

H2Teesside Project

Environmental Statement

Volume III – Appendices

Appendix 15A: Transport Assessment

Document Reference: 6.4.26

The Infrastructure Planning (Environmental Impact Assessment) Regulations 2017 (as amended)

The Infrastructure Planning (Applications: Prescribed Forms and Procedure) Regulations 2009 - Regulation 5(2)(a)



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15A.0 TRANSPORT ASSESSMENT

15A.1 Introduction

15A.1.1 This Transport Assessment (TA) has been prepared to identify, assess and propose mitigation where necessary in relation to the traffic impact of the Proposed Development as set out in the Chapter 15: Traffic and Transport (ES Volume I, EN070009/APP/6.2). The assessment only considers the impact upon the public highway and does not include any review of the impact within the private Wilton or South Tees Development Corporation (STDC) estate.

15A.1.2 This appendix should be read in conjunction with the following documents:

- Chapter 15: Traffic and Transport (ES Volume I, EN070009/APP/6.2);
- Framework Construction Workers Travel Plan (EN070009/APP/5.15); and
- Framework Construction Traffic Management Plan (EN070009/APP/5.16).

15A.1.3 The issues identified for consideration in this assessment are as follows:

- a description of current baseline conditions;
- analysis of accidents within the study area and formulation of mitigation measures;
- calculation of the likely profile of traffic generation through the construction period and the identification of peak development flows;
- distribution and assignment of construction and operational traffic;
- identification of other committed developments in the study area and that have been taken account of as part of the assessment; and
- network capacity and impact analysis of construction and operational phases.

15A.2 Proposed Development

15A.2.1 This section will set out the details of the Proposed Development including the access location.

Proposed Development Description

15A.2.2 The Proposed Development comprises the construction, operation (including maintenance where relevant) and decommissioning of up to 1.2-Gigawatt Thermal (GWth) Lower Heating Value (LHV) Carbon Capture and Storage (CCS) enabled Hydrogen Production Facility in Teesside and associated Connection Corridors. For more details, please refer to Chapter 4: Proposed Development (ES Volume I, EN070009/APP/6.2).

Access

15A.2.3 The Main Site will take access from the A1085 Trunk Road / West Coatham Lane / STDC Steel House Gate roundabout, with all construction workers and HGVs using this access.

15A.3 Legislation, Planning Policy Context and Other Guidance

15A.3.1 This section outlines the planning policy relating to traffic and transport.

Guidance

Department for Transport Guidance (2014) Travel Plans, Transport Assessments and Statements

15A.3.2 The Planning Practice Guidance (PPG) for Travel Plans, Transport Assessments and Statements (Department for Transport (DfT), 2014) provides general guidelines for travel plans, transport assessments and statements. The guidance also contains statements which are relevant to traffic and transport and the assessment of impacts to this, such as:

“The scope and level of detail in a Transport Assessment or Statement will vary from site to site but the following should be considered when settling the scope of the proposed assessment:

- *information about the Proposed Development, site layout, (particularly proposed transport access and layout across all modes of transport);*
- *information about neighbouring uses, amenity and character, existing functional classification of the nearby road network;*
- *data about existing public transport provision, including provision/ frequency of services and proposed public transport changes;*
- *a qualitative and quantitative description of the travel characteristics of the Proposed Development, including movements across all modes of transport that would result from the development and in the vicinity of the site;*
- *an assessment of trips from all directly relevant committed development in the area (ie development that there is a reasonable degree of certainty will proceed within the next 3 years);*
- *data about current traffic flows on links and at junctions (including by different modes of transport and the volume and type of vehicles) within the study area and identification of critical links and junctions on the highways network;*
- *an analysis of the injury accident records on the public highway in the vicinity of the site access for the most recent 3-year period, or 5-year period if the proposed site has been identified as within a high accident area;*
- *an assessment of the likely associated environmental impacts of transport related to the development, particularly in relation to proximity to environmentally sensitive areas (such as air quality management areas or noise sensitive areas);*
- *measures to improve the accessibility of the location (such as provision/enhancement of nearby footpath and cycle path linkages) where these are necessary to make the development acceptable in planning terms;*

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- *a description of parking facilities in the area and the parking strategy of the development;*
 - *ways of encouraging environmental sustainability by reducing the need to travel; and*
 - *measures to mitigate the residual impacts of development (such as improvements to the public transport network, introducing walking and cycling facilities, physical improvements to existing roads.)*

**Institute of Environmental Management and Assessment Guidelines:
Environmental Assessment of Traffic and Movement**

15A.3.3 The Institute of Environmental Management and Assessment (IEMA) Guidelines: Environmental Assessment of Traffic and Movement (IEMA, 2023) set out two broad rules of thumb which are applied as criteria and can be used to assist in delimiting the scale and extent of the environmental impact:

- include highway links where traffic flows will increase by more than 30% (or the number of HGVs would increase by more than 30%);
- include highway links of high sensitivity where traffic flows have increased by 10% or more.

DfT Circular 01/2022 Strategic Road Network and the delivery of sustainable development

15A.3.4 Circular 01/2022 (Department for Transport (DfT), 2022) sets out the way in which National Highways will engage with the development industry to deliver sustainable development and thus economic growth, whilst safeguarding the primary function and purpose of the strategic road network.

National Planning Policy

Overarching National Policy Statement for Energy (NPS EN-1)

15A.3.5 Applicants should consult the Highways Agency and The National Policy Statement (NPS) (Department of Energy and Climate Change (DESNZ), 2023) and specifically section 5.14 of the NPS outlines the planning policy for traffic and transport, including guidance on undertaking relevant parts of the EIA (which has been taken into account in this assessment). The most relevant paragraphs for the transport assessment are paragraphs 5.14.5, 5.14.7 and 5.14.21, respectively, which state:

“If a project is likely to have significant transport implications, the applicant’s ES (see Section 4.3) should include a transport appraisal. The DfT’s Transport Analysis Guidance (TAG) and Welsh Governments WelTAG provides guidance on modelling and assessing the impacts of transport schemes.”

“The applicant should prepare a travel plan including demand management and monitoring measures to mitigate transport impacts. The applicant should also provide details of proposed measures to improve access by active, public and shared transport to:

- *reduce the need for parking associated with the proposal;*
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- *contribute to decarbonisation of the transport network;*
 - *reduce the need to travel; and*
 - *secure behavioural change and modal shift through an offer of genuine modal choice and to mitigate transport impacts."*

"The Secretary of State should only consider refusing development on highways grounds if there would be an unacceptable impact on highway safety, residual cumulative impacts on the road network would be severe, or it does not show how consideration has been given to the provision of adequate active public or shared transport access and provision."

15A.3.6 In terms of the Secretary of State's decision making, Section 5.14 of the NPS states that the Secretary of State should ensure that the Applicant has sought to mitigate the impacts on the surrounding road infrastructure that may occur as a result of a new energy NSIP.

National Planning Policy Framework (2023)

15A.3.7 The Department for Levelling Up, Housing and Communities (DLUHC) National Planning Policy Framework (NPPF) (DLUHC, 2023) sets out the UK Government's national planning policies for England and provides guidance on their application. The policy also contains statements which are relevant to traffic and transport, such as:

- paragraph 108 (c) *"opportunities to promote walking, cycling and public transport use are identified and pursued."*
- paragraph 108 (d) *"the environmental impacts of traffic and transport infrastructure can be identified, assessed and taken into account – including appropriate opportunities for avoiding and mitigating any adverse effects, and for net environmental gains."*
- paragraph 115 *"Development should only be prevented or refused on highways grounds if there would be an unacceptable impact on highway safety, or the residual cumulative impacts on the road network would be severe."*
- paragraph 117 *"All developments that will generate significant amounts of movement should be required to provide a travel plan, and the application should be supported by a transport statement or transport assessment so that the likely impacts of the proposal can be assessed."*

Local Planning Policy

Redcar and Cleveland Local Plan (2018)

15A.3.8 The Local Plan was adopted in 2018 and sets out the vision and overall development strategy for the borough and how it will be achieved for the period until 2032.

15A.3.9 Policy TA 1 states that *"The Council and its partners will ensure that the transport requirements of new development, commensurate to the scale and type of development, are taken into account and seek to promote sustainable travel to minimise environmental impacts and support residents' health and wellbeing."*

15A.3.10 Proposals will be supported that:

- improve transport choice and encourage travel to work and school by public transport, cycling and walking;
- minimise the distance that people need to travel; and
- where appropriate contribute positively to wider demand management measures to address congestion, environmental and safety issues.

15A.3.11 Policy TA 2 states that *“The council will work together with neighbouring authorities, the Tees Valley Combined Authority, Tees Valley Unlimited (the Local Enterprise Partnership), the Government, developers and transport providers to improve accessibility within and beyond the borough, which will support economic, tourism and regeneration objectives for both Redcar and Cleveland and the wider Tees Valley. This will include ‘working with Highways England to improve capacity to the A66, A1053 and A174, particularly Greystones roundabout.”*

Tees Valley Combined Authority Strategic Transport Plan 2020 to 2030

15A.3.12 The focus of the Tees Valley Combined Authority Strategic Transport Plan is aimed at improving the transport system for local people and businesses ensuring integration between different transport modes. This plan has been developed by the five constituent local authorities including Darlington, Hartlepool, Middlesbrough, Redcar and Cleveland and Stockton-on-Tees. The plan has the following aims and aspirations to be delivered over the plan period:

- better transport links helping to create more jobs;
- improving the affordability, quality and reliability of people’s daily commute;
- more reliable and affordable public transport, walking and cycling options; and
- improved technology making travelling around as easy and simple as possible.

Redcar and Cleveland Local Transport Plan 2011 to 2021

15A.3.13 The Redcar and Cleveland third Local Transport Plan, 2011 to 2021 (LTP3) was adopted by RCBC in March 2011 and builds upon the core strategy and the Teesside Local Enterprise Partnership Statement of Transport Ambition by setting five main goals for city and regional networks, namely:

- reduce carbon emissions;
- support economic growth;
- promote quality of opportunity;
- contribute to better safety, security and health; and
- improve quality of life and a healthy natural environment.

15A.3.14 The following four policies have been identified as being critical in achieving the goals of the LTP3 and are considered to be of particular relevance to the consideration of the Proposed Development’s potential transport impacts:

- PEG2 – manage the demand for travel, in particular during peak periods. The package of measures will include car parking restraint and enforcement; providing informed travel choices; considerate land use planning;
- PEG4 – address localised congestion issues, in particular through the development of Workplace Travel Plans (WTP) and through localised traffic management schemes;
- PEG5 – manage freight transport in the borough to provide reliability of journey times and minimise adverse environmental impacts; and
- SSH1 –improve road safety in the borough through a combination of education, encouragement, engineering and enforcement initiatives.

15A.4 Existing Conditions

Local Highway Network

- 15A.4.1 The Main Site is located approximately 2 km north-west of Redcar (see Figure 1-1, ES Volume II, EN070009/APP/6.3) and will be accessed via the existing roundabout junction with the A1085 and West Coatham Lane. The wider connection network covers land to the north and south of the River Tees.
- 15A.4.2 The A1085 Trunk Road, in the vicinity of the Main Site and within the study area is a dual carriageway road running east to west between Redcar and the A1053 Tees Dock Road and is subject to a 60mph speed limit. The carriageway is street lit and a shared footway / cycleway is provided on either side of the road.
- 15A.4.3 Travelling west from the Main Site access, the A1085 provides a link to the A1053 which in turn connects to the A174 to the south and the A66 to the north. The A1053 and A174 are part of Highways England's strategic network. All other routes are managed by RCBC Highways Authority.
- 15A.4.4 On the north side of the River Tees, the access to the works would be centred around the A178 Seaton Carew Road, which is a single carriageway road subject to a 60mph speed limit and provides the main north – south route within the vicinity of the works. An unnamed road would then provide a direct access from a roundabout with Seaton Carew Road directly into the Seal Sands area.
- 15A.4.5 Access to the wider network and the A19 to the west would be via either the A1185, which heads towards the A689 Wolviston interchange in the north or via the A1046 Haverton Hill Road or B1275 Belasis Avenue to access the A19 in the south. Although there is a low bridge (4.6m 15' 3") on the A146 which may restrict some HGV movements.
- 15A.4.6 The Proposed Development Site location in relation to the surrounding road network is illustrated in Figure 15-1 (ES Volume II, EN070009/APP/6.3).

Accessibility

Walking

- 15A.4.7 The Chartered Institution of Highways and Transportation (CIHT) document '*Providing for Journeys on Foot*' (CIHT, 2000) suggests a maximum walking distance of 2 km for journeys to work.
- 15A.4.8 See Plate 15A-1 for a Walking Isochrone of the Proposed Development Site.

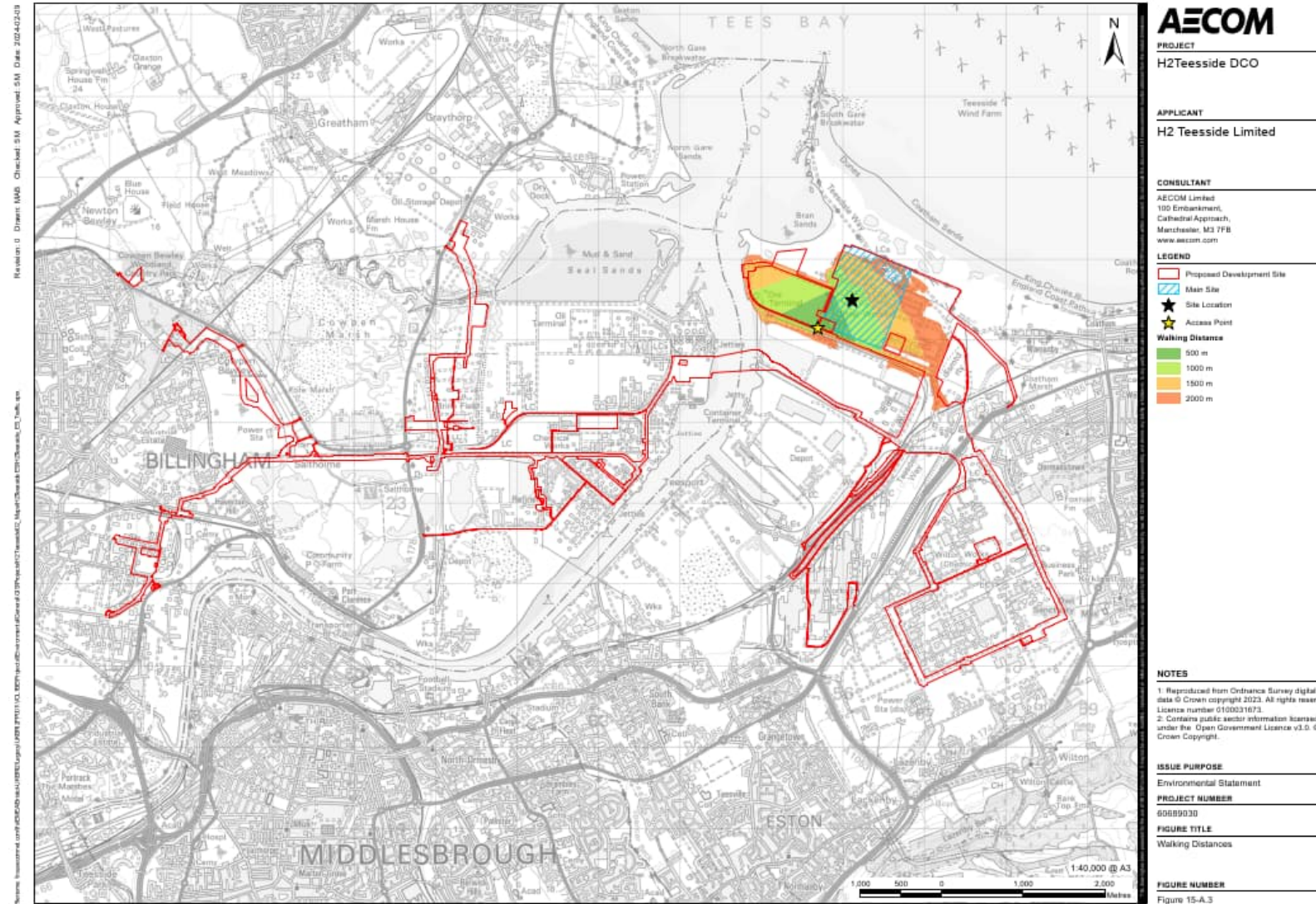


Plate 15A-1: Walking Isochrone

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- 15A.4.9 Considering a 2 km walking catchment area, the potential for walking access to the Main Site is small with only the built-up area of Dormanstown on the western edge of Redcar located within a 2 km walking distance of the Main Site.
- 15A.4.10 In terms of pedestrian facilities, a footway is provided on both sides of West Coatham Lane and Broadway West which is street lit. In addition, a shared footway / cycleway is provided along the entire length of the A1085 Trunk Road on either side of the carriageway.
- 15A.4.11 At the A1085 / West Coatham Lane Roundabout, dropped kerbs and tactile paving are provided on all arms of the junction. Central refuges are also provided on the A1085 to allow pedestrians to cross the dual carriageway.
- 15A.4.12 Given the limited walking catchment area, it is not therefore anticipated that walking trips would likely represent a practical mode for construction, operational and/or decommissioning staff.
- 15A.4.13 There are no Public Right of Ways (PRoWs) crossing The Main Site therefore the development will have no direct impact on PRoWs.

Cycling

- 15A.4.14 Cycling is considered to be a viable alternative to that of the private car for journeys up to 8 km, providing a healthy and environmentally friendly form of transport.
- 15A.4.15 See Plate 15A-2 for a Cycling Isochrone of the Proposed Development Site.

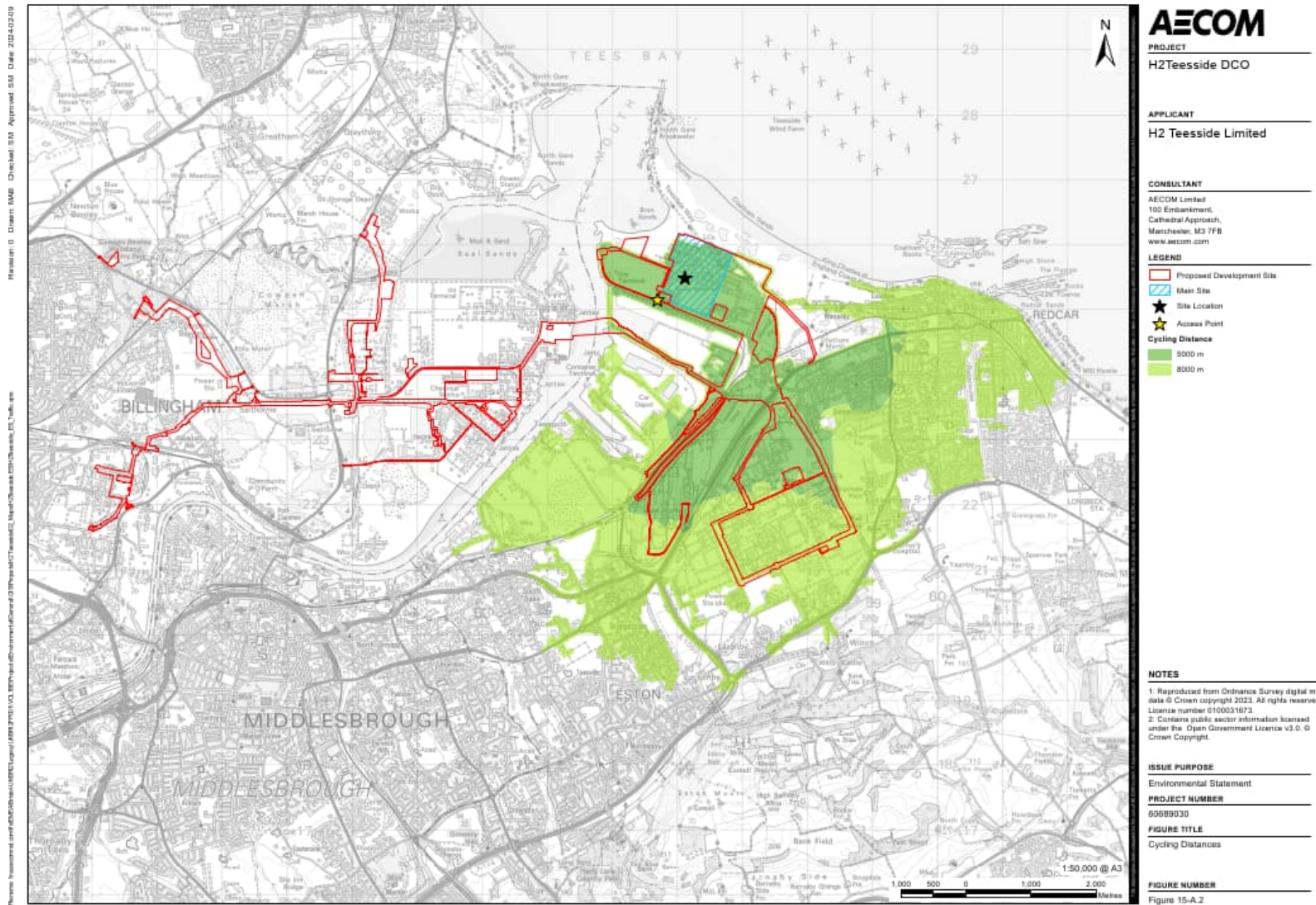


Plate 15A-2: Cycling Isochrone

15A.4.16 In respect of acceptable cycle distances, '*Local Transport Note 2/08: Cycling Infrastructure Design*' (DfT, 2008) states that many utility cycle trips are less than approximately 5 km, but for commuter journeys a distance of approximately 8 km is not uncommon. An 8 km catchment area includes Redcar, Marske-by-the-Sea and the suburbs of Eston, Normanby and South Bank to the east of Middlesbrough.

15A.4.17 Within the vicinity of the Main Site there is a shared cycle / footway along the length of the A1085 Trunk Road between Redcar and Middlesbrough. Given the cycling infrastructure already in place on the local road network there is potential for staff living within this catchment area to travel to the Main Site by cycle.

Public Transport

15A.4.18 The nearest bus stops to the Main Site are located on West Coatham Lane approximately 250 m south-east of the Main Site entrance. Pedestrian crossing facilities in the form of drop kerbs and tactile paving are provided on all five arms of the A1085 / West Coatham Lane / Main Site Access Roundabout allowing for safe crossing of this junction.

15A.4.19 There are five services that stop at the West Coatham Lane bus stops, these are services 62, X3, X3A, X4 and X4A.

15A.4.20 Bus Service 62 runs between Middlesbrough and New Marske via Dormanstown and Redcar. Service 62 operates a half hourly service Monday to Saturday apart from Sunday which operates an hourly service. The service is run by Arriva Bus. The first bus departs Middlesbrough at 06:43 and New Marske at 06:25. The last bus departs Middlesbrough at 20:05 and New Marske at 19:45.

15A.4.21 Bus Service X3 runs between Middlesbrough and Lingdale via Dormanstown, Redcar and Saltburn. Service X3 operates an hourly service Monday to Saturday. The service is run by Arriva Bus. The first bus departs Middlesbrough at 08:25 and Lingdale at 06:44. The last bus departs Middlesbrough at 17:25 and Lingdale at 17:54.

15A.4.22 Bus Service X3A runs between Middlesbrough and Brotton. Service X3A operates an hourly service Monday to Saturday. The service is run by Arriva Bus. The first bus departs Middlesbrough at 08:50 and Brotton at 09:15. The last bus departs Middlesbrough at 17:55 and Brotton at 17:15.

15A.4.23 Bus Service X4 runs between Middlesbrough and Whitby via Redcar and Saltburn. Service X4 operates a half hourly service Monday to Saturday apart from Sunday which operates an hourly service. The service is run by Arriva Bus. The first bus departs Middlesbrough at 06:02 and Whitby at 05:59. The last bus departs Middlesbrough at 18:10 and Whitby at 17:04.

15A.4.24 Bus Service X4A runs between Middlesbrough and Whitby via Redcar and Saltburn. Service X4A operates an hourly evening service Monday to Sunday. The service is run by Arriva Bus.

15A.4.25 A summary of the bus service frequency is shown in Table 15A-1 below.

Table 15A-1: Bus Service Summary

SERVICE	ROUTE	FREQUENCY			
		MON TO FRI DAYTIME	MON TO FRI EVENING	SAT	SUN
62	Middlesbrough to New Marske	30 mins	60 mins	30 mins	60 mins
X3	Middlesbrough to Lingdale	60 mins	n/a	60 mins	n/a
X3A	Middlesbrough to Brotton	60 mins	n/a	60 mins	n/a
X4	Middlesbrough to Whitby	30 mins	n/a	30 mins	60 mins
X4A	Middlesbrough to Whitby	n/a	60 mins	60 mins	60 mins

15A.4.26 Given the frequency of bus services, whilst there is a reasonable level of service, given the type of activity in relation to construction workers and the facilities within the wider site it is not considered that this will form a realistic modal choice for workers travelling to the Main Site.

15A.4.27 See Plate 15A-3 for Bus Stop Distances in the vicinity of the Proposed Development.

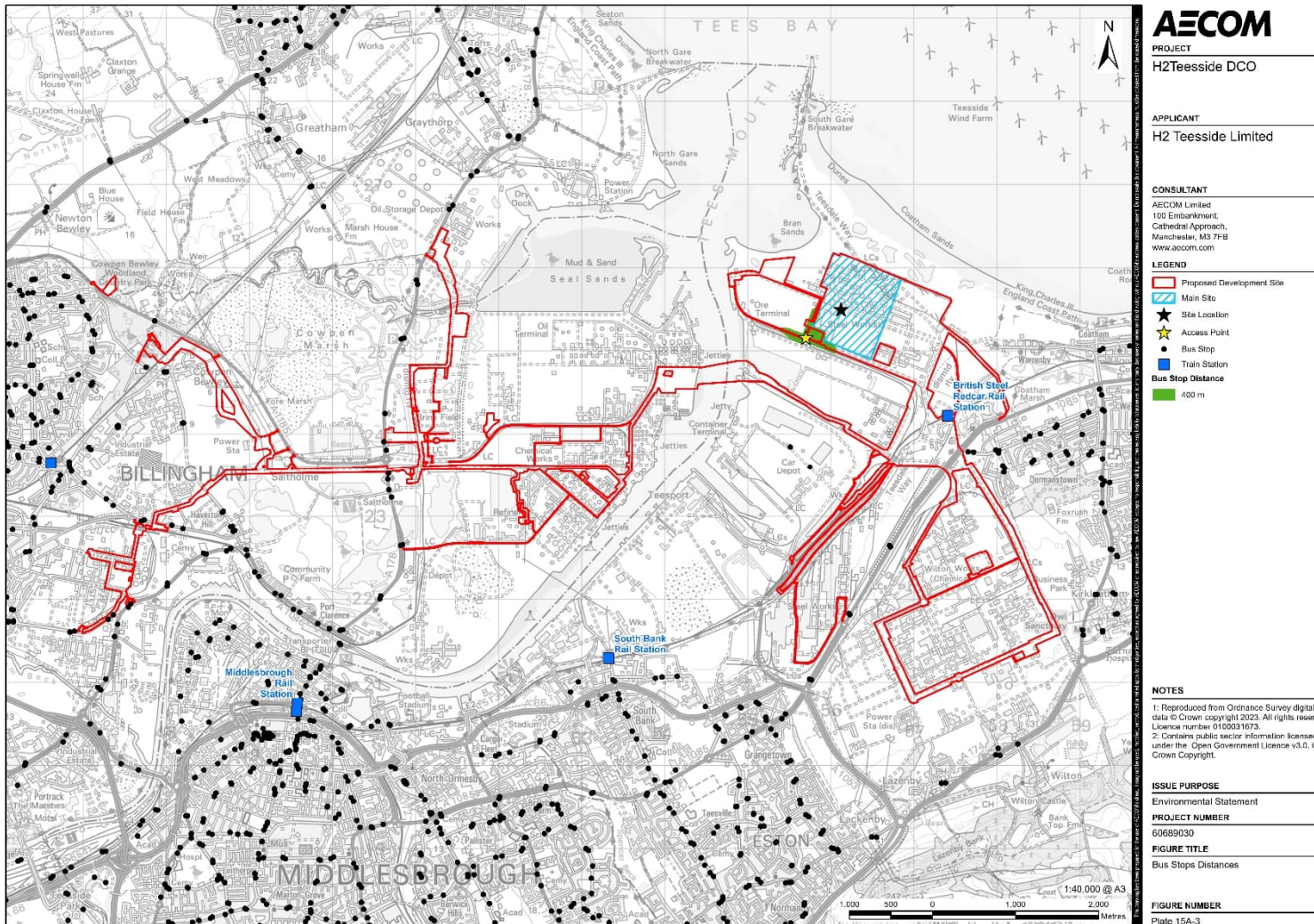


Plate 15A-3: Bus Stop Distances

Rail

- 15A.4.28 The nearest railway station to the Proposed Development Site is British Steel, Redcar, which is located within the Proposed Development Site. The station is located on the Tees Valley Line and is operated by Northern Rail.
- 15A.4.29 Historically, there were two eastbound services per day to Saltburn via Redcar and two westbound services per day to Bishop Auckland via Middlesbrough and Darlington. Northern Rail suspended all services to and from the station on 14 December 2019 due to the lack of passengers using the station.
- 15A.4.30 However, there is potential for the station to be re-opened in the future for both construction staff and operational staff to use the train as a mode of traveling to work – this has not been assumed for the purposes of this assessment. The nearest station to the Main Site that is still open is Redcar Central, located approximately 3 km to the east.

Accessibility Summary

- 15A.4.31 From the above it is considered that, although the Main Site is reasonably well connected by alternative modes of travel, given the working patterns and type of construction work, it is accepted that these are unlikely to represent a significant proportion of worker trips.

Road Safety

Introduction

- 15A.4.32 This section of the report will review the road safety record of the local highway network based upon the most recent five year period and will identify any areas of concern which may then be exacerbated by the addition of the traffic during the more critical construction period.
- 15A.4.33 Personal Injury Accident (PIA) Data has been obtained from CrashMap (CrashMap, 2023) and takes into account accidents that occurred within the selected area between 1 January 2018 and 31 December 2022 (the most up to date data available at the time of preparing this report), with the area of study shown below in Plate 15A-4.

15A.4.34 Within the defined area outlined in Plate 15A-3, a total of 69 accidents occurred over the five-year study period between 2018 and 2022. Of these accidents, 54 were classed as slight in severity, 14 as serious and one as fatal. A breakdown of all accidents for this study area is provided in Table 15A-2 below.

Table 15A-2: Accident Breakdown Summary

YEAR	TOTAL	SLIGHT	SERIOUS	FATAL
2018	16	13	3	0
2019	14	11	1	0
2020	11	6	4	1
2021	12	13	1	0
2022	16	11	5	0
TOTAL	69	54	14	1

15A.4.35 Below, each accident location is further discussed.

B1380 High Street / Birchington Avenue Junction

15A.4.36 Over the five-year study period, a total of two accidents occurred at the junction between the B1380 and Birchington Avenue, of which one was slight, and one was fatal in severity. Table 15A-3 provides a more detailed breakdown of the incidents.

Table 15A-3: Accident Breakdown B1380 High Street / Birchington Avenue Junction

DATE OF INCIDENT	SEVERITY	NO. OF VEHICLES	CAUSATION
03/12/2019	Slight	2	Vehicle turning right impacted by vehicle travelling normally along the carriageway.
12/11/2020	Fatal	1	Crossing pedestrian impacted by bus or coach at a pedestrian crossing facility.

15A.4.37 From the above it can be concluded that minimal accidents have occurred at this junction over the five-year study period and analysis suggests these accidents were attributed to driver error such as failure to look properly.

15A.4.38 Whilst clearly any fatal accident is undesirable, it is not considered that a total of two accidents within the previous five years constitutes an existing road safety issue along this link.

B1380 High Street Between A1053 and Birchington Avenue

15A.4.39 No accidents have occurred on this link over the five-year study period.

A1053 / A174 / B1380 Roundabout

15A.4.40 Over the five-year study period, four accidents occurred at the A1053 / A174 / B1380 Roundabout, of which all were slight in severity. Table 15A-4 provides a more detailed breakdown of the incidents.

Table 15A-4: Accident Breakdown A1503 / A174 / B1380 Roundabout

DATE OF INCIDENT	SEVERITY	NO. OF VEHICLES	CAUSATION
29/06/2021	Slight	2	Vehicle travelling around roundabout impacted vehicle pulling into roundabout.
02/11/2021	Slight	2	Slowing vehicle impacted at rear by moving vehicle in the carriageway.
08/12/2021	Slight	2	Light goods vehicle turning right impacted by heavy goods vehicle travelling normally along the carriageway.
20/10/2022	Slight	2	Heavy goods vehicle impacted a light goods vehicle while changing lane to the left.

15A.4.41 From the above it can be concluded that minimal accidents have occurred at this junction over the five-year study period and those that did were all slight in severity. Analysis suggests these accidents were attributed to driver error such as failure to judge the other person's path or speed and failure to look properly. Therefore, none of these accidents can be attributed to an inadequate highway design.

A1053 Greystone Road

15A.4.42 Over the five-year study period, one accident occurred on A1053 Greystone Road which was considered slight in severity. Table 15A-5 provides a more detailed breakdown of the incident.

Table 15A-5: Accident Breakdown A1053 Greystone Road

DATE OF INCIDENT	SEVERITY	NO. OF VEHICLES	CAUSATION
09/01/2018	Slight	1	Crossing pedestrian impacted by vehicle in the carriageway.

15A.4.43 From the above it can be concluded that only one accident has occurred at this junction over the five-year study period and analysis suggests this accident was attributed to driver error such as failure to look properly and reckless behaviour of pedestrians. There were no official crossing facilities in the vicinity of the accident, therefore this accident cannot be attributed to an inadequate highway design.

A1053 / A1085 Roundabout

15A.4.44 Over the five-year study period, six accidents occurred at the A1053 / A1085 Roundabout, five of which were considered slight in severity and one of which was considered serious. Table 15A-6 provides a more detailed breakdown of the incidents.

Table 15A-6: Accident Breakdown A1053 / A1085 Roundabout

DATE OF INCIDENT	SEVERITY	NO. OF VEHICLES	CAUSATION
15/04/2019	Slight	2	Bus / Coach proceeding normally along the carriageway impacted head-on with a Goods Vehicle (7.5T and over)
04/06/2019	Slight	2	Two vehicles impacted (front-rear) when proceeding normally along the carriageway.
24/01/2020	Slight	2	Waiting vehicle impacted at rear by moving vehicle in the carriageway
24/09/2021	Slight	2	Bus or coach travelling around roundabout impacted vehicle pulling into roundabout.
30/01/2022	Serious	1	Light goods vehicle impacted central island of roundabout
16/12/2022	Slight	2	Vehicle impacted on roundabout by vehicle turning left onto roundabout

15A.4.45 From the above it can be concluded that the majority of the accidents at this junction over the five-year study period were slight in severity. Analysis suggests these accidents were attributed to driver error such as failure to judge the other person's path or speed and failure to look properly. Therefore, none of these accidents can be attributed to an inadequate highway design.

A1053 / A66 / Tees Dock Road Roundabout

15A.4.46 Over the five-year study period, a total of two accidents occurred at the A1053 / A66 / Tees Dock Road Roundabout, both of which were slight in severity. Table 15A-7 provides a more detailed breakdown of the incidents.

Table 15A-7: A1053 / A66 / Tees Dock Roundabout

DATE OF INCIDENT	SEVERITY	NO. OF VEHICLES	CAUSATION
03/07/2022	Slight	2	Vehicle impacted by vehicle changing lanes to the left

DATE OF INCIDENT	SEVERITY	NO. OF VEHICLES	CAUSATION
14/07/2022	Slight	2	Vehicle impacted on roundabout by vehicle entering roundabout

15A.4.47 From the above it can be concluded that minimal accidents have occurred at this junction over the five-year study period and analysis suggests these accidents were attributed to driver error such as failure to look properly. Therefore, neither of these accidents can be attributed to an inadequate highway design.

A66 Between A1053 and Eston Road

15A.4.48 Over the five-year study period, one accident occurred on the A66 between A1053 and Eston Road, which was considered slight in severity. Table 15A-8 provides a more detailed breakdown of the incident.

Table 15A-8: Accident Breakdown A66 Between A1053 / A1085 Roundabout

DATE OF INCIDENT	SEVERITY	NO. OF VEHICLES	CAUSATION
15/02/2021	Slight	5	Slowing Light Goods Vehicle impacted by moving vehicle from the rear. Another vehicle impacts the second vehicle at the rear. Impacts continue until five vehicles have been affected.

15A.4.49 From the above it can be concluded that only one accident has occurred at this junction over the five-year study period and analysis suggests this accident was attributed to driver error such as failure to judge other person's path or speed. Therefore, this accident cannot be attributed to an inadequate highway design.

A66 / Eston Road / Church Lane Junction

15A.4.50 Over the five-year study period, four accidents occurred at the A66 / Eston Road / Church Lane junction, of which all were considered slight in severity. Table 15A-9 provides a more detailed breakdown of the incident.

Table 15A-9: Accident Breakdown A66 / Eston Road / Church Lane Junction

DATE OF INCIDENT	SEVERITY	NO. OF VEHICLES	CAUSATION
26/02/2020	Slight	2	Two vehicles impacted when proceeding normally along the carriageway.
12/01/2022	Slight	2	Slowing vehicle impacted at rear by moving vehicle in the carriageway.

DATE OF INCIDENT	SEVERITY	NO. OF VEHICLES	CAUSATION
29/01/2022	Slight	2	Vehicle impacted by vehicle changing lanes to the left.
20/04/2022	Slight	2	Stationary vehicle impacted at rear by moving vehicle in the carriageway.

15A.4.51 From the above it can be concluded that minimal accidents have occurred at this junction over the five-year study period and those that did were all slight in severity. Analysis suggests these accidents were attributed to driver error such as failure to judge the other person's path or speed and failure to look properly. Therefore, none of these accidents can be attributed to an inadequate highway design.

A1085 Between A1053 and Birchington Avenue

15A.4.52 No accidents have occurred on this link section over the five-year study period.

A1085 / Birchington Avenue Roundabout

15A.4.53 Over the five-year study period, six accidents occurred at the Broadway / Birchington Avenue Roundabout, of which two were considered serious in severity and four were slight in severity. Table 15A-10 provides a more detailed breakdown of the incidents.

Table 15A-10: Accident Breakdown 1085 / Birchington Avenue Roundabout

DATE OF INCIDENT	SEVERITY	NO. OF VEHICLES	CAUSATION
22/08/2018	Slight	2	Waiting vehicle impacted at rear by moving vehicle in the carriageway.
27/09/2018	Slight	1	Pedestrian impacted when crossing by vehicle proceeding normally along the carriageway.
25/07/2019	Slight	1	Pedestrian impacted when crossing by vehicle proceeding normally along the carriageway.
31/12/2020	Serious	2	Cyclist impacted by vehicle proceeding normally along carriageway.
25/06/2021	Slight	1	Pedestrian impacted when crossing by vehicle proceeding normally along the carriageway.
07/04/2022	Serious	2	Cyclist impacted on the nearside by vehicle proceeding along carriageway

15A.4.54 From the above it can be concluded that over the five-year study period there were four slight severity and two serious severity accidents.

15A.4.55 Analysis suggests these accidents were attributed to driver error such as failure to judge the other person's path or speed and failure to look properly, and as such none of these accidents can be attributed to an inadequate highway design.

A1085 Between A1053 and A1085 / British Steel Roundabout

15A.4.56 Over the five-year study period, one accident occurred on this section of the A1085, which was classed as serious in severity. Table 15A-11 provides a more detailed breakdown of the incident.

Table 15A-11: Accident Breakdown A1085 Between A1053 and A1085 / British Steel Roundabout

DATE OF INCIDENT	SEVERITY	NO. OF VEHICLES	CAUSATION
05/04/2018	Serious	2	Parked vehicle impacted by moving vehicle in the carriageway.

15A.4.57 From the above it can be concluded that only one accident has occurred at this junction over the five-year study period and analysis suggests this accident was attributed to driver error such as failure to judge other person's path or speed. Therefore, this accident cannot be attributed to an inadequate highway design.

A1085 / British Steel Roundabout

15A.4.58 No accidents have occurred on this link section over the five-year study period.

A1085 Between British Steel Roundabout and West Coatham Lane Roundabout

15A.4.59 Over the five-year study period, three accidents occurred on this section of the A1085, of which two were classed as serious in severity and one slight in severity. Table 15A-12 provides a more detailed breakdown of the incidents.

Table 15A-12: Accident Breakdown A1085 between British Steel Roundabout and West Coatham Lane Roundabout

DATE OF INCIDENT	SEVERITY	NO. OF VEHICLES	CAUSATION
10/01/2020	Serious	2	Parked vehicle impacted by moving vehicle in the carriageway.
01/04/2021	Serious	1	Vehicle impacted wall or fence while processing normally along carriageway.
16/10/2021	Slight	1	Motorcycle impacted while proceeding normally along carriageway.

15A.4.60 From the above it can be concluded that minimal accidents have occurred at this junction over the five-year study period and analysis suggests these accidents were attributed to driver / rider error such as failure to look properly, failure to judge other person's speed or path, and / or loss of control. Therefore, none of these accidents can be attributed to an inadequate highway design.

A1058 / West Coatham Lane Roundabout

15A.4.61 Over the five-year study period, four accidents occurred at this junction, of which three were slight in severity and one was serious in severity. Table 15A-13 provides a more detailed breakdown of the incidents.

Table 15A-13: Accident Breakdown A1058 / West Coatham Lane Roundabout

DATE OF INCIDENT	SEVERITY	NO. OF VEHICLES	CAUSATION
24/09/2018	Slight	2	Moving vehicle impacted with another vehicle turning right in the carriageway.
31/10/2018	Serious	1	Motorcycle proceeding normally along the carriageway.
07/01/2019	Slight	2	Two vehicles impacted when proceeding normally along the carriageway.
06/02/2021	Slight	2	Vehicle turning left impacted by vehicle travelling normally along the carriageway.

15A.4.62 From the above it can be concluded that minimal accidents have occurred at this junction over the five-year study period and analysis suggests these accidents were attributed to driver / rider error such as failure to look properly and/or loss of control. Therefore, none of these accidents can be attributed to an inadequate highway design.

A1085 Between West Coatham Lane and Kirkleatham Lane

15A.4.63 Over the five-year study period, one accident occurred on this section of the A1085, which was classed as slight in severity. Table 15A-14 provides a more detailed breakdown of the incident.

Table 15A-14: Accident Breakdown A1085 Between West Coatham Lane and Kirkleatham Lane

DATE OF INCIDENT	SEVERITY	NO. OF VEHICLES	CAUSATION
31/08/2021	Slight	1	Motorcycle proceeding normally along the carriageway.

15A.4.64 From the above it can be concluded that only one accident has occurred at this junction over the five-year study period and analysis suggests this accident was

attributed to rider error such as loss of control. Therefore, this accident cannot be attributed to an inadequate highway design.

A1085 / A1042 Kirkleatham Lane Junction

15A.4.65 Over the five-year study period, two accidents occurred at this junction, of which both were classed as slight in severity. Table 15A-15 provides a more detailed breakdown of the incidents.

Table 15A-15: Accident Breakdown A1085 / A1042 Kirkleatham Lane Junction

DATE OF INCIDENT	SEVERITY	NO. OF VEHICLES	CAUSATION
02/10/2018	Slight	2	Vehicle waiting to turn right impacted by vehicle turning left in the carriageway.
29/08/2021	Slight	2	Vehicle turning right impacted by vehicle travelling normally along the carriageway.

15A.4.66 From the above it can be concluded that minimal accidents have occurred at this junction over the five-year study period and analysis suggests these accidents were attributed to driver error such as failure to look properly. Therefore, none of these accidents can be attributed to an inadequate highway design.

A1042 Kirkleatham Lane

15A.4.67 Over the five-year study period, a total of twelve accidents occurred along the A1042 within the study area, of which two were considered serious in severity and the other ten were of slight severity. Table 15A-16 provides a more detailed breakdown of the incidents.

Table 15A-16: Accident Breakdown A1042 Kirkleatham Lane

DATE OF INCIDENT	SEVERITY	NO. OF VEHICLES	CAUSATION
13/04/2018	Slight	3	Two vehicles waiting to turn right impacted by another vehicle proceeding normally along the carriageway.
22/06/2018	Serious	1	Crossing pedestrian impacted by vehicle proceeding normally along the carriageway.
19/08/2018	Slight	2	Two vehicles impacted proceeding normally along the carriageway.
20/08/2018	Slight	2	Vehicle turning right impacted by another vehicle proceeding normally along the carriageway.

DATE OF INCIDENT	SEVERITY	NO. OF VEHICLES	CAUSATION
08/01/2019	Slight	2	Cyclist impacted by vehicle proceeding normally along the carriageway.
02/06/2020	Slight	2	Vehicle turning left impacted cyclist proceeding normally along the carriageway.
04/12/2020	Slight	3	Vehicle turning right impacted vehicle proceeding normally along carriageway way and vehicle waiting to turn right.
02/11/2021	Slight	2	Vehicle waiting to turn right impacted from the rear by vehicle proceeding normally along the carriageway.
14/12/2021	Slight	2	Vehicle turning right impacted by another vehicle overtaking a moving vehicle on its offside.
22/01/2022	Slight	2	Cyclist impacted head on by vehicle proceeding normally along carriageway.
28/03/2022	Serious	1	Motorcycle proceeding normally along carriageway.
30/04/2022	Slight	2	Cyclist travelling along carriageway impacted by vehicle turning right.

15A.4.68 From the above it can be concluded that multiple accidents have occurred on this road over the five-year study period. However, this section of road spans over 3 km and no more than three accidents have occurred in the same area over the five-year study period. The serious accident involving a pedestrian occurred at an uncontrolled crossing with good visibility of the road in both directions. The analysis therefore suggests these accidents can all be attributed to driver / rider error such as failure to judge the other person's path or speed, a failure to look properly and / or loss of control. None of the accidents can be attributed to an inadequate highway design.

A174 / A1042 Roundabout

15A.4.69 Over the five-year study period, a total of five accidents occurred at the A174 / A1042 Roundabout, of which all were considered slight in severity. Table 15A-17 provides a more detailed breakdown of the incidents.

Table 15A-17: Accident Breakdown A174 / A1042 Roundabout

DATE OF INCIDENT	SEVERITY	NO. OF VEHICLES	CAUSATION
16/06/2018	Slight	2	Slowing vehicle impacted from the rear by a moving vehicle in the carriageway.
12/08/2018	Slight	5	Four waiting vehicles impacted on offside by another vehicle proceeding normally along the carriageway
09/01/2020	Slight	2	Two vehicles impacted while both turning right.
03/11/2020	Slight	2	Vehicle changing lanes impacted vehicle proceeding normally along the carriageway.
08/03/2022	Slight	2	Vehicle impacted on roundabout by vehicle turning right.

15A.4.70 From the above it can be concluded that minimal accidents have occurred at this junction over the five-year study period and analysis suggests these accidents were attributed to driver error such as failure to look properly and / or failure to judge the other person's speed or path. Therefore, none of these accidents can be attributed to an inadequate highway design.

Accident Clusters

15A.4.71 The following criteria has been adopted for identifying potential collision clusters within the study area for both urban and rural areas:

- a rural collision cluster site is one at which there have been four or more personal injury collisions within a 100 m radius of each other during a five-year period and the speed limit of the road is over 40 mph; and
- an urban collision cluster site is one at which there have been four or more personal injury collisions within a 50 m radius of each other during a five-year period and the speed limit of the road is 40 mph or less.

15A.4.72 Based on the above analysis this has identified two accident clusters:

Cluster One: Roundabout Junction of the A1085 Broadway and Birchington Avenue

15A.4.73 This junction experienced six collisions within the past five years of which four were of slight severity and two of serious severity. Of the four slight accidents, one involved a car and pedal cyclist colliding and three involved a car colliding with a pedestrian. Both accidents of serious severity involved a car colliding with a pedal cyclist.

15A.4.74 Analysis suggests that the accidents were attributed to driver / rider error such as a failure to judge the other person's path or speed, a failure to look properly and /

or loss of control. None of the accidents can be attributed to an inadequate highway design.

Cluster Two: Roundabout Junction of the A1085, West Coatham Lane and PCC Site Access

15A.4.75 The junction experienced four collisions within the past five years of which three were slight in severity and one was serious in severity. Of the three slight accidents one involved a vehicle turning right and colliding with an oncoming vehicle, one involved a vehicle turning left and colliding with an oncoming vehicle and one involved a rear end shunt. The accident of serious severity involved loss of control of a motorcycle.

15A.4.76 Analysis suggests that the accidents were attributed to driver / rider error such as a failure to judge the other person's path or speed, a failure to look properly and / or loss of control. None of the accidents can be attributed to an inadequate highway design.

Traffic Baseline

Introduction

15A.4.77 This section sets out the baseline traffic flows that have been used within both this assessment as well as the accompanying ES Chapter (Chapter 15: Traffic and Transport (ES Volume I, EN070009/APP/6.2) and will include both Automatic Traffic Count (ATC) data as well as Manual Classified Counts (MCC), with the locations shown on Figure 15-3 (ES Volume II, EN070009/APP/6.3).

Manual Classified Counts

15A.4.78 The counts were undertaken on Tuesday 19 November 2019, between 06:00 and 10:00 and 16:00 and 20:00 at the following junctions:

- MCC 1: A1085 / West Coatham Lane / Main Access Roundabout;
- MCC 2: A1085 / A1053 Roundabout; and
- MCC 3: A1053 / A174 / B1380 Roundabout

15A.4.79 In order to establish the peak hours for assessment, the total flows arriving at each individual junction have been calculated for each hour in order to identify the base peak hours for assessment for each junction.

15A.4.80 Table 15A-18 below summarises the total flows into each junction and identifies time period 08:00 to 09:00 as the weekday AM peak hour and 16:00 to 17:00 as the PM Peak hour.

Table 15A-18: 2019 MCC Baseline Counts – Peak Hour

HOUR	MCC1 A1085 / WEST COATHAM LANE / MAIN SITE ACCESS ROUNDAABOUT	MCC2 A1085 / A1053 ROUNDAABOUT	MCC3 A1053 / A174 / B1380 ROUNDAABOUT	TOTAL
AM				
06:00 – 07:00	777	1,745	2,280	4,802
07:00 – 08:00	1,327	2,843	4,803	8,973
08:00 – 09:00	1,680	3,396	5,083	10,159
09:00 – 10:00	1,244	2,160	3,180	6,584
PM				
16:00 – 17:00	1,840	3,241	5,217	10,298
17:00 – 18:00	1,790	3,167	4,879	9,836
18:00 – 19:00	909	1,826	3,017	5,752
19:00 – 20:00	569	1,035	1,736	3,340

15A.4.81 Therefore, from the above the peak hours can be given as being between 08:00 and 09:00 in the weekday AM peak and between 16:00 and 17:00 during the weekday PM peak.

Automatic Traffic Counts

15A.4.82 A series of Automatic Traffic Counts (ATCs) have been undertaken between Tuesday 19 November and Monday 25 November 2019 at the following locations. It should be noted counts on the A1053 Greystone Road and the A174 were obtained from National Highways Webtris database (National Highways, 2023) for the month of May 2022 and 2023 respectively.

- A1085 Trunk Road, 100m east of Ennis Road;
- A1085 Trunk Road, 1.34 km south of West Coatham Lane;
- A1042 Kirkleatham Lane, 85m south of Staintondale Avenue;
- A1085 Trunk Road, 500m north of A1053 Tees Dock Road;
- A1085 Broadway, 235m east of Birchington Avenue;
- A1380 High Street, 50m east of Lackenby Lane;
- A66, 140m east of Whitworth Road;
- A1046 Port Clarence Road, 20m north of Beech Terrace;
- A178 Seaton Carew Road, 535m north of Huntsman Drive;
- Unnamed Road, 725m east of A178 Seaton Carew Road;

- A1053 Greystone Road (May 2023 data);
- A174 (West of Greystone Roundabout) (May 2022 data);
- A1046 Haverton Hill Road (May 2022 data);
- A1185 (west of A178 Seaton Carew Road) (May 2022 data), and
- Belasis Avenue.

15A.4.83 From this data, the following typical traffic flows are evident on each link as set out below in Table 15A-19, with all data from 2019 unless indicated:

Table 15A-19: 2019, 2022 and 2023 ATC Traffic Data

	LINK	ALL VEHICLES	HEAVY GOODS VEHICLES	HEAVY GOODS VEHICLE PERCENTAGE
1	A1085 Trunk Road, 100m east of Ennis Road	12,274	1,049	8.5%
2	A1085 Trunk Road, 1.34 km south of West Coatham Lane	14,387	1,275	8.9%
3	A1042 Kirkleatham Lane, 85m south of Staintondale Avenue	11,791	762	6.5%
4	A1085 Trunk Road, 500m north of A1053 Tees Dock Road	16,058	2,012	12.5%
5	A1085 Broadway, 235m east of Birchington Avenue	8,093	521	6.4%
6	A1380 High Street, 50m east of Lackenby Lane	9,835	826	8.4%
7	A66, 140m east of Whitworth Road	19,865	3,662	18.4%
8	A1046 Port Clarence Road, 20m north of Beech Terrace	7,612	896	11.8%
9	A178 Seaton Carew Road, 535m north of Huntsman Drive	7,814	998	12.8%
10	Unnamed Road, 725m east of A178 Seaton Carew Road	4,206	860	20.4%
11	A1053 Greystone Road (May 2023 data)	12,808	1,204	9.4%

LINK		ALL VEHICLES	HEAVY GOODS VEHICLES	HEAVY GOODS VEHICLE PERCENTAGE
12	A174 (West of Greystone Roundabout) (May 2022 data)	30,651	2,008	6.6%
13	A1046 Haverton Hill Road (May 2022 data)	14,010	1,115	8.0%
14	A1185 (west of A178 Seaton Carew Road) (May 2022 data)	4,874	1,050	21.5%
15	Belasis Avenue	2,451	72	2.9%

15A.4.84 As set out in Table 15A-20, the use of ATC data from 2019 is still considered to be valid. By way of example, the 2019 traffic data for the A1053 Greystone Road (Link 8) and the A174 (West of Greystone roundabout) (Link 9) was taken from the National Highways WebTRIS database, and as such, with reference to Table 15A-19, has been updated to use the most recently available data from 2022 and 2023.

15A.4.85 This new data from 2022 and 2023 can then be compared with the data from 2019 on these links to provide a comparison between traffic data collected in 2019 and more up to date data as follows in Table 15A-20.

Table 15A-20: 2019 Traffic Data Comparison

			TOTAL VEHICLES	HEAVY GOODS VEHICLES	HEAVY GOODS VEHICLE PERCENTAGE
8	A1053 Greystone Road	2019 Data	14,387	1,392	9.7%
		2023 data	12,808	1,204	9.4%
9	A174 (West of Greystone Roundabout)	2019 data	31,758	1,936	6.1%
		2022 data	30,651	2,008	6.6%

15A.4.86 With reference to Table 15A-20 above it can be seen that overall traffic volumes have reduced between 2019 and 2022 / 23, although the percentage of HGV traffic is similar. It is therefore considered that the use of traffic data from 2019, when applying TEMPRO Growth Factors (see below), to the peak year of construction remains a valid baseline for the traffic and transport assessment.

TEMPRO Growth Factors

15A.4.87 The future baseline traffic flows have seen a growth factor applied to the peak year of construction, 2026 using TEMPRO V8.1 growth factors, as set out below in Table 15A-21.

Table 15A-21: TEMPRO Growth Factors

YEAR	AVERAGE DAILY GROWTH
2019 to 2026	1.054
2022 to 2026	1.049
2023 to 2026	1.035

2026 Baseline Traffic

15A.4.88 Based upon the above TEMPRO growth factors the daily traffic flows on the ATC sites can be given as follows in Table 15A-22.

Table 15A-22: 2026 Baseline ATC Traffic Data

	LINK	ALL VEHICLES	HEAVY GOODS VEHICLES	HEAVY GOODS VEHICLE PERCENTAGE
1	A1085 Trunk Road, 100m east of Ennis Road	12,948	1,107	8.5%
2	A1085 Trunk Road, 1.34 km south of West Coatham Lane	15,176	1,345	8.9%
3	A1042 Kirkleatham Lane, 85m south of Staintondale Avenue	12,438	804	6.5%
4	A1085 Trunk Road, 500m north of A1053 Tees Dock Road	16,940	2,122	12.5%
5	A1085 Broadway, 235m east of Birchington Avenue	8,537	549	6.4%
6	A1380 High Street, 50m east of Lackenby Lane	10,375	871	8.4%
7	A66, 140m east of Whitworth Road	20,955	3,863	18.4%
8	A1046 Port Clarence Road, 20m north of Beech Terrace	8,030	945	11.8%
9	A178 Seaton Carew Road, 535m north of Huntsman Drive	8,243	1,053	12.8%

	LINK	ALL VEHICLES	HEAVY GOODS VEHICLES	HEAVY GOODS VEHICLE PERCENTAGE
10	Unnamed Road, 725m east of A178 Seaton Carew Road	4,437	907	20.4%
11	A1053 Greystone Road (MAY 2023 data)	13,265	1,247	9.4%
12	A174 (West of Greystone Roundabout) (May 2022 data)	32,129	2,105	6.6%
13	A1046 Haverton Hill Road (MAY 2022 data)	14,686	1,169	8.0%
14	A1185 (west of A178 Seaton Carew Road) (May 2022 data)	5,109	1,101	21.5%
15	Belasis Avenue	2,586	76	2.9%

15A.5 Proposed Development Trip Generation

Construction Phase Trip Generation

Introduction

15A.5.1 This section will set out the vehicle trip generation expected on the Proposed Development Site during the construction phase, traffic generation is expected to peak in June 2026, this is set out below.

Programme

15A.5.2 With reference to Table 15A-23 below, PPW Phase 1 starts in Q3 2025, and Construction finishes in Q2 2028, and Enabling Works Phase 2 starts in Q1 2028, and Construction finishes in Q4 2030.

Table 15A-23 Indicative Construction Programme for the Proposed Development

DEVELOPMENT PHASE	2025				2026				2027				2028				2029				2030			
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
PPW Phase 1																								
Construction Phase 1																								
Phase 1 Operation Commences																								
Enabling Works Phase 2																								
Construction Phase 2																								
Phase 2 Operation Commences																								

Construction Workers

- 15A.5.3 There will be a maximum of 1,300 workers travelling to both the Main Site and Connection Corridors daily, which is set out in Chapter 5: Construction and Programme Management (ES Volume I, EN070009/APP/6.2) has been split between the Main Site (71%) and the Connection Corridors (29%).
- 15A.5.4 It has then been assumed that there would be an average of 2 workers per car, which is considered a realistic assumption given that the mode of arrival of construction workers can be controlled through travel planning measures and that construction workers would want to minimise their travel expenditure, particularly if having to pay for temporary accommodation. It is proposed that this level of traffic generation can be managed and maintained through Travel Plan measures and the availability of on-site parking spaces.
- 15A.5.5 Therefore, a total of 1,300 workers based upon 2 workers per car gives a total of 650 worker car trips per day across all activities, and this is shown in Table 15A-24 below, please note any minor variations in totals are due to rounding errors and do not materially affect any of the assessments. A Framework Construction Workers Travel Plan (CWTP) which will inform the Final CWTP(s) has been submitted with this ES (EN070009/APP/5.15).

Table 15A-24: Construction Worker Split – Main Site and Connection Corridors

LOCATION	PERCENTAGE SPLIT	TOTAL NUMBER OF WORKER CAR TRIPS PER DAY AT THE PEAK OF CONSTRUCTION (ASSUMING 2 WORKERS PER CAR)
Main Site	71%	462
Connection Corridors	29%	189
Total	100%	650

- 15A.5.6 There are then a total of 650 worker car trips to the Proposed Development Site per day with 462 travelling to the Main Site and 189 travelling to the Connection Corridors north and south of the River Tees.
- 15A.5.7 The workers on the Connection Corridors have then been split north and south of the River Tees based upon the respective lengths of pipeline on each side of the river as shown in Table 15A-25 below, please note any minor variations in totals is due to rounding errors and does not materially affect any of the assessments.

Table 15A-25: Construction Worker Split – Connection Corridor Workers

LOCATION	PERCENTAGE SPLIT	TOTAL NUMBER OF WORKER CAR TRIPS PER DAY AT THE PEAK OF CONSTRUCTION (ASSUMING 2 WORKERS PER CAR)
North of the River Tees	60%	113
South of the River Tees	40%	75
Total	100%	188

15A.5.8 There are seven construction compounds, with four to the north of the River Tees and three to the south of the River Tees, as follows:

- North of River Tees:
 - Seal Sands Compound;
 - Greatham Satellite Compound;
 - Cowpen Bewley Satellite Compound; and
 - Billingham Industrial Park Satellite Compound.
- South of River Tees:
 - Main Site Compound;
 - RBT Satellite Compound; and
 - Wilton International Satellite Compound.

15A.5.9 The daily number of car trips generated during the construction phase can then be set out as follows in Table 15A-26, with the number of workers to each compound based upon the assumed length of pipeline served by each compound, with any slight differences in the calculations due to rounding. With the total number of worker trips taken from Table 15A-24 for the Main Site and Table 15A-14 for the Connection Corridors workers north and south of the River Tees. Please note any minor variations in totals are due to rounding errors and do not materially affect any of the assessments.

Table 15A-26: Construction Worker Vehicle Trips per Day

LOCATION	PERCENTAGE SPLIT OF TRAFFIC	ARRIVALS	DEPARTURES	TWO WAY
Main Site				
Construction worker car trips per day to Main Site	Main Site 100%	462	462	923
Total	100%	462	462	923

LOCATION	PERCENTAGE SPLIT OF TRAFFIC	ARRIVALS	DEPARTURES	TWO WAY
Pipeline North of River				
Construction car trips per day to Billingham Industrial Park Satellite Compound	21%	24	24	48
Construction car trips per day to Cowpen Bewley Satellite Compound	26%	29	29	58
Construction car trips per day to Greatham Satellite Compound	28%	32	32	64
Construction car trips per day to Seal Sands Compound	25%	28	28	56
Total	100%	113	113	227
Pipeline South of River				
Construction car trips per day to RBT Satellite Compound	100%	75	75	150
Construction car trips per day to Main Site Compound	0%	Zero as all pipeline traffic on the south of the River Tees is assumed to use the RBT Satellite Compound		
Construction car trips per day to Wilton International Satellite Compound	0%	Zero as all pipeline traffic on the south of the River Tees is assumed to use the RBT Satellite Compound		
Total	100%	75	75	150

15A.5.10 The above has been taken forward to the assessment of the local highway network and the accompanying chapter of the ES, and is included within Chapter 15, Section 15.6 (ES Volume I, EN070009/APP/6.2).

Construction HGVs

15A.5.11 The profile of HGV trips across both Phase 1 and Phase 2 is shown below in Plate 15A-4.

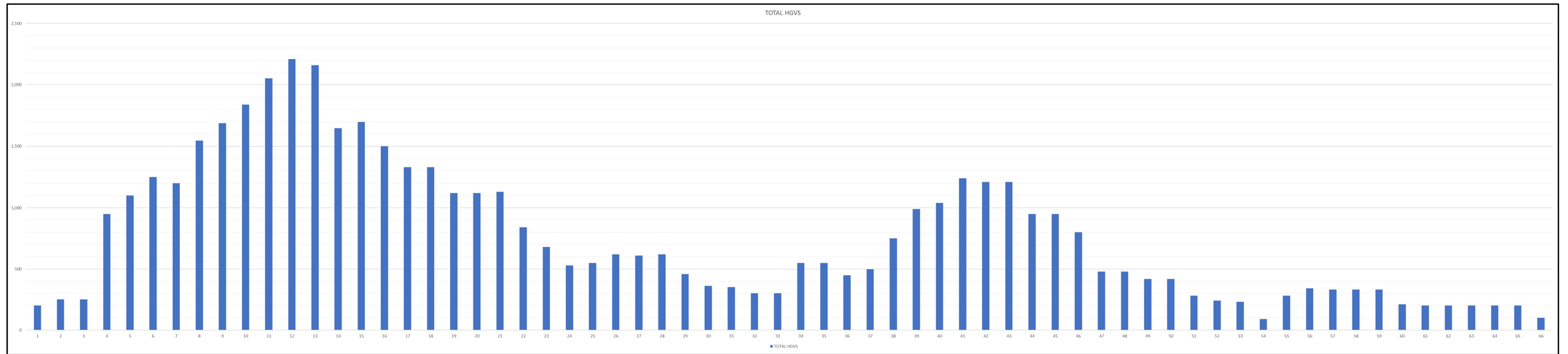


Plate 15A-5: Construction HGV Profile

15A.5.12 From the above the peak in HGV movements occurs in Phase 1 during June 2026 (Month 12) with a total of 2,210 HGVs in the month, of these 1,610 are associated with the Main Site and 600 are associated with the Connection Corridors, both north and south of the River Tees.

15A.5.13 Based upon an average of 20 working days in the month this results in the following HGV movements as shown in Table 15A-27 below.

Table 15A-27: Construction HGV Movements

LOCATION	TOTAL MONTHLY HGVS	TOTAL DAILY HGVS (BASED UPON 20 WORKING DAYS PER MONTH)
Main Site	1,610	81
Connection Corridors	600	30
Total	2,210	111

15A.5.14 Therefore, based upon the above, there are predicted to be a total of 111 HGVs on average per day arriving and departing.

15A.5.15 With reference to Table 15A-26, the Connection Corridors construction workers have been split north and south of the River Tees according to the length of pipe, and this assumption is assumed to be valid for the HGV trips, and therefore the HGV trips can be further split as follows in Table 15A-28.

Table 15A-28: Construction HGV Split – Connection Corridors

LOCATION	PERCENTAGE SPLIT	TOTAL NUMBER OF HGVS (ONE WAY)
North of the River Tees	60%	18
South of the River Tees	40%	12
Total	100%	30

15A.5.16 Based upon the number of HGVS to the Main Site from Table 15A-27 and the Connection Corridors HGV split from Table 15A-28, the number of HGVS to each of the construction compounds can be set out as follows, based upon the same assumptions as given in Table 15A-29, please note any minor variations in totals are due to rounding errors and do not materially affect any of the assessments.

Table 15A-29: Construction HGV Vehicle Trips per Day

LOCATION	PERCENTAGE SPLIT OF TRAFFIC	ARRIVALS	DEPARTURES	TWO WAY
Main Site				
Construction worker car trips per day to Main Site	Main Site 100%	81	81	162
Total	100%	81	81	162
Connection Corridors North of the River Tees				
Construction car trips per day to Billingham Industrial Park Satellite Compound	21%	4	4	8
Construction car trips per day to Cowpen Bewley Satellite Compound	26%	5	5	10
Construction car trips per day to Greatham Satellite Compound	28%	5	5	10
Construction car trips per day to Seal Sands Compound	25%	5	5	10
Total	100%	18	18	38
Connection Corridors South of the River Tees				
Construction car trips per day to RBT Satellite Compound	50%	6	6	12
Construction car trips per day to Main Site Compound	25%	3	3	6
Construction car trips per day to Wilton International Satellite Compound	25%	3	3	6
Total	100%	12	12	24

15A.5.17 The above has been taken forward to the assessment of the local highway network and is included within Section 15.6 of the accompanying chapter of the ES, with traffic flow diagrams being shown in Annex A of this Transport Assessment.

Operational Phase Trip Generation

Introduction

15A.5.18 This section will set out the vehicle trip generation expected during the operational phase.

Operational Phase

15A.5.19 Operation of Phase 1 of the Proposed Development is due to commence in Q1 2028 and once operational will employ 100 people, once Phase 2 Operation commences in Q4 2030, a further 30 people will be employed.

15A.5.20 The staff will work a shift pattern with a minimum operational workforce of 60 staff members during the week.

15A.5.21 There is also expected to be a total of 50 LGV and 15 HGV movements throughout the day during the operational phase.

15A.5.22 During 28-day maintenance periods, which are likely to occur approximately every four years, there could be up to 400 people onsite. Any impact of this would be managed through the adoption of a plant turnaround travel plan, produced by the Applicant as required.

15A.5.23 Once the Proposed Development is operational, traffic flows are therefore expected to be very low – significantly lower than those experienced during the construction period. The overall transportation effects during the operation of the Proposed Development are therefore not considered to be severe. As such no further assessment is considered to be required.

Trip Distribution and Vehicle Assignment

Introduction

15A.5.24 This section sets out the distribution of both construction workers and HGVs on the local highway network.

Distribution

15A.5.25 With such a large and specialised workforce required for the construction of the Proposed Development, it is likely that some of the workforce will be sourced from beyond the daily commutable catchment area.

15A.5.26 Experience at other similar construction sites has confirmed this and recent transport assessments prepared for other large energy developments have allowed for a split of permanent home-based site staff and transient staff staying temporarily in local accommodation.

15A.5.27 As set out in Chapter 18: Socio-Economics and Land Use (ES Volume I, EN070009/APP/6.2) it has been assumed that the majority of the employment generated would be occupied by people living in the Middlesbrough and Stockton Travel To Work Area (TTWA) and as such leakage effects are considered to be low and has been set at 25%. The assessment has then been based upon 75% of workers being local and 25% being transient.

15A.5.28 The 25% transitory workers will either engage in short term rentals or will reside in bed and breakfasts, small hotels, caravan sites or private households located in the vicinity of the Proposed Development Site. From experience elsewhere on similar types of construction sites, these staff prefer to locate as close to the site as possible to minimise travel time and costs. They also tend to find accommodation in groups and lift share to site (or use contractors' minibuses).

15A.5.29 The distribution of the permanent resident construction workforce traffic to the network has been based on a gravity model and the number of those employed in construction in towns and cities (ONS, 2011), within a 45-minute drive time of the Proposed Development Site. The catchment area includes the districts of Redcar and Cleveland, Middlesbrough, Stockton-on-Tees, Hartlepool, Darlington, Sunderland and parts of County Durham. Table 15A-30 shows the permanent resident workforce distribution and the number of workers this equates to at the peak of construction.

15A.5.30 Table 15A-30 below takes the worker population and their distance from the Proposed Development Site, and calculates a factor based upon the distance so that those locations further away (e.g., Hartlepool and Darlington) have a lower 'attractiveness' compared to those locations that are closer (e.g., Redcar and Cleveland and Middlesborough). The distribution therefore favours locations closer to the Proposed Development Site – these are shown within Figure 15-4: Traffic Routes (ES Volume II, EN070009/APP/6.3).

Table 15A-30: Permanent Resident Construction Worker Distribution

DISTRICT	CONSTRUCTION WORKER POPULATION	DISTANCE (MILES)	FACTOR (1/D)	POP X FACTOR	PERCENTAGE (%) FROM EACH DISTRICT
Darlington	3,743	22	0.045	170	5%
Durham	9,100	32	0.031	284	8%
Hartlepool	3,764	22	0.045	171	5%
Middlesborough	4,620	6	0.167	770	22%
Redcar and Cleveland	4,976	4	0.250	1244	25%
Stockton-on-Tees	7,200	12	0.083	600	17%
Sunderland	9,345	35	0.029	267	8%

15A.5.31 In contrast, the distribution of the transitory workforce has been undertaken based on a gravity model and the estimated number of accommodation beds available in the surrounding districts within a 30-minute travelling distance of the Proposed Development Site. This information has been based upon the methodology adopted and agreed for the NZT project, which was based on the Visit Britain

Accommodation Stock Audit (Visit Britain, 2016), which is still considered to provide a reasonable estimate of accommodation availability. Table 15A-31 shows the transitory workforce distribution and the number of workers this equates to at the peak month of construction.

Table 15A-31: Transitory Resident Construction Worker Distribution

DISTRICT	NUMBER OF BEDS	DISTANCE (MILES)	FACTOR (1/D)	POP X FACTOR	PERCENTAGE (%) FROM EACH DISTRICT
Darlington	3,545	22	0.045	161	13%
Hartlepool	946	22	0.045	43	3%
Middlesborough	2,870	6	0.167	478	37%
Redcar and Cleveland	1,484	4	0.250	371	29%
Stockton-on-Tees	2,711	12	0.083	226	18%

Assignment

15A.5.32 Five key routes have been identified that are most likely to be taken by construction workers travelling to and from the Main Site and are as follows:

- route 1: Via A66 onto A1085 Trunk Road, Main Site Access;
- route 2: Via A1085 Broadway onto A1085 Trunk Road, Main Site Access;
- route 3: Via B1380 High Street onto A1053 Greystone Road, A1085 Trunk Road, Main Site Access;
- route 4: Via A174 onto A1053 Greystone Road, A1085 Trunk Road, Main Site Access; and
- route 5: Via A1085 Trunk Road, Main Site Access.

15A.5.33 The key routes are shown on Figure 15-4: Traffic Routes (ES Volume II, EN070009/APP/6.3).

15A.5.34 The assignment of the permanent resident construction workforce to the network is summarised in Table 15A-32 and is consistent with the assessment of other developments within the local area.

15A.5.35 For this assessment, it is assumed that all construction HGVs associated with the Main Site will arrive / depart the Main Site from Tees Dock Road via the A1053 / A66 / Tees Dock Road roundabout. At the junction with the A1053 / A66 / Tees Dock Road, it is assumed that 50% will head west on the A66 and 50% will head south on the A1053 then west on the A174.

15A.5.36 Similarly, and again reflecting the unknown location of construction material, all Connection Corridor traffic to the north of the River Tees has been assigned along Seaton Carew Road to the junction with Haverton Hill Road and the B1275, where it is assumed it will split 50 / 50 to access the A19.

15A.5.37 This 50 / 50 split is a conservative approach and reflects the unknown location of construction material during the preparation of this assessment. HGV routes are presented on Figure 15-2: HGV Routes to and from the Main Site (ES Volume II, EN070009/APP/6.3).

15A.5.38 Table 15A-32 and Table 15A-33 presents the route assignment for both the permanent and transient resident workforce travelling to the Main Site. Please note any minor variations in totals is due to rounding errors and does not materially affect any of the assessments.

Table 15A-32: Catchment Area and Route Assignment for Permanent Resident Workforce

ROUTE	CATCHMENT AREA	PERCENTAGE (%) CONSTRUCTION WORKER VEHICLES	TOTAL DAILY TRAFFIC FLOW
Route 1: Via A66 onto A1085 Trunk Road turning left into Main Site Access	Redcar and Cleveland Darlington Durham Hartlepool Middlesbrough Stockton-on-Tees Sunderland	50%	488
Route 2: Via A1085 Broadway onto A1085 Trunk Road turning left into Main Site Access	Redcar and Cleveland Middlesbrough	17%	166
Route 3: Via B1380 High Street onto A1053 Greystone Road, A1085 Trunk Road turning left into Main Site Access	Redcar and Cleveland Middlesbrough	7%	68
Route 4: Via A174 onto A1053 Greystone Road, A1085 Trunk Road turning left into Main Site Access	Middlesbrough	6%	59
Route 5: Via A1085 Trunk Road turning right into Main Site Access	Redcar and Cleveland	20%	195

ROUTE	CATCHMENT AREA	PERCENTAGE (%) CONSTRUCTION WORKER VEHICLES	TOTAL DAILY TRAFFIC FLOW
Total		100%	976

Table 15A-33: Catchment Area and Route Assignment for Transient Resident Workforce

ROUTE	CATCHMENT AREA	PERCENTAGE (%) CONSTRUCTION WORKER VEHICLES	TOTAL DAILY TRAFFIC FLOW
Route 1: Via A66 onto A1085 Trunk Road turning left into Main Site Access	Darlington Hartlepool Middlesbrough Stockton-on-Tees	49%	159
Route 2: Via A1085 Broadway onto A1085 Trunk Road turning left into Main Site Access	Middlesbrough	22%	72
Route 3: Via B1380 High Street onto A1053 Greystone Road, A1085 Trunk Road turning left into Main Site Access	-	0%	0
Route 4: Via A174 onto A1053 Greystone Road, A1085 Trunk Road turning left into Main Site Access	-	0%	0
Route 5: Via A1085 Trunk Road turning right into Main Site Access	Redcar and Cleveland	29%	94
Total		100%	325

15A.5.39 All the construction workers assignment has been based on the geographic split of population within a 45-minute drive time of the Proposed Development Site for permanent home-based workers and a 30-minute drive time for transitory workers.

15A.5.40 The total construction traffic on each link can be assigned as follows in Table 15A-34.

Table 15A-34: Construction Traffic Flows

LINK		DAILY CONSTRUCTION TRAFFIC (TWO WAY FLOWS)	
		TOTAL VEHICLES	TOTAL HGVS
1	A1085 Trunk Road, 100m east of Ennis Road	289	0
2	A1085 Trunk Road, 1345m south of West Coatham Lane	1070	185
3	A1042 Kirkleatham Lane, 85m south of Staintondale Avenue	145	0
4	A1085 Trunk Road, 500m north of A1053 Tees Dock Road	1070	185
5	A1085 Broadway, 235m east of Birchington Avenue	238	0
6	A1380 High Street, 50m east of Lackenby Lane	56	0
7	A66, 140m east of Whitworth Road	719	92
8	A1046 Port Clarence Road, 20m north of Beech Terrace	225	36
9	A178 Seaton Carew Road, 535m north of Huntsman Drive	225	36
10	Unnamed Road, 725m east of A178 Seaton Carew Road	263	36
11	A1053 Greystone Road (MAY 2023 data)	197	92
12	A174 (West of Greystone Roundabout) (May 2022 data)	141	92
13	A1046 Haverton Hill Road (MAY 2022 data)	225	36
14	A1185 (west of A178 Seaton Carew Road) (May 2022 data)	73	36

15A.5.41 The above has then been used to establish the impact in the accompanying Chapter 15: Traffic and Transport (ES Volume I, EN070009/APP/6.2).

Phase 1 and Phase 2 Overlap

15A.5.42 Based upon the number of construction workers as supplied (although we have used a total of 1,300 workers as a worst-case assessment), Phase 1 has a peak of 480 construction worker vehicle trips and Phase 2 has a peak of 340 construction worker trips, again one way only.

15A.5.43 Therefore, using the numbers as supplied, Phase 1 includes.

- construction worker trips, 480 vehicles in and 480 vehicles out per day (960 two-way vehicle trips);
- construction HGVS, 111 in and 111 out (222 two-way HGV trips); and
- total two-way movements per day is therefore 1,182.

15A.5.44 A Phase 2 assessment assumes:

- construction worker trips, 340 vehicles in and 340 vehicles out (680 two-way vehicle trips);
- construction HGVs, 62 in and 62 out (124 two-way); and
- operational worker trips, 100 in and 100 out per day (200 two-way) – assuming all operational workers will come by car.

15A.5.45 Total two-way movements per day is therefore 1,004, although there are 89 two-way fewer HGV movements in Phase 2, which is considered to be a significant reduction when compared to the Phase 1 assessment.

15A.5.46 We would therefore conclude that a Phase 1 only assessment, as undertaken, provides a more robust assessment of the peak month of construction, when compared to a Phase 1 operational and Phase 2 construction assessment.

Daily Construction Traffic Profiles

15A.5.47 Hours on major construction sites tend to be long due to pressures of timescales and available light. Therefore, the arrival and departure of workers vehicles tend to be spread over the core working hours of weekdays between 07:00 and 19:00 and on Saturdays between 07:00 and 16:00, rather than all falling in the traditional network peak hours. In the time immediately before and after the core working hours there will likely be some travel from construction workers as they travel to and from site.

15A.5.48 In an attempt to quantify this, previous discussions have been held with contractors associated with power station build projects where it was revealed that there is a general tendency for construction workers to travel early for a number of reasons as follows:

- to avoid congestion and delay; and
- to deliver the project to programme.

15A.5.49 This is still considered to provide a relevant profile for a blue hydrogen production facility, as the overall principles of the construction of any large energy related facility are considered to have similar requirements.

15A.5.50 Table 15A-35 below sets out the percentage of daily inbound and outbound trips on an hour-by-hour basis and calculates the totals for the peak month of construction (Month 12) based upon a more critical weekday. This profile is based on a count undertaken at the construction site entrance to Ferrybridge Multifuel 2 in 2017.

15A.5.51 The daily profile at the Main Site can be given as follows based upon a total of 462 workers from Table 15A-24 and Table 15A-26. Please note any minor variations in totals is due to rounding errors and does not materially affect any of the assessments.

Table 15A-35: Main Site Daily Construction Traffic Flows

HOUR BEGINING	% OF DAILY INBOUND	% OF DAILY OUTBOUND	CONSTRUCTION WORKER ARRIVALS	CONSTRUCTION WORKER DEPARTURES
06:00	34%	2%	157	9
07:00	25%	2%	115	9
08:00	5%	2%	23	9
09:00	4%	2%	18	9
10:00	4%	3%	18	14
11:00	4%	3%	18	14
12:00	5%	4%	23	18
13:00	4%	4%	18	18
14:00	3%	3%	14	14
15:00	2%	3%	9	14
16:00	2%	5%	9	23
17:00	3%	15%	14	69
18:00	3%	35%	14	162
19:00	2%	16%	9	74
20:00	0%	1%	0	5
21:00	0%	0%	0	0
Total	100%	100%	462	462

15A.5.52 The daily profile of HGV movement at the peak of construction is shown in Table 15A-36. This profile is based on experience from gas fired combined cycle gas turbined (CCGT) construction sites and shows that the arrival and departure of HGVs from the Proposed Development Site will be spread evenly over the day. The

profile shows that deliveries will be made between 07:00 and 19:00 hours, with 81 HGVS per day as given in Table 15A-27 and Table 15A-29, please note any minor variations in totals are due to rounding errors and do not materially affect any of the assessments.

Table 15A-36: Daily Construction HGV Traffic Flows

HOUR BEGINING	% OF DAILY INBOUND	% OF DAILY OUTBOUND	CONSTRUCTION HGV ARRIVALS	CONSTRUCTION HGV DEPARTURES
06:00	0%	0%	0	0
07:00	9%	8%	7	7
08:00	9%	8%	7	7
09:00	9%	8%	7	7
10:00	9%	8%	7	7
11:00	9%	8%	7	7
12:00	9%	8%	7	7
13:00	9%	8%	7	7
14:00	9%	8%	7	7
15:00	9%	8%	7	7
16:00	9%	8%	7	7
17:00	9%	8%	7	7
18:00	0%	8%	7	7
19:00	0%	0%	0	0
20:00	0%	0%	0	0
21:00	0%	0%	0	0
TOTAL	100%	100%	81	81

15A.5.53 Therefore, from Table 15A-35 and Table 15A-36 above there is a total of 31 two way worker trips during the weekday AM peak hour (08:00 to 09:00) and 32 two way worker trips during the weekday PM peak (16:00 to 17:00).

15A.5.54 The additional number of HGVs during the peak hours is 14 two-way movements in each hour, which is not considered to represent a severe impact upon the local highway network.

Construction Compound Hourly Profiles

15A.5.55 Based upon the total daily Connection Corridors construction trip generation from Table 15A-25 and Table 15A-26, the generation to each of the individual compounds over the working day during the construction phase can be set out as follows in Table 15A-37. Please note any minor variations in totals are due to rounding errors and do not materially affect any of the assessments.

Table 15A-37: Daily Construction Compound Connection Corridor Worker Traffic Flows – South of the River Tees

HOUR BEGINING	% OF DAILY INBOUND	% OF DAILY OUTBOUND	RBT COMPOUND		MAIN SITE COMPOUND		WILTON COMPOUND	
			ARRIVALS	DEPARTURES	ARRIVALS	DEPARTURES	ARRIVALS	DEPARTURES
06:00	0%	0%	0	0	0	0	26	2
07:00	9%	8%	0	0	0	0	19	2
08:00	9%	8%	0	0	0	0	4	2
09:00	9%	8%	0	0	0	0	3	2
10:00	9%	8%	0	0	0	0	3	2
11:00	9%	8%	0	0	0	0	3	2
12:00	9%	8%	0	0	0	0	4	3
13:00	9%	8%	0	0	0	0	3	3
14:00	9%	8%	0	0	0	0	2	2
15:00	9%	8%	0	0	0	0	2	2
16:00	9%	8%	0	0	0	0	2	4
17:00	9%	8%	0	0	0	0	2	11
18:00	0%	8%	0	0	0	0	2	26
19:00	0%	0%	0	0	0	0	2	12
20:00	0%	0%	0	0	0	0	0	1
21:00	0%	0%	0	0	0	0	0	0
Totals	100%	100%	0	0	0	0	75	75

Table 15A-38: Daily Construction Compound Connection Corridor Worker Traffic Flows – North of the River Tees

HOUR BEGINING	% OF DAILY INBOUND	% OF DAILY OUTBOUND	SEAL SANDS COMPOUND		GREATHAM COMPOUND		COWPEN COMPOUND		CF COMPOUND	
			ARRIVALS	DEPARTURES	ARRIVALS	DEPARTURES	ARRIVALS	DEPARTURES	ARRIVALS	DEPARTURES
06:00	0%	0%	10	1	11	1	10	1	8	0
07:00	9%	8%	7	1	8	1	7	1	6	0
08:00	9%	8%	1	1	2	1	1	1	1	0
09:00	9%	8%	1	1	1	1	1	1	1	0
10:00	9%	8%	1	1	1	1	1	1	1	1
11:00	9%	8%	1	1	1	1	1	1	1	1
12:00	9%	8%	1	1	2	1	1	1	1	1
13:00	9%	8%	1	1	1	1	1	1	1	1
14:00	9%	8%	1	1	1	1	1	1	1	1
15:00	9%	8%	1	1	1	1	1	1	0	1
16:00	9%	8%	1	1	1	2	1	1	0	1
17:00	9%	8%	1	4	1	5	1	4	1	4
18:00	0%	8%	1	10	1	11	1	10	1	8
19:00	0%	0%	1	5	1	5	1	5	0	4
20:00	0%	0%	0	0	0	0	0	0	0	0
21:00	0%	0%	0	0	0	0	0	0	0	0
Totals	100%	100%	28	28	32	32	26	29	24	24

15A.5.56 Therefore, taking the construction worker trip generation for the compounds to the south of the River Tees Table 15A-37 and the north of the River Tees from Table 15A-38, the total construction worker trips north and south of the river Tees can be given as follows in Table 15A-39.

Table 15A-39: Daily Construction Compound Connection Corridor Worker Traffic Flows – North and South of the River Tees

HOUR BEGINING	% OF DAILY INBOUND	% OF DAILY OUTBOUND	TOTAL CONSTRUCTION COMPOUNDS SOUTH OF THE RIVER TEES			TOTAL CONSTRUCTION COMPOUNDS NORTH OF THE RIVER TEES		
			ARRIVALS	DEPARTURES	TWO WAY	ARRIVALS	DEPARTURES	TWO WAY
06:00	0%	0%	26	2	27	39	2	41
07:00	9%	8%	19	2	20	28	2	31
08:00	9%	8%	4	2	5	6	2	8
09:00	9%	8%	3	2	5	5	2	7
10:00	9%	8%	3	2	5	5	3	8
11:00	9%	8%	3	2	5	5	3	8
12:00	9%	8%	4	3	7	6	5	10
13:00	9%	8%	3	3	6	5	5	9
14:00	9%	8%	2	2	5	3	3	7
15:00	9%	8%	2	2	4	2	3	6
16:00	9%	8%	2	4	5	2	6	8
17:00	9%	8%	2	11	14	3	17	20
18:00	0%	8%	2	26	29	3	40	43
19:00	0%	0%	2	12	14	2	18	20
20:00	0%	0%	0	1	1	0	1	1
21:00	0%	0%	0	0	0	0	0	0

HOUR BEGINING	% OF DAILY INBOUND	% OF DAILY OUTBOUND	TOTAL CONSTRUCTION COMPOUNDS SOUTH OF THE RIVER TEES			TOTAL CONSTRUCTION COMPOUNDS NORTH OF THE RIVER TEES		
			ARRIVALS	DEPARTURES	TWO WAY	ARRIVALS	DEPARTURES	TWO WAY
Totals	100%	100%	75	75	150	113	113	227

Peak Hour Impact at Key Junctions

15A.5.57 The additional levels of construction traffic at the key junctions on the local road network during the weekday AM and PM periods can then be given as follows in Table 15A-40 and Table 15A-41.

Table 15A-40: Weekday AM Period – Junction Impact (two way)

LINK		DAILY CONSTRUCTION TRAFFIC		06:00 TO 07:00		07:00 TO 08:00		08:00 TO 09:00	
		TOTAL WORKER TRIPS	TOTAL HGVS	TOTAL VEHICLES	TOTAL HGVS	TOTAL VEHICLES	TOTAL HGVS	TOTAL VEHICLES	TOTAL HGVS
1	A1085 Trunk Road, 100m east of Ennis Road	289	0	52	0	39	0	10	0
2	A1085 Trunk Road, 1345m south of West Coatham Lane	885	185	159	0	119	16	31	16
3	A1042 Kirkleatham Lane, 85m south of Staintondale Avenue	145	0	26	0	20	0	5	0
4	A1085 Trunk Road, 500m north of A1053 Tees Dock Road	885	185	159	0	119	16	31	16
5	A1085 Broadway, 235m east of Birchington Avenue	238	0	43	0	32	0	8	0
6	A1380 High Street, 50m east of Lackenby Lane	56	0	10	0	8	0	2	0
7	A66, 140m east of Whitworth Road	626	92	113	0	85	8	22	8

LINK		DAILY CONSTRUCTION TRAFFIC		06:00 TO 07:00		07:00 TO 08:00		08:00 TO 09:00	
		TOTAL WORKER TRIPS	TOTAL HGVS	TOTAL VEHICLES	TOTAL HGVS	TOTAL VEHICLES	TOTAL HGVS	TOTAL VEHICLES	TOTAL HGVS
8	A1046 Port Clarence Road, 20m north of Beech Terrace	189	36	34	0	26	3	7	3
9	A178 Seaton Carew Road, 535m north of Huntsman Drive	189	36	34	0	26	3	7	3
10	Unnamed Road, 725m east of A178 Seaton Carew Road	227	36	41	0	31	3	8	3
11	A1053 Greystone Road (MAY 2023 data)	105	92	19	0	14	8	4	8
12	A174 (West of Greystone Roundabout) (May 2022 data)	48	92	9	0	7	8	2	8
13	A1046 Haverton Hill Road (MAY 2022 data)	95	18	34	0	26	3	7	3
14	A1185 (west of A178 Seaton Carew Road) (May 2022 data)	37	36	7	0	5	3	1	3
15	Belasis Avenue	95	18	17	0	13	2	3	2

15A.5.58 The PM peak can then be given as follows.

Table 15A-41: Weekday PM Period – Junction Impact (two way)

LINK		DAILY CONSTRUCTION TRAFFIC		16:00 TO 17:00		17:00 TO 18:00		18:00 TO 19:00	
		TOTAL WORKER TRIPS	TOTAL HGVS	TOTAL VEHICLES	TOTAL HGVS	TOTAL VEHICLES	TOTAL HGVS	TOTAL VEHICLES	TOTAL HGVS
1	A1085 Trunk Road, 100m east of Ennis Road	289	0	10	0	26	0	55	0
2	A1085 Trunk Road, 1345m south of West Coatham Lane	885	185	31	16	80	16	168	8
3	A1042 Kirkleatham Lane, 85m south of Staintondale Avenue	145	0	5	0	13	0	27	0
4	A1085 Trunk Road, 500m north of A1053 Tees Dock Road	885	185	31	16	80	16	168	8
5	A1085 Broadway, 235m east of Birchington Avenue	238	0	8	0	21	0	45	0
6	A1380 High Street, 50m east of Lackenby Lane	56	0	2	0	5	0	11	0
7	A66, 140m east of Whitworth Road	626	92	22	8	56	8	119	4
8	A1046 Port Clarence Road, 20m north of Beech Terrace	189	36	7	3	17	3	36	2
9	A178 Seaton Carew Road, 535m north of Huntsman Drive	189	36	7	3	17	3	36	2
10	Unnamed Road, 725m east of A178 Seaton Carew Road	227	36	8	3	20	3	43	2
11	A1053 Greystone Road (MAY 2023 data)	105	92	4	8	9	8	20	4
12	A174 (West of Greystone Roundabout) (May 2022 data)	48	92	2	8	4	8	9	4
13	A1046 Haverton Hill Road (MAY 2022 data)	95	36	7	3	17	3	36	2
14	A1185 (west of A178 Seaton Carew Road) (May 2022 data)	37	36	1	3	3	3	7	2
15	Belasis Avenue	95	18	3	2	9	2	18	1

15A.5.59 Based upon the above tables only the A1085 / West Coatham Lane /Main Site Access roundabout will be assessed during the weekday AM and PM peak periods during the construction phase.

15A.5.60 The impact at both the A1085 / A1053 and A1053 / A174 / B1380 roundabouts is not considered to be severe with any impact during the construction phase being managed through the Framework CWTP (EN070009/APP/5.15) and Framework Construction Traffic Management plan (CTMP) (EN070009/APP/5.16).

15A.5.61 The capacity assessment is then set out in Section 15A.6 of this TA.

15A.6 Cumulative Developments

15A.6.1 The full short list of other developments has been reviewed and is set out in the following tables, with a comment against each regarding if it is considered to have an impact during the peak month of traffic generation in June 2026.

Table 15A-42: Short List of Other Development Sites

ID	APPLICATION REFERENCE	APPLICANT	OTHER DEVELOPMENT DETAILS	LOCATION	INCLUDE IN ASSESSMENT
2	EN010082	Sembcorp Utilities (UK) Limited	The Tees Combined Cycle Power Plant. A gas fired CCGT power station with a maximum generating capacity of up to 1,700 MWe (Tbc).	Land at the Wilton International Site, Teesside	Yes
3	EN010103	BP	NZT.	Land within the vicinity of the Former Redcar Steel Works Site (STDC), Redcar and Stockton-on-Tees, TS10 5QW	Yes
5	D/4271/2021	BP	The Northern Endurance Partnership (NEP) Development: The essential nature of the NEP Development is the drilling of the NEP wells, the installation and commissioning of the required subsea infrastructure and the operation and maintenance of the wells and infrastructure for the injection and storage of carbon dioxide (CO ₂) at the Endurance Store (Carbon Dioxide Appraisal and Storage Licence CS001), a geological storage site under the Southern North Sea.	Southern North Sea with CO ₂ export pipeline and power / communications cable making landfall at Teesside.	No - data not available

ID	APPLICATION REFERENCE	APPLICANT	OTHER DEVELOPMENT DETAILS	LOCATION	INCLUDE IN ASSESSMENT
6	EN010051	Forewind Ltd.	Forewind Ltd. (formerly Dogger Bank Teesside B) - Project previously known as Dogger Bank Teesside A and B.	Dogger Bank Zone (North Sea), with cabling coming ashore between Redcar and Marske-by-the-Sea (Wilton complex, Redcar and Cleveland).	Yes
8	EN010150	Lighthouse Green Fuels Ltd	'Waste-to-sustainable aviation fuel' facility with on-site generating station capacity of up to 150 MW	Land at Port Clarence, near Stockton-on-Tees, Teesside	No - scoping stage data not available
19	R/2017/0876/FFM	Peak Resources Ltd	Construction and operation of a mineral processing and refining facility.	Wilton International, Redcar	No - operational traffic included within background traffic growth factors
20	R/2016/0484/FFM	CBRE	Proposed anaerobic biogas production facility	Former Croda Site, Wilton International, Redcar	Yes
22	R/2019/0767/OOM	Director of Regeneration and Neighbourhoods Hartlepool	Outline application for the construction of an energy recovery facility (ERF) and associated development	Grangetown Prairie, Land east of John Boyle Road and west of Tees Dock Road, Grangetown	Yes
30	R/2019/0031/FFM	Tourian Renewables Ltd	Tourian Renewables Ltd, construction and operation of a plastic conversion facility	Former Croda Site, Wilton International, Redcar	Yes

ID	APPLICATION REFERENCE	APPLICANT	OTHER DEVELOPMENT DETAILS	LOCATION	INCLUDE IN ASSESSMENT
33	R/2017/0906/OOM	Sirius Minerals plc	Sirius Minerals Plc, outline planning application for an overhead conveyor and associated storage facilities in connection with the York potash project.	Land between Wilton International and Bran Sands, Redcar	Yes
35	R/2014/0627/FFM	York Potash Ltd		Doves Nest Farm and Haxby Plantation, Sneatonthorpe; underneath 252 sq km of the North York Moors National Park; a corridor extending underground from the edge of the National Park boundary to Wilton International Complex; at Ladycross Plantation near Egton, at Lockwood Beck Farm near Moorsholm and at Tocketts Lythe, near Guisborough.	Yes
41	R/2014/0372/OOM	The Lady Hewley Charity Trust Company Ltd	The Lady Hewley Charity Trust Company Ltd and Taylor - Outline application for residential development (up to 1250 dwellings)	Land at Low Grange Farm, Southbank	Yes
42	R/2020/0357/OOM	STDC	South Tees Development Corporation (STDC): Outline planning application for demolition of existing structures on site and the development of up to	Land at South Tees Development Corporation east of Smiths Dock Road and west of Tees Dock Road, South Bank	Yes

ID	APPLICATION REFERENCE	APPLICANT	OTHER DEVELOPMENT DETAILS	LOCATION	INCLUDE IN ASSESSMENT
			418,000 m ² (gross) of general industry (use class B2) and storage or distribution facilities (use class B8) with office accommodation (use class B1)		
48	R/2006/0433/OO	PD Teesport	P D Teesport: Outline application for development of a container terminal	Land at Teesport, Grangetown	No - assessment from 2006, with a 2014 assessment year, assumed to be included within background baseline traffic
51	R/2020/0819/ESM	STDC	South Tees Development Corporation (STDC): Outline planning application for development of up to 139,353 m ² (gross) of general industry (Use Class B2) and storage or distribution facilities (Use Class B8) with office accommodation (Use Class E.	Land bounded by Tees Dock Road to E, Bolckow Road Industrial Estate to SE, Eston Road and vacant land to W, Darlington and Saltburn railway line to NW	Yes - part development based upon a 2033 opening year
52	R/2020/0820/ESM	STDC	South Tees Development Corporation (STDC): Outline planning application for development of up to 92,903 m ² (gross) of general industry (Use Class B2) and storage or distribution	Land bounded by STDC Road Infrastructure to NW, E and S and Tees Dock Road to W Lackenby	No - from the supporting information the development will commence in 2028

ID	APPLICATION REFERENCE	APPLICANT	OTHER DEVELOPMENT DETAILS	LOCATION	INCLUDE IN ASSESSMENT
			facilities (Use Class B8) with office accommodation (Use Class E.		and be complete by 2031
53	R/2020/0821/ESM	STDC	South Tees Development Corporation (STDC): Outline planning application for development of up to 464,515qm (gross) of general industry (Use Class B2) and storage or distribution facilities (Use Class B8) with office accommodation (Use Class E.	Land bounded by edge of NWL Bran Sands Treatment Plant and former ICI landfull to SW; Redcar bulk terminal to NW line of vegetation tod point road to NE and existing internal roads to SE	Yes - part development based upon a 2033 opening year
54	R/2020/0822/ESM	STDC	South Tees Development Corporation (STDC): Outline planning application for the development of up to 185,806 m ² (gross) of general industry (Use Class B2) and storage or distribution facilities (Use Class B8) with office accommodation (Use Class E.	Land bounded by Darlington to Saltburn railway line to SE; private internal road and open industrial land to NW; section of hot metal transfer railway line open land and south gare road to N; boundary wall of marsh farmhouse and adjacent industrial unit and open land to NE	Yes - part development based upon a 2033 opening year
55	R/2020/0823/ESM	STDC	South Tees Development Corporation (STDC): Outline planning application for the development of up to 15,794 m ² (gross) of office accommodation (Use Class E).	Land bounded by A1085 trunk road to SE and roundabout providing access to local road network; private access track to E; internal roads to west and Darlington to Saltburn railway to NW, Redcar	No - from the data supplied construction will commence in 2026 and be complete by 2031, with no construction

ID	APPLICATION REFERENCE	APPLICANT	OTHER DEVELOPMENT DETAILS	LOCATION	INCLUDE IN ASSESSMENT
					traffic data being available
65	MWP8 South Tees Eco-Park	NA	Tees Valley Joint Minerals and Waste Development Plan Documents, A site of approximately 27 ha is allocated for the development of the South Tees Eco-Park.	South Tees Eco-Park	No - assumed to be included within any background traffic growth
76	H/2022/0181	Wynyard Park LTD	Outline planning application for the erection of up to 1400no. dwellings and up to 750 m ² of non-residential floorspace (comprising Use Class E and Sui Generis).	Land north of A689, Wynyard Park Estate, Wynyard Woods, Wynyard, Hartlepool	No - negligible impact, covered by background traffic growth
80	H/2020/0276	Miller Homes and Bellway Homes	Erection of 570 dwellings and provision of a new roundabout and associated infrastructure	Land to the south of A179 and west of Middle Warren known as Upper Warren, Hartlepool	No - negligible impact, covered by background traffic growth
91	H/2014/0428	Tunstall Homes Ltd	Outline application with all matters reserved for residential development comprising up to 1,200 dwellings	Land south of Elwick Road, High Tunstall, Hartlepool, TS26 0LQ	No - negligible impact, covered by background traffic growth
121a	21/0594/EIASCP	The Mary Street Estate Limited a	Redevelopment of land to provide urban logistics and industrial	Teesside Park Phase 3, Aintree Oval	No - data not available at scoping stage

ID	APPLICATION REFERENCE	APPLICANT	OTHER DEVELOPMENT DETAILS	LOCATION	INCLUDE IN ASSESSMENT
		British Land Company	development - Link to 21-2124-SOR (ID: 231)		
121b	21/2124/SOR	The Mary Street Estate Limited a British Land Company	Scoping request for outline planning permission with all matters reserved except for access comprising the demolition of existing buildings and the construction of employment floorspace (Use Classes E(g)(iii) (Light Industrial Processes), B2 (General Industrial) and B8 (Storage and Distribution) and ancillary office floorspace (E(g)(iii)	Teesside Park Phase 3 Newmarket Avenue Thornaby	No - data not available at scoping stage
131	22/2386/SOR	Tees Valley Net Zero (Protium Green Solutions Limited)	Scoping opinion for Green Hydrogen Production Facility and Wind Turbine	Land off Haverton Hill Road, Billingham, TS23 1PZ	No - data not available at scoping stage
135	23/0090/EIS	Suez Recycling and Recovery UK Ltd	Carbon capture facility for existing Energy from Waste site	Suez Tees Valley Site, Haverton Hill Road, Billingham, TS23 1PY	No - data not available
150	13/0342/EIS	Cameron Hall Developments Ltd	Outline application for the construction of up to 500 houses, Primary School (inc Sport Facilities) and nursery, Retail Units (up to 500 m ²), Doctors Surgery, Community Facilities	Land at Wynyard Village	No - negligible impact, covered by background traffic growth

ID	APPLICATION REFERENCE	APPLICANT	OTHER DEVELOPMENT DETAILS	LOCATION	INCLUDE IN ASSESSMENT
157	08/3644/EIS	Northshore Development Partnership Ltd	Outline planning application for residential (Class C3), employment (Class B1), health care facility (Class D1), leisure (Class A3, A4, A5, C1 and D2), ancillary retail and services (Class A1 and A2) and car dealership (sui generis)	Land to the north of the River Tees to the south of A1046 and Church Road and east of the Square	No - data not available
166	13/2892/EIS	O2N Energy (Billingham) LLP	Development of materials recycling facility and production of energy from waste,	GrowHow Stores New Road, Billingham	No - negligible impact, covered by background traffic growth
167	22/1145/SCO	Not provided	Screening opinion for proposed hydrogen production plant, battery storage and hydrogen re-fuelling point.	Energy from Waste Plant, New Road, Billingham, TS23 1LE	No - data not available
168	Stockton-on-Tees Local Plan, Policy SD4 Economic Growth Strategy	NA	Stockton-on-Tees Local Plan, Main growth location for hazardous installations including liquid and gas processing, bio-fuels and bio-refineries, chemical processing, resource recovery, and waste treatment, energy generation, carbon capture and storage and other activities, Seal Sands.	Seal Sands	No - assumed to be included within any background traffic growth

ID	APPLICATION REFERENCE	APPLICANT	OTHER DEVELOPMENT DETAILS	LOCATION	INCLUDE IN ASSESSMENT
172	R/2020/0685/ESM	STDC	South Tees Development Corporation (STDC): Outline planning application for demolition of existing redundant quay structures, capital dredging and development of new quay and associated works (PHASE 2)	Land at South Bank Wharf, Grangetown, Lackenby	Yes
173	R/2022/0773/ESM	Tees Valley Lithium Limited	Construction of a Lithium Hydroxide Monohydrate manufacturing plant and ancillary development	Plots 1A and 1B, Wilton International Site, near Redcar, Middlesbrough, Teesside, TS90 8WS	Yes - operational phase
174	R/2014/0626/FFM	York Potash Ltd	Mineral (Polyhalite) granulation and storage facility	Wilton International Complex, Redcar	Yes
178	R/2023/0291/ESM	Green Lithium Refining Limited	Outline application (all matters reserved) for the development of a 3 line low-carbon lithium refinery and associated dock-side reception, handling, storage, and manufacturing facilities for the production of high-quality, battery-grade lithium hydroxide monohydrate	Land off Kinkerdale Road, Teesport, Grangetown, TS6 6UE	No - negligible impact, covered by background traffic growth
205	H/2023/0128	Environment Agency	Scoping opinion in respect of Greatham North East Flood Alleviation Scheme	LAND AT GREATHAM FLOOD CELL, GREATHAM, HARTLEPOOL	No - data not available

ID	APPLICATION REFERENCE	APPLICANT	OTHER DEVELOPMENT DETAILS	LOCATION	INCLUDE IN ASSESSMENT
206	22/1525/EIS	Teesside Green Energy Park Limited	Erection of an energy recovery facility and associated infrastructure for fuel receipt and storage, power generation, power export, process emissions control, maintenance, offices.	Land At Seal Sands Billingham	No - negligible impact, covered by background traffic growth
219	23/1019/EIS	Greenery International Ltd	Development of Greenery Renewable Fuels and Circular Products Facility	Land West Of Epax Pharma U K Limited North South Access Road Seal Sands TS2 1UB	No - negligible impact, covered by background traffic growth
222	R/2023/0179/SCP	BP	HyGreen Hydrogen Project	Land at the Foundry Site, STDC and in the vicinity of Wilton International, Lackenby and Grangetown near Redcar	Yes

15A.6.2 Having reviewed the supporting information in regard to the Other Developments that are being included, the daily traffic flows to be used within the assessment at the peak year of construction can be given as follows.

Table 15A-43: Other Development Sites – Daily Traffic Generation – Site ID 2 to 22 (1 of 3)

LINK		2		2		3		6		20		22	
		CARS	HGVS	CARS	HGVS	CARS	HGVS	CARS	HGVS	CARS	HGVS	CARS	HGVS
1	A1085 Trunk Road, 100 m east of Ennis Road	0	0	0	0	381	0	0	0	0	0	0	0
2	A1085 Trunk Road, 1.34 km south of West Coatham Lane	86	11	63	5	1,199	80	0	0	8	6	0	8
3	A1042 Kirkleatham Lane, 85 m south of Staintondale Avenue	0	0	0	0	0	0	81	0	10	8	0	10
4	A1085 Trunk Road, 500 m north of A1053 Tees Dock Road	86	11	63	5	1,199	80	0	0	8	6	0	8
5	A1085 Broadway, 235 m east of Birchington Avenue	108	6	83	3	300	0	0	0	8	6	0	8
6	A1380 High Street, 50 m east of Lackenby Lane	38	3	29	2	42	0	129	37	0	0	0	0
7	A66, 140 m east of Whitworth Road	341	70	247	36	781	40	415	291	8	6	189	8
8	A1046 Port Clarence Road, 20 m north of Beech Terrace	0	0	0	0	0	0	0	0	0	0	0	0
9	A178 Seaton Carew Road, 535 m north of Huntsman Drive	0	0	0	0	0	0	0	0	0	0	0	0
10	Unnamed Road, 725 m east of A178 Seaton Carew Road	0	0	0	0	0	0	0	0	0	0	0	0
11	A1053 Greystone Road (May 2023 data)	408	68	261	34	118	40	415	291	8	6	0	8
12	A174 (West of Greystone Roundabout) (May 2022 data)	83	32	49	9	76	40	372	229	0	0	0	0
13	A1046 Haverton Hill Road (May 2022 data)	0	0	0	0	0	0	0	0	0	0	0	0
14	A1185 (west of A178 Seaton Carew Road) (May 2022 data)	0	0	0	0	0	0	0	0	0	0	0	0
15	Belasis Avenue	0	0	0	0	0	0	0	0	0	0	0	0

Table 15A-44: Other Development Sites – Daily Traffic Generation – Site ID 30 to 51 (2 of 3)

LINK		30		33		35		41		42		51	
		CARS	HGVS	CARS	HGVS	CARS	HGVS	CARS	HGVS	CARS	HGVS	CARS	HGVS
1	A1085 Trunk Road, 100 m east of Ennis Road	21	8	640	183	0	0	0	0	0	0	0	0
2	A1085 Trunk Road, 1.34 km south of West Coatham Lane	21	8	640	183	0	0	1,026	0	1,775	206	654	0
3	A1042 Kirkleatham Lane, 85 m south of Staintondale Avenue	10	4	0	0	0	0	0	0	0	0	0	0
4	A1085 Trunk Road, 500 m north of A1053 Tees Dock Road	21	8	640	183	334	40	1,026	0	1,775	206	654	0
5	A1085 Broadway, 235 m east of Birchington Avenue	10	4	0	0	0	0	2,822	0	142	16	0	0
6	A1380 High Street, 50 m east of Lackenby Lane	0	0	0	0	0	0	0	0	142	16	0	0
7	A66, 140 m east of Whitworth Road	10	4	728	383	299	31	0	0	3,515	408	1,478	0
8	A1046 Port Clarence Road, 20 m north of Beech Terrace	0	0	0	0	0	0	0	0	0	0	0	0
9	A178 Seaton Carew Road, 535 m north of Huntsman Drive	0	0	0	0	0	0	0	0	0	0	0	0
10	Unnamed Road, 725 m east of A178 Seaton Carew Road	0	0	0	0	0	0	0	0	0	0	0	0
11	A1053 Greystone Road (May 2023 data)	0	0	615	306	205	26	898	0	2,095	243	638	0
12	A174 (West of Greystone Roundabout) (May 2022 data)	21	8	753	306	249	26	128	0	817	95	0	0
13	A1046 Haverton Hill Road (May 2022 data)	0	0	0	0	0	0	0	0	0	0	0	0
14	A1185 (west of A178 Seaton Carew Road) (May 2022 data)	0	0	0	0	0	0	0	0	0	0	0	0
15	Belasis Avenue	0	0	0	0	0	0	0	0	0	0	0	0

Table 15A-45: Other Development Sites – Daily Traffic Generation- Site ID 53 to 222 (3 of 3)

LINK		53		54		172		173		174		222	
		CARS	HGVS	CARS	HGVS	CARS	HGVS	CARS	HGVS	CARS	HGVS	CARS	HGVS
1	A1085 Trunk Road, 100 m east of Ennis Road	917	157	457	56	0	0	0	0	0	0	104	0
2	A1085 Trunk Road, 1.34 km south of West Coatham Lane	1,037	176	516	63	0	0	0	0	640	183	473	110
3	A1042 Kirkleatham Lane, 85 m south of Staintondale Avenue	117	17	59	7	0	0	0	0	0	0	52	0
4	A1085 Trunk Road, 500 m north of A1053 Tees Dock Road	1,037	176	516	63	0	0	0	0	640	183	473	110
5	A1085 Broadway, 235 m east of Birchington Avenue	0	0	0	0	0	0	0	0	0	0	85	0
6	A1380 High Street, 50 m east of Lackenby Lane	0	0	0	0	0	0	0	0	0	0	25	0
7	A66, 140 m east of Whitworth Road	384	66	191	24	177	42	48	0	0	0	287	55
8	A1046 Port Clarence Road, 20 m north of Beech Terrace	0	0	0	0	0	0	0	0	0	0	0	0
9	A178 Seaton Carew Road, 535 m north of Huntsman Drive	0	0	0	0	0	0	0	0	0	0	0	0
10	Unnamed Road, 725 m east of A178 Seaton Carew Road	0	0	0	0	0	0	0	0	0	0	0	0
11	A1053 Greystone Road (May 2023 data)	476	81	237	28	141	42	48	0	615	306	101	55
12	A174 (West of Greystone Roundabout) (May 2022 data)	183	34	91	11	0	0	102	0	743	306	76	55
13	A1046 Haverton Hill Road (May 2022 data)	0	0	0	0	0	0	0	0	0	0	0	0
14	A1185 (west of A178 Seaton Carew Road) (May 2022 data)	0	0	0	0	0	0	0	0	0	0	0	0
15	Belasis Avenue	0	0	0	0	0	0	0	0	0	0	0	0

15A.6.3 Taking the total committed development flows from Table 15A-43, Table 15A-44 and Table 15A-45 can then be combined to provide the total traffic flows on each link as follows in Table 15A-46.

Table 15A-46: Total Other Development Traffic Flows

LINK		DAILY OTHER DEVELOPMENT TRAFFIC	
		TOTAL VEHICLES	TOTAL HGVS
1	A1085 Trunk Road, 100 m east of Ennis Road	2,913	404
2	A1085 Trunk Road, 1.34 km south of West Coatham Lane	10,429	1,373
3	A1042 Kirkleatham Lane, 85 m south of Staintondale Avenue	564	36
4	A1085 Trunk Road, 500 m north of A1053 Tees Dock Road	10,763	1,413
5	A1085 Broadway, 235 m east of Birchington Avenue	3,881	35
6	A1380 High Street, 50 m east of Lackenby Lane	485	58
7	A66, 140 m east of Whitworth Road	10,382	1,793
8	A1046 Port Clarence Road, 20 m north of Beech Terrace	241	43
9	A178 Seaton Carew Road, 535 m north of Huntsman Drive	249	46
10	Unnamed Road, 725 m east of A178 Seaton Carew Road	409	94
11	A1053 Greystone Road (May 2023 data)	8,240	1,724
12	A174 (West of Greystone Roundabout) (May 2022 data)	4,220	1,321
13	A1046 Haverton Hill Road (May 2022 data)	136	28
14	A1185 (west of A178 Seaton Carew Road) (May 2022 data)	97	46
15	Belasis Avenue	136	28

15A.6.4 The above will then be used within Chapter 15: Traffic and Transport (ES Volume I, EN070009/APP/6.2) to determine the cumulative environmental effect.

15A.7 Junction Impact Assessment

Introduction

15A.7.1 This section will set out the impact of the development at the following 3 junctions, which are considered to form the main junctions on the local highway network, including the access into the Main Site:

- A1085 / West Coatham Lane / Main Site Access Roundabout;
- A1085 / A1053 Roundabout; and
- A1053 / A174 / B1380 Roundabout.

Traffic Data

15A.7.2 Table 15A-46 below summarises how the peak hour has been selected and identifies hour beginning 08:00 as the AM Peak hour for assessment and hour beginning 16:00 as the PM Peak hour for assessment (in bold text).

15A.7.3 These are unchanged from the network peak hours as previously identified.

Table 15A-47: Peak Hour Identification

PEAK HOUR	2026 BASELINE			PEAK 2026 CONSTRUCTION TRAFFIC (WORKERS AND HGVS)			TOTAL			TOTAL
	MCC1	MCC2	MCC3	MCC1	MCC2	MCC3	MCC1	MCC2	MCC3	
06:00 to 07:00	819	1,840	2,404	419	329	40	1,238	2,169	2,444	5,851
07:00 to 08:00	1,399	2,998	5,065	348	281	46	1,747	3,279	5,111	10,137
08:00 to 09:00	1,772	3,581	5,360	115	98	25	1,887	3,679	5,385	10,951
09:00 to 10:00	1,312	2,278	3,353	104	89	23	1,416	2,367	3,376	7,159
										0
16:00 to 17:00	1,941	3,418	5,502	115	98	25	2,056	3,516	5,527	11,099
17:00 to 18:00	1,888	3,340	5,146	243	198	37	2,131	3,538	5,183	10,852
18:00 to 19:00	959	1,926	3,182	459	363	50	1,418	2,289	3,232	6,939
19:00 to 20:00	600	1,092	1,831	210	165	20	810	1,257	1,851	3,918

Assessment Years

15A.7.4 The following assessment scenarios are considered within the Transport Assessment:

- 2026 Baseline;
- 2026 Baseline plus Peak of Construction; and
- 2026 Baseline plus Peak of Construction plus Other developments.

15A.7.5 With the other development only comprising the following adjacent proposals:

- HyGreen; and
- NZT.

15A.7.6 Any other development in the area is then considered to be included within the TEMPRO growth factors accounted for in the 2026 Baseline, which given the assessment year of 2026 is considered to be a reasonable approach.

Junction Impact Assessments

A1085 / West Coatham Lane / Main Site Access Roundabout

15A.7.7 The A1085 / West Coatham Lane / Main Site Access Roundabout has been modelled using ARCADY from the TRL Junctions 10 software package. Within the software, the time periods assessed are divided into a number of 15-minute time segments in order to simulate the likely arrival pattern of traffic more effectively. The results returned in the models are the Ratio of Flows to Capacity (RFC) and queue length based on Passenger Car Units (PCU).

15A.7.8 RFC values between 0.00 and 0.85 are generally accepted as representing stable operating conditions, values between 0.85 and 1.00 represent variable operation (i.e. possible queues building up at the junction during the period under consideration and increases in vehicle delay moving through the junction). RFC values in excess of 1.00 represent overloaded conditions (i.e. congested conditions).

15A.7.9 Level of Service (LOS) is an additional measure of junction performance, utilising letters A to F, with the definitions below being typical:

- A = Free flow;
- B = Reasonably free flow;
- C = Stable flow;
- D = Approaching unstable flow;
- E = Unstable flow; and
- F = Forced or breakdown flow

2026 Baseline

15A.7.10 The results of the assessment for the 2026 baseline scenario are outlined in Table 15A-48 below, with full ARCADY modelling output available at Annex B to this TA for reference.

Table 15A-48: A1085 / West Coatham Lane / Main Site Access Roundabout – 2026 Baseline

ARM	2026 BASELINE					
	AM			PM		
	QUEUE	RFC	LOS	QUEUE	RFC	LOS
A1085 N	0.8	0.42	A	0.4	0.28	A
W Coatham Ln	0.4	0.27	A	0.2	0.14	A
Wilton Site Access	0.0	0.01	A	0.0	0.02	A
A1085 S	1.0	0.47	A	2.6	0.72	A
Mini Chef	0.0	0.0	A	0.0	0.0	A
Main Site Access	0.0	0.02	A	0.0	0.03	A

15A.7.11 The table above highlights that the junction operates within its theoretical capacity when accounting for the 2026 baseline traffic across both the AM and PM peak periods.

Baseline Plus Proposed Development – Peak of Construction

15A.7.12 The results of the 2026 Baseline plus Proposed Development scenario are outlined in Table 15A-49 below.

Table 15A-49: A1085 / West Coatham Lane / Main Site Access Roundabout – 2026 Baseline plus Proposed Development – Peak of Construction

ARM	2026 BASELINE PLUS PROPOSED DEVELOPMENT PEAK OF CONSTRUCTION					
	AM			PM		
	QUEUE	RFC	LOS	QUEUE	RFC	LOS
A1085 N	0.8	0.44	A	0.5	0.30	A
W Coatham Ln	0.4	0.27	A	0.2	0.15	A
Wilton Site Access	0.0	0.01	A	0.0	0.02	A
A1085 S	1.1	0.49	A	3.3	0.76	A
Mini Chef	0.0	0.03	A	0.0	0.02	A

ARM	2026 BASELINE PLUS PROPOSED DEVELOPMENT PEAK OF CONSTRUCTION					
	AM			PM		
	QUEUE	RFC	LOS	QUEUE	RFC	LOS
Main Site Access	0.1	0.04	A	0.2	0.17	A

15A.7.13 Table 15A-49 shows that with the addition of construction traffic, the roundabout would operate within capacity with only slightly increased queues. The main impact would be seen along the A1085 Soth where the queue would increase from 1.0 PCUs to 1.1 PCUs in the AM and from 2.6 PCUs to 3.3 PCU's in the PM. This is an increase of approximately one car at the maximum in the PM period. All arms have an RFC below the recommended threshold of 0.85.

2026 Baseline Plus Other Development

15A.7.14 The results of the 2026 Baseline plus Other Development scenario are outlined in Table 15A-50 below.

Table 15A-50: A1085 / West Coatham Lane / Main Site Access Roundabout – 2026 Baseline plus Other Development

ARM	2026 BASELINE PLUS PROPOSED DEVELOPMENT PEAK OF CONSTRUCTION PLUS OTHER DEVELOPMENT					
	AM			PM		
	QUEUE	RFC	LOS	QUEUE	RFC	LOS
A1085 N	0.9	0.45	A	0.5	0.32	A
W Coatham Ln	0.4	0.28	A	0.2	0.15	A
Wilton Site Access	0.0	0.02	A	0.0	0.02	A
A1085 S	1.4	0.54	A	4.0	0.79	A
Mini Chef	0.0	0.03	A	0.0	0.02	A
Main Site Access	0.1	0.07	A	0.3	0.22	A

15A.7.15 Table 15A-50 above highlights that the junction operates within its theoretical capacity for the scenario 2026 Base plus the Proposed Development, HyGreen, and NZT. RFC values for all six arms is below the capacity exceeding threshold (maximum 0.49 during the AM peak, and 0.76 during the PM peak).

A1085 / A1053 Roundabout

- 15A.7.16 During the construction peak there will be an additional 25 worker car trips and 19 HGV trips through the junction in each of the weekday AM and PM peak hours, 08:00 to 09:00 and 16:00 to 17:00 hours respectively.
- 15A.7.17 The total traffic flow through the junction at the 2026 baseline is 2,008 and 2,223 in the AM and PM peaks respectively. Construction traffic for the Proposed Scheme therefore equates to an increase in traffic flows of 2% in the weekday AM peak and 2% in the weekday PM peak.
- 15A.7.18 This level of impact is not considered to constitute a severe impact, and therefore it is not proposed to model the junction, and it should also be stated that any impact is temporary during the construction phase only.
- 15A.7.19 The construction phase of the NZT and HyGreen developments are predicted to add a further 43 and 40 during each of the peak hours.
- 15A.7.20 It would be proposed to mitigate any impact through the Final CWTP(s) and the Final CTMP(s). A Framework CWTP (EN070009/APP/5.15) and Framework CTMP (EN070009/APP/5.16) have been prepared and submitted with the ES to inform these final plans. This approach was agreed with National Highways for the adjacent NZT development.

A1053 / A174 / B1380 Roundabout

- 15A.7.21 The development increases traffic flow by 13 in the peak hours with 10 HGVs and 3 worker car trips, and this level of impact is not considered to be severe.
- 15A.7.22 The NZT and HyGreen developments are predicted to add a further 7 and 10 during each of the peak hours.
- 15A.7.23 It is not therefore proposed to undertake any modelling of this junction, and instead mitigate any impact through the adoption of the Final CWTP(s) and Final CTMP(s). A Framework CWTP (EN070009/APP/5.15) and CTMP (EN070009/APP/5.16) have been prepared and submitted with the ES to inform these final plans. This approach is consistent with the adjacent NZT development.

15A.8 Summary and Conclusion

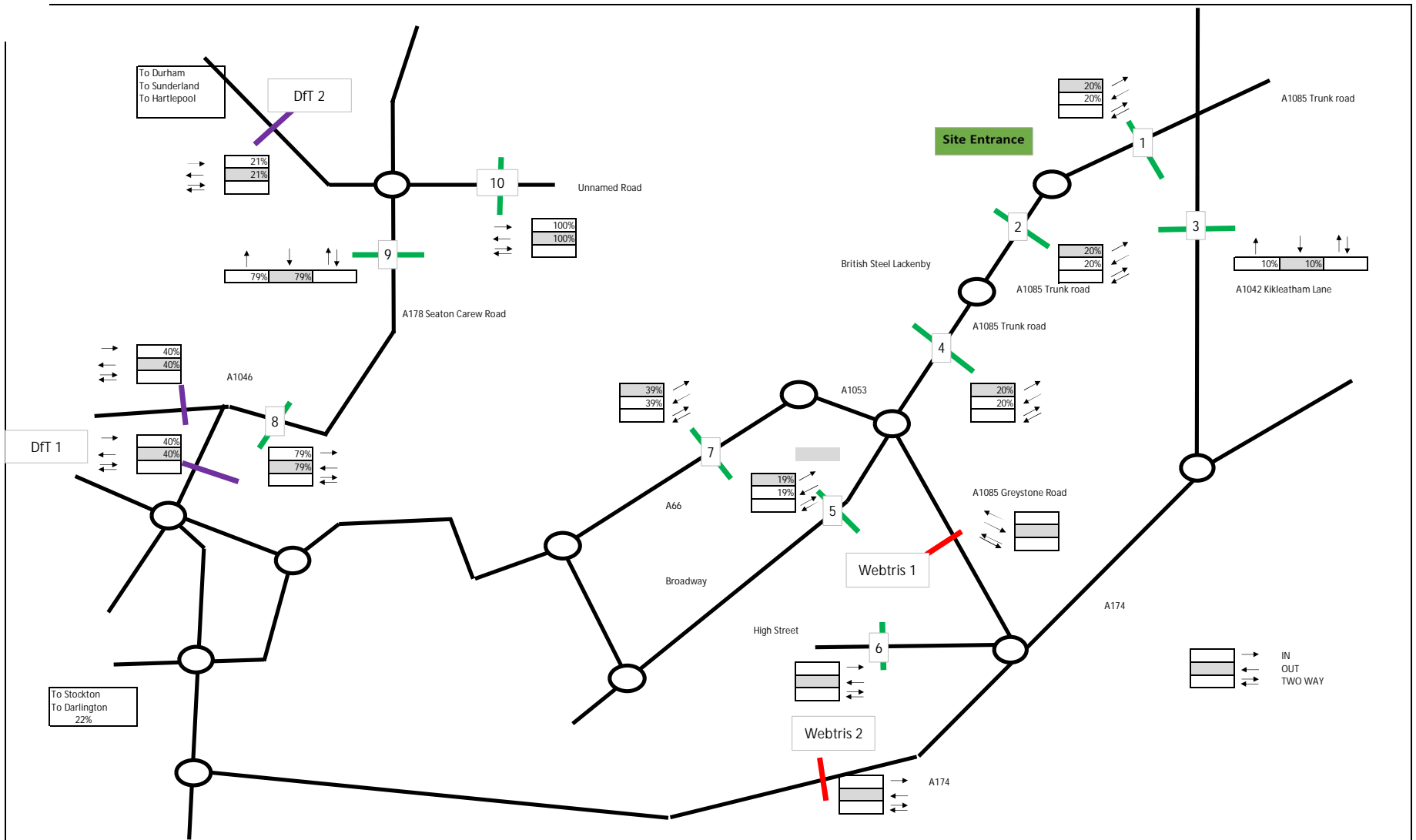
- 15A.8.1 The Proposed Development will take access from the A1085 Trunk Road / West Coatham Lane / Steel House Gate roundabout, with construction due to commence for Phase 1 in Q3 2025 and be complete in Q2 2028, with Phase 2 commencing in Q2 2028 and finishing in Q4 2030.
- 15A.8.2 At the peak of construction there is predicted to be a total of 1,300 workers split between the Main Site and the Connection Corridors on both sides of the River Tees. The peak month will also require a total of 2,210 HGVs, which assuming an average of 20 working days equates to a total of 111 per day across both the Main Site and the Connection Corridors.

-
- 15A.8.3 The construction workers are assumed to have an average car occupancy of 2 workers per car resulting in a total of 650 worker car trips arriving and 650 worker car trips departing per day.
- 15A.8.4 Once operational, Phase 1 will employ 100 workers, with a further 30 in phase 2, giving a total of 130 workers on site once fully open. During 28-day maintenance periods, which are likely to occur approximately every four years, there could be up to 400 people on-site, this will be managed through the adoption of a turnaround Travel Plan, produced by the Applicant.
- 15A.8.5 The assessments as set out in both this Transport Assessment and the ES Chapter have therefore concentrated upon the construction phase, as once operational, it is considered that the Proposed Development would not result in a severe impact upon the local road network.
- 15A.8.6 Whilst the Proposed Development is considered to be reasonably well connected for alternative modes of travel, given the nature of the construction work this is not likely to form a key mode of travel for workers.
- 15A.8.7 The construction worker trips have been distributed onto the local network based upon a split of both transitory workers, who will live elsewhere but reside in the local area for the duration of the works and permanent workers, who will live with in the local area, with transitory workers assumed to live largely within the local area and permanent workers being distributed based upon census data.
- 15A.8.8 All HGV traffic has been assigned to the A19 north and south via either the A66 or the A174.
- 15A.8.9 Based upon the distribution of both construction workers and HGVs only the A1085 Trunk Road / West Coatham lane / Steel House Gate roundabout has been assessed at the peak year of 2026. With the other two junctions under consideration, A1085 / A1053 / A66 and A1053 / A167 not considered to be materially affected, with any impact being managed through the Final CTMP(s) and Final CWTP(s).
- 15A.8.10 The A1085 Trunk Road / West Coatham Lane / Steel House Gate roundabout is considered to still operate within capacity with the addition of the H2Teesside construction traffic flows, as well as in a cumulative scenario with both the NZT and HyGreen construction traffic being included.
- 15A.8.11 There are therefore not considered to be any traffic and transportation reasons why the Proposed Development cannot be approved.

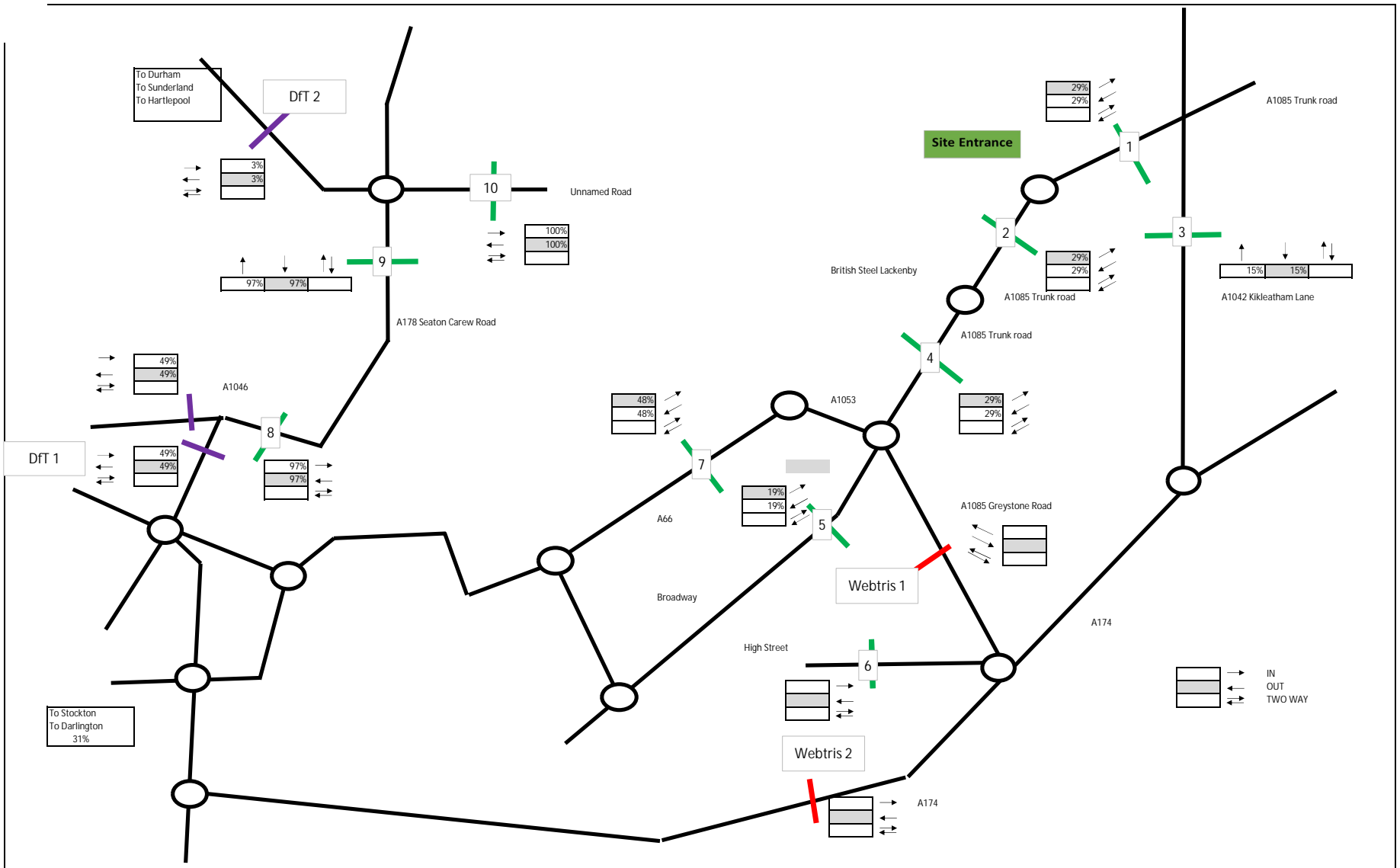
15A.9 References

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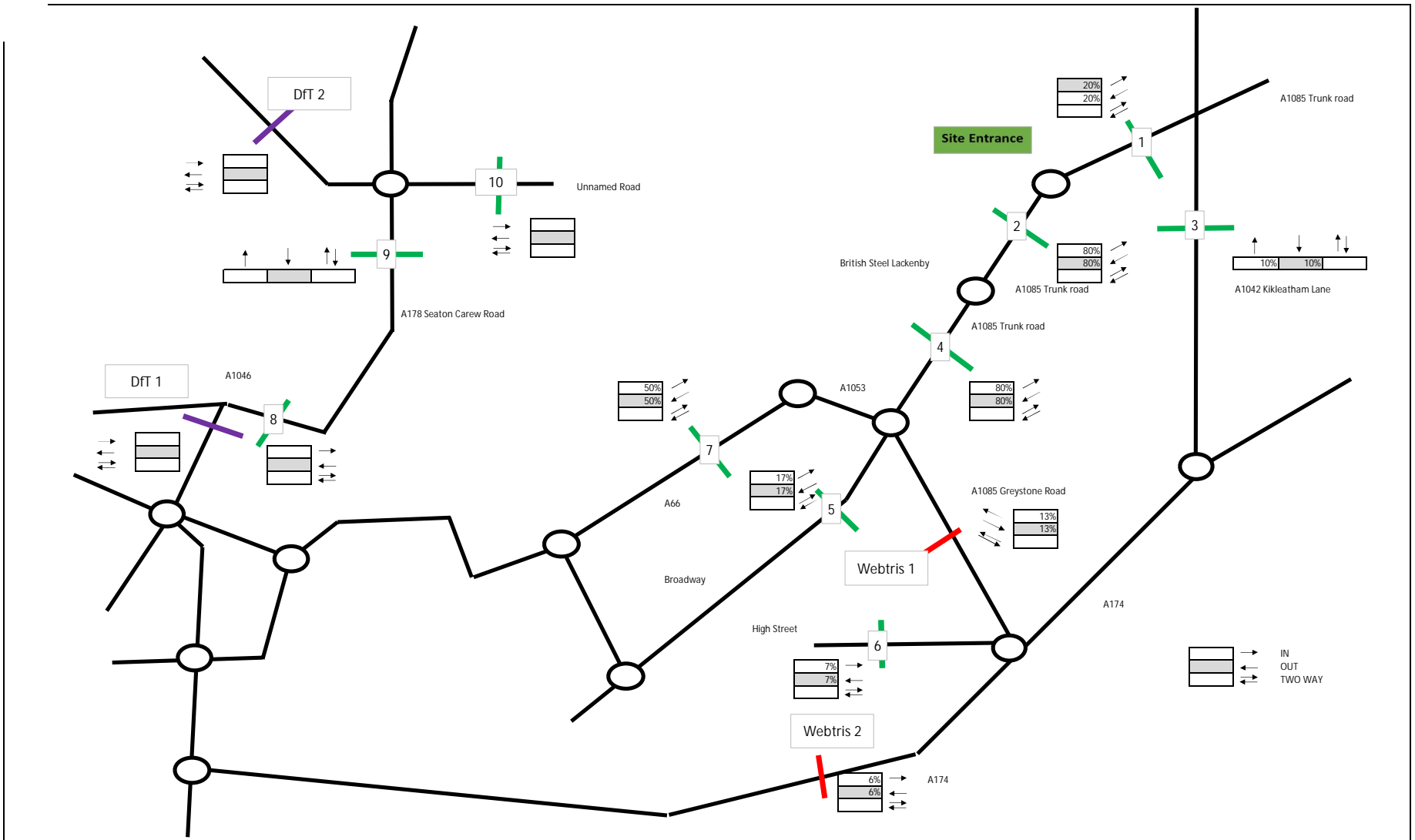
ANNEX A TRAFFIC FLOW DIAGRAMS



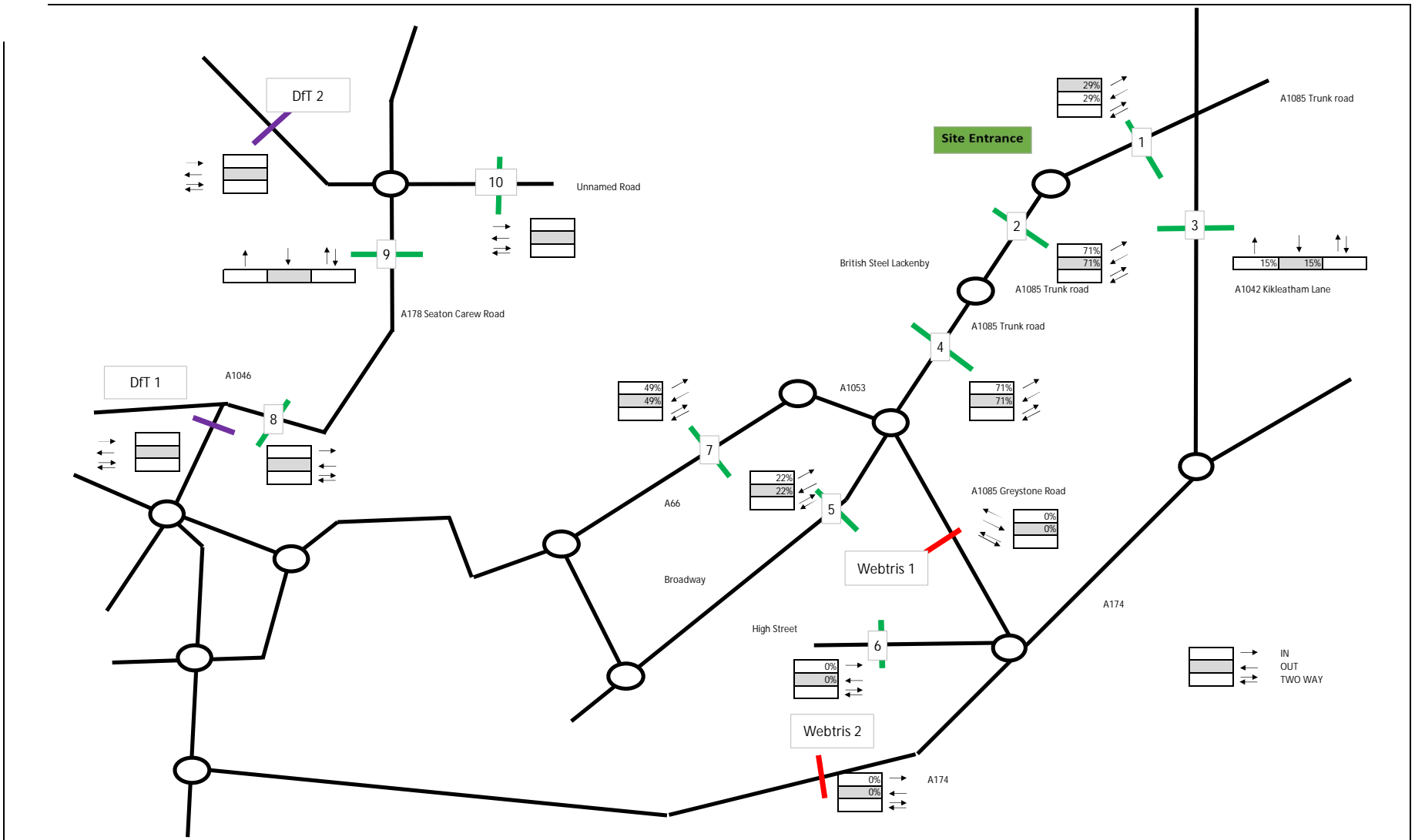
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					Approved	SM	
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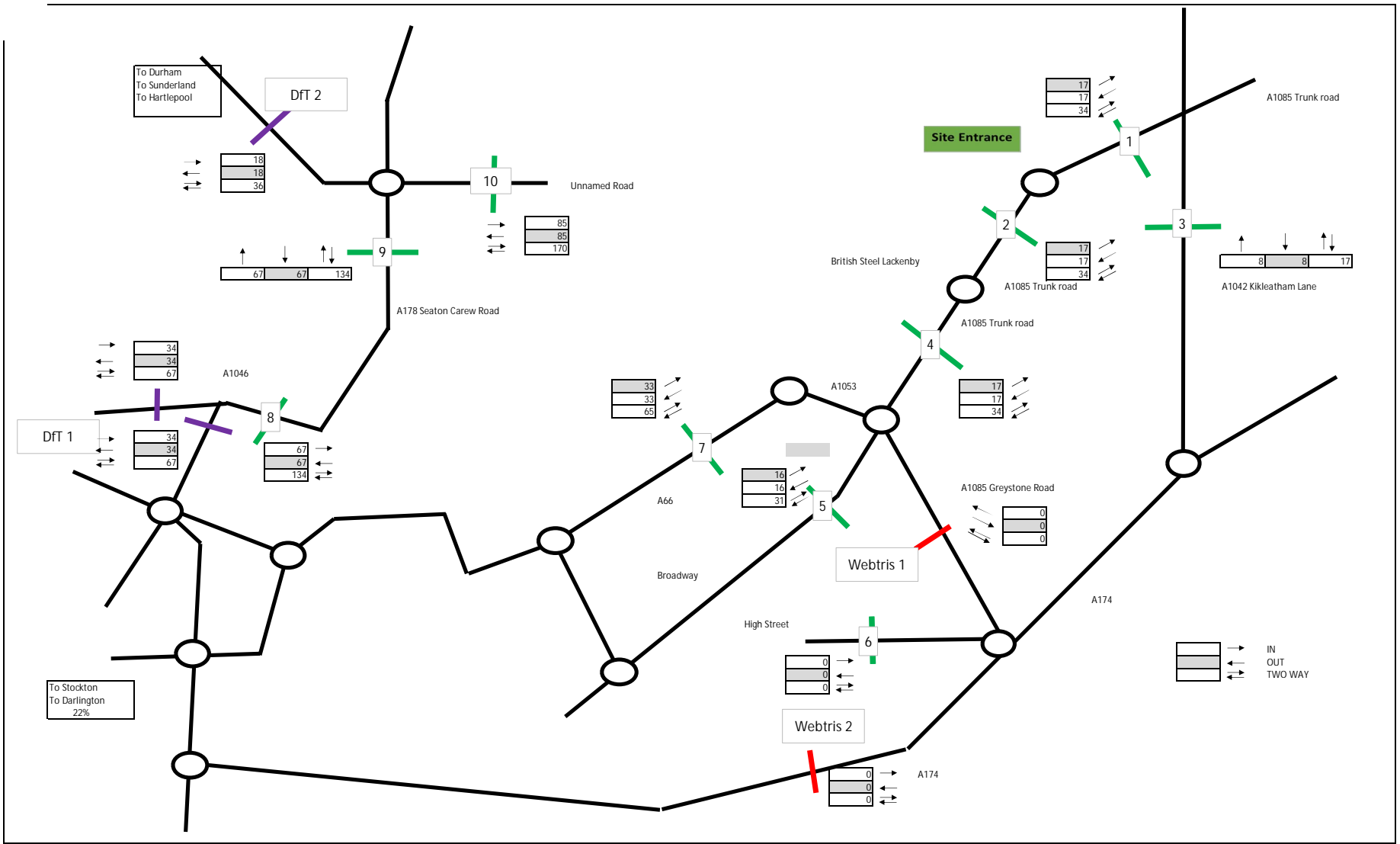
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Traffic Flow Diagrams_A1_A3_A4.xlsx							



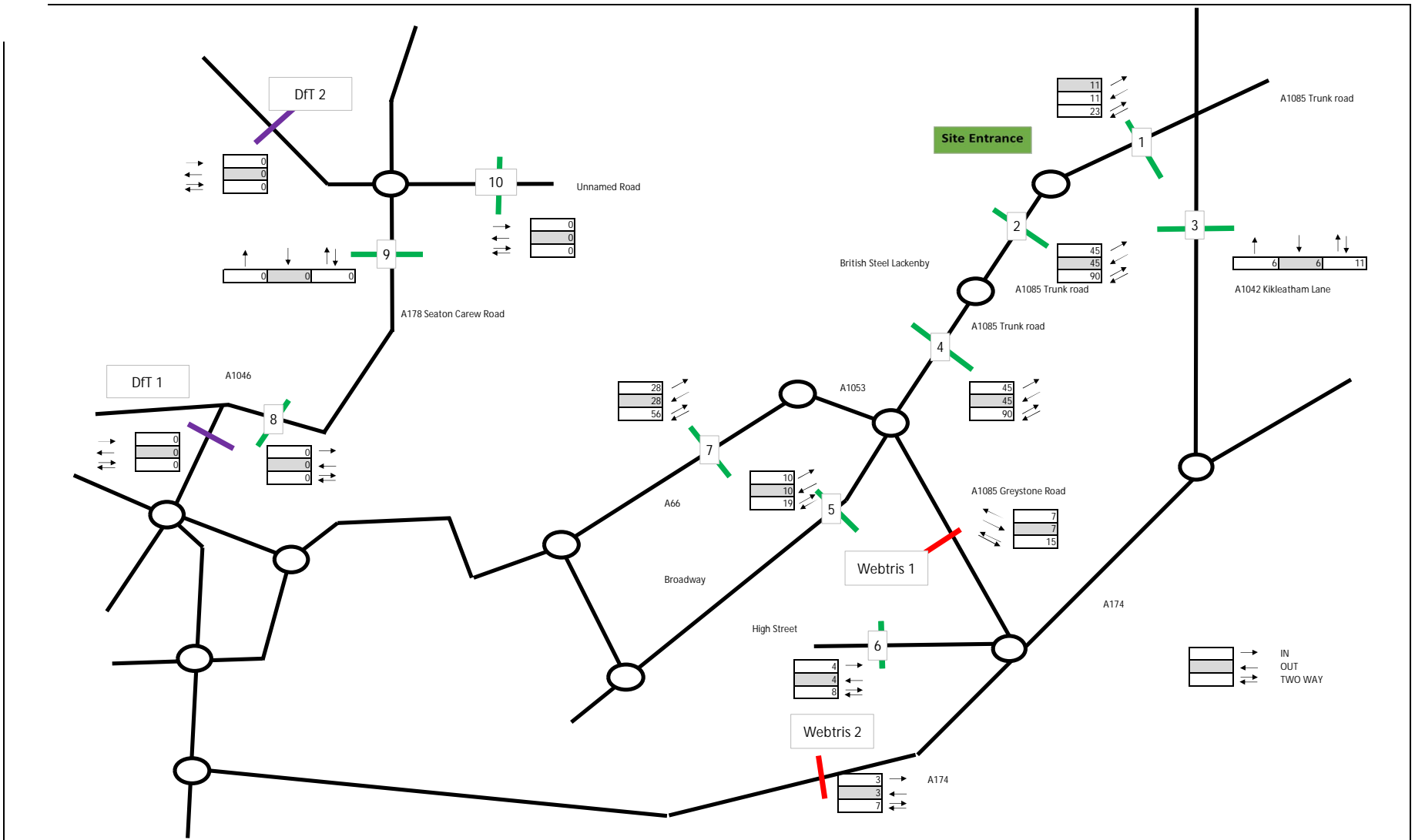
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				Approved	SM		
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					Approved	SM	
Traffic Flow Diagrams_A1_A3_A4.xlsx							



Client:	Project:	Title:	AECOM	Number:	Rev	Date	Mar-24
BP	H2Teesside	Permanent pipe workers - north of the River Tees		Picture 5	Design	CC	
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Traffic Flow Diagrams_A1_A3_A4.xlsx							

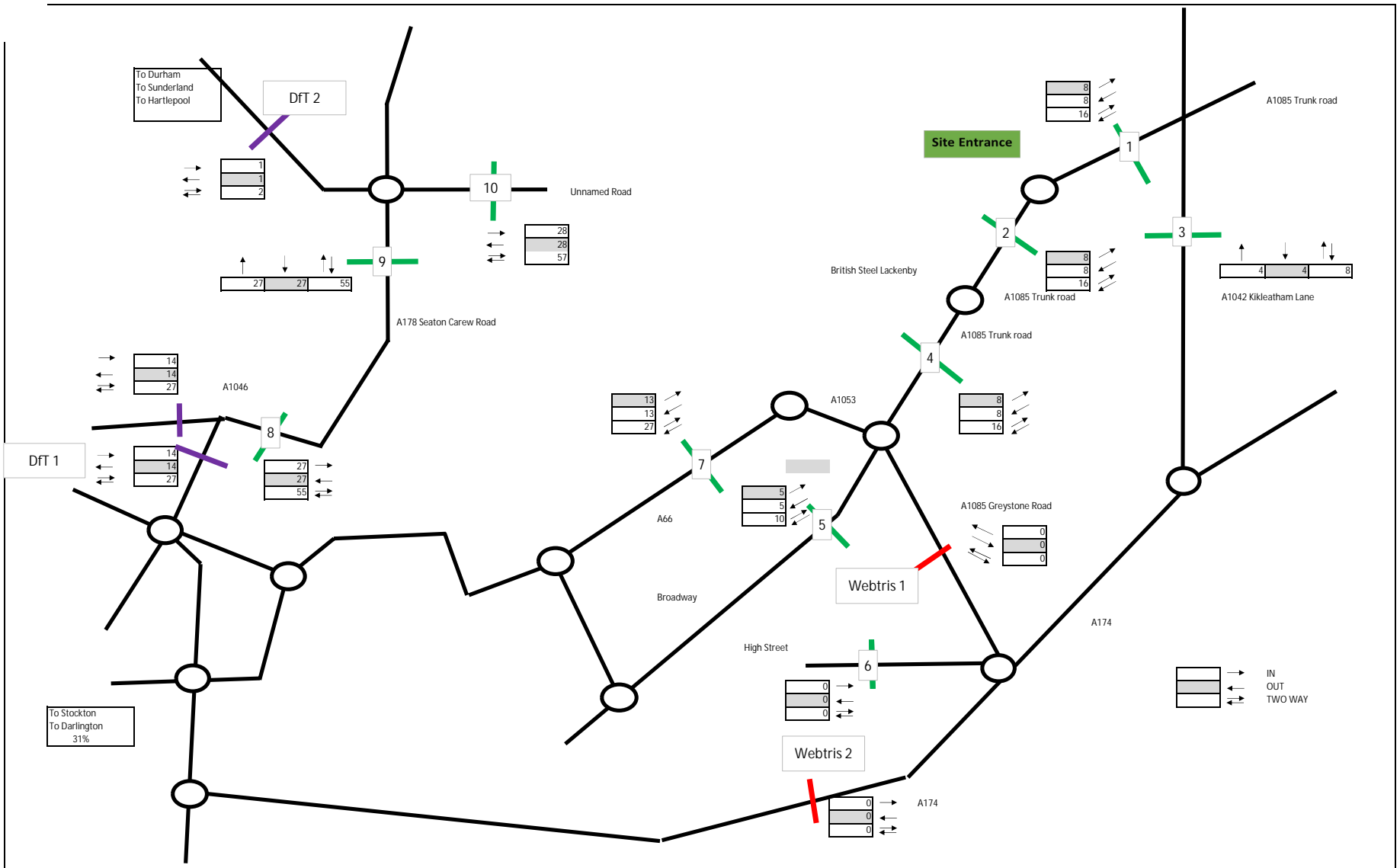


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BP	H2Teesside	Permanent pipe workers - south of the River Tees

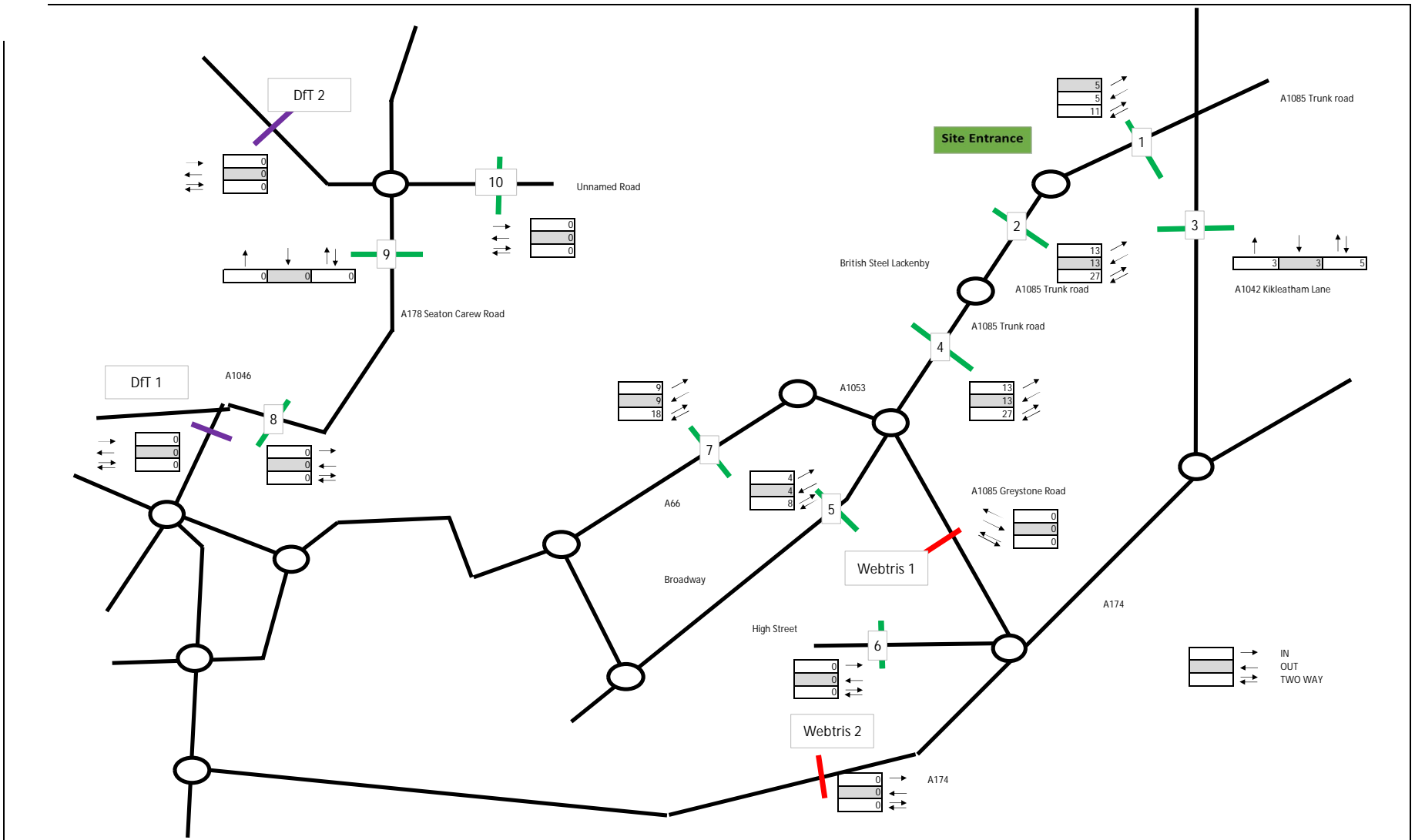


Number:
Picture 6

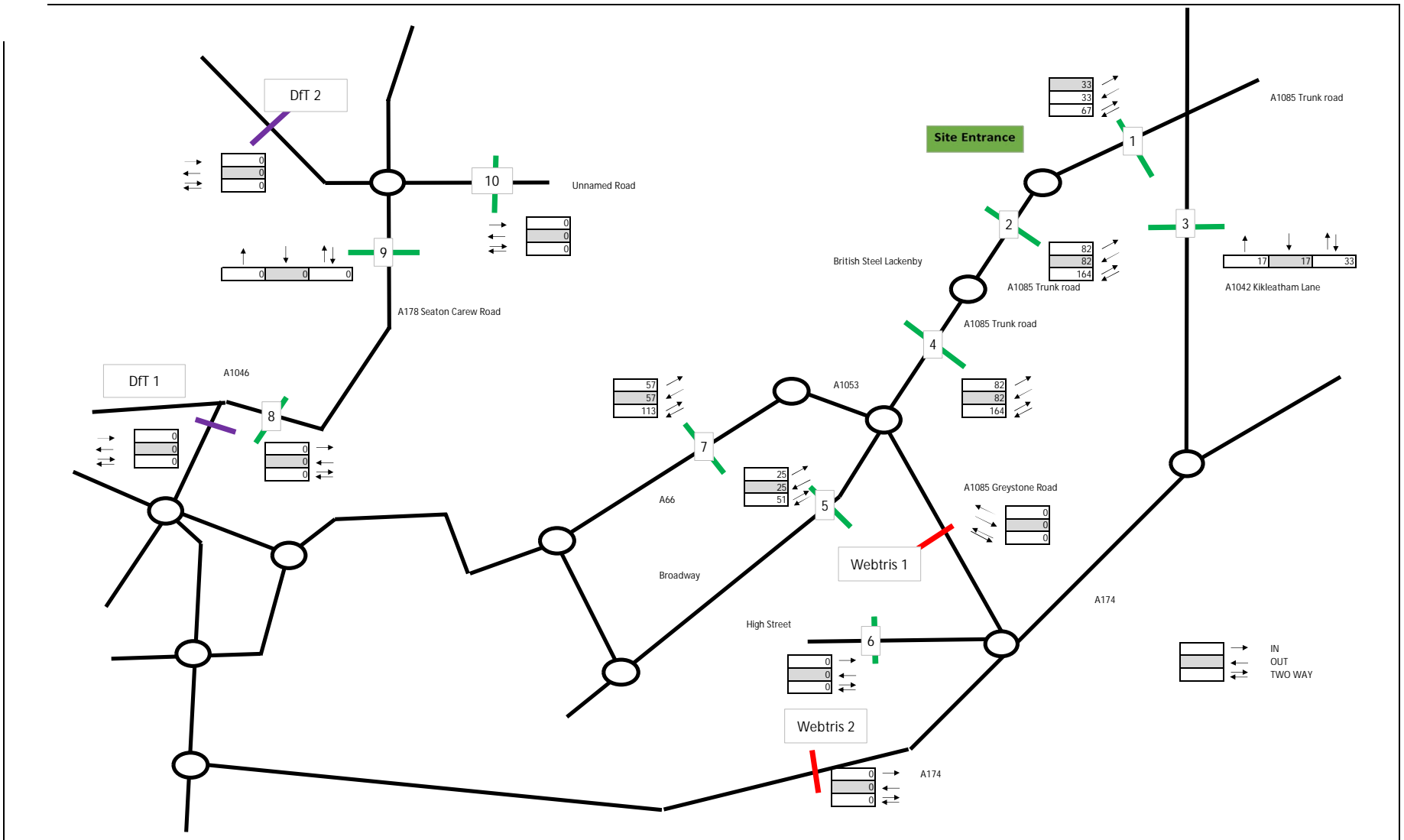
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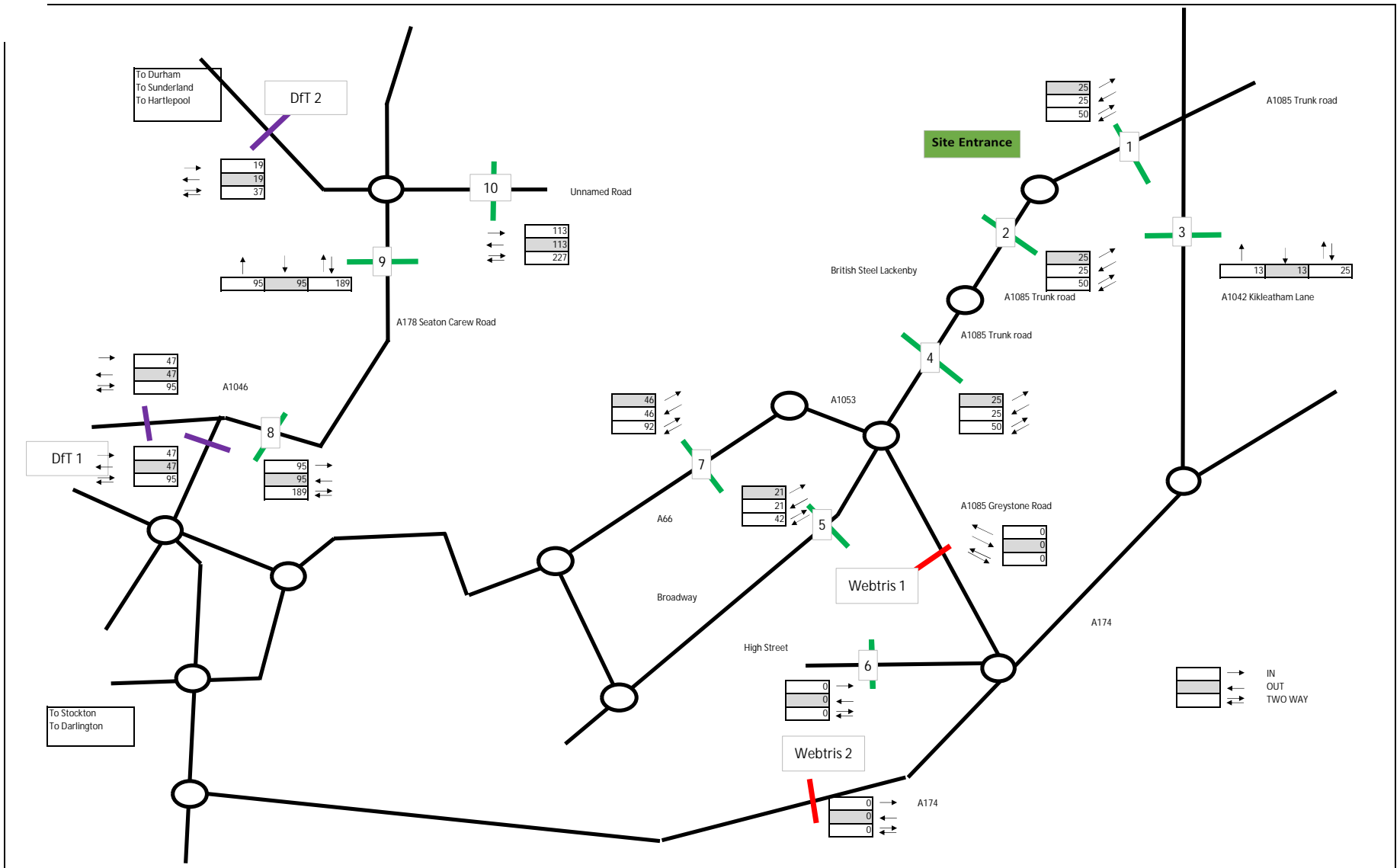
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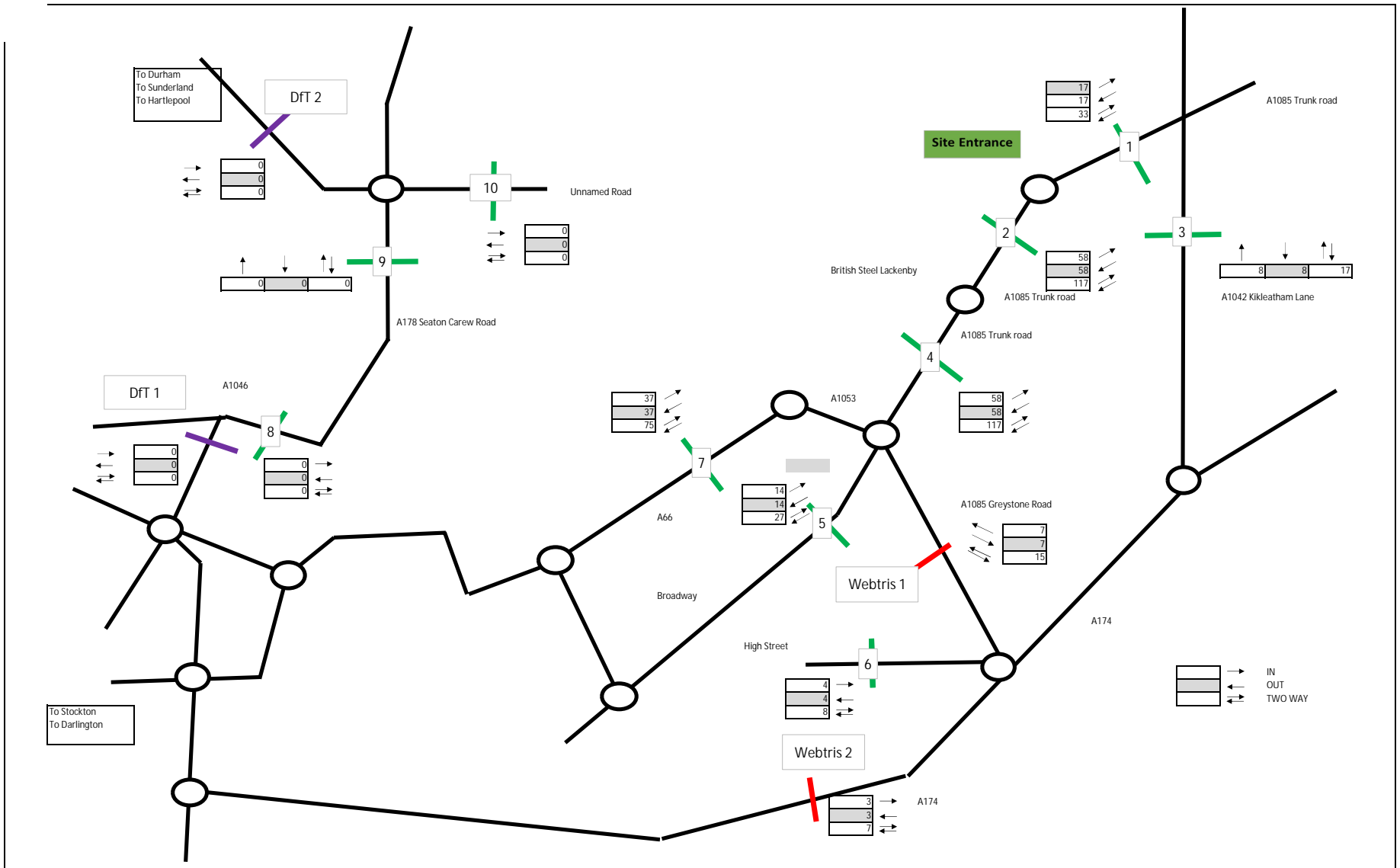
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Traffic Flow Diagrams_A1_A3_A4.xlsx							



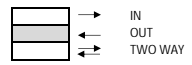
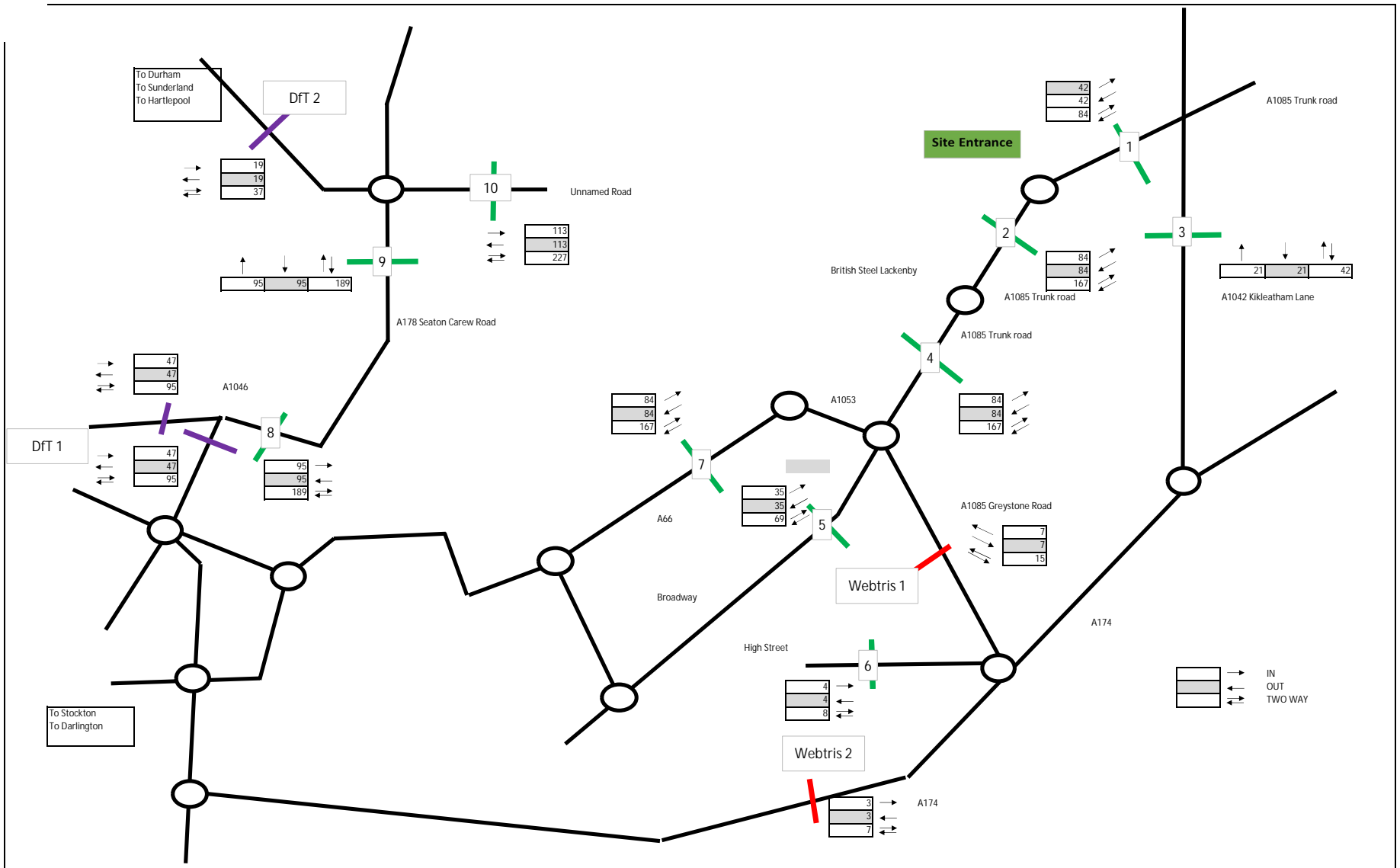
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BP	H2Teesside	Temporary site workers - south of the River Tees		Picture 10	Design	CC	
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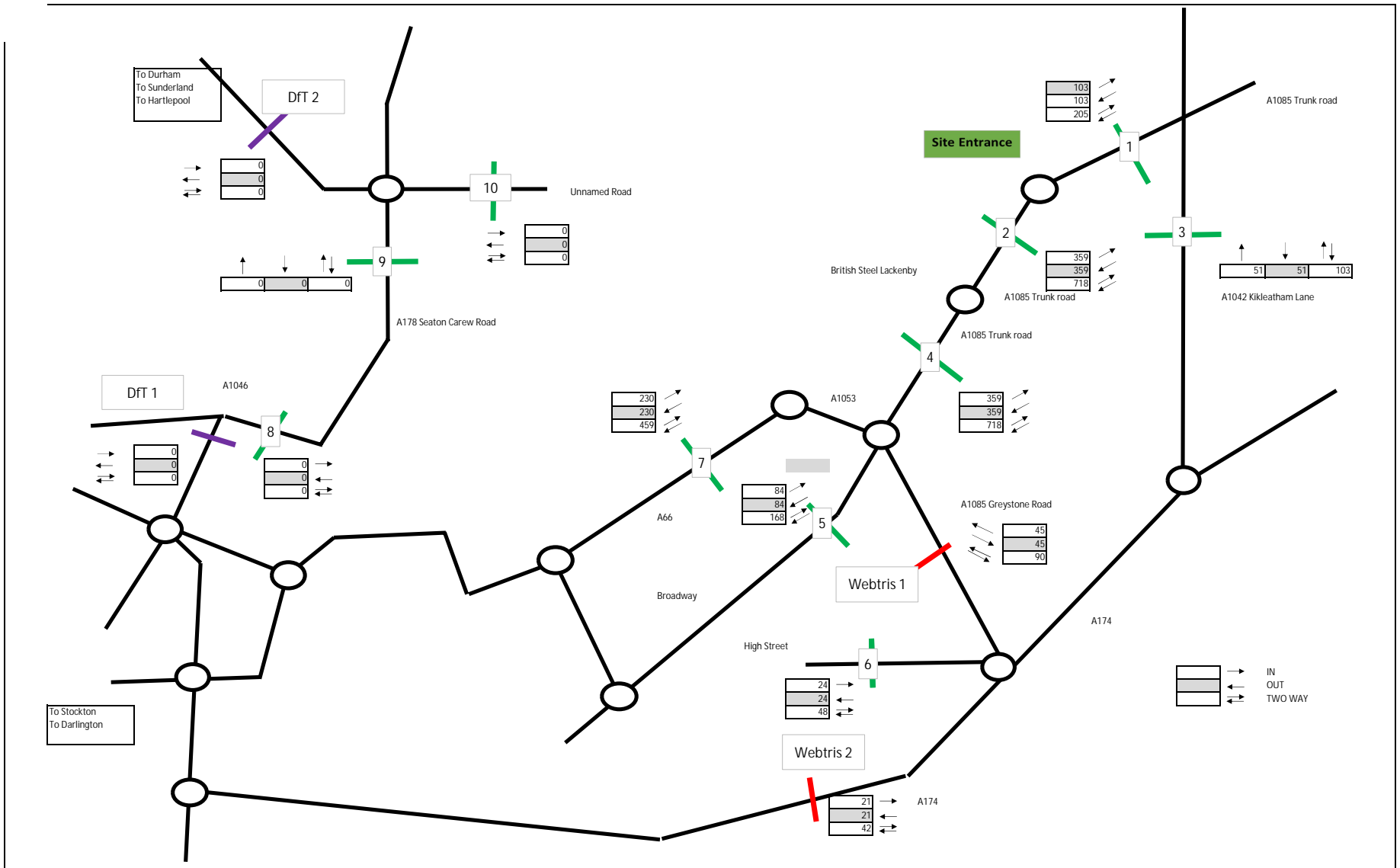
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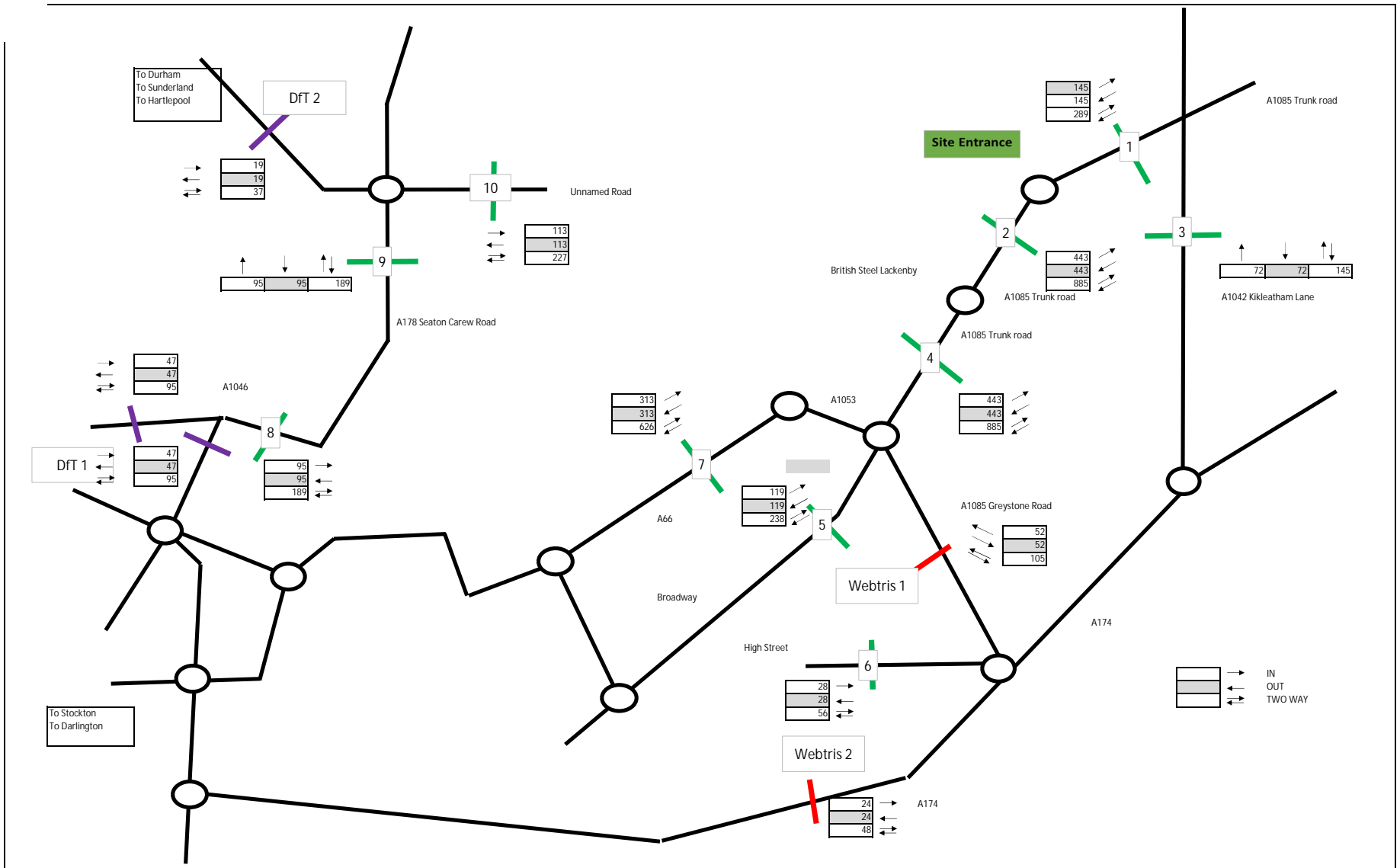
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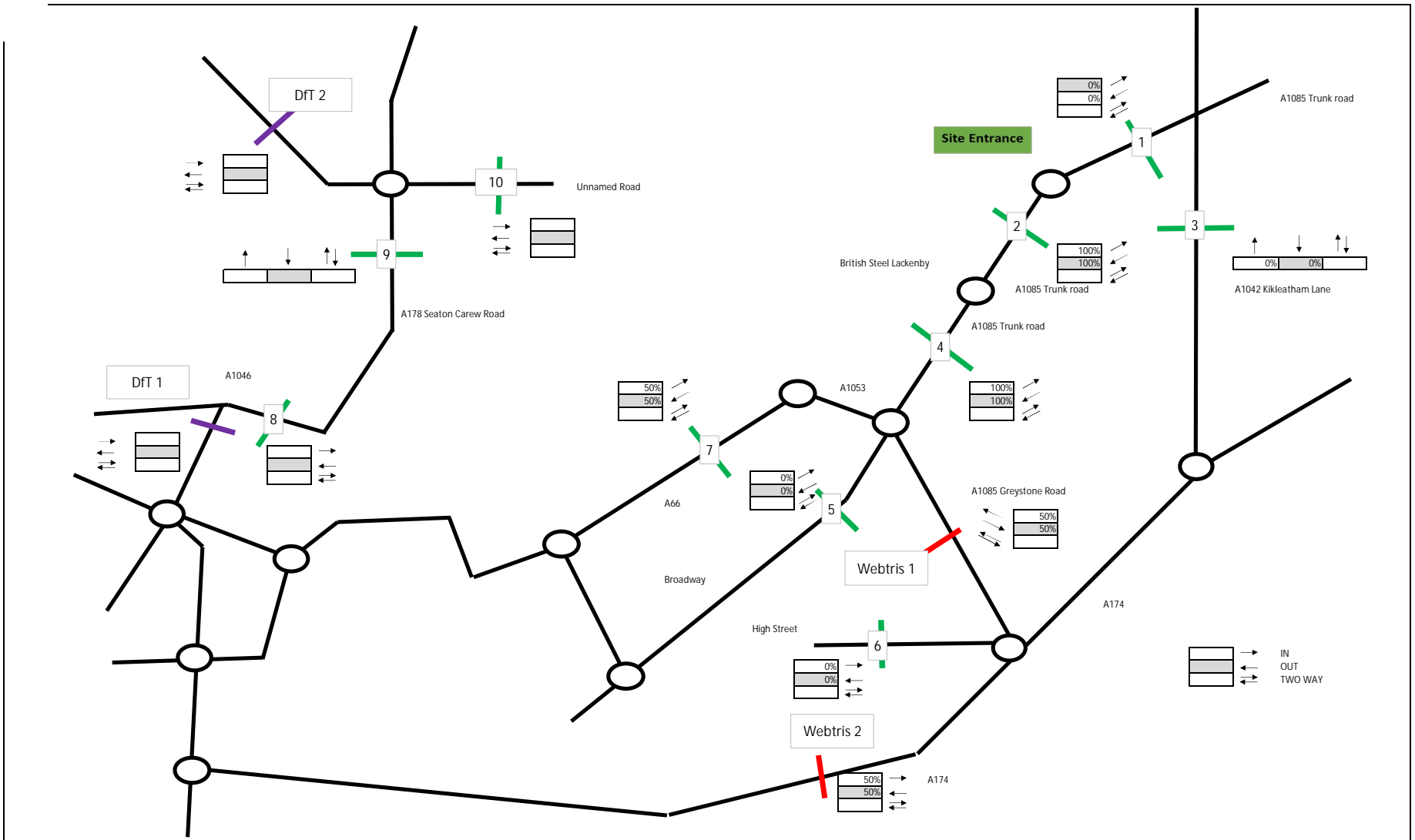
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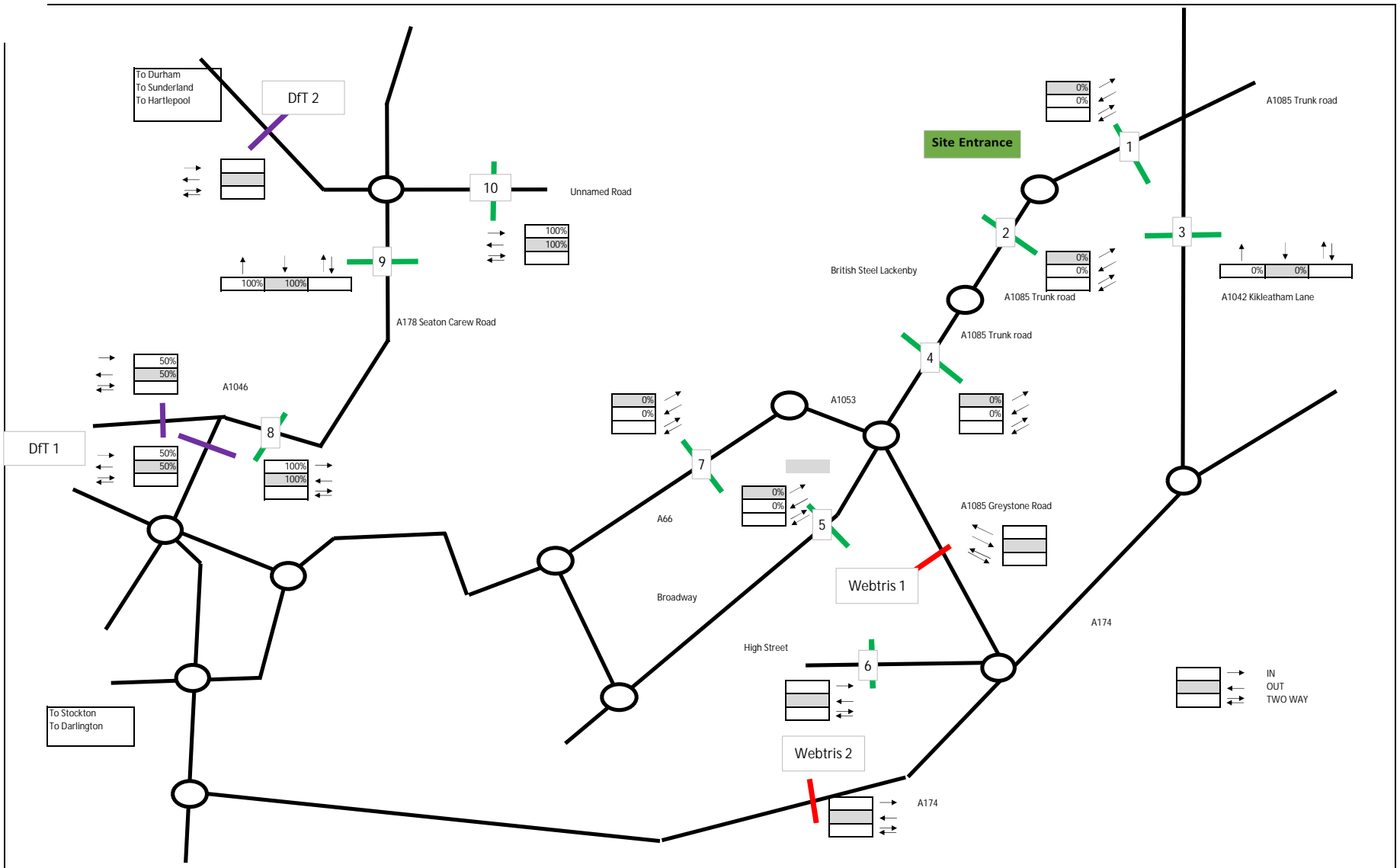
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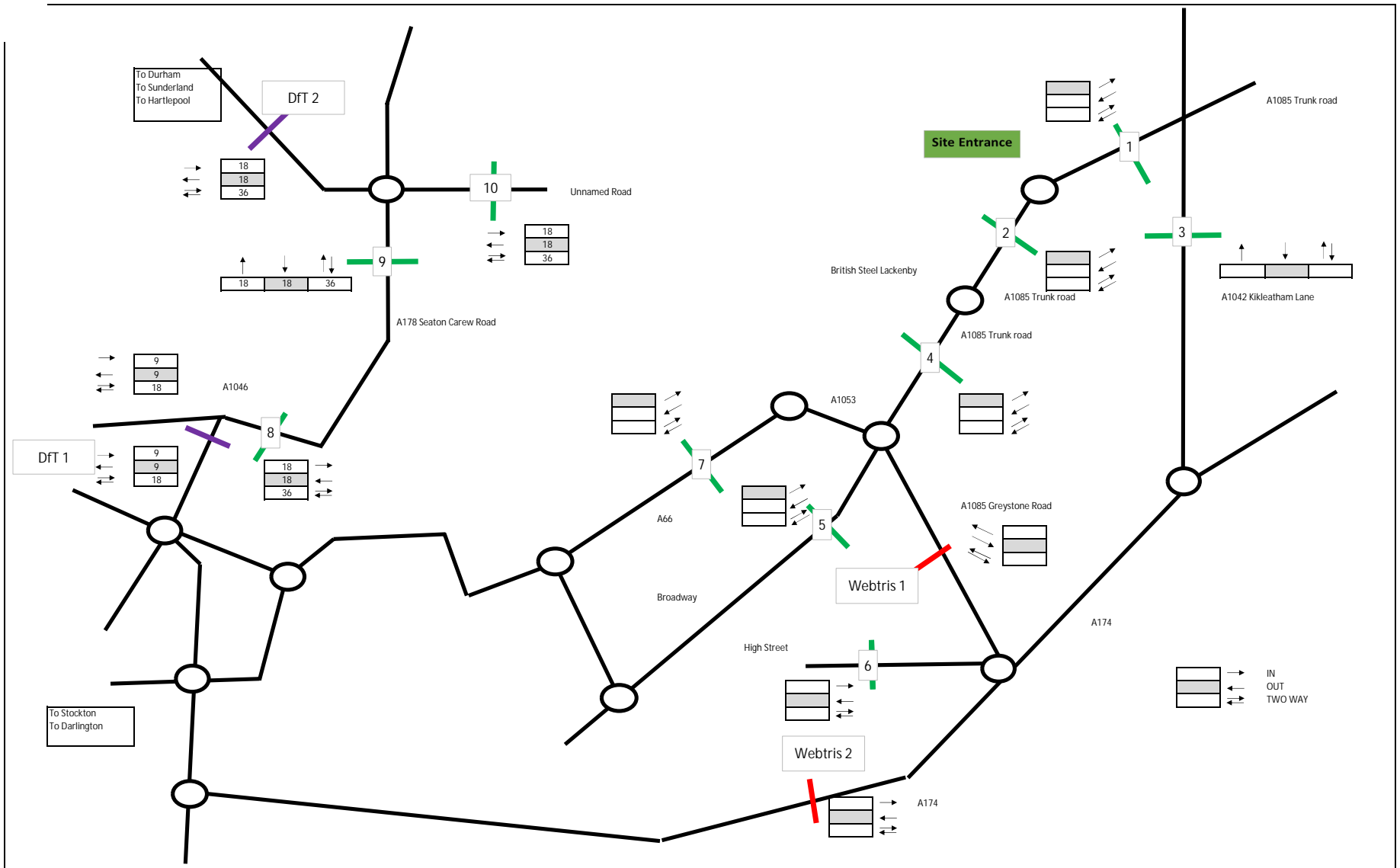
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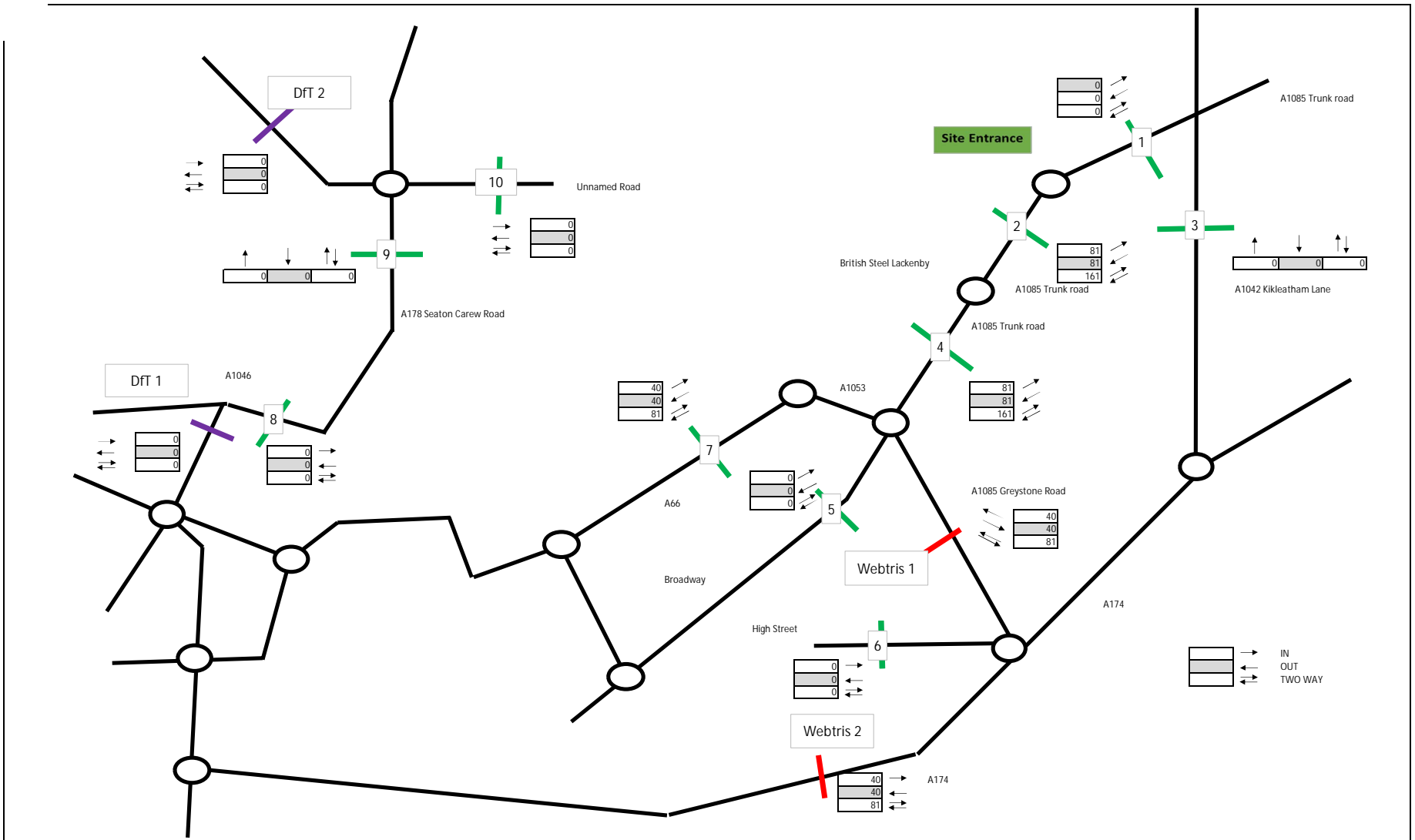
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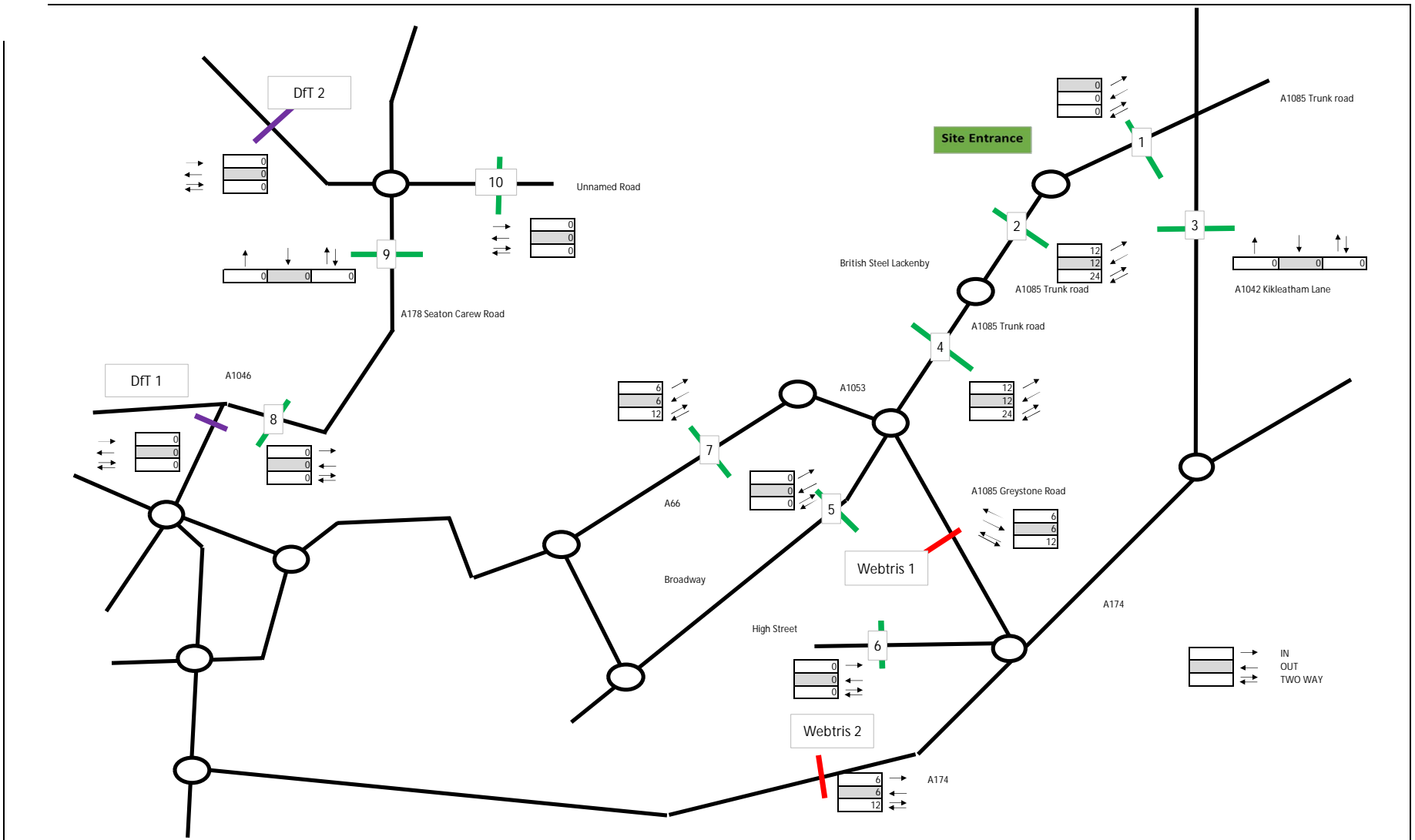
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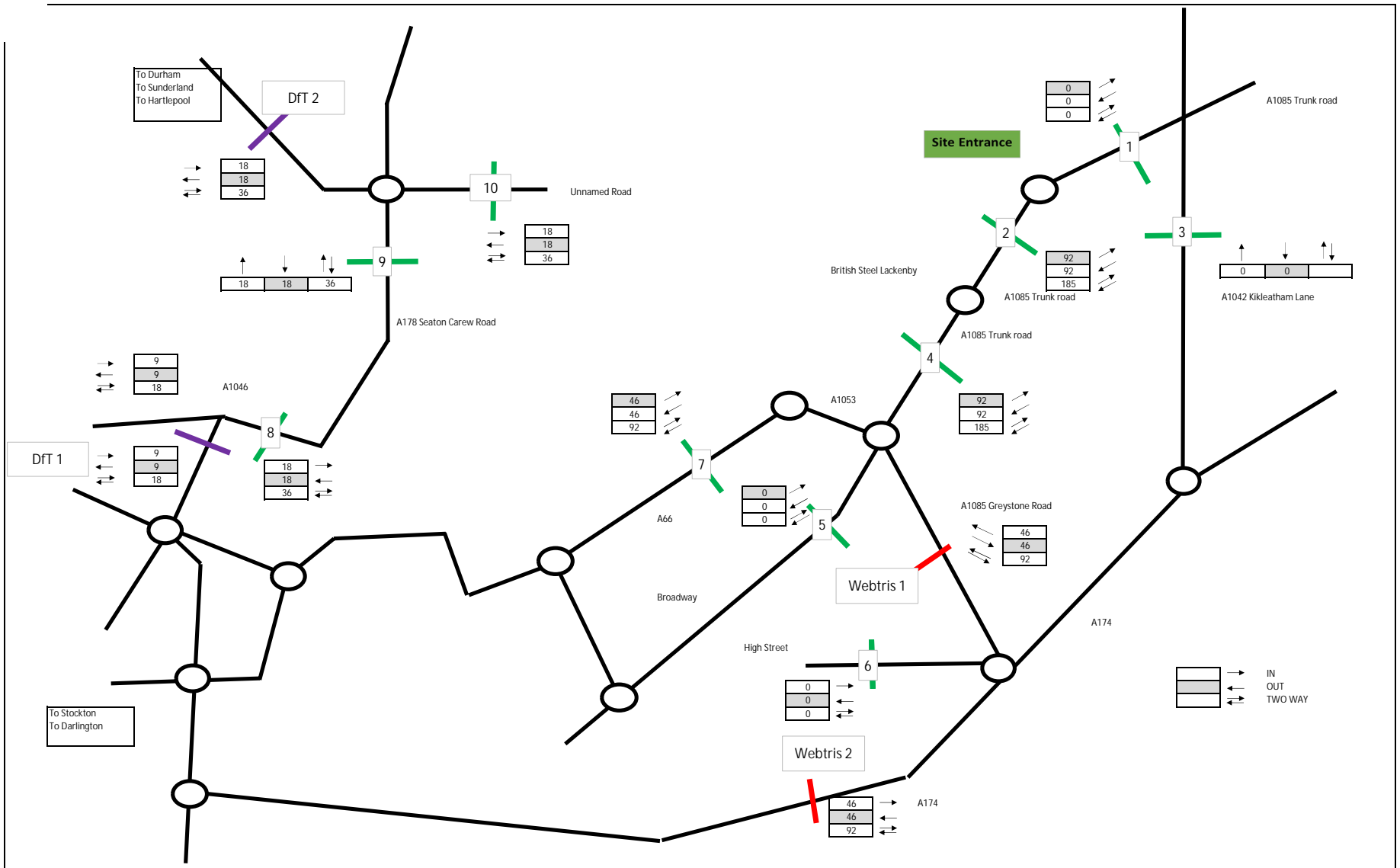
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BP	H2Teesside	Total HGV		Picture 21	Design	CC	
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Traffic Flow Diagrams_A1_A3_A4.xlsx							

ANNEX B ARCADY MODELLING OUTPUT

Junctions 10
ARCADY 10 - Roundabout Module
Version: 10.0.4.1693 © Copyright TRL Software Limited, 2021
For sales and distribution information, program advice and maintenance, contact TRL Software: +44 (0)1344 379777 software@trl.co.uk trlsoftware.com
The users of this computer program for the solution of an engineering problem are in no way relieved of their responsibility for the correctness of the solution

Filename: Junction April 2023 H2 Teesside - Cumulatives.j10
 Path: L:\DCS\Projects\C\60689030_H2_Teesside\400_Technical\Modelling
 Report generation date: 18/12/2023 16:55:36

- »2019 Base, AM
- »2019 Base, PM
- »2026 Base, AM
- »2026 Base, PM
- »Committed Development Hygreen, AM
- »Committed Development Hygreen, PM
- »Committed Development Teesside Net Zero, AM
- »Committed Development Teesside Net Zero, PM
- »Base + Committed, AM
- »Base + Committed, PM
- »Development Traffic, AM
- »Development Traffic, PM
- »Base + Committed + Development, AM
- »Base + Committed + Development, PM

Summary of junction performance

	AM				PM			
	Queue (PCU)	Delay (s)	RFC	LOS	Queue (PCU)	Delay (s)	RFC	LOS
2019 Base								
A - A1085 N	0.7	3.43	0.39	A	0.4	2.87	0.26	A
B - W Coatham Ln	0.3	3.55	0.24	A	0.2	2.82	0.13	A
C - Wilton Site Access	0.0	3.72	0.01	A	0.0	2.35	0.01	A
D - A1085 S	0.9	3.66	0.43	A	2.1	5.75	0.66	A
E - Mini Chef Stop (York Potash Access)	0.0	0.00	0.00	A	0.0	0.00	0.00	A
F - Site Access	0.0	3.12	0.02	A	0.0	3.09	0.03	A
2026 Base								
A - A1085 N	0.8	3.65	0.42	A	0.4	2.99	0.28	A
B - W Coatham Ln	0.4	3.74	0.27	A	0.2	2.88	0.14	A
C - Wilton Site Access	0.0	3.86	0.01	A	0.0	2.39	0.02	A
D - A1085 S	1.0	3.91	0.47	A	2.6	6.77	0.72	A
E - Mini Chef Stop (York Potash Access)	0.0	0.00	0.00	A	0.0	0.00	0.00	A
F - Site Access	0.0	3.19	0.02	A	0.0	3.19	0.03	A
Committed Development Hygreen								
A - A1085 N	0.0	1.85	0.00	A	0.0	0.00	0.00	A
B - W Coatham Ln	0.0	0.00	0.00	A	0.0	0.00	0.00	A
C - Wilton Site Access	0.0	0.00	0.00	A	0.0	0.00	0.00	A
D - A1085 S	0.0	2.82	0.02	A	0.0	3.19	0.01	A
E - Mini Chef Stop (York Potash Access)	0.0	0.00	0.00	A	0.0	0.00	0.00	A
F - Site Access	0.0	2.31	0.01	A	0.0	2.03	0.02	A

Committed Development Teeside Net Zero								
A - A1085 N	0.0	1.85	0.01	A	0.0	1.91	0.00	A
B - W Coatham Ln	0.0	0.00	0.00	A	0.0	0.00	0.00	A
C - Wllton Site Access	0.0	0.00	0.00	A	0.0	0.00	0.00	A
D - A1085 S	0.0	0.00	0.00	A	0.0	0.00	0.00	A
E - Mini Chef Stop (York Potash Access)	0.0	2.19	0.02	A	0.0	2.18	0.01	A
F - Site Access	0.0	1.41	0.01	A	0.1	1.52	0.07	A
Base + Committed								
A - A1085 N	0.8	3.77	0.44	A	0.5	3.23	0.30	A
B - W Coatham Ln	0.4	3.83	0.27	A	0.2	3.09	0.15	A
C - Wllton Site Access	0.0	3.94	0.01	A	0.0	2.54	0.02	A
D - A1085 S	1.1	4.18	0.49	A	3.3	8.38	0.76	A
E - Mini Chef Stop (York Potash Access)	0.0	3.03	0.03	A	0.0	3.59	0.02	A
F - Site Access	0.1	2.76	0.04	A	0.2	2.78	0.17	A
Development Traffic								
A - A1085 N	0.0	1.87	0.01	A	0.0	1.88	0.00	A
B - W Coatham Ln	0.0	0.00	0.00	A	0.0	0.00	0.00	A
C - Wllton Site Access	0.0	0.00	0.00	A	0.0	0.00	0.00	A
D - A1085 S	0.1	2.73	0.05	A	0.1	3.04	0.03	A
E - Mini Chef Stop (York Potash Access)	0.0	0.00	0.00	A	0.0	0.00	0.00	A
F - Site Access	0.0	2.23	0.02	A	0.1	1.97	0.04	A
Base + Committed + Development								
A - A1085 N	0.9	3.93	0.45	A	0.5	3.37	0.32	A
B - W Coatham Ln	0.4	3.96	0.28	A	0.2	3.20	0.15	A
C - Wllton Site Access	0.0	4.04	0.02	A	0.0	2.62	0.02	A
D - A1085 S	1.4	4.72	0.54	A	4.0	9.86	0.79	A
E - Mini Chef Stop (York Potash Access)	0.0	3.15	0.03	A	0.0	3.69	0.02	A
F - Site Access	0.1	2.88	0.07	A	0.3	3.11	0.22	A

There are warnings associated with one or more model runs - see the 'Data Errors and Warnings' tables for each Analysis or Demand Set.

Values shown are the highest values encountered over all time segments. Delay is the maximum value of average delay per arriving vehicle.

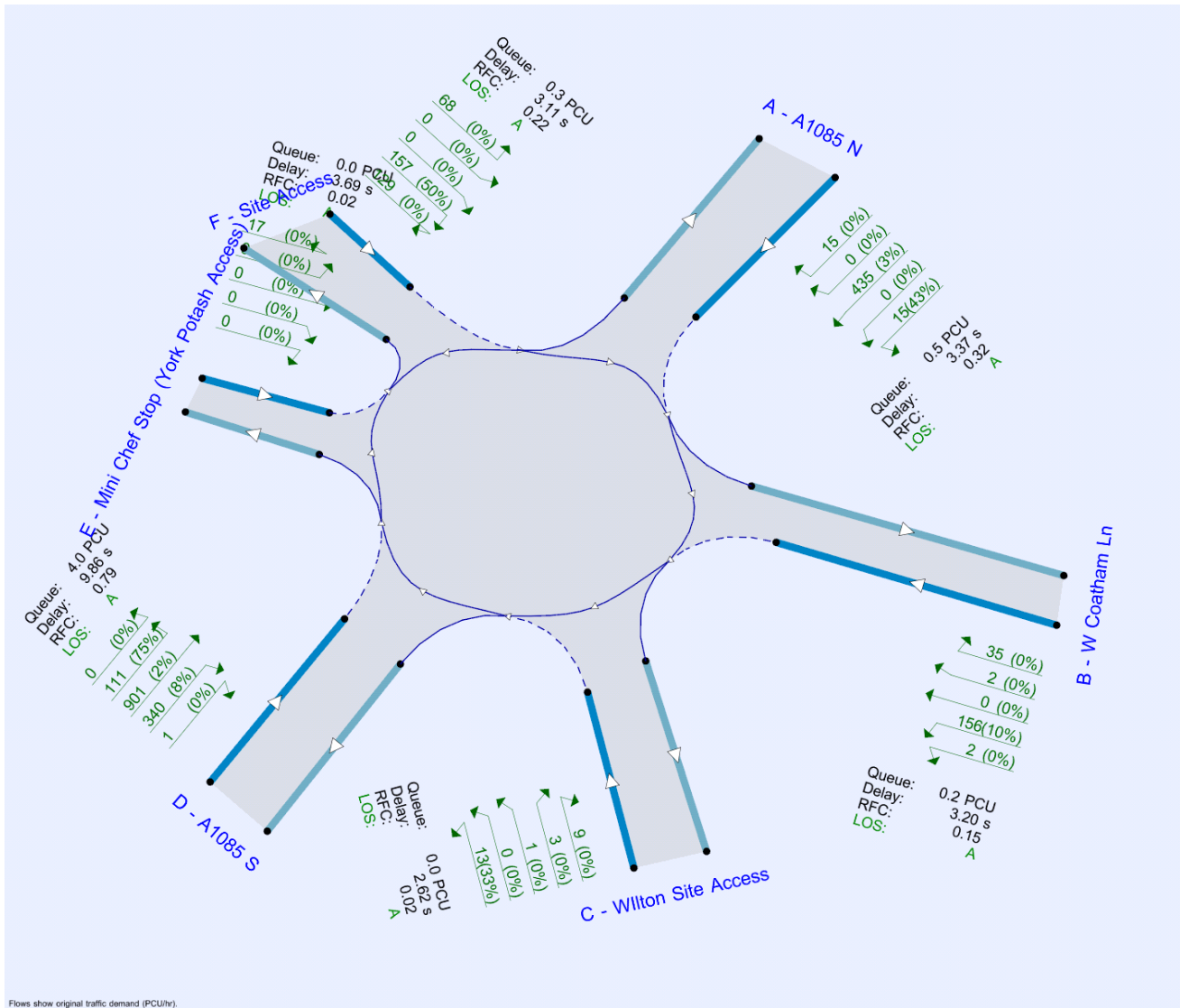
File summary

File Description

Title	Junction 1 - A1085 / West Coatham Lane / Site Access Roundabout
Location	
Site number	
Date	17/12/2020
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	JC
Description	

Units

Distance units	Speed units	Traffic units input	Traffic units results	Flow units	Average delay units	Total delay units	Rate of delay units
m	kph	PCU	PCU	perHour	s	-Min	perMin



Flows show original traffic demand (PCU/hr).

The junction diagram reflects the last run of Junctions.

Analysis Options

Vehicle length (m)	Calculate Queue Percentiles	Calculate detailed queueing delay	Show lane queues in feet / metres	Show all PICADY stream intercepts	Calculate residual capacity	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)	Use iterations with HCM roundabouts	Max number of iterations for roundabouts
5.75						0.85	36.00	20.00		500

Demand Set Summary

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically	Relationship type	Relationship
D1	2019 Base	AM	ONE HOUR	07:45	09:15	15	✓		
D2	2019 Base	PM	ONE HOUR	16:45	18:15	15	✓		
D3	2026 Base	AM	ONE HOUR	07:45	09:15	15	✓		
D4	2026 Base	PM	ONE HOUR	16:45	18:15	15	✓		
D5	Committed Development Hygreen	AM	ONE HOUR	07:45	09:15	15	✓		
D6	Committed Development Hygreen	PM	ONE HOUR	16:45	18:15	15	✓		
D7	Committed Development Teeside Net Zero	AM	ONE HOUR	07:45	09:15	15	✓		
D8	Committed Development Teeside Net Zero	PM	ONE HOUR	16:45	18:15	15	✓		
D9	Base + Committed	AM	ONE HOUR	07:45	09:15	15	✓	Simple	D3+D5+D7
D10	Base + Committed	PM	ONE HOUR	16:45	18:15	15	✓	Simple	D4+D6+D8
D11	Development Traffic	AM	ONE HOUR	07:45	09:15	15	✓		
D12	Development Traffic	PM	ONE HOUR	16:45	18:15	15	✓		
D13	Base + Committed + Development	AM	ONE HOUR	07:45	09:15	15	✓	Simple	D9+D11
D14	Base + Committed + Development	PM	ONE HOUR	16:45	18:15	15	✓	Simple	D10+D12

Analysis Set Details

ID	Include in report	Network flow scaling factor (%)	Network capacity scaling factor (%)
A1	✓	100.000	100.000

2019 Base, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Demand Set Relationship	D13 - Base + Committed + Development, AM	Demand Set relationships are chained. This may slow down the file.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	Junction 1 - A1085 / West Coatham Lane / Site Access Roundabout	Standard Roundabout		A, B, C, D, E, F	3.55	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	3.55	A

Arms

Arms

Arm	Name	Description	No give-way line
A	A1085 N		
B	W Coatham Ln		
C	Wilton Site Access		
D	A1085 S		
E	Mini Chef Stop (York Potash Access)		
F	Site Access		

Roundabout Geometry

Arm	V - Approach road half-width (m)	E - Entry width (m)	I' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Entry only	Exit only
A - A1085 N	6.49	6.50	4.9	15.2	99.4	27.0		
B - W Coatham Ln	4.53	7.68	7.6	21.7	99.4	27.0		
C - Wilton Site Access	6.38	6.82	2.0	20.1	99.4	12.5		
D - A1085 S	6.45	6.67	5.5	12.6	99.4	26.0		
E - Mini Chef Stop (York Potash Access)	4.46	12.00	5.1	12.1	99.4	33.0		
F - Site Access	7.53	9.64	3.6	12.5	99.4	15.0		

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Final slope	Final intercept (PCU/hr)
A - A1085 N	0.485	1960
B - W Coatham Ln	0.468	1808
C - Wilton Site Access	0.524	2134
D - A1085 S	0.486	1984
E - Mini Chef Stop (York Potash Access)	0.438	1676
F - Site Access	0.575	2561

The slope and intercept shown above include any corrections and adjustments.

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D1	2019 Base	AM	ONE HOUR	07:45	09:15	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - A1085 N		ONE HOUR	✓	647	100.000
B - W Coatham Ln		ONE HOUR	✓	322	100.000
C - Wilton Site Access		ONE HOUR	✓	18	100.000
D - A1085 S		ONE HOUR	✓	768	100.000
E - Mini Chef Stop (York Potash Access)		ONE HOUR	✓	0	100.000
F - Site Access		ONE HOUR	✓	32	100.000

Origin-Destination Data

Demand (PCU/hr)

		To					
		A - A1085 N	B - W Coatham Ln	C - Wilton Site Access	D - A1085 S	E - Mini Chef Stop (York Potash Access)	F - Site Access
From	A - A1085 N	0	14	4	626	0	3
	B - W Coatham Ln	39	0	4	269	0	10
	C - Wilton Site Access	1	7	0	9	0	1
	D - A1085 S	500	197	10	0	0	61
	E - Mini Chef Stop (York Potash Access)	0	0	0	0	0	0
	F - Site Access	0	1	1	30	0	0

Vehicle Mix

Heavy Vehicle Percentages

		To					
		A - A1085 N	B - W Coatham Ln	C - Wilton Site Access	D - A1085 S	E - Mini Chef Stop (York Potash Access)	F - Site Access
From	A - A1085 N	0	29	0	6	0	0
	B - W Coatham Ln	21	0	0	8	0	0
	C - Wilton Site Access	0	57	0	89	0	0
	D - A1085 S	7	14	40	0	0	66
	E - Mini Chef Stop (York Potash Access)	0	0	0	0	0	0
	F - Site Access	0	0	0	87	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
A - A1085 N	0.39	3.43	0.7	A	594	891
B - W Coatham Ln	0.24	3.55	0.3	A	295	443
C - Wilton Site Access	0.01	3.72	0.0	A	17	25
D - A1085 S	0.43	3.66	0.9	A	705	1057
E - Mini Chef Stop (York Potash Access)	0.00	0.00	0.0	A	0	0
F - Site Access	0.02	3.12	0.0	A	29	44

Main Results for each time segment

07:45 - 08:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A1085 N	487	122	185	1870	0.260	486	405	0.0	0.4	2.763	A
B - W Coatham Ln	242	61	506	1571	0.154	242	164	0.0	0.2	2.950	A
C - Wilton Site Access	14	3	733	1750	0.008	14	14	0.0	0.0	3.324	A
D - A1085 S	578	145	46	1961	0.295	576	701	0.0	0.5	2.915	A
E - Mini Chef Stop (York Potash Access)	0	0	622	1404	0.000	0	0	0.0	0.0	0.000	A
F - Site Access	24	6	566	2235	0.011	24	56	0.0	0.0	2.886	A

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A1085 N	582	145	221	1852	0.314	581	485	0.4	0.5	3.012	A
B - W Coatham Ln	289	72	605	1525	0.190	289	197	0.2	0.3	3.176	A
C - Wilton Site Access	16	4	878	1675	0.010	16	17	0.0	0.0	3.481	A
D - A1085 S	690	173	55	1957	0.353	690	839	0.5	0.6	3.188	A
E - Mini Chef Stop (York Potash Access)	0	0	745	1350	0.000	0	0	0.0	0.0	0.000	A
F - Site Access	29	7	677	2171	0.013	29	67	0.0	0.0	2.979	A

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A1085 N	712	178	271	1828	0.390	712	594	0.5	0.7	3.426	A
B - W Coatham Ln	355	89	741	1461	0.243	354	241	0.3	0.3	3.545	A
C - Wilton Site Access	20	5	1075	1571	0.013	20	21	0.0	0.0	3.721	A
D - A1085 S	846	211	67	1951	0.433	845	1027	0.6	0.9	3.650	A
E - Mini Chef Stop (York Potash Access)	0	0	912	1277	0.000	0	0	0.0	0.0	0.000	A
F - Site Access	35	9	829	2084	0.017	35	82	0.0	0.0	3.115	A

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A1085 N	712	178	271	1828	0.390	712	595	0.7	0.7	3.430	A
B - W Coatham Ln	355	89	742	1461	0.243	355	241	0.3	0.3	3.547	A
C - Willton Site Access	20	5	1076	1571	0.013	20	21	0.0	0.0	3.722	A
D - A1085 S	846	211	67	1951	0.433	846	1028	0.9	0.9	3.656	A
E - Mini Chef Stop (York Potash Access)	0	0	913	1277	0.000	0	0	0.0	0.0	0.000	A
F - Site Access	35	9	830	2083	0.017	35	83	0.0	0.0	3.116	A

08:45 - 09:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A1085 N	582	145	221	1852	0.314	582	486	0.7	0.5	3.016	A
B - W Coatham Ln	289	72	607	1524	0.190	290	197	0.3	0.3	3.180	A
C - Willton Site Access	16	4	879	1674	0.010	16	17	0.0	0.0	3.486	A
D - A1085 S	690	173	55	1957	0.353	691	841	0.9	0.6	3.195	A
E - Mini Chef Stop (York Potash Access)	0	0	746	1349	0.000	0	0	0.0	0.0	0.000	A
F - Site Access	29	7	679	2170	0.013	29	68	0.0	0.0	2.980	A

09:00 - 09:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A1085 N	487	122	185	1870	0.261	488	407	0.5	0.4	2.770	A
B - W Coatham Ln	242	61	508	1571	0.154	243	165	0.3	0.2	2.955	A
C - Willton Site Access	14	3	736	1749	0.008	14	14	0.0	0.0	3.327	A
D - A1085 S	578	145	46	1961	0.295	579	704	0.6	0.5	2.926	A
E - Mini Chef Stop (York Potash Access)	0	0	625	1403	0.000	0	0	0.0	0.0	0.000	A
F - Site Access	24	6	568	2234	0.011	24	57	0.0	0.0	2.888	A

2019 Base, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Demand Set Relationship	D13 - Base + Committed + Development, AM	Demand Set relationships are chained. This may slow down the file.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	Junction 1 - A1085 / West Coatham Lane / Site Access Roundabout	Standard Roundabout		A, B, C, D, E, F	4.70	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	4.70	A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D2	2019 Base	PM	ONE HOUR	16:45	18:15	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - A1085 N		ONE HOUR	✓	420	100.000
B - W Coatham Ln		ONE HOUR	✓	182	100.000
C - Wilton Site Access		ONE HOUR	✓	24	100.000
D - A1085 S		ONE HOUR	✓	1182	100.000
E - Mini Chef Stop (York Potash Access)		ONE HOUR	✓	0	100.000
F - Site Access		ONE HOUR	✓	47	100.000

Origin-Destination Data

Demand (PCU/hr)

		To					
		A - A1085 N	B - W Coatham Ln	C - Wilton Site Access	D - A1085 S	E - Mini Chef Stop (York Potash Access)	F - Site Access
From	A - A1085 N	0	14	0	404	0	2
	B - W Coatham Ln	33	0	2	145	0	2
	C - Wilton Site Access	3	8	0	12	0	1
	D - A1085 S	836	316	1	0	0	29
	E - Mini Chef Stop (York Potash Access)	0	0	0	0	0	0
	F - Site Access	7	0	0	40	0	0

Vehicle Mix

Heavy Vehicle Percentages

		To					
		A - A1085 N	B - W Coatham Ln	C - Wilton Site Access	D - A1085 S	E - Mini Chef Stop (York Potash Access)	F - Site Access
From	A - A1085 N	0	43	0	3	0	0
	B - W Coatham Ln	0	0	0	10	0	0
	C - Wilton Site Access	0	0	0	33	0	0
	D - A1085 S	2	8	0	0	0	97
	E - Mini Chef Stop (York Potash Access)	0	0	0	0	0	0
	F - Site Access	0	0	0	65	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
A - A1085 N	0.26	2.87	0.4	A	385	578
B - W Coatham Ln	0.13	2.82	0.2	A	167	251
C - Wilton Site Access	0.01	2.35	0.0	A	22	33
D - A1085 S	0.66	5.75	2.1	A	1085	1627
E - Mini Chef Stop (York Potash Access)	0.00	0.00	0.0	A	0	0
F - Site Access	0.03	3.09	0.0	A	43	65

Main Results for each time segment

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A1085 N	316	79	274	1827	0.173	315	659	0.0	0.2	2.475	A
B - W Coatham Ln	137	34	336	1651	0.083	137	254	0.0	0.1	2.562	A
C - Wilton Site Access	18	5	470	1888	0.010	18	2	0.0	0.0	2.197	A
D - A1085 S	890	222	37	1966	0.453	886	451	0.0	0.9	3.484	A
E - Mini Chef Stop (York Potash Access)	0	0	923	1272	0.000	0	0	0.0	0.0	0.000	A
F - Site Access	35	9	898	2044	0.017	35	26	0.0	0.0	2.695	A

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A1085 N	378	94	328	1801	0.210	377	789	0.2	0.3	2.629	A
B - W Coatham Ln	164	41	402	1620	0.101	164	303	0.1	0.1	2.663	A
C - Wilton Site Access	22	5	562	1840	0.012	22	3	0.0	0.0	2.260	A
D - A1085 S	1063	266	44	1962	0.542	1061	540	0.9	1.2	4.180	A
E - Mini Chef Stop (York Potash Access)	0	0	1105	1192	0.000	0	0	0.0	0.0	0.000	A
F - Site Access	42	11	1075	1943	0.022	42	31	0.0	0.0	2.849	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A1085 N	462	116	401	1765	0.262	462	965	0.3	0.4	2.872	A
B - W Coatham Ln	200	50	492	1578	0.127	200	371	0.1	0.2	2.816	A
C - Wilton Site Access	26	7	689	1773	0.015	26	3	0.0	0.0	2.352	A
D - A1085 S	1301	325	54	1957	0.665	1298	661	1.2	2.0	5.694	A
E - Mini Chef Stop (York Potash Access)	0	0	1352	1084	0.000	0	0	0.0	0.0	0.000	A
F - Site Access	52	13	1315	1805	0.029	52	37	0.0	0.0	3.088	A

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A1085 N	462	116	402	1765	0.262	462	968	0.4	0.4	2.873	A
B - W Coatham Ln	200	50	492	1578	0.127	200	372	0.2	0.2	2.816	A
C - Wilton Site Access	26	7	689	1773	0.015	26	3	0.0	0.0	2.352	A
D - A1085 S	1301	325	54	1957	0.665	1301	662	2.0	2.1	5.748	A
E - Mini Chef Stop (York Potash Access)	0	0	1355	1083	0.000	0	0	0.0	0.0	0.000	A
F - Site Access	52	13	1318	1803	0.029	52	37	0.0	0.0	3.092	A

17:45 - 18:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A1085 N	378	94	329	1800	0.210	378	793	0.4	0.3	2.633	A
B - W Coatham Ln	164	41	402	1620	0.101	164	305	0.2	0.1	2.664	A
C - Wilton Site Access	22	5	563	1839	0.012	22	3	0.0	0.0	2.260	A
D - A1085 S	1063	266	44	1962	0.542	1066	541	2.1	1.3	4.223	A
E - Mini Chef Stop (York Potash Access)	0	0	1110	1190	0.000	0	0	0.0	0.0	0.000	A
F - Site Access	42	11	1079	1940	0.022	42	31	0.0	0.0	2.853	A

18:00 - 18:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A1085 N	316	79	275	1826	0.173	316	663	0.3	0.2	2.480	A
B - W Coatham Ln	137	34	337	1651	0.083	137	255	0.1	0.1	2.563	A
C - Wilton Site Access	18	5	472	1887	0.010	18	2	0.0	0.0	2.198	A
D - A1085 S	890	222	37	1966	0.453	891	453	1.3	0.9	3.518	A
E - Mini Chef Stop (York Potash Access)	0	0	928	1270	0.000	0	0	0.0	0.0	0.000	A
F - Site Access	35	9	903	2042	0.017	35	26	0.0	0.0	2.698	A

2026 Base, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Demand Set Relationship	D13 - Base + Committed + Development, AM	Demand Set relationships are chained. This may slow down the file.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	Junction 1 - A1085 / West Coatham Lane / Site Access Roundabout	Standard Roundabout		A, B, C, D, E, F	3.77	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	3.77	A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D3	2026 Base	AM	ONE HOUR	07:45	09:15	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - A1085 N		ONE HOUR	✓	698	100.000
B - W Coatham Ln		ONE HOUR	✓	348	100.000
C - Wilton Site Access		ONE HOUR	✓	20	100.000
D - A1085 S		ONE HOUR	✓	830	100.000
E - Mini Chef Stop (York Potash Access)		ONE HOUR	✓	0	100.000
F - Site Access		ONE HOUR	✓	34	100.000

Origin-Destination Data

Demand (PCU/hr)

		To					
		A - A1085 N	B - W Coatham Ln	C - Wilton Site Access	D - A1085 S	E - Mini Chef Stop (York Potash Access)	F - Site Access
From	A - A1085 N	0	15	4	676	0	3
	B - W Coatham Ln	42	0	4	291	0	11
	C - Wilton Site Access	1	8	0	10	0	1
	D - A1085 S	540	213	11	0	0	66
	E - Mini Chef Stop (York Potash Access)	0	0	0	0	0	0
	F - Site Access	0	1	1	32	0	0

Vehicle Mix

Heavy Vehicle Percentages

		To					
		A - A1085 N	B - W Coatham Ln	C - Wilton Site Access	D - A1085 S	E - Mini Chef Stop (York Potash Access)	F - Site Access
From	A - A1085 N	0	29	0	6	0	0
	B - W Coatham Ln	21	0	0	8	0	0
	C - Wilton Site Access	0	57	0	89	0	0
	D - A1085 S	7	14	40	0	0	66
	E - Mini Chef Stop (York Potash Access)	0	0	0	0	0	0
	F - Site Access	0	0	0	87	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
A - A1085 N	0.42	3.65	0.8	A	640	961
B - W Coatham Ln	0.27	3.74	0.4	A	319	479
C - Wilton Site Access	0.01	3.86	0.0	A	18	28
D - A1085 S	0.47	3.91	1.0	A	762	1142
E - Mini Chef Stop (York Potash Access)	0.00	0.00	0.0	A	0	0
F - Site Access	0.02	3.19	0.0	A	31	47

Main Results for each time segment

07:45 - 08:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A1085 N	525	131	200	1863	0.282	524	437	0.0	0.4	2.855	A
B - W Coatham Ln	262	65	546	1553	0.169	261	178	0.0	0.2	3.037	A
C - Wilton Site Access	15	4	792	1720	0.009	15	15	0.0	0.0	3.409	A
D - A1085 S	625	156	50	1959	0.319	623	757	0.0	0.5	3.024	A
E - Mini Chef Stop (York Potash Access)	0	0	672	1382	0.000	0	0	0.0	0.0	0.000	A
F - Site Access	26	6	612	2209	0.012	26	61	0.0	0.0	2.932	A

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A1085 N	627	157	239	1844	0.340	627	524	0.4	0.5	3.144	A
B - W Coatham Ln	313	78	653	1503	0.208	313	213	0.2	0.3	3.298	A
C - Wilton Site Access	18	4	948	1638	0.011	18	18	0.0	0.0	3.587	A
D - A1085 S	746	187	59	1955	0.382	745	906	0.5	0.7	3.341	A
E - Mini Chef Stop (York Potash Access)	0	0	805	1324	0.000	0	0	0.0	0.0	0.000	A
F - Site Access	31	8	732	2140	0.014	31	73	0.0	0.0	3.035	A

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A1085 N	769	192	293	1818	0.423	768	641	0.5	0.8	3.642	A
B - W Coatham Ln	383	96	800	1434	0.267	383	261	0.3	0.4	3.731	A
C - Wilton Site Access	22	6	1160	1527	0.014	22	22	0.0	0.0	3.863	A
D - A1085 S	914	228	73	1948	0.469	913	1110	0.7	1.0	3.900	A
E - Mini Chef Stop (York Potash Access)	0	0	985	1245	0.000	0	0	0.0	0.0	0.000	A
F - Site Access	37	9	896	2045	0.018	37	89	0.0	0.0	3.188	A

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A1085 N	769	192	293	1817	0.423	769	642	0.8	0.8	3.648	A
B - W Coatham Ln	383	96	800	1434	0.267	383	261	0.4	0.4	3.735	A
C - Wilton Site Access	22	6	1162	1526	0.014	22	22	0.0	0.0	3.864	A
D - A1085 S	914	228	73	1948	0.469	914	1111	1.0	1.0	3.907	A
E - Mini Chef Stop (York Potash Access)	0	0	986	1244	0.000	0	0	0.0	0.0	0.000	A
F - Site Access	37	9	897	2045	0.018	37	89	0.0	0.0	3.189	A

08:45 - 09:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A1085 N	627	157	239	1843	0.340	628	525	0.8	0.6	3.154	A
B - W Coatham Ln	313	78	654	1502	0.208	313	213	0.4	0.3	3.302	A
C - Wilton Site Access	18	4	950	1637	0.011	18	18	0.0	0.0	3.592	A
D - A1085 S	746	187	59	1955	0.382	747	908	1.0	0.7	3.353	A
E - Mini Chef Stop (York Potash Access)	0	0	807	1323	0.000	0	0	0.0	0.0	0.000	A
F - Site Access	31	8	734	2139	0.014	31	73	0.0	0.0	3.037	A

09:00 - 09:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A1085 N	525	131	200	1862	0.282	526	439	0.6	0.4	2.865	A
B - W Coatham Ln	262	65	548	1552	0.169	262	179	0.3	0.2	3.043	A
C - Wilton Site Access	15	4	795	1718	0.009	15	15	0.0	0.0	3.415	A
D - A1085 S	625	156	50	1959	0.319	626	760	0.7	0.5	3.031	A
E - Mini Chef Stop (York Potash Access)	0	0	675	1380	0.000	0	0	0.0	0.0	0.000	A
F - Site Access	26	6	614	2208	0.012	26	61	0.0	0.0	2.934	A

2026 Base, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Demand Set Relationship	D13 - Base + Committed + Development, AM	Demand Set relationships are chained. This may slow down the file.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	Junction 1 - A1085 / West Coatham Lane / Site Access Roundabout	Standard Roundabout		A, B, C, D, E, F	5.39	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	5.39	A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D4	2026 Base	PM	ONE HOUR	16:45	18:15	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - A1085 N		ONE HOUR	✓	451	100.000
B - W Coatham Ln		ONE HOUR	✓	195	100.000
C - Wilton Site Access		ONE HOUR	✓	26	100.000
D - A1085 S		ONE HOUR	✓	1271	100.000
E - Mini Chef Stop (York Potash Access)		ONE HOUR	✓	0	100.000
F - Site Access		ONE HOUR	✓	51	100.000

Origin-Destination Data

Demand (PCU/hr)

		To					
		A - A1085 N	B - W Coatham Ln	C - Wilton Site Access	D - A1085 S	E - Mini Chef Stop (York Potash Access)	F - Site Access
From	A - A1085 N	0	15	0	434	0	2
	B - W Coatham Ln	35	0	2	156	0	2
	C - Wilton Site Access	3	9	0	13	0	1
	D - A1085 S	899	340	1	0	0	31
	E - Mini Chef Stop (York Potash Access)	0	0	0	0	0	0
	F - Site Access	8	0	0	43	0	0

Vehicle Mix

Heavy Vehicle Percentages

		To					
From		A - A1085 N	B - W Coatham Ln	C - Wilton Site Access	D - A1085 S	E - Mini Chef Stop (York Potash Access)	F - Site Access
	A - A1085 N	0	43	0	3	0	0
	B - W Coatham Ln	0	0	0	10	0	0
	C - Wilton Site Access	0	0	0	33	0	0
	D - A1085 S	2	8	0	0	0	97
	E - Mini Chef Stop (York Potash Access)	0	0	0	0	0	0
	F - Site Access	0	0	0	65	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
A - A1085 N	0.28	2.99	0.4	A	414	621
B - W Coatham Ln	0.14	2.88	0.2	A	179	268
C - Wilton Site Access	0.02	2.39	0.0	A	24	36
D - A1085 S	0.72	6.77	2.6	A	1166	1749
E - Mini Chef Stop (York Potash Access)	0.00	0.00	0.0	A	0	0
F - Site Access	0.03	3.19	0.0	A	47	70

Main Results for each time segment

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A1085 N	340	85	295	1817	0.187	339	709	0.0	0.2	2.531	A
B - W Coatham Ln	147	37	360	1640	0.090	146	273	0.0	0.1	2.600	A
C - Wilton Site Access	20	5	504	1870	0.010	20	2	0.0	0.0	2.220	A
D - A1085 S	957	239	39	1965	0.487	953	485	0.0	1.0	3.716	A
E - Mini Chef Stop (York Potash Access)	0	0	992	1242	0.000	0	0	0.0	0.0	0.000	A
F - Site Access	38	10	965	2006	0.019	38	27	0.0	0.0	2.739	A

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A1085 N	405	101	353	1788	0.227	405	848	0.2	0.3	2.705	A
B - W Coatham Ln	175	44	431	1606	0.109	175	327	0.1	0.1	2.712	A
C - Wilton Site Access	23	6	604	1818	0.013	23	3	0.0	0.0	2.289	A
D - A1085 S	1143	286	47	1961	0.583	1141	580	1.0	1.4	4.590	A
E - Mini Chef Stop (York Potash Access)	0	0	1187	1156	0.000	0	0	0.0	0.0	0.000	A
F - Site Access	46	11	1155	1896	0.024	46	32	0.0	0.0	2.912	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A1085 N	497	124	431	1750	0.284	496	1037	0.3	0.4	2.984	A
B - W Coatham Ln	215	54	528	1561	0.138	215	400	0.1	0.2	2.882	A
C - Wilton Site Access	29	7	739	1747	0.016	29	3	0.0	0.0	2.391	A
D - A1085 S	1399	350	57	1956	0.716	1395	711	1.4	2.6	6.673	A
E - Mini Chef Stop (York Potash Access)	0	0	1452	1041	0.000	0	0	0.0	0.0	0.000	A
F - Site Access	56	14	1413	1748	0.032	56	40	0.0	0.0	3.184	A

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A1085 N	497	124	433	1750	0.284	497	1040	0.4	0.4	2.985	A
B - W Coatham Ln	215	54	528	1561	0.138	215	401	0.2	0.2	2.883	A
C - Wilton Site Access	29	7	740	1747	0.016	29	3	0.0	0.0	2.391	A
D - A1085 S	1399	350	57	1956	0.716	1399	711	2.6	2.6	6.774	A
E - Mini Chef Stop (York Potash Access)	0	0	1457	1039	0.000	0	0	0.0	0.0	0.000	A
F - Site Access	56	14	1417	1746	0.032	56	40	0.0	0.0	3.189	A

17:45 - 18:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A1085 N	405	101	355	1788	0.227	406	853	0.4	0.3	2.708	A
B - W Coatham Ln	175	44	432	1606	0.109	175	328	0.2	0.1	2.715	A
C - Wilton Site Access	23	6	605	1817	0.013	23	3	0.0	0.0	2.292	A
D - A1085 S	1143	286	47	1961	0.583	1147	581	2.6	1.5	4.662	A
E - Mini Chef Stop (York Potash Access)	0	0	1194	1154	0.000	0	0	0.0	0.0	0.000	A
F - Site Access	46	11	1161	1893	0.024	46	32	0.0	0.0	2.918	A

18:00 - 18:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A1085 N	340	85	296	1816	0.187	340	713	0.3	0.2	2.537	A
B - W Coatham Ln	147	37	362	1639	0.090	147	275	0.1	0.1	2.601	A
C - Wilton Site Access	20	5	506	1869	0.010	20	2	0.0	0.0	2.223	A
D - A1085 S	957	239	39	1965	0.487	959	487	1.5	1.0	3.760	A
E - Mini Chef Stop (York Potash Access)	0	0	998	1239	0.000	0	0	0.0	0.0	0.000	A
F - Site Access	38	10	971	2002	0.019	38	27	0.0	0.0	2.746	A

Committed Development Hygreen, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Demand Set Relationship	D13 - Base + Committed + Development, AM	Demand Set relationships are chained. This may slow down the file.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	Junction 1 - A1085 / West Coatham Lane / Site Access Roundabout	Standard Roundabout		A, B, C, D, E, F	2.56	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	2.56	A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D5	Committed Development Hygreen	AM	ONE HOUR	07:45	09:15	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - A1085 N		ONE HOUR	✓	5	100.000
B - W Coatham Ln		ONE HOUR	✓	0	100.000
C - Wilton Site Access		ONE HOUR	✓	0	100.000
D - A1085 S		ONE HOUR	✓	39	100.000
E - Mini Chef Stop (York Potash Access)		ONE HOUR	✓	0	100.000
F - Site Access		ONE HOUR	✓	28	100.000

Origin-Destination Data

Demand (PCU/hr)

		To					
		A - A1085 N	B - W Coatham Ln	C - Wilton Site Access	D - A1085 S	E - Mini Chef Stop (York Potash Access)	F - Site Access
From	A - A1085 N	0	0	0	0	0	5
	B - W Coatham Ln	0	0	0	0	0	0
	C - Wilton Site Access	0	0	0	0	0	0
	D - A1085 S	0	0	0	0	0	39
	E - Mini Chef Stop (York Potash Access)	0	0	0	0	0	0
	F - Site Access	2	0	0	26	0	0

Vehicle Mix

Heavy Vehicle Percentages

From	To						
	A - A1085 N	B - W Coatham Ln	C - Wilton Site Access	D - A1085 S	E - Mini Chef Stop (York Potash Access)	F - Site Access	
A - A1085 N	0	0	0	0	0	0	
B - W Coatham Ln	0	0	0	0	0	0	
C - Wilton Site Access	0	0	0	0	0	0	
D - A1085 S	0	0	0	0	0	52	
E - Mini Chef Stop (York Potash Access)	0	0	0	0	0	0	
F - Site Access	0	0	0	71	0	0	

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
A - A1085 N	0.00	1.85	0.0	A	5	7
B - W Coatham Ln	0.00	0.00	0.0	A	0	0
C - Wilton Site Access	0.00	0.00	0.0	A	0	0
D - A1085 S	0.02	2.82	0.0	A	36	54
E - Mini Chef Stop (York Potash Access)	0.00	0.00	0.0	A	0	0
F - Site Access	0.01	2.31	0.0	A	26	39

Main Results for each time segment

07:45 - 08:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A1085 N	4	0.94	20	1950	0.002	4	2	0.0	0.0	1.848	A
B - W Coatham Ln	0	0	23	1797	0.000	0	0	0.0	0.0	0.000	A
C - Wilton Site Access	0	0	23	2122	0.000	0	0	0.0	0.0	0.000	A
D - A1085 S	29	7	4	1982	0.015	29	20	0.0	0.0	2.802	A
E - Mini Chef Stop (York Potash Access)	0	0	33	1661	0.000	0	0	0.0	0.0	0.000	A
F - Site Access	21	5	0	2561	0.008	21	33	0.0	0.0	2.306	A

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A1085 N	4	1	23	1948	0.002	4	2	0.0	0.0	1.851	A
B - W Coatham Ln	0	0	28	1795	0.000	0	0	0.0	0.0	0.000	A
C - Wilton Site Access	0	0	28	2119	0.000	0	0	0.0	0.0	0.000	A
D - A1085 S	35	9	4	1981	0.018	35	23	0.0	0.0	2.810	A
E - Mini Chef Stop (York Potash Access)	0	0	40	1659	0.000	0	0	0.0	0.0	0.000	A
F - Site Access	25	6	0	2561	0.010	25	40	0.0	0.0	2.310	A

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A1085 N	6	1	29	1946	0.003	6	2	0.0	0.0	1.854	A
B - W Coatham Ln	0	0	34	1792	0.000	0	0	0.0	0.0	0.000	A
C - Wilton Site Access	0	0	34	2116	0.000	0	0	0.0	0.0	0.000	A
D - A1085 S	43	11	6	1981	0.022	43	29	0.0	0.0	2.823	A
E - Mini Chef Stop (York Potash Access)	0	0	48	1655	0.000	0	0	0.0	0.0	0.000	A
F - Site Access	31	8	0	2561	0.012	31	48	0.0	0.0	2.315	A

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A1085 N	6	1	29	1946	0.003	6	2	0.0	0.0	1.854	A
B - W Coatham Ln	0	0	34	1792	0.000	0	0	0.0	0.0	0.000	A
C - Wilton Site Access	0	0	34	2116	0.000	0	0	0.0	0.0	0.000	A
D - A1085 S	43	11	6	1981	0.022	43	29	0.0	0.0	2.823	A
E - Mini Chef Stop (York Potash Access)	0	0	48	1655	0.000	0	0	0.0	0.0	0.000	A
F - Site Access	31	8	0	2561	0.012	31	48	0.0	0.0	2.315	A

08:45 - 09:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A1085 N	4	1	23	1948	0.002	4	2	0.0	0.0	1.851	A
B - W Coatham Ln	0	0	28	1795	0.000	0	0	0.0	0.0	0.000	A
C - Wilton Site Access	0	0	28	2119	0.000	0	0	0.0	0.0	0.000	A
D - A1085 S	35	9	4	1981	0.018	35	23	0.0	0.0	2.810	A
E - Mini Chef Stop (York Potash Access)	0	0	40	1659	0.000	0	0	0.0	0.0	0.000	A
F - Site Access	25	6	0	2561	0.010	25	40	0.0	0.0	2.310	A

09:00 - 09:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A1085 N	4	0.94	20	1950	0.002	4	2	0.0	0.0	1.851	A
B - W Coatham Ln	0	0	23	1797	0.000	0	0	0.0	0.0	0.000	A
C - Wilton Site Access	0	0	23	2122	0.000	0	0	0.0	0.0	0.000	A
D - A1085 S	29	7	4	1982	0.015	29	20	0.0	0.0	2.804	A
E - Mini Chef Stop (York Potash Access)	0	0	33	1661	0.000	0	0	0.0	0.0	0.000	A
F - Site Access	21	5	0	2561	0.008	21	33	0.0	0.0	2.306	A

Committed Development Hygreen, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Demand Set Relationship	D13 - Base + Committed + Development, AM	Demand Set relationships are chained. This may slow down the file.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	Junction 1 - A1085 / West Coatham Lane / Site Access Roundabout	Standard Roundabout		A, B, C, D, E, F	2.48	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	2.48	A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D6	Committed Development Hygreen	PM	ONE HOUR	16:45	18:15	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - A1085 N		ONE HOUR	✓	2	100.000
B - W Coatham Ln		ONE HOUR	✓	0	100.000
C - Wilton Site Access		ONE HOUR	✓	0	100.000
D - A1085 S		ONE HOUR	✓	27	100.000
E - Mini Chef Stop (York Potash Access)		ONE HOUR	✓	0	100.000
F - Site Access		ONE HOUR	✓	42	100.000

Origin-Destination Data

Demand (PCU/hr)

		To					
		A - A1085 N	B - W Coatham Ln	C - Wilton Site Access	D - A1085 S	E - Mini Chef Stop (York Potash Access)	F - Site Access
From	A - A1085 N	0	0	0	0	0	2
	B - W Coatham Ln	0	0	0	0	0	0
	C - Wilton Site Access	0	0	0	0	0	0
	D - A1085 S	0	0	0	0	0	27
	E - Mini Chef Stop (York Potash Access)	0	0	0	0	0	0
	F - Site Access	5	0	0	37	0	0

Vehicle Mix

Heavy Vehicle Percentages

From	To						
	A - A1085 N	B - W Coatham Ln	C - Wilton Site Access	D - A1085 S	E - Mini Chef Stop (York Potash Access)	F - Site Access	
A - A1085 N	0	0	0	0	0	0	
B - W Coatham Ln	0	0	0	0	0	0	
C - Wilton Site Access	0	0	0	0	0	0	
D - A1085 S	0	0	0	0	0	73	
E - Mini Chef Stop (York Potash Access)	0	0	0	0	0	0	
F - Site Access	0	0	0	50	0	0	

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
A - A1085 N	0.00	0.00	0.0	A	0	0
B - W Coatham Ln	0.00	0.00	0.0	A	0	0
C - Wilton Site Access	0.00	0.00	0.0	A	0	0
D - A1085 S	0.01	3.19	0.0	A	25	37
E - Mini Chef Stop (York Potash Access)	0.00	0.00	0.0	A	0	0
F - Site Access	0.02	2.03	0.0	A	39	58

Main Results for each time segment

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A1085 N	0	0	28	1946	0.000	0	4	0.0	0.0	0.000	A
B - W Coatham Ln	0	0	28	1795	0.000	0	0	0.0	0.0	0.000	A
C - Wilton Site Access	0	0	28	2119	0.000	0	0	0.0	0.0	0.000	A
D - A1085 S	20	5	0	1984	0.010	20	28	0.0	0.0	3.171	A
E - Mini Chef Stop (York Potash Access)	0	0	20	1667	0.000	0	0	0.0	0.0	0.000	A
F - Site Access	32	8	0	2561	0.012	32	20	0.0	0.0	2.014	A

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A1085 N	0	0	33	1943	0.000	0	4	0.0	0.0	0.000	A
B - W Coatham Ln	0	0	33	1793	0.000	0	0	0.0	0.0	0.000	A
C - Wilton Site Access	0	0	33	2117	0.000	0	0	0.0	0.0	0.000	A
D - A1085 S	24	6	0	1984	0.012	24	33	0.0	0.0	3.177	A
E - Mini Chef Stop (York Potash Access)	0	0	24	1665	0.000	0	0	0.0	0.0	0.000	A
F - Site Access	38	9	0	2561	0.015	38	24	0.0	0.0	2.019	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A1085 N	0	0	41	1940	0.000	0	6	0.0	0.0	0.000	A
B - W Coatham Ln	0	0	41	1789	0.000	0	0	0.0	0.0	0.000	A
C - Wilton Site Access	0	0	41	2113	0.000	0	0	0.0	0.0	0.000	A
D - A1085 S	30	7	0	1984	0.015	30	41	0.0	0.0	3.186	A
E - Mini Chef Stop (York Potash Access)	0	0	30	1663	0.000	0	0	0.0	0.0	0.000	A
F - Site Access	46	12	0	2561	0.018	46	30	0.0	0.0	2.026	A

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A1085 N	0	0	41	1940	0.000	0	6	0.0	0.0	0.000	A
B - W Coatham Ln	0	0	41	1789	0.000	0	0	0.0	0.0	0.000	A
C - Wilton Site Access	0	0	41	2113	0.000	0	0	0.0	0.0	0.000	A
D - A1085 S	30	7	0	1984	0.015	30	41	0.0	0.0	3.186	A
E - Mini Chef Stop (York Potash Access)	0	0	30	1663	0.000	0	0	0.0	0.0	0.000	A
F - Site Access	46	12	0	2561	0.018	46	30	0.0	0.0	2.026	A

17:45 - 18:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A1085 N	0	0	33	1943	0.000	0	4	0.0	0.0	0.000	A
B - W Coatham Ln	0	0	33	1793	0.000	0	0	0.0	0.0	0.000	A
C - Wilton Site Access	0	0	33	2117	0.000	0	0	0.0	0.0	0.000	A
D - A1085 S	24	6	0	1984	0.012	24	33	0.0	0.0	3.178	A
E - Mini Chef Stop (York Potash Access)	0	0	24	1665	0.000	0	0	0.0	0.0	0.000	A
F - Site Access	38	9	0	2561	0.015	38	24	0.0	0.0	2.021	A

18:00 - 18:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A1085 N	0	0	28	1946	0.000	0	4	0.0	0.0	0.000	A
B - W Coatham Ln	0	0	28	1795	0.000	0	0	0.0	0.0	0.000	A
C - Wilton Site Access	0	0	28	2119	0.000	0	0	0.0	0.0	0.000	A
D - A1085 S	20	5	0	1984	0.010	20	28	0.0	0.0	3.174	A
E - Mini Chef Stop (York Potash Access)	0	0	20	1667	0.000	0	0	0.0	0.0	0.000	A
F - Site Access	32	8	0	2561	0.012	32	20	0.0	0.0	2.016	A

Committed Development Teeside Net Zero, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Demand Set Relationship	D13 - Base + Committed + Development, AM	Demand Set relationships are chained. This may slow down the file.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	Junction 1 - A1085 / West Coatham Lane / Site Access Roundabout	Standard Roundabout		A, B, C, D, E, F	1.91	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	1.91	A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D7	Committed Development Teeside Net Zero	AM	ONE HOUR	07:45	09:15	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - A1085 N		ONE HOUR	✓	10	100.000
B - W Coatham Ln		ONE HOUR	✓	0	100.000
C - Wilton Site Access		ONE HOUR	✓	0	100.000
D - A1085 S		ONE HOUR	✓	0	100.000
E - Mini Chef Stop (York Potash Access)		ONE HOUR	✓	28	100.000
F - Site Access		ONE HOUR	✓	15	100.000

Origin-Destination Data

Demand (PCU/hr)

		To					
		A - A1085 N	B - W Coatham Ln	C - Wilton Site Access	D - A1085 S	E - Mini Chef Stop (York Potash Access)	F - Site Access
From	A - A1085 N	0	0	0	0	0	10
	B - W Coatham Ln	0	0	0	0	0	0
	C - Wilton Site Access	0	0	0	0	0	0
	D - A1085 S	0	0	0	0	0	0
	E - Mini Chef Stop (York Potash Access)	0	0	0	0	0	28
	F - Site Access	4	0	0	0	11	0

Vehicle Mix

Heavy Vehicle Percentages

From	To						
	A - A1085 N	B - W Coatham Ln	C - Wilton Site Access	D - A1085 S	E - Mini Chef Stop (York Potash Access)	F - Site Access	
A - A1085 N	0	0	0	0	0	0	
B - W Coatham Ln	0	0	0	0	0	0	
C - Wilton Site Access	0	0	0	0	0	0	
D - A1085 S	0	0	0	0	0	52	
E - Mini Chef Stop (York Potash Access)	0	0	0	0	0	0	
F - Site Access	0	0	0	71	0	0	

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
A - A1085 N	0.01	1.85	0.0	A	9	14
B - W Coatham Ln	0.00	0.00	0.0	A	0	0
C - Wilton Site Access	0.00	0.00	0.0	A	0	0
D - A1085 S	0.00	0.00	0.0	A	0	0
E - Mini Chef Stop (York Potash Access)	0.02	2.19	0.0	A	26	39
F - Site Access	0.01	1.41	0.0	A	14	21

Main Results for each time segment

07:45 - 08:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A1085 N	8	2	8	1956	0.004	8	3	0.0	0.0	1.847	A
B - W Coatham Ln	0	0	16	1801	0.000	0	0	0.0	0.0	0.000	A
C - Wilton Site Access	0	0	16	2126	0.000	0	0	0.0	0.0	0.000	A
D - A1085 S	0	0	16	1976	0.000	0	0	0.0	0.0	0.000	A
E - Mini Chef Stop (York Potash Access)	21	5	8	1673	0.013	21	8	0.0	0.0	2.179	A
F - Site Access	11	3	0	2561	0.004	11	29	0.0	0.0	1.411	A

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A1085 N	9	2	10	1955	0.005	9	4	0.0	0.0	1.849	A
B - W Coatham Ln	0	0	19	1799	0.000	0	0	0.0	0.0	0.000	A
C - Wilton Site Access	0	0	19	2124	0.000	0	0	0.0	0.0	0.000	A
D - A1085 S	0	0	19	1974	0.000	0	0	0.0	0.0	0.000	A
E - Mini Chef Stop (York Potash Access)	25	6	9	1672	0.015	25	10	0.0	0.0	2.185	A
F - Site Access	13	3	0	2561	0.005	13	34	0.0	0.0	1.412	A

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A1085 N	11	3	12	1954	0.006	11	4	0.0	0.0	1.852	A
B - W Coatham Ln	0	0	23	1797	0.000	0	0	0.0	0.0	0.000	A
C - Wilton Site Access	0	0	23	2122	0.000	0	0	0.0	0.0	0.000	A
D - A1085 S	0	0	23	1972	0.000	0	0	0.0	0.0	0.000	A
E - Mini Chef Stop (York Potash Access)	31	8	11	1671	0.018	31	12	0.0	0.0	2.194	A
F - Site Access	17	4	0	2561	0.006	17	42	0.0	0.0	1.414	A

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A1085 N	11	3	12	1954	0.006	11	4	0.0	0.0	1.852	A
B - W Coatham Ln	0	0	23	1797	0.000	0	0	0.0	0.0	0.000	A
C - Wilton Site Access	0	0	23	2122	0.000	0	0	0.0	0.0	0.000	A
D - A1085 S	0	0	23	1972	0.000	0	0	0.0	0.0	0.000	A
E - Mini Chef Stop (York Potash Access)	31	8	11	1671	0.018	31	12	0.0	0.0	2.194	A
F - Site Access	17	4	0	2561	0.006	17	42	0.0	0.0	1.414	A

08:45 - 09:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A1085 N	9	2	10	1955	0.005	9	4	0.0	0.0	1.849	A
B - W Coatham Ln	0	0	19	1799	0.000	0	0	0.0	0.0	0.000	A
C - Wilton Site Access	0	0	19	2124	0.000	0	0	0.0	0.0	0.000	A
D - A1085 S	0	0	19	1974	0.000	0	0	0.0	0.0	0.000	A
E - Mini Chef Stop (York Potash Access)	25	6	9	1672	0.015	25	10	0.0	0.0	2.187	A
F - Site Access	13	3	0	2561	0.005	13	34	0.0	0.0	1.412	A

09:00 - 09:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A1085 N	8	2	8	1956	0.004	8	3	0.0	0.0	1.847	A
B - W Coatham Ln	0	0	16	1801	0.000	0	0	0.0	0.0	0.000	A
C - Wilton Site Access	0	0	16	2126	0.000	0	0	0.0	0.0	0.000	A
D - A1085 S	0	0	16	1976	0.000	0	0	0.0	0.0	0.000	A
E - Mini Chef Stop (York Potash Access)	21	5	8	1673	0.013	21	8	0.0	0.0	2.179	A
F - Site Access	11	3	0	2561	0.004	11	29	0.0	0.0	1.413	A

Committed Development Teeside Net Zero, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Demand Set Relationship	D13 - Base + Committed + Development, AM	Demand Set relationships are chained. This may slow down the file.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	Junction 1 - A1085 / West Coatham Lane / Site Access Roundabout	Standard Roundabout		A, B, C, D, E, F	1.59	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	1.59	A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D8	Committed Development Teeside Net Zero	PM	ONE HOUR	16:45	18:15	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - A1085 N		ONE HOUR	✓	6	100.000
B - W Coatham Ln		ONE HOUR	✓	0	100.000
C - Wilton Site Access		ONE HOUR	✓	0	100.000
D - A1085 S		ONE HOUR	✓	0	100.000
E - Mini Chef Stop (York Potash Access)		ONE HOUR	✓	17	100.000
F - Site Access		ONE HOUR	✓	173	100.000

Origin-Destination Data

Demand (PCU/hr)

		To					
		A - A1085 N	B - W Coatham Ln	C - Wilton Site Access	D - A1085 S	E - Mini Chef Stop (York Potash Access)	F - Site Access
From	A - A1085 N	0	0	0	0	0	6
	B - W Coatham Ln	0	0	0	0	0	0
	C - Wilton Site Access	0	0	0	0	0	0
	D - A1085 S	0	0	0	0	0	0
	E - Mini Chef Stop (York Potash Access)	0	0	0	0	0	17
	F - Site Access	44	0	0	0	129	0

Vehicle Mix

Heavy Vehicle Percentages

From	To						
	A - A1085 N	B - W Coatham Ln	C - Wilton Site Access	D - A1085 S	E - Mini Chef Stop (York Potash Access)	F - Site Access	
A - A1085 N	0	0	0	0	0	0	
B - W Coatham Ln	0	0	0	0	0	0	
C - Wilton Site Access	0	0	0	0	0	0	
D - A1085 S	0	0	0	0	0	73	
E - Mini Chef Stop (York Potash Access)	0	0	0	0	0	0	
F - Site Access	0	0	0	50	0	0	

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
A - A1085 N	0.00	1.91	0.0	A	6	8
B - W Coatham Ln	0.00	0.00	0.0	A	0	0
C - Wilton Site Access	0.00	0.00	0.0	A	0	0
D - A1085 S	0.00	0.00	0.0	A	0	0
E - Mini Chef Stop (York Potash Access)	0.01	2.18	0.0	A	16	23
F - Site Access	0.07	1.52	0.1	A	159	238

Main Results for each time segment

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A1085 N	5	1	97	1913	0.002	5	33	0.0	0.0	1.885	A
B - W Coatham Ln	0	0	101	1761	0.000	0	0	0.0	0.0	0.000	A
C - Wilton Site Access	0	0	101	2081	0.000	0	0	0.0	0.0	0.000	A
D - A1085 S	0	0	101	1934	0.000	0	0	0.0	0.0	0.000	A
E - Mini Chef Stop (York Potash Access)	13	3	5	1674	0.008	13	97	0.0	0.0	2.166	A
F - Site Access	130	33	0	2561	0.051	130	17	0.0	0.1	1.480	A

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A1085 N	5	1	116	1903	0.003	5	40	0.0	0.0	1.895	A
B - W Coatham Ln	0	0	121	1751	0.000	0	0	0.0	0.0	0.000	A
C - Wilton Site Access	0	0	121	2070	0.000	0	0	0.0	0.0	0.000	A
D - A1085 S	0	0	121	1925	0.000	0	0	0.0	0.0	0.000	A
E - Mini Chef Stop (York Potash Access)	15	4	5	1674	0.009	15	116	0.0	0.0	2.170	A
F - Site Access	156	39	0	2561	0.061	155	21	0.1	0.1	1.496	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A1085 N	7	2	142	1891	0.003	7	48	0.0	0.0	1.909	A
B - W Coatham Ln	0	0	149	1739	0.000	0	0	0.0	0.0	0.000	A
C - Wilton Site Access	0	0	149	2056	0.000	0	0	0.0	0.0	0.000	A
D - A1085 S	0	0	149	1911	0.000	0	0	0.0	0.0	0.000	A
E - Mini Chef Stop (York Potash Access)	19	5	7	1673	0.011	19	142	0.0	0.0	2.175	A
F - Site Access	190	48	0	2561	0.074	190	25	0.1	0.1	1.518	A

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A1085 N	7	2	142	1891	0.003	7	48	0.0	0.0	1.909	A
B - W Coatham Ln	0	0	149	1739	0.000	0	0	0.0	0.0	0.000	A
C - Wilton Site Access	0	0	149	2056	0.000	0	0	0.0	0.0	0.000	A
D - A1085 S	0	0	149	1911	0.000	0	0	0.0	0.0	0.000	A
E - Mini Chef Stop (York Potash Access)	19	5	7	1673	0.011	19	142	0.0	0.0	2.175	A
F - Site Access	190	48	0	2561	0.074	190	25	0.1	0.1	1.518	A

17:45 - 18:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A1085 N	5	1	116	1903	0.003	5	40	0.0	0.0	1.898	A
B - W Coatham Ln	0	0	121	1751	0.000	0	0	0.0	0.0	0.000	A
C - Wilton Site Access	0	0	121	2070	0.000	0	0	0.0	0.0	0.000	A
D - A1085 S	0	0	121	1925	0.000	0	0	0.0	0.0	0.000	A
E - Mini Chef Stop (York Potash Access)	15	4	5	1674	0.009	15	116	0.0	0.0	2.170	A
F - Site Access	156	39	0	2561	0.061	156	21	0.1	0.1	1.496	A

18:00 - 18:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A1085 N	5	1	97	1912	0.002	5	33	0.0	0.0	1.888	A
B - W Coatham Ln	0	0	102	1761	0.000	0	0	0.0	0.0	0.000	A
C - Wilton Site Access	0	0	102	2081	0.000	0	0	0.0	0.0	0.000	A
D - A1085 S	0	0	102	1934	0.000	0	0	0.0	0.0	0.000	A
E - Mini Chef Stop (York Potash Access)	13	3	5	1674	0.008	13	97	0.0	0.0	2.168	A
F - Site Access	130	33	0	2561	0.051	130	17	0.1	0.1	1.480	A

Base + Committed, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Demand Set Relationship	D13 - Base + Committed + Development, AM	Demand Set relationships are chained. This may slow down the file.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	Junction 1 - A1085 / West Coatham Lane / Site Access Roundabout	Standard Roundabout		A, B, C, D, E, F	3.91	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	3.91	A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically	Relationship type	Relationship
D9	Base + Committed	AM	ONE HOUR	07:45	09:15	15	✓	Simple	D3+D5+D7

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - A1085 N		ONE HOUR	✓	713	100.000
B - W Coatham Ln		ONE HOUR	✓	348	100.000
C - Wilton Site Access		ONE HOUR	✓	20	100.000
D - A1085 S		ONE HOUR	✓	869	100.000
E - Mini Chef Stop (York Potash Access)		ONE HOUR	✓	28	100.000
F - Site Access		ONE HOUR	✓	77	100.000

Origin-Destination Data

Demand (PCU/hr)

		To					
		A - A1085 N	B - W Coatham Ln	C - Wilton Site Access	D - A1085 S	E - Mini Chef Stop (York Potash Access)	F - Site Access
From	A - A1085 N	0	15	4	676	0	18
	B - W Coatham Ln	42	0	4	291	0	11
	C - Wilton Site Access	1	8	0	10	0	1
	D - A1085 S	540	213	11	0	0	105
	E - Mini Chef Stop (York Potash Access)	0	0	0	0	0	28
	F - Site Access	6	1	1	58	11	0

Vehicle Mix

Heavy Vehicle Percentages

From	To						
	A - A1085 N	B - W Coatham Ln	C - Wilton Site Access	D - A1085 S	E - Mini Chef Stop (York Potash Access)	F - Site Access	
A - A1085 N	0	29	0	6	0	0	
B - W Coatham Ln	21	0	0	8	0	0	
C - Wilton Site Access	0	57	0	89	0	0	
D - A1085 S	7	14	40	0	0	61	
E - Mini Chef Stop (York Potash Access)	0	0	0	0	0	0	
F - Site Access	0	0	0	79	0	0	

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
A - A1085 N	0.44	3.77	0.8	A	654	981
B - W Coatham Ln	0.27	3.83	0.4	A	319	479
C - Wilton Site Access	0.01	3.94	0.0	A	18	28
D - A1085 S	0.49	4.18	1.1	A	797	1196
E - Mini Chef Stop (York Potash Access)	0.03	3.03	0.0	A	26	39
F - Site Access	0.04	2.76	0.1	A	71	106

Main Results for each time segment

07:45 - 08:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A1085 N	537	134	227	1849	0.290	535	442	0.0	0.4	2.905	A
B - W Coatham Ln	262	65	585	1535	0.171	261	178	0.0	0.2	3.081	A
C - Wilton Site Access	15	4	831	1699	0.009	15	15	0.0	0.0	3.450	A
D - A1085 S	654	164	69	1950	0.336	652	777	0.0	0.6	3.146	A
E - Mini Chef Stop (York Potash Access)	21	5	713	1364	0.015	21	8	0.0	0.0	2.680	A
F - Site Access	58	14	611	2209	0.026	58	122	0.0	0.0	2.510	A

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A1085 N	641	160	272	1828	0.351	640	529	0.4	0.6	3.218	A
B - W Coatham Ln	313	78	700	1481	0.211	313	213	0.2	0.3	3.360	A
C - Wilton Site Access	18	4	994	1613	0.011	18	18	0.0	0.0	3.642	A
D - A1085 S	781	195	83	1943	0.402	780	930	0.6	0.8	3.516	A
E - Mini Chef Stop (York Potash Access)	25	6	853	1303	0.019	25	10	0.0	0.0	2.817	A
F - Site Access	69	17	732	2140	0.032	69	146	0.0	0.1	2.608	A

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A1085 N	785	196	333	1798	0.437	784	648	0.6	0.8	3.767	A
B - W Coatham Ln	383	96	857	1407	0.272	383	261	0.3	0.4	3.828	A
C - Wilton Site Access	22	6	1217	1497	0.015	22	22	0.0	0.0	3.941	A
D - A1085 S	957	239	101	1934	0.495	955	1138	0.8	1.1	4.172	A
E - Mini Chef Stop (York Potash Access)	31	8	1044	1219	0.025	31	12	0.0	0.0	3.029	A
F - Site Access	85	21	896	2045	0.041	85	179	0.1	0.1	2.754	A

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A1085 N	785	196	334	1798	0.437	785	648	0.8	0.8	3.774	A
B - W Coatham Ln	383	96	858	1407	0.272	383	261	0.4	0.4	3.833	A
C - Wilton Site Access	22	6	1219	1496	0.015	22	22	0.0	0.0	3.943	A
D - A1085 S	957	239	101	1934	0.495	957	1140	1.1	1.1	4.184	A
E - Mini Chef Stop (York Potash Access)	31	8	1046	1218	0.025	31	12	0.0	0.0	3.031	A
F - Site Access	85	21	897	2045	0.041	85	179	0.1	0.1	2.755	A

08:45 - 09:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A1085 N	641	160	273	1827	0.351	642	530	0.8	0.6	3.230	A
B - W Coatham Ln	313	78	701	1480	0.211	313	213	0.4	0.3	3.367	A
C - Wilton Site Access	18	4	997	1612	0.011	18	18	0.0	0.0	3.648	A
D - A1085 S	781	195	83	1943	0.402	783	932	1.1	0.8	3.530	A
E - Mini Chef Stop (York Potash Access)	25	6	855	1302	0.019	25	10	0.0	0.0	2.822	A
F - Site Access	69	17	734	2139	0.032	69	147	0.1	0.1	2.611	A

09:00 - 09:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A1085 N	537	134	228	1849	0.290	537	444	0.6	0.4	2.918	A
B - W Coatham Ln	262	65	587	1533	0.171	262	179	0.3	0.2	3.090	A
C - Wilton Site Access	15	4	834	1697	0.009	15	15	0.0	0.0	3.454	A
D - A1085 S	654	164	69	1950	0.336	655	780	0.8	0.6	3.162	A
E - Mini Chef Stop (York Potash Access)	21	5	716	1363	0.015	21	8	0.0	0.0	2.682	A
F - Site Access	58	14	614	2207	0.026	58	123	0.1	0.0	2.512	A

Base + Committed, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Demand Set Relationship	D13 - Base + Committed + Development, AM	Demand Set relationships are chained. This may slow down the file.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	Junction 1 - A1085 / West Coatham Lane / Site Access Roundabout	Standard Roundabout		A, B, C, D, E, F	6.12	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	6.12	A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically	Relationship type	Relationship
D10	Base + Committed	PM	ONE HOUR	16:45	18:15	15	✓	Simple	D4+D6+D8

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - A1085 N		ONE HOUR	✓	459	100.000
B - W Coatham Ln		ONE HOUR	✓	195	100.000
C - Wilton Site Access		ONE HOUR	✓	26	100.000
D - A1085 S		ONE HOUR	✓	1298	100.000
E - Mini Chef Stop (York Potash Access)		ONE HOUR	✓	17	100.000
F - Site Access		ONE HOUR	✓	266	100.000

Origin-Destination Data

Demand (PCU/hr)

		To					
		A - A1085 N	B - W Coatham Ln	C - Wilton Site Access	D - A1085 S	E - Mini Chef Stop (York Potash Access)	F - Site Access
From	A - A1085 N	0	15	0	434	0	10
	B - W Coatham Ln	35	0	2	156	0	2
	C - Wilton Site Access	3	9	0	13	0	1
	D - A1085 S	899	340	1	0	0	58
	E - Mini Chef Stop (York Potash Access)	0	0	0	0	0	17
	F - Site Access	57	0	0	80	129	0

Vehicle Mix

Heavy Vehicle Percentages

From	To						
	A - A1085 N	B - W Coatham Ln	C - Wilton Site Access	D - A1085 S	E - Mini Chef Stop (York Potash Access)	F - Site Access	
A - A1085 N	0	43	0	3	0	0	
B - W Coatham Ln	0	0	0	10	0	0	
C - Wilton Site Access	0	0	0	33	0	0	
D - A1085 S	2	8	0	0	0	85	
E - Mini Chef Stop (York Potash Access)	0	0	0	0	0	0	
F - Site Access	0	0	0	58	0	0	

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
A - A1085 N	0.30	3.23	0.5	A	421	632
B - W Coatham Ln	0.15	3.09	0.2	A	179	268
C - Wilton Site Access	0.02	2.54	0.0	A	24	36
D - A1085 S	0.76	8.38	3.3	A	1191	1787
E - Mini Chef Stop (York Potash Access)	0.02	3.59	0.0	A	16	23
F - Site Access	0.17	2.78	0.2	A	244	366

Main Results for each time segment

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A1085 N	346	86	419	1756	0.197	345	745	0.0	0.3	2.648	A
B - W Coatham Ln	147	37	491	1578	0.093	146	273	0.0	0.1	2.711	A
C - Wilton Site Access	20	5	635	1802	0.011	20	2	0.0	0.0	2.306	A
D - A1085 S	977	244	142	1915	0.510	973	513	0.0	1.1	4.021	A
E - Mini Chef Stop (York Potash Access)	13	3	1018	1231	0.010	13	97	0.0	0.0	2.955	A
F - Site Access	200	50	965	2006	0.100	200	66	0.0	0.1	2.239	A

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A1085 N	413	103	502	1716	0.240	412	892	0.3	0.3	2.868	A
B - W Coatham Ln	175	44	588	1533	0.114	175	327	0.1	0.1	2.858	A
C - Wilton Site Access	23	6	760	1736	0.013	23	3	0.0	0.0	2.399	A
D - A1085 S	1167	292	170	1901	0.614	1165	614	1.1	1.7	5.150	A
E - Mini Chef Stop (York Potash Access)	15	4	1219	1143	0.013	15	116	0.0	0.0	3.192	A
F - Site Access	239	60	1155	1897	0.126	239	79	0.1	0.2	2.440	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A1085 N	505	126	614	1662	0.304	505	1090	0.3	0.5	3.230	A
B - W Coatham Ln	215	54	719	1472	0.146	215	399	0.1	0.2	3.088	A
C - Wilton Site Access	29	7	931	1647	0.017	29	3	0.0	0.0	2.539	A
D - A1085 S	1429	357	208	1882	0.759	1423	751	1.7	3.2	8.165	A
E - Mini Chef Stop (York Potash Access)	19	5	1489	1024	0.018	19	142	0.0	0.0	3.578	A
F - Site Access	293	73	1411	1749	0.167	293	97	0.2	0.2	2.777	A

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A1085 N	505	126	615	1661	0.304	505	1094	0.5	0.5	3.235	A
B - W Coatham Ln	215	54	720	1471	0.146	215	401	0.2	0.2	3.089	A
C - Wilton Site Access	29	7	931	1646	0.017	29	3	0.0	0.0	2.540	A
D - A1085 S	1429	357	208	1882	0.759	1429	752	3.2	3.3	8.377	A
E - Mini Chef Stop (York Potash Access)	19	5	1495	1022	0.018	19	142	0.0	0.0	3.587	A
F - Site Access	293	73	1417	1746	0.168	293	97	0.2	0.2	2.783	A

17:45 - 18:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A1085 N	413	103	504	1715	0.241	413	898	0.5	0.3	2.873	A
B - W Coatham Ln	175	44	589	1533	0.114	175	329	0.2	0.1	2.860	A
C - Wilton Site Access	23	6	761	1735	0.013	23	3	0.0	0.0	2.402	A
D - A1085 S	1167	292	170	1901	0.614	1173	615	3.3	1.7	5.270	A
E - Mini Chef Stop (York Potash Access)	15	4	1227	1139	0.013	15	116	0.0	0.0	3.203	A
F - Site Access	239	60	1163	1892	0.126	239	79	0.2	0.2	2.447	A

18:00 - 18:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A1085 N	346	86	422	1755	0.197	346	750	0.3	0.3	2.655	A
B - W Coatham Ln	147	37	493	1578	0.093	147	275	0.1	0.1	2.715	A
C - Wilton Site Access	20	5	637	1800	0.011	20	2	0.0	0.0	2.309	A
D - A1085 S	977	244	142	1914	0.510	980	515	1.7	1.1	4.080	A
E - Mini Chef Stop (York Potash Access)	13	3	1025	1228	0.010	13	97	0.0	0.0	2.965	A
F - Site Access	200	50	971	2002	0.100	200	66	0.2	0.1	2.244	A

Development Traffic, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Demand Set Relationship	D13 - Base + Committed + Development, AM	Demand Set relationships are chained. This may slow down the file.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	Junction 1 - A1085 / West Coatham Lane / Site Access Roundabout	Standard Roundabout		A, B, C, D, E, F	2.47	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	2.47	A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D11	Development Traffic	AM	ONE HOUR	07:45	09:15	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - A1085 N		ONE HOUR	✓	13	100.000
B - W Coatham Ln		ONE HOUR	✓	0	100.000
C - Wilton Site Access		ONE HOUR	✓	0	100.000
D - A1085 S		ONE HOUR	✓	81	100.000
E - Mini Chef Stop (York Potash Access)		ONE HOUR	✓	0	100.000
F - Site Access		ONE HOUR	✓	55	100.000

Origin-Destination Data

Demand (PCU/hr)

		To					
		A - A1085 N	B - W Coatham Ln	C - Wilton Site Access	D - A1085 S	E - Mini Chef Stop (York Potash Access)	F - Site Access
From	A - A1085 N	0	0	0	2	0	11
	B - W Coatham Ln	0	0	0	0	0	0
	C - Wilton Site Access	0	0	0	0	0	0
	D - A1085 S	1	0	0	0	0	80
	E - Mini Chef Stop (York Potash Access)	0	0	0	0	0	0
	F - Site Access	5	0	0	50	0	0

Vehicle Mix

Heavy Vehicle Percentages

		To					
From		A - A1085 N	B - W Coatham Ln	C - Wilton Site Access	D - A1085 S	E - Mini Chef Stop (York Potash Access)	F - Site Access
	A - A1085 N	0	0	0	0	0	0
	B - W Coatham Ln	0	0	0	0	0	0
	C - Wilton Site Access	0	0	0	0	0	0
	D - A1085 S	0	0	0	0	0	44
	E - Mini Chef Stop (York Potash Access)	0	0	0	0	0	0
	F - Site Access	0	0	0	64	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
A - A1085 N	0.01	1.87	0.0	A	12	18
B - W Coatham Ln	0.00	0.00	0.0	A	0	0
C - Wilton Site Access	0.00	0.00	0.0	A	0	0
D - A1085 S	0.05	2.73	0.1	A	74	111
E - Mini Chef Stop (York Potash Access)	0.00	0.00	0.0	A	0	0
F - Site Access	0.02	2.23	0.0	A	50	76

Main Results for each time segment

07:45 - 08:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A1085 N	10	2	38	1941	0.005	10	5	0.0	0.0	1.862	A
B - W Coatham Ln	0	0	47	1786	0.000	0	0	0.0	0.0	0.000	A
C - Wilton Site Access	0	0	47	2109	0.000	0	0	0.0	0.0	0.000	A
D - A1085 S	61	15	8	1980	0.031	61	39	0.0	0.0	2.686	A
E - Mini Chef Stop (York Potash Access)	0	0	69	1646	0.000	0	0	0.0	0.0	0.000	A
F - Site Access	41	10	0.75	2560	0.016	41	68	0.0	0.0	2.214	A

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A1085 N	12	3	45	1938	0.006	12	5	0.0	0.0	1.868	A
B - W Coatham Ln	0	0	57	1782	0.000	0	0	0.0	0.0	0.000	A
C - Wilton Site Access	0	0	57	2104	0.000	0	0	0.0	0.0	0.000	A
D - A1085 S	73	18	10	1979	0.037	73	47	0.0	0.1	2.704	A
E - Mini Chef Stop (York Potash Access)	0	0	83	1640	0.000	0	0	0.0	0.0	0.000	A
F - Site Access	49	12	0.90	2560	0.019	49	82	0.0	0.0	2.221	A

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A1085 N	14	4	55	1933	0.007	14	7	0.0	0.0	1.875	A
B - W Coatham Ln	0	0	69	1776	0.000	0	0	0.0	0.0	0.000	A
C - Wilton Site Access	0	0	69	2098	0.000	0	0	0.0	0.0	0.000	A
D - A1085 S	89	22	12	1978	0.045	89	57	0.1	0.1	2.729	A
E - Mini Chef Stop (York Potash Access)	0	0	101	1632	0.000	0	0	0.0	0.0	0.000	A
F - Site Access	61	15	1	2560	0.024	61	100	0.0	0.0	2.231	A

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A1085 N	14	4	55	1933	0.007	14	7	0.0	0.0	1.875	A
B - W Coatham Ln	0	0	69	1776	0.000	0	0	0.0	0.0	0.000	A
C - Wilton Site Access	0	0	69	2098	0.000	0	0	0.0	0.0	0.000	A
D - A1085 S	89	22	12	1978	0.045	89	57	0.1	0.1	2.729	A
E - Mini Chef Stop (York Potash Access)	0	0	101	1632	0.000	0	0	0.0	0.0	0.000	A
F - Site Access	61	15	1	2560	0.024	61	100	0.0	0.0	2.231	A

08:45 - 09:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A1085 N	12	3	45	1938	0.006	12	5	0.0	0.0	1.871	A
B - W Coatham Ln	0	0	57	1782	0.000	0	0	0.0	0.0	0.000	A
C - Wilton Site Access	0	0	57	2104	0.000	0	0	0.0	0.0	0.000	A
D - A1085 S	73	18	10	1979	0.037	73	47	0.1	0.1	2.706	A
E - Mini Chef Stop (York Potash Access)	0	0	83	1640	0.000	0	0	0.0	0.0	0.000	A
F - Site Access	49	12	0.90	2560	0.019	49	82	0.0	0.0	2.221	A

09:00 - 09:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A1085 N	10	2	38	1941	0.005	10	5	0.0	0.0	1.865	A
B - W Coatham Ln	0	0	47	1786	0.000	0	0	0.0	0.0	0.000	A
C - Wilton Site Access	0	0	47	2109	0.000	0	0	0.0	0.0	0.000	A
D - A1085 S	61	15	8	1980	0.031	61	39	0.1	0.0	2.689	A
E - Mini Chef Stop (York Potash Access)	0	0	69	1646	0.000	0	0	0.0	0.0	0.000	A
F - Site Access	41	10	0.75	2560	0.016	41	69	0.0	0.0	2.216	A

Development Traffic, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Demand Set Relationship	D13 - Base + Committed + Development, AM	Demand Set relationships are chained. This may slow down the file.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	Junction 1 - A1085 / West Coatham Lane / Site Access Roundabout	Standard Roundabout		A, B, C, D, E, F	2.36	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	2.36	A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D12	Development Traffic	PM	ONE HOUR	16:45	18:15	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - A1085 N		ONE HOUR	✓	6	100.000
B - W Coatham Ln		ONE HOUR	✓	0	100.000
C - Wilton Site Access		ONE HOUR	✓	0	100.000
D - A1085 S		ONE HOUR	✓	55	100.000
E - Mini Chef Stop (York Potash Access)		ONE HOUR	✓	0	100.000
F - Site Access		ONE HOUR	✓	88	100.000

Origin-Destination Data

Demand (PCU/hr)

		To					
		A - A1085 N	B - W Coatham Ln	C - Wilton Site Access	D - A1085 S	E - Mini Chef Stop (York Potash Access)	F - Site Access
From	A - A1085 N	0	0	0	1	0	5
	B - W Coatham Ln	0	0	0	0	0	0
	C - Wilton Site Access	0	0	0	0	0	0
	D - A1085 S	2	0	0	0	0	53
	E - Mini Chef Stop (York Potash Access)	0	0	0	0	0	0
	F - Site Access	11	0	0	77	0	0

Vehicle Mix

Heavy Vehicle Percentages

		To					
From		A - A1085 N	B - W Coatham Ln	C - Wilton Site Access	D - A1085 S	E - Mini Chef Stop (York Potash Access)	F - Site Access
	A - A1085 N	0	0	0	0	0	0
	B - W Coatham Ln	0	0	0	0	0	0
	C - Wilton Site Access	0	0	0	0	0	0
	D - A1085 S	0	0	0	0	0	66
	E - Mini Chef Stop (York Potash Access)	0	0	0	0	0	0
	F - Site Access	0	0	0	42	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
A - A1085 N	0.00	1.88	0.0	A	6	8
B - W Coatham Ln	0.00	0.00	0.0	A	0	0
C - Wilton Site Access	0.00	0.00	0.0	A	0	0
D - A1085 S	0.03	3.04	0.1	A	50	76
E - Mini Chef Stop (York Potash Access)	0.00	0.00	0.0	A	0	0
F - Site Access	0.04	1.97	0.1	A	81	121

Main Results for each time segment

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A1085 N	5	1	58	1932	0.002	5	10	0.0	0.0	1.867	A
B - W Coatham Ln	0	0	62	1779	0.000	0	0	0.0	0.0	0.000	A
C - Wilton Site Access	0	0	62	2101	0.000	0	0	0.0	0.0	0.000	A
D - A1085 S	41	10	4	1982	0.021	41	59	0.0	0.0	3.007	A
E - Mini Chef Stop (York Potash Access)	0	0	45	1656	0.000	0	0	0.0	0.0	0.000	A
F - Site Access	66	17	2	2560	0.026	66	44	0.0	0.0	1.947	A

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A1085 N	5	1	69	1926	0.003	5	12	0.0	0.0	1.873	A
B - W Coatham Ln	0	0	75	1773	0.000	0	0	0.0	0.0	0.000	A
C - Wilton Site Access	0	0	75	2095	0.000	0	0	0.0	0.0	0.000	A
D - A1085 S	49	12	4	1981	0.025	49	70	0.0	0.0	3.020	A
E - Mini Chef Stop (York Potash Access)	0	0	54	1652	0.000	0	0	0.0	0.0	0.000	A
F - Site Access	79	20	2	2560	0.031	79	52	0.0	0.0	1.957	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A1085 N	7	2	85	1918	0.003	7	14	0.0	0.0	1.882	A
B - W Coatham Ln	0	0	91	1766	0.000	0	0	0.0	0.0	0.000	A
C - Wilton Site Access	0	0	91	2086	0.000	0	0	0.0	0.0	0.000	A
D - A1085 S	61	15	6	1981	0.031	61	86	0.0	0.1	3.038	A
E - Mini Chef Stop (York Potash Access)	0	0	66	1647	0.000	0	0	0.0	0.0	0.000	A
F - Site Access	97	24	2	2560	0.038	97	64	0.0	0.1	1.972	A

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A1085 N	7	2	85	1918	0.003	7	14	0.0	0.0	1.882	A
B - W Coatham Ln	0	0	91	1765	0.000	0	0	0.0	0.0	0.000	A
C - Wilton Site Access	0	0	91	2086	0.000	0	0	0.0	0.0	0.000	A
D - A1085 S	61	15	6	1981	0.031	61	86	0.1	0.1	3.038	A
E - Mini Chef Stop (York Potash Access)	0	0	66	1647	0.000	0	0	0.0	0.0	0.000	A
F - Site Access	97	24	2	2560	0.038	97	64	0.1	0.1	1.972	A

17:45 - 18:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A1085 N	5	1	69	1926	0.003	5	12	0.0	0.0	1.873	A
B - W Coatham Ln	0	0	75	1773	0.000	0	0	0.0	0.0	0.000	A
C - Wilton Site Access	0	0	75	2095	0.000	0	0	0.0	0.0	0.000	A
D - A1085 S	49	12	4	1981	0.025	49	70	0.1	0.0	3.022	A
E - Mini Chef Stop (York Potash Access)	0	0	54	1652	0.000	0	0	0.0	0.0	0.000	A
F - Site Access	79	20	2	2560	0.031	79	52	0.1	0.0	1.959	A

18:00 - 18:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A1085 N	5	1	58	1931	0.002	5	10	0.0	0.0	1.867	A
B - W Coatham Ln	0	0	63	1779	0.000	0	0	0.0	0.0	0.000	A
C - Wilton Site Access	0	0	63	2101	0.000	0	0	0.0	0.0	0.000	A
D - A1085 S	41	10	4	1982	0.021	41	59	0.0	0.0	3.007	A
E - Mini Chef Stop (York Potash Access)	0	0	45	1656	0.000	0	0	0.0	0.0	0.000	A
F - Site Access	66	17	2	2560	0.026	66	44	0.0	0.0	1.947	A

Base + Committed + Development, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Demand Set Relationship	D13 - Base + Committed + Development, AM	Demand Set relationships are chained. This may slow down the file.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	Junction 1 - A1085 / West Coatham Lane / Site Access Roundabout	Standard Roundabout		A, B, C, D, E, F	4.20	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	4.20	A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically	Relationship type	Relationship
D13	Base + Committed + Development	AM	ONE HOUR	07:45	09:15	15	✓	Simple	D9+D11

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - A1085 N		ONE HOUR	✓	726	100.000
B - W Coatham Ln		ONE HOUR	✓	348	100.000
C - Wilton Site Access		ONE HOUR	✓	20	100.000
D - A1085 S		ONE HOUR	✓	950	100.000
E - Mini Chef Stop (York Potash Access)		ONE HOUR	✓	28	100.000
F - Site Access		ONE HOUR	✓	132	100.000

Origin-Destination Data

Demand (PCU/hr)

		To					
		A - A1085 N	B - W Coatham Ln	C - Wilton Site Access	D - A1085 S	E - Mini Chef Stop (York Potash Access)	F - Site Access
From	A - A1085 N	0	15	4	678	0	29
	B - W Coatham Ln	42	0	4	291	0	11
	C - Wilton Site Access	1	8	0	10	0	1
	D - A1085 S	541	213	11	0	0	185
	E - Mini Chef Stop (York Potash Access)	0	0	0	0	0	28
	F - Site Access	11	1	1	108	11	0

Vehicle Mix

Heavy Vehicle Percentages

		To					
		A - A1085 N	B - W Coatham Ln	C - Wilton Site Access	D - A1085 S	E - Mini Chef Stop (York Potash Access)	F - Site Access
From	A - A1085 N	0	29	0	6	0	0
	B - W Coatham Ln	21	0	0	8	0	0
	C - Wilton Site Access	0	57	0	89	0	0
	D - A1085 S	7	14	40	0	0	53
	E - Mini Chef Stop (York Potash Access)	0	0	0	0	0	0
	F - Site Access	0	0	0	72	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
A - A1085 N	0.45	3.93	0.9	A	666	999
B - W Coatham Ln	0.28	3.96	0.4	A	319	479
C - Wilton Site Access	0.02	4.04	0.0	A	18	28
D - A1085 S	0.54	4.72	1.4	A	872	1308
E - Mini Chef Stop (York Potash Access)	0.03	3.15	0.0	A	26	39
F - Site Access	0.07	2.88	0.1	A	121	182

Main Results for each time segment

07:45 - 08:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A1085 N	547	137	265	1831	0.299	545	446	0.0	0.4	2.965	A
B - W Coatham Ln	262	65	632	1513	0.173	261	178	0.0	0.2	3.135	A
C - Wilton Site Access	15	4	878	1674	0.009	15	15	0.0	0.0	3.502	A
D - A1085 S	715	179	77	1946	0.368	713	816	0.0	0.7	3.369	A
E - Mini Chef Stop (York Potash Access)	21	5	782	1334	0.016	21	8	0.0	0.0	2.741	A
F - Site Access	99	25	612	2209	0.045	99	191	0.0	0.1	2.594	A

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A1085 N	653	163	317	1806	0.361	652	534	0.4	0.6	3.308	A
B - W Coatham Ln	313	78	756	1454	0.215	313	213	0.2	0.3	3.438	A
C - Wilton Site Access	18	4	1051	1584	0.011	18	18	0.0	0.0	3.711	A
D - A1085 S	854	214	93	1939	0.441	853	976	0.7	0.9	3.832	A
E - Mini Chef Stop (York Potash Access)	25	6	936	1267	0.020	25	10	0.0	0.0	2.899	A
F - Site Access	119	30	733	2139	0.055	119	228	0.1	0.1	2.708	A

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A1085 N	799	200	388	1771	0.451	798	654	0.6	0.9	3.921	A
B - W Coatham Ln	383	96	926	1375	0.279	383	261	0.3	0.4	3.954	A
C - Wilton Site Access	22	6	1287	1460	0.015	22	22	0.0	0.0	4.040	A
D - A1085 S	1046	261	113	1928	0.542	1044	1195	0.9	1.4	4.699	A
E - Mini Chef Stop (York Potash Access)	31	8	1145	1175	0.026	31	12	0.0	0.0	3.146	A
F - Site Access	145	36	897	2045	0.071	145	279	0.1	0.1	2.881	A

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A1085 N	799	200	389	1771	0.451	799	655	0.9	0.9	3.930	A
B - W Coatham Ln	383	96	927	1374	0.279	383	261	0.4	0.4	3.959	A
C - Wilton Site Access	22	6	1288	1460	0.015	22	22	0.0	0.0	4.043	A
D - A1085 S	1046	261	113	1928	0.542	1046	1197	1.4	1.4	4.718	A
E - Mini Chef Stop (York Potash Access)	31	8	1147	1174	0.026	31	12	0.0	0.0	3.148	A
F - Site Access	145	36	898	2044	0.071	145	280	0.1	0.1	2.882	A

08:45 - 09:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A1085 N	653	163	318	1805	0.362	654	536	0.9	0.6	3.318	A
B - W Coatham Ln	313	78	758	1453	0.215	313	213	0.4	0.3	3.443	A
C - Wilton Site Access	18	4	1053	1582	0.011	18	18	0.0	0.0	3.717	A
D - A1085 S	854	214	93	1938	0.441	856	979	1.4	0.9	3.853	A
E - Mini Chef Stop (York Potash Access)	25	6	939	1265	0.020	25	10	0.0	0.0	2.902	A
F - Site Access	119	30	735	2138	0.056	119	229	0.1	0.1	2.712	A

09:00 - 09:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A1085 N	547	137	266	1830	0.299	547	449	0.6	0.5	2.978	A
B - W Coatham Ln	262	65	635	1511	0.173	262	179	0.3	0.2	3.145	A
C - Wilton Site Access	15	4	882	1672	0.009	15	15	0.0	0.0	3.509	A
D - A1085 S	715	179	78	1946	0.368	716	819	0.9	0.7	3.390	A
E - Mini Chef Stop (York Potash Access)	21	5	786	1332	0.016	21	8	0.0	0.0	2.747	A
F - Site Access	99	25	615	2207	0.045	99	191	0.1	0.1	2.599	A

Base + Committed + Development, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Demand Set Relationship	D13 - Base + Committed + Development, AM	Demand Set relationships are chained. This may slow down the file.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	Junction 1 - A1085 / West Coatham Lane / Site Access Roundabout	Standard Roundabout		A, B, C, D, E, F	6.96	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	6.96	A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically	Relationship type	Relationship
D14	Base + Committed + Development	PM	ONE HOUR	16:45	18:15	15	✓	Simple	D10+D12

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - A1085 N		ONE HOUR	✓	465	100.000
B - W Coatham Ln		ONE HOUR	✓	195	100.000
C - Wilton Site Access		ONE HOUR	✓	26	100.000
D - A1085 S		ONE HOUR	✓	1353	100.000
E - Mini Chef Stop (York Potash Access)		ONE HOUR	✓	17	100.000
F - Site Access		ONE HOUR	✓	354	100.000

Origin-Destination Data

Demand (PCU/hr)

		To					
		A - A1085 N	B - W Coatham Ln	C - Wilton Site Access	D - A1085 S	E - Mini Chef Stop (York Potash Access)	F - Site Access
From	A - A1085 N	0	15	0	435	0	15
	B - W Coatham Ln	35	0	2	156	0	2
	C - Wilton Site Access	3	9	0	13	0	1
	D - A1085 S	901	340	1	0	0	111
	E - Mini Chef Stop (York Potash Access)	0	0	0	0	0	17
	F - Site Access	68	0	0	157	129	0

Vehicle Mix

Heavy Vehicle Percentages

		To					
		A - A1085 N	B - W Coatham Ln	C - Wilton Site Access	D - A1085 S	E - Mini Chef Stop (York Potash Access)	F - Site Access
From	A - A1085 N	0	43	0	3	0	0
	B - W Coatham Ln	0	0	0	10	0	0
	C - Wilton Site Access	0	0	0	33	0	0
	D - A1085 S	2	8	0	0	0	75
	E - Mini Chef Stop (York Potash Access)	0	0	0	0	0	0
	F - Site Access	0	0	0	50	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
A - A1085 N	0.32	3.37	0.5	A	427	640
B - W Coatham Ln	0.15	3.20	0.2	A	179	268
C - Wilton Site Access	0.02	2.62	0.0	A	24	36
D - A1085 S	0.79	9.86	4.0	A	1242	1862
E - Mini Chef Stop (York Potash Access)	0.02	3.69	0.0	A	16	23
F - Site Access	0.22	3.11	0.3	A	325	487

Main Results for each time segment

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A1085 N	350	88	477	1728	0.203	349	755	0.0	0.3	2.709	A
B - W Coatham Ln	147	37	553	1549	0.095	146	273	0.0	0.1	2.767	A
C - Wilton Site Access	20	5	697	1769	0.011	20	2	0.0	0.0	2.348	A
D - A1085 S	1019	255	146	1913	0.533	1014	571	0.0	1.2	4.269	A
E - Mini Chef Stop (York Potash Access)	13	3	1063	1211	0.011	13	97	0.0	0.0	3.003	A
F - Site Access	267	67	966	2005	0.133	266	109	0.0	0.2	2.425	A

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A1085 N	418	105	571	1683	0.248	418	903	0.3	0.3	2.955	A
B - W Coatham Ln	175	44	662	1498	0.117	175	327	0.1	0.1	2.933	A
C - Wilton Site Access	23	6	835	1697	0.014	23	3	0.0	0.0	2.455	A
D - A1085 S	1216	304	174	1899	0.641	1214	684	1.2	1.9	5.608	A
E - Mini Chef Stop (York Potash Access)	15	4	1272	1119	0.014	15	116	0.0	0.0	3.259	A
F - Site Access	318	80	1156	1896	0.168	318	131	0.2	0.2	2.674	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A1085 N	512	128	698	1621	0.316	511	1103	0.3	0.5	3.366	A
B - W Coatham Ln	215	54	811	1429	0.150	215	399	0.1	0.2	3.196	A
C - Wilton Site Access	29	7	1022	1599	0.018	29	3	0.0	0.0	2.616	A
D - A1085 S	1490	372	213	1880	0.792	1482	837	1.9	3.9	9.499	A
E - Mini Chef Stop (York Potash Access)	19	5	1553	996	0.019	19	142	0.0	0.0	3.681	A
F - Site Access	390	97	1412	1749	0.223	389	160	0.2	0.3	3.104	A

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A1085 N	512	128	700	1620	0.316	512	1108	0.5	0.5	3.372	A
B - W Coatham Ln	215	54	811	1428	0.150	215	401	0.2	0.2	3.197	A
C - Wilton Site Access	29	7	1023	1599	0.018	29	3	0.0	0.0	2.617	A
D - A1085 S	1490	372	214	1880	0.793	1489	838	3.9	4.0	9.857	A
E - Mini Chef Stop (York Potash Access)	19	5	1561	993	0.019	19	142	0.0	0.0	3.694	A
F - Site Access	390	97	1419	1745	0.223	390	161	0.3	0.3	3.114	A

17:45 - 18:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A1085 N	418	105	574	1681	0.249	419	911	0.5	0.3	2.963	A
B - W Coatham Ln	175	44	663	1498	0.117	175	329	0.2	0.1	2.935	A
C - Wilton Site Access	23	6	836	1696	0.014	23	3	0.0	0.0	2.458	A
D - A1085 S	1216	304	175	1899	0.641	1225	685	4.0	1.9	5.790	A
E - Mini Chef Stop (York Potash Access)	15	4	1283	1115	0.014	15	116	0.0	0.0	3.274	A
F - Site Access	318	80	1166	1890	0.168	319	132	0.3	0.2	2.686	A

18:00 - 18:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A1085 N	350	88	480	1727	0.203	350	760	0.3	0.3	2.717	A
B - W Coatham Ln	147	37	555	1548	0.095	147	275	0.1	0.1	2.772	A
C - Wilton Site Access	20	5	700	1768	0.011	20	2	0.0	0.0	2.352	A
D - A1085 S	1019	255	146	1912	0.533	1021	573	1.9	1.2	4.343	A
E - Mini Chef Stop (York Potash Access)	13	3	1070	1208	0.011	13	97	0.0	0.0	3.012	A
F - Site Access	267	67	973	2001	0.133	267	110	0.2	0.2	2.433	A