

Rampion 2 Wind Farm

Category 6: Environmental Statement

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Executive Summary

This section summarises the assessment findings for transport (onshore), based on **Chapter 23: Transport, Volume 2** of the [Environmental Statement \(ES\)](#) (Document Reference: 6.2.23).

[This Chapter should be read in conjunction with Chapter 32: ES Addendum, Volume 2 of the ES \(Document reference: 6.2.32\) \[REP5-038\] \(updated at Deadline 6\) which includes additional sensitivity tests and associated assessments completed by the Applicant since submission of the Development Consent Order Application. This sensitivity test considers the peak week for construction traffic at each receptor location using the same assessment methodology as detailed below.](#)

How effects on transport have been assessed

The assessment for transport has been undertaken in line with current guidance for assessing potentially significant environmental effects is the Institute of Environmental Assessment (IEA) (1993) publication ‘*Guidance Notes No. 1: Guidelines for the Environmental Assessment of Road Traffic*’ (hereafter referred to as ‘GEART’). GEART (IEA, 1993) identifies the following environmental effects that can occur as a result of traffic associated with the Proposed Development.

- **severance**: the separation of people from places and other people and places or the impediment of pedestrian access to essential facilities;
- **driver delay**: traffic delays as a result of the Proposed Development traffic;
- **pedestrian amenity**: the effect on the relative pleasantness of a pedestrian journey as a result of changes in traffic flow, traffic composition and pavement width / separation from traffic;
- **pedestrian delay**: the ability of people to crossroads as a result of changes in traffic volume, composition and speed, the level of pedestrian activity, visibility and general physical conditions of the Proposed Development. Consideration is given to the effects on PRow users due to the closure and diversion of PRowS;
- **fear and intimidation**: these may be experienced by people as a result of an increase in traffic volume and its proximity or the lack of protection caused by such factors as narrow pavement widths; and
- **accidents and safety**: the risk of accidents occurring where the Proposed Development is expected to produce a change in the character of traffic.

The guidance followed in assessing the potential significance of road traffic effects is summarised in GEART (IEA, 1993), which states that:

“The detailed assessment of impacts is...likely to concentrate on the period during which the absolute level of an impact is at its peak, as well as the hour at which the greatest level of change is likely to occur.” (Paragraph 3.10).

To assess the impact at its peak, the likely percentage increase in traffic is determined by comparing estimates of traffic generated by the Proposed Development with future predicted baseline traffic flows on the road links.

GEART (IEA, 1993) provides two rules that are used to establish whether an environmental assessment of traffic effects should be carried out on receptors:

- **Rule 1:** Include roads where traffic flows are predicted to increase by more than 30% (or where the number of HGVs is predicted to increase by more than 30%); and
- **Rule 2:** Include any specifically 'sensitive' areas where traffic flows are predicted to increase by 10% or more.

The sensitivity of each highway link included in the assessment has been assigned a sensitivity in accordance with GEART (IEA, 1993). This is based on professional judgement and related to the proximity, volume and type of receptors along the highway link.

Based on the Rule 1 and Rule 2 and the sensitivity of the receptors shows the magnitude of change applied to the environmental effects to help identify levels of significance. The indicators to assess the magnitude of change are based on advice included within GEART (IEA, 1993) and professional judgement.

The significance of a likely transport effect is derived by considering the sensitivity of the receptor against the magnitude of change.

Baseline environment

The public highway network comprises the strategic road network, which is managed and maintained by National Highways and the local road network, which is managed and maintained by the relevant local authorities. Roads within the strategic road network that are proposed to be used for access include the A23 and A27. For the local road network this includes the A24, A26, A259, A272, A280, A281, A283, B2109, B2116, B2117 and B2118 and connecting roads. Information obtained from the Department for Transport has identified a number of accidents that have occurred on the highway network surrounding Rampion 2, however it is not considered there is a significant accident record on the local highways network.

Bus services are in operation between major settlements in the area, in addition there are two principal railway lines, one line running along the south coast between Brighton and Portsmouth and one line between Horsham and Portsmouth. The onshore cable corridor, onshore substation and landfall, as well as temporary and permanent accesses potentially affect a number of Public Rights of Way (PRoWs), one of which is the South Downs Way, a National Trail. The onshore temporary cable corridor will cross two parts of the Sustrans national cycle network (NCN): NCN 2 and 223. At Newhaven Port the nearest element of the NCN is NCN 2 which runs along the B2109 across the junction with Railway Road.

The onshore temporary cable corridor has numerous crossings of roads including the A289, A27, A24, A283, B2135, B2116 and A281. There is also one crossing of the River Arun and two crossings of the National Rail network west of Littlehampton and Wick.

Embedded environmental measures

A range of environmental measures within the **Commitments Register** (Document Reference: 7.22) which relate to transport are embedded as part of the Rampion 2 design to remove or reduce significant environmental effects as far as possible. Examples of these embedded environmental measures include the following:

- Routing of heavy goods vehicles (HGV) during the construction period to avoid Air Quality Management Areas, the A24 through Findon and major settlements, such as Storrington, Cowfold, Steyning, Wineham, Henfield, Woodmancote and other smaller settlements, where possible;
- Main rivers, watercourses, railways and roads that form part of the Strategic Highways Network will be crossed by horizontal directional drill (HDD) or other trenchless technology where this represents the best environment solution and is financially and technically feasible;
- An **Outline Construction Traffic Management Plan (CTMP)** (Document Reference: 7.6) has been developed which will sets out the approach to managing and minimising the impact of the construction traffic on the transport network; and
- An **Outline Public Rights of Way Management Plan (PRoWMP)** (Document Reference: 7.8) has been developed which sets out the approach to managing the use of public rights of way (PRoW) during construction.

Overview

Likely significant effects

Based on the proposed location of the onshore substation and routing of the onshore cable corridor, plus the incorporation of appropriate embedded environmental measures (such as the **Outline CTMP** (Document Reference: 7.6) and **Outline PRoWMP** (Document Reference: 7.8)), no significant effects have been identified in relation to transport receptors from Rampion 2 construction, operation and maintenance, and decommissioning [in this chapter of the ES.](#)

Significant effects for two highway links in relation to pedestrian amenity, pedestrian delay and fear and intimidation as a result of the construction traffic peak week sensitivity test have been identified in Table 2-29 in **Chapter 32: ES Addendum, Volume 2** of the ES (Document Reference: 6.2.32) [REP5-038] (updated at Deadline 6). This is based on the additional sensitivity tests and associated assessments completed by the Applicant since submission of the Development Consent Order Application presented in Section 2 within **Chapter 32: ES Addendum, Volume 2** of the ES (Document Reference: 6.2.32) [REP5-038] (updated at Deadline 6). Traffic Management Strategies for these highway links (Kent Street and Michelgrove Lane) are included in Appendix D of the **Outline Construction Traffic Management Plan** (Document Reference: 7.6 [REP5-068]) (updated at Deadline 6).

Cumulative effects

No significant cumulative effects have been identified in relation to the Proposed Development on transport during the construction, operation and maintenance, and decommissioning phases.

Inter-related effects

No significant inter-related effects of greater significance compared to the effects considered alone were identified for transport receptors during the construction, operation and maintenance, and decommissioning phases of the Proposed Development.

Transboundary effects

No significant transboundary effects have been identified in relation to the Proposed Development on transport receptors during the construction, operation and maintenance, and decommissioning phases.

23. Transport

23.1 Introduction

23.1.1 This chapter of the Environmental Statement (ES) presents the results of the assessment of the likely significant effects of Rampion 2 with respect to transport. It should be read in conjunction with the Proposed Development description provided in **Chapter 4: The Proposed Development, Volume 2** (Document Reference: 6.2.4) and the relevant parts of the following chapters and appendices:

- **Chapter 13: Shipping and navigation, Volume 2** of the ES (Document Reference: 6.2.13) due to onshore effects of offshore works;
- **Chapter 17: Socio-economics, Volume 2** of the ES (Document Reference: 6.2.17) due to effects of the Proposed Development on Public Rights of Way (PRoW);
- **Chapter 19: Air quality, Volume 2** of the ES (Document Reference: 6.2.19) due to the use of transport data to inform air quality assessments;
- **Chapter 21: Noise and vibration, Volume 2** of the ES (Document Reference: 6.2.21) due to the use of transport data to inform noise assessments; **and**
- **Chapter 29: Climate change, Volume 2** of the ES (Document Reference: 6.2.29) due to the use of transport data in the greenhouse gases assessment; **and**
- **Chapter 32: ES Addendum, Volume 2** of the ES (Document Reference: 6.2.32) [REP5-038] (updated at Deadline 6) which includes additional sensitivity tests and associated assessments completed by the Applicant since submission of the Development Consent Order Application.

23.1.2 This technical chapter describes:

- the legislation, planning policy and other documentation that has informed the assessment (**Section 23.2: Relevant legislation, planning policy, and other documentation**);
- the outcome of consultation and engagement that has been undertaken to date, including how matters relating to transport within the Statutory Consultation have been addressed (**Section 23.3: Consultation and engagement**);
- the scope of the assessment for transport (**Section 23.4: Scope of the assessment**);
- the methods used for the baseline data gathering (**Section 23.5: Methodology for baseline data gathering**);
- the overall baseline including future baseline (**Section 23.6: Baseline conditions**);

- embedded environmental measures relevant to transport and the relevant maximum design scenario (**Section 23.7: Basis for ES assessment**);
- the assessment methods used for the ES (**Section 23.8: Methodology for ES assessment**);
- the assessment of transport effects (**Section 23.9: Construction phase onshore works, Section 2.10: Operation and Maintenance phase – onshore works, –23.11: Decommissioning phase – onshore works** and **Section 23.12: Assessment of Cumulative effects**);
- consideration of transboundary effects (**Section 23.13: Transboundary effects**);
- inter-related effects (**Section 23.14: Inter-related effects**);
- a summary of residual effects (**Section 23.15: Summary of residual effects**);
- a glossary of terms and abbreviations is provided in (**Section 23.16: Glossary of terms and abbreviations**); and
- a references list is provided in **Section 23.17: References**.

23.1.3 The chapter is also supported by the following appendices and other DCO Application documents:

- **Appendix 23.1: Abnormal Indivisible Load (AIL) assessment, Volume 4** of the ES (Document Reference: 6.4.23.1);
- **Appendix 23.2: Traffic Generation Technical Note, Volume 4** of the ES (Document Reference: 6.4.23.2));
- **Outline Operational Travel Plan** (Document Reference: 7.5);
- **Outline Construction Traffic Management Plan (CTMP)** (Document Reference: 7.6);
- **Outline Construction Workforce Travel Plan (CWTP)** (Document Reference: 7.7); and
- **Outline Public Rights of Way Management Plan (PRoWMP)** (Document Reference: 7.8).

23.2 Relevant legislation, policy and other information and guidance

Introduction

- 23.2.1 This section identifies the legislation, policy and other documentation that has informed the assessment of effects with respect to transport. Further information on policies relevant to the Environmental Impact Assessment (EIA) and their status is provided in **Chapter 2: Policy and legislative context, Volume 2** of the ES (Document Reference: 6.2.2).
- 23.2.2 The assessment has been undertaken in accordance with relevant transport related planning policy, legislation and guidance at the national, regional and local

level. This helped identify any requirements which the Proposed Development needs to consider, aiding the process of defining the scope of assessment and informing the identification of local issues.

National planning policy

23.2.3 **Table 23-1** lists the national planning policy relevant to the assessment of the effects on transport receptors.

Table 23-1 National planning policy relevant to transport

Policy description	How and where considered in this chapter
<p>The Overarching National Policy Statement (NPS) for Energy (EN-1) (Department of Energy & Climate Change (DECC), 2011)</p>	
<p>NPS EN-1 contains the generic requirements for the assessment of impacts arising from traffic associated with design, construction and operation of renewable energy infrastructure. Relevant paragraphs are set out below.</p>	<p>This chapter considers all relevant potential transport effects during the construction, operation and maintenance, and decommissioning phases of the Proposed Development.</p>
<p>Paragraph 5.13.1 states <i>“The transport of materials, goods and personnel to and from a development during all project phases can have a variety of impacts on the surrounding transport infrastructure and potentially on connecting transport networks, for example through increased congestion. Impacts may include economic, social and environmental effects. Environmental impacts may result particularly from increases in noise and emissions from road transport. Disturbance caused by traffic and abnormal loads generated during the construction phase will depend on the scale and type of the proposal.”</i></p>	<p>This chapter considers all relevant potential transport effects during the construction, operation and maintenance, and decommissioning phases of development. The Study Area has been established through discussions with the relevant Highway Authorities.</p>
<p>Paragraph 5.13.2 states <i>“The consideration and mitigation of transport impacts is an essential part of Government’s wider policy objectives for sustainable development as set out in Section 2.2 of this NPS”</i></p>	<p>This chapter identifies possible transport impacts and ways to mitigate them in Section 23.9 to 23.11. The environmental measures to mitigate these impacts are embedded into the design.</p>

Policy description	How and where considered in this chapter
<p>Paragraph 5.13.3 states <i>“If a project is likely to have significant transport implications, the applicant’s ES (see Section 4.2) should include a transport assessment, using the NATA/WebTAG methodology stipulated in Department for Transport guidance, or any successor to such methodology. Applicants should consult the Highways Agency and Highways Authorities as appropriate on the assessment and mitigation”</i></p>	<p>Appendix 23.2: Traffic Generation Technical Note (TGTN), Volume 4 of the ES (Document Reference: 6.4.23.2) is submitted as part of the DCO Application in accordance with guidance and best practice. The scope of Appendix 23.2: TGTN, Volume 4 of the ES (Document Reference: 6.4.23.2) has been discussed and agreed with West Sussex County Council (WSCC) and National Highways. An Outline Construction Traffic Management Plan (CTMP) (Document Reference: 7.6), Outline Public Rights of Way Management Plan (PRoWMP) (Document Reference: 7.8), and Appendix 23.1: Abnormal Indivisible Loads assessment, Volume 4 of the ES (Document Reference: 6.4.23.1) are also submitted as part of the DCO Application.</p>
<p>Paragraph 5.13.4 states <i>“Where appropriate, the applicant should prepare a travel plan including demand management measures to mitigate transport impacts. The applicant should also provide details of proposed measures to improve access by public transport, walking and cycling, to reduce the need for parking associated with the proposal and to mitigate transport impacts.”</i></p>	<p>Where appropriate, it is expected that movement by sustainable means will be facilitated and encouraged. Sustainable links such as bus stops and rail lines are discussed in the Outline Construction Workforce Travel Plan (Document Reference: 7.7) and Outline Operational Travel Plan (Document Reference: 7.5).</p>
<p>Paragraph 5.13.5 states <i>“If additional transport infrastructure is proposed, applicants should discuss with network providers the possibility of co-funding by Government for any third-party benefits. Guidance has been issued in England which explains the circumstances where this may be possible, although the Government cannot guarantee in advance that funding will be available for any given uncommitted scheme at any specified time”</i></p>	<p>Additional transport infrastructure is limited to the provision of a number of mostly temporary construction accesses along the onshore cable corridor. Accesses will be removed where appropriate and where agreed with landowners, and the land reinstated following completion of temporary construction activities. Some accesses such as the access to the onshore landfall site and onshore substation will be retained. An Outline CTMP (Document Reference: 7.6) is provided alongside the DCO Application with further details on access.</p>
<p>Paragraph 5.13.6 states <i>“A new energy NSIP may give rise to substantial impacts on the surrounding transport infrastructure and the IPC [Planning</i></p>	<p>Sections 23.9 to 23.11 identify possible transport impacts resulting from all phases of</p>

Policy description	How and where considered in this chapter
<p><i>Inspectorate] should therefore ensure that the applicant has sought to mitigate these impacts, including during the construction phase of the development. Where the proposed mitigation measures are insufficient to reduce the impact on the transport infrastructure to acceptable levels, the IPC [Planning Inspectorate] should consider requirements to mitigate adverse impacts on transport networks arising from the development, as set out below. Applicants may also be willing to enter into planning obligations for funding infrastructure and otherwise mitigating adverse impacts”.</i></p> <p>Paragraph 5.13.11 states “<i>The IPC [Planning Inspectorate] may attach requirements to a consent where there is likely to be substantial HGV traffic that:</i> <i>Control numbers of HGV movements to and from the site in a specified period during its construction and possibly on the routing of such movements;</i> <i>Make sufficient provision for HGV parking, either on the site or at dedicated facilities elsewhere, to avoid ‘overspill’ parking on public roads, prolonged queuing on approach roads and uncontrolled on-street HGV parking in normal operating conditions; and</i> <i>Ensure satisfactory arrangements for reasonably foreseeable abnormal disruption, in consultation with network providers and the responsible police force”</i></p>	<p>the Proposed Development and ensure environmental measures (where relevant/necessary) are incorporated into the design.</p> <p>Proposed heavy goods vehicle (HGV) routes are identified and restrictions on HGV timing are proposed to avoid adverse impact on sensitive receptors, particularly schools as set out within the Outline CTMP (Document Reference: 7.6). The design of the construction works will avoid the risk of HGV parking on the surrounding highway. The transport of abnormal indivisible loads (AILs) has been subject to assessment within the Appendix 23.1: Abnormal Indivisible Loads assessment, Volume 4 of the ES (Document Reference: 6.4.23.1) and is expected to result in minimal disruption.</p>
<p>Draft Overarching National Policy Statement for Energy (EN-1, March 2023 (DESNZ, 2023a)</p>	
<p>NPS EN-1 (2023 Draft) contains the generic requirements for the assessment of impacts arising from traffic associated with design, construction and operation of renewable energy infrastructure. Requirements not</p>	

Policy description	How and where considered in this chapter
<p>previously set out in the NPS EN-1 (2011) are set out below:</p> <p>Paragraph 5.14.7: The applicant should also provide details of proposed measures to improve access by active, public and shared transport to:</p> <ul style="list-style-type: none"> • reduce the need for parking associated with the proposal; • contribute to decarbonisation of the transport network; • reduce the need to travel; and • secure behavioural change and modal shift through an offer of genuine modal choice and to mitigate transport impacts. 	<p>Where appropriate, it is expected that movement by sustainable means will be facilitated and encouraged. Sustainable links such as bus stops and rail lines are discussed in the Outline CWTP (Document Reference: 7.7) and Outline Operational Travel Plan (Document Reference: 7.5).</p>
<p>Paragraph 5.14.8: The assessment should also consider any possible disruption to services and infrastructure (such as road, rail and airports).</p>	<p>The objectives of the Delivery Management System are too to minimise the number of construction vehicles on the road, and make sure construction vehicles do not exceed any agreed restrictions, for example peak period traveling through certain towns / villages / junctions. This is included in the Outline CTMP (Document Reference: 7.6),</p>
<p>Paragraph 5.14.11: Where mitigation is needed, possible demand management measures must be considered. This could include identifying opportunities to:</p> <ul style="list-style-type: none"> • reduce the need to travel by consolidating trips, • locate development in areas already accessible by active travel and public transport, • provide opportunities for shared mobility, • re-mode by shifting travel to a sustainable mode that is more beneficial to the network, • retime travel outside of the known peak times, • reroute to use parts of the network that are less busy. 	<p>Trip consolidation and other demand management measures will be implemented are discussed in the Outline CWTP (Document Reference: 7.7) and Outline Operational Travel Plan (Document Reference: 7.5).</p>

Policy description	How and where considered in this chapter
<p>Paragraph 5.14.12: If feasible and operationally reasonable, such mitigation should be required, before considering requirements for the provision of new inland transport infrastructure to deal with remaining transport impacts. All stages of the project should support and encourage a modal shift of freight from road to more environmentally sustainable alternatives, such as rail, cargo bike, maritime and inland waterways, as well as making appropriate provision for and infrastructure needed to support the use of alternative fuels including charging for electric vehicles.</p>	<p>Trip consolidation, sustainable travel and other demand management measures are discussed in the Outline CWTP (Document Reference: 7.7) and Outline Operational Travel Plan (Document Reference: 7.5). No new operational road infrastructure is proposed, however accesses and car parks are proposed as part of the Proposed Development.</p>
<p>Paragraph 5.14.13: Regard should always be given to the needs of freight at all stages in the construction and operation of the development including the need to provide appropriate facilities for HGV drivers as appropriate.</p>	<p>The needs of freight traffic is considered within the Outline Code of Construction Practice (Document Reference: 7.2)</p>
<p>Paragraph 5.14.16: Applicants should consider the DfT policy guidance “Water Preferred Policy Guidelines for the movement of abnormal indivisible loads” when preparing their application.</p>	<p>The transport of abnormal indivisible loads (AIL) has been subject to assessment within the Appendix 23.1: Abnormal Indivisible Load assessment, Volume 4 of the ES (Document Reference: 6.4.23.1) and is expected to result in minimal disruption.</p>
<p>National Planning Policy Framework (NPPF) (Ministry of Housing, Communities and Local Government (MHCLG), 2021)</p>	
<p>The NPPF is the primary source of national planning guidance in England.</p>	<p>Whilst the NPPF is not directly applicable to Nationally Significant Infrastructure Projects (NSIPs), it provides context to the assessment of transport effects.</p>
<p>Paragraph 111 of the NPPF states that <i>“[d]evelopment 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.”</i></p>	<p>Sections 23.9 to 23.11 set out the results of the assessment of traffic impacts including highways safety (an accident assessment is within Section 23.6).</p>
<p>Paragraph 113 of the NPPF states that <i>“[a]ll developments that will generate significant amounts of movement should</i></p>	<p>The Appendix 23.2: Traffic Generation Technical Note, Volume 4 of the ES</p>

Policy description	How and where considered in this chapter
<p><i>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.”</i></p> <p>The document sets out that the Transport Statement (TS) / TA should take into account:</p> <ul style="list-style-type: none"> the opportunities for sustainable transport modes have been taken up depending on the nature and location of the site, to reduce the need for major transport infrastructure; safe and suitable access to the site can be achieved for all people; and improvements can be undertaken within the transport network that cost effectively limit the significant impacts of the development. 	<p>(Document Reference: 6.4.23.2) has been developed which has assessed these criteria, the opportunities for sustainable transport, access and road safety, and the need for any transport improvements.</p> <p>For understanding development impacts, this chapter is supported by an appended Outline Construction Traffic Management Plan (Document Reference: 7.6), Outline Public Rights of Way Management Plan (Document Reference: 7.8), and Appendix 23.1: Abnormal Indivisible Load assessment, Volume 4 of the ES (Document Reference: 6.4.23.1).</p>

Local planning policy

23.2.4 **Table 23-2** lists the local planning policy relevant to the assessment of the effects on transport receptors.

Table 23-2 Local transport / planning policy relevant to transport

Policy description	Relevance to assessment
West Sussex Transport Plan 2022-36 (West Sussex County Council, 2022)	
<p>4.23-4.25 and 6.4: Walking. The policy aims to maintain the existing pedestrian provision in West Sussex, including PRow provision, and, where possible provide new infrastructure to create new connections and routes for pedestrians particularly for leisure. More information is also included on PRow in the WSCC Rights of Way Management Plan 2018-2028.</p>	<p>The construction of the onshore cable has the potential to temporarily affect the PRow infrastructure in West Sussex. The Outline PRowMP (Document Reference: 7.8). has been prepared setting out all PRow impacts and environmental measures proposed.</p>
<p>4.26-4.29 and 6.4: Cycling. This policy aims to protect the existing cycling provision and promote cycling as a form of sustainable transport. It also identifies a requirement to construct and improve</p>	<p>The construction of the onshore cable has the potential to temporarily affect local and nationally strategic cycle routes in West Sussex. A review of the local cycle routes has been undertaken in Section 23.6 and</p>

Policy description	Relevance to assessment
<p>cycling infrastructure to connect local cycle networks in line with the LCWIPs.</p>	<p>sets out that impacts on National Cycle Network (NCN) routes will not be significant.</p>
<p>4.33-4.39 and 6.12: Shared Transport Services. This policy proposes a range of measures to promote and improve public transport in West Sussex. Measures include the maintenance of public transport to a good standard and the provision of new infrastructure – such as bus lanes- to improve the existing provision where this is possible.</p>	<p>The construction of the onshore cable has the potential to temporarily affect local bus routes in West Sussex. A review of local bus routes has been set out in this chapter in Section 23.6.</p>
<p>4.64-4.66 and 6.25: Freight. This policy sets out the measures which are to be used to manage the movement of freight during the plan period. The policy identifies measures to be used, including a lorry route network around West Sussex and investment into major infrastructure improvements on the A27.</p>	<p>The policy and HGV route network have been considered when identifying construction HGV routes associated with the Proposed Development set out in Section 23.7. The HGV access strategy avoids Findon Valley, a key route restriction within the Freight Movement and Management Plan.</p>
<p>Draft Horsham District Local Plan 2019-2036 (Horsham District Local Council, 2019)</p>	
<p>Strategic policy 41 – Infrastructure Provision. This policy states that development will only be supported if local infrastructure has adequate capacity to support the development. Suitable mitigation should be proposed where local infrastructure does not have the capacity to accommodate development.</p>	<p>Consideration of transport effects and requirements for environmental measures. Sections 23.9 to 23.11 sets out the results of the assessment of the traffic impacts on local and strategic highways links.</p>
<p>Strategic policy 42 – Sustainable Transport. This policy sets out the conditions in which development will be supported for sustainable transport. The policy states “<i>development will be supported if it:</i></p> <ul style="list-style-type: none"> • <i>Provides safe and suitable access for all vehicles, pedestrians, cyclists, horse riders, public transport and the delivery of goods.</i> • <i>Minimises the distance people need to travel and minimises conflicts between traffic, cyclists and pedestrians.</i> 	<p>The construction of the onshore cable has the potential to temporarily affect PRoW, local bus routes and cycle routes in Horsham.</p> <p>The Outline PRoWMP (Document Reference: 7.8) sets out all impacts on PRoW and environmental measures proposed.</p> <p>A review of the local cycle routes has been undertaken within this chapter in paragraph 23.5.10 and identifies that</p>

Policy description	Relevance to assessment
<ul style="list-style-type: none"> • <i>Prioritises and provides safe and accessible walking and cycling routes and is integrated with the wider network of routes, including public rights of way and cycle paths.</i> • <i>Includes opportunities for sustainable transport which reduce the need for major infrastructure and cut carbon emissions.</i> • <i>Develops innovative and adaptable approaches to public transport in the rural areas of the District.</i> • <i>Maintains and improves the existing transport system (pedestrian, cycle, rail and road).</i> • <i>Is accompanied by an agreed Green Travel Plan where it is necessary to minimise a potentially significant impact of the development of the wider area, or as a result of needing to address an existing local traffic problem.”</i> 	<p>impacts on NCN routes will not be significant.</p> <p>A review of local bus routes, including those in Horsham, has been set out in this chapter in paragraph 23.6.35.</p>
<p><i>Mid Sussex District Plan 2014-2031 (Mid Sussex District Council, 2018)</i></p>	
<p>DP20: Securing Infrastructure. This policy requires development to be provided with necessary infrastructure such as efficient and sustainable transport networks.</p>	<p>Additional transport infrastructure is limited to the provision of a number of mostly temporary construction accesses along the onshore cable corridor. Accesses will be removed where appropriate and where agreed with landowners and the land reinstated when onshore cable construction is finished. Where accesses are not removed, they will remain in-situ, for example, the access to the onshore landfall site and onshore substation. The Outline CTMP (Document Reference: 7.6) outlines further details on access.</p>
<p>DP21: Transport. This policy requires developments, depending on their size or impact to prepare a Transport Statement or Transport Assessment to be submitted with the planning application. The policy also requires submission of a travel plan statement or full travel plan alongside the transport statement or transport</p>	<p>Appendix 23.2: Traffic Generation Technical Note, Volume 4 of the ES (Document Reference: 6.4.23.2) has been provided in support of the DCO Application. The DCO application is also supported by an Outline CTMP (Document Reference: 7.6), Outline PRowMP (Document Reference: 7.8) and Appendix 23.1: Abnormal Indivisible</p>

Policy description	Relevance to assessment
<p>assessment which will be submitted with the planning application.</p> <p>DP22: Rights of Way and other Recreational Routes. This policy aims to protect existing rights of way, cycle and recreational routes from any adverse effects that might come from development. It also states that where a route is likely to be affected an alternative must be provided which is equivalent in value to the route affected.</p>	<p>Loads assessment, Volume 4 (Document Reference: 6.4.23.1).</p> <p>The protection of PRoW, including recreational route and National Trails has been included within the Outline PRoWMP (Document Reference: 7.8).</p>
<p><i>Worthing Local Plan 2020 – 2036</i> (Worthing Borough Council, 2023)</p>	
<p>DM15 Sustainable Transport and Active Travel. The policy sets out that Worthing Borough Council will support development which encourages use of public and sustainable transport and reduces the number of car journeys. Where development is likely to generate demand for travel or have other implications it is required to be supported by a Transport Statement or Assessment and a sustainable travel plan. The policy further states that it will “<i>support measures that promote improved accessibility, create safer roads, reduce the environmental impact of traffic movements, enhance the pedestrian environment, or facilitate highway improvements</i>”. In particular reference is made to managing the impact of HGV movements and implementing measures where this may be appropriate.</p>	<p>Section 23.6 and the Outline CTMP (Document Reference: 7.6) sets out the proposed HGV access strategy and environmental measures and routes that have been applied to mitigate impacts of the construction phase of the Proposed Development.</p>
<p>West Sussex Walking and Cycling 2016 – 2026 (West Sussex County Council, 2020a)</p>	
<p>The West Sussex Walking and Cycling strategy is a document that sets out the aims and objectives for walking and cycling during the strategy period (2016-2026) and sets out guidance and information for developers.</p>	<p>The Outline PRoWMP (Document Reference: 7.8) which has been prepared setting out impacts on PRoW and environmental measures proposed.</p>

Other relevant information and guidance

The Strategic Road Network and the Delivery of Sustainable Development Guidance.

23.2.5 The Department for Transport (DfT) (2022a) Circular 02/2022 ‘*The Strategic Road Network and the Delivery of Sustainable Development*’ outlines the methods in which the National Highways (NH) (formally Highways England (HE)) will engage with developers and communities to deliver sustainable development and consequently economic growth, whilst safeguarding the primary function and purpose of the Strategic Road Network (SRN).

23.2.6 Paragraph 55 outlines under ‘Environmental assessments’:

“The company will engage in the relevant screening or scoping process where a potential impact on the SRN is identified. Environmental assessments must be comprehensive enough to establish the likely impacts on air quality, light pollution and noise arising from traffic generated by a development, along with the impacts from any proposed works to the SRN and identify measures to mitigate these impacts. Requirements and advice for undertaking environmental assessments in respect of transport impacts can be found in the DMRB.”

23.2.7 Paragraphs 65 to 69 outline access requirements relating to onshore wind turbines:

“The promoter of a wind turbine development must identify any impacts on the operation of the SRN from the construction, operation and de-commissioning stages and identify measures to mitigate these impacts. Swept path analyses must be provided for any abnormal load deliveries to the site via the SRN.

Access to the site for construction, maintenance and de-commissioning should be obtained from the local road network. A direct connection to the SRN will only be permitted in exceptional circumstances.”

23.2.8 Within the transport Study Area (outlined in **Section 23.4**), the SRN managed by NH include the A27 and A23. The requirements of Circular 02/2022 (DfT, 2022a) are therefore addressed further within this chapter.

Guidelines for the Environmental Assessment of Road Traffic

23.2.9 Current guidance for assessing potentially significant environmental effects is the Institute of Environmental Assessment (IEA) (1993) publication ‘*Guidance Notes No. 1: Guidelines for the Environmental Assessment of Road Traffic*’ (hereafter referred to as ‘GEART’).

23.2.10 GEART (IEA, 2003) has informed the assessment in this chapter and **Section 23.8** sets out how this has been applied.

23.3 Consultation and engagement

Overview

- 23.3.1 This section describes the stakeholder engagement undertaken for Rampion 2. This consists of early engagement, the outcome of, and response to, the Scoping Opinion (Planning Inspectorate, 2020a) to the transport assessment, the Evidence Plan Process (EPP), non-statutory consultation and Rampion 2's statutory consultation. An overview of consultation and engagement undertaken for Rampion 2 relevant to the EIA is outlined in [Section 5.4 of Chapter 5: Approach to the EIA, Volume 2](#) of the ES (Document Reference: 6.2.5).
- 24.1.1 Given the social distancing restrictions which have been in place due to the COVID-19 pandemic from 2020 to 2022, technical consultation relating to transport has taken place online, primarily in the form of conference calls using Microsoft Teams.

Scoping Opinion

- 23.3.2 Rampion Extension Development Limited (RED) submitted a Scoping Report (RED, 2020) and request for a Scoping Opinion to the Secretary of State (administered by the Planning Inspectorate on 2 July 2020. A Scoping Opinion was received on 11 August 2020 (Planning Inspectorate, 2020a). The Scoping Report sets out the proposed transport assessment methodologies, outline of the baseline data collected to date and proposed, and the scope of the assessment. **Table 23-3** sets out the comments received in Section 5 of the Planning Inspectorate's Scoping Opinion 'Aspect based scoping tables – Onshore' and how these have been addressed in this ES. A full list of the Planning Inspectorate Scoping Opinion (2020a) comments and responses is provided in [Appendix 5.1: Response to the Scoping Opinion, Volume 4](#) (Document Reference: 6.4.5.1). Regard has also been given to other stakeholder comments that were received in relation to the Scoping Report (RED, 2020).

Table 23-3 Planning Inspectorate (2020a) Scoping Opinion responses – transport

Planning Inspectorate ID number	Scoping Opinion comment	How this is addressed in this ES Chapter
5.6.1	<i>“Hazardous Loads during construction operation and decommissioning.</i> <i>The Inspectorate agrees that this matter can be scoped out on the basis that no hazardous loads are anticipated by the Applicant during construction or operation of the Proposed Development.”</i>	Acknowledged. Hazardous loads have been scoped out of the assessment within the ES.
5.6.2	<i>“Operation and maintenance activities resulting in potential impact on roads, PRoW and users of these routes.</i>	Acknowledged. The assessment of operation and

Planning Inspectorate ID number	Scoping Opinion comment	How this is addressed in this ES Chapter
	<p><i>The Scoping Report advises that the operation and maintenance requirements of the onshore part of the Proposed Development would be occasional and therefore there would only be a limited number of vehicle movements. Whilst no further quantification of vehicle movements during operation has been provided, the Inspectorate is content that such activities will be below the threshold at which potentially significant effects could occur.</i></p> <p><i>Paragraph 6.7.49 of the Scoping Report does not provide any justification as to operational effects on PRow. Whilst the impacts in this regard are likely to be predominantly experienced during construction, the ES should also consider the potential for significant effects during operation including (e.g. as a result of permanent diversions / changes to PRow around the cable route and substation)."</i></p>	<p>maintenance activities from the onshore works resulting in potential impacts on roads has been scoped out of the ES.</p> <p>The operation and maintenance effects on existing PRow's of permanent onshore elements of the Proposed Development have been considered within the Outline PRowMP (Document Reference: 7.8).</p>
5.6.3	<p><i>“Decommissioning activities resulting in potential impact on local roads, PRow and the users of these routes.</i></p> <p><i>The Scoping Report has scoped out potential impact on local roads, PRow and the users of these routes during decommissioning works on the basis that the effects of decommissioning will be lower than construction.</i></p> <p><i>The Inspectorate is unable to agree that this can be scoped out at this stage as the effects and subsequent mitigation have not been quantified for the construction phase. Although the transport impacts during decommissioning works would be similar or potentially lower than during construction, the ES should assess these matters where significant effects are likely to occur.”</i></p>	<p>Acknowledged. It is anticipated that all onshore and offshore subsurface cable infrastructure will be left <i>in situ</i> as part of the decommissioning phase (outlined in Chapter 4: The Proposed Development, Volume 2 (Document Reference 6.2.4). Decommissioning effects will relate only to the removal of the onshore substation and traffic generation will therefore be lower than during construction. An assessment of the decommissioning effects in relation to the decommissioning of the onshore</p>

Planning Inspectorate ID number	Scoping Opinion comment	How this is addressed in this ES Chapter
5.6.4	<p>“Study area <i>The Scoping Report states that the Study Area for the transport assessment will consider the onshore elements of the Scoping Boundary (and the “key routes outside” of this boundary). Routes that construction and operational traffic will take will be reviewed and amended in response to refinement of the onshore. The Inspectorate recommends that the geographical extent of the Study Area (with particular reference to “key routes” outside the Scoping Boundary) is agreed with the relevant highways authorities and Network Rail (where applicable).”</i></p>	<p>substation is included in Section 23.11.</p> <p>Construction traffic routing patterns are presented in Section 23.7. The key routes have been agreed with the relevant transport and highways providers to inform the highways link assessments in this chapter. The Study Areas are provided in Section 23.4 and Figures 23.5 and 23.6, Volume 3 (Document Reference: 6.3.23).</p>
5.6.5	<p>“Consultation <i>The Inspectorate welcomes the Applicant’s intention to agree the scope of assessment with the relevant consultation bodies. This is particularly important in agreeing the baseline position and the receptors which will be deemed sensitive in the assessment. It is also important that methodologies are justified, for example, why the Guidelines for the Assessment of the Environmental impact of Road Traffic (GEART) has been chosen over Design Manual for Roads and Bridges (DMRB). Where the scope differs from that requested by the relevant consultation bodies, the ES should provide justification for the alternative approach.”</i></p>	<p>The scope of the assessment outlined in Section 23.4 including baseline and receptors have been discussed with key stakeholders including West Sussex County Council (WSCC) and NH (further details provided in Section 23.3). Use of GEART (IEA, 1993) has been applied to this chapter as set out in Section 23.8. The Design Manual for Roads and Bridges (DMRB) (Standards for Highways, 2020) guidelines have been used within the Outline CTMP (Document Reference:</p>

Planning Inspectorate ID number	Scoping Opinion comment	How this is addressed in this ES Chapter
5.6.6	<p>“Baseline Surveys/COVID-19 <i>The Scoping Report makes limited reference to how data will be collected to form the baseline assessment. The Inspectorate would expect the Applicant to agree the scope of any further baseline information to inform the assessment with the relevant authorities.</i></p> <p><i>The Inspectorate acknowledges the Applicants concerns regarding COVID-19 restrictions, the Applicant should refer to the advice provided in Section 3.4 of this Scoping Opinion.”</i></p>	<p>7.6) when setting out proposed permanent access designs.</p> <p>Discussion with WSCC on baseline surveys is set out in Section 23.3. Details on the collation of the baseline data and how the COVID-19 pandemic issues have been addressed are in Section 23.5. An agreement was reached with WSCC over the data used in the assessment. A combination of historic data and new traffic counts undertaken in 2021 have been used, given the COVID-19 pandemic restrictions were lifted</p>
5.6.7	<p>“Rail Network <i>The transport assessment should include an assessment of the potential impact on the rail network. Figure 6.7.1 indicates that several operational railway lines would be crossed. The assessment should also consider the potential impacts of any construction or diversion activities on public transport.”</i></p>	<p>As part of the embedded environmental measures as part of the Proposed Development, it is proposed to provide a trenchless crossing of the rail network in two locations (outlined in commitment C-5) therefore there will no impact on the rail infrastructure.</p>
5.6.8	<p>“Onshore vehicle movements associated with marine works <i>No information is provided regarding any onshore vehicular movements associated with marine elements of the work (if any, and</i></p>	<p>Consideration is given to the traffic generation related to the onshore impacts of offshore works in the</p>

Planning Inspectorate ID number	Scoping Opinion comment	How this is addressed in this ES Chapter
	<p><i>particularly in reference to nearshore / intertidal works). These should be included within the ES where significant effects are likely to occur. It is noted in paragraph 6.7.2 of the Scoping Report that the scope of offshore transport effects (beyond mean high water springs) are proposed to be considered elsewhere in the ES).</i></p>	<p>operation and maintenance phase. This is set out in Section 23.10. Details as to why onshore impacts of offshore works in the construction phase are scoped out is set out in Table 23-12.</p>
5.6.9	<p>“Mitigation <i>The Inspectorate welcomes the commitment to produce an Outline Construction Traffic Management Plan (Outline CTMP), Abnormal Indivisible Load (AIL) access study and PRow Management Plan. Drafts of these documents should be provided with the DCO application. It should be clear how the implementation of such plans would be secured in the DCO and the Applicant should consider how this plan would interact with the CoCP and other relevant plans.”</i></p>	<p>An Outline CTMP (Document Reference: 7.6), Outline PRowWMP (Document Reference: 7.8), and Appendix 23.1: Abnormal Indivisible Load Assessment, Volume 4 (Document Reference: 6.4.23.1) have been provided alongside the DCO Application.</p>
5.6.10	<p>“Cross Referencing with Other Disciplines <i>Any cross-referencing between aspect chapters should be clear within the ES and the Inspectorate welcomes the consideration of inter-relationships on traffic and transport.”</i></p>	<p>Cross referencing with other related aspect chapters is clearly set out throughout the chapter.</p>

Evidence Plan Process (EPP)

Overview

- 23.3.3 The Evidence Plan Process (EPP) has been set up to provide a formal, non-legally binding, independently chaired forum to agree the scope of the EIA and Habitats Regulations Assessment (HRA), and the evidence required to support the DCO Application. The EPP commenced in January 2020 and has continued throughout the EIA helping to inform the ES.
- 23.3.4 For transport, further engagement has been undertaken via the EPP Expert Topic Group (ETG) ‘Traffic, Air Quality, Noise, Health and Socio-economics’ meetings alongside additional meetings with specific stakeholders such as West Sussex County Council (WSSCC) and National Highways (NH).

27 October 2020

- 23.3.5 The first conference call on the 27 October 2020 was attended by the following stakeholders held by conference call on 27 October 2020.:
- 23.3.6 For transport, further engagement has been undertaken via the EPP Expert Topic Group (ETG) 'Traffic, Air Quality, Noise, Health and Socio-economics' meeting held by conference call on 27 October 2020. The conference call was attended by the following stakeholders:
- West Sussex County Council (WSCC);
 - Highways England (HE) (now National Highways (NH));
 - South Downs National Park Authority (SDNPA);
 - Arun District Council (ADC);
 - Mid Sussex District Council (MSDC); and
 - East Sussex County Council (ESCC).
- 23.3.7 The transport section of the ETG meeting covered the scope of the transport assessment, the baseline data and supporting assessments to be used to undertake the assessment, proposed environmental measures, proposed HGV access proposals and the assessment methodology. The engagement also presented the proposed approach to address the Scoping Opinion (Planning Inspectorate, 2020a) comments detailed in **Table 23-3**. An outline of the approach to the following documents was covered in the presentation and discussions including:
- Transport chapter to support the EIA;
 - Outline Construction Traffic Management Plan (CTMP);
 - Outline PRow Management Plan (PRowMP); and
 - Abnormal Indivisible Load (AIL) Assessment; and
 - Traffic data collection.
- 23.3.8 Key discussion points raised during the ETG meeting in October 2020 related to the application of lessons learned from the existing Rampion 1 project and to produce a schedule of transport infrastructure crossed by the onshore temporary cable corridor. This has been taken into consideration with a full highways and rail crossing schedule provided in **Appendix 4.1: Crossing schedule, Volume 4** of the ES (Document Reference: 6.4.4.1), the **Outline CTMP** (Document Reference: 7.6) while a crossing schedule of the PRow is presented in the **Outline PRowMP** (Document Reference: 7.8).
- 23.3.9 SDNPA raised during the ETG meeting on 27 October 2020:
- the Outline CTMP should include staff movements as well as HGV movements;
 - Transport for the South East (TfSE) has undertaken research into the effects of the COVID-19 pandemic on traffic flows and can advise further on this;

- consideration for impacts on Open Access Land should be included if the onshore cable corridor is likely to cross within the South Downs National Park;
- within the mitigation hierarchy, avoidance of impacts should be considered as the first option; and
- the **Outline CTMP** (Document Reference: 7.6) should include approach to enforcement of HGV routes.

23.3.10 The issues raised by SDNPA have been addressed within this chapter. The **Appendix 23.2: Technical Generation Technical Note** of the ES (Document Reference: 6.4.23.2) includes a calculation of both staff and construction vehicle movements; the **Outline CTMP** (Document Reference: 7.6) sets out measures for the management / mitigation of trips. The **Outline PRowMP** (Document Reference: 7.8) includes a review of affected Open Access Land and proposed mitigation and the overall access strategy underpinning all assessments has sought to avoid impacts on towns, villages, PRow and other sensitive roads users as set out in **Section 23.5**.

16 March 2021

- 23.3.11 The second conference call was held for Traffic, Air Quality, Noise and Socio-economics on 16 March 2021 with the same key stakeholders as the meeting on 27 October 2020.
- 23.3.12 The transport section of the ETG meeting covered an update on baseline data, consultation progress, construction traffic generation, PRow impacts, the **Outline CTMP** (Document Reference: 7.6), the **Appendix 23.1: Abnormal Indivisible Load assessment, Volume 4** of the ES (Document Reference: 6.4.23.1) and some of the initial findings of the environmental assessment.
- 23.3.13 Key discussion points raised at the meeting were as follows:
- HGV construction route enforcement;
 - locations of Highways Links assessed as part of the transport assessment;
 - time restrictions for construction traffic;
 - use of helicopters during the Construction phase;
 - interactions with the proposed A27 Arundel Bypass project;
 - trenchless crossing proposals in relation to the SRN;
 - additional speed surveys to inform access visibility requirements; and
 - ALLs during the decommissioning phase.
- 23.3.14 HGV route enforcement will be addressed within the **Outline CTMP** (Application Document Reference: 7.6) prepared to support the onshore elements of the Proposed Development and agreed requirements of the DCO. The **Outline CTMP** (Document Reference: 7.6) includes details on timings on the local highways network for all construction vehicles including HGVs as well as trenchless crossing proposals and details on visibility splays. **Table 23-29** sets out the locations of the highways links assessed in the ES. The **Appendix 23.1: Abnormal Indivisible**

Load assessment, Volume 4 of the ES (Document Reference: 6.4.23.1) sets out details of AILs in the construction and decommissioning phases.

- 23.3.15 It is not proposed to use helicopters for the construction phase of the Proposed Development.

25 November 2022

- 23.3.16 The third ETG meeting was held for traffic and socio-economics stakeholders on 25 November 2022. Key stakeholders were present including WSCC, NH and SDNPA.
- 23.3.17 A project update was provided to stakeholders including regarding the alternatives and modifications assessed within the Preliminary Environmental Information Report (PEIR, 2021) Supplementary Information Report (SIR) (RED, 2022) as part of RED's second Statutory Consultation exercise (October to November 2022). It was also noted that the Oakendene substation had now been selected by RED.
- 23.3.18 A review of the Section 42 comments received from Rampion 2's second Statutory Consultation exercise (October to November 2022), and progression of subsequent actions, was also provided, as well as a summary of publication of the PEIR and PEIR SIR reports (RED, 2021; 2022) and associated traffic counts.
- 23.3.19 Clarification was sought by the South Downs National Park Authority (SDNPA) regarding certain impacts on the South Downs National Park (SDNP), for example in relation to inter-site trips: it was clarified that these would be covered as part of the ES.
- 23.3.20 An update in regards to surveys was provided at the meeting confirming that since November 2021 automatic traffic counter (ATC) surveys had been undertaken in April / May 2022 at a further four locations including:
- Ferry Road;
 - Long Furlong;
 - A283; and
 - B2118
- 23.3.21 It was confirmed at the meeting that Crossbush Lane had not been surveyed as the area was not expected to be impacted by the Proposed Development.
- 23.3.22 It was confirmed that an Outline Travel Plan would be prepared as part of the DCO Application submission and that further information would be provided in the ES in relation to access and visibility, including road safety audits and speed assessments.

21 February 2023

- 23.3.23 A fourth ETG meeting for traffic and socio-economics was held on 21 February 2023. Attendance of key stakeholders was similar to that of the meeting held in November 2022.
- 23.3.24 The transport section of the fourth ETG included an update on Rampion 2's second Statutory Consultation exercise (October to November 2022) including a

review of comments received with respect to the PEIR SIR (RED, 2022). In addition, an update on the consultation process was provided, together with details on the preparation of the documents which would accompany the ES chapter within the DCO Application submission. It was outlined and agreed that the **Appendix 23.2: Traffic Generation Technical Note, Volume 4** of the ES (Document Reference: 6.4.23.2) would include a level of detail considered to be proportionate to the volume of traffic predicted to be generated by the Proposed Development.

- 23.3.25 A request was made by SDNPA for further detail with regards to the port chosen to transport materials offshore; it was confirmed by RED that, at the time of the meeting, there was not a named port, and that one might not be included at the time of DCO Application submission. However, it was confirmed that the TGTN would include details of traffic to and from the port, depending on the level of detail available by the time of the DCO Application submission.

19 April 2023

- 23.3.26 On 19 April 2023, a follow-up meeting to expand upon issues raised in the February 2023 ETG was held via Microsoft Teams, attended by representatives from WSCC and NH.
- 23.3.27 WSCC and NH provided feedback with regards to a number of proposed accesses to be used during construction and / or operation and maintenance. These included accesses at Michelgrove Lane, Longfurlong Lane and Tolmare Farm, all on the A280 Long Furlong. Stakeholders raised potential issues with large and / or slow-moving traffic using the accesses, particularly during the construction phase. In response, RED stated that further work would be undertaken to verify whether access use could be rationalised in cases where several accesses exist in close proximity.
- 23.3.28 In order to facilitate the detailed design of proposed accesses, as well as the targeted assessment of impacts, consultees also requested further information about accesses' usage, particularly during the construction phase. RED proposed to provide further information based on which accesses would be the most heavily used during the construction phase.
- 23.3.29 Speed surveys, road safety audits (RSAs) and Walking, Cycling and Horse-Riding Assessment and Reviews (WCHARs) were also discussed. It was agreed to assess the proposed usage and characteristics of the accesses in order to inform the potential need for the various surveys at each location.
- 23.3.30 Previously agreement had been reached to use traffic data for a 5-year period. WSCC confirmed they were satisfied that this could include years during the COVID-19 pandemic related restrictions, however NH stated that the 5 years should exclude COVID-19 pandemic years. It was agreed that, in view of the extensive accident analysis already undertaken, targeted analysis for a further two-year period in proximity only of the proposed accesses would also be undertaken.
- 23.3.31 Stakeholders noted that the temporary construction compound site at Washington was proposed to be accessed from the inside of a bend. RED took note of this

feedback, and confirmed this would be considered as part of the access's detailed design development.

20 June 2023

- 23.3.32 On 20 June 2023, a further ETG meeting was held via Microsoft Teams, attended by representatives including from WSCC and NH.
- 23.3.33 During this call, attendees were updated regarding progress on the application and the transport technical documents. This included mention of ongoing work being undertaken to update the traffic flow methodology and associated outputs.

13 July 2023

- 23.3.34 On 13 July 2023, a targeted meeting was held with attendees from NH, SDNPA and WSCC.
- 23.3.35 Items discussed included progress made on the application, the transport technical documents, and the design of accesses.

20 July 2023

- 23.3.36 On 20 July 2023, a targeted meeting was held with attendees from NH, SDNPA and WSCC.
- 23.3.37 Items discussed included progress made on the application and its likely submission date, together with when the transport documents would be made available for review by consultees. Further discussion was held around speed surveys, visibility splays and road safety audits (RSAs).

Non-statutory consultation

Overview

- 23.3.38 Non-statutory consultation captures all consultation and engagement outside of statutory consultation exercises and has been ongoing with a number of prescribed and non-prescribed consultation bodies and local authorities in relation to transport. A summary of the non-statutory consultation undertaken since completion of the Scoping Report (RED, 2020) is outlined in this section.

Non-statutory consultation exercise – January 2021 / February 2021

- 23.3.39 RED carried out a non-statutory consultation exercise for a period of four weeks from 14 January 2021 to 11 February 2021. This non-statutory consultation exercise aimed to engage with a range of stakeholders including the prescribed and non-prescribed consultation bodies, local authorities, Parish Councils and general public with a view to introducing the Proposed Development and seeking early feedback on the emerging designs.
- 23.3.40 The key themes emerging from non-statutory consultation relating to transport are:
- concerns over the use of the Wineham Lane for construction traffic;
 - details around construction programming and phasing;

- onshore substation design and potential screening;
- traffic management during the Construction phase and the capacity of local roads; and
- questions around the management of PRoW during construction including temporary and permanent diversions, and reinstatement.

23.3.41 Further detail about the results of the non-statutory consultation exercise can be found in **Consultation Report** (Document Reference: 5.1).

West Sussex County Council

23.3.42 Engagement with WSCC has been ongoing since August / September 2020. Early email discussions in September 2020 outlined the Proposed Development and set out questions relating to baseline data collection, traffic growth and use of strategic models to inform transport assessments.

23.3.43 The response to this initial consultation provided by WSCC in September 2020 outlined:

- issues with the refinement of the A27 Arundel to Bypass and Worthing to Lancing Strategic Model on the A259 corridor and routes north of the Downs and the model does not include the A272 as well as other roads within the proposed transport Study Area of the Rampion 2 assessment. It was noted this is a NH traffic model;
- WSCC has developed the East Arun Transport Model which covers part of the Rampion 2 transport Study Area and has a base year of 2014;
- there is an A29 realignment model which has a base year of 2019 and covers Chichester to the River Arun, although the key routes in this model fall outside the Rampion 2 transport Study Area;
- a new traffic model has been developed of the A259 covering a small part of the Rampion 2 transport Study Area but this will not be available until late 2021/2022;
- there is an Arun Transport Study, however this has a base year of 2009 which was revalidated to 2015. WSCC considered the Arun Transport Study to be insufficiently detailed and current for the Rampion 2 assessment during consultation; and
- there is a Horsham Local Plan Transport Model which has a base year of 2018 and a network that includes some of the northern element of the Rampion 2 transport Study Area.

23.3.44 The suitability of the transport models as potential sources of traffic data was discussed with WSCC and it was agreed that none will be appropriate for the assessment for a variety of reasons including model area and/or network coverage and the age of the base data. It was further agreed that for the purpose of the PEIR, it will be appropriate for the baseline data to be derived from historic traffic counts sourced from WSCC and publicly available survey data. Further information on this is set out in **Section 23.5**.

23.3.45 Further correspondence regarding the scope of the assessment was held with WSCC in January / February 2021 with agreement reached on the following aspects:

- use of historic traffic count data for key construction routes;
- future year of 2026/27 based on the estimated traffic generated by the onshore elements of the Proposed Development during the construction phase;
- the use of the Trip End Model Presentation Program (TEMPro) is acceptable to growth the trip rates to the future year without the requirement to add committed development traffic flows;
- access visibility designs and use of DMRB to inform the following:
 - ▶ construction access designs and the types proposed on the onshore elements of the Proposed Development; and
 - ▶ permanent accesses.

23.3.46 An non-statutory consultation response relating to the onshore elements of the Proposed Development was also received in January 2021. The key comments received and how these were addressed in the assessments / design are set out below:

- issues regarding use of Bob Lane as a temporary construction access due to ongoing concerns by local residents, in particular its narrow width. This has been incorporated into the design of the Proposed Development and Bob Lane is no longer proposed to be used as a temporary construction access; and
- temporary construction access to the onshore substation site at Oakendene: Kent Street was not considered appropriate as a main construction access to the onshore substation site by some consultees, and instead an access directly off the A272 was proposed. This has been addressed within the design of the Proposed Development, as temporary construction and permanent access from the A272 is proposed for the onshore substation site. Details of the temporary construction access and the permanent access arrangement from the A272 are set out in the **Outline CTMP** (Document Reference: 7.6). Kent Street remains proposed for use as a temporary construction access for onshore cable corridor works.

National Highways (formerly Highways England)

23.3.47 Engagement with National Highways (NH) has been ongoing since August 2020. NH provided the following comments regarding the assessment:

- NH is concerned about proposals that have potential impact on the safe and efficient operation of the SRN, in this case, particularly the A27;
- the approved Arun Local Plan strategic model is a potential source for data;
- DMRB LA104 (Standards for Highways, 2020) should be considered with reference to crossings of the SRN;

- use of a TEMPPro growth methodology (that has been agreed with WSCC) would be acceptable to NH;
 - consultation with the A27 Arundel Bypass scheme team is encouraged; and
 - the A27 Arundel Bypass has a preferred alignment but is not a committed scheme.
- 23.3.48 NH comments outlined in **paragraph 23.3.38 23.3.47** have been addressed in the design of the Proposed Development and / or within this chapter.
- 23.3.49 The A27 is a key route for access to the Proposed Development and this chapter has included the assessment of nine receptors on the A27 and two on the A23.
- 23.3.50 Crossings of the SRN do not need to apply DMRB as the crossing of the SRN (A27) will be via a trenchless crossing, and traffic will flow freely along the road during the Construction phase without delay during drilling and subsequent laying of the cable. TEMPPro has been used to understand traffic growth on the SRN in **Sections 23.5** and **23.6**.
- 23.3.51 A meeting was held with the NH A27 Bypass scheme team on 21 October 2020 which introduced the individual project teams and provided a presentation of both the Proposed Development and the current A27 Bypass scheme to be taken forward. NH have also attended subsequent ETGs.
- 23.3.52 A meeting was held with National Highways on 21 July 2022 which focused on the requirement to use temporary construction accesses directly onto A27 east of Crossbush. These locations were not considered as temporary construction accesses direct onto the A27 and had not been previously identified in discussions with NH. It was agreed with NH that it would be appropriate to use the accesses for temporary construction accesses. These temporary construction accesses would be required to allow for construction of LACR-01 (LACR-01a, LACR-01b and LACR-01c).

Statutory Consultation

First Statutory Consultation exercise – July to September 2021

- 23.3.53 Rampion 2's first Statutory Consultation exercise under Section 42 of the Planning Act 2008 ran from 14 July to 16 September 2021 for a period of nine weeks. The PEIR (RED, 2021) was published as part of Rampion 2's first consultation exercise which provided preliminary information on transport within Chapter 24: Transport.
- 23.3.54 **Table 23-4** provides a summary of the key themes of the feedback received in the first statutory exercise in 2021 in relation to transport and outlines how the feedback has been considered in this ES chapter. A full list of all comments received during the first statutory consultation exercise in 2021 and the responses to those comments is provided in the **Consultation Report** (Document Reference: 5.1).

Table 23-4 First Statutory Consultation exercise (July – September 2021) feedback

Stakeholder	Theme	How this is addressed in this ES
Multiple stakeholders including (but not restricted to) Arun District Council, Clymping Parish Council, West Sussex County Council	<p>During the construction phase of highways, careful consideration needs to be given to the impact on various aspects such as the number and location of construction compounds and the routing of construction traffic. These factors are crucial in determining the overall impact and effectiveness of the construction process.</p>	<p>Decisions around traffic routes are addressed in the Outline CTMP (Document Reference: 7.6), decisions around compound locations are addressed in the Chapter 4: The Proposed Development, Volume 2 of the ES (Document Reference 6.2.4).</p>
East Sussex County Council	<p>The County Council has finished the second phase of the Newhaven Port Access Road, funded by the Department for Transport (DfT) and the council's own capital program. This road project enhances connectivity to the East Quay area of the Port, including the Rampion site, by providing final links from the Access Road to the Port land. It improves access from the strategic road network (A26 and A27) into the designated area, benefiting transport in the region.</p>	<p>The residual road transport impacts around the vicinity of the chosen designated port are considered in this ES Chapter from paragraphs 23.4.26 to 23.4.34.</p>
East Sussex County Council	<p>Most components and materials for Rampion 2 would be shipped directly from European manufacturing bases to the offshore construction area, bypassing the need to land in the UK. Additionally, materials from different locations within the UK would be shipped from various ports rather than a single designated port. The majority of transport would occur via sea, thereby avoiding any potential impacts on highways.</p>	<p>The residual road transport effeimpacts around the vicinity of the chosen designated port are considered in this ES Chapter.</p>

Stakeholder	Theme	How this is addressed in this ES
National Highways (formally Highways England)	<p>The primary effects of traffic generation on the Strategic Road Network will occur in on the A23, A27, and the A26 between Newhaven and the A27.</p>	<p>The impact of Rampion 2 on the SRN is provided in Appendix 23.2: Traffic Generation Technical Note, Volume 4 of the ES (Document Reference: 6.4.23.2).</p>
National Highways (formally Highways England), Royal Mail Group, The Environment Agency, Washington Parish Council	<p>Awareness of the significant local major development proposal A27 Arundel bypass which Highways England is planning to construct between 2024 and 2030. The underground cable circuits pass beneath the A27 and are in proximity to the proposed A27 Arundel Bypass scheme. Need to ensure that any cabling route is compatible with/ does not fetter the ability of NH to deliver any consented scheme. Impacts of both need to be considered.</p>	<p>Comments on the A27 Arundel Bypass scheme provided in the Outline CTMP (Document Reference: 7.6).</p>
National Highways (formally Highways England), Mid Sussex District Council	<p>A Transport Assessment, an updated Construction Traffic Management Plan, and an Outline Travel Plan have been requested for Rampion 2. These documents are intended to evaluate whether the environmental and transport impacts of the project can be adequately mitigated, ensuring minimal negative effects on the surrounding area. They also provide a comprehensive understanding of how the proposed development will impact the strategic road network (SRN). The assessment of these plans will determine whether the project can proceed without significant detriment to</p>	<p>An Outline CTMP (Document Reference: 7.6), Appendix 23.2: Traffic Generation Technical Note, Volume 4 of the ES (Document Reference: 6.4.23.2) and an Outline CWTP (Document Reference: 7.6) have been submitted alongside the DCO Application.</p>

Stakeholder	Theme	How this is addressed in this ES
	<p>the area or ascertain the extent of its impacts on the SRN.</p>	
<p>National Highways (formally Highways England)</p>	<p>The baseline modelling assessments for the project rely on historical traffic data. It is recommended in the detailed transport assessment review section that the baseline data be updated using revised traffic surveys starting from September 2021. This update is necessary due to the relaxation of COVID-19 restrictions, which may have an impact on traffic patterns and volumes.</p>	<p>Methodology for baseline data gathering is discussed in Section 23.5.</p>
<p>National Highways (formally Highways England)</p>	<p>Confirmation is needed that the construction work associated with the proposed development will minimise additional trips during the network weekday morning peak from 08:00 to 09:00 and the network evening peak from 17:00 to 18:00. The specific number of trips expected during these peak hours needs to be provided as part of the confirmation process. NH emphasises the importance of minimising construction-related traffic during these peak periods to avoid disruptions to the network.</p>	<p>The Outline CTMP (Document Reference: 7.6) provides information about the breakdown of trips.</p>
<p>National Highways (formally Highways England), West Sussex County Council</p>	<p>It is stated that a full traffic data set for 2021 will be surveyed in September 2021, following the lifting of COVID-19 restrictions in the UK. This updated baseline data will be used for the Environmental Statement (ES) chapter and other supporting documents. It is requested that the applicant arranges for updated traffic surveys to be</p>	<p>Further engagement has taken place with NH with regards to the validity of pre-COVID-19 pandemic data and the need to undertake refreshed surveys.</p>

Stakeholder	Theme	How this is addressed in this ES
	<p>conducted from September 2021 onwards. The surveys should take place on a neutral weekday outside of school holiday periods, provided there are no changes to COVID-related requirements.</p>	
<p>National Highways (formally Highways England), West Sussex County Council</p>	<p>The PEIR does not provide evidence to determine if the peak weeks occur between week 53 and 136. A request is made for further information and acknowledges the need for additional data to determine the specific timing of peak weeks and highlights the importance of addressing this information gap to ensure a comprehensive understanding of the project's impacts.</p>	<p>Appendix 23.2: Traffic Generation Technical Note, Volume 4 of the ES (Document Reference: 6.4.23.2) provides details of how the peak week has been calculated and when it is forecast to occur.</p>
<p>National Highways (formally Highways England)</p>	<p>Stakeholders want to be consulted once the final arrangement of the construction works, methods and the construction phases is determined, given the implications for vehicle movements and number of staff required.</p>	<p>Further engagement has taken place with a range of stakeholders.</p>
<p>National Highways (formally Highways England)</p>	<p>The applicant is required to confirm whether construction personnel are included in the overall trip generation. If they are not included, they should be incorporated into the calculations. Trip generation should be provided in much more detail such and divided into hourly time periods throughout the entire construction period, with a specific focus on the peak hours of the highway network. The applicant must provide a clear</p>	<p>Construction personnel are included within the overall trip generation found in Appendix 23.2: Traffic Generation Technical Note, Volume 4 of the ES (Document Reference: 6.4.23.2).</p>

Stakeholder	Theme	How this is addressed in this ES
National Highways (formally Highways England)	<p>explanation of how the presence of plant equipment and personnel translates into traffic generation figures. This clarification is necessary to accurately assess the impact of construction activities on the transport network.</p>	<p>Construction personnel are expected to make movements within the assessment boundary during the working day, and these movements have been included as part of the Appendix 23.2: Traffic Generation Technical Note, Volume 4 of the ES (Document Reference: 6.4.23.2).</p>
National Highways (formally Highways England)	<p>The PEIR and Appendix 24.4 do not assess the expectation of 2000+ two-way movements for crew support vessels from onshore ports to offshore infrastructure. This omission is concerning as it indicates an underestimation of the number of additional trips on the strategic road network (SRN) resulting from this activity. The specific timeframe for these 2000+ movements is not clarified, whether it is per day, per week, per year, or over the entire construction period.</p>	<p>The 2000+ two-way movements is spread over the period of construction.</p>
National Highways (formally Highways England)	<p>In Chapter 24, a daily vehicle figure is provided per 'Highway Link.' This daily figure does not provide information about the timing of these trips. NH raises concerns about the distribution of trips throughout the day. They seek clarity on whether the trips</p>	<p>The Outline CTMP (Document Reference: 7.6) provides information on the booking system (included in the DMS) which will be used so that construction deliveries to the construction sites are spread across the working</p>

Stakeholder	Theme	How this is addressed in this ES
	<p>will be evenly spread out or if there will be specific peak hours associated with Rampion 2. More detail is required to understand the proposed timing of these trips. They express particular concern if a significant number of trips are planned during the morning and evening peak hours on the highway network.</p>	<p>day (where feasible). This will minimise the impact of construction HGV traffic during the peak periods.</p>
<p>National Highways (formally Highways England)</p>	<p>Traffic flow diagrams are provided for the Wineham Lane substation, but they only cover the local highway network and display daily trips. Highway Links 26 and 27 have logical routes to the strategic road network (SRN). Therefore, the applicant should expand the traffic flow diagrams to include the SRN, along with the morning (AM) and evening (PM) network peaks, the identified construction traffic peaks for Rampion 2 (AM and PM), and the average interpeak period.</p>	<p>Traffic flow diagrams can be found in Figure 23.19, Volume 3 of the ES (Document Reference: 6.3.23).</p>
<p>National Highways (formally Highways England)</p>	<p>It is observed that the temporary construction compounds are not accessed directly from the strategic road network (SRN). However, it is anticipated that vehicles destined for the temporary construction compounds would utilise the SRN to reach their respective locations. The Climping Landfall Site (Site 1) is likely to be accessed via the A27, while the Oakendene Industrial Estate (Site 3) would be accessed through the A23. The Construction Traffic Management Plan (CTMP) refers to seven different</p>	

Stakeholder	Theme	How this is addressed in this ES
	<p>construction compounds. Therefore, the applicant is requested to provide clarification regarding the exact number of temporary construction compounds.</p>	
<p>National Highways (formally Highways England)</p>	<p>The applicant should submit all temporary construction management plans and temporary traffic management measures to the stakeholder for review and comment.</p>	<p>These are being submitted as appendices to the application (Outline CTMP (Document Reference: 7.6)).</p>
<p>Lyminster & Crossbush Parish Council, SDNPA</p>	<p>There are significant objections to the proposed routes B and C through Crossbush village. Both would cause great disruption due to heavy machine traffic along single track country roads, close to local residents.</p>	<p>The proposed cable route no longer passes close to Crossbush, and traffic associated with the Proposed Development would also not need to pass through the village.</p>
<p>Royal Mail Group</p>	<p>Royal Mail requests that the CTMP includes specific requirements that during the construction phase Royal Mail is notified by Rampion Extension Development Limited or its contractors at least one month in advance on any proposed road closures / diversions / alternative access arrangements, hours of working, and the CTMP includes a mechanism to inform major road users (including Royal Mail) about works affecting the local highways network (with particular regard to Royal Mail's distribution facilities near the DCO application boundary as identified above).</p>	<p>Noted – no specific actions in the ES.</p>
<p>SDNPA</p>	<p>The PEIR seems to downplay the effects of transport, including within the National Park, and as a result, the proposed mitigation</p>	<p>Sustainable transport has been considered in the Outline Operational Travel Plan (OTP) (Document</p>

Stakeholder	Theme	How this is addressed in this ES
	<p>measures are deemed insufficient. There is a suggestion that greater efforts could be made to promote sustainable transport during the construction phase.</p>	<p>Reference: 7.5) and Outline CWTP (Document Reference: 7.7).</p>
<p>Washington Parish Council</p>	<p>There are significant concerns regarding the proposed construction compounds in the village and the excessive disruption it would cause to residents, including a primary school and campsite. The Council deems any location within the parish or nearby as entirely inappropriate due to existing traffic pressures on the local A283 and A24, including Washington Roundabout and the surrounding country road network.</p>	<p>The Outline CTMP (Document Reference: 7.6) contains details regarding the proposed routes which construction vehicles will take. Decisions around compound locations are addressed in the Chapter 4: The Proposed Development, Volume 2 of the ES (Document Reference 6.2.4).</p>
<p>West Sussex County Council</p>	<p>Eight out of the 13 settlements in the study area, including Climping, Littlehampton, Crossbush, Warningcamp, Wepham, Wiston, Partridge Green, and Shermanbury, would experience significant temporary visual effects. Additionally, the views from five long-distance recreational routes, such as the Downs Link located approximately 500m south of Partridge Green, would be significantly affected during the construction phase. Recreational users of approximately 76 local Public Rights of Way (PRoWs) would also be significantly affected, both directly and indirectly. It is necessary to ensure suitable accommodation for all PRoWs during construction and</p>	<p>Impacts on PRoW have been discussed in the Outline PRoWMP (Document Reference: 7.8).</p>

Stakeholder	Theme	How this is addressed in this ES
	minimize adverse impacts after the works are completed.	
West Sussex County Council	Compound 2 (Washington) lacks peak week movements associated with it. This compound raises concerns due to the increased presence of slow-moving HGVs on the A24 at a junction without a merge, as well as poor forward visibility for vehicles turning from the A283 onto The Hollow. Further discussions are necessary with WSCC regarding potential locations and the impacts associated with siting a compound in this area.	The Outline CTMP (Document Reference: 7.6) provides data for all compounds.
West Sussex County Council	Clarity is required on the access points presented, if possible, the number should be reduced, especially where multiple accesses are proposed onto the same road.	Accesses have been reduced at the ES stage and discussed along with visibility splays in the Outline CTMP (Document Reference: 7.6).
West Sussex County Council	The visibility requirements for access locations will be determined based on speed surveys, although there are a few locations (such as Access 13 and 20a) where achieving adequate visibility may be challenging. It is important to determine if feasibility checks have been conducted for the access locations and what alternatives are in place if some accesses do not meet the necessary visibility guidelines or have negative implications in both visual and ecological terms.	Visibility splays have been reviewed for all accesses along the route.
West Sussex County Council	Consideration needs to be given to where the use of certain roads is required, and aren't	The Outline CTMP (Document Reference: 7.6) sets out the principles of

Stakeholder	Theme	How this is addressed in this ES
	suitable. Some roads lack any merge lane, will significantly increase slow moving HGV movements onto a high-speed road, will disrupt the only access to businesses for staff, deliveries, and emergencies, or not be accessible during adverse weather conditions.	which routes have been selected for use by HGVs.

23.3.55 Following feedback to the first Statutory Consultation exercise in 2021 and after further analysis, it was identified that some coastal residents did not receive consultation leaflets as intended. Therefore, the first Statutory Consultation was reopened between 7 February 2022 to 11 April 2022 for a further nine weeks. No feedback or comments were received from the reopened first Statutory consultation in relation to transport.

Second Statutory Consultation exercise – October to November 2022

23.3.56 The second Statutory Consultation exercise was undertaken from 18 October 2022 to 29 November 2022. This was a targeted consultation which focused on updates to the onshore cable corridor proposals which were being considered following feedback from consultation and further engineering and environmental works. As part of this second Statutory Consultation exercise, RED sought feedback on the potential changes to the onshore cable corridor proposals to inform the onshore design taken forward to DCO application.

23.3.57 **Table 23-5** provides a summary of the key themes of the feedback received in the second Statutory Consultation exercise in 2022 in relation to transport and outlines how the feedback has been considered in this ES chapter. A full list of all comments received during the second Statutory Consultation exercise in 2022 and the responses to those comments is provided in the [Consultation Report](#) (Document Reference 5.1).

Table 23-5 Second Statutory Consultation exercise (October – November 2022) feedback

Stakeholder	Theme	How this is addressed in this ES
Horsham District Council, Shermanbury Parish Council, Storrington & Sullington PC	Additional traffic using roads is a concern to local communities.	Local access routes have been developed based on considerations including areas prone to congestion and are available in the Outline CTMP (Document Reference: 7.6).

Stakeholder	Theme	How this is addressed in this ES
Horsham District Council, Washington Parish Council	The visual impact of the proposed routes would be significant, and out of context with the surrounding countryside. Open views are attractive and having a permanent access in this location is likely to have a negative effect on the special qualities of the SDNP.	Noted – no specific actions in the ES.
Horsham District Council, Washington Parish Council	Query the need for accesses in such close proximity.	Accesses have been reduced at the ES stage and discussed in the Outline CTMP (Document Reference: 7.6).
Network Rail Infrastructure Ltd	The scheme introduces an alternative access AA-03, which uses the Pring level User-Worked Level Crossing. Network Rail, additional information regarding the frequency and types of vehicles that would utilise the level crossing is needed in order to assess the proposal and determine if any measures are required to mitigate potential risks associated with it.	AA-03 (as presented in the PEIR SIR (RED, 2022)) has been discounted as an access following design refinements and not included within the proposed DCO Order Limits. Trenchless crossing will mean no impact on the rail network at either level crossing on the Network Rail network.
Network Rail Infrastructure Ltd	Network Rail has standard protective provisions which it expects to be included in the DCO. These will need to be amended to incorporate appropriate cross-references to the DCO provisions. Network Rail would like to ensure that that submitted form of DCO includes an agreed form of protective provisions.	This is noted.
Poling Parish Council	Risks of the proposed access to the A27 between houses and the proximity of shallow septic tanks, connections etc.	This access has been removed from the scheme. A list of accesses can be found in the

Stakeholder	Theme	How this is addressed in this ES
	and also to some redundant fuel storage tanks in the area that will need further investigation.	Outline CTMP (Document Reference: 7.6).
Poling Parish Council, Shermanbury Parish Council, Shermanbury Parish Council, Twineham Parish Council	Consideration needs to be given to where the use of certain roads is required, and aren't suitable. Only access roads in to villages mustn't be blocked off and fragile road surfaces must be considered.	Local access routes have been developed based on considerations including areas prone to congestion and are available in the Outline CTMP (Document Reference: 7.6). Poling Lane in particular is now crossed by trenchless crossing methods and will not need to be closed.
Poling Parish Council	The new A27 Arundel Bypass works at Crossbush could be much greater than previously envisaged as new roundabouts and a second A27 bridge crossing are being consulted upon so this may increase the amount of trenchless work on the existing proposed blue route. This reinforces a choice of route that would follow the contours around the edge of the valley to connect back up with the existing route at Wepham.	Comments on the A27 Arundel Bypass scheme provided in the Outline CTMP (Document Reference: 7.6).
Shermanbury Parish Council, West Sussex County Council	Disruption footpaths, and bridleways; this must be minimised. The detail is light on the impacts to PRowS and some alternative routes put users on roads.	Impacts and PRowS diversions have been addressed in the Outline PRowMP (Document Reference: 7.8).
Shermanbury Parish Council, Twineham Parish Council, West Sussex County Council	Traffic management systems should not be used at the Bolney National Grid site. The road is straight, and a simple give way system is adequate. Other traffic management systems should be adjusted to	Site specific mitigation has been considered in the Outline CTMP (Document Reference: 7.6).

Stakeholder	Theme	How this is addressed in this ES
	only be in place during working hours.	
Storrington & Sullington PC	Provision should be made for a layby located away from the site on the A23/A272 for HGVs to park up prior to gaining access to the site as this may go some way to reducing the number of movements per hour.	This feedback is noted.
Storrington & Sullington PC, Twineham Parish Council	Measures should be put in place to prevent HGVs travelling through villages and to enforcement of lorry routes.	Local access routes have been developed based on considerations including areas prone to congestion and are available in the Outline CTMP (Document Reference: 7.6).
Washington Parish Council	West Sussex County Council (WSCC) describes the A283 as “a very busy high speed rural road, which does not have a good accident record” (WSCC Report to Executive Member ‘Proposed extension to Rampion Offshore Windfarm; Approval of Consultation Response’ September 2021). As a consequence, WSCC asked Rampion to reduce the number of access point from the A283, not to increase the number as proposed.	Along the route overall, accesses have been reduced at the ES stage and discussed in the Outline CTMP (Document Reference: 7.6). In the vicinity of Washington it is still necessary to provide accesses.
Washington Parish Council	Construction compounds must be easily served by major routes, including the A283 and A24. However, the proximity of Washington village to these roads and the fact that our residents inevitably rely upon them for every day access gives rise to the possibility of conflict between construction traffic and local traffic.	Local access routes have been developed based on considerations including areas prone to congestion and are available in the Outline CTMP (Document Reference: 7.6).

Stakeholder	Theme	How this is addressed in this ES
Washington Parish Council	<p>The Rock Common Quarry is not suitable for a construction compound with issues relating to existing traffic flows and sightlines. The possibility exists that further HGV traffic will be generated by activities at this site and this has not yet been taken into account in the evaluation of its operational suitability.</p>	<p>Rock Common Quarry is no longer proposed to be a temporary construction compound</p>
West Sussex County Council	<p>A significant number of PRoWs will be impacted along the onshore cable route, whichever route is taken forward from those proposed through this consultation. This should be kept to a minimum through the design evolution process when refining to a single cable route option.</p>	<p>Impacts and PRoW diversions have been addressed in the Outline PRoWMP (Document Reference: 7.8).</p>
West Sussex County Council	<p>The LACR-01 cable route proposes a crossing with the Lyminster Bypass, construction on which has recently commenced. It is noted that the alignment of the bypass is not shown on any drawings submitted or therefore considered against the related new access points.</p>	<p>The cable route has been designed with a trenchless crossing of the Lyminster Bypass, however, the drawings show the road network in its present state.</p>
West Sussex County Council	<p>Confirmation is required on the number and location of new accesses.</p>	<p>Accesses have been reduced and clarified at the ES stage and discussed in the Outline CTMP (Document Reference: 7.6).</p>
West Sussex County Council	<p>There are a number of accesses indicated in the table where a visibility splay is not required (e.g. AA-22, 23, 24, 26). Whilst these accesses may be existing, the proposals will intensify the use. Some of</p>	<p>Visibility splays have been reviewed prior to DCO submission based on maximum road design speed and are available in the Outline CTMP (Document Reference: 7.6).</p>

Stakeholder	Theme	How this is addressed in this ES
	these accesses are also onto high-speed roads and have potentially substandard visibility for emerging vehicles at present. An appropriate review of the appropriateness of these accesses to accommodate the intended use should be undertaken.	
West Sussex County Council	WSCC will require detailed consultation on the draft PRoW Strategy prior to submission of the DCO to understand and make comment on the proposals to impact PRoW, once a refined cable route has been chosen.	WSCC have been consulted on PRoWs in advance of DCO submission, this is included in the Outline PRoWMP (Document Reference: 7.8).

Third Statutory Consultation exercise – February to March 2023

- 23.3.58 The third Statutory Consultation exercise was undertaken from 24 February 2023 to 27 March 2023. This was a targeted consultation which focused on a further single onshore cable corridor alternative being considered following feedback from consultation and further engineering and environmental works. As part of this third Statutory Consultation exercise, RED sought feedback on the potential changes to the onshore cable corridor proposals to inform the onshore design taken forward to DCO Application.
- 23.3.59 **Table 23-6** provides a summary of the key themes of the feedback received in the third Statutory Consultation exercise in 2023 in relation to transport and outlines how the feedback has been considered in this ES chapter. A full list of all comments received during the third Statutory Consultation exercise in 2023 and the responses to those comments is provided in the **Consultation Report** (Document Reference 5.1).

Table 23-6 Third Statutory Consultation exercise (February – March 2023) feedback

Stakeholder	Theme	How this is addressed in this ES
Clapham Parish Council, WSCC	The routing of the cable may have temporary impacts for traffic, Long Furlong is already heavily congested at peak travel times and it is difficult to envisage how this aspect can be	Local access routes have been developed based on considerations including areas prone to congestion and are

Stakeholder	Theme	How this is addressed in this ES
	successfully managed to avoid potential gridlock during the work.	available in the Outline CTMP (Document Reference: 7.6)
Horsham District Council, WSCC	The cable corridor passes through a number of Public Right of Ways.	An Outline PRowMP (Document Reference: 7.8) has been written up outlining the effected routes, closures and diversions.

Fourth Statutory Consultation exercise – April to May 2023

- 23.3.60 The fourth Statutory Consultation exercise was undertaken from 28 April 2023 to 30 May 2023. This was a targeted consultation which focused on the proposed extension works to the existing National Grid Bolney substation to facilitate the connection of the Rampion 2 onshore cable corridor into the national grid electricity infrastructure. As part of this fourth Statutory Consultation exercise, RED sought feedback on the proposed substation extension works to inform the onshore design taken forward to the DCO Application.
- 23.3.61 **Table 23-7** provides a summary of the key themes of the feedback received in the fourth Statutory Consultation exercise in 2023 in relation to transport and outlines how the feedback has been considered in this ES chapter. A full list of all comments received during the fourth Statutory Consultation exercise in 2023 and the responses to those comments is provided in the [Consultation Report](#) (Document Reference 5.1).

Table 23-7 Fourth Statutory Consultation exercise (April – May 2023) feedback

Stakeholder	Theme	How this is addressed in this ES
Horsham District Council	No new transport receptors have been identified as a result of the Bolney substation extension works, however it will result in a change to construction traffic generation. Construction traffic trip generation data should be further updated in detail in the ES, and that updated traffic flows associated with the proposed Bolney substation extension will be assessed as part of the ES.	Information on traffic has been provided in Appendix 23.2: Traffic Generation Technical Note, Volume 4 of the ES (Document Reference: 6.4.23.2)

23.4 Scope of the Assessment

- 23.4.1 This section sets out the scope of the ES assessment for transport. This scope has been developed as the Rampion 2 design has evolved and responds to feedback received to-date as set out in **Section 23.3**.

The Proposed Development

The onshore elements of the Proposed Development

- 23.4.2 The onshore elements of the Proposed Development will include the construction of an onshore cable corridor from landfall at Climping to a new onshore substation, at Oakendene near Cowfold, that will connect to the existing National Grid Bolney substation, Mid Sussex, via buried onshore cables.
- 23.4.3 **Figure 23.1, Volume 3** of the ES (Document Reference 6.3.23) sets out the onshore part of the proposed DCO Order Limits. The proposed DCO Order Limits includes for all the specific elements outlined of the onshore elements of the Proposed Development including temporary construction and operational accesses.
- 23.4.4 A full overview of the onshore elements of the Proposed Development are outlined in **Chapter 4: The Proposed Development, Volume 2** of the ES (Document Reference: 6.2.4).

Landfall

- 23.4.5 A landfall site is required at Climping, accessed from Ferry Road.

Onshore cable corridor

- 23.4.6 The onshore cable corridor will cover an approximate distance of 38.8km and will be buried along its entire length. For construction purposes, a nominal working width of up to 40m will be required for a majority of the onshore cable corridor, with some larger working areas required at key areas while constraints may restrict the working width in other areas.
- 23.4.7 The onshore cable corridor commences at landfall and then crosses under the A259, rail network and River Arun via trenchless crossing before also crossing by trenchless method under the A27 near Hammerpot. From here the onshore cable corridor will head northeast across the South Downs to Washington, West Sussex and under the A24 and A283 via a trenchless crossing. The onshore cable corridor continues northeast through a rural area and to new onshore substation at Oakendene, that will connect to the existing National Grid Bolney substation, Mid Sussex, via buried onshore cables. Additional infrastructure at the existing National Grid Bolney substation is required to connect Proposed Development to the National Grid electrical network.
- 23.4.8 The onshore cable corridor has numerous crossings of roads including Ferry Road, A259, A284, A27, A24, A283, Chanctonbury Ring Road, Spithandle Lane, B2135, B2116, A281, King's Lane, Kent Street, and Wineham Lane. There is also one crossing of the River Arun and two crossings of the National Rail network west

of Littlehampton and Wick. Installation of the onshore cable will utilise trenchless crossing techniques (e.g. HDD) to avoid major roads at specific locations, operating railway lines and watercourses. Details of the highways crossings are included in **Appendix 4.1: Crossing schedule, Volume 4** of the ES (Document Reference: 6.4.4.1).

- 23.4.9 For the purpose of this assessment, the entire onshore cable corridor has been split into three sections which are described below and presented in **Figure 23.2, Volume 3** of the ES (Document Reference 6.3.23). Each of the sections contains a temporary construction compound (TCC) plus a number of construction accesses, and therefore enables the study area to be studied in greater detail.
- **Section 1** runs north from landfall, across the A259, the River Arun and the two railway lines before crossing the A27 near the edge of the South Downs at Hammerpot. This section is rural but runs along the edge of the settlements of Littlehampton, Wick, Lyminster and Crossbush;
 - **Section 2** runs north east from the **Section 1** boundary to a crossing of the A24 near Washington, West Sussex. Between the A27 and A24, the onshore cable corridor has minimal interaction with the local highways network and due to the nature of access options, will make use of a continuous temporary construction haul road; and
 - **Section 3** runs from the **Section 2** boundary along the A283 corridor before turning north east to Partridge Green and further east to Bolney. This section is flat and rural in character but with more crossings of roads.

Onshore substation and extension to existing National Grid Bolney substation

- 23.4.10 The proposed DCO Order Limits includes a new onshore substation, proposed at Oakendene near Cowfold, that will connect to the existing National Grid Bolney substation, Mid Sussex, via buried onshore cables; and additional infrastructure at the existing National Grid Bolney substation to connect Rampion 2 to the existing National Grid electrical network.

Temporary Construction Compounds

- 23.4.11 A number of temporary construction compounds (TCCs) will be required in support of the construction of the onshore elements of the Proposed Development. TCCs will store materials and plant as well as form a base for traffic travelling to and from the various construction site locations which are shown in **Figure 23.3.a-c, Volume 3** of the ES (Document Reference 6.3.23). The three TCCs are as follows:
- Climping compound, off Church Lane;
 - Washington compound, north of Washington, West Sussex (accessed from A283); and
 - Oakendene west compound, west of the Oakendene Industrial Estate (accessed from A272).

- 23.4.12 There are also additional construction compounds associated with the new onshore substation at Oakendene and the extension works at the existing National Grid Bolney substation.
- 23.4.13 **Figure 23.4 a-c, Volume 3** of the ES (Document Reference 6.3.23) sets out the onshore cable corridor sections and temporary construction compounds.

Construction phase

- 23.4.14 The construction of the onshore elements of the Proposed Development is proposed to occur over an approximate four-year construction programme.
- 23.4.15 During the construction phase, there will be several phases of works and some of these will have effects on differing elements of the highways network at differing times. It is estimated that the peak of construction works will occur in 2026/2027 as set out in **Section 23.9**.
- 23.4.16 Indicative core working hours for the construction work and any construction-related traffic movements to or from onshore elements of the Proposed Development are as follows:
- 08:00 to 18:00 hours Monday to Friday;
 - 08:00 to 13:00 hours on Saturday.
- 23.4.17 Prior to and following the core working hours Monday to Friday, a 'shoulder hour' for mobilisation and shut down will be applied (07:00 to 08:00 and 18:00 to 19:00) for which restrictions are described further in the **Outline Code of Construction Practice** (Document Reference: 7.2) and commitment C-22. No activity outside of these hours, including Sundays, public holidays or bank holidays will take place apart from under the following circumstances:
- ~~23.4.17 No activity outside these hours, including on Sundays, public holidays or bank holidays, apart from under the following circumstances:-~~
- where continuous periods (up to 24 hours, 7 days per week) of construction work are required for HDD¹;
 - for other works requiring extended working hours such as concrete pouring which will require the relevant planning authority to be notified at least 72 hours in advance;
 - for the delivery of abnormal loads to the connection works, which may cause congestion on the local road network, and will require the relevant highway authority to be notified at least 72 hours in advance; or
 - as otherwise agreed in writing with the relevant planning authority.
- 23.4.18 For the purposes of a robust assessment in this chapter, traffic generation has only been calculated for a 5-day working week and no Saturday working.

¹ HDD is a continuous activity and cannot be paused once started.

- 23.4.19 Further details for the on and offshore components of the Proposed Development are set out in **Chapter 4: The Proposed Development, Volume 2** (Application Document Reference: 6.2.4) and are set out in detail in this chapter in **Section 23.7**.

Operation and maintenance phase

- 23.4.20 Following the construction phase, the operation and maintenance phase activities can be divided into three main categories:
- scheduled maintenance;
 - unscheduled maintenance; and
 - special maintenance in the event of major equipment breakdown and repairs.
- 23.4.21 A key principle is that the wind farm will be designed to operate under minimum supervisory input. Maintenance of the onshore cable is expected to be minimal. During operation and maintenance, periodic testing of the cable is likely to be required (every two to five years). This will require access to the link boxes at defined inspection points along the onshore cable corridor. This will involve attendance by up to three light vehicles, such as vans, in a day at any one location. The vehicles will gain access using existing field accesses and side accesses as agreed with landowners to reach the relevant sections of the onshore cable.
- 23.4.22 For the onshore cable, unscheduled maintenance or emergency repair visits will typically involve a very small number of vehicles, typically light vans. Infrequently, equipment may be required to be replaced, then the use of an occasional HGV may be utilised, depending on the nature of the repair.
- 23.4.23 The operational lifetime of the Proposed Development is expected to be around 30 years and for the purposes of this chapter at Year 30 the Proposed Development will reach the Decommissioning phase.

Decommissioning phase

- 23.4.24 A decommissioning plan and programme will be developed prior to construction and updated during operation of the Proposed Development to account for any changes to decommissioning best-practice and developments in technology.
- 23.4.25 The decommissioning phase is anticipated to involve the removal of offshore infrastructure above the seabed, and the removal and reinstatement of the onshore substation site. The decommissioning works are likely to be undertaken in reverse to the sequence of construction works and involve similar levels of equipment but much reduced numbers of vehicles for decommissioning.

The offshore elements of the Proposed Development

- 23.4.26 The key offshore elements of the Proposed Development will be as follows:
- up to 90 offshore wind turbine generators (WTGs) and associated foundations;

- blade tip of the WTGs will be up to 325m above Lowest Astronomical Tide (LAT) and will have a 22m minimum air gap above Mean High Water Springs (MHWS);
- inter-array cables connecting the WTGs to up to three offshore substations;
- up to two offshore interconnector export cables between the offshore substations;
- up to four offshore export cables each in its own trench, will be buried under the seabed within the final cable corridor; and
- the export cable circuits will be High Voltage Alternating Current (HVAC), with a voltage of up to 275kV.

Construction phase

- 23.4.27 During the construction phase, it is anticipated that over 2,000 two-way movements² for crew support vessels from the onshore ports to the offshore infrastructure, however it is not established how this will be organised.
- 23.4.28 The construction of the existing Rampion 1 project resulted in staff arriving and departing numerous ports in the UK and Europe and it is likely this process will be undertaken for Rampion 2. A maximum of 6 crew transfer vessels (which can typically carry 12 to 16 passengers and equipment) is required with 180 return trips³ (360 two-way movements) for all three substations during the offshore substation vessel installation.
- 23.4.29 A maximum of 10 crew transfer vessels (which can typically carry 12 to 16 passengers and equipment) is required with 1800 two-way movements for the smaller wind turbine generator type during the offshore installation.
- 23.4.30 A maximum of 6 crew transfer vessels (which can typically carry 12 to 16 passengers and equipment) is required with 600 two-way movements for the larger wind turbine generator type during the offshore installation.
- 23.4.31 Material, including large transformers, cable and WTG components are expected to be delivered directly from European manufacturing bases. WTG construction vessels are also usually moored in European ports or will transfer from other projects.
- 23.4.32 There will also be some onshore works required in relation to the offshore works but these construction activities (construction compound setup, horizontal directional drill (HDD), Transition Joint Bay (TJB) construction etc.) have relatively short durations compared with the overall landfall construction presented in this chapter for the Construction phase of the landfall site (onshore). Due to the landfall works requiring offshore works, the scheduling of the landfall works will allow for

² Two-way movements are the total of movements in both directions. If there are 100 eastbound movements and 100 westbound movements in a day on a road, there are 200 two-way movements

³ One return trip comprises 2 two-way movements in total

flexibility around the offshore schedule and sufficient time for all onshore activities to be performed so as not to delay the offshore works.

Operation and maintenance phase

- 23.4.33 When the offshore elements of the Proposed Development are constructed and commissioned, staff will be required to continue to operate and maintain the WTGs and associated infrastructure.
- 23.4.34 The maintenance port and facilities will be located in Sussex and it is assumed that all direct labour will be residents within the area. It is likely that the existing facilities at Newhaven Port will be utilised (and expanded where necessary) as the base for operations management of Rampion 2, as this will yield synergies and enable effective coordination with the existing operations team on Rampion 1.

Spatial scope and Study Area

Overview

- 23.4.35 The spatial scope of the assessment is based on the most probable routes for traffic generated by the Proposed Development, for the movement of deliveries, equipment and of staff. Identification of appropriate routes takes into consideration the following:
 - restrictions such as weight and height limits;
 - advisory HGV routes as identified in the West Sussex Transport Plan (WSCC, 2022); and
 - suitability of routes based on a review of road types and widths.
- 23.4.36 Two distinct Study Areas have been identified for the onshore impacts and onshore impacts of offshore works, as described below.

Study Area 1 – Traffic routes used for onshore construction activities

- 23.4.37 Identification of the Study Area 1 has focused on the road network to be used by traffic for all onshore temporary construction activity which will comprise a range of routes due to the number of potential access points along the onshore cable corridor. The proposed Study Area 1 is presented in **Figure 23.5, Volume 3** of the ES (Document Reference 6.3.23) which shows the highway sections, referred to as ‘highway links’, that have been included in the assessment as set out in **Table 23-8**.

Table 23-8 Highways links within the Rampion 2 onshore Study Area (1)

Highways link	Link names	Highways link	Link names
1	Ferry Road	19	A283, Steyning
2	Church Lane	20	A24, South of A272

Highways link	Link names	Highways link	Link names
3	Ford Road	21	B2116, Partridge Green Road
4	A27, West of Arundel	22	A281, South Shermanbury
5	A259, West of Wick	23	A281, South of Cowfold
6	A284, North of Wick	24	A281, Cowfold Centre
7	A284, Lyminster	25	A272, Station Road, Cowfold
8	Crossbush Lane, Crossbush	26	Wineham Lane, South of A272
9	A27, Arundel Station	27	A272, West of A23
10	Crossbush Lane, Warningcamp	28	A23, North of the A272
11	A27, South of Crossbush	29	B2118, Sayers Common
12	A27, High Salvington	30	B2116, Henfield Road, Albourne
13	A24/A27, Offington (Warren Road)	31	A23, North of the A27
14	A24, Findon	32	A27, West of A23
15	A280, Long Furlong	33	A27, East of A23
16	A283, West of A24	34	A259, West of Church Street
17	A283, East of A24	35	A259, East of Wick
18	B2135, South of Ashurst		

23.4.38 In order to understand the wider impact of the construction traffic on the SRN, Highways Links 28, 31, 32 and 33 have been used within the assessment in this chapter for Study Area 1 to allow for robust assessment of the SRN even though, as set out in **Section 23.9**, these are not all sensitive links for traffic.

Study Area 2 – Traffic routes used for onshore impacts of offshore activities

23.4.39 The spatial scope of the onshore impacts of offshore activities is focused around a candidate port located at Newhaven. Newhaven Port, East Quay is the current base used for the operation and maintenance phase of the existing Rampion 1 project.

- 23.4.40 Previously the access to this location used the local road network including Beach Road which then reaches a port security gate. Beach Road runs north into Clifton Road and then Railway Road to a junction with the A259 and A26. The A259 to the west provides access to Newhaven and to the east leaves Newhaven on a coast route to Eastbourne. The A26 is a key route north from Newhaven to a junction with the SRN (A27) at Beddingham. Following construction of a recently-completed access road to Newhaven Port East Quay, the primary vehicular access route for Rampion 2 offshore activities at Newhaven Port is via a new route (McKinley Road).
- 23.4.41 Identification of the Study Area 2 for the offshore works has focused on the road network to be used by traffic for all onshore works for the offshore activity which is primarily focused on the route from the port to the A27. The proposed Study Area 2 is presented in **Figure 23.6, Volume 3** of the ES (Document Reference 6.3.23) which shows the highway sections, referred to as 'highway links', that are proposed to be included in the assessment as set out in **Table 23-9**.

Table 23-9 Highways links within the Rampion 2 onshore Study Area (2)

Highways Link	Link Names
1	McKinley Road
2	A26 South Heighton
3	A26 Beddingham
4	A27 West of A26
5	A26 East of A25

- 23.4.42 In order to understand the wider impact of the construction traffic on the SRN, Highways Links 4 and 5 have been used within the assessment in this chapter for Study Area 2 to allow for robust assessment of the SRN even though, as set out in **Section 23.9**, these are not sensitive links for traffic.

Study Area overlap

- 23.4.43 It is not considered that a combined cumulative assessment of the traffic generation within the two Study Areas is required. Study Area 2, as set out in **paragraphs 23.4.39 to 23.4.42**, is relevant to the assessment of the operation and maintenance phase of the offshore works.
- 23.4.44 Although there may be a period where parts of Study Area 2 are in operation while construction work in Study Area 1 is ongoing, the cumulative traffic is likely less than the construction peak traffic from Study Areas 1 and 2 combined.
- 23.4.45 The two Study Areas are also independent of each other and are approximately 16km apart. On this basis, the two Study Areas are assessed independently.

Temporal scope

Activities associated with the onshore elements of the Proposed Development

Construction phase

23.4.46 The temporal scope of the assessment of the construction phase is the periods of peak activity along sections of the onshore cable corridor as outlined in **Appendix 23.2: Traffic Generation Technical Note, Volume 4** of the ES (Document Reference 6.4.23.2). As agreed with WSCC and NH, the proposed future years for assessment are 2026 and 2027.

Decommissioning phase

23.4.47 The temporal scope of the assessment of the decommissioning phase is based on the peak period of traffic during the onshore substation removal. It is currently predicted that the onshore substation could be decommissioned around 30 years from the Proposed Development commission. The onshore substation is proposed to be built in years two to five of the overall construction programme set out as **Graphic 4.24** in **Chapter 4: The Proposed Development, Volume 2** of the ES (Document Reference: 6.2.4). Based on the assessments set out in this chapter, year 5 will be 2030 (end of construction), and 30 years from then will be 2060 (start of decommissioning).

23.4.48 For the decommissioning of the above ground infrastructure, it is acknowledged by the Planning Inspectorate (Response 5.6.3 of the Planning Inspectorate's (2020a) Scoping Opinion in **Table 23-3**) that this will be similar or less than the construction phase, however assessment has been undertaken in this chapter for completeness.

Onshore impacts of offshore activities during the operation and maintenance phase

23.4.49 Onshore impacts of the offshore operation and maintenance phase are proposed to start in the first year of commission. With the construction phase ending in 2030, a future year of assessment of 2030 for this phase has been assumed for assessment in this chapter.

Potential receptors

23.4.50 The spatial and temporal scope of the assessment enables the identification of receptors which may experience a change as a result of Rampion 2. GEART (IEA, 1993) identifies particular groups and special interests that may be sensitive to changes in traffic conditions which can be defined as

- local roads and the users of those roads; and
- land uses and environmental resources fronting those roads, including the relevant occupiers and users.

23.4.51 GEART (IEA, 1993) identifies groups and special interest groups that may be affected and suggests that others should be added if considered appropriate. The

receptors identified that may experience likely significant effects for transport are outlined in **Table 23-10**.

Table 23-10 Receptors requiring assessment for transport

Receptor group	Receptors included within group
Traffic and transport highways receptors (IEA, 1993)	People at work
	People at home
	Sensitive groups including children, elderly and disabled
	Sensitive locations such as hospitals, churches, schools and historical buildings
	Pedestrians
	Cyclists
	Open spaces, recreational areas and shopping areas
	Sites of ecological and nature conservation value
	Sites of tourist / visitor attractions
	Highway links on the local and strategic network that currently suffered from congestion in the peak hours of the day may also need to be considered for further assessment as this has potential to impact on “users of the roads”.

23.4.52 As set out in **Table 23-10**, the category of traffic and transport highway receptors encompasses a wide range of receptors, including people, buildings, users of the road, and the highway links themselves.

23.4.53 The list of receptors has been kept under review during the preparation of the ES chapter as more detailed information has been obtained during baseline surveys and other forms of data collection by other aspects. A list of highways links identified for assessment is set out in **Section 23.5.10** and these links are assessed for impacts to the receptors set out in **Table 23-10** within **Sections 23.9 to 23.11**.

Potential effects

23.4.54 Potential effects on transport receptors that have been scoped in for assessment are summarised in **Table 23-11**.

Table 23-11 Potential effects on transport receptors scoped in for further assessment

Receptor	Activity or impact	Potential effect
Construction		
All receptors (Table 23-6) on identified highways links – Study Area 1	Construction of landfall, associated cable and associated earthworks	Impact of construction traffic at identified highway receptors Impact of the construction phase on PRow
All receptors (Table 23-6) on identified highways links – Study Area 1	Construction of onshore cable and associated earthworks	Impact of construction traffic at identified highway receptors Impact of the construction phase on PRow
All receptors (Table 23-6) on identified highways links – Study Area 1	Construction of onshore substation and associated earthworks	Impact of construction traffic at identified highway receptors Impact of the construction phase on PRow
Operation and maintenance		
All receptors (Table 23-6) on identified highways links – Study Area 2	Onshore operational staff traffic associated with the operation and maintenance phase of the offshore wind farm	Impact of construction traffic at identified highway receptors
Decommissioning		
All receptors on identified highways - Study Area 1 (limited to Highways Links around the onshore substation)	Decommissioning of the onshore substation	Impact of decommissioning traffic at identified highway receptors

Activities or impacts scoped out of assessment

- 23.4.55 A number of potential effects have been scoped out from further assessment, resulting from a conclusion of no likely significant effect. These conclusions have been made based on the knowledge of the baseline environment, the nature of planned works and the wealth of evidence on the potential for impact from such projects more widely. The conclusions follow (in a site-based context) existing best practice.
- 23.4.56 Each scoped out activity or impact is considered in turn in **Table 23-12**.

Table 23-12 Activities or impacts scoped out of assessment

Activity or impact	Rationale for scoping out
Onshore – Operation and maintenance activities resulting in potential impact on roads and users of these routes	As agreed within the Planning Inspectorate’s Scoping Opinion (2020a) (Response 5.6.2) in Appendix 5.1: Planning Inspectorate’s Scoping Opinion, Volume 4 of the ES (Document Reference: 6.4.5.1) the vehicle movements during the operation and maintenance phase of the onshore cable and substation will be small, comprising occasional inspection and maintenance requirements. It is considered this traffic will be negligible and has therefore been scoped out of the assessment.
Onshore – Decommissioning of underground cable and landfall site and potential impacts on road, PRow and users of these routes	It is proposed that the onshore cable and / or landfall site will be left in-situ during decommissioning of the Proposed Development and as such no traffic generation is proposed. Therefore, it has been scoped out of assessment.
Offshore – Construction phase	Based on construction of offshore wind farms and associated infrastructure in the English Channel and North Sea, a majority of components and materials will be shipped from European manufacturing bases and exported to the Rampion 2 offshore construction area without ever entering the UK. Materials required from various locations in the UK will be shipped from numerous ports without one port of focus and as such any trips associated will be disparate and below threshold levels for assessment. Staff for specific offshore construction elements will arrive at site with the components being installed. Other staff will be based in Europe and transfer to site via support vessels. The remaining staff that will be based in the UK have been assessed based on the assumed port of origin which has been identified for staff travel.

Activity or impact	Rationale for scoping out
Offshore – Decommissioning phase	<p>The offshore decommissioning phase has been scoped out of further assessment as it is proposed that only above sea level elements of the Proposed Development are removed such as the offshore substations and WTGs. As such, the onshore traffic generation is expected to be significantly lower than the construction phase.</p> <p>As with the construction phase, the works required to decommission the offshore elements of the Proposed Development are likely to be undertaken from a few ports across Europe and the UK, and as such the impacts on UK roads will be mitigated by this construction strategy. Based on the above, the offshore decommissioning phase has been scoped out of the assessment.</p>
Impact of Hazardous Loads required on the Proposed Development	<p>As agreed within the Planning Inspectorate’s Scoping Opinion (2020a) (Response 5.6.1) in Table 23-3, no hazardous loads are expected as part of the Proposed Development and have been scoped out of the assessment.</p>
Impact on rail service provision	<p>It is considered that the local rail service provision will not be affected significantly by the Proposed Development as railways will be crossed by trenchless crossing techniques and no further consideration is made in this chapter.</p>
Impact on bus service provision	<p>It is considered that the local bus service provision will not be affected significantly by the Proposed Development and no further consideration is made in this chapter.</p>

23.5 Methodology for baseline data gathering

Overview

- 23.5.1 Baseline data collection has been undertaken to obtain information over the Study Areas described in **Section 23.4**. The current baseline conditions presented in **Section 23.6** sets out data currently available from the Study Areas.
- 23.5.2 The methodology for baseline data gathering has been based on a desk study followed by site surveys as set out in **paragraphs 23.5.3 to 23.5.7**.

Desk study

- 23.5.3 The desk study included a review of the overall network, public transport and accident data. The data sources that have been collected and used to inform this ES chapter and appendices are summarised in **Table 23-13** and **Table 23-14** for Study Area 1 and Study Area 2. Not all data was required for both Study Areas; in

particular, Study Area 2 required less extensive information as, for example, modifications to existing road junctions do not form part of the Proposed Development.

Table 23-13 Data sources used to inform the assessment of transport effects – Study Area 1

Source (With Date of Data)	Date Accessed	Summary	Coverage of Study Area 1
WSCC (2020b)	December 2020	Historic traffic data from permanent count locations on WSCC network – data includes vehicle number and speed surveys	Construction traffic routes in Study Area 1
DfT (2020)	2017 – 2019	Historic traffic data from permanent count locations on NH and WSCC network – data includes vehicle number and speed surveys (where available)	Construction traffic routes in Study Area 1.
Automatic Traffic Count (ATC) data – collected by Rampion 2 project (2022)	April 2022 – May 2022	Additional traffic surveys commissioned at locations where DfT data was not available: Ferry Road (Highways Link 1); Crossbush Lane (Highways Link 10); A280 Long Furlong (Highways Link 15); A283 East of Washington (Highways Link 17) and B2188 Sayers Common (Highways Link 29).	Five highway links.
Rampion 1 traffic data (2020)	November 2020	Traffic data used to inform Rampion 1 where it overlaps with Study Area 1	Study Area 1 where it overlapped with Rampion 1
Ordnance Survey (OS) mapping (2020)	November 2020 – June 2023	Use of online mapping of 1:50,000 and 1:25,000 OS mapping	Entire Study Area 1
DfT (2021a) – Table TRA2501c	January 2021	Road traffic statistics to inform HGV traffic growth assumptions	National statistics
DfT (2022) – Road Safety Data	June 2023	Road accident records by severity and casualty type and vehicle type (car, HGV, bus, pedal cyclist and motorcyclist)	Construction traffic routes in Study Area 1

Source (With Date of Data)	Date Accessed	Summary	Coverage of Study Area 1
DfT (2021b) – TEMPro	February 2021	Traffic growth factors based on local planning data and the National Traffic Model	Traffic growth rates for the Study Area 1
Google (2023) – Street View, maps, aerial photography	September 2020 – June 2023	Review of construction traffic roads, local pinch points and sensitive locations	Construction traffic routes in Study Area 1
WSCC (2023a) definitive PRow mapping	June 2023	PRoW routes affected by the onshore elements of the Proposed Development	PRoWs crossed by the onshore part of the proposed DCO Order Limits.
WSCC (2023b) bus service information	June 2023	Local and sub-regional bus routes and frequency	Roads crossed by onshore part of the proposed DCO Order Limits.
Sustrans (2023) – National Cycle Network (NCN) mapping	June 2023	Routes of the UK NCN	Construction traffic routes in Study Area 1 and routes affected by onshore part of the proposed DCO Order Limits.
Network Rail	June 2023	Location of active lines on the national rail network	Rail lines crossed by onshore part of the proposed DCO Order Limits.

Table 23-14 Data sources used to inform the assessment of transport effects – Study Area 2

Source (With Date of Data)	Date Accessed	Summary	Coverage of Study Area 2
DfT (2021)	March 2021	Historic traffic data from permanent count locations on NH and WSCC network – data includes vehicle	Key Route from Newhaven Port to A27

Source (With Date of Data)	Date Accessed	Summary	Coverage of Study Area 2
		number and speed surveys (where available)	
OS mapping (2020)	November 2020 – June 2023	Use of online mapping of 1:50,000 and 1:25,000 OS mapping	Entire Study Area 2
DfT (2021a) – Table TRA2501c	January 2021	Road traffic statistics to inform HGV traffic growth assumptions	National statistics
DfT – Accident data (2023)	June 2023	Road accident records by severity and casualty type and vehicle type (car, HGV, bus, pedal cyclist and motorcyclist)	Key route from Newhaven Port to A27
DfT (2021b) – TEMPro	March 2021	Traffic growth factors based on local planning data and the National Traffic Model	Traffic growth rates for the Study Area 2
Google (2023) – Street View, maps, aerial photography	September 2020 - March 2023	Review of construction traffic roads, local pinch points and sensitive locations	Key route from Newhaven Port to A27
WSCC (2023b) bus service information	March 2023	Local and sub-regional bus routes and frequency	Key route from Newhaven Port to A27
Sustrans (2023) – NCN mapping	June 2023	Routes of the UK National Cycle Network (NCN)	Key route from Newhaven Port to A27

Site surveys

- 23.5.4 A site survey in Study Area 1 was carried out in October 2020. The site survey included detailed notes and photographs recorded on a Global Positioning System (GPS) linked on site system (collector app).
- 23.5.5 Automatic Traffic Count (ATC) data was collected between April 2022 and May 2022 at locations where DfT data was not available. This included Ferry Road (Highways Link 1); Crossbush Lane (Highways Link 10); A280 Long Furlong (Highways Link 15); A283 East of Washington (Highways Link 17) and B2188 Sayers Common (Highways Link 29).
- 23.5.6 Another site visit to Study Area 1 was undertaken in March 2023. The visit focused on accesses, PRoWs and onshore substation location, in particular those which

had changed since earlier consultation stages of the project. The site survey included photographs recorded on a GPS linked on site system (collector app).

23.5.7 **Table 23-15** below sets out details of these site surveys.

Table 23-15 Site survey undertaken for transport – Study Area 1

Survey type	Scope of survey	Coverage of Study Area 1
Study Area 1: Site Survey (October 2020)	<p>The transport site survey undertaken in Study Area 1 in October 2020 included:</p> <ul style="list-style-type: none"> • all roads and junctions that form part of Study Area 1; • all proposed site accesses; • the PRoW affected by the onshore elements of the Proposed Development; • peak hour observations of traffic conditions around Littlehampton and Washington, West Sussex; • observations of Wick Railway Level Crossing; • observations of sustainable transport provision such as pedestrian footways, bus stops etc.; • a visit to the existing National Grid Bolney substation and existing Rampion 1 substation; • a visit to all potential temporary construction compound locations; • a visit to the proposed landfall site; • observations of trenchless crossing locations; • observations were made of key sensitive locations and pinch points identified as part of the desk study; and • confirmation of suitability of roads for HGV traffic. 	Construction traffic routes in Study Area 1
Study Area 1: Site Survey (March 2023)	<p>The transport site undertaken survey in Study Area 1 in March 2023 included:</p> <ul style="list-style-type: none"> • all roads and junctions that form part of Study Area 1; • all proposed site accesses; • the PRoW affected by the onshore elements of the Proposed Development; and confirmation of suitability of roads for HGV traffic. 	Construction traffic routes in Study Area 1

Data limitations

- 23.5.8 The COVID-19 pandemic restrictions had a significant effect on the traffic levels on roads across 2020/2021. DfT (2020) road traffic statistics indicate that in 2020 UK roads saw a reduction of 6% in HGVs and 12% in private cars which means that counts undertaken in 2020 did not represent an accurate picture of traffic levels in normal conditions.
- 23.5.9 As a result of this, it was considered that new traffic surveys to inform this assessment could not be undertaken and a different strategy would be required. The Planning Inspectorate (2020b) Advice Note Seven sets out that:
- “The Inspectorate considers that Applicants should make effort to agree their approach to the collection and presentation of information with relevant consultation bodies. In turn the Inspectorate expects that consultation bodies will work with Applicants to find suitable approaches and points of reference to aid the robust preparation of applications at this time.”*
- 23.5.10 Discussion with WSCC and NH were undertaken to agree the use of historic traffic data from counts that had been undertaken before 2020 and the first UK nationwide COVID-19 pandemic lockdown. This approach has been applied to this assessment. It was also agreed that, should COVID-19 pandemic restrictions be lifted later in 2021 then site specific traffic data could be surveyed to inform the DCO submission and / or validate the traffic data used in this chapter. Engagement with WSCC and NH took place in the meeting on 19 April 2023 (see **Section 23.3**), after which it was agreed that the additional traffic forecast to be generated by the Proposed Development would be negligible compared to the baseline flows as shown by the data already collected in recent years, and thus there was no further requirement to update traffic counts.

23.6 Baseline conditions

Current Baseline

Study Area 1 – onshore

- 23.6.1 This section provides a description of the baseline conditions of the local and strategic roads which are proposed to be used for access to the onshore elements of the Proposed Development as well as the local PRoW, cycle routes and sustainable travel routes. **Figure 23.1, Volume 3** of the ES (Document Reference 6.3.23) identifies the roads that have been included in this section.
- 23.6.2 **Table 23-16** sets out a high-level review of the Main “A” and “B” Roads included within Study Area 1 and more details on these are presented in the following section.

Table 23-16 A / B roads within Study Area 1

Type of road	Road name
A Roads	A23, A27, A24, A272, A280, A281, A283, A284, A259
B Roads	B2116, B2117, B2118, B2135, B2139

Strategic Road Network

A23

23.6.3 The A23 routes from the M23 south of Crawley to the A27 on the northern periphery of Brighton. For much of its length, the A23 is a dual carriageway subject to the national speed limit (70mph). Within Study Area 1, the A23 has junctions with two major roads, the A272 and the A27 as follows:

- the junction with the A272 is located east of Bolney and comprises grade separated roundabout junctions located either side of the A23 alignment which connect to the A23 with on / off slips; and
- the junction with the A27 is located on the northern periphery of Brighton and comprises a grade separated bell junction with on / off slips which connects to a separate roundabout junction with the A23.

A27

23.6.4 The section of the A27 that is managed by NH routes between Pevensey in East Sussex to Cosham, Portsmouth where the A27 becomes the M27. The A27 connects numerous coastal towns along the south coast as well as connecting the cities of Portsmouth and Brighton. Road design standards vary along the A27, however, for most of its length the A27 is a dual carriageway subject to the national speed limit.

Local Highway Network

A24

23.6.5 The A24 routes between Worthing on the south coast and London, and routes via towns including Horsham and Leatherhead. Within Study Area 1, the A24 routes through both urban and rural settings. In rural areas, the A24 is typically a dual carriageway and is subject to the national speed limit. In urban areas, the A24 routes through both residential and commercial areas, and numerous residential and commercial properties front onto the road and there are a number of pedestrian crossing points.

A272

23.6.6 Within Study Area 1, the A272 routes east / west between the A24 and the A23 and beyond. The A272 intersects with the A24 via a staggered crossroad and junctions with the A23 are via two grade separated roundabouts which connect to

the A23 by on/off slips. The A272 is a predominantly a single carriageway rural road throughout Study Area 1. The speed limit varies between national speed limit and 50mph depending on local constraints. A section of the A272 through Cowfold is subject to a 30mph speed limit as the road routes through a village setting. Pedestrian footways are provided and residential properties front onto the A272 throughout Cowfold.

A280 Long Furlong

- 23.6.7 The A280 Long Furlong provides a connection between the A24 at Findon and the A27 south of the village of Clapham. The A280 is a single carriageway road which is predominantly subject to the national speed limit and routes through a rural setting. A small section of the A280 through Clapham Village is subject to a 40mph speed limit and a signal controlled crossing is provided adjacent to the local primary school.

A281

- 23.6.8 The A281 routes between Guildford and the A23 north of Brighton, the road connects multiple towns and villages along its routes including Horsham and Cowfold. Due to the length of the A281 and the numerous settlements that it routes through the road conditions vary throughout. The A281 within Study Area 1 includes a section from Cowfold via Shermanbury to the A281 junction with the B2116. The A281 through this section is a single carriageway road where the speed limit and other conditions vary depending on location.
- 23.6.9 Through Cowfold, the A281 routes through the centre of the village where commercial properties front onto the road. Pedestrian footways are located on either side of the carriageway within Cowfold centre and on at least one side of the carriageway through the rest of the village, the road is subject to a 30mph speed limit. The A281 junctions with the A272 at two mini roundabout junctions within Cowfold centre and a signal controlled pedestrian crossing are provided.
- 23.6.10 Through Shermanbury, the A281 is subject to a 40mph speed limit and a pedestrian footway is provided on the eastern side of the carriageway. Residential properties / driveways front onto the A281.
- 23.6.11 Between Cowfold and Shermanbury the A281 is rural in nature, no pedestrian infrastructure is provided, and the national speed limit applies.

A283

- 23.6.12 The A283 provides a connection between the A24 at Washington, West Sussex and the A27 at Shoreham-by-Sea, and the A24 at Washington southward beyond Storrington. The A283 is a single carriageway which is subject to 50mph and national speed limits at various points along its route. The A283 routes predominantly through rural areas and throughout the town of Steyning, the A283 is located within a cutting which is over bridged by local roads. The A283 intersects with the A27 via a grade separated roundabout and on-off slips.

A284

- 23.6.13 The A284 routes between Littlehampton and the A29 west of the village of Houghton. The A284 exists in two sections, from Littlehampton to a junction with the A27 at Crossbush and from a junction with the A27 in Arundel to the A29.
- 23.6.14 The section of the A284 from the A259 in Littlehampton to the A27 at Crossbush is within Study Area 1. This section of the A284 routes through the village of Lyminster and the residential suburb of Wick. In Wick, the A284 routes through a residential area where streetlighting and footways are provided and residential properties and driveways front onto the A284. The road is subject to a 30mph speed limit.
- 23.6.15 In Lyminster Village, the road is subject to a 30mph speed limit. Pedestrian footways exist throughout the village on at least one side of the carriageway, a small number of residential properties / driveways front onto the A284. North of Lyminster Village, the speed limit increases to 40mph and a pedestrian footway continues on the western side of the carriageway.
- 23.6.16 The construction of the Lyminster Bypass, which is expected to be officially designated as the A284 upon completion, will be a significant development in the road infrastructure. The Bypass will serve to reduce the volume of traffic passing through Lyminster and reduce the impacts on local receptors arising as a result.

A259

- 23.6.17 The A259 routes along the south coast between Havant in Hampshire and Folkestone in Kent. Within Study Area 1, the A259 routes between a roundabout junction with Ford Lane at Climping to a roundabout junction with the B2187 at Toddington.
- 23.6.18 Between Climping and the junction with the B2187 at Littlehampton (Bridge Road roundabout), the road is a single carriageway which is subject to a 40mph speed limit west of the Ferry Road junction and the national speed limit east of the junction. A shared footway / cycleway is provided on the northern side of the carriageway.
- 23.6.19 Between Bridge Road roundabout and the junction with the A284 (Wick roundabout), the road is subject to the national speed limit and a shared cycleway / footway exists on the northern side of the carriageway between the signal controlled junction with Benjamin Grays Drive and the priority junction with New Courtwick Lane. Between Wick roundabout and the roundabout junction with the B2187 at Toddington, the speed limit is reduced to 40mph through this area with residential properties fronting the carriageway and pedestrian footways exist on both sides of the carriageway.

B2116

- 23.6.20 The B2116 routes between the A281 north of Henfield to the B2118 at Aldbourne. The B2116 is a single carriageway which predominantly routes through a rural area. The speed limit varies between 30mph, 40mph and the national speed limit along the B2116 depending on local constraints. Throughout Aldbourne, the road

is subject to a 30mph speed limit and pedestrian footways are provided, residential properties / driveways front onto the road.

B2117

- 23.6.21 The B2117 is a single carriageway road which routes between the A281 and Pierpoint Village. Within the short section of the road included in Study Area 1, the road junctions with the B2118 by a priority junction and junctions with the A23 by means of two priority junctions which serve as on / off slips to the grade separated A23. The B2117 is rural in nature between these junctions and is subject to the national speed limit.

B2118

- 23.6.22 The B2118 routes between the B2117 at Muddleswood and the A23 north of Sayers Common. The B2118 is a single carriageway and is subject to the national speed limit for much of its route.
- 23.6.23 Through the village of Aldbourne, the road is subject to a 40mph speed limit, a pedestrian footway is provided on the eastern side of the carriageway and residential properties / driveways front onto the road.
- 23.6.24 Through the village of Sayers Common, the B2118 is subject to a 30mph speed limit and pedestrian footways are provided on both sides of the carriageway. Residential properties / driveways front onto the B2118 and the road junctions with the B2116 by a roundabout in the centre of the village.

B2135

- 23.6.25 The B2135 is a rural B-road serving the village of Partridge Green in Sussex. It is subject to the national speed limit for most of its route. It starts on the A283 at the northern end of the Steyning bypass. It heads north and, although quite wide, the route is windy before straightens out before entering the small village of Ashurst. Through the village of Ashurst the road is subject to a 30mph speed limit. The road then heads into Partridge Green (also 30mph speed limit) where it meets the B2116, and continues through the village, after which it turns north-west towards the A24.

B2139

- 23.6.26 The B2139 is a rural B-road which runs through Houghton, Amberly and Storrington in West Sussex. Much of the route is subject to the national speed limit, although Houghton and Storrington have a 30mph limit and Amberly is subject to a 40mph speed limit. The B2139 begins at Whiteways Lodge Roundabout with the A29 and the A284, and then runs northeast until Storrington, where it meets Pulborough Road (A283). The road is crossed by no other major roads, only residential streets when routing through villages. It is also the only access to Amberly Train Station.

Ford Road

- 23.6.27 Ford Road is a single carriageway road which routes between the A27 in Arundel and Church Lane in Climping. From a roundabout junction with the A27 to the edge of Arundel, the road routes through a residential area where a 30mph speed limit applies and pedestrian footways are provided. South of Arundel the road is rural in nature and the national speed limit applies. Adjacent to Ford station, Ford Road crosses a railway line by means of a level crossing. North of the level crossing a 40mph speed limit is applied to Ford Road which exists for its remaining route to Church Lane in Climping. Between Ford station and Climping a pedestrian footway exists on the western side of the carriageway.

Church Lane

- 23.6.28 Church Lane is a single carriageway road which routes between Ford Road in Climping to a roundabout junction with the A259 south of Climping. The road is subject to a 40mph speed limit and a pedestrian footway is provided on the eastern side of the carriageway. A small number of residential properties front onto Church Lane in Climping.

Water Lane

- 23.6.29 Water Lane is single carriageway rural road which routes between the A283 and Hole Street in Winston. Water Lane is subject to the national speed limit between the junction with the A283 and the periphery of Winston Village. In Winston Village, Water Lane is subject to a 40mph speed limit and a pedestrian footway is provided on the western side of the carriageway.

Kent Street

- 23.6.30 Kent Street is a single carriageway rural road which routes between the A272 and Wineham Lane and is subject to the national speed limit. There are no pedestrian footways on this rural road.

Wineham Lane

- 23.6.31 Wineham Lane is a single carriageway rural road which connects the village of Wineham to the A272 to the north and the B2116 to the south. Wineham Lane is subject to the national speed limit for all sections outside Wineham. Throughout Wineham, Wineham Lane is subject to a 40mph speed limit and residential / rural properties and driveways front onto the road.

Rail network

- 23.6.32 Within Study Area 1 there are two principal railway lines, one line running along the south coast between Brighton and Portsmouth and one line between Horsham and Portsmouth.
- 23.6.33 The railway line between Brighton and Portsmouth serves coastal towns including Worthing, Lancing and Shoreham-by-Sea. Two branch lines exist which serve Littlehampton and Bognor Regis. From Brighton services can be taken to London or towns further east along the south coast including Eastbourne and Hastings.

23.6.34 From Portsmouth services can be taken to London via Horsham or can be taken to travel further west along the coast to places including Southampton.

Bus network

23.6.35 Bus services are in operation between the major settlements within Study Area 1. The following bus services operate along roads proposed to be crossed by the onshore cable corridor:

- A259 – Services 9, 69, 700;
- A284 – Service 9;
- A27 – Services 9, 23, 69, 106 and 740⁴;
- A24 – Services 1, 23;
- A283 – Service 2, 2B;
- B2116 – Service 3,17;
- B2135 – Service 17;
- A281 – Service 17; and
- A23 – Service 17.

23.6.36 The bus services which have stops within a reasonable distance of the temporary construction compounds are:

- A259 Services 9 and 700;
- A284 – Service 9;
- A27 – Service 69;
- A24 – Service 23; and
- A281 – Service 17.

⁴ indicates school/college buses

Table 23-17 Bus Services accessible from Accesses

Service	Route Description	Frequency One Way Buses / Hour		First Service	Last service
		AM Peak	PM Peak		
Stagecoach South Service 9	Arundel – Holmbush Shopping Centre: via Shoreham, Lancing, Worthing, Angmering, Littlehampton	3	1	06:34	16:38
Stagecoach South Service 700	Brighton – Wick: via Brighton, Hove, Worthing, Goring, Littlehampton	5	5	05:25	22:10
Compass Travel 69	Alfold – Worthing: via Pulborough, Arundel	1	1	9:15	13:30
Metrobus 23	Crawley – Worthing: via Horsham	1	1	05:57	19:16
Stagecoach South 17	Brighton – Horsham: via Henfield	1	1	05:58	19:56

23.6.37 The key roads above and the bus services running along them are set out in **Figure 23.7a-c, Volume 3** of the ES (Document Reference: 6.3.23).

23.6.38 It should be noted that, for all of the bus service interactions with the onshore cable corridor, each road that is used for the service is a two-lane carriageway. For the A259, A27, A24, A283 and A281 it is proposed to cross by trenchless crossing techniques and as such there will be no surface impacts to the road or delays to any bus service routes on these roads.

23.6.39 Where trenchless crossing techniques are not used as method of crossing the road (B2116), the crossing will be open cut trench as confirmed though commitment C-166. The open cut trenching of a road will occur using one of two solutions:

- 1) lay the cable in a trench, which will be excavated in phases to ensure at least one traffic lane is operational and controlled using temporary signals (although this approach cannot be used on single track parts of the highway). This will allow bus services to continue their routes though signal control traffic management or
- 2) provide a short road closure while the work is undertaken with a relevant diversion route.

PRoW

- 23.6.40 The **Outline PRoWMP** (Document Reference: 7.8) sets out in detail each PRoW and area of Open Access Land (OAL) that is currently affected by the onshore part of the proposed DCO Order Limits. This includes details on the PRoW number, type of effect and whether the effect is likely to be temporary or permanent.
- 23.6.41 RED proposes to manage and provide mitigation for each PRoW that is affected by the Proposed Development and a series of embedded environmental measures have been set out in the **Commitments Register** (Document Reference: 7.22) which can be applied to different types of PRoW and OAL affected.
- 23.6.42 Temporary diversions will ensure that the affected PRoW passes around the work areas or run on routes away from the haul roads or cross underground cable sections at safe locations that can be managed
- 23.6.43 The proposed signage strategies will inform the public of the construction schedule and the implications for each affected PRoW.
- 23.6.44 The active management of crossing points and shared accesses will be temporary in nature and will required site specific signage to inform the public and construction vehicle drivers.
- 23.6.45 Prior to the start of the construction, all affected PRoW will be inspected. These routes will also be monitored throughout the duration of the construction phase. At the end of the construction phase, all affected PRoW will be inspected and their condition will be returned to the same as observed during the initial inspection.
- 23.6.46 Any permanent diversions required as a result of the onshore elements of the Proposed Development will be agreed and implemented through discussions with the relevant local authority where appropriate.

National cycle routes

- 23.6.47 The onshore cable corridor will cross two parts of the Sustrans (2021) NCN:
- NCN 2 – Between Littlehampton and Bognor Regis which runs along A259 and then onto the Ferry Road; and
 - NCN 223 – Route crosses the NCN just south of Partridge Green as NCN 223 runs along a former railway line known as the Downs Link.
- 23.6.48 The proposed DCO Order Limits include the A259 between Bognor Regis and the junction with Ferry Road. The NCN 2 on the A259 between Bognor Regis and the junction with Ferry Road and on Ferry Road will not experience direct impacts as a result of the Proposed Development as it will be crossed via a trenchless crossing technique.
- 23.6.49 The NCN 223 route follows a bridleway PRoW on the Downs Link, where it is crossed by the cable corridor south of Partridge Green. This bridleway is crossed by open cut trenching method resulting in a temporary diversion being implemented. PRoW are considered in the **Outline PRoWMP** (Document Reference: 7.8) in further detail.

23.6.50 **Figure 23.9a-b, Volume 3** of the ES sets out the two NCN routes in relation to the proposed DCO Order Limits.

Baseline traffic flows

23.6.51 It was agreed with WSCC highways officers that baseline traffic flows could be derived from existing traffic counts. Most of the existing traffic counts data is taken from either permanent count locations maintained by WSCC /DfT or one-off counts within the WSCC (2020b) online traffic count database. For most locations this resulted in the use of data from 2008 to 2019.

23.6.52 Following the COVID-19 pandemic, traffic counts were undertaken in mid-2022 to supplement the above dataset on the following five Highway Links: Ferry Road (Highways Link 1), Crossbush Lane (Highways Link 10), A280 Long Furlong (Highways Link 15), A283 East of Washington (Highways Link 17) and B2188 Sayers Common (Highways Link 29) using data that was from pre-2010.

23.6.53 In some locations where the available traffic data is older, WSCC confirmed that this is acceptable, given the uplift in traffic flows is predicted to be negligible, and that TEMPro could be used to inform growth with no additional surveys required. Growth rates have been derived from the DfT's TEMPro 7.2. Growth rates for HGVs have been derived from the DfT (2020) National Traffic Statistics. A base year of 2021 has been used to growth up to for the baseline traffic counts.

23.6.54 Growth rates from TEMPro have been used to growth the Highway Links based on two output areas: Arun for the (Lower Layer Super Output Area (LSOA) code E41000245) and Horsham (LSOA code E41000248). Professional judgement has been used to allocate a growth rate to a Highway Links which are split across both areas.

23.6.55 The TEMPro growth rates are as follows:

- 2012 – 2021 – Arun – 1.1387 – Horsham – 1.1468;
- 2013 – 2021 – Arun – 1.1232 – Horsham – 1.1292;
- 2017 - 2021 – Arun – 1.0607 – Horsham – 1.0608;
- 2018 - 2021 – Arun – 1.0454 – Horsham – 1.0454; and
- 2019 – 2021 – Arun – 1.0305 – Horsham – 1.0306.

23.6.56 HGV traffic growth has been based on the DfT (2021a) publication '*TRA2501c - Road traffic (vehicle miles) by vehicle type in Great Britain*'. TRA2501c presents national data of the yearly change in vehicle traffic for total vehicles, car, light commercial vehicles and HGVs.

23.6.57 Based on TRA2501c (DfT, 2021a), annual growth factors for HGVs have been derived as follows:

- the changes in HGV traffic flows between 2019 (last reliable year of data due to the COVID-19 pandemic) and the base year of 2021 has been calculated;
- the growth factor for from 2018 to 2019 was 0.38%;

- estimated growth between 2019 and 2021 is assumed as 0.38% per annum, or 0.76% over the two years; and
- the growth for 2019 – 2021 (0.76% has been added to the growth from the historic count year to 2019 to provide for a growth from historic count year to 2021).

23.6.58 It should be noted the traffic count for A283 (East of A24) is dated (2005). As TEMPro does not extend as far back as 2005, an alternative method based on the DfT statistics has been used as discussed and agreed with WSCC at PEIR stage.

23.6.59 The calculations above presented the following growth rates for HGVs:

- 2005 – 2021 - 0.9755;
- 2012 – 2021 – 1.0778;
- 2013 – 2021 – 1.10180;
- 2017 – 2021 - 1.0270;
- 2018 – 2021 - 1.0160; and
- 2019 – 2021 – 1.00750.

23.6.60 For locations where total vehicle traffic data was extracted from existing counts but where there were no HGV breakdowns in these counts, a HGV percentage was required to allow to develop a HGV traffic flow at these locations. There were three highway links where this was an issue as follows;

- Highways Link 10 – Crossbush Lane;
- Highways Link 17 – A283 East of A24; and
- Highways Link 29 – B2188, Sayers Common.

23.6.61 At all three of these highway links, the historic traffic data only present a breakdown of total vehicles. In order to understand a likely HGV percentage on these highways links, reference has been made to adjacent historic traffic counts as follows:

- Highways Link 10 – Crossbush Lane – 2% HGVs based on Highways Link 8 data;
- Highways Link 17 – A283 East of A24 – 3.4% HGVs based on Highways Link 16 data; and
- Highways Link 29 – B2188, Sayers Common – 4.7% HGVs based on Highways Link 32 data.

23.6.62 For locations where total vehicle data was extracted from existing counts undertaken in 2022, it has been assumed that traffic levels have remained unchanged from 2021. The growth rate between 2021 and 2022 is negligible, and in 2021 traffic flows were also still being affected by the COVID-19 pandemic.

23.6.63 **Table 23-18** sets out the average annual weekday flow (AADF) for the date of survey and the current baseline (2021) for each highways link.

Table 23-18 2021 baseline traffic data (AADF) – Study Area 1

Highways Link	Historic Traffic Data			2021 Base		
	Total Vehicles	HGVs	Year of Data	Total Vehicles	HGVs	HGV%
1	1925	314	2022	1925	314	16.3%
2	9859	1106	2019	10458	1135	10.9%
3	6025	253	2019	6209	255	4.1%
4	23618	1302	2019	24338	1312	5.4%
5	22400	857	2019	23083	863	3.7%
6	13248	551	2019	13652	555	4.1%
7	13546	692	2018	13959	698	5.0%
8	619	12	2019	647	12	1.9%
9	32734	1613	2013	33732	1625	4.8%
10	736	15	2019	827	16	2.0%
11	31936	1757	2019	32910	1770	5.4%
12	22776	923	2019	23473	930	4.0%
13	30777	1012	2018	31719	1020	3.2%
14	25731	627	2017	26899	637	2.4%
15	18580	3653	2022	18580	3653	19.7%
16	21977	750	2005	22649	755	3.3%
17	11430	2326	2022	11430	2326	20.3%
18	3444	105	2019	3550	106	3.0%
19	20485	585	2019	21112	589	2.8%
20	35481	1636	2019	36567	1648	4.5%

Highways Link	Historic Traffic Data			2021 Base		
	Total Vehicles	HGVs	Year of Data	Total Vehicles	HGVs	HGV%
21	6374	362	2018	6569	364	5.5%
22	7739	341	2019	8090	346	4.3%
23	6081	141	2019	6267	142	2.3%
24	22389	991	2019	23074	998	4.3%
25	16904	745	2019	17421	751	4.3%
26	853	16	2019	879	16	1.8%
27	16889	724	2019	17406	729	4.2%
28	71894	4024	2012	74094	4054	5.5%
29	7356	1497	2022	7356	1497	20.4%
30	3147	149	2019	3243	150	4.6%
31	78611	3118	2019	81016	3141	3.9%
32	65068	2421	2019	67059	2439	3.6%
33	71173	2852	2019	73351	2873	3.9%
34	25835	548	2019	26623	552	2.1%
35	24757	469	2019	25512	473	1.9%

Existing accident record

- 23.6.64 Personal Injury Accident (PIA) data has been obtained from DfT STATS19 data for the five-year period 1 January 2017– 31 December 2021 inclusive. The extent of Study Area 1 is illustrated in [Figure 23.5, Volume 3](#) of the ES (Document Reference: 6.3.23.5).
- 23.6.65 The purpose of assessing recorded PIAs is to determine whether there is a history of accidents on construction traffic routes within Study Area 1 and to investigate whether there are any patterns or contributing factors to the accidents recorded. Clusters of accidents could indicate that improvements are required to enable development to proceed as additional traffic generated during the construction phase may exacerbate existing safety issues. Further consideration has been

given to those accidents involving vulnerable road users (cyclists / pedestrians) in this chapter.

23.6.66 The impact of casualties differs according to the severity of the injuries sustained. Three groups are usually differentiated as follows:

- fatal: any death that occurs within 30 days from causes arising out of the accident;
- serious: records casualties who require hospital treatment and have lasting injuries, but who do not die within the recording period for a fatality; and
- slight: where casualties have injuries that do not require hospital treatment, or, if they do, the effects of the injuries quickly subside.

Recorded accidents

23.6.67 A total of 1,016 accidents were recorded over the five-year period in Study Area 1 shown on links between 1 January 2017 – 31 December 2021 inclusive. Of the 1,016 accidents recorded, 10 accidents were recorded as fatal, 234 accidents were recorded as serious and 772 accidents recorded as slight. **Table 23-19** provides a summary of the accidents and details of the accident rate per million vehicle kilometres⁵ which is a means of assessing the number of accidents against national statistics.

23.6.68 The 'Estimated annual traffic flows' have been calculated by using the base year for traffic for 24 hours multiplied by 365 days of the year.

23.6.69 The 'PIA per annum million vehicle kilometres' is measured using the accident rate per million kilometres (PIA per annum multiplied by one million kilometres), divided by the product of annual traffic flow and link length.

⁵ Accident Rate means the number of accidents at a particular location on a roadway or section of roadway divided by the number of vehicles using the roadway, normally expressed in the number of accidents per million vehicle kilometres driven.

Table 23-19 Personal Injury Accident (PIA) data summary (January 2017 – December 2021)

Vicinity	Severity			Total	PIA per annum	Highway Link Length (km)	Estimated Annual Traffic Flow On Each Road	PIA per annum million vehicle kms
	Slight ⁶	Serious ⁷	Fatal ⁸					
A24 between A27 and A280	28	18	0	46	9.2	3.71	9391815	0.26
A27 (Warren Road) between A24 and A27	15	2	0	17	3.4	1.00	11233605	0.30
A24 between A280 and A283	18	9	0	27	5.4	4.71	12293200	0.09
A24 between A283 and A272	36	14	1	51	10.2	10.80	12950565	0.07
A272 between A24 and A281	20	2	0	22	4.4	4.90	6169960	0.15
A272 between A281 and A23	24	11	1	36	7.2	5.40	6164485	0.22
A23 between A272 and A2300	16	3	0	19	3.8	2.15	27153445	0.07

⁶ One in which at least one person is slightly injured but no person is killed or seriously injured.

⁷ One in which at least one person is seriously injured but no person is killed.

⁸ Road fatality means any person killed immediately or dying within 30 days as a result of a road injury accident.

Vicinity	Severity			Total	PIA per annum	Highway Link Length (km)	Estimated Annual Traffic Flow On Each Road	PIA per annum million vehicle kms
	Slight ⁶	Serious ⁷	Fatal ⁸					
A23 between A2300 and B2117	19	5	0	24	4.8	5.35	21030935	0.04
A23 between B2117 and A27	55	16	0	71	14.2	6.97	28693015	0.07
A27 between A23 and A270	57	14	0	71	14.2	8.30	23749820	0.07
A27 between A270 and A24	150	35	1	186	37.2	9.10	24188915	0.17
A27 between A24 and A280	39	13	0	52	10.4	4.31	8313240	0.29
A27 between A280 and A284	48	12	2	62	12.4	7.31	11656640	0.15
A280 between A27 and A24	24	7	1	32	6.4	5.50	6781700	0.17
A281 between A272 and B2116	13	7	2	22	4.4	5.77	2824662	0.27
A283 between A24 and B2135	24	6	2	32	6.4	5.70	4171950	0.27
A283 between B2135 and A2037	15	4	0	19	3.8	4.11	7477098	0.12

Vicinity	Severity			Total	PIA per annum	Highway Link Length (km)	Estimated Annual Traffic Flow On Each Road	PIA per annum million vehicle kms
	Slight ⁶	Serious ⁷	Fatal ⁸					
A283 between A2037 and A27	21	9	0	30	6	3.60	9388895	0.18
A283 between A24 and B2139	21	5	0	26	5.2	3.20	8021532	0.20
B2135 between B2116 and A283	7	6	0	13	2.6	7.45	1257151	0.28
B2116 between B2135 and A281	5	0	0	5	1	1.70	2326601	0.25
B2116 between A281 and B2118	15	7	0	22	4.4	6	1148655	0.64
B2118 between A23 and B2116	3	1	0	4	0.8	2.40	2606465	0.13
B2118 between B2116 and B2117	1	2	0	3	0.6	2.00	2606465	0.12
Wineham Lane between A272 and B2116	2	1	0	3	0.6	4.75	311345	0.41
A284 between A27 and A259	24	8	0	32	6.4	2.87	4356640	0.51

Vicinity	Severity			Total	PIA per annum	Highway Link Length (km)	Estimated Annual Traffic Flow On Each Road	PIA per annum million vehicle kms
	Slight ⁶	Serious ⁷	Fatal ⁸					
A259 between Wick Roundabout and Bilsham Road	72	17	0	89	17.8	6.30	9429775	0.30
Ford Road between A27 and A259	13	3	0	16	3.2	5.31	2115475	0.09

- 23.6.70 From the DfT (2021) reported road casualties for Great Britain 2021 presented in RAS0302 table, the national accident rate per million vehicle kilometres by road classification were as follows:
- urban A road – 0.42;
 - rural A road – 0.11;
 - urban other roads – 0.37; and
 - rural other roads – 0.19.
- 23.6.71 A comparison of the highway links in **Table 23-19** and the accident rate per million vehicle km for the links and the national accident rate and this sets out that only 11 links have an annual accident rate higher than the national average as follows:
- A272 between A24 and A281 – 0.15 compared to 0.11 for a Rural A Road;
 - A272 between A281 and A23 – 0.22 compared to 0.11 for a Rural A Road;
 - A27 between A280 and A284 – 0.15 compared to 0.11 for a Rural A Road;
 - A280 between A27 and A24 – 0.17 compared to 0.11 for a Rural A Road;
 - A281 between A272 and B2116 – 0.27 compared to 0.11 for a Rural A Road;
 - A283 between A24 and B2135 – 0.27 compared to 0.11 for Rural A Road;
 - A283 between A2037 and A27 – 0.18 compared to 0.11 for Rural A Road;
 - B2135 between B2116 and A283 – 0.28 compared to 0.19 for a Rural Other Road;
 - B2116 between A281 and B2118 – 0.64 compared to 0.19 for a Rural Other Road;
 - Wineham Lane between A272 and B2116 – 0.41 compared to 0.19 for a Rural Other Road; and
 - A284 between A27 and A259 – 0.51 compared to 0.42 for an Urban A Road.
- 23.6.72 It should be noted that for the 11 links where these accident rates are higher than average, they may be distorted by several factors and should be treated with caution. For six of the locations, the accident rates are only between 0.04 and 0.11 per million above the national average which will not be perceptibly different and with daily traffic variations will be around the national averages. Some of the routes are also a mixture of differing road types though sections of urban and rural locations.
- 23.6.73 The remaining five locations where accident rates were higher than the national average are set out in further detail below:
- **A272 between A281 and A23:** Annual Accident rate of 0.22 compared to 0.11 for a Rural A Road. The accidents on this link are mostly spread evenly along the 5.4km section of road, with clusters at the A272 junctions with Wineham Lane, Foxhole Lane, and the A23. They all have various causes leading to a high accident rate. This link is proposed to accommodate HGV traffic associated with the construction of the onshore substation and the existing

National Grid Bolney substation extension works and as such, there are likely to be some impacts of the Proposed Development in this area;

- **A281 between A272 and B2116:** Annual Accident rate of 0.27 compared to 0.11 for a Rural A Road. Much of this section and the locations of the accidents were recorded in the settlement of Cowfold and it might be more accurate to compare it to an Urban A road rate of 0.42 which will indicate the link is below the national average;
- **A283 between A24 and B2135:** Annual Accident rate of 0.27 compared to 0.11 for a Rural A Road. This section includes the A283 junction with the A24 which is a busy location in Washington, West Sussex and includes for accidents on the approach to the junction which might distort the results for the entire section;
- **B2116 between A281 and B2118:** Annual Accident rate of 0.64 compared to a 0.19 Rural Other Road. The accidents on this link are spread evenly along the 6km section of road and have various causes leading to a high accident rate. This link is only proposed to accommodate limited HGV traffic from the Proposed Development based on the routing in the **Outline CTMP** (Document Reference: 7.6) and as such, the impacts of the Proposed Development are minimal; and
- **Wineham Lane** – Annual Accident Rate of 0.41 compared to a 0.19 for rural other road. Wineham Lane has a very low traffic base and has only recorded three accidents in the reported five years period from 1 January 2017 – 31 December 2021.

23.6.74 Based on the assessment in **paragraph 23.6.71** and the justification for locations where accident rates are calculated to be above national averages for the type of road, it is not considered there is a significant accident record on the local highways network in Study Area 1.

23.6.75 A further review of the accidents outlined in **paragraph 23.6.67** has been undertaken for two further years⁹. Accidents which occurred on the road 500m either side of the proposed accesses have been outlined in **Table 23-20**. The extension of this accident period by two years was agreed with National Highways and WSCC during the ETG meeting on the 19 April 2023. Those accidents causing severe or fatal injury have been examined in more detail. This has been undertaken in order to understand whether there is a particular history of accidents in the vicinity of locations where it is proposed to take access from the highway network for the Proposed Development.

⁹ Only DfT accident data for a further one year 2016 has been used, given data from 2015 is not available to download, and 2022 and 2023 has not yet been published at the time of writing this report.

Table 23-20 Accidents near all temporary and permanent accesses

	Access point(s)	Junction access	Slight	Serious	Fatal
Ferry Road	A-01	Ferry Road	11	3	1
Ferry Road	A-02	Ferry Road	0	1	1
A259 between Wick Roundabout and Bilsham Road	A-03	Ferry Road	14	2	0
A259 between Wick Roundabout and Bilsham Road	A-04	A259 Church Lane Roundabout	20	4	0
A259 between Wick Roundabout and Bilsham Road	A-05, A-06	A259 Church Lane Roundabout	21	4	0
A259 between Wick Roundabout and Bilsham Road	A-08	A259	11	2	0
A259 between Wick Roundabout and Bilsham Road	A-09	A259	10	2	0
A259 between Wick Roundabout and Bilsham Road	A-10	A259	3	3	0
A284 between A27 and A259	A-11, A-12, A-13	A283	10	1	1
A284 between A27 and A259	A-14	A284	12	3	1
A284 between A27 and A259	A-15	A284	2	0	1
A284 between A27 and A259	A-16	A284	2	0	1

	Access point(s)	Junction access	Slight	Serious	Fatal
A27 between A280 and A284 (WB)	A-17, A-18	Poling Street	5	2	0
A27 between A280 and A284 (WB)	A-20	A27	2	1	0
A27 between A280 and A284 (EB)	A-21	A27	3	0	1
A27 between A280 and A284 (EB)	A-22, A-23	A27	3	0	1
A27 between A280 and A284 (EB)	A-24	Swillage Lane	2	0	0
A27 between A280 and A284 (EB)	A-25	Blakehurst Lane	1	0	0
A280 between A27 and A24	A-26	A280	3	2	0
A280 between A27 and A24	A-27	A280	2	2	0
A280 between A27 and A24	A-28	A280	6	3	0
A24 between A280 and A283	A-29	A24	6	1	0
A283 between A24 and B2139	A-30	Chantry Lane	0	0	0
A283 between A24 and B2139	A-31	Sullington Lane	0	0	0
A283 between A24 and B2139	A-32	A283	7	2	0
A283 between A24 and B2139	A-33	A283	7	2	0
A283 between A24 and B2139	A-34	A283	4	3	0
A283 between A24 and B2139	A-35	A283	6	2	0

	Access point(s)	Junction access	Slight	Serious	Fatal
The Street, Washington Village	A-36	The Street, Washington Village	0	0	0
A283 between A24 and B2135	A-37	School Lane, Washington Village	0	0	0
A283 between A24 and B2135	A-38	A283	8	0	0
A283 between A24 and B2135	A-39	A283	1	0	0
A283 between A24 and B2135	A-40	A283	4	0	0
A283 between A24 and B2135	A-41	A283	4	0	0
A283 between A24 and B2135	A-42	A283	7	4	0
A283 between A24 and B2135	A-43, A-43a, A-43b	A284	6	1	1
Spithandle Lane	A-44	Spithandle Lane	0	0	0
Spithandle Lane	A-45	Spithandle Lane	0	0	0
Spithandle Lane	A-46	Spithandle Lane	0	0	0
Spithandle Lane	A-47	Spithandle Lane	0	0	0
B2135 between B2116 and A283	A-48	B2135	1	3	0
B2135 between B2116 and A283	A-49	B2135	0	0	0
B2135 between B2116 and A283	A-50, A-50a, A-50b	B2135	2	0	0
A281 between A272 and B2116	A-52	A281	2	1	0

	Access point(s)	Junction access	Slight	Serious	Fatal
B2116 between B2135 and A281	A-53	Shermanbury Road	1	1	0
A281 between A272 and B2116	A-54, A-55	A281	2	2	0
A281 between A272 and B2116	A-56, A-57	A281	0	0	0
A281 between A272 and B2116	A-58	A281	3	0	1
Kent Street	A-59	Kent Street	0	0	0
Kent Street	A-60	Kent Street	0	0	0
Kent Street	A-61	Kent Street	0	0	0
A272 between A281 and A22	A-62	A272	5	1	0
A272 between A281 and A23	A-63	A272	3	1	0
Kent Street	A-64	Kent Street	1	0	0
Wineham Lane between A272 and B2117	A-65	Wineham Lane	0	0	0
Wineham Lane between A272 and B2117	A-66, A-67	Wineham Lane	0	0	0
Wineham Lane between A272 and B2117	A-68, A-69	Wineham Lane	0	0	0

- 23.6.76 Only serious and fatal accidents in **Table 23-20** at each of the accesses have been described in more detail below. It should be noted that above there may be some double counting of accidents, where an accident occurs within 500m of several accesses along a road. The reference numbers allow the reader to look up the accident in the DfT (2022b) Road Safety Data.

Ferry Road

A-1

- 23.6.77 **Ref. 471705662** – A serious accident occurred in 2017 on Ferry Road approximately 95m east of access point A-1 on Ferry Road. The accident involved one car travelling westbound, and occurred while the vehicle was going ahead at the right-hand bend.

A-2

- 23.6.78 **Ref. 471705662** – A fatal accident occurred in 2018 at A-2 access point on Ferry Road. The accident involved one car travelling westbound, and occurred while the vehicle was going ahead. The road surface was wet.

A-3

- 23.6.79 **Ref. 471067116** – A serious accident occurred in 2021 on the A259 Ferry Road Junction approximately 50m north of access point A-3 on Ferry Road. The accident occurred at the junction involving one motorcycle (over 500cc) travelling eastbound. At the time of the accident, it was raining and the road surface was wet.
- 23.6.80 **Ref. 471067116** – A serious accident occurred in 2021 on the A259 Ferry Road Junction approximately 50m respectively north of the A-3, access point on Ferry Road. The accident occurred at the junction involving one mobility scooter travelling north to southeast and a car travelling west to east. The mobility scooter was moving off and the car was travelling straight ahead when the accident occurred.

A259 between Wick Roundabout and Bilsham Road

A-4, A-5 and A-6

- 23.6.81 All four of these serious accidents occurred in the same location at Church lane Roundabout which is south of A-5 and A-6 and north of A-4:
- 23.6.82 **Ref. 471701828** – A serious accident occurred in 2017 on the A259 Church Lane Roundabout approximately 260m and 360m respectively south of access points A-5 and A-6 and 177m north of access point A-4. The accident occurred at the roundabout whilst the car was travelling west to east ahead and a pedal cyclist travelling from the east did a U-turn at the roundabout.
- 23.6.83 **Ref. 471805385** – A serious accident occurred in 2018 on the western approach to the A259 Church Lane Roundabout approximately 310m and 396m respectively south of access points A-5 and A-6 and 221m north of access point A-4. The accident involved a car travelling east to west and a motorcycle (over 500cc)

travelling in the same direction. The accident occurred when the motorcycle overtook a moving vehicle on the offside, while the car was travelling ahead.

23.6.84 **Ref. 470945483** – A serious accident occurred in 2020 on the A259 Church Lane Roundabout approximately 369m and 376m respectively south of access points A-5 and A-6 and 175m north of access point A-4. The accident at the roundabout involved a car travelling east to west and a pedal cyclist travelling north to south. The accident occurred while both vehicles were travelling ahead.

23.6.85 **Ref. 471028772** – A serious accident occurred in 2021 on the A259 Church Lane Roundabout approximately 260m and 360m respectively south of access points A-5 and A-6 and 177m north of access point A-4. The accident at the roundabout involved a car travelling west to east and a pedal cyclist travelling south to north. The accident occurred while both vehicles were travelling ahead.

A-8 and A-9

23.6.86 **Ref. 471901865** – A serious accident occurred in 2018 on the A259 approximately 400m and 475m south of access points A-8 and A-9 respectively. The accident involved one motorcycle (125cc and under) travelling southbound and occurred while the vehicle was going ahead at the left-hand bend. At the time of the accident it was raining and the road surface was wet. The vehicle skidded and hit the kerb.

A-8, A-9 and A-10

23.6.87 **Ref. 471803858** – A serious accident occurred in 2018 on the A259 at access point A-10 and approximately 200m and 275m south of access points A-9 and A-10 respectively. The accident involved one car travelling northbound, and occurred while the vehicle was going ahead at the right-hand bend.

A284 between A27 and A259

A-11, A-12, A-13

23.6.88 **Ref. 471601769** – A fatal accident occurred in 2016 on the A284 approximately 280m south of the access points. The accident occurred between two cars both travelling southbound.

A-11, A-12, A-13 and A-14

23.6.89 **Ref. 470882287** – A serious accident occurred in 2019 on the A284 approximately 222m north of access point A-12, 268m north of access points A-11 and A-13 and 329m south of access point A-14. The accident involved a motorcycle (over 500cc) travelling from southeast to east going ahead at the right-hand bend. The road surface was wet and it was raining with high winds at the time of the accident. This accident also occurred within 500m north of access points

A-14

23.6.90 **Ref. 471707305** – A serious accident occurred in 2017 on the A284 approximately 160m north of access point A-14. The accident involved a car travelling southbound in wet conditions colliding with a tree off the carriageway.

- 23.6.91 **Ref. 470996722** – A serious accident occurred in 2020 on the A284 approximately 14m north of access point A-14. The accident involved a motorcycle (over 125cc and up to 500cc) travelling northbound going ahead at the left-hand bend. The road surface was wet at the time of the accident.

A-15, A-16

- 23.6.92 **Ref. 471602837** – A fatal accident occurred in 2016 approximately 230m north of the access points. The accident involved two vehicles; a car and a motorcycle over 500cc. The motorcyclist travelling northbound was going ahead at the left hand bend while the car was travelling southbound when the collision occurred.

A27 between A280 and A284

A-21, A-22, A-23

- 23.6.93 **Ref. 470968592** – A fatal accident occurred in 2020 on the eastbound side of the A27 approximately 50m to the east of access point A-21 and 320m west of the Hammerpot accesses A-22 and A-23. The accident involved two cars both travelling west to east. The accident occurred when one car changed lane to the left, whilst the other was travelling ahead.

A280 between A27 and A24

A-14, A-15, A-16

- 23.6.94 **Ref. 471602837** – A fatal accident occurred on the A280 Long Furlong in 2016. The accident involved one car and one motorcycle over 500cc; one was travelling east to northbound and the other in the opposite direction. The motorcyclist was going ahead at the bend and the car was going ahead.

A-26, A-27

- 23.6.95 **Ref. 471605343** – A serious accident occurred on the A280 Long Furlong bend in 2016 at access A-27 and 220m from A-26. The accident involved two cars both travelling in opposite directions at the bend when the accident occurred.

A-27

- 23.6.96 **Ref. 471702689** – A serious accident occurred on the A280 Long Furlong bend leading to access point A-27 in 2017. The accident involved two cars; one was travelling east to southeast and the other in the opposite direction. The car travelling east to southeast was going ahead at the left-hand bend, whilst the other was also approaching the right-hand bend when a collision occurred.

A-28

- 23.6.97 **Ref. 471707256** – A serious accident occurred on the A280 Long Furlong in 2017 approximately 500m to the south of access point A-28. The accident involved three cars; one of the cars was travelling north to southeast and the other two in the opposite direction. All vehicles were going ahead when the collision occurred.
- 23.6.98 **Ref. 471031710** – A serious accident occurred in 2021 on the A280 Long Furlong approximately 380m north of access point A-28. The accident involved four vehicles; two cars and two vans (3.5 tonnes mgw or under). All vehicles were

travelling from the west to east, the two vans were travelling ahead whilst the two cars stopped / slowed causing an accident.

- 23.6.99 **Ref. 471602268** – A serious accident occurred in 2016. The accident involved two cars both travelling in opposite directions southwest to northeast, and northwest to southeast when the accident occurred.

A24 between A280 and A283

A-29

- 23.6.100 **Ref. 471702442** – A serious accident occurred on the A24 in 2017 approximately 85m south of access point A-29. This accident involved three vehicles; two cars and one motorcyclist. All vehicles were travelling from the north, one of the cars was turning left eastbound, whilst one of the cars was changing lane right and the motorcyclist was travelling ahead this caused an accident.

A283 between A24 and B2139

A32, A-33 and A-34

- 23.6.101 **Ref. 471603944** – A serious accident occurred in 2016. The accident involved two vehicles a pedal cyclists and a van / goods (3.5 tonnes mgw¹⁰ or under). The cyclist was going ahead westbound and the van was parked when the accident occurred.
- 23.6.102 **Ref. 471803938** – A serious accident occurred in 2018 on the A283 at the Chanctonbury Ring Road junction approximately 350m east of access point A-42. This accident involved three cars. One of the cars was turning right travelling east to north, one of the cars was travelling west to east, and the last car was waiting to turn left north to east.
- 23.6.103 **Ref. 470969022** – A serious accident occurred on the A283 in 2020 approximately 28m east of access point A-33 and 268m east of access point A-32. This accident involved one car travelling westbound going ahead when it had the collision and skidded.
- 23.6.104 **Ref. 470982509** – A serious accident occurred in 2020 on the A283 at the Chanctonbury Ring Road junction approximately 350m east of access point A-42. This accident involved two cars. One of the cars was turning right travelling east to north, whilst the other was travelling ahead west to east.
- 23.6.105 **Ref. 471006482** – A serious accident occurred in 2020 on the A283 at the Chanctonbury Ring Road junction approximately 350m east of access point A-42. This accident involved two cars. One of the cars was turning right travelling north to west, whilst the other was travelling ahead west to east. At the time of the accident, it was raining and the road surface was wet.

¹⁰ mgw - Maximum Gross Weight

A-34

- 23.6.106 **Ref. 471600172** – A serious accident occurred in 2016 at A-34. The accident involved two cars both travelling ahead one eastbound one westbound. At the time of the accident it was raining and there were high winds.

A283 between A24 and B2135

A-42

- 23.6.107 **Ref. 471604651** – A serious accident occurred in 2016 340m east of the A-42. The accident involved two cars; one car was travelling westbound ahead while the other was travelling waiting to turn right east to north when the accident occurred.

A-43

- 23.6.108 **Ref. 471601688** – A serious accident occurred in 2016 approximately 90m east of A-43. The accident involved a single car travelling eastbound which skidded and overturned.
- 23.6.109 **Ref. 471077084** – A fatal accident occurred in 2021 on the A283 approximately 15m east of the School Lane junction and access point A-43. This accident involved three vehicles; one car, and two motorcycles (one over 500cc and one 125cc and under). The car was travelling west to east and both motorcycles were travelling east to west. The smaller motorcycle slowed and stopped whilst the other vehicles were travelling ahead.

B2116 between B2135 and A281

A-53

- 23.6.110 **Ref. 471603468** – A serious accident occurred in 2016 approximately 320m west of A-53. The accident involved one car and motorcycle (over 125cc and up to 500cc). The motorcyclist was travelling southbound ahead and the car was turning right north to southwest when the accident occurred.

A-54

- 23.6.111 **Ref. 471606888** – A serious accident occurred in 2016 approximately 150m west of A-54. The accident involved one car which was going ahead at the right hand bend when the accident occurred. At the time of the accident it was raining.

A-55

- 23.6.112 **Ref. 471801964** – A serious accident occurred in 2018 on the A281 / B2116 junction approximately 224m east of access point A-55 on the B2116 and 461m east of access point A-54. This accident involved two vehicles, one van / goods vehicle (3.5 tonnes mgw or under), and one motorcyclist (125cc and under). The motorcyclist was travelling northbound ahead and the van was turning right when the accident occurred. At the time of the accident, it was raining and the road surface was wet.

B2135 between B2116 and A283

A-48

- 23.6.113 **Ref. 471801825** – A serious accident occurred in 2018 on the B2135 approximately 265m south of access point A-48. This accident involved one car and one pedal cyclist. The car was travelling southbound and the pedal cyclist the opposite direction. At the time of the accident, both vehicles were travelling ahead, it was raining and the road surface was wet.
- 23.6.114 **Ref. 471901107** – A serious accident occurred in 2019 on the B2135 approximately 110m south of access point A-48. This accident involved two cars and one motorcycle over 500cc. One of the cars is turning right from southeast to east. One of the cars travelling southeast to north was slowing or stopping. The motorcyclists was also travelling southeast to north ahead. The collision occurred and the motorcyclist and car travelling northbound skid.
- 23.6.115 **Ref. 470952970** – A serious accident occurred in 2020 on the B2135 approximately 298m north of access point A-48. This accident involved one car and one pedal cyclist. Both vehicles were travelling northbound. The car went straight ahead at the junction and entered a ditch.

A-51

- 23.6.116 **Ref. 471705415** – A serious accident occurred in 2017 on the B2135 at access point A-51. This accident involved three vehicles, one car, one pedal cyclist and one motorcyclist (over 500cc). The motorcyclists and car were travelling southbound while the pedal cyclist was travelling northbound. The motorcyclist was overtaking moving vehicle on the offside, while the pedal cyclist was turning right and the car was travelling ahead.

A281 between A272 and B2116

A-52

- 23.6.117 **Ref. 470951834** – A serious accident occurred in 2020 on the A281 approximately 288m south from the access point A-52. This accident involved two cars, one car was travelling north to south going ahead right-hand bend and the other car was travelling in the opposite direction and was changing lane to right. At the time of the accident, it was raining and the road surface was wet.

A-58

- 23.6.118 **Ref. 470850453** – A fatal accident occurred in 2019 on the A281 approximately 375m north of access point A-58. This accident involved two cars, one of the cars was travelling north to west turning right and the other car was travelling ahead northbound when the collision occurred.

A272 between A281 and A22

A-62 and A-63

- 23.6.119 **Ref. 471067793** – A serious accident occurred in 2021 on the A272 approximately 292m east of access point A-62 and 440m west of access point A-63. This

accident involved two vehicles, one car, and one motorcyclist (over 500cc). The vehicles were both travelling eastbound, the car was slowing or stopping, whilst the motorcyclist was travelling ahead at the right-hand bend when the accident occurred.

Study Area 2 – onshore impacts of offshore works

- 23.6.120 This section provides a description of the baseline conditions of the local and strategic roads which are proposed to be used for access to the onshore elements of the offshore Operation and maintenance phase (access to Port of Newhaven) of the Proposed Development **Figure 23.1, Volume 3** of the ES (Document Reference 6.3.23.6) identifies the roads that have been included in this section.
- 23.6.121 **Table 23-21** sets out a high-level review of the main A and B Roads included within Study Area 2 and more details on these are presented in the following section.

Table 23-21 A / B Roads within Study Area 2

Type of Road	Road Name
A Roads	A27, A26, A259
B Roads	B2109

Strategic Road Network

A27

- 23.6.122 The section of the A27 that is managed by NH routes between Pevensey in East Sussex to Cosham, Portsmouth where the A27 becomes the M27. The A27 connects numerous coastal towns along the south coast as well as connecting the cities of Portsmouth and Brighton. Road design standards vary along the A27, however, for most of its length the A27 is a dual carriageway subject to the national speed limit. Within Study Area 2, the junction with the A26 is located at Beddingham.

Local Road Network

Beach Road / Clifton Road / Railway Road

- 23.6.123 Beach Road / Clifton Road / Railway Road is a two lane single carriageway urban road which connects the East Quay of Newhaven Port to the A26 / B2109. The road is subject to a 30mph speed limit. In the southern section at Beach Road, the route is industrial in nature but passes through residential areas on the Clifton Road and Railway Road section. The route has footways on both sides and is provided with streetlights.

B2109

23.6.124 The B2109 is a two-lane single carriageway that runs from the A26 routing south to the A259 where it runs parallel for a section before splitting from the A259 where the A259 has an overpass near Newhaven Town rail station. In the vicinity of Study Area 2, the B2109 runs between the two junctions at either side of the A259 overpass and is provided with footways, pedestrian crossings (under signal control) and streetlights. The B2109 is subject to a 30mph speed limit. The B2109 also has an at grade signal rail crossing to the east of the junction with Railway Road.

A259

23.6.125 The A259 routes along the south coast of England between Havant in Hampshire and Folkestone in Kent. Within Study Area 2, the A259 routes Newhaven Town Centre and a junction with McKinley Way.

23.6.126 In Study Area 2, the A259 is a two lane single carriageway which for the most part is a flyover between McKinley Way and Newhaven Town Centre. The A259 is subject to a 30mph speed limit and has footways either side of road apart from the flyover section. The A259 also has streetlights and west of the flyover section has a signalised crossing of the River Ouse to accommodate the swing bridge operation.

A26

23.6.127 The A26 is a two lane single carriageway in Study Area 2 that links Newhaven Maidstone, Kent and a primary route in the south east of England.

23.6.128 In Study Area 2, the A26 links to the B2109 / A259 in Newhaven and routes north to a roundabout junction with the A27. The road is subject to the national speed limit (NSL) outside of settlements but reduces to speed limits of 40mph in South Highton and 30mph in Newhaven. The A26 has footways and streetlights in the major settlements but is not provided with footways in the rural sections.

McKinley Road (Newhaven Port New Access Road)

23.6.129 McKinley Road is a 1.4km two lane single carriageway which runs from a roundabout junction with the A259, via a new intermediate roundabout, to a new roundabout providing access to Newhaven East Quay. The road has footways as well as a segregated cycle track, and the southern end of the road includes a bridge spanning the Newhaven to Seaford railway line. McKinley Road is subject to a 30mph speed limit.

Bus network

23.6.130 Bus services are in operation between the major settlements within Study Area 2. The following bus services operate along roads proposed to be used by traffic related to the offshore works:

- A259 – Service 12 (Newhaven to Brighton), 14, 123, 145;
- B2109 – Service 12 (Newhaven to Brighton), 14, 123, 145; and

- A26 – In Newhaven the 12A and 145 but no major bus routes run north of Heighton on the A26.
- 23.6.131 The key roads above and the bus services running along them are set out in **Figure 23.11, Volume 3** of the ES (Document Reference 6.3.23).
- 23.6.132 The only impacts on the local bus services will be related to potential increased delay on local roads as result of the development proposals at Newhaven Port. Traffic generation set out in **Section 23.10** indicates low traffic generation in the Operation and maintenance phase of the offshore elements of the Proposed Development and as such it is considered that the impacts on local bus service provision will not be affected significantly by the Proposed Development and no further consideration is made in this chapter.

National cycle routes

- 23.6.133 In the vicinity of the Proposed Development at Newhaven Port the nearest element of the national cycle network is NCN 2 which runs along the B2109 across the junction with Railway Road. **Figure 23.12, Volume 3** of the ES (Document Reference 6.3.23) sets out the NCN routes in relation to Study Area 2. It is not anticipated there will be any impacts on NCN 2 as a result of the Operation and maintenance phase of the Proposed Development as the crossing of McKinley Way by NCN2 is provided with a kerbed central island and dropped crossings.

Baseline traffic flows

- 23.6.134 The approach to the collation of baseline traffic for Study Area 2 is the same as Study Area 1 and historic traffic data has been used, derived from the DfT traffic data.
- 23.6.135 Growth rates for total vehicles have been derived from the DfT's TEMPro 7.2. A base year of 2021 has been used to growth up to for the baseline traffic counts. Growth rates from TEMPro have been based TEMPro rates for Lewes 008/009 within the database which covers the town of Newhaven. The TEMPro growth rates are as follows:
- 2018 - 2021 - Newhaven – 1.929675.
- 23.6.136 HGV growth has been based on the DfT (2021a) publication '*TRA2501c - Road traffic (vehicle miles) by vehicle type in Great Britain*'. Table TRA2501c presents national data of the yearly change in vehicle traffic for total vehicles, car, light commercial vehicles and HGVs.
- 23.6.137 Based on Table TRA2501c (DfT, 2021a), annual growth factors for HGVs have been derived as follows:
- the change in HGV traffic flows between 2019 (last reliable year of data due to the COVID-19 pandemic) and the base year of 2021 has been calculated;
 - the growth factor for from 2018 to 2019 was 0.38%;
 - estimated growth between 2019 and 2021 is assumed as 0.38% per annum, or 0.76% over the two years; and

- the growth for 2019 – 2021 (0.76% has been added to the growth from the historic count year to 2019 to provide for a growth from historic count year to 2021).

23.6.138 The calculations above presented the following growth rates for HGVs:

- 2019 – 2021 – 1.00750

23.6.139 Due to the Newhaven Port New Access Road not having been opened to traffic at the time of the surveys undertaken in April/May 2022, an assumption has been made for the percentage transfer of traffic to Newhaven Port East Quay which previously routed along Railway Road / Clifton Road and would move onto the New Access Road. For completion of a robust assessment, it is assumed that 80% of the average daily traffic previously on the Railway Road / Clifton Road route moved across to the New Port Access Road.

23.6.140 **Table 23-22** sets out the AADF for the date of survey and the current baseline (2021). For McKinley Road, as the road was not currently open at the time of surveys undertaken in April/May 2022, there was no historic data which could be used. Future 2021 base traffic includes for the transference of 80% of the traffic from the existing access to Newhaven Port corridor; this is considered suitable given that a range of existing traffic would continue to travel along the original route to access both the town and port, whilst the new route would represent the most direct option for port traffic.

Table 23-22 2021 baseline traffic data (AADF) – Study Area 2

Highways Link	Historic Traffic Data			2021 Base		
	Total Vehicles	HGVs	Year of Data	Total Vehicles	HGVs	HGV%
1	N/A	N/A	N/A	2829	233	8.2%
2	16873	1267	2019	17346	1277	7.4%
3	16873	1267	2019	17346	1277	7.4%
4	36734	1921	2019	37781	1935	5.1%
5	26348	1095	2019	27106	1103	4.1%

Future baseline

Study Area 1 – Onshore works

Traffic growth

Construction impacts

- 23.6.141 To understand the future year of assessment for the assessment of transport effects in the construction phase, the traffic generation calculations were interrogated (as set out in **Section 23.7**) to understand the peak weeks for all receptors on highways links. This work provided that all peak weeks required to be assessed in this chapter occurred weeks 53 to 136 of the construction programme for the onshore elements of the Proposed Development which, based on current delivery timescales, places future years of assessment in 2026 and 2027.
- 23.6.142 It has been agreed with WSCC that growth rates can be derived from TEMPro and there is no requirement to include committed development or Local Plan allocations as the growth within the TEMPro estimates will account for traffic growth related to future development in the area through local plan allocations.
- 23.6.143 The growth rates from TEMPro are as follows:
- 2021 – 2026 – Arun – 1.0746 / Horsham – 1.0788; and
 - 2021 – 2027 – Arun – 1.0831 / Horsham – 1.0868.
- 23.6.144 The HGV growth rates derived from the DfT Transport Statistics are as follows:
- 2021 – 2026 – 1.075; and
 - 2021 – 2027 – 1.093.
- 23.6.145 The resultant future year traffic generation is set out in **Table 23-43** in **Section 23.11**.

Decommissioning impacts

- 23.6.146 The temporal scope of the assessment of the decommissioning phase is based on the peak period of traffic during the onshore substation removal. It is currently predicted that the onshore substation will be decommissioned around 30 years from the Proposed Development commission. The onshore substation is proposed to be built in year two to five of the construction programme. Based on the assessments set out on this chapter, year five will be 2030 and 30 years from then will be 2060.
- 23.6.147 It has been agreed with WSCC and NH that growth rates can be derived from TEMPro and there is no requirement to include committed development or Local Plan allocations as the growth within the TEMPro estimates will account for traffic growth related to future development in the area through local plan allocations. For the decommissioning phase impacts assessment, TEMPro rates have been extracted from the Horsham District.

- 23.6.148 TEMPro only provide traffic estimates to 2051 as such this is the latest year a reliable traffic growth estimate can be made. Therefore, 2051 is used for the assessment for the decommissioning phase.
- 23.6.149 The growth rates from TEMPro are as follows:
- 2021 – 2051 – Horsham – 1.22.
- 23.6.150 The HGV growth rates derived from the DfT Transport Statistics based on the construction phase HGV growth methodology will result in HGV growth of 1.55% per year which over 30 years to 2051 will result an increase in HGVs of 46.50%. Although this almost doubling of HGVs in 30 years may not be achieved (in recent years HGV growth has slowed) it has been used for calculations in this chapter for consistency with other assessments.
- 2021 – 2051 – 1.4650.
- 23.6.151 The resultant future year traffic generation is set out in **Table 23-43**.

Future highways network changes (construction and decommissioning phases)

- 23.6.152 During initial consultation, WSCC confirmed that there are no highways schemes that will need to be considered in the assessment.
- 23.6.153 The A27 Arundel Bypass is being promoted by NH but is not a committed development. With no direct impacts of onshore elements of the Proposed Development across the proposed route of the A27 Arundel Bypass, the only effects of the onshore elements of the Proposed Development on the bypass will be the additional traffic generated during the construction phase. Highways Link 9 (shown in **Figure 23.22, Volume 3** of the ES (Document Reference 6.3.23)) has been selected to provide NH with an indication of the peak construction traffic on the A27 which will switch to an open A27 Arundel Bypass. The DfT has confirmed that the A27 Arundel Bypass scheme will be deferred to Road Investment Strategy (RIS3 (covering 2025 to 2030) to allow time for stakeholders' views to be fully considered. [Further to this, the UK government scrapped the Arundel Bypass scheme on the 29 July 2024 as part of their review of major transport infrastructure projects.](#) Therefore, as the A27 Arundel Bypass is not yet committed it is not included within the cumulative effects assessment in this chapter, since it is not considered that the A27 Arundel Bypass would either be open or past its peak point of construction by the time that construction of the Proposed Development is complete.
- 23.6.154 The Lyminster Bypass construction works commenced on 24 October 2022 and the scheme completion is currently forecast for Autumn 2024. The bypass will link to the existing A284 from a point approximately 600m south of the A27 at Crossbush and join the privately developed section of the same proposed bypass at Toddington Nurseries. The proposed bypass will be a 7.3m wide single dual carriageway with verge on one side and a shared footway/cycleway facility on the other. The footway/cycleway will connect to existing and proposed facilities along the southern half of the bypass and A259. The Lyminster Bypass is due to be completed ahead of the peak of any Rampion 2 construction works. In order to present a robust scenario, the Rampion 2 traffic modelling has assumed that no Rampion 2 construction traffic would use the Lyminster Bypass and would instead

use the existing road network; in practice, the presence of the Lyminster Bypass would relieve pressure on the existing road network. The cumulative highways assessment therefore does not include the Lyminster Bypass, so as to provide a robust assessment.

- 23.6.155 West Sussex County Council (WSCC) is currently developing a major road enhancement scheme for the corridor of the A259 between Bognor Regis and Littlehampton in Arun District. The location of the scheme is between and including the B2132 Yapton Road (Comet Corner) junction and the B2187 Bridge Road (Tesco) junction. Construction commencement, subject to Full Business Case approval, is predicted to be the middle of 2025. As the scheme does not yet have a full Business Case it has not been included in the cumulative effects assessment in this chapter, however a sensitivity test could be undertaken if the A259 scheme were to get full business case approval.

Study Area 2 – Onshore impacts of offshore works

Traffic growth

- 23.6.156 Onshore impacts of the offshore operation and maintenance phase are proposed to start in the first year of commission. With the construction phase ending in 2029, a future year of assessment of 2030 for this operation and maintenance phase has been assumed for assessment in this chapter.
- 23.6.157 It was agreed with WSCC and NH that growth rates can be derived from TEMPro and there is no requirement to include committed development or Local Plan allocations as the growth within the TEMPro estimates will account for traffic growth related to future development in the area and it is proposed to continue that approach for Study Area 2. The growth rates are based on the Newhaven (TEMPro data set Lewes 008/009) location in TEMPro as that is where the candidate port is located.
- 23.6.158 The growth rates from TEMPro are as follows:
- 2021 – 2030 – 1.0746.
- 23.6.159 The HGV growth rates derived from the DfT Transport Statistics are as follows:
- 2021 – 2030 – 1.1395.
- 23.6.160 The resultant future year traffic generation is set out in **Table 23-42** later in this chapter.

23.7 Basis for ES assessment

- 23.7.1 The maximum parameters and assessment assumptions that have been identified to be relevant to transport are outlined in **Table 23-23** below and are in line with the Project Design Envelope (**Chapter 4: The Proposed Development, Volume 2** of the ES (Document Reference 6.2.4)).
- 23.7.2 [A change request \[AS-046\] to the DCO Application was accepted by the Examining Authority on 24 July 2024 \[PD-018\]. These changes included minor reductions to the proposed DCO Order Limits \(onshore only\) where adjacent to areas of Ancient Woodland to provide a 25m buffer from these features. Further](#)

localised reductions to the extent of Works 9 and 19 were also made, assigning these areas to a class of work with lower impacts from those previously assessed as cable installation. The changes made result in no new or different effects from those reported in this chapter of the ES. The figures supporting this chapter of the ES have not been updated due to the minor nature of these changes, the final proposed DCO Order Limits and Works areas should be viewed on the **Onshore Works Plans** (Document Reference: 2.2.2 and [AS-026].

Table 23-23 Maximum assessment assumptions for impacts on transport

Project phase and activity/ impact	Maximum assessment assumptions	Justification
Onshore – Construction	<p>Landfall</p> <ul style="list-style-type: none"> ● Permanent landfall site. ● Underground cable from onshore to offshore. <p><i>Landfall construction compound</i></p> <ul style="list-style-type: none"> ● Compound dimensions: 120m x 100m (length and width). ● 24 months construction duration. ● Permanent access to Ferry Road. <p>Onshore cable corridor:</p> <ul style="list-style-type: none"> ● Up to 40m wide temporary construction corridor within the onshore part of the Proposed DCO Order Limits with approximate length of 38.8km. ● Total construction duration up to three years for the onshore cable corridor. ● Up to four trenches with burial depth of 1.2m standard cover to top of duct. ● Trench width at base 1.2m. ● Trench width at surface. Soft soil: between 2m and 4m dependant on soil strength. Maximum angle of trench dependent on soil strength. Hard / solid ground: Same as base trench width. ● Trenchless crossing of all major roads and railways ● Access as follows: 	<p>The maximum assessment assumptions are the elements of the Proposed Development that will generate vehicles from the construction phase affecting the local and strategic highways network.</p>

Project phase and activity/ impact	Maximum assessment assumptions	Justification
	<ul style="list-style-type: none"> ▶ ElevenSeven temporary construction accesses. ▶ 2230 temporary construction accesses to later be used as permanent accesses for the operation and maintenance phase. ▶ Five temporary light construction accesses. ▶ ▶ SixSeven temporary <u>light</u> construction and operation accesses (for the onshore substation and landfall) will be designed to the same standards as temporary construction accesses. However, post-construction some or all elements of the access design will be retained to ensure access can be maintained during the operational phase for maintenance. ▶ 274 permanent accesses to be used in the Operation and maintenance phase. ▶ 713 total access locations.‡ ● Temporary construction haul road width 5-10m. 	
	<p><i>Temporary construction compounds:</i></p>	
	<ul style="list-style-type: none"> ● Four temporary construction compounds. ● Temporary construction compounds have a use duration of 3.5 years per compound. ● Size of temporary construction compounds: <ul style="list-style-type: none"> ▶ Climping – 61,300 m² ▶ Washington – 39,100 m² ▶ Oakendene East – 25,000m² 	

Project phase and activity/ impact	Maximum assessment assumptions	Justification
	<ul style="list-style-type: none"> ▶ Oakendene West – 50,000 m² ▶ Existing National Grid Bolney substation compound – 3,500 m² <p><i>Trenchless crossing compounds:</i></p> <ul style="list-style-type: none"> ● Trenchless crossing compound dimensions: 50m x 75m (length and width). ● 3 to 4 months construction duration. <p>Onshore substation:</p> <ul style="list-style-type: none"> ● Permanent area of site for all infrastructure – up to 6ha. ● Temporary works area – 2.5ha. ● Large loads (transformers) requiring abnormal loads. ● Duration of construction of the onshore substation – up to three years. ● Permanent access. ● Existing National Grid Bolney extension works: <ul style="list-style-type: none"> ▶ Air Insulated Switchgear (AIS) 6,300 m² ▶ Gas Insulated Switchgear (GIS) 3,500 m² 	
Onshore – Decommissioning	<p>Landfall</p> <p>Landfall site to remain in situ – No decommissioning effects.</p> <p>Onshore cable corridor</p> <p>All underground cable infrastructure to remain in situ – no decommissioning effects.</p> <p>Onshore substation</p> <p>All onshore substation equipment to be removed and access closed.</p>	<p>The maximum assessment assumptions are the elements of the Proposed Development that will generate vehicles from the decommissioning phase affecting the local and strategic highways network</p>

Project phase and activity/ impact	Maximum assessment assumptions	Justification
Offshore – Operation and maintenance	Staffing for operation and maintenance of the completed wind farm from East Quay, Newhaven Port. Staff Estimate of 40-50.	The maximum assessment assumptions are the elements of the Proposed Development that will generate vehicles from the offshore operation and maintenance phase affecting the local and strategic highways network.

23.7.3 The remainder of this section sets out the details of scenarios that have been selected to inform the assessment in this chapter for the following phases / impacts which are scoped into assessment in **Sections 23.9 - 23.11**:

- Construction phase – onshore works;
- Operation and maintenance phase – onshore impacts of offshore operation and maintenance; and
- Decommissioning phase – onshore works.

The Proposed Development – Construction phase – onshore works

Introduction

23.7.4 The construction traffic flow estimations have been based on the following elements of the Construction phase for the onshore elements of the Proposed Development:

- trenchless crossing compound works;
- trenchless crossing drilling works;
- temporary construction compound mobilisation;
- construction of the temporary construction compounds;
- landfall works (including HDD);
- clearing of sites;
- temporary and permanent access construction works;
- construction materials deliveries;
- onshore cable trenching;

- transition joint bay construction works;
- duct installation, onshore cable pulling and reinstatement;
- temporary construction access roads and haul road reinstatement;
- temporary construction compound reinstatement;
- construction of the onshore substation; and
- existing National Grid Bolney substation extension works.

23.7.5 Construction traffic generation of all of these elements has been predicted across the proposed four-year construction schedule. This has resulted in vehicle movement predictions per vehicle type on a weekly basis per access point, split into heavy goods vehicles (HGV) and light vehicles, with the latter being further split into staff vehicles and construction Light Goods Vehicles (LGVs) such as vans and pick-up trucks.

23.7.6 The detailed methodology and traffic calculations undertaken to inform this output are presented in [Appendix 23.2: Traffic Generation Technical Note](#) of the ES (Document Reference 6.4.23.2)). This appendix sets out the detailed construction methodology, assumptions, materials required and other matters that have informed the traffic generation output.

Fixed route option and access strategy for EIA assessment

23.7.7 To allow for an accurate and robust assessment of the construction phase of the onshore elements of the Proposed Development, the impact of a fixed scheme is required.

23.7.8 **Table 23-24** sets out the details of the temporary construction compounds (TCCs) and their associated accesses as set out in [Figure 23.13a-c, Volume 3](#) of the ES (Document Reference 6.3.23).

23.7.9 A number of temporary construction compounds will be required to support the construction of the onshore elements of the Proposed Development and will be used to store materials and form a base for traffic travelling to and from construction site locations. The TCCs are as follows:

- TCC 1 –Clipping compound: Site Access A-5, serving Section 1;
- TCC 2 –Washington compound: Site Access A-39, serving Section 2;
- TCC 3 – Oakendene west compound: Site Access A-62, serving Section 3;
- TCC 4 –Oakendene substation compound: Site Access A-63, serving Section 3; and
- TCC 5 – Existing National Grid Bolney substation compound: Site Access A-68, serving Section 3.

Table 23-24 Temporary construction compounds and associated accesses for onshore ES Assessment

Temporary construction compound	TCC-1	TCC-2	TCC-3	TCC-4 (Onshore Substation)	TCC-5 (Bolney Substation)
Access	A-5	A-39	A-62	A-63	A-68

23.7.10 The access points and their use are outlined below in **Table 23-25**.

Table 23-25 Use of each access point

Access ID	Use
A-01	Construction & operational
A-02	Light construction
A-03	Light construction
A-04	Operational
A-05	Construction & operational
A-06	Operational
A-08	Light construction
A-09	Construction & operational
A-10	Operational
A-11	Operational
A-12	Construction
A-13	Construction & operation
A-14	Light construction & operational
A-15	Construction & operational
A-16	Construction & operational
A-17	Operational
A-18	Operational
A-20	Light Construction <u>& operational</u>
A-21	Construction

Access ID	Use
A-22	Construction
A-23	Operational
A-24	Light construction & o Operational
A-25	Light construction & operational
A-26	Construction & operational
A-27	Operational
A-28	Construction
A-29	Operational
A-30	Operational
A-31	Operational
A-32	Operational
A-33	Construction
A-34	Operational
A-35	Construction
A-36	Operational
A-37	Light construction
A-38	Light construction
A-39	Construction & operational
A-40	Construction & operational
A-41	Construction & operational
A-42	Construction & operational
A-43	Construction & operational
A-43a	Construction
A-43b	Operational
A-44	Operational
A-45	Operational

Access ID	Use
A-46	Light construction & operational
A-47	Construction & operational
A-48	Construction & operational
A-49	Light construction & operational
A-50	Construction & operational
A-50a	Construction
A-50b	Operational
A-51	Operational
A-52	Construction & operational
A-53	Construction
A-54	Operational
A-55	Operational
A-56	Construction & operational
A-57	Construction & operational
A-58	Operational
A-59	Operational
A-60	Operational
A-61	Construction & operational
A-62	Construction
A-63	Construction & operational
A-64	Construction & operational
A-65	Operational
A-66	Light construction & operational
A-67	Construction & operational
A-68	Construction
A-69	Operational

23.7.11 **Figure 23.14a-e, Volume 3** of the ES (Document Reference 6.3.23) sets out the location of the accesses used within this ES assessment outlined in **Table 23-24**. Accesses selected for access to the onshore cable corridor have been selected based on those the furthest from the SRN and which will result in the biggest impact on the road network.

Traffic distribution

23.7.12 To inform the assessment of peak traffic at each identified receptor, traffic distribution is required for the light vehicles and HGVs.

Light Vehicles

23.7.13 There are two types of light vehicles (LGV) required on the Proposed Development: LGVs between temporary construction compound locations and temporary construction works sites, and construction staff traffic.

23.7.14 For the purposes of the distribution of LGV traffic between temporary construction compounds and temporary construction works site accesses, appropriate and direct routes have been based on Google Maps (2021) journey planning.

23.7.15 For construction staff traffic into and out of the temporary construction compounds per day, a more detailed distribution matrix was required. This has been based on journey to work data from the 2011 census for three local areas associated with the three sections of the onshore elements of the Proposed Development (the 2021 census was not used as the labour market still had not regained its pre-COVID-19 pandemic characteristics). **Figure 23.15a-c, Volume 3** of the ES (Document Reference 6.3.23) sets out the locations of the three local areas used to inform construction staff distribution.

23.7.16 The resultant distribution that has been applied to construction staff traffic is set out in **Table 23-26** for the three sections as detailed in **paragraph 23.4.9** of the onshore elements of the Proposed Development. **Table 23-26** also sets out the exit points, which are the points from which the traffic will exit the transport Study Area as shown in **Figure 23.16, Volume 3** of the ES (Document Reference 6.3.23) onto the wider network.

Table 23-26 Onshore construction staff traffic distribution

Traffic Generated by Section	Section 1	Section 2	Section 3
Temporary construction compound associated to Section	TCC1 A-05	TCC2 A-39	TCC3 A-62
Network exit point	%	%	%
A259 East	20.8%	3.4%	2.1%

Traffic Generated by Section	Section 1	Section 2	Section 3
A284 South	32.5%	2.3%	0.9%
A259 West	15.8%	2.6%	0.0%
A23 North	1.0%	1.5%	16.7%
A23 South	3.2%	2.6%	6.4%
A24 North	2.8%	15.1%	21.0%
A3021 South	4.5%	17.4%	9.0%
A27 East	0.7%	1.9%	2.6%
A27 West	9.4%	1.5%	0.0%
A284 North	4.0%	1.1%	0.0%
A283 East	0.4%	11.7%	7.7%
A283 North	0.3%	0.0%	0.0%
A283 West	0.0%	29.1%	12.9%
A272 East	0.8%	1.1%	8.6%
A272 West	0.3%	2.3%	2.6%
A270	3.1%	6.0%	6.0%
A273	0.5%	0.0%	0.0%
A2300	0.0%	0.4%	3.4%
Total	100.0%	100.0%	100.0%

HGVs

- 23.7.17 HGV traffic generation is based identifying origin locations of quarries and sand and gravel sites within the south east (south of London, west of Dover and east of Southampton) as the majority of deliveries are likely to include stone for temporary construction access tracks and temporary construction compounds (and the subsequent removal) and sand / limestone dust for the onshore temporary cable works.
- 23.7.18 HGVs will route onto the SRN into Study Area 1, via the A27 East, A27 West, A23 North and A23 South. These are also key routes as shown in Figure 5 (Lorry Route Network) of the West Sussex Transport Plan (WSCC, 2022). **Figure 23.17, Volume 3** of the ES (Document Reference 6.3.23) sets out the location of the destination / origins of HGV trips into Study Area 1.

- 23.7.19 The HGVs generated as part of the construction phase will travel directly to the temporary construction work sites and no additional HGV traffic is proposed from temporary construction compounds to works sites. Any materials delivered to temporary construction compounds and needed at works sites (smaller ancillary materials) will be transported with staff in low loader LGV-type vehicles.
- 23.7.20 For each of the network exit points, **Table 23-27** sets out for the HGV distribution of construction material deliveries directly to and from the landfall onshore substation, temporary construction compounds, onshore cable corridor and temporary and permanent accesses.

Table 23-27 HGV distribution and network exit points – Study Area 1

Network exit point	HGV distribution
A27 West	27.6%
A27 East	20.7%
A23 North	27.6%
A23 South	23.1%

- 23.7.21 HGV routing from the temporary construction and permanent accesses to the points of exit from Study Area 1 has been identified. **Figure 23.18, Volume 3** of the ES (Document Reference 6.3.23) sets out the proposed HGV Access Strategy that is detailed further in the **Outline CTMP** (Document Reference: 7.6).
- 23.7.22 The selection of HGV routes has been selected to, where possible, avoid routing HGVs through key settlements and villages. This strategy seeks to minimise HGV traffic routing through Findon Valley (referring to the requirements of the West Sussex freight strategy (WSSCC, 2011), Ford and Climping, Henfield, Steyning, Storrington, Partridge Green, Woodmancote, Wineham, West Grinstead, Cowfold (avoiding an AQMA) and several smaller villages and settlements. This approach also minimises the need for additional HGV traffic on the A259 to Bognor Regis or on the A259 in Littlehampton.
- 23.7.23 With a fixed set of temporary construction accesses (Table 4.1 of the **Outline CTMP** (Document Reference: 7.6), predictions of traffic generation across the construction phase and distribution for HGV and light vehicle traffic (including staff and temporary construction compound to work site LGVs) have been undertaken using the peak week of traffic for the network overall, based on the sum of HGVs and LGVs during each week of the construction programme.
- 23.7.24 The construction traffic has been converted to a daily traffic flow by using a five-day working in line with working hours detailed in **Section 23.4**. The resultant traffic generation is presented on a network plot as **Figure 23.19, Volume 3** of the ES (Document Reference 6.3.23) Receptor (users of road or location), while locations of the highways links are presented on **Figure 23.22, Volume** of the ES (Document Reference 6.3.23) Receptor (users of road or location).

Construction management base

- 23.7.25 A construction management base is proposed to be located in the vicinity of Shoreham Port.
- 23.7.26 A management team, marine co-ordination and vessel management team will be based in the office, and some contractors may use the office facility as well. These teams will comprise around 24 people in total and will be assumed to be shore-based for robustness.
- 23.7.27 The construction management base will enable Crew Transfer Vessels (CTV) to access the offshore construction location. The construction management base will also enable CTV crew transfers to complete construction and commissioning work.
- 23.7.28 It has been assumed that 40 workers per day will travel to the CMB for onward transfer by CTV and has the same spatial distribution as workers based at TCC-1. The remainder of the LGV traffic is assumed to be LGVs and similarly follows the spatial distribution for TCC-1 construction deliveries. There are also some HGVs serving the construction management base, and it is assumed that the HGV distribution outlined in **Table 23-27** is followed with respect to these.

The Proposed Development – Operation and maintenance phase – onshore impacts of offshore works

- 23.7.29 During the Operation and maintenance phase, it is currently estimated that 40-50 full time staff will be required per day. For the purposes of assessment in this chapter, it is proposed to assess a worst case of 50 staff per day into and out of East Quay, Newhaven Port, which currently accommodates the existing Rampion 1 project operation and maintenance facility.
- 23.7.30 For the daily traffic generation, it is assumed that all staff arrive by private car with no car sharing or use of sustainable modes. This results in 100 two staff vehicle movements per day, the impacts of which on the local highways network are assessed in **Section 23.10**.
- 23.7.31 The traffic is proposed to be distributed following the same approach as staff traffic for the construction phase and using journey to work data. An assessment of journey to work data based on the existing port indicates the following distribution of traffic and where it will leave Study Area 2:
- A259 West (Newhaven) – 30.58%;
 - A259 East – 37.79%;
 - A27 West – 18.64%; and;
 - A27 East – 12.99%.
- 23.7.32 **Figure 23.21a-d, Volume 3** of the ES (Document Reference 6.3.23) sets out the daily traffic impacts on the local highways network and the location of the highways links affected is set out in **Figure 23.22, Volume 3** of the ES (Document Reference 6.3.23).

23.7.33 The impacts on National Parks from Operational and maintenance traffic from Newhaven have been considered in Study Area 2.

The Proposed Development – decommissioning phase – onshore works

23.7.34 As set out in **Table 23-12** the only onshore element of the Proposed Development that will require to be removed in the decommissioning phase is the onshore substation and therefore only a small part of Study Area 1 will be affected by decommissioning traffic.

23.7.35 The assessment of decommissioning of the onshore substation on the same basis as the construction phase.

23.7.36 Using the onshore substation at Oakendene as a location for assessment it is considered that only a limited number of highway links within Study Area 1 will require assessment for the decommissioning phase which include: Highways Links 22, 23, 25 and 27. This is due to the logical routes to the SRN from the onshore substation and anticipated traffic distribution.

23.7.37 It is considered that the decommissioning of the onshore substation will require the same levels of traffic generation as the construction phase and therefore the peak construction traffic generation of the construction phase has been used as a basis for assessment.

23.7.38 Unlike the assessment for the construction phase (**Section 23.9**), the highways links that require assessment would only have to accommodate traffic associated with the onshore substation decommissioning only and not the traffic associated with the onshore cable decommissioning as the onshore cable will be left *in situ* during the decommissioning phase. As such, traffic levels at these receptors during the decommissioning phase will be less than set out in the assessment for the construction phase at these four highways links as the additional onshore cable related traffic in the construction phase would not be present in the decommissioning phase. An assessment has still been provided for robustness due to the different future year for the decommissioning phase.

23.7.39 The detailed methodology and traffic calculations undertaken to inform the construction and the decommissioning phases are presented in **Appendix 23.2: Traffic Generation Technical Note, Volume 4** of the ES (Document Reference 6.4.23.2). This appendix sets out the detailed construction methodology, assumptions, materials required and other matters that have informed the traffic generation output.

23.7.40 The calculations indicate that the peak week of the construction of the onshore substation will result in a peak traffic week that comprises:

- 76 two-way HGV movements during temporary compound construction;
- 36 two-way LGV movements during temporary compound construction;
- 2 onshore substation two-way HGV movements;
- 120 onshore substation two-way HGV movements; and
- Total two-way vehicle movements: 196 HGV and 38 LGV per week

- 23.7.41 This will result in the following daily traffic which as informed the assessment in this chapter:
- 39 two-way HGVs; and
 - 8 two-way LGVs.
- 23.7.42 Distribution of this traffic during the decommissioning phase has been based on the same distribution patterns as the construction phase as set out in **Table 23-26** and **Table 23-27**. This will result in all HGV trips routing over a combination of highway links 22, 23, 25 and 27.
- 23.7.43 **Figure 23.25, Volume 3** of the ES (Document Reference 6.3.23) sets out the resultant traffic generation on the local highways network during the decommissioning phase.

Embedded environmental measures

- 23.7.44 As part of the Rampion 2 design process, a number of embedded environmental measures have been adopted to reduce the potential for impacts on transport. These embedded environmental measures will evolve over the development process as the EIA progresses and in response to consultation.
- 23.7.45 These embedded environmental measures typically include those that have been identified as good or standard practice and include actions that will be undertaken to meet existing legislation requirements. As there is a commitment to implementing these embedded environmental measures, and also to various standard sectoral practices and procedures, they are considered inherently part of the design of Rampion 2 and are set out in this ES.
- 23.7.46 **Table 23-28** sets out the relevant embedded environmental measures within the design and how these affect the assessment of transport effects.

Table 23-28 Relevant transport embedded environmental measures

ID	Environmental measure proposed	Project phase measure introduced	How the environmental measures will be secured	Relevance to transport assessment
C-1	The onshore cable will be completely buried underground for its entire length where practicable.	Scoping	Draft Development Consent Order (DCO) Schedule 1, Part 1, The Authorised Development, Work No. 6, 7, 8, 9, 19 <u>Draft Development Consent Order (DCO) works plans, description of development and requirements</u>	This measure will minimise the impacts on the local and strategic highways and PRowWs by minimising closures.
C-2	Cables will be installed in ducting.	Scoping	Draft Development Consent Order <u>DCO Schedule 1, Part 3, Requirement 6 Cable parameters (3)</u> DCO works plans, description of development and requirements	This measure will minimise the impacts on the local and strategic highways and PRowWs by minimising closures due to crossings in trenches.
C-5	<u>Trenchless crossings will be provided for features where identified in Appendix A - Crossing Schedule of the Outline Code of Construction Practice. — Main rivers, watercourses,</u>	Scoping - updated at PEIR	Draft Development Consent Order, DCO Schedule 1, Part 3, Requirement 6 (4), Cable Parameters <u>Draft Development Consent Order, DCO Schedule 1, Part 3, Requirement 22, Code of construction practice (CoCP) (4) (p)</u> DCO works plans and order limits	This measure will minimise the impacts on the local and strategic highways.

ID	Environmental measure proposed	Project phase measure introduced	How the environmental measures will be secured	Relevance to transport assessment
	<p>railways and roads that form a part of the Strategic Highways Network will be crossed by Horizontal Directional Drill (HDD) or other trenchless technology where this represents the best environment solution and is financially and technically feasible (see C-17).</p>			
C-18	<p><u>Appendix A Crossing Schedule of the Outline Code of Construction Practice includes the crossing methodology which will be used for each crossing of road, rail, public right of way (PRoW) and</u></p>	Scoping	<p><u>Draft Development Consent Order, DCO Schedule 1, Part 3, Requirement 22 Code of construction practice (CoCP) (4) (p) Outline Code of Construction Practice (CoCP) (Document Reference 7.2) and DCO requirement</u></p>	<p>This measure will allow for safe and managed crossings of the local highway network and PRoWs.</p>

ID	Environmental measure proposed	Project phase measure introduced	How the environmental measures will be secured	Relevance to transport assessment
	<p>watercourse.—crossing schedule will be prepared which includes crossing methodology for each crossing of road, rail, public right of way (PRoW) and watercourse.</p>			
C-32	<p>Signage and/or temporary public rights of way (PRoW) / footpath diversions will be provided during construction.</p>	Scoping	<p><u>Draft Development Consent Order, DCO Schedule 1, Part 3, Requirement 20 Public rights of way (5) (a) Outline CoCP (Document Reference: 7.2) and DCO requirement</u></p>	<p>This measure will allow for safe interactions between PRoW users and construction vehicles and areas.</p>
C-157	<p>The proposed heavy goods vehicle (HGV) routing during the construction period to individual accesses will be developed to avoid major settlements such as Storrington,</p>	PEIR	<p><u>Draft Development Consent Order, DCO Schedule 1, Part 3, Requirement 24 Construction traffic management plan (2 (a) Proposed routing in agreed Outline CTMP (Document Reference: 7.6)</u></p>	<p>This measure will limit the impacts of Proposed Development in key local villages and settlements.</p>

ID	Environmental measure proposed	Project phase measure introduced	How the environmental measures will be secured	Relevance to transport assessment
	<p>Cowfold, Steyning, Wineham, Henfield, Woodmancote and other smaller settlements where possible. <u>For Cowfold, this means that HGVs will only route through the village centre for trips related to accesses A-56 and A-57 or where use of local sourced materials / equipment makes its avoidance impracticable.</u></p>			
C-158	<p>The <u>proposed heavy goods vehicle (HGV) Routing during the construction period to individual accesses will avoid the Air Quality Management Area</u></p>	PEIR	<p><u>Draft Development Consent Order, DCO Schedule 1, Part 3, Requirement 24 Construction traffic management plan (2) (a) Proposed routing in agreed Outline CTMP (Document Reference: 7.6)</u></p>	<p>This measure will limit the impacts of the onshore elements of the Proposed Development on the AQMA in Cowfold.</p>

ID	Environmental measure proposed	Project phase measure introduced	How the environmental measures will be secured	Relevance to transport assessment
C-159	The proposed heavy goods vehicle (HGV) routing	PEIR	<u>Draft Development Consent Order, DCO Schedule 1, Part 3, Requirement 24 Construction traffic management plan (2)</u>	This measure will restrict the conveyance of HGVs as part of the

ID	Environmental measure proposed	Project phase measure introduced	How the environmental measures will be secured	Relevance to transport assessment
	<p>during the construction period to individual accesses will avoid the A24 through Findon where possible, as advised from the West Sussex County Council (WSSCC) Freight Action Plan where possible.</p>		<p>(a) Proposed routing in agreed Outline CTMP (Document Reference: 7.6)</p>	<p>Proposed Development through the settlement of Findon on the A24.</p>
C-160	<p>Highways condition surveys will be undertaken before, during and after the Construction phase. Any damage to highways as a result of Rampion 2 construction heavy goods vehicles (HGV) on the highways will be repaired. Further detail will be</p>	PEIR	<p>Draft Development Consent Order, DCO Schedule 1, Part 3, Requirement 24 Construction traffic management plan -(2) (a) Proposed routing in agreed Outline CTMP (Document Reference: 7.6)</p>	<p>This measure will allow for any damage caused by the Proposed Development on the local and strategic highways during the construction phase to be repaired in good time.</p>

ID	Environmental measure proposed	Project phase measure introduced	How the environmental measures will be secured	Relevance to transport assessment
included within the Outline CTMP.				
C-161	The South Downs Way and the Downs Link Public Rights of Ways (PRoWs) will be managed in a way that minimises any closures or diversions.	PEIR	<u>Draft Development Consent Order, DCO Schedule 1, Part 3, Requirement 20 Public rights of way (1) (a), (b) Outline PRoWMP</u> (Document Reference: 7.8)	This will limit the impact on the key PRoWs (South Downs Way and the Downs Link) affected by the Proposed Development.
C-162	Public Rights of Ways (PRoWs) that cross the onshore cable corridor will be managed or diverted over the shortest distance possible with potential to provide adjacent crossings.	PEIR	<u>Draft Development Consent Order, DCO Schedule 1, Part 3, Requirement 20 Public rights of way (1) (a), (b) Outline PRoWMP</u> (Document Reference: 7.8)	This will limit the extent of impact on PRoWs affected by the Proposed Development.
C-163	Public Rights of Way (PRoW) condition surveys will be undertaken before, during and	PEIR	<u>Draft Development Consent Order, DCO Schedule 1, Part 3, Requirement 20 Public rights of way (1) (a), (b) Outline PRoWMP</u> (Document Reference: 7.8)	This measure will allow for any damage caused by the Proposed Development on PRoWs during the construction phase to be repaired in good time. This ensures that all

ID	Environmental measure proposed	Project phase measure introduced	How the environmental measures will be secured	Relevance to transport assessment
	<p>after the Construction phase. If damage has been identified during the construction phase, the damage will be repaired. Post-construction, all PRoWs will be returned to their pre-construction condition.</p>			<p>PRoWs will be returned to their pre-construction condition.</p>
C-164	<p>Public Rights of Way (PRoW) routing through locations of permanent infrastructure will be provided with a permanent diversion and the existing route closed.</p>	PEIR	<p>Outline PRoWMP (Document Reference: 7.8)</p>	<p>This will allow for PRoW routes to be maintained on a similar course to their existing routes.</p>
C-165	<p>Construction access will be provided with visibility splays designed to Design</p>	PEIR	<p><u>Draft Development Consent Order, DCO Schedule 1, Part 3, Requirement 15 Highway accesses outside the South Downs National Park (1) (b), (2), Requirement 16 Highway</u></p>	<p>This will provide for safe accesses where construction vehicles can access the highways network in a safe way which should reduce the</p>

ID	Environmental measure proposed	Project phase measure introduced	How the environmental measures will be secured	Relevance to transport assessment
	Manual for Roads and Bridges (DMRB) design standards as agreed with West Sussex County Council (WSCC). <u>Road Safety Audits will be provided where agreed with the highways authority.</u>		<u>accesses in the South Downs National Park (1) (b), (2) Outline CTMP (Document Reference: 7.6) — Requirement, order limit plans and access plans</u>	risk of accidents related to the Proposed Development.
C-166	For non-horizontal directional drilling (HDD) crossings of the highway, one of the following solutions will be used: 1 - Lay the cable in a trench, which will be excavated in phases to ensure at least one traffic lane is operational and controlled using temporary signals	PEIR	<u>Draft Development Consent Order, DCO Schedule 1, Part 3, Requirement 24 Construction traffic management plan (2) (c) Outline CTMP (Document Reference: 7.6) — Requirement, order limit plans and access plans</u>	This measure will limit the need for road closures where open trench crossings are proposed. Where traffic management cannot be achieved, diversions will lead to local road users still being able to access the same final destinations and no parts of the local highways network would be cut off.

ID	Environmental measure proposed	Project phase measure introduced	How the environmental measures will be secured	Relevance to transport assessment
	<p>(although this approach cannot be used on single track parts of the highway); or</p> <p>2 - Provide a short road closure while the work is undertaken with a relevant diversion route.</p>			
C-168	Impacts on open access land will be managed through active management strategy.	PEIR	Outline PRoWMP (Document Reference: 7.8)	This measure will allow for access to Open Access Land to be maintained wherever possible.
C-169	<p><u>Designs for permanent accesses required on the project will be provided to Department for Transport (DfT) Design Manual for Roads and Bridges</u></p>	PEIR	<p><u>Draft Development Consent Order, DCO Schedule 1, Part 3, Requirement 15 Highway accesses outside the South Downs National Park (2)</u></p> <p><u>Requirement 8 Detailed design approval onshore substation (2), Design requirement</u></p>	This measure will allow for a safe and formal access to be provided to the highways network to permanent infrastructure.

ID	Environmental measure proposed	Project phase measure introduced	How the environmental measures will be secured	Relevance to transport assessment
	<p>(DMRB) design standards. RED will provide designs for permanent accesses required on the Proposed Development project will be provided to Department for Transport (DfT) Design Manual for Roads and Bridges (DMRB) design standards.</p>			

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23.7.47 In addition to the embedded environmental measures set out in **Table 23-28**, five supporting documents have been prepared to support the ES assessment including:

- an **Outline Operational Travel Plan** (Document Reference: 7.5) which sets out details of the measures to mitigate impacts arising from staff and other operational trips during the operation phase of the Proposed Development;
- an **Outline CTMP** (Document Reference: 7.6) which sets out details of the construction traffic access strategy that underpins the assessment in this chapter and the mitigation and management of these flows;
- an **Outline PRowMP** (Document Reference: 7.8) which sets out details of the impacts of the Proposed Development on the PRow network and Open Access Land and the management and mitigation required; and
- **Appendix 23.1: Abnormal Indivisible Load assessment, Volume 4** of the ES (Document Reference: 6.4.23.1) which outlines setting out the nature of the AILs required associated with the Proposed Development, routes to site and how this will be managed; and
- **Appendix 23.2: Traffic Generation Technical Note, Volume 4** of the ES (Document Reference: 6.4.23.2) which summarises the methodology used to calculate the trip generation and distribution.

23.7.48 Many of the embedded environmental measures set out in **Table 23-28** form key management and mitigation proposals set out in these additional documents.

23.8 Methodology for ES assessment

Introduction

23.8.1 The project-wide generic approach to assessment is set out in **Chapter 5: Approach to the EIA, Volume 2** of the ES (Document Reference: 6.2.5). The assessment methodology for transport in the ES is generally consistent with that provided in the Scoping Report (RED, 2020).

Methodology

23.8.2 GEART (IEA, 1993) identifies the following environmental effects that can occur as a result of traffic associated with the Proposed Development.

- **severance**: the separation of people from places and other people and places or the impediment of pedestrian access to essential facilities;
- **driver delay**: traffic delays as a result of the Proposed Development traffic;
- **pedestrian amenity**: the effect on the relative pleasantness of a pedestrian journey as a result of changes in traffic flow, traffic composition and pavement width / separation from traffic;
- **pedestrian delay**: the ability of people to crossroads as a result of changes in traffic volume, composition and speed, the level of pedestrian activity, visibility and general physical conditions of the Proposed Development. Consideration

is given to the effects on PRow users due to the closure and diversion of PRowS;

- **fear and intimidation:** these may be experienced by people as a result of an increase in traffic volume and its proximity or the lack of protection caused by such factors as narrow pavement widths; and
- **accidents and safety:** the risk of accidents occurring where the Proposed Development is expected to produce a change in the character of traffic.

23.8.3 The guidance that is followed when assessing the potential significance of road traffic effects is summarised in GEART (IEA, 1993), which states that:

“The detailed assessment of impacts is...likely to concentrate on the period during which the absolute level of an impact is at its peak, as well as the hour at which the greatest level of change is likely to occur.” (Paragraph 3.10).

23.8.4 To assess the impact at its peak, the likely percentage increase in traffic is determined by comparing estimates of traffic generated by the Proposed Development with future predicted baseline traffic flows on the road links in both Study Areas 1 and 2.

23.8.5 As described in **Section 23.4**, construction of the onshore cable route and substation will involve construction for several years in different locations spread out over 38km. To provide a representative forecast of construction traffic generated, a number of complementary approaches have been adopted.

23.8.6 Firstly, a realistic worst case peak week of construction traffic has been identified. This is calculated as the week with the greatest sum of vehicle movements generated by all accesses across the network. The daily traffic flows per highways link thus presented gives a snapshot of the busiest week overall.

23.8.7 Secondly, noting that for a linear project such as this construction intensity will vary spatially, further sensitivity tests have been undertaken. For this, peak weeks for each of the three construction sections have been further modelled. This is similarly calculated by identifying the greatest sum of vehicle movements generated by accesses within Section 1 at the southern end, Section 2 in the middle and Section 3 at the northern end.

23.8.8 Finally, Annual Average Weekday Traffic (AAWT) flows have been calculated for each link, for each year of the construction period. This provides a comprehensive overview of the project impact across Study Area 1 over the duration of the construction period.

23.8.9 [In addition to the scenarios described in paragraphs 23.8.6 to 23.8.8 Chapter 32: ES Addendum, Volume 2 of the ES \(Document reference: 6.2.32\) \[REP5-038\] \(updated at Deadline 6\) includes additional sensitivity tests and associated assessments completed by the Applicant since submission of the Development Consent Order Application. This sensitivity test considers the peak week for construction traffic at each receptor location. Whilst recognising that this is an unrealistic scenario for consideration of overall worst case, due to those weeks occurring at different weeks in the programme, this sensitivity test provides a more localised and refined impact assessment, and confirms the worst case construction traffic impact for all receptor locations in the Study Area.](#)

- 23.8.10 The traffic generation methodology is explained in full in **Appendix 23.2: Traffic Generation Technical Note, Volume 4** of the ES (Application Document Reference: 6.4.23.2).
- 23.8.11 GEART (IEA, 1993) provides two rules that are used to establish whether an environmental assessment of traffic effects should be carried out on receptors:
- **Rule 1:** Include roads where traffic flows are predicted to increase by more than 30% (or where the number of HGVs is predicted to increase by more than 30%); and
 - **Rule 2:** Include any specifically 'sensitive' areas where traffic flows are predicted to increase by 10% or more.
- 23.8.12 It should be noted that, according to GEART (IEA, 1993), predicted traffic flow increases below 10% are generally not considered to be significant as daily variations in background traffic flow may fluctuate by this amount. Changes in traffic flows below this level are, therefore, assumed not to result in significant environmental effects and have therefore not been assessed further as part of this study.
- 23.8.13 Details of the GEART threshold applied to each highways link is set out in **Section 23.9** and **Table 23-29** provides details of the highways links and the nature of the receptors within the vicinity of each of them for Study Area 1 and **Table 23-30** for Study Area 2. Further to this list, **Chapter 32: ES Addendum, Volume 2 of the ES** (Document reference: 6.2.32) **[REP5-0381]** (updated at Deadline 6) includes a number of additional receptors which were identified following a review of **Table 23-29** following on from submission of the Development Consent Order Application.
- 23.8.14 In terms of transport and access impacts, the receptors are the users of the roads within the study area and the locations (towns/villages/AQMAs) through which those roads pass.

Table 23-29 Receptors potentially requiring assessment – Study Area 1

No.	Highways link	Receptor (users of road or location)
1	Ferry Road	Cyclists travelling along Ferry Road which is a NCN route (NCN Route 2).
2	Church Lane	Residents living in properties adjacent to Church Lane.
3	Ford Road	Residents living in properties adjacent to Church Lane.
4	A27, West of Arundel	Residents living in properties adjacent to highway and pedestrians travelling along the road.
5	A259, West of Wick	Residents living in properties adjacent to highway, pedestrians travelling along the road.

No.	Highways link	Receptor (users of road or location)
6	A284, North of Wick	Residents living in properties and people working in retail adjacent to highway, pedestrians travelling along the road.
7	A284, Lyminster	Residents living in properties adjacent to highway, pedestrians travelling along the road.
8	Crossbush Lane, Crossbush	Residents living in properties adjacent to highway, pedestrians travelling along the road.
9	A27, Arundel Station	Pedestrians travelling along the road and residents living in properties adjacent to the highway.
10	Crossbush Lane, Warningcamp	Pedestrians travelling along the road and residents living in properties adjacent to the highway.
11	A27, South of Crossbush	Motorists experiencing congestion issues on approach to A27/A284 Junction
12	A27, High Salvington	Pedestrians travelling along the road and residents living in properties adjacent to the highway.
13	A24/A27, Offington (Warren Road)	Pedestrians travelling along the road, residents living in properties adjacent to the highway and living in Cowfold village AQMA.
14	A24, Findon	Pedestrians travelling along the road, residents living in properties adjacent to the highway and in Findon.
15	A280, Long Furlong	Pedestrians travelling along the road, residents living in properties adjacent to the highway.
16	A283, West of A24	Pedestrians travelling along the road, residents living in properties adjacent to the highway.
17	A283, East of A24	Pedestrians travelling along the road, residents living in Washington built up area.
18	B2135, South of Ashurst	Residents living in properties adjacent to the highway.
19	A283, Steyning	Pedestrians travelling along the road, residents living in Steyning built up area.
20	A24, South of A272	Residents living in properties adjacent to the highway.

No.	Highways link	Receptor (users of road or location)
21	B2116, Partridge Green Road	Residents living in properties adjacent to the highway.
22	A281, South Shermanbury	Pedestrians travelling along the road, residents living in properties adjacent to the highway.
23	A281, South of Cowfold	Pedestrians travelling along the road, residents living in properties adjacent to the highway and living in Cowfold Village AQMA.
24	A281, Cowfold Centre	Pedestrians travelling along the road, residents living in properties adjacent to the highway and living in Cowfold Village AQMA.
25	A272, Station Road, Cowfold	Pedestrians travelling along the road particularly given the school in Cowfold, residents living in properties adjacent to the highway and living in Cowfold Village AQMA.
26	Wineham Lane, South of A272	Residents living in properties adjacent to the highway, given key route to existing National Grid Bolney substation.
27	A272, West of A23	Residents living in properties adjacent to highway, pedestrians travelling along the road.
28	A23, North of the A272	Key route to north for construction vehicles on SRN. Residents living in Bolney built up areas.
29	B2118, Sayers Common	Residents living in properties adjacent to highway, pedestrians travelling along the road.
30	B2116, Henfield Road, Albourne	Residents living in properties adjacent to highway, pedestrians travelling along the road.
31	A23, North of the A27	Key route on SRN impacted by construction traffic. Residents living in Hickstead and Sayers Common built up areas.
32	A27, West of A23	Key route on SRN impacted by construction traffic. Residents living in properties adjacent to highway
33	A27, East of A23	Key route to the east for construction vehicles on SRN. Residents living in properties adjacent to highway
34	A259, West of Church Street	NCN Route 2, pedestrians, properties adjacent to highway. Residents living in properties adjacent to highway

No.	Highways link	Receptor (users of road or location)
35	A259, East of Wick	Residents living in properties adjacent to highway, pedestrians travelling along the road, and education site local to road

Table 23-30 Receptors potentially requiring assessment – Study Area 2

No.	Highways link	Identified receptors on highway link
1	McKinley Road	Pedestrians, segregated cycle route, retail properties adjacent to carriageway
2	A26 South Heighton	Residential properties adjacent to carriageway, pedestrians
3	A26 Beddingham	Residential properties adjacent to carriageway, pedestrians
4	A27 West of A26	Pedestrians, SRN link selected for assessment
5	A26 East of A25	Pedestrians, SRN link selected for assessment

Receptor sensitivity

23.8.15 The sensitivity of each highway link included in the assessment has been assigned a sensitivity in accordance with GEART (IEA, 1993). This is based on professional judgement and related to the proximity, volume and type of receptors along the highway link. **Table 23-31** summarises the rationale used to determine the sensitivity against the corresponding receptors.

Table 23-31 Highways Link sensitivity

Sensitivity	Description / reason	Receptor
High	Receptors of greatest sensitivity to traffic flows: schools, colleges, playgrounds, accident blackspots, retirement homes and urban / residential homes without footways that are used by pedestrians and cyclists.	Residents / workers travelling to and from work or home on foot and by car or bicycle, school children, leisure walkers and equestrians.
Medium	Receptors of medium sensitivity to change in traffic flows including: congested junctions, doctors' surgeries,	Residents / workers travelling to and from work or home on

Sensitivity	Description / reason	Receptor
	hospitals, shopping areas with roadside frontage, roads with narrow footways, unsegregated cycle ways, community centres, parks and recreation facilities.	foot and by car or bicycle, people visiting these land uses.
Low	Receptors with low sensitivity to change in traffic flows: places of worship, public open space, nature conservation areas, listed buildings, tourist / visitor attractions and residential areas with adequate footway provision.	Residents / workers travelling to and from work or home on foot or car or bicycle and people visiting these land uses.
Negligible	Receptors with negligible sensitivity to traffic flows including: Motorway and Dual Carriageways and / or land uses sufficiently distant from affected routes and junctions.	Residents / workers travelling by foot or by car or bicycle.

- 23.8.16 In accordance with GEART (IEA, 1993), where the sensitivity of a road link is judged as high or medium, [Rule 2 \(paragraph 23.8.11\)](#) is applied and where traffic flows are predicted to increase by 10% or more, an assessment of environmental effects is undertaken. Where the sensitivity is judged as low or negligible results, [Rule 1 \(paragraph 23.8.11\)](#) is applied and where traffic flows are predicted to increase by more than 30%, or where the number of HGVs is predicted to increase by more than 30%, an assessment of environmental effects of the road link is undertaken.
- 23.8.17 Details of the sensitivity of the highways links and receptors are set out in [Sections 23.9 to 23.11](#).

Magnitude of change

- 23.8.18 GEART (IEA, 1993) recognises that professional judgement should be used as part of the assessment and states the following:
- “For many effects there are no simple rules or formulae which define thresholds of significance and there is, therefore, a need for interpretation and judgement on the part of the assessor, backed-up by data or quantified information wherever possible. Such judgements will include the assessment of the numbers of people experiencing a change in environmental impact as well as the assessment of the damage to various natural resources.”*
(Paragraph 4.5, IEA, 1993)
- 23.8.19 Based on the [Rule 1](#) and [Rule 2 \(paragraph 23.8.11\)](#) and the sensitivity of the receptors ([paragraph 23.8.15](#)), [Table 23-32](#) shows the magnitude of change applied to the environmental effects ([paragraph 23.8.2](#)) to help identify levels of significance. The indicators to assess the magnitude of change are based on

advice included within GEART (IEA, 1993) and professional judgement. These are presented in **Table 23-32**.

Table 23-32 Magnitude of change

Transport effect	High	Medium	Low	Negligible
Severance	Change in total traffic or HGV flows over 91%	Change in total traffic or HGV flows of 61%-90%	Change in total traffic or HGV flows of 31%-60%	Change in total traffic or HGV flows of less than 30%
Driver Delay	High increase in queuing at junctions and / or congestion on road links	Medium increase in queuing at junctions and / or congestion on road links	Low increase in queuing at junctions and / or congestion on road links	Low or no increase in queuing at junctions and / or congestion on road links
Pedestrian Amenity Pedestrian Delay Fear and Intimidation	Based on general level of pedestrian activity, visibility and physical conditions such as traffic flow, traffic composition, crossing points and pavement width / separation from traffic			
Accidents and Safety	Based on general level of pedestrian activity, visibility and physical conditions such as traffic flow, traffic composition, crossing points and pavement width / separation from traffic			

Significance evaluation methodology

23.8.20 The significance of a likely transport effect is derived by considering the sensitivity of the receptor (derived from **Table 23-31**) against the magnitude of change (derived from **Table 23-32**) as defined in **Table 23-33**.

Table 23-33 Significance evaluation matrix

		Magnitude of change			
		High	Medium	Low	Negligible
Receptor sensitivity	High	Major (Significant)	Major (Significant)	Moderate (Significant)	Negligible (Not Significant)
	Medium	Major (Significant)	Moderate (Significant)	Minor (Not Significant)	Negligible (Not Significant)
	Low	Moderate (Significant)	Minor (Not Significant)	Minor (Not Significant)	Negligible (Not Significant)
	Negligible	Negligible (Not Significant)	Negligible (Not Significant)	Negligible (Not Significant)	Negligible (Not Significant)

23.8.21 The following terms have been used to classify the level of transport effects, where they are predicted to occur:

- **major adverse or major beneficial** – where the Proposed Development will cause a significant deterioration or improvement to the existing environment;
- **moderate adverse or moderate beneficial** – where the Proposed Development will cause a noticeable deterioration or improvement to the existing environment;
- **minor adverse or minor beneficial** – where the Proposed Development will cause a small deterioration or improvement to the existing environment; and
- **negligible** – no discernible deterioration or improvement to the existing environment.

23.8.22 For the purposes of the assessment presented in this chapter, major and moderate effects are considered to be ‘Significant’, whilst minor and negligible effects are considered ‘Not Significant’.

23.8.23 Effects can also be described, for example, as:

- beneficial, negligible or adverse;
- temporary (short-term, medium-term, long-term) or permanent; and
- local, district, regional or national.

23.9 Construction phase – onshore works

23.9.1 To undertake the assessment of effects of the traffic generated by the Proposed Development, the traffic flows are estimated and trips distributed onto the road network.

- 23.9.2 These trips for the peak Construction phase of the Proposed Development have been added to future baseline years to provide a clear impact of the difference between the growth of future baseline and the growth of future baseline 'with Development'.
- 23.9.3 The significance has been assessed against GEART (IEA, 1993) **Rule 1** (30% or above) and **Rule 2** (10% or above) (**paragraph 23.8.11**). Where the change is considered significant, further assessment has been made using the criteria in GEART (IEA, 1993).
- 23.9.4 The assessment in this Section includes for all of the relevant embedded environmental measures applicable to the Construction phase including C-1, C-2, C-18, C-157, C-158, C-159, C-165, C-166 and C-169 as described in **Table 23-28**.

Sensitivity of receptor

- 23.9.5 The sensitivity of receptors (the highways links assessed based on the receptors present and the GEART (IEA, 1993) rules regarding change in traffic flows) for Study Area 1 are set out within **Table 23-34**.

Table 23-34 Highway link receptor sensitivity – Study Area 1

Link No	Highway link	Comments	Receptor Sensitivity	GEART rule
1	Ferry Road	The highway link is a two-way single lane carriageway with no properties directly fronting the road and no pedestrian footways.	Negligible	1
2	Church Lane	The highway link is a two-way single lane carriageway south of the village of Climping with no properties directly fronting the road but with footways.	Low	1
3	Ford Road	The highway link is a two-way single lane carriageway in south Arundel with properties directly fronting the road and footways.	Medium	2
4	A27, West of Arundel	The highway link is a dual carriageway west of Arundel with some properties directly fronting the road and footways.	Low	1
5	A259, West of Wick	The highway link is a two-way single lane carriageway in Wick with properties directly fronting the road and footways and a segregated cycle way part of the NCN.	High	2

Link No	Highway link	Comments	Receptor Sensitivity	GEART rule
6	A284, North of Wick	The highway link is a two-way single lane in Wick with properties directly fronting the road and footways.	High	2
7	A284, Lyminster	The highway link is a two-way single lane carriageway in Wick with properties directly fronting the road and footways.	High	2
8	Crossbush Lane, Crossbush	The highway link is a two-way single lane carriageway in Crossbush with properties directly fronting the road and footways.	Medium	2
9	A27, Arundel Station	The highway link is a two-way single lane carriageway near Arundel Station with footways.	Low	1
10	Crossbush Lane, Warningcamp	The highway link is a two-way single lane carriageway in Warningcamp with some properties directly fronting the road and no footways.	Low	1
11	A27, South of Crossbush	The highway link is a dual carriageway south of Crossbush with no properties directly fronting the road and footways.	Negligible	1
12	A27, High Salvington	The highway link is a two-way single lane carriageway north of Salvington with properties directly fronting the road with footways.	Medium	2
13	A24/A27, Offington (Warren Road)	The highway link is a two-way single lane carriageway north of Salvington with properties directly fronting the road with footways.	Medium	2
14	A24, Findon	The highway link is a two-way single lane carriageway north of Salvington with properties directly fronting the road with footways.	Medium	2
15	A280, Long Furlong	The highway link is a two-way single lane carriageway at Clapham with properties directly fronting the road with footways on a WSCC signed HGV route.	Low	1

Link No	Highway link	Comments	Receptor Sensitivity	GEART rule
16	A283, West of A24	The highway link is a two-way single lane carriageway at East of Storrington with some properties directly fronting the road and footways.	Low	1
17	A283, East of A24	The highway link is a two-way single lane carriageway at north of Washington, West Sussex with properties directly fronting the road and footways.	Medium	2
18	B2135, South of Ashurst	The highway link is a two-way rural single lane carriageway with some properties directly fronting the road and no footways.	Low	1
19	A283, Steyning	The highway link is a two-way single lane carriageway with no properties directly fronting the road or footways.	Negligible	1
20	A24, South of A272	The highway link is a two-way single lane carriageway with no properties directly fronting the road or footways.	Negligible	1
21	B2116, Partridge Green Road	The highway link is a two-way single lane carriageway with some properties directly fronting the road and footways.	Low	1
22	A281, South Shermanbury	The highway link is a two-way single lane carriageway with properties directly fronting the road and footways.	Medium	2
23	A281, South of Cowfold	The highway link is a two-way single lane carriageway at Cowfold with properties directly fronting the road and footways.	High	2
24	A281, Cowfold Centre	The highway link is a two-way single lane carriageway at Cowfold with properties directly fronting the road and footways.	High	2
25	A272, Station Road, Cowfold	The highway link is a two-way single lane carriageway at Cowfold with properties directly fronting the road and footways.	High	2

Link No	Highway link	Comments	Receptor Sensitivity	GEART rule
26	Wineham Lane, South of A272	The highway link is a two-way rural single lane carriageway with some properties directly fronting the road and footways.	Low	1
27	A272, West of A23	The highway link is a two-way single lane carriageway with properties directly fronting the road and footways.	Low	1
28	A23, North of the A272	The highway link is a dual carriageway with no properties directly fronting the road or footways.	Negligible	1
29	B2118, Sayers Common	The highway link is a two-way single lane carriageway at Sayers Common with properties directly fronting the road and footways.	Medium	2
30	B2116, Henfield Road, Albourne	The highway link is a two-way single lane carriageway at Albourne Green with properties directly fronting the road and footways.	Medium	2
31	A23, North of the A27	The highway link is a dual carriageway with no properties directly fronting the road or footways.	Negligible	1
32	A27, West of A23	The highway link is a dual carriageway with no properties directly fronting the road or footways.	Negligible	1
33	A27, East of A23	The highway link is a dual carriageway with no properties directly fronting the road or footways.	Negligible	1
34	A259, West of Church Street	The highway link is a two-way single lane carriageway south of Climping with some properties directly fronting the road, footways and a segregated cycle route part of the NCN.	Low	2
35	A259, East of Wick	The link is a two-way single lane carriageway through Wick with properties directly fronting the road and footways.	Medium	2

23.9.6 Given the potential receptors described in **Section 23.8**, **Table 23-35** identifies the sensitivity of highway link and the GEART (IEA, 1993) rule that applies for Study Area 2.

Table 23-35 Highway link – receptor sensitivity – Study Area 2

No	Highway Link	Comments	Receptor sensitivity	GEART Rule
1	McKinley Road	The highway link is a two way single lane carriageway south of the A259 no close adjacent properties and footways	Negligible	1
2	A26 South Heighton	The highway link is a two-way single lane carriageway at South Heighton with some properties directly fronting the road and footways.	Low	1
3	A26 Beddingham	The highway link is a two-way single lane carriageway at Beddingham with some properties directly fronting the road and footways.	Low	1
4	A27 West of A26	The highway link is a dual carriageway with no properties directly fronting the road or footways.	Negligible	1
5	A26 East of A25	The highway link is a dual carriageway with no properties directly fronting the road or footways.	Negligible	1

Magnitude of change

23.9.7 **Table 23-36** sets out the magnitude of change of the proposed peak daily (24 hour) development traffic on the identified highways links and presents the following information, for total vehicles and HGVs:

- future year baseline traffic per highways link;
- predicted daily traffic flows per highways link during the peak week of construction movements, calculated as being the week with the greatest sum of vehicle movements generated by all accesses across the network; and
- percentage impact of the Proposed Development traffic per highways link.

23.9.8 **Table 23-36** identifies highways links percentage impacts that exceed the GEART (IEA,1993) assessment thresholds (10% / 30%) based on the highways link

sensitivity are set out in red. This data is also robust as it has been calculated by dividing the weekly total by five working days.

23.9.9 Highways Links 8 and 10 have been removed from **Table 23-38** and subsequent analysis. These highway links were included in Chapter 24: Transport, Volume 2 of the Preliminary Environmental Information Report (PEIR) (RED, 2021) as they received traffic from the Proposed Development as part of the maximum design scenario. For the assessment in this ES chapter, there is no traffic from the Proposed Development anticipated to be routed across these highway links and as such they have not been included in the assessment, but to maintain continuity with numbering they are shown as blank lines.

23.9.10 [In addition to the assessment contained within Table 23-36 to Table 23-38 Chapter 32: ES Addendum, Volume 2 of the ES \(Document Reference: 6.2.32\) \[REP5-038\] \(updated at Deadline 6\) details estimated magnitude of change for the construction traffic peak weeks at each individual receptor as an additional sensitivity test. Whilst recognising that this is an unrealistic scenario for consideration of overall worst case, due to those weeks occurring at different weeks in the programme, this sensitivity test provides a more localised and refined impact assessment and confirms the worst case construction traffic impact for all receptor locations within the Study Area.](#)

Table 23-36 Onshore construction traffic percentage impact per highways link – peak week

Link No	Location	Future Year Base Traffic (2026/27)		Peak Week Construction Traffic (per weekday)		Magnitude of change percentage impact	
		Total Vehicles	HGVs	Total Vehicles	HGVs	Total Vehicles	HGVs
1	Ferry Road	2069	338	32	32	1.5%	9.5%
2	Church Lane	11238	1221	137	0	1.2%	0.0%
3	Ford Road	6672	274	109	32	1.6%	11.7%
4	A27 West of Arundel	26154	1410	67	36	0.3%	2.6%
5	A259 West of Wick	24805	928	257	23	1.0%	2.5%
6	A284 North of Wick	14671	597	107	23	0.7%	3.9%
7	A284 Lyminster	15000	750	137	53	0.9%	7.1%

Link No	Location	Future Year Base Traffic (2026/27)		Peak Week Construction Traffic (per weekday)		Magnitude of change percentage impact	
		Total Vehicles	HGVs	Total Vehicles	HGVs	Total Vehicles	HGVs
8	Crossbush Lane, Crossbush						
9	A27, Arundel Station	36249	1747	92	51	0.3%	2.9%
10	Crossbush Lane, Warning Camp						
11	A27, South of Crossbush	35365	1903	213	87	0.6%	4.6%
12	A27 High Salvington	25323	1000	148	97	0.6%	9.7%
13	A24/A27 Offington (Warren Road)	34218	1096	140	118	0.4%	10.8%
14	A24 Findon	29019	685	103	21	0.4%	3.0%
15	A280 Long Furlong	20044	3927	108	34	0.5%	0.9%
16	A283 West of A24	24434	812	81	6	0.3%	0.8%
17	A283 East of A24	12422	2543	182	8	1.5%	0.3%
18	B2135, South of Ashurst	3858	116	0	0	0.0%	0.0%
19	A283, Steyning	22776	633	0	0	0.0%	0.0%

Link No	Location	Future Year Base Traffic (2026/27)		Peak Week Construction Traffic (per weekday)		Magnitude of change percentage impact	
		Total Vehicles	HGVs	Total Vehicles	HGVs	Total Vehicles	HGVs
20	A24, South of A272	39448	1772	93	0	0.2%	0.0%
21	B2116 Partridge Green Road	7140	398	22	0	0.3%	0.0%
22	A281, South Shermanbury	8792	378	22	0	0.2%	0.0%
23	A281, South of Cowfold	6811	155	0	0	0.0%	0.0%
24	A281, Cowfold Centre	25077	1091	106	18	0.4%	1.7%
25	A272, Station Road, Cowfold	18933	820	101	18	0.5%	2.2%
26	Wineham Lane, South of A272	948	17	30	12	3.2%	71.6%
27	A272, West of A23	18917	797	156	48	0.8%	6.0%
28	A23, North of the A272	80525	4431	54	18	0.1%	0.4%
29	B2188, Sayers Common	7995	1636	0	0	0.0%	0.0%
30	B2116, Henfield	3525	164	0	0	0.0%	0.0%

Link No	Location	Future Year Base Traffic (2026/27)		Peak Week Construction Traffic (per weekday)		Magnitude of change percentage impact	
		Total Vehicles	HGVs	Total Vehicles	HGVs	Total Vehicles	HGVs
	Road, Albourne						
31	A23, North of the A272	88049	3434	143	90	0.2%	2.6%
32	A27, West of A23	72880	2666	161	107	0.2%	4.0%
33	A27, East of A23	79718	3141	76	44	0.1%	1.4%
34	A259, West of Church Street	28609	594	38	9	0.1%	1.5%
35	A259 East of Wick	27415	508	85	0	0.3%	0.0%

23.9.11 To provide another level of detail and robustness, peak week has also been calculated for each of the three construction sections (Section 1 at the southern end, Section 2 in the middle and Section 3 at the northern end).

23.9.12 **Table 23-37** presents the percentage change for the peak weeks in Section 1, Section 2, and Section 3.

Table 23-37 Onshore construction traffic percentage impact per highways link – section-based peak weeks

Link No	Location	Future Year Base Traffic (2026/27)		Section-based Peak Week Construction Traffic Impact (per weekday)											
		Total Vehicles	HGVs	Section 1 (Peak Week 72)				Section 2 (Peak Week 83)				Section 3 (Peak Week 125)			
				Total Vehicles	HGVs	Total Vehicles	HGVs	Total Vehicles	HGVs	Total Vehicles	HGVs				
1	Ferry Road	2069	338	12	0.6%	12	3.4%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
2	Church Lane	11238	1221	117	1.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
3	Ford Road	6672	274	135	2.0%	51	18.7%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
4	A27 West of Arundel	26154	1410	63	0.2%	33	2.4%	7	0.0%	1	0.1%	32	0.1%	32	2.3%
5	A259 West of Wick	24805	928	192	0.8%	8	0.9%	9	0.0%	0	0.0%	0	0.0%	0	0.0%
6	A284 North of Wick	14671	597	8	0.1%	8	1.4%	34	0.2%	0	0.0%	9	0.1%	0	0.0%
7	A284 Lyminster	15000	750	34	0.2%	34	4.5%	34	0.2%	0	0.0%	9	0.1%	0	0.0%
8	Crossbush Lane, Crossbush														
9	A27, Arundel Station	36249	1747	98	0.3%	56	3.2%	7	0.0%	1	0.1%	32	0.1%	32	1.9%
10	Crossbush Lane, Warning Camp														
11	A27, South of Crossbush	35365	1903	117	0.3%	76	4.0%	40	0.1%	1	0.1%	41	0.1%	32	1.7%
12	A27 High Salvington	25323	1000	120	0.5%	96	9.6%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
13	A24/A27 Offington (Warren Road)	34218	1096	120	0.3%	96	8.7%	4	0.0%	4	0.3%	0	0.0%	0	0.0%
14	A24 Findon	29019	685	0	0.0%	0	0.0%	65	0.2%	4	0.5%	26	0.1%	0	0.0%

Link No	Location	Future Year Base Traffic (2026/27)		Section-based Peak Week Construction Traffic Impact (per weekday)											
		Total Vehicles	HGVs	Section 1 (Peak Week 72)				Section 2 (Peak Week 83)				Section 3 (Peak Week 125)			
				Total Vehicles	HGVs	Total Vehicles	HGVs	Total Vehicles	HGVs	Total Vehicles	HGVs				
15	A280 Long Furlong	20044	3927	46	0.2%	28	0.7%	43	0.2%	4	0.1%	43	0.2%	34	0.9%
16	A283 West of A24	24434	812	71	0.3%	0	0.0%	128	0.5%	5	0.6%	0	0.0%	0	0.0%
17	A283 East of A24	12422	2543	38	0.3%	0	0.0%	260	2.1%	0	0.0%	23	0.2%	0	0.0%
18	B2135, South of Ashurst	3858	116	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
19	A283, Steyning	22776	633	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
20	A24, South of A272	39448	1772	15	0.0%	0	0.0%	72	0.2%	0	0.0%	90	0.2%	32	1.8%
21	B2116 Partridge Green Road	7140	398	36	0.5%	0	0.0%	47	0.7%	12	2.9%	4	0.1%	4	0.9%
22	A281, South Shermanbury	8792	378	36	0.4%	0	0.0%	43	0.5%	7	1.9%	6	0.1%	6	1.6%
23	A281, South of Cowfold	6811	155	0	0.0%	0	0.0%	4	0.1%	4	2.8%	4	0.1%	4	2.3%
24	A281, Cowfold Centre	25077	1091	6	0.0%	0	0.0%	11	0.0%	0	0.0%	159	0.6%	32	3.0%
25	A272, Station Road, Cowfold	18933	820	0	0.0%	0	0.0%	11	0.1%	0	0.0%	159	0.8%	32	3.9%
26	Wineham Lane, South of A272	948	17	0	0.0%	0	0.0%	0	0.0%	0	0.0%	70	7.4%	41	237.8%
27	A272, West of A23	18917	797	6	0.0%	0	0.0%	11	0.1%	4	0.6%	254	1.3%	89	11.1%
28	A23, North of the A272	80525	4431	3	0.0%	0	0.0%	10	0.0%	4	0.1%	85	0.1%	36	0.8%

Link No	Location	Future Year Base Traffic (2026/27)		Section-based Peak Week Construction Traffic Impact (per weekday)											
		Total Vehicles	HGVs	Section 1 (Peak Week 72)				Section 2 (Peak Week 83)				Section 3 (Peak Week 125)			
				Total Vehicles	HGVs	Total Vehicles	HGVs	Total Vehicles	HGVs	Total Vehicles	HGVs				
29	B2188, Sayers Common	7995	1636	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
30	B2116, Henfield Road, Albourne	3525	164	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
31	A23, North of the A272	88049	3434	80	0.1%	65	1.9%	9	0.0%	6	0.2%	92	0.1%	27	0.8%
32	A27, West of A23	72880	2666	121	0.2%	92	3.4%	9	0.0%	4	0.1%	42	0.1%	0	0.0%
33	A27, East of A23	79718	3141	41	0.1%	26	0.8%	7	0.0%	4	0.1%	54	0.1%	27	0.9%
34	A259, West of Church Street	28609	594	28	0.1%	3	0.5%	9	0.0%	0	0.0%	0	0.0%	0	0.0%
35	A259 East of Wick	27415	508	80	0.3%	0	0.0%	12	0.0%	0	0.0%	6	0.0%	0	0.0%

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- 23.9.13 A further means of testing robustness, the change in Annual Average Weekday Traffic (AAWT) on each of the highway links has been calculated for years 1, 2, 3 and 4 of the construction programme.
- 23.9.14 **Table 23-38** presents the percentage change in AAWT flows for each highway link by year.

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Table 23-38 Onshore construction traffic percentage impact per highways link – AAWT

Link No	Location	Future Year Base Traffic (2026/27)		Magnitude of change impact - AAWT															
				Year 1				Year 2				Year 3				Year 4			
				Total Vehicles	HGVs	Total Vehicles	HGVs	Total Vehicles	HGVs	Total Vehicles	HGVs	Total Vehicles	HGVs	Total Vehicles	HGVs	Total Vehicles	HGVs		
1	Ferry Road	2069	338	0	0.0%	0	0.0%	7	0.3%	7	2.0%	0	0.0%	0	0.1%	1	0.0%	1	0.2%
2	Church Lane	11238	1221	8	0.1%	0	0.0%	75	0.7%	0	0.0%	1	0.0%	0	0.0%	4	0.0%	0	0.0%
3	Ford Road	6672	274	10	0.2%	6	2.1%	67	1.0%	25	9.2%	6	0.1%	6	2.1%	5	0.1%	3	1.1%
4	A27 West of Arundel	26154	1410	6	0.0%	5	0.3%	51	0.2%	34	2.4%	24	0.1%	22	1.6%	8	0.0%	7	0.5%
5	A259 West of Wick	24805	928	14	0.1%	1	0.1%	136	0.5%	7	0.8%	4	0.0%	0	0.0%	8	0.0%	1	0.1%
6	A284 North of Wick	14671	597	4	0.0%	1	0.1%	59	0.4%	7	1.2%	14	0.1%	0	0.0%	5	0.0%	1	0.2%
7	A284 Lyminster	15000	750	7	0.0%	4	0.5%	77	0.5%	26	3.4%	14	0.1%	0	0.0%	10	0.1%	6	0.8%
8	Crossbush Lane, Crossbush																		
9	A27, Arundel Station	36249	1747	10	0.0%	7	0.4%	68	0.2%	45	2.6%	26	0.1%	25	1.4%	10	0.0%	9	0.5%
10	Crossbush Lane, Warning Camp																		
11	A27, South of Crossbush	35365	1903	15	0.0%	9	0.5%	135	0.4%	61	3.2%	40	0.1%	25	1.3%	17	0.0%	12	0.6%
12	A27 High Salvington	25323	1000	13	0.0%	10	1.0%	77	0.3%	49	4.9%	5	0.0%	4	0.4%	15	0.1%	13	1.3%
13	A24/A27 Offington (Warren Road)	34218	1096	14	0.0%	12	1.1%	76	0.2%	64	5.9%	30	0.1%	30	2.7%	18	0.1%	17	1.5%
14	A24 Findon	29019	685	5	0.0%	3	0.4%	71	0.2%	15	2.2%	56	0.2%	25	3.7%	10	0.0%	4	0.6%

Link No	Location	Future Year Base Traffic (2026/27)		Magnitude of change impact - AAWT															
				Year 1				Year 2				Year 3				Year 4			
				Total Vehicles	HGVs	Total Vehicles	HGVs	Total Vehicles	HGVs	Total Vehicles	HGVs	Total Vehicles	HGVs	Total Vehicles	HGVs				
15	A280 Long Furlong	20044	3927	4	0.0%	1	0.0%	76	0.4%	29	0.7%	37	0.2%	22	0.6%	11	0.1%	8	0.2%
16	A283 West of A24	24434	812	1	0.0%	0	0.0%	70	0.3%	12	1.5%	29	0.1%	0	0.0%	2	0.0%	0	0.0%
17	A283 East of A24	12422	2543	6	0.0%	4	0.1%	142	1.1%	9	0.3%	109	0.9%	35	1.4%	13	0.1%	5	0.2%
18	B2135, South of Ashurst	3858	116	0	0.0%	0	0.0%	5	0.1%	5	4.1%	4	0.1%	4	3.9%	3	0.1%	3	2.3%
19	A283, Steyning	22776	633	1	0.0%		0.0%	44	0.2%		0.0%	22	0.1%		0.0%	1	0.0%		0.0%
20	A24, South of A272	39448	1772	2	0.0%	0	0.0%	78	0.2%	12	0.7%	62	0.2%	11	0.6%	13	0.0%	1	0.1%
21	B2116 Partridge Green Road	7140	398	0	0.0%	0	0.0%	23	0.3%	6	1.6%	14	0.2%	6	1.5%	5	0.1%	4	1.0%
22	A281, South Shermanbury	8792	378	0	0.0%	0	0.0%	23	0.3%	6	1.5%	14	0.2%	5	1.4%	4	0.1%	4	1.0%
23	A281, South of Cowfold	6811	155	0	0.0%	0	0.0%	4	0.1%	4	2.3%	3	0.0%	3	2.1%	2	0.0%	2	1.5%
24	A281, Cowfold Centre	25077	1091	1	0.0%	0	0.0%	72	0.3%	12	1.1%	89	0.4%	11	1.0%	25	0.1%	1	0.1%
25	A272, Station Road, Cowfold	18933	820	1	0.0%	0	0.0%	69	0.4%	12	1.5%	89	0.5%	11	1.3%	25	0.1%	1	0.1%
26	Wineham Lane, South of A272	948	17	0	0.0%	0	0.0%	3	0.4%	1	3.5%	15	1.6%	5	30.4%	2	0.2%	1	5.3%
27	A272, West of A23	18917	797	2	0.0%	1	0.1%	109	0.6%	35	4.4%	129	0.7%	29	3.7%	36	0.2%	5	0.7%

Link No	Location	Future Year Base Traffic (2026/27)		Magnitude of change impact - AAWT															
				Year 1				Year 2				Year 3				Year 4			
				Total Vehicles	HGVs	Total Vehicles	HGVs	Total Vehicles	HGVs	Total Vehicles	HGVs	Total Vehicles	HGVs	Total Vehicles	HGVs				
28	A23, North of the A272	80525	4431	1	0.0%	0	0.0%	40	0.0%	16	0.4%	45	0.1%	14	0.3%	13	0.0%	4	0.1%
29	B2188, Sayers Common	7995	1636	0	0.0%		0.0%	0	0.0%		0.0%	0	0.0%		0.0%	0	0.0%		0.0%
30	B2116, Henfield Road, Albourne	3525	164	0	0.0%		0.0%	0	0.0%		0.0%	0	0.0%		0.0%	0	0.0%		0.0%
31	A23, North of the A272	88049	3434	10	0.0%	9	0.3%	90	0.1%	56	1.6%	71	0.1%	32	0.9%	27	0.0%	15	0.4%
32	A27, West of A23	72880	2666	14	0.0%	12	0.5%	95	0.1%	62	2.3%	55	0.1%	30	1.1%	25	0.0%	17	0.6%
33	A27, East of A23	79718	3141	5	0.0%	4	0.1%	48	0.1%	29	0.9%	36	0.0%	19	0.6%	13	0.0%	7	0.2%
34	A259, West of Church Street	28609	594	2	0.0%	0	0.0%	20	0.1%	3	0.5%	2	0.0%	0	0.0%	1	0.0%	0	0.1%
35	A259 East of Wick	27415	508	4	0.0%	0	0.0%	49	0.2%	0	0.0%	7	0.0%	0	0.0%	4	0.0%	0	0.0%

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Significance of residual effect

- 23.9.15 Where the percentage change in total traffic or HGVs is 30% or more on non-sensitive sections ([Rule 1](#)) or 10% or more on sensitive sections ([Rule 2](#)) (outlined in [paragraph 23.8.11](#)), an assessment of the environmental effects is needed. Based on the results presented in [Table 23-36](#) and the defined sensitivities set out within [Table 23-34](#), there are three highway links where the percentage change in HGVs results in the need for an assessment.
- 23.9.16 The three highway links that require detailed environmental assessment based on the peak week screening method are as follows:
- Highway Link 3 – Ford Road ([Rule 2](#));
 - Highway Link 13 – A24/A27, Offington (Warren Road) ([Rule 2](#)); and
 - Highway Link 26 – Wineham Lane, South of the A272 ([Rule 1](#)).
- 23.9.17 As a sensitivity test, the section-based peak week method also identified highway link 3 (Ford Road) and highway link 26 (Wineham Lane) for detailed assessment.
- 23.9.18 On all other highways links, the percentage change in traffic flows or HGVs does not trigger the need for an assessment of environmental effects based on the rules set out in GEART (IEA, 1993).

Highways Link 3 – Ford Road

- 23.9.19 As set out in [Table 23-36](#), the total HGV flows are predicted to increase on this link by 11.7% over a 24-hour period (an increase of 306 HGVs) during the peak week. The sensitivity of the highway link has been identified as **Medium** ([Table 23-34](#)) and therefore, with a change in HGVs exceeding 10%, an assessment of environmental effects under GEART Rule 2 (IEA, 1993) is required.
- 23.9.20 [Table 23-39](#) sets out the assessment of the transport environmental effects at highway link 3 and the significance of effect.

Table 23-39 Highway Link 3 – assessment of transport environmental effects

Effect	Comments	Magnitude of change	Significance of residual effect
Severance	The percentage change in HGVs on the link is less than 30%. Based on Table 23-32 Table 23-32, the magnitude of change is Negligible . The residual effect on severance is Negligible (Not Significant) . It should be noted that the daily increase in HGVs during the peak week is forecast to be 32, an increase of 11.7% compared to the future year base level. As a further sensitivity test, during the section-based peak the daily increase in HGVs on this link would be 51, an uplift of 18.7%.	Negligible	Negligible (Not Significant)
Driver delay	In this location, Ford Road is a two lane carriageway which routes through a predominantly rural area. The increase in at the peak of Construction phase is predicted to be an additional 51 HGVs per working day based on the section-based peak week which, based on a 07:00 – 19:00 HGV workday (12 hours), will result in approximately 4 additional HGVs per hour. It is not considered that this will result in any perceptible delay to drivers on the highway link or local junctions. The magnitude of change is Low . The residual effect on driver delay is Minor <u>adverse</u> (Not Significant) .	Low	Minor <u>adverse</u> (Not Significant)
Pedestrian amenity, Pedestrian delay and Fear and intimidation	Ford Road does not have footway provision along its entire length. A number of PRow branch off from Ford Road along its route. During the peak of the Construction phase, based on the section-based peak week, it is anticipated that an additional HGV will be generated every 14 minutes on the highway link. Therefore, based on professional judgement, it is considered that this will not be perceptible to pedestrians wishing to cross the road. The magnitude of change is Negligible for the pedestrian amenity, pedestrian delay and fear and intimidation. Therefore, the	Negligible	Negligible (Not Significant)

Effect	Comments	Magnitude of change	Significance of residual effect
	residual effect on pedestrian amenity, pedestrian delay and fear and intimidation is Negligible (Not Significant) .		
Accidents and safety	As set out in Table 23-19 , Ford Road has an accident rate of 0.09 per million vehicle kilometres which is below the average for a rural other road (0.19). The Proposed Development will result in one additional HGV every 14 minutes in the Construction phase peak, based on the section-based peak week. The magnitude of change for accidents and safety is Negligible in the context of the existing accident rate. Therefore, the residual effect on accidents and safety is Minor adverse Negligible (Not Significant) .	Negligible	Negligible (Not Significant)

23.9.21 Based on **Table 23-39**, the overall significance of residual effects at Highways Link 3 and associated receptors is therefore considered to be **Not Significant** in EIA terms.

Highways Link 13 – A24/A27, Offington (Warren Road)

23.9.22 As set out in **Table 23-36**, the total HGV flows are predicted to increase on this link by 10.8% over the 24-hour period (an increase of 118 HGVs) during the peak week. The sensitivity of the highways link has been identified as **Medium (Table 23-34)**.

23.9.23 **Table 23-40** sets out the assessment of the transport environmental effects at highway link 13 and the significance of effect.

Table 23-40 Highway Link 13 – assessment of transport environmental effects

Effect	Comments	Magnitude of change	Significance of residual effect
Severance	The percentage change in HGVs on the highway link is greater than 10% however less than 30%. Based on Table 23-32 , the magnitude of change is Negligible . The residual effect on severance is Negligible (Not Significant) .	Negligible	Negligible (Not Significant)
Driver delay	In this location, the A24/A27 is principally a two lane carriageway on the edge of a built-up area. As its name suggests, the highway link is shared by both the A24 and the A27. The increase at the peak of Construction phase is predicted to be an additional 118 HGVs per working day which, based on a 07:00 – 19:00 HGV workday (12 hours), will result in approximately 10 additional HGVs per hour (or one HGV every 6 minutes). In the context of the existing level of traffic flow on the highway link, it is not considered that this will result in any perceptible change in delay to drivers on the highway link or at local junctions. The magnitude of change is Negligible . Therefore, the residual effect on driver delay is Negligible (Not Significant) .	Negligible	Negligible (Not Significant)
Pedestrian amenity, Pedestrian delay and Fear and intimidation	The A24/A27 has footways on both sides. A number of side roads branch off from the highway link along its route, which in turn provide for pedestrians in this urban location. During the peak of the Construction phase, it is anticipated that an additional HGV will be generated every 10 minutes on the link. Signalised crossings are provided for pedestrians at either end of the highway link, plus a number of islands in between. Therefore, based on professional judgement, it is	Negligible	Negligible (Not Significant)

Effect	Comments	Magnitude of change	Significance of residual effect
	considered that this increase will not be perceptible to pedestrians wishing to cross the road. The magnitude of change is Negligible for the pedestrian amenity, pedestrian delay and fear and intimidation. Therefore, the residual effect on pedestrian amenity, pedestrian delay and fear and intimidation is Negligible (Not Significant) .		
Accidents and safety	As set out in Table 23-19 , the A24/A27 has an accident rate of 0.30 per million vehicle kilometres which is below the average for an urban A road (0.42). The Proposed Development will result in an additional HGV every 10 minutes in the Construction phase peak. The magnitude of change for accidents and safety is Negligible in the context of the existing accident rate. Therefore, the residual effect on accidents and safety is Negligible (Not Significant) .	Negligible	Negligible (Not Significant)

23.9.24 Based on **Table 23-40**, the overall significance of residual effects at Highways Link 13 and associated receptors is therefore considered to be **Not Significant**.

Highways Link 26 – Wineham Lane, South of the A272

23.9.25 As set out in **Table 23-36**, the total HGV flows are predicted to increase on this link by 71.6% over the 24-hour period (an increase of 12 HGVs) during the peak week. The sensitivity of the highway link has been identified as **Low (Table 23-34)**.

23.9.26 **Table 23-41** sets out the assessment of the transport environmental effects at highway link 26 and the significance of effect.

Table 23-41 Highway Link 26 – assessment of transport environmental effects

Effect	Comments	Magnitude of change	Significance of residual effect
Severance	<p>Wineham Lane has a very low baseline of HGVs across 24 hours (17 HGVs) and therefore, even a small increase in absolute terms of 12 two-way HGVs a day at the peak leads to a high percentage impact. Across the peak week overall, based on a 07:00 – 19:00 HGV workday (12 hours), this will result in approximately one additional HGVs per hour; during the section-based peak week, the forecast is 4 per hour. Wineham Lane has no pedestrian footway and has occasional PRowWs branching from it. The percentage change in HGVs on the highway link is more than 90% and based on Table 23-32.</p> <p>However, further consideration is required of this highway link as there is such a low baseline of HGV movements. An increase of 4 additional HGVs per hour at the peak of the Construction phase is still considered to represent only a negligible change given that in practice the impact of this uplift in HGV frequency on severance would not be perceptible. As such, the magnitude of change is considered to be Negligible. Therefore, the residual effect on severance is Negligible (Not Significant).</p>	Negligible	Negligible (Not Significant)
Driver delay	<p>In this location, Wineham Lane is a two-way single carriageway which routes through a partially rural setting. The existing traffic flows on the highway link are very low, especially for HGVs. The increase at the peak of Construction phase is predicted to be an additional 12 HGVs per working day based on peak week and 41 HGVs per day based on section-based peak week which, using a 07:00 – 19:00 HGV workday (12 hours), will result in</p>	Negligible	Negligible (Not Significant)

Effect	Comments	Magnitude of change	Significance of residual effect
	<p>approximately 4 additional HGVs per hour. It is considered that this will not result in any perceptible delay to drivers on the highway link or local junctions. The magnitude of change is Negligible. Therefore, the residual effect on driver delay is Negligible (Not Significant).</p>		
Pedestrian amenity, Pedestrian delay and Fear and intimidation	<p>Wineham Lane in this location has no footways, formal crossings of the road and there are no desire lines for pedestrians to cross the road. There are low HGV flows per day at the peak of the Construction phase (25 HGVs per day using peak week, 41 HGVs per day using section-based peak week) Therefore, combined with the lack of pedestrian infrastructure and desire lines the magnitude of change is Negligible. Therefore, the residual effects on pedestrian amenity, pedestrian delay and fear and intimidation is Negligible (Not Significant).</p>	Negligible	Negligible (Not Significant)
Accidents and safety	<p>As set out in Table 23-19, Wineham Lane has an accident rate of 0.41 per million vehicle kilometres which is above the average for a rural other road (0.19). The Proposed Development will result in 41 additional HGVs per day in the section-based peak week. The magnitude of change for accidents and safety is Low in the context of the existing accident rate. Therefore, the residual effect on accidents and safety is Minor adverse (Not Significant).</p>	Low	Minor Adverse (Not Significant)

[23.9.27](#) Based on **Table 23-41**, the overall significance of residual effects at Highways Link 26 and associated receptors is therefore considered to be **Not Significant** in EIA terms.

[23.9.27](#)[23.9.28](#) [Further to the assessment presented in Table 23-39 to Table 23-41 Chapter 32: ES Addendum, Volume 2 of the ES \(Document reference: 6.2.32\) \[REP5-038\] \(updated at Deadline 6\) which includes additional sensitivity tests and](#)

associated assessments completed by the Applicant since submission of the Development Consent Order Application.

23.10 Operation and maintenance phase – onshore impacts of offshore works

Introduction

- 23.10.1 To undertake the assessment of effects of the traffic generated by the Proposed Development, the traffic flows are estimated and trips distributed onto the road network.
- 23.10.2 The trips for the operation and maintenance phase of the Proposed Development works offshore have been added to a future baseline years to provide a clear impact of the difference between the growth of future baseline and the growth of future baseline ‘with Development’.
- 23.10.3 The significance has been assessed against GEART (IEA, 1993) [Rule 1](#) (30% or above) and [Rule 2](#) (10% or above) (**paragraph 23.8.11**). Where the change is considered significant, further assessment has been made using the criteria in **Section 23.8**.

Assessment year traffic growth

- 23.10.4 **Table 23-42** sets out the 2030 traffic flows per receptor based on the traffic growth methodology set out in **Section 23.8**.

Magnitude of change

- 23.10.5 **Table 23-42** sets out the magnitude of change from the proposed peak daily (24 hour) development traffic on the identified highways links and presents the following information:
- future year baseline traffic per highways link for 2030;
 - the predicted daily traffic flows per highways link for total vehicles and HGVs; and
 - the percentage impact of the Proposed Development traffic per highways link for total vehicles and HGVs.
- 23.10.6 In **Table 23-42**, any highways links percentage impacts identified that exceed the GEART (IEA, 1993) assessment thresholds based on the highways link sensitivity would be set out in **red**. Note that no highways links exceed the GEART (IEA, 1993) assessment thresholds and therefore no red values are highlighted in **Table 23-42**.

Table 23-42 Onshore operation and maintenance traffic percentage impact per highways link – Study Area 2

Link No	Future Year Base Traffic (2030)		Peak Week Staff Traffic (per day)		Percentage Impact	
	Total Vehicles	HGVs	Total Vehicles	HGVs	Total Vehicles	HGVs
1	3055	265	100	0	3.3%	0%
2	18722	1454	32	0	0.2%	0%
3	18722	1454	32	0	0.2%	0%
4	40726	2205	32	0	0.05%	0%
5	29199	1257	19	0	0.04%	0%

Significance of residual effect – Study Area 2

- 23.10.7 **Table 23-35** sets out the sensitivity of the highways links assessed based on the receptors present in Study Area 2 and the GEART (IEA, 1993) rules (**paragraph 23.8.11**), and **Table 23-42** sets out the magnitude of change for Study Area 2. Traffic growth as a result of the offshore operation and maintenance phase of the Proposed Development indicates that none of the five assessed highways links would exceed the GEART (IEA, 1993) threshold **Rule 1** (30% or more) on non-sensitive sections (Low and Negligible sensitivity).
- 23.10.8 Therefore, the residual effect of the offshore operation and maintenance phase of the Proposed Development will be **Negligible (Not Significant)** on the local highways network and transport receptors.

23.11 Decommissioning phase – onshore works

- 23.11.1 To undertake the assessment of effects of the traffic generated by the Proposed Development, the traffic flows are estimated and trips distributed onto the road network.
- 23.11.2 The trips for the Decommissioning phase of onshore works have been added to a future baseline year to provide a clear impact of the difference between the growth of future baseline and the growth of future baseline 'with Development'.
- 23.11.3 The significance has been assessed against GEART (IEA, 1993) **Rule 1** (30% or above) and **Rule 2** (10% or above) (**paragraph 23.8.11**). Where the change is considered significant, further assessment has been made using the criteria in **Section 23.8**.
- 23.11.4 The assessment in this section includes for all of the relevant embedded environmental measures applicable to this phase of the development, C-18, C-32,

C-157, C-158, C-159, C-165 and C-169. Details of these embedded environmental measures are set out in **Table 23-28**.

Assessment year traffic growth

23.11.5 **Table 23-43** sets out the 2051 traffic flows per highway link based on the traffic growth methodology set out in **Section 23.8**. There is one highway link requiring assessment as per the GEART (IEA, 1993) rules.

Magnitude of change

23.11.6 **Table 23-43** sets out the magnitude of change based on the proposed peak daily (24 hour) Proposed Development traffic in the Decommissioning phase on the identified highways links and presents the following information:

- future year baseline traffic per highways link for 2051
- the predicted daily traffic flows per highways link for total vehicles and HGVs; and
- the percentage impact of the Proposed Development traffic per highways link for total vehicles and HGVs.

23.11.7 In **Table 23-43**, any highways links percentage impacts identified that exceed the GEART (IEA, 1993) assessment thresholds based on the highways link sensitivity in **Table 23-35** would be set out in red. Note that no highways links exceed the GEART (IEA, 1993) threshold and therefore no red values are highlighted in **Table 23-43**.

Table 23-43 Onshore substation decommissioning traffic percentage impact per highways link

Link No	Future Year Base Traffic (2051)		Peak Week Staff Traffic (per day)		Percentage impact	
	Total vehicles	HGVs	Total vehicles	HGVs	Total vehicles	HGVs
27 (A272, West of A23)	21414	1069	156	48	0.3%	0.6%

Sensitivity of receptor

23.11.8 Given the potential receptors described in **Section 23.8**, **Table 23-44** identifies the sensitivity of highway link and the GEART (IEA, 1993) rule that applies for highways link 27 in Study Area 1, used in the decommissioning phase.

Table 23-44 Receptor sensitivity – Highways Link 27 (Study Area 1)

No	Highway Link	Comments	Receptor sensitivity	GEART Rule
27	A272, West of A23	The highway link is a two-way single lane carriageway with properties directly fronting the road and footways.	Low	1

Significance of residual effects

- 23.11.9 **Table 23-44** sets out the sensitivity of highways link 27 based on the receptors present and the GEART (IEA, 1993) rules (**paragraph 23.8.11**), while **Table 23-43** shows the magnitude of change. Traffic growth as a result of the decommissioning phase of the Proposed Development on highway link 27 would be below the threshold for GEART (IEA, 1993) **Rule 1** (30% or more on non-sensitive sections (Low and Negligible sensitivity)).
- 23.11.10 Therefore, the residual effect of the Decommissioning phase of the onshore elements of the Proposed Development will be **Negligible (Not Significant)** on the local highways network and transport receptors.

23.12 Cumulative effects

- 23.12.1 In terms of road traffic, the preferred option for projecting existing or historical traffic data for future year assessments is the use of appropriate local traffic forecasts such as TEMPro as has been undertaken in this chapter, the methodology of which is set out in **Section 23.8**. TEMPro is a program developed by the DfT providing traffic growth projections used to project long-term forecasts in traffic growth. The forecasts take into account national projections of population, employment, housing, car ownership, and trip rates. This is an accepted approach to assess future baseline traffic. This approach to forecasting traffic growth taking into account the traffic associated with all cumulative and anticipated development with the local plan has been agreed with WSCC and NH during consultation.
- 23.12.2 The A27 is a key link in the area and the A27 Arundel Bypass is noted within this chapter though at this stage no further cumulative assessment of any potential overlap has been undertaken. A preferred route was presented to the public in November 2020 which set out that it would be proposed to start construction of the road in 2023/24 but with no details of an anticipated date of completion, ~~as the road is still not committed (plans for the A27 Arundel Bypass are instead deferred until 2025-2030) and no DCO application has been submitted. Further to this, the UK government scrapped the Arundel Bypass scheme on the 29 July 2024 as part of their review of major transport infrastructure projects. It was anticipated that this might change over the lifetime of the Rampion 2 DCO Application and that a more detailed assessment of the A27 Arundel Bypass and any cumulative effects could be required. However following NH's announcement of the deferral of the scheme until 2025-2030, it is considered that the peak construction years of 2026-2027 for Rampion 2 are some way in advance of the anticipated construction~~

~~years for the A27 Arundel Bypass, and as~~ a result no cumulative assessment is provided of the two developments.

- 23.12.3 No other committed developments in addition to those already taken into consideration within the TEMPro forecasts used in the assessment within this chapter have been identified that are anticipated to overlap with the Proposed Development and therefore no cumulative transport effects are anticipated.

23.13 Transboundary effects

- 23.13.1 Transboundary effects arise when impacts from a development within one European Economic Area (EEA) states affects the environment of another EEA state(s). A screening of transboundary effects has been carried out and is presented in Appendix B of the Scoping Report (RED, 2020).
- 23.13.2 No transboundary effects relating to onshore transport were identified as part of the screening exercise and are therefore not considered further.

23.14 Inter-related effects

- 23.14.1 The inter-related effects assessment considers likely significant effects from multiple impacts and activities from the construction, operation and maintenance and decommissioning phases of Rampion 2 on the same receptor, or group of receptors.
- 23.14.2 Inter-related effects could potentially arise in one of two ways. The first type of inter-related effect is a Proposed Development lifetime effect, where multiple phases of the Proposed Development interact to create a potentially more significant effect on a receptor than in one phase alone. The phases for Rampion 2 are construction, operation and maintenance, and decommissioning. All Proposed Development lifetime effects are assessed in [Chapter 30: Inter-related effects, Volume 2](#) of the ES (Document Reference: 6.2.30).
- 23.14.3 The second type of inter-related effect is receptor-led effects. Receptor-led effects are where effects from different environmental aspects combine spatially and temporally on a receptor. These effects may be short-term, temporary, transient, or longer-term. Receptor-led effects have been considered, where relevant, in this chapter. Full results of the receptor-led effects assessment can be found in [Chapter 30: Inter-related effects, Volume 2](#) of the ES (Document Reference: 6.2.30).

23.15 Summary of residual effects

- 23.15.1 **Table 23-45** presents a summary of the assessment of significant effects, any relevant embedded environmental measures and residual effects on transport receptors. The embedded environmental measures relevant to the assessment of transport effects are set out within **Table 23-28**.

Table 23-45 Summary of residual effects

Activity and Impact	Magnitude of change	Receptor (highway link) and sensitivity	Embedded environmental Measures	Assessment of residual effect (significance)
Construction phase				
Severance	3 Links where GEART (IEA, 1993) thresholds are triggered	3 – Medium 13 – Medium 26 – Low	C-1, C-2, C-18, C-157, C-158, C-159, C-165, C-166, C-169	Negligible (Not Significant)
Driver delay	3 Links where GEART (IEA, 1993) thresholds are triggered	3 – Medium 13 – Medium 26 – Low	C-1, C-2, C-18, C-157, C-158, C-159, C-165, C-166, C-169	Negligible (Not Significant)
Pedestrian amenity, Pedestrian delay and Fear and intimidation	3 Links where GEART (IEA, 1993) thresholds are triggered	3 – Medium 13 – Medium 26 – Low	C-1, C-2, C-18, C-157, C-158, C-159, C-165, C-166, C-169	Negligible (Not Significant)
Accidents and safety	3 Links where GEART (IEA, 1993) thresholds are triggered	3 – Medium 13 – Medium 26 – Low	C-1, C-2, C-18, C-157, C-158, C-159, C-165, C-166, C-169	Negligible (Not Significant)
Operation and maintenance phase				
Severance	Negligible	Negligible to Low	N/A	Negligible (Not Significant)
Driver delay	Negligible	Negligible to Low	N/A	Negligible (Not Significant)

Activity and Impact	Magnitude of change	Receptor (highway link) and sensitivity	Embedded environmental Measures	Assessment of residual effect (significance)
Pedestrian amenity, Pedestrian delay and Fear and intimidation	Negligible	Negligible to Low	N/A	Negligible (Not Significant)
Accidents and safety	Negligible	Negligible to Low	N/A	Negligible (Not Significant)
Decommissioning phase				
Severance	Negligible	Low	C-18, C- 32 157, C-158, C-159, C-165, C-169	Negligible (Not Significant)
Driver delay	Negligible	Low	C-18, C- 32 157, C-158, C-159, C-165, C-169	Negligible (Not Significant)
Pedestrian amenity, Pedestrian delay and Fear and intimidation	Negligible	Low	C-18, C- 32 157, C-158, C-159, C-165, C-169	Negligible (Not Significant)
Accidents and safety	Negligible	Low	C-18, C- 32 157, C-158, C-159, C-165, C-169	Negligible (Not Significant)

- 23.15.2 Overall, as shown in **Table 23-45**, it can be seen that the residual effects of the Proposed Development are **Negligible (Not Significant)**.
- 23.15.3 In addition to **Table 23-45, Chapter 32: ES Addendum, Volume 2** of the ES (Document Reference: 6.2.32) **[REP5-038]** (updated at Deadline 6) provides a summary of residual effects related to the construction traffic peak week sensitivity test which should be read in conjunction with this chapter of the ES.-
- 23.15.4 **Table 2-29 in Chapter 32: ES Addendum, Volume 2** of the ES (Document Reference: 6.2.32) **[REP5-038]** identifies significant effects for two highway links in relation to pedestrian amenity, pedestrian delay and fear and intimidation as a result of the construction traffic peak week sensitivity test.

23.16 Glossary of terms and abbreviations

Table 23-4646 **Glossary of terms and abbreviations**

Term (acronym)	Definition
AADF	Annual Average Daily Traffic Flow
AIL	Abnormal Indivisible Loads
Baseline	Refers to existing conditions as represented by latest available survey and other data which is used as a benchmark for making comparisons to assess the impact of development.
Baseline conditions	The environment as it appears (or would appear) immediately prior to the implementation of the Proposed Development together with any known or foreseeable future changes that will take place before completion of the Proposed Development.
Code of Construction Practice (COCP)	The code sets out the standards and procedures to which developers and contractors must adhere to when undertaking construction of major projects. This will assist with managing the environmental impacts and will identify the main responsibilities and requirements of developers and contractors in constructing their projects.
Construction Effects	Used to describe both temporary effects that arise during the Construction phases as well as permanent existence effects that arise from the physical existence of development (for example new buildings).
CTMP	Construction Traffic Management Plan
Cumulative Effects Assessment	Assessment of impacts as a result of the incremental changes caused by other past, present and reasonably foreseeable human activities and natural processes together with the Proposed Development.
CWTP	Construction Workforce Travel Plan
DCO Application	An application for consent to undertake a Nationally Significant Infrastructure Project made to the Planning Inspectorate who will consider the Application and make a recommendation to the Secretary of State, who will decide on whether development consent should be granted for the Proposed Development.

Term (acronym)	Definition
Decommissioning	The period during which a development and its associated processes are removed from active operation.
Development Consent Order (DCO)	This is the means of obtaining permission for developments categorised as Nationally Significant Infrastructure Projects, under the Planning Act 2008.
DfT	Department for Transport
DMRB	Design Manual for Roads and Bridges
Embedded environmental measures	They are measures to avoid or reduce environmental effects that are directly incorporated into the design for the Proposed Development.
Environmental Impact Assessment (EIA)	The process of evaluating the likely significant environmental effects of a proposed project or development over and above the existing circumstances (or 'baseline').
Environmental Statement	The written output presenting the full findings of the Environmental Impact Assessment.
ETG	Expert Topic Group
Evidence Plan Process	A voluntary consultation process with specialist stakeholders to agree the approach and the information required to support the EIA and HRA for certain aspects.
Formal consultation	Formal consultation refers to statutory consultation that is required under Section 42 and Section 47 of the Planning Act 2008 with the relevant consultation bodies and the public on the preliminary environmental information.
Future Baseline	Refers to the situation in future years without the Proposed Development.
GEART	Guidelines for the Environmental Assessment of Road Traffic
NH	National Highways
HGV	Heavy Goods Vehicle
Horizontal Directional Drill (HDD)	An engineering technique avoiding open trenches.
Impact	The changes resulting from an action.

Term (acronym)	Definition
Indirect effects	<p>Effects that result indirectly from the Proposed Development as a consequence of the direct effects, often occurring away from the site, or as a result of a sequence of interrelationships or a complex pathway. They may be separated by distance or in time from the source of the effects.</p> <p>Often used to describe effects on landscape character that are not directly impacted by the Proposed Development such as effects on perceptual characteristics and qualities of the landscape.</p>
Informal consultation	Informal consultation refers to the voluntary consultation that RED undertake in addition to the formal consultation requirements.
KM	Kilometres
LGV	Light Goods Vehicle
Likely Significant Effects	It is a requirement of Environmental Impact Assessment Regulations to determine the likely significant effects of the Proposed Development on the environment which should relate to the level of an effect and the type of effect.
LTP	Local Transport Plan
LGV	Light Vehicle
Magnitude (of change)	A term that combines judgements about the size and scale of the effect, the extent of the area over which it occurs, whether it is reversible or irreversible and whether it is short term or long term in duration'. Also known as the 'degree' or 'nature' of change.
MHWS	Mean High Water Springs
MPH	Miles Per Hour
Nationally Significant Infrastructure Project (NSIP)	Nationally Significant Infrastructure Projects are major infrastructure developments in England and Wales which are consented by DCO. These include proposals for renewable energy projects with an installed capacity greater than 100MW.
NCN	National Cycle Network
NPPF	National Planning Policy Framework

Term (acronym)	Definition
OAL	Open Access Land
Onshore part of the proposed DCO Order Limits	An area that encompasses all planned onshore infrastructure.
OTP	Operational Travel Plan
Proposed DCO Order Limits	The proposed DCO Order Limits combines the search areas for the offshore and onshore infrastructure associated with the Proposed Development. It is defined as the area within which the Proposed Development and associated infrastructure will be located, including the temporary and permanent construction and operational work areas.
PIA	Personal Injury Accident
Planning Inspectorate	The Planning Inspectorate deals with planning appeals, national infrastructure planning applications, examinations of local plans and other planning-related and specialist casework in England and Wales.
PPA	Planning Performance Agreement
Preliminary Environmental Information Report (PEIR)	The written output of the Environmental Impact Assessment undertaken to date for the Proposed Development. It is developed to support formal consultation and presents the preliminary findings of the assessment to allow an informed view to be developed of the Proposed Development, the assessment approach that has been undertaken, and the preliminary conclusions on the likely significant effects of the Proposed Development and environmental measures proposed.
PRoW	Public Rights of Way
PRoWMP	Public Rights of Way Management Plan
Receptor	These are as defined in Regulation 5(2) of The Infrastructure Planning (Environmental Impact Assessment) Regulations 2017 and include population and human health, biodiversity, land, soil, water, air, climate, material assets, cultural heritage and landscape that may be at risk from exposure to pollutants which could potentially arise as a result of the Proposed Development.

Term (acronym)	Definition
Scoping Opinion	A Scoping Opinion is adopted by the Secretary of State for a Proposed Development.
Scoping Report	A report that presents the findings of an initial stage in the Environmental Impact Assessment process.
SDNP	South Downs National Park
Secretary of State	The Minister for Department for Energy Security and Net Zero (DESNZ).
Sensitivity	A term applied to specific receptors, combining judgements of the susceptibility of the receptor to the specific type of change or development proposed and the value associated to that receptor.
Significance	A measure of the importance of the environmental effect, defined by criteria specific to the environmental aspect.
Significant effects	<p>It is a requirement of the EIA Regulations to determine the likely significant effects of the development on the environment which should relate to the level of an effect and the type of effect. Where possible significant effects should be mitigated.</p> <p>The significance of an effect gives an indication as to the degree of importance (based on the magnitude of the effect and the sensitivity of the receptor) that should be attached to the impact described.</p> <p>Whether or not an effect should be considered significant is not absolute and requires the Application of professional judgement. Significant – ‘noteworthy, of considerable amount or effect or importance, not insignificant or negligible’.</p> <p>Those levels and types of landscape and visual effect likely to have a major or important / noteworthy or special effect of which a decision maker should take particular note.</p>
SRN	Strategic Road Network
TBC	To Be Confirmed
Temporal Scope	The temporal scope covers the time period over which changes to the environment and the resultant effects are predicted to occur and are typically defined as either being temporary or permanent.

Term (acronym)	Definition
Temporary or permanent effects	Effects may be considered as temporary or permanent. In the case of wind energy development the Application is for a 30 year period after which the assessment assumes that decommissioning will occur and that the site will be restored. For these reasons the development is referred to as long term and reversible.
The Applicant	Rampion Extension Development Limited (RED)
The Proposed Development / Rampion 2	The development that is subject to the application for development consent, as described in Chapter 4: The Proposed Development, Volume 2 of the ES (Document Reference: 6.2.4).
TGTN	Traffic Generation Technical Note, summarising the methodology underlying the calculation of proposed trip generation.
WSCC	West Sussex County Council
Zone of Influence	The area surrounding the Proposed Development which could result in likely significant effects.

23.17 References

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