

Medworth Energy from Waste Combined Heat and Power Facility



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Environmental Statement Chapter 6: Traffic and Transport

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Appendix 6D: Stakeholder Engagement and Consultation Comments on the Traffic and Transport Assessment.

Appendix 6E: Committed Development Traffic

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6. Traffic and Transport

6.1 Introduction

6.1.1 This chapter presents the environmental assessment of the likely significant effects of the Proposed Development with respect to Traffic and Transport. It presents the potential traffic and transport impacts related to several different elements of the Proposed Development as follows:

- The Energy from Waste (EfW) Combined Heat and Power (CHP) Facility (EfW CHP Facility); for the purposes of this assessment, the impacts assessed include for the EfW CHP Facility, the CHP Connection, the Temporary Construction Compound (TCC), Water Connections and Access Improvements.
- The Grid Connection – From the onsite substation located in the southern area of the EfW CHP Facility Site, via the Applicant’s proposed substation, to the Walsoken Substation to a point of connection (POC) with the National Electricity Transmission Network distribution system at UKPNs existing substation off Broadend Road, Walsoken; the Walsoken DNO Substation.

6.1.2 The Proposed Development components are illustrated in **Figure 6.1 Proposed Development Components and the Local Highway Network (Volume 6.3)** and **Figure 6.2 Proposed Development in the Operational Period (Volume 6.3)**.

6.1.3 This chapter should be read in conjunction with the description of the development provided in **Chapter 3: Description of the Proposed Development (Volume 6.2)** and with respect to relevant parts of the following chapters where common Receptors have been considered and where there is an overlap or relationship between the assessment of effects:

- **Chapter 7: Noise and Vibration (Volume 6.2)** (due to the use of transport data to inform noise assessments);
- **Chapter 8: Air Quality (Volume 6.2)** (due to the use of transport data to inform air quality assessments); and
- **Chapter 14: Climate Change (Volume 6.2)** (due to the use of transport data in the greenhouse gases assessment).

6.1.4 Terms and abbreviations used within this chapter are defined in **Appendix 1F: Terms and Abbreviations (Volume 6.4)**.

6.1.5 **Figure 6.1 Proposed Development Components and the Local Highway Network (Volume 6.3)** presents the location of the Proposed Development in the context of the wider local highway network. This figure illustrates the location of the EfW CHP Facility, the CHP Connection, the TCC, Water Connections and Access Improvements and Grid Connection.

6.1.6 This chapter describes the:

- Outcome of consultation and engagement that has been undertaken to date, including how matters relating to traffic and transport within the EIA Scoping Opinion (January 2020) and at statutory consultation (July 2021) have been addressed (**Section 6.2: Consultation and Stakeholder engagement**);
- Legislation, planning policy and other documentation that has informed the assessment (**Section 6.3: Relevant legislation, planning policy and other documentation**);
- Methods used for baseline data gathering (**Section 6.4: Data gathering methodology**);
- Overall baseline including future baseline (**Section 6.5: Baseline assessment**);
- Basis for this Environmental Statement (ES) chapter, based on the differing elements of the Proposed Development (**Section 6.6: Basis for Traffic and Transport Assessment**);
- Scope of the assessment for transport (**Section 6.7: Scope of the assessment**);
- Embedded environmental measures relevant to transport (**Section 6.8: Embedded environmental measures**);
- Assessment methods used for the environmental assessments (**Section 6.9: Assessment methodology**);
- Assessment of transport effects for the construction phase (**6.10: Construction Phase assessment**);
- Assessment of transport effects for the operational phase (**6.11: Operational Phase assessment**);
- Consideration of any additional mitigation (**Section 6.12 Consideration of additional mitigation or compensation**); and
- Section setting out the implementation of environmental measures (**Section 6.13: Implementation of environmental measures**).

6.1.7 This chapter is supported by the following appendices:

- **Appendix 6A: Outline Construction Traffic Management Plan (CTMP) (Volume 6.4)**;
- **Appendix 6B: Transport Assessment (TA) (Volume 6.4)**;
- **Appendix 6C: Outline Operational Travel Plan (TP) (Volume 6.4)**;
- **Appendix 6D: Stakeholder Engagement and Consultation Comments on the Traffic and Transport Assessment (Volume 6.4)**;
- **Appendix 6E: Committed Development Traffic (Volume 6.4)**; and
- **Appendix 6F: TEMPro Factors (Volume 6.4)**.

6.2 Consultation and Stakeholder engagement

- 6.2.1 The assessment has been informed by consultation responses and ongoing Stakeholder engagement. An overview of the approach to consultation is provided in **Chapter 4: Approach to the EIA (Volume 6.2)**.
- 6.2.2 A summary of the relevant responses received in the EIA Scoping Opinion and Section 42 responses to the statutory consultation as well other engagement with key Stakeholders in relation to the Proposed Development is presented in **Appendix 6D: Stakeholder Engagement and Consultation Comments on the Traffic and Transport Assessment (Volume 6.4)**

6.3 Relevant legislation, planning policy, technical guidance

- 6.3.1 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 5: Legislation and Policy (Volume 6.2)**.
- 6.3.2 The assessment has been undertaken in accordance with relevant transport related planning policy and guidance at the national, regional and local level. This has helped to 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.
- 6.3.3 There is no legislation specifically relevant to this assessment.

Planning policy context

- 6.3.4 There are a number of policies at the national and local level that will be relevant to the Proposed Development. The overarching national policy statements, which provide the primary policy basis for the consideration of Nationally Significant Infrastructure Projects (NSIPs), are provided in **Table 6.1 Planning policy context for traffic and transportation: National Policy Statements**. This section should be read in conjunction with **Chapter 5: Legislation and Policy (Volume 6.2)**.

Table 6.1 Planning policy context for traffic and transportation: National Policy Statements

Policy reference	Implications	Section addressed
The Overarching National Policy Statement for Energy (EN-1)	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 NPS EN-1”.</i>	This chapter of the ES identifies possible transport impacts and ways to mitigate them in Sections 6.10 and 6.11 . The mitigation of these impacts is embedded into the Proposed Development. A TA (Appendix 6B (Volume 6.4)) has been provided to inform this ES chapter

Policy reference	Implications	Section addressed
	<p>Paragraph 5.13.3 states <i>“If a project is likely to have significant transport implications, the applicant’s ES should include a Transport Assessment, using the NATA/ WebTAG methodology stipulated in Department for Transport (DfT) 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>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>Paragraph 5.13.6 states <i>“A new energy NSIP may give rise to substantial impacts on the surrounding transport infrastructure and the Infrastructure Planning Commission [now, Secretary of State] 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 Secretary of State 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 [now Secretary of State] may attach requirements to a consent where there is likely to be substantial HGV traffic that:</i></p> <ul style="list-style-type: none"> • <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> 	<p>and formulation of the Proposed Development. The TA and ES are also supported by an Outline CTMP (Appendix 6A: (Volume 6.4)) and Outline Operational TP (Appendix 6C (Volume 6.4)). These documents have been developed through discussions with the relevant highway authorities.</p> <p>An Outline Operational TP (Appendix 6C (Volume 6.4)) has been prepared. The TP includes details on how to reduce single car occupancy for staff in the operational and construction phase of the EfW CHP Facility.</p> <p>Sections 6.10 and 6.11 identify possible transport impacts resulting from the construction and operational phases of development and ensures mitigation measures (where relevant/necessary) are incorporated into the Proposed Development. The decommissioning stage of the Proposed Development has been scoped out of the assessment as set out during scoping and without comment from the Planning Inspectorate (PINS).</p> <p>Heavy Goods Vehicles (HGV) routes are identified and restrictions on HGV timing are proposed to avoid adverse impact on sensitive Receptors, particularly schools, as set out in the Outline CTMP (Appendix 6A (Volume 6.4)). The design of the construction works will avoid the risk of HGV parking on surrounding highways and relevant parking will be made available for HGVs at the TCC.</p>

Policy reference	Implications	Section addressed
	<ul style="list-style-type: none"> • <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>National Policy Statement for Renewable Energy Infrastructure (EN-3)</p>	<p>Paragraph 2.5.24 identifies that Biomass or EfW generating stations are likely to generate considerable transport movements.</p> <p>Paragraph 2.5.25 states that:</p> <ul style="list-style-type: none"> • Multi-modal transport is encouraged and that the Secretary of State expects materials (fuel and residues) to be transported by water or rail where possible. • Applicants should locate new biomass or waste combustion generating stations in the vicinity of existing transport routes wherever possible. 	<p>The assessment has assumed that all waste movements would be conducted by road (see Sections 6.10 and 6.11). However, land has been reserved to accommodate the future unloading of waste from a rail siding, should the potential reopening of the disused March to Wisbech Railway provide an opportunity for waste deliveries. Rail deliveries do not form part of this application.</p> <p>The Proposed Development is located within close proximity to the Strategic Road Network (SRN) (A47) with access the EfW CHP Facility Site via the B198 Cromwell Road. The Grid Connection runs alongside the SRN (A47) with direct access to it for construction.</p>

6.3.5 National Policy Statement for Electricity Networks Infrastructure (EN-5) does not reference Traffic and Transport as a technology-specific matter for assessment.

6.3.6 In September 2021, the Department of Business, Energy and Industrial Strategy (BEIS) consulted on a review of energy National Policy Statements (NPS) with consultation closing on 29 November 2021. The energy NPS were reviewed to reflect the policies and broader strategic approach set out in the Energy white paper and ensured a planning framework was in place to support the infrastructure requirement for the transition to net zero. There are no material changes in national policy as described within the draft NPSs relative to the Proposed Development and in relation to traffic and transport. Draft NPSs policy relevant to the Proposed Development is identified within **Chapter 5: Legislation and Policy (Volume 6.2)**.

6.3.7 Other national and local policies, which may provide additional guidance and can be considered material to the consideration of an NSIP, are detailed in **Table 6.2 Planning policy context for traffic and transport: national and local planning policies** below.

Table 6.2 Planning policy context for traffic and transport: national and local planning policies

Policy reference	Implications	Section addressed
National Policy		
National Planning Policy Framework (NPPF): (February 2021)	<p>Paragraph 111 of the NPPF states that <i>“development should only be prevented or refused on highways grounds if there would be an unacceptable impact on highway safety, or the residual cumulative impacts on the road network would be severe.”</i></p> <p>Paragraph 113 of the NPPF states that <i>“all developments that will generate significant amounts of movement should be required to provide a travel plan, and the application should be supported by a transport statement or transport assessment so that the likely impacts of the proposal can be assessed.”</i></p> <p>Paragraph 108 of the NPPF sets out that the TA should set out:</p> <ul style="list-style-type: none"> • The opportunities for sustainable transport modes can be or have been taken up depending on the nature and location of the site; • Safe and suitable access to the site can be achieved for all people; and • any significant impacts from the development on the transport network (in terms of capacity and congestion) or on highway safety, can be cost effectively mitigated to an acceptable degree. • Development should only be prevented or refused on transport grounds if there would be an unacceptable impact on highway safety, or the residual cumulative impacts on the road network would be severe. 	<p>Section 6.5 provides an assessment of the impacts on highways safety.</p> <p>A TA (Appendix 6B (Volume 6.4)) has been produced to support the DCO application and it has been produced in consultation with Cambridgeshire County Council Highways Authority, Norfolk County Council Highways Authority, hereafter referred to as CCC and NCC respectively and National Highways (NH).</p> <p>The TA (Appendix 6B (Volume 6.4)) has assessed against the NPPF criteria, including the opportunities for sustainable transport, access and road safety, and the need for any transport/highways improvements. The TA is supported by an Outline CTMP for the construction phase (Appendix 6A (Volume 6.4)) and Outline Operational TP for the operational phase (Appendix 6C (Volume 6.4))</p> <p>A link-based assessment has been undertaken and is reported in this chapter based on new traffic data, which was surveyed October 2021, to inform the traffic impacts assessments (see Section 6.10 and 6.11).</p>
Local Policy		
Cambridgeshire County Council and Peterborough City Council Minerals and	Policy 23, Transport, Highways and Rights of Way of the draft Cambridge and Peterborough Waste Plan states that development will only be permitted where:	The Proposed Development (see Figure 6.2 (Volume 6.3)) provides for land which can be made available to accommodate a future rail unloading area as part of the operational EfW CHP Facility Site. The powers to construct and operate a rail siding however are not included in

Policy reference	Implications	Section addressed
<p>Waste Local Plan 2036 (2021)</p>	<ul style="list-style-type: none"> • appropriate opportunities to promote sustainable transport modes can be or have been taken up to the degree reasonably available given the type of development and its location. • safe and suitable access to the site can be achieved for all users of the subsequent development. • any significant impacts from the development on the transport network (in terms of capacity and congestion) or on highway safety can be cost effectively mitigated to an acceptable degree. • any associated increase in traffic or highway improvements would not cause unacceptable harm to the environment, road safety or residential amenity; and • binding agreements covering lorry backloading, routing arrangements and Heavy Commercial Vehicle (HCV) signage for mineral and waste traffic are agreed, if any such agreements are necessary and reasonable to make a development acceptable. <p>Policy 23 also requires identification and enforcement of HGV routes for vehicles accessing and leaving the site to the SRN.</p> <p>Policy 23 also covers PRow and identifies that minerals and waste developments will only be permitted where any permanently affected PRow has an acceptable alternative route which is of equivalent convenience, quality and interest.</p>	<p>the DCO application. This would require a separate consent. For the purpose of robust assessment and to assume a reasonable 'worst-case' in this chapter, and given that there is currently no rail access, all waste transport to and from site has been assumed to be road based.</p> <p>To address Policy 23, a TA (Appendix 6B (Volume 6.4)) has been prepared to provide evidence that the highway network serving the Proposed Development is suitable and could accommodate any mitigation which may be considered necessary.</p> <p>The binding arrangements for mitigating the impacts of construction and operational traffic are secured by the draft DCO which will require compliance with the Outline CTMP and Outline Operational TP. It is noted in the Cambridgeshire Advisory Freight Map¹ that the two corridors into Wisbech are included. B198 Cromwell Road is an HGV 'Local Route' and Elm High Road/Churchill Road a 'Strategic Route'. The A47 is also included as a 'Strategic Route'.</p> <p>An Outline CTMP has been prepared setting out the HGV access strategy for the construction phase of the Proposed Development (Appendix 6A (Volume 6.4)).</p> <p>This chapter also sets out the proposed HGV routing for the operational phase. This is based on discussions with CCC and the identification of the B198 Cromwell Road corridor for access to both the Algores Way and New Bridge Lane accesses.</p> <p>At PEIR a Preliminary Public Rights of Way (PRow) Management Plan was prepared, however the revised design of the Grid Connection, now running under the A47, New Bridge Lane and Broadend Road removes all the PRow interactions on the project and as such no PRow Management Plan has been prepared for this DCO submission, as described in the Outline CTMP (Appendix 6A (Volume 6.4))</p>
<p>Fenland Local Plan (Adopted) (2014)</p>	<p>Policy LP8 identifies South Wisbech and the area around the access to the proposed development as a location for</p>	<p>The use of TEMPro Growth rates has been agreed with CCC and NH, and that this would</p>

¹CCC. Cambridgeshire Advisory Freight Map

Policy reference	Implications	Section addressed
	<p>industrial/commercial growth with the possibility of the inclusion of 100 residential dwellings. The policy identifies that the site location has access issues and improvements to the road network would be required.</p> <p>Policy LP15 – Facilitating the creation of a more sustainable transport network in Fenland. This policy sets out the transport aspirations of Fenland district council regarding strategic transport infrastructure, public and community transport and walking and cycling. The policy also sets out criteria for which development proposals for these elements should be based.</p> <p>Strategic policies included in LP15 include, reopening Wisbech to March railway line when it is viable to do so and to increase the proportion of freight carried by rail and waterways making use of Wisbech port and a potentially reopened rail line.</p> <p>Walking and cycling policies included within LP15 state that developments should contribute to robust walking and cycling networks, and these should where possible be integrated into the wider transport network.</p> <p>LP15 sets out that developments should demonstrate the following;</p> <ol style="list-style-type: none"> 1) Development should be located and designed so that it can maximise accessibility and help to increase the use of non-car modes. 2) Proposals which include new public highway should ensure such new highway complements and enhances the character of the area, possibly through the preparation of a public realm strategy for larger development schemes. 3) If the proposal is likely to result in significant transport implications, a Transport Assessment and Travel Plan should be prepared. 	<p>include local plan growth and growth arising from the proposals for South Wisbech, as part of 'background traffic'. It has been agreed with CCC that other committed developments be included in the growth methodology.</p> <p>The Traffic and Transport Assessment includes an assessment of the potential impact of reopening the disused March to Wisbech Railway on the proposed access arrangements and highways design of the Proposed Development, as set out in Section 6.6.</p> <p>The Proposed Development includes a new access design onto Algores Way, and improvements to New Bridge Lane (and HGV access) which incorporates pedestrian access improvements too, as set out in Section 6.6. The New Bridge Lane Access works form part of the Access Improvements.</p> <p>The locations of the proposed EfW CHP Facility Site including the CHP Connection, Water Connections and Access Improvements is located to the south of Wisbech and has good connections to local residential areas and the public transport network, which would allow staff to access the Proposed Development in sustainable ways. Assuming a worst-case approach, no discounts for successful car share/travel plan measures have been included. An Outline Operational TP has been prepared (Appendix 6C (Volume 6.4)).</p> <p>The Access Improvements to New Bridge Lane have considered the potential Wisbech Access Strategy (WAS) designs proposed by CCC and Fenland District Council (FDC) and include pedestrian infrastructure which would enhance the local area. The Access Improvements to New Bridge Lane would assist the implementation of the WAS (Southern Access</p>

Policy reference	Implications	Section addressed
	<p>4) Development schemes should provide well designed, safe and convenient access for all, giving priority to the needs of pedestrians, cyclists, people with impaired mobility and users of public transport by providing a network of pedestrian and cycle routes and green corridors including habitat connectivity (linking to existing routes where opportunities exist) that give easy access and permeability to adjacent areas.</p> <p>5) Development schemes should provide car and cycle parking appropriate to the development proposed, subject to the Council's defined parking standards.</p>	<p>Road (SAR)¹²⁾ and enable allocated development land to be accessed with reduced connection infrastructure requirements</p> <p>A TA (Appendix 6B (Volume 6.4)) and Outline Operational TP (Appendix 6C (Volume 6.4)) has been prepared and submitted as part of the DCO application.</p> <p>The EfW CHP Facility Site layout drawing (Figure 6.2 (Volume 6.3)) indicates the proposed pedestrian connectivity, including how access can be obtained from both Algores Way and New Bridge Lane.</p> <p>The proposed operational site layout (Figure 6.2 (Volume 6.3)) illustrates the appropriate level of car parking and cycle parking arrangements for the Proposed Development; a sui generis land use³.</p>
<p>Norfolk Core Strategy and Minerals and Waste Development Management Policies DPD (2011)</p>	<p>Policy CS15 Transport requires all applications for minerals and waste development to consider positively the potential for non-HGV transportation. Proposals are considered satisfactory providing that they do not give unacceptable risks to the safety of road users and pedestrians, unacceptable impacts on highway capacity, air quality, the natural or historic environment or physical damage to the highway network,</p>	<p>The EfW CHP Facility Site is located adjacent to the disused March to Wisbech Railway with plans for its reopening being promoted by Cambridgeshire and Peterborough Combined Authority (CPCA), CCC and FDC. The Applicant has set aside land within the EfW CHP Facility Site to accommodate a future rail unloading area should the railway be built. The assessment reported within this chapter considers the potential effects on both road users and highway capacity. The wider environmental effects arising from the Proposed Development are considered within the appropriate environmental chapters.</p>
<p>King's Lynn and West Norfolk Local Development Framework Core Strategy (2011)</p>	<p>CS11 – Transport. Policy CS11 sets the Strategic policies and criteria for development.</p> <p>Strategic CS11 policies include, improving strategic networks serving passengers and freight movements, maximise the use of alternative modes of freight by rail and via water and to provide safe routes for pedestrians and cyclists.</p> <p>CS11 states the developments should reduce the need to travel, promote</p>	<p>The EfW CHP Facility Site, CHP Connection, TCC, Water Connections and Access Improvements from New Bridge Lane are located to the south of Wisbech town centre and have good connections to local residential areas and the public transport network. The location of the project would allow staff to access the EfW CHP Facility Site in sustainable ways. In this assessment no discounts for successful car share/travel plan measures have been included to enable a robust assessment. An Outline Operational TP has been included in the DCO submission (Appendix 6C (Volume 6.4)).</p>

² FDC. FDC Presentation Board, Individual Scheme Southern Access Road. Undated

³ FDC Local Plan 2014. Appendix A Parking Standards.

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Policy reference	Implications	Section addressed
	sustainable transport appropriate to the development location and provide safe and convenient access for all modes.	The site layout drawing (Figure 6.2 (Volume 6.3)) illustrates the proposed pedestrian connectivity to New Bridge Lane and Algores Way.
King's Lynn and West Norfolk Local Development Framework Site Allocations and development Management Policies (2016)	<p>Policy DM12 Strategic Transport. This policy defines the strategic road network within the borough as A10, A17, A47, A134, A148, A149, A1101 & A1122. The policy highlights that development will not be permitted if access is taken on these roads where the development is not a plan allocation site.</p> <p>Also, DM12 states development served by a side road which connects to a road forming part of the Strategic Road Network will be permitted provided that any resulting increase in traffic would not have a significant adverse effect on:</p> <ol style="list-style-type: none"> 1) The route's national and strategic role as a road for long distance traffic 2) Highway safety 3) The route's traffic capacity 4) The amenity and access of any adjoining occupiers. 	The necessity to enter into agreements has been considered as part of the TA prepared in support of the DCO (Appendix 6B (Volume 6.4)).
Cambridgeshire and Peterborough Minerals and Waste Local Plan (2021)	<p>Policy 23, Transport, Highways and Rights of Way of the Cambridge and Peterborough Minerals and Waste Plan states that development will only be permitted where:</p> <ul style="list-style-type: none"> • appropriate opportunities to promote sustainable transport modes can be or have been taken up to the degree reasonably available given the type of development and its location. If at the point of application, commercially available electric Heavy Commercial Vehicles (HCVs) are reasonably available, and the development would increase HCV movements, should provide appropriate electrical vehicle charging infrastructure. • safe and suitable access to the site can be achieved for all users of the subsequent development. 	<p>The Proposed Development (see Figure 6.2 (Volume 6.3)) provides for land which can be made available to accommodate a future rail siding unloading area as part of the operational EfW CHP Facility Site. The powers to install rail siding however are not included in this DCO application and would require a separate consent. For the purpose of robust assessment and to assume a reasonable 'worst-case' in this chapter, given that there is currently no rail access, all waste transport to and from site has been assumed to be road based.</p> <p>Commercially available electric Heavy Commercial Vehicles (HCVs) are not widely available and not considered commercially viable. However, the Applicant will work with those transporting waste to the EfW CHP Facility Site to regularly review low carbon alternatives to the use of diesel.</p> <p>To address Policy 23 a TA (Appendix 6B (Volume 6.4)) has been prepared for the DCO</p>

Policy reference	Implications	Section addressed
	<ul style="list-style-type: none"> • any significant impacts from the development on the transport network (in terms of capacity and congestion) or on highway safety can be cost effectively mitigated to an acceptable degree. • any associated increase in traffic or highway improvements would not cause unacceptable harm to the environment, road safety or residential amenity and would not cause severe residual cumulative impacts on the road network; and • binding agreements covering lorry backloading, routing arrangements and Heavy Commercial Vehicle (HCV) signage for mineral and waste traffic are agreed, if any such agreements are necessary and reasonable to make a development acceptable. <p>Policy 23 also requires identification and enforcement of HGV routes for vehicles accessing and leaving the site to the SRN.</p> <p>Policy 23 also covers PRoW and identifies that minerals and waste developments will only be permitted where any permanently affected PRoW has an acceptable alternative route which is of equivalent convenience, quality and interest.</p>	<p>application to provide evidence that the highways network serving the site is suitable or could accommodate any necessary mitigation schemes. A highways, link based, environmental assessment has been undertaken in this ES chapter.</p> <p>The binding arrangements for mitigating the impacts of construction and operational traffic are secured by the draft DCO which will require compliance with the Outline CTMP and Outline Operational TP (Volume 6.4). It is noted in the Cambridgeshire Advisory Freight Map that the two corridors into Wisbech are included. B198 Cromwell Road is an HGV 'Local Route' and Elm High Road/Churchill Road a 'Strategic Route'. The A47 is also included as a 'Strategic Route'.</p> <p>An Outline CTMP has been prepared setting out the HGV access strategy for the construction phase of the Proposed Development (Appendix 6A Construction Traffic Management Plan (Volume 6.4)). The proposed access routes for HGVs to the site in the construction phases have been agreed with CCC.</p> <p>This chapter also sets out the proposed HGV routing for the operational phase. This is based on discussions with CCC and the identification of the B198 Cromwell Road corridor for access to both the Algores Way and New Bridge Lane accesses.</p> <p>At PEIR a Preliminary PRoW Management Plan was prepared, however the revised design of the Grid Connection, now running under the A47, New Bridge Lane and Broadend Road removes all the direct PRoW interactions and as such no PRoW Management Plan has been prepared for this DCO submission, as described in the Outline CTMP (Appendix 6A (Volume 6.4))</p>

Technical guidance

6.3.8 Technical guidance of relevance to the assessment is set out below.

The Strategic Road Network and the Delivery of Sustainable Development Guidance

6.3.9 The Department for Transport (DfT) Circular 02/2013 'The Strategic Road Network and the Delivery of Sustainable Development' outlines the methods by which NH (formerly the Highways Agency) will engage with developers and communities to

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deliver sustainable development and economic growth, whilst safeguarding the primary function and purpose of the SRN.

6.3.10 Circular 02/2013 outlines under 'Environmental Impact':

"...developers must ensure all environmental implications associated with their proposals, are adequately assessed and reported so as to ensure that the mitigation of any impact is compliant with prevailing policies and standards. This requirement applies in respect of the environmental impacts arising from the temporary construction works and the permanent transport solution associated with the development, as well as the environmental impact of the existing trunk road upon the development itself".

6.3.11 Within the traffic and transport Study Area (outlined in **Section 6.4**), the SRN managed by NH includes the A47. The requirements of Circular 02/2013 are therefore addressed further within this chapter.

Guidelines for the Environmental Assessment of Road Traffic

6.3.12 Current guidance for assessing potentially significant environmental effects is the Institute of Environmental Assessment (IEA) publication Guidance Notes No. 1: *Guidelines for the Environmental Assessment of Road Traffic* (hereafter referred to as 'GEART'). GEART has informed the assessment in this chapter and **Section 6.9** sets out how this has been applied.

Design Manual for Roads and Bridges

6.3.13 The Design Manual for Roads and Bridges (DMRB) contains information about the current standards, advice notes and other published documents relating to the assessment and operation of trunk roads. A series of documents within the DMRB will be relevant for design of access proposals such as CD 109 (Highways Link Design), CD 123 (Geometric Design of at-grade priority and signal-controlled junctions) and CD 143 (Designing for walking, cycling and horse-riding).

6.4 Data gathering methodology

Overview

6.4.1 Baseline data collection has been undertaken to obtain information over the Study Areas described in **Section 6.4**. The description of the baseline conditions presented in **Section 6.5** is based on currently available data from within the Study Area.

6.4.2 The methodology for baseline data gathering including the desk study and site surveys is set out below.

Study Area

6.4.3 The PEIR assessment considered two Study Areas due to the extent of the Grid Connection Option 1 (Walpole). With the Proposed Development as now being submitted including the Walsoken POC only, the assessment has been revised to

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form one uniform Study Area applicable for both the construction and operational phases of the Proposed Development. The scope of the Study Area (**Figure 6.3 Scope of Assessment (Volume 6.3)**) has been agreed with CCC, NCC and NH as set out in **Appendix 6D Scope of Assessment – Traffic and Transport Study Area (Volume 6.4)**.

6.4.4 The selected Study Area for construction and operation has taken into account the key roads that would be affected by traffic associated with the Proposed Development see **Table 6.3 Scope of Assessment – Traffic and Transport Study Area**.

Table 6.3 Scope of Assessment – Traffic and Transport Study Area

Traffic and Transport Study Area	
Algores Way	A1101 Churchill Road
New Bridge Lane	New Drove
B198 Cromwell Road (A47 to Wisbech Town Centre)	Broadend Road
Weasenham Lane	
A1101 Elm High Road	
A47 (Between Guyhirn Roundabout and Junction with A17)	

6.4.5 A plan showing the Highways links comprising the Study Area set out above, is provided as **Figure 6.4: Traffic and Transport Highways Links (Volume 6.3)**.

Desk study

6.4.6 The desk study included a review of the highway network, public transport, and accident data within the Study Area for both the construction and operational phases.

6.4.7 A summary of the data used to inform the assessment is provided in **Table 6.4 Desk Study data for Traffic and Transport** below.

Table 6.4 Desk Study data for Traffic and Transport

Source	Date	Summary
Department for Transport ⁴	October 2020	Historic traffic data from permanent count locations on Highways England's network. Data includes Annual Average Daily Traffic (AADT) vehicle flows broken down by vehicle type.

⁴ Dept of Transport. Road Traffic Statistics. Website (Accessed October 2020)

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Source	Date	Summary
Crashmap ⁵	February 2022	Road accident records by severity and casualty type and vehicle type (car, HGV, bus, pedal cyclist, motorcyclist).
Google Maps – Street View, Maps, Aerial Photography ⁶	February 2022	Review of local highway network including proposed access and access routes, local pinch points and sensitive locations.
Cambridgeshire County Council Definitive PRow Mapping ⁷	February 2022	Details of the PRow network within Cambridgeshire.
Sustrans – National Cycle Network ⁸	February 2022	National Cycle Network for the UK.
Norfolk Definitive PRow Mapping ⁹	February 2022	Details of the PRow network within Norfolk.
Traveline Bus Service Information ¹⁰	February 2022	Details of local bus services and timetables.
National Rail ¹¹	February 2022	Details of local rail stations, services and timetables.
New Traffic Surveys	October 2021	New commissioning traffic surveys commissioned on the local highways network in October 2021.
Accident Data – CCC	February 2022	Accident data from CCC has been provided for the elements for the Study Area within Cambridgeshire.
Accident Data – NCC	February 2022	Accident data from NCC has been provided for the elements for the Study Area within Norfolk.

Survey work

6.4.8 A site survey of the local road network with the potential to be affected by the operational and construction traffic generated by the Proposed Development was carried out on 15 March 2021. The site survey included detailed notes and photographs recorded on a Global Positioning System (GPS) linked on-site system (collector app). **Table 6.5 Surveys for Transport assessment** below sets out details of this site survey.

⁵ Crashmap Data: Great Britain 1999-2021 (verified) -2021 provisional data to June 2021. (Accessed February 2021)

⁶ Google. Googlemaps. Website (Accessed February 2022)

⁷ CCC. My Cambridgeshire. Website (Accessed February 2022)

⁸ [REDACTED] The National Cycle Network (Accessed February 2022)

⁹ maps.norfolk.gov.uk/highways. Website (Accessed February 2022)

¹⁰ [REDACTED]. Website (Accessed February 2022)

¹¹ National Rail. National Rail Enquiries. Website (Accessed February 2022)

Table 6.5 Surveys for Transport assessment

Survey	Survey dates	Survey methodology
Traffic and Transport Site Survey	15 March 2021	<p>The scope of the site survey undertaken for transport in the Study Area included:</p> <ul style="list-style-type: none"> • all roads and junctions that form part of the Study Area (Construction and Operation) (to inform the environmental Assessment, TA and CTMP); • all proposed site access locations for all elements of the Proposed Development; • local PRoW which are close to the Proposed Development; • peak hour observations of traffic conditions around Wisbech; • observations of the existing New Bridge Lane disused March to Wisbech Railway crossing point and New Bridge Lane itself; • observations of the existing Weasenham Lane disused March to Wisbech Railway crossing point and location of the Weasenham Lane Pipe Bridge for the CHP Connection; • observations of sustainable transport provision such as pedestrian footways and bus stops near the EfW CHP Facility Site, TCC, CHP Connection, Water Connections and Access Improvements at New Bridge Lane; • a visit to the proposed TCC; • a visit to the site of the proposed EfW CHP Facility; • a visit to the Walsoken POC location at Broadend Road; • 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.

Data Limitations

- 6.4.9 Following completion of the traffic surveys in October 2021 it can be confirmed that there are no traffic data limitations.
- 6.4.10 The assessment of bus services in this chapter (and the **TA (Appendix 6B (Volume 6.4))**) has reviewed service provision as of March 2022. At this time services are still running in Wisbech and the wider area on slightly reduced service frequency on some routes as a result of changes made during the COVID-19 pandemic.

6.5 Baseline

6.5.1 This section provides a description of the current and future baseline conditions, including roads, which are proposed to be used for access to the Proposed Development.

Current baseline

6.5.2 The baseline condition of the strategic and local highways network is presented for the Study Area. The following section sets out the local highway network split as follows;

- Strategic Highways Network; and
- Local Highways Network.

Strategic Highways Network

A47

6.5.3 The A47 provides a link from the A1 and A1(M) west of Peterborough to Lowestoft on the coast of Norfolk. The A47 routes via numerous towns including Peterborough, Wisbech, Norwich and Great Yarmouth.

6.5.4 Within the Study Area the A47 runs north-east/south-west between the A47/A141 junction (Guyhirn Roundabout) and the A47/A17 junction. The A47 is located around the southern and eastern periphery of Wisbech and acts as a bypass for through traffic. The A47 junctions included within this assessment are:

- B198 Cromwell Road;
- A1101 Elm High Road;
- Broadend Road;
- B198 Lynn Road; and
- A47.

6.5.5 The A47 is a single carriageway rural A Road subject to the national speed limit.

Local Highways Network

A1101 Elm High Road

6.5.6 Between the A47 and Weasenham Lane, Elm High Road is a single carriageway road which is subject to a 40-mph speed limit. The road is lit, and pedestrian footways are provided on both sides of the carriageway. Numerous residential properties and driveways face onto the carriageway along the length of the road.

Algores Way

- 6.5.7 Algores Way is a single carriageway road which runs into an industrial area from Weasenham Lane. Numerous industrial properties face onto Algores Way and pedestrian footways are provided on both sides of the carriageway. Minor road junctions with Algores Way provide access to premises located in the wider industrial area beyond Algores Way.

B198 Cromwell Road

- 6.5.8 The B198 Cromwell Road forms the principal route into the centre of Wisbech from the south-west. Between New Bridge Lane and Weasenham Lane the B198 is a single carriageway road subject to a 40-mph speed limit. The road is lit and numerous industrial and commercial properties face onto it. A signal-controlled pedestrian crossing is provided adjacent to the Tesco supermarket and pedestrian footways are provided on at least one side of the carriageway.
- 6.5.9 Between New Bridge Lane and the A47 the speed limit of the B198 changes from 40-mph to the national speed limit. A pedestrian footway is provided on the eastern side of the carriageway and a small number of properties face onto the road.
- 6.5.10 Between Weasenham Lane and Wisbech Town Centre the B198 has a speed limit of 40-mph.

New Bridge Lane

- 6.5.11 New Bridge Lane is a single carriageway road which is subject to the national speed limit. New Bridge Lane connects to the B198 Cromwell Road via a priority junction. A pedestrian footway is provided on the northern side of the carriageway and street lighting is provided. Industrial and residential properties face onto New Bridge Lane whilst Salters Way forms a priority junction with New Bridge Lane providing access to the commercial properties located within the adjacent area.
- 6.5.12 Access to New Bridge Lane east of the disused March to Wisbech Railway from B198 Cromwell Road is currently restricted to traffic by bollards. Access for pedestrians and cyclists along this section of New Bridge Lane has been retained. Vehicular access can only be obtained from New Drove. (See below for a description of New Drove).

Weasenham Lane

- 6.5.13 Weasenham Lane is a single carriageway road which runs between the B198 Cromwell Road and the A1101 Elm High Road. Weasenham Lane is subject to a 30-mph speed limit and street lighting is provided along the length of the road. Pedestrian footways exist on Weasenham Lane on at least one side of the carriageway throughout its route. Residential and industrial properties face onto the road and there are numerous minor roads which lead from it providing access to the industrial and residential areas which exist to the north and south.

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A1101 Churchill Road

6.5.14 Churchill Road is a dual carriageway which runs between Elm High Road and a roundabout with B198 Cromwell Road/Lynn Road near Wisbech town centre. The road is subject to a 30-mph speed limit and street lighting is provided along the entire length of the road. Pedestrian footways are provided on both sides of the road and the route passes numerous residential and retail properties on the edge of Wisbech town centre. The road is a key route into Wisbech from the north and south.

A1101 Elm High Road/Church Road

6.5.15 This route is a two-lane carriageway which links the A47 to Emneth and is categorised as the A1101 before the junction with Church Road. The road is subject to a 30-mph speed limit and is provided with street lighting and pedestrian footways in Emneth.

Broadend Road

6.5.16 Broadend Road is a single carriageway road with centre line which links from the A47 to the east into Wisbech before the road becomes Buttergate Road. The Broadend Road/Buttergate Road link eventually routes north into north-east Wisbech. The road is subject to the national speed limit and is not provided with street lighting or pedestrian footways in the Study Area.

Non-Motorised Modes of Transport

6.5.17 The following section sets out the non-motorised modes of transport within the Study Area.

Rail Network

6.5.18 The closest railway station to the Proposed Development is located in the town of March, approximately 14km south of Wisbech.

6.5.19 March Station is located on a section of railway line which runs between Peterborough and Ely. From March, services can be taken to Peterborough, Cambridge, Ipswich, and a long-distance service operates to Birmingham New Street Station.

6.5.20 From Peterborough and Ely stations, services can be taken to various areas of the country including London, the Midlands, and the North.

Bus Network

6.5.21 Bus services are in operation between Wisbech and local smaller and major settlements including March, Peterborough, Kings Lynn, Norwich, Three Holes and Long Sutton. The following bus services operate along A roads within the Study Area:

- A47 – Service 68,60,56, A, B and C;
- A1101 Elm High Road – Service 56 and 60;

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- B198 Cromwell Road – Service 68, A, B and C, EXCEL ; and
- Weasenham Lane – Service 68.

6.5.22 It should be noted that during 2021/22 and the COVID-19 pandemic the services listed above were suspended or run with lower frequency during this period and some of these services are still not back to the pre-pandemic frequency levels.

6.5.23 The key roads above and the bus services operating along them are set out in **Figure 6.5 Bus Service (Volume 6.3)**.

PRoW

6.5.24 For the PEIR submission a PRoW Management Plan was prepared to cover the PRoW impacts that were anticipated at that stage of project. Since the PEIR, optionality has been removed and the Proposed Development has been confirmed (to include the deletion of the Grid Connection Option to the Walpole POC) and as such there are now no direct impacts upon any PRoW.

National Cycle Network

6.5.25 The proposed traffic and transport Study Area includes an area which would cross the National Cycle Network (NCN) Route 63. NCN 63 runs between Wisbech and Peterborough and crosses through the Study Area as it routes from Wisbech to the south running on a route adjacent to the A1101 using Elm Road, Corporation Road, Elm Low Road before crossing over the A47 south of Wisbech via a signalised crossing. South of the A47 the route runs onto Low Road.

6.5.26 The Town of Wisbech is also on another part of the NCN, Route 1. NCN Route 1 is a long-distance Cycle Route which runs along the East Coast of England linking Dover to Scotland. In Wisbech the route enters the town from the north on Walton Road and then two routes into the town centre before leaving to the north-west along the A1101.

6.5.27 **Figure 6.6 National Cycle Network (Volume 6.3)** sets out the NCN routes in relation to the Proposed Development.

Baseline Traffic Flows

6.5.28 At the PEIR Stage due to the ongoing COVID-19 pandemic it was agreed with the relevant highway authorities (National Highways, CCC and NCC) that baseline traffic flows could be derived from existing historic traffic counts, most of which were taken from either permanent count locations maintained by DfT, traffic data used to inform the WAS (from CCC), or local planning applications.

6.5.29 It was also agreed that all of the Receptor locations included at PEIR would be resurveyed for the DCO submission. This agreement has been taken forward and thus this section sets out the details arising from this new data set and this data is to be used within this assessment.

6.5.30 In addition to the agreements during the PEIR preparation, statutory consultation responses (**Appendix 6D Stakeholder Engagement and Consultation**

Comments on the Traffic and Transport Assessment (Volume 6.4) were received which resulted in the inclusion of additional Receptors at:

- A47 (Between Lynn Road and A17); and
- A1011 (South of A47).

6.5.31 The traffic surveys to inform this assessment were undertaken over two-weeks between 8 October 2021 to 21 October 2021. These dates were provided to the relevant highways authority to avoid local holidays and ongoing roads closures and diversions.

6.5.32 **Table 6.6 Baseline Traffic Data (AADF)** sets out the average annual weekday flow (AADF) for the date of survey and the current baseline (2021) for the relevant highway links.

Table 6.6 2021 Baseline Traffic Data (AADF)

Highways Link	2021 Base		
	Total Vehicles	HGVs	HGV%
1 Algores Way	2917	201	6.9%
2 New Bridge Lane	791	173	21.9%
3 B198 Cromwell Road (A47 to NBL)	14775	943	6.4%
4 Weasenham Lane (AL to EHR)	12026	637	5.3%
5 A1101 Elm High Road	19125	1115	5.8%
6 A47 N (CR to EHR)	19695	1815	9.2%
7 A47 N (EHE to LR)	18284	1647	9.0%
8 A47 S (CR to Guyhirn)	23703	2234	9.4%
9 B198 Cromwell Road (WL to Town Centre)	14821	608	4.1%
10 Churchill Road	15850	1135	7.2%
11 Weasenham Lane (CR to AW)	11149	590	5.3%
12 A47 (LR to A17)	23938	1693	7.1%
13 B198 Cromwell Road (NBL to WR)	14215	871	6.1%

Highways Link		2021 Base		
		Total Vehicles	HGVs	HGV%
14	A1101 Elm High Road (S of A47)	19057	754	4.0%
15	Church Lane (E of A1101)	2955	79	2.7%
16	Broadend Road (E of A47)	1600	54	3.4%
17	Broadend Road (W of A47)	2140	68	3.2%
18	A1101 (S of Church Lane)	11737	823	7.0%

Existing Accident Record

6.5.33 As a result of statutory consultation feedback from CCC (**Appendix 6D: Stakeholder Engagement and Consultation Comments on the Traffic and Transport Assessment (Volume 6.4)**) accident data has been provided directly from both highway authorities (NCC and CCC) to better inform the assessments of the accident record of the local highway network. Personal Injury Accident (PIA) data has been obtained from both NCC and CCC for the following dates:

- CCC – 2016 – 2021; and
- NCC – 2015 – 2021.

6.5.34 The extent of the Study Area is illustrated in **Figure 6.7 Accident Assessment Area (Volume 6.3)**.

6.5.35 The purpose of assessing recorded PIAs is to determine whether there is a history of accidents on the traffic routes within the Study Area 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 the Proposed 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 assessment.

6.5.36 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.

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6.5.37 The detailed assessment of accidents has been split between a link-based assessment to inform environmental assessments in this chapter and a junction-based assessment provided in the TA (**Appendix 6B (Volume 6.4)**).

Highways Safety Link Based Assessment

6.5.38 A detailed assessment of the highway links in the Study Area has been completed using the baseline data (as presented in **Table 6.6 2021 Baseline Traffic Data (AADF)**).

6.5.39 A total of 158 accidents on highway links were recorded over the five-year period in the Study Area. Of the 158 accidents recorded, five accidents were recorded as Fatal, 46 accidents were recorded as Serious in terms of severity and 107 accidents recorded as Slight. **Table 6.7 Personal Injury Accident Data Summary** below provides a summary of the accidents and details of the accident rate per kilometre.

6.5.40 It should be noted that the accident assessment within the TA includes additional accidents on the circulatory carriageways of the roundabouts on the A47 which have been discounted from this link assessment as these accidents are a function of the operation of the junctions, at the connections between two separate links.

6.5.41 From the DfT (2019) reported road casualties for Great Britain 2019 as presented in RAS10002¹², the national accident rate per million vehicle kms by road classification were as follows:

- Urban A road – 0.42;
- Rural A road – 0.11;
- Urban other roads – 0.33; and
- Rural other roads – 0.19.

6.5.42 **Table 6.7 Personal Injury Accident Data Summary** also sets out the national PIA rate per million vehicle kms classification reported by DfT for road casualties in Great Britain 2019.

Table 6.7 Personal Injury Accident Data Summary

Highways Link	Severity			Total	Accident Rate (per Year)	Link Length (km)	Estimated Annual Flow	PIA p.a. million Vehicle km	PIA p.a. million Vehicle km threshold
	Slight	Serious	Fatal						
Algores Way	2	1	0	3	0.6	0.69	772873	1.13	0.33
New Bridge Lane	0	1	0	1	0.2	0.839	209483	1.14	0.33

¹²Dept of Transport. Reported road accidents, vehicles and casualties table for Great Britain. Website (Accessed May 2022)

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Highways Link	Severity			Total	Accident Rate (per Year)	Link Length (km)	Estimated Annual Flow	PIA p.a. million Vehicle km	PIA p.a. million Vehicle km threshold
	Slight	Serious	Fatal						
B198 Cromwell Road (A47 to New Bridge Lane)	0	1	0	1	0.2	0.63	3915428	0.08	0.33
Weasenham Lane (Algores Way to Elm High Road)	10	5	0	15	3	0.71	3186784	1.33	0.33
A1101 Elm High Road	10	1	0	11	2.4	0.79	5068231	0.54	0.42
A47 N (B198 Cromwell Road to Elm High Road)	7	5	0	12	2.4	2.44	5219255	0.188	0.19
A47 N (Elm High Road to Lynn Road)	10	3	2	15	3	5.06	4845260	0.12	0.19
A47 S (B198 Cromwell Road to Guyhirn)	19	10	1	30	6	6.7	6281216	0.14	0.19
B198 Cromwell Road (Weasenham Lane to Town Centre)	1	3	0	4	0.8	1.18	3927512	0.17	0.33
Churchill Road	10	5	0	15	3	1.53	4200356	0.47	0.42
Weasenham Lane (B198 Cromwell Road to Algores Way)	3	1	1	5	1	0.67	2954512	0.51	0.33
A47 (Lynn Road to A17)	22	7	1	30	6	13.62	6343570	0.07	0.19
B198 Cromwell Road (New Bridge Lane)	7	2	0	9	1.8	0.90	3766975	0.53	0.33

Highways Link	Severity			Total	Accident Rate (per Year)	Link Length (km)	Estimated Annual Flow	PIA p.a. million Vehicle km	PIA p.a. million Vehicle km threshold
	Slight	Serious	Fatal						
to Weasenham Lane)									
A1101 Elm High Road (S of A47)	5	1	0	6	1.2	0.90	5049973	0.26	0.42
Church Lane (E of A1101)	0	0	0	0	0	0.36	782996	0	0.19
Broadend Road (E of A47)	0	0	0	0	0	0.27	423974	0	0.19
Broadend Road (W of A47)	0	0	0	0	0	0.33	566994	0	0.19
A1101 (S of Church Lane)	0	0	0	0	0	0.33	3110173	0	0.11

6.5.43 The detailed assessment of the links in **Table 6.7 Personal Injury Accident Data Summary** above provides a resultant accident rate per million vehicle km. When comparing these results to the national accident rate it reveals that 7 links have an annual accident rate higher than the national average as follows:

- Algores Way – 1.13 compared to 0.33 for an urban other roads;
- New Bridge Lane – 1.14 compared to 0.33 for an urban other road;
- Weasenham Lane (B198 Cromwell Road and A1101 Elm High Road) – 1.33 and 0.51 compared to 0.33 for an urban other road;
- A1101 Elm High Road – 0.54 compared to 0.42 for an urban A road;
- Churchill Road – 0.47 compared to 0.42 for an urban A road; and
- B198 Cromwell Road (New Bridge Lane to Weasenham Lane) – 0.53 compared to a 0.33 for urban other road.

6.5.44 For two links (Elm High Road and Churchill Road) the accident rates are only 0.12 and 0.05 above the national average which will not be perceptively different taking into account daily traffic variations. This suggests that both are effectively at the national average.

6.5.45 There are two links where the accident rates reported above are higher than the national average, but these results may be distorted. New Bridge Lane is a short link and although above the national average, the link has only recorded one accident in the five-year time frame assessed. For the PEIR assessment New Bridge Lane was assessed as having a lower accident rate but this conclusion was arrived at based upon historic traffic data rather than specific, recent survey data

due to difficulty of obtaining a representative survey during the COVID-19 pandemic. The 2021 traffic counts recorded much lower traffic flows than the historic data used for the PEIR assessment, and this was potentially a result of HGV traffic not returning to pre-pandemic levels in October 2021. A similar situation was recorded for Algores Way which recorded three cases in five years).

- 6.5.46 The assessment has indicated two links (Weasenham Lane and B198 Cromwell Road) where thresholds are exceeded, and both of these links are taken forward and considered in the assessment.

A47 Congestion Review

- 6.5.47 A review has been undertaken of the A47 links around to understand the existing congestion record of the NH links across the day. This assessment reviews the links between the A47/B198 Cromwell Road and A47 Lynn Road junction.

- 6.5.48 Google Maps provides for 'typical' traffic for each day of the week for 24 -ours of the day. For the purpose of a high-level assessment, Wednesday has been used as the basis for understanding typical congestion in the area. Google Maps presents traffic on a link as a range between the Green (fast) through amber, red and dark red (slow). On approach to junctions, particularly the A47 roundabouts, all traffic naturally slows to safely enter, navigate and exit the junction so links with green and amber are not usually considered to indicate congestion.

- 6.5.49 This review indicates that at the A47/B198 Cromwell Road, A47/Broad End Road and A47/Lynn Road junction there are no existing congestion issues on the A47 with the links approaching the junctions green throughout the whole day.

- 6.5.50 The A47/A1101 (Elm High Road Junction) does indicate some delay in the amber range on the approach to the junction from east and west on the A47 in the AM Peak. At the start of the hour (08:00-08:05) there is also a section of red on the A1011 south of the roundabout for 5 minutes before easing to amber for the rest of the hour. In the PM Peak the situation is reversed with the red delay for 20 minutes on the A1011 north of the roundabout and amber on the approaches to the junction on the A47.

Existing site for the EfW CHP Facility and Access Improvements

- 6.5.51 The EfW CHP Facility Site is located to the south of Wisbech on an existing industrial estate and an adjacent plot of undeveloped land located to the east. The EfW CHP Facility Site is bounded by the disused March to Wisbech Railway to the west, New Bridge Lane to the south and Algores Way to the north-east. The EfW CHP Facility Site is currently accessed via an existing surfaced access from Algores Way. To reach the existing site entrance, traffic is required to route along Algores Way from Weasenham Lane. Weasenham Lane site traffic can access the A47 strategic road by either routing east to the A1101 Elm High Road, joining the A47 at the A1101/A47 junction, or routing west to the B198 Cromwell Road, joining the A47 at the B198/A47 junction. In the CCC response (13 January 2020) to the Transport Assessment Scoping Note, it was confirmed that Algores Way is not an adopted highway for the entire length between the existing site access into the EfW CHP

Facility Site and Weasenham Lane. The road is only adopted from the junction with Weasenham Lane to the Frontage of 19 Algores Way.

6.5.52 The southern boundary of the EfW CHP Facility Site is adjacent to New Bridge Lane; a single-track road that runs from B198 Cromwell Road to a terminus point near the A47. The road is currently closed (as advised by CCC on 13 January 2020) at the point at which it crosses the disused March to Wisbech Railway over land owned by Network Rail. The road is at grade across the railway line and closed effectively by the placement of stone blocks though non-motorised users can still cross the railway line. New Bridge Lane is the location for the proposed Access Improvements, a permanent access into the south of the site for HGVs, the start of the Grid Connection and potable Water Connection.

Future baseline

6.5.53 The construction phase and operational phase of the Proposed Development have differing future years of assessment. These are set out in the following sections.

6.5.54 It has been agreed with the relevant highways authorities (CCC and NCC) and NH, that growth rates for both the construction and operational phases can be derived from TEMPro but that this must be supplemented with two committed developments (included at the request of CCC):

- F/YR20/0420/F – Land north-east of 25 Cromwell Road Wisbech Cambridgeshire – An existing warehouse/office which is being expanded and moving from Weasenham Lane to Cromwell Road new warehouse; and
- F/YR16/0996/F – A new business park and service station off the A47/ B198 Cromwell Road Junction.

6.5.55 Committed developments are developments locally which have already received planning consent. They are assumed to be built before the start of the construction phase such that the changes to traffic levels within the Study Area would be present in all of the future year assessments. **Appendix 6E: Committed Development Traffic (Volume 6.4)** sets out the details related to the calculations of the committed development traffic.

6.5.56 The following section sets out the growth rate applied on top of the agreed committed development traffic.

Construction Phase

6.5.57 The construction phase traffic generation calculations were interrogated (as set out in **Section 6.6**) to identify the peak week of traffic impacts during the construction phase.

6.5.58 The peak construction period of the project is Month 14 which is proposed to fall in 2024.

6.5.59 The growth rates from TEMPro for 2024 using the Fenland 003 location classification is as follows, for total vehicles:

- 2021 – 2024 – 1.0624.

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6.5.60 The HGV growth rates derived from the National Traffic Model (NTM) within TEMPro are:

- 2021 – 2024 – 1.0359.

6.5.61 The resultant future year traffic generation is set out in **Section 6.10** later in this chapter. **Appendix 6F: TEMPro Factors (Volume 6.4)** has details of the TEMPro interrogation to indicate the derivation of the figures above.

Operational Phase

6.5.62 The operational phase traffic generation calculations were interrogated to identify the traffic impacts (as set out in **Section 6.6**). The construction works are programmed for completion in 2026, after which the EfW CHP Facility would become operational. The potential maximum 625,600 tonnes per annum would not occur until 2027. The assessment of the future year representing the largest throughput to the EfW CHP Facility has therefore been undertaken for 2027.

6.5.63 The growth rates from TEMPro for 2027 using the Fenland 003 area classification is as follows for total vehicles:

- 2021 – 2027 – 1.1054.

6.5.64 The HGV growth rates derived from the NTM within TEMPro are:

- 2021 – 2027 – 1.07035.

6.5.65 The resultant future year traffic generation is set out in **Section 6.10** later in this chapter. **Appendix 6F: TEMPro Factors (Volume 6.4)** has details of the TEMPro interrogation to indicate the derivation of the figures above.

Highways Network Changes

Junctions on the CCC Network

6.5.66 CCC has confirmed that, as of July 2020, only three of the WAS Phase 1 schemes have been initially funded to allow for further design work to be undertaken and therefore could be considered committed; these are:

- Elm High Road/Weasenham Lane roundabout (EH7b);
- A47/Broadend Road roundabout (BER2); and
- Minor improvements to the existing Elm High Road/A47 roundabout (EH1).

6.5.67 A CCC Highways and Transport Committee Report was published in July 2020. It referred to the EfW CHP Facility and its link with the WAS. The Committee Report stated the following:

“Since the approval for the package of works at the Economy and Environmental Committee in May 2018, a proposal has now come forward to construct an energy from waste combined heat and power facility (EfW CHP), built on the existing waste management site on the Algores Way Industrial Estate. The proposal, if

approved, would have an impact on the traffic flows in the local area, as well as the proportion of HGVs”.

6.5.68 *“Pre-application activity is continuing for the EfW CHP facility.... Until this process and its impacts are fully understood, detailed design work for schemes CR2 and SAR1 therefore is not progressing...”*

6.5.69 *“The Cambridgeshire and Peterborough Combined Authority is also progressing the potential re-opening of the Wisbech railway line, which is in the vicinity of these schemes and therefore must also be considered as part of their [the Applicant’s] future development”.*

6.5.70 Following consultation on the PEIR, CCC was asked whether there were any future changes to the highways network to the Year 2027 which it considered should be included in the scope of the assessment. Although there remains a desire to deliver the three schemes, and which are included within the Fenland Local Plan (2014) and WAS, it was confirmed that the improvements to these junctions would not be brought forward within the time scale and should not be included in any future assessments.

6.5.71 Although the SAR schemes are not currently committed it is recognised that these schemes could influence the proposed access arrangements to the EfW CHP Facility from New Bridge Lane. Therefore, the Access Improvements for New Bridge Lane are designed to accommodate SAR1 proposals should these come forward at a future point. In summary, the Access Improvements on New Bridge Lane would include the reopening New Bridge Lane to motorised vehicles; widening the road to form a two-way carriageway suitable for HGV traffic and provide a footway. Further information on the proposed access arrangements for the Proposed Development is set out in **Section 6.6**.

Junctions on the National Highways Network

6.5.72 Following receipt of statutory consultation responses, discussions with NH indicated that the junction improvements at the A47 Guyhirn Roundabout should complete in early 2022. Initial assessment in the **TA** however has indicated that detailed assessment of this junction was not required (**Appendix 6B (Volume 6.4)**).

6.5.73 In the response at statutory consultation and in the discussions which followed, NH confirmed that there were no further highways improvement schemes that should be included within a future baseline.

Junctions on the CCC/NH Network

6.5.74 None of the committed junction improvements are considered to alter the pattern of traffic flows locally and as such no amendments are required to the highway links future year baseline flows which have been calculated in this assessment.

Future Rail Network Changes

6.5.75 The disused March to Wisbech Railway runs along the western boundary of the EfW CHP Facility Site. It is the aim of the CPCA with the support of CCC and FDC to reopen this line if it is considered economically viable to do so.

- 6.5.76 A GRIP 2 Report and Outline Business Case was prepared in July 2015¹³. A GRIP 3 Study¹⁴ and an updated Business Case¹⁵ were published in December 2020. The current timeline set out in the Business Case indicates that should the scheme pass through all stages of governance and planning processes, the construction could commence in 2023, be completed by 2026 and operational by 2028. As of June 2022, no application for consent has been submitted.
- 6.5.77 During the development of the scheme several station locations within Wisbech have been considered and these include a station in Wisbech town centre (which would require the railway to cross the A47, Weasenham Lane and New Bridge Lane) and a site south of the A47 which may not require the reinstatement of the railway across the A47, Weasenham Lane or New Bridge Lane. The GRIP assessments indicate that north of the A47 there are additional costs associated with a town centre station site which would include a bridge over the A47.
- 6.5.78 The assessment has considered the implications of the potential reopening of the disused March to Wisbech Railway on the design and future operation of the Proposed Development through consideration of an alternative access arrangement. Further details are set out in **Section 6.7**. Discussions are ongoing with Network Rail.

6.6 Basis for Traffic and Transport Assessment

- 6.6.1 The Traffic and Transport assessment presented in this chapter has been undertaken for two scenarios, one during the construction phase and the second during the operational phase. A specific decommissioning phase assessment has been scoped out of the assessment for the reasons provided within **Chapter 3: Description of the Proposed Development (Volume 6.2)**.
- 6.6.2 This section details the nature of the traffic generation and distribution associated with the Proposed Development and the construction and operational scenarios that are considered within this chapter.
- 6.6.3 This section describes the construction access arrangements for the Proposed Development. Further detail on access construction arrangements, access routing and access locations is set out in **Appendix 6A: Outline CTMP (Volume 6.4)**. The Access Improvements to New Bridge Lane and proposed changes to the existing access on Algores Way are also described in this section. Further detail on operational access arrangements is set out in **Appendix 6C: Outline Operational Travel Plan (Volume 6.4)**.
- 6.6.4 This section should be read in conjunction with the description of the Proposed Development provided in **Chapter 3: Description of Proposed Development (Volume 6.2)**.

¹³ CCC. travel_roads_and_parking/68/transport_funding_bids_and_studies

¹⁴ CCC. March to Wisbech Rail Reopening. Grip 2 Report. July 2015.

¹⁵ CCC. Study into Re-opening of March to Wisbech Rail Link. Outline Business Case. July 2015.

Construction Phase Proposed Development Details

6.6.5 There are several elements of the Proposed Development that will generate construction traffic during the proposed 36-month programme which is projected to extend from 2023 to 2026. This section sets out how construction traffic generation has been calculated for each element starting first with consideration of the overall programme and construction elements which will overlap.

6.6.6 The elements that are considered for construction traffic generation are:

- The EfW CHP Facility, including TCC;
- Water Connections;
- The Grid Connection;
- The CHP Connection; and
- Access Improvements.

Construction Programme

6.6.7 A proposed construction programme has been developed for all the works required to deliver the Proposed Development. This programme is a robust estimate of the works required for the differing elements of the project informed by projects such as the Applicant's Devonport EfW CHP Facility in Plymouth. This programme is preliminary and along with a series of worst-case assumptions set out in this chapter provides a robust set of traffic calculations to base the assessment upon.

6.6.8 The Construction Programme is proposed over 36 months or 157 weeks. Week 1 of the construction programme has been defined for the purpose of the traffic calculations in this chapter with an estimated start date based on initial programme considerations of 4 September 2023.

6.6.9 The construction programme is provided as **Figure 6.8 Construction Programme (Volume 6.3)**; however, the following presents some of the key dates for elements of the Proposed Development:

- EfW CHP Facility, including TCC and Water Connections – Week 1 to 157:
 - ▶ Mobilisation and Site Set up – Week 1 to 13;
 - ▶ Demolition Works – Week 1 to 13;
 - ▶ Cut and Fill Works – Week 1 to 157;
 - ▶ Civils Works – Week 6 to 157;
 - ▶ Mechanical and Electrical (M+E) – Week 49 to 130;
 - ▶ Plant Installation – Week 36-143; and
 - ▶ Commissioning and Testing – Week 118 to 157.
- The Grid Connection – Week 62 – 91:
 - ▶ Mobilisation and Site Set up – Week 62 – 65;

- ▶ Construction of the Underground Cable – Week 66 to 91; and
- ▶ Commission and Testing – Week 92 – 96 (and Week 144 to 157).
- The CHP Connection – Week 105 to 139:
 - ▶ Mobilisation and Site Set up – Week 105 – 109;
 - ▶ Construction of the CHP Connection – Week 110 to 135; and
 - ▶ Commission and Testing – Week 136 to 139 (and Week 144 to 157).
- Access Improvements – Week 5 to 30.

6.6.10 Following analysis of the details of the traffic generation set out in the following sections, the scenario reflecting the peak month of vehicle movements has been assessed in this chapter.

EfW CHP Facility and Water Connections Construction Traffic Generation and Distribution

6.6.11 The Applicant has constructed EfW CHP facilities such as the Proposed Development across Europe, including at a site in Devonport, Plymouth, which also included a CHP Connection. During the construction of the Devonport facility a detailed record was made of the traffic and staff into and out of the site. In addition to Devonport construction traffic, the Applicant, , which has constructed EfW sites across the UK, has also sourced details of the construction traffic per month for other EfW sites across the country, including Shrewsbury, Oxford, Wilton and Avonmouth. It has used an average of the traffic predictions to define proposed daily traffic generation per month across the preliminary programme.

6.6.12 For cars, no discount has been applied for any construction travel plan measures and it has been assumed that all staff arrive at the site via private cars, but with a car occupancy rate of between one and two. The calculations result in the following daily traffic flows per month for HGVs and LVs (Light Vehicles) as set out in **Table 6.8 EfW Daily Traffic Flows Per Month (Two Way)**.

Table 6.8 EfW Daily Traffic Flows Per Month (Two Way)

Month	HGV	LV	Total	Month	HGV	LV	Total
1	20	20	40	19	146	390	536
2	20	46	66	20	114	430	544
3	24	70	94	21	102	496	598
4	46	164	210	22	108	482	590
5	46	176	222	23	94	452	546
6	84	270	354	24	80	478	558
7	82	312	394	25	56	430	486
8	136	306	442	26	40	384	424

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Month	HGV	LV	Total	Month	HGV	LV	Total
9	156	340	496	27	36	440	476
10	198	398	596	28	34	382	416
11	186	438	624	29	32	314	346
12	146	438	584	30	28	230	258
13	144	478	622	31	28	230	258
14	174	456	630	32	24	188	212
15	162	446	608	33	10	138	148
16	156	446	602	34	10	84	94
17	156	470	626	35	6	84	90
18	136	378	514	36	0	74	74

6.6.13 **Table 6.8 EfW Daily Traffic Flows Per Month (Two Way)** sets out in month 14 there would be 174 two-way HGV movements and 446 two-way LV movements per day relative to the EfW CHP Facility construction.

6.6.14 In addition to the traffic generation set out in **Table 6.8 EfW Daily Traffic Flows Per Month (Two Way)** for the construction phase, the HGV traffic generation for the cut and fill balance and the traffic associated with the demolition works requires consideration. These figures are set out in **Table 6.9 EfW Cut and Fill and Demolition Traffic Daily Traffic Flows Per Month (Two Way)**.

Table 6.9 EfW Cut and Fill and Demolition Traffic Daily Traffic Flows Per Month (Two Way)

Month	HGV	Month	HGV
1	30	19	11
2	28	20	11
3	23	21	11
4	26	22	12
5	35	23	11
6	14	24	11
7	13	25	11
8	13	26	11
9	13	27	11

Month	HGV	Month	HGV
10	14	28	
11	13	29	
12	13	30	
13	14	31	14
14	13	32	14
15	12	33	14
16	11	34	
17	11	35	
18	11	36	

6.6.15 **Table 6.9 EfW Cut and Fill and Demolition Traffic Daily Traffic Flows Per Month (Two Way)** sets out in month 14 there would be 13 two-way HGV movements per day relative to the cut and fill operations.

6.6.16 **Table 6.10 TOTAL Daily Traffic Flows Per Month (Two Way)** sets out the total construction phase traffic generation for the EfW CHP Facility including TCC and Water Connections.

Table 6.10 TOTAL Daily Traffic Flows Per Month (Two Way)

Month	HGV	LV	Total	Month	HGV	LV	Total
1	50	20	70	19	157	390	547
2	48	46	94	20	125	430	555
3	47	70	117	21	113	496	609
4	72	164	236	22	120	482	602
5	81	176	257	23	105	452	557
6	98	270	368	24	91	478	569
7	95	312	407	25	67	430	497
8	149	306	455	26	51	384	435
9	169	340	509	27	47	440	487
10	212	398	610	28	34	382	416
11	199	438	637	29	32	314	346
12	159	438	597	30	28	230	258

Month	HGV	LV	Total	Month	HGV	LV	Total
13	158	478	636	31	28	230	258
14	187	456	643	32	24	188	212
15	174	446	620	33	10	138	148
16	167	446	613	34	10	84	94
17	167	470	637	35	6	84	90
18	147	378	525	36	0	74	74

6.6.17 **Table 6.10 TOTAL Daily Traffic Flows Per Month** indicates that the predicted peak month will be month 14, when there will be 643 two-way vehicle movements per day of which 167 will be HGVs and 446 Light Vehicles. This is the peak construction impact of the Proposed Development. As such traffic generation from this month forms the construction phase assessment.

6.6.18 HGV traffic distribution has been based on a split of 25% of HGVs routing out of the Study Area north of the A47 and 75% of HGVs routing out of the Study Area south of the A47. HGV access will be required during the construction phase to both Alloges Way and New Bridge Lane.

6.6.19 Light vehicles are all related to staff and staff distribution has been based on Journey to Work data from the 2011 UK Census¹⁶ based on the area of E01033111 (Fenland 003H). This area includes the existing New Bridge Lane industrial area and is considered a suitable location to enable understanding of existing staff commuter patterns to industrial type developments in Wisbech.

6.6.20 Due to the nature of staff travel to and from a wider range of destinations, a more comprehensive set of distribution locations on the local highways network have been assumed and these are shown in **Figure 6.9 Construction Staff Distribution (Volume 6.3)**.

6.6.21 **Table 6.11 Staff Distribution** sets out the percentage split base for the journey to work.

Table 6.11 Staff Distribution

Distribution Routes out of the Study Area	Percentage
A	14%
B	0%
C	0%
D	1%
E	1%

¹⁶ ONS. Census. Website. (Accessed February 2022).

Distribution Routes out of the Study Area	Percentage
F	11%
G	21%
H	23%
I	8%
J	8%
K	4%
Internal	9%

6.6.22 It is proposed that all construction staff will use Algores Way for access to parking areas. It is not proposed to place any route restrictions on staff vehicles due to the relatively low number of vehicles anticipated. The staff routes to the destination points A to J have been understood using journey planning software which indicates staff traffic journeys would be to the A47 via the A1101 and B198 Cromwell Road corridors.

Grid Connection Traffic Generation and Distribution

6.6.23 The construction programme for the Grid Connection is broken down into specific construction activities and the details of each activity are provided below, including the assumptions and calculations that have been made in order to identify the resultant traffic generation.

6.6.24 **Figure 6.10 Grid Connection Construction Accesses (Volume 6.3)** illustrates the proposed Grid Connection and the accesses and sections of A47 that would be used for its construction.

6.6.25 The construction programme has been split into distinctive elements, which are as follows:

- Mobilisation;
- Underground cable materials deliveries;
- Underground civil works;
- Underground cable installation; and
- Works at the substation.

6.6.26 There is also a requirement for staff to be based at the construction compound permanently during construction, once established. The compound on the EfW CHP Facility Site will be used for the construction of the underground cable and agreement has been reached with NH to use the laybys on the A47 for some materials storage. The traffic generated by this is set out in further detail below.

6.6.27 The following section sets out the traffic generation resulting from the differing elements of the Grid Connection construction programme. It presents a summary of

the way in which traffic flows for this element of the Proposed Development have been developed.

Mobilisation

- 6.6.28 Mobilisation is proposed to take place in weeks 62 and 65, taking a total of 20 days.
- 6.6.29 Mobilisation comprises the works associated with the establishment of the underground cable temporary construction compound being established within part of the TCC. This would include the site offices, welfare unit, a lock-up and hard standing for staff vehicles, as well as some storage areas for materials to be delivered later in the construction programme.
- 6.6.30 HGVs would only be required in week 63 to deliver various components for the compound. This would entail five HGV deliveries (10 two-way movements). Weeks 62 to 65 would all also require staff and smaller deliveries to the site per day, including 2 arrivals in week 62, 10 in week 63, 6 in week 64 and 4 in week 65 to and from the site.

Underground cable materials deliveries

- 6.6.31 The traffic flows associated with the delivery of underground cable materials are identified as occurring in weeks 67 to 84 of the construction programme.
- 6.6.32 This element of the construction programme covers the delivery of materials required for the completion of the underground cable section. There are three main components that will need to be delivered:
- cable ducts;
 - sand (including limited amounts of limestone dust for trenching); and
 - cables.
- 6.6.33 There is a requirement for approximately 4,376m of cable ducts. Each duct is 6m in length. This leads to a requirement for approximately 2187 ducts in total. Each HGV can transport 468 ducts and as such there is a requirement for five duct deliveries or 10 two-way HGV movements.
- 6.6.34 There is a requirement for approximately 3,358 tonnes of sand to support the cable ducts over the length of underground cable. Assuming this is delivered in 20 tonne capacity HGVs, a total of 169 HGV deliveries or 338 HGV two-way movements will be required.
- 6.6.35 It is estimated that there is a requirement for approximately nine HGV deliveries of cable for the underground cable section or 18 two-way HGV movements.

Underground civil works

- 6.6.36 The works associated with underground cable works are proposed to take place in weeks 70 to 85 of the preliminary construction programme.
- 6.6.37 This part of the construction programme encompasses various civil engineering tasks required to enable the cable to be installed, as follows:

- Construction of joint bays, including concrete deliveries; and
- General underground civil works such as trench digging and other cable works.

6.6.38 A detailed breakdown of these elements is set out below.

Construction of joint bays

6.6.39 The construction of the joint bays is proposed to take place in weeks 70 to 73. Each joint bay will require 10 deliveries (20 HGV two-way movements). There are seven joint bays proposed, with approximately 500m between each joint bay. **Figure 6.11: Joint Bay Locations (Volume 6.3)** identifies the locations of the joint bays on the underground cable route. The first joint bay is located in New Bridge Lane south-east of the EfW CHP Facility Site, the next two would be within the verge of the A47 south of the A1101 junction. The next three would be in the A47 verge north of the A1101 and the final joint bay would be located within Broadend Road. In total this would generate 140 two-way movements for all joint bays. These trips are predominately deliveries of cement-bound sand and as such are assumed to arrive direct from local suppliers. It is proposed to construct the joint bays from south to north across the preliminary construction programme period.

6.6.40 In addition to the cement-bound sand there is also a requirement for two deliveries of plant on HGVs. Delivery and removal of the plant would result in eight two-way HGV movements in total.

6.6.41 Staffing requirements for the joint bays are assumed to be three staff per day arriving and departing in one two-way trip in a LV direct from local accommodation. In order to generate a robust assessment, it is assumed that these staff would need to visit the main compound at the start of the day before commencing work.

6.6.42 The construction of the joint bays for the northern section is proposed to take place in weeks 97-100. Each joint bay will require 10 deliveries (20 HGV two-way movements). There are two joint bays proposed, with approximately 500m between each joint bay, and both would be located within the road in this section. In total this would generate 40 two-way movements. These trips are predominately deliveries of cement-bound sand and as such are assumed to arrive direct from local suppliers.

6.6.43 In addition to the cement-bound sand there is also a requirement for two deliveries of plant on HGVs to four differing sections of the underground cable route. Delivery and removal of the plant would result in 16 two-way HGV movements in total.

6.6.44 Staffing requirements for the joint bays are assumed to be three staff per day arriving and departing in one two-way trip in a LV direct from local accommodation. In order to generate a robust assessment is assumed that these staff would need to visit the main compound at the start of the day before commencing work.

Underground civil works and intra UG section materials deliveries

6.6.45 This activity includes the materials that need to be transferred from the construction compound to the underground cable work site accesses (cable deliveries are omitted, as these are considered in the underground cable installation section below) and staff to undertake the works.

- 6.6.46 The lengths of cable required to each of the other underground cable accesses have been calculated. Based on the cable required, a calculation of the amount of cable ducts and sand/limestone dust required has been estimated. As materials are already at the main compound, no further trips other than those leaving and returning from the other sites are required. This work will be undertaken between Weeks 74 and 85 and is predicted to generate 338 two-way HGV movements across that time period with approximately 28 two-way HGV movements per week.
- 6.6.47 Spoil will also need to be removed from the cable trenches as the project is constructed between weeks 70 and 85 which would result in 142 two-way HGV movements.
- 6.6.48 Staffing requirements for the underground civil works are assumed to be five staff per day arriving and departing in two two-way LV journeys direct from local accommodation with a requirement to visit the construction compound prior to works commencing.

Underground Cable Installation

- 6.6.49 The works associated with the underground cable installation are proposed to take place in weeks 75 to 87 of the construction programme following the completion of the preparation works, such as joint box construction, excavations and cable ducting.
- 6.6.50 At this stage in the construction programme, the cable drums will have been delivered to, and stored at, the construction compound. The installation will necessitate the transfer of the cable drums, via the local highway network, to the various underground cable sites. This will result in 54 two-way movements to deliver the cable drums from the compound to the work sites.
- 6.6.51 Staffing requirements for the underground cable installation are assumed to be up to six staff per day arriving and departing in two LV trips. These two LVs will have started the workday at the construction compounds and would return there at the end of the working day.

Works at the Walsoken Substation

- 6.6.52 Works at the Walsoken Substation are proposed to be undertaken between week 84 and 90. It is currently estimated that in the first four weeks of this period, there would be a requirement for ten two-way HGVs to that site per week to deliver equipment. During this period staffing would comprise six staff arriving and departing in private cars each day for a five-day week. These staff would not need to go to the construction compound at the start and end of every day.

Permanent Staffing of the Construction Compound

- 6.6.53 The permanent staffing of the construction compound could include a project manager, supervisor, security guard and one ancillary staff member. This would result in eight two-way movements per day or 40 two-way LV movements per working week.

Grid Connection Traffic Distribution.

6.6.54 Based on the traffic generation above the following distribution of traffic has been applied to the Grid Connection:

- Staff – For all elements, staff distribution is based on the same methodology as set out for the operational phase traffic and in **Table 6.11 Staff Distribution**.
- Compound to work sites – journeys are based on appropriate routes to and from site on the local highways network; and
- Direct HGV – movements to the construction sites – are based on the same assumption as for the EfW CHP Facility construction traffic. i.e., 25% north on the A47 and 75% south.

CHP Connection

6.6.55 The CHP Connection is proposed to be constructed between week 105 to week 139.

6.6.56 Mobilisation of the CHP Connection construction works is proposed to be undertaken in weeks 105 to 109. This is predicted to require 5 HGV deliveries (10 two-way HGVs) per week and 20 two-way LV trips per week for staff. The same traffic would be required for the reinstatement works proposed for weeks 136 to 139.

6.6.57 The CHP Connection works would then be undertaken from weeks 110 to 135. The construction stage would involve the following key stages:

- Excavation of foundations;
- Construction of pipe supports;
- Installation of steam pipes;
- Installation of condensation pipes;
- Installation of cable;
- Installation of the Weasenham Lane Pipe Bridge; and
- Provision of access tracks and fencing.

6.6.58 Key to the works above is the delivery of various materials to the parts of the CHP Connection corridor listed below. To understand this, the CHP Connection has been split into three sections

- Section 1 – EFW CHP Facility to Weasenham Lane Pipe Bridge – 720m;
- Section 2 – The Weasenham Lane Pipe Bridge; and
- Section 3 – Weasenham Lane Pipe Bridge to northern end point of the CHP Connection – 575m.

6.6.59 To inform calculations of traffic generation the following has been assumed for the construction of the CHP Connection:

- Every 50m there is a requirement for a 5m expansion loop section.

- Each expansion loop section requires two pipe supports and seven steam pipes and for a robust assessment, the use of condensation pipes.
- Between expansion loop sections are a length of pipeline of 50m and this requires six pipe supports and 12 pipes (both steam and condensation).
- Each pipe support for the expansion loop section requires 4.5m³ of concrete per support.
- Each pipe support for the pipe section between expansion loop sections is estimated to require 2.25m³ of concrete per support.
- The pipe bridge comes as one large section of metal work that then requires 12 steam and condensation pipes. The pipe bridge also requires concrete for foundations of 24.5m³.
- Cable is required for the entire length of the route.
- North of Weasenham Lane there is a need for expansion bellows rather than expansion loops due to the close proximity of residential properties. These expansion bellow require 7.5m³ of concrete for foundations.
- An access road is required alongside the route for sections 1 and 2 for maintenance. This will be 2.7m wide and have a depth of 0.3m. It will be a rolled stone access road.
- Fencing will be required alongside the corridor to segregate it from the disused March to Wisbech Railway. This would be around 2m high palisade fencing.
- A crane pad for the lifting of the Weasenham Lane Pipe Bridge is unlikely to be required as it is intended to seek a temporary closure of the highway to enable the mobile crane to function. However, for a robust assessment a crane pad has been assumed which will be 15m wide by 15m long and is assumed to require a rolled stone depth of 0.35m.

6.6.60 Following the installation of the foundations, the steel framework for the pipeline would be constructed. At the Weasenham Lane section, works to construct the pipe bridge would take place over a single night period when a temporary road closure would be in place. The pipe bridge would be prefabricated and lifted into position at night.

6.6.61 **Table 6.12 CHP Connection Two Way HGV Traffic Generation** sets out the traffic generation for HGVs for the delivery of materials required for the three sections of the CHP Connection.

Table 6.12 CHP Connection Two Way HGV Traffic Generation

Material	Section 1	Section 2 (Bridge)	Section 3
Concrete	126	8	152
Steam Pipes	36	2	22
Condensation Pipes	14	2	8

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Material	Section 1	Section 2 (Bridge)	Section 3
Access Track	58	-	46
Fencing	6	-	6
Prefab Bridge	-	2	-
Cable	4	-	2
Stone for Crane pad	-	26	-
Total	244	40	236

6.6.62 This results in a total of 520 two-way HGVs across the CHP construction period. **Figure 6.12 CHP Connection Traffic Generation (Volume 6.3)** shows how these HGVs have been distributed.

6.6.63 It is considered that each day, 10 staff will be required on site arriving and departing directly. They will require three LVs resulting in 6 two-way LV trips per day for staff.

6.6.64 The distribution of the HGV and LV trips has been based on the same methodology that has been assumed for the EFW CHP Facility and Grid Connection construction.

Access Improvements

6.6.65 In **Section 6.6** it has been established for the purposes of assessment the design case for access from New Bridge Lane would require an improvement to New Bridge Lane east of Salters Way to the proposed new access. This work would be undertaken in Week 5 to 25 of the proposed preliminary construction programme. This work would comprise the widening of New Bridge Lane and provision of new footways which would comprise the Access Improvements at New Bridge Lane. Construction traffic generated by the Access Improvements at Algores Way is included within the vehicle calculations for the construction of the EFW CHP Facility, TCC and Water Connections above.

6.6.66 Estimates have been made of the traffic generation that may be required to construct this section of road and **Table 6.13 Access Improvements – Traffic Generation (Total)** indicates the resultant traffic generation providing detail of the type of work, week of works and split of HGV and LV traffic.

Table 6.13 Access Improvements – Traffic Generation (Total)

Work Phase	Week Works	HGV		LVs
		Plant	Deliveries	Staff
Site Investigation	5	12	-	20

Work Phase	Week Works	HGVS		LVs	
		Plant	Deliveries	Staff	
Site Clearance	6 to 8	8	12	60	
Fencing	9	8	10	20	
Drainage	10 to 12	-	26	60	
Utilities	13 to 14	8	6	40	
Road Construction – Sub Base	15 to 16	4	34	40	
Road Construction – Bituminous Surface	17 to 18	12	54	40	
Kerb Laying	19 to 20	-	2	40	
Footway Construction	21 to 22	4	6	40	
Traffic Signs and Markings	23	4	2	12	
Street Lighting	23	4	2	4	
Reinstatement	24 to 25	-	6	20	

6.6.67 The distribution of the plant, material import and export and staff are based on the same principles as the EfW CHP Facility construction phase.

Proposed Construction Access

EfW CHP Facility, TCC and Water Connections

6.6.68 All staff and visitor vehicles would access the TCC via Algores Way. A tarmac surfaced access track would be installed for vehicles entering the car park in the TCC.

6.6.69 It is anticipated that 65% of construction vehicles (mostly HGVs) would enter and exit the EfW CHP Facility Site via a new construction access off New Bridge Lane. A wheel wash facility would be located at the exit.

6.6.70 A further access point for construction vehicles (including some HGVs) would be retained at the current site access off Algores Way to facilitate access to the northern portion of the EfW CHP Facility Site. It is anticipated that 35% of HGVs would use this entrance and exit. A wheel wash facility would be located at the exit.

Grid Connection

- 6.6.71 The location of each construction access point and route to the Grid Connection is provided on **Figure 6.10 Grid Connection Construction Accesses (Volume 6.3)**. At this stage it is not anticipated that any temporary access tracks would be required because the Grid Connection would be constructed outside of winter, and predominately within the adopted highway.

CHP Connection

- 6.6.72 The location of each construction access point and route for the CHP Connection is provided on **Figure 6.13 CHP Connection Construction Accesses (Volume 6.3)**.

Access Improvements

- 6.6.73 All traffic accessing the Access Improvements would access New Bridge Lane and journey directly to the work area.

Scenario for Assessment – Construction

- 6.6.74 To understand the peak month for the construction phase, the traffic generation set out earlier in this section has been distributed over the construction programme. **Figure 6.14 Construction Period Peak Month Identification (Volume 6.3)** provides the total traffic per month and per day and highlights the peak months used for assessment.
- 6.6.75 Month 14 is the overall peak month of assessment for the Proposed Development, as this is the month with the largest traffic generation for the combination of works necessary to construct the Proposed Development. This is set out in **Figure 6.14: Construction Period Peak Month Identification (Volume 6.3)**.
- 6.6.76 **Table 6.10 TOTAL Daily Traffic Flows Per Month** indicates the predicted peak month will be month 14 and there will be 643 two-way vehicle movements per day of which 167 will be HGVs and 446 Light Vehicles.

Construction Phase Traffic Network Plots

- 6.6.77 Based on the calculation of traffic generation and distribution for the construction phase, 24-hour traffic flow network plots have been generated for the month 14 peak construction traffic period on the project. This is presented in **Figure 6.15 Construction Peak Network Plots (Volume 6.3)**, and this forms the basis for assessment in this chapter.

Operational Phase Proposed Development Detail

Proposed Development

- 6.6.78 During the operational period, the Proposed Development will only generate traffic in the context of the EfW CHP Facility. The EfW CHP Facility will be located south of Wisbech within the administrative areas of FDC and CCC. CCC is the relevant local Highways Authority.

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- 6.6.79 The existing site entrance is located off Algores Way. It is gated with a standard bell mouth access. Algores Way is an unadopted highway at the point at which it provides access to the existing site in the ownership of FDC.
- 6.6.80 The southern end of the existing site is bounded by New Bridge Lane. This connects with B198 Cromwell Road to the west which provides direct access to the A47 via a four-arm roundabout. To the east, New Bridge Lane terminates after the T-junction with New Drove.
- 6.6.81 The EfW CHP Facility would be designed to handle 523,500 (nominal) tonnes of residual (non-recyclable) waste per annum at 10.9MJ/kg (approximately 625,600 per annum at 9.8MJ/kg). Under low CV and high availability conditions the mechanical throughput could be as high as 625,600 tonnes of waste per annum. For the purpose of this assessment a worst-case assessment of the 625,600 tonnes of waste per annum at 9.8MJ/kg has been used.

Proposed Traffic Generation

- 6.6.82 The Applicant has developed traffic generation predictions based on the maximum 625,600 tonnes of waste throughput per year which has drawn on the wider company experience in managing the operation of other EfW CHP facilities within the UK and in Germany. This section presents the details of the traffic generation assumptions for the operational phase of the Proposed Development for HGVs and LVs.
- 6.6.83 The following general assumptions have been made regarding the operation of the EfW CHP Facility:
- HGVs will have an operating weight exceeding 3.5 tonnes. This includes walking floors, Refuse Collection Vehicles (RCVs) and other residual/consumable vehicles;
 - LVs will have an operating weight not exceeding 3.5 tonnes. This includes transit vans and pick-up trucks; and
 - Except for a small number of staff vehicles or for emergency maintenance (see **Chapter 3: Description of Proposed Development (Volume 6.2)**), HGVs and LVs will access the EfW CHP Facility Site between 07:00 – 20:00:
 - ▶ There may be some occasions when waste deliveries are accepted outside the normal opening hours, for example in the case of an emergency or to accommodate the delivery of waste where vehicles have been unavoidably delayed, or in other similar circumstances. It is therefore proposed that the EfW CHP Facility be able to accept waste outside the operating hours stated above in these circumstances.
 - Chain skip vehicles will not be accepted.

HGV Traffic Generation

- 6.6.84 The waste fuel stream to the EfW CHP Facility includes the following movements to and from the site:

- Deliveries of residual waste for combustion in the EfW process;
- Deliveries of consumables for use in the EfW process; and
- Export of residues from the EfW process.

6.6.85 These imports and exports are broken down to the following elements and vehicle types.

- Required deliveries to the EfW CHP Facility Site:
 - ▶ Walking floor HGVs (around 23t) will deliver 90% of residual waste materials to input into the EfW process;
 - ▶ RCVs (around 8t) will deliver 10% of residual waste materials to input into the EfW process;
 - ▶ Consumable – Lime – delivered by HGV (around 20t) tankers;
 - ▶ Consumable – Urea – delivered by HGV (around 27t) tankers;
 - ▶ Consumable – Activated Carbon (AC) – delivered by HGV (around 15t) tankers; and
 - ▶ Consumable – Diesel – delivered by fuel tankers (around 36,000 litres).
- Required exports from EfW CHP Facility Site:
 - ▶ Residue – Incinerator Bottom Ash (IBA) – exported by HGV (around 28t); and
 - ▶ Residue – Air Pollution Control Residues (APCr) – exported by HGV (around 27t) tanker.

6.6.86 It is assumed that 90% of residual waste deliveries will take place between Monday to Friday (18% per day) and 10% will be delivered over the weekend on Saturday and Sunday (5% per day). This has been calculated based on the experience at operational EfW CHP facilities and assumptions for the Proposed Development.

6.6.87 The following section sets out a breakdown of HGV movements across the EfW CHP Facility Site.

Residual Waste Deliveries

6.6.88 The maximum residual waste tonnage throughput per annum for the purpose of this assessment is 625,600. 90% of this will be delivered by walking floor HGVs and 10% by RCV.

6.6.89 For the Walking Floor HGVs, the total tonnage per annum will be 563,040. This equates to a weekly tonnage of 10,828. Of that weekly tonnage, it is anticipated that each weekday would accommodate 18% and each day of the weekend would accommodate 5%. This would result in a daily tonnage of 1,949 per weekday and 541 per weekend day. Based on an average net weight of 23 tonnes per Walking Floor HGV, this would result in the need for 85 deliveries of waste on a weekday (170 two-way movements) and 24 deliveries of waste on a weekend day (48 two-way movements).

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6.6.90 For the RCVs the total tonnage per annum will be 62,560. This equates to a weekly tonnage of 1,203. Of that weekly tonnage, it is anticipated that each weekday would accommodate 18% and each day of the weekend would accommodate 5%. This would result in a daily tonnage of 241 per weekday and 60 per weekend day. Based on an average net weight of eight tonnes per RCV, this would result in the need for 27 deliveries of waste on a weekday (54 two-way movements) and eight deliveries of waste on a weekend day (16 two-way movements).

Residues/Consumables

1. Lime (import).

6.6.91 Based on the maximum throughput of 625,600 tonnes, it is anticipated there will be a requirement for 204.52 tonnes of lime to be imported to the site each week. These imports would only occur during the five weekdays. This results in 41 tonnes to be imported every weekday. Based on an average net payload capacity of a barrel tanker (20 tonnes), this results in two vehicles to import the material every weekday (or four two-way movements per weekday).

2. Urea (import).

6.6.92 Based on the maximum throughput of 625,600 tonnes, it is anticipated there will be a requirement for 36.09 tonnes of urea to be imported to the site each week. Based on the average net payload capacity of a tanker (27 tonnes) and pro rata per day (five-day week), this results in approximately 0.27 vehicles to import the material every weekday.

3. Activated Carbon (AC) (import).

6.6.93 Based on the maximum throughput of 625,600 tonnes, it is anticipated there will be a requirement for a maximum of three deliveries of 36.09 tonnes of AC to be imported to the site each month. These imports have been extrapolated to weekdays and based on the average net payload capacity of a tanker (15 tonnes), and pro rata per day (five-day week), this results in approximately 0.05 vehicles to import the material every weekday.

4. Diesel (import).

6.6.94 Based on the maximum throughput of 625,600 tonnes, it is anticipated there would be a requirement for 161,613 litres of diesel to be imported to the site each month. These imports would only occur during the five weekdays. Based on the average net capacity of a tanker (36,000 litres), and pro rata per day (five-day week), this results in approximately 0.22 vehicles to import the material every weekday.

5. IBA (export).

6.6.95 There is a requirement to remove IBA from the EfW CHP Facility every weekday. Based on the maximum annual throughput of 625,600 tonnes, the amount of IBA produced is 26.50% by weight of the waste input which is 165,784 tonnes to be exported every year. This results in 3,188 tonnes of IBA to be exported every week. The IBA would only be exported during weekdays. This results in 638 tonnes to be exported each weekday. Based on an average net capacity of a Bulk tipper (28

tonnes), this results in 23 vehicles to export the material every weekday (or 46 two-way movements per weekday).

6. APCr (export).

6.6.96 There is a requirement to remove APCr from the EfW CHP Facility every day. Based on the annual throughput of 625,600, the amount of APCr produced is equivalent to 5% by weight of the waste input. This equates to 31,280 tonnes to be exported every year. This results in 602 tonnes to be exported every week. The APCr would only be exported during the five weekdays. This results in 120 tonnes to be exported every weekday. Based on an average net capacity of a barrel tanker (27 tonnes), this results in four vehicles to export the material every weekday (or eight two-way movements per day).

6.6.97 In total, residues and consumables amount to 29.82 HGVs for importing or exporting materials per day which has been rounded up to 30 HGVs or 60 two-way HGV movements per weekday.

6.6.98 Combined with the residual waste delivery HGVs, the EfW CHP Facility is predicted to generate 142 HGV movements per weekday, resulting in 284 two-way HGVs per weekday.

LV Movements

- EfW Maintenance Trip Generation

6.6.99 In addition to the vehicles associated with the residual waste deliveries and residues/consumables, there will be a requirement for maintenance vehicles to access the EfW CHP Facility seven days a week. The trip generation of these LVs is based on the Applicant's experience of operating EfW CHP facilities elsewhere in the UK. These trips are required to deliver parts and carry out maintenance and would be undertaken by LVs. These trips are proposed to be eight arrivals at the site resulting in 16 two-way vehicle movements per weekday. On weekends, these trips are four arrivals resulting in eight two-way vehicle movements.

- Staff Vehicle Movements.

6.6.100 During the weekday, the 31 staff arriving and departing will do so as follows:

- 06:00 – 07:00 – 8 staff cars arrive;
- 07:00 – 08:00 – 10 staff cars arrive;
- 08:00 – 09:00 – 11 staff cars arrive;
- 09:00 – 10:00 – 2 staff cars arrive;
- 15:00 – 16:00 – 2 staff cars depart;
- 16:00 – 17:00 – 3 staff cars depart;
- 17:00 – 18:00 – 12 staff cars depart;
- 18:00 – 19:00 – 5 staff cars depart; and
- 19:00 – 20:00 – 9 staff cars depart.

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6.6.101 On each of the weekend days the 12 staff will arrive 06:00 – 09:00 and depart 17:00 – 20:00.

Total Operational EfW CHP Traffic Generation

6.6.102 Based on the above details and calculations **Tables 6.14 Weekday EfW Traffic Generation (Two Way Trips)** and **Table 6.15 Weekend EfW Traffic Generation (Two Way Trips)** set out the anticipated trips to the EfW CHP Facility during the operational phase.

Table 6.14 Weekday EfW Traffic Generation (Two Way Trips)

Time	HGV		Other			Total
	Walking Floor	RCV	Residues/ Consumables	LV Maintenance	Staff Cars	
06:00-07:00	0	0	0	0	8	8
07:00-08:00	13	6	6	4	10	39
08:00-09:00	15	6	6	4	11	42
09:00-10:00	15	6	8	0	2	31
10:00-11:00	15	6	6	2	0	29
11:00-12:00	15	6	7	0	0	28
12:00-13:00	15	6	7	2	0	30
13:00-14:00	15	6	8	0	0	29
14:00-15:00	15	6	6	4	0	31
15:00-16:00	15	6	6	0	2	29
16:00-17:00	15	0	0	0	3	18
17:00-18:00	10	0	0	0	12	22
18:00-19:00	8	0	0	0	5	13
19:00-20:00	4	0	0	0	9	13
Total	170	54	60	16	62	362

Table 6.15 Weekend EfW Traffic Generation (Two Way Trips)

Time	HGV		Other			Total
	Walking Floor	RCV	Residues/ Consumables	LV Maintenance	Staff Cars	
06:00-07:00	0	0	0	0	6	6

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Time	HGV		Other			
	Walking Floor	RCV	Residues/ Consumables	LV Maintenance	Staff Cars	Total
07:00-08:00	4	0	0	0	3	7
08:00-09:00	4	4	0	2	3	13
09:00-10:00	4	4	0	2	0	10
10:00-11:00	4	4	0	0	0	8
11:00-12:00	4	4	0	0	0	8
12:00-13:00	4	0	0	0	0	4
13:00-14:00	4	0	0	0	0	4
14:00-15:00	4	0	0	0	0	4
15:00-16:00	4	0	0	0	0	4
16:00-17:00	4	0	0	2	0	6
17:00-18:00	4	0	0	2	3	9
18:00-19:00	4	0	0	0	6	10
19:00-20:00	0	0	0	0	3	3
Total	48	16	0	8	24	96

6.6.103 The traffic generation over the weekend period is significantly less than the weekday period, approximately a quarter of the weekday traffic flows. This is because waste contractors for operational reasons favour delivery of waste in the weekdays. All consumables and residue contractors are assumed to deliver in the weekdays.

6.6.104 Considering the significantly lower levels of traffic in the weekend period this chapter has considered the weekday period only. The weekend period is scoped out from further assessment.

Traffic Distribution

Waste Stream

6.6.105 Based on a review of the strategic and local highway network and the Applicant's experience and knowledge of the waste market; calculations to inform the traffic distribution pattern have been developed.

6.6.106 To minimise potential impacts on the local community, the Applicant will not route HGVs through the town of Wisbech and from the A1101 Elm High Road. This route restriction was suggested by CCC during the consultation process and is an agreed

approach. Route restrictions for any HGVs other than local collection RCVs would therefore be implemented in relation to:

- A1101 north of A47 Elm Road roundabout;
- Churchill Road (north of Elm High Road); and
- Weasenham Lane (between Algores Way and Elm High Road).

6.6.107 On similar projects delivered by the Applicant, requirements have been enforced through inclusion in the **Outline CTMP** and an **Operational Travel Plan** and this is set out in **Appendices 6A and 6C (Volume 6.4)**, respectively.

6.6.108 Feedback received during non-statutory and statutory consultation indicated the local community and business (Royal Mail) is concerned about traffic congestion in and around Wisbech. The Applicant's proposals to implement the route restrictions described above would minimise potential impacts to the residents of Wisbech. The only HGV traffic that would need to route into and out of Wisbech would be RCVs should a contract be in place for the town's waste collection service to deliver to the EfW CHP Facility.

6.6.109 Taking into consideration trip distribution patterns and route restrictions, five routes have been identified to transport waste and residues/consumables to and from the EfW CHP Facility in the Study Area.

6.6.110 The proposed HGV routes are as follows (set out in **Figure 6.16: Operational HGV Access Strategy (Volume 6.3)**):

- Route 1 – New Bridge Lane – B198 Cromwell Road (South), A47 (West), A1 (M).
- Route 2 – New Bridge Lane - B198 Cromwell Road (South), A47 (South) A141 (South).
- Route 3 – New Bridge Lane – B198 Cromwell Road (South), A47 (East) A1101 (East), A1122, A10.
- Route 4 – New Bridge Lane – B198 Cromwell Road (South), A47 (East).
- Route 5 – New Bridge Lane – 50% route to north on B198 Cromwell Road into Wisbech and 50% routing north on Churchill Road to Wisbech). This is contrary to the route restrictions set out above (as traffic would use the Elm High Road/Churchill Road corridor) but as set out in **Table 6.11 Staff Distribution** this only relates to an assumption for any local RCV that may be contracted to collect waste from Wisbech itself.

6.6.111 **Table 6.16 EfW CHP Facility Traffic Distribution** sets out the anticipated traffic distribution for the various waste streams, consumables, and maintenance vehicles across the five proposed routes and identifies those routes subject to routing restrictions.

Table 6.16 EfW CHP Facility Traffic Distribution

Element	Route 1	Route 2	Route 3	Route 4	Route 5
Walking Floors	60%	25%	5%	10%	RR
RCVs	20%	20%	20%	20%	20%
Air Pollution Control Residues (APCr)	100%	-	-	-	RR
Incinerator Bottom Ash (IBA)	100%	-	-	-	RR
Lime	100%	-	-	-	RR
Urea		-	100%	-	RR
Activated Carbon (AC)	100%	-	-	-	RR
Diesel	Sourced Locally within Wisbech 100%				
LV Maintenance and Parts Vehicles					
LVs	20%	20%	20%	20%	20%
RR = subject to Routing Restriction					

6.6.112 As set out in **Table 6.16** the majority of the HGV traffic associated with the operational EfW CHP Facility will follow Route 1, routing south from New Bridge Lane to B198 Cromwell Road and onto the B198 Cromwell Road/A47 junction. This provides the focus of the operational assessment.

Staff Distribution

6.6.113 Staff distribution has been based on journey to work data from the 2011 UK Census¹⁷ as based on the area of E01033111 (Fenland 003H). This area includes the existing New Bridge Lane industrial area and was considered to be a suitable location for understanding existing staff commuter patterns to industrial type developments in Wisbech.

6.6.114 Due to the nature of staff travel to and from a wider range of destinations, a more comprehensive set of distribution locations on the local highways network were developed and these are shown in **Figure 6.17 Operational Staff Travel Distribution Plan (Volume 6.3)**.

6.6.115 It is not proposed to place any route restrictions on staff vehicles due to the low numbers of staff. The staff routes to the destination points A to N have been understood using journey planning software from the staff access on Algores Way.

¹⁷ ONS. Census 2011. Website. (accessed March 2022)

Proposed Operational Site Access

- 6.6.116 The majority of land that would form part of the proposed EfW CHP Facility Site recently operated as a waste transfer station. All vehicles, including HGVs, accessed the site from Algores Way.
- 6.6.117 As set out in **Section 6.5**, this assessment has taken into account highways schemes in the WAS. In addition, the assessment has considered the reopening of the disused March to Wisbech Railway and comments received from CCC such that it results in two access locations needing to be assessed and one alternative access as follows;
- Access from New Bridge Lane – At grade over the disused March to Wisbech Railway;
 - Access from Algores Way – New access; and
 - Access from New Bridge Lane – Alternative access for a reopened March to Wisbech Railway.

Operational Design Case – New Bridge Lane:

- 6.6.118 The operational design case is the design for which development consent will be sought. This design is reflected in **Chapter 3: Description of the Proposed Development (Volume 6.2)**.
- 6.6.119 Operational access for waste vehicles would be from the A47 along B198 Cromwell Road and via a reopened New Bridge Lane over the disused March to Wisbech Railway to a new site entrance off New Bridge Lane. Operational staff access would be via Weasenham Lane and Algores Way to the redesigned site access.
- 6.6.120 In the operational design case, it is assumed that the disused March to Wisbech Railway is not reopened, or if reopened, it would terminate south of the EfW CHP Facility Site, for example, south of the A47 via a parkway station.
- 6.6.121 The operational design case is the proposed access option for operational traffic. Access to the EfW CHP Facility Site for waste vehicles would be via a new surface access bellmouth on New Bridge Lane.
- 6.6.122 To facilitate the operational access via New Bridge Lane, Access Improvements are proposed along a section of New Bridge Lane between east of Salters Way and the proposed EfW CHP Facility Site access location. The section of highway subject to Access Improvements at New Bridge Lane is illustrated on **Figure 6.18 Design Case New Bridge Lane Access Design (Volume 6.3)**.
- 6.6.123 These improvement works are described in **Section 3.3** in **Chapter 3: Description of the Proposed Development (Volume 6.2)**, but in summary include:
- New Bridge Lane – Road widening;
 - New footway on north side of carriageway;
 - A road crossing over the disused March to Wisbech Railway; and
 - Bellmouth site entrance off New Bridge Lane.

- 6.6.124 The Access Improvements at New Bridge Lane would widen the road from just east of the junction with Salters Way to the proposed EfW CHP Facility Site access over a distance of 172m. The road would be widened to 7.3m to allow for a two-lane carriageway with centre lines. The alignment of the road has been based on the initial proposals for the WAS SAR1 scheme which provided an at grade crossing of the disused March to Wisbech Railway. This scheme provided for a 6m-wide carriageway; however, due to the proposed HGV use, a widened carriageway of 7.3m would be more appropriate for access. SAR1 also provides for footways on both sides of the carriageway, however the proposed New Bridge Lane scheme design in **Figure 6.18: Design Case New Bridge Lane Access Design (Volume 6.3)** only provides for a footway on the north side of the road. The current speed limit on New Bridge Lane is subject to the national speed limit, but it is considered that to allow access along New Bridge Lane to the Proposed Development, the speed limit along this section of road should be reduced to 30-mph.
- 6.6.125 **Figure 6.18: Design Case New Bridge Lane Access Design (Volume 6.3)** illustrates the design of the proposed bellmouth access into New Bridge Lane. This also includes the internal layout of the site and the access arrangements for the weighbridge and potential future rail unloading area. The bellmouth access has been provided with a visibility splay for a 30-mph road (70m). The access radius has been designed to accommodate the largest design vehicle and for these vehicles to enter and exit from the west on New Bridge Lane only. The proposed junction kerb radius is 15m.
- 6.6.126 The end of the widened section of New Bridge Lane would end with a chicane section where access to the east and onto New Drove could be made by cars but not HGVs. This is to maintain the access that is currently provided for the house opposite the site on the south side of New Bridge Lane but restrict any HGV movements and discourage locals from using New Drove and New Bridge Lane as a rat run.
- 6.6.127 The road widening and access arrangements have been designed to the relevant DMRB design standards.
- 6.6.128 It should be noted that the red line boundary includes for the inclusion of the entirety of New Bridge Lane to the west and the junction with B198 Cromwell Road. It is considered the remaining section of New Bridge Lane would not need to be improved to facilitate the Proposed Development as it is a two-lane carriageway. The conclusion of the **TA (Appendix 6B (Volume 6.4))** confirms an improvement scheme to the B198 Cromwell Road junction as a result of the operational impact is not required.
- 6.6.129 The Applicant has also provided a commitment to CCC that funds would be provided to improve New Bridge Lane, outside of the DCO Order limits for two additional highways matters. The first would be funds to support the provision of additional lighting columns to link the proposed lighting on the improved section of New Bridge Lane to B198 Cromwell Road. The second would be funds for the provision of a dropped crossing on Salters Way.

Operational Design Case – Algores Way

6.6.130 **Figure 6.19 Algores Way Operational Access Design (Volume 6.3)** has been prepared to illustrate how the existing site access off Algores Way would be redesigned to accommodate the requirements of the EfW CHP Facility. The EfW CHP Facility Site's access would be located slightly to the south of the existing access off Algores Way and would be designed to DMRB standards.

New Bridge Lane – Alternative Access:

6.6.131 To take account of the potential reopening of the disused March to Wisbech Railway, an alternative access scenario has been accommodated whereby operational access would be maintained from B198 Cromwell Road along New Bridge Lane via a new railway bridge. This would replace the road crossing installed as part of the operational design case should the reopening of the disused March to Wisbech Railway come forward in the future.

6.6.132 Limited design details for the proposed reopening of the disused March to Wisbech Railway are available at this stage.

6.6.133 The construction of a railway bridge does not form part of the Proposed Development. This alternative to the crossing of the disused March to Wisbech Railway by a reopened New Bridge Lane has been accommodated to provide key Stakeholders with the confidence that the Proposed Development will not compromise their proposals and that sufficient land within the site of the Proposed Development has been set aside to enable the construction of a new railway bridge should a bridge be considered by Network Rail to be the most appropriate means of crossing the reopened railway.

6.6.134 Land has therefore been reserved in the EfW CHP Facility Site to be used for future bridge abutments works, should they be required as part of a railway bridge.

6.6.135 Based on the programme reported in the GRIP3 study, it is assumed that the EfW CHP Facility would be operational before any railway reopening works take place. During the construction period for a new railway bridge, it is anticipated that operational access for all EfW CHP Facility vehicles would temporarily have to be via A47/B198 Cromwell Road/Weasenham Lane/Algores Way. Any impacts associated with such temporary access along Algores Way would be fully assessed as part of the consenting process for the new railway bridge.

6.6.136 For the avoidance of doubt, the Applicant's preferred, design case option is that access to the EfW CHP Facility would be as per the operational design case described above.

6.6.137 Once the construction of the new railway bridge has been completed, it should be noted that no changes to the Operational Design case access (**Figure 6.18: Design Case New Bridge Lane Access Design (Volume 6.3)**) would be required.

Access Scenarios for Assessment

6.6.138 Taking account of the access proposals set out above, one operational assessment scenario has been considered in relation to the traffic generation and distribution calculations set out in **Section 6.7:**

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- Operational design case:
 - ▶ Waste vehicles (HGVs) and non-staff LVs enter the Site via New Bridge Lane; and
 - ▶ Staff (LVs) enter the Site via Algores Way.

Medworth EfW CHP Facility Operational Phase Traffic Network Plots

- Based on the calculation of traffic generation and distribution for the operational phase of the Proposed Development, 24-hour traffic flow network plots have been generated for the operational traffic scenario.
- Network Plots are presented as **Figure 6.20: 24-Hour Operational Traffic Network Traffic Plots (Volume 6.3)**. These traffic network plots have formed the basis for the assessment presented in **Section 6.11 and 6.12** of this chapter.

6.7 Scope of the assessment

Spatial scope

- 6.7.1 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 staff during operation or for construction related traffic. Identification of appropriate routes takes into consideration the following:
- Road restrictions such as weight and height limits;
 - Road widths;
 - Junction restrictions; and
 - Suitability of routes based on a review of road types and widths.
- 6.7.2 A Study Area has been set out in **Section 6.4** for the operation and construction phases of the Proposed Development.
- 6.7.3 Identification of the Study Area has focused on the road network to be used by traffic for the operational and construction phases of the EfW CHP Facility. **Figure 6.4: Traffic and Transport Highway Links (Volume 6.3)** shows the highway sections, referred to as 'highway links', that are proposed to be included in the assessment for this chapter. These are set out in **Table 6.17 Highway Links within the Proposed Development Study Area**.

Table 6.17 Highway Links within the Proposed Development Study Area

Highways Link	Highways Link Name
1	Algores Way
2	New Bridge Lane

Highways Link	Highways Link Name
3	B198 Cromwell Road (A47 to New Bridge Lane)
4	Weasenham Lane (Algores Way to Elm High Road)
5	A1101 Elm High Road
6	A47 N (B198 Cromwell Road to Elm High Road)
7	A47 N (Elm High Road to Lynn Road)
8	A47 S (B198 Cromwell Road to Guyhirn Roundabout)
9	B198 Cromwell Road (Weasenham Lane to Town Centre)
10	Churchill Road
11	Weasenham Lane (Cromwell Road to Algores Way)
12	A47 (Lynn Road to A17)
13	B198 Cromwell Road (New Bridge Lane to Weasenham Road)
14	A1101 Elm High Road (S of A47)
15	Church Lane (E of A1101)
16	Broadend Road (E of A47)
17	Broadend Road (W of A47)
18	A1101 (S of Church Lane)

Temporal scope

6.7.4 The timing and duration of the construction and operational phases of the Proposed Development is set out in **Chapter 3: Description of the Proposed Development (Volume 6.2)**.

Construction Phase

6.7.5 The construction of the Proposed Development is due to start in 2023. The temporal scope of the assessment of the construction phase has been defined for the peak month construction activity: This is proposed to be in month 14 which is proposed to occur in 2024.

Operational Phase

6.7.6 The operation of the EfW CHP Facility is due to commence in 2026.

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6.7.7 The earliest that the maximum throughput of 625,600 tonnes would be reached would be in 2027.

Potential Receptors

6.7.8 The spatial and temporal scope of the assessment enables the identification of Receptors which may experience a change because of the Proposed Development during the construction and operational phases. GEART 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.

6.7.9 The Receptors identified in the Study Area that may experience likely significant effects for transport are outlined in **Table 6.18 Receptors Requiring Assessment for Transport**.

Table 6.18 Receptors Requiring Assessment for Transport

Receptor Group	Receptors Included within the 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'.

Likely significant effects

6.7.10 Potential effects on transport Receptors that have been scoped in for assessment are summarised in **Table 6.19 Transport Receptors scoped in for further assessment**.

Table 6.19 Transport Receptors scoped in for further assessment

Receptor	Activity or impact	Potential effect
Construction		
All Receptors on Highway Links 1-19 (Table 6.17) in Study Area	Construction combination of the Proposed Development	Impact of construction traffic on identified highway Receptors.
All Receptors on Highway Links 1-19 (Table 6.17) in Study Area	Conveyance of Abnormal Indivisible Loads (AILs).	Impact of AILs on identified highway Receptors.
Operation and maintenance		
All Receptors on Highway Links 1-19 (Table 6.17) in Study Area	Operation of the EfW CHP Facility.	Impact of operational traffic on identified highways Receptors.

6.7.11 The Traffic and Transport impacts scoped out of further assessment because the potential effects are not considered likely to be significant are summarised in **Table 6.20 Traffic and Transport Receptors scoped out of further assessment.**

Table 6.20 Traffic and Transport Receptors scoped out of further assessment

Receptor	Impact	Justification	Agreement
Receptors on Associated Highway Links	Decommissioning of the Proposed Development including EfW CHP Facility, CHP Connection, and the Grid Connection.	The decommissioning impacts of the Grid Connection, EfW CHP Facility and CHP Connection would all require only the above ground infrastructure to be decommissioned and as such it is considered traffic flows would be lower than that assessed for the construction period. This would also take place approximately 40 years in advance of these elements of the Proposed Development being commissioned where future baseline traffic would be higher and as such environmental impacts based on GEART guidelines would be diluted.	The EIA Scoping Report indicated that decommissioning would not be separately assessed and the construction phase would be used as a worst-case. This was not disputed in the EIA Scoping Opinion.
	Operational Traffic Associated with the CHP Connection and Grid Connection	The vehicle movements during the operation of Grid Connection and CHP Connection would be limited, comprising occasional inspection and maintenance requirements. It is considered that traffic associated with operational maintenance would be negligible and has therefore been scoped out of the assessment.	The EIA Scoping Report submitted indicated that operational traffic related to the Grid Connection and CHP Connection would be very low and would not be assessed. This was not disputed in the Scoping Opinion.

Receptor	Impact	Justification	Agreement
	Dangerous or Hazardous Loads during operational and construction phases	Further to the production of the EIA Scoping Report and as part of the detailed design process, it has been confirmed that no dangerous or hazardous loads would be required during the construction or operational phases of the Proposed Development.	The traffic and transport EIA Scoping Report set out that it was anticipated that dangerous and hazardous loads would not be required. This has since been confirmed with the details of the nature of traffic set out in this chapter. This was not disputed in the EIA Scoping Opinion.
PRoW	Temporary or Permanent Impacts on PRoW within the Study Area	The change of the design to a shorter connection to the Walsoken substation on Broadend Road means that there are NO direct impacts on PRoW so this can now be discounted from assessment.	This was discussed and agreed with CCC and NCC during post statutory consultation discussions.

6.8 Embedded environmental measures

6.8.1 Environmental measures have been embedded into the Proposed Development and **Table 6.21 Summary of the embedded environmental measures and how these influence the Transport assessment** outlines how embedded measures will influence the Traffic and Transport assessment.

Table 6.21 Summary of the embedded environmental measures and how these influence the Transport assessment

Receptor	Changes and effects	Embedded measures and influence on assessment
Users of the Local and Strategic Highways Network and users of these routes	Proposed HGV access Routes for Construction	The proposed HGV routing (Set out in Appendix 6A Outline CTMP (Volume 6.4)) during the construction period to individual accesses has been developed to avoid impacts on the Elm High Road/Churchill Road corridor.
	Reduction of effect on Severance, Driver Delay Pedestrian Amenity, Pedestrian Delay, Fear and Intimidation, Accidents and Safety	
	Highways Condition	Highways condition surveys would be undertaken before, during and after the construction phase. Repairs would be made to any damage caused to highways as a result of construction vehicles on local and strategic highways network subject to agreement with the relevant highways authorities.
	Reduction in effect on accidents and safety	

Receptor	Changes and effects	Embedded measures and influence on assessment
	<p>Proposed HGV access Routes</p> <p>Reduction of effect on Severance, Driver Delay Pedestrian Amenity, Pedestrian Delay, Fear and Intimidation, Accidents and Safety</p>	<p>The proposed HGV routing during the operational period has been developed to avoid impacts on the Elm High Road/Churchill Road, corridor and the B198 Cromwell Road north of Weasenham Lane and Weasenham Lane itself. It is set out in the Outline Operational Traffic Management Plan (Volume 7.15).</p>
Users of Proposed Access	<p>Permanent Access Proposals</p> <p>Reduction in effect on accidents and safety</p>	<p>The operational site access proposals to the EfW CHP Facility on New Bridge Lane and Algores Way have been designed to DMRB standards and provided with appropriate visibility splays. These designs are described in Section 6.6.</p>
Users of New Bridge Lane	<p>Improvements to New Bridge Lane</p> <p>Reduction in effect on accidents and safety</p>	<p>The Access Improvement works proposed on New Bridge Lane including widening the road have been designed to DMRB standards and provide for a pedestrian route. These designs are provided in Section 6.6.</p>

6.9 Assessment methodology

6.9.1 The generic project-wide approach to the assessment methodology is set out in **Chapter 4: Approach to the EIA (Volume 6.2)**, and specifically in **Sections 4.7 to 4.10**. Whilst this has informed the approach that has been used in this Traffic and Transport assessment, it is necessary to set out how this methodology has been applied, and adapted as appropriate, to address the specific needs of this Traffic and Transport assessment.

Methodology

6.9.2 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 cross roads 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

will also be given to the effects on PRow users due to the closure and diversion of PRowS (though none will be directly affected by the Proposed Development);

- 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.

6.9.3 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).

6.9.4 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 the Study Area.

6.9.5 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.

6.9.6 It should be noted that, according to GEART, 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.

6.9.7 Details of the GEART threshold applied to each highways link is set out earlier in this section (in **Table 6.18 Receptors Requiring Assessment for Transport**) and **Table 6.22 Receptors identified on Highway Links** provides details of the highway links and the nature of the Receptors for Study Area considered in the assessment.

Table 6.22 Receptors identified on Highway Links

No.	Highway link	Identified Receptors on Highway link
1	Algores Way (Between Site and Weasenham Lane)	Pedestrians, properties adjacent to the highway.
2	New Bridge Lane (East of B198 Cromwell Road)	Pedestrians.

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No.	Highway link	Identified Receptors on Highway link
3	B198 Cromwell Road (Between A47 and New Bridge Lane)	Some properties adjacent to the carriageway, pedestrians and cyclists.
4	Weasenham Lane (Between Algores Way and Elm High Road)	Pedestrians, cyclists, properties adjacent to the highway, urban area, Thomas Clarkson Academy, recreation facility adjacent to the highway, road users experiencing peak hour congestion.
5	A1101 Elm High Road (Between Weasenham Lane and A47)	Peak hour traffic congestion, pedestrians, properties and retail premises adjacent to highway, built up areas.
6	A47 (Between B198 Cromwell Road and Elm High Road)	Road users experiencing Peak hour traffic congestion.
7	A47 (Between Elm High Road and Lynn Road)	Road users experiencing Peak hour traffic congestion.
8	A47 (Between B198 Cromwell Road and Guyhirn Roundabout)	Road users experiencing Peak hour traffic congestion.
9	B198 Cromwell Road (North of Weasenham Lane)	Pedestrians, residential properties adjacent to the highway.
10	Churchill Road (North of Weasenham Lane)	Pedestrians, residential properties adjacent to the highway, Thomas Clarkson Academy.
11	Weasenham Lane (Between Cromwell Road and Algores Way)	Pedestrians, cyclists, properties adjacent to the highway, urban areas.
12	A47 (Lynn Road to A17)	Road users experiencing Peak hour traffic congestion.
13	B198 Cromwell Road (New Bridge Lane to Weasenham Lane)	Pedestrians, residential properties adjacent to the highway and cyclists.
14	A1101 Elm High Road (South of the A47)	Pedestrians, residential properties adjacent to the highway and cyclists.

No.	Highway link	Identified Receptors on Highway link
15	Church Lane (East of A1101)	Pedestrians, residential properties adjacent to the highway.
16	Broadend Road (East of A47)	Pedestrians, residential properties adjacent to the highway.
17	Broadend Road (West of A47)	Pedestrians, residential properties adjacent to the highway.
19	A1101 (South of Church Lane)	Pedestrians, residential properties adjacent to the highway and cyclists.

Receptor sensitivity

6.9.8 The sensitivity of each highway link included in the assessment has been assigned a sensitivity in accordance with GEART. This is based on professional judgement and related to the proximity, volume and type of Receptors along the highway link. **Table 6.23 Highways Link Sensitivity** summarises the rationale used to determine the sensitivity against the corresponding Receptors.

Table 6.23 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, hospitals, shopping areas with roadside frontage, roads with narrow footways, unsegregated cycle ways, community centres, parks and recreation facilities.	Residents/workers travelling to and from work or home on 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	Residents/workers travelling to and from work or home on foot or car or bicycle and people visiting these land uses.

Sensitivity	Description/reason	Receptor
	buildings, tourist/visitor attractions and residential areas with adequate footway provision.	
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.

6.9.9 In accordance with GEART where the sensitivity of a road link is judged as high or medium, Rule 2 will be applied and where traffic flows are predicted to increase by 10% or more or where the number of HGVs is predicted to increase by more than 10%, an assessment of environmental effects will be undertaken. Where the sensitivity is judged as low or negligible, Rule 1 will be 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 will be undertaken of the road link.

6.9.10 Given the potential Receptors described in **Section 6.10** and those set out in **Table 6.22 Receptors identified on Highway Links** above, **Table 6.24 Receptors potentially requiring assessment** identifies the sensitivity of highway links and the GEART (IEA, 1993) rule that applies for that highway link.

Table 6.24 Receptors potentially requiring assessment

Link No	Highway link	Comments	Receptor sensitivity	GEART Rule
1	Algores Way (between EfW CHP Facility Site and Weasenham Lane)	The highway is a two-way single lane carriageway with industrial properties directly fronting the carriageway and it has pedestrian footways.	Medium	1
2	New Bridge Lane (east of B198 Cromwell Road)	The highway is a two-way single lane carriageway with industrial properties and a small number of individual residential properties directly fronting the carriageway and it has pedestrian footways.	Medium	1
3	B198 Cromwell Road (between A47 and New Bridge Lane)	The highway is a two-way single lane carriageway with some residential properties directly fronting the carriageway and it has a pedestrian footway on one side of the carriageway.	Medium	1
4	Weasenham Lane (Between Algores Way and Elm High Road)	The highway link is a two-way single lane carriageway in Wisbech with properties directly fronting the road and it has pedestrian footways. This road also passes by a local school.	High	1

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Link No	Highway link	Comments	Receptor sensitivity	GEART Rule
5	A1101 Elm High Road (Between Weasenham Lane and A47)	The highway link is a two-way single lane carriageway in Wisbech with properties directly fronting the road and it has pedestrian footways.	High	1
6	A47 (between B198 Cromwell Road and A1101 Elm High Road)	The highway link is a two-way single lane carriageway with very few properties directly fronting the road and it has no footways.	Negligible	2
7	A47 (between A1101 Elm High Road and Lynn Road)	The highway link is a two-way single lane carriageway with very few properties directly fronting the road and it has no footways. Minimal Congestion issues.	Negligible	2
8	A47 (between B198 Cromwell Road and A47 Guyhirn Roundabout)	The highway link is a two-way single lane carriageway with very few properties directly fronting the road and it has no footways.	Negligible	2
9	B198 Cromwell Road (north of Weasenham Lane)	The highway link is a two-way single lane carriageway in Wisbech with properties directly fronting the road and it has pedestrian footways.	High	1
10	Churchill Road (north of Weasenham Lane)	The highway link is a two-way single lane carriageway in Wisbech with properties directly fronting the road and it has pedestrian footways.	High	1
11	Weasenham Lane (between B198 Cromwell Road and Algores Way)	The highway link is a two-way single lane carriageway in Wisbech with properties directly fronting the road and it has pedestrian footways.	Medium	1
12	A47 (Lynn Road to A17)	The highway link is a two-way single lane carriageway with very few properties directly fronting the road and it has no footways.	Negligible	2
13	B198 Cromwell Road (New Bridge Lane to Weasenham Lane)	The highway link is a two-way single lane carriageway in Wisbech with properties directly fronting the road and it has pedestrian footways.	Medium	1
14	A1101 Elm High Road (South of the A47)	The highway link is a two-way single lane carriageway in Wisbech with properties directly fronting the road and it has pedestrian footways.	Medium	1
15	Church Lane (East of A1101)	The highway link is a two-way single lane carriageway South of Wisbech with properties directly fronting the road and it has pedestrian footways.	Medium	1
16	Broadend Road (East of A47)	The highway link is a two-way single lane carriageway East of Wisbech with properties directly fronting the road and it has pedestrian footways.	Medium	1

Link No	Highway link	Comments	Receptor sensitivity	GEART Rule
17	Broadend Road (West of A47)	The highway link is a two-way single lane carriageway East of Wisbech with properties directly fronting the road and it has pedestrian footways.	Medium	1
18	A1101 (South of Church Lane)	The highway link is a two-way single lane carriageway south of Wisbech with properties directly fronting the road and it has pedestrian footways.	Medium	1

Magnitude of change

6.9.11 GEART 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).

6.9.12 Based on the Rule 1 and Rule 2 and the sensitivity of the Receptors, **Table 6.25 Magnitude of Change** shows the magnitude of change that will be 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 and professional judgement.

Table 6.25 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	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.			
Pedestrian Delay				
Fear and Intimidation				

Transport Effect	High	Medium	Low	Negligible
Accidents and Safety	Based on the existing accident record along with observations of 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

6.9.13 The significance of a likely traffic and transport effect is derived by considering the sensitivity of the Receptor (derived from **Table 6.24 Receptors potentially requiring assessment**) against the magnitude of change (derived from **Table 6.25 Magnitude of Change**) as defined in **Table 6.26 Significance evaluation matrix**.

Table 6.26 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)

6.9.14 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.

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

6.9.16 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.

6.10 Assessment of Traffic and Transport Effects – Construction Phase

6.10.1 To undertake the assessment of effects of the traffic generated by the Proposed Development in the construction phase, the traffic flows have been estimated and these trips distributed onto the road network (see **Section 6.6**).

6.10.2 As set out in **Section 6.6**, the assessment of the construction phase of the Proposed Development has been undertaken for one scenario for peak construction month of the project, Month 14 (2024). In this scenario, staff traffic is proposed to route to Alorges Way and all HGVs to New Bridge Lane.

6.10.3 The Proposed Development traffic has 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 construction'.

6.10.4 The significance has been assessed against GEART Rule 1 (30% or above) and Rule 2 (10% or above) (see paragraph 6.10.9). Where the change is considered significant, further assessment has been made using the criteria in **Section 6.10**.

Assessment year traffic growth

6.10.5 **Table 6.27 Construction traffic percentage impact per highways link** below sets out the future year 2024 traffic flows per highways link, based on the traffic growth methodology set out in **Section 6.5** for the construction traffic scenario assessed in this chapter.

Magnitude of change

6.10.6 **Table 6.27 Construction traffic percentage impact per highways link** sets out the magnitude of change of the proposed peak daily (24-hour) development traffic on the identified highway links and presents the following information for both access scenarios:

- Future year baseline traffic per highways link for 2024 for total vehicles and HGVs;
- The predicted development generated daily traffic flows per highways link for total vehicles and HGVs; and

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- The percentage impact of the Proposed Development traffic per highways link for total vehicles and HGVs.

6.10.7

Table 6.27 Construction traffic percentage impact per highways link presents highway links percentage impacts that exceed the GEART assessment thresholds based on the highways link sensitivity identified in **Table 6.24 Receptors potentially requiring assessment** – set out in **bold**.

Table 6.27 Construction traffic percentage impact per highways link

Highways Link No	Future Year Base Traffic (2024)		Peak Construction Traffic – Month 14 – Construction Traffic (per day)		Magnitude of Change – Percentage Impact	
	Total Vehicles	HGVs	Total Vehicles	HGVs	Total Vehicles	HGVs
1	3021	214	517	61	17.10%	28.41%
2	819	184	126	126	15.33%	68.38%
3	16141	964	401	186	2.48%	19.31%
4	12799	677	220	0	1.72%	0.00%
5	20154	1184	125	0	0.62%	0.00%
6	20402	1928	47	47	0.23%	2.41%
7	19432	1750	120	47	0.62%	2.66%
8	25046	2374	210	140	0.84%	5.88%
9	15832	646	146	0	0.92%	0.00%
10	16911	1206	95	0	0.56%	0.00%
11	11854	590	296	61	2.50%	10.28%
12	25289	1798	94	47	0.37%	2.59%
13	15560	889	150	61	0.97%	6.83%
14	19741	801	19	0	0.10%	0.00%
15	3061	84	0	0	0.00%	0.00%
16	1657	57	5	0	0.28%	0.00%
17	2216	73	3	0	0.15%	0.00%
18	12158	874	19	0	0.16%	0.00%

Significance of residual effect

6.10.8 **Table 6.24 Receptors potentially requiring assessment** sets out the sensitivity of the highway links assessed based on the Receptors present and the GEART rules regarding change in traffic flows. **Table 6.27 Construction traffic percentage impact per highways link** sets out the percentage change in traffic flows and HGVs. Where the percentage change is 30% or more on non-sensitive sections (Rule 1) or 10% or more on sensitive sections (Rule 2), an assessment of the environmental effects is needed. Based on the results presented in **Table 6.27 Construction traffic percentage impact per highways link** and the defined sensitivities set out in **Table 6.24 Receptors potentially requiring assessment**, the following is noted for the construction period scenario:

- Receptor 1 – Algores Way triggers the threshold for detailed environmental assessment;
- Receptor 2 – New Bridge Lane triggers the threshold for detailed environmental assessment;
- Receptor 3 – B198 Cromwell Road (A47 to New Bridge Lane) triggers the threshold for detailed environmental assessment; and
- Receptor 11 – Weasenham Lane (B198 Cromwell Road to Algores Way) triggers the threshold for detailed environmental assessment.

6.10.9 Applying the assessment methodology set out at **Section 6.10**, the changes in traffic flows at the other links is assumed not to result in significant environmental effects and therefore these links have not been assessed further. The following section set out the detailed assessment of the identified links that triggered the GEART thresholds.

Detailed Traffic and Transport Assessment – EfW CHP Facility Construction Traffic – MONTH 14 (2024)

6.10.10 For the construction period as set out above there are four Receptors that require detailed assessment. The following section sets out the assessments.

Highways Link 1 – Algores Way

6.10.11 As set out in **Table 6.27 Construction traffic percentage impact per highways link** the total HGV flows are predicted to increase on this link by 28.41 % over the 24-hour period (an increase of 61 HGVs). The total vehicle flow is also predicted to increase by 17.10% (an increase of 517 vehicles). Based on **Table 6.24 Receptors potentially requiring assessment**, the sensitivity of the highways link has been identified as **Medium**.

6.10.12 **Table 6.28 Peak Construction Scenario – Highway Link 1 – assessment of construction transport environmental effects** sets out the assessment of the transport environmental effects at this highways link and the significance of effect.

Table 6.28 Peak Construction Scenario – Highway Link 1 – assessment of construction transport environmental effects

Effect	Comments	Magnitude of change	Significance of residual effect
Severance	<p>The change in HGVs and Total Vehicles on the link is less than 30%. Based on Table 6.25 the magnitude of change is therefore Negligible, and the significance of effect on severance based on Table 6.26 is therefore Minor (Not Significant).</p>	Negligible	Minor (Not Significant)
Driver Delay	<p>In this location, Algores Way is a two-lane carriageway which routes through an industrial estate.</p> <p>The increase in HGVs as a result of the development is predicted to be an additional 61 HGVs per working day which, based on proposed working hours of 07:00 to 19:00, would result in approximately 6 HGVs per hour. which would result in an additional HGV on the link every 20 minutes.</p> <p>It is considered that this will not result in any delay to drivers on the highway link due to the existing traffic flow and available highway capacity.</p> <p>Based on the above assessment it is considered that the significance of effect on driver delay based on Table 6.25 is therefore Low.</p> <p>The significance of effect on driver delay based on Table 6.26 is therefore Minor (Not Significant).</p>	Low	Minor (Not Significant)
Pedestrian Amenity, Pedestrian Delay and Fear and Intimidation	<p>Algores Way has a pedestrian footway on both sides of the carriageway. There are no formal crossings of the highway. The footway widths where they exist are 3-3.5m wide. The footpaths also have numerous crossings of private access junctions which are not provided with dropped crossings.</p> <p>At the peak of the construction phase (Month 14), it is anticipated that an additional HGV will be generated every 20 minutes on the link. Based on professional judgement, it is considered that this would not cause a perceptual issue to existing users and those wishing to cross the road and would not result in a material change to the existing provision offered to pedestrians. Therefore, the magnitude of change is Negligible for the pedestrian amenity, pedestrian delay and fear and intimidation effects.</p> <p>The significance of effect on pedestrian amenity, pedestrian delay, and fear and intimidation based on Table 6.26 is therefore Negligible (Not Significant).</p>	Negligible	Negligible (Not Significant)

Effect	Comments	Magnitude of change	Significance of residual effect
Accidents and Safety	<p>The assessment undertaken in Section 6.5 indicates that Algores Way has an accident rate just above the national average for a 'other' urban Road. However additional assessment indicates that only three accidents was recorded in the five-year assessment period.</p> <p>With an additional HGV every 20 minutes during the peak month of the construction phase as a result of the Proposed Development, the magnitude of change is considered to be low. The significance of the effect on accidents and safety is therefore Minor (Not Significant).</p>	Low	Minor (Not Significant)

Based on **Table 6.32 Highways Link Sensitivity** the overall significance of residual effects at Highways Link 1 and associated Receptors is therefore considered to be Minor which is considered Not Significant in EIA terms.

Highways Link 2 – New Bridge Lane (east of B198 Cromwell Road)

- 6.10.13 As set out in **Table 6.27 Construction traffic percentage impact per highways link** the total HGV flows are predicted to increase on this link by 68.63% over the 24-hour period (an increase of 126 HGVs). The total vehicle flow is also predicted to increase by 15.33% (an increase of 126 vehicles). Based on **Table 6.24 Receptors potentially requiring assessment**, the sensitivity of the highways link has been identified as Medium.
- 6.10.14 **Table 6.29 Peak Construction Scenario – Highway Link 2 – assessment of construction transport environmental effects** sets out the assessment of the transport environmental effects at this highways link and the significance of effect.

Table 6.29 Peak Construction Scenario – Highway Link 2 – assessment of construction transport environmental effects

Effect	Comments	Magnitude of change	Significance of residual effect
Severance	The change in HGVs on the link is between 60% and 90%. Based on Table 6.26 the magnitude of change is therefore Medium, and the significance of effect on severance based on Table 6.27 is therefore Moderate (Significant).	Medium	Moderate (Significant)
Driver Delay	In this location, New Bridge Lane is a two-lane carriageway which routes through an industrial estate. There are a small number of individual residential properties, but the road remains commercial in nature.	Low	Minor (Not Significant)

Effect	Comments	Magnitude of change	Significance of residual effect
	<p>The increase in HGVs as a result of the development is predicted to be an additional 126 HGVs per working day which, based on proposed working hours of 07:00 to 19:00, would result in approximately 11 HGVs per hour. which would result in an additional HGV on the link approximately every 5 minutes.</p> <p>It is not considered that this will result in any delay to drivers on the highway link due to the existing traffic flow and available highway capacity.</p> <p>Based on the above assessment it is considered that the significance of effect on driver delay based on Table 6.25 is therefore Low.</p> <p>The significance of effect on driver delay based on Table 6.26 is therefore Minor (Not Significant).</p>		
<p>Pedestrian Amenity, Pedestrian Delay and Fear and Intimidation</p>	<p>New Bridge Lane has a pedestrian footway on only one side of the carriageway for the majority of its length. There are no formal crossings of the highway. The footway widths where they are present are 3-3.5m wide. The footpaths also have numerous crossings of private access junctions which are not provided with dropped crossings.</p> <p>At the peak of the construction phase, it is anticipated that an additional HGV will be generated approximately every 5 minutes on the link. Based on professional judgement, it is considered that this would not cause a perceptual issue to existing users and those wishing to cross the road and would not result in a material change to the existing provision offered to pedestrians. Therefore, the magnitude of change is Negligible for the pedestrian amenity, pedestrian delay and fear and intimidation effects.</p> <p>The significance of effect on pedestrian amenity, pedestrian delay, and fear and intimidation based on Table 6.26 is therefore Negligible (Not Significant).</p>	Negligible	Negligible (Not Significant)
<p>Accidents and Safety</p>	<p>The assessment undertaken in Section 6.5 indicates that New Bridge Lane has an accident rate above the national average for a 'other' urban Road. However additional assessment indicates that only one accident was recorded in the five-year assessment period.</p> <p>With an additional HGV every 5 minutes during the peak Scenario 1a construction phase as a result of the Proposed Development, the magnitude of change is considered to be Low. The significance of the effect on accidents and safety is therefore Minor (Not Significant).</p>	Low	Minor (Not significant)

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6.10.15 Based on **Table 6.29 Peak Construction Scenario – Highway Link 2 – assessment of construction transport environmental effects** the overall significance of residual effects at Highways Link 2 and associated Receptors is therefore considered to be Moderate which is considered **Significant** in EIA terms.

Highways Link 3 – B198 Cromwell Road (Between A47 and New Bridge Lane)

6.10.16 **Table 6.27 Construction traffic percentage impact per highways link** identifies that the total HGV flows are predicted to increase on this link by 19.31% over the 24-hour period (an increase of 186 HGVs). Based on **Table 6.24 Receptors potentially requiring assessment** the sensitivity of the highways link has been identified as Medium.

6.10.17 **Table 6.30 Peak Construction Scenario – Highway Link 3 – assessment of construction transport environmental effects** sets out the assessment of the transport environmental effects at this highways link and the significance of effect.

Table 6.30 Peak Construction Scenario – Highway Link 3 – assessment of construction transport environmental effects

Effect	Comments	Magnitude of change	Significance of residual effect
Severance	The change in HGVs on the link is less than 30%. Based on Table 6.25 the magnitude of change is therefore Negligible and the significance of effect on severance based on Table 6.26 is therefore Negligible (Not Significant) .	Negligible	Negligible (Not Significant)
Driver Delay	<p>In this location, B198 Cromwell Road is a two-lane carriageway which routes through a partially built up section of southern Wisbech.</p> <p>The increase in HGVs as a result of the Proposed Development is predicted to be an additional 186 HGVs per working day which, based on proposed working hours of 07:00 to 19:00, would result in approximately 16 HGVs per hour, which would result in an additional HGV on the link every approximately every 4 minutes.</p> <p>It is considered that this will not result in any delay to drivers on the highway link due to the existing traffic flow and available highway capacity.</p> <p>Based on the above assessment it is considered that the significance of effect on driver delay based on Table 6.25 is therefore Low.</p> <p>The significance of effect on driver delay based on Table 6.26 is therefore Minor (Not Significant).</p>	Low	Minor (Not Significant)

Effect	Comments	Magnitude of change	Significance of residual effect
Pedestrian Amenity, Pedestrian Delay and Fear and Intimidation	<p>The B198 Cromwell Road has a pedestrian footway on only one side of the carriageway for the majority of its length and to the south links to the A47 which has no pedestrian footways. The footway widths where they are present, are 3-3.5m wide. The footpaths also have numerous crossings of private access junctions which are not provided with dropped crossings.</p>	Negligible	Negligible (Not Significant)
	<p>In the peak of the construction phase it is anticipated that an additional HGV would be generated every 4 minutes on the link. Based on professional judgement it is considered that this would not cause a perceptual issue to existing users and those wishing to cross the road and not result in a material change to the existing provision offered to pedestrians. Therefore, the magnitude of change is Negligible for the pedestrian amenity, pedestrian delay and fear and intimidation effects.</p> <p>The significance of effect on pedestrian amenity, pedestrian delay, and fear and intimidation based on Table 6.26 is therefore Negligible (Not Significant).</p>		
Accidents and Safety	<p>The assessment undertaken in Section 6.5 indicates that B198 Cromwell Road has an accident rate above the thresholds for that type of road.</p> <p>With an additional vehicle only every 4 minutes in the peak construction phase of the Proposed Development, the magnitude of change is considered to be Low. The significance of effect on accidents and safety is therefore Minor (Not Significant).</p>	Low	Minor (Not Significant)

6.10.18 Based on **Table 6.30 Peak Construction Scenario – Highway Link 3 – assessment of construction transport environmental effects** the overall significance of residual effects at Highways Link 3 and associated Receptors is therefore considered to be Minor which is considered **Not Significant** in EIA terms.

Highways Link 11 – Weasenham Lane (B198 Cromwell Road to Algores Way)

6.10.19 **Table 6.27 Construction traffic percentage impact per highways link** identifies that the total HGV flows are predicted to increase on this link by 10.28% over the 24-hour period (an increase of 61 HGVs). Based on **Table 6.25** the sensitivity of the highways link has been identified as **Medium**.

6.10.20 **Table 6.31 Peak Construction Scenario – Highway Link 11 – assessment of construction transport environmental effects** sets out the assessment of the transport environmental effects at this highways link and the significance of effect.

Table 6.31 Peak Construction Scenario – Highway Link 11 – assessment of construction transport environmental effects

Effect	Comments	Magnitude of change	Significance of residual effect
Severance	<p>The change in HGVs on the link is less than 30%. Based on Table 6.25 the magnitude of change is therefore negligible and the significance of effect on severance based on Table 6.26 is therefore Negligible (Not Significant).</p>	Negligible	Negligible (Not Significant)
Driver Delay	<p>In this location, Weasenham Lane is a two-lane carriageway which routes through a partially built up section of southern Wisbech.</p> <p>The increase in HGVs as a result of the Proposed Development is predicted to be an additional 61 HGVs per working day which, based on proposed working hours of 07:00 to 19:00, would result in approximately 5 HGVs per hour, which would result in an additional HGV on the link every approximately every 12 minutes.</p> <p>It is considered that this will not result in any delay to drivers on the highway link due to the existing traffic flow and available highway capacity.</p> <p>Based on the above assessment it is considered that the significance of effect on driver delay based on Table 6.25 is therefore Low.</p> <p>The significance of effect on driver delay based on Table 6.26 is therefore Minor (Not significant).</p>	Low	Minor (Not Significant)
Pedestrian Amenity, Pedestrian Delay and Fear and Intimidation	<p>Weasenham Lane has a pedestrian footway on both sides of the carriageway on this section of highway.</p> <p>In the peak of the construction phase it is anticipated that an additional HGV would be generated every 12 minutes on the link. Based on professional judgement it is considered that this would not cause a perceptual issue to existing users and those wishing to cross the road and not result in a material change to the existing provision offered to pedestrians. Therefore, the magnitude of change is Negligible for the pedestrian amenity, pedestrian delay and fear and intimidation effects.</p> <p>The significance of effect on pedestrian amenity, pedestrian delay, and fear and intimidation based on Table 6.26 is therefore Negligible (Not Significant).</p>	Negligible	Negligible (Not Significant)

Effect	Comments	Magnitude of change	Significance of residual effect
Accidents and Safety	<p>The assessment undertaken in Section 6.5 indicates that Weasenham Lane has an accident rate above the thresholds for the type of road.</p> <p>With an additional vehicle every 12 minutes in the peak construction phase of the Proposed Development, the magnitude of change is therefore considered to be Low. The significance of effect on accidents and safety is therefore Minor (Not Significant).</p>	Low	Minor (Not Significant)

6.10.21 Based on **Table 6.31 Peak Construction Scenario – Highway Link 11 – assessment of construction transport environmental effects** the overall significance of residual effects at Highways Link 3 and associated Receptors is therefore considered to be Minor which is considered **Not Significant** in EIA terms.

Construction Effects upon Public Transport

6.10.22 It is considered that the impacts on local bus service provision will not be significantly affected by the construction of Proposed Development. Bus services on the A1101 Elm High Road will not be affected by the Grid Connection because open trenching across the A1101 at the A47 junction will be for short periods and work will be undertaken over night when bus services have paused for the day. Short closures overnight will be required for cable being installed in the highway on the A47, New Bridge Lane and Broadend Road and on Weasenham Lane for the construction of the pipe bridge. Closures should avoid significant impacts on the bus services given cable works will be over night and the pipe bridge works would be undertaken evening/early morning in consultation and agreement with the highway authority.

6.11 Assessment of Traffic and Transport Effects- Operational Phase

6.11.1 To undertake the assessment of effects of the traffic generated by the Proposed Development in the operational phase, the traffic flows have been estimated and these trips distributed onto the road network (see **Section 6.6**).

6.11.2 As set out in **Section 6.6**, the assessment of the operational phase of the Proposed Development has been undertaken for one scenario when the peak throughput of waste is proposed to be achieved. This scenario includes for staff to route to Algores Way and all HGVs to the proposed New Bridge Lane access.

6.11.3 The trips for the peak operational 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’.

6.11.4 The significance has been assessed against GEART Rule 1 (30% or above) and Rule 2 (10% or above). Where the change is considered significant, further assessment has been made using the criteria in **Section 6.8**.

6.11.5 The assessment in this section includes all of the relevant embedded mitigation measures applicable to the operational phase of the Proposed Development which are set out in **Table 6.21 Summary of the embedded environmental measures and how these influence the Transport assessment**.

Assessment year traffic growth

6.11.6 **Table 6.32 Operational traffic percentage impact per highways link – Operational Scenario** below sets out the future year 2027 traffic flows per highways link based on the traffic growth methodology set out in **Section 6.7** for operational phases scenario.

Magnitude of change

6.11.7 **Tables 6.33 Operational Scenario - Highway Link 2 – assessment of operational transport environmental effects** sets out the magnitude of change of the proposed peak daily (24-hour) development traffic on the identified highway links and presents the following information for both access scenarios:

- future year baseline traffic per highways link for 2027 total vehicles and HGVs;
- the predicted development generated 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.

6.11.8 In **Table 6.32 Operational traffic percentage impact per highways link – Operational Scenario** the highway links where percentage impacts have been identified that exceed the GEART assessment thresholds based on the highways link sensitivity in **Table 6.24 Highways Link Sensitivity** are set out in **Bold**.

Table 6.32 Operational traffic percentage impact per highways link – Operational Scenario

Link No	Future Year Base Traffic (2027)		Peak Operational Traffic (per day)		Magnitude of Change-Percentage Impact	
	Total Vehicles	HGVs	Total Vehicles	HGVs	Total Vehicles	HGVs
1	3122	222	78	0	2.50%	0.00%
2	846	191	284	284	33.57%	148.68%
3	16650	1005	290	273	1.74%	27.19%
4	13213	704	38	0	0.29%	0%
5	20813	1232	38	0	0.18%	0.00%

Link No	Future Year Base Traffic (2027)		Peak Operational Traffic (per day)		Magnitude of Change-Percentage Impact	
	Total Vehicles	HGVs	Total Vehicles	HGVs	Total Vehicles	HGVs
6	21081	2006	47	47	0.22%	2.35%
7	20062	1821	41	28	0.20%	1.53%
8	25862	2470	241	226	0.93%	9.16%
9	16343	672	34	11	0.21%	1.61%
10	17457	1255	14	0	0.08%	0.00%
11	12238	616	40	0	0.32%	0.00%
12	26114	1871	35	28	0.13%	1.49%
13	16050	926	27	11	0.17%	1.17%
14	20397	833	31	19	0.15%	2.32%
15	3163	87	0	0	0.00%	0.00%
16	1712	59	0	0	0.00%	0.00%
17	2290	75	0	0	0.00%	0.00%
18	12562	909	31	19	0.24%	2.12%

Significance of residual effect

6.11.9 **Table 6.243 Highways Link Sensitivity** sets out the sensitivity of the highway links assessed based on the Receptors present and the GEART rules regarding change in traffic flows. **Table 6.32 Operational traffic percentage impact per highways link – Operational Scenario** sets out the percentage change in traffic flows and HGVs. Where the percentage change is 30% or more on non-sensitive sections (Rule 1) or 10% or more on sensitive sections (Rule 2), an assessment of the environmental effects is needed. Based on the results presented in **Table 6.32 Operational traffic percentage impact per highways link – Operational Scenario** and the defined sensitivities set out **Table 6.24** in, the following is noted for the operational period scenario:

- Receptor 2 - New Bridge Lane triggers the threshold for detailed environmental assessment; and
- Receptor 3 – B198 Cromwell Road (A47 to New Bridge Lane) triggers the threshold for detailed environmental assessment.

6.11.10 Applying the assessment methodology set out at Section 6.10, the changes in traffic flows at the other links is assumed not to result in significant environmental effects and therefore these links have not been assessed further. The following section sets

out the detailed assessment of the identified links that triggered the GEART thresholds.

Highways Link 2 – New Bridge Lane (east of B198 Cromwell Road)

6.11.11 As set out in **Table 6.32 Operational traffic percentage impact per highways link – Operational Scenario** the total HGV flows are predicted to increase on this link by 128.68% over the 24-hour period (an increase of 284 HGVs). The total vehicle flow is also predicted to increase by 33.57% (an increase of 284 vehicles). Based on **Table 6.24**, the sensitivity of the highways link has been identified as Medium.

6.11.12 **Table 6.33 Operational Scenario – Highway Link 2 – assessment of operational transport environmental effects** sets out the assessment of the transport environmental effects at this highways link and the significance of effect.

Table 6.33 Operational Scenario – Highway Link 2 – assessment of operational transport environmental effects

Effect	Comments	Magnitude of change	Significance of residual effect
Severance	The change in HGVs on the link is over 90%. Based on Table 6.25 the magnitude of change is therefore High, and the significance of effect on severance based on Table 6.27 is therefore Major (Significant).	High	Major (Significant)
Driver Delay	<p>In this location, New Bridge Lane is a two-lane carriageway which routes through a partially built an industrial estate.</p> <p>The increase in HGVs as a result of the development is predicted to be an additional 284 HGVs per working day which, based on proposed working hours of 07:00 – 20:00. Detailed traffic predictions have been calculated for the access to the site off New Bridge Lane. This indicates that in the worst-case (peak) hour of the day for HGVs (09:00 – 10:00 and 13:00 – 14:00), 29 two-way HGVs would be generated which would result in an additional HGV on the link every 2 minutes. It is not considered that this will result in any delay to drivers on the highway link due to the existing traffic flow and available highway capacity.</p> <p>Based on the above assessment it is considered that the significance of effect on driver delay based on Table 6.25 is therefore Low.</p> <p>The significance of effect on driver delay based on Table 6.26 is therefore Minor (Not Significant).</p>	Low	Minor (Not Significant)
Pedestrian Amenity, Pedestrian Delay and Fear and Intimidation	New Bridge Lane has a pedestrian footway on only one side of the carriageway for a majority of its length. There are no formal crossings of the highway. The footway widths where they are present are 3-3.5m wide. The footpaths also have numerous crossings of private access junctions which are not provided with dropped crossings.	Negligible	Negligible (Not Significant)

Effect	Comments	Magnitude of change	Significance of residual effect
	<p>At the peak of the operational phase, is anticipated that an additional HGV will be generated every 2 minutes on the link. Based on professional judgement it is considered that this would not cause a perceptual issue to existing users and those wishing to cross the road and would not result in a material change to the existing provision offered to pedestrians. Therefore, the magnitude of change is Negligible for the pedestrian amenity, pedestrian delay and fear and intimidation effects.</p> <p>The significance of effect on pedestrian amenity, pedestrian delay, and fear and intimidation based on Table 6.25 is therefore Negligible (Not Significant).</p>		
Accidents and Safety	<p>The assessment undertaken in Section 6.5 indicates that New Bridge Lane has an accident rate just above the national average for a 'other' urban Road. However additional assessment indicates that only one accident was recorded in the five-year assessment period.</p> <p>With an additional HGV every 2 minutes during the operational phase as a result of the Proposed Development, the magnitude of change is considered to be Low. The significance of the effect on accidents and safety is therefore Minor (Not Significant).</p>	Low	Minor (Not Significant)

6.11.13 Based on **Table 6.33 Operational Scenario - Highway Link 2 – assessment of operational transport environmental effects** the overall significance of residual effects at Highways Link 2 and associated Receptors is therefore considered to be Major, which is considered **Significant** in EIA terms.

Highways Link 3 – B198 Cromwell Road (Between A47 and New Bridge Lane)

6.11.14 **Table 6.32 Operational traffic percentage impact per highways link – Operational Scenario** identifies that the total HGV flows are predicted to increase on this link by 27.19% over the 24-hour period (an increase of 273 HGVs). Based on **Table 6.253 Highways Link Sensitivity** the sensitivity of the highways link has been identified as Medium.

6.11.15 **Table 6.34 Operational Scenario - Highway Link 3 – assessment of operational transport environmental effects** sets out the assessment of the transport environmental effects at this highways link and the significance of effect.

Table 6.34 Operational Scenario - Highway Link 3 – assessment of operational transport environmental effects

Effect	Comments	Magnitude of change	Significance of residual effect
Severance	<p>The change in HGVs on the link is between 0% - 30%. Based on Table 6.25, the magnitude of change is therefore Low and the significance of effect on severance based on Table 6.26 is therefore Minor (Not Significant).</p>	Low	Minor (Not Significant)
Driver Delay	<p>In this location, B198 Cromwell Road is a two-lane carriageway which routes through a partially built up section of southern Wisbech.</p> <p>The increase in HGVs as a result of the Proposed Development is predicted to be an additional 273 HGVs per working day based on a 07:00 – 20:00 HGV workday. Detailed traffic predictions have been calculated for this link for an hourly profile. As a majority of traffic to the Site along New Bridge Lane is predicted to route along the B198 Cromwell Road for the operational phase worst-case through put of 625,600 tonnes per annum, it is anticipated an additional HGV would be present on the highway every 2-3 minutes.</p> <p>It is considered that this will not result in any delay to drivers on the highway link due to the existing traffic flow and available highway capacity. It is considered that this will not result in any delay to drivers on the highway link.</p> <p>Based on the above assessment it is considered that the significance of effect on driver delay based on Table 6.25 is therefore Low.</p> <p>The significance of effect on driver delay based on Table 6.26 is therefore Minor (Not Significant).</p>	Low	Minor (Not Significant)
Pedestrian Amenity, Pedestrian Delay and Fear and Intimidation	<p>The B198 Cromwell Road has a pedestrian footway on only one side of the carriageway for the majority of its length and to the south links to the A47 which has no pedestrian footways. There is a formal crossing on the road at the signalised junction with the Tesco supermarket. The footway widths where they are present, are 3-3.5m wide. The footpaths also have numerous crossings of private access junctions which are not provided with dropped crossings.</p> <p>In the peak of the operational phase it is anticipated that an additional HGV would be generated every 2-3 minutes on the link. Based on professional judgement</p>	Negligible	Negligible (Not Significant)

Effect	Comments	Magnitude of change	Significance of residual effect
	<p>it is considered that this would not cause a perceptual issue to existing users and those wishing to cross the road and would not result in a material change to the existing</p> <p>provision offered to pedestrians. Therefore, the magnitude of change is Negligible for the pedestrian amenity, pedestrian delay and fear and intimidation effects.</p> <p>The significance of effect on pedestrian amenity, pedestrian delay, and fear and intimidation based on Table 6.26 is therefore Negligible (Not Significant).</p>		
	<p>The assessment undertaken in Section 6.5 indicates that B198 Cromwell Road has an accident rate just above the thresholds for that type of road.</p>		
Accidents and Safety	<p>With an additional vehicle every 2-3 minutes as a result of the operational phase of the Proposed Development, the magnitude of change is therefore considered to be Low. The significance of effect on accidents and safety is therefore Minor (Not Significant).</p>	Low	Minor (Not Significant)

6.11.16 Based on **Table 6.34 Operational Scenario - Highway Link 3 – assessment of operational transport environmental effects** the overall significance of residual effects at Highways Link 3 and associated Receptors is therefore considered to be minor which is considered **Not Significant** in EIA terms.

Summary

6.11.17 A summary of the results of the Traffic and Transport assessment is provided in **Table 6.35 Summary of assessment of significance**.

Table 6.35 Summary of assessment of significance

Receptor and summary of potential effects	Sensitivity of Receptors ¹	Magnitude of change ²	Significance ³	Rationale for assessment conclusion
Construction Phase				
Severance - 4 Links where GEART Thresholds are triggered	All Medium	R1 Negligible R2 Medium R3 Negligible	R1 Minor (NS) R2 Moderate (S) R3 Negligible (NS)	The assessment has indicated that for one of the links assessed in this scenario a Moderate and Significant impact would be experienced from the worst-case operational traffic (New Bridge Lane).
Receptor 1		R11 Negligible	R11 Negligible (NS)	

Receptor and summary of potential effects	Sensitivity of Receptors ¹	Magnitude of change ²	Significance ³	Rationale for assessment conclusion
Receptor 2 Receptor 3 Receptor 11		R4 Negligible		It is considered that additional mitigation will be required to address this moderate impact on severance by providing a crossing of New Bridge Lane at the junction with B198 Cromwell Road. Details of this proposed design are set out in the TA (Appendix 6B (Volume 6.4)). The additional mitigation that will be considered is set out further in Section 6.11 .
Driver Delay - 4 Links where GEART Thresholds are triggered Receptor 1 Receptor 2 Receptor 3 Receptor 11	All Medium	All Low	All Minor (Not Significant)	There will be a temporary increase in traffic during the peak month of the construction programme but the assessment has indicated that the impacts on driver delay would be Not Significant .
Pedestrian Amenity Pedestrian Delay and Fear and Intimidation - 4 Links where GEART Thresholds are triggered Receptor 1 Receptor 2 Receptor 3 Receptor 11	All Medium	All Negligible	All Negligible (Not Significant)	There will be a temporary increase in traffic during the peak month of the construction programme but the assessment has indicated that the impacts on Pedestrian Amenity, delay and fear and intimidation would be Not Significant .
Accidents and Safety - 4 Links where GEART Thresholds are triggered Receptor 1 Receptor 2 Receptor 3 Receptor 11	All Medium	All Low	All Negligible (Not Significant)	There will be a temporary increase in traffic during the peak month of the construction programme but the assessment has indicated that the impacts on accidents and safety would be Not Significant .
Operational Phase				
Severance - 2 Links where GEART Thresholds are triggered	All Medium	R2 – High R3 – Negligible	R2 Major (S) R3 Negligible (NS)	The assessment has indicated that for one of the links assessed in this scenario a Major and

Receptor and summary of potential effects	Sensitivity of Receptors ¹	Magnitude of change ²	Significance ³	Rationale for assessment conclusion
Receptor 2 Receptor 3				<p>Significant impact would be experienced from the worst-case operational traffic (New Bridge Lane).</p> <p>It is considered that additional mitigation will be required to address this moderate impact on severance by providing a crossing of New Bridge Lane at the junction with B198 Cromwell Road. Details of this proposed design are set out in the TA (Appendix 6B (Volume 6.4)).</p> <p>The additional mitigation that will be considered is set out further in Section 6.11.</p>
Driver Delay – 2 Links where GEART Thresholds are triggered Receptor 2 Receptor 3	All Medium	All Low	All Minor (Not Significant)	The increase in traffic as a result of the Proposed Development would not lead to a significant impact on the local highways network, as such the impacts on driver delay are considered to be Not Significant .
Pedestrian Amenity, Pedestrian Delay and Fear and Intimidation - 2 Links where GEART Thresholds are triggered Receptor 2 Receptor 3	All Medium	All Negligible	All Negligible (Not Significant)	The increase in traffic as a result of the Proposed Development would not lead to a significant impact on the local highways network, as such the impacts on Pedestrian Amenity, Pedestrian Delay and Fear and Intimidation are considered to be Not Significant .
Accidents and Safety - 2 Links where GEART Thresholds are triggered Receptor 2 Receptor 3	All Medium	All Low	All Minor	The increase in traffic as a result of the Proposed Development would not lead to a significant impact on the local highways network, as such the impacts on Accidents and Safety are considered to be Not Significant .

1. The sensitivity/importance/value of a Receptor is defined using the criteria set out in **Section 6.23** above and is defined as High, Medium, Low, Negligible.
2. The magnitude of change on a Receptor resulting from activities relating to the development is defined using the criteria set out in **Section 6.26** above and is defined as High, Medium, Low, Negligible.
3. The significance of the environmental effects is based on the combination of the sensitivity/importance/value of a Receptor and the magnitude of change and is expressed as major (Significant (S)), moderate (Significant (S)) or minor/negligible (Not Significant (NS)), subject to the evaluation methodology outlined in **Section 6.27**.



6.12 Consideration of optional additional mitigation or compensation

- 6.12.1 The assessment set out above has concluded that it will be necessary to implement some further mitigation measures. The assessment of the construction and operational phases indicates a **Significant** effect on New Bridge Lane based on the increase in HGVs.
- 6.12.2 To address the issues related to severance at this location a formal pedestrian crossing of New Bridge Lane is proposed. The crossing would not be placed on New Bridge Lane itself as there are non-continuous footways along the road and no clear design lines between businesses. The most appropriate location would be at the junction of New Bridge Lane and B198 Cromwell Road.
- 6.12.3 At this location currently no formal crossing exists. There are footways in this location on the east side of B198 Cromwell Road and on both sides of New Bridge Lane, representing a clear design line.
- 6.12.4 The proposed pedestrian crossing would include for tactile paving at dropped crossings and a small central pedestrian refuge in the centre of the junction. This crossing design is shown as **Figure 6.21: New Bridge Lane Pedestrian Crossing (Volume 6.3)**. Further detail on the design of the crossing is provided within the TA (**Appendix 6B (Volume 6.4)**).

6.13 Implementation of environmental measures

- 6.13.1 **Table 6.36 Summary of environmental measures to be implemented – relating to Traffic and Transport** describes the environmental measures embedded within the Proposed Development and the proposed means by which they will be implemented, i.e., they will be secured through the powers of the DCO (Works Plans) or as a requirement of the DCO.

Table 6.36 Summary of environmental measures to be implemented – relating to Traffic and Transport

Environmental measure	Responsibility for implementation	Proposed Compliance mechanism	ES section reference	
Proposed HGV Access Routes Construction	Applicant/Contractor	DCO Requirement and contained in the Outline CTMP	Appendix (Volume 6.4)	6A
Proposed HGV Access Routes Operation	Applicant	DCO Requirement and contained in the Outline Operational Traffic Management Plan	Outline (Volume 7.15)	OTMP
Highways Condition Survey	Applicant/Contractor	DCO Requirement and contained in the Outline CTMP	Appendix (Volume 6.4)	6A



Environmental measure	Responsibility for implementation	Proposed Compliance mechanism	ES section reference	
Underground Cable Provision in the A47	Applicant/Contractor	DCO Requirement and contained in the Outline CTMP	Appendix (Volume 6.4)	6A
Provision of a formal crossing of New Bridge Lane	Applicant/Contractor	DCO Requirement and contained in the Outline CTMP	Appendix (Volume 6.4)	6B

6.14 Conclusion

- 6.14.1 This chapter has evaluated the potential environmental impacts resulting from traffic and transport aspects of the Proposed Development.
- 6.14.2 An assessment of the likely traffic generation during the construction and operation phases of the Proposed Development is presented. The decommissioning phase has been scoped out of assessment.
- 6.14.3 A review of national and local policy outlines how the Proposed Development adheres to the prevailing planning policy, specific to traffic and transport.
- 6.14.4 The scope of the assessment considers the local and strategic road network including the highways in Wisbech and the A47 and this scope was agreed with the relevant highway authorities, CCC, NCC and NH.
- 6.14.5 A review of the local highway network has been undertaken to identify baseline conditions on the proposed access routes for the construction and operational phases.
- 6.14.6 This chapter sets out the key aspects of the Proposed Development including the anticipated levels of traffic in both the operational and construction phases including for worst-case assessments in both scenarios (construction peak month and the highest anticipated waste throughput in the operational phase).
- 6.14.7 The assessment has concluded that there are no anticipated environmental effects expected on any links other than New Bridge Lane in both the construction (moderate effect) and operational (major effect) phase for Severance. This significance is a product of the low baseline numbers of HGVs currently using the link compared with the increase in Numbers of HGV in the operational and construction phases.
- 6.14.8 To address the significant effects, a pedestrian crossing on New Bridge Lane near the junction of Cromwell Road is proposed which would result in a residual, **Not Significant** effect.

