



Immingham Green Energy Terminal

TR030008

Volume 6

6.4 Environmental Statement Appendices

Appendix 11.B: Traffic and Transport Cumulative
Effects Assessment

Planning Act 2008

Regulation 5(2)(a)

Infrastructure Planning (Applications: Prescribed
Forms and Procedure) Regulations 2009 (as
amended)

September 2023

Infrastructure Planning

Planning Act 2008

The Infrastructure Planning
(Applications: Prescribed Forms and
Procedure) Regulations 2009 (as amended)

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Development Consent Order 2023

6.4 Environmental Statement Appendices

Appendix 11.B: Traffic and Transport Cumulative Effects Assessment

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1 Traffic and Transport Cumulative Assessment

1.1 Overview

1.1.1 The list of cumulative development can be set out within **Table 1** below, and against each site we have provided some commentary as to whether it needs to be included within the cumulative assessment of traffic and transport as set out within this chapter.

Table 1: Cumulative Developments

ID	Application	Planning Application Brief Description	Summary of Highways Consideration
1	DM/1145/19/ FUL	Construction and operation of an energy park comprising photovoltaic (PV) solar panels together with energy (battery) storage and associated infrastructure	No data was given regarding construction date. However, the development is located adjacent to the A1173/A18 within the study area and will therefore be included. INCLUDE
3	DM/0105/18/ FUL	Hybrid application seeking outline consent with access, landscaping and scale to be considered for the development of a 62ha Business Park comprising up to 120,176 sq.m for B1 (Business), B2 (General Industrial) and B8 (Storage and Distribution), associated infrastructure and internal highways. Full application for the creation of a new roundabout, new access roads, associated highway works, substations, pumping stations, drainage and landscaping. (Amended FRA and Drainage Strategy July 2018)	No construction traffic generation has been provided, with only the development flows once fully occupied being given. To ensure a robust assessment assume that site is fully occupied and include. INCLUDE
13	DM/0628/18/ FUL	Partially demolish existing building and erect 20MWE waste to energy power generation facility, 65m stack and associated plant, machinery, parking and external works	No information submitted in regard to the number of construction trips However, the supporting report was undertaken in 2018. Therefore, assume operational and included in the 2021 baseline surveys DON'T INCLUDE

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ID	Application	Planning Application Brief Description	Summary of Highways Consideration
18	DM/0026/18/ FUL	Erect an Energy Recovery Facility with an electricity export capacity of up to 49.5MW and associated infrastructure including a stack to 90m high, parking areas, hard and soft landscaping, access road, weighbridge facility and drainage infrastructure.	Construction year has been given as being 2021, so included. INCLUDE
21	EN010107	APPLICATION FOR THE SOUTH HUMBER BANK ENERGY CENTRE PROJECT ORDER	Construction year has been given as being 2021, so included. INCLUDE
22	TR030007	Proposed Immingham Eastern Ro-Ro Terminal	Construction year has been given as being 2021, so included. INCLUDE
25	TR030001	Able Marine Energy Park	No details provided regarding the construction dates given, so included to provide a robust assessment. INCLUDE
26	EN010097	VPI Immingham OCGT	Construction given as being 2021/22 and operational by 2022/23. We have therefore included the construction flows, as these are higher to provide a robust assessment. INCLUDE
27	EN010038	North Killingholme Power Project	Construction year has been given as being 2025, so included. INCLUDE
35	DM/0329/18/ FUL	Erection of industrial building and adjoined two storey office/control room to create power plant (18MW Energy From Waste) including construction of associated access, hardsurfacing, erection of 65m chimney stack and installation of necessary plant and machinery (AMENDED PLANS/DESCRIPTION)	No dates for construction given, but included to provide a robust assessment. INCLUDE

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ID	Application	Planning Application Brief Description	Summary of Highways Consideration
37	DM/1070/18/ FUL	Construction of an energy from waste facility of up to 49.9MWe gross capacity including emissions stack(s), associated infrastructure including parking areas, hard and soft landscaping, the creation of a new access to South Marsh Road, weighbridge facility, and drainage infrastructure, on land at South Humber Bank Power Station	Construction given as being 2020/2021 and opening from 2022, and operational traffic levels included. INCLUDE
40	DM/0378/15/ OUT	Outline planning application with means of access to be considered for the construction of up to 250 residential dwellings, a new primary access with Stallingborough Road and secondary/emergency access via Larkspur Avenue, public open space and landscaping, surface water drainage attenuation and associated works	This site is considered to be remote from the site, circa 2.5 miles, and is not considered to impact local network under consideration. It also appears to have commenced on site, so assumed included in 2021 baseline. DON'T INCLUDE
41	DM/0728/18/ OUT	Outline planning application for the development of up to 525 residential dwellings together with an extra care facility for the elderly with up to 80 units with access to be considered	No construction data given and doesn't appear to have commenced on site. The traffic from the residential development has been included assuming full occupation. INCLUDE
42	DM/1175/17/ FUL	Residential development for 145 dwellings with associated parking, landscaping and emergency vehicular access only onto Mill Lane. (amended plans and documents January 2019)	This site is considered to be remote from the site, and is not considered to impact local network under consideration. DON'T INCLUDE
94	MLA/2020/00 520	Humber International Terminal Berth 2: Adaptation for car carriers	No transport implications DON'T INCLUDE
95	PA/2018/918	Planning permission to construct a new gas-fired power station with a gross electrical output of up to 49.9 megawatts. A further non-material amendment application has been made (PA/2021/1039)	Construction given as commencing in 2019 and opening in 2021. Included construction flows for a robust assessment. INCLUDE

ID	Application	Planning Application Brief Description	Summary of Highways Consideration
105	DM/1071/22/ FUL	Rock revetment repair and reinforcement along a 4.5km section of the Humber Estuary, works to repair, reinstate and enable access to the gravity outfalls at Middle Drain, Oldfleet Drain and Mawmbridge Drain, associated landscape improvements, installation of temporary construction compounds and associated infrastructure	Construction given as being between 2023 and 2025 and has therefore been included. INCLUDE
113 and 114	DM/0304/23/ SCO and PA/SCO/202 3/1	EIA Scoping request for Immingham onshore wind including up to three wind turbines	Traffic and Transport has been scoped out, with no objection from highways. DON'T INCLUDE
115		Maintenance dredge disposal at Grimsby, Immingham and Sunk dredged channel	No Transport implications. DON'T INCLUDE

1.1.2 Therefore, from the full list of cumulative sites given in **Table 1**, the following are being considered as part of the cumulative traffic and transport chapter as follows:

- a. NEL Energy Park, Mauxhall Farm, Stallingborough (Ref DM/1145/19/FUL)
- b. Business Park, Stallingborough Interchange (Ref DM/0105/18/FUL)
- c. North Beck Energy Centre (Ref DM/0026/18/FUL)
- d. South Humber Bank Energy Centre (Ref EN010107)
- e. Immingham Eastern Ro-Ro Terminal (Ref TR030007)
- f. Able Marine Energy Park (Ref TR030001)
- g. VPI Immingham OCGT (Ref EN010097)
- h. North Killinghome Energy Park (Ref EN010038)
- i. Great Coates Renewable Energy Centre (Ref DM/0329/18/FUL)
- j. South Humber Bank Energy Centre (Ref DM/1070/18/FUL)
- k. 525 residential development, Stallingborough Road, Immingham (Ref DM/0728/18/OUT)
- l. VPI Immingham Energy Park "A" (Ref PA/2018/918)
- m. Rock revetment repair and reinforcement, Humber Estuary (Ref DM/1071/22/FUL)

1.1.3 The trip generation for each of the above sites is set out in **Table 2** to **Table 14**, with a traffic flow against each of the links included within the Environmental Assessment, although please note for some sites data is not available.

Table 2: NEL Energy Park, Mauxhall Farm, Stallingborough

Link	Link Description	Peak Construction Traffic		
		All Vehicles	Workers	HGVs
1	A180 E - Between East of A180/A1173 Junction	40	30	10
2	A1173 - Between A1173/Kiln Lane and A1173/Kings Road	0	0	0
3	Queens Road - between A1173/Kings Road and Queens Road/Laporte Road	0	0	0
4	Kings Road - between A1173/ Kings Road and Kings Road/ Pelham Road	0	0	0
5	Manby Road - between A160/ Manby Road and Kings Road/ Pelham Road	0	0	0
6	A160 - Between Manby Road/ A160 and A160/ A1077 Roundabout	0	0	0
7	A160 - Between A160/ A1077 Roundabout and A160/ A180	0	0	0
8	A180 W - Between A180/ A1173 and A180/A160	40	30	10
9	Laporte Road – Between Queens Road and Kiln Lane/Hobson Way Roundabout.	0	0	0

Table 3: Business Park, Stalinborough Interchange

Link	Link Description	Peak Operational Traffic		
		All Vehicles	Workers	HGVs
1	A180 E - Between East of A180/A1173 Junction	3,763	3,619	144

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Link	Link Description	Peak Operational Traffic		
		All Vehicles	Workers	HGVs
2	A1173 - Between A1173/Kiln Lane and A1173/ Kings Road	1,114	826	288
3	Queens Road - between A1173/Kings Road and Queens Road/Laporte Road	39	13	26
4	Kings Road - between A1173/ Kings Road and Kings Road/ Pelham Road	1,114	865	249
5	Manby Road - between A160/ Manby Road and Kings Road/ Pelham Road	197	26	170
6	A160 - Between Manby Road/ A160 and A160/A1077 Roundabout	0	0	0
7	A160 - Between A160/A1077 Roundabout and A160/A180	0	0	0
8	A180 W - Between A180/ A1173 and A180/A160	2,753	1,639	1,114
9	Laporte Road – Between Queens Road and Kiln Lane/Hobson Way Roundabout	0	0	0

Table 4: North Beck Energy Centre

Link	Link Description	Peak Construction Traffic		
		All Vehicles	Workers	HGVs
1	A180 E - Between East of A180/A1173 Junction	481	441	40
2	A1173 - Between A1173/Kiln Lane and A1173/Kings Road	630	630	0
3	Queens Road - between A1173/Kings Road and Queens Road/Laporte Road	920	840	80
4	Kings Road - between A1173/ Kings Road and Kings Road/ Pelham Road	210	210	0

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Link	Link Description	Peak Construction Traffic		
		All Vehicles	Workers	HGVs
5	Manby Road - between A160/ Manby Road and Kings Road/ Pelham Road	0	Insufficient information	0
6	A160 - Between Manby Road/ A160 and A160/A1077 Roundabout	0	Insufficient information	0
7	A160 - Between A160/A1077 Roundabout and A160/A180	0	Insufficient information	0
8	A180 W - Between A180/ A1173 and A180/A160	171	131	40
9	Laporte Road – Between Queens Road and Kiln Lane/Hobson Way Roundabout.	80	0	80

Table 5: South Humber Bank Energy Centre

Link	Link Description	Peak Construction Traffic		
		All Vehicles	Workers	HGVs
1	A180 E - Between East of A180/A1173 Junction	336	278	58
2	A1173 - Between A1173/Kiln Lane and A1173/Kings Road	0	0	0
3	Queens Road - between A1173/Kings Road and Queens Road/Laporte Road	0	0	0
4	Kings Road - between A1173/ Kings Road and Kings Road/ Pelham Road	0	0	0
5	Manby Road - between A160/ Manby Road and Kings Road/ Pelham Road	0	0	0
6	A160 - Between Manby Road/ A160 and A160/A1077 Roundabout	0	0	0
7	A160 - Between A160/A1077 Roundabout and A160/A180	0	0	0

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Link	Link Description	Peak Construction Traffic		
		All Vehicles	Workers	HGVs
8	A180 W - Between A180/ A1173 and A180/A160	0	0	0
9	Laporte Road – Between Queens Road and Kiln Lane/Hobson Way Roundabout.	336	278	58

Table 6: Immingham Eastern Ro-Ro Terminal

Link	Link Description	Peak Construction Traffic		
		All Vehicles	Workers	HGVs
1	A180 E - Between East of A180/A1173 Junction	48	48	0
2	A1173 - Between A1173 Kiln Lane and A1173/Kings Road	400	186	214
3	Queens Road - between A1173/Kings Road and Queens Road/Laporte Road	446	232	214
4	Kings Road - between A1173/ Kings Road and Kings Road/ Pelham Road	0	0	0
5	Manby Road - between A160/ Manby Road and Kings Road/ Pelham Road	67	29	38
6	A160 - Between Manby Road/ A160 and A160/A1077 Roundabout	67	29	38
7	A160 - Between A160/A1077 Roundabout and A160/A180	0		
8	A180 W - Between A180/ A1173 and A180/A160	406	164	242
9	Laporte Road – Between Queens Road and Kiln Lane/Hobson Way Roundabout.	0	0	0

Table 7: Able Marine Energy Park

Link	Link Description	Peak Construction Traffic		
		All Vehicles	Workers	HGVs
1	A180 E - Between East of A180/A1173 Junction	243	243	0
2	A1173 - Between A1173/Kiln Lane and A1173/Kings Road	293	293	0
3	Queens Road - between A1173/Kings Road and Queens Road/Laporte Road	0	0	0
4	Kings Road - between A1173/ Kings Road and Kings Road/ Pelham Road	243	243	0
5	Manby Road - between A160/ Manby Road and Kings Road/ Pelham Road	289	289	0
6	A160 - Between Manby Road/ A160 and A160/A1077 Roundabout	1,159	679	480
7	A160 - Between A160/A1077 Roundabout and A160/A180	1,158	678	480
8	A180 W - Between A180/ A1173 and A180/A160	0	0	0
9	Laporte Road – Between Queens Road and Kiln Lane/Hobson Way Roundabout	0	0	0

Table 8: VPI Immingham OCGT

Link	Link Description	Peak Construction Traffic		
		All Vehicles	Workers	HGVs
1	A180 E - Between East of A180/A1173 Junction	0	Insufficient information	Insufficient information
2	A1173 - Between A1173/ Kiln Lane and A1173/ Kings Road	0	Insufficient information	Insufficient information

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Link	Link Description	Peak Construction Traffic		
		All Vehicles	Workers	HGVs
3	Queens Road - between A1173/Kings Road and Queens Road/Laporte Road	0	Insufficient information	Insufficient information
4	Kings Road - between A1173/Kings Road and Kings Road/Pelham Road	0	Insufficient information	Insufficient information
5	Manby Road - between A160/Manby Road and Kings Road/Pelham Road	103	82	21
6	A160 - Between Manby Road/A160 and A160/A1077 Roundabout	92	61	31
7	A160 - Between A160/A1077 Roundabout and A160/A180	92	61	31
8	A180 W - Between A180/A1173 and A180/A160	0	0	0
9	Laporte Road – Between Queens Road and Kiln Lane/Hobson Way Roundabout	0	0	0

Table 9: North Killinghome Energy Park

Link	Link Description	Peak Construction Traffic		
		All Vehicles	Workers	HGVs
1	A180 E - Between East of A180/A1173 Junction	2,616	1,886	731
2	A1173 - Between A1173/Kiln Lane and A1173/Kings Road	2,616	1,886	731
3	Queens Road - between A1173/Kings Road and Queens Road/Laporte Road	0	0	0

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Link	Link Description	Peak Construction Traffic		
		All Vehicles	Workers	HGVs
4	Kings Road - between A1173/ Kings Road and Kings Road/ Pelham Road	2,616	1,886	731
5	Manby Road - between A160/ Manby Road and Kings Road/ Pelham Road	2,616	1,886	731
6	A160 - Between Manby Road/ A160 and A160/A1077 Roundabout	6,264	4,514	1,749
7	A160 - Between A160/A1077 Roundabout and A160/A180	6,264	4,514	1,749
8	A180 W - Between A180/ A1173 and A180/A160	0	0	0
9	Laporte Road – Between Queens Road and Kiln Lane/Hobson Way Roundabout.	0	0	0

Table 10: Great Coates Renewable Energy Centre

Link	Link Description	Peak Construction Traffic		
		All Vehicles	Workers	HGVs
1	A180 E - Between East of A180/A1173 Junction	125	0	125
2	A1173 - Between A1173/ Kiln Lane and A1173/Kings Road	0	0	0
3	Queens Road - between A1173/Kings Road and Queens Road/Laporte Road	20	20	0
4	Kings Road - between A1173/ Kings Road and Kings Road/ Pelham Road	20	20	0
5	Manby Road - between A160/ Manby Road and Kings Road/ Pelham Road	0	0	0
6	A160 - Between Manby Road/ A160 and A160/A1077 Roundabout	0	0	0

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Link	Link Description	Peak Construction Traffic		
		All Vehicles	Workers	HGVs
7	A160 - Between A160/A1077 Roundabout and A160/A180	0	0	0
8	A180 W - Between A180/A1173 and A180/A160	184	59	125
9	Laporte Road – Between Queens Road and Kiln Lane/Hobson Way Roundabout	20	20	0

Table 11: South Humber Bank Energy Centre

Link	Link Description	Peak Construction Traffic		
		All Vehicles	Workers	HGVs
1	A180 E - Between East of A180/A1173 Junction	116	0	116
2	A1173 - Between A1173/Kiln Lane and A1173/Kings Road	0	0	0
3	Queens Road - between A1173/Kings Road and Queens Road/Laporte Road	15	15	0
4	Kings Road - between A1173/Kings Road and Kings Road/Pelham Road	15	15	0
5	Manby Road - between A160/Manby Road and Kings Road/Pelham Road	0	0	0
6	A160 - Between Manby Road/A160 and A160/A1077 Roundabout	0	0	0
7	A160 - Between A160/A1077 Roundabout and A160/A180	0	0	0
8	A180 W - Between A180/A1173 and A180/A160	716	600	116
9	Laporte Road – Between Queens Road and Kiln Lane/Hobson Way Roundabout	15	15	0

Table 12: 525 residential development, Stallingborough Road, Immingham

Link	Link Description	Peak Development Traffic		
		All Vehicles	Residents	HGVs
1	A180 E - Between East of A180/A1173 Junction	636	636	0
2	A1173 - Between A1173/Kiln Lane and A1173/ Kings Road	0	Insufficient information	0
3	Queens Road - between A1173/Kings Road and Queens Road/Laporte Road	0	Insufficient information	0
4	Kings Road - between A1173/ Kings Road and Kings Road/ Pelham Road	386	386	0
5	Manby Road - between A160/ Manby Road and Kings Road/ Pelham Road	386	386	0
6	A160 - Between Manby Road/ A160 and A160/A1077 Roundabout	0	Insufficient information	0
7	A160 - Between A160/A1077 Roundabout and A160/A180	0	Insufficient information	0
8	A180 W - Between A180/ A1173 and A180/A160	289	289	0
9	Laporte Road – Between Queens Road and Kiln Lane/Hobson Way Roundabout	0	Insufficient information	0

Table 13: VPI Immingham Energy Park “A”

Link	Link Description	Peak Construction Traffic		
		All Vehicles	Workers	HGVs
1	A180 E - Between East of A180/A1173 Junction	10		10
2	A1173 - Between A1173/Kiln Lane and A1173/Kings Road	0	0	0
3	Queens Road - between A1173/Kings Road and Queens Road/Laporte Road	0	0	0

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Link	Link Description	Peak Construction Traffic		
		All Vehicles	Workers	HGVs
4	Kings Road - between A1173/ Kings Road and Kings Road/ Pelham Road	0	0	0
5	Manby Road - between A160/ Manby Road and Kings Road/ Pelham Road	0	0	0
6	A160 - Between Manby Road/ A160 and A160/A1077 Roundabout	133	113	20
7	A160 - Between A160/A1077 Roundabout and A160/A180	133	113	20
8	A180 W - Between A180/ A1173 and A180/A160	67	57	10
9	Laporte Road – Between Queens Road and Kiln Lane/Hobson Way Roundabout	0	0	0

Table 14: Rock revetment repair and reinforcement, Humber Estuary

Link	Link Description	Peak Construction Traffic		
		All Vehicles	Workers	HGVs
1	A180 E - Between East of A180/A1173 Junction	30	30	0
2	A1173 - Between A1173/Kiln Lane and A1173/Kings Road	0	0	0
3	Queens Road - between A1173/Kings Road and Queens Road/Laporte Road	0	0	0
4	Kings Road - between A1173/ Kings Road and Kings Road/ Pelham Road	0	0	0
5	Manby Road - between A160/ Manby Road and Kings Road/ Pelham Road	0	0	0
6	A160 - Between Manby Road/ A160 and A160/A1077 Roundabout	0	0	0

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Link	Link Description	Peak Construction Traffic		
		All Vehicles	Workers	HGVs
7	A160 - Between A160/A1077 Roundabout and A160/A180	0	0	0
8	A180 W - Between A180/A1173 and A180/A160	80	30	50
9	Laporte Road – Between Queens Road and Kiln Lane/Hobson Way Roundabout	71	15	56

1.1.4 Taking the traffic generation from each of the cumulative sites as set out in **Table 2** to **Table 14**, the total cumulative development traffic flow is set out in **Table 15** below.

Table 15: Total Cumulative Development Traffic Flow

Link	Link Description	Peak Construction Traffic		
		All Vehicles	Workers	HGVs
1	A180 E - Between East of A180/A1173 Junction	8,443	7,209	1,234
2	A1173 - Between A1173/Kiln Lane and A1173/Kings Road	5,053	3,820	1,233
3	Queens Road - between A1173/Kings Road and Queens Road/Laporte Road	1,440	1,120	320
4	Kings Road - between A1173/Kings Road and Kings Road/Pelham Road	4,604	3,624	980
5	Manby Road - between A160/Manby Road and Kings Road/Pelham Road	3,657	2,697	960
6	A160 - Between Manby Road/A160 and A160/A1077 Roundabout	7,715	5,397	2,318
7	A160 - Between A160/A1077 Roundabout and A160/A180	7,647	5,367	2,280
8	A180 W - Between A180/A1173 and A180/A160	4,706	2,998	1,707

Link	Link Description	Peak Construction Traffic		
		All Vehicles	Workers	HGVs
9	Laporte Road – Between Queens Road and Kiln Lane/Hobson Way Roundabout	521	327	194

1.2 Cumulative Assessment

1.2.1 Based upon the 2026 Future baseline traffic flows from Table 11-9 in **Chapter 11: Traffic and Transport [TR030008/APP/6.2]** and the cumulative development flows from **Table 15**, the future base plus cumulative development traffic flows can be given as set out in **Table 16** below.

Table 16: 2026 Base + Cumulative Development Two-Way Daily Flows

Link No.	Link Description	Sensitivity	2026 Baseline Flow		Cumulative Development		2026 Baseline plus cumulative development	
			Total vehicles	Total HGV	Total vehicles	Total HGV	Total vehicles	Total HGV
1	A180 East - between East of A180/A1173 Junction	Low	36,653	3,482	8,443	1,234	45,097	4,716
2	A1173 - between A1173/Kiln Lane and A1173/Kings Road	Low	7,903	851	5,053	1,233	12,956	2,084
3	Queens Road - between A1173/Kings Road and Queens Road/Laporte Road	Low	4,156	606	1,440	320	5,596	926
4	Kings Road - between A1173/Kings Road and Kings Road/Pelham Road	Low	8,265	608	4,604	980	12,869	1,588

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Link No.	Link Description	Sensitivity	2026 Baseline Flow		Cumulative Development		2026 Baseline plus cumulative development	
			Total vehicles	Total HGV	Total vehicles	Total HGV	Total vehicles	Total HGV
5	Manby Road - between A160/Manby Road and Kings Road/Pelham Road	Low	7,936	1,219	3,657	960	11,593	2,180
6	A160 - Between Manby Road/A160 and A160/A1077 roundabout	Low	11,277	5,403	7,715	2,318	18,992	7,721
7	A160 - between A160/A1077 roundabout and A160/ A180	Low	12,953	5,702	7,647	2,280	20,600	7,983
8	A180 West - between A180/A1173 and A180/A160	Low	27,342	4,107	4,706	1,707	32,047	5,814
9	Laporte Road – between Queens Road and Kiln Lane/Hobson Way Roundabout.	Low	3,783	624	521	194	4,304	818

1.2.2 Based upon the combined 2026 future baseline and cumulative development traffic from **Table 16** and the peak of construction traffic from Table 11-16 in **Chapter 11: Traffic and Transport [TR030008/APP/6.2]** the percentage increase for total vehicles and HGV's on each of the links within the study area, during the peak construction year can be given as follows in **Table 17**.

Table 17: 2026 Base + Cumulative Development Two-Way Flows

Link No.	Link Description	Sensitivity	2026 Baseline plus cumulative development		Construction traffic		Percentage Increase	
			Total vehicles	Total HGV	Total vehicles	Total HGV	Total vehicles	Total HGV
1	A180 East - between East of A180/A1173 Junction	Low	45,097	4,716	411	91	1%	2%
2	A1173 - between A1173/Kiln Lane and A1173/Kings Road	Low	12,956	2,084	826	201	6%	10%
3	Queens Road - between A1173/Kings Road and Queens Road/Laporte Road	Low	5,596	926	1,168	201	21%	22%
4	Kings Road - between A1173/Kings Road and Kings Road/Pelham Road	Low	12,869	1,588	342	0	3%	0%
5	Manby Road - between A160/Manby Road and Kings Road/Pelham Road	Low	11,593	2,180	101	0	1%	0%
6	A160 - Between Manby Road/A160 and A160/A1077 roundabout	Low	18,992	7,721	101	0	1%	0%
7	A160 - between A160/A1077 roundabout and A160/A180	Low	20,600	7,983	0	0	0%	0%

Link No.	Link Description	Sensitivity	2026 Baseline plus cumulative development		Construction traffic		Percentage Increase	
			Total vehicles	Total HGV	Total vehicles	Total HGV	Total vehicles	Total HGV
8	A180 West - between A180/A1173 and A180/A160	Low	32,047	5,814	225	110	1%	2%
9	Laporte Road – between Queens Road and Kiln Lane/Hobson Way Roundabout	Low	4,304	818	257	0	6%	0%

1.2.3 **Table 17** indicates that for most of the links within the study area the impact is substantially below 30% for both the total vehicle number and total HGVs, with the increase in HGVs being below 30% on all links, except Link 3 Queens Road which has a low sensitivity and would experience an increase of 21% in all traffic and a 22% increase in HGVs

1.3 Traffic and Transport

1.3.1 With reference to the Guidelines for the Environmental Assessment of Road Traffic (1993) (the GEART Guidelines) (Ref 1-1) and explained in Section 11.4 of **Chapter 11: Traffic and Transport [TR030008/APP/6.2]** a two rule approach has been used to assess the extent of any traffic assessment as follows:

- a. Rule 1: include highway links where traffic flows will increase by more than 30% (or the number of HGVs will increase by more than 30%).
- b. Rule 2: include any other specific sensitive areas where traffic flows have increased by 10% or more.

1.3.2 Given that the local highway network is deemed to have a low sensitivity, the only link to experience a potential effect is along Queens Road, and. no other road links are predicted to experience an adverse impact and no further assessment is required of these links. With the effect on Queens Road considered to be minor, not significant.

1.3.3 The following sections summarise the likely effects on receptors in terms of severance, pedestrian amenity, fear and intimidation and highway safety.

1.4 Severance

- 1.4.1 In terms of severance the GEART guidelines (Ref 1-1) state that changes in traffic flow of 30%, 60% and 90% are registered as producing slight, moderate and substantial changes respectively (see Section 11.4 of **Chapter 11: Traffic and Transport [TR030008/APP/6.2]**). The magnitude of impact is therefore assumed to be very low for all receptors, except links 2 and 3 Queens Road which are low and therefore the effects would not be significant.

1.5 Pedestrian Amenity

- 1.5.1 For pedestrian amenity, the GEART guidelines (Ref 1-1) state that an indicative threshold would be where the traffic flow (or its lorry component) is halved or doubled (see Section 11.4 of **Chapter 11: Traffic and Transport [TR030008/APP/6.2]**). The magnitude of impact is therefore assessed to be very low for all receptors considered, and therefore the effects would not be significant

1.6 Fear and Intimidation

- 1.6.1 Fear and intimidation relate to the impact traffic may have on pedestrians with no commonly agreed threshold for estimating levels of danger or fear and intimidation (see Section 11.4 of **Chapter 11: Traffic and Transport [TR030008/APP/6.2]**). The numbers of pedestrians on the HGV route to the A180 along the A1173 is considered to be very low. The impact is therefore considered to be very low for all links apart from on Queens Road and the A1173 where it is low, and as such not significant..

1.7 Road Safety

- 1.7.1 For road safety as there is not considered to be an existing accident issue on the local highway (see Section 11.6 of **Chapter 11: Traffic and Transport [TR030008/APP/6.2]**), all impacts will therefore be very low, and as such are not significant.

1.8 Cumulative Impact Assessment

- 1.8.1 Based upon the above percentage increases in traffic at the peak year of construction, 2026, displayed in **Table 17, Table 18** provides an overview of the magnitude of impact of proposed peak construction traffic on each of these metrics, based upon the magnitude of impact in Table 11.3 of **Chapter 11:Traffic and Transport [TR030008/APP/6.2]**.
- 1.8.2 The effects on the local network based upon the low sensitivity of each link and the magnitudes of impact can then be summarised as follows.

Table 18: Magnitude of Impact (robust assessment (Cumulative Impact Assessment))

Link No.	Link Description	Sensitivity	Percentage Increase		Traffic and Transport	Severance	Pedestrian Amenity	Fear and Intimidation	Highway Safety
			Total vehicles	Total HGV					
1	A180 East - between east of A180/A1173 Junction	Low	1%	2%	Very Low	Very Low	Very Low	Very Low	Very Low
2	A1173 - between A1173/Kiln Lane and A1173/Kings Road	Low	6%	10%	Low	Low	Very Low	Low	Very Low
3	Queens Road - between A1173/Kings Road and Queens Road/Laporte Road	Low	21%	22%	Medium	Low	Very Low	Low	Very Low
4	Kings Road - between A1173/Kings Road and Kings Road/Pelham Road	Low	3%	0%	Very Low	Very Low	Very Low	Very Low	Very Low

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Link No.	Link Description	Sensitivity	Percentage Increase		Traffic and Transport	Severance	Pedestrian Amenity	Fear and Intimidation	Highway Safety
			Total vehicles	Total HGV					
5	Manby Road - between A160/Manby Road and Kings Road/Pelham Road	Low	1%	0%	Very Low	Very Low	Very Low	Very Low	Very Low
6	A160 - between Manby Road/A160 and A160/A1077 roundabout	Low	1%	0%	Very Low	Very Low	Very Low	Very Low	Very Low
7	A160 - Between A160/A1077 roundabout and A160/A180	Low	0%	0%	Very Low	Very Low	Very Low	Very Low	Very Low
8	A180 West - between A180/A1173 and A180/ A160	Low	1%	2%	Very Low	Very Low	Very Low	Very Low	Very Low
9	Laporte Road – between Queens Road and Kiln Lane/Hobson Way Roundabout	Low	6%	0%	Low	Very Low	Very Low	Very Low	Very Low

- 1.8.3 As indicated in **Table 18**, the majority of the links included within the assessment would experience a very low magnitude of impact for each of the impacts considered. The exceptions are Link 2 (A1173 between Queens Road and Kiln Lane) and Link 3 (Queens Road - between A1173/Kings Road and Queens Road/Laporte Road), which would experience a low or medium impact for some of the assessment criteria.
- 1.8.4 Based upon the impact magnitudes defined in **Table 18** and the low sensitivity of the transportation links, the predicted traffic and transportation-related effects during the peak construction year (2026), when the cumulative development is included, are summarised in **Table 19**.

Table 19: Classification of Traffic and Transportation Effects (during Peak Construction year 2026) – with Cumulative Developments

Link No.	Link Description	Traffic and Transport	Severance	Pedestrian Amenity	Fear and Intimidation	Highway Safety
1	A180 East - between east of A180/A1173 Junction	Negligible Not significant	Negligible Not significant	Negligible Not significant	Negligible not significant	Negligible not significant
2	A1173 - between A1173/Kiln Lane and A1173/Kings Road	Negligible not significant	Negligible not significant	Negligible not significant	Negligible not significant	Negligible not significant
3	Queens Road - between A1173/Kings Road and Queens Road/Laporte Road	Minor not significant	Negligible not significant	Negligible not significant	Negligible not significant	Negligible not significant
4	Kings Road - between A1173/Kings Road and Kings Road/Pelham Road	Negligible not significant	Negligible not significant	Negligible not significant	Negligible not significant	Negligible not significant
5	Manby Road - between A160/Manby Road and Kings Road/Pelham Road	Negligible not significant	Negligible not significant	Negligible not significant	Negligible not significant	Negligible not significant

Link No.	Link Description	Traffic and Transport	Severance	Pedestrian Amenity	Fear and Intimidation	Highway Safety
6	A160 - between Manby Road/A160 and A160/A1077 roundabout	Negligible not significant	Negligible not significant	Negligible not significant	Negligible not significant	Negligible not significant
7	A160 - between A160/A1077 roundabout and A160/A180	Negligible not significant	Negligible not significant	Negligible not significant	Negligible not significant	Negligible not significant
8	A180 W - between A180/A1173 and A180/A160	Negligible not significant	Negligible not significant	Negligible not significant	Negligible not significant	Negligible not significant
9	Laporte Road – between Queens Road and Kiln Lane/Hobson Way roundabout	Negligible not significant	Negligible not significant	Negligible not significant	Negligible not significant	Negligible not significant

1.8.5 This assessment of the traffic and transport effects for the Project, which includes the relevant cumulative development, has concluded that the traffic and transport effects within the defined study area would be **negligible** and therefore **not significant**, with the exception Link 3 (Queens Road, between A1173/ Kings Road and Queens Road/ Laporte Road) where the effect would be **minor** and therefore **not significant**.

1.9 Summary of Cumulative Assessment

1.9.1 **Table 20** provides a summary of the assessment of Project effects on traffic and transport as related to traffic flows in the peak year of construction year (2026) taking into account relevant cumulative development.

- a. The assessment indicates that traffic and transport effects associated with the peak construction phase for the Project within the study area, taking into account the adoption of the CTMP and CWTP measures and cumulative development, would be negligible or minor, and therefore not significant on all links.

Table 20: Summary of Assessment – Likely Significant Effects

Link No.	Receptor	Impact Pathway	Impact Magnitude	Standard / embedded Mitigation Measure
1	A180 East - between east of A180/A1173 Junction	Traffic flows	Negligible not significant	CTMP/CWTP
2	A1173 - between A1173/Kiln Lane and A1173/Kings Road	Traffic flows	Negligible not significant	CTMP/CWTP
3	Queens Road - between A1173/Kings Road and Queens Road/Laporte Road	Traffic flows	Minor, not significant	CTMP/CWTP
4	Kings Road - between A1173/Kings Road and Kings Road/Pelham Road	Traffic flows	Negligible not significant	CTMP/CWTP
5	Manby Road - between A160/Manby Road and Kings Road/Pelham Road	Traffic flows	Negligible not significant	CTMP/CWTP
6	A160 - Between Manby Road/A160 and A160/A1077 roundabout	Traffic flows	Negligible not significant	CTMP/CWTP
7	A160 - Between A160/A1077 roundabout and A160/A180	Traffic flows	Negligible not significant	CTMP/CWTP
8	A180 W - between A180/A1173 and A180/A160	Traffic flows	Negligible not significant	CTMP/CWTP
9	Laporte Road – between Queens Road and Kiln Lane/Hobson Way roundabout.	Traffic flows	Negligible not significant	CTMP/CWTP

1.10 References

- Ref 1-1 Guidelines for the Environmental Assessment of Road Traffic. Institute of Environmental Assessment (1993).