UK Onshore Scheme

Environmental Statement

Volume 2 Document ES-2-B.10

Chapter 14

Traffic & Transport (Proposed Underground DC Cable)

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Environmental Statement Volume 2			
ES Reference	**Chapter**	**Chapter Title**	
ES-2-A.01	Ch01	Introduction	
ES-2-A.02	Ch02	Development of the UK Onshore Scheme	
ES-2-A.03	Ch03	The UK Onshore Scheme	
ES-2-A.04	Ch04	Environmental Impact Assessment Methods	
ES-2-B.01	Ch05	The Proposed Underground DC Cable	
ES-2-B.02	Ch06	Intertidal Zone	
ES-2-B.03	Ch07	Geology & Hydrogeology	
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ES-2-B.05	Ch09	Agriculture & Soils	
ES-2-B.06	Ch10	Ecology	
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ES-2-B.08	Ch12	Archaeology & Cultural Heritage	
ES-2-B.09	Ch13	Socio-economics & Tourism	
ES-2-B.10	**Ch14**	**Traffic & Transport**	
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ES-2-C.06	Ch22	Landscape & Visual Amenity	
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Glossary & Abbreviations

Glossary of Terms	
Term	**Meaning**
Base Traffic	The existing or future level of traffic, without additional construction traffic added.
Gravity Model	A model used to estimate the amount of interaction between two locations, based on population and distance.
Peak Construction Traffic	The highest number of vehicles expected during a certain period of the construction phase.
Traffic Distribution	The method of allocating construction traffic onto the surrounding road network.
Traffic Growth Factor	Applied industry standard traffic growth factor that accounts for background increases in traffic for a future assessment year.
Two-way vehicle movements	The total number of vehicles travelling in both directions as captured at an individual traffic count location.

List of Abbreviation	
Abbreviation	**Meaning**
AIL	Abnormal Indivisible Loads
ATC	Automatic Traffic Count
CDM	Construction Design and Management
CEMP	Construction Environmental Management Plan
CPH&SP	Construction Phase Health and Safety Plan
CTMP	Construction Traffic Management Plan
DC	Direct Current
DCO	Development Consent Order
DfT	Department for Transport
ES	Environmental Statement
HDD	Horizontal Direction Drilling
HGV	Heavy Goods Vehicle
IEMA	Institute of Environmental Management and Assessment
LCC	Lincolnshire County Council
LGV	Light Goods Vehicle
LHA	Local Highway Authority
NGVL	National Grid Viking Link

List of Abbreviation	
Abbreviation	**Meaning**
NPPF	National Planning Policy Framework
NPS	National Policy Statement
NRSWA	New Roads and Street Works Act
NTM	National Transport Model
TCA	Temporary Construction Areas
TCC	Temporary Construction Compounds
TCF	Temporary Construction Facilities
TCPA	Town and Country Planning Act
TSRGD	Traffic Signs Regulations and General Directions
ZoI	Zone of Influence

1 Introduction

1.1 Introduction

1.1.1 This chapter has been prepared by AECOM. It reports the results of baseline studies and the assessment of the potential impacts of the proposed Direct Current (DC) cable route on traffic and transport. Table 14.1 below sets out the structure of the Environmental Statement (ES) with respect to Traffic and Transport.

1.1.2 Impacts on traffic and transport are interrelated with impacts on Noise and Vibration; reference ES-2-B.11, Volume 2, Chapter 15, and the Cumulative Effects; reference ES-2-D.01, Volume 2, Chapter 28.

Table 14.1 Environmental Statement: Traffic and Transport

ES Reference	ES Volume	ES Chapter	Content
ES-2-B.10	**2**	**14**	**Main Report: Proposed Underground Cable**
ES-2-C.09	2	25	Main Report: Proposed Converter Station
ES-3-B.01	3	14	Figures: Proposed Underground Cable
ES-3-C.01	3	25	Figures: Proposed Converter Station
ES-4-B.10	4	14	Technical Appendices: Proposed Underground Cable
ES-4-C.09	4	25	Technical Appendices: Proposed Converter Station

1.2 Chapter Structure

1.2.1 The remainder of this chapter is structured as follows:

- Section 2. Approach to Assessment. Sets out the discipline specific approach to the assessment in accordance with relevant guidance.
- Section 3. Basis of Assessment. Sets out the key assumptions which have been made in undertaking the impact assessment.
- Section 4. Planning, Policy and Legislative Considerations. Provides a summary of the key points of planning policy and legislation which have been considered as part of the assessment.
- Section 5. Baseline Conditions. Reports the results of desktop and field studies undertaken to establish existing conditions.
- Section 6. Potential Impacts. Identifies the potential impacts on traffic and transport which may occur as result of construction and operation.

- Section 7. Mitigation. Identifies the mitigation which is proposed including measures which are incorporated into the siting, design and construction of the underground cable.
- Section 8. Residual Effects. Reports the residual effects which remain taking into account proposed mitigation and identifies whether these are significant or not.
- Section 9. Cumulative Effects. Identifies the inter-project cumulative effects which may occur in combination with other developments.
- Section 10. Summary of Assessment. Provides a summary of the key findings of the impact assessment.

2 Approach to Assessment

2.1 Introduction

2.1.1 This section describes the approach to the identification and assessment of traffic and transport impacts resulting from the construction and operation of the proposed DC cable.

2.2 Summary of Consultation

2.2.1 This section of the report outlines the scoping responses received from Lincolnshire County Council (LCC), in their role as the Local Highway Authority (LHA).

2.2.2 LCC responded to the UK Onshore Scoping Report dated August 2016 on the 8 September 2016 and concluded that it "….generally covers the required scope for the Transport Assessment…" The assessment has therefore been undertaken in accordance with the methodology as outlined in the Scoping Report, which can then be considered to be an agreed approach with LCC.

2.2.3 Table 14.2 summarises the scoping opinion undertaken with relevant statutory and non-statutory consultees in relation to traffic and transport and outlines how and where this has been addressed in this chapter.

Table 14.2 Scoping Opinion (Traffic and Transport)

Consultee	Summary of Comment	How and where addressed
LCC	LCC concluded that the UK Onshore Scoping Report "*generally covers the required scope for the Transport Assessment*."	The assessments in Chapter 14 which cover the assessment of the proposed DC cable route have therefore been undertaken in accordance with the methodology as outlined in the UK Onshore Scoping Report, which can then be considered to be an agreed approach with LCC.
LCC Highways	It was agreed with LCC that no operational, longer term or permanent impacts would be expected as part of the proposed converter station site, as once constructed the converter station would only be expected to generate small numbers of cars/LGVs per day, with occasional deliveries supplied by larger vehicles.	Operational impacts have been scoped out of the assessment.

Additional Consultation

2.2.4 On Friday 6 May 2016 AECOM and National Grid met with LCC to discuss the traffic and transport elements of the scheme and to gain an understanding of the approach that they would require to any assessment as well as how they would require road crossings to be addressed and to also obtain details of key contacts.

2.2.5 Table 14.3 summarises additional consultation undertaken with relevant statutory and non-statutory consultees in relation to traffic and transport and outlines how and where this has been addressed in subsequent chapters of the ES.

Table 14.3 Additional Consultation (Traffic and Transport)

Consultee	Nature of additional consultation	How and where addressed
LCC	Direct liaison regarding the location and timing of Automatic Traffic Count (ATC) surveys. The proposed extent of the ATC surveys was issued to LCC for agreement prior to the data being collected, and they responded on the 20 July 2016 with some additional sites, which were then included in the surveys. The results of the ATC's undertaken in July 2016 were then forwarded to LCC for comment and they responded on 23 November 2016 confirming that they had no comments and that the January 2017 ATC data collection could therefore proceed on the same basis.	LCC have agreed to the location of the ATC surveys that were undertaken during the week commencing 1 August for a period of 1 week with a second set of data being collected during the week commencing 9 January 2017. The baseline traffic data included in Chapter 14 covers the proposed DC cable route. We would therefore consider that the ATC data collection has been undertaken in full consultation with LCC and based upon an agreed methodology.
LCC	With regard to the proposed landfall site, LCC acknowledged that this would be served from the A52 and raised concerns over the suitability of the local road network	Addressed through Chapter 14 of the ES Chapter which covers the assessment of the proposed DC cable route.

Table 14.3 Additional Consultation (Traffic and Transport)		
Consultee	**Nature of additional consultation**	**How and where addressed**
LCC	On the 8 February 2017 AECOM e-mailed LCC to agree the approach to the calculation of the base traffic data from the ATC surveys, and on the 22 February 2017 LCC confirmed their acceptance that the ES Chapter could be based upon an assessment of average weekday traffic flows between 07.00 and 19.00 collected over a 5 day period, Monday to Friday.	The calculation of the baseline traffic data as addressed in Chapter 14 covers the proposed DC cable route.
LCC	On 5 April 2017 AECOM emailed LCC to agree the distribution and assessment methodology for construction traffic generated by the proposed DC cable route station.	Addressed through Chapter 14 of the ES Chapter which covers the assessment of the proposed DC cable route.

2.3 Scope of Assessment

2.3.1 The traffic and transport assessment contained in this chapter focuses primarily on the percentage increases in traffic associated with the construction of the proposed DC cable route on the surrounding road network. The Zone of Influence (ZoI) of the proposed DC cable route as it relates to traffic and transport is defined by those roads where there is the potential for significant impact due to the addition of construction traffic.

2.3.2 For the purposes of assessment the proposed DC cable route has been split into four sections as follows and is described from the proposed landfall to the proposed converter station site (e.g. from east to west):

- Route Section 1: Proposed Landfall to Well High Lane (13.04 km, entirely within ELDC);
- Route Section 2: Well High Lane to A16/Keal Road (16.85 km, entirely within ELCD);
- Route Section 3: the A16/Keal Road to River Witham (22.06 km, within ELDC and BBC); and
- Route Section 4: the River Witham to the proposed converter station (15.21 km, within BCC, NKDC and SHDC).

2.3.3 The four route sections are shown in Figure 14.1.The planning application boundary is shown in Figure 14.2.

2.3.4 The general methodology of the assessment can be summarised as follows:

- Set out baseline conditions;

- Identify effect by type in relation to traffic flow and infrastructure;
- Consider effect severity in confidence level;
- Consider mitigation; and
- Identify residual effect remaining.

2.3.5 The traffic associated with the proposed DC cable route has been derived based upon the construction methodology assumed for this component. This has then been distributed onto the local highway network, as described in section 3.1 with the receptors also identified. The impacts on the following have also been considered:

- HGV Construction Traffic;
- Severance;
- Pedestrian/Cycling Amenities; and
- Road Safety.

2.3.6 The potential impacts of traffic related to the proposed DC cable route during the peak period of construction are likely to be temporary in nature, therefore have been assessed as such within the potential impacts section of the report (section 6). No operational, longer term or permanent impacts are expected as part of the proposed DC cable route construction, and therefore are not assessed further.

2.3.7 The methodology for this chapter has been informed by the 'Travel Plans, Transport Assessments and Statements' Planning Practice Guidance document (Department for Communities and Local Government, March 2014) (Ref 14-1) and the Institute of Environmental Management and Assessment's (IEMA) 'Guidelines for the Environmental Assessment of Road Traffic' (January 1993) (Ref 14-2).

2.3.8 The IEMA guidelines report is the only document available that sets out a methodology for assessing potentially significant environmental effects where a development is likely to give rise to changes in traffic flows. The IEMA guidelines suggest that to determine the scale and extent of the assessment and the level of effect which a given development will have on the surrounding road network, the following two 'rules' should be followed:

- Include highway links 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
- Include any other specifically sensitive areas where traffic flows are predicted to increase by 10% or more.

2.3.9 The significance of each effect is considered against the criteria within the IEMA guidelines, where possible. However, the IEMA guidelines state that:

'For many effects there are no simple rules or formulae which define the 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.'

2.3.10 In the absence of established significance criteria for traffic and transport effects, professional judgement has been used to assess whether the effects on traffic and transport are considered to be significant. This is carried out using the IEMA guidelines to identify the scale and extent of the assessment to be undertaken. The significance falls into two categories - not significant and significant. The latter corresponding to significant effects in accordance with the EIA regulations.

2.3.11 The IEMA guidelines state projected changes in traffic of less than 10% creates no discernible environmental effect, given that daily variations in background traffic flow may fluctuate by this amount, and that a 30% change in traffic flow represents a reasonable threshold for including a highway link within the assessment.

2.4 Assessment Criteria

Sensitivity of Receptors

2.4.1 The general criteria for defining the importance or sensitivity of receptors are set out in Table 14.4. Key factors influencing this include:

- The value of the receptor or resource based upon empirical and/or intrinsic factors, for example taking into account any legal or policy protection afforded which is indicative of the receptor or resources' value internationally, nationally or locally; and
- The sensitivity of the receptor or resource to change, for example is the receptor likely to acclimatise to the change. This will take into account legal and policy thresholds which are indicative of the ability of the resource to absorb change.

Table 14.4 Receptor Sensitivity (Traffic and Transport)

Sensitivity	Description
Very High	Schools, colleges, playgrounds, hospitals, retirement homes.
High	Heavily congested junctions, residential properties very close to the carriageway.
Medium	Congested junctions, shops/businesses, pedestrians/cyclists, areas of ecological/nature conservation value, residential properties close to the carriageway.
Low	Sites of tourist/visitor attraction, places of worship, residential areas set back from the highway with screening.
Negligible	Those people and places located away from the affected highway link.

Magnitude of Impacts

2.4.2 The general criteria for defining the magnitude of an impact are set out in Table 14.5. Key factors influencing this include:

- The physical or geographical scale of the impact, (note that this will be relative to the scale of the receptor or resource affected);
- The duration of the peak construction impact - will it be short term, lasting for a few days or weeks, or long term, lasting for a number of years;
- The frequency of the impact - will it occur hourly, daily, monthly or will it last for the duration of the construction period; and
- The reversibility of the effect - can it be reversed following completion of construction of the development.

Table 14.5 Impact Magnitude Criteria (Traffic and Transport)

Magnitude	Description	Illustrative Criteria
High	HGV Construction Traffic	High number of construction vehicles using roads over a protracted period of time. More than a 40% increase for more than 6 months.
	Severance	Increase in total traffic flows of 90% and above (or increase in HGV flows over 10% based on the sensitivity of the receptors).
	Road safety	High increase in total traffic at known accident locations.
	Pedestrians/ Cyclists	Limited or no facilities for pedestrians and cyclists with limited crossing facilities and low quality linkages to the local facilities.
Medium	HGV Construction Traffic	Moderate number of construction vehicles using roads over a protracted time period. 16-39% increase for more than 6 months; or More than 40% increase for 3-6 months.
	Severance	Increase in total traffic flows of 60-89% (or increase in HGV flows over 10% based on the sensitivity of the receptors).
	Road safety	Moderate increase in total traffic at known accident location.
	Pedestrians/ Cyclists	Few facilities for pedestrians and cyclists with limited crossing facilities and linkages to the local facilities.
Low	HGV Construction Traffic	Small number of construction vehicles using roads over a short period of time. 6-15% Increase for more than 6 months; or Between 31-39% for 3-6 months; or More than 40% increase for less than 3 months.
	Severance	Increase in total traffic flows of 30-59% (or increase in HGV flows over 10% based on the sensitivity of the receptors).
	Road safety	Minor increase in total traffic at known accident locations.
	Pedestrians/ Cyclists	Facilities for pedestrians and cyclists with safe and convenient crossing facilities and good linkages to the local facilities.

Table 14.5 Impact Magnitude Criteria (Traffic and Transport)		
Magnitude	**Description**	**Illustrative Criteria**
Negligible	HGV Construction Traffic	Occasional construction vehicles using roads over a short period of time. Less than 5% Increase for more than 6 months; or Between 6-30% increase for 3- 6 months; or Between 31-39% for less than 3 months.
	Severance	Increase in total traffic flows of 29% or under (or increase in HGV flows under 10%).
	Road safety	Negligible increase in total traffic at known accident locations.
	Pedestrians/ Cyclists	Dedicated facilities for pedestrians and cyclists with safe and convenient crossing facilities and good linkages to the local facilities.

Assessing the Significance of Effects

2.4.3 The general approach adopted for evaluating the significance of effects taking into account the sensitivity of the receptor and the magnitude of impact is outlined in Table 14.6. The IEA Regulations require the likely significant effects to be identified. Effects predicted to be 'major' or 'moderate' are considered to be **significant** whilst effects predicted to be 'minor' or 'negligible' are considered to be **not significant**.

Table 14.6 Assessment of Significance (Traffic and Transport)					
Magnitude of Impact	**Sensitivity or Value of Receptor**				
	Very High	**High**	**Medium**	**Low**	**Negligible**
High	Major	Major	Moderate	Moderate	Minor
Medium	Major	Moderate	Moderate	Minor	Negligible
Low	Moderate	Moderate	Minor	Negligible	Negligible
Negligible	Minor	Minor	Negligible	Negligible	Negligible

3 Basis of Assessment

3.1 Proposed DC Cable Route

3.1.1 A full description of the construction and operation of the proposed DC cable route from the proposed landfall to the proposed converter station is provided in ES-2-B.01, Volume 2, Chapter 5, Proposed Underground DC Cable.

3.1.2 The remainder of this section, which forms the basis of the assessment is structured as follows:

- Proposed DC Cable Route;
- Construction Traffic Volumes;
- Construction Programme;
- Construction Traffic Distribution and Assessment; and
- Construction Assumptions.

Proposed DC Cable Route;

3.1.3 As part of the assessment of the proposed DC cable route there is a requirement for TCFs to be established along the route, which will generate traffic to be assessed. The TCF locations are shown in Figure 14.3 and are comprised of the following:

- Temporary Construction Compounds (TCCs) for the storage of plant and material as well as site offices and welfare facilities for staff;
- Temporary Construction Areas (TCAs) where the proposed DC cable working width requires to extend beyond 30 m for example at crossings where trenchless methods are to be used; and
- Access including upgrades to existing roads as well as the establishment of temporary accesses to the proposed DC cable working width.

Construction Traffic Volumes

3.1.4 Traffic movements have been provided by NGVL for each of the TCFs based on average weekly traffic movements, assuming a 22 week construction programme at each TCF. An average daily total has then been assumed by dividing the weekly total by six (assuming a six day working week, Monday to Saturday).

3.1.5 The assumed numbers of construction vehicles have been derived based on the length of cable to be laid from each of the TCFs.

3.1.6 The peak period for traffic during construction at each TCF has been assumed to ensure a robust assessment of traffic is undertaken. The daily two-way trips to and from the TCFs have been considered in terms of their overall percentage impact on the roads within the ZoI.

3.1.7 Construction trips generated by each TCF have been split into Car/Light Goods Vehicle (LGV) trips (representing workers) and Heavy Goods Vehicle (HGV) trips (assuming 1 HGV = 16 tonne Max Articulated vehicle). Some of the assumed generated HGV trips will be larger vehicles such as cranes, cable delivery vehicles, which are included as part of the assessment.

3.1.8 The breakdown of total two-way vehicle movements expected as part of the construction activities at each TCF, based on the 22 week construction duration, is summarised in Table 14.7

Table 14.7 Proposed TCF Construction Traffic

Route Section	TCF	Peak Daily Vehicle Flow – Two-Way Movements (22 Week Duration)		
		Cars/LGVs	HGVs	Total
1	TCA (T1)	9	32	**41**
	TCC (S1)	9	32	**41**
	TCA (T2)	10	34	**44**
	TCA (T3)	10	36	**46**
	TCC (P1)	10	36	**46**
	TCA (T4)	10	36	**46**
2	TCA (T5)	10	35	**46**
	TCA (T6)	11	36	**47**
	TCA (T7)	10	36	**46**
	TCC (S2)	10	34	**44**
	TCA (T8)	10	33	**43**
	TCA (T9)	10	35	**45**
3	TCC (P2)	10	36	**46**
	TCC (S3)	11	36	**47**
	TCC (S4)	11	37	**47**
	TCA (T10)	10	36	**46**
	TCC (S5)	10	35	**44**
	TCA (T11)	10	34	**44**
	TCA (T12)	10	35	**45**
4	TCC (P3)	10	35	**45**
	TCA (T13)	10	36	**46**
	TCC (S6)	10	36	**46**
	TCA (T14)	10	35	**45**
	TCA (T15)	10	35	**45**
	TCA (T16)	10	34	**44**

3.1.9 As part of the assessment, a sensitivity test has been carried out whereby all construction traffic has been uplifted by 20%, which allowed for variations in construction traffic flows and adds to the robustness of the assessment. Further details are provided within the Potential Impacts section.

Construction Programme

3.1.10 Initial works relating to the construction of the DC cable route are expected to commence in 2019, with initial works relating to the permanent access road. Works are scheduled to be completed by December 2022.

Construction Traffic Distribution and Assessment

Construction Traffic Distribution Methodology

3.1.11 The construction traffic generated by the TCFs as detailed above has been distributed onto the road network within the ZoI to facilitate the assessment work.

3.1.12 The distribution methodology has been separated into two elements, with one focusing on the distribution of workers and one on the distribution of HGVs during the construction period. Both methodologies have been agreed with LCC Highways.

Car/LGV Traffic Distribution (Workers)

3.1.13 In order to assume a robust traffic distribution of workers travelling to and from each TCF each day a gravity model has been developed.

3.1.14 It is currently unknown where workers may originate, therefore the distribution of worker origin has been based on the approximate populations of large settlements (>6,000 people) within a 60 minute drive time of each TCF. For those settlements towards the maximum journey time of 60 minutes, a weighting of 0.7 has been applied to reflect the additional distance needed to travel, hence the reduced likelihood of people travelling from that area. This methodology has been agreed with LCC Highways.

3.1.15 It should be noted that this methodology is in line with that used for the Triton Knoll application and the proposed converter station (as detailed within ES-2-C.09, Volume 2, Chapter 25).

3.1.16 A separate distribution has been assumed for each route section, which was then applied to the relevant TCFs within each particular route section. As journey times would vary over the full length of the proposed DC cable route, a central point within each section was chosen and journeys were assumed from this point.

3.1.17 The following tables indicate the distribution for each route section based on each settlement identified.

Table 14.8 Worker Distribution (Route Section 1)				
Town	**Population**	**Distance Weighting**	**Weighted Population**	**Distribution %**
Immingham	9,642	0.7	6,749	2%
Lincoln	130,200	0.7	91,140	30%
Sleaford	17,671	0.7	12,370	4%
Boston	64,600	0.7	45,220	15%
Skegness	19,579	1.0	19,579	6%
Horncastle	6,815	1.0	6,815	2%
Mablethorpe	12,531	1.0	12,531	4%
Louth	16,419	1.0	16,419	5%
Grimsby	88,243	0.7	61,770	20%
Cleethorpes	39,505	0.7	27,654	9%
Brigg	5,626	0.7	3,938	1%
Total	**410,831**	**-**	**304,185**	**100%**

Table 14.9 Worker Location Distribution (Route Section 2)				
Town	**Population**	**Distance Weighting**	**Weighted Population**	**Distribution %**
Immingham	9,642	0.7	6,749	2%
Grimsby	88,243	0.7	61,770	18%
Bourne	13,961	0.7	9,773	3%
Spalding	28,722	0.7	20,105	6%
Boston	64,600	0.7	45,220	14%
Sleaford	17,671	0.7	12,370	4%
Skegness	19,579	1.0	19,579	6%
Horncastle	6,815	1.0	6,815	2%
Lincoln	130,200	0.7	91,140	27%
Louth	16,419	1.0	16,419	5%
Mablethorpe	12,531	1.0	12,531	4%
Brigg	5,626	0.7	3,938	1%
Cleethorpes	39,505	0.7	27,654	8%
Total	**453,514**	**-**	**334,063**	**100%**

Table 14.10 Worker Location Distribution (Route Section 3)				
Town	**Population**	**Distance Weighting**	**Weighted Population**	**Distribution %**
Wisbech	31,573	0.7	22,101	5%
Grantham	43,117	0.7	30,182	7%
Newark	27,700	0.7	19,390	5%
Grimsby	88,243	0.7	61,770	15%
Spalding	28,722	1.0	28,722	7%
Bourne	13,961	0.7	9,773	2%
Boston	64,600	1.0	64,600	16%
Sleaford	17,671	1.0	17,671	4%
Skegness	19,579	0.7	13,705	3%
Horncastle	6,815	1.0	6,815	2%
Lincoln	130,200	0.7	91,140	22%
Mablethorpe	12,531	0.7	8,772	2%
Louth	16,419	0.7	11,493	3%
Cleethorpes	39,505	0.7	27,654	7%
Total	**540,636**	**-**	**413,788**	**100%**

Table 14.11 Worker Location Distribution (Route Section 4)				
Town	**Population**	**Distance Weighting**	**Weighted Population**	**Distribution %**
Louth	16,419	0.7	11,493	2%
Mablethorpe	12,531	0.7	8,772	2%
Skegness	19,579	0.7	13,705	3%
Boston	64,600	1.0	64,600	12%
Kings Lynn	42,800	0.7	29,960	6%
Wisbech	31,573	0.7	22,101	4%
Spalding	28,722	1.0	28,722	5%
Peterborough	183,600	0.7	128,520	24%
Melton Mowbray	27,158	0.7	19,011	4%
Grantham	43,117	1.0	43,117	8%
Horncastle	6,815	1.0	6,815	1%
Oakham	10,922	0.7	7,645	1%
Stamford	21,800	0.7	15,260	3%
Bourne	13,961	1.0	13,961	3%

Table 14.11 Worker Location Distribution (Route Section 4)				
Town	**Population**	**Distance Weighting**	**Weighted Population**	**Distribution %**
Sleaford	17,671	1.0	17,671	3%
Newark	27,700	0.7	19,390	4%
Lincoln	130,200	0.7	91,140	17%
Total	**699,168**	**-**	**541883**	**100%**

3.1.18 The above distribution percentages were then applied to the relevant road links within the ZoI in order to carry out the impact assessment.

HGV Traffic Distribution

3.1.19 A separate methodology has been developed in order to assume a robust distribution of HGVs onto the road network within the ZoI. This methodology better reflects the locations that materials will potentially come from for the TCFs (e.g. ports and other local/regional/national sources).

3.1.20 A number of key assumptions have been made, as it is not clear where materials will originate. For the purposes of the assessment, the following distribution percentages have been assumed:

- Ports = 50%
  - Boston Port = 16.7%
  - Immingham Port/Grimsby Port = 16.7%
  - King Lynn Port = 16.7%
- Other Locations = 50%
  - North = 12.5%
  - East = 12.5%
  - South = 12.5%
  - West = 12.5%

3.1.21 In terms of the 50% of HGV traffic travelling to 'other locations' from the TCFs, this has been distributed equally north, south, east or west and is assumed to travel across the entirety of the ZoI. This is a robust approach which assumes that all traffic within this 50% originates from outside of the ZoI. As Route Section 1 lies close to the east coast, no trips are assumed to travel to/from the east, therefore the 50% distribution has been re-organised based on travel in northerly, southerly and westerly directions (e.g. 16.7% to/from each).

3.1.22 The above distribution percentages were then applied to the relevant road links within the ZoI in order to carry out the impact assessment.

Construction Traffic Assessment

3.1.23 Traffic associated with the construction of the proposed DC cable route has been distributed onto the local highway network and the impacts of this traffic generated by the TCFs have been measured against baseline future traffic flows to indicate a percentage increase in traffic as a result. Road links within the ZoI where a traffic count (e.g. identified as receptor locations) has been undertaken have therefore been assessed.

3.1.24 The construction timescale for the proposed DC cable route was not finalised at the time of application and will be confirmed by the contractors in due course, therefore assumptions regarding the timing of different elements of the construction phase have been made.

3.1.25 As no programme for the proposed DC cable route construction was available, it has been assumed that all TCFs in one section will generate their peak traffic at the same time during the construction period, which would provide a robust assessment.

3.1.26 A number of scenarios and parameters have been assumed as part of the construction traffic assessment to ensure a robust assessment is provided. These are detailed as follows:

- Assessment of construction traffic assuming a 22 week construction schedule for each of the TCFs;
- Assessment of construction traffic using summer and winter base traffic flows;
- Assessment of uplifted construction traffic (20%).

3.1.27 Baseline traffic assessment years of 2019 and 2022 have been chosen as this allows for a degree of flexibility within the construction programme with regard to the timing of the peak months of construction.

3.1.28 A full list of the assessment scenarios carried out are summarised as follows. These were undertaken using the assumed 22 week construction schedule:

- Base Traffic 2019 & 2022 + Construction Traffic (Summer, Weekday);
- Base Traffic 2019 & 2022 + Construction Traffic (Summer, Saturday);
- Base Traffic 2019 & 2022 + Construction Traffic (Winter, Weekday);
- Base Traffic 2019 & 2022 + Construction Traffic (Winter, Saturday);
- Base Traffic 2019 & 2022 + Construction Traffic (with 20% uplift) - (Summer, Weekday);
- Base Traffic 2019 & 2022 + Construction Traffic (with 20% uplift) - (Summer, Saturday);
- Base Traffic 2019 & 2022 + Construction Traffic (with 20% uplift) - (Winter, Weekday); and
- Base Traffic 2019 & 2022 + Construction Traffic (with 20% uplift) - (Winter, Saturday).

3.1.29 As outlined in section 3.1.25, only TCFs within individual route sections will operate at the same time during the construction period, therefore only traffic associated with these TCFs was distributed onto the road network and assessed.

3.1.30 The TCFs and their relevant route sections are shown in Table 14.12, and in Figure 14.3.

Table 14.12 Route Sections and TCFs	
Route Section	**TCFs**
Route Section 1: Proposed landfall to Well High Lane	TCA (T1), TCA (T2), TCA (T3), TCC (S1), TCA (T4), TCC (P1)
Route Section 2: Well High Lane to A16/Keal Road	TCA (T5), TCA (T6), TCA (T7), TCC (S2), TCA (T8), TCA (T9)
Route Section 3: A16/Keal Road to River Witham	TCC (S3), TCC (P2), TCC (S4), TCC (S5), TCA (T10), TCA (T11), TCA (T12)
Route Section: 4 River Witham to the Proposed Converter Station	TCC (P3), TCA (T13), TCC (S6), TCA (T14), TCA (T15), TCA (T16)

Construction Assumptions

3.1.31 A number of assumptions have been considered in order to form the basis of assessment, as agreed with LCC Highways. These are described as follows:

- The ZoI of the proposed DC cable route, in relation to traffic and transport, is defined by those roads where there is the potential for significant impact due to the addition of construction traffic.
- The period of 07:00-19:00, Monday to Saturday (6-day assessment period) will be assessed, using data collected over a 7-day period, which included five weekdays, one Saturday and one Sunday.
- The impacts of construction traffic will be assessed using traffic count data collected during August 2016 (summer traffic counts) and January/February 2017 (winter traffic counts) to reflect the effects of increased seasonal summer traffic on Lincolnshire's roads.
- Assessment has been undertaken for the assumed first year (2019) and last year (2022) of the proposed DC cable route construction. Base traffic has been factored up to the two assessment years using the Department for Transport National Transport Model (NTM) (Ref 14-3) factor adjusted for the Lincolnshire area (this is in accordance with the 'Travel Plans, Transport Assessments and Statements' Planning Practice Guidance (Department for Communities and Local Government, March 2014) (Ref 14-1).
- The assessment sets out the baseline traffic flows based upon a series of ATC surveys undertaken in August 2016 and January/February 2017.

3.2 Design Mitigation

3.2.1 In order to facilitate access for HGVs and Abnormal Indivisible Loads (AILs) to TCF locations, it would be necessary to design improvements to relevant highway access roads and junctions. These improvements would be incorporated into the design of the scheme. The highway improvements are summarised in Table 14.13.

Table 14.13 Design Mitigation – Highway Improvements	
TCF	**Summary of Improvements**
TCA (T1)	Major/minor crossroads design including adequate bell-mouths, controlled under temporary traffic signals. T1 access is via the proposed DC cable route working width and road access is via S1.
TCC (S1)	Major/minor crossroads design including adequate bell-mouths, controlled under temporary traffic signals.
TCA (T2)	Major/minor junction design including adequate bell-mouth, controlled under temporary traffic signals. Sections of Crawcroft Lane would be widened to accommodate carriageway passing bays.
TCA (T3)	Major/minor crossroads design including adequate bell-mouths, controlled under temporary traffic signals.
TCC (P1)	Major/minor crossroads design including adequate bell-mouths, controlled under temporary traffic signals. An additional major/minor junction into the TCC would also be provided.
TCA (T4)	Major/minor crossroads design including adequate bell-mouths, controlled under temporary traffic signals.
TCA (T5)	Major/minor crossroads design including adequate bell-mouths, controlled under temporary traffic signals.
TCA (T6)	Major/minor junction design including adequate bell-mouths, controlled under temporary traffic signals.
TCA (T7)	Major/minor crossroads design including adequate bell-mouths, controlled under temporary traffic signals.
TCC (S2)	Major/minor junction design including adequate bell-mouths, controlled under temporary traffic signals.
TCA (T8)	Major/minor crossroads design including adequate bell-mouths, controlled under temporary traffic signals.
TCA (T9)	Major/minor junction design including adequate bell-mouths, controlled under temporary traffic signals.
TCC (P2)	Major/minor crossroads design including adequate bell-mouths, controlled under temporary traffic signals. An additional major/minor junction into the TCC would also be provided.
TCC (S3)	Major/minor staggered crossroads design including adequate bell-mouths, controlled under temporary traffic signals. Two additional major/minor junctions linking a new access road would also be provided.
TCC (S4)	Major/minor crossroads design including adequate bell-mouths, controlled under temporary traffic signals.
TCA (T10)	Major/minor crossroads design including adequate bell-mouths, controlled under temporary traffic signals.
TCC (S5)	Major/minor crossroads design including adequate bell-mouths, controlled under temporary traffic signals.
TCA (T11)	Major/minor crossroads design including adequate bell-mouths, controlled under temporary traffic signals.
TCA (T12)	Major/minor crossroads design including adequate bell-mouths, controlled under temporary traffic signals.
TCC (P3)	Major/minor crossroads design including adequate bell-mouths, controlled under temporary traffic signals.
TCA (T13)	Major/minor crossroads design including adequate bell-mouths, controlled under temporary traffic signals.
TCC (S6)	Major/minor staggered crossroads design including adequate bell-mouths, proposed right turn ghost island and carriageway widening.

TCA (T14)	New junction into TCA from private road, including adequate bell-mouth. Sections of Crawcroft Lane would be widened to accommodate carriageway passing bays.
TCA (T15)	Accessed via the proposed DC cable route working width.
TCA (T16)	Accessed via the proposed converter station permanent access road.

4 Planning Policy and Legislative Considerations

4.1 Introduction

4.1.1 The proposed DC cable route has been considered in the context of a number of national and local planning and transport guidelines and policies. These are summarised in the following sections.

4.2 National Policy Context

4.2.1 The scheme has been considered in the context of a number of national planning and transport guidelines and policies. The following document has been reviewed:

- National Planning Policy Framework (2012) (Ref 14-10);
  - The National Planning Policy Framework (NPPF) was introduced in 2012 and sets out the Governments planning policies for England and it superseded the Planning Policy Guidance Notes. The document aims to contribute to the achievement of sustainable development through the planning system.
  - Paragraph 32 indicates that 'developments should only be prevented or refused on transport grounds where the residual cumulative impacts of development are severe'.

4.3 National Legislation Context

4.3.1 The scheme has been considered in the context of national legislation. The following has been reviewed:

- Town and Country Planning Act (1990) (Ref 14-11);
  - Plans for the proposed DC cable route will be submitted under the Town and Country Planning Act (TCPA) and do not constitute a Development Consent Order (DCO).

4.4 Local Policy Context

4.4.1 The proposed DC cable route has been considered in the context of a number of local planning and transport guidelines and policies. The following documents have been reviewed:

- Lincolnshire Local Transport Plan (2013/14 – 2022/23) (Ref 14-12);
- Boston Borough Local Plan, Adopted 1999 (Saved Policies, 2007) (Ref 14-13);
- South East Lincolnshire Local Plan 2011-2036 (Publication Version, March 2017) (Ref 14-14);
- Central Lincolnshire Local Plan (Adopted, April 2017) (Ref 14-15);
- South Holland Local Plan 2006 (Saved Policies, 2009) (Ref 14-16);
- East Lindsey Local Plan Alteration 1999 (Saved Policies, September 2007) (Ref 14-17); and

- East Lindsey Core Strategy (Submissions Modifications Draft, March 2017) (Ref 14-18).

4.5 Other Guidance Documents

4.5.1 In addition to the above policies and documents, the following guidance documents have been taken into account in the production of the chapter. These have provided guidance for the methodology and design guidelines on which the permanent access road designs have been based.

- Travel Plans, Transport Assessments and Statements – Planning Practice Guidance (Department for Communities and Local Government, March 2014) (Ref 14-1);
- Institute of Environmental Management and Assessment's (IEMA) 'Guidelines for the Environmental Assessment of Road Traffic' – January 1993 (Ref 14-2);
- Design Manual for Road and Bridges (DMRB) (Ref 14-4); and
- DMRB Volume 11, Section 2, Part 5 – HA 205/08 Assessment and Management of Environmental Effects (Ref 14-5).

5 Baseline Conditions

5.1 Study Area

5.1.1 This section provides a description of the study area or ZoI. The ZoI of the proposed DC cable route, as it relates to traffic and transport, is defined by those roads where there is the potential for significant impact due to the addition of construction traffic.

5.1.2 Site visits were undertaken in November 2015 and November 2016 to develop a robust understanding of the characteristics of the baseline conditions within the ZoI.

5.1.3 To facilitate the construction of the proposed DC cable route, the key roads within the vicinity of the proposed DC cable route have been described. The area being assessed covers the key roads surrounding the four sections of the proposed DC cable route, as shown in Figure 14.1.

5.2 Existing Highway Network – Route Section 1: Proposed Landfall to Well High Lane

A52

5.2.1 The A52 crosses the proposed DC cable route south of Sandilands, approximately 2 km inland from where the proposed DC cable route reaches landfall. The A52 is a principal A-road and travels from Mablethorpe to Stoke-on-Trent via Skegness, Grantham, Nottingham and Derby.

5.2.2 Within the vicinity of the proposed DC cable route, the road is rural in nature and is single carriageway with a 60 mph speed limit applied. Where the road enters the village of Huttoft south of the proposed DC cable route crossing, the speed limit reduces to 40 mph. Lighting is generally only present at major junctions along the A52 and in built up areas, such as in Huttoft. See Figure 14.5.

A1111

5.2.3 The A1111 is a principal A-road and connects Sutton-on-Sea to Alford via Markby and is approximately 10 km in length. It passes the proposed DC cable route along Sutton Road between Markby and Bilsby.

5.2.4 The road is rural in nature and is single carriageway with a 60 mph speed limit applied, which reduces to 30 mph when entering the village of Bilsby. Lighting is generally only present in built up areas such as Bilsby. See Figure 14.5.

A1104

5.2.5 The A1104 is a principal A-road and connects Mablethorpe to Ulceby Cross via Alford. It crosses the cable route south of the junction with Greenfield Lane near Salesby.

5.2.6 The road is rural in nature and is single carriageway with a 60 mph speed limit applied. Warning signage is provided to indicate the nature of the road, which includes a number of bends. Lighting is generally only present at major junctions, such as the junction with the A1111. See Figure 14.5.

5.2.7 As agreed with LCC Highways, at points where the proposed DC cable crosses the aforementioned roads, the preferred method of installation will be by Horizontal Direction Drilling (HDD) and not open cut.

5.3 Existing Highway Network – Route Section 2: Well High Lane to A16 (Keal Road)

A16

5.3.1 The A16 is a principal A-road and travels south from Grimsby through Boston to Peterborough. It strategically connects with a number of other principal A-roads including the A158, which is a key east to west link connecting Skegness and Lincoln, and the A1028 linking Ulceby Cross to Skegness.

5.3.2 Close to the cable route, the road is rural in nature and is single carriageway with a 60 mph speed limit applied. Lighting is generally only present at major junctions, such as the roundabout junction with the A158. See Figure 14.6.

A158

5.3.3 The A158 is a principal A-road and passes the cable route approximately 2 km west from the Partney Pumps Roundabout junction with the A16. It travels in an east-west direction from Skegness to Lincoln.

5.3.4 Within the vicinity of the cable route, the road is rural in nature and is single carriageway with a 60 mph speed limit applied. Lighting is generally only present at major junctions, such as the roundabout junction with the A16. See Figure 14.6.

A1028

5.3.5 The A1028 is a principal A-road that runs from Partney Pumps Roundabout, less than 1 km southeast of the proposed DC cable route, to Gunby Roundabout in a southeast direction. At the Partney Pumps Roundabout, the A1028 meets the A16 and A1104 providing links to Grimsby, Boston and Alford, and at the Gunby Roundabout, it meets the A158 linking to Skegness and Lincoln. The A1028 is approximately 9 km in length.

5.3.6 The route is rural in nature and is single carriageway with a 60 mph speed limit applied, until approaching Ulceby where the speed reduces to 50 mph and 30 mph within the village. Lighting is generally only present at major junctions, such as the roundabout junction with the A16. See Figure 14.6.

5.3.7 As agreed with LCC Highways, at points where the proposed DC cable crosses the aforementioned roads, the preferred method of installation will be by Horizontal Direction Drilling (HDD) and not open cut.

5.4 Existing Highway Network – Route Section 3: A16 (Keal Road) to River Witham

A155

5.4.1 The A155 is a principal A-road, beginning about 400 m west of the proposed DC cable route from its junction with the A16 in West Keal and travels west for approximately 14 km until it meets the A153 in Tumby.

5.4.2 The route has a 60 mph speed limit, however whilst travelling through the built-up areas of West Keal and East Kirkby the speed limit reduces to 40 mph, and in Mareham le Fen where the speed limit reduces to 30 mph. Lighting is generally only present at major junctions, such as the junction with the A153. See Figure 14.7.

5.4.3 As agreed with LCC Highways, at points where the proposed DC cable crosses the aforementioned roads, the preferred method of installation will be by Horizontal Direction Drilling (HDD) and not open cut.

5.5 Existing Highway Network – Route Section: 4 River Witham to the Proposed Converter Station

A17

5.5.1 The A17 is a principal A-road that runs from Kings Lynn to Newark where strategically, the A17 provides a link with the A1 at Newark.

5.5.2 The A17 passes through the proposed DC cable route approximately 1.5 km north east of its junction with the A1121 which provides a link to Boston via Hubbert's Bridge. Within the vicinity of the proposed DC cable route, the road is rural in nature and is a single carriageway with a 60 mph speed limit applied. The speed limit reduces to 40 mph at Swineshead Bridge, where there is a railway level crossing. Warning signs are present informing drivers of long/slow vehicles to wait and request permission to cross the railway. North of Swineshead Bridge there is a section of 50 mph limit, before it returns to national speed limit near Heckington. Lighting is generally only present at major junctions, such as the junction with the A52. See Figure 14.8.

A52

5.5.3 The A52 is a principal A-road that travels from Mablethorpe to Stoke-on-Trent via Skegness, Grantham, Nottingham and Derby. Strategically the road links the A1 at Grantham with Boston to the east.

5.5.4 The road within vicinity of the proposed DC cable route is rural in nature and is single carriageway with a 60 mph speed limit applied. Lighting is generally only present at major junctions, such as the junction with the A17. See Figure 14.8.

A1121

5.5.5 The A1121 meets the A17 at Swineshead Bridge and follows the South Forty Foot Drain and railway track towards Boston until it meets the A52. It is a relatively straight road that is approximately 9 km in length.

5.5.6 The road is rural in nature and is single carriageway with a 60 mph speed limit applied, with the exception of when the road passes Hubberts Bridge and on the approach to Boston which have 40 mph speed limits. In these zones, street lighting is generally present. See Figure 14.8.

5.5.7 As agreed with LCC Highways, at points where the proposed DC cable crosses the aforementioned roads, the preferred method of installation will be by Horizontal Direction Drilling (HDD) and not open cut.

5.6 Baseline Traffic

5.6.1 Baseline traffic conditions were established using Automatic Traffic Counts (ATCs) positioned in 100 agreed (with LCC Highways) locations across Lincolnshire to collect baseline traffic flows on key roads in the area surrounding the proposed DC cable route. The geographical extent of the ATCs collected essentially forms the ZoI for the purpose of the assessment. Locations of the ATCs are shown in Figure 14.4.

5.6.2 It was agreed with LCC that the ATCs should be carried out during winter and summer months in order to take into account seasonal variations on roads surrounding the proposed DC cable route.

5.6.3 The summer flows were collected over a 24-hour seven day period between Monday 1 and Sunday 7 August 2016 and the winter flows were collected between Monday 9 and Sunday 15 January 2017. Some of the winter surveys were delayed until mid-February due to scheduled roadworks and unforeseen circumstances at some locations. The surveys provided two-way flows by direction and were classified by vehicle types, including HGVs.

5.6.4 As indicated in section 3.1.2, assessment of traffic flows would be based on weekday average and Saturday average flows between the hours of 07:00 and 19:00, to reflect the construction periods.

5.6.5 The ATC locations also formed the receptor locations as part of the assessment. The receptors are described further in Table 14.9.

5.6.6 Appendix 14.1 provides a complete record of the surveyed traffic flows.

Traffic Growth

5.6.7 Surveyed traffic flows collected in 2016 and 2017 have been factored up to the two construction assessment years using the Department for Transport NTM (Ref 14-3) factor adjusted for the Lincolnshire area (this is in accordance with the Travel Plans, Transport Assessments and Statements' Planning Practice Guidance document (Ref 14-1)). This provides the baseline traffic flows on which the assessments have been established.

5.6.8 The growth factors are shown in Table 14.14.

Table 14.14 Locally Adjusted NTM Growth Factors

Seasonal Flows	Years	Weekday	Saturday
Summer	**2016 – 2019**	1.018 (1.8%)	1.017 (1.7%)
	2016 – 2022	1.036 (3.6%)	1.035 (3.5%)
Winter	**2017 – 2019**	1.012 (1.2%)	1.011 (1.1%)
	2017 – 2022	1.030 (3.0%)	1.029 (2.9%)

5.7 Road Safety

5.7.1 Personal injury accidents for the most recent full five-year period available (2011-2015), were obtained from LCC. In order to provide a more focused analysis of accidents, only those that occurred within approximately 1 km of the proposed DC cable route have been assessed.

5.7.2 The complete accident data is included at Appendix 14.2 and an assessment of accidents by route section is included below.

Route Section 1: Proposed Landfall to Well High Lane

5.7.3 The accidents that occurred on roads surrounding the proposed DC cable route between the proposed landfall and Well High Lane have been identified, as shown in Figure 14.5.

5.7.4 There were a total of 20 accidents on roads surrounding this section during the five year period, details of the accidents that occurred are shown in Table 14.15.

Table 14.15 Route Section 1: Accidents and Severity (2011-2015)

Location	Slight	Serious	Fatal	Total
Huttoft Bank	1	0	0	**1**
A52	2	0	0	**2**
Crawcroft Lane	1	0	0	**1**
A1111	8	1	0	**9**
Mill Lane	1	0	0	**1**

Table 14.15 Route Section 1: Accidents and Severity (2011-2015)				
Location	Slight	Serious	Fatal	Total
A1104	4	1	1	**6**
Total	**17**	**2**	**1**	**20**

5.7.5 Of the recorded accidents within the vicinity of Route Section 1, 80% involved only one vehicle, while 60% accidents occurred in wet/icy conditions. A total of 50% of recorded accidents included loss of control as a contributory factor.

5.7.6 Two serious accidents occurred on the A1111 and A1104, and one fatal accident occurred on the A1104. The first serious accident on the A1111 occurred in 2011 due to travelling in excess of the speed limit and poor navigation of the road bend resulting in loss of control. The second serious accident occurred on the A1104 in 2013 and was the result of poor weather conditions where the vehicle lost control when travelling over ice. The fatal accident occurred on the A1104 near Salesby in 2015, where the driver was impaired by alcohol, exceeded the speed limit and lost control of the vehicle.

Route Section 2: Well High Lane to A16/Keal Road

5.7.7 The accidents that occurred on roads surrounding the proposed DC cable route between Well High Lane and A16/Keal Road have been identified, as shown in Figure 14.6.

5.7.8 **T**here were a total of 23 accidents on roads surrounding this section during the five year period, details of the accidents that occurred are shown in Table 14.16.

Table 14.16 Route Section 2: Accidents and Severity (2011-2015)				
Location	Slight	Serious	Fatal	Total
A16	16	1	0	**17**
A158	5	0	0	**5**
B1195	1	0	0	**1**
Total	**22**	**1**	**0**	**23**

5.7.9 Of the recorded accidents, 57% occurred in dry weather conditions and involved more than one vehicle. The main contributing factors for these accidents were loss of control, poor turn or manoeuvre and slippery road conditions.

5.7.10 The one serious accident that occurred in this route section took place at the A16/A1028/A1104 roundabout in Ulceby Cross and was considered a road rage incident which resulted in a motorbike rider to fall off his bike.

Route Section 3: A16 (Keal Road) to River Witham

5.7.11 The accidents that occurred on roads surrounding the proposed DC cable route between A16/Keal Road and River Witham have been identified, as shown in Figure 14.7.

5.7.12 There were a total of 21 accidents on roads surrounding this section during the five year period, details of the accidents that occurred are shown in Table 14.17.

Table 14.17 Route Section 3: Accidents and Severity (2011-2015)

Location	Slight	Serious	Fatal	Total
A16	13	1	0	**14**
A155	1	1	0	**2**
Drain Bank	1	0	0	**1**
Main Road	2	0	0	**2**
B1192	2	0	0	**2**
Total	**19**	**2**	**0**	**21**

5.7.13 Around 67% of accidents occurred in dry/fine weather conditions, while 33% of accidents had a contributory factor of careless driving. Around half of the accidents involved more than one vehicle.

5.7.14 There were two serious accidents recorded within this route section, the first of which occurred on the A16 in 2011 and the second on the A158 in 2015. Both were caused by speeding and careless driving.

Route Section 4: River Witham to the Proposed Converter Station

5.7.15 The accidents that occurred on the routes between the River Witham to the proposed converter station site have been assessed, as shown in Figure 14.8.

5.7.16 There were a total of 9 accidents on roads surrounding this section during the five year period, details of the accidents that occurred are shown in Table 14.18.

Table 14.18 Route Section 4: Accidents and Severity (2011-2015)

Location	Slight	Serious	Fatal	Total
A17	7	0	1	**8**
North Forty Foot Bank	1	0	0	**1**
Total	**8**	**0**	**1**	**9**

5.7.17 There were eight accidents recorded as slight, and the majority of which occurred in dry weather conditions. Seven of these slight accidents were recorded on the A17. All of the accidents involved more than one vehicle.

5.7.18 A fatal accident occurred on the A17 north of Swineshead Bridge in 2012 and involved 4 vehicles. It was caused by careless driving.

5.8 Receptor Sensitivity

5.8.1 As part of the assessment of additional traffic generated by the construction of the proposed DC cable route, a number of receptors have been identified where impacts have subsequently been assessed. For the purposes of the assessment, the receptor locations are the same as the locations of the ATC surveys. The locations, along with their baseline sensitivity (following the criteria outlined in Table 14.4) are provided in Table 14.19. The table also outlines the reasoning behind the sensitivity rating and also provides the receptor distance from nearest TCF.

Table 14.19 Receptor Sensitivity Descriptions and Distance from nearest TCF

Receptor Location	ATC Site Location	Sensitivity Rating	Description	Distance from nearest TCF (km)
Roman Bank (Anderby Creek)	1	High	Residential properties very close	2.3
Huttoft Bank (Sandilands)	2	Very High	Playgrounds, School etc.	0.7
Sea Road (Anderby)	3	High	Residential properties very close	3.6
A52 (Huttoft)	4	Very High	School	2.3
B1449 (Thurlby)	5	Medium	Shops/businesses, residential properties close	2.7
A1111 (Markby)	6	Low	Places of worship, residential properties set back	1.2
A1104 (Salesby)	7	Low	Visitor attractions	0.2
A1104 (Alford)	8	Very High	School, residential properties very close	1.8
A16 (Ulceby Cross)	9	Medium	Residential properties close	1.0
A16 (Ulceby Cross)	10	Low	Residential properties set back	0.3
A158 (Scremby)	11	Low	Residential properties set back	5.3
Sloothby High Lane (Sloothby)	12	Medium	Residential properties close	7.4
Marsh Lane (Orby)	13	High	Residential properties very close	11.5
South Ings Lane (Slackholme End)	14	Negligible	People and places located away from the carriageway	8.9
A52 (Hogsthorpe)	15	High	Incl. Ingoldmells village - residential properties very close	8.5

Table 14.19 Receptor Sensitivity Descriptions and Distance from nearest TCF				
Receptor Location	ATC Site Location	Sensitivity Rating	Description	Distance from nearest TCF (km)
Ingoldmells Road (Ashington End)	16	Low	Residential properties set back	11.9
A158 (Ashington End)	17	Medium	Shops/businesses, residential properties close	14.5
A158 (Burgh le Marsh)	18	Negligible	People and places located away from the carriageway	10.6
B1195 (Irby in the Marsh)	19	Medium	Shops/businesses, residential properties close	9.9
Thorpe Bank (Thorpe Fendykes)	20	Low	Residential properties set back	9.2
A52 (Wainfleet)	21	Medium	Shops/businesses, residential properties close	13.9
A52 (Skegness)	22	High	Incl. Skegness - Residential properties very close	16.6
A52 (Wrangle Lowgate)	23	Very High	School, residential properties very close	12.7
A52 (Haltoft End)	24	Medium	Residential properties close	9.9
A16 (Hilldyke)	25	Very High	Incl. Boston - school etc.	6.5
Midville Road (Midville)	26	Very High	School, residential properties very close	3.8
A16 (Northlands)	27	Very High	School, residential properties very close	3.9
A16 (East Keal)	28	Medium	Residential properties and shops/businesses close	1.1
West Fen (Stickney)	29	Very High	School, Residential properties close	0.7
Spilsby Hill (Old Bolingbroke)	30	Medium	Residential properties and shops/businesses close	2.3
Raithby Road (Raithby)	31	Medium	Residential properties and shops/businesses close	0.7
A155 (East Kirkby)	32	Medium	Residential properties and shops/businesses close	2.8
B1183 (Revesby Bridge)	33	Medium	Residential properties and shops/businesses close	2.9
Main Road (Carrington)	34	Medium	Residential properties and shops/businesses close	0.8
Moorhouses Road (Tumby)	35	Low	Residential properties set back	3.5
Westville Road (Bunkers Hill)	36	Medium	Residential properties and shops/businesses close	0.2
Moorside Road (Sandy Bank)	37	Medium	Residential properties and shops/businesses close	4.1
B1192 (New York)	38	Low	Residential properties set back	2.5
A158 (Hagworthingham)	39	Low	Residential properties set back	3.1
A16 (Haugham)	40	Low	Residential properties set back	9.3

Table 14.19 Receptor Sensitivity Descriptions and Distance from nearest TCF				
Receptor Location	ATC Site Location	Sensitivity Rating	Description	Distance from nearest TCF (km)
A153 (West Ashby)	41	Medium	Residential properties and shops/businesses close	11.2
A158 (Eddington)	42	Low	Residential properties set back	14.3
B1225 (Ranby)	43	Low	Residential properties set back	17.7
A157 (East Barkwith)	44	Medium	Residential properties and shops/businesses close	24.3
A158 (Stainton by Langworth)	45	Low	Residential properties set back	30.0
B1190 (Tupholme)	46	Medium	Residential properties and shops/businesses close	21.0
B1191 (Roughton)	47	Medium	Residential properties and shops/businesses close	12.4
B1191 (Woodhall Spa)	48	Medium	Residential properties and shops/businesses close	14.9
B1192 (Tattershall)	49	Medium	Residential properties and shops/businesses close	11.3
B1189 (Billinghay)	50	Medium	Residential properties and shops/businesses close	12.3
A153 (Tattershall Bridge)	51	Low	Residential properties set back	9.2
A153 (Anwick)	52	Medium	Residential properties and shops/businesses close	11.4
B1188 (Digby)	53	Low	Residential properties set back	16.1
B1395 (South Kyme)	54	Low	Residential properties set back	4.2
A17 (Kirkby la Thorpe)	55	Negligible	People and places located away from the carriageway	10.4
A17 (Swineshead Bridge)	56	Medium	Residential properties and shops/businesses close, congestion	0.2
A17 (Swineshead)	57	Low	Residential properties set back	2.3
A1121 (Hubbert's Bridge)	58	Low	Residential properties set back	5.0
A17 (Wigtoft)	59	Low	Residential properties set back	6.9
A52 (Bicker)	60	Low	Residential properties set back	4.5
A16 (Kirton)	61	Negligible	People and places located away from the carriageway	11.3
A16 (Algarkirk)	62	Negligible	People and places located away from the carriageway	11.4
A52 (Swaton)	63	Low	Residential properties set back	5.0
A15 (Aswardby)	64	Low	Residential properties set back	13.2

Table 14.19 Receptor Sensitivity Descriptions and Distance from nearest TCF				
Receptor Location	ATC Site Location	Sensitivity Rating	Description	Distance from nearest TCF (km)
A15 (Folkingham)	65	Medium	Residential properties and shops/businesses close	11.8
B1188 (Metheringham)	66	Low	Residential properties set back	24.7
A15 (Ashby de la Launde)	67	Negligible	People and places located away from the carriageway	20.8
A52 (Dembleby)	68	Low	Residential properties set back	15.3
A153 (Haltham)	69	Low	Residential properties set back	9.1
North Forty Foot Bank (Pelhams Lands)	70	Low	Residential properties set back	5.1
A1031 (Theddlethorpe)	71	Medium	Residential properties and shops/businesses close	8.3
A52 (Mablethorpe)	72	High	Residential properties very close	5.5
A1104 (Maltby le Marsh)	73	Medium	Residential properties and shops/businesses close	4.1
A157 (South Reston)	74	Medium	Residential properties and shops/businesses close	7.0
B1200 (Manby)	75	Medium	Residential properties and shops/businesses close	11.3
A153 (Horncastle)	76	High	Residential properties very close etc.	10.7
A155 (Mareham le Fen)	77	Medium	Residential properties and shops/businesses close	7.1
A17 (Kings Lynn)	78	Negligible	People and places located away from the carriageway	46.9
A17 (West Lynn)	79	Negligible	People and places located away from the carriageway	43.5
A17 (Long Sutton)	80	Negligible	People and places located away from the carriageway	27.9
A17 (Holbeach)	81	Low	Residential properties set back	17.6
A16 (Grimsby)	82	High	Residential properties very close etc.	35.3
A16 (New Waltham)	83	Low	Residential properties set back	31.4
A16 (Utterby)	84	Low	Residential properties set back	22.0
A16 (Louth)	85	Negligible	People and places located away from the carriageway	15.3
B1225 (Ludford)	86	Negligible	People and places located away from the carriageway	25.2
B1225 (Normanby le Wold)	87	Negligible	People and places located away from the carriageway	34.9
Croxton Road (Humberside Airport)	88	Negligible	People and places located away from the carriageway	44.8

Table 14.19 Receptor Sensitivity Descriptions and Distance from nearest TCF				
Receptor Location	ATC Site Location	Sensitivity Rating	Description	Distance from nearest TCF (km)
A18 (Barnetby le Wold)	89	Low	Residential properties set back	50.2
A15 (Barton-upon-Humber)	90	Negligible	People and places located away from the carriageway	59.9
A63 (Hessle)	91	Negligible	People and places located away from the carriageway	62.5
A63 (Hull)	92	Negligible	People and places located away from the carriageway	60.5
B1372 (Woodthorpe)	93	Low	Residential properties set back	2.8
B1196 (Willoughby)	94	Very High	School close to the carriageway	5.8
A1028 (Fordington)	95	Negligible	People and places located away from the carriageway	2.9
B1195 (Lusby)	96	Low	Residential properties set back	3.5
B1184 (The Gride)	97	Low	Residential properties set back	7.0
B1184 (Gipsey Bridge)	98	High	Residential properties very close	2.0
B1992 (Langrick)	99	Medium	Residential properties and shops/businesses close, congestion	3.3
A18 (Beesby)	100	Negligible	People and places located away from the carriageway	27.0

6 Potential Impacts

6.1 Overview of Potential Impacts

Temporary Impacts

6.1.1 This section assesses the impact of percentage increases in traffic associated with the construction of the proposed DC cable route on the surrounding road network and receptors.

6.1.2 The worst potential impacts of traffic related to the proposed DC cable route are temporary in nature (e.g. the peak period of construction), therefore have been assessed as such within this section of the report. For further details of the assessment methodology, please refer to section 3.1.

6.1.3 As shown in Table 14.5 a number of impacts have been specifically assessed at the receptor locations. The impacts assessed are as follows:

- HGV Construction Traffic;
- Road Safety;
- Severance; and
- Pedestrian/Cycle Amenities.

6.1.4 The assessment of significance for each of the above elements was subsequently assessed using the criteria set out in Table 14.5.

HGV Construction Traffic Impacts

6.1.5 For each route section, a summary of the potential effects of the additional HGV traffic generated by the relevant TCFs is provided.

6.1.6 The traffic impacts during summer and winter do not vary significantly, but as base traffic flows are generally lower in winter, this period has been considered as the worst case scenario. Assessments have been conducted to indicate impacts on a weekday and Saturday.

6.1.7 The construction traffic from the relevant TCFs has therefore been applied to the road network within the ZoI, based on the traffic distribution methodology described in section 3.2.

6.1.8 Consequently, a percentage change has been calculated to provide an indication of the level of impact generated by the traffic upon the identified receptors within the ZoI.

6.1.9 Tables showing all traffic scenarios are provided in Appendix 14.3. Diagrams showing the percentage HGV traffic increases for the assessed scenario are also provided in Appendix 14.4.

Road Safety Impacts

6.1.10 For each route section a summary of the potential effects on road safety during the construction phase has been provided. The magnitude of potential impacts, described in Table 14.5

Severance Impacts

6.1.11 For each route section a summary of the potential effects on severance during the construction phase has been provided. The determination of potential impact magnitude is based on the information in Table 14.5.

Pedestrian/Cycling Impacts

6.1.12 For each route section a summary of the potential effects on pedestrians and cyclists during the construction phase has been provided in line with information provided in Table 14.5

6.2 Route Section 1 Proposed Landfall to Well High Lane

Temporary Impacts

6.2.1 Table 14.20 to Table 14.27 present summaries of the potential effects of the additional HGV traffic generated by the TCFs within Route Section 1. Only the receptors locations within the ZoI that have a percentage increase in either HGV traffic or total traffic have been included in the tables. All other receptor locations have a 0% increase in traffic, therefore are considered to have negligible impacts.

6.2.2 The tables below are based on winter baseline traffic flows, including the 20% traffic uplift.

6.2.3 Tables showing all traffic scenarios are provided in Appendix 14.3.

Table 14.20 Traffic Impact Significance of Effects (Route Section 1) – HGV Impacts - Weekday

Site	Site Location	Receptor Sensitivity	Traffic % Increase (HGV)	Magnitude	Effect	Notes
4	A52 (Huttoft)	**Very High**	199%	Medium	Major	The magnitude is Medium as the HGV percentage increase is greater than 40% for 3-6 months, and the receptor sensitivity is Very High because there is a school close to the receptor.
5	B1449 (Thurlby)	**Medium**	220%	Medium	Moderate	The magnitude is Medium as the HGV percentage increase is greater than 40% for 3-6 months, and the receptor sensitivity is Medium because there are shops/businesses, residential properties close to the receptor.
6	A1111 (Markby)	**Low**	0%	Negligible	Negligible	
7	A1104 (Salesby)	**Low**	108%	Medium	Minor	
8	A1104 (Alford)	**Very High**	87%	Medium	Major	The magnitude is Medium as the HGV percentage increase is greater than 40% for 3-6 months, and the receptor sensitivity is Very High because there is a school and residential properties close to the receptor.
9	A16 (Ulceby Cross)	**Medium**	9%	Negligible	Negligible	
10	A16 (Ulceby Cross)	**Low**	61%	Medium	Minor	
14	South Ings Lane (Slackholme End)	**Negligible**	0%	Negligible	Negligible	
16	Ingoldmells Road (Ashington End)	**Low**	0%	Negligible	Negligible	
17	A158 (Ashington End)	**Medium**	4%	Negligible	Negligible	
18	A158 (Burgh le Marsh)	**Negligible**	4%	Negligible	Negligible	
25	A16 (Hilldyke)	**Very High**	35%	Low	Moderate	The magnitude is Low as the HGV percentage increase is between 31-39% for 3-6 months, and the receptor sensitivity is Very High because there are schools and residential properties close to the receptor in Boston.
27	A16 (Northlands)	**Very High**	43%	Medium	Major	The magnitude is Medium as the HGV percentage increase is greater than 40% for 3-6 months, and the receptor sensitivity is Very High because there is a school close to the receptor.
28	A16 (East Keal)	**Medium**	29%	Negligible	Negligible	
32	A155 (East Kirkby)	**Medium**	0%	Negligible	Negligible	
39	A158 (Hagworthingham)	**Low**	20%	Negligible	Negligible	
40	A16 (Haugham)	**Low**	9%	Negligible	Negligible	

Table 14.20 Traffic Impact Significance of Effects (Route Section 1) – HGV Impacts - Weekday

Site	Site Location	Receptor Sensitivity	Traffic % Increase (HGV)	Magnitude	Effect	Notes
42	A158 (Eddington)	**Low**	8%	Negligible	Negligible	
45	A158 (Stainton by Langworth)	**Low**	76%	Medium	Minor	
51	A153 (Tattershall Bridge)	**Low**	0%	Negligible	Negligible	
52	A153 (Anwick)	**Medium**	0%	Negligible	Negligible	
61	A16 (Kirton)	**Negligible**	9%	Negligible	Negligible	
62	A16 (Algarkirk)	**Negligible**	9%	Negligible	Negligible	
71	A1031 (Theddlethorpe)	**Medium**	0%	Negligible	Negligible	
72	A52 (Mablethorpe)	**High**	0%	Negligible	Minor	
73	A1104 (Maltby le Marsh)	**Medium**	0%	Negligible	Negligible	
74	A157 (South Reston)	**Medium**	92%	Medium	Moderate	The magnitude is Medium as the HGV percentage increase is greater than 40% for 3-6 months, and the receptor sensitivity is Medium because there are shops/businesses, residential properties close to the receptor.
77	A155 (Mareham le Fen)	**Medium**	0%	Negligible	Negligible	
78	A17 (Kings Lynn)	**Negligible**	1%	Negligible	Negligible	
79	A17 (West Lynn)	**Negligible**	4%	Negligible	Negligible	
80	A17 (Long Sutton)	**Negligible**	3%	Negligible	Negligible	
81	A17 (Holbeach)	**Low**	3%	Negligible	Negligible	
82	A16 (Grimsby)	**High**	13%	Negligible	Minor	
83	A16 (New Waltham)	**Low**	12%	Negligible	Negligible	
84	A16 (Utterby)	**Low**	8%	Negligible	Negligible	
85	A16 (Louth)	**Negligible**	14%	Negligible	Negligible	
86	B1225 (Ludford)	**Negligible**	16%	Negligible	Negligible	
87	B1225 (Normanby le Wold)	**Negligible**	19%	Negligible	Negligible	
88	Croxton Road (Humberside Airport)	**Negligible**	201%	Medium	Negligible	

Table 14.20 Traffic Impact Significance of Effects (Route Section 1) – HGV Impacts - Weekday						
Site	**Site Location**	**Receptor Sensitivity**	**Traffic % Increase (HGV)**	**Magnitude**	**Effect**	**Notes**
89	A18 (Barnetby le Wold)	**Low**	6%	Negligible	Negligible	
93	B1372 (Woodthorpe)	**Low**	190%	Medium	Minor	
95	A1028 (Fordington)	**Negligible**	7%	Negligible	Negligible	
100	A18 (Beesby)	**Negligible**	0%	Negligible	Negligible	

Table 14.21 Traffic Impact Significance of Effects (Route Section 1) – Severance Impacts - Weekday

Site	Site Location	Receptor Sensitivity	Traffic % Increase (HGV)	Traffic % Increase (Total)	Magnitude	Effect	Notes
4	A52 (Huttoft)	**Very High**	199%	4.9%	High	Major	The HGV percentage increase is greater than 10%, therefore has a magnitude of High based on the receptor sensitivity. The receptor sensitivity is Very High because there is a school close to the receptor.
5	B1449 (Thurlby)	**Medium**	220%	6.3%	Medium	Moderate	The HGV percentage increase is greater than 10%, therefore has a magnitude of Medium based on the receptor sensitivity. The receptor sensitivity is Medium because there are shops/businesses, residential properties close to the receptor.
6	A1111 (Markby)	**Low**	0%	1.8%	Negligible	Negligible	
7	A1104 (Salesby)	**Low**	108%	2.2%	Low	Negligible	
8	A1104 (Alford)	**Very High**	87%	3.1%	High	Major	The HGV percentage increase is greater than 10%, therefore has a magnitude of High based on the receptor sensitivity. The receptor sensitivity is Very High because there is a school and residential properties close to the receptor.
9	A16 (Ulceby Cross)	**Medium**	9%	0.9%	Negligible	Negligible	
10	A16 (Ulceby Cross)	**Low**	61%	3.8%	Low	Negligible	
14	South Ings Lane (Slackholme End)	**Negligible**	0%	0.4%	Negligible	Negligible	
16	Ingoldmells Road (Ashington End)	**Low**	0%	0.5%	Negligible	Negligible	
17	A158 (Ashington End)	**Medium**	4%	0.1%	Negligible	Negligible	
18	A158 (Burgh le Marsh)	**Negligible**	4%	0.2%	Negligible	Negligible	
25	A16 (Hilldyke)	**Very High**	35%	1.7%	High	Major	The HGV percentage increase is greater than 10%, therefore has a magnitude of High based on the receptor sensitivity. The receptor sensitivity is Very High because there are schools and residential properties close to the receptor in Boston.
27	A16 (Northlands)	**Very High**	43%	2.3%	High	Major	The HGV percentage increase is greater than 10%, therefore has a magnitude of High based on the receptor sensitivity. The receptor sensitivity is Very High because there is a school close to the receptor.

Table 14.21 Traffic Impact Significance of Effects (Route Section 1) – Severance Impacts - Weekday

Site	Site Location	Receptor Sensitivity	Traffic % Increase (HGV)	Traffic % Increase (Total)	Magnitude	Effect	Notes
28	A16 (East Keal)	**Medium**	29%	1.9%	Medium	Moderate	The HGV percentage increase is greater than 10%, therefore has a magnitude of Medium based on the receptor sensitivity. The receptor sensitivity is Medium because there are shops/businesses, residential properties close to the receptor.
32	A155 (East Kirkby)	**Medium**	0%	0.1%	Negligible	Negligible	
39	A158 (Hagworthingham)	**Low**	20%	0.9%	Low	Negligible	
40	A16 (Haugham)	**Low**	9%	0.6%	Negligible	Negligible	
42	A158 (Eddington)	**Low**	8%	0.5%	Negligible	Negligible	
45	A158 (Stainton by Langworth)	**Low**	76%	1.4%	Low	Negligible	
51	A153 (Tattershall Bridge)	**Low**	0%	0.0%	Negligible	Negligible	
52	A153 (Anwick)	**Medium**	0%	0.0%	Negligible	Negligible	
61	A16 (Kirton)	**Negligible**	9%	0.5%	Negligible	Negligible	
62	A16 (Algarkirk)	**Negligible**	9%	0.5%	Negligible	Negligible	
71	A1031 (Theddlethorpe)	**Medium**	0%	0.1%	Negligible	Negligible	
72	A52 (Mablethorpe)	**High**	0%	0.1%	Negligible	Minor	
73	A1104 (Maltby le Marsh)	**Medium**	0%	0.0%	Negligible	Negligible	
74	A157 (South Reston)	**Medium**	92%	2.9%	Medium	Moderate	The HGV percentage increase is greater than 10%, therefore has a magnitude of Medium based on the receptor sensitivity. The receptor sensitivity is Medium because there are shops/businesses, residential properties close to the receptor.
77	A155 (Mareham le Fen)	**Medium**	0%	0.1%	Negligible	Negligible	
78	A17 (Kings Lynn)	**Negligible**	1%	0.2%	Negligible	Negligible	
79	A17 (West Lynn)	**Negligible**	4%	0.3%	Negligible	Negligible	
80	A17 (Long Sutton)	**Negligible**	3%	0.3%	Negligible	Negligible	

Table 14.21 Traffic Impact Significance of Effects (Route Section 1) – Severance Impacts - Weekday

Site	Site Location	Receptor Sensitivity	Traffic % Increase (HGV)	Traffic % Increase (Total)	Magnitude	Effect	Notes
81	A17 (Holbeach)	**Low**	3%	0.4%	Negligible	Negligible	
82	A16 (Grimsby)	**High**	13%	0.4%	High	Major	The HGV percentage increase is greater than 10%, therefore has a magnitude of High based on the receptor sensitivity. The receptor sensitivity is High because there are residential properties close to the receptor in Grimsby.
83	A16 (New Waltham)	**Low**	12%	0.4%	Low	Negligible	
84	A16 (Utterby)	**Low**	8%	0.5%	Negligible	Negligible	
85	A16 (Louth)	**Negligible**	14%	1.1%	Negligible	Negligible	
86	B1225 (Ludford)	**Negligible**	16%	1.6%	Negligible	Negligible	
87	B1225 (Normanby le Wold)	**Negligible**	19%	1.4%	Negligible	Negligible	
88	Croxton Road (Humberside Airport)	**Negligible**	201%	3.1%	Negligible	Negligible	
89	A18 (Barnetby le Wold)	**Low**	6%	0.4%	Negligible	Negligible	
93	B1372 (Woodthorpe)	**Low**	190%	6.8%	Low	Negligible	
95	A1028 (Fordington)	**Negligible**	7%	0.3%	Negligible	Negligible	
100	A18 (Beesby)	**Negligible**	0%	0.0%	Negligible	Negligible	

Table 14.22 Traffic Impact Significance of Effects (Route Section 1) – Road Safety Impacts - Weekday

Site	Site Location	Receptor Sensitivity	Traffic % Increase (Total)	Magnitude	Effect	Notes
4	A52 (Huttoft)	**Very High**	4.9%	Negligible	Minor	The effects of the additional traffic on receptor locations within the ZoI are considered Negligible at the majority of locations, with 7 locations experiencing Minor adverse effects. In addition, the construction process is transient and short-term, therefore the overall effects are considered **not significant**.
5	B1449 (Thurlby)	**Medium**	6.3%		Minor	
6	A1111 (Markby)	**Low**	1.8%		Negligible	
7	A1104 (Salesby)	**Low**	2.2%		Negligible	
8	A1104 (Alford)	**Very High**	3.1%		Minor	
9	A16 (Ulceby Cross)	**Medium**	0.9%		Negligible	
10	A16 (Ulceby Cross)	**Low**	3.8%		Negligible	
14	South Ings Lane (Slackholme End)	**Negligible**	0.4%		Negligible	
16	Ingoldmells Road (Ashington End)	**Low**	0.5%		Negligible	
17	A158 (Ashington End)	**Medium**	0.1%		Negligible	
18	A158 (Burgh le Marsh)	**Negligible**	0.2%		Negligible	
25	A16 (Hilldyke)	**Very High**	1.7%		Minor	
27	A16 (Northlands)	**Very High**	2.3%		Minor	
28	A16 (East Keal)	**Medium**	1.9%		Negligible	
32	A155 (East Kirkby)	**Medium**	0.1%		Negligible	
39	A158 (Hagworthingham)	**Low**	0.9%		Negligible	
40	A16 (Haugham)	**Low**	0.6%		Negligible	
42	A158 (Eddington)	**Low**	0.5%		Negligible	
45	A158 (Stainton by Langworth)	**Low**	1.4%		Negligible	
51	A153 (Tattershall Bridge)	**Low**	0.0%		Negligible	
52	A153 (Anwick)	**Medium**	0.0%		Negligible	
61	A16 (Kirton)	**Negligible**	0.5%		Negligible	
62	A16 (Algarkirk)	**Negligible**	0.5%		Negligible	

Table 14.22 Traffic Impact Significance of Effects (Route Section 1) – Road Safety Impacts - Weekday						
Site	**Site Location**	**Receptor Sensitivity**	**Traffic % Increase (Total)**	**Magnitude**	**Effect**	**Notes**
71	A1031 (Theddlethorpe)	**Medium**	0.1%		Negligible	
72	A52 (Mablethorpe)	**High**	0.1%		Minor	
73	A1104 (Maltby le Marsh)	**Medium**	0.0%		Negligible	
74	A157 (South Reston)	**Medium**	2.9%		Negligible	
77	A155 (Mareham le Fen)	**Medium**	0.1%		Negligible	
78	A17 (Kings Lynn)	**Negligible**	0.2%		Negligible	
79	A17 (West Lynn)	**Negligible**	0.3%		Negligible	
80	A17 (Long Sutton)	**Negligible**	0.3%		Negligible	
81	A17 (Holbeach)	**Low**	0.4%		Negligible	
82	A16 (Grimsby)	**High**	0.4%		Minor	
83	A16 (New Waltham)	**Low**	0.4%		Negligible	
84	A16 (Utterby)	**Low**	0.5%		Negligible	
85	A16 (Louth)	**Negligible**	1.1%		Negligible	
86	B1225 (Ludford)	**Negligible**	1.6%		Negligible	
87	B1225 (Normanby le Wold)	**Negligible**	1.4%		Negligible	
88	Croxton Road (Humberside Airport)	**Negligible**	3.1%		Negligible	
89	A18 (Barnetby le Wold)	**Low**	0.4%		Negligible	
93	B1372 (Woodthorpe)	**Low**	6.8%		Negligible	
95	A1028 (Fordington)	**Negligible**	0.3%		Negligible	
100	A18 (Beesby)	**Negligible**	0.0%		Negligible	

Table 14.23 Traffic Impact Significance of Effects (Route Section 1) – Pedestrian/Cycle Impacts - Weekday

Site	Site Location	Receptor Sensitivity	Magnitude	Effect	Notes
4	A52 (Huttoft)	**Very High**	Medium	Major	At the majority of receptor locations there are limited or no pedestrian/cycling facilities available, therefore in accordance with the criteria outlined in Table 14.5, the impact magnitude for the sites has been identified as either 'High' or 'Medium' with only one exception. When the receptor sensitivity is combined with these magnitudes, a number of the receptors experience a 'Major' or 'Moderate' adverse overall significance. However, it should be noted that there are currently very few pedestrians/cyclists who currently use the roads under assessment and due to the nature of the roads, very few additional pedestrian/cyclist movements would be expected in the future. The works are also expected to be temporary in nature, therefore any significant effects will only be apparent for a limited period.
5	B1449 (Thurlby)	**Medium**	High	Moderate	
6	A1111 (Markby)	**Low**	High	Moderate	
7	A1104 (Salesby)	**Low**	High	Moderate	
8	A1104 (Alford)	**Very High**	Medium	Major	
9	A16 (Ulceby Cross)	**Medium**	Medium	Moderate	
10	A16 (Ulceby Cross)	**Low**	High	Moderate	
14	South Ings Lane (Slackholme End)	**Negligible**	High	Minor	
16	Ingoldmells Road (Ashington End)	**Low**	High	Moderate	
17	A158 (Ashington End)	**Medium**	Medium	Moderate	
18	A158 (Burgh le Marsh)	**Negligible**	Medium	Negligible	
25	A16 (Hilldyke)	**Very High**	High	Major	
27	A16 (Northlands)	**Very High**	High	Major	
28	A16 (East Keal)	**Medium**	High	Moderate	
32	A155 (East Kirkby)	**Medium**	High	Moderate	
39	A158 (Hagworthingham)	**Low**	Medium	Minor	
40	A16 (Haugham)	**Low**	High	Moderate	
42	A158 (Eddington)	**Low**	High	Moderate	
45	A158 (Stainton by Langworth)	**Low**	High	Moderate	
51	A153 (Tattershall Bridge)	**Low**	Medium	Minor	
52	A153 (Anwick)	**Medium**	Medium	Moderate	
61	A16 (Kirton)	**Negligible**	Medium	Negligible	
62	A16 (Algarkirk)	**Negligible**	High	Minor	
71	A1031 (Theddlethorpe)	**Medium**	Medium	Moderate	

Table 14.23 Traffic Impact Significance of Effects (Route Section 1) – Pedestrian/Cycle Impacts - Weekday					
Site	**Site Location**	**Receptor Sensitivity**	**Magnitude**	**Effect**	**Notes**
72	A52 (Mablethorpe)	**High**	High	Major	
73	A1104 (Maltby le Marsh)	**Medium**	Medium	Moderate	
74	A157 (South Reston)	**Medium**	High	Moderate	
77	A155 (Mareham le Fen)	**Medium**	High	Moderate	
78	A17 (Kings Lynn)	**Negligible**	Medium	Negligible	
79	A17 (West Lynn)	**Negligible**	High	Minor	
80	A17 (Long Sutton)	**Negligible**	High	Minor	
81	A17 (Holbeach)	**Low**	High	Moderate	
82	A16 (Grimsby)	**High**	Negligible	Minor	
83	A16 (New Waltham)	**Low**	Medium	Minor	
84	A16 (Utterby)	**Low**	Medium	Minor	
85	A16 (Louth)	**Negligible**	High	Minor	
86	B1225 (Ludford)	**Negligible**	High	Minor	
87	B1225 (Normanby le Wold)	**Negligible**	High	Minor	
88	Croxton Road (Humberside Airport)	**Negligible**	High	Minor	
89	A18 (Barnetby le Wold)	**Low**	Medium	Minor	
93	B1372 (Woodthorpe)	**Low**	High	Moderate	
95	A1028 (Fordington)	**Negligible**	High	Minor	
100	A18 (Beesby)	**Negligible**	High	Minor	

Table 14.24 Traffic Impact Significance of Effects (Route Section 1) – HGV Impacts - Saturday

Site	Site Location	Receptor Sensitivity	Traffic % Increase (HGV)	Magnitude	Effect	Notes
4	A52 (Huttoft)	**Very High**	388%	Medium	Major	On a Saturday 8 receptor locations would experience significant effects. However, it is proposed that the majority of HGV movements will take place on weekdays, with Saturdays reserved for traffic movements only if required. Also, works on a Saturday would only constitute around 16% of the total working time during a given six day working week, therefore the impacts would be considered minimal.
5	B1449 (Thurlby)	**Medium**	728%	Medium	Moderate	
6	A1111 (Markby)	**Low**	0%	Negligible	Negligible	
7	A1104 (Salesby)	**Low**	345%	Medium	Minor	
8	A1104 (Alford)	**Very High**	417%	Medium	Major	
9	A16 (Ulceby Cross)	**Medium**	43%	Medium	Moderate	
10	A16 (Ulceby Cross)	**Low**	239%	Medium	Minor	
14	South Ings Lane (Slackholme End)	**Negligible**	0%	Negligible	Negligible	
16	Ingoldmells Road (Ashington End)	**Low**	0%	Negligible	Negligible	
17	A158 (Ashington End)	**Medium**	32%	Low	Minor	
18	A158 (Burgh le Marsh)	**Negligible**	14%	Negligible	Negligible	
25	A16 (Hilldyke)	**Very High**	123%	Medium	Major	
27	A16 (Northlands)	**Very High**	185%	Medium	Major	
28	A16 (East Keal)	**Medium**	124%	Medium	Moderate	
32	A155 (East Kirkby)	**Medium**	0%	Negligible	Negligible	
39	A158 (Hagworthingham)	**Low**	81%	Medium	Minor	
40	A16 (Haugham)	**Low**	7%	Negligible	Negligible	
42	A158 (Eddington)	**Low**	38%	Low	Negligible	
45	A158 (Stainton by Langworth)	**Low**	148%	Medium	Minor	
51	A153 (Tattershall Bridge)	**Low**	0%	Negligible	Negligible	
52	A153 (Anwick)	**Medium**	0%	Negligible	Negligible	
61	A16 (Kirton)	**Negligible**	31%	Low	Negligible	
62	A16 (Algarkirk)	**Negligible**	30%	Negligible	Negligible	
71	A1031 (Theddlethorpe)	**Medium**	0%	Negligible	Negligible	
72	A52 (Mablethorpe)	**High**	0%	Negligible	Minor	
73	A1104 (Maltby le Marsh)	**Medium**	0%	Negligible	Negligible	

Table 14.24 Traffic Impact Significance of Effects (Route Section 1) – HGV Impacts - Saturday						
Site	**Site Location**	**Receptor Sensitivity**	**Traffic % Increase (HGV)**	**Magnitude**	**Effect**	**Notes**
74	A157 (South Reston)	**Medium**	233%	Medium	Moderate	
77	A155 (Mareham le Fen)	**Medium**	0%	Negligible	Negligible	
78	A17 (Kings Lynn)	**Negligible**	3%	Negligible	Negligible	
79	A17 (West Lynn)	**Negligible**	18%	Negligible	Negligible	
80	A17 (Long Sutton)	**Negligible**	12%	Negligible	Negligible	
81	A17 (Holbeach)	**Low**	14%	Negligible	Negligible	
82	A16 (Grimsby)	**High**	34%	Low	Moderate	
83	A16 (New Waltham)	**Low**	50%	Medium	Minor	
84	A16 (Utterby)	**Low**	31%	Low	Negligible	
85	A16 (Louth)	**Negligible**	59%	Medium	Negligible	
86	B1225 (Ludford)	**Negligible**	30%	Low	Negligible	
87	B1225 (Normanby le Wold)	**Negligible**	58%	Medium	Negligible	
88	Croxton Road (Humberside Airport)	**Negligible**	741%	Medium	Negligible	
89	A18 (Barnetby le Wold)	**Low**	34%	Low	Negligible	
93	B1372 (Woodthorpe)	**Low**	732%	Medium	Minor	
95	A1028 (Fordington)	**Negligible**	27%	Negligible	Negligible	
100	A18 (Beesby)	**Negligible**	0%	Negligible	Negligible	

Table 14.25 Traffic Impact Significance of Effects (Route Section 1) – Severance Impacts - Saturday							
Site	Site Location	Receptor Sensitivity	Traffic % Increase (HGV)	Traffic % Increase (Total)	Magnitude	Effect	Notes
4	A52 (Huttoft)	**Very High**	388%	6.5%	High	Major	On a Saturday 10 receptor locations would experience significant effects. However, it is proposed that the majority of HGV movements will take place on weekdays, with Saturdays reserved for traffic movements only if required. Also, works on a Saturday would only constitute around 16% of the total working time during a given six day working week, therefore the impacts would be considered minimal.
5	B1449 (Thurlby)	**Medium**	728%	8.3%	Medium	Moderate	
6	A1111 (Markby)	**Low**	0%	2.5%	Low	Negligible	
7	A1104 (Salesby)	**Low**	345%	2.8%	Low	Negligible	
8	A1104 (Alford)	**Very High**	417%	4.5%	High	Major	
9	A16 (Ulceby Cross)	**Medium**	43%	1.3%	Medium	Moderate	
10	A16 (Ulceby Cross)	**Low**	239%	6.1%	Low	Minor	
14	South Ings Lane (Slackholme End)	**Negligible**	0%	0.5%	Negligible	Negligible	
16	Ingoldmells Road (Ashington End)	**Low**	0%	0.8%	Negligible	Negligible	
17	A158 (Ashington End)	**Medium**	32%	0.1%	Medium	Moderate	
18	A158 (Burgh le Marsh)	**Negligible**	14%	0.2%	Negligible	Negligible	
25	A16 (Hilldyke)	**Very High**	123%	2.2%	High	Major	
27	A16 (Northlands)	**Very High**	185%	3.1%	High	Major	
28	A16 (East Keal)	**Medium**	124%	2.5%	Medium	Moderate	
32	A155 (East Kirkby)	**Medium**	0%	0.1%	Negligible	Negligible	
39	A158 (Hagworthingham)	**Low**	81%	1.0%	Low	Negligible	
40	A16 (Haugham)	**Low**	7%	0.5%	Low	Negligible	
42	A158 (Eddington)	**Low**	38%	0.6%	Low	Negligible	
45	A158 (Stainton by Langworth)	**Low**	148%	1.8%	Low	Negligible	
51	A153 (Tattershall Bridge)	**Low**	0%	0.1%	Negligible	Negligible	
52	A153 (Anwick)	**Medium**	0%	0.1%	Negligible	Negligible	
61	A16 (Kirton)	**Negligible**	31%	0.7%	Negligible	Negligible	
62	A16 (Algarkirk)	**Negligible**	30%	0.7%	Negligible	Negligible	
71	A1031 (Theddlethorpe)	**Medium**	0%	0.1%	Negligible	Negligible	
72	A52 (Mablethorpe)	**High**	0%	0.1%	Negligible	Minor	
73	A1104 (Maltby le Marsh)	**Medium**	0%	0.0%	Negligible	Negligible	
74	A157 (South Reston)	**Medium**	233%	3.3%	Medium	Moderate	

Table 14.25 Traffic Impact Significance of Effects (Route Section 1) – Severance Impacts - Saturday							
Site	Site Location	Receptor Sensitivity	Traffic % Increase (HGV)	Traffic % Increase (Total)	Magnitude	Effect	Notes
77	A155 (Mareham le Fen)	**Medium**	0%	0.1%	Negligible	Negligible	
78	A17 (Kings Lynn)	**Negligible**	3%	0.2%	Negligible	Negligible	
79	A17 (West Lynn)	**Negligible**	18%	0.4%	Negligible	Negligible	
80	A17 (Long Sutton)	**Negligible**	12%	0.5%	Negligible	Negligible	
81	A17 (Holbeach)	**Low**	14%	0.6%	Low	Negligible	
82	A16 (Grimsby)	**High**	34%	0.5%	High	Major	
83	A16 (New Waltham)	**Low**	50%	0.4%	Low	Negligible	
84	A16 (Utterby)	**Low**	31%	0.6%	Low	Negligible	
85	A16 (Louth)	**Negligible**	59%	1.6%	Negligible	Negligible	
86	B1225 (Ludford)	**Negligible**	30%	2.1%	Negligible	Negligible	
87	B1225 (Normanby le Wold)	**Negligible**	58%	2.4%	Negligible	Negligible	
88	Croxton Road (Humberside Airport)	**Negligible**	741%	4.1%	Negligible	Negligible	
89	A18 (Barnetby le Wold)	**Low**	34%	0.6%	Low	Negligible	
93	B1372 (Woodthorpe)	**Low**	732%	7.3%	Low	Negligible	
95	A1028 (Fordington)	**Negligible**	27%	0.4%	Negligible	Negligible	
100	A18 (Beesby)	**Negligible**	0%	0.1%	Negligible	Negligible	

Table 14.26 Traffic Impact Significance of Effects (Route Section 1) – Road Safety Impacts - Saturday						
Site	**Site Location**	**Receptor Sensitivity**	**Traffic % Increase (Total)**	**Magnitude**	**Effect**	**Notes**
4	A52 (Huttoft)	**Very High**	6.5%	Negligible	Moderate	On a Saturday 2 receptor locations would experience significant effects. However, it is proposed that the majority of HGV movements will take place on weekdays, with Saturdays reserved for traffic movements only if required. Also, works on a Saturday would only constitute around 16% of the total working time during a given six day working week, therefore the impacts would be considered minimal.
5	B1449 (Thurlby)	**Medium**	8.3%		Minor	
6	A1111 (Markby)	**Low**	2.5%		Negligible	
7	A1104 (Salesby)	**Low**	2.8%		Negligible	
8	A1104 (Alford)	**Very High**	4.5%		Moderate	
9	A16 (Ulceby Cross)	**Medium**	1.3%		Negligible	
10	A16 (Ulceby Cross)	**Low**	6.1%		Negligible	
14	South Ings Lane (Slackholme End)	**Negligible**	0.5%		Negligible	
16	Ingoldmells Road (Ashington End)	**Low**	0.8%		Negligible	
17	A158 (Ashington End)	**Medium**	0.1%		Negligible	
18	A158 (Burgh le Marsh)	**Negligible**	0.2%		Negligible	
25	A16 (Hilldyke)	**Very High**	2.2%		Minor	
27	A16 (Northlands)	**Very High**	3.1%		Minor	
28	A16 (East Keal)	**Medium**	2.5%		Negligible	
32	A155 (East Kirkby)	**Medium**	0.1%		Negligible	
39	A158 (Hagworthingham)	**Low**	1.0%		Negligible	
40	A16 (Haugham)	**Low**	0.5%		Negligible	
42	A158 (Eddington)	**Low**	0.6%		Negligible	
45	A158 (Stainton by Langworth)	**Low**	1.8%		Negligible	
51	A153 (Tattershall Bridge)	**Low**	0.1%		Negligible	
52	A153 (Anwick)	**Medium**	0.1%		Negligible	
61	A16 (Kirton)	**Negligible**	0.7%		Negligible	
62	A16 (Algarkirk)	**Negligible**	0.7%		Negligible	
71	A1031 (Theddlethorpe)	**Medium**	0.1%		Negligible	
72	A52 (Mablethorpe)	**High**	0.1%		Minor	
73	A1104 (Maltby le Marsh)	**Medium**	0.0%		Negligible	

Table 14.26 Traffic Impact Significance of Effects (Route Section 1) – Road Safety Impacts - Saturday						
Site	**Site Location**	**Receptor Sensitivity**	**Traffic % Increase (Total)**	**Magnitude**	**Effect**	**Notes**
74	A157 (South Reston)	**Medium**	3.3%		Negligible	
77	A155 (Mareham le Fen)	**Medium**	0.1%		Negligible	
78	A17 (Kings Lynn)	**Negligible**	0.2%		Negligible	
79	A17 (West Lynn)	**Negligible**	0.4%		Negligible	
80	A17 (Long Sutton)	**Negligible**	0.5%		Negligible	
81	A17 (Holbeach)	**Low**	0.6%		Negligible	
82	A16 (Grimsby)	**High**	0.5%		Minor	
83	A16 (New Waltham)	**Low**	0.4%		Negligible	
84	A16 (Utterby)	**Low**	0.6%		Negligible	
85	A16 (Louth)	**Negligible**	1.6%		Negligible	
86	B1225 (Ludford)	**Negligible**	2.1%		Negligible	
87	B1225 (Normanby le Wold)	**Negligible**	2.4%		Negligible	
88	Croxton Road (Humberside Airport)	**Negligible**	4.1%		Negligible	
89	A18 (Barnetby le Wold)	**Low**	0.6%		Negligible	
93	B1372 (Woodthorpe)	**Low**	7.3%		Negligible	
95	A1028 (Fordington)	**Negligible**	0.4%		Negligible	
100	A18 (Beesby)	**Negligible**	0.1%		Negligible	

Table 14.27 Traffic Impact Significance of Effects (Route Section 1) – Pedestrian/Cycle Impacts - Saturday					
Site	**Site Location**	**Receptor Sensitivity**	**Magnitude**	**Effect**	**Notes**
4	A52 (Huttoft)	**Very High**	Medium	Major	At the majority of receptor locations there are limited or no pedestrian/cycling facilities available, therefore in accordance with the criteria outlined in Table 14.5, the impact magnitude for the sites has been identified as either 'High' or 'Medium' with only one exception. When the receptor sensitivity is combined with these magnitudes, a number of the receptors experience a 'Major' or 'Moderate' adverse overall significance. However, it should be noted that there are currently very few pedestrians/cyclists who currently use the roads under assessment and due to the nature of the roads, very few additional pedestrian/cyclist movements would be expected in the future. The works are also expected to be temporary in nature, therefore any significant effects will only be apparent for a limited period.
5	B1449 (Thurlby)	**Medium**	High	Moderate	
6	A1111 (Markby)	**Low**	High	Moderate	
7	A1104 (Salesby)	**Low**	High	Moderate	
8	A1104 (Alford)	**Very High**	Medium	Major	
9	A16 (Ulceby Cross)	**Medium**	Medium	Moderate	
10	A16 (Ulceby Cross)	**Low**	High	Moderate	
14	South Ings Lane (Slackholme End)	**Negligible**	High	Minor	
16	Ingoldmells Road (Ashington End)	**Low**	High	Moderate	
17	A158 (Ashington End)	**Medium**	Medium	Moderate	
18	A158 (Burgh le Marsh)	**Negligible**	Medium	Negligible	
25	A16 (Hilldyke)	**Very High**	High	Major	
27	A16 (Northlands)	**Very High**	High	Major	
28	A16 (East Keal)	**Medium**	High	Moderate	
32	A155 (East Kirkby)	**Medium**	High	Moderate	
39	A158 (Hagworthingham)	**Low**	Medium	Minor	
40	A16 (Haugham)	**Low**	High	Moderate	
42	A158 (Eddington)	**Low**	High	Moderate	
45	A158 (Stainton by Langworth)	**Low**	High	Moderate	
51	A153 (Tattershall Bridge)	**Low**	Medium	Minor	
52	A153 (Anwick)	**Medium**	Medium	Moderate	
61	A16 (Kirton)	**Negligible**	Medium	Negligible	
62	A16 (Algarkirk)	**Negligible**	High	Minor	
71	A1031 (Theddlethorpe)	**Medium**	High	Moderate	
72	A52 (Mablethorpe)	**High**	Low	Minor	
73	A1104 (Maltby le Marsh)	**Medium**	Medium	Moderate	
74	A157 (South Reston)	**Medium**	High	Moderate	

Table 14.27 Traffic Impact Significance of Effects (Route Section 1) – Pedestrian/Cycle Impacts - Saturday					
Site	**Site Location**	**Receptor Sensitivity**	**Magnitude**	**Effect**	**Notes**
77	A155 (Mareham le Fen)	**Medium**	High	Moderate	
78	A17 (Kings Lynn)	**Negligible**	Medium	Negligible	
79	A17 (West Lynn)	**Negligible**	High	Minor	
80	A17 (Long Sutton)	**Negligible**	High	Minor	
81	A17 (Holbeach)	**Low**	High	Moderate	
82	A16 (Grimsby)	**High**	Negligible	Minor	
83	A16 (New Waltham)	**Low**	Medium	Minor	
84	A16 (Utterby)	**Low**	Medium	Minor	
85	A16 (Louth)	**Negligible**	High	Minor	
86	B1225 (Ludford)	**Negligible**	High	Minor	
87	B1225 (Normanby le Wold)	**Negligible**	High	Minor	
88	Croxton Road (Humberside Airport)	**Negligible**	High	Minor	
89	A18 (Barnetby le Wold)	**Low**	Medium	Minor	
93	B1372 (Woodthorpe)	**Low**	High	Moderate	
95	A1028 (Fordington)	**Negligible**	High	Minor	
100	A18 (Beesby)	**Negligible**	High	Minor	

6.3 Route Section 2 Well High Lane to A16 (Keal Road)

Temporary Impacts

6.3.1 Table 14.28 to Table 14.35 present summaries of the potential effects of the additional HGV traffic generated by the TCFs within Route Section 2. Only the receptors locations within the ZoI that have a percentage increase in either HGV traffic or total traffic have been included in the tables. All other receptor locations have a 0% increase in traffic, therefore are considered to have negligible impacts.

6.3.2 The tables below are based on winter baseline traffic flows, including the 20% traffic uplift.

6.3.3 Tables showing all traffic scenarios are provided in Appendix 14.3.

Table 14.28 Traffic Impact Significance of Effects (Route Section 2) – HGV Impacts - Weekday

Site	Site Location	Receptor Sensitivity	Traffic % Increase (HGV)	Magnitude	Effect	Notes
7	A1104 (Salesby)	**Low**	0%	Negligible	Negligible	
8	A1104 (Alford)	**Very High**	0%	Negligible	Minor	
9	A16 (Ulceby Cross)	**Medium**	13%	Negligible	Negligible	
10	A16 (Ulceby Cross)	**Low**	32%	Low	Negligible	
11	A158 (Scremby)	**Low**	11%	Negligible	Negligible	
17	A158 (Ashington End)	**Medium**	12%	Negligible	Negligible	
18	A158 (Burgh le Marsh)	**Negligible**	12%	Negligible	Negligible	
25	A16 (Hilldyke)	**Very High**	34%	Low	Moderate	The magnitude is Low as the HGV percentage increase is between 31-39% for 3-6 months, and the receptor sensitivity is Very High because there are schools and residential properties close to the receptor in Boston.
27	A16 (Northlands)	**Very High**	41%	Medium	Major	The magnitude is Medium as the HGV percentage increase is greater than 40% for 3-6 months, and the receptor sensitivity is Very High because there is a school close to the receptor.
28	A16 (East Keal)	**Medium**	29%	Negligible	Negligible	
30	Spilsby Hill (Old Bolingbroke)	**Medium**	0%	Negligible	Negligible	
32	A155 (East Kirkby)	**Medium**	5%	Negligible	Negligible	
34	Main Road (Carrington)	**Medium**	6%	Negligible	Negligible	
39	A158 (Hagworthingham)	**Low**	17%	Negligible	Negligible	
40	A16 (Haugham)	**Low**	18%	Negligible	Negligible	
42	A158 (Eddington)	**Low**	10%	Negligible	Negligible	
43	B1225 (Ranby)	**Low**	7%	Negligible	Negligible	
45	A158 (Stainton by Langworth)	**Low**	53%	Medium	Minor	
51	A153 (Tattershall Bridge)	**Low**	2%	Negligible	Negligible	
52	A153 (Anwick)	**Medium**	2%	Negligible	Negligible	
61	A16 (Kirton)	**Negligible**	9%	Negligible	Negligible	

Table 14.28 Traffic Impact Significance of Effects (Route Section 2) – HGV Impacts - Weekday						
Site	**Site Location**	**Receptor Sensitivity**	**Traffic % Increase (HGV)**	**Magnitude**	**Effect**	**Notes**
62	A16 (Algarkirk)	**Negligible**	8%	Negligible	Negligible	
73	A1104 (Maltby le Marsh)	**Medium**	0%	Negligible	Negligible	
77	A155 (Mareham le Fen)	**Medium**	4%	Negligible	Negligible	
78	A17 (Kings Lynn)	**Negligible**	1%	Negligible	Negligible	
79	A17 (West Lynn)	**Negligible**	4%	Negligible	Negligible	
80	A17 (Long Sutton)	**Negligible**	3%	Negligible	Negligible	
81	A17 (Holbeach)	**Low**	3%	Negligible	Negligible	
82	A16 (Grimsby)	**High**	11%	Negligible	Minor	
83	A16 (New Waltham)	**Low**	12%	Negligible	Negligible	
84	A16 (Utterby)	**Low**	8%	Negligible	Negligible	
85	A16 (Louth)	**Negligible**	9%	Negligible	Negligible	
86	B1225 (Ludford)	**Negligible**	14%	Negligible	Negligible	
87	B1225 (Normanby le Wold)	**Negligible**	16%	Negligible	Negligible	
88	Croxton Road (Humberside Airport)	**Negligible**	169%	Medium	Negligible	
89	A18 (Barnetby le Wold)	**Low**	5%	Negligible	Negligible	
95	A1028 (Fordington)	**Negligible**	3%	Negligible	Negligible	
96	B1195 (Lusby)	**Low**	59%	Medium	Minor	
100	A18 (Beesby)	**Negligible**	0%	Negligible	Negligible	

Table 14.29 Traffic Impact Significance of Effects (Route Section 2) – Severance Impacts - Weekday

Site	Site Location	Receptor Sensitivity	Traffic % Increase (HGV)	Traffic % Increase (Total)	Magnitude	Effect	Notes
7	A1104 (Salesby)	**Low**	0%	0%	Negligible	Negligible	
8	A1104 (Alford)	**Very High**	0%	0%	Negligible	Minor	
9	A16 (Ulceby Cross)	**Medium**	13%	1%	Medium	Moderate	The HGV percentage increase is greater than 10%, therefore has a magnitude of Medium based on the receptor sensitivity. The receptor sensitivity is Medium because there are residential properties close to the receptor.
10	A16 (Ulceby Cross)	**Low**	32%	2%	Low	Negligible	
11	A158 (Scremby)	**Low**	11%	0%	Low	Negligible	
17	A158 (Ashington End)	**Medium**	12%	0%	Medium	Moderate	The HGV percentage increase is greater than 10%, therefore has a magnitude of Medium based on the receptor sensitivity. The receptor sensitivity is Medium because there are shops/businesses, residential properties close to the receptor.
18	A158 (Burgh le Marsh)	**Negligible**	12%	0%	Negligible	Negligible	
25	A16 (Hilldyke)	**Very High**	34%	2%	High	Major	The HGV percentage increase is greater than 10%, therefore has a magnitude of High based on the receptor sensitivity. The receptor sensitivity is Very High because there are schools and residential properties close to the receptor in Boston.
27	A16 (Northlands)	**Very High**	41%	2%	High	Major	The HGV percentage increase is greater than 10%, therefore has a magnitude of High based on the receptor sensitivity. The receptor sensitivity is Very High because there is a school close to the receptor.
28	A16 (East Keal)	**Medium**	29%	2%	Medium	Moderate	The HGV percentage increase is greater than 10%, therefore has a magnitude of Medium based on the receptor sensitivity. The receptor sensitivity is Medium because there are shops/businesses, residential properties close to the receptor.
30	Spilsby Hill (Old Bolingbroke)	**Medium**	0%	0%	Negligible	Negligible	
32	A155 (East Kirkby)	**Medium**	5%	0%	Negligible	Negligible	
34	Main Road (Carrington)	**Medium**	6%	0%	Negligible	Negligible	

Table 14.29 Traffic Impact Significance of Effects (Route Section 2) – Severance Impacts - Weekday

Site	Site Location	Receptor Sensitivity	Traffic % Increase (HGV)	Traffic % Increase (Total)	Magnitude	Effect	Notes
39	A158 (Hagworthingham)	**Low**	17%	1%	Low	Negligible	
40	A16 (Haugham)	**Low**	18%	2%	Low	Negligible	
42	A158 (Eddington)	**Low**	10%	1%	Negligible	Negligible	
43	B1225 (Ranby)	**Low**	7%	1%	Negligible	Negligible	
45	A158 (Stainton by Langworth)	**Low**	53%	1%	Low	Negligible	
51	A153 (Tattershall Bridge)	**Low**	2%	0%	Negligible	Negligible	
52	A153 (Anwick)	**Medium**	2%	0%	Negligible	Negligible	
61	A16 (Kirton)	**Negligible**	9%	1%	Negligible	Negligible	
62	A16 (Algarkirk)	**Negligible**	8%	1%	Negligible	Negligible	
73	A1104 (Maltby le Marsh)	**Medium**	0%	0%	Negligible	Negligible	
77	A155 (Mareham le Fen)	**Medium**	4%	0%	Negligible	Negligible	
78	A17 (Kings Lynn)	**Negligible**	1%	0%	Negligible	Negligible	
79	A17 (West Lynn)	**Negligible**	4%	0%	Negligible	Negligible	
80	A17 (Long Sutton)	**Negligible**	3%	0%	Negligible	Negligible	
81	A17 (Holbeach)	**Low**	3%	0%	Negligible	Negligible	
82	A16 (Grimsby)	**High**	11%	0%	High	Major	The HGV percentage increase is greater than 10%, therefore has a magnitude of High based on the receptor sensitivity. The receptor sensitivity is High because there are residential properties close to the receptor in Grimsby.
83	A16 (New Waltham)	**Low**	12%	0%	Low	Negligible	
84	A16 (Utterby)	**Low**	8%	0%	Negligible	Negligible	
85	A16 (Louth)	**Negligible**	9%	1%	Negligible	Negligible	
86	B1225 (Ludford)	**Negligible**	14%	1%	Negligible	Negligible	
87	B1225 (Normanby le Wold)	**Negligible**	16%	1%	Negligible	Negligible	

Table 14.29 Traffic Impact Significance of Effects (Route Section 2) – Severance Impacts - Weekday							
Site	Site Location	Receptor Sensitivity	Traffic % Increase (HGV)	Traffic % Increase (Total)	Magnitude	Effect	Notes
88	Croxton Road (Humberside Airport)	**Negligible**	169%	3%	Negligible	Negligible	
89	A18 (Barnetby le Wold)	**Low**	5%	0%	Negligible	Negligible	
95	A1028 (Fordington)	**Negligible**	3%	0%	Negligible	Negligible	
96	B1195 (Lusby)	**Low**	59%	2%	Low	Negligible	
100	A18 (Beesby)	**Negligible**	0%	0%	Negligible	Negligible	

Table 14.30 Traffic Impact Significance of Effects (Route Section 2) – Road Safety Impacts - Weekday

Site	Site Location	Receptor Sensitivity	Traffic % Increase (Total)	Magnitude	Effect	Notes
7	A1104 (Salesby)	**Low**	0%	Negligible	Negligible	The effects of the additional traffic on receptor locations within the ZoI are considered Negligible at the majority of locations, with 4 locations experiencing Minor adverse effects. In addition, the construction process is transient and short-term, therefore the overall effects are considered **not significant**.
8	A1104 (Alford)	**Very High**	0%		Minor	
9	A16 (Ulceby Cross)	**Medium**	1%		Negligible	
10	A16 (Ulceby Cross)	**Low**	2%		Negligible	
11	A158 (Scremby)	**Low**	0%		Negligible	
17	A158 (Ashington End)	**Medium**	0%		Negligible	
18	A158 (Burgh le Marsh)	**Negligible**	0%		Negligible	
25	A16 (Hilldyke)	**Very High**	2%		Minor	
27	A16 (Northlands)	**Very High**	2%		Minor	
28	A16 (East Keal)	**Medium**	2%		Negligible	
30	Spilsby Hill (Old Bolingbroke)	**Medium**	0%		Negligible	
32	A155 (East Kirkby)	**Medium**	0%		Negligible	
34	Main Road (Carrington)	**Medium**	0%		Negligible	
39	A158 (Hagworthingham)	**Low**	1%		Negligible	
40	A16 (Haugham)	**Low**	2%		Negligible	
42	A158 (Eddington)	**Low**	1%		Negligible	
43	B1225 (Ranby)	**Low**	1%		Negligible	
45	A158 (Stainton by Langworth)	**Low**	1%		Negligible	
51	A153 (Tattershall Bridge)	**Low**	0%		Negligible	
52	A153 (Anwick)	**Medium**	0%		Negligible	
61	A16 (Kirton)	**Negligible**	1%		Negligible	
62	A16 (Algarkirk)	**Negligible**	1%		Negligible	
73	A1104 (Maltby le Marsh)	**Medium**	0%		Negligible	

Table 14.30 Traffic Impact Significance of Effects (Route Section 2) – Road Safety Impacts - Weekday						
Site	**Site Location**	**Receptor Sensitivity**	**Traffic % Increase (Total)**	**Magnitude**	**Effect**	**Notes**
77	A155 (Mareham le Fen)	**Medium**	0%		Negligible	
78	A17 (Kings Lynn)	**Negligible**	0%		Negligible	
79	A17 (West Lynn)	**Negligible**	0%		Negligible	
80	A17 (Long Sutton)	**Negligible**	0%		Negligible	
81	A17 (Holbeach)	**Low**	0%		Negligible	
82	A16 (Grimsby)	**High**	0%		Minor	
83	A16 (New Waltham)	**Low**	0%		Negligible	
84	A16 (Utterby)	**Low**	0%		Negligible	
85	A16 (Louth)	**Negligible**	1%		Negligible	
86	B1225 (Ludford)	**Negligible**	1%		Negligible	
87	B1225 (Normanby le Wold)	**Negligible**	1%		Negligible	
88	Croxton Road (Humberside Airport)	**Negligible**	3%		Negligible	
89	A18 (Barnetby le Wold)	**Low**	0%		Negligible	
95	A1028 (Fordington)	**Negligible**	0%		Negligible	
96	B1195 (Lusby)	**Low**	2%		Negligible	
100	A18 (Beesby)	**Negligible**	0%		Negligible	

Table 14.31 Traffic Impact Significance of Effects (Route Section 2) – Pedestrian/Cycle Impacts - Weekday

Site	Site Location	Receptor Sensitivity	Magnitude	Effect	Notes
7	A1104 (Salesby)	**Low**	High	Moderate	At the majority of receptor locations there are limited or no pedestrian/cycling facilities available, therefore in accordance with the criteria outlined in Table 14.5, the impact magnitude for the sites has been identified as either 'High' or 'Medium' with only one exception. When the receptor sensitivity is combined with these magnitudes, a number of the receptors experience a 'Major' or 'Moderate' adverse overall significance. However, it should be noted that there are currently very few pedestrians/cyclists who currently use the roads under assessment and due to the nature of the roads, very few additional pedestrian/cyclist movements would be expected in the future. The works are also expected to be temporary in nature, therefore any significant effects will only be apparent for a limited period.
8	A1104 (Alford)	**Very High**	Medium	Major	
9	A16 (Ulceby Cross)	**Medium**	Medium	Moderate	
10	A16 (Ulceby Cross)	**Low**	High	Moderate	
11	A158 (Scremby)	**Low**	High	Moderate	
17	A158 (Ashington End)	**Medium**	Medium	Moderate	
18	A158 (Burgh le Marsh)	**Negligible**	Medium	Negligible	
25	A16 (Hilldyke)	**Very High**	High	Major	
27	A16 (Northlands)	**Very High**	High	Major	
28	A16 (East Keal)	**Medium**	High	Moderate	
30	Spilsby Hill (Old Bolingbroke)	**Medium**	High	Moderate	
32	A155 (East Kirkby)	**Medium**	High	Moderate	
34	Main Road (Carrington)	**Medium**	High	Moderate	
39	A158 (Hagworthingham)	**Low**	Medium	Minor	
40	A16 (Haugham)	**Low**	High	Moderate	
42	A158 (Eddington)	**Low**	High	Moderate	
43	B1225 (Ranby)	**Low**	High	Moderate	
45	A158 (Stainton by Langworth)	**Low**	High	Moderate	
51	A153 (Tattershall Bridge)	**Low**	Medium	Minor	
52	A153 (Anwick)	**Medium**	Medium	Moderate	
61	A16 (Kirton)	**Negligible**	Medium	Negligible	
62	A16 (Algarkirk)	**Negligible**	High	Minor	
73	A1104 (Maltby le Marsh)	**Medium**	Medium	Moderate	
77	A155 (Mareham le Fen)	**Medium**	High	Moderate	

Table 14.31 Traffic Impact Significance of Effects (Route Section 2) – Pedestrian/Cycle Impacts - Weekday					
Site	**Site Location**	**Receptor Sensitivity**	**Magnitude**	**Effect**	**Notes**
78	A17 (Kings Lynn)	**Negligible**	Medium	Negligible	
79	A17 (West Lynn)	**Negligible**	High	Minor	
80	A17 (Long Sutton)	**Negligible**	High	Minor	
81	A17 (Holbeach)	**Low**	High	Moderate	
82	A16 (Grimsby)	**High**	Negligible	Minor	
83	A16 (New Waltham)	**Low**	Medium	Minor	
84	A16 (Utterby)	**Low**	Medium	Minor	
85	A16 (Louth)	**Negligible**	High	Minor	
86	B1225 (Ludford)	**Negligible**	High	Minor	
87	B1225 (Normanby le Wold)	**Negligible**	High	Minor	
88	Croxton Road (Humberside Airport)	**Negligible**	High	Minor	
89	A18 (Barnetby le Wold)	**Low**	Medium	Minor	
95	A1028 (Fordington)	**Negligible**	High	Minor	
96	B1195 (Lusby)	**Low**	High	Moderate	
100	A18 (Beesby)	**Negligible**	High	Minor	

Table 14.32 Traffic Impact Significance of Effects (Route Section 2) – HGV Impacts - Saturday

Site	Site Location	Receptor Sensitivity	Traffic % Increase (HGV)	Magnitude	Effect	Notes
7	A1104 (Salesby)	**Low**	0%	Negligible	Negligible	On a Saturday 5 receptor locations would experience significant effects. However, it is proposed that the majority of HGV movements will take place on weekdays, with Saturdays reserved for traffic movements only if required. Also, works on a Saturday would only constitute around 16% of the total working time during a given six day working week, therefore the impacts would be considered minimal.
8	A1104 (Alford)	**Very High**	0%	Negligible	Minor	
9	A16 (Ulceby Cross)	**Medium**	58%	Medium	Moderate	
10	A16 (Ulceby Cross)	**Low**	126%	Medium	Minor	
11	A158 (Scremby)	**Low**	52%	Medium	Minor	
17	A158 (Ashington End)	**Medium**	94%	Medium	Moderate	
18	A158 (Burgh le Marsh)	**Negligible**	41%	Medium	Negligible	
25	A16 (Hilldyke)	**Very High**	119%	Medium	Major	
27	A16 (Northlands)	**Very High**	178%	Medium	Major	
28	A16 (East Keal)	**Medium**	126%	Medium	Moderate	
30	Spilsby Hill (Old Bolingbroke)	**Medium**	0%	Negligible	Negligible	
32	A155 (East Kirkby)	**Medium**	16%	Negligible	Negligible	
34	Main Road (Carrington)	**Medium**	25%	Negligible	Negligible	
39	A158 (Hagworthingham)	**Low**	68%	Medium	Minor	
40	A16 (Haugham)	**Low**	13%	Negligible	Negligible	
42	A158 (Eddington)	**Low**	48%	Medium	Minor	
43	B1225 (Ranby)	**Low**	22%	Negligible	Minor	
45	A158 (Stainton by Langworth)	**Low**	104%	Medium	Minor	
51	A153 (Tattershall Bridge)	**Low**	10%	Negligible	Negligible	
52	A153 (Anwick)	**Medium**	7%	Negligible	Negligible	
61	A16 (Kirton)	**Negligible**	29%	Negligible	Negligible	
62	A16 (Algarkirk)	**Negligible**	28%	Negligible	Negligible	
73	A1104 (Maltby le Marsh)	**Medium**	0%	Negligible	Negligible	

Table 14.32 Traffic Impact Significance of Effects (Route Section 2) – HGV Impacts - Saturday						
Site	**Site Location**	**Receptor Sensitivity**	**Traffic % Increase (HGV)**	**Magnitude**	**Effect**	**Notes**
77	A155 (Mareham le Fen)	**Medium**	16%	Negligible	Negligible	
78	A17 (Kings Lynn)	**Negligible**	3%	Negligible	Negligible	
79	A17 (West Lynn)	**Negligible**	18%	Negligible	Negligible	
80	A17 (Long Sutton)	**Negligible**	12%	Negligible	Negligible	
81	A17 (Holbeach)	**Low**	14%	Negligible	Negligible	
82	A16 (Grimsby)	**High**	30%	Negligible	Minor	
83	A16 (New Waltham)	**Low**	51%	Medium	Minor	
84	A16 (Utterby)	**Low**	31%	Low	Negligible	
85	A16 (Louth)	**Negligible**	39%	Low	Negligible	
86	B1225 (Ludford)	**Negligible**	25%	Negligible	Negligible	
87	B1225 (Normanby le Wold)	**Negligible**	49%	Medium	Negligible	
88	Croxton Road (Humberside Airport)	**Negligible**	622%	Medium	Negligible	
89	A18 (Barnetby le Wold)	**Low**	29%	Negligible	Negligible	
95	A1028 (Fordington)	**Negligible**	13%	Negligible	Negligible	
96	B1195 (Lusby)	**Low**	126%	Medium	Minor	
100	A18 (Beesby)	**Negligible**	0%	Negligible	Negligible	

Table 14.33 Traffic Impact Significance of Effects (Route Section 2) – Severance Impacts - Saturday

Site	Site Location	Receptor Sensitivity	Traffic % Increase (HGV)	Traffic % Increase (Total)	Magnitude	Effect	Notes
7	A1104 (Salesby)	**Low**	0%	0%	Negligible	Negligible	On a Saturday 9 receptor locations would experience significant effects. However, it is proposed that the majority of HGV movements will take place on weekdays, with Saturdays reserved for traffic movements only if required. Also, works on a Saturday would only constitute around 16% of the total working time during a given six day working week, therefore the impacts would be considered minimal.
8	A1104 (Alford)	**Very High**	0%	0%	Negligible	Minor	
9	A16 (Ulceby Cross)	**Medium**	58%	2%	Medium	Moderate	
10	A16 (Ulceby Cross)	**Low**	126%	4%	Low	Negligible	
11	A158 (Scremby)	**Low**	52%	1%	Low	Negligible	
17	A158 (Ashington End)	**Medium**	94%	0%	Medium	Moderate	
18	A158 (Burgh le Marsh)	**Negligible**	41%	1%	Negligible	Negligible	
25	A16 (Hilldyke)	**Very High**	119%	2%	Very High	Major	
27	A16 (Northlands)	**Very High**	178%	3%	Very High	Major	
28	A16 (East Keal)	**Medium**	126%	3%	Medium	Moderate	
30	Spilsby Hill (Old Bolingbroke)	**Medium**	0%	0.1%	Negligible	Negligible	
32	A155 (East Kirkby)	**Medium**	16%	0%	Medium	Moderate	
34	Main Road (Carrington)	**Medium**	25%	0%	Medium	Moderate	
39	A158 (Hagworthingham)	**Low**	68%	1%	Low	Negligible	
40	A16 (Haugham)	**Low**	13%	1%	Low	Negligible	
42	A158 (Eddington)	**Low**	48%	1%	Low	Negligible	
43	B1225 (Ranby)	**Low**	22%	1%	Low	Negligible	
45	A158 (Stainton by Langworth)	**Low**	104%	1%	Low	Negligible	
51	A153 (Tattershall Bridge)	**Low**	10%	0%	Negligible	Negligible	
52	A153 (Anwick)	**Medium**	7%	0%	Negligible	Negligible	
61	A16 (Kirton)	**Negligible**	29%	1%	Negligible	Negligible	
62	A16 (Algarkirk)	**Negligible**	28%	1%	Negligible	Negligible	
73	A1104 (Maltby le Marsh)	**Medium**	0%	0%	Negligible	Negligible	

Table 14.33 Traffic Impact Significance of Effects (Route Section 2) – Severance Impacts - Saturday							
Site	Site Location	Receptor Sensitivity	Traffic % Increase (HGV)	Traffic % Increase (Total)	Magnitude	Effect	Notes
77	A155 (Mareham le Fen)	**Medium**	16%	0%	Medium	Moderate	
78	A17 (Kings Lynn)	**Negligible**	3%	0%	Negligible	Negligible	
79	A17 (West Lynn)	**Negligible**	18%	0%	Negligible	Negligible	
80	A17 (Long Sutton)	**Negligible**	12%	1%	Negligible	Negligible	
81	A17 (Holbeach)	**Low**	14%	1%	Low	Negligible	
82	A16 (Grimsby)	**High**	30%	0%	High	Major	
83	A16 (New Waltham)	**Low**	51%	0%	Low	Negligible	
84	A16 (Utterby)	**Low**	31%	1%	Low	Negligible	
85	A16 (Louth)	**Negligible**	39%	1%	Negligible	Negligible	
86	B1225 (Ludford)	**Negligible**	25%	2%	Negligible	Negligible	
87	B1225 (Normanby le Wold)	**Negligible**	49%	2%	Negligible	Negligible	
88	Croxton Road (Humberside Airport)	**Negligible**	622%	3%	Negligible	Negligible	
89	A18 (Barnetby le Wold)	**Low**	29%	1%	Low	Negligible	
95	A1028 (Fordington)	**Negligible**	13%	0%	Negligible	Negligible	
96	B1195 (Lusby)	**Low**	126%	2%	Low	Negligible	
100	A18 (Beesby)	**Negligible**	0%	0%	Negligible	Negligible	

Table 14.34 Traffic Impact Significance of Effects (Route Section 2) – Road Safety Impacts - Saturday

Site	Site Location	Receptor Sensitivity	Traffic % Increase (Total)	Magnitude	Effect	Notes
7	A1104 (Salesby)	**Low**	0%	Negligible	Negligible	On a Saturday no receptor locations would experience significant effects. The majority of HGV movements will take place on weekdays, with Saturdays reserved for traffic movements only if required. Also, works on a Saturday would only constitute around 16% of the total working time during a given six day working week, therefore the impacts would be considered minimal.
8	A1104 (Alford)	**Very High**	0%		Minor	
9	A16 (Ulceby Cross)	**Medium**	2%		Negligible	
10	A16 (Ulceby Cross)	**Low**	4%		Negligible	
11	A158 (Scremby)	**Low**	1%		Negligible	
17	A158 (Ashington End)	**Medium**	0%		Negligible	
18	A158 (Burgh le Marsh)	**Negligible**	1%		Negligible	
25	A16 (Hilldyke)	**Very High**	2%		Minor	
27	A16 (Northlands)	**Very High**	3%		Minor	
28	A16 (East Keal)	**Medium**	3%		Negligible	
30	Spilsby Hill (Old Bolingbroke)	**Medium**	0.1%		Negligible	
32	A155 (East Kirkby)	**Medium**	0%		Negligible	
34	Main Road (Carrington)	**Medium**	0%		Negligible	
39	A158 (Hagworthingham)	**Low**	1%		Negligible	
40	A16 (Haugham)	**Low**	1%		Negligible	
42	A158 (Eddington)	**Low**	1%		Negligible	
43	B1225 (Ranby)	**Low**	1%		Negligible	
45	A158 (Stainton by Langworth)	**Low**	1%		Negligible	
51	A153 (Tattershall Bridge)	**Low**	0%		Negligible	
52	A153 (Anwick)	**Medium**	0%		Negligible	
61	A16 (Kirton)	**Negligible**	1%		Negligible	
62	A16 (Algarkirk)	**Negligible**	1%		Negligible	
73	A1104 (Maltby le Marsh)	**Medium**	0%		Negligible	

Table 14.34 Traffic Impact Significance of Effects (Route Section 2) – Road Safety Impacts - Saturday						
Site	**Site Location**	**Receptor Sensitivity**	**Traffic % Increase (Total)**	**Magnitude**	**Effect**	**Notes**
77	A155 (Mareham le Fen)	**Medium**	0%		Negligible	
78	A17 (Kings Lynn)	**Negligible**	0%		Negligible	
79	A17 (West Lynn)	**Negligible**	0%		Negligible	
80	A17 (Long Sutton)	**Negligible**	1%		Negligible	
81	A17 (Holbeach)	**Low**	1%		Negligible	
82	A16 (Grimsby)	**High**	0%		Minor	
83	A16 (New Waltham)	**Low**	0%		Negligible	
84	A16 (Utterby)	**Low**	1%		Negligible	
85	A16 (Louth)	**Negligible**	1%		Negligible	
86	B1225 (Ludford)	**Negligible**	2%		Negligible	
87	B1225 (Normanby le Wold)	**Negligible**	2%		Negligible	
88	Croxton Road (Humberside Airport)	**Negligible**	3%		Negligible	
89	A18 (Barnetby le Wold)	**Low**	1%		Negligible	
95	A1028 (Fordington)	**Negligible**	0%		Negligible	
96	B1195 (Lusby)	**Low**	2%		Negligible	
100	A18 (Beesby)	**Negligible**	0%		Negligible	

Table 14.35 Traffic Impact Significance of Effects (Route Section 2) – Pedestrian/Cycle Impacts - Saturday

Site	Site Location	Receptor Sensitivity	Magnitude	Effect	Notes
7	A1104 (Salesby)	**Low**	High	Moderate	At the majority of receptor locations there are limited or no pedestrian/cycling facilities available, therefore in accordance with the criteria outlined in Table 14.5, the impact magnitude for the sites has been identified as either 'High' or 'Medium' with only one exception. When the receptor sensitivity is combined with these magnitudes, a number of the receptors experience a 'Major' or 'Moderate' adverse overall significance. However, it should be noted that there are currently very few pedestrians/cyclists who currently use the roads under assessment and due to the nature of the roads, very few additional pedestrian/cyclist movements would be expected in the future. The works are also expected to be temporary in nature, therefore any significant effects will only be apparent for a limited period.
8	A1104 (Alford)	**Very High**	Medium	Major	
9	A16 (Ulceby Cross)	**Medium**	Medium	Moderate	
10	A16 (Ulceby Cross)	**Low**	High	Moderate	
11	A158 (Scremby)	**Low**	High	Moderate	
17	A158 (Ashington End)	**Medium**	Medium	Moderate	
18	A158 (Burgh le Marsh)	**Negligible**	Medium	Negligible	
25	A16 (Hilldyke)	**Very High**	High	Major	
27	A16 (Northlands)	**Very High**	High	Major	
28	A16 (East Keal)	**Medium**	High	Moderate	
30	Spilsby Hill (Old Bolingbroke)	**Medium**	High	Moderate	
32	A155 (East Kirkby)	**Medium**	High	Moderate	
34	Main Road (Carrington)	**Medium**	High	Moderate	
39	A158 (Hagworthingham)	**Low**	Medium	Minor	
40	A16 (Haugham)	**Low**	High	Moderate	
42	A158 (Eddington)	**Low**	High	Moderate	
43	B1225 (Ranby)	**Low**	High	Moderate	
45	A158 (Stainton by Langworth)	**Low**	High	Moderate	
51	A153 (Tattershall Bridge)	**Low**	Medium	Minor	
52	A153 (Anwick)	**Medium**	Medium	Moderate	
61	A16 (Kirton)	**Negligible**	Medium	Negligible	
62	A16 (Algarkirk)	**Negligible**	High	Minor	
73	A1104 (Maltby le Marsh)	**Medium**	Medium	Moderate	
77	A155 (Mareham le Fen)	**Medium**	High	Moderate	

Table 14.35 Traffic Impact Significance of Effects (Route Section 2) – Pedestrian/Cycle Impacts - Saturday					
Site	**Site Location**	**Receptor Sensitivity**	**Magnitude**	**Effect**	**Notes**
78	A17 (Kings Lynn)	**Negligible**	Medium	Negligible	
79	A17 (West Lynn)	**Negligible**	High	Minor	
80	A17 (Long Sutton)	**Negligible**	High	Minor	
81	A17 (Holbeach)	**Low**	High	Moderate	
82	A16 (Grimsby)	**High**	Negligible	Minor	
83	A16 (New Waltham)	**Low**	Medium	Minor	
84	A16 (Utterby)	**Low**	Medium	Minor	
85	A16 (Louth)	**Negligible**	High	Minor	
86	B1225 (Ludford)	**Negligible**	High	Minor	
87	B1225 (Normanby le Wold)	**Negligible**	High	Minor	
88	Croxton Road (Humberside Airport)	**Negligible**	High	Minor	
89	A18 (Barnetby le Wold)	**Low**	Medium	Minor	
95	A1028 (Fordington)	**Negligible**	High	Minor	
96	B1195 (Lusby)	**Low**	High	Moderate	
100	A18 (Beesby)	**Negligible**	High	Minor	

6.4 Route Section 3 A16 (Keal Road) to River Witham

Temporary Impacts

6.4.1 Table 14.36 to Table 14.43 present summaries of the potential effects of the additional HGV traffic generated by the TCFs within Route Section 3. Only the receptors locations within the ZoI that have a percentage increase in either HGV traffic or total traffic have been included in the tables. All other receptor locations have a 0% increase in traffic, therefore are considered to have negligible impacts.

6.4.2 The tables below are based on winter baseline traffic flows, including the 20% traffic uplift.

6.4.3 Tables showing all traffic scenarios are provided in Appendix 14.3.

Table 14.36 Traffic Impact Significance of Effects (Route Section 3) – HGV Impacts - Weekday

Site	Site Location	Receptor Sensitivity	Traffic % Increase (HGV)	Magnitude	Effect	Notes
7	A1104 (Salesby)	**Low**	0%	Negligible	Negligible	
8	A1104 (Alford)	**Very high**	0%	Negligible	Minor	
9	A16 (Ulceby Cross)	**Medium**	3%	Negligible	Negligible	
10	A16 (Ulceby Cross)	**Low**	6%	Negligible	Negligible	
11	A158 (Scremby)	**Low**	15%	Negligible	Minor	
17	A158 (Ashington End)	**Medium**	14%	Negligible	Negligible	
18	A158 (Burgh le Marsh)	**Negligible**	14%	Negligible	Negligible	
21	A52 (Wainfleet)	**Medium**	0%	Negligible	Negligible	
22	A52 (Skegness)	**High**	0%	Negligible	Minor	
23	A52 (Wrangle Lowgate)	**Very High**	0%	Negligible	Minor	
25	A16 (Hilldyke)	**Very High**	29%	Negligible	Minor	
26	Midville Road (Midville)	**Very High**	0%	Negligible	Minor	
27	A16 (Northlands)	**Very High**	31%	Low	Moderate	The magnitude is Low as the HGV percentage increase is between 31-39% for 3-6 months, and the receptor sensitivity is Very High because there is a school close to the receptor.
28	A16 (East Keal)	**Medium**	15%	Negligible	Negligible	
29	West Fen (Stickney)	**Very High**	0%	Negligible	Minor	
32	A155 (East Kirkby)	**Medium**	82%	Medium	Moderate	The magnitude is Medium as the HGV percentage increase is greater than 40% for 3-6 months, and the receptor sensitivity is Medium because there are shops/businesses, residential properties close to the receptor.
33	B1183 (Revesby Bridge)	**Medium**	53%	Medium	Moderate	The magnitude is Medium as the HGV percentage increase is greater than 40% for 3-6 months, and the receptor sensitivity is Medium because there are shops/businesses, residential properties close to the receptor.
34	Main Road (Carrington)	**Medium**	44%	Medium	Moderate	The magnitude is Medium as the HGV percentage increase is greater than 40% for 3-6 months, and the receptor sensitivity is Medium because there are shops/businesses, residential properties close to the receptor.

Table 14.36 Traffic Impact Significance of Effects (Route Section 3) – HGV Impacts - Weekday						
Site	Site Location	Receptor Sensitivity	Traffic % Increase (HGV)	Magnitude	Effect	Notes
35	Moorhouses Road (Tumby)	**Low**	0%	Negligible	Negligible	
36	Westville Road (Bunkers Hill)	**Medium**	144.8%	Medium	Moderate	The magnitude is Medium as the HGV percentage increase is greater than 40% for 3-6 months, and the receptor sensitivity is Medium because there are shops/businesses, residential properties close to the receptor.
37	Moorshide Road (Sandy Bank)	**Medium**	192%	Medium	Moderate	The magnitude is Medium as the HGV percentage increase is greater than 40% for 3-6 months, and the receptor sensitivity is Medium because there are shops/businesses, residential properties close to the receptor.
38	B1192 (New York)	**Low**	21%	Negligible	Negligible	
39	A158 (Hagworthingham)	**Low**	6%	Negligible	Negligible	
40	A16 (Haugham)	**Low**	5%	Negligible	Negligible	
41	A153 (West Ashby)	**Medium**	21%	Negligible	Negligible	
42	A158 (Eddington)	**Low**	3%	Negligible	Negligible	
43	B1225 (Ranby)	**Low**	7%	Negligible	Negligible	
45	A158 (Stainton by Langworth)	**Low**	0%	Medium	Minor	
48	B1191 (Woodhall Spa)	**Medium**	0%	Negligible	Negligible	
49	B1192 (Tattershall)	**Medium**	0%	Negligible	Negligible	
51	A153 (Tattershall Bridge)	**Low**	20%	Negligible	Negligible	
52	A153 (Anwick)	**Medium**	26%	Negligible	Negligible	
55	A17 (Kirkby la Thorpe	**Negligible**	0%	Negligible	Negligible	
56	A17 (Swineshead Bridge)	**Medium**	0%	Negligible	Negligible	
58	A1121 (Hubbert's Bridge)	**Low**	2%	Negligible	Negligible	
59	A17 (Wigtoft)	**Low**	0%	Negligible	Negligible	
60	A52 (Bicker)	**Low**	0%	Negligible	Negligible	
61	A16 (Kirton)	**Negligible**	10%	Negligible	Negligible	
62	A16 (Algarkirk)	**Negligible**	9%	Negligible	Negligible	

Table 14.36 Traffic Impact Significance of Effects (Route Section 3) – HGV Impacts - Weekday						
Site	Site Location	Receptor Sensitivity	Traffic % Increase (HGV)	Magnitude	Effect	Notes
63	A52 (Swaton)	**Low**	0%	Negligible	Negligible	
64	A15 (Aswardby)	**Low**	2%	Negligible	Negligible	
65	A15 (Folkingham)	**Medium**	3%	Negligible	Negligible	
66	B1188 (Metheringham)	**Low**	0%	Negligible	Negligible	
68	A52 (Dembleby)	**Low**	0%	Negligible	Negligible	
69	A153 (Haltham)	**Low**	9%	Negligible	Negligible	
73	A1104 (Maltby le Marsh)	**Medium**	0%	Negligible	Negligible	
76	A153 (Horncastle)	**High**	10%	Negligible	Minor	
77	A155 (Mareham le Fen)	**Medium**	67%	Medium	Moderate	The magnitude is Medium as the HGV percentage increase is greater than 40% for 3-6 months, and the receptor sensitivity is Medium because there are shops/businesses, residential properties close to the receptor.
78	A17 (Kings Lynn)	**Negligible**	1%	Negligible	Negligible	
79	A17 (West Lynn)	**Negligible**	4%	Negligible	Negligible	
80	A17 (Long Sutton)	**Negligible**	3%	Negligible	Negligible	
81	A17 (Holbeach)	**Low**	4%	Negligible	Negligible	
82	A16 (Grimsby)	**High**	16%	Negligible	Minor	
83	A16 (New Waltham)	**Low**	14%	Negligible	Negligible	
84	A16 (Utterby)	**Low**	10%	Negligible	Negligible	
85	A16 (Louth)	**Negligible**	9%	Negligible	Negligible	
86	B1225 (Ludford)	**Negligible**	7%	Negligible	Negligible	
87	B1225 (Normanby le Wold)	**Negligible**	8%	Negligible	Negligible	
88	Croxton Road (Humberside Airport)	**Negligible**	88%	Medium	Negligible	
89	A18 (Barnetby le Wold)	**Low**	2%	Negligible	Negligible	
96	B1195 (Lusby)	**Low**	0%	Negligible	Negligible	

Table 14.36 Traffic Impact Significance of Effects (Route Section 3) – HGV Impacts - Weekday						
Site	Site Location	Receptor Sensitivity	Traffic % Increase (HGV)	Magnitude	Effect	Notes
97	B1184 (The Gride)	**Low**	0%	Negligible	Negligible	
98	B1184 (Gipsey Bridge)	**High**	11%	Negligible	Minor	
99	B1992 (Langrick)	**Medium**	0%	Negligible	Negligible	

Table 14.37 Traffic Impact Significance of Effects (Route Section 3) – Severance Impacts - Weekday							
Site	Site Location	Receptor Sensitivity	Traffic % Increase (HGV)	Traffic % Increase (Total)	Magnitude	Effect	Notes
7	A1104 (Salesby)	**Low**	0%	0.1%	Negligible	Negligible	
8	A1104 (Alford)	**Very high**	0%	0.0%	Negligible	Minor	
9	A16 (Ulceby Cross)	**Medium**	3%	0.4%	Negligible	Negligible	
10	A16 (Ulceby Cross)	**Low**	6%	0.6%	Negligible	Negligible	
11	A158 (Scremby)	**Low**	15%	0.6%	Low	Negligible	
17	A158 (Ashington End)	**Medium**	14%	0.4%	Medium	Moderate	The HGV percentage increase is greater than 10%, therefore has a magnitude of Medium based on the receptor sensitivity. The receptor sensitivity is Medium because there are shops/businesses, residential properties close to the receptor.
18	A158 (Burgh le Marsh)	**Negligible**	14%	0.5%	Negligible	Negligible	
21	A52 (Wainfleet)	**Medium**	0%	0.0%	Negligible	Negligible	
22	A52 (Skegness)	**High**	0%	0.0%	Negligible	Minor	
23	A52 (Wrangle Lowgate)	**Very High**	0%	0.0%	Negligible	Minor	
25	A16 (Hilldyke)	**Very High**	29%	1.4%	High	Major	The HGV percentage increase is greater than 10%, therefore has a magnitude of High based on the receptor sensitivity. The receptor sensitivity is Very High because there are schools and residential properties close to the receptor in Boston.
26	Midville Road (Midville)	**Very High**	0%	0.1%	Negligible	Minor	
27	A16 (Northlands)	**Very High**	31%	1.6%	High	Major	The HGV percentage increase is greater than 10%, therefore has a magnitude of High based on the receptor sensitivity. The receptor sensitivity is Very High because there is a school close to the receptor.
28	A16 (East Keal)	**Medium**	15%	1.1%	Medium	Moderate	The HGV percentage increase is greater than 10%, therefore has a magnitude of Medium based on the receptor sensitivity. The receptor sensitivity is Medium because there are shops/businesses, residential properties close to the receptor.
29	West Fen (Stickney)	**Very High**	0%	0.4%	Negligible	Minor	

Table 14.37 Traffic Impact Significance of Effects (Route Section 3) – Severance Impacts - Weekday							
Site	Site Location	Receptor Sensitivity	Traffic % Increase (HGV)	Traffic % Increase (Total)	Magnitude	Effect	Notes
32	A155 (East Kirkby)	**Medium**	82%	4.2%	Medium	Moderate	The HGV percentage increase is greater than 10%, therefore has a magnitude of Medium based on the receptor sensitivity. The receptor sensitivity is Medium because there are shops/businesses, residential properties close to the receptor.
33	B1183 (Revesby Bridge)	**Medium**	53%	1.6%	Medium	Moderate	The HGV percentage increase is greater than 10%, therefore has a magnitude of Medium based on the receptor sensitivity. The receptor sensitivity is Medium because there are shops/businesses, residential properties close to the receptor.
34	Main Road (Carrington)	**Medium**	44%	1.9%	Medium	Moderate	The HGV percentage increase is greater than 10%, therefore has a magnitude of Medium based on the receptor sensitivity. The receptor sensitivity is Medium because there are shops/businesses, residential properties close to the receptor.
35	Moorhouses Road (Tumby)	**Low**	0%	0.4%	Negligible	Negligible	
36	Westville Road (Bunkers Hill)	**Medium**	144.8%	4.3%	Medium	Moderate	The HGV percentage increase is greater than 10%, therefore has a magnitude of Medium based on the receptor sensitivity. The receptor sensitivity is Medium because there are shops/businesses, residential properties close to the receptor.
37	Moorshide Road (Sandy Bank)	**Medium**	192%	6.0%	Medium	Moderate	The HGV percentage increase is greater than 10%, therefore has a magnitude of Medium based on the receptor sensitivity. The receptor sensitivity is Medium because there are shops/businesses, residential properties close to the receptor.
38	B1192 (New York)	**Low**	21%	1.3%	Low	Negligible	
39	A158 (Hagworthingham)	**Low**	6%	0.3%	Negligible	Negligible	
40	A16 (Haugham)	**Low**	5%	0.5%	Negligible	Negligible	
41	A153 (West Ashby)	**Medium**	21%	0.9%	Medium	Moderate	The HGV percentage increase is greater than 10%, therefore has a magnitude of Medium based on the receptor sensitivity. The receptor sensitivity is Medium because there are shops/businesses, residential properties close to the receptor.
42	A158 (Eddington)	**Low**	3%	0.3%	Negligible	Negligible	

Table 14.37 Traffic Impact Significance of Effects (Route Section 3) – Severance Impacts - Weekday							
Site	Site Location	Receptor Sensitivity	Traffic % Increase (HGV)	Traffic % Increase (Total)	Magnitude	Effect	Notes
43	B1225 (Ranby)	**Low**	7%	1.0%	Low	Negligible	
45	A158 (Stainton by Langworth)	**Low**	0%	0.1%	Low	Negligible	
48	B1191 (Woodhall Spa)	**Medium**	0%	0.4%	Negligible	Negligible	
49	B1192 (Tattershall)	**Medium**	0%	0.4%	Negligible	Negligible	
51	A153 (Tattershall Bridge)	**Low**	20%	0.9%	Low	Negligible	
52	A153 (Anwick)	**Medium**	26%	1.0%	Medium	Moderate	The HGV percentage increase is greater than 10%, therefore has a magnitude of Medium based on the receptor sensitivity. The receptor sensitivity is Medium because there are shops/businesses, residential properties close to the receptor.
55	A17 (Kirkby la Thorpe	**Negligible**	0%	0.1%	Negligible	Negligible	
56	A17 (Swineshead Bridge)	**Medium**	0%	0.1%	Negligible	Negligible	
58	A1121 (Hubbert's Bridge)	**Low**	2%	0.2%	Negligible	Negligible	
59	A17 (Wigtoft)	**Low**	0%	0.0%	Negligible	Negligible	
60	A52 (Bicker)	**Low**	0%	0.1%	Negligible	Negligible	
61	A16 (Kirton)	**Negligible**	10%	0.6%	Negligible	Negligible	
62	A16 (Algarkirk)	**Negligible**	9%	0.6%	Negligible	Negligible	
63	A52 (Swaton)	**Low**	0%	0.1%	Negligible	Negligible	
64	A15 (Aswardby)	**Low**	2%	0%	Negligible	Negligible	
65	A15 (Folkingham)	**Medium**	3%	0%	Negligible	Negligible	
66	B1188 (Metheringham)	**Low**	0%	1%	Negligible	Negligible	
68	A52 (Dembleby)	**Low**	0%	0%	Negligible	Negligible	
69	A153 (Haltham)	**Low**	9%	1%	Negligible	Negligible	
73	A1104 (Maltby le Marsh)	**Medium**	0%	0%	Negligible	Negligible	

Table 14.37 Traffic Impact Significance of Effects (Route Section 3) – Severance Impacts - Weekday

Site	Site Location	Receptor Sensitivity	Traffic % Increase (HGV)	Traffic % Increase (Total)	Magnitude	Effect	Notes
76	A153 (Horncastle)	**High**	10%	1%	High	Major	The HGV percentage increase is greater than 10%, therefore has a magnitude of High based on the receptor sensitivity. The receptor sensitivity is High because there are residential properties very close to the carriageway (e.g. in Horncastle).
77	A155 (Mareham le Fen)	**Medium**	67%	4%	Medium	Moderate	The HGV percentage increase is greater than 10%, therefore has a magnitude of Medium based on the receptor sensitivity. The receptor sensitivity is Medium because there are shops/businesses, residential properties close to the receptor.
78	A17 (Kings Lynn)	**Negligible**	1%	0%	Negligible	Negligible	
79	A17 (West Lynn)	**Negligible**	4%	0%	Negligible	Negligible	
80	A17 (Long Sutton)	**Negligible**	3%	0%	Negligible	Negligible	
81	A17 (Holbeach)	**Low**	4%	0%	Negligible	Negligible	
82	A16 (Grimsby)	**High**	16%	0%	High	Major	The HGV percentage increase is greater than 10%, therefore has a magnitude of High based on the receptor sensitivity. The receptor sensitivity is High because there are residential properties very close to the receptor in Grimsby.
83	A16 (New Waltham)	**Low**	14%	0%	Low	Negligible	
84	A16 (Utterby)	**Low**	10%	1%	Negligible	Negligible	
85	A16 (Louth)	**Negligible**	9%	1%	Negligible	Negligible	
86	B1225 (Ludford)	**Negligible**	7%	1%	Negligible	Negligible	
87	B1225 (Normanby le Wold)	**Negligible**	8%	1%	Negligible	Negligible	
88	Croxton Road (Humberside Airport)	**Negligible**	88%	1%	Negligible	Negligible	
89	A18 (Barnetby le Wold)	**Low**	2%	0%	Negligible	Negligible	
96	B1195 (Lusby)	**Low**	0%	0%	Negligible	Negligible	
97	B1184 (The Gride)	**Low**	0%	0%	Negligible	Negligible	

Table 14.37 Traffic Impact Significance of Effects (Route Section 3) – Severance Impacts - Weekday							
Site	Site Location	Receptor Sensitivity	Traffic % Increase (HGV)	Traffic % Increase (Total)	Magnitude	Effect	Notes
98	B1184 (Gipsey Bridge)	**High**	11%	2%	High	Major	The HGV percentage increase is greater than 10%, therefore has a magnitude of High based on the receptor sensitivity. The receptor sensitivity is High because there are residential properties very close to the receptor.
99	B1992 (Langrick)	**Medium**	0%	0%	Negligible	Negligible	

Table 14.38 Traffic Impact Significance of Effects (Route Section 3) – Road Safety Impacts - Weekday						
Site	Site Location	Receptor Sensitivity	Traffic % Increase (Total)	Magnitude	Effect	Notes
7	A1104 (Salesby)	**Low**	0.1%	Negligible	Negligible	The effects of the additional traffic on receptor locations within the ZoI are considered Negligible at the majority of locations, with one location experiencing a Moderate adverse effect, caused by the receptor having a 'very high' sensitivity. 13 other locations experience Minor adverse effects. In addition, the construction process is transient and short-term, therefore the overall effects are considered **not significant.**
8	A1104 (Alford)	**Very high**	0.0%	Negligible	Minor	
9	A16 (Ulceby Cross)	**Medium**	0.4%	Negligible	Negligible	
10	A16 (Ulceby Cross)	**Low**	0.6%	Negligible	Negligible	
11	A158 (Scremby)	**Low**	0.6%	Negligible	Negligible	
17	A158 (Ashington End)	**Medium**	0.4%	Negligible	Negligible	
18	A158 (Burgh le Marsh)	**Negligible**	0.5%	Negligible	Negligible	
21	A52 (Wainfleet)	**Medium**	0.0%	Negligible	Negligible	
22	A52 (Skegness)	**High**	0.0%	Negligible	Minor	
23	A52 (Wrangle Lowgate)	**Very High**	0.0%	Negligible	Minor	
25	A16 (Hilldyke)	**Very High**	1.4%	Negligible	Minor	
26	Midville Road (Midville)	**Very High**	0.1%	Negligible	Minor	
27	A16 (Northlands)	**Very High**	1.6%	Negligible	Minor	
28	A16 (East Keal)	**Medium**	1.1%	Negligible	Negligible	
29	West Fen (Stickney)	**Very High**	0.4%	Low	Moderate	
32	A155 (East Kirkby)	**Medium**	4.2%	Low	Minor	
33	B1183 (Revesby Bridge)	**Medium**	1.6%	Negligible	Negligible	
34	Main Road (Carrington)	**Medium**	1.9%	Negligible	Negligible	
35	Moorhouses Road (Tumby)	**Low**	0.4%	Negligible	Negligible	
36	Westville Road (Bunkers Hill)	**Medium**	4.3%	Low	Minor	
37	Moorshide Road (Sandy Bank)	**Medium**	6.0%	Low	Minor	
38	B1192 (New York)	**Low**	1.3%	Negligible	Negligible	
39	A158 (Hagworthingham)	**Low**	0.3%	Negligible	Negligible	
40	A16 (Haugham)	**Low**	0.5%	Negligible	Negligible	

Table 14.38 Traffic Impact Significance of Effects (Route Section 3) – Road Safety Impacts - Weekday						
Site	Site Location	Receptor Sensitivity	Traffic % Increase (Total)	Magnitude	Effect	Notes
41	A153 (West Ashby)	**Medium**	0.9%	Negligible	Negligible	
42	A158 (Eddington)	**Low**	0.3%	Negligible	Negligible	
43	B1225 (Ranby)	**Low**	1.0%	Low	Negligible	
45	A158 (Stainton by Langworth)	**Low**	0.1%	Negligible	Negligible	
48	B1191 (Woodhall Spa)	**Medium**	0.4%	Negligible	Negligible	
49	B1192 (Tattershall)	**Medium**	0.4%	Negligible	Negligible	
51	A153 (Tattershall Bridge)	**Low**	0.9%	Negligible	Negligible	
52	A153 (Anwick)	**Medium**	1.0%	Negligible	Negligible	
55	A17 (Kirkby la Thorpe	**Negligible**	0.1%	Negligible	Negligible	
56	A17 (Swineshead Bridge)	**Medium**	0.1%	Negligible	Negligible	
58	A1121 (Hubbert's Bridge)	**Low**	0.2%	Negligible	Negligible	
59	A17 (Wigtoft)	**Low**	0.0%	Negligible	Negligible	
60	A52 (Bicker)	**Low**	0.1%	Negligible	Negligible	
61	A16 (Kirton)	**Negligible**	0.6%	Negligible	Negligible	
62	A16 (Algarkirk)	**Negligible**	0.6%	Negligible	Negligible	
63	A52 (Swaton)	**Low**	0.1%	Negligible	Negligible	
64	A15 (Aswardby)	**Low**	0%	Negligible	Negligible	
65	A15 (Folkingham)	**Medium**	0%	Negligible	Negligible	
66	B1188 (Metheringham)	**Low**	1%	Negligible	Negligible	
68	A52 (Dembleby)	**Low**	0%	Negligible	Negligible	
69	A153 (Haltham)	**Low**	1%	Negligible	Negligible	
73	A1104 (Maltby le Marsh)	**Medium**	0%	Negligible	Negligible	
76	A153 (Horncastle)	**High**	1%	Negligible	Minor	
77	A155 (Mareham le Fen)	**Medium**	4%	Low	Minor	

Table 14.38 Traffic Impact Significance of Effects (Route Section 3) – Road Safety Impacts - Weekday						
Site	Site Location	Receptor Sensitivity	Traffic % Increase (Total)	Magnitude	Effect	Notes
78	A17 (Kings Lynn)	**Negligible**	0%	Negligible	Negligible	
79	A17 (West Lynn)	**Negligible**	0%	Negligible	Negligible	
80	A17 (Long Sutton)	**Negligible**	0%	Negligible	Negligible	
81	A17 (Holbeach)	**Low**	0%	Negligible	Negligible	
82	A16 (Grimsby)	**High**	0%	Negligible	Minor	
83	A16 (New Waltham)	**Low**	0%	Negligible	Negligible	
84	A16 (Utterby)	**Low**	1%	Negligible	Negligible	
85	A16 (Louth)	**Negligible**	1%	Negligible	Negligible	
86	B1225 (Ludford)	**Negligible**	1%	Negligible	Negligible	
87	B1225 (Normanby le Wold)	**Negligible**	1%	Negligible	Negligible	
88	Croxton Road (Humberside Airport)	**Negligible**	1%	Negligible	Negligible	
89	A18 (Barnetby le Wold)	**Low**	0%	Negligible	Negligible	
96	B1195 (Lusby)	**Low**	0%	Negligible	Negligible	
97	B1184 (The Gride)	**Low**	0%	Negligible	Negligible	
98	B1184 (Gipsey Bridge)	**High**	2%	Negligible	Minor	
99	B1992 (Langrick)	**Medium**	0%	Negligible	Negligible	

Table 14.39 Traffic Impact Significance of Effects (Route Section 3) – Pedestrian/Cycle Impacts - Weekday					
Site	**Site Location**	**Receptor Sensitivity**	**Magnitude**	**Effect**	**Notes**
7	A1104 (Salesby)	**Low**	High	Moderate	At the majority of receptor locations there are limited or no pedestrian/cycling facilities available, therefore in accordance with the criteria outlined in Table 14.5, the impact magnitude for the sites has been identified as either 'High' or 'Medium' with only one exception. When the receptor sensitivity is combined with these magnitudes, a number of the receptors experience a 'Major' or 'Moderate' adverse overall significance. However, it should be noted that there are currently very few pedestrians/cyclists who currently use the roads under assessment and due to the nature of the roads, very few additional pedestrian/cyclist movements would be expected in the future. The works are also expected to be temporary in nature, therefore any significant effects will only be apparent for a limited period.
8	A1104 (Alford)	**Very high**	Medium	Major	
9	A16 (Ulceby Cross)	**Medium**	Medium	Moderate	
10	A16 (Ulceby Cross)	**Low**	High	Moderate	
11	A158 (Scremby)	**Low**	High	Moderate	
17	A158 (Ashington End)	**Medium**	Medium	Moderate	
18	A158 (Burgh le Marsh)	**Negligible**	Medium	Negligible	
21	A52 (Wainfleet)	**Medium**	High	Moderate	
22	A52 (Skegness)	**High**	High	Major	
23	A52 (Wrangle Lowgate)	**Very High**	High	Major	
25	A16 (Hilldyke)	**Very High**	High	Major	
26	Midville Road (Midville)	**Very High**	High	Major	
27	A16 (Northlands)	**Very High**	High	Major	
28	A16 (East Keal)	**Medium**	High	Moderate	
29	West Fen (Stickney)	**Very High**	High	Major	
32	A155 (East Kirkby)	**Medium**	High	Moderate	
33	B1183 (Revesby Bridge)	**Medium**	High	Moderate	
34	Main Road (Carrington)	**Medium**	High	Moderate	
35	Moorhouses Road (Tumby)	**Low**	High	Moderate	
36	Westville Road (Bunkers Hill)	**Medium**	High	Moderate	
37	Moorshide Road (Sandy Bank)	**Medium**	High	Moderate	
38	B1192 (New York)	**Low**	High	Moderate	
39	A158 (Hagworthingham)	**Low**	Medium	Minor	
40	A16 (Haugham)	**Low**	High	Moderate	

Table 14.39 Traffic Impact Significance of Effects (Route Section 3) – Pedestrian/Cycle Impacts - Weekday					
Site	Site Location	Receptor Sensitivity	Magnitude	Effect	Notes
41	A153 (West Ashby)	**Medium**	High	Moderate	
42	A158 (Eddington)	**Low**	High	Moderate	
43	B1225 (Ranby)	**Low**	High	Moderate	
45	A158 (Stainton by Langworth)	**Low**	High	Moderate	
48	B1191 (Woodhall Spa)	**Medium**	High	Moderate	
49	B1192 (Tattershall)	**Medium**	High	Moderate	
51	A153 (Tattershall Bridge)	**Low**	Medium	Minor	
52	A153 (Anwick)	**Medium**	Medium	Moderate	
55	A17 (Kirkby la Thorpe	**Negligible**	Medium	Negligible	
56	A17 (Swineshead Bridge)	**Medium**	High	Moderate	
58	A1121 (Hubbert's Bridge)	**Low**	High	Moderate	
59	A17 (Wigtoft)	**Low**	High	Moderate	
60	A52 (Bicker)	**Low**	Medium	Minor	
61	A16 (Kirton)	**Negligible**	Medium	Negligible	
62	A16 (Algarkirk)	**Negligible**	High	Minor	
63	A52 (Swaton)	**Low**	High	Moderate	
64	A15 (Aswardby)	**Low**	High	Moderate	
65	A15 (Folkingham)	**Medium**	High	Moderate	
66	B1188 (Metheringham)	**Low**	High	Moderate	
68	A52 (Dembleby)	**Low**	High	Moderate	
69	A153 (Haltham)	**Low**	High	Moderate	
73	A1104 (Maltby le Marsh)	**Medium**	Medium	Moderate	
76	A153 (Horncastle)	**High**	Medium	Moderate	
77	A155 (Mareham le Fen)	**Medium**	High	Moderate	

Table 14.39 Traffic Impact Significance of Effects (Route Section 3) – Pedestrian/Cycle Impacts - Weekday					
Site	Site Location	Receptor Sensitivity	Magnitude	Effect	Notes
78	A17 (Kings Lynn)	**Negligible**	Medium	Negligible	
79	A17 (West Lynn)	**Negligible**	High	Minor	
80	A17 (Long Sutton)	**Negligible**	High	Minor	
81	A17 (Holbeach)	**Low**	High	Moderate	
82	A16 (Grimsby)	**High**	Negligible	Minor	
83	A16 (New Waltham)	**Low**	Medium	Minor	
84	A16 (Utterby)	**Low**	Medium	Minor	
85	A16 (Louth)	**Negligible**	High	Minor	
86	B1225 (Ludford)	**Negligible**	High	Minor	
87	B1225 (Normanby le Wold)	**Negligible**	High	Minor	
88	Croxton Road (Humberside Airport)	**Negligible**	High	Minor	
89	A18 (Barnetby le Wold)	**Low**	Medium	Minor	
96	B1195 (Lusby)	**Low**	High	Moderate	
97	B1184 (The Gride)	**Low**	High	Moderate	
98	B1184 (Gipsey Bridge)	**High**	High	Major	
99	B1992 (Langrick)	**Medium**	High	Moderate	

Table 14.40 Traffic Impact Significance of Effects (Route Section 3) – HGV Impacts -Saturday						
Site	Site Location	Receptor Sensitivity	Traffic % Increase (HGV)	Magnitude	Effect	Notes
7	A1104 (Salesby)	**Low**	0%	Negligible	Negligible	On a Saturday 14 receptor locations would experience significant effects. However, it is proposed that the majority of HGV movements will take place on weekdays, with Saturdays reserved for traffic movements only if required. Also, works on a Saturday would only constitute around 16% of the total working time during a given six day working week, therefore the impacts would be considered minimal.
8	A1104 (Alford)	**Very high**	0%	Negligible	Minor	
9	A16 (Ulceby Cross)	**Medium**	16%	Negligible	Negligible	
10	A16 (Ulceby Cross)	**Low**	22%	Negligible	Negligible	
11	A158 (Scremby)	**Low**	74%	Medium	Negligible	
17	A158 (Ashington End)	**Medium**	112%	Medium	Moderate	
18	A158 (Burgh le Marsh)	**Negligible**	49%	Medium	Negligible	
21	A52 (Wainfleet)	**Medium**	0%	Negligible	Negligible	
22	A52 (Skegness)	**High**	0%	Negligible	Minor	
23	A52 (Wrangle Lowgate)	**Very High**	0%	Negligible	Minor	
25	A16 (Hilldyke)	**Very High**	100%	Medium	Major	
26	Midville Road (Midville)	**Very High**	0%	Negligible	Minor	
27	A16 (Northlands)	**Very High**	134%	Medium	Major	
28	A16 (East Keal)	**Medium**	65%	Medium	Moderate	
29	West Fen (Stickney)	**Very High**	0%	Negligible	Minor	
32	A155 (East Kirkby)	**Medium**	268%	Medium	Moderate	
33	B1183 (Revesby Bridge)	**Medium**	204%	Medium	Moderate	
34	Main Road (Carrington)	**Medium**	180%	Medium	Moderate	
35	Moorhouses Road (Tumby)	**Low**	0%	Negligible	Negligible	
36	Westville Road (Bunkers Hill)	**Medium**	2056.9%	Medium	Moderate	
37	Moorshide Road (Sandy Bank)	**Medium**	455%	Medium	Moderate	
38	B1192 (New York)	**Low**	111%	Medium	Minor	
39	A158 (Hagworthingham)	**Low**	23%	Negligible	Negligible	
40	A16 (Haugham)	**Low**	4%	Negligible	Negligible	

Table 14.40 Traffic Impact Significance of Effects (Route Section 3) – HGV Impacts -Saturday						
Site	Site Location	Receptor Sensitivity	Traffic % Increase (HGV)	Magnitude	Effect	Notes
41	A153 (West Ashby)	**Medium**	71%	Medium	Moderate	
42	A158 (Eddington)	**Low**	17%	Negligible	Negligible	
43	B1225 (Ranby)	**Low**	23%	Negligible	Minor	
45	A158 (Stainton by Langworth)	**Low**	0%	Negligible	Negligible	
48	B1191 (Woodhall Spa)	**Medium**	0%	Negligible	Negligible	
49	B1192 (Tattershall)	**Medium**	0%	Negligible	Negligible	
51	A153 (Tattershall Bridge)	**Low**	108%	Medium	Minor	
52	A153 (Anwick)	**Medium**	75%	Medium	Moderate	
55	A17 (Kirkby la Thorpe	**Negligible**	1%	Negligible	Negligible	
56	A17 (Swineshead Bridge)	**Medium**	1%	Negligible	Negligible	
58	A1121 (Hubbert's Bridge)	**Low**	6%	Negligible	Negligible	
59	A17 (Wigtoft)	**Low**	0%	Negligible	Negligible	
60	A52 (Bicker)	**Low**	0%	Negligible	Negligible	
61	A16 (Kirton)	**Negligible**	33%	Low	Negligible	
62	A16 (Algarkirk)	**Negligible**	31%	Low	Negligible	
63	A52 (Swaton)	**Low**	0%	Negligible	Negligible	
64	A15 (Aswardby)	**Low**	9%	Negligible	Negligible	
65	A15 (Folkingham)	**Medium**	12%	Negligible	Negligible	
66	B1188 (Metheringham)	**Low**	0%	Negligible	Negligible	
68	A52 (Dembleby)	**Low**	0%	Negligible	Negligible	
69	A153 (Haltham)	**Low**	57%	Medium	Minor	
73	A1104 (Maltby le Marsh)	**Medium**	0%	Negligible	Negligible	
76	A153 (Horncastle)	**High**	43%	Medium	Moderate	
77	A155 (Mareham le Fen)	**Medium**	259%	Medium	Moderate	

Table 14.40 Traffic Impact Significance of Effects (Route Section 3) – HGV Impacts -Saturday						
Site	Site Location	Receptor Sensitivity	Traffic % Increase (HGV)	Magnitude	Effect	Notes
78	A17 (Kings Lynn)	**Negligible**	4%	Negligible	Negligible	
79	A17 (West Lynn)	**Negligible**	22%	Negligible	Negligible	
80	A17 (Long Sutton)	**Negligible**	15%	Negligible	Negligible	
81	A17 (Holbeach)	**Low**	16%	Negligible	Minor	
82	A16 (Grimsby)	**High**	42%	Medium	Moderate	
83	A16 (New Waltham)	**Low**	61%	Medium	Minor	
84	A16 (Utterby)	**Low**	37%	Low	Negligible	
85	A16 (Louth)	**Negligible**	37%	Low	Negligible	
86	B1225 (Ludford)	**Negligible**	13%	Negligible	Negligible	
87	B1225 (Normanby le Wold)	**Negligible**	25%	Negligible	Negligible	
88	Croxton Road (Humberside Airport)	**Negligible**	323%	Medium	Negligible	
89	A18 (Barnetby le Wold)	**Low**	15%	Negligible	Negligible	
96	B1195 (Lusby)	**Low**	0%	Negligible	Negligible	
97	B1184 (The Gride)	**Low**	0%	Negligible	Negligible	
98	B1184 (Gipsey Bridge)	**High**	46%	Medium	Moderate	
99	B1992 (Langrick)	**Medium**	0%	Negligible	Negligible	

Table 14.41 Traffic Impact Significance of Effects (Route Section 3) – Severance Impacts - Saturday							
Site	Site Location	Receptor Sensitivity	Traffic % Increase (HGV)	Traffic % Increase (Total)	Magnitude	Effect	Notes
7	A1104 (Salesby)	**Low**	0%	0.1%	Negligible	Negligible	On a Saturday 18 receptor locations would experience significant effects. However, it is proposed that the majority of HGV movements will take place on weekdays, with Saturdays reserved for traffic movements only if required. Also, works on a Saturday would only constitute around 16% of the total working time during a given six day working week, therefore the impacts would be considered minimal.
8	A1104 (Alford)	**Very high**	0%	0.0%	Negligible	Minor	
9	A16 (Ulceby Cross)	**Medium**	16%	0.5%	Medium	Moderate	
10	A16 (Ulceby Cross)	**Low**	22%	0.9%	Low	Negligible	
11	A158 (Scremby)	**Low**	74%	0.7%	Low	Negligible	
17	A158 (Ashington End)	**Medium**	112%	0.4%	Medium	Moderate	
18	A158 (Burgh le Marsh)	**Negligible**	49%	0.6%	Negligible	Negligible	
21	A52 (Wainfleet)	**Medium**	0%	0.0%	Negligible	Negligible	
22	A52 (Skegness)	**High**	0%	0.0%	Negligible	Minor	
23	A52 (Wrangle Lowgate)	**Very High**	0%	0.0%	Negligible	Minor	
25	A16 (Hilldyke)	**Very High**	100%	1.8%	High	Major	
26	Midville Road (Midville)	**Very High**	0%	0.1%	Negligible	Minor	
27	A16 (Northlands)	**Very High**	134%	2.3%	High	Major	
28	A16 (East Keal)	**Medium**	65%	1.4%	Medium	Moderate	
29	West Fen (Stickney)	**Very High**	0%	0.6%	Negligible	Major	
32	A155 (East Kirkby)	**Medium**	268%	4.7%	Medium	Moderate	
33	B1183 (Revesby Bridge)	**Medium**	204%	2.1%	Medium	Moderate	
34	Main Road (Carrington)	**Medium**	180%	2.5%	Medium	Moderate	
35	Moorhouses Road (Tumby)	**Low**	0%	0.6%	Negligible	Negligible	
36	Westville Road (Bunkers Hill)	**Medium**	2056.9%	6.4%	Medium	Moderate	
37	Moorshide Road (Sandy Bank)	**Medium**	455%	8.0%	Medium	Moderate	
38	B1192 (New York)	**Low**	111%	1.7%	Low	Negligible	
39	A158 (Hagworthingham)	**Low**	23%	0.3%	Low	Negligible	
40	A16 (Haugham)	**Low**	4%	0.4%	Negligible	Negligible	

Table 14.41 Traffic Impact Significance of Effects (Route Section 3) – Severance Impacts - Saturday							
Site	Site Location	Receptor Sensitivity	Traffic % Increase (HGV)	Traffic % Increase (Total)	Magnitude	Effect	Notes
41	A153 (West Ashby)	**Medium**	71%	1.3%	Medium	Moderate	
42	A158 (Eddington)	**Low**	17%	0.4%	Low	Negligible	
43	B1225 (Ranby)	**Low**	23%	1.0%	Low	Negligible	
45	A158 (Stainton by Langworth)	**Low**	0%	0.2%	Negligible	Negligible	
48	B1191 (Woodhall Spa)	**Medium**	0%	0.5%	Negligible	Negligible	
49	B1192 (Tattershall)	**Medium**	0%	0.6%	Negligible	Negligible	
51	A153 (Tattershall Bridge)	**Low**	108%	1.5%	Low	Negligible	
52	A153 (Anwick)	**Medium**	75%	1.4%	Medium	Moderate	
55	A17 (Kirkby la Thorpe	**Negligible**	1%	0.1%	Negligible	Negligible	
56	A17 (Swineshead Bridge)	**Medium**	1%	0.1%	Negligible	Negligible	
58	A1121 (Hubbert's Bridge)	**Low**	6%	0.2%	Negligible	Negligible	
59	A17 (Wigtoft)	**Low**	0%	0.0%	Negligible	Negligible	
60	A52 (Bicker)	**Low**	0%	0.2%	Negligible	Negligible	
61	A16 (Kirton)	**Negligible**	33%	0.8%	Negligible	Negligible	
62	A16 (Algarkirk)	**Negligible**	31%	0.9%	Negligible	Negligible	
63	A52 (Swaton)	**Low**	0%	0.3%	Negligible	Negligible	
64	A15 (Aswardby)	**Low**	9%	0%	Negligible	Negligible	
65	A15 (Folkingham)	**Medium**	12%	0%	Medium	Moderate	
66	B1188 (Metheringham)	**Low**	0%	1%	Negligible	Negligible	
68	A52 (Dembleby)	**Low**	0%	0%	Negligible	Negligible	
69	A153 (Haltham)	**Low**	57%	1%	Low	Negligible	
73	A1104 (Maltby le Marsh)	**Medium**	0%	0%	Negligible	Negligible	
76	A153 (Horncastle)	**High**	43%	1%	High	Major	
77	A155 (Mareham le Fen)	**Medium**	259%	4%	Medium	Moderate	

Table 14.41 Traffic Impact Significance of Effects (Route Section 3) – Severance Impacts - Saturday							
Site	Site Location	Receptor Sensitivity	Traffic % Increase (HGV)	Traffic % Increase (Total)	Magnitude	Effect	Notes
78	A17 (Kings Lynn)	**Negligible**	4%	0%	Negligible	Negligible	
79	A17 (West Lynn)	**Negligible**	22%	1%	Negligible	Negligible	
80	A17 (Long Sutton)	**Negligible**	15%	1%	Negligible	Negligible	
81	A17 (Holbeach)	**Low**	16%	1%	Low	Negligible	
82	A16 (Grimsby)	**High**	42%	1%	High	Major	
83	A16 (New Waltham)	**Low**	61%	1%	Low	Negligible	
84	A16 (Utterby)	**Low**	37%	1%	Low	Negligible	
85	A16 (Louth)	**Negligible**	37%	1%	Negligible	Negligible	
86	B1225 (Ludford)	**Negligible**	13%	1%	Negligible	Negligible	
87	B1225 (Normanby le Wold)	**Negligible**	25%	1%	Negligible	Negligible	
88	Croxton Road (Humberside Airport)	**Negligible**	323%	2%	Negligible	Negligible	
89	A18 (Barnetby le Wold)	**Low**	15%	0%	Low	Negligible	
96	B1195 (Lusby)	**Low**	0%	1%	Negligible	Negligible	
97	B1184 (The Gride)	**Low**	0%	0%	Negligible	Negligible	
98	B1184 (Gipsey Bridge)	**High**	46%	3%	High	Major	
99	B1992 (Langrick)	**Medium**	0%	1%	Negligible	Negligible	

Table 14.42 Traffic Impact Significance of Effects (Route Section 3) – Road Safety Impacts - Saturday

Site	Site Location	Receptor Sensitivity	Traffic % Increase (Total)	Magnitude	Effect	Notes
7	A1104 (Salesby)	**Low**	0.1%	Negligible	Negligible	On a Saturday 1 receptor location would experience significant effects. However, it is proposed that the majority of HGV movements will take place on weekdays, with Saturdays reserved for traffic movements only if required. Also, works on a Saturday would only constitute around 16% of the total working time during a given six day working week, therefore the impacts would be considered minimal.
8	A1104 (Alford)	**Very high**	0.0%	Negligible	Minor	
9	A16 (Ulceby Cross)	**Medium**	0.5%	Negligible	Negligible	
10	A16 (Ulceby Cross)	**Low**	0.9%	Negligible	Negligible	
11	A158 (Scremby)	**Low**	0.7%	Negligible	Negligible	
17	A158 (Ashington End)	**Medium**	0.4%	Negligible	Negligible	
18	A158 (Burgh le Marsh)	**Negligible**	0.6%	Negligible	Negligible	
21	A52 (Wainfleet)	**Medium**	0.0%	Negligible	Negligible	
22	A52 (Skegness)	**High**	0.0%	Negligible	Minor	
23	A52 (Wrangle Lowgate)	**Very High**	0.0%	Negligible	Minor	
25	A16 (Hilldyke)	**Very High**	1.8%	Negligible	Minor	
26	Midville Road (Midville)	**Very High**	0.1%	Negligible	Minor	
27	A16 (Northlands)	**Very High**	2.3%	Negligible	Minor	
28	A16 (East Keal)	**Medium**	1.4%	Negligible	Negligible	
29	West Fen (Stickney)	**Very High**	0.6%	Low	Moderate	
32	A155 (East Kirkby)	**Medium**	4.7%	Low	Minor	
33	B1183 (Revesby Bridge)	**Medium**	2.1%	Negligible	Negligible	
34	Main Road (Carrington)	**Medium**	2.5%	Negligible	Negligible	
35	Moorhouses Road (Tumby)	**Low**	0.6%	Negligible	Negligible	
36	Westville Road (Bunkers Hill)	**Medium**	6.4%	Low	Minor	
37	Moorshide Road (Sandy Bank)	**Medium**	8.0%	Low	Minor	
38	B1192 (New York)	**Low**	1.7%	Negligible	Negligible	
39	A158 (Hagworthingham)	**Low**	0.3%	Negligible	Negligible	
40	A16 (Haugham)	**Low**	0.4%	Negligible	Negligible	

Table 14.42 Traffic Impact Significance of Effects (Route Section 3) – Road Safety Impacts - Saturday						
Site	Site Location	Receptor Sensitivity	Traffic % Increase (Total)	Magnitude	Effect	Notes
41	A153 (West Ashby)	**Medium**	1.3%	Negligible	Negligible	
42	A158 (Eddington)	**Low**	0.4%	Negligible	Negligible	
43	B1225 (Ranby)	**Low**	1.0%	Low	Negligible	
45	A158 (Stainton by Langworth)	**Low**	0.2%	Negligible	Negligible	
48	B1191 (Woodhall Spa)	**Medium**	0.5%	Negligible	Negligible	
49	B1192 (Tattershall)	**Medium**	0.6%	Negligible	Negligible	
51	A153 (Tattershall Bridge)	**Low**	1.5%	Negligible	Negligible	
52	A153 (Anwick)	**Medium**	1.4%	Negligible	Negligible	
55	A17 (Kirkby la Thorpe	**Negligible**	0.1%	Negligible	Negligible	
56	A17 (Swineshead Bridge)	**Medium**	0.1%	Negligible	Negligible	
58	A1121 (Hubbert's Bridge)	**Low**	0.2%	Negligible	Negligible	
59	A17 (Wigtoft)	**Low**	0.0%	Negligible	Negligible	
60	A52 (Bicker)	**Low**	0.2%	Negligible	Negligible	
61	A16 (Kirton)	**Negligible**	0.8%	Negligible	Negligible	
62	A16 (Algarkirk)	**Negligible**	0.9%	Negligible	Negligible	
63	A52 (Swaton)	**Low**	0.3%	Negligible	Negligible	
64	A15 (Aswardby)	**Low**	0%	Negligible	Negligible	
65	A15 (Folkingham)	**Medium**	0%	Negligible	Negligible	
66	B1188 (Metheringham)	**Low**	1%	Negligible	Negligible	
68	A52 (Dembleby)	**Low**	0%	Negligible	Negligible	
69	A153 (Haltham)	**Low**	1%	Negligible	Negligible	
73	A1104 (Maltby le Marsh)	**Medium**	0%	Negligible	Negligible	
76	A153 (Horncastle)	**High**	1%	Negligible	Minor	
77	A155 (Mareham le Fen)	**Medium**	4%	Low	Minor	

Table 14.42 Traffic Impact Significance of Effects (Route Section 3) – Road Safety Impacts - Saturday						
Site	Site Location	Receptor Sensitivity	Traffic % Increase (Total)	Magnitude	Effect	Notes
78	A17 (Kings Lynn)	**Negligible**	0%	Negligible	Negligible	
79	A17 (West Lynn)	**Negligible**	1%	Negligible	Negligible	
80	A17 (Long Sutton)	**Negligible**	1%	Negligible	Negligible	
81	A17 (Holbeach)	**Low**	1%	Negligible	Negligible	
82	A16 (Grimsby)	**High**	1%	Negligible	Minor	
83	A16 (New Waltham)	**Low**	1%	Negligible	Negligible	
84	A16 (Utterby)	**Low**	1%	Negligible	Negligible	
85	A16 (Louth)	**Negligible**	1%	Negligible	Negligible	
86	B1225 (Ludford)	**Negligible**	1%	Negligible	Negligible	
87	B1225 (Normanby le Wold)	**Negligible**	1%	Negligible	Negligible	
88	Croxton Road (Humberside Airport)	**Negligible**	2%	Negligible	Negligible	
89	A18 (Barnetby le Wold)	**Low**	0%	Negligible	Negligible	
96	B1195 (Lusby)	**Low**	1%	Negligible	Negligible	
97	B1184 (The Gride)	**Low**	0%	Negligible	Negligible	
98	B1184 (Gipsey Bridge)	**High**	3%	Negligible	Minor	
99	B1992 (Langrick)	**Medium**	1%	Negligible	Negligible	

Table 14.43 Traffic Impact Significance of Effects (Route Section 3) – Pedestrian/Cycle Impacts - Saturday					
Site	**Site Location**	**Receptor Sensitivity**	**Magnitude**	**Effect**	**Notes**
7	A1104 (Salesby)	**Low**	High	Moderate	At the majority of receptor locations there are limited or no pedestrian/cycling facilities available, therefore in accordance with the criteria outlined in Table 14.5, the impact magnitude for the sites has been identified as either 'High' or 'Medium' with only one exception. When the receptor sensitivity is combined with these magnitudes, a number of the receptors experience a 'Major' or 'Moderate' adverse overall significance. However, it should be noted that there are currently very few pedestrians/cyclists currently who use the roads under assessment and due to the nature of the roads, very few additional pedestrian/cyclist movements would be expected in the future. The works are also expected to be temporary in nature, therefore any significant effects will only be apparent for a limited period.
8	A1104 (Alford)	**Very high**	Medium	Major	
9	A16 (Ulceby Cross)	**Medium**	Medium	Moderate	
10	A16 (Ulceby Cross)	**Low**	High	Moderate	
11	A158 (Scremby)	**Low**	High	Moderate	
17	A158 (Ashington End)	**Medium**	Medium	Moderate	
18	A158 (Burgh le Marsh)	**Negligible**	Medium	Negligible	
21	A52 (Wainfleet)	**Medium**	High	Moderate	
22	A52 (Skegness)	**High**	High	Major	
23	A52 (Wrangle Lowgate)	**Very High**	High	Major	
25	A16 (Hilldyke)	**Very High**	High	Major	
26	Midville Road (Midville)	**Very High**	High	Major	
27	A16 (Northlands)	**Very High**	High	Major	
28	A16 (East Keal)	**Medium**	High	Moderate	
29	West Fen (Stickney)	**Very High**	High	Major	
32	A155 (East Kirkby)	**Medium**	High	Moderate	
33	B1183 (Revesby Bridge)	**Medium**	High	Moderate	
34	Main Road (Carrington)	**Medium**	High	Moderate	
35	Moorhouses Road (Tumby)	**Low**	High	Moderate	
36	Westville Road (Bunkers Hill)	**Medium**	High	Moderate	
37	Moorshide Road (Sandy Bank)	**Medium**	High	Moderate	
38	B1192 (New York)	**Low**	High	Moderate	
39	A158 (Hagworthingham)	**Low**	Medium	Minor	
40	A16 (Haugham)	**Low**	High	Moderate	

Table 14.43 Traffic Impact Significance of Effects (Route Section 3) – Pedestrian/Cycle Impacts - Saturday					
Site	Site Location	Receptor Sensitivity	Magnitude	Effect	Notes
41	A153 (West Ashby)	**Medium**	High	Moderate	
42	A158 (Eddington)	**Low**	High	Moderate	
43	B1225 (Ranby)	**Low**	High	Moderate	
45	A158 (Stainton by Langworth)	**Low**	High	Moderate	
48	B1191 (Woodhall Spa)	**Medium**	High	Moderate	
49	B1192 (Tattershall)	**Medium**	High	Moderate	
51	A153 (Tattershall Bridge)	**Low**	Medium	Minor	
52	A153 (Anwick)	**Medium**	Medium	Moderate	
55	A17 (Kirkby la Thorpe	**Negligible**	Medium	Negligible	
56	A17 (Swineshead Bridge)	**Medium**	High	Moderate	
58	A1121 (Hubbert's Bridge)	**Low**	High	Moderate	
59	A17 (Wigtoft)	**Low**	High	Moderate	
60	A52 (Bicker)	**Low**	Medium	Minor	
61	A16 (Kirton)	**Negligible**	Medium	Negligible	
62	A16 (Algarkirk)	**Negligible**	High	Minor	
63	A52 (Swaton)	**Low**	High	Moderate	
64	A15 (Aswardby)	**Low**	High	Moderate	
65	A15 (Folkingham)	**Medium**	High	Moderate	
66	B1188 (Metheringham)	**Low**	High	Moderate	
68	A52 (Dembleby)	**Low**	High	Moderate	
69	A153 (Haltham)	**Low**	High	Moderate	
73	A1104 (Maltby le Marsh)	**Medium**	Medium	Moderate	
76	A153 (Horncastle)	**High**	Medium	Moderate	
77	A155 (Mareham le Fen)	**Medium**	High	Moderate	

Table 14.43 Traffic Impact Significance of Effects (Route Section 3) – Pedestrian/Cycle Impacts - Saturday					
Site	Site Location	Receptor Sensitivity	Magnitude	Effect	Notes
78	A17 (Kings Lynn)	**Negligible**	Medium	Negligible	
79	A17 (West Lynn)	**Negligible**	High	Minor	
80	A17 (Long Sutton)	**Negligible**	High	Minor	
81	A17 (Holbeach)	**Low**	High	Moderate	
82	A16 (Grimsby)	**High**	Negligible	Minor	
83	A16 (New Waltham)	**Low**	Medium	Minor	
84	A16 (Utterby)	**Low**	Medium	Minor	
85	A16 (Louth)	**Negligible**	High	Minor	
86	B1225 (Ludford)	**Negligible**	High	Minor	
87	B1225 (Normanby le Wold)	**Negligible**	High	Minor	
88	Croxton Road (Humberside Airport)	**Negligible**	High	Minor	
89	A18 (Barnetby le Wold)	**Low**	Medium	Minor	
96	B1195 (Lusby)	**Low**	High	Moderate	
97	B1184 (The Gride)	**Low**	High	Moderate	
98	B1184 (Gipsey Bridge)	**High**	High	Major	
99	B1992 (Langrick)	**Medium**	High	Moderate	

6.5 Route Section 4 River Witham to the Proposed Converter Station

Temporary Impacts

6.5.1 Table 14.44 to Table 14.51 present summaries of the potential effects of the additional HGV traffic generated by the TCFs within Route Section 4. Only the receptors locations within the ZoI that have a percentage increase in either HGV traffic or total traffic have been included in the tables. All other receptor locations have a 0% increase in traffic, therefore are considered to have negligible impacts.

6.5.2 The tables below are based on winter baseline traffic flows, including the 20% traffic uplift.

6.5.3 Tables showing all traffic scenarios are provided in Appendix 14.3.

Table 14.44 Traffic Impact Significance of Effects (Route Section 4) – HGV Impact - Weekday						
Site	Site Location	Receptor Sensitivity	Traffic % Increase (HGV)	Magnitude	Effect	Notes
7	A1104 (Salesby)	**Low**	0%	Negligible	Negligible	The effects at all receptors are expected to be **not significant**.
8	A1104 (Alford)	**Very High**	0%	Negligible	Minor	
9	A16 (Ulceby Cross)	**Medium**	8%	Negligible	Negligible	
10	A16 (Ulceby Cross)	**Low**	16%	Negligible	Negligible	
21	A52 (Wainfleet)	**Medium**	17%	Negligible	Negligible	
22	A52 (Skegness)	**High**	24%	Negligible	Minor	
23	A52 (Wrangle Lowgate)	**Very High**	18%	Negligible	Minor	
24	A52 (Haltoft End)	**Medium**	9%	Negligible	Negligible	
25	A16 (Hilldyke)	**Very High**	12%	Negligible	Minor	
27	A16 (Northlands)	**Very High**	15%	Negligible	Minor	
28	A16 (East Keal)	**Medium**	10%	Negligible	Negligible	
29	West Fen (Stickney)	**Very High**	0%	Negligible	Minor	
34	Main Road (Carrington)	**Medium**	0%	Negligible	Negligible	
38	B1192 (New York)	**Low**	0%	Negligible	Negligible	
40	A16 (Haugham)	**Low**	14%	Negligible	Negligible	
41	A153 (West Ashby)	**Medium**	7%	Negligible	Negligible	
55	A17 (Kirkby la Thorpe	**Negligible**	2%	Negligible	Negligible	
56	A17 (Swineshead Bridge)	**Medium**	7%	Negligible	Negligible	
57	A17 (Swineshead)	**Low**	5%	Negligible	Negligible	
58	A1121 (Hubbert's Bridge)	**Low**	30%	Negligible	Negligible	
59	A17 (Wigtoft)	**Low**	4%	Negligible	Negligible	
60	A52 (Bicker)	**Low**	9%	Negligible	Negligible	
63	A52 (Swaton)	**Low**	4%	Negligible	Negligible	
64	A15 (Aswardby)	**Low**	2%	Negligible	Negligible	

Table 14.44 Traffic Impact Significance of Effects (Route Section 4) – HGV Impact - Weekday						
Site	Site Location	Receptor Sensitivity	Traffic % Increase (HGV)	Magnitude	Effect	Notes
65	A15 (Folkingham)	**Medium**	0%	Negligible	Negligible	
67	A15 (Ashby de la Launde)	**Negligible**	0%	Negligible	Negligible	
68	A52 (Dembleby)	**Low**	1%	Negligible	Negligible	
69	A153 (Haltham)	**Low**	0%	Negligible	Negligible	
73	A1104 (Maltby le Marsh)	**Medium**	0%	Negligible	Negligible	
76	A153 (Horncastle)	**High**	0%	Negligible	Minor	
78	A17 (Kings Lynn)	**Negligible**	1%	Negligible	Negligible	
79	A17 (West Lynn)	**Negligible**	3%	Negligible	Negligible	
80	A17 (Long Sutton)	**Negligible**	3%	Negligible	Negligible	
81	A17 (Holbeach)	**Low**	3%	Negligible	Negligible	
82	A16 (Grimsby)	**High**	13%	Negligible	Minor	
83	A16 (New Waltham)	**Low**	12%	Negligible	Negligible	
84	A16 (Utterby)	**Low**	8%	Negligible	Negligible	
85	A16 (Louth)	**Negligible**	7%	Negligible	Negligible	
97	B1184 (The Gride)	**Low**	0%	Negligible	Negligible	
98	B1184 (Gipsey Bridge)	**High**	0%	Negligible	Minor	
99	B1992 (Langrick)	**Medium**	0%	Negligible	Negligible	

Table 14.45 Traffic Impact Significance of Effects (Route Section 4) – Severance Impact - Weekday							
Site	Site Location	Receptor Sensitivity	Traffic % Increase (HGV)	Traffic % Increase (Total)	Magnitude	Effect	Notes
7	A1104 (Salesby)	**Low**	0%	0.0%	Negligible	Negligible	
8	A1104 (Alford)	**Very High**	0%	0.0%	Negligible	Minor	
9	A16 (Ulceby Cross)	**Medium**	8%	0.6%	Negligible	Negligible	
10	A16 (Ulceby Cross)	**Low**	16%	1.0%	Low	Negligible	
21	A52 (Wainfleet)	**Medium**	17%	0.6%	Medium	Moderate	The HGV percentage increase is greater than 10%, therefore has a magnitude of Medium based on the receptor sensitivity. The receptor sensitivity is Medium because there are shops/businesses, residential properties close to the receptor.
22	A52 (Skegness)	**High**	24%	0.5%	High	Major	The HGV percentage increase is greater than 10%, therefore has a magnitude of High based on the receptor sensitivity. The receptor sensitivity is Very High because there are schools and residential properties very close to the receptor in Skegness.
23	A52 (Wrangle Lowgate)	**Very High**	18%	0.7%	High	Major	The HGV percentage increase is greater than 10%, therefore has a magnitude of High based on the receptor sensitivity. The receptor sensitivity is Very High because there is a school close to the receptor.
24	A52 (Haltoft End)	**Medium**	9%	0.4%	Negligible	Moderate	The HGV percentage increase is greater than 10%, therefore has a magnitude of Medium based on the receptor sensitivity. The receptor sensitivity is Medium because there are residential properties close to the receptor.
25	A16 (Hilldyke)	**Very High**	12%	0.5%	High	Major	The HGV percentage increase is greater than 10%, therefore has a magnitude of High based on the receptor sensitivity. The receptor sensitivity is Very High because there are schools and residential properties close to the receptor in Boston.
27	A16 (Northlands)	**Very High**	15%	0.7%	High	Major	The HGV percentage increase is greater than 10%, therefore has a magnitude of High based on the receptor sensitivity. The receptor sensitivity is Very High because there is a school close to the receptor.
28	A16 (East Keal)	**Medium**	10%	0.6%	Medium	Moderate	The HGV percentage increase is greater than 10%, therefore has a magnitude of Medium based on the receptor sensitivity. The receptor sensitivity is Medium because there are shops/businesses, residential properties close to the receptor.
29	West Fen (Stickney)	**Very High**	0%	0.1%	Negligible	Minor	
34	Main Road (Carrington)	**Medium**	0%	0.0%	Negligible	Negligible	

Table 14.45 Traffic Impact Significance of Effects (Route Section 4) – Severance Impact - Weekday							
Site	Site Location	Receptor Sensitivity	Traffic % Increase (HGV)	Traffic % Increase (Total)	Magnitude	Effect	Notes
38	B1192 (New York)	**Low**	0%	0.1%	Negligible	Negligible	
40	A16 (Haugham)	**Low**	14%	0.9%	Low	Negligible	
41	A153 (West Ashby)	**Medium**	7%	0.2%	Negligible	Moderate	The HGV percentage increase is greater than 10%, therefore has a magnitude of Medium based on the receptor sensitivity. The receptor sensitivity is Medium because there are shops/businesses, residential properties close to the receptor.
55	A17 (Kirkby la Thorpe	**Negligible**	2%	0.5%	Negligible	Negligible	
56	A17 (Swineshead Bridge)	**Medium**	7%	0.9%	Negligible	Negligible	
57	A17 (Swineshead)	**Low**	5%	0.9%	Negligible	Negligible	
58	A1121 (Hubbert's Bridge)	**Low**	30%	1.7%	Low	Negligible	
59	A17 (Wigtoft)	**Low**	4%	0.8%	Negligible	Negligible	
60	A52 (Bicker)	**Low**	9%	0.6%	Negligible	Negligible	
63	A52 (Swaton)	**Low**	4%	0.3%	Negligible	Negligible	
64	A15 (Aswardby)	**Low**	2%	0.2%	Negligible	Negligible	
65	A15 (Folkingham)	**Medium**	0%	0.1%	Negligible	Negligible	
67	A15 (Ashby de la Launde)	**Negligible**	0%	0.1%	Negligible	Negligible	
68	A52 (Dembleby)	**Low**	1%	0.3%	Negligible	Negligible	
69	A153 (Haltham)	**Low**	0%	0.0%	Negligible	Negligible	
73	A1104 (Maltby le Marsh)	**Medium**	0%	0.0%	Negligible	Negligible	
76	A153 (Horncastle)	**High**	0%	0.0%	Negligible	Minor	
78	A17 (Kings Lynn)	**Negligible**	1%	0.2%	Negligible	Negligible	
79	A17 (West Lynn)	**Negligible**	3%	0.3%	Negligible	Negligible	
80	A17 (Long Sutton)	**Negligible**	3%	0.4%	Negligible	Negligible	
81	A17 (Holbeach)	**Low**	3%	0.4%	Negligible	Negligible	

Table 14.45 Traffic Impact Significance of Effects (Route Section 4) – Severance Impact - Weekday							
Site	Site Location	Receptor Sensitivity	Traffic % Increase (HGV)	Traffic % Increase (Total)	Magnitude	Effect	Notes
82	A16 (Grimsby)	**High**	13%	0.3%	High	Major	The HGV percentage increase is greater than 10%, therefore has a magnitude of High based on the receptor sensitivity. The receptor sensitivity is High because there are residential properties very close to the receptor in Grimsby.
83	A16 (New Waltham)	**Low**	12%	0.3%	Low	Negligible	
84	A16 (Utterby)	**Low**	8%	0.3%	Negligible	Negligible	
85	A16 (Louth)	**Negligible**	7%	0.5%	Negligible	Negligible	
97	B1184 (The Gride)	**Low**	0%	0.02%	Negligible	Negligible	
98	B1184 (Gipsey Bridge)	**High**	0%	0.1%	Negligible	Minor	
99	B1992 (Langrick)	**Medium**	0%	0.1%	Negligible	Negligible	

Table 14.46 Traffic Impact Significance of Effects (Route Section 4) – Road Safety Impact - Weekday						
Site	**Site Location**	**Receptor Sensitivity**	**Traffic % Increase (Total)**	**Magnitude**	**Effect**	**Notes**
7	A1104 (Salesby)	**Low**	0.0%	Negligible	Negligible	The effects of the additional traffic on receptor locations within the ZoI are considered Negligible at the majority of locations, with 9 locations experiencing Minor adverse effects. In addition, the construction process is transient and short-term, therefore the overall effects are considered **not significant**.
8	A1104 (Alford)	**Very High**	0.0%		Minor	
9	A16 (Ulceby Cross)	**Medium**	0.6%		Negligible	
10	A16 (Ulceby Cross)	**Low**	1.0%		Negligible	
21	A52 (Wainfleet)	**Medium**	0.6%		Negligible	
22	A52 (Skegness)	**High**	0.5%		Minor	
23	A52 (Wrangle Lowgate)	**Very High**	0.7%		Minor	
24	A52 (Haltoft End)	**Medium**	0.4%		Negligible	
25	A16 (Hilldyke)	**Very High**	0.5%		Minor	
27	A16 (Northlands)	**Very High**	0.7%		Minor	
28	A16 (East Keal)	**Medium**	0.6%		Negligible	
29	West Fen (Stickney)	**Very High**	0.1%		Minor	
34	Main Road (Carrington)	**Medium**	0.0%		Negligible	
38	B1192 (New York)	**Low**	0.1%		Negligible	
40	A16 (Haugham)	**Low**	0.9%		Negligible	
41	A153 (West Ashby)	**Medium**	0.2%		Negligible	
55	A17 (Kirkby la Thorpe	**Negligible**	0.5%		Negligible	
56	A17 (Swineshead Bridge)	**Medium**	0.9%		Negligible	
57	A17 (Swineshead)	**Low**	0.9%		Negligible	
58	A1121 (Hubbert's Bridge)	**Low**	1.7%		Negligible	
59	A17 (Wigtoft)	**Low**	0.8%		Negligible	
60	A52 (Bicker)	**Low**	0.6%		Negligible	
63	A52 (Swaton)	**Low**	0.3%		Negligible	
64	A15 (Aswardby)	**Low**	0.2%		Negligible	

Table 14.46 Traffic Impact Significance of Effects (Route Section 4) – Road Safety Impact - Weekday						
Site	Site Location	Receptor Sensitivity	Traffic % Increase (Total)	Magnitude	Effect	Notes
65	A15 (Folkingham)	**Medium**	0.1%		Negligible	
67	A15 (Ashby de la Launde)	**Negligible**	0.1%		Negligible	
68	A52 (Dembleby)	**Low**	0.3%		Negligible	
69	A153 (Haltham)	**Low**	0.0%		Negligible	
73	A1104 (Maltby le Marsh)	**Medium**	0.0%		Negligible	
76	A153 (Horncastle)	**High**	0.0%		Minor	
78	A17 (Kings Lynn)	**Negligible**	0.2%		Negligible	
79	A17 (West Lynn)	**Negligible**	0.3%		Negligible	
80	A17 (Long Sutton)	**Negligible**	0.4%		Negligible	
81	A17 (Holbeach)	**Low**	0.4%		Negligible	
82	A16 (Grimsby)	**High**	0.3%		Minor	
83	A16 (New Waltham)	**Low**	0.3%		Negligible	
84	A16 (Utterby)	**Low**	0.3%		Negligible	
85	A16 (Louth)	**Negligible**	0.5%		Negligible	
97	B1184 (The Gride)	**Low**	0.02%		Negligible	
98	B1184 (Gipsey Bridge)	**High**	0.1%		Minor	
99	B1992 (Langrick)	**Medium**	0.1%		Negligible	

Table 14.47 Traffic Impact Significance of Effects (Route Section 4) – Pedestrian/Cycle Impact - Weekday					
Site	Site Location	Receptor Sensitivity	Magnitude	Effect	Notes
7	A1104 (Salesby)	**Low**	High	Moderate	At the majority of receptor locations there are limited or no pedestrian/cycling facilities available, therefore in accordance with the criteria outlined in Table 14.5, the impact magnitude for the sites has been identified as either 'High' or 'Medium' with only one exception. When the receptor sensitivity is combined with these magnitudes, a number of the receptors experience a 'Major' or 'Moderate' adverse overall significance. However, it should be noted that there are currently very few pedestrians/cyclists currently using the roads under assessment and due to the nature of the roads, very few additional pedestrian/cyclist movements would be expected in the future. The works are also expected to be temporary in nature, therefore any significant effects will only be apparent for a limited period.
8	A1104 (Alford)	**Very High**	Medium	Major	
9	A16 (Ulceby Cross)	**Medium**	Medium	Moderate	
10	A16 (Ulceby Cross)	**Low**	High	Moderate	
21	A52 (Wainfleet)	**Medium**	High	Moderate	
22	A52 (Skegness)	**High**	High	Major	
23	A52 (Wrangle Lowgate)	**Very High**	High	Major	
24	A52 (Haltoft End)	**Medium**	Medium	Moderate	
25	A16 (Hilldyke)	**Very High**	High	Major	
27	A16 (Northlands)	**Very High**	High	Major	
28	A16 (East Keal)	**Medium**	High	Moderate	
29	West Fen (Stickney)	**Very High**	High	Major	
34	Main Road (Carrington)	**Medium**	High	Moderate	
38	B1192 (New York)	**Low**	High	Moderate	
40	A16 (Haugham)	**Low**	High	Moderate	
41	A153 (West Ashby)	**Medium**	High	Moderate	
55	A17 (Kirkby la Thorpe	**Negligible**	Medium	Negligible	
56	A17 (Swineshead Bridge)	**Medium**	High	Moderate	
57	A17 (Swineshead)	**Low**	Medium	Minor	
58	A1121 (Hubbert's Bridge)	**Low**	High	Moderate	
59	A17 (Wigtoft)	**Low**	High	Moderate	
60	A52 (Bicker)	**Low**	Medium	Minor	
63	A52 (Swaton)	**Low**	High	Moderate	
64	A15 (Aswardby)	**Low**	High	Moderate	

Table 14.47 Traffic Impact Significance of Effects (Route Section 4) – Pedestrian/Cycle Impact - Weekday					
Site	Site Location	Receptor Sensitivity	Magnitude	Effect	Notes
65	A15 (Folkingham)	**Medium**	High	Moderate	
67	A15 (Ashby de la Launde)	**Negligible**	High	Minor	
68	A52 (Dembleby)	**Low**	High	Moderate	
69	A153 (Haltham)	**Low**	High	Moderate	
73	A1104 (Maltby le Marsh)	**Medium**	Medium	Moderate	
76	A153 (Horncastle)	**High**	Medium	Moderate	
78	A17 (Kings Lynn)	**Negligible**	Medium	Negligible	
79	A17 (West Lynn)	**Negligible**	High	Minor	
80	A17 (Long Sutton)	**Negligible**	High	Minor	
81	A17 (Holbeach)	**Low**	High	Moderate	
82	A16 (Grimsby)	**High**	Negligible	Minor	
83	A16 (New Waltham)	**Low**	Medium	Minor	
84	A16 (Utterby)	**Low**	Medium	Minor	
85	A16 (Louth)	**Negligible**	High	Minor	
97	B1184 (The Gride)	**Low**	High	Moderate	
98	B1184 (Gipsey Bridge)	**High**	High	Major	
99	B1992 (Langrick)	**Medium**	High	Moderate	

Table 14.48 Traffic Impact Significance of Effects (Route Section 4) – HGV Impact - Saturday						
Site	Site Location	Receptor Sensitivity	Traffic % Increase (HGV)	Magnitude	Effect	Notes
7	A1104 (Salesby)	**Low**	0%	Negligible	Negligible	On a Saturday 6 receptor locations would experience significant effects. However, it is proposed that the majority of HGV movements will take place on weekdays, with Saturdays reserved for traffic movements only if required. Also, works on a Saturday would only constitute around 16% of the total working time during a given six day working week, therefore the impacts would be considered minimal.
8	A1104 (Alford)	**Very High**	0%	Negligible	Minor	
9	A16 (Ulceby Cross)	**Medium**	39%	Low	Minor	
10	A16 (Ulceby Cross)	**Low**	64%	Medium	Minor	
21	A52 (Wainfleet)	**Medium**	32%	Low	Minor	
22	A52 (Skegness)	**High**	95%	Medium	Moderate	
23	A52 (Wrangle Lowgate)	**Very High**	54%	Medium	Major	
24	A52 (Haltoft End)	**Medium**	20%	Negligible	Negligible	
25	A16 (Hilldyke)	**Very High**	43%	Medium	Major	
27	A16 (Northlands)	**Very High**	65%	Medium	Major	
28	A16 (East Keal)	**Medium**	44%	Medium	Moderate	
29	West Fen (Stickney)	**Very High**	0%	Negligible	Minor	
34	Main Road (Carrington)	**Medium**	0%	Negligible	Negligible	
38	B1192 (New York)	**Low**	0%	Negligible	Negligible	
40	A16 (Haugham)	**Low**	11%	Negligible	Negligible	
41	A153 (West Ashby)	**Medium**	24%	Negligible	Negligible	
55	A17 (Kirkby la Thorpe	**Negligible**	8%	Negligible	Negligible	
56	A17 (Swineshead Bridge)	**Medium**	19%	Negligible	Negligible	
57	A17 (Swineshead)	**Low**	12%	Negligible	Negligible	
58	A1121 (Hubbert's Bridge)	**Low**	112%	Medium	Minor	
59	A17 (Wigtoft)	**Low**	10%	Negligible	Negligible	
60	A52 (Bicker)	**Low**	34%	Low	Negligible	
63	A52 (Swaton)	**Low**	17%	Negligible	Negligible	
64	A15 (Aswardby)	**Low**	9%	Negligible	Negligible	

Table 14.48 Traffic Impact Significance of Effects (Route Section 4) – HGV Impact - Saturday						
Site	Site Location	Receptor Sensitivity	Traffic % Increase (HGV)	Magnitude	Effect	Notes
65	A15 (Folkingham)	**Medium**	0%	Negligible	Negligible	
67	A15 (Ashby de la Launde)	**Negligible**	0%	Negligible	Negligible	
68	A52 (Dembleby)	**Low**	6%	Negligible	Negligible	
69	A153 (Haltham)	**Low**	0%	Negligible	Negligible	
73	A1104 (Maltby le Marsh)	**Medium**	0%	Negligible	Negligible	
76	A153 (Horncastle)	**High**	0%	Negligible	Minor	
78	A17 (Kings Lynn)	**Negligible**	3%	Negligible	Negligible	
79	A17 (West Lynn)	**Negligible**	15%	Negligible	Negligible	
80	A17 (Long Sutton)	**Negligible**	12%	Negligible	Negligible	
81	A17 (Holbeach)	**Low**	14%	Negligible	Negligible	
82	A16 (Grimsby)	**High**	35%	Low	Moderate	
83	A16 (New Waltham)	**Low**	51%	Medium	Minor	
84	A16 (Utterby)	**Low**	31%	Low	Negligible	
85	A16 (Louth)	**Negligible**	32%	Low	Negligible	
97	B1184 (The Gride)	**Low**	0%	Negligible	Negligible	
98	B1184 (Gipsey Bridge)	**High**	0%	Negligible	Minor	
99	B1992 (Langrick)	**Medium**	0%	Negligible	Negligible	

Table 14.49 Traffic Impact Significance of Effects (Route Section 4) – Severance Impact - Saturday

Site	Site Location	Receptor Sensitivity	Traffic % Increase (HGV)	Traffic % Increase (Total)	Magnitude	Effect	Notes
7	A1104 (Salesby)	**Low**	0%	0.0%	Negligible	Negligible	On a Saturday 11 receptor locations would experience significant effects. However, it is proposed that the majority of HGV movements will take place on weekdays, with Saturdays reserved for traffic movements only if required. Also, works on a Saturday would only constitute around 16% of the total working time during a given six day working week, therefore the impacts would be considered minimal.
8	A1104 (Alford)	**Very High**	0%	0.0%	Negligible	Minor	
9	A16 (Ulceby Cross)	**Medium**	39%	0.8%	Medium	Moderate	
10	A16 (Ulceby Cross)	**Low**	64%	1.5%	Low	Negligible	
21	A52 (Wainfleet)	**Medium**	32%	0.7%	Medium	Moderate	
22	A52 (Skegness)	**High**	95%	0.5%	High	Major	
23	A52 (Wrangle Lowgate)	**Very High**	54%	0.9%	High	Major	
24	A52 (Haltoft End)	**Medium**	20%	0.6%	Medium	Moderate	
25	A16 (Hilldyke)	**Very High**	43%	0.7%	High	Major	
27	A16 (Northlands)	**Very High**	65%	1.0%	High	Major	
28	A16 (East Keal)	**Medium**	44%	0.8%	Medium	Moderate	
29	West Fen (Stickney)	**Very High**	0%	0.1%	Negligible	Minor	
34	Main Road (Carrington)	**Medium**	0%	0.1%	Negligible	Negligible	
38	B1192 (New York)	**Low**	0%	0.1%	Negligible	Negligible	
40	A16 (Haugham)	**Low**	11%	0.7%	Low	Negligible	
41	A153 (West Ashby)	**Medium**	24%	0.3%	Medium	Moderate	
55	A17 (Kirkby la Thorpe	**Negligible**	8%	0.8%	Negligible	Negligible	
56	A17 (Swineshead Bridge)	**Medium**	19%	1.4%	Medium	Moderate	
57	A17 (Swineshead)	**Low**	12%	1.5%	Low	Negligible	
58	A1121 (Hubbert's Bridge)	**Low**	112%	2.6%	Low	Negligible	
59	A17 (Wigtoft)	**Low**	10%	1.2%	Negligible	Negligible	
60	A52 (Bicker)	**Low**	34%	0.8%	Low	Negligible	
63	A52 (Swaton)	**Low**	17%	0.6%	Low	Negligible	
64	A15 (Aswardby)	**Low**	9%	0.3%	Negligible	Negligible	

Table 14.49 Traffic Impact Significance of Effects (Route Section 4) – Severance Impact - Saturday							
Site	Site Location	Receptor Sensitivity	Traffic % Increase (HGV)	Traffic % Increase (Total)	Magnitude	Effect	Notes
65	A15 (Folkingham)	**Medium**	0%	0.1%	Negligible	Negligible	
67	A15 (Ashby de la Launde)	**Negligible**	0%	0.2%	Negligible	Negligible	
68	A52 (Dembleby)	**Low**	6%	0.4%	Negligible	Negligible	
69	A153 (Haltham)	**Low**	0%	0.1%	Negligible	Negligible	
73	A1104 (Maltby le Marsh)	**Medium**	0%	0.0%	Negligible	Negligible	
76	A153 (Horncastle)	**High**	0%	0.0%	Negligible	Minor	
78	A17 (Kings Lynn)	**Negligible**	3%	0.3%	Negligible	Negligible	
79	A17 (West Lynn)	**Negligible**	15%	0.4%	Negligible	Negligible	
80	A17 (Long Sutton)	**Negligible**	12%	0.6%	Negligible	Negligible	
81	A17 (Holbeach)	**Low**	14%	0.7%	Low	Negligible	
82	A16 (Grimsby)	**High**	35%	0.3%	High	Major	
83	A16 (New Waltham)	**Low**	51%	0.3%	Low	Negligible	
84	A16 (Utterby)	**Low**	31%	0.4%	Low	Negligible	
85	A16 (Louth)	**Negligible**	32%	0.7%	Negligible	Negligible	
97	B1184 (The Gride)	**Low**	0%	0.02%	Negligible	Negligible	
98	B1184 (Gipsey Bridge)	**High**	0%	0.2%	Negligible	Minor	
99	B1992 (Langrick)	**Medium**	0%	0.1%	Negligible	Negligible	

Table 14.50 Traffic Impact Significance of Effects (Route Section 4) – Road Safety Impact - Saturday						
Site	**Site Location**	**Receptor Sensitivity**	**Traffic % Increase (Total)**	**Magnitude**	**Effect**	**Notes**
7	A1104 (Salesby)	**Low**	0.0%	Negligible	Negligible	The effects of the additional traffic on receptor locations within the ZoI are considered Negligible at the majority of locations, with 9 locations experiencing Minor adverse effects. In addition, the construction process is transient and short-term, therefore the overall effects are considered **not significant**.
8	A1104 (Alford)	**Very High**	0.0%		Minor	
9	A16 (Ulceby Cross)	**Medium**	0.8%		Negligible	
10	A16 (Ulceby Cross)	**Low**	1.5%		Negligible	
21	A52 (Wainfleet)	**Medium**	0.7%		Negligible	
22	A52 (Skegness)	**High**	0.5%		Minor	
23	A52 (Wrangle Lowgate)	**Very High**	0.9%		Minor	
24	A52 (Haltoft End)	**Medium**	0.6%		Negligible	
25	A16 (Hilldyke)	**Very High**	0.7%		Minor	
27	A16 (Northlands)	**Very High**	1.0%		Minor	
28	A16 (East Keal)	**Medium**	0.8%		Negligible	
29	West Fen (Stickney)	**Very High**	0.1%		Minor	
34	Main Road (Carrington)	**Medium**	0.1%		Negligible	
38	B1192 (New York)	**Low**	0.1%		Negligible	
40	A16 (Haugham)	**Low**	0.7%		Negligible	
41	A153 (West Ashby)	**Medium**	0.3%		Negligible	
55	A17 (Kirkby la Thorpe	**Negligible**	0.8%		Negligible	
56	A17 (Swineshead Bridge)	**Medium**	1.4%		Negligible	
57	A17 (Swineshead)	**Low**	1.5%		Negligible	
58	A1121 (Hubbert's Bridge)	**Low**	2.6%		Negligible	
59	A17 (Wigtoft)	**Low**	1.2%		Negligible	
60	A52 (Bicker)	**Low**	0.8%		Negligible	
63	A52 (Swaton)	**Low**	0.6%		Negligible	
64	A15 (Aswardby)	**Low**	0.3%		Negligible	

Table 14.50 Traffic Impact Significance of Effects (Route Section 4) – Road Safety Impact - Saturday						
Site	Site Location	Receptor Sensitivity	Traffic % Increase (Total)	Magnitude	Effect	Notes
65	A15 (Folkingham)	**Medium**	0.1%		Negligible	
67	A15 (Ashby de la Launde)	**Negligible**	0.2%		Negligible	
68	A52 (Dembleby)	**Low**	0.4%		Negligible	
69	A153 (Haltham)	**Low**	0.1%		Negligible	
73	A1104 (Maltby le Marsh)	**Medium**	0.0%		Negligible	
76	A153 (Horncastle)	**High**	0.0%		Minor	
78	A17 (Kings Lynn)	**Negligible**	0.3%		Negligible	
79	A17 (West Lynn)	**Negligible**	0.4%		Negligible	
80	A17 (Long Sutton)	**Negligible**	0.6%		Negligible	
81	A17 (Holbeach)	**Low**	0.7%		Negligible	
82	A16 (Grimsby)	**High**	0.3%		Minor	
83	A16 (New Waltham)	**Low**	0.3%		Negligible	
84	A16 (Utterby)	**Low**	0.4%		Negligible	
85	A16 (Louth)	**Negligible**	0.7%		Negligible	
97	B1184 (The Gride)	**Low**	0.0%		Negligible	
98	B1184 (Gipsey Bridge)	**High**	0.2%		Minor	
99	B1992 (Langrick)	**Medium**	0.1%		Negligible	

Table 14.51 Traffic Impact Significance of Effects (Route Section 4) – Pedestrian/Cycle Impact - Saturday					
Site	Site Location	Receptor Sensitivity	Magnitude	Effect	Notes
7	A1104 (Salesby)	**Low**	High	Moderate	At the majority of receptor locations there are limited or no pedestrian/cycling facilities available, therefore in accordance with the criteria outlined in Table 14.5, the impact magnitude for the sites has been identified as either 'High' or 'Medium' with only one exception. When the receptor sensitivity is combined with these magnitudes, a number of the receptors experience a 'Major' or 'Moderate' adverse overall significance. However, it should be noted that there are currently very few pedestrians/cyclists currently using the roads under assessment and due to the nature of the roads, very few additional pedestrian/cyclist movements would be expected in the future. The works are also expected to be temporary in nature, therefore any significant effects will only be apparent for a limited period.
8	A1104 (Alford)	**Very High**	Medium	Major	
9	A16 (Ulceby Cross)	**Medium**	Medium	Moderate	
10	A16 (Ulceby Cross)	**Low**	High	Moderate	
21	A52 (Wainfleet)	**Medium**	High	Moderate	
22	A52 (Skegness)	**High**	High	Major	
23	A52 (Wrangle Lowgate)	**Very High**	High	Major	
24	A52 (Haltoft End)	**Medium**	Medium	Moderate	
25	A16 (Hilldyke)	**Very High**	High	Major	
27	A16 (Northlands)	**Very High**	High	Major	
28	A16 (East Keal)	**Medium**	High	Moderate	
29	West Fen (Stickney)	**Very High**	High	Major	
34	Main Road (Carrington)	**Medium**	High	Moderate	
38	B1192 (New York)	**Low**	High	Moderate	
40	A16 (Haugham)	**Low**	High	Moderate	
41	A153 (West Ashby)	**Medium**	High	Moderate	
55	A17 (Kirkby la Thorpe	**Negligible**	Medium	Negligible	
56	A17 (Swineshead Bridge)	**Medium**	High	Moderate	
57	A17 (Swineshead)	**Low**	Medium	Minor	
58	A1121 (Hubbert's Bridge)	**Low**	High	Moderate	
59	A17 (Wigtoft)	**Low**	High	Moderate	
60	A52 (Bicker)	**Low**	Medium	Minor	
63	A52 (Swaton)	**Low**	High	Moderate	
64	A15 (Aswardby)	**Low**	High	Moderate	

Table 14.51 Traffic Impact Significance of Effects (Route Section 4) – Pedestrian/Cycle Impact - Saturday					
Site	Site Location	Receptor Sensitivity	Magnitude	Effect	Notes
65	A15 (Folkingham)	**Medium**	High	Moderate	
67	A15 (Ashby de la Launde)	**Negligible**	High	Minor	
68	A52 (Dembleby)	**Low**	High	Moderate	
69	A153 (Haltham)	**Low**	High	Moderate	
73	A1104 (Maltby le Marsh)	**Medium**	Medium	Moderate	
76	A153 (Horncastle)	**High**	Medium	Moderate	
78	A17 (Kings Lynn)	**Negligible**	Medium	Negligible	
79	A17 (West Lynn)	**Negligible**	High	Minor	
80	A17 (Long Sutton)	**Negligible**	High	Minor	
81	A17 (Holbeach)	**Low**	High	Moderate	
82	A16 (Grimsby)	**High**	Negligible	Minor	
83	A16 (New Waltham)	**Low**	Medium	Minor	
84	A16 (Utterby)	**Low**	Medium	Minor	
85	A16 (Louth)	**Negligible**	High	Minor	
97	B1184 (The Gride)	**Low**	High	Moderate	
98	B1184 (Gipsey Bridge)	**High**	High	Major	
99	B1992 (Langrick)	**Medium**	High	Moderate	

6.6 Decommissioning Effects

6.6.1 The effects during the decommissioning phase would be no worse than those presented within section 6.5, as decommissioning would essentially be the reverse of the construction period. The impacts would therefore be no worse in scale, nature and duration.

7 Mitigation

7.1 Overview of Mitigation

7.1.1 In order to mitigate some of the potentially significant effects relating to traffic and transport, a number of mitigation measures have been proposed. Mitigation would be secured/delivered through the Construction Environmental Management Plan (CEMP) and Construction Traffic Management Plan (CTMP), which are expected to be secured by planning condition.

HGV Construction Traffic

7.1.2 Mitigation relating to traffic movements associated with the proposed DC cable route would be focused primarily on HGV traffic, as the additional car/LGV trips will have a negligible impact on future traffic flows. However, the impacts of car/LGV trips could also be mitigated through the encouragement of worker car share.

7.1.3 Based on the assessment criteria of HGV traffic, the only method of reducing the overall significance of effect would be through a reduction in overall HGV traffic during construction (either by reducing the total number required or re-routing traffic). This will not be possible, hence the residual impacts would remain the same post mitigation. However, there are a number of softer measures that would help to lessen the general impacts of the construction traffic.

7.1.4 The number of HGVs associated with construction is likely to have a potentially adverse, but temporary, effect on the highway network. Therefore, the programming of such movements could potentially be subject to restrictions during certain periods of the day.

7.1.5 In addition, extensive route planning and analysis was carried out during the assessment of traffic impacts in order to devise the most appropriate route for vehicles travelling to and from the TCFs (e.g. to ensure avoidance of residential and other sensitive areas) as much as possible.

7.1.6 This process involved a detailed assessment of all A-roads, B-roads and unclassified roads in the ZoI to ascertain their suitability for use by HGVs and other large vehicles required at the TCFs.

7.1.7 A desktop review, supported by a site visit, was conducted that identified a number of features on the routes that could potentially affect their suitability, as follows:

- Proximity to settlements;
- Road width;
- Weight restrictions;
- Height restrictions;
- Bridges;
- Level crossings; and
- Other obstacles.

7.1.8 The above accessibility features were then assessed using a Red, Amber, Green criteria, which provided a total score for each route section. The routing of HGVs was then devised based on these results.

7.1.9 A CTMP will also be developed, which will identify how traffic would be managed throughout the duration of the construction period. The CTMP would include the following:

- Location of TCFs and the access/egress points for the working width;
- Traffic routeing plans – defining the routes to be taken by HGVs to each TCF on the proposed DC cable route. For example, prioritising the use of A and B-roads as far as possible, avoidance of Langrick Bridge and other sensitive locations;
- Construction hours and delivery times (as mentioned above);
- Strategy for traffic management and measures for informing construction traffic of local access routes, road restrictions, timing restrictions and where access is prohibited;
- Measures to protect the public highway (e.g. wheel wash facilities);
- Measures for the monitoring of the CTMP to ensure compliance from drivers and appropriate actions in the event of non-compliance;
- Mechanism for responding to traffic management issues arising during the works (including concerns raised from the public) including a joint consultation approach with relevant highways authorities;
- Details of each road crossing, access points, and traffic management requirements; and
- Strategy for traffic management and measures for informing construction traffic of local access routes, road restrictions (statutory limits: width, height, axle loading and gross weight), timing restrictions (if applicable) and where access is prohibited.

7.1.10 Control measures will include:

- All construction traffic to adhere to the Traffic Route Plans included in the CTMP;
- All vehicles will be able to access and egress the TCFs in a forward gear, with sufficient room off the public highway to allow them to wait without blocking the main carriageway;
- Adequate parking will be provided at the TCFs to ensure that the safety and efficient operation of the public highway is not reduced;
- Welfare facilities will be provided within the working width so as to minimise the need for off-site trips by staff during the working day;
- At all site accesses, suitable supervision will be provided as required to ensure that traffic is controlled at access points during construction (for example banksman checking road traffic and controlling construction vehicle movements) and mud deposits on the roads are minimised; and
- Where required, traffic signals (in accordance with New Roads and Street Works Act (NRSWA), (Ref: 14-6) or stop-go boards will be used to control road traffic. Road signs will conform to Chapter 8 (Traffic Signs Manual, Ref 14-8) and NRSWA.
- Traffic management on the major road at TCF access locations would include temporary speed limit reductions, to be agreed with LCC.

Road Safety

7.1.11 Whilst the majority of impacts relating to road safety are either 'Minor' or 'Negligible', the access to individual TCFs from the public highway will use Banksmen, where appropriate, HGVs can access and egress in a forward gear, to manage the movement of HGVs on and off the public highway. Warning signage will be provided on the approaches to junctions from the public highway.

Pedestrians & Cyclists

7.1.12 As part of a Travel Plan developed for the proposed DC cable route construction, measures such as an internal site layout to accommodate the movement of pedestrian and cyclists will be designed.

7.1.13 There would however be very few pedestrian/cyclist movements expected as part of the construction phase of the development, which relates to the relatively low number of additional workers expected.

Travel Plan

7.1.14 A Travel Plan will be introduced in order to encourage sustainable travel to the TCFs. The Travel Plan would include measures such as; encouragement of car sharing and public transport usage, better marketing of information and implementation of a Travel Plan Co-ordinator. Where appropriate, a shuttle bus to transport workers to key interchange locations could be introduced.

7.1.15 An important element in ensuring the success of the construction phase of the proposed DC cable route and reducing the effects on traffic receptors is effective communication with local communities before and during the construction process, and in particular to inform them of the timing of construction activities and to help alleviate any concerns they may have. To address this National Grid will ensure, in line with NRSWA and any Section 278 Agreements with the Highway Authorities that the Contractor maintains good communication with affected communities, keeping them informed about the timing and extent of activities which may affect them.

7.1.16 A Construction Phase Health and Safety Plan (CPH&SP) will be required for the construction of the proposed DC cable route. This will include details of best practice methods of reducing dust emissions and vehicle washing facilities (this will help to remove mud from vehicles before they access the road network). The CPH&SP is a Construction, Design and Management (CDM) requirement and is separate to any specific Contractor agreements to minimise the effect of construction traffic.

7.1.17 So far as practicable, material will be retained on site (or moved using the working width within the proposed DC cable route), including the retention of all soils and spoils, therefore minimising the need to move material on and off the site.

7.1.18 It is considered that with the implementation of the above measures, any minor effects on road users during the construction period will be reduced further. In terms of Road Safety, all accesses

off the public highway will use Banksmen to manage the movement of HGVs on and off the public highway. Where appropriate, HGVs would access and egress in a forward gear. At all accesses, warning signage will be provided on the approaches to the access junctions. For the temporary junctions, this would be provided in line with Chapter 8 of the Traffic Signs Manual (Ref 14-8. For permanent junctions, these would be provided in line with The Traffic Signs Regulations and General Directions 2002 (TSRGD) (Ref 14-7) and Traffic Signs Manual (Ref 14-8).

8 Residual Effects

8.1 Introduction

8.1.1 This section of the report outlines the residual effects of the potential traffic impacts, following the application of mitigation.

8.2 Route Section 1 Proposed Landfall to Well High Lane

Temporary Impacts

HGV Construction Traffic Impacts

8.2.1 The residual effects of the additional HGV traffic generated by the proposed DC cable route site, following the implementation of associated mitigation are outlined below.

8.2.2 As stated in section 7.1.3, based on the assessment criteria used the only method of reducing the overall significance of effect would be through a reduction in HGV traffic during construction.

8.2.3 Therefore, the residual effects post mitigation would remain the same as those stated pre-mitigation, with all but 6 sites having residual effects that are **not significant** on weekdays**.** On Saturdays all but 8 sites would have residual effects that are **not significant**.

8.2.4 However, on a Saturday there is much less HGV traffic in the baseline, therefore any increase in HGVs would be substantial. Traffic has been assessed as a typical working day, however, it is proposed that the majority of HGV movements will take place on weekdays, with Saturdays reserved for traffic movements only if required. Also, works on a Saturday would only constitute around 16% of the total working time during a given six day working week, therefore the impacts would be considered minimal in duration relative to the total working time.

8.2.5 The measures introduced as part of the CTMP would help to lessen any impacts of the construction traffic, although they would not impact the residual significance. For example, the use of A and B-roads would be prioritised as far as possible.

Severance

8.2.6 As stated in section 7.1.3, based on the assessment criteria used to measure severance impacts, the only method of reducing the overall significance of effect would be through a reduction in HGV traffic during construction.

8.2.7 Therefore, the residual effects post mitigation would remain the same as those stated pre-mitigation, with all but 8 sites having residual effects that are **not significant** on weekdays**.** On Saturdays all but 10 sites would have residual effects that are **not significant**.

8.2.8 However, a number of softer measures as provided within the CTMP would help to lessen the general impacts of the construction traffic.

Road Safety

8.2.9 At the receptor locations experiencing an increase in overall traffic, there is expected to be either a minor or negligible increase in overall traffic at known accident locations, therefore in accordance with the criteria outlined in Table 14.5, the impact magnitude for the sites has been identified as Low or Negligible. This results in the majority of the receptors experiencing a Negligible or Minor overall significance. The residual effects are therefore **not significant**.

Pedestrians and Cycling

8.2.10 The impact magnitude for pedestrian and cycling movements is driven by the level of existing amenities available. The majority of receptor sites that experience an increase in overall traffic have little or pedestrian/cycling facilities.

8.2.11 Consequently, as very few cyclists/pedestrians are expected as part of the construction of the proposed DC cable route, the overall significance has been reduced at all sites, for example, sites that would experience a Moderate Adverse effect, would be reduced to Minor Adverse and so on. The residual effects at all but 5 sites would be **not significant** on weekdays, with 4 sites on Saturdays.

8.2.12 However, it should be noted that there are currently very few pedestrians/cyclists currently using the roads under assessment and due to the nature of the roads, very few additional pedestrian/cyclist movements would be expected in the future. The works are also expected to be temporary in nature, therefore any significant effects will only be apparent for a limited period.

8.2.13 The Travel Plan and CTMP would also help to deliver softer measures that would help to lessen the overall significance of effects.

8.3 Route Section 2 Well High Lane to A16 (Keal Road)

Temporary Impacts

HGV Construction Traffic Impacts

8.3.1 The residual effects of the additional HGV traffic generated by the proposed DC cable route site, following the implementation of associated mitigation are outlined below.

8.3.2 As stated in section 7.1.3, based on the assessment criteria used the only method of reducing the overall significance of effect would be through a reduction in HGV traffic during construction.

8.3.3 Therefore, the residual effects post mitigation would remain the same as those stated pre-mitigation, with all but 2 sites having residual effects that are **not significant** on weekdays**.** On Saturdays all but 5 sites would have residual effects that are **not significant**.

8.3.4 However, on a Saturday there is much less HGV traffic in the baseline, therefore any increase in HGVs would be substantial. Traffic has been assessed as a typical working day, however, it is proposed that the majority of HGV movements will take place on weekdays, with Saturdays reserved for traffic movements only if required. Also, works on a Saturday would only constitute

around 16% of the total working time during a given six day working week, therefore the impacts would be considered minimal.

8.3.5 The measures introduced as part of the CTMP would help to lessen any impacts of the construction traffic, whilst they would not impact the residual significance. For example, the use of A and B-roads would be prioritised as far as possible.

Severance

8.3.6 As stated in section 7.1.3, based on the assessment criteria used to measure severance impacts, the only method of reducing the overall significance of effect would be through a reduction in HGV traffic during construction.

8.3.7 Therefore, the residual effects post mitigation would remain the same as those stated pre-mitigation, with all but 6 sites having residual effects that are **not significant** on weekdays**.** On Saturdays all but 9 sites would have residual effects that are **not significant**.

8.3.8 However, a number of softer measures as provided within the CTMP would help to lessen the general impacts of the construction traffic.

Road Safety

8.3.9 At the receptor locations experiencing an increase in overall traffic, there is expected to be either a minor or negligible increase in overall traffic at known accident locations, therefore in accordance with the criteria outlined in Table 14.5, the impact magnitude for the sites has been identified as Low or Negligible. This results in the majority of the receptors experiencing a Negligible or Minor overall significance. The residual effects are therefore **not significant**.

Pedestrians and Cycling

8.3.10 The impact magnitude for pedestrian and cycling movements is driven by the level of existing amenities available. The majority of receptor sites that experience an increase in overall traffic have little or pedestrian/cycling facilities.

8.3.11 Consequently, as very few cyclists/pedestrians are expected as part of the construction of the proposed DC cable route, the overall significance has been reduced at all sites, for example, sites that would experience a Moderate Adverse effect, would be reduced to Minor Adverse and so on. The residual effects at all but 3 sites would be **not significant** on weekdays, with 3 sites on Saturdays.

8.3.12 However, it should be noted that there are currently very few pedestrians/cyclists currently using the roads under assessment and due to the nature of the roads, very few additional pedestrian/cyclist movements would be expected in the future. The works are also expected to be temporary in nature, therefore any significant effects will only be apparent for a limited period.

8.3.13 The Travel Plan and CTMP would also help to deliver softer measures that would help to lessen the overall significance of effects.

8.4 Route Section 3 A16 (Keal Road) to River Witham

Temporary Impacts

HGV Construction Traffic Impacts

8.4.1 The residual effects of the additional HGV traffic generated by the proposed DC cable route site, following the implementation of associated mitigation are outlined below.

8.4.2 As stated in section 7.1.3, based on the assessment criteria used the only method of reducing the overall significance of effect would be through a reduction in HGV traffic during construction.

8.4.3 Therefore, the residual effects post mitigation would remain the same as those stated pre-mitigation, with all but 7 sites having residual effects that are **not significant** on weekdays. On Saturdays all but 14 sites would have residual effects that are **not significant**.

8.4.4 However, on a Saturday there is much less HGV traffic in the baseline, therefore any increase in HGVs would be substantial. Traffic has been assessed as a typical working day, however, it is proposed that the majority of HGV movements will take place on weekdays, with Saturdays reserved for traffic movements only if required. Also, works on a Saturday would only constitute around 16% of the total working time during a given six day working week, therefore the impacts would be considered minimal.

8.4.5 The measures introduced as part of the CTMP would help to lessen any impacts of the construction traffic, whilst they would not impact the residual significance. For example, the use of A and B-roads would be prioritised as far as possible.

Severance

8.4.6 As stated in section 7.1.3, based on the assessment criteria used to measure severance impacts, the only method of reducing the overall significance of effect would be through a reduction in HGV traffic during construction.

8.4.7 Therefore, the residual effects post mitigation would remain the same as those stated pre-mitigation, with all but 15 sites having residual effects that are **not significant** on weekdays**.** On Saturdays all but 18 sites would have residual effects that are **not significant**.

8.4.8 However, a number of softer measures as provided within the CTMP would help to lessen the general impacts of the construction traffic.

8.4.9 In addition, on a Saturday there is much less HGV traffic in the baseline, therefore any increase in HGVs would be substantial. Traffic has been assessed as a typical working day, however, it is proposed that the majority of HGV movements will take place on weekdays, with Saturdays reserved for traffic movements only if required. Also, works on a Saturday would only constitute around 16% of the total working time during a given six day working week, therefore the impacts would be considered minimal.

Road Safety

8.4.10 At the receptor locations experiencing an increase in overall traffic, there is expected to be either a minor or negligible increase in overall traffic at known accident locations, therefore in accordance with the criteria outlined in Table 14.5, the impact magnitude for the sites has been identified as Low or Negligible. This results in the majority of the receptors experiencing a Negligible or Minor overall significance, with one exception. The residual effects are therefore **not significant**.

Pedestrians and Cycling

8.4.11 The impact magnitude for pedestrian and cycling movements is driven by the level of existing amenities available. The majority of receptor sites that experience an increase in overall traffic have little or pedestrian/cycling facilities.

8.4.12 Consequently, as very few cyclists/pedestrians are expected as part of the construction of the proposed DC cable route, the overall significance has been reduced at all sites, for example, sites that would experience a Moderate Adverse effect, would be reduced to Minor Adverse and so on. The residual effects at all but 8 sites would be **not significant** on weekdays, with 8 sites on Saturdays.

8.4.13 However, it should be noted that there are currently very few pedestrians/cyclists currently using the roads under assessment and due to the nature of the roads, very few additional pedestrian/cyclist movements would be expected in the future. The works are also expected to be temporary in nature, therefore any significant effects will only be apparent for a limited period.

8.4.14 The Travel Plan and CTMP would also help to deliver softer measures that would help to lessen the overall significance of effects.

8.5 Route Section 4 River Witham to the Proposed Converter Station

Temporary Impacts

HGV Construction Traffic Impacts

8.5.1 The residual effects of the additional HGV traffic generated by the proposed DC cable route site, following the implementation of associated mitigation are outlined below.

8.5.2 As stated in section 7.1.3, based on the assessment criteria used the only method of reducing the overall significance of effect would be through a reduction in HGV traffic during construction.

8.5.3 Therefore, the residual effects post mitigation would remain the same as those stated pre-mitigation, with all sites having residual effects that are **not significant** on weekdays. On Saturdays all but 6 sites would have residual effects that are **not significant**.

8.5.4 However, on a Saturday there is much less HGV traffic in the baseline, therefore any increase in HGVs would be substantial. Traffic has been assessed as a typical working day, however, it is proposed that the majority of HGV movements will take place on weekdays, with Saturdays reserved for traffic movements only if required. Also, works on a Saturday would only constitute

around 16% of the total working time during a given six day working week, therefore the impacts would be considered minimal.

8.5.5 The measures introduced as part of the CTMP would help to lessen any impacts of the construction traffic, whilst they would not impact the residual significance. For example, the use of A and B-roads would be prioritised as far as possible.

Severance

8.5.6 As stated in section 7.1.3, based on the assessment criteria used to measure severance impacts, the only method of reducing the overall significance of effect would be through a reduction in HGV traffic during construction.

8.5.7 Therefore, the residual effects post mitigation would remain the same as those stated pre-mitigation, with all but 9 sites having residual effects that are **not significant** on weekdays**.** On Saturdays all but 11 sites would have residual effects that are **not significant**.

8.5.8 However, a number of softer measures as provided within the CTMP would help to lessen the general impacts of the construction traffic.

8.5.9 In addition, on a Saturday there is much less HGV traffic in the baseline, therefore any increase in HGVs would be substantial. Traffic has been assessed as a typical working day, however, it is proposed that the majority of HGV movements will take place on weekdays, with Saturdays reserved for traffic movements only if required. Also, works on a Saturday would only constitute around 16% of the total working time during a given six day working week, therefore the impacts would be considered minimal.

Road Safety

8.5.10 At the receptor locations experiencing an increase in overall traffic, there is expected to be either a minor or negligible increase in overall traffic at known accident locations, therefore in accordance with the criteria outlined in Table 14.5, the impact magnitude for the sites has been identified as Low or Negligible. This results in the majority of the receptors experiencing a Negligible or Minor overall significance. The residual effects are therefore **not significant**.

Pedestrians and Cycling

8.5.11 The impact magnitude for pedestrian and cycling movements is driven by the level of existing amenities available. The majority of receptor sites that experience an increase in overall traffic have little or pedestrian/cycling facilities.

8.5.12 Consequently, as very few cyclists/pedestrians are expected as part of the construction of the proposed DC cable route, the overall significance has been reduced at all sites, for example, sites that would experience a Moderate Adverse effect, would be reduced to Minor Adverse and so on. The residual effects at all but 7 sites would be **not significant** on weekdays, with 7 sites on Saturdays.

8.5.13 However, it should be noted that there are currently very few pedestrians/cyclists currently using the roads under assessment and due to the nature of the roads, very few additional pedestrian/cyclist movements would be expected in the future. The works are also expected to be temporary in nature, therefore any significant effects will only be apparent for a limited period.

8.5.14 The Travel Plan and CTMP would also help to deliver softer measures that would help to lessen the overall significance of effects.

8.6 Decommissioning Effects

8.6.1 The effects during the decommissioning phase would be no worse than those presented within section 6.5, as decommissioning would essentially be the reverse of the construction period. The residual impacts would therefore be no worse in scale, nature and duration.

9 Cumulative Effects

9.1 Introduction

9.1.1 This section will consider inter-project cumulative impacts relating to traffic and transport. Reference should be made to the cumulative assessment chapter (Chapter 16/ES-2-B.12) which also identifies the committed developments to be considered within the assessment.

9.2 Scope of Cumulative Assessment (Inter-Project Impacts)

9.2.1 As noted above, the following table details the committed developments considered as part of the proposed DC cable route traffic and transport assessment.

9.2.2 The developments identified within Chapter 16 have been reviewed and only the sites lying within the proposed DC cable route ZoI have ultimately been included for further assessment.

9.2.3 Table 14.51 shows the committed developments considered relevant to the proposed DC cable route.

9.2.4 Further review of relevant documentation relating to the committed developments has been undertaken to ascertain whether there would be any potential traffic impacts generated by these sites. The next stage of the process was to discount sites from the identified list if they were not deemed to generate traffic impacts.

9.2.5 For example, if traffic was not to be generated at the same time as that of the proposed DC cable route construction period and the volume of traffic was not considered significant, the committed development was omitted from the assessment at this point.

9.2.6 As shown in Table 14.52, three of the committed development sites have been included as part of the traffic and transport assessment. These sites were then assessed further to ascertain their potential effects on the proposed DC cable route.

Table 14.52 Cumulative Assessment - Committed Developments				
Development Name/Description	**Planning Application Reference Number**	**Location**	**Details of Traffic Impacts**	**Include**
Triton Knoll Offshore Wind Farm	-	Within the county of Lincolnshire	The ES chapter outlines the total daily two-way Cars/HGVs expected as part of the scheme.	Yes
Heckington Fen Wind Park	15/0416/S36	Land At Six Hundred Farm Six Hundred Drove East Heckington Lincolnshire	Average of 18 HGV two way movements per day during 52 week construction phase. Maximum of 24 two way car movements per day. Assumes all traffic would arrive/depart via A17, A1. No operational impacts assumed.	Yes
Installation of 19,230no. 5MW solar panels to a maximum height of 2.7m to create a solar farm and to include associated works of a vehicular access,	S/203/01106/15	Land off, Folly Lane, Stickney, Boston, Lincolnshire	The Construction Traffic Management Plan stated that between 10 and 25 staff vehicles will access the site each daily.	Yes
Erection of one new grain store	17/0165/FUL	Six Hundreds Farm Buildings Six Hundreds Drove East Heckington Sleaford Lincolnshire PE20 3QA	The planning officer states that the site would not attract or generate large numbers of journeys, and is located to provide opportunities for access by public transport, walking or cycling.	No
Erection of 6no. – 8no. poultry sheds.	S/096/00333/16	Land At Laburnum House, Main Road, Langrick, Boston, Lincolnshire, PE22 7AN	Requested that the ES provide further details on types, frequency and number of trips. These details were not available online.	No

Table 14.52 Cumulative Assessment - Committed Developments				
Development Name/Description	**Planning Application Reference Number**	**Location**	**Details of Traffic Impacts**	**Include**
Construct a 499kw anaerobic digestion plant. (county matter application). Initial Application S/096/02043/13	S/096/00870/14	Land At Laburnum House, Main Road, Langrick, Boston, Lincolnshire.	Chapter 4.27 - 4.29 outlines that during operation of the site, it will not generate additional highway traffic over and above existing activities.	No
Erection of 16no. biomass boilers with associated fuel silos to heat existing poultry units.	S/096/01235/14	Langriville Farm, Langrick Road, New York, Lincoln, Lincolnshire. LN4 4XH	LCC Highways comments outline the following: After reviewing the proposed planning application it was felt that an additional 16 HGV movements over 45 days or 90 days would not constitute to a significant impact on the surrounding highway network.	No
Change of use of land to form an extension to existing yard area at existing recycling centre	S/054/01504/16	Westville Recycling Centre, Northlands Road, Westville, Boston, Lincolnshire. PE22 7HR	No objections were made and no traffic impact was stated, therefore permission was granted.	No
Siting of 3no, containers with flues to provide housing for 9no. biomass boilers and to include 9no. buffer tanks	S/168/01773/14	Hagnaby Farm, Back Lane, Stickford (also within East Kirkby CP), Boston, Lincolnshire, PE22 8EW	No increase to the amount of traffic.	No
Erection of a poultry unit, 2no. feed silos and construction of a vehicular and a pedestrian access	S/204/01679/16	Land At Poplar Farm, Mill Lane, Keal Cotes, Spilsby, Lincolnshire, PE23 4AJ	It is considered that the proposed construction period is very short and the traffic impact is minimal.	No

Table 14.52 Cumulative Assessment - Committed Developments				
Development Name/Description	**Planning Application Reference Number**	**Location**	**Details of Traffic Impacts**	**Include**
Screening opinion with respect to the creation of 9 hectares of woodland.	S/045/01700/16	Woodlands, Glebe Farm, Hundleby, Spilsby, Lincolnshire	No objections were made and no traffic impact was stated, therefore permission was granted.	No
Screening opinion with respect to the development of a 2MW solar park.	N/119/01383/13	Land At Dale Farm, Mavis Enderby, Spilsby, Lincolnshire	No objections were made and no traffic impact was stated, therefore permission was granted.	No
Installation of ground mounted 122kwp solar arrays consisting of 460 panels within 3 rows to a maximum height of 2.4 metres including associated works.	N/098/01711/15	Land off Dale Farm, Sutterby Lane, Sutterby, (within Langton by Spilsby PC) Lincolnshire. LN11 8RB	It is considered that the proposed construction period is very short with only minimal future maintenance transport required.	No
Installation of 192no. 50kW ground mounted solar panels to a maximum height of 2.4m	N/098/01313/15	Langton Grange Farm, Langton Road, Langton by Spilsby, Lincolnshire. PE23 4PT	It is considered that the proposed construction period is very short with only minimal future maintenance transport required.	No
Construct a solar farm comprising construction and operation over a 25 year period of a 1.5MW ground mounted solar array (6000 panels) with a maximum overall height of 2.3 metres together with support structures.	N/163/00245/15	Marriages Specialist Foods, Bluestone Heath Road, Driby Top, Lincolnshire. LN13 0BT	It is stated that the development is not considered to raise significant highways and transportation issues and that very limited construction works would be required.	No

Table 14.52 Cumulative Assessment - Committed Developments				
Development Name/Description	**Planning Application Reference Number**	**Location**	**Details of Traffic Impacts**	**Include**
Form B application – To erect an 11KV overhead line (plan no. Alford/TW/0036d).	N/116/01460/13	Proposed OH Power Line A, Hagnaby Lane, Hagnaby	No objections were made and no traffic impact was stated, therefore permission was granted.	No
Erection of a free range poultry unit, provision of 2no. feed silos and construction of a hard standing and access road	N/089/01982/15	Land Off, Crawcroft Lane, Huttoft, Alford, Lincolnshire	The Environmental Report stated that vehicles serving the proposals were to increase by 4 vehicles per year and was therefore considered to be insignificant.	No
Erect an 11kv overhead line	N/089/12430/14	OH Power Line Rebuild Adjoining Yarlsgate Farm, Huttoft Road, Sutton On Sea	The Highways Authority stated that the proposed development will not be detrimental to highway safety or traffic capacity. Natural England stated that the Construction Management Plan should ensure that no materials or vehicles enter the SSSI.	No

9.3 Cumulative Effects

9.3.1 As indicated in Table 14.52, three of the identified committed developments are expected to generate traffic impacts.

Triton Knoll Offshore Wind Farm

9.3.2 As detailed in Figure 9-13 of the Triton Knoll ES Chapter 9: Traffic and Access (April 2015) (Ref 14-9) it is expected that the Triton Knoll scheme will generate significant levels of traffic during its construction phase. However, it is planned that the peak levels of traffic associated with the proposed DC cable route construction phase will likely occur following completion of the Triton Knoll scheme in 2020.

9.3.3 No cumulative effects are expected to be generated; therefore the cumulative effects of the Triton Knoll scheme were considered to be **not significant**.

Heckington Fen Wind Park

9.3.4 Permission has been granted for the development of Heckington Fen Wind Park (Ref: 15/0416/S36) and subsequently the scheme will generate some traffic movements during its construction period, expected to be between 2017 and 2013. However, due to the small number of additional daily vehicle movements and the fact that the construction period is unlikely to coincide with the peak month of construction of the proposed DC cable route.

9.3.5 Subsequently, the cumulative effects of the Heckington Fen Wind Park scheme were considered to be **not significant**.

Solar Farm, Stickney

9.3.6 This application (Ref: S/203/01106/15) was granted permission on land near Stickney, Lincolnshire. It was stated in the Construction Traffic Management Plan that between 10 and 25 staff will arrive at the site per day during construction, which would be between 2014-2020.

9.3.7 It was considered that the traffic generated by this scheme was minimal, and construction would not coincide with the peak month of construction for the DC cable route. Subsequently the cumulative effects were considered **not significant**.

9.4 Scope of Cumulative Assessment (Intra-Project Impacts)

9.4.1 This section considers the intra-project cumulative impacts, which relate to construction activities concerning the proposed converter station.

9.4.2 For the purposes of this assessment, the traffic impacts generated by the proposed converter station have been combined with the proposed DC cable route.

9.4.3 The construction period for the proposed converter station is scheduled to take place between 2019 and 2022, however details of the proposed DC cable route construction are to be confirmed.

9.4.4 Although it is unlikely that the peak construction periods will coincide, an assessment has been undertaken to determine the impacts of this scenario, were it to occur.

9.4.5 Only traffic generated by the proposed DC cable route TCFs within Route Section 4 (e.g. Temporary Construction Compound (TCC) P3, Temporary Construction Area (TCA) T13, TCC S6, TCA T14, TCA T15 and TCA T16) have been considered as part of the assessment.

9.4.6 As with the other assessments contained within this chapter, the 2019 assessment year, with a 20% construction traffic uplift has been assumed for the associated converter station traffic. Traffic relating to the proposed DC cable route construction has then been added to indicate the intra-project traffic impacts.

9.4.7 On weekdays, the receptors through which traffic generated by the proposed DC cable route travels would experience no additional significant impacts generated by traffic associated with the proposed converter station. The proposed converter station generates negligible impacts on these receptors.

9.4.8 On Saturdays, no further significant effects would be generated by the proposed converter station traffic, except at site 60 (Bicker) which has significant effects on Saturdays.

9.4.9 On Saturdays some effects will be significant, although as previously noted, however, it is proposed that the majority of HGV movements will take place on weekdays, with Saturdays reserved for traffic movements only if required. Also, works on a Saturday would only constitute around 16% of the total working time during a given six day working week, therefore the impacts would be considered minimal.

10 Summary of Assessment

10.1 Summary

10.1.1 This chapter reports the results of baseline studies and the assessment of the potential impacts of traffic and transport on the proposed DC cable route.

Overview of Baseline Conditions

10.1.2 This section provides an overview of baseline conditions within the ZoI, which is defined by those roads where there is the potential for significant impact due to the addition of construction traffic.

10.1.3 Prediction of construction effects has focused on activities that could directly and indirectly disrupt receptors within the ZoI. The ZoI includes those roads which are required in order to facilitate the construction of the proposed DC cable route, and upon which there is the potential for a significant impact.

10.1.4 Site visits were undertaken in November 2015 and November 2016 to develop a robust understanding of the characteristics of the baseline conditions within the ZoI.

10.1.5 To facilitate the construction of the proposed DC cable route, the key roads within the vicinity of the route have been described. The area being assessed covers the key roads surrounding the following four sections of the proposed DC cable route.

- Section 1: Proposed Landfall to Well High Lane;
- Section 2: Well High Lane to A16/Keal Road;
- Section 3: A16/Keal Road to River Witham; and
- Section 4: River Witham to the proposed converter station.

10.1.6 Baseline traffic conditions were established using ATCs positioned in 100 agreed locations across Lincolnshire to collect base traffic flows on key roads in the area surrounding the proposed DC cable route. The geographical extent of the ATCs collected essentially forms the ZoI for the purpose of the assessment.

10.1.7 Summer flows were collected over a 24-hour seven day period between Monday 1 and Sunday 7 August 2016 and the winter flows were collected between Monday 9th and Sunday 15 January 2017. Some of the winter surveys were delayed until mid-February due to scheduled roadworks and unforeseen circumstances at some locations. The surveys provided two-way flows by direction and were classified by vehicle types, including HGVs.

10.1.8 A number of receptors have been identified where impacts have subsequently been assessed. For the purposes of the assessment, the receptor locations are the same as the locations of the ATC surveys.

Overview of Residual Effects

10.1.9 In order to understand the residual effects within the specified local authority areas, namely East Lindsey District Council (ELDC), Boston Borough Council (BBC), North Kesteven District Council (NKDC) and South Holland District Council (SHDC) the following lookup table (which indicates the receptor locations that fall within each district) should be read in conjunction with Table 14.20 to Table 14.51 and with information provided within section 8.

Table 14.53 Local Authority Receptor Locations

Local Authority	Site Location
East Lindsey District Council	1, 2, 3, 4, 5 ,6, 7, 8, 9, 10, 11,12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 46, 47, 49, 69, 71, 72, 73, 74, 75, 76, 77, 84, 85, 86, 93, 94, 95, 96, 98, 100
Boston Borough Council	23, 24, 25, 56, 57, 58, 59, 60, 61, 62, 70, 97, 99
North Kesteven District Council	48, 50, 51, 52, 53, 54, 55, 64, 66, 67, 68
South Holland District Council	80, 81

11 References

Ref 14-1. Department for Communities and Local Government, (March 2014), 'Travel Plans, Transport Assessments and Statements' Planning Practice Guidance document

Ref 14-2. Institute of Environmental Management and Assessment (IEMA) (January 1993), 'Guidelines for the Environmental Assessment of Road Traffic'

Ref 14-3. Department for Transport, National Transport Model (NTM)

Ref 14-4. Design Manual for Road and Bridges (DMRB)

Ref 14-5. DMRB Volume 11, Section 2, Part 5 – HA 205/08 Assessment and Management of Environmental Effects

Ref 14-6. New Roads and Street Works Act (NRSWA), (1991)

Ref 14-7. Traffic Signs Regulations and General Directions (TSRGD), 2002

Ref 14-8. Traffic Signs Manual (2006)

Ref 14-9. Triton Knoll ES Chapter 9: Traffic and Access (April 2015)

Ref 14-10. National Planning Policy Framework (2012)

Ref 14-11. Town and Country Planning Act (1990)

Ref 14-12. Lincolnshire Local Transport Plan (2013/14 – 2022/23)

Ref 14-13. Boston Borough Local Plan, Adopted 1999 (Saved Policies, 2007)

Ref 14-14. South East Lincolnshire Local Plan 2011-2036 (Publication Version, March 2017)

Ref 14-15. Central Lincolnshire Local Plan (Adopted, April 2017)

Ref 14-16. South Holland Local Plan 2006 (Saved Policies, 2009)

Ref 14-17. East Lindsey Local Plan Alteration 1999 (Saved Policies, September 2007)

Ref 14-18. East Lindsey Core Strategy (Submissions Modifications Draft, March 2017)

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