Thurrock Flexible Generation Plant

Environmental Statement Volume 6
Appendix 10.1: Transport Assessment

Date: February 2020

Environmental Impact Assessment

Environmental Statement

Volume 6

Appendix 10.1

Report Number: OXF10872

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This report is also downloadable from the Thurrock Flexible Generation Plant website at:
http://www.thurrockpower.co.uk

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Summary

This document considers the traffic and transport impact of the proposed Thurrock Flexible Generation Plant development, focussing on the potential temporary effects on local highways during construction (operational traffic flows will be negligible).

The report has been prepared as an Appendix to Volume 3, Chapter 10: Traffic and Transport.

During construction, it is estimated there would be an average of 250 staff on site per day with a peak of up to 350 staff. An average of 40 HGV deliveries per day (80 HGV movements) is predicted with a peak of 80 HGV deliveries (160 HGV movements).

The intention is for construction vehicles to route from the A13 and then south on the A1089 Dock Approach Road, A1089 St Andrews Road and A1089 Ferry Road, then routing east onto the proposed RWE / Tilbury 2 road and access junction. Should this access be unavailable for any reason, construction vehicles will continue north on Fort Road and join Coopers Shaw Road to the east, continuing along Church Road and then Station Road to access the site.

A small number of construction HGVs will originate from the Port of Tilbury, perform a U-turn at the ASDA roundabout before continuing on the above route, south along A1089 St Andrews Road.

Abnormal indivisible loads will be delivered to the proposed development through a new dedicated access via a causeway on the river Thames and will not use the highway network.

Vehicle movements when the proposed development is operational will be irregular and low. These impacts have been scoped out of the assessment.

When the site is decommissioned, the process will require its removal from site which will generate associated vehicle movements, including HGV movements. Since there is no further use for the materials, these can be removed in bulk after demolition. This means that larger payloads can be achieved, and the traffic flows associated with decommissioning are lower than those during its construction. Thus, the assessment for the decommissioning phase is deemed to be of similar nature to, but a lower magnitude than that for the construction phase.

An assessment of the temporary construction traffic flows against 2022 baseline traffic flows shows changes that would not be noticeable to other drivers and would not create or add to any existing levels of congestion or road safety.

An assessment of the cumulative temporary construction traffic flows with other emerging developments against 2022 baseline traffic flows produced the same conclusion.

It is concluded that the temporary construction traffic flows would not result in a severe residual cumulative impact on the road network or an unacceptable impact on highway safety along the local road network.

It is therefore considered that there are no transport or highways reasons for not permitting the development.

Qualifications

This document has been prepared by Charles Montgomerie, a Member of the Chartered Institution of Highways and Transportation and a Consultant Transport Planner who has three years' experience in transport planning.

It has been checked by David Archibald, Director, a Member of the Chartered Institution of Highways and Transportation with 20 years' experience in transport planning and highway engineering.

1. Introduction

1.1.1 This Transport Assessment (TA) assesses the transport impact of the construction phase of the Thurrock Flexible Generation Plant.

1.1.2 The site is located immediately to the north of the existing Tilbury Substation within Thurrock, Essex, as shown on Figure 1.1**.**

1.1.3 The intention is for construction vehicles to route from the A13 (including from Junction 30 on the M25) and then south on the A1089 Dock Approach Road, A1089 St Andrews Road and A1089 Ferry Road, then routing east onto the proposed RWE / Tilbury 2 access road into the proposed development. Should this access be unavailable for any reason, an alternative route would be available by continuing north on Fort Road and joining Coopers Shaw Road to the east, continuing along Church Road and then Station Road to access the site. The proposed development is shown in the context of the proposed Tilbury 2 access and Tilbury 2 access road on Figure 1.2.

1.1.4 It is expected that a number of construction HGVs will originate from the Port of Tilbury to access the proposed development along the A1089 St Andrews Road.

1.1.5 Abnormal indivisible loads (AILs) will access the proposed development through a new causeway on the river Thames, thus no AILs will use the highway network.

1.1.6 The TA has been prepared in accordance with the National Policy Statements for Energy Infrastructure (NPSs), published by the Department of Energy and Climate Change in 2011, the 'National Planning Policy Framework' (Ministry of Housing, Communities and Local Government (MHCLG), 2019), 'Planning Practice Guidance: Travel Plans, Transport Assessments and Statements in Decision-Taking' (MHCLG, 2014), and the Department for Transport (DfT) (2013) publication Circular 02/2013: 'The Strategic Road Network and the Delivery of Sustainable Development'.

1.1.7 It has also been prepared following liaison with and comments received from Highways England and Thurrock Council, full details of which are set out in Volume 3, Chapter 10: Traffic and Transport.

1.1.8 Section 2 of the TA sets out the existing situation and assesses the local and strategic highway network, road safety, facilities for pedestrians and cyclists, public transport facilities and existing traffic flows. Section 3 provides details of the proposed development, whilst an assessment is made against current local and national policies in respect to transport in Section 4.

1.1.9 Future year traffic flows are set out in Section 5 of the TA and details of the likely trip generation, distribution, assignment and modal share of trips is set out in Section 6. An assessment of the likely transport impact is set out in Section 7 and a cumulative assessment is contained in Section 8.

1.1.10 A summary is provided in Section 9 along with a conclusion that there are no transport or highways related reasons for not granting consent to the proposed development.

Legend

Order Limits

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Thurrock Flexible Generation Plant
Site Location Plan

Figure 1.1: Site Location Plan.

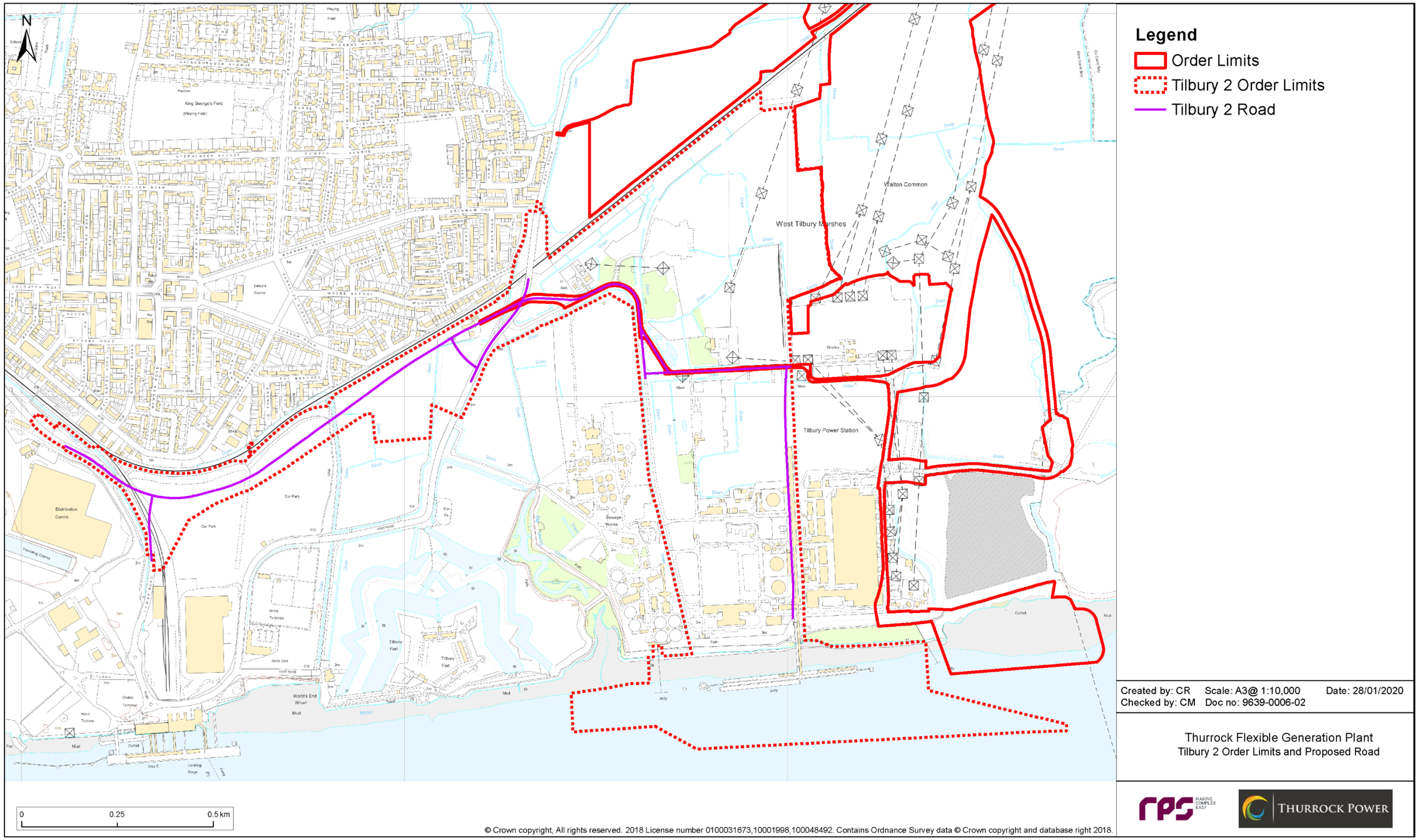


Figure 1.2: Site Location Plan with Tilbury 2 Proposed Access and Proposed Access Road.

2. Existing Situation

2.1 Site Location

2.1.1 The site is located immediately to the north of the existing Tilbury Substation and the site of the decommissioned Tilbury coal fired power station, with the River Thames further to the south. The eastern edge of Tilbury is approximately 800 m north west of the main development site, the village of West Tilbury is approximately 1.25 km to the north and East Tilbury village is approximately 2.1 km to the east.

2.1.2 Part of the main development site is known as Walton Common (registered common land number CL228). It forms part of the common known as The Green, Hall Hill, Fort Road, Parsonage, Walton and Tilbury Fort Commons (ID 33611).

2.1.3 The other land within the application boundary generally comprises grass or arable fields separated by drainage channels and some man-made ponds.

2.1.4 Existing access from the site is via a farm track to Station Road, which then connects to West Tilbury via Church Road and East Tilbury via Princess Margaret Road. To the north, the A13 dual carriageway provides a strategic highway route to the M25 and London.

2.2 Highway Network

Local Highway Network

2.2.1 The local transport network providing access to the site is shown on Figure 1.1.

2.2.2 Station Road is a 4.5 m – 6.2 m wide single carriageway road routing broadly west to east between Church Road and Princess Margaret Road respectively with a national speed limit of 60 mph. It has no footways, no street lighting and no formal parking restrictions (double yellow lines). At the narrow sections of Station Road there is clear forward visibility either side of the narrow sections, meaning that oncoming drivers can see one-another, and self- manage themselves, passing accordingly.

2.2.3 At its eastern end, Station Road forms the minor arm of a bifurcated simple priority junction with Princess Margaret Road. To the west, Station Road passes over an at-grade level crossing and becomes Church Road at its junction with Low Street Lane.

2.2.4 To the north east of the existing site access Love Lane forms the minor arm of a simple priority junction with Station Road and routes to Princess Margaret Road with a 7.5 tonne weight restriction. Love Lane is a one-way road in the south west bound direction.

2.2.5 Church Road is a single carriageway road with a national speed limit of 60 mph and is approximately 4.7 m – 6 m wide. It has no footways, no street lighting and no parking restrictions. Church Road continues west from Station Road into West Tilbury. Approximately halfway between Station Road and West Tilbury, Church Road becomes Coopers Shaw Road and continues as the major priority arm to the south west. At this point, Church Road forms the minor arm of a simple priority junction to provide access to West Tilbury with a 7.5 tonne weight restriction along it.

2.2.6 Coopers Shaw Road is a single carriageway road with a national speed limit of 60 mph and an approximate carriageway width of 6 m. There are no footways, no street lighting and no parking restrictions. It continues to the south west to Gun Hill where it becomes Fort Road and continues south west into Tilbury.

2.2.7 Fort Road is a single carriageway road routing west from Coopers Shaw Road then south and to the west. It is subject to the national speed limit of 60mph prior to entering Tilbury where the speed limit reduces to 30mph. The carriageway is of varying width along its length, generally being 5.5 m to 6 m wide. There is no street lighting and limited footways. Fort Road has a number of dedicated accesses to Tilbury Railport and Tilbury Ferry Port. Fort Road becomes the Ferry Road and then the A1089 St Andrews Road as it continues west.

Strategic Highway Network

2.2.8 To the north west of the Gate 1 entrance to the Port of Tilbury, the A1089 St Andrews Road becomes a dual carriageway road with two lanes in each direction at which point it becomes part of the Strategic Road Network. Along this section of road, it is subject to a 40mph speed limit.

2.2.9 Continuing north, the A1089 St Andrews Road forms the southern arm of a five-arm roundabout, known locally as the ‘ASDA Roundabout’. At the ASDA roundabout, the A1089 Dock Road Approach continues north; Dock Road provides the main vehicular link to Tilbury town centre to the south east; Thurrock Park Way provides a link to Thurrock Park Industrial Estate to the west; and there is an access to the consented London Distribution Park to the east. The ASDA roundabout has recently been improved as part of the consented London Distribution Park.

2.2.10 The A1089 is a dual carriageway road north of the ASDA roundabout which is subject to the national speed limit of 70 mph. It has street lighting, two lanes in both directions and forms merge and diverge lanes with both directions of the A13 at its northern end.

2.2.11 The A13 to the east of the A1089 is also a dual carriageway road and continues to Stanford Le Hope, Basildon and Southend on Sea. It connects to the grade separated Orsett Cock roundabout and is subject to the national speed limit of 70 mph. The A13 also continues west of the A1089 and connects to the M25 at junction 30 via a grade separated signalised gyratory. It has street lighting along both sides in the vicinity of the A1089.

2.2.12 The A13 is currently undergoing improvement works to widen it between the Orsett Cock roundabout and the A1014 from two to three lanes in both directions. As part of the work, the Orsett Cock roundabout will be widened, and new traffic lights will be installed. Works are planned to be complete by Autumn 2020.

2.3 Facilities for Pedestrians and Cyclists

Pedestrian Routes

2.3.1 There are a number of public rights of way (PRoWs) within the vicinity of the application site (to the north of the railway and the coastal path on the Thames bank), though none within the main development site. These link the nearby residential areas and provide connections to the River Thames to the south.

2.3.2 There are no footways along Station Road which connect to the site, however there are well lit footways along Princess Margaret Road in Linford, which connects the East Tilbury Rail Station to the bus stops and services within Linford.

Cycle Routes

2.3.3 Cycle linkage in the vicinity of the site is good with Station Road designated as a local cycle link which connects to Linford and East Tilbury in the east and Tilbury via Fort Road in the west. A Thurrock Cycle map is shown at Annex A.

Bus Services

2.3.4 The closest bus stops to the site are just off Princess Margaret Road on Gloucester Avenue, approximately 1 km east of the site, served by bus service number 374 which provides a direct link to Tilbury East Station and runs via Chadwell St Mary, East Tilbury and Stanford Le Hope in one direction and from West Horndon to Grays via Bulphan, Stanford Le Hope, East Tilbury and Chadwell St Mary in the other. This service runs 8 times a day Monday to Friday and 4 times a day on Saturdays. There is no Sunday Service.

2.3.5 A bus service map for the routes in the Thurrock area is included at Annex B.

Train Services

2.3.6 East Tilbury Train Station is located approximately 1.5 km to the north east of the site. The station is served by the C2C service which provides frequent linkage to destinations including Shoeburyness, Southend Central, Upminster, Barking and London Fenchurch Street.

2.4 Observed Traffic Flows

2.4.1 In order to determine the existing traffic flows on the adjacent local highway network, traffic survey data has been obtained from Highways England, DfT and recent planning applications in the vicinity of the site.

2.4.2 The source and details of the traffic data for each link on the highway network are shown in Table 2.1.

Table 2.1: Source of Observed Traffic Flows.

Road Link ID	Road Link / Description	Data Available	Year	Data Source
1	A13 between M25 junction 30 and A126	24-hour data	2014	Highways England, Webtris; and Department for Transport, Traffic Counts
2	A13 between A126 and A1012	24-hour Data	2014	Highways England, Webtris; and Department for Transport, Traffic Counts
3	A13 between A1089 and A1012	24-hour Data	2014	Highways England, Webtris; and Department for Transport, Traffic Counts

Road Link ID	Road Link / Description	Data Available	Year	Data Source
4	A1089 between Marshfoot Road roundabout and A13	24-hour Data	2018	Highways England, Webtris
11	Coopers Shaw Road / Church Road / Station Road, between Gun Hill Road and EMR East Tilbury junction	12-Hour Data	2017	18/00458/FUL - Pulverised Fuel Ash Extraction, Ashfields Site Transport Statement; and TR030003 – Tilbury 2 Transport Assessment
15	A13, between Orsett Cock roundabout and A1089	24-Hour Data	2016	Department for Transport, Traffic Counts
16	A1089 Dock Approach Road, between Marshfoot Road roundabout and ASDA roundabout	24-Hour Data	2016	TR030003 – Tilbury 2 Transport Assessment
17	A1089 St Andrews Road, between ASDA roundabout and Port of Tilbury Gate 1	24-Hour Data	2016	TR030003 – Tilbury 2 Transport Assessment
18	A1089 St Andrews Road, between Port of Tilbury Gate 1 and Proposed Tilbury 2 Road	24-Hour Data	2016	TR030003 – Tilbury 2 Transport Assessment
19	Proposed Tilbury 2 Road between A1089 St Andrews Road and Fort Road	24-Hour Data	2016	TR030003 – Tilbury 2 Transport Assessment
20	Fort Road, between Proposed Tilbury 2 Road and Brennan Road	24-Hour Data	2016	TR030003 – Tilbury 2 Transport Assessment
21	Fort Road, between Brennan Road and Coopers Shaw Road	24-Hour Data	2016	TR030003 – Tilbury 2 Transport Assessment
22	Station Road, East Tilbury	24-Hour Data	-	Estimate using professional judgement

2.4.3 Traffic data was available for the majority of links and taken from a number of sources in order to provide the latest available data for each link. However, for link 22, Station Road East Tilbury, there was no data available. Therefore, the total and heavy vehicle traffic flows on the links have been estimated using the traffic flows observed on the adjacent highway and applying professional judgement. This resulted in an estimation of a 24-hour AADT of 500 for the number of total vehicles and no heavy vehicles, due to the Traffic Regulation Order (TRO) in place which restricts vehicles in excess of 7.5 tonnes.

2.4.4 The resulting base 24-hour traffic data for all links are shown in Table 2.2.

Table 2.2: Observed Traffic Flows.

Road Link ID	Road Link / Description	Data	24 Hour AADT
			Observed
1	A13 between M25 junction 30 and A126	Total	105,742
		HV	11686
2	A13 between A126 and A1012	Total	87145
		HV	11066
3	A13 between A1089 and A1012	Total	92240
		HV	10988
4	A1089 between Marshfoot Road roundabout and A13	Total	26691
		HV	7047
11	Coopers Shaw Road / Church Road / Station Road, between Gun Hill Road and EMR East Tilbury junction	Total	977
		HV	190
15	A13, between Orsett Cock roundabout and A1089	Total	86272
		HV	8142
16	A1089 Dock Approach Road, between Marshfoot Road roundabout and ASDA roundabout	Total	29123
		HV	6948
17	A1089 St Andrews Road, between ASDA roundabout and Port of Tilbury Gate 1	Total	13477
		HV	6235
18	A1089 St Andrews Road, between Port of Tilbury Gate 1 and Proposed Tilbury 2 Road	Total	5263
		HV	1382
19	Proposed Tilbury 2 Road between A1089 St Andrews Road and Fort Road	Total	1413
		HV	220
20	Fort Road, between Proposed Tilbury 2 Road and Brennan Road	Total	1413
		HV	220
21	Fort Road, between Brennan Road and Coopers Shaw Road	Total	1906
		HV	243
22	Station Road, East Tilbury	Total	500
		HV	0

2.5 Road Safety

Local Highway Network

2.5.1 Personal injury accident (PIA) data have been obtained for the most recently available 5 year period from the website Crashmap, which provides a summary of PIAs from data recorded by the police.

2.5.2 The area of study for the local road network is the construction vehicle route including Station Road, Church Road, Coopers Shaw Lane and Fort Road.

2.5.3 A summary of the injury accident locations and severity is shown on Figure 2.1. Crashes are categorised by severity as follows:

- Fatal - a crash resulting in a death;
- Serious - detention in hospital, includes paralysis, fractures and severe lacerations; and
- Slight - includes whiplash, sprains and minor lacerations.

2.5.4 The Crashmap output reports are attached at Annex C.

2.5.5 During the five-year period there was a total of 9 PIAs in the study area. Three resulted in serious injury and the remainder were classified as slight injury accidents. There were no fatal injury accidents.

2.5.6 Of the total accidents two involved goods vehicles, with the remainder of the injury accidents involving cars only.

2.5.7 All three serious PIAs occurred on Fort Road, between the Brennan Road junction and Gun Hill junction. One occurred on Fort Road on a bend when a driver failed to look before overtaking, the other two occurred on a straight section of road where drivers lost control and entered a ditch.

2.5.8 The analysis shows a cluster of injury accidents at Fort Road between the Brennan Road junction and Gun Hill junction where 4 PIAs occurred during the five-year period, 1 of which was slight and the rest classified as serious (as described above). The slight PIA occurred when the driver lost control of the vehicle.

2.5.9 From the analysis undertaken at this section of the road network, it appears that driver error is the common contributory factor in the PIA data obtained. There does not appear to be anything in relation to the existing highway layout or geometries that contributes to a road safety concern.

ASDA roundabout

2.5.10 In accordance with comments received from Highways England and Thurrock Council, PIA data has been obtained from Essex Highways for the latest available 5-year period for the ASDA roundabout. The data are included in Annex D.

2.5.11 There have been 22 injury accidents recorded within the study area, during the five year analysis period. This equates to an average of 4 injury accidents per year.

2.5.12 There were 18 slight and 4 serious injury accidents across the five-year period. There were no fatal injury accidents recorded during the time period and area selected. The locations of the injury accidents are shown on Figure 2.2 of this report.

2.5.13 Of the 4 serious injury accidents occurring at the ASDA roundabout, one involved a motorcycle which lost control travelling from the A1089 Dock Approach Road southbound and upon entering the roundabout hit a pothole. A second serious injury accident occurred when a car driver failed to look and collided with a pedestrian at an informal crossing point to the north of the ASDA roundabout on Dock Approach Road. The third serious injury accident involved a car driver failing to look resulting in shunting a car onto the ASDA roundabout southbound from the A1089 Dock Approach Road. The final serious injury accident occurred when a car collided with a cyclist after failing to look after entering the ASDA roundabout from Thurrock Park Way.

2.5.14 Along with the aforementioned serious injury accidents there were 18 slight injury accidents at the ASDA roundabout. Five slight injury accidents involving goods vehicles occurred at the roundabout after four failed to look and one failed to judge speeds correctly leading to its load shifting in its container and tipping over. One slight injury accident involved a pedal cycle which failed to look and two injury accidents involved motorcycles which failed to look. Of the remaining slight injury accidents all involved cars which either failed to look, failed to judge speeds or lost control after driving at excessive speeds.

2.5.15 Of the aforementioned slight injury accidents, one included a goods vehicle which overturned on the roundabout due to failing to reduce speed when traversing the roundabout carriageway. On the A1089 Dock Approach road southbound and on the roundabout itself there are signs warning goods vehicles of tipping and giving a max speed of 30 mph. It should be noted that as part of the Tilbury 2 consented application the speed limit on approach to the roundabout will be reduced to 30 mph from the north and from the south. It is also noted that there are road signs warning drivers of adverse camber both north of the roundabout and on the circulatory carriageway.

2.5.16 Having analysed the injury accident data, it is considered that there are no common contributory factors of injury accidents which would highlight any potential deficiency in the design of the roundabout and that there are therefore no prevailing highway safety issues.

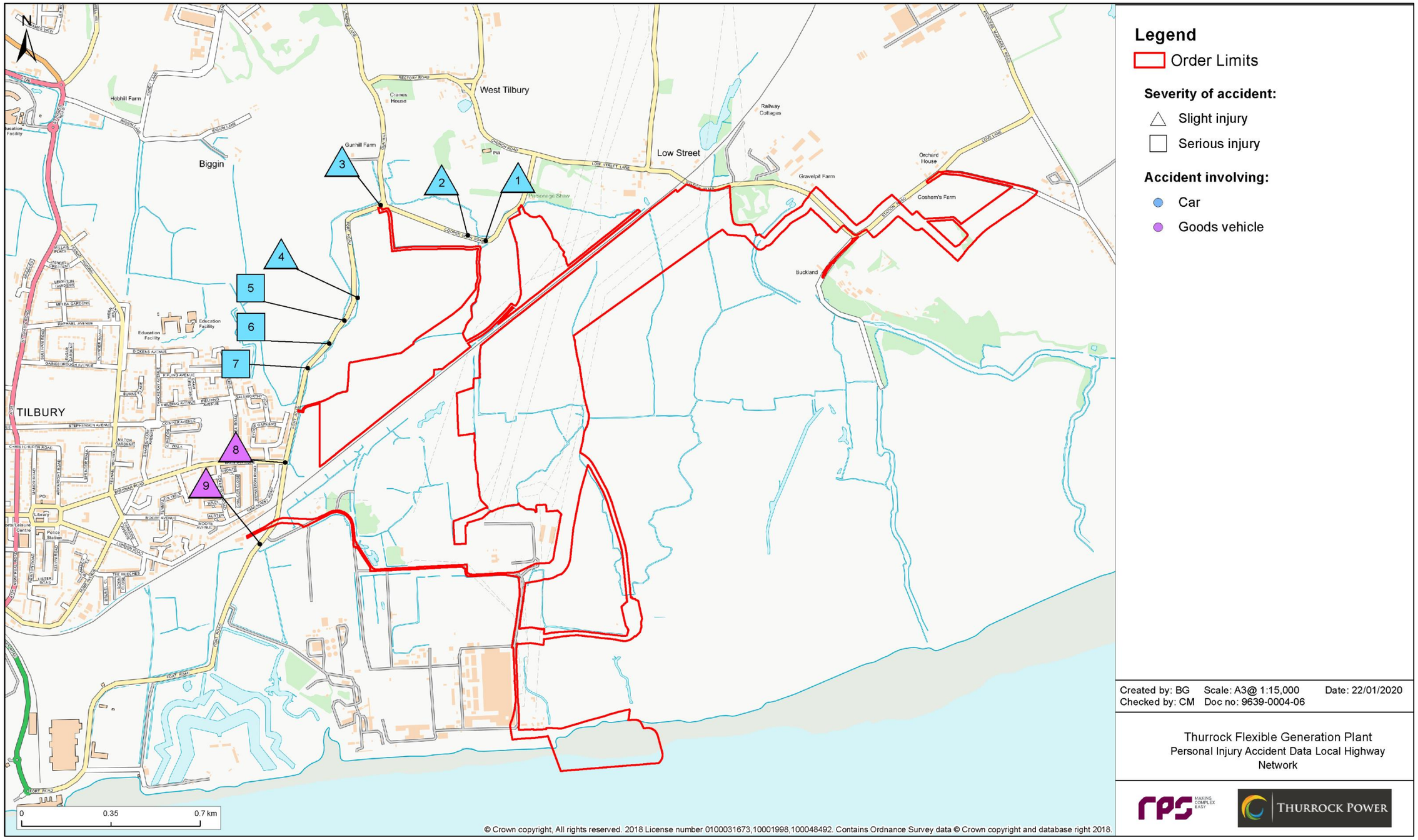
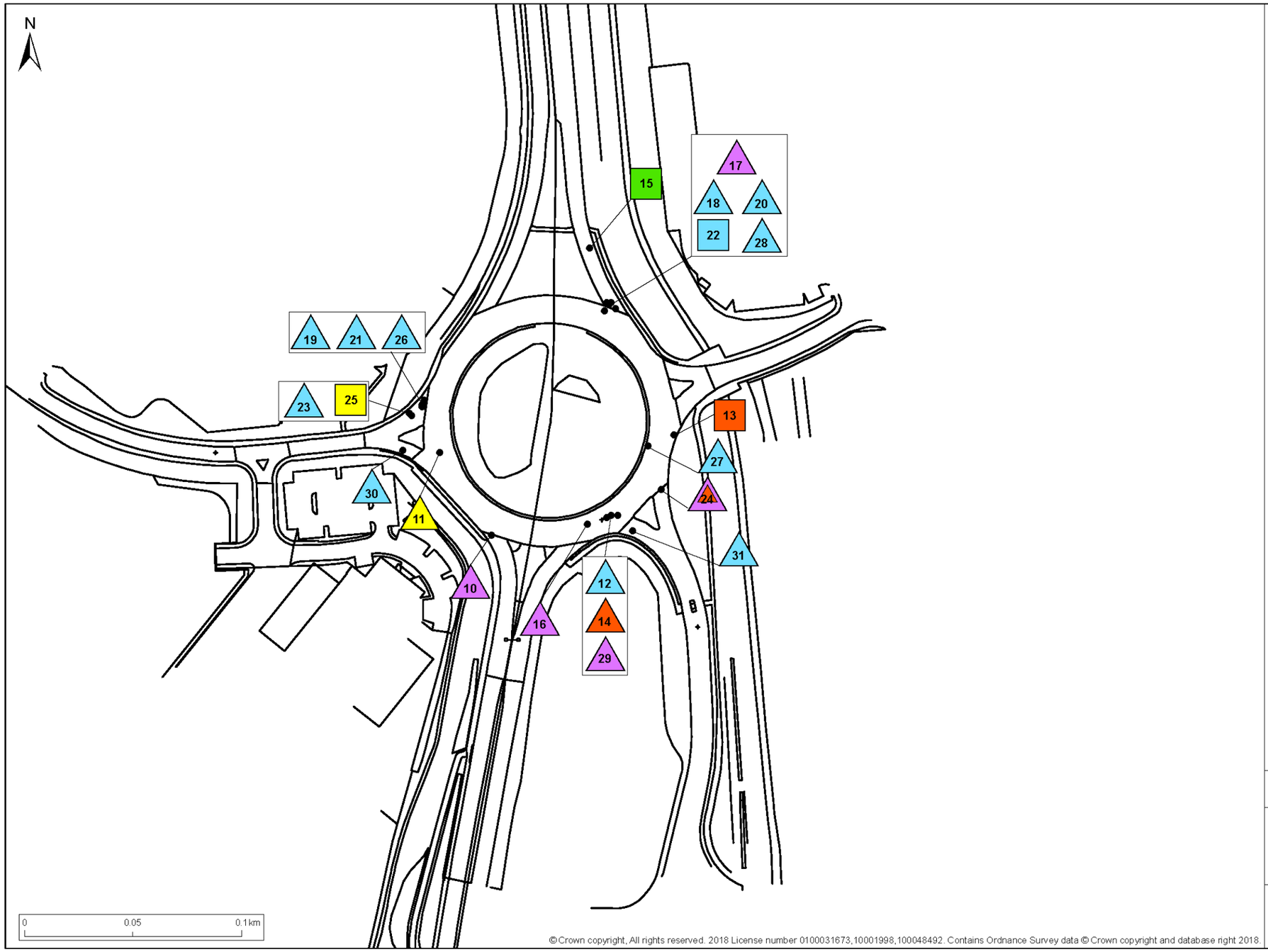


Figure 2.1: Personal Injury Accident Data Local Highway Network Plan



Legend

Severity of accident:

- Slight injury
- Serious injury

Accident involving:

- Car
- Goods vehicle
- Motorcycle
- Pedal cycle
- Pedestrian

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Thurrock Flexible Generation Plant
Personal Injury Accident Data ASDA Roundabout

Figure 2.2: Personal Injury Accident Data ASDA roundabout Plan

3. Development Proposals

3.1 Introduction

3.1.1 Full details of the development proposals are set out in Volume 2, Chapter 2: Project Description of the ES.

3.1.2 Those parts that require assessment as part of this TA are described below.

3.2 Construction Phasing and Timescales

3.2.1 Details on the construction phasing and timescales are set out in Volume 2, Chapter 2: Project Description of the ES.

3.3 Construction Hours

3.3.1 Normal construction working hours will be Monday to Friday 08:00–18:00 and Saturday 08:00–13:00. No Sunday, bank holiday or night working is proposed save as described below.

3.3.2 Non-noisy activities such as fit-out within buildings may be undertaken outside those hours where these would not cause disturbance off-site. It is possible that certain construction activities that cannot be interrupted, such as a continuous concrete pour, may be required.

3.4 Construction Staff and Construction HGV Deliveries

3.4.1 The PEIR previously estimated construction staff and construction deliveries in conjunction with the applicant and their construction contractor for their scheme at Creyke Beck, which is a similar scheme near Cottingham, Humberside.

3.4.2 Since the PEIR has been prepared the applicant has gained more experience with a wider range of schemes similar to the proposed development and the fluctuations associated with these. As such the applicant has refined the estimated number of construction staff and construction deliveries to ensure a robust assessment.

3.4.3 Therefore, the applicant has used their experience of similar schemes and have estimated the following for the proposed Thurrock Flexible Generation Plant:

- An average of 250 construction staff on site per day;
- A peak of up to 350 construction staff on site per day;
- An average of 40 construction HGV deliveries per day (average of 80 construction HGV movements per day); and
- A peak of 80 construction HGV deliveries per day (160 construction HGV movements per day).

3.4.4 These estimates include all associated construction activities including all deliveries (including Abnormal Indivisible Loads (AIL) vehicles) and all removal of material / waste etc.

3.4.5 Section 6 sets out that there will be an average of 25 construction workers arriving as a car driver per day, peaking at up to 35 per day. To ensure safety within the construction site, no inappropriate parking and no overspill onto the public highway, 40 car parking spaces will be set aside within the construction site, as dictated by the construction site manager. 7 Minibus and 2 coach parking spaces will also be provided, with exact numbers to be confirmed by the construction contractor. The number of vehicle parking spaces provided are a worst-case estimation with the majority of, if not all, construction staff taken to the site via minibus or coach from various pick up points in the Thurrock area, such as their accommodation locations or a dedicated parking area.

3.4.6 The construction contractor will be required to use minibuses and coaches to transport construction staff to / from the site. The locations of pick up and drop off points will be confirmed within the Full CTMP, after a contractor has been appointed. These locations will include accommodation, public transport nodes and / or any dedicated off-site car parking locations for staff.

3.4.7 Dedicated off site car parks that currently operate as a car park already have consent to be used as a car park, unless they have any restrictions attached to their consent.

3.4.8 Land which is currently not operating as a car park would need a planning application via the Town and Country Planning Act to secure the use of any such land to be used as an off-site car park.

3.4.9 It is expected that all staff would use the minibus / coach service, however, as set out in Section 6, for assessment purposes a small number of staff have been assumed to travel by car.

3.5 Abnormal Indivisible Loads

3.5.1 The largest items of plant that will be delivered as part of the construction of site include the gas turbines, steam turbines, generators and transformers.

3.5.2 It is proposed for the AILs to arrive at the proposed development site via a jetty on the River Thames and to access the site from the south without using the highway network (Zone G).

3.5.3 A concept design drawing of the jetty and causeway is attached at Annex E which shows the location where it will allow passage through the seawall.

3.5.4 From the jetty, a haul road will be provided to the existing RWE road by running parallel to the seawall in an east to west direction. A design drawing of the haul road is provided at Annex E which shows a horizontal layout, longitudinal section and cross sections.

3.5.5 AILs will utilise the existing RWE road running north to south along the eastern side of the former Tilbury B power station from which two options are then available. It was envisaged that access would be taken between the RWE substation and the land raising and restoration being undertaken by Ingrebourne Valley, however, due to a recent land heave along this route, an alternative has also been identified which routes in between the areas of land raising and restoration being undertaken by Ingrebourne Valley. Only one of these routes will be constructed and utilised but due to the recent land heave, it is necessary to include both within the DCO boundary to ensure the ground conditions does not preclude access.

3.5.6 A design drawing of the western option between the RWE substation and the land raising and restoration is shown at Annex E which shows a horizontal layout, longitudinal section and cross sections. In liaison with RWE, a 3.0m separation has been provided between the existing RWE fence and the road whilst a 2.0m wide verge will be provided on the road's eastern side beyond which the land restoration will begin its rise up to its restored level. In liaison with Ingrebourne Valley, there are long term aspirations to restore the land up to 11.0m AOD and the road design allows for this as well as the consented (Application Ref: 17/00412/FUL) 9.0m AOD level.

3.5.7 A design drawing of the eastern option between the areas of land raising and restoration is shown at Annex E. The majority of this route is along level ground, but a short section passes through the land restoration, which allows for both the consented 9.0m AOD level and the long term aspiration to raise to 11.0m AOD.

3.6 Construction Access

Construction Access Route

3.6.1 The intention is for daily construction vehicles to route from the A13 and then south on the A1089 Dock Approach Road, A1089 St Andrews Road and A1089 Ferry Road, then routing east onto the proposed Tilbury 2 road and into the RWE and Tilbury 2 access, as shown on Figure 3.1.

3.6.2 Once within the RWE site, construction vehicles would join with the road described above for AILs and utilise this to access the site.

3.6.3 A secondary access point is proposed on Station Road, where vehicles would continue along Fort Road and access Station Road, through Coopers Shaw Road and Church Road. This would be used only in exceptional circumstances in the event that the Fort Road access was unavailable temporarily for any reason. A design drawing of the access junction and road into the site is attached at Annex E.

3.6.4 The access would be located 45 m to the east of the railway crossing to enable space for two northbound HGVs queuing to cross the railway, without blocking the access. Inbound and outbound HGV movements can be achieved simultaneously. A visibility splay of 2.4 m x 69 m would be provided to the right (to the east), commensurate with 85th percentile vehicle speeds of 40mph using Manual for Streets 2 principles.

3.6.5 HGVs which deliver material from the Port of Tilbury to the proposed development are proposed to arrive to the port from the A13, collect the load, turn left onto the A1089 to exit the port, perform a u-turn at the ASDA roundabout and continue southbound on the A1089 to the site. Having made the delivery of materials to the proposed development, HGVs would then exit the site travelling northbound from the site to the A13 via the A1089.

3.6.6 Each such event would result in eight daily HGV movements on the section of the A1089 between the Port of Tilbury and the Asda roundabout. The Port of Tilbury has planning consent for HGVs to arrive and depart the Port to collect the material. HGV movements have therefore only been assessed for the part of the route originating from the Port of Tilbury to the proposed development to avoid double counting.

3.6.7 In accordance with comments from Highways England and Thurrock Council, a swept path analysis has been undertaken to show an HGV performing a U-turn at the ASDA roundabout, shown at Annex F. This shows that a HGV can negotiate the circulatory carriageway of the roundabout simultaneously with another HGV alongside. The northbound entry arm of the A1089 is unable to accommodate two HGVs travelling alongside each other.

3.6.8 It is noted that Tilbury 2 will improve this arm as one of its DCO Requirements. Notwithstanding, traffic management measures will be adopted and, in accordance with the Outline CTMP (application document A8.8), all HGV driver undertaking a U-turn will be instructed to not travel alongside another HGV when entering the roundabout.

3.6.9 In accordance with the Outline CTMP (application document A8.8), all HGV drivers will also be advised of the adverse camber signs on the ASDA roundabout and will be instructed to slow down when circulating the roundabout (both when undertaking a U-turn and also when travelling north to south) to undertake their manoeuvre safely.

3.6.10 A number of construction vehicles will be associated with the works for the gas compound and the gas pipeline accessed from Station Road East Tilbury. It is estimated that these works will be over a few months and would generate up to 10 HGV movements per day (5 in each direction). During this period, the 7.5 tonne weight restriction on Station Road would be temporarily suspended.

3.6.11 Construction staff are expected to report to the main compound and travel together to the works at the gas compound and generate up to 10 car movements per day. Only these construction vehicles will travel along Station Road.

3.6.12 The gas pipeline crosses Station Road in two locations. It is expected that these works would be undertaken by way of open cut trenching. Given the width of Station Road, the length of time to undertake the open cut trenching is expected to take a matter of days. During the open cut trenching works, Station Road will have to be closed and a local diversion put in place. The contractor may choose to undertake these works over a series of nights meaning that the local diversion is only in place at nights. This proposal will be developed with Thurrock Council, as the Local Highway Authority. The management measures to be adopted for these works are set out in the Outline CTMP (application document A8.8) and will be confirmed post consent in agreement with Thurrock Council.

3.7 Operational Phase Staff

3.7.1 The operational workforce will consist of 24 full time staff operating in two 12-hour shifts with 6 staff working in each shift, this will allow 4 days on, 4 days off for staff. Shifts are envisaged to begin at 07:00 and end at 19:00.

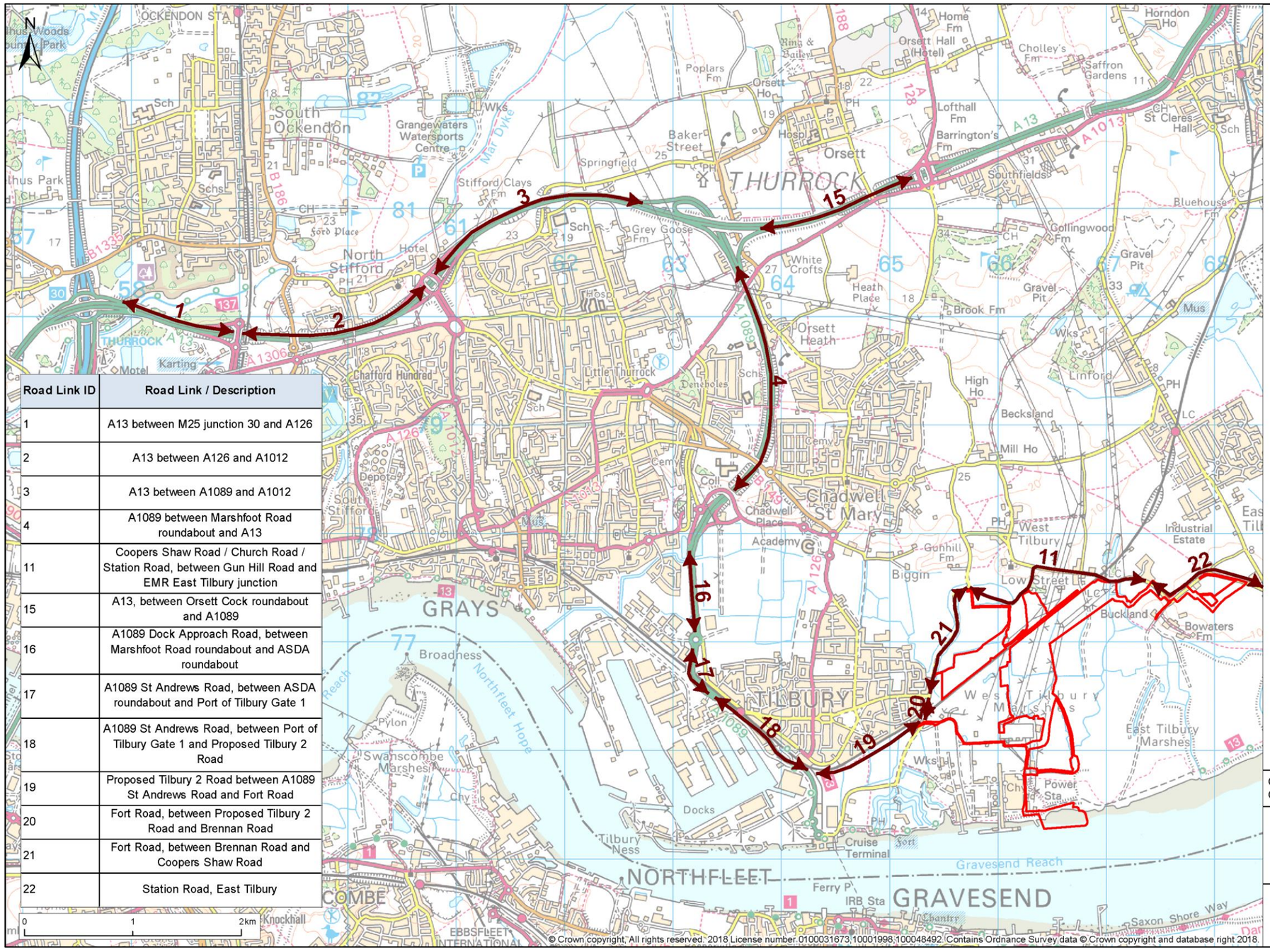
3.7.2 As well as the operational workforce, operational maintenance staff will also be required at the development. The maintenance staff will be separate from the operational workforce and conduct one major maintenance visit per annum (duration of three weeks) and four minor maintenance visits per annum (duration of one week). The operational maintenance staff will number 20 staff for the major maintenance visit and 6 staff for the minor maintenance visit.

3.7.3 32 car parking spaces will be provided for the operational workforce, including for the full-time staff and the maintenance staff.

3.8 Operational Phase Access

3.8.1 Permanent road access will be provided through Zones H and G to the public highway at Fort Road with a secondary permanent access provided from Station Road. The construction access provided on the southern side of Station Road (described above) will be retained for operational access.

3.8.2 The Lower Thames Crossing link road to Tilbury is expected to route through Zone C but is not expected to prevent access to the operational site. The access road to Zone C will be a private access road for the occasional vehicles associated with the operational phase and its alignment could be adjacent to the railway line in the northern part of this parcel of land. The Lower Thames Crossing link road will be an All Purpose Road with a connection further south which means it will be located far away from the railway line and continue to diverge even further from it at its western end. It is not expected that the access to Zone C would prejudice the delivery of the Lower Thames Crossing.



Road Link ID	Road Link / Description
1	A13 between M25 junction 30 and A126
2	A13 between A126 and A1012
3	A13 between A1089 and A1012
4	A1089 between Marshfoot Road roundabout and A13
11	Coopers Shaw Road / Church Road / Station Road, between Gun Hill Road and EMR East Tilbury junction
15	A13, between Orsett Cock roundabout and A1089
16	A1089 Dock Approach Road, between Marshfoot Road roundabout and ASDA roundabout
17	A1089 St Andrews Road, between ASDA roundabout and Port of Tilbury Gate 1
18	A1089 St Andrews Road, between Port of Tilbury Gate 1 and Proposed Tilbury 2 Road
19	Proposed Tilbury 2 Road between A1089 St Andrews Road and Fort Road
20	Fort Road, between Proposed Tilbury 2 Road and Brennan Road
21	Fort Road, between Brennan Road and Coopers Shaw Road
22	Station Road, East Tilbury

Legend

Order Limits

Road Link

Created by: BG Scale: A3@ 1:40,000 Date: 22/01/2020
Checked by: CM Doc no: 9639-0002-04

Thurrock Flexible Generation Plant
Link Locations

Figure 3.1: Route and Link Location Plan

4. Compatibility with Transport Policies

4.1 National Policy Statements

4.1.1 National Policy Statements (NPSs) have been developed to guide the decision-making process for NSIPs. The NPSs define the national need for certain types of infrastructure, as well as the issues to be considered by the examining body when assessing whether a location is acceptable for the type and scale of development proposed.

Overarching National Policy Statement for Energy (EN-1)

4.1.2 EN-1 (Department of Energy and Climate Change (DECC), 2011a) sets out national policy for energy infrastructure projects defined as NSIPs under the Planning Act 2008. It is noted that this document makes reference to the former Infrastructure Planning Commission (IPC), whose functions are now replaced by the Planning Inspectorate's National Infrastructure Directorate. Section 1.1 of this document states that:

"For such applications this NPS, when combined with the relevant topic-specific energy NPS, provides the primary basis for decisions by the IPC."

4.1.3 In relation to traffic and transport it states that the consideration and mitigation of transport impacts is an essential part of the Government's wider policy objectives for sustainable development.

4.1.4 It highlights that for the applicant if a project is likely to have significant transport implications, the applicant's ES should include a transport assessment. Applicants should consult the Highways Agency (now Highways England) and Highways Authorities as appropriate on the assessment and mitigation. Where appropriate a travel plan should also be prepared and if additional transport infrastructure is proposed, applicants should discuss with network providers the possibility of co-funding by Government for any third-party benefits.

4.1.5 Where mitigation is needed, possible demand management measures must be considered and if feasible and operationally reasonable, required, before considering requirements for the provision of new inland transport infrastructure to deal with remaining transport impacts. PINS should have regard to the cost-effectiveness of demand management measures compared to new transport infrastructure.

4.1.6 PINS may attach requirements to a consent where there is likely to be substantial HGV traffic that:

- *"Control numbers of HGV movements to and from the site in a specified period during its construction and possibly on the routing of such movements;*
- *Make sufficient provision for HGV parking, either on the site or at dedicated facilities elsewhere, to avoid 'overspill' parking on public roads, prolonged queuing on approach roads and uncontrolled on-street HGV parking in normal operating conditions; and*
- *Ensure satisfactory arrangements for reasonably foreseeable abnormal disruption, in consultation with network providers and the responsible police force."*

4.1.7 It is noted that if an applicant suggests that the costs of meeting any obligations or requirements would make the proposal economically unviable this should not in itself justify the relaxation by PINS of any obligations or requirements needed to secure the mitigation.

Fossil Fuel Electricity Generation (EN-2)

4.1.8 Paragraph 2.2.6 of EN-2 states:

"Government policy encourages multi-modal transport and materials (fuel and residues) may be transported by water or rail routes where possible. (See Section 5.13 of EN-1 on transport impacts). Applicants should locate new fossil fuel generating stations in the vicinity of existing transport routes wherever possible. Although there may in some instances be environmental advantages to rail or water transport, whether or not such methods are viable is likely to be determined by the economics of the scheme. Road transport may be required to connect the site to the rail network, waterway or port. Any application should therefore incorporate suitable access leading off from the main highway network. If the existing access is inadequate and the applicant has proposed new infrastructure, the IPC should satisfy itself that the impacts of the new infrastructure are acceptable as set out in Section 5.13 of EN-1."

4.2 National Policy Guidance

National Planning Policy Framework (2019)

4.2.1 The National Planning Policy Framework (NPPF) (MHCLG, 2019) was updated in June 2019 and sets out national policy for delivering sustainable growth and development. The updated NPPF replaces the previous National Planning Framework published in March 2012 and revised in July 2018. The NPPF aims to make the planning system less complex and more accessible. The NPPF sets out the Government's planning policies for England and how these are expected to be applied. In terms of transport the objectives outlined in NPPF are set out in paragraph 102:

"Transport issues should be considered from the earliest stages of plan-making

and development proposals, so that:

a) the potential impacts of development on transport networks can be addressed;

b) opportunities from existing or proposed transport infrastructure, and changing transport technology and usage, are realised – for example in relation to the scale, location or density of development that can be accommodated;

c) opportunities to promote walking, cycling and public transport use are identified and pursued;

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; and

e) patterns of movement, streets, parking and other transport considerations are integral to the design of schemes and contribute to making high quality places."

4.2.2 When determining planning applications, Paragraph 108 of the NPPF states it should be ensured that:

"a) appropriate opportunities to promote sustainable transport modes can be – or have been – taken up, given the type of development and its location;

b) safe and suitable access to the site can be achieved for all users; and

c) any significant impacts from the development on the transport network (in terms of capacity and congestion), or on highway safety, can be cost effectively mitigated to an acceptable degree."

4.2.3 Paragraph 109 states that:

"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."

4.2.4 Having regard to the above, the proposed development's access and movement will ensure that the development is connected to the wider highway network.

Planning Policy Guidance (NPPG) (March 2014)

4.2.5 National Planning Practice Guidance (NPPG) – Travel Plans, Transport Assessments and Statements in Decision-Taking (MHCLG, 2014) was published in March 2014 and provides a concise report on the use and importance of Transport Assessments / Statements and Travel Plans. With regard to whether to provide a Transport Assessment, Transport Statement or no assessment, the guidance states:

"Local planning authorities, developers, relevant transport authorities, and neighbourhood planning organisations should agree what evaluation is needed in each instance."

4.2.6 The guidance states that Transport Assessments / Statements and Travel Plans can positively contribute to:

- *"encouraging sustainable travel;*
- *lessening traffic generation and its detrimental impacts;*
- *reducing carbon emissions and climate impacts;*
- *creating accessible, connected, inclusive communities;*
- *improving health outcomes and quality of life;*
- *improving road safety; and*
- *reducing the need for new development to increase existing road capacity or provide new roads."*

4.2.7 The guidance states that Transport Assessments / Statements and Travel Plans should be proportionate to the size and scope of the proposed development, be tailored to particular local circumstances and be established at the earliest practicable possible stage of a development proposal.

4.2.8 The guidance continues by stating that these reports should be brought forward through collaborative ongoing working between the Local Planning Authority / Transport Authority, transport operators, Rail Network Operators, Highways Agency and other relevant bodies.

4.2.9 The proposed development will alter the volume of traffic on the adjacent road network during the construction stage. Vehicle movements will be associated with construction staff, HGV movements and AILs. However, as outlined in Sections 6 and 7, the volume of construction vehicle is not anticipated to be significant. The construction process is expected to generate an average of 80 two-way HGV movements per day and a peak of 160 two-way HGV movements per day.

4.2.10 The vehicle movements generated by construction are temporary; therefore, the impact of the development on the highway network is temporary. When the site is operational, there will be a limited number of irregular vehicle movements at the site.

4.2.11 The NPPG states that Transport Assessments / Statements and Travel Plans should be proportionate to the size and scope of the proposed development. Considering the above, this Transport Assessment has been prepared to consider the transport related effects associated with construction only.

Circular 02/2013: The Strategic Road Network and the Delivery of Sustainable Development

4.2.12 Circular 02/2013: The Strategic Road Network and the Delivery of Sustainable Development, was published by the Department for Transport in September 2013. The Circular sets out the way in which the Highways Agency (now Highways England) will engage with communities and the development industry to deliver sustainable development and economic growth whilst safeguarding the primary function and purpose of the strategic road network.

4.2.13 Circular 02/2013 replaces Circular 02/2007 and 01/2008. Circular 02/2013 states that '*the Highways Agency supports the economy through the provision of a safe and reliable strategic road network, which allows for the efficient movement of people and goods'*. Similarly, to the NPPF, Circular 02/2013 states that 'development should only be prevented or refused on transport grounds where the residual cumulative impacts of development are severe.

4.3 Local Policy

4.3.1 National policy on transport and land use establishes broad policy objectives that reflect the Government's aspirations for integrating land development and transport. The role of local government is to develop strategies based on specific local social and spatial requirements, which deliver the national aspirations.

4.3.2 Local strategy with respect to land use and transport is articulated in statutory documents prepared by planning and highway authorities which, for this development, comprises of:

- Thurrock Council (2015) Core Strategy and Policies for Management of Development;
- Thurrock Council (2013) Transport Strategy;
- Thurrock Council (2016) Parking Strategy and Policies; and
- Essex County Council (2011) Development Management Policies.

Thurrock Core Strategy and Policies for Management of Development (January 2015)

4.3.3 The Thurrock Borough Core Strategy and Policies for Management of Development (Adopted December 2011, amended 2015), is a strategic document providing broad guidance on the scale and distribution of development and the provision of supporting infrastructure. It sets out the spatial vision, spatial objectives, the spatial development strategy and policies for Thurrock to 2026 and beyond together with a monitoring and implementation framework.

4.3.4 The Transport and Access section sets out the council's strategy for tackling congestion, road safety, air quality and enabling better access to services. Its aims are to reduce the need to travel and encourage the location of new development and delivery of services in places that have good levels of accessibility for people.

4.3.5 Policy CSTP14 (Transport in the Thurrock Urban Area) identifies the measures to be promoted to increase the uptake of travel by sustainable modes, it is identified that the Council will work to deliver at least a 10% reduction in car traffic from forecast 2026 levels. Within Policy CSTP14 it is stated that new development should:

"promote high levels of accessibility by sustainable transport modes and local services are conveniently located to reduce the need to travel by car."

4.3.6 Policy CSTP16 (National and Regional Transport Networks) states that the Council will work with partners to deliver improvements to national and regional networks. In particular to:

"Support the delivery of additional highway capacity, including through the use of technology and information, but only where modal shift will be insufficient to address congestion. Opportunities will be taken to improve public transport as part of any enhancements. Priority will be given to routes that provide access, especially for freight, to Strategic Employment Sites, the ports at London Gateway, Tilbury and Purfleet, and regeneration areas. This will include:

- *M25 between junctions 27 and 30;*
- *M25 junction 30;*
- *A13 from A128 to A1014;*
- *A13 and A1089 junction improvement; and*
- *A1014 from A13 to London Gateway."*

4.3.7 Policy CSTP17 (Strategic Freight Movement and Access to Ports) states that the Council will support the logistics and port sectors, and the positive impacts of freight activity in Thurrock and beyond, by:

- *"Facilitating a shift to rail freight and freight carried on the River Thames. This will be through;*
- *Protecting inter-modal, rail and water-borne freight facilities from other development at locations where a demand exists or is expected to exist;*
- *Promoting the use of rail and water borne freight facilities by supporting the development of appropriate infrastructure;*
- *Supporting improvements to facilitate sustainable freight movements, including the rail hub at London Gateway, the South West Thurrock Railhead and improving access to the ports; and*
- *Facilitating the provision of 24-hour lorry parks at Tilbury Port, London Gateway and West Thurrock. Subject to compliance with other policies in this plan, other lorry parks will be considered in locations where demand can be shown to exist, which are located away from residential areas and have good access to the Strategic Road Network."*

4.3.8 It is also identified in Policy CSTP17 that the Council will support the logistics and port sectors by working as part of a Freight Quality Partnership and with other relevant partners to:

- *"Maximise modal shift opportunities;*
- *Ensure freight traffic keeps to the most suitable routes as defined in Thurrock Council's Road Network Hierarchy;*
- *Promote the use of less polluting vehicles; and*
- *Reduce the adverse impact of congestion caused by freight on the A13, A1089 and A1306*."

Thurrock Transport Strategy 2013 – 2026

4.3.9 The Thurrock Transport Strategy describes Thurrock Council's transport strategy for the period 2013 to 2026, setting out the aims, objectives and policies for delivering transport improvements in Thurrock. As such, the document comprises the strategy element of the third Local Transport Plan (LTP3) for Thurrock. Thurrock's Transport Strategy Vision aims to create a transport system for Thurrock that:

- is fully inclusive, meeting the social needs of residents;
- is integrated to provide seamless multi-modal journeys;
- is accessible for everyone, safe and attractive to use;
- delivers sustainable community regeneration and growth; and
- reflects the exceptional circumstances of Thurrock as an international centre for logistics and commercial development.

4.3.10 The plan seeks to promote capacity improvements on the Strategic Road Network, with priority for freight routes to key strategic economic hubs.

Thurrock Council – Parking Strategy and Policies (2016-2021)

4.3.11 The Thurrock Parking Strategy outlines the policies and strategies over the five years from 2016-2021.

4.3.12 It is identified that Thurrock Council will:

"Work in close partnership with the ports, freight operators and Essex Police to ensure that freight movements can be accommodated with minimum disruption to residents."

Essex County Council Development Management Policies (February 2011)

4.3.13 The Essex County Council Development Management Policies outlines the key transport policies for Essex County Council. In terms of Transport Assessments Policy DM13 states that the highway authority will require:

"A Transport Assessment (TA) to accompany a planning application in accordance with the thresholds set out in Appendix B, or where the Highway Authority deems it to be necessary."

4.3.14 In relation to HGV movements, Policy DM19 states:

"The Highway Authority will protect the safety and efficiency of the highway network by ensuring that any proposals which generate a significant number of heavy goods vehicle movements:

- *Are located in close proximity to Strategic Routes / Main Distributors and / or Secondary Distributors;*
- *Are connected to Strategic Routes / Main Distributors and / or Secondary Distributors via short sections of other roads;*
- *Will where appropriate require the developer to submit and agree with the Highway Authority a routing management plan in relation to heavy goods vehicle movements."*

4.3.15 The requirements for the management of construction traffic are set out in Policy DM20:

"The Highway Authority will protect the safety and efficiency of the highway network by ensuring that:

- *Any temporary construction access and / or haul road will be agreed with the Highway Authority prior to commencement of development;*
- *A Construction Traffic Management Plan is submitted and agreed with the Highway Authority prior to commencement of development;*
- *Details of parking and turning for all construction traffic within the development site are submitted and agreed with the Highway Authority prior to commencement of development; and*
- *Details of wheel cleaning facilities within the development site are submitted and agreed with the Highway Authority prior to commencement of development.*

4.4 Policy Consideration

4.4.1 It is considered that the proposals are generally in accordance with policies relating to transport and highways at the national and local levels since the site is well located in respect to the strategic freight network.

5. Future Year Traffic Flows and Other Developments

5.1 Future Assessment Year

5.1.1 Vehicle movements when the proposed development is operational will be low. When the site is decommissioned, the process will require its removal from site which will generate associated vehicle movements, including HGV movements. Since there is no further use for the materials, such materials can be removed in bulk after demolition. This means that larger payloads can be achieved, and the traffic flows associated with decommissioning are lower than those during its construction. This TA is therefore considering the impact of the site during the construction phase.

5.1.2 The peak construction period typically occurs in earlier phases of construction works and therefore an assessment year of 2022 has been adopted. Consequently, for assessment purposes, the traffic flows on the adjacent highway network have been estimated for a future year of 2022.

5.2 Traffic Growth Rates

5.2.1 A future year baseline scenario of 2022 has been created by applying traffic growth rates to the observed traffic flows set out in Section 2.4 and then adding in the traffic flows of 'committed developments', i.e. developments that have planning consent but are not yet generating traffic on the network.

5.2.2 Before adding in any committed development traffic flows, growth rates have been applied to the observed traffic flows set out in Section 2.4 using the DfT software TEMPRO (version 7.2) to create base 2022 traffic flows. The TEMPRO software presents the output of the DfT's National Trip End Model which forms part of the National Transport Model (NTM). The DfT's Webtag guidance Unit 3.15.2 advises the use of NTM in preference to the National Road Traffic Forecasts (NRTF) as the NTM data is based on a more up-to-date model.

5.2.3 It should be noted that growth rates include allowances for background traffic growth as well as development growth. In some instances, the application of growth rates and the addition of traffic flows from committed developments and cumulative developments (i.e. emerging developments that do not yet have planning consent) can result in double counting of traffic flows.

5.2.4 In this instance, given that a 2022 baseline year is being developed, any such effect of double counting is likely to be low and so no adjustments to the growth rates have been made.

5.2.5 The TEMPRO growth rates obtained are listed in Table 5.1.

Table 5.1: TEMPRO Growth Rates.

	Road Type					
Base Year	**Trunk**		**Principal**		**Minor**	
	Rural	**Urban**	**Rural**	**Urban**	**Rural**	**Urban**
2014 to 2022 Daily	1.1976	-	-	-	-	-
2015 to 2022 Daily	1.1731	-	-	-	-	-
2016 to 2022 Daily	1.1471	1.1353	-	1.1216	1.1248	-
2017 to 2022 Daily	-	1.1127	-	-	1.1035	-
2018 to 2022 Daily	1.0977	-	-	-	-	-

5.2.6 These growth rates have been applied to the observed traffic flows to create 2022 base traffic flows (prior to the inclusion of committed development traffic flows). The 2022 growthed traffic flows are shown in Table 5.2.

Table 5.2: 2022 Growthed Traffic Flows.

Road Link ID	Road Link / Description	Data	24 Hour AADT	
			Observed	**2022 Growthed**
1	A13 between M25 junction 30 and A126	Total	105742	126637
		HV	11686	13996
2	A13 between A126 and A1012	Total	87145	104364
		HV	11066	13253
3	A13 between A1089 and A1012	Total	92240	108206
		HV	10988	12891
4	A1089 between Marshfoot Road roundabout and A13	Total	26691	29299
		HV	7047	7736
11		Total	977	1078

Road Link ID	Road Link / Description	Data	24 Hour AADT	
			Observed	2022 Growthed
	Coopers Shaw Road / Church Road / Station Road, between Gun Hill Road and EMR East Tilbury junction	HV	190	209
15	A13, between Orsett Cock roundabout and A1089	Total	86272	98966
		HV	8142	9340
16	A1089 Dock Approach Road, between Marshfoot Road roundabout and ASDA roundabout	Total	29123	33063
		HV	6948	7888
17	A1089 St Andrews Road, between ASDA roundabout and Port of Tilbury Gate 1	Total	13477	15300
		HV	6235	7078
18	A1089 St Andrews Road, between Port of Tilbury Gate 1 and Proposed Tilbury 2 Road	Total	5263	5903
		HV	1382	1550
19	Proposed Tilbury 2 Road between A1089 St Andrews Road and Fort Road	Total	1413	1590
		HV	220	247
20	Fort Road, between Proposed Tilbury 2 Road and Brennan Road	Total	1413	1590
		HV	220	247
21	Fort Road, between Brennan Road and Coopers Shaw Road	Total	1906	2144
		HV	243	274
22	Station Road, East Tilbury	Total	500	500
		HV	0	0

5.3 Committed Developments

5.3.1 The transport effects of the proposed development with other schemes that are consented but are not yet generating traffic on the network, have been be assessed.

5.3.2 An assessment of 'committed' developments in the local area that have gained permission has been undertaken to determine whether they are operational, or when they are likely to be operational within the timescales of construction for the site. This is to form a view of whether the traffic generated by the developments will already be present in the observed traffic flows, or whether they should be added as committed developments within the Future Baseline 2022 traffic flows and assessments.

5.3.3 The committed developments which have been included in the Future Baseline 2022 traffic flows are outlined in Table 5.3 with details below.

Table 5.3: Committed Developments.

Site No.	Site Name	Application number	Status	Submitted / Decision Date	Status	Traffic Flows
6	Pulverised Fuel Ash Extraction, Ashfields Site	18/00458/FUL	Approved	2018 / 2018	Not Built	Operational traffic flows included within committed flows.
18	Tilbury GreenPower Phase 1	11/50361/TTGETL	Approved	2011 / 2012	Built	Operational traffic flows included within committed flows.
29	Southern area of London Distribution Park, Amazon Site	15/01483/FUL	Approved	2015 / 2016	Built	Operational traffic flows included within committed flows
42	Tilbury 2	TR030003	Approved	2017 / 2019	Under Construction	Operational traffic flows included within committed flows.
80	Purfleet Centre Regeneration Scheme	17/01668/OUT	Approved	2017 / 2019	Not Built	Operational traffic flows included within committed flows.
84	Land between St Andrew's Road and Dock Road, Tilbury Island Site	18/01315/FUL	Approved	2018 / 2019	Under Construction	Operational traffic flows included within committed flows.

5.3.4 The traffic flows predicted to be generated by these committed developments have been taken from their respective Transport Assessments that supported their planning applications; where the Transport Assessment did not assign traffic to the wider network, distributions used in other applications have been used.

5.3.5 The committed development traffic flows are attached at Annex G.

Other Committed Developments Not Included within the Assessment

5.3.6 Other committed developments (which have planning consent) in the vicinity of the site have been reviewed and decided they should not be included as part of the future baseline. A summary of this review is included in Table 5.4.

Table 5.4: Review of Committed Developments.

Site No.	Site Name	Application number	Submitted / Decision Date	Status	Reason Not Assessed
2	St Georges Church of England School	GR/17/674 (KCC/GR/0165/ 2017)	2017 / 2017	Built	The application does not predict traffic to be generated onto the local highway links being assessed for the Thurrock Flexible Generation Plant.
5	Land south of Thames Industrial Estate	18/00664/COND C	2013 / 2015	Built	The application does not predict traffic to be generated onto the local highway links being assessed for the Thurrock Flexible Generation Plant.
9	Tarmac Orsett Quarry	15/00649/FUL	2015 / 2016	Assumed Operational	The application sets out that the proposals would generate only a minimal amount of traffic and does not undertake any assessments itself due to that.
15	Land West of Butts Lane	10/50235/TTGO UT	2010 / 2012	Built	The application development is built out during the periods of observed traffic flows on the local highway links being assessed for the Thurrock Flexible Generation Plant and thus application traffic flows already substantially included on the local highway network.
16	Land Part Of Marsh Farm Sewage Treatment Plant	17/00977/FUL	2017 / 2018	Assumed Operational	Application stated to have no material effect on the highway network.
25	Tilbury B Power Station	16/00186/DMI	2016 / 2016	Demolition in progress/ ongoing	Demolition traffic flows not included in the Application. Traffic flows on the local highway links being assessed for the Thurrock Flexible Generation Plant therefore assumed to be negligible in the context of existing traffic flows.
44	Purfleet Commercial Park	18/00897/SCR	2018 / 2018	In progress	The application does not predict traffic to be generated onto the local highway links being assessed for the Thurrock Flexible Generation Plant
45	Segro Logistics Park	18/00847/SCR	2018 / 2018	In progress	The application does not predict traffic to be generated onto the local highway links being assessed for the Thurrock Flexible Generation Plant
57	Land at Coldharbour Road	20141214	2014 / 2018	Not Built	The application does not predict traffic to be generated onto the local highway links being assessed for the Thurrock Flexible Generation Plant.
65	Land at former Northfleet Cement Works	20090238	2009 / 2011	Not Built	The application does not predict traffic to be generated onto the local highway links being assessed for the Thurrock Flexible Generation Plant

5.4 2022 Baseline Traffic Flows

5.4.1 The committed development traffic flows attached at Annex G have been added to the 2022 growthed traffic flows to form the resultant 2022 baseline traffic flows. The 2022 growthed traffic flows are shown against the 2022 baseline traffic flows in Table 5.5.

Table 5.5: 2022 Baseline Traffic Flows.

Road Link ID	Road Link / Description	Data	24 Hour AADT	
			2022 Growthed	2022 Baseline
1	A13 between M25 junction 30 and A126	Total	126637	132736
		HV	13996	17487
2	A13 between A126 and A1012	Total	104364	110772
		HV	13253	16744
3	A13 between A1089 and A1012	Total	108206	114614
		HV	12891	16382
4	A1089 between Marshfoot Road roundabout and A13	Total	29299	37249
		HV	7736	11960
11		Total	1078	1138

Road Link ID	Road Link / Description	Data	24 Hour AADT	
			2022 Growthed	2022 Baseline
	Coopers Shaw Road / Church Road / Station Road, between Gun Hill Road and EMR East Tilbury junction	HV	209	269
15	A13, between Orsett Cock roundabout and A1089	Total	98966	102630
		HV	9340	10220
16	A1089 Dock Approach Road, between Marshfoot Road roundabout and ASDA roundabout	Total	33063	42502
		HV	7888	12112
17	A1089 St Andrews Road, between ASDA roundabout and Port of Tilbury Gate 1	Total	15300	18521
		HV	7078	9640
18	A1089 St Andrews Road, between Port of Tilbury Gate 1 and Proposed Tilbury 2 Road	Total	5903	8953
		HV	1550	3976
19	Proposed Tilbury 2 Road between A1089 St Andrews Road and Fort Road	Total	1590	4640
		HV	247	2673
20	Fort Road, between Proposed Tilbury 2 Road and Brennan Road	Total	1590	1786
		HV	247	307
21	Fort Road, between Brennan Road and Coopers Shaw Road	Total	2144	2204
		HV	274	334
22	Station Road, East Tilbury	Total	500	500
		HV	0	0

5.5 Cumulative Development Sites

5.5.1 The following developments in Table 5.6 have been considered in the cumulative assessment:

Table 5.6: Cumulative Development Sites.

Site Number	Site Name	Application number	Description
58	The Lower Thames Crossing	TR010032	The Lower Thames Crossing will be a new road crossing connecting Essex and Kent. Located east of Gravesend and Tilbury, this new crossing will offer the improved journeys, new connections and network reliability, and economic benefits that only a new, alternative crossing, away from Dartford, can provide.
60	Northlake	18/01671/FUL	Proposed development of up to 2,500 dwellings on land for development including education, community and leisure facilities, publicly-accessible woodland, a cycle park, and a lido at Northlake, Lakeside Basin, Thurrock
63	Thames Enterprise Park	18/01404/OUT	Proposed development of 480,000sq. m of commercial development and additional land for a rail freight terminal, car and lorry parking, road and access facilities at Thames Enterprise Park, The Manorway, Coryton, Essex
76	Land to The South of Stifford Road	16/01491/SCR	EIA screening opinion for proposed development of 600 dwellings at Land to the south of Stifford Road, Aveley, Essex
78	Churchill Green	19/01058/OUT	Proposed development of 161 new dwellings and 7,650sqm of flexible employment floorspace at land part of little Thurrock Marshes, Thurrock Park Way, Tilbury, Essex
81	Tilbury Green Power Phase 2	12.04.09.04/266C	Tilbury Green Power Phase 2, waste to energy generation station at Former Cargill Plant, Tilbury Freeport, Tilbury, Essex
82	Gateway Energy Centre	01.08.10.04/462C	Gateway Energy Centre, development of up to 1250 MW energy centre at The Manorway, Stanford-Le-Hope, Essex

5.5.2 Lower Thames Crossing (LTC) motorway and link road (TR010032) to the west, south and north is currently planned to be submitted in the summer 2020.

5.5.3 The Lower Thames Crossing motorway will substantially change the surrounding highway network and will substantially change the number of vehicle movements on links assessed. The construction traffic for the average and peak construction scenarios for the FGP application are negligible compared to the significant changes in the patterns of traffic flows should the Lower Thames Crossing be brought forward. It is also unlikely that the Lower Thames Crossing will affect the links assessed for the FGP application in the assessment year of 2022. The cumulative assessment undertaken therefore does not include the Lower Thames Crossing, which will be accompanied by its own independent and cumulative assessments in due course.

5.5.4 All other cumulative developments outlined in Table 5.6 are included in the cumulative assessment.

5.5.5 The cumulative development traffic flows have been taken from the relevant Transport Assessment / planning application. Where traffic flows have not been assigned, or not assigned to the whole of the network being assessed in this study area, professional judgement has been used to assign them to the network.

5.5.6 The cumulative development traffic flows are attached at Annex H**.**

Review of Other Cumulative Developments

5.5.7 Other cumulative developments in the vicinity of the site have been reviewed in order to ascertain as to whether their development traffic flows should be included as part of the cumulative assessment.

5.5.8 Application 16/01475/SCR for an Environmental Impact Assessment (EIA) screening opinion for Gothards Field has not been included in the Thurrock Flexible Generation Plant transport impact assessment as no development traffic flow information or build out timescales have been provided, and the development does not predict traffic flows onto the links assessed for the Thurrock Flexible generation plant. This is similar for applications 16/01232/OUT, 16/00412/OUT, 15/00379/OUT, 17/00349/SCR, 19/01274/FUL, 19/00922/SCR. These developments are either considered too premature to be delivered within the 2022 assessment year being adopted by this application or will not have traffic flows on the highway links being assessed for the Thurrock Flexible Generation Plant and therefore have not been considered as part of the cumulative assessment.

6. Trip Generation, Distribution and Mode Share

6.1 Construction Phase

Trip Generation and Distribution

6.1.1 Construction HGV movements are set out in Section 3.

6.1.2 During construction, it is estimated there will be an average of 250 staff on site with a peak of up to 350 staff on site.

6.1.3 It is estimated that construction of the site will generate an average of 40 HGV deliveries per day (average of 80 HGV movements per day) throughout the construction period. This could peak at 80 HGV deliveries per day (160 HGV movements per day). This includes all associated construction activities including all deliveries and all removal of material / waste etc.

6.1.4 The origins of materials etc will be subject to a procurement exercise which has not been undertaken and won't be undertaken until just prior to the point of construction. Therefore, at this stage, it is not possible to identify the potential location of HGV origins.

6.1.5 Construction contractors will also be subject to a procurement exercise which will also not be undertaken until just prior to construction. Therefore, the arrangements for construction staff in terms of origins or accommodation cannot be determined at this stage.

6.1.6 To ensure a robust assessment, all vehicles have been assigned onto all road links. This covers the scenario of construction vehicles accessing via the RWE access and the realigned A1089 / Fort Road. The Station Road access would only be used in exceptional circumstances if the Fort Road access were unavailable temporarily for any reason. The scenario where this access is unavailable for any reason and construction vehicles take access via Station Road is also assessed.

6.1.7 Given the limited amount of potential temporary accommodation for construction staff in the surrounding area, it is expected that the majority of construction staff would route along these road links. There may be some negligible numbers that route along local roads at the boundaries of the study area but any such movement would be negligible and would be *de minimis* in the context of traffic flows along such routes.

6.1.8 The only exception to this is Station Road, East Tilbury, given that the only construction vehicles on this link are in relation to works for the gas compound and gas pipeline. It is estimated these works would take place over a few months and generate up to 10 HGV movements per day. Construction staff are expected to report to the main compound and travel together to the works at the gas compound and generate up to 10 car / 1 minibus movements per day. Given the short timeframe for these works, they have been considered in the peak construction assessment below, but not in the average construction assessment.

6.1.9 Minibuses and coaches will be provided for construction staff to use which will reduce the number of construction staff arriving and departing the site via car.

Mode Share

6.1.10 Construction workers will travel to the site either by minibus or coach. For assessment purposes, a small number have been assumed to drive a car or be a car passenger, for example management who have other daily duties and require their car on site.

6.1.11 For assessment purposes, to estimate the likely modes of transport that construction workers would use to travel to and from the site a mode share has been derived from first principles to take into account car drivers, car passengers, minibuses and coaches and provide a robust assessment by maximising the estimated vehicles travelling to the site.

Table 6.1: Mode Share

Mode	% Mode Share
Car Driver	10%
Car Passenger	1%
Minibus	56%
Coach	33%
Total	100%

6.1.12 As can be seen in Table 6.1 as a worst case, it is estimated that that 10% of staff will arrive via car, 1% would arrive as a car passenger, 56% would arrive by minibus and 33% would arrive by coach.

6.1.13 In order to continue the theme of a robust assessment, the number of minibuses has been maximised compared to the number of coaches. In terms of converting the minibus and coach mode share into a number of vehicles it has also been assumed, for assessment purposes only, that each minibus will hold a minimum of 15 construction staff and coaches the minimum of 54 staff. 17 seat minibuses are widely used and can reach a maximum size of 21 seats. 60 seat coaches are widely used and can reach a maximum size of 85 seats. Therefore, the assumptions relating to the number of staff per minibus / coach provide a robust assessment in relation to the number of vehicles accessing the site.

6.1.14 The mode share as shown in Table 6.1 has been applied to the level of construction staff to predict the level of vehicle trip generation for the site.

6.1.15 Therefore, it is estimated there would be an average of 25 construction staff arriving and departing via car per day. At the construction peak, it is estimated there will be up to 35 construction staff arriving and departing via car per day. It is also estimated that there would be an average of 140 construction staff arriving by minibus and 82 arriving by coach. During the peak construction period it is estimated there would be 196 construction staff arriving by minibus and 115 arriving by coach.

Temporal Distribution

6.1.16 Construction activities will be undertaken during normal construction working hours of 08:00 and 18:00 on weekdays and 08:00 to 13:00 on Saturdays.

6.1.17 Construction HGV movements will be generated throughout the day and will be typically spread fairly equally in terms of hourly movements. Although there may be occasional peaks of construction HGV movements at various times of the day, these will be balanced by subsequent troughs. During the construction phase, these peaks and troughs of HGV activity will average out overall. Therefore, an average day will see a fairly equal spread of construction HGV movements across the working day. HGV movements on a weekday will be between 08:00 and 18:00 and on a Saturday, between 08:00 and 13:00.

6.1.18 It is common for construction works to have mobilisation periods when some construction staff are on site up to one hour before and after for mobilisation. For the purposes of assessment, construction staff would typically arrive between 06:00 and 08:00, and depart between 18:00 and 20:00 on a weekday. On a Saturday, construction staff would typically arrive between 06:00 and 08:00 and depart between 13:00 and 15:00.

6.1.19 Based upon the calculations set out above, a breakdown of the average construction traffic flows and the peak construction traffic flows are shown in Table 6.2 and Table 6.3:Peak Construction Traffic Generation. respectively.

Table 6.2: Average Construction Traffic Generation.

Time Begin	Weekday						Saturday					
	Arrivals		Departures		Two Way		Arrivals		Departures		Two Way	
	Car / Minibus	HVs	Car / Minibus	HVs	Car / Minibus	HVs	Car / Minibus	HVs	Car / Minibus	HVs	Car / Minibus	HVs
06:00	18	1	5		23	1	18	1	5		23	1
07:00	18	1	5		23	1	18	1	5		23	1
08:00		4		4		8		4		4		8
09:00		4		4		8		4		4		8
10:00		4		4		8		4		4		8
11:00		4		4		8		4		4		8
12:00		4		4		8		4		4		8
13:00		4		4		8	5		18	1	23	1
14:00		4		4		8	5		18	1	23	1
15:00		4		4		8						
16:00		4		4		8						
17:00		4		4		8						
18:00	5		18	1	23	1						
19:00	5		18	1	23	1						
Total	45	42	45	42	90	83	45	22	45	22	90	44

Table 6.3: Peak Construction Traffic Generation.

Time Begin	Weekday						Saturday					
	Arrivals		Departures		Two Way		Arrivals		Departures		Two Way	
	Car / Minibus	HVs	Car / Minibus	HVs	Car / Minibus	HVs	Car / Minibus	HVs	Car / Minibus	HVs	Car / Minibus	HVs
06:00	25	1	7		32	1	25	1	7		32	1
07:00	25	1	7		32	1	25	1	7		32	1
08:00		8		8		16		8		8		16
09:00		8		8		16		8		8		16
10:00		8		8		16		8		8		16
11:00		8		8		16		8		8		16
12:00		8		8		16		8		8		16
13:00		8		8		16	7		25	1	32	1
14:00		8		8		16	7		25	1	32	1
15:00		8		8		16						
16:00		8		8		16						
17:00		8		8		16						
18:00	7		25	1	32	1						
19:00	7		25	1	32	1						
Total	63	82	63	82	126	164	63	42	63	42	126	84

Trip Assignment

6.1.20 The movement of construction HGVs and their route to the site is detailed in Development Proposals.

6.1.21 All traffic has been assigned along all the road links to the M25 Junction 30. The resultant average and peak construction 24-hour AADT traffic flows on each link are shown in Table 6.4. Nevertheless, it is important to note that construction traffic will only utilise links 11, 20 and 22 (Coopers Shaw Road, Church Road, Station Road and Fort Road) in exceptional circumstances, should the main access at RWE be unavailable temporarily for any reason.

Table 6.4: Assignment of Average and Peak Construction Traffic.

Road Link ID	Road Link / Description	Data	24 Hour AADT	
			Average Construction	Peak Construction
1	A13 between M25 junction 30 and A126	Total	170	286
		HV	83	164
2	A13 between A126 and A1012	Total	170	286
		HV	83	164
3	A13 between A1089 and A1012	Total	170	286
		HV	83	164
4	A1089 between Marshfoot Road roundabout and A13	Total	170	286
		HV	83	164
11	Coopers Shaw Road / Church Road / Station Road, between Gun Hill Road and EMR East Tilbury junction	Total	170	286
		HV	83	164
15	A13, between Orsett Cock roundabout and A1089	Total	170	286
		HV	83	164
16	A1089 Dock Approach Road, between Marshfoot Road roundabout and ASDA roundabout	Total	170	286
		HV	83	164
17	A1089 St Andrews Road, between ASDA roundabout and Port of Tilbury Gate 1	Total	170	286
		HV	83	164
18	A1089 St Andrews Road, between Port of Tilbury Gate 1 and Proposed Tilbury 2 Road	Total	170	286
		HV	83	164
19	Proposed Tilbury 2 Road between A1089 St Andrews Road and Fort Road	Total	170	286
		HV	83	164
20	Fort Road, between Proposed Tilbury 2 Road and Brennan Road	Total	170	286
		HV	83	164
21	Fort Road, between Brennan Road and Coopers Shaw Road	Total	170	286
		HV	83	164
22	Station Road, East Tilbury	Total	N/A	20
		V	N/A	10

6.1.22 These traffic flows have been added to the 2022 baseline traffic flows to create the following scenarios:

- 2022 baseline plus average construction traffic flows (Table 6.5);
- 2022 baseline plus peak construction traffic flows (Table 6.5);
- 2022 baseline plus average construction traffic flows plus cumulative traffic flows (Table 8.1); and
- 2022 baseline plus peak construction traffic flows plus cumulative traffic flows (Table 8.1).

Table 6.5: 2022 Baseline Average + Construction Traffic + Peak Construction Traffic.

Road Link ID	Road Link / Description	Data	2022 Baseline + Average Construction	2022 Baseline + Peak Construction
1	A13 between M25 junction 30 and A126	Total	132906	133022
		HV	17570	17651
2	A13 between A126 and A1012	Total	110942	111058
		HV	16827	16908
3	A13 between A1089 and A1012	Total	114784	114900
		HV	16465	16546
4	A1089 between Marshfoot Road roundabout and A13	Total	37419	37535
		HV	12043	12125
11	Coopers Shaw Road / Church Road / Station Road, between Gun Hill Road and EMR East Tilbury junction	Total	1308	1424
		HV	352	434
15	A13, between Orsett Cock roundabout and A1089	Total	102800	102916
		HV	10303	10384
16	A1089 Dock Approach Road, between Marshfoot Road roundabout and ASDA roundabout	Total	42672	42788
		HV	12195	12276
17	A1089 St Andrews Road, between ASDA roundabout and Port of Tilbury Gate 1	Total	18691	18807
		HV	9723	9804
18	A1089 St Andrews Road, between Port of Tilbury Gate 1 and Proposed Tilbury 2 Road	Total	9123	9239
		HV	4059	4140
19		Total	4810	4926
	Proposed Tilbury 2 Road between A1089 St Andrews Road and Fort Road	HV	2756	2837
20	Fort Road, between Proposed Tilbury 2 Road and Brennan Road	Total	1956	2072
		HV	391	472
21	Fort Road, between Brennan Road and Coopers Shaw Road	Total	2374	2490
		HV	417	498
22	Station Road, East Tilbury	Total	500	520
		HV	0	10

6.2 Operational Phase

6.2.1 Vehicle movements when the proposed development is operational will be low, thus, these impacts have been scoped out of the assessment.

6.3 Decommissioning Phase

6.3.1 When the site is decommissioned, the process will require its removal from site which will generate associated vehicle movements, including HGV movements. Since there is no further use for the materials, such materials can be removed in bulk after demolition. This means that larger payloads can be achieved, and the traffic flows associated with decommissioning are lower than those during its construction.

6.3.2 Thus, the assessment for the decommissioning phase is deemed to be of similar nature to, but a lower magnitude and shorter duration than that for the construction phase.

7. Transport Assessment

7.1.1 As set out above, this TA assesses the effects of the construction traffic flows generated by the proposed development.

7.2 Impact Upon Highway Capacity

Highway Network

7.2.1 To consider the effects of the traffic generated by the construction of the proposed development, an assessment of traffic flow increases has been undertaken against the 2022 baseline traffic flows.

7.2.2 These assessments have been undertaken for the average and peak construction traffic flows to enable an understanding of the effects throughout the construction phase to be identified.

7.2.3 The average and peak construction traffic flows have been assessed against the 2021 baseline traffic flows within Table 7.1.

Table 7.1: 2022 Baseline plus Average Construction Traffic Flows and 2022 Baseline plus Peak Construction Traffic Flows.

Road Link ID	Road Link / Description	Data	2022 Baseline	Average Construction		Peak Construction	
				24 hr AADT*	% Impact	24 hr AADT*	% Impact
1	A13 between M25 junction 30 and A126	Total	132726	170	0.13%	286	0.22%
		HV	17487	83	0.48%	164	0.94%
2	A13 between A126 and A1012	Total	110772	170	0.15%	286	0.26%
		HV	16744	83	0.50%	164	0.98%
3	A13 between A1089 and A1012	Total	114614	170	0.15%	286	0.25%
		HV	16382	83	0.51%	164	1.00%
4	A1089 between Marshfoot Road roundabout and A13	Total	37249	170	0.46%	286	0.77%
		HV	11960	83	0.69%	164	1.37%
11	Coopers Shaw Road / Church Road / Station Road, between Gun Hill Road and EMR East Tilbury junction	Total	1138	170	14.95%	286	25.15%
		HV	269	83	30.86%	164	61.04%
15	A13, between Orsett Cock roundabout and A1089	Total	102630	170	0.17%	286	0.28%
		HV	10220	83	0.81%	164	1.61%
16	A1089 Dock Approach Road, between Marshfoot Road roundabout and ASDA roundabout	Total	42502	170	0.40%	286	0.67%
		HV	12112	83	0.69%	164	1.36%
17	A1089 St Andrews Road, between ASDA roundabout and Port of Tilbury Gate 1	Total	18521	170	0.92%	286	1.54%
		HV	9640	83	0.86%	164	1.70%
18	A1089 St Andrews Road, between Port of Tilbury Gate 1 and Proposed Tilbury 2 Road	Total	8953	170	1.90%	286	3.20%
		HV	3976	83	2.09%	164	4.13%
19	Proposed Tilbury 2 Road between A1089 St Andrews Road and Fort Road	Total	4640	170	3.67%	286	6.17%
		HV	2673	83	3.11%	164	6.15%
20	Fort Road, between Proposed Tilbury 2 Road and Brennan Road	Total	1786	170	9.52%	286	16.02%
		HV	307	83	27.02%	164	53.45%
21	Fort Road, between Brennan Road and Coopers Shaw Road	Total	2204	170	7.72%	286	12.98%
		HV	334	83	24.89%	164	49.23%
22	Station Road, East Tilbury	Total	500	N/A	N/A	20	4.0%
		HV**	0	N/A	N/A	10	N/A

*Note that all temporary construction traffic has been assigned to every link, for testing purposes, with the exception of Station Road (Link 22)
**Although no HVs were observed along Station Road during the survey, HVs are not prohibited from Station Road

7.2.4 As can be seen from Table 7.1, the temporary daily increases on the majority of links are small. On the A13, east of the M25 junction, the temporary total daily increases to traffic flows are less than one-quarter of a percent as a result of the average construction traffic and for the peak construction traffic. Such temporary increases are negligible and would not be noticeable to other drivers. A similar conclusion can be drawn for traffic through the M25 junction 30 and on the M25 north and south of the A13.

7.2.5 The temporary total daily increases on the A1089 would be less than one percent for the average construction traffic north of ASDA roundabout and the peak construction traffic. Such temporary increases are negligible and would not be noticeable to other drivers. The effect of the temporary increases on the performance of the ASDA roundabout are discussed in paragraph 7.2.25 *et seq*.

7.2.6 For the A1089 south of the ASDA roundabout the baseline traffic flows decrease, the temporary total daily increases are less than 2% for the average construction traffic and less than 4% for the peak construction traffic. Such temporary increases are negligible and would not be noticeable to other drivers.

7.2.7 Traffic flows on Station Road, Coopers Shaw Road and Fort Road are far lower than on the A1089 and there are no highway capacity concerns. The maximum impact on these links is shown on Station Road whereby the temporary total daily increases are 14.95% for the average construction traffic and 25.15% for the peak construction traffic. These temporary increases are due to the low base traffic flows. These temporary increases would retain traffic flows along Station Road, Coopers Shaw Road and Fort Road at a low level and would not create congestion. These increases would only take place should the RWE access be unavailable.

7.2.8 Similar temporary increases are expected along Station Road, Coopers Shaw Road and Fort Road due to the low traffic flows along them. The only exception to this is on Station Road East Tilbury where there are no HV movements in the baseline scenario and a percentage increase caused by 10 additional HGV movements per day cannot be calculated. Nevertheless, the temporary increases would retain traffic flows along Gun Hill, Coopers Shaw Hill and Station Road at a low level and would not create congestion.

7.2.9 During the weekday peak hour periods (08:00 to 09:00 and 17:00 to 18:00), when background traffic flows are at their highest and most sensitive to change, it would only be construction HGV movements being generated to and from the site.

7.2.10 This equates to eight HGV two-way movements per hour during the average construction traffic flows and sixteen HGV two-way movements per hour during the peak construction traffic flows. Such a level of temporary movement is negligible and would not be noticeable to other drivers.

7.2.11 Indeed, a common threshold for vehicle movements which require assessment is 30 vehicle movements per hour; this stems from guidance set out in Guidance on Transport Assessment, published by the DfT and the Communities and Local Government in 2007. Although this guidance document has been withdrawn, a like-for-like document has not been published and many professionals and Highway Officers in the industry use this quantum as a threshold upon which to undertake assessment.

7.2.12 Eight to sixteen HGV two-way movements per hour is under this threshold and it is concluded that the temporary construction traffic would not create or materially impact upon any congestion that may occur during the weekday peak hours or any other hours during the day.

Fort Road, Coopers Shaw Road, Church Road and Station Road

7.2.13 Only in exceptional circumstances, should the RWE access be unavailable temporarily for any reason, construction traffic would route along Fort Road, Coopers Shaw Road, Church Road and Station Road. As set out in Section 2, Fort Road (north of Brennan Road), Coopers Shaw Road, Church Road and Station Road are of variable width, therefore, an analysis of the ability for two-way vehicle movements along them have been considered in more detail.

7.2.14 From an inspection of OS mapping, it is apparent that this does not accurately reflect the actual widths of the carriageway, therefore a site visit has been undertaken to measure these.

7.2.15 It should be noted that only a topographical survey would be able to accurately show the road alignment and geometries on a plan and Annex I shows the measured carriageway widths without linking these to other features. Annex I therefore doesn't show the precise road alignments but it demonstrates where there are narrowing's in the carriageway and considers these accordingly, below.

7.2.16 Guidance set out in Manual for Streets sets out that a width of 4.8 m can accommodate a car passing an HGV and a width of 5.5 m can accommodate two HGVs passing one-another.

7.2.17 There are six sections along Fort Road (north of Brennan Road), Coopers Shaw Road, Church Road and Station Road where the carriageway is less than 4.8 m wide, which are identified at Annex I. These are:

- Coopers Shaw Road to the south of Church Road;
- Church Street between Coopers Shaw Road and Low Street Lane (three locations); and
- Station Road between Low Street Lane and railway crossing (two locations).

7.2.18 For all of these six locations, Annex I demonstrates that there is clear forward visibility either side of the narrowing's, meaning that oncoming drivers can see one-another, and self-manage passing accordingly. There is therefore no requirement for vehicles to reverse on the public highway, because drivers can see one-another from locations where they can pass one-another, and they give way accordingly.

7.2.19 All construction vehicle drivers will be made aware of this through the CTMP and will be instructed to be courteous and give way to any oncoming drivers in these locations.

7.2.20 The longest section of road narrowing occurs on Church Street, between Coopers Shaw Road and Low Street Lane, for 120 meters. Including for the distance to pass an HGV after the narrowing would mean there is a section of 140 meters where the road narrows. To ensure that there is capacity for HGVs and cars to traverse this section of road an assessment has been carried out to derive the capacity of the road. This assessment is included at Annex J.

7.2.21 The assessment has shown that when using the Station Road maximum hour data, from 14:45 to 15:45 and growthed to 2022, a total of 131 two-way vehicle movements of which 33 are HGV movements are shown to navigate the road. This increases to 137 two way-vehicle movements of which 39 are HGVs with the addition of committed developments.

7.2.22 Assuming that the average car speed along the section of road is 20mph and the average HGV speed is 10mph over the section of road, the capacity of the road has been derived by calculating the time taken for the total vehicles on Station Road plus the peak construction vehicles to pass along the road within an hour. Then calculating how many vehicles including HGVs can pass through the road in the remaining time using the HGV proportion from the base 2022 data. This has resulted in the total capacity of the road standing at 184, therefore the capacity of the road in the 2022 baseline scenario is at 75%.

7.2.23 The addition of the sixteen two-way peak construction HGV movements leads to a total of 153 vehicle movements traversing the narrow section of road in the maximum hour.

7.2.24 Therefore, with the addition of the peak construction traffic flows the capacity of the road with the peak hour HGV construction movements is at 84%, showing the road will remain in capacity in the unlikely circumstance where The Fort Road Access was unavailable temporarily for any reason.

ASDA Roundabout

7.2.25 Construction HGVs and staff traffic (minibuses and coaches) will route through the ASDA roundabout.

7.2.26 As detailed in Section 6, 23 staff car and minibus movements (including 1 coach movement) for the average construction scenario and 32 car and minibus movements (including 1 coach movement) for the peak construction scenario are expected to arrive between 07:00 and 08:00. This coincides with the shift movements at Amazon (committed development site number 29), therefore the ASDA roundabout has been assessed for this time period.

7.2.27 The HGV movements to the proposed development are also detailed in Section 3. These movements will occur between 08:00 and 18:00 and will thus not coincide with the construction staff movements. Nevertheless, the HGV movements have been assessed for the AM peak hour of 08:15 – 09:15 and the PM peak hour of 17:00 to 18:00. As detailed in Section 3, the route whereby HGVs will perform a U-turn from the Port of Tilbury has also been assessed.

7.2.28 Operational assessments have been undertaken using the Junctions 9 modelling suite at the ASDA roundabout for the 07:00 to 08:00 period, the 08:15 to 09:15 AM peak hour and the 17:00 to 18:00 PM peak hour for a number of scenarios, the traffic flow diagrams for these scenarios are shown in Annex K.

7.2.29 The 2017 observed scenario has been modelled using the existing roundabout geometries of the ASDA roundabout, the scenarios including Tilbury 2 have been modelled in accordance with the mitigation proposed through the consented Tilbury 2 scheme. Tilbury 2 forms part of the 2022 baseline unless mentioned as excluded.

7.2.30 The scenarios included for the 07:00 to 08:00 scenario are as follows:

- 2017 Observed;
- 2022 Baseline (excluding Tilbury 2 and Amazon consented developments traffic flows);
- 2022 Baseline (excluding Tilbury 2 consented development traffic flows);
- 2022 Baseline;
- 2022 Baseline + Average Construction; and
- 2022 Baseline + Peak Construction.

7.2.31 The scenarios included for the 08:15 to 09:15 AM and 17:00 to 18:00 PM scenario are as follows:

- 2017 Observed;
- 2022 Baseline;
- 2022 Baseline + Average Construction;
- 2022 Baseline + Peak Construction;
- 2022 Baseline + Average Construction (HGV U-turn); and
- 2022 Baseline + Peak Construction (HGV U-turn).

7.2.32 The primary outputs of Junctions 9 are the Ratio of Flow to Capacity (RFC) and queue. The RFC is a measure of the demand traffic flow against the Junctions 9 predicted capacity, whereby a value of 1.0 means that traffic demand is equal to capacity.

7.2.33 A summary of the results is presented in Table 7.2 and Table 7.3 below. Full printouts of the model output files are attached at Annex L.

7.2.34 Table 7.2 indicates with the 2017 observed traffic flows, the junction is operating with a maximum RFC of 0.76 on the A1089 Dock Road arm between 07:00 and 08:00.

7.2.35 In the 2022 baseline excluding the Amazon and Tilbury 2 consented developments the maximum RFC on the A1089 Dock Road arm is shown as 0.92. The addition of the consented Amazon Development leads to the maximum RFC on the A1089 Dock Road arm rising to 1.29, above capacity. Completing the 2022 baseline, the introduction of the Tilbury 2 consented development further increases the RFC on the A1089 Dock Road arm to 1.36. The full 2022 baseline is therefore presented with a maximum RFC on the A1089 Dock Road arm of 1.36, with the consented Amazon development being seen to bring the arm over capacity and the Tilbury 2 consented development further increasing the RFC over capacity.

7.2.36 It should be noted that all other arms remain within capacity during the 07:00 to 08:00 period.

7.2.37 The addition of the temporary construction staff movements in the 07:00 to 08:00 period increases the RFC by 0.02 from the 2022 baseline to 1.37 on the A1089 Dock Road for the average construction movements. For the peak staff construction movements, the RFC increases by 0.03 to from the 2022 baseline to 1.38. These temporary increases are negligible and would not be noticed by other drivers. All other arms remain within capacity.

Table 7.2: ASDA Roundabout 07:00 – 08:00.

	2017 Observed		
	Queue	**Delay**	**RFC**
London Distribution Park	0.1	5.64	0.09
Dock Road	0.7	5.15	0.40
St Andrews Road	0.7	5.62	0.41
Thurrock Park Way	0.4	4.17	0.31
A1089 Dock Road	3.0	7.67	0.76
	2022 Baseline (excluding Tilbury 2 and Amazon consented developments)		
	Queue	**Delay**	**RFC**
London Distribution Park	0.1	6.59	0.10
Dock Road	1.0	7.52	0.51
St Andrews Road	0.9	6.19	0.48
Thurrock Park Way	0.5	4.59	0.35
A1089 Dock Road	9.6	21.17	0.92
	2022 Baseline (excluding Tilbury 2 consented developments)		
	Queue	**Delay**	**RFC**
London Distribution Park	0.2	8.83	0.18
Dock Road	1.1	8.44	0.53
St Andrews Road	1.0	6.68	0.50
Thurrock Park Way	0.6	4.81	0.36
A1089 Dock Road	226.2	415.26	1.29
	2022 Baseline		
	Queue	**Delay**	**RFC**
London Distribution Park	0.2	9.01	0.18
Dock Road	1.1	8.81	0.54
St Andrews Road	1.3	7.23	0.56

Thurrock Park Way	0.6	5.46	0.39
A1089 Dock Road	310.8	581.82	1.36
	2022 Baseline + Average Construction		
	Queue	**Delay**	**RFC**
London Distribution Park	0.2	9.02	0.19
Dock Road	1.2	8.86	0.54
St Andrews Road	1.3	7.26	0.57
Thurrock Park Way	0.6	5.48	0.39
A1089 Dock Road	329	611.75	1.37
	2022 Baseline + Peak Construction		
	Queue	**Delay**	**RFC**
London Distribution Park	0.2	9.03	0.19
Dock Road	1.2	8.88	0.54
St Andrews Road	1.3	7.23	0.57
Thurrock Park Way	0.6	5.48	0.39
A1089 Dock Road	336.5	625.98	1.38

7.2.38 The results indicate that the capacity of the roundabout on the A1089 Dock Road arm is compromised by the existing and committed development traffic excluding the temporary average and peak construction traffic flows.

Table 7.3: ASDA Roundabout 08:15 – 09:15 and 17:00 – 18:00.

	2017 Observed					
	08:15 – 09:15 AM			17:00 – 18:00 PM		
	Queue	Delay	RFC	Queue	Delay	RFC
London Distribution Park	0.1	6.68	0.08	0.3	4.20	0.21
Dock Road	1.2	7.20	0.55	0.6	4.45	0.37
St Andrews Road	0.7	5.44	0.40	1.8	6.56	0.65
Thurrock Park Way	0.6	4.64	0.37	3.0	12.68	0.76
A1089 Dock Road	3.9	9.76	0.81	1.4	4.72	0.58
	2022 Baseline					
	08:15 – 09:15 AM			17:00 – 18:00 PM		
	Queue	Delay	RFC	Queue	Delay	RFC
London Distribution Park	0.3	11.18	0.24	0.6	7.24	0.39
Dock Road	2.8	15.47	0.75	1.0	6.57	0.50
St Andrews Road	1.2	7.57	0.55	4.0	11.37	0.81
Thurrock Park Way	0.9	6.68	0.48	23.0	61.93	1.06
A1089 Dock Road	54.0	88.77	1.09	3.1	8.73	0.76
	2022 Baseline + Average Construction					
	08:15 – 09:15 AM			17:00 – 18:00 PM		
	Queue	Delay	RFC	Queue	Delay	RFC
London Distribution Park	0.3	11.19	0.24	0.6	7.20	0.39
Dock Road	2.9	15.64	0.75	1.0	6.60	0.50
St Andrews Road	1.3	7.64	0.56	4.0	11.50	0.81
Thurrock Park Way	0.9	6.74	0.49	23.4	62.77	1.07
A1089 Dock Road	55.3	93.86	1.09	3.1	8.85	0.77
	2022 Baseline + Peak Construction					
	08:15 – 09:15 AM			17:00 – 18:00 PM		
	Queue	Delay	RFC	Queue	Delay	RFC
London Distribution Park	0.3	11.22	0.24	0.6	7.27	0.39
Dock Road	2.9	15.96	0.76	1.0	6.65	0.50
St Andrews Road	1.3	7.71	0.56	4.3	12.01	0.82
Thurrock Park Way	0.9	6.78	0.49	24.6	65.39	1.08
A1089 Dock Road	58.4	100.90	1.10	3.2	9.07	0.77
	2022 Baseline + Average Construction (HGV U-turn)					
	08:15 – 09:15 AM			17:00 – 18:00 PM		
	Queue	Delay	RFC	Queue	Delay	RFC
London Distribution Park	0.3	11.23	0.24	0.6	7.22	0.39
Dock Road	2.9	15.68	0.75	1.0	6.60	0.50
St Andrews Road	1.3	7.65	0.56	4.1	11.65	0.82
Thurrock Park Way	0.9	6.75	0.49	23.8	63.72	1.07
A1089 Dock Road	55.0	91.59	1.09	3.1	8.81	0.77
	2022 Baseline + Peak Construction (HGV U-turn)					
	08:15 – 09:15 AM			17:00 – 18:00 PM		
	Queue	Delay	RFC	Queue	Delay	RFC
London Distribution Park	0.3	11.27	0.24	0.6	7.26	0.39
Dock Road	2.9	15.89	0.76	1.0	6.65	0.50
St Andrews Road	1.3	7.74	0.56	4.2	11.85	0.82
Thurrock Park Way	0.9	6.77	0.49	24.2	64.63	1.07
A1089 Dock Road	56.0	94.41	1.09	3.1	8.88	0.77

7.2.39 Table 7.3 indicates, with the 2017 observed flows, the junction is operating at a maximum RFC of 0.81 on the A1089 Dock Road arm in the AM peak and a maximum RFC of 0.76 on Thurrock Park Way in the PM peak.

7.2.40 In the 2022 baseline scenario the junction is predicted to operate with a maximum RFC of 1.09 on A1089 Dock Road in the AM peak and a maximum RFC of 1.06 on Thurrock Park Way in the PM Peak. Therefore, the existing traffic flow movement together with the addition of the committed development traffic compromise the capacity of the roundabout in the AM peak on the A1089 Dock Road arm and Thurrock Park Way in the PM peak. All other arms operate within capacity for the AM peak and the PM peak.

7.2.41 The addition of the temporary average construction flow movements, which comprises of eight two-way HGV movements, to the 2022 baseline leads to no increase of the maximum RFC in the AM peak and an increase in the maximum RFC of 0.01 in the PM peak on the Thurrock Park Way arm. The temporary peak construction flow movements, which comprise of sixteen two-way HGV movements, leads to an increase in the maximum RFC of 0.01 in the AM on the A1089 Dock Road arm and an increase in the maximum RFC of 0.02 in the PM on the Thurrock Park Way arm.

7.2.42 The scenario whereby the average and peak construction flow movements originate from the Port of Tilbury and then perform a U-turn has also been assessed. The addition of the average construction flow movements in this fashion leads to no increase in the maximum RFC on A1089 Dock Road in the AM peak and an increase in the maximum RFC of 0.01 in the PM peak on the Thurrock Park Way arm. The addition of the peak construction traffic flow movements leads to no increase in the maximum RFC in the AM on the A1089 Dock Road arm and an increase in the maximum RFC of 0.01 in the PM on the Thurrock Park Way arm.

7.2.43 Therefore, addition of the temporary average or peak construction traffic flows to the 2022 baseline scenario in the AM peak or the PM peak leads to the roundabout operating in a similar fashion to the 2022 baseline with RFC's remaining the same or with a small increase of 0.02. These temporary increases are negligible and would not be noticed by other drivers. The modelling results indicate that the temporary construction traffic has only a negligible effect on the capacity of the roundabout and that the committed development traffic leads to the greatest effect upon the junction.

7.3 Impact Upon Road Safety

7.3.1 Section 2.5 contains an analysis of PIA data and concludes that there does not appear to be anything in relation to the existing highway layout or geometries that contribute to a road safety concern.

7.3.2 As previously stated in Section 2, one slight injury accident included a goods vehicle which overturned on the ASDA roundabout due to failing to reduce speed when traversing the roundabout carriageway.

7.3.3 The existing situation at the roundabout shows that on the A1089 Dock Approach road southbound and on the roundabout itself there are signs warning goods vehicles of an adverse camber and giving a max speed of 30 mph. It should also be noted that as part of the Tilbury 2 consented application the speed limit on approach to the roundabout will be reduced to 30 mph from the north and from the south.

7.3.4 In terms of the construction traffic proposed to traverse the roundabout, the vehicles will be managed through a CTMP. Through the CTMP, drivers will be made aware of the existing situation at the roundabout in relation to the speed limit and warning signs. Drivers will be instructed to travel through the roundabout at appropriate speeds and alerted to the danger of tipping if traveling at excessive speeds. Thus, the CTMP will ensure construction vehicles traverse the ASDA roundabout safely and there will be no impact upon road safety in relation to their movements. This is set out in the Outline CTMP (application document A8.8) and will be confirmed post consent in agreement with Thurrock Council.

7.3.5 As previously stated in Section 3, there will be a number of construction HGVs originating from the Port of Tilbury which will turn left out of Gate 1 and perform a U-turn at the ASDA roundabout before continuing southbound to the development site. This is the only route available from the port of Tilbury as it is not possible grant a right of way use to use Gate 2 or Gate 2a.

7.3.6 A swept path analysis of HGVs has been undertaken to show the U-turn movement on the ASDA roundabout, at Annex F.

7.3.7 The swept path analysis shows that the HGV performing the U-turn, from the A1089 St Andrews Road, is able to traverse the roundabout in the correct lane. It also details two HGVs traversing the carriageway of the ASDA roundabout at the same time. It should be noted that upon entering the ASDA roundabout from the A1089 St Andrews Road the swept paths of the HGVs overrun. The mitigation on the A1089 St Andrews Road arm as part of the consented Tilbury 2 development will ensure that the HGVs are able to pass one another within the carriageway.

7.3.8 In practice it is unlikely that two HGVs will traverse the roundabout carriageway at the same time, whereby HGV drivers will most likely stagger movements in order to assist other HGV drivers. As part of the Outline CTMP (document reference A8.8) construction HGV drivers will be told to stagger their movements to ensure that vehicles can safely traverse the roundabout from the entry point. Thus, construction HGVs will be able to perform a U-turn at the roundabout by keeping within their lane and not impact upon other vehicles on the roundabout, resulting in vehicle having no impact upon the safe operation of the roundabout.

7.3.9 The construction staff movements would be no different to other car movements along the highway network and there is nothing to suggest that they would create a road safety issue.

7.3.10 There are already HGV movements along the majority of the highway network and there is nothing to suggest that the construction HGVs would create a road safety issue. The construction HGVs will be under strict instruction and guidelines when travelling along the local road network and road safety issues are not predicted to result.

7.3.11 It is considered that the construction traffic would not create in any road safety issues that would result in an unacceptable impact on highway safety.

7.4 Impact upon Sustainable Modes of Transport

7.4.1 Construction staff may use sustainable modes of transport during the construction phase. During the periods when construction staff will arrive and depart on site, the footways, cycleways, bus services and train services in the vicinity of the site generally have available capacity.

7.4.2 The construction staff are not predicted to be at a level that will impact upon the capacity of these modes of transport.

7.4.3 It is considered that the proposed development would not impact upon sustainable modes of transport.

7.5 Summary

7.5.1 The above assessments demonstrate that both the average and peak construction traffic flows would not result in any noticeable increases along the local road network and would not create or materially impact upon any congestion that may occur during the weekday peak hours or any other hours during the day. It should also be borne in mind that these increases would all be temporary.

7.5.2 It is therefore concluded that the average and the peak construction traffic flows would not result in a severe impact along the local road network or an unacceptable impact on highway safety.

8. Cumulative Assessments

8.1.1 As set out in Section 5, a number of sites have been identified to be assessed alongside the proposed plant to understand the cumulative impact of development on the highway network.

8.2 Impact Upon Highway Capacity

Highway Network

8.2.1 The cumulative development traffic flows with average and peak construction traffic flows have been assessed against the 2022 baseline traffic flows within Table 8.1.

Table 8.1: 2022 Baseline + Average Construction Traffic and Peak Construction Traffic with Cumulative.

Road Link ID	Road Link / Description	Data	2022 Baseline	Average Construction + Cumulative		Peak Construction + Cumulative	
				24 hr AADT	% Impact	24 hr AADT	% Impact
1	A13 between M25 junction 30 and A126	Total	132736	3420	2.58%	3536	2.66%
		HGV	17487	932	5.33%	1013	5.79%
2	A13 between A126 and A1012	Total	110772	3420	3.09%	3536	3.19%
		HGV	16744	932	5.56%	1013	6.05%
3	A13 between A1089 and A1012	Total	114614	3420	2.98%	3536	3.08%
		HGV	16382	932	5.69%	1013	6.18%
4	A1089 between Marshfoot Road roundabout and A13	Total	37249	905	2.43%	1021	2.74%
		HGV	11960	415	3.47%	496	4.15%
11	Coopers Shaw Road / Church Road / Station Road, between Gun Hill Road and EMR East Tilbury junction	Total	1138	170	14.95%	286	25.15%
		HGV	269	83	30.86%	164	61.04%
15	A13, between Orsett Cock roundabout and A1089	Total	102630	3516	3.43%	3632	3.54%
		HGV	10220	936	9.16%	1017	9.95%
16	A1089 Dock Approach Road, between Marshfoot Road roundabout and ASDA roundabout	Total	42502	905	2.13%	1021	2.40%
		HGV	12112	415	3.43%	496	4.10%
17	A1089 St Andrews Road, between ASDA roundabout and Port of Tilbury Gate 1	Total	18521	630	3.40%	746	4.03%
		HGV	9640	383	3.97%	464	4.82%
18	A1089 St Andrews Road, between Port of Tilbury Gate 1 and Proposed Tilbury 2 Road	Total	8953	170	1.90%	286	3.20%
		HGV	3976	83	2.09%	164	4.13%
19	Proposed Tilbury 2 Road between A1089 St Andrews Road and Fort Road	Total	4640	170	3.67%	286	6.17%
		HGV	2673	83	3.11%	164	6.15%
20	Fort Road, between Proposed Tilbury 2 Road and Brennan Road	Total	1786	170	9.52%	286	16.02%
		HGV	307	83	27.02%	164	53.45%
21	Fort Road, between Brennan Road and Coopers Shaw Road	Total	2204	170	7.72%	286	12.98%
		HGV	334	83	24.89%	164	49.23%
22	Station Road, East Tilbury	Total	500	N/A	N/A	20	4.0%
		HGV	0	N/A	N/A	10	N/A

8.2.2 As can be expected, the cumulative increases in traffic along the highway links within the study area are higher than those created by the construction traffic generated by the Thurrock Flexible Generation Plant alone.

8.2.3 Of particular note in this assessment is the minor change in the percentage increase from the average construction traffic flows with cumulative development to the peak construction traffic flows with cumulative development. This gives a perspective to the effect of the proposed development within the cumulative development traffic flows given that the peak construction traffic flows are almost double the average construction traffic flows.

8.2.4 On the A13, the average construction traffic flows generated by the proposed development form only 5.2% of the total cumulative traffic flows whilst the proposed development peak construction traffic flows form only 8.8%. The majority of other cumulative traffic flows are for construction of developments with long term operational traffic flows, whereas the construction traffic flows generated by the proposed development are temporary during the construction period only with minimal operational flows.

8.2.5 As set out in Table 7.1, on the A13, the temporary daily increases in traffic flows are less than one-quarter of a percent as a result of the average construction traffic and the peak construction traffic generated by the proposed development alone. Under the cumulative development scenario as shown in Table 8.1, the increases are 3.43% for the average construction traffic and 4.10% for the peak construction traffic.

8.2.6 The same is predicted on the A1089 north of the ASDA roundabout where the temporary daily increases are predicted at less than one percent as a result of the average construction traffic and the peak construction traffic generated by the proposed development alone. Under the cumulative development scenario, the increases are 2.43% for the average construction traffic and 2.74% for the peak construction traffic.

8.2.7 It is clear that the cumulative increase predicted on the trunk road is created by the other developments in the surrounding areas, the majority of which generate construction traffic flows which lead to operational traffic flows far higher than the temporary traffic flows predicted by the proposed development.

8.2.8 The temporary increases in traffic along the trunk road network generated by the proposed development are considered negligible and would not be noticeable to other drivers. In this context, if the cumulative developments create a material impact, then such an impact would not be worsened by any noticeable amount by the traffic generated by the proposed development.

8.2.9 This is confirmed by the change in the increase from the average to the peak construction flows. For example, on the A13 between the M25 junction 30 and A126, the effect of almost doubling the construction traffic flows generated by the proposed development (i.e. from the average to the peak construction traffic flows) is to change the cumulative increase from 2.58% to 2.66%.

8.2.10 It is evident that if the cumulative developments were to create a material impact along the trunk road, then such an impact would not be worsened by any noticeable amount by the traffic generated by the proposed development.

8.2.11 This is also the case for the cumulative traffic flows along the A1089 where similar low changes from the average construction traffic flows to peak construction traffic flows result. It is also evident that if the cumulative developments create a material impact along the A1089, then such an impact would not be worsened by any noticeable amount by the traffic generated by the proposed development.

8.2.12 For other parts of the highway network, traffic flows are low and the cumulative traffic flows would not create any congestion.

ASDA Roundabout

8.2.13 Operational assessments have been undertaken using the Junctions 9 modelling suite at the ASDA roundabout for the 07:00 to 08:00 period, the 08:15 to 09:15 AM peak and the 17:00 to 18:00 PM Peak. The cumulative development flows have been added to the baseline and average and peak construction traffic flows to create a number of scenarios.

8.2.14 The scenarios included for the 07:00 to 08:00 scenario are as follows:

- 2022 Baseline + Average Construction + Cumulative; and
- 2022 Baseline + Peak Construction + Cumulative.

8.2.15 The scenarios included for the 08:15 to 09:15 AM and 17:00 to 18:00 PM scenario are as follows:

- 2022 Baseline + Average Construction + Cumulative;
- 2022 Baseline + Peak Construction + Cumulative;
- 2022 Baseline + Average Construction (HGV U-turn) + Cumulative; and
- 2022 Baseline + Peak Construction (HGV U-turn) + Cumulative.

8.2.16 A summary of the results is presented in Table 8.2 to Table 8.3 below. Full printouts of the model output files are attached at Annex L.

Table 8.2: ASDA Roundabout 07:00 – 08:00.

	2022 Baseline + Average Construction + Cumulative		
	Queue	**Delay**	**RFC**
London Distribution Park	0.2	9.15	0.19
Dock Road	1.2	9.38	0.56
St Andrews Road	1.5	8.41	0.61
Thurrock Park Way	0.7	5.64	0.40
A1089 Dock Road	486.7	865.44	1.45
	2022 Baseline + Peak Construction + Cumulative		
	Queue	**Delay**	**RFC**
London Distribution Park	0.2	9.16	0.19
Dock Road	1.2	9.40	0.56
St Andrews Road	1.5	8.40	0.61
Thurrock Park Way	0.7	5.65	0.40
A1089 Dock Road	494.1	880.50	1.46

8.2.17 Table 8.2 shows that the addition of the cumulative development to the 2022 baseline scenario plus average construction leads to a maximum RFC of 1.45 on the A1089 Dock Road arm during the 07:00 to 08:00 period. In the 2022 baseline plus peak construction scenario the addition of the cumulative development leads to a maximum RFC of 1.46 on the A1089 Dock Road arm.

8.2.18 It should be noted that all other arms remain within capacity during the 07:00 to 08:00 period.

8.2.19 As previously stated the results indicate that the capacity of the roundabout on the A1089 Dock Road arm is compromised by the existing and committed development traffic excluding the temporary average and peak construction traffic flows, together with the cumulative development traffic.

Table 8.3: ASDA Roundabout 08:15 – 09:15 and 17:00 – 18:00.

	2022 Baseline + Average Construction + Cumulative					
	08:15 – 09:15 AM			17:00 – 18:00 PM		
	Queue	**Delay**	**RFC**	**Queue**	**Delay**	**RFC**
London Distribution Park	0.3	11.45	0.26	0.6	7.56	0.39
Dock Road	3.8	20.25	0.81	1.1	7.00	0.52
St Andrews Road	1.5	8.89	0.60	6.4	16.21	0.88
Thurrock Park Way	1.0	7.06	0.50	40.2	119.83	1.17
A1089 Dock Road	107.1	221.35	1.16	3.6	9.86	0.79
	2022 Baseline + Peak Construction + Cumulative					
	08:15 – 09:15 AM			17:00 – 18:00 PM		
	Queue	**Delay**	**RFC**	**Queue**	**Delay**	**RFC**
London Distribution Park	0.3	11.46	0.26	0.6	7.65	0.38
Dock Road	3.9	20.53	0.81	1.1	7.02	0.53
St Andrews Road	1.5	8.97	0.60	4.4	11.41	0.82
Thurrock Park Way	1.0	7.10	0.51	43.2	117.61	1.19
A1089 Dock Road	112.8	232.84	1.17	3.6	9.82	0.79
	2022 Baseline + Average Construction (HGV U-turn) + Cumulative					
	08:15 – 09:15 AM			17:00 – 18:00 PM		
	Queue	**Delay**	**RFC**	**Queue**	**Delay**	**RFC**
London Distribution Park	0.3	11.48	0.26	0.6	7.57	0.39
Dock Road	3.8	20.36	0.81	1.1	7.01	0.53
St Andrews Road	1.5	8.91	0.60	6.5	16.39	0.88
Thurrock Park Way	1.0	7.06	0.50	40.5	109.91	1.17
A1089 Dock Road	106.6	221.01	1.16	3.5	9.80	0.79
	2022 Baseline + Peak Construction (HGV U-turn) + Cumulative					
	08:15 – 09:15 AM			17:00 – 18:00 PM		
	Queue	**Delay**	**RFC**	**Queue**	**Delay**	**RFC**

London Distribution Park	0.3	11.52	0.26	0.6	7.61	0.39
Dock Road	3.9	20.63	0.81	1.1	7.06	0.53
St Andrews Road	1.5	9.02	0.61	6.7	16.81	0.89
Thurrock Park Way	1.0	7.11	0.51	41.2	114.16	1.18
A1089 Dock Road	107.3	222.61	1.17	3.6	9.87	0.79

8.2.20 Table 8.3 shows with the addition of the cumulative development flows to the baseline and average construction flow scenario that the maximum RFC in the AM peak is 1.16 on the A1089 Dock Road and in the PM 1.17 on Thurrock Park Way. In the 2022 baseline plus peak construction the addition of the cumulative development leads to a maximum RFC of 1.17 in the AM peak on the A1089 Dock Road arm and 1.19 in the PM peak on the Thurrock Park Way arm.

8.2.21 The addition of the cumulative development to the 2022 baseline plus average construction for the HGV U-turn scenario leads to a maximum RFC of 1.16 on the A1089 Dock Road in the AM peak and 1.17 in the PM peak on Thurrock Park Way. For the 2022 baseline plus peak construction HGV U-turn scenario the maximum RFC is 1.17 on the A1089 Dock Road arm and 1.18 in the PM on the Thurrock Park Way arm.

8.2.22 It should be noted that all other arms remain within capacity during the 07:00 to 08:00 period and the AM and PM peaks.

8.2.23 The above cumulative assessments do not include the Lower Thames Crossing. As set out above, the Lower Thames Crossing will substantially change the surrounding highway network and will substantially change the number of vehicle movements on links assessed. It is expected that the changes in traffic flows as a result of the Lower Thames Crossing would result in significant impacts and these would be mitigated by the Lower Thames Crossing.

8.2.24 The construction traffic for the average and peak construction scenarios for this application are minimal compared the significant changes in the patterns of traffic flows should the Lower Thames Crossing be brought forward. Any effect of this application on a cumulative assessment with Lower Thames Crossing would be negligible and would not contribute to any noticeable levels. The mitigation from the Lower Thames Crossing is expected to outweigh the traffic flows generated by this application. A cumulative assessment to include the Lower Thames Crossing has not been included as part of this application has not therefore been undertaken.

9. Summary and Conclusions

9.1.1 This Transport Assessment assesses the transport impact of the construction phase of the Thurrock Flexible Generation Plant. The report has been prepared as an Appendix to Volume 3, Chapter 10: Traffic and Transport.

9.1.2 The site is located immediately to the north of the existing Tilbury Substation within Thurrock, Essex.

9.1.3 During construction, it is estimated there would be an average of 250 staff on site per day and a peak of up to 350 staff on site per day. An average of 40 HGV deliveries per day (average of 80 HGV movements per day) is predicted with a peak of 80 HGV deliveries per day (160 HGV movements per day).

9.1.4 The intention is for construction vehicles to route from the A13 and then south on the A1089 Dock Approach Road, A1089 St Andrews Road and A1089 Ferry Road, then routing east onto the proposed RWE / Tilbury 2 road and access junction. Should this access be unavailable for any reason, construction vehicles will continue north on Fort Road and join Coopers Shaw Road to the east, continuing along Church Road and then Station Road to access the site.

9.1.5 It is expected that a number of construction HGVs will originate from the Port of Tilbury, perform a U-turn at the ASDA roundabout before continuing on the above route, south along A1089 St Andrews Road.

9.1.6 Abnormal indivisible loads will access the proposed development through a new dedicated access and temporary causeway on the river Thames, which will avoid the highway network.

9.1.7 Vehicle movements when the proposed development is operational will be irregular and low, so the impacts have been scoped out of the assessment.

9.1.8 When the site is decommissioned, the process will require its removal from site which will generate associated vehicle movements, including HGV movements. Since there is no further use for the materials, such materials can be removed in bulk. This means that larger payloads can be achieved, and the traffic flows associated with decommissioning are lower than those during its construction. Thus, the assessment for the decommissioning phase is deemed to be of similar nature to, but a lower magnitude and shorter duration than that for the construction phase.

9.1.9 An assessment of the temporary construction traffic flows against 2022 baseline traffic flows demonstrate changes that would not be noticeable to other drivers and would not create or add to any existing levels of congestion or road safety.

9.1.10 An assessment of the cumulative temporary construction traffic flows with other emerging developments against 2022 baseline traffic flows produced the same conclusion.

9.1.11 It is thus concluded that the construction traffic flows would not result in a severe residual cumulative impact on the road network or an unacceptable impact on highway safety along the local road network.

9.1.12 It is therefore considered that there are no transport or highways reasons for not permitting the development.

10. References

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Annex A Thurrock Cycle Routes

Cranham

North Ockendon

Bulphan

Ockendon

South Ockendon

Orsett

Wennington

Aveley

North Stifford

Orsett Heath

Chadwell St Mary

Little Thurrock

West Thurrock

South Stifford

Grays

Purfleet

Tilbury

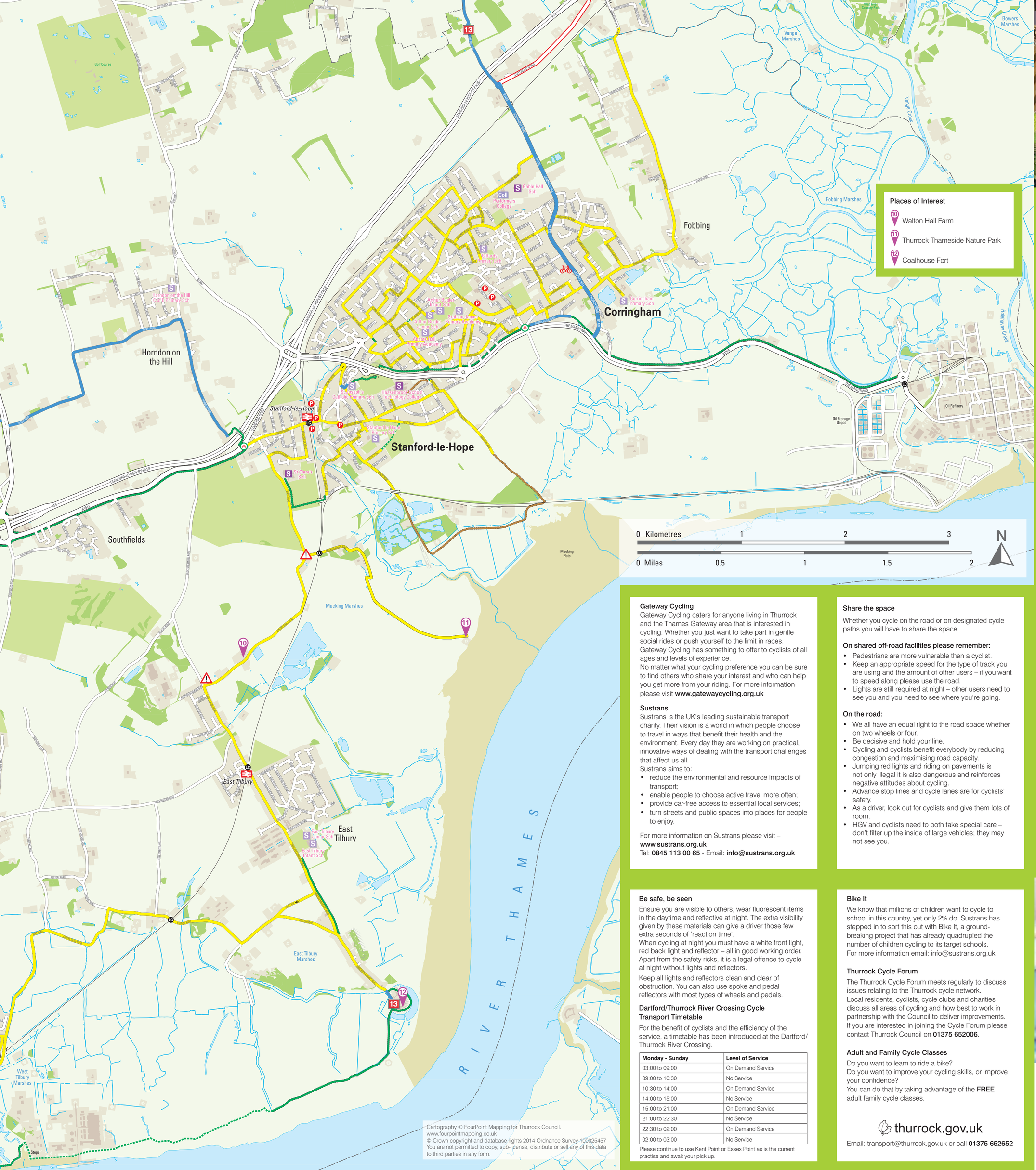
Local links and links to villages (traffic volumes may vary according to time of day)
Signed cycle route
On-road cycle lane
Traffic-free route
Bridleway (surfaces may vary)
Walk your bike section
National Cycle Network Route numbers
Railway with station
Pedestrian crossing
Toucan crossing
Bike shop
Primary school
Secondary school
Special school
College
Take care
Cycle parking
Place of interest (named and numbered)
Level crossing
Borough boundary
Ferry
One way

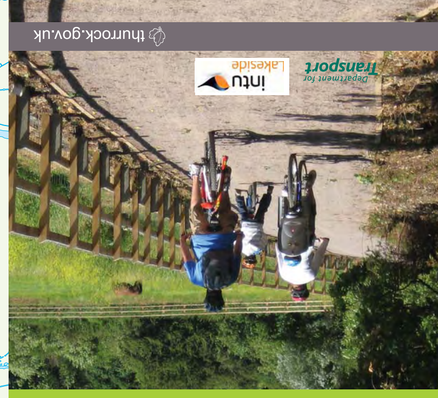
Places of Interest

1. Rainham Marshes R.S.P.B. Nature Reserve
2. High House Production Park
3. Grays Beach Riverside Park
4. Tilbury to Gravesend Ferry
5. Tilbury Fort
6. Chafford Gorges Nature Park
7. intu Lakeside
8. Davy Down Country Park
9. Belhus Woods Country Park

0 Kilometres 1 2 3
0 Miles 0.5 1 1.5 2

N





Thurrock Cycle Map

Travel Thurrock

Cycle Shops in Thurrock

Thurrock Cycle Centre, 55 Southend Rd, Grays	01375 379221
The Bike Shop,10 Clarence Road, Grays	01375 372679
Corringham Cycles, 47 Lampits Hill, Corringham	01375 644067
Halfords Superstore, West Thurrock Way, West Thurrock	01708 862980
Evans Cycles Lakeside Retail Park, West Thurrock	01708 804988
Decathlon Tunnel Retail Park, Lakeside	01708 895650

Council Contacts

Highways	01375 413866
Road Safety Manager & Bike It	01375 413369
Public Rights of Way	01375 373949

Other Useful Contacts

www.thurrock.gov.uk/travel	
Thurrock Cycle Forum and Map	01375 652006
Basildon District Council - www.basildon.gov.uk	01268 533333
Gravesham Borough Council - www.gravesham.gov.uk	01474 337000
London Borough of Havering - www.havering.gov.uk	01708 432804
QE2 Bridge Crossing	01322 221603
Gateway Cycling - www.gatewaycycling.org.uk	
Thurrock Council - www.thurrock.gov.uk	01375 652652
Sustrans Rangers - sustrans.thurrock@yahoo.co.uk	
Bike Week - www.bikeweek.org.uk	
Lakeside Shopping Centre - www.intu.co.uk/lakeside	
Tilbury Ferry	07973 390124

Scan this code with your smart phone to go to **www.thurrock.gov.uk/travel**

Gateway Cycling

Gateway Cycling caters for anyone living in Thurrock and the Thames Gateway area that is interested in cycling. Whether you just want to take part in gentle social rides or push yourself to the limit in races. Gateway Cycling has something to offer to cyclists of all ages and levels of experience.
No matter what your cycling preference you can be sure to find others who share your interest and who can help you get more from your riding. For more information please visit **www.gatewaycycling.org.uk**

Sustrans

Sustrans is the UK's leading sustainable transport charity. Their vision is a world in which people choose to travel in ways that benefit their health and the environment. Every day they are working on practical, innovative ways of dealing with the transport challenges that affect us all.
Sustrans aims to:

- reduce the environmental and resource impacts of transport;
- enable people to choose active travel more often;
- provide car-free access to essential local services;
- turn streets and public spaces into places for people to enjoy.

For more information on Sustrans please visit – **www.sustrans.org.uk**
Tel: **0845 113 00 65** - Email: **info@sustrans.org.uk**

Share the space

Whether you cycle on the road or on designated cycle paths you will have to share the space.

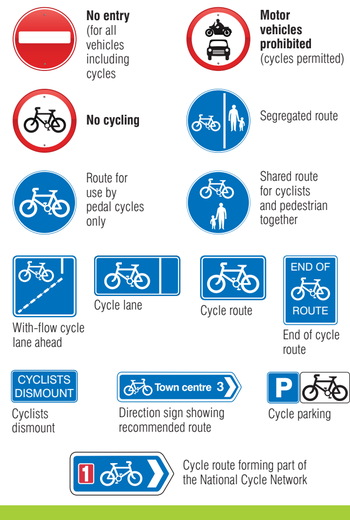
On shared off-road facilities please remember:

- Pedestrians are more vulnerable then a cyclist.
- Keep an appropriate speed for the type of track you are using and the amount of other users – if you want to speed along please use the road.
- Lights are still required at night – other users need to see you and you need to see where you're going.

On the road:

- We all have an equal right to the road space whether on two wheels or four.
- Be decisive and hold your line.
- Cycling and cyclists benefit everybody by reducing congestion and maximising road capacity.
- Jumping red lights and riding on pavements is not only illegal it is also dangerous and reinforces negative attitudes about cycling.
- Advance stop lines and cycle lanes are for cyclists' safety.
- As a driver, look out for cyclists and give them lots of room.
- HGV and cyclists need to both take special care – don't filter up the inside of large vehicles; they may not see you.

Common road signs and markings that you may come across when out cycling.



Be safe, be seen

Ensure you are visible to others, wear fluorescent items in the daytime and reflective at night. The extra visibility given by these materials can give a driver those few extra seconds of 'reaction time'.
When cycling at night you must have a white front light, red back light and reflector – all in good working order. Apart from the safety risks, it is a legal offence to cycle at night without lights and reflectors.

Keep all lights and reflectors clean and clear of obstruction. You can also use spoke and pedal reflectors with most types of wheels and pedals.

Dartford/Thurrock River Crossing Cycle Transport Timetable

For the benefit of cyclists and the efficiency of the service, a timetable has been introduced at the Dartford/Thurrock River Crossing.

Monday - Sunday	Level of Service
03:00 to 09:00	On Demand Service
09:00 to 10:30	No Service
10:30 to 14:00	On Demand Service
14:00 to 15:00	No Service
15:00 to 21:00	On Demand Service
21:00 to 22:30	No Service
22:30 to 02:00	On Demand Service
02:00 to 03:00	No Service

Please continue to use Kent Point or Essex Point as is the current practise and await your pick up.

Bike It

We know that millions of children want to cycle to school in this country, yet only 2% do. Sustrans has stepped in to sort this out with Bike It, a ground-breaking project that has already quadrupled the number of children cycling to its target schools.
For more information email: info@sustrans.org.uk

Thurrock Cycle Forum

The Thurrock Cycle Forum meets regularly to discuss issues relating to the Thurrock cycle network.
Local residents, cyclists, cycle clubs and charities discuss all areas of cycling and how best to work in partnership with the Council to deliver improvements.
If you are interested in joining the Cycle Forum please contact Thurrock Council on **01375 652006**.

Adult and Family Cycle Classes

Do you want to learn to ride a bike?
Do you want to improve your cycling skills, or improve your confidence?
You can do that by taking advantage of the **FREE** adult family cycle classes.

thurrock.gov.uk

Email: transport@thurrock.gov.uk or call **01375 652652**

Annex B Thurrock Bus Routes

Thurrock bus routes

thurrock.gov.uk/travel

to Romford via Harold Wood

to Romford via Hornchurch

Upminster Station

St. Mary's Lane

269 **Brentwood**

Great Warley

Corbets Tey

North Ockendon

347

Ockendon Academy

to Hornchurch

Elm Park

Rainham

11 22 32 Z1

Aveley ***Usk Road***

to Barking

Z2

Ormiston Park Academy

Mill Road

Daiglen Drive

Darenth Lane

Belhus *Foyle Drive*

Belhus *Derwent Parade*

Ockendon Station

South Road

Stifford Road

Aveley *High Street*

Stifford Hill

North Stifford *Dog & Partridge*

Stifford Clays Road

Stifford Clays *Crammavill Street*

Kingsman Drive

Love Lane

Pilgrims Lane

Lakeside Bus Station

22 33 44 66

66A 73 73A 83

88 88A 100 370

372 X80 Z1

London Road (Aveley)

Thurrock FC

Arterial Road *Harvester*

Long Lane

Thurrock Community Hospital

Blackshots Lane

Jesmond Road

Treacle Mine

Arterial Road *Sainsbury's*

Blackshots Leisure Centre

Uplands Estate

New Tank Hill Road *RSPB*

Thurrock Services *for Lakeside Retail Park*

Lakeside

Garrison Estate

Chafford Hundred Station

Elizabeth Road

Hathaway Academy

Hathaway Road

Harris Academy

Drake Road

Lenthall Avenue

Weston Ave

11

Purfleet Station

West Thurrock Way

Hogg Lane

IKEA *for Lakeside Retail Park*

London Road *The Ship*

Royal Opera House

Motherwell Way

Stonehouse Corner

Grays Station

Chadwell Road

Palmers Avenue

66 66A

East Thurrock Road

Broadway

London Road *The Rookery*

London Road *Red Lion*

Grays Bus Station

5A/B 22 32 33

44 66 66A 73

73A 83 88 100

265 269 374 Z1

Dartford Crossing M25

Crossways

Stone Crossing Station

Greenhithe Station

X80 **Bluewater Shopping Centre**

to Brentwood

265 ***West Horndon Station***

Bulphan Motel

565

Bulphan Church

Recreation Ground

5B

Orsett Hospital

Baker Street

Orsett Cock

Gordon Road

High Road

South Hill

Heath Road

King Edward Drive

River View

Cross Keys

Socketts Heath *The Oak*

Palmers College

66 66A 83

Chadwell St. Mary, Longhouse Road, Defoe Parade

Waterson Road

Linford Road

Gateway Academy

West Tilbury

St. Chad's Road

Feenan Highway

Z1 Z2 Z4

Amazon

66 66A 73 73A

Tilbury Civic Square

Tilbury ***ASDA***

99

Tilbury Town Station

Port of Tilbury

Tilbury Town Station

London International Cruise Terminal

99

Tilbury Landing Stage

Gravesend

Fort Road *for Tilbury Fort*

The Ship

Coalhouse Fort

RIVER THAMES

to Laindon

Basildon Bus Station

5A/B 11 100

374 Z4

to Billericay and Chelmsford

Basildon Bus Station

Basildon Station

Laindon Station

Basildon *Hospital*

Vange *Five Bells*

Corringham *Leisure Centre*

Lampits Hill

Greathouse Chase

Marsh Lane

Corringham *Social Club*

Homesteads *Southend Road*

Abbotts Drive

Corringham Town Centre

Digby Road

Victoria Road

Stanford-le-Hope *Town Centre*

High Street

Rookery Corner

Stanford-le-Hope Station

Hassenbrook Academy

Butts Lane

Walton's Hall Road

East Tilbury Station

East Tilbury *Coronation Avenue*

Key

5A	88A
5B	99
11	100
22	265
32	269
32 School journey only	347
33	370
44	372
66	374
66A	565
73	X80
73A	Z1
83	Z2
88	Z4

Railway and Station

Tilbury-Gravesend Ferry Service

Annex C Crashmap Reports

crashmap.co.uk

Crash Date:	Sunday, September 22, 2013	**Time of Crash:**	8:50:00 PM	**Crash Reference:**	**201342I289409**

Highest Injury Severity:	Slight	**Road Number:**	U0	**Number of Casualties:**	2
Highway Authority:	Thurrock			**Number of Vehicles:**	1
Local Authority:	Thurrock			**OS Grid Reference:**	566132 177353
Weather Description:	Fine without high winds				
Road Surface Description:	Dry				
Speed Limit:	60				
Light Conditions:	Darkness: no street lighting				
Carriageway Hazards:	None				
Junction Detail:	Not at or within 20 metres of junction				
Junction Pedestrian Crossing:	No physical crossing facility within 50 metres				
Road Type:	Single carriageway				
Junction Control:	Not Applicable				

For more information about the data please visit: *www.crashmap.co.uk/home/Faq*
To subscribe to unlimited reports using CrashMap Pro visit *www.crashmap.co.uk/Home/Premium_Services*

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Vehicles involved

Vehicle Ref	Vehicle Type	Vehicle Age	Driver Gender	Driver Age Band	Vehicle Maneouvre	First Point of Impact	Journey Purpose	Hit Object - On Carriageway	Hit Object - Off Carriageway
1	Car (excluding private hire)	13	Male	26 - 35	Vehicle proceeding normally along the carriageway, on a right hand bend	Did not impact	Other	None	Entered ditch

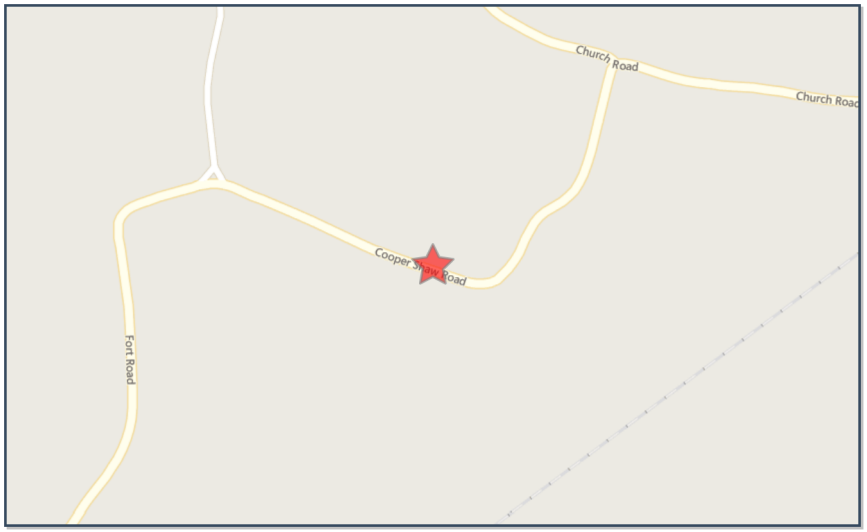
Casualties

Vehicle Ref	Casualty Ref	Injury Severity	Casualty Class	Gender	Age Band	Pedestrian Location	Pedestrian Movement
1	1	Slight	Driver or rider	Male	26 - 35	Unknown or other	Unknown or other
1	2	Slight	Vehicle or pillion passenger	Female	16 - 20	Unknown or other	Unknown or other

crashmap.co.uk

Crash Date:	Monday, August 15, 2016	**Time of Crash:**	5:19:00 PM	**Crash Reference:**	**2016420095791**

Highest Injury Severity:	Slight	**Road Number:**	U0	**Number of Casualties:**	4
Highway Authority:	Thurrock			**Number of Vehicles:**	2
Local Authority:	Thurrock			**OS Grid Reference:**	566063 177375
Weather Description:	Fine without high winds				
Road Surface Description:	Dry				
Speed Limit:	60				
Light Conditions:	Daylight: regardless of presence of streetlights				
Carriageway Hazards:	None				
Junction Detail:	Not at or within 20 metres of junction				
Junction Pedestrian Crossing:	No physical crossing facility within 50 metres				
Road Type:	Single carriageway				
Junction Control:	Not Applicable				



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Vehicles involved

Vehicle Ref	Vehicle Type	Vehicle Age	Driver Gender	Driver Age Band	Vehicle Maneouvre	First Point of Impact	Journey Purpose	Hit Object - On Carriageway	Hit Object - Off Carriageway
2	Car (excluding private hire)	1	Female	16 - 20	Vehicle proceeding normally along the carriageway, on a left hand bend	Front	Other	None	None
1	Car (excluding private hire)	-1	Unknown	Unknown	Vehicle proceeding normally along the carriageway, on a right hand bend	Did not impact	Other	None	None

Casualties

Vehicle Ref	Casualty Ref	Injury Severity	Casualty Class	Gender	Age Band	Pedestrian Location	Pedestrian Movement
2	1	Slight	Driver or rider	Female	16 - 20	Unknown or other	Unknown or other
2	2	Slight	Vehicle or pillion passenger	Female	16 - 20	Unknown or other	Unknown or other
2	3	Slight	Vehicle or pillion passenger	Male	16 - 20	Unknown or other	Unknown or other
2	4	Slight	Vehicle or pillion passenger	Female	16 - 20	Unknown or other	Unknown or other

For more information about the data please visit: *www.crashmap.co.uk/home/Faq*
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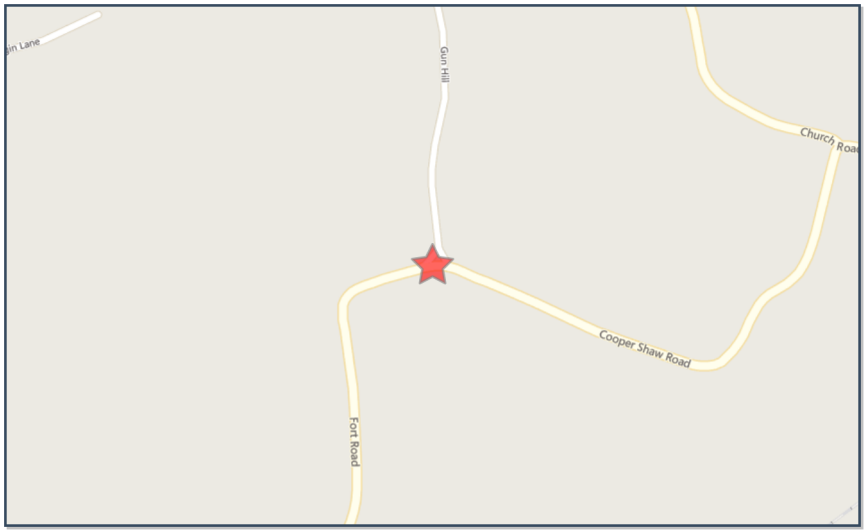
crashmap.co.uk

Crash Date:	Wednesday, October 10, 2018	**Time of Crash:**	12:30:00 PM	**Crash Reference:**	**2018420334482**

Highest Injury Severity:	Slight	**Road Number:**	U0	**Number of Casualties:**	2
Highway Authority:	Thurrock			**Number of Vehicles:**	2
Local Authority:	Thurrock			**OS Grid Reference:**	565721 177493
Weather Description:	Fine without high winds				
Road Surface Description:	Dry				
Speed Limit:	60				
Light Conditions:	Daylight: regardless of presence of streetlights				
Carriageway Hazards:	None				
Junction Detail:	T or staggered junction				
Junction Pedestrian Crossing:	No physical crossing facility within 50 metres				
Road Type:	Single carriageway				
Junction Control:	Give way or uncontrolled				



For more information about the data please visit: *www.crashmap.co.uk/home/Faq*
To subscribe to unlimited reports using CrashMap Pro visit *www.crashmap.co.uk/Home/Premium_Services*

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Vehicles involved

Vehicle Ref	Vehicle Type	Vehicle Age	Driver Gender	Driver Age Band	Vehicle Maneouvre	First Point of Impact	Journey Purpose	Hit Object - On Carriageway	Hit Object - Off Carriageway
2	Car (excluding private hire)	14	Male	26 - 35	Vehicle is moving off	Back	Other	None	None
1	Car (excluding private hire)	5	Male	21 - 25	Vehicle is moving off	Front	Journey as part of work	None	None

Casualties

Vehicle Ref	Casualty Ref	Injury Severity	Casualty Class	Gender	Age Band	Pedestrian Location	Pedestrian Movement
2	1	Slight	Driver or rider	Male	26 - 35	Unknown or other	Unknown or other
2	2	Slight	Vehicle or pillion passenger	Male	26 - 35	Unknown or other	Unknown or other

crashmap.co.uk

Crash Date:	Wednesday, December 28, 2016	**Time of Crash:**	8:00:00 AM	**Crash Reference:**	**2016420140401**
Highest Injury Severity:	Slight	**Road Number:**	U0	**Number of Casualties:**	1
Highway Authority:	Thurrock			**Number of Vehicles:**	1
Local Authority:	Thurrock			**OS Grid Reference:**	565631 177130
Weather Description:	Fog or mist - if hazard				
Road Surface Description:	Frost or Ice				
Speed Limit:	60				
Light Conditions:	Daylight: regardless of presence of streetlights				
Carriageway Hazards:	None				
Junction Detail:	Not at or within 20 metres of junction				
Junction Pedestrian Crossing:	No physical crossing facility within 50 metres				
Road Type:	Single carriageway				
Junction Control:	Not Applicable				

For more information about the data please visit: *www.crashmap.co.uk/home/Faq*
To subscribe to unlimited reports using CrashMap Pro visit *www.crashmap.co.uk/Home/Premium_Services*

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Vehicles involved

Vehicle Ref	Vehicle Type	Vehicle Age	Driver Gender	Driver Age Band	Vehicle Maneouvre	First Point of Impact	Journey Purpose	Hit Object - On Carriageway	Hit Object - Off Carriageway
1	Car (excluding private hire)	6	Female	16 - 20	Vehicle proceeding normally along the carriageway, on a left hand bend	Front	Other	None	None

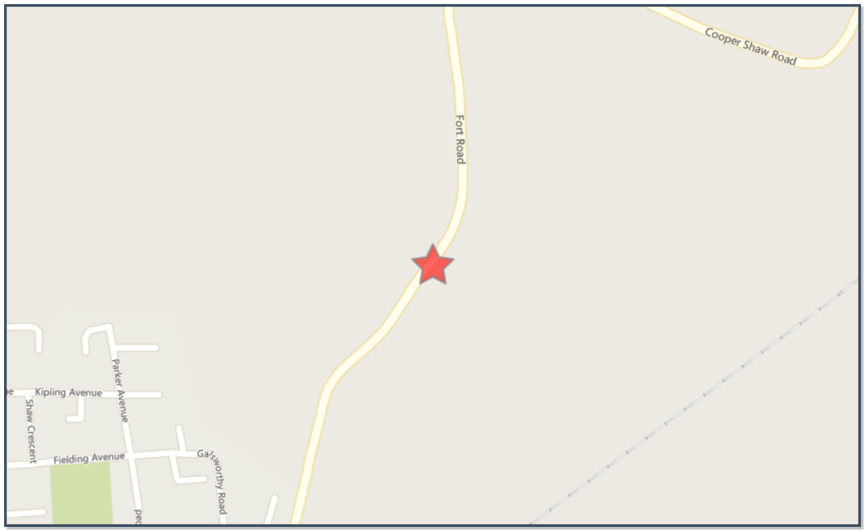
Casualties

Vehicle Ref	Casualty Ref	Injury Severity	Casualty Class	Gender	Age Band	Pedestrian Location	Pedestrian Movement
1	1	Slight	Driver or rider	Female	16 - 20	Unknown or other	Unknown or other

crashmap.co.uk

Crash Date:	Sunday, February 16, 2014	**Time of Crash:**	7:00:00 PM	**Crash Reference:**	**201442I053102**

Highest Injury Severity:	Serious	**Road Number:**	U0	**Number of Casualties:**	1
Highway Authority:	Thurrock			**Number of Vehicles:**	1
Local Authority:	Thurrock			**OS Grid Reference:**	565579 177041
Weather Description:	Fine without high winds				
Road Surface Description:	Wet or Damp				
Speed Limit:	50				
Light Conditions:	Darkness: no street lighting				
Carriageway Hazards:	Any animal in carriageway (except ridden horse)				
Junction Detail:	Not at or within 20 metres of junction				
Junction Pedestrian Crossing:	No physical crossing facility within 50 metres				
Road Type:	Single carriageway				
Junction Control:	Not Applicable				



For more information about the data please visit: *www.crashmap.co.uk/home/Faq*
To subscribe to unlimited reports using CrashMap Pro visit *www.crashmap.co.uk/Home/Premium_Services*

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Vehicles involved

Vehicle Ref	Vehicle Type	Vehicle Age	Driver Gender	Driver Age Band	Vehicle Maneouvre	First Point of Impact	Journey Purpose	Hit Object - On Carriageway	Hit Object - Off Carriageway
1	Car (excluding private hire)	2	Male	66 - 75	Vehicle proceeding normally along the carriageway, not on a bend	Front	Other	Any animal (except ridden horse)	Entered ditch

Casualties

Vehicle Ref	Casualty Ref	Injury Severity	Casualty Class	Gender	Age Band	Pedestrian Location	Pedestrian Movement
1	1	Serious	Driver or rider	Male	66 - 75	Unknown or other	Unknown or other

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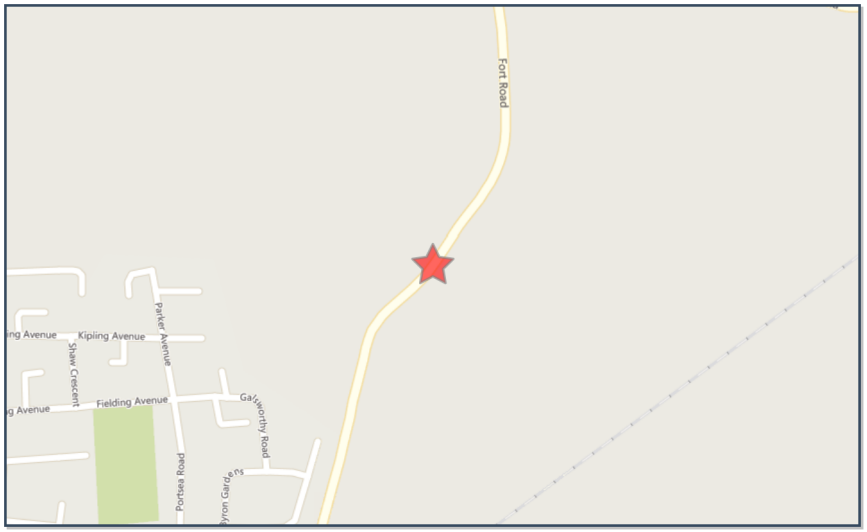
Crash Date:	Saturday, July 11, 2015	**Time of Crash:**	9:55:00 PM	**Crash Reference:**	**201542I314607**

Highest Injury Severity:	Serious	**Road Number:**	U0	**Number of Casualties:**	3
Highway Authority:	Thurrock			**Number of Vehicles:**	1
Local Authority:	Thurrock			**OS Grid Reference:**	565519 176950
Weather Description:	Fine without high winds				
Road Surface Description:	Dry				
Speed Limit:	60				
Light Conditions:	Darkness: no street lighting				
Carriageway Hazards:	None				
Junction Detail:	Not at or within 20 metres of junction				
Junction Pedestrian Crossing:	No physical crossing facility within 50 metres				
Road Type:	Single carriageway				
Junction Control:	Not Applicable				



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Vehicles involved

Vehicle Ref	Vehicle Type	Vehicle Age	Driver Gender	Driver Age Band	Vehicle Maneouvre	First Point of Impact	Journey Purpose	Hit Object - On Carriageway	Hit Object - Off Carriageway
1	Car (excluding private hire)	6	Male	26 - 35	Vehicle proceeding normally along the carriageway, not on a bend	Front	Other	None	Entered ditch

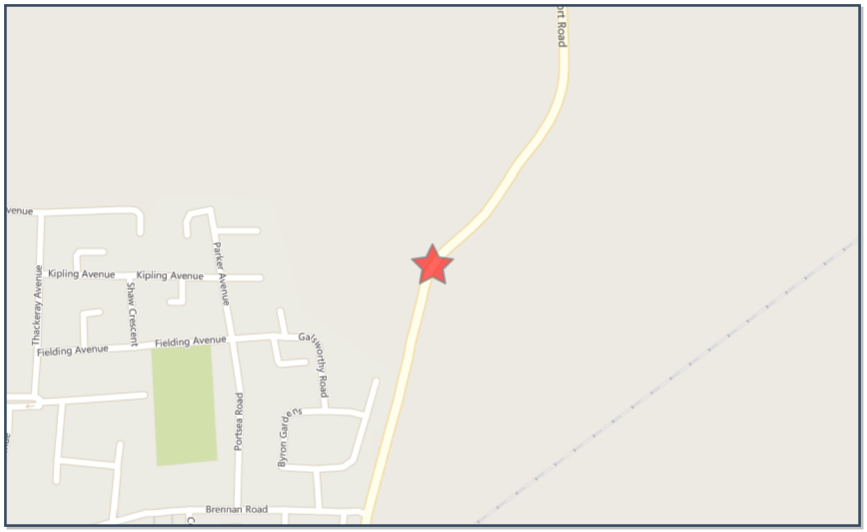
Casualties

Vehicle Ref	Casualty Ref	Injury Severity	Casualty Class	Gender	Age Band	Pedestrian Location	Pedestrian Movement
1	1	Serious	Driver or rider	Male	26 - 35	Unknown or other	Unknown or other
1	2	Slight	Vehicle or pillion passenger	Male	26 - 35	Unknown or other	Unknown or other
1	3	Slight	Vehicle or pillion passenger	Female	6 - 10	Unknown or other	Unknown or other

crashmap.co.uk

Crash Date:	Thursday, August 25, 2016	**Time of Crash:**	3:20:00 PM	**Crash Reference:**	**2016420099461**

Highest Injury Severity:	Serious	**Road Number:**	U0	**Number of Casualties:**	2
Highway Authority:	Thurrock			**Number of Vehicles:**	2
Local Authority:	Thurrock			**OS Grid Reference:**	565435 176854
Weather Description:	Fine without high winds				
Road Surface Description:	Dry				
Speed Limit:	60				
Light Conditions:	Daylight: regardless of presence of streetlights				
Carriageway Hazards:	None				
Junction Detail:	Not at or within 20 metres of junction				
Junction Pedestrian Crossing:	No physical crossing facility within 50 metres				
Road Type:	Single carriageway				
Junction Control:	Not Applicable				



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Vehicles involved

Vehicle Ref	Vehicle Type	Vehicle Age	Driver Gender	Driver Age Band	Vehicle Maneouvre	First Point of Impact	Journey Purpose	Hit Object - On Carriageway	Hit Object - Off Carriageway
2	Car (excluding private hire)	10	Female	66 - 75	Vehicle proceeding normally along the carriageway, not on a bend	Front	Other	None	None
1	Car (excluding private hire)	12	Male	26 - 35	Vehicle is passing another moving vehicle on its offside	Front	Other	None	None

Casualties

Vehicle Ref	Casualty Ref	Injury Severity	Casualty Class	Gender	Age Band	Pedestrian Location	Pedestrian Movement
2	1	Serious	Vehicle or pillion passenger	Female	46 - 55	Unknown or other	Unknown or other
2	2	Serious	Driver or rider	Female	66 - 75	Unknown or other	Unknown or other

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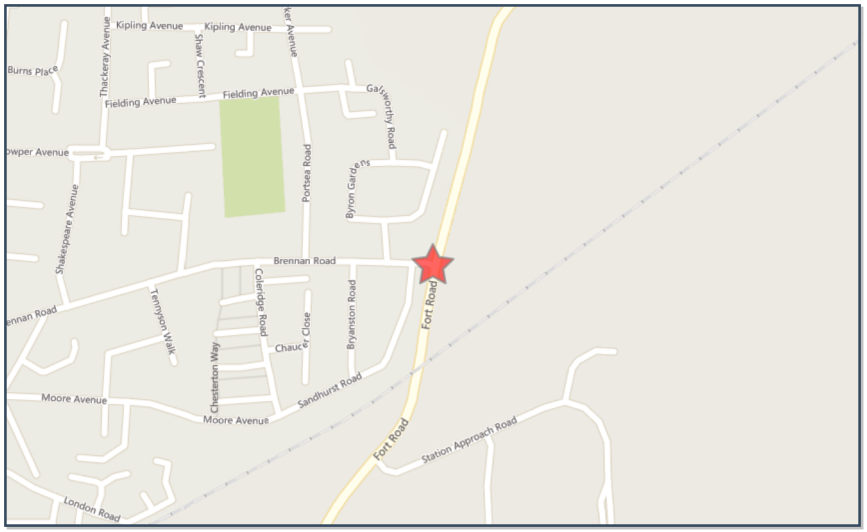
Crash Date:	Monday, July 13, 2015	**Time of Crash:**	10:45:00 AM	**Crash Reference:**	**201542I211507**

Highest Injury Severity:	Slight	**Road Number:**	U0	**Number of Casualties:**	1
Highway Authority:	Thurrock			**Number of Vehicles:**	2
Local Authority:	Thurrock			**OS Grid Reference:**	565346 176484
Weather Description:	Fine without high winds				
Road Surface Description:	Dry				
Speed Limit:	60				
Light Conditions:	Daylight: regardless of presence of streetlights				
Carriageway Hazards:	None				
Junction Detail:	T or staggered junction				
Junction Pedestrian Crossing:	No physical crossing facility within 50 metres				
Road Type:	Single carriageway				
Junction Control:	Give way or uncontrolled				



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Vehicles involved

Vehicle Ref	Vehicle Type	Vehicle Age	Driver Gender	Driver Age Band	Vehicle Maneouvre	First Point of Impact	Journey Purpose	Hit Object - On Carriageway	Hit Object - Off Carriageway
2	Car (excluding private hire)	15	Female	21 - 25	Vehicle is in the act of turning right	Nearside	Other	None	None
1	Goods vehicle over 3.5 tonnes and under 7.5 tonnes mgw	-1	Male	26 - 35	Vehicle proceeding normally along the carriageway, not on a bend	Front	Journey as part of work	None	None

Casualties

Vehicle Ref	Casualty Ref	Injury Severity	Casualty Class	Gender	Age Band	Pedestrian Location	Pedestrian Movement
1	1	Slight	Driver or rider	Male	26 - 35	Unknown or other	Unknown or other

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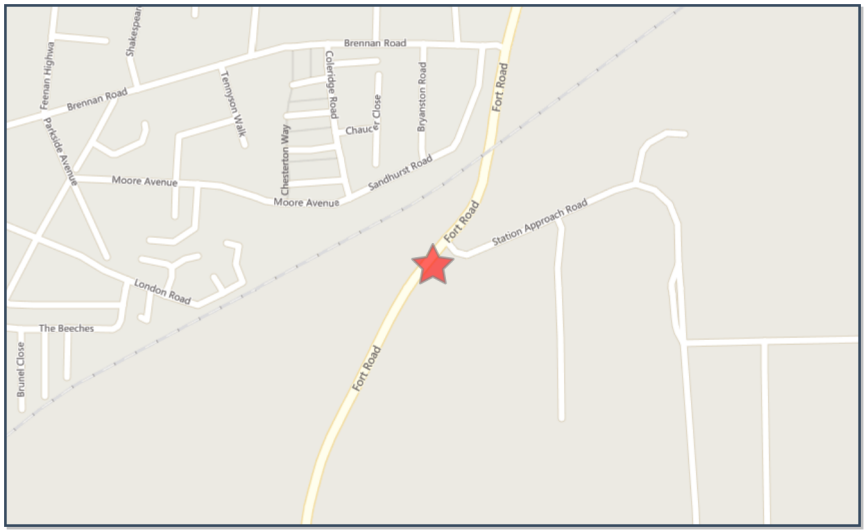
Crash Date:	Monday, August 11, 2014	**Time of Crash:**	1:10:00 PM	**Crash Reference:**	**201442I265208**

Highest Injury Severity:	Slight	**Road Number:**	U0	**Number of Casualties:**	1
Highway Authority:	Thurrock			**Number of Vehicles:**	2
Local Authority:	Thurrock			**OS Grid Reference:**	565248 176164
Weather Description:	Fine with high winds				
Road Surface Description:	Dry				
Speed Limit:	60				
Light Conditions:	Daylight: regardless of presence of streetlights				
Carriageway Hazards:	None				
Junction Detail:	Other junction				
Junction Pedestrian Crossing:	No physical crossing facility within 50 metres				
Road Type:	Single carriageway				
Junction Control:	Give way or uncontrolled				



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Vehicles involved

Vehicle Ref	Vehicle Type	Vehicle Age	Driver Gender	Driver Age Band	Vehicle Maneouvre	First Point of Impact	Journey Purpose	Hit Object - On Carriageway	Hit Object - Off Carriageway
2	Car (excluding private hire)	1	Male	46 - 55	Vehicle is in the act of turning right	Back	Journey as part of work	None	None
1	Goods vehicle 7.5 tonnes mgw and over	7	Male	26 - 35	Vehicle is passing another vehicle (moving or stationary) on its nearside	Front	Journey as part of work	None	None

Casualties

Vehicle Ref	Casualty Ref	Injury Severity	Casualty Class	Gender	Age Band	Pedestrian Location	Pedestrian Movement
2	1	Slight	Driver or rider	Male	46 - 55	Unknown or other	Unknown or other

Annex D Essex Highways Personal Injury Accident Data

Accidents between dates **01/07/2014** **and** **30/06/2019** (60) months

Selection: **Notes:**

Selected using Manual Selection

I25040714 23/07/2014 Time 1750 Vehicles 2 Casualties 1 Slight
E: 563188 N: 176966 First Road: A 1089 Road Type 1
Speed limit: 40 Junction Detail: Roundabout Give way or controlled Unclassified
Crossing: Control None Facilities: None within 50m Road surface Dry
Daylight Fine without high winds
Special Conditions at Site None Carriageway Hazards: None
Place accident reported: At scene DfT Special Projects:

Causation

	Factor:	Participant:	Confidence:
1st:	Failed to look properly	Vehicle 2	Possible
2nd:			
3rd:			
4th:			
5th:			
6th:			

VEH 1 STOPPED AT THE RAB ST ANDREWS ROAD TOWARDS A1089. VEH 2 COLLIDED WITH THE REAR OF VEH 1.

Occurred on ST ANDREWS ROAD RAB WITH DOCK ROAD

Vehicle Reference 1 Car Stopping
Vehicle movement from SW to N No tow / articulation
On main carriageway No skidding, jack-knifing or overturning
Location at impact Entering roundabout First impact Back Hit vehicle:
Hit object in road None Off road: None
Nearside Age of Driver 44 Male
Not hit and run Breath test Driver not contacted
Driver Postcode: VRM:

Casualty Reference: 1 Vehicle: 1 Age: 44 Male Driver/rider Severity: Slight
Not a pupil Postcode Seatbelt

Vehicle Reference 2 Goods over 3.5 tonnes and under 7.5 to Starting
Vehicle movement from SW to N Articulated
On main carriageway No skidding, jack-knifing or overturning
Location at impact Entering roundabout First impact Front Hit vehicle:
Hit object in road None Off road: None
Did not leave carr Age of Driver 47 Male
Not hit and run Breath test Driver not contacted
Driver Postcode: VRM:

Accidents between dates **01/07/2014** **and** **30/06/2019** (60) months

Selection: **Notes:**

Selected using Manual Selection

I28510814 27/08/2014 Time 1030 Vehicles 2 Casualties 3 Serious
E: 563217 N: 177271 First Road: A 1089 Road Type Dual carriageway
Speed limit: 70 Junction Detail: Not within 20m of junction
Crossing: Control None Facilities: None within 50m Road surface Dry
Daylight Fine without high winds
Special Conditions at Site None Carriageway Hazards: None
Place accident reported: At scene DfT Special Projects:

Causation

	Factor:	Participant:	Confidence:
1st:	Swerved	Vehicle 1	Very Likely
2nd:	Careless/Reckless/In a hurry	Vehicle 1	Very Likely
3rd:	Failed to look properly	Vehicle 1	
4th:			
5th:			
6th:			

VEH 2 PARKED UNATTENDED WITHIN LAYBY AREA. VEH 1 ENTERS DOCK APPROACH ROAD FROM ASDA RAB IN LANE 1. VEH 1 SWERVED INTO LAYBY AND COLLIDES WITH VEH 2.

Occurred on DOCK APPROACH ROAD APPROX 200M NORTH J/W ASDA RAB DOCK ROAD

Vehicle Reference 1 Car Going ahead other
Vehicle movement from N to S No tow / articulation
Entering lay-by or hard shoulder No skidding, jack-knifing or overturning
Location at impact Not at, or within 20M of Jct First impact Front Hit vehicle:
Hit object in road None Off road: None
Did not leave carr Age of Driver 25 Female
Not hit and run Breath test Negative
Driver Postcode: VRM:

Casualty Reference: 1 Vehicle: 1 Age: 25 Female Driver/rider Severity: Slight
Not a pupil Postcode Seatbelt

Casualty Reference: 2 Vehicle: 1 Age: 5 Male Passenger Severity: Serious
Not a pupil Postcode Seatbelt
Back seat

Casualty Reference: 3 Vehicle: 1 Age: 4 Male Passenger Severity: Slight
Not a pupil Postcode Seatbelt
Front seat

Vehicle Reference 2 Goods 7.5 tonnes mgw and over Parked
Vehicle movement from Park to Parked No tow / articulation
On lay-by or hard shoulder No skidding, jack-knifing or overturning
Location at impact Not at, or within 20M of Jct First impact Back Hit vehicle:
Hit object in road None Off road: None
Did not leave carr Age of Driver Not traced
Not hit and run Breath test Driver not contacted
Driver Postcode: VRM:

Accidents between dates **01/07/2014** **and** **30/06/2019** (60) months

Selection: **Notes:**

Selected using Manual Selection

I33151014 08/10/2014 Time 1805 Vehicles 2 Casualties 1 Slight
E: 563164 N: 177004 First Road: A 1089 Road Type 1
Speed limit: 30 Junction Detail: Roundabout Give way or controlled Unclassified
Crossing: Control None Facilities: None within 50m Road surface Wet/Damp
Darkness: street lights present and lit Other
Special Conditions at Site None Carriageway Hazards: None
Place accident reported: At scene DfT Special Projects:

Causation

	Factor:	Participant:	Confidence:
1st:	Cyclist entering road from pavement	Vehicle 001	Very Likely
2nd:	Failed to look properly	Vehicle 002	Possible
3rd:	Inexperienced or learner driver/rider	Vehicle 001	Possible
4th:	Fatigue	Vehicle 002	Possible
5th:			
6th:			

V2 STATIONARY AT ASDA ROUNDABOUT. V1 HAS STARTED TO CROSS FROM V2 NEARSIDE MID CAR THEN DECIDED TO CROSS INFRONT OF V2. V2 SEEING THERE IS NO TRAFFIC FROM HIS RIGHT HAS MOVED FORWARD ONTO THE ROUNDABOUT AND ON MOVING FORWARD V1 IS NOW IN HIS PATH AND A COLLISION OCCURS BETWEEN BOTH VEHICLES RESULTING IN A SCUFF TO BONNET OF V2 AND A GRAZE TO LEG OF RIDER OF V1.

Occurred on NORTHBOUND A1089 JNC WITH ASDA ROUNDABOUT.

Vehicle Reference 1 Pedal Cycle Going ahead other
Vehicle movement from W to E No tow / articulation
On main carriageway No skidding, jack-knifing or overturning
Location at impact Entering roundabout First impact Offside Hit vehicle:
Hit object in road None Off road: None
Did not leave carr Age of Driver 13 Male
Not hit and run Breath test Not applicable
Driver Postcode: VRM:

Casualty Reference: 1 Vehicle: 1 Age: 13 Male Driver/rider Severity: Slight
Not a pupil Postcode Seatbelt

Vehicle Reference 2 Car Starting
Vehicle movement from S to N No tow / articulation
On main carriageway No skidding, jack-knifing or overturning
Location at impact Entering roundabout First impact Front Hit vehicle:
Hit object in road None Off road: None
Did not leave carr Age of Driver 27 Male
Not hit and run Breath test Negative
Driver Postcode: VRM:

Accidents between dates **01/07/2014** **and** **30/06/2019** (60) months

Selection: **Notes:**

Selected using Manual Selection

I38121114 05/11/2014 Time 1720 Vehicles 1 Casualties 1 Slight
E: 563241 N: 176974 First Road: A 126 Road Type 1
Speed limit: 30 Junction Detail: Roundabout Give way or controlled A 1089
Crossing: Control None Facilities: None within 50m Road surface Wet/Damp
Darkness: street lights present and lit Fine without high winds
Special Conditions at Site None Carriageway Hazards: None
Place accident reported: At scene DfT Special Projects:

Causation

	Factor:	Participant:	Confidence:
1st:	Careless/Reckless/In a hurry	Vehicle 001	Very Likely
2nd:	Loss of control	Vehicle 001	Possible
3rd:			
4th:			
5th:			
6th:			

VEH 1 LOST CONTROL AFTER LEAVING ROUNDABOUT. VEH 1 STRUCK N/S KERB THEN SLID AND STRUCK ROAD SIGNS ON THE OFF SIDE VERGE.

Occurred on DOCK ROAD J/W DOCK ROAD APPROACH

Vehicle Reference 1 Car Going ahead other
Vehicle movement from S to W No tow / articulation
On main carriageway Skidded
Location at impact Entering roundabout First impact Nearside Hit vehicle:
Hit object in road None Off road: Road sign / ATS
O/S & rebounded Age of Driver 35 Male
Not hit and run Breath test Negative
Driver Postcode: VRM:

Casualty Reference: 1 Vehicle: 1 Age: 27 Male Passenger Severity: Slight
Not a pupil Postcode Seatbelt
Front seat

Accidents between dates **01/07/2014** **and** **30/06/2019** (60) months

Selection: **Notes:**

Selected using Manual Selection

I40691114 19/11/2014 Time 1710 Vehicles 3 Casualties 1 Slight
E: 563210 N: 177162 First Road: A 1089 Road Type Dual carriageway
Speed limit: 70 Junction Detail: Not within 20m of junction

Crossing: Control None Facilities: None within 50m Road surface Wet/Damp
Darkness: street lights present and lit Fine without high winds
Special Conditions at Site None Carriageway Hazards: None

Place accident reported: At scene DfT Special Projects:

Causation

	Factor:	Participant:	Confidence:
1st:	Poor turn or manoevre	Vehicle 001	Very Likely
2nd:	Sudden braking	Vehicle 002	Possible
3rd:			
4th:			
5th:			
6th:			

VEH 2 & 3 BOTH TRAVELLING IN OFF SIDE LANE OF DUAL CARRIAGEWAY HEADING NORTH OUT OF TILBURY. AS THEY APPROACHED LAY-BY ON NEARSIDE A HGV PULLED OUT. BOTH VEH 2 & 3 BRAKED SHARPLY AND VEH 3 WENT INTO THE REAR OF VEH 2. NO DETAILS OF HGV KNOWN WHICH CO NTINUED ON ITS WAY.

Occurred on TILBURY DOCK ROAD 100M J/W PARKWAY

Vehicle Reference 1 Goods 7.5 tonnes mgw and over Starting
Vehicle movement from S to N Articulated
Leaving lay-by or hard shoulder No skidding, jack-knifing or overturning
Location at impact Not at, or within 20M of Jct First impact Did not impact Hit vehicle:
Hit object in road None Off road: None
Did not leave carr Age of Driver Not traced
Non-stop, not hit Breath test Driver not contacted
Driver Postcode: VRM:

Vehicle Reference 2 Car Going ahead other
Vehicle movement from S to N No tow / articulation
On main carriageway No skidding, jack-knifing or overturning
Location at impact Not at, or within 20M of Jct First impact Front Hit vehicle:
Hit object in road None Off road: None
Did not leave carr Age of Driver Male
Not hit and run Breath test Negative
Driver Postcode: VRM:

Vehicle Reference 3 Car Going ahead other
Vehicle movement from S to N No tow / articulation
On main carriageway No skidding, jack-knifing or overturning
Location at impact Not at, or within 20M of Jct First impact Back Hit vehicle:
Hit object in road None Off road: None
Did not leave carr Age of Driver 20 Female
Not hit and run Breath test Negative
Driver Postcode: VRM:

Casualty Reference: 1 Vehicle: 3 Age: 20 Female Driver/rider Severity: Slight
Not a pupil Postcode Seatbelt

Accidents between dates **01/07/2014** **and** **30/06/2019** (60) months

Selection: **Notes:**

Selected using Manual Selection

I18700615 03/06/2015 Time 1730 Vehicles 2 Casualties 1 Serious
E: 563272 N: 177012 First Road: A 1089 Road Type 1
Speed limit: 30 Junction Detail: Roundabout Give way or controlled A 126
Crossing: Control None Facilities: None within 50m Road surface Dry
Daylight Fine without high winds
Special Conditions at Site None Carriageway Hazards: Other object in carriageway
Place accident reported: Elsewhere DfT Special Projects:

Causation

	Factor:	Participant:	Confidence:
1st:	Poor or defective road surface	Casualty 001	Very Likely
2nd:	Failed to look properly	Vehicle 001	Possible
3rd:			
4th:			
5th:			
6th:			

A GROUP OF M/C RIDERS PULLED ONTO THE ASDA ROUNDABOUT OFF THE A1089. THE RIDER OF A HONDA M/C INDEX NO EX15HDN CLIPPED OR WENT OVER A SMALL POT MOLS, LOST CONTROL, WENT OVER THE DIVIDING ISLAND ON THE DOCK ROAD EXIT LANE AND HIT PEUGEOT 208 INDEX NO FN15LPO ON ITS F/O/S DOOR WING.

Occurred on ASDA ROUNDABOUT ON A1089/ DOCK ROAD.

Vehicle Reference 1 Car Going ahead but held up
Vehicle movement from N to S No tow / articulation
On main carriageway No skidding, jack-knifing or overturning
Location at impact Mid Junction - on roundabout or r First impact Offside Hit vehicle:
Hit object in road None Off road: None
Did not leave carr Age of Driver 18 Male
Not hit and run Breath test Negative
Driver Postcode: VRM:

Vehicle Reference 2 Motorcycle over 500cc Going ahead right bend
Vehicle movement from N to S No tow / articulation
On main carriageway Skidded
Location at impact Mid Junction - on roundabout or r First impact Front Hit vehicle:
Hit object in road Other object Off road: None
Did not leave carr Age of Driver 20 Male
Not hit and run Breath test Not requested
Driver Postcode: VRM:

Casualty Reference: 1 Vehicle: 2 Age: 20 Male Driver/rider Severity: Serious
Not a pupil Postcode Seatbelt

Accidents between dates **01/07/2014** **and** **30/06/2019** (60) months

Selection: **Notes:**

Selected using Manual Selection

I16890615 04/06/2015 Time 0751 Vehicles 2 Casualties 1 Slight
E: 563243 N: 176975 First Road: A 1089 Road Type 1
Speed limit: 30 Junction Detail: Roundabout Give way or controlled A 1089
Crossing: Control None Facilities: None within 50m Road surface Dry
Daylight Fine without high winds
Special Conditions at Site None Carriageway Hazards: None
Place accident reported: At scene DfT Special Projects:

Causation

	Factor:	Participant:	Confidence:
1st:	Failed to judge other persons path or speed	Vehicle 001	Very Likely
2nd:	Failed to judge other persons path or speed	Vehicle 002	Very Likely
3rd:	Failed to look properly	Vehicle 001	Very Likely
4th:	Failed to look properly	Vehicle 002	Very Likely
5th:			
6th:			

V1 APPROACHES ROUNDABOUT IN OUTSIDE LANE INTENDING TO TAKE THE 3RD EXIT. V2 APPROACHES ROUNDABOUT IN NEARSIDE INTENDING TO GO STRAIGHT OVER. BOTH VEHICLES ENTER ROUNDABOUT. AS V2 GOES TO EXIT ROUNDABOUT, V1 COLLIDES WITH V2.

Occurred on DOCK ROAD ROUNDABOUT TILBURY J/W ST. ANOREWS ROAD.

Vehicle Reference 1 Motor Cycle over 50 cc and up to 125cc Going ahead other
Vehicle movement from S to N No tow / articulation
On main carriageway No skidding, jack-knifing or overturning
Location at impact Mid Junction - on roundabout or r First impact Front Hit vehicle:
Hit object in road None Off road: None
Did not leave carr Age of Driver 31 Male
Not hit and run Breath test Negative
Driver Postcode: VRM:

Casualty Reference: 1 Vehicle: 1 Age: 31 Male Driver/rider Severity: Slight
Not a pupil Postcode Seatbelt

Vehicle Reference 2 Car Going ahead other
Vehicle movement from S to N No tow / articulation
On main carriageway No skidding, jack-knifing or overturning
Location at impact Leaving roundabout First impact Nearside Hit vehicle:
Hit object in road None Off road: None
Did not leave carr Age of Driver 52 Male
Not hit and run Breath test Negative
Driver Postcode: VRM:

Accidents between dates **01/07/2014** **and** **30/06/2019** (60) months

Selection: **Notes:**

Selected using Manual Selection

1533069 23/11/2015 Time 1343 Vehicles 2 Casualties 1 Serious
E: 563233 N: 177098 First Road: A 1089 Road Type Dual carriageway
Speed limit: 70 Junction Detail: Not within 20m of junction Not applicable
Crossing: Control None Facilities: None within 50m Road surface Dry
Daylight Fine without high winds
Special Conditions at Site None Carriageway Hazards: None
Place accident reported: At scene DfT Special Projects:

Causation

	Factor:	Participant:	Confidence:
1st:	Crossed road masked by stationary veh	Casualty 1	Very Likely
2nd:			
3rd:			
4th:			
5th:			
6th:			

VEHICLES 1 AND 2 TRAVELLING DOWN DOCK APPROACH ROAD, TILBURY TOWARDS THE ASDA ROUNDABOUT. VEHICLE 2 SLOWS IN LANE 1 AS THERE ARE FOUR CARS ON THE APPROACH TO THE ROUNDABOUT IN FRONT. DRIVER OF VEHICLE 2 SEES A PEDESTRIAN WAITING TO CROSS FROM THE N EARSIDE ON A DEDICATED CROSSING. DRIVER OF VEHICLE 2 ALLOWS PEDESTRIAN TO CROSS FROM THE NEARSIDE. VEHICLE 1 IS IN LANE 2 AND CAN NOT SEE PEDESTRIAN AS SHE IS MASKED BY VEHICLE 2. PEDESTRIAN RUNS FROM NEARSIDE ACROSS CARRIAGEWAY AND VEHICLE 1 IS T
HEN IN COLLISION WITH PEDESTRIAN. PEDESTRIAN HAS SUSTAINED SERIOUS LIFE CHANGING INJURIES AND HAS BEEN TAKEN ROYAL LONDON HOSPITAL.

Occurred on DOCK ROAD A1089 30 METRES NORTH OF JUNCTION WITH THURROCK PARK WAY

Vehicle Reference 1 Car Going ahead other
Vehicle movement from N to S No tow / articulation
On main carriageway No skidding, jack-knifing or overturning
Location at impact Not at, or within 20M of Jct First impact Front Hit vehicle:
Hit object in road None Off road: None
Did not leave carr Age of Driver 42 Male
Not hit and run Breath test Negative
Driver Postcode: VRM:

Casualty Reference: 1 Vehicle: 1 Age: 24 Female Pedestrian Severity: Serious
Postcode Seatbelt
In carr elsewhere E bound
Driver's nearside

Vehicle Reference 2 Other Vehicle Stopping
Vehicle movement from N to S Articulated
On main carriageway No skidding, jack-knifing or overturning
Location at impact Not at, or within 20M of Jct First impact Did not impact Hit vehicle:
Hit object in road None Off road: None
Did not leave carr Age of Driver 46 Male
Not hit and run Breath test Negative
Driver Postcode: VRM:

Accidents between dates **01/07/2014** **and** **30/06/2019** (60) months

Selection: **Notes:**

Selected using Manual Selection

1646414 16/02/2016 Time 1120 Vehicles 2 Casualties 1 Slight
E: 563232 N: 176971 First Road: U Road Type 1
Speed limit: 40 Junction Detail: Roundabout Give way or controlled A 1089
Crossing: Control None Facilities: None within 50m Road surface Dry
Daylight Fine without high winds
Special Conditions at Site None Carriageway Hazards: None
Place accident reported: Elsewhere DfT Special Projects:

Causation

	Factor:	Participant:	Confidence:
1st:			
2nd:			
3rd:			
4th:			
5th:			
6th:			

VEHICLE 1 , WAS IN LANE ONE. VEHICLE 2 IN LANE 2. VEHICLE 1 HAS CONTINUED AROUND ROUNDABOUT WHEN VEHICLE 2 WAS CONTINUING STRAIGHT ON AND VEHICLE 1 HAS COLLIDED WITH N/S OF VEHICLE 2. MINOR INJURY - SHOULDER PAINTO DRIVER OF V1.

Occurred on ST ANDREWS ROAD UNSPECIFIED ROAD OR LOCATION A1089

Vehicle Reference 1 Car Turning right
Vehicle movement from N to W No tow / articulation
On main carriageway No skidding, jack-knifing or overturning
Location at impact Leaving roundabout First impact Offside Hit vehicle:
Hit object in road None Off road: None
Did not leave carr Age of Driver 69 Male
Not hit and run Breath test Negative
Driver Postcode: VRM:

Casualty Reference: 1 Vehicle: 1 Age: 69 Male Driver/rider Severity: Slight
Postcode Seatbelt

Vehicle Reference 2 Goods vehicle - unknown weight Going ahead other
Vehicle movement from N to W Articulated
On main carriageway No skidding, jack-knifing or overturning
Location at impact Leaving roundabout First impact Nearside Hit vehicle:
Hit object in road None Off road: None
Did not leave carr Age of Driver 68 Male
Not hit and run Breath test Negative
Driver Postcode: VRM:

Accidents between dates **01/07/2014** **and** **30/06/2019** (60) months
Selection: **Notes:**
Selected using Manual Selection

1664731 09/05/2016 Time 1216 Vehicles 2 Casualties 1 Slight
E: 563243 N: 177073 First Road: A 1089 Road Type Dual carriageway
Speed limit: 70 Junction Detail: Roundabout Give way or controlled Unclassified
Crossing: Control None Facilities: None within 50m Road surface Dry
Daylight Fine without high winds
Special Conditions at Site None Carriageway Hazards: None
Place accident reported: Elsewhere DfT Special Projects:

Causation

	Factor:	Participant:	Confidence:
1st:	Failed to look properly	Vehicle 1	Very Likely
2nd:	Following too close	Vehicle 1	Possible
3rd:			
4th:			
5th:			
6th:			

VEHICLE 2 TRAVELLING TOWARDS TILBURY ON THE A1089 APPROACHING THE ROUNDABOUT. VEHICLE 1 BEHIND VEHICLE 2 HAS COLLIDED WITH THE REAR OF VEHICLE 2 ON THE APPROACH TO THE ROUNDABOUT.

Occurred on A1089 50 METRES NORTH OF JUNCTION WITH DOCK ROAD

Vehicle Reference 1 Other Vehicle Stopping
Vehicle movement from N to S Articulated
On main carriageway No skidding, jack-knifing or overturning
Location at impact Jct Approach First impact Front Hit vehicle:
Hit object in road None Off road: None
Did not leave carr Age of Driver 51 Male
Not hit and run Breath test Negative
Driver Postcode: VRM:

Vehicle Reference 2 Car Stopping
Vehicle movement from N to S No tow / articulation
On main carriageway No skidding, jack-knifing or overturning
Location at impact Jct Approach First impact Back Hit vehicle:
Hit object in road None Off road: None
Did not leave carr Age of Driver 45 Female
Not hit and run Breath test Negative
Driver Postcode: VRM:

Casualty Reference: 1 Vehicle: 2 Age: 45 Female Driver/rider Severity: Slight
Postcode Seatbelt

Accidents between dates **01/07/2014** **and** **30/06/2019** (60) months

Selection: **Notes:**

Selected using Manual Selection

1670665 29/05/2016 Time 1030 Vehicles 2 Casualties 1 Slight
E: 563240 N: 177069 First Road: A 1089 Road Type 1
Speed limit: 70 Junction Detail: Roundabout Give way or controlled Unclassified
Crossing: Control None Facilities: None within 50m Road surface Dry
Daylight Fine without high winds
Special Conditions at Site None Carriageway Hazards: None
Place accident reported: Elsewhere DfT Special Projects:

Causation

	Factor:	Participant:	Confidence:
1st:	Failed to judge other persons path or speed	Vehicle 2	Very Likely
2nd:			
3rd:			
4th:			
5th:			
6th:			

VEHICLE ONE AND TWO TRAVELLING IN SAME DIRECTION FROM A1089 TAKING EXIT ON TO DOCK ROAD TOWARDS TILBURY TOWN. VEHICLE ONE PULLED ON TO THE ROUNDABOUT AS NOTHING WAS COMING FROM THE RIGHT AND SUDDENLY BRAKED FOR NO APPARANT REASON. VEHICLE TWO RAN IN TO T
HE BACK OF VEHICLE ONE. VEHICLE ONE DRIVER REFUSED ALL DETAILS OTHER THAN THE SUPERVISING DRIVERS MOBILE NUMBER

Occurred on DOCK APPROACH ROAD A1089 DOCK ROAD

Vehicle Reference 1 Car Starting
Vehicle movement from S to SE No tow / articulation
On main carriageway No skidding, jack-knifing or overturning
Location at impact Entering roundabout First impact Back Hit vehicle:
Hit object in road None Off road: None
Did not leave carr Age of Driver 19 Male
Not hit and run Breath test Driver not contacted
Driver Postcode: VRM:

Vehicle Reference 2 Car Starting
Vehicle movement from S to SE No tow / articulation
On main carriageway No skidding, jack-knifing or overturning
Location at impact Entering roundabout First impact Front Hit vehicle:
Hit object in road None Off road: None
Did not leave carr Age of Driver 24 Male
Not hit and run Breath test Driver not contacted
Driver Postcode: VRM:

Casualty Reference: 1 Vehicle: 2 Age: 24 Male Driver/rider Severity: Slight
Postcode Seatbelt

Accidents between dates **01/07/2014** **and** **30/06/2019** (60) months

Selection: **Notes:**

Selected using Manual Selection

16122965 05/09/2016 Time 1048 Vehicles 2 Casualties 1 Slight
E: 563156 N: 177026 First Road: U Road Type 1
Speed limit: 30 Junction Detail: Roundabout Give way or controlled Unclassified
Crossing: Control None Facilities: None within 50m Road surface Dry
Daylight Fine without high winds
Special Conditions at Site None Carriageway Hazards: None
Place accident reported: Elsewhere DfT Special Projects:

Causation

	Factor:	Participant:	Confidence:
1st:	Failed to look properly	Vehicle 1	Possible
2nd:			
3rd:			
4th:			
5th:			
6th:			

V2 STOPPED AT ROUNDABOUT, V1 HIT ME FROM BEHIND,

Occurred on THURROCK PARK WAY UNSPECIFIED ROAD OR LOCATION DOCK ROAD

Vehicle Reference 1 Car Going ahead but held up
Vehicle movement from W to N No tow / articulation
On main carriageway No skidding, jack-knifing or overturning
Location at impact Entering roundabout First impact Front Hit vehicle:
Hit object in road None Off road: None
Did not leave carr Age of Driver Female
Not hit and run Breath test Driver not contacted
Driver Postcode: VRM:

Vehicle Reference 2 Car Going ahead other
Vehicle movement from W to N No tow / articulation
On main carriageway No skidding, jack-knifing or overturning
Location at impact Jct Approach First impact Back Hit vehicle:
Hit object in road None Off road: None
Did not leave carr Age of Driver 49 Male
Not hit and run Breath test Driver not contacted
Driver Postcode: VRM:

Casualty Reference: 1 Vehicle: 2 Age: 49 Male Driver/rider Severity: Slight
Postcode Seatbelt

Accidents between dates **01/07/2014** **and** **30/06/2019** (60) months

Selection: **Notes:**

Selected using Manual Selection

16111420 30/09/2016 Time 0645 Vehicles 2 Casualties 1 Slight
E: 563242 N: 177072 First Road: A 1089 Road Type Dual carriageway
Speed limit: 70 Junction Detail: Roundabout Give way or controlled A 1089
Crossing: Control None Facilities: None within 50m Road surface Dry
Daylight Fine without high winds
Special Conditions at Site None Carriageway Hazards: None
Place accident reported: At scene DfT Special Projects:

Causation

	Factor:	Participant:	Confidence:
1st:	Failed to judge other persons path or speed	Vehicle 1	Very Likely
2nd:			
3rd:			
4th:			
5th:			
6th:			

V1 AND V2 TRAVELLING SOUTH ON THE A1089 DOCK ROAD FROM THE A13 TOWARDS TILBURY TOWN IN LANE 2. V2 AHEAD OF V1. AS BOTH VEHICLES APPROACH THE ROUNDABOUT, V2 SLOWS TO A STOP. V1 FAILS TO JUDGE V2'S PATH AND COLLIDES INTO THE REAR OF V2 FORCING IT INTO THE ROUNDABOUT.

Occurred on DOCK ROAD A1089 ASDA ROUNDABOUT A1089

Vehicle Reference 1 Car Going ahead other
Vehicle movement from N to S No tow / articulation
On main carriageway No skidding, jack-knifing or overturning
Location at impact Jct Approach First impact Front Hit vehicle:
Hit object in road None Off road: None
Did not leave carr Age of Driver 36 Male
Not hit and run Breath test Negative
Driver Postcode: VRM:

Vehicle Reference 2 Car Stopping
Vehicle movement from N to S No tow / articulation
On main carriageway No skidding, jack-knifing or overturning
Location at impact Entering roundabout First impact Back Hit vehicle:
Hit object in road None Off road: None
Did not leave carr Age of Driver 28 Female
Not hit and run Breath test Negative
Driver Postcode: VRM:

Casualty Reference: 1 Vehicle: 2 Age: 28 Female Driver/rider Severity: Slight
Postcode Seatbelt

Accidents between dates **01/07/2014** **and** **30/06/2019** (60) months
Selection: **Notes:**
Selected using Manual Selection

16133586 25/11/2016 Time 0850 Vehicles 2 Casualties 1 Slight
E: 563157 N: 177028 First Road: U Road Type 1
Speed limit: 30 Junction Detail: Roundabout Give way or controlled A 1089
Crossing: Control None Facilities: None within 50m Road surface Dry
Daylight Fine without high winds
Special Conditions at Site None Carriageway Hazards: None
Place accident reported: Elsewhere DfT Special Projects:

Causation

	Factor:	Participant:	Confidence:
1st:	Failed to judge other persons path or speed	Vehicle 1	Very Likely
2nd:	Poor turn or manoevre	Vehicle 2	Possible
3rd:			
4th:			
5th:			
6th:			

I WAS STOPPED AND WAITING TO PULL ONTO THE ROUNDABOUT WHEN THE OTHER CAR SMASHED INTO THE BACK OF ME PUSHING ME ONTO THE ROUNDABOUT I SAT FOR A MINUTE BEFORE GETTING OUT AS I WAS IN SHOCK I THEN GOT OUT MY VEHICLE AND THE LADY FROM THE OTHER CAR WAS STAN
DING NEXT TO ME SHE SAID THAT THERE WAS NO DAMAGE TO EITHER VEHICLE SO I HAD A QUICK LOOK AN TOLD HER THAT BECAUSE MY CAR WAS ON THE ROUNDABOUT AND THERE WAS LORRIES FAST APPROACHING THAT WE HAD TO MOVE BEFORE ANOTHER ACCIDENT WAS CAUSED SHE THEN SAID TH
AT SHE HAD A INTERVIEW IN 10 MINUTES BUT OK I TOLD THE LADY THAT WE WOULD PULL AROUND TO THE TILBURY TURNOFF AND PULL OVER DOWN THERE AS IT WAS SAFER TO DO SO SHE SAID OK. I THEN GOT BACK INTO MY CAR AND WE BOTH PULLED AWAY AS I TOOK THE TILBURY TURNOFF

Occurred on THURROCK PARK WAY UNSPECIFIED ROAD OR LOCATION A1089

Vehicle Reference 1 Car Starting
Vehicle movement from W to NE No tow / articulation
On main carriageway No skidding, jack-knifing or overturning
Location at impact Entering roundabout First impact Front Hit vehicle:
Hit object in road None Off road: None
Did not leave carr Age of Driver 53 Female
Not hit and run Breath test Driver not contacted
Driver Postcode: VRM:

Vehicle Reference 2 Car Going ahead but held up
Vehicle movement from W to NE No tow / articulation
On main carriageway No skidding, jack-knifing or overturning
Location at impact Jct Approach First impact Back Hit vehicle:
Hit object in road None Off road: None
Did not leave carr Age of Driver 37 Female
Not hit and run Breath test Driver not contacted
Driver Postcode: VRM:

Casualty Reference: 1 Vehicle: 2 Age: 37 Female Driver/rider Severity: Slight
Postcode Seatbelt

Accidents between dates **01/07/2014** **and** **30/06/2019** (60) months

Selection: **Notes:**

Selected using Manual Selection

16132838 30/11/2016 Time 0900 Vehicles 2 Casualties 1 Serious
E: 563245 N: 177070 First Road: A 1089 Road Type Dual carriageway
Speed limit: 70 Junction Detail: Roundabout Give way or controlled Unclassified
Crossing: Control None Facilities: None within 50m Road surface Dry
Daylight Fine without high winds
Special Conditions at Site None Carriageway Hazards: None
Place accident reported: At scene DfT Special Projects:

Causation

	Factor:	Participant:	Confidence:
1st:	Failed to look properly	Vehicle 1	Very Likely
2nd:	Inexperienced or learner driver/rider	Vehicle 1	Very Likely
3rd:	Careless/Reckless/In a hurry	Vehicle 1	
4th:			
5th:			
6th:			

V2 HEADING SOUTH ON DOCK ROAD IN LANE TWO. V1 HEADING SOUTH BEHIND V2. V2 STOPPED AT GIVE WAY LINES AT ASDA ROUNDABOUT V1 RAN INTO REAR OF V2

Occurred on DOCK ROAD A1089 THURROCK PARK WAY

Vehicle Reference 1 Car Going ahead other
Vehicle movement from N to S No tow / articulation
On main carriageway No skidding, jack-knifing or overturning
Location at impact Jct Approach First impact Front Hit vehicle:
Hit object in road None Off road: None
Did not leave carr Age of Driver 18 Male
Not hit and run Breath test Negative
Driver Postcode: VRM:

Vehicle Reference 2 Car Going ahead but held up
Vehicle movement from N to S No tow / articulation
On main carriageway No skidding, jack-knifing or overturning
Location at impact Entering roundabout First impact Back Hit vehicle:
Hit object in road None Off road: None
Did not leave carr Age of Driver 66 Male
Not hit and run Breath test Negative
Driver Postcode: VRM:

Casualty Reference: 1 Vehicle: 2 Age: 66 Male Driver/rider Severity: Serious
Postcode Seatbelt

Accidents between dates **01/07/2014** **and** **30/06/2019** (60) months

Selection: **Notes:**

Selected using Manual Selection

16140183 22/12/2016 Time 1431 Vehicles 2 Casualties 1 Slight
E: 563150 N: 177022 First Road: U Road Type Single carriageway
Speed limit: 30 Junction Detail: Roundabout Give way or controlled A 1089
Crossing: Control None Facilities: None within 50m Road surface Dry
Daylight Fine without high winds
Special Conditions at Site None Carriageway Hazards: None
Place accident reported: Elsewhere DfT Special Projects:

Causation

	Factor:	Participant:	Confidence:
1st:	Following too close	Vehicle 2	Very Likely
2nd:			
3rd:			
4th:			
5th:			
6th:			

VEHICLE 1 WAITING TO JOIN ROUNDABOUT. VEHICLE 2 BEHIND VEHICLE 1. VEHICLE 2 PULLED FORWARD AND COLLIDED WITH REAR VEHICLE 1.

Occurred on THURROCK PARKWAY NEAR JN WITH DOCK APPROACH ROAD A1089

Vehicle Reference 1 Car Going ahead but held up
Vehicle movement from E to N No tow / articulation
On main carriageway No skidding, jack-knifing or overturning
Location at impact Jct Approach First impact Back Hit vehicle:
Hit object in road None Off road: None
Did not leave carr Age of Driver 37 Female
Not hit and run Breath test Driver not contacted
Driver Postcode: VRM:

Casualty Reference: 1 Vehicle: 1 Age: 37 Female Driver/rider Severity: Slight
Postcode Seatbelt

Vehicle Reference 2 Car Going ahead but held up
Vehicle movement from E to N No tow / articulation
On main carriageway No skidding, jack-knifing or overturning
Location at impact Jct Approach First impact Front Hit vehicle:
Hit object in road None Off road: None
Did not leave carr Age of Driver 21 Male
Not hit and run Breath test Driver not contacted
Driver Postcode: VRM:

Accidents between dates **01/07/2014** **and** **30/06/2019** (60) months

Selection: **Notes:**

Selected using Manual Selection

17183905 20/05/2017 Time 1104 Vehicles 2 Casualties 1 Slight
E: 563266 N: 176987 First Road: A 1089 Road Type Single carriageway
Speed limit: 30 Junction Detail: Roundabout Give way or controlled Unclassified
Crossing: Control None Facilities: None within 50m Road surface Dry
Daylight Fine without high winds
Special Conditions at Site Road works Carriageway Hazards: None
Place accident reported: Elsewhere DfT Special Projects:

Causation

	Factor:	Participant:	Confidence:
1st:	Failed to look properly	Vehicle 1	Possible
2nd:	Failed to judge other persons path or speed	Vehicle 2	Possible
3rd:			
4th:			
5th:			
6th:			

V1 MOVING OFF TO TRAVEL THROUGH CONTRAFLOW/ROADWORKS TOWARDS DIRECTION OF TILBURY, V2 LEAVING ROUNDABOUT AND FILTERING TO OFFISIDE OF V1, V2 HAS BRAKED AS V1 MOVED OFF AND IN DOING SO HAS SKIDDED FALLING OFF BIKE COLLIDING INTO V1 TYRE

Occurred on DOCK APPROACH ROAD A1089 DOCK ROAD

Vehicle Reference 1 Goods 7.5 tonnes mgw and over Starting
Vehicle movement from N to S Articulated
On main carriageway No skidding, jack-knifing or overturning
Location at impact Leaving roundabout First impact Offside Hit vehicle:
Hit object in road None Off road: None
Did not leave carr Age of Driver 52 Male
Not hit and run Breath test Negative
Driver Postcode: VRM:

Vehicle Reference 2 Motorcycle over 500cc Going ahead other
Vehicle movement from N to S No tow / articulation
On main carriageway Skidded
Location at impact Leaving roundabout First impact Offside Hit vehicle:
Hit object in road None Off road: None
Did not leave carr Age of Driver 52 Male
Not hit and run Breath test Negative
Driver Postcode: VRM:

Casualty Reference: 1 Vehicle: 2 Age: 52 Male Driver/rider Severity: Slight
Postcode Seatbelt

Accidents between dates **01/07/2014** **and** **30/06/2019** (60) months

Selection: **Notes:**

Selected using Manual Selection

17210662 20/06/2017 Time 1420 Vehicles 3 Casualties 1 Serious
E: 563151 N: 177021 First Road: U Road Type 1
Speed limit: 40 Junction Detail: Roundabout Give way or controlled A 1089
Crossing: Control None Facilities: None within 50m Road surface Dry
Daylight Fine without high winds
Special Conditions at Site None Carriageway Hazards: None
Place accident reported: Elsewhere DfT Special Projects:

Causation

	Factor:	Participant:	Confidence:
1st:	Cyclist entering road from pavement	Vehicle 3	Very Likely
2nd:	Failed to judge other persons path or speed	Vehicle 3	Possible
3rd:	Stationary or parked vehicle	Vehicle 2	
4th:			
5th:			
6th:			

APPROACHING THE TWO LANE JUNCTION, ALL WAS CLEAR AND FREE FLOWING. I CHECKED BOTH WAYS, CARRIED OUT MY LAST CHECK FOR ONCOMING TRAFFIC. WENT TO PULL AWAY AND HIT THE CYCLIST. HE EMERGED FROM BEHIND ANOTHER CAR (APPARENTLY HIS COLLEAGUE) WHO HAD LET H IM CROSS (NOT AT A FORMAL CROSSING) THE CYCLIST (WEARING HEADPHONES) FELL ON TO HIS LEFT SIDE STILL ON THE BIKE. PUTTING HIS ARM OUT TO BREAK HIS FALL AND RECEIVING THE SUBSEQUENT WRIST INJURY.

Occurred on THURROCK PARK WAY AT JN WITH A1089 A1089

Vehicle Reference 1 Car Going ahead but held up
Vehicle movement from E to W No tow / articulation
On main carriageway No skidding, jack-knifing or overturning
Location at impact Jct Approach First impact Did not impact Hit vehicle:
Hit object in road None Off road: None
Did not leave carr Age of Driver Not traced
Non-stop, not hit Breath test Driver not contacted
Driver Postcode: VRM:

Vehicle Reference 2 Car Starting
Vehicle movement from E to W No tow / articulation
On main carriageway No skidding, jack-knifing or overturning
Location at impact Entering roundabout First impact Front Hit vehicle:
Hit object in road None Off road: None
Did not leave carr Age of Driver 37 Male
Not hit and run Breath test Driver not contacted
Driver Postcode: VRM:

Accidents between dates **01/07/2014** **and** **30/06/2019** (60) months

Selection: **Notes:**

Selected using Manual Selection

Vehicle Reference 3 Pedal Cycle Starting
Vehicle movement from N to S No tow / articulation
On main carriageway No skidding, jack-knifing or overturning
Location at impact Entering roundabout First impact Offside Hit vehicle:
Hit object in road None Off road: None
Did not leave carr Age of Driver 29 Male
Not hit and run Breath test Not applicable
Driver Postcode: VRM:

Casualty Reference: 1 Vehicle: 3 Age: 29 Male Driver/rider Severity: Serious
Postcode Seatbelt

Accidents between dates **01/07/2014** **and** **30/06/2019** (60) months

Selection: **Notes:**

Selected using Manual Selection

17215687 02/09/2017 Time 1705 Vehicles 2 Casualties 1 Slight
E: 563156 N: 177025 First Road: A 1089 Road Type 1
Speed limit: 60 Junction Detail: Roundabout Give way or controlled Unclassified
Crossing: Control None Facilities: None within 50m Road surface Dry
Daylight Fine without high winds
Special Conditions at Site None Carriageway Hazards: None
Place accident reported: At scene DfT Special Projects:

Causation

	Factor:	Participant:	Confidence:
1st:	Failed to judge other persons path or speed	Vehicle 1	Very Likely
2nd:			
3rd:			
4th:			
5th:			
6th:			

VEHICLE TWO ENTERING ROUNDABOUT WHEN HIT FROM BEHIND BY VEHICLE ONE.

Occurred on DOCK ROAD A1089 AT JN WITH THURROCK PARKWAY

Vehicle Reference 1 Car Starting
Vehicle movement from W to E No tow / articulation
On main carriageway No skidding, jack-knifing or overturning
Location at impact Entering roundabout First impact Front Hit vehicle:
Hit object in road None Off road: None
Did not leave carr Age of Driver 30 Male
Not hit and run Breath test Negative
Driver Postcode: VRM:

Vehicle Reference 2 Taxi/Private hire car Starting
Vehicle movement from W to E No tow / articulation
On main carriageway No skidding, jack-knifing or overturning
Location at impact Entering roundabout First impact Back Hit vehicle:
Hit object in road None Off road: None
Did not leave carr Age of Driver 56 Male
Not hit and run Breath test Negative
Driver Postcode: VRM:

Casualty Reference: 1 Vehicle: 2 Age: 33 Female Passenger Severity: Slight
Postcode Seatbelt
Front seat

Accidents between dates **01/07/2014** **and** **30/06/2019** (60) months

Selection: **Notes:**

Selected using Manual Selection

17242545 23/11/2017 Time 2210 Vehicles 2 Casualties 1 Slight
E: 563260 N: 177007 First Road: A 1089 Road Type 1
Speed limit: 30 Junction Detail: Roundabout Give way or controlled Unclassified
Crossing: Control None Facilities: None within 50m Road surface Wet/Damp
Darkness: street lights present and lit Unknown
Special Conditions at Site None Carriageway Hazards: None
Place accident reported: Elsewhere DfT Special Projects:

Causation

	Factor:	Participant:	Confidence:
1st:	Failed to look properly	Vehicle 1	Very Likely
2nd:			
3rd:			
4th:			
5th:			
6th:			

VEHICLE 2 WAS COMING FROM A1089 TO DOCK ROAD TILBURY. WHEN VEHICLE 1 COMING FROM WINDRUSH ROAD ENTERED THE ROUNDABOUT AND HIT VEHICLE 2. DRIVER OF VEHICLE 1 DID NOT SEE VEHICLE 2. VEHICLE 2 WAS HIT HEAD ON AND A SIDE IMPACT TO THE OFFSIDE OF VEHICLE 1.

Occurred on DOCK ROAD A1089 AT JN WITH WINDRUSH ROAD

Vehicle Reference 1 Car Turning right
Vehicle movement from E to W No tow / articulation
On main carriageway No skidding, jack-knifing or overturning
Location at impact Entering roundabout First impact Offside Hit vehicle:
Hit object in road None Off road: None
Did not leave carr Age of Driver 23 Male
Not hit and run Breath test Negative
Driver Postcode: VRM:

Vehicle Reference 2 Car Going ahead other
Vehicle movement from N to S No tow / articulation
On main carriageway No skidding, jack-knifing or overturning
Location at impact Leaving roundabout First impact Front Hit vehicle:
Hit object in road None Off road: None
Did not leave carr Age of Driver 29 Male
Not hit and run Breath test Negative
Driver Postcode: VRM:

Casualty Reference: 1 Vehicle: 2 Age: 29 Male Driver/rider Severity: Slight
Postcode Seatbelt

Accidents between dates **01/07/2014** **and** **30/06/2019** (60) months

Selection: **Notes:**

Selected using Manual Selection

18261451 23/01/2018 Time 2115 Vehicles 2 Casualties 1 Slight
E: 563241 N: 177073 First Road: A 1089 Road Type 1
Speed limit: 70 Junction Detail: Roundabout Give way or controlled Unclassified
Crossing: Control None Facilities: None within 50m Road surface Dry
Darkness: street lights present and lit Fine without high winds
Special Conditions at Site None Carriageway Hazards: None
Place accident reported: Elsewhere DfT Special Projects:

Causation

	Factor:	Participant:	Confidence:
1st:	Failed to look properly	Vehicle 1	Very Likely
2nd:	Careless/Reckless/In a hurry	Vehicle 1	Very Likely
3rd:	Failed to judge other persons path or speed	Vehicle 1	
4th:			
5th:			
6th:			

VEHICLE TWO WAS ON DOCK APPROACH ROAD AT THE GIVE WAY LINES OF THE ROUNDABOUT JUNCTION WITH DOCK ROAD ON LANE ONE OF THE DUAL CARRIAGEWAY. VEHICLE TWO CAME TO A STOP OWING TO OTHER TRAFFIC MOVING AROUND THE ROUNDABOUT. VEHICLE ONE WAS ON DOCK APPR
OACH ROAD ON LANE ONE TRAVELLING BEHIND VEHICLE TWO. VEHICLE ONE CRASHED INTO THE REAR OF STATIONARY VEHICLE TWO, SHUNTING VEHICLE TWO OUT INTO THE ROUNDABOUT.

Occurred on DOCK APPROACH ROAD A1089 AT JN WITH DOCK ROAD

Vehicle Reference 1 Car Stopping
Vehicle movement from N to S No tow / articulation
On main carriageway Skidded
Location at impact Jct Approach First impact Front Hit vehicle:
Hit object in road None Off road: None
Did not leave carr Age of Driver 28 Male
Not hit and run Breath test Negative
Driver Postcode: VRM:

Casualty Reference: 1 Vehicle: 1 Age: 28 Male Driver/rider Severity: Slight
Postcode Seatbelt

Vehicle Reference 2 Car Going ahead but held up
Vehicle movement from N to S No tow / articulation
On main carriageway No skidding, jack-knifing or overturning
Location at impact Jct Approach First impact Back Hit vehicle:
Hit object in road None Off road: None
Did not leave carr Age of Driver 63 Male
Not hit and run Breath test Negative
Driver Postcode: VRM:

Accidents between dates **01/07/2014** **and** **30/06/2019** (60) months

Selection: **Notes:**

Selected using Manual Selection

18321697 24/08/2018 Time 1600 Vehicles 2 Casualties 2 Slight
E: 563196 N: 177310 First Road: A 1089 Road Type Dual carriageway
Speed limit: 70 Junction Detail: Not within 20m of junction

Crossing: Control None Facilities: None within 50m Road surface Wet/Damp
Daylight Raining without high winds
Special Conditions at Site None Carriageway Hazards: None
Place accident reported: Elsewhere DfT Special Projects:

Causation

	Factor:	Participant:	Confidence:
1st:	Careless/Reckless/In a hurry	Vehicle 1	Possible
2nd:			
3rd:			
4th:			
5th:			
6th:			

V1 HAS PARKED STATIONARY IN LANE 1 OF A DUAL CARRIAGEWAY TO ADJUST HIS MIRROR. V2 DIDN'T REALISE HE WAS STATIONARY AND HAS COLLIDED WITH V1. SLIGHT INJURIES TO BOTH DRIVERS. V1 HEAVY DAMAGE TO R/N/S QUARTER. V2 MILD DAMAGE TO F/O/S QUARTER.

Occurred on DOCK APPROACH A1089

Vehicle Reference 1 Car Parked
Vehicle movement from Park to Parked No tow / articulation
On main carriageway No skidding, jack-knifing or overturning
Location at impact Not at, or within 20M of Jct First impact Back Hit vehicle:
Hit object in road None Off road: None
Did not leave carr Age of Driver 81 Male
Not hit and run Breath test Negative
Driver Postcode: VRM:

Casualty Reference: 2 Vehicle: 1 Age: 81 Male Driver/rider Severity: Slight
Postcode Seatbelt

Vehicle Reference 2 Goods vehicle - unknown weight Going ahead other
Vehicle movement from S to N No tow / articulation
On main carriageway No skidding, jack-knifing or overturning
Location at impact Not at, or within 20M of Jct First impact Front Hit vehicle:
Hit object in road None Off road: None
Nearside Age of Driver 31 Male
Not hit and run Breath test Negative
Driver Postcode: VRM:

Casualty Reference: 1 Vehicle: 2 Age: 31 Male Driver/rider Severity: Slight
Postcode Seatbelt

Accidents between dates **01/07/2014** **and** **30/06/2019** (60) months
Selection: **Notes:**
Selected using Manual Selection

18339018 24/10/2018 Time 1155 Vehicles 3 Casualties 1 Slight
E: 563246 N: 176975 First Road: A 1089 Road Type 1
Speed limit: 60 Junction Detail: Roundabout Give way or controlled Unclassified
Crossing: Control None Facilities: None within 50m Road surface Dry
Daylight Fine without high winds
Special Conditions at Site None Carriageway Hazards: None
Place accident reported: At scene DfT Special Projects:

Causation

	Factor:	Participant:	Confidence:
1st:	Other	Vehicle 1	Very Likely
2nd:			
3rd:			
4th:			
5th:			
6th:			

Other Cause: LOAD SHIFTED IN CONTAINER Precipitating Factor:

VEHICLE ONE WAS TRAVELLING ALONG LANE 2 OF A1089 TOWARDS TILBURY DOCKS. WHEN IT REACHED THE ROUNDABOUT AT ASDA, VEHICLE ONE HAS ENTERED ROUNDABOUT AND WHILST NEGOTIATING THE ROUNDABOUT, THE LOAD WHICH WAS BRICKS WITHIN THE SEALED CONTAINER HAS SHIFTE
D CAUSING THE VEHICLE TO TIP TO ITS NEARSIDE AND LAND IN THE ROAD ON ITS SIDE. DEBRIS FROM THE INCIDENT HAS THEN FLOWN INTO THE AIR AND STRUCK VEHICLE TWO AND VEHICLE THREE CAUSING SCRATCHES AND DENTS TO THE VEHICLES.

Occurred on DOCK ROAD A1089 AT JN WITH DOCK ROAD

Vehicle Reference 1 Goods 7.5 tonnes mgw and over Going ahead right bend
Vehicle movement from N to S Articulated
On main carriageway Overturned
Location at impact Mid Junction - on roundabout or r First impact Offside Hit vehicle:
Hit object in road Kerb Off road: None
Did not leave carr Age of Driver 39 Male
Not hit and run Breath test Negative
Driver Postcode: VRM:

Casualty Reference: 1 Vehicle: 1 Age: 39 Male Driver/rider Severity: Slight
Postcode Seatbelt

Vehicle Reference 2 Car Waiting to turn right
Vehicle movement from SE to N No tow / articulation
On main carriageway No skidding, jack-knifing or overturning
Location at impact Entering roundabout First impact Front Hit vehicle:
Hit object in road None Off road: None
Did not leave carr Age of Driver 17 Female
Not hit and run Breath test Negative
Driver Postcode: VRM:

Accidents between dates **01/07/2014** **and** **30/06/2019** (60) months

Selection: **Notes:**

Selected using Manual Selection

Vehicle Reference 3 Car Waiting to turn right

Vehicle movement from SE to W No tow / articulation

On main carriageway No skidding, jack-knifing or overturning

Location at impact Entering roundabout First impact Front Hit vehicle:

Hit object in road None Off road: None

Did not leave carr Age of Driver 30 Female

Not hit and run Breath test Negative

Driver Postcode: VRM:

Accidents between dates **01/07/2014** **and** **30/06/2019** (60) months
Selection: **Notes:**
Selected using Manual Selection

19820364 06/02/2019 Time 1320 Vehicles 2 Casualties 2 Slight
E: 563147 N: 177005 First Road: U Road Type 1
Speed limit: 30 Junction Detail: Roundabout Give way or controlled A 1089
Crossing: Control None Facilities: Pelican, puffin, toucan etc. Road surface Dry
Daylight Fine without high winds
Special Conditions at Site None Carriageway Hazards: Pedestrian in carriageway - not injur
Place accident reported: Elsewhere DfT Special Projects:

Causation

	Factor:	Participant:	Confidence:
1st:	Failed to look properly	Vehicle 1	Possible
2nd:			
3rd:			
4th:			
5th:			
6th:			

I WAS EXITING ROUNDABOUT TOWARDS ASDA . PEDESTRIAN WITH A PUSHCHAIR STEP OUT SO I STOPPED, CAR BEHIND ME HIT ME. PROMPTLY FAILED TO STOP, DID A U TURN AND DROVE OFF. I MADE TO TURN MY VEHICLE AROUND TO GET NUMBER PLATE WHEN AN ENSIGN BUS DRIVER GA VE ME HIS DETAILS. I HAVE A CASE NUMBER 567/06022019

Occurred on THURROCK PARK WAY NEAR JUNCTION WITH THURROCK PARK WAY ROUNDABOUT (A1089)

Vehicle Reference 1 Car Going ahead other
Vehicle movement from E to W No tow / articulation
On main carriageway No skidding, jack-knifing or overturning
Location at impact Leaving roundabout First impact Front Hit vehicle:
Hit object in road None Off road: None
Did not leave carr Age of Driver Male
Hit and run Breath test Driver not contacted
Driver Postcode: VRM:

Vehicle Reference 2 Car Stopping
Vehicle movement from E to W No tow / articulation
On main carriageway No skidding, jack-knifing or overturning
Location at impact Leaving roundabout First impact Back Hit vehicle:
Hit object in road None Off road: None
Did not leave carr Age of Driver 52 Female
Not hit and run Breath test Driver not contacted
Driver Postcode: VRM:

Casualty Reference: 1 Vehicle: 2 Age: 52 Female Driver/rider Severity: Slight
Postcode Seatbelt

Casualty Reference: 2 Vehicle: 2 Age: 32 Female Passenger Severity: Slight
Postcode Seatbelt
Front seat

Accidents between dates **01/07/2014** **and** **30/06/2019** (60) months

Selection: **Notes:**

Selected using Manual Selection

19846503 20/05/2019 Time 1700 Vehicles 2 Casualties 2 Slight
E: 563253 N: 176968 First Road: U Road Type 1
Speed limit: 30 Junction Detail: Roundabout Give way or controlled A 1089
Crossing: Control None Facilities: None within 50m Road surface Dry
Daylight Fine without high winds
Special Conditions at Site None Carriageway Hazards: None
Place accident reported: Elsewhere DfT Special Projects:

Causation

	Factor:	Participant:	Confidence:
1st:	Careless/Reckless/In a hurry	Vehicle 1	Very Likely
2nd:			
3rd:			
4th:			
5th:			
6th:			

VEHICLE 2 AT ROUNDABOUT ON DOCK ROAD WAITING TO PULL FORWARD VEHICLE 1 BEHIND VEHICLE 2 VEHICLE 1 HAS ACCELERATED AND HIT THE REAR OF VEHICLE 2 CAUSING DAMAGE AND INJURIES - VEHICLE 2 LEARNER DRIVER ON A LESSON WITH DRIVING INSTRUCTOR

Occurred on DOCK ROAD NEAR JUNCTION WITH THURROCK PARK WAY ROUNDABOUT (A1089)

Vehicle Reference 1 Car Going ahead but held up
Vehicle movement from SE to W No tow / articulation
On main carriageway No skidding, jack-knifing or overturning
Location at impact Entering roundabout First impact Front Hit vehicle:
Hit object in road None Off road: None
Did not leave carr Age of Driver 28 Male
Non-stop, not hit Breath test Driver not contacted
Driver Postcode: VRM:

Vehicle Reference 2 Car Going ahead but held up
Vehicle movement from SE to W No tow / articulation
On main carriageway No skidding, jack-knifing or overturning
Location at impact Entering roundabout First impact Back Hit vehicle:
Hit object in road None Off road: None
Did not leave carr Age of Driver 18 Female
Non-stop, not hit Breath test Driver not contacted
Driver Postcode: VRM:

Casualty Reference: 1 Vehicle: 2 Age: 27 Female Passenger Severity: Slight
Postcode Seatbelt
Front seat

Casualty Reference: 2 Vehicle: 2 Age: 18 Female Driver/rider Severity: Slight
Postcode Seatbelt

Accidents between dates **01/07/2014** **and** **30/06/2019** (60) months

Selection:

Selected using Manual Selection

Notes:

Accidents involving:

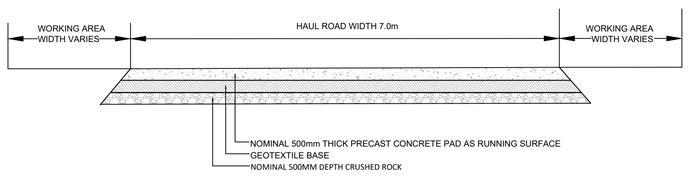
	Fatal	Serious	Slight	Total
Motor vehicles only (excluding 2-wheels)	0	3	17	20
2-wheeled motor vehicles	0	1	2	3
Pedal cycles	0	1	1	2
Horses & other	0	0	0	0
Total	0	5	20	25

Casualties:

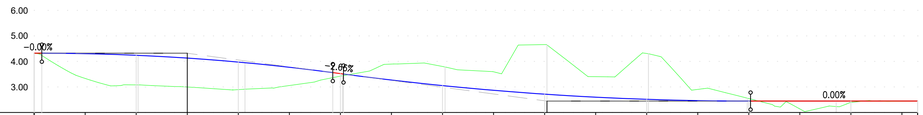
	Fatal	Serious	Slight	Total
Vehicle driver	0	1	17	18
Passenger	0	1	5	6
Motorcycle rider	0	1	2	3
Cyclist	0	1	1	2
Pedestrian	0	1	0	1
Other	0	0	0	0
Total	0	5	25	30

Annex E Concept Design Drawings

Proposed Haul Road Southern Section
Scale 1:1000

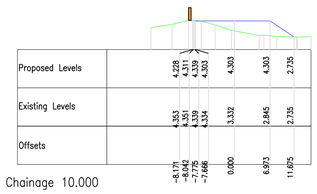


Typical Section of Haul Road
Scale 1:50



CHAINAGE	00.000	10.000	20.000	30.000	40.000	50.000	60.000	70.000	80.000	90.000	100.000	110.000	120.000	130.000	140.000	150.000	160.000	170.000	170.004
EXISTING LEVELS	4.320	3.333	3.079	2.998	2.894	3.054	3.424	3.896	3.800	3.592	4.658	3.400	4.310	2.903	2.544	2.139	2.394	2.439	2.439
PROPOSED LEVELS	4.320	4.303	4.240	4.130	3.974	3.771	3.522	3.270	3.052	2.868	2.717	2.599	2.514	2.463	2.445	2.445	2.445	2.445	2.445
LEVEL DIFFERENCE	0.000	-0.970	-1.160	-1.132	-1.079	-0.717	-0.098	0.625	0.748	0.724	1.942	0.801	1.796	0.440	0.099	-0.306	-0.052	0.006	0.006
HORIZONTAL GEOMETRY		R: 33.024 L: 20.373		R: 113.675 L: 20.927		L =19.113	L =20.080		R: 1589.804 L: 19.975		R: 222.491 L: 19.868		R: 71.041 L: 19.358		R: 28.590 L: 17.427		R: 61.693 L: 15.943		

ALIGNMENT – SOUTHERN SECTION CENTRELINE – LONGSECTION
SCALE: H 1:500,V 1:100. DATUM: 2.000



CROSS SECTION - CHAINAGE 10.000
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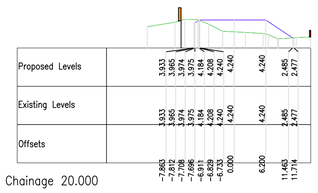

CROSS SECTION - CHAINAGE 20.000
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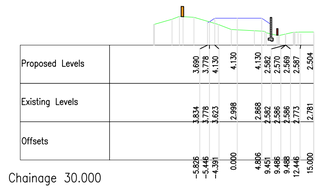

CROSS SECTION - CHAINAGE 30.000
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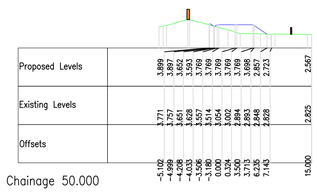

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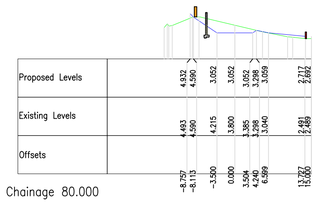

CROSS SECTION - CHAINAGE 80.000
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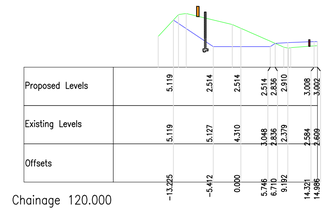

CROSS SECTION - CHAINAGE 120.000
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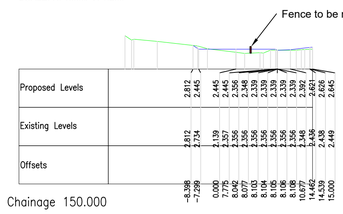

CROSS SECTION - CHAINAGE 150.000
SCALE: H. 1:500, V. 1:250

Key:

- Existing level
- Proposed level
- Proposed retaining wall (cross section)
- Existing seawall cross section (approx 2.5m height)
- Existing fence cross section (approx 1.3m height)
- Development Boundary
- Proposed carriageway area
- Proposed embankment area
- Proposed Retaining Walls
- Existing fence to be retained
- Existing fence to be removed
- Existing seawall

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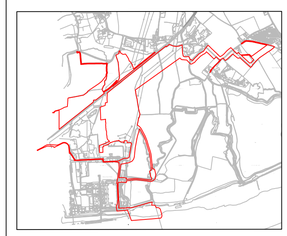

Date: 11/02/2020
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Doc no: JNY9639-24
Scale: A1@ 1:1,000
Reference System: OSGB36
Projection: BNG

Rev	Date	Date

APFP Regulations Reference: 5(2)(k)
Application Document Number: A2.5

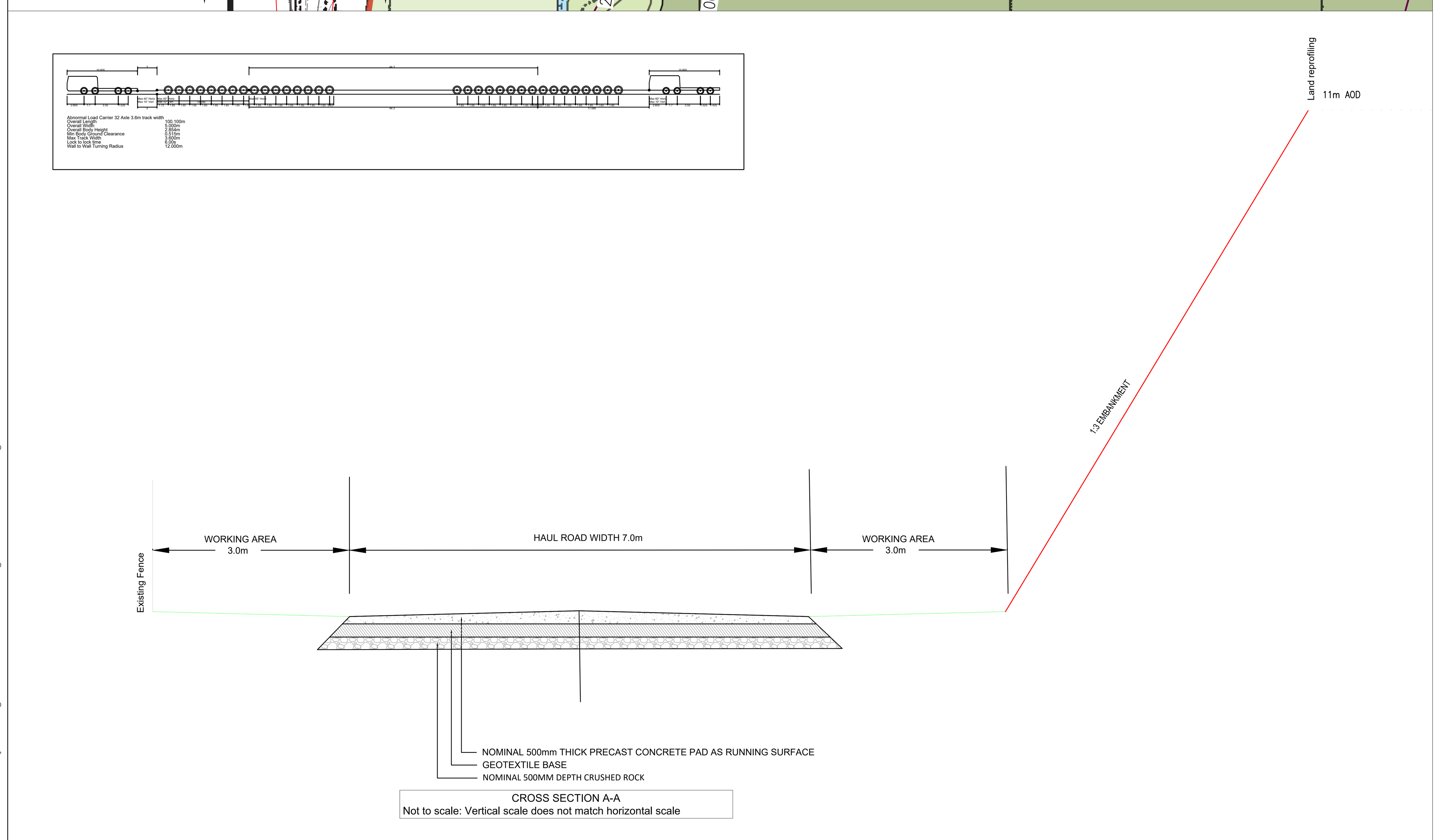
Thurrock Flexible Generation Plant

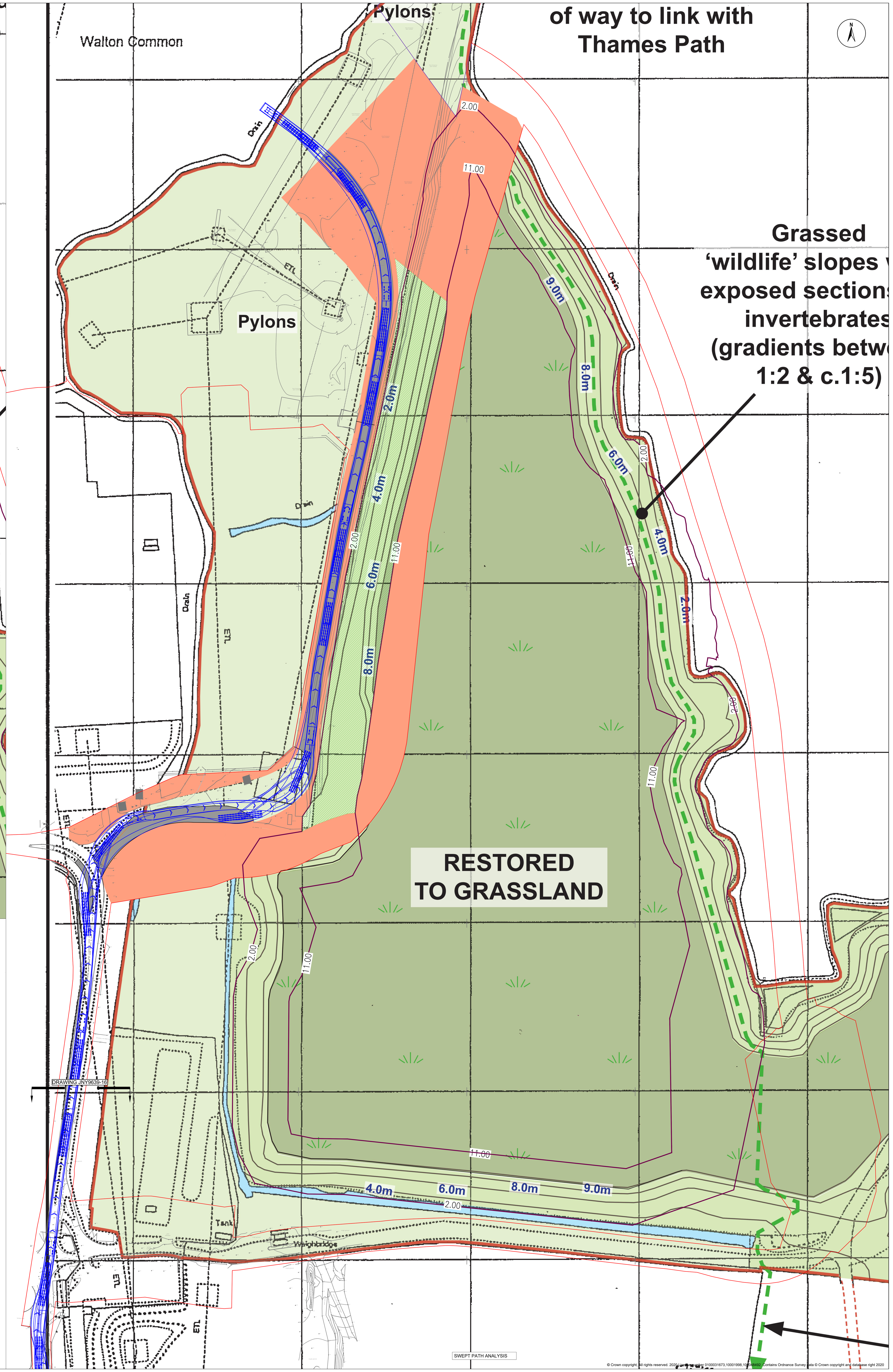
Illustrative Access Road from Causeway
Long Sections and Cross Sections

MAKING COMPLEX EASY

THURROCK POWER

O:\10872 Tilbury Peaking Point DCO\TechDrawings\10872-0222-03.dwg





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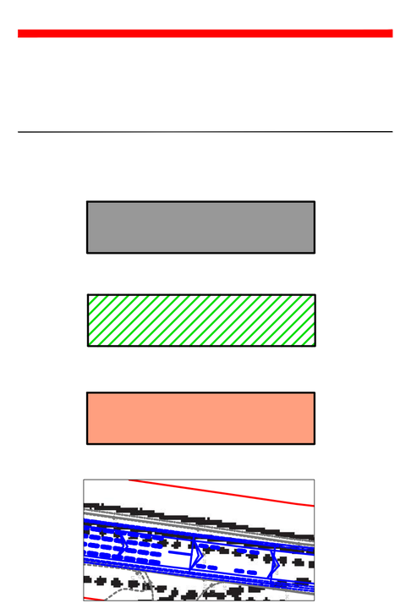

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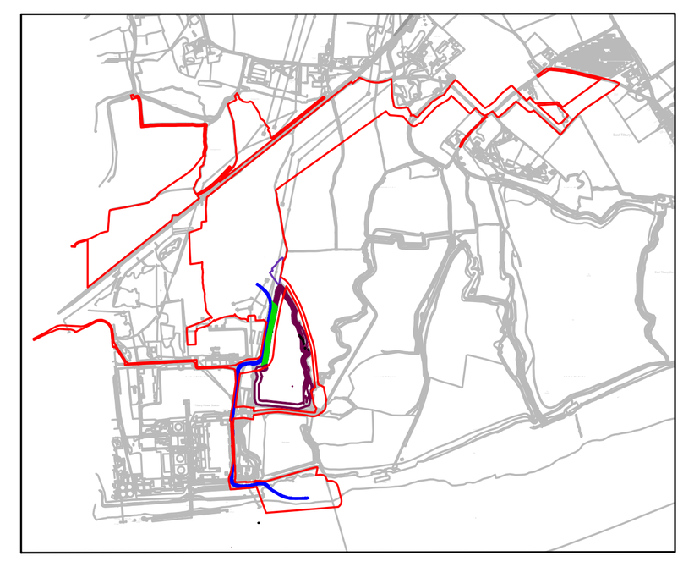
3. Swept path analysis is based on the OS Mastermap Data and the Abnormal Indivisible Load AL500 with 32 axles.
4. Height and weight limits along the proposed route should be assessed.
5. Land restoration base layer reproduced from D.K. Symes Associates Drawing Number 0125/TR/R/1; planning application 17/00412/FUL (continued re-profiling of the site to 9 metres AOD using inert reclamation material imported by river, in place of Pulverised Fuel Ash from the adjacent now redundant Power Station)



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Doc no: JNY9639-23
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Reference System: OSGB36
Projection: BNG

Rev	Date	Date

APFP Regulations Reference: 5(2)(k)
Application Document Number: A2.5

Thurrock Flexible Generation Plant
Illustrative Access Road Northern Section

rps MAKING COMPLEX EASY

THURROCK POWER

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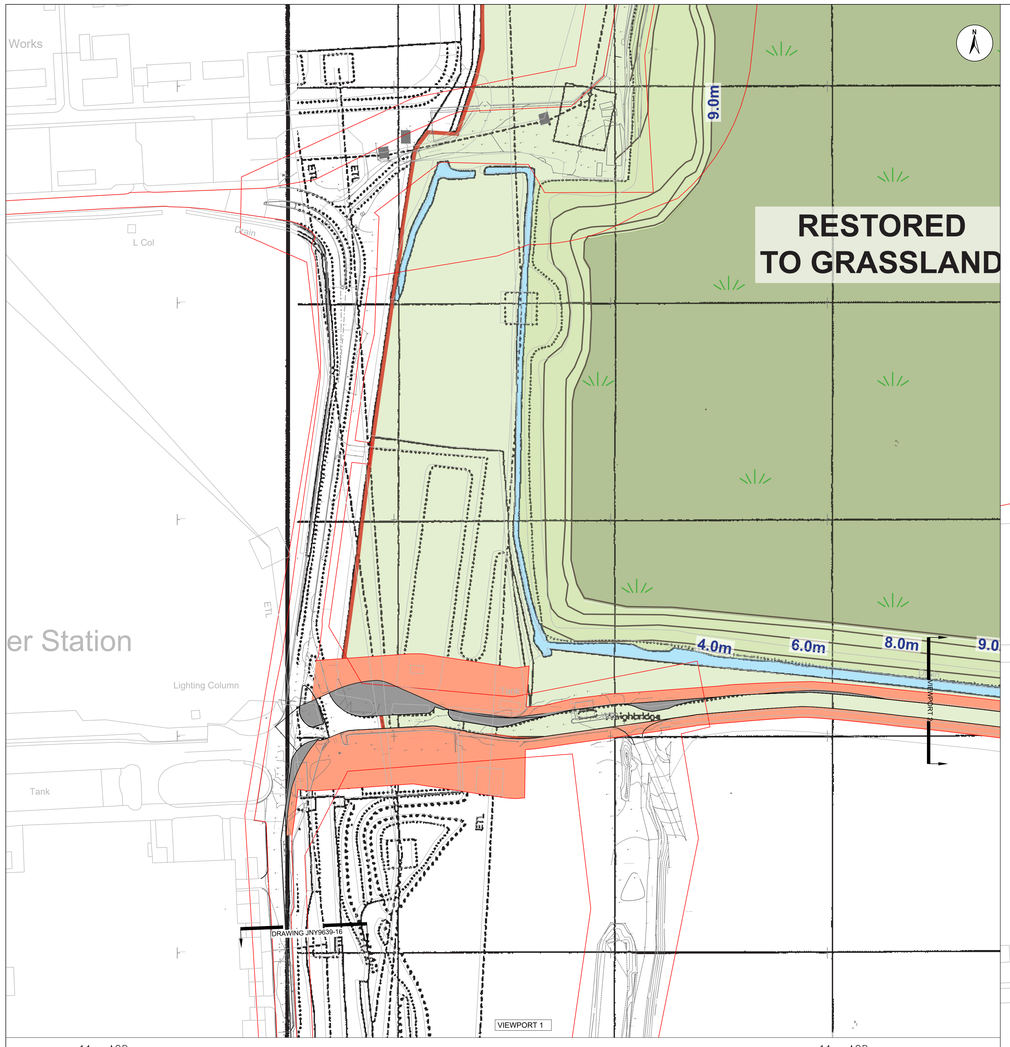

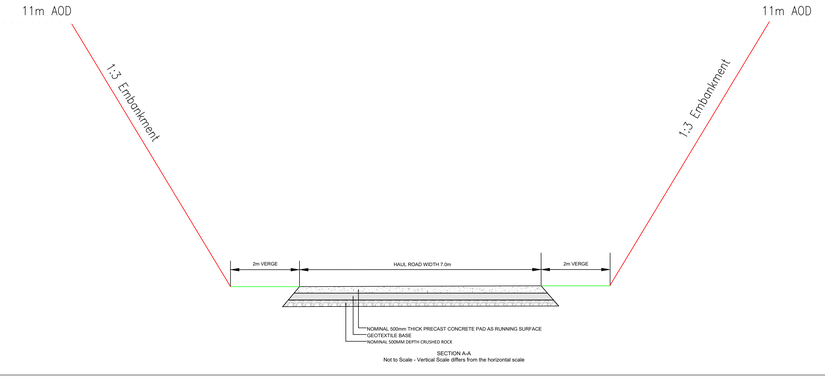

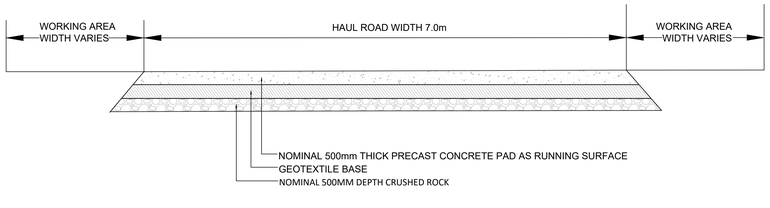

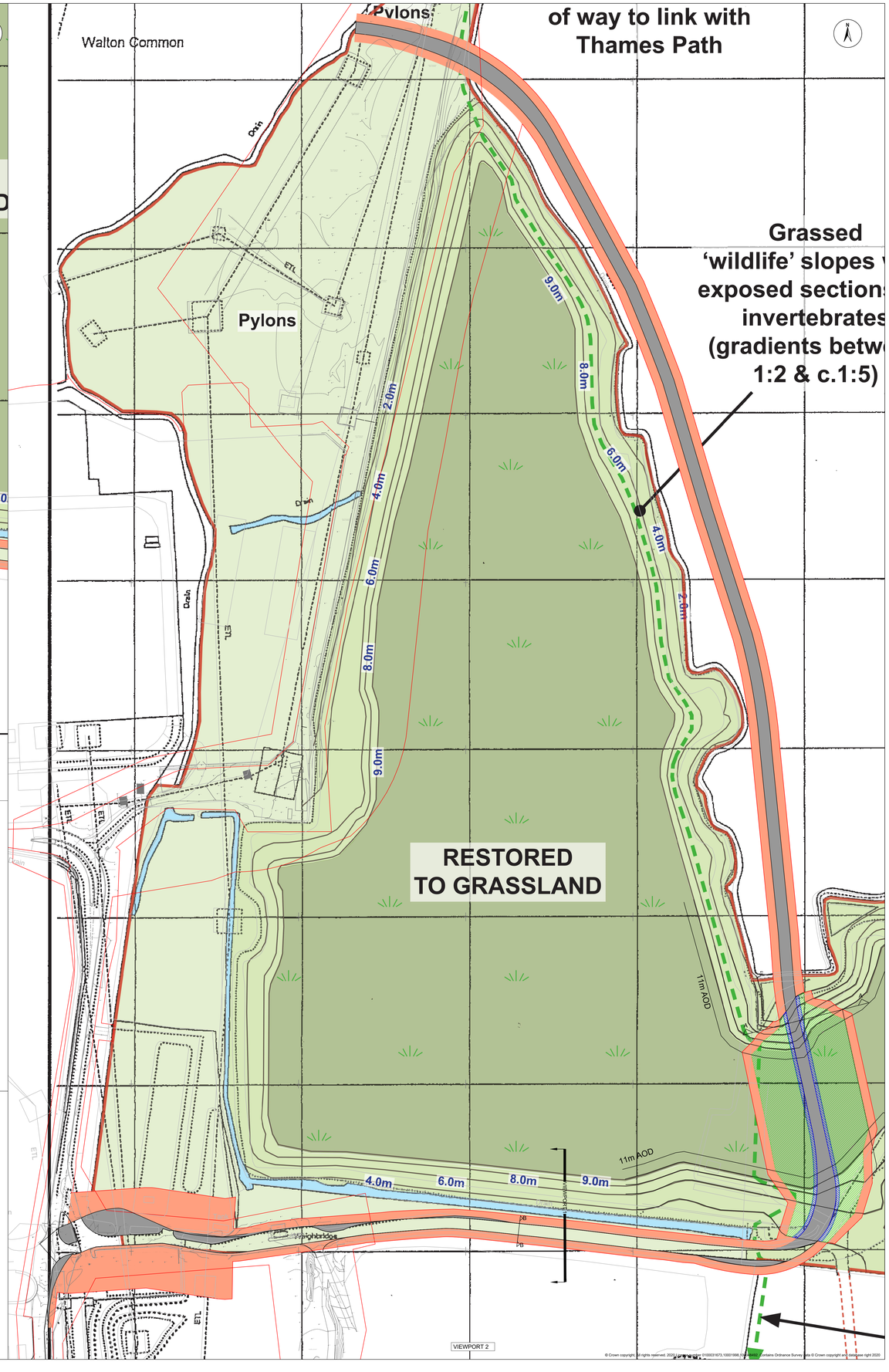

Key:

- Development Boundary
- Edge of existing road
- Proposed carriageway/widening
- Working Area
- Proposed 2m Verge
- Proposed Embankment Area

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4. Height and weight limits along the proposed route should be assessed.
5. Land restoration base layer reproduced from D.K. Symes Associates Drawing Number 0125/TR/R/1; planning application 17/00412/FUL (continued re-profiling of the site to 9 metres AOD using inert reclamation material imported by river, in place of Pulverised Fuel Ash from the adjacent now redundant Power Station)

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Projection: BNG

Rev	Date	Date

APFP Regulations Reference: 5(2)(k)
Application Document Number: A2.5

Thurrock Flexible Generation Plant

Illustrative Access Road Alternative Route

MAKING COMPLEX EASY

THURROCK POWER

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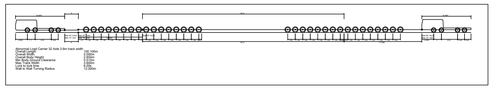

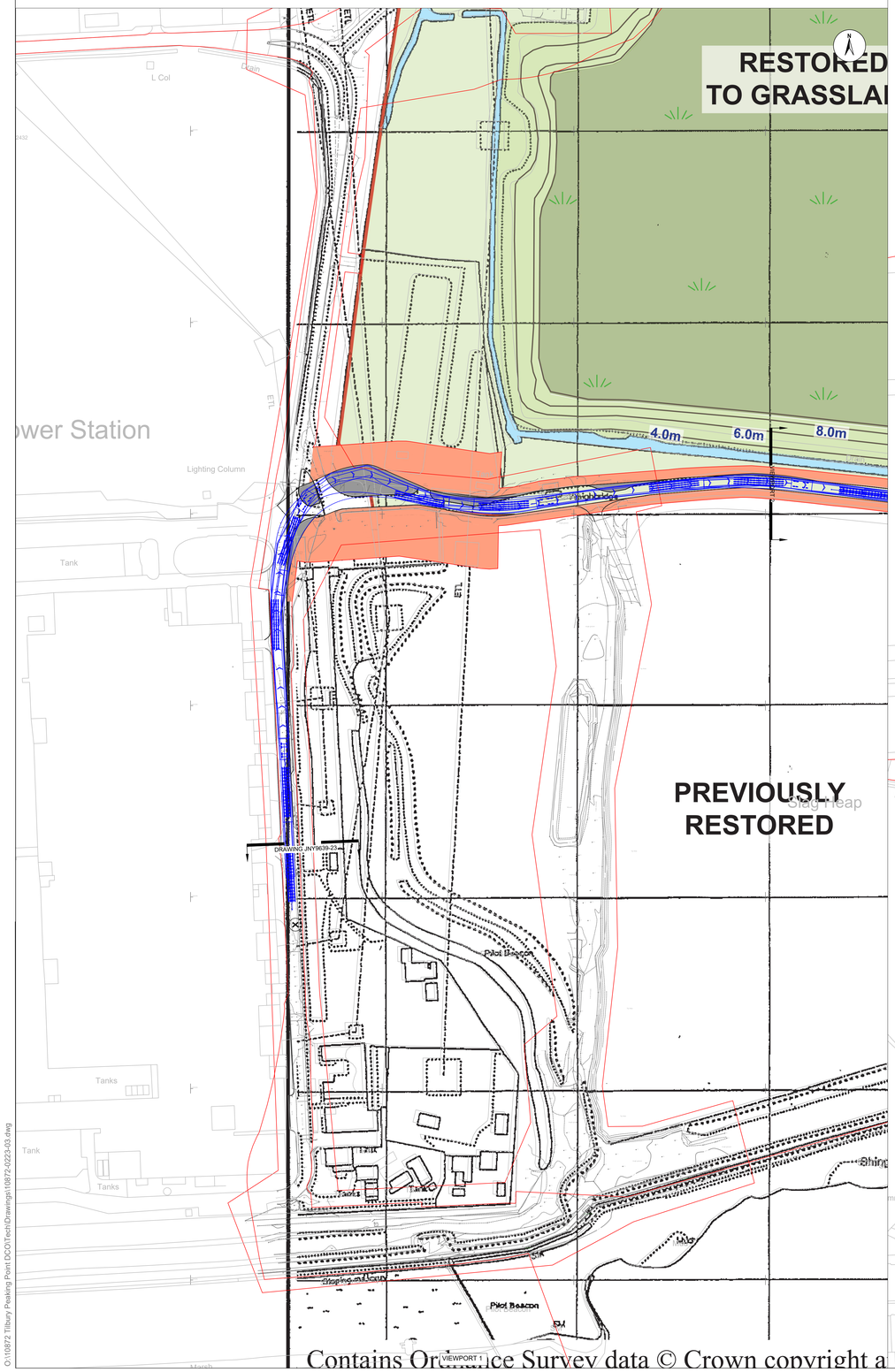

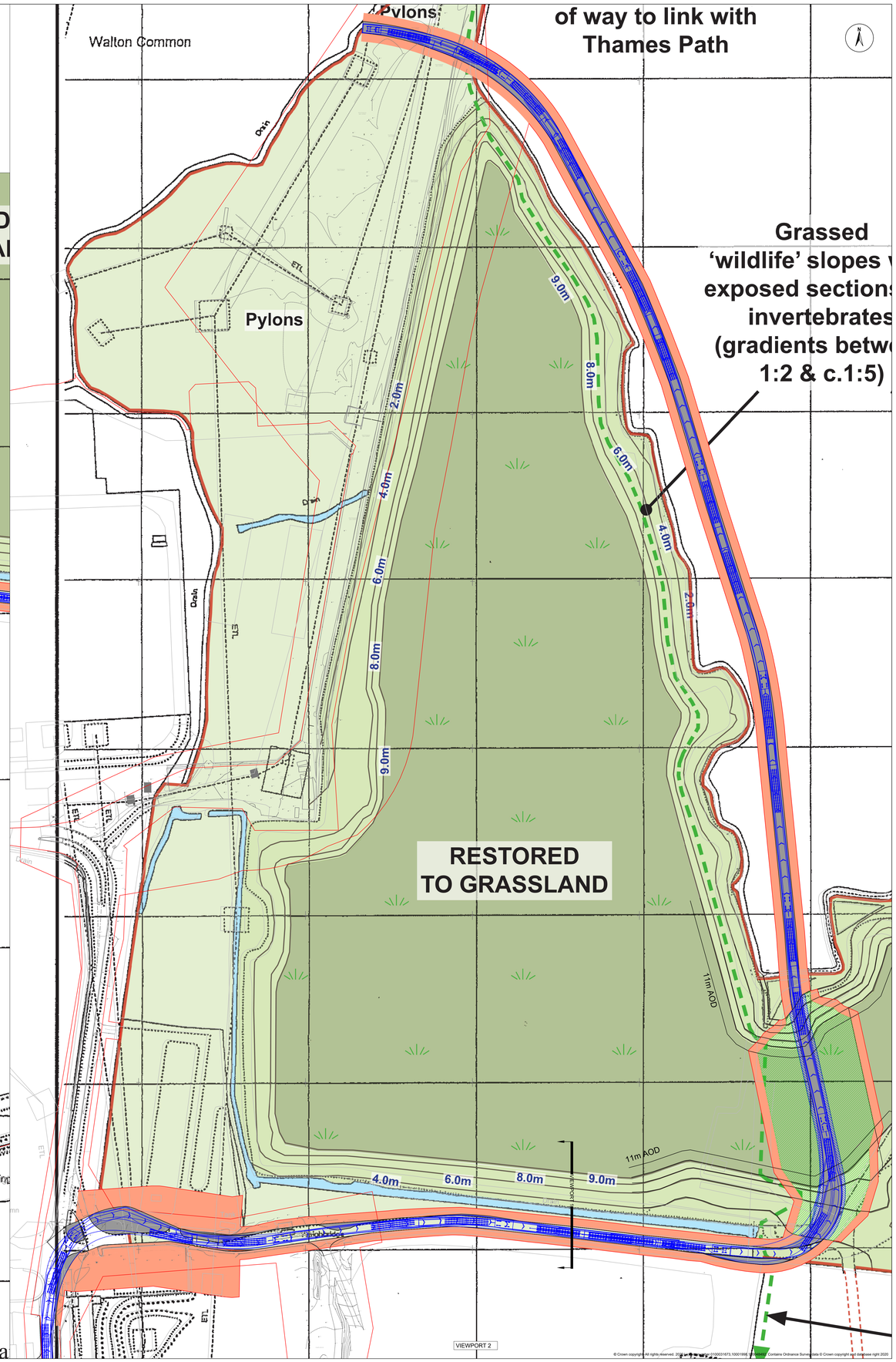

Key:

- Development Boundary
- Edge of existing road
- Proposed carriageway/widening
- Working Area
- Proposed 2m Verge
- Proposed Embankment Area
- AIL Vehicle swept paths

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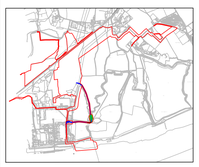
3. Swept path analysis is based on the OS Mastermap Data and the Abnormal Indivisible Load AL500 with 32 axles.
4. Height and weight limits along the proposed route should be assessed.



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Doc no: JNY9639-27
Scale: A0@ 1:1,000
Reference System: OSGB36
Projection: BNG

Rev	Date	Date

APFP Regulations Reference: 5(2)(k)
Application Document Number: A2.5

Thurrock Flexible Generation Plant

Illustrative Access Road Alternative Route
Swept Analysis

RPS MAKING COMPLEX EASY

THURROCK POWER

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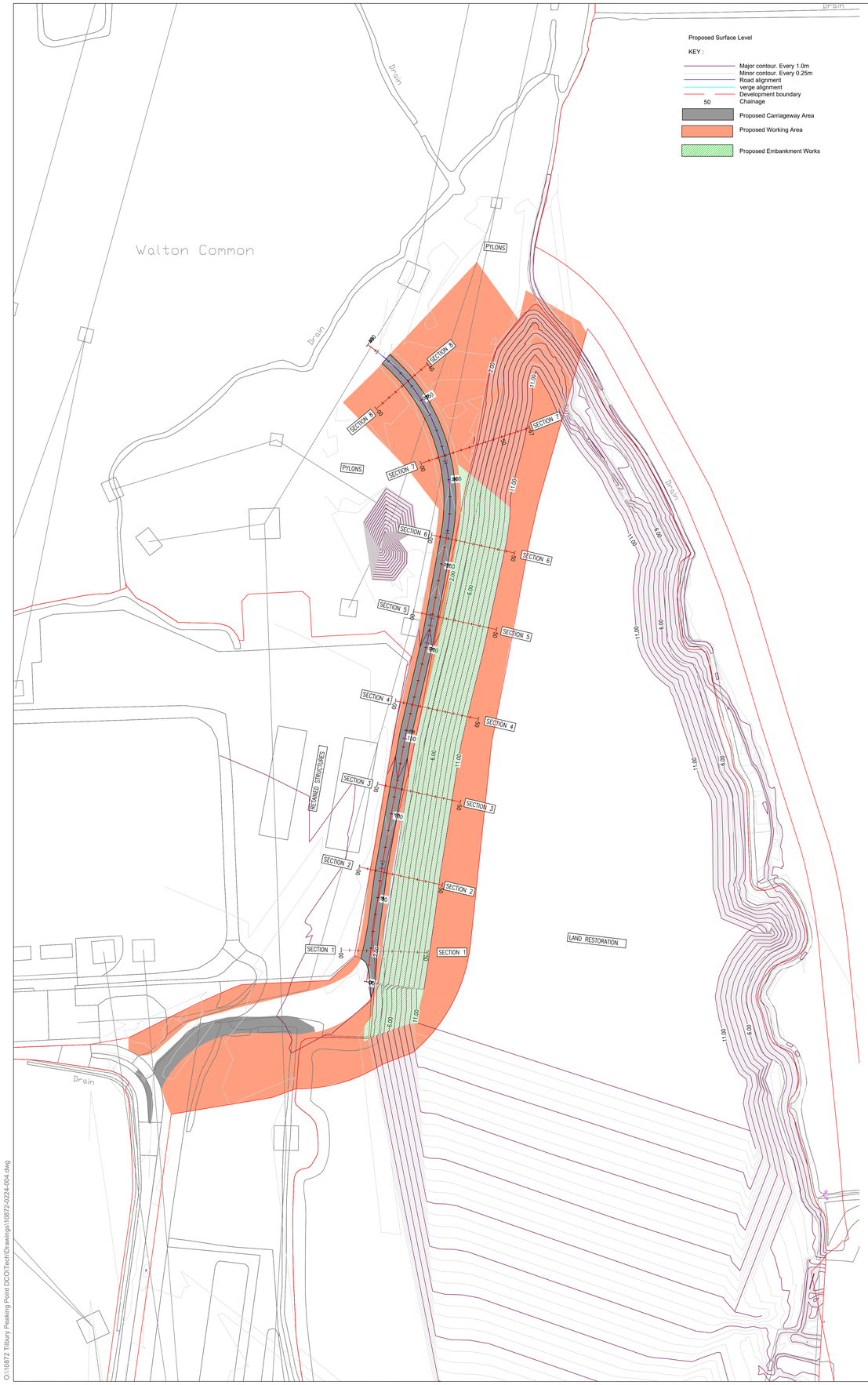

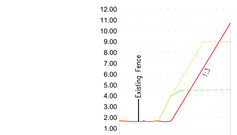

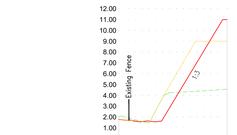

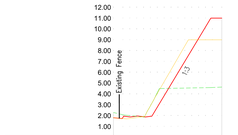

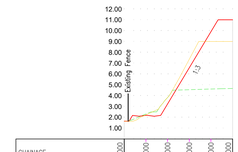

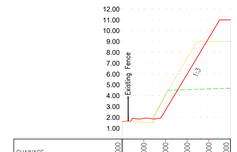

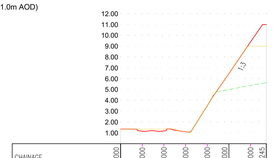

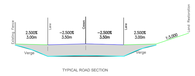

Proposed Surface Level

KEY :

—	Major contour. Every 1.0m
—	Minor contour. Every 0.25m
—	Road alignment
—	verge alignment
— —	Development boundary
50	Chainage
■	Proposed Carriageway Area
■	Proposed Working Area
▨	Proposed Embankment Works

KEY :-

Proposed alignment
Existing Surface

CHAINAGE	00.000	10.000	20.000	30.000	40.000	50.000	60.000	70.000	80.000	90.000	100.000	110.000	120.000	130.000	140.000	150.000	160.000	170.000	180.000	190.000	200.000	210.000	220.000	230.000	240.000	250.000	260.000	270.000	280.000	290.000	300.000	310.000	320.000	330.000	340.000	350.000	360.000	370.000	380.000	390.000	395.662
EXISTING LEVELS	1.835	1.699	1.650	1.976	1.814	1.533	1.427	1.534	1.875	1.885	1.879	1.796	1.883	2.087	2.018	2.096	2.122	2.143	2.081	1.581	1.662	1.920	1.580	1.588	1.583	1.502	1.495	1.414	1.420	1.417	1.397	1.371	1.312	1.298	1.348	1.476	1.558	1.605	1.576	1.725	1.653

HORIZONTAL GEOMETRY
L =67.345
R: 93.500 L: 4.204
L =73.413
R: 93.500 L: 4.821
L =52.839
R: 106.500 L: 4.851
L =5.758
R: 106.500 L: 4.308
L =50.836
R: 106.500 L: 42.837
L =2.980
R: 106.500 L: 74.423
L =7.048

PROPOSED LEVELS																																													
1.751	1.690	1.647	1.623	1.617	1.628	1.649	1.665	1.707	1.773	1.847	1.921	1.995	2.068	2.125	2.146	2.163	2.184	2.186	2.171	2.137	2.085	2.051	2.014	1.969	1.926	1.825	1.724	1.623	1.522	1.440	1.426	1.347	1.287	1.245	1.221	1.217	1.215	1.228	1.259	1.316	1.375	1.453	1.531	1.609	1.653

Drain

LONGSECTION
SCALE: H 1:500,V 1:100.
DATUM: 0.000

KEY :-

Proposed Surface (Allowance for 11.0m AOD)
Consented Surface (9.0m AOD)
Existing Surface
1:3 Proposed Slope

CHAINAGE	00.000	10.000	20.000	30.000	40.000	51.173
EXISTING LEVELS	1.653	1.615	2.496	4.506	4.539	4.576
PROPOSED LEVELS	1.718	1.635	1.633	3.709	7.020	10.720

SECTION 1
SCALE: H 1:500,V 1:100. DATUM: 0.000

CHAINAGE	00.000	10.000	20.000	30.000	40.000	50.000
EXISTING LEVELS	2.069	1.622	3.711	4.315	4.440	4.565
PROPOSED LEVELS	1.778	1.564	1.713	5.033	8.353	11.000

SECTION 2
SCALE: H 1:500,V 1:100. DATUM: 0.000

CHAINAGE	00.000	10.000	20.000	30.000	40.000	50.000
EXISTING LEVELS	2.290	1.954	4.035	4.533	4.570	4.635
PROPOSED LEVELS	1.802	1.931	2.705	6.033	9.362	11.000

SECTION 3
SCALE: H 1:500,V 1:100. DATUM: 0.000

KEY :-

Proposed Surface (Allowance for 11.0m AOD)
Consented Surface (9.0m AOD)
Existing Surface
1:3 Proposed Slope

CHAINAGE	00.000	10.000	20.000	30.000	40.000	50.000
EXISTING LEVELS		2.304	3.826	4.548	4.610	4.664
PROPOSED LEVELS	1.646	2.179	3.232	6.565	9.898	11.000

SECTION 4
SCALE: H 1:500,V 1:100. DATUM: 0.000

CHAINAGE	00.000	10.000	20.000	30.000	40.000	50.000
EXISTING LEVELS			4.076	4.559	4.626	4.693
PROPOSED LEVELS	1.593	1.901	2.656	5.993	9.330	11.000

SECTION 5
SCALE: H 1:500,V 1:100. DATUM: 0.000

CHAINAGE	00.000	10.000	20.000	30.000	40.000	50.000
EXISTING LEVELS		1.440	3.848	4.668	4.799	4.813
PROPOSED LEVELS	1.451	1.440	3.004	6.338	9.673	11.000

SECTION 6
SCALE: H 1:500,V 1:100. DATUM: 0.000

KEY :-

Proposed Surface (Allowance for 11.0m AOD)
Consented Surface (9.0m AOD)
Existing Surface
1:3 Proposed Slope

CHAINAGE	00.000	10.000	20.000	30.000	40.000	50.000	60.000	67.245
EXISTING LEVELS		1.153	1.179	1.103	3.497	5.001	5.371	5.638
PROPOSED LEVELS	1.355	1.153	1.179	1.103	3.497	6.467	9.406	11.000

SECTION 7
SCALE: H 1:500,V 1:100. DATUM: 0.000

CHAINAGE	00.000	10.000	20.000	30.000	40.000
EXISTING LEVELS	1.590	1.594	1.576	1.578	1.644
PROPOSED LEVELS	1.590	1.594	1.340	1.366	1.644

SECTION 8
SCALE: H 1:500,V 1:100. DATUM: 0.000

Drain

O:\10872 Tilbury Peaking Point DCO\Tech\Drawings\10872-0224-004.dwg

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Created by: HN
Checked by: DA
Doc no: JNY9639-28
Scale: A0@ 1:1,000
Reference System: OSGB36
Projection: BNG

Rev	Date	Date

APFP Regulations Reference: 5(2)(k)
Application Document Number: A2.5

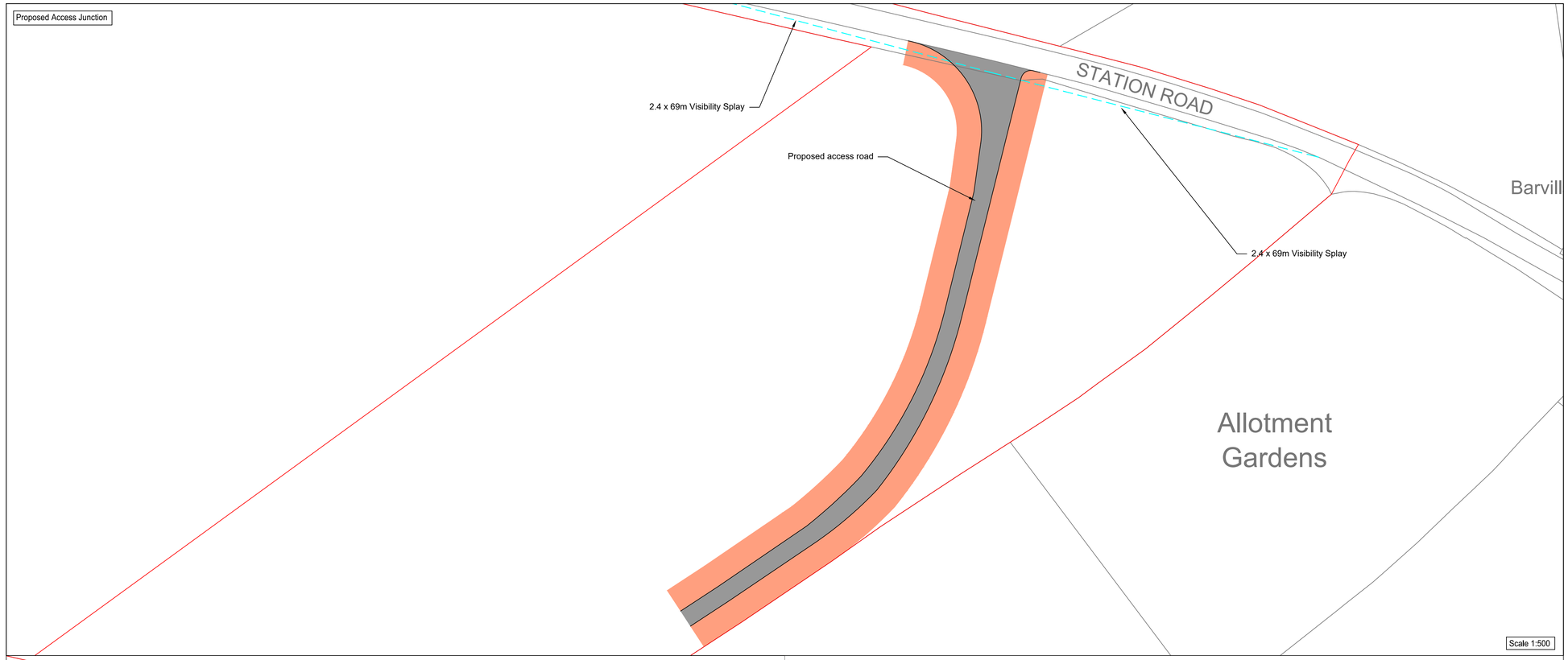
Thurrock Flexible Generation Plant

Illustrative Access Road Northern Section
Cross Section and Long Section

MAKING COMPLEX EASY

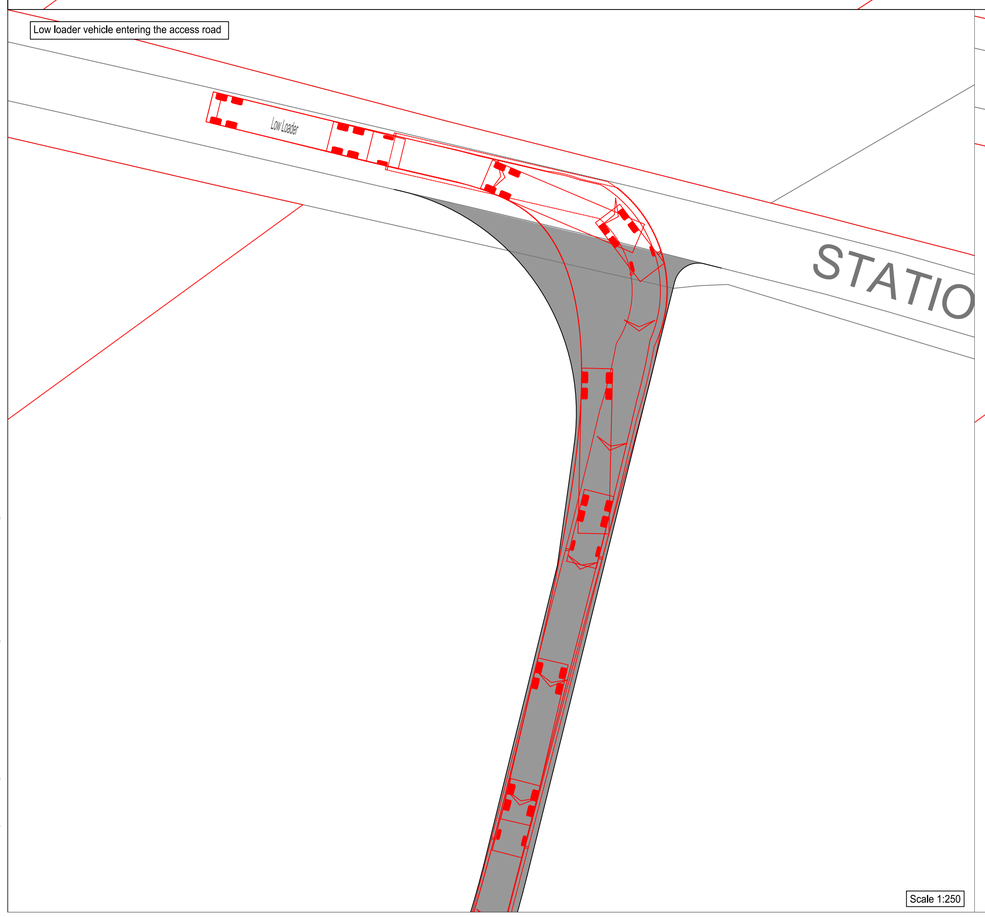
THURROCK POWER

Proposed Access Junction



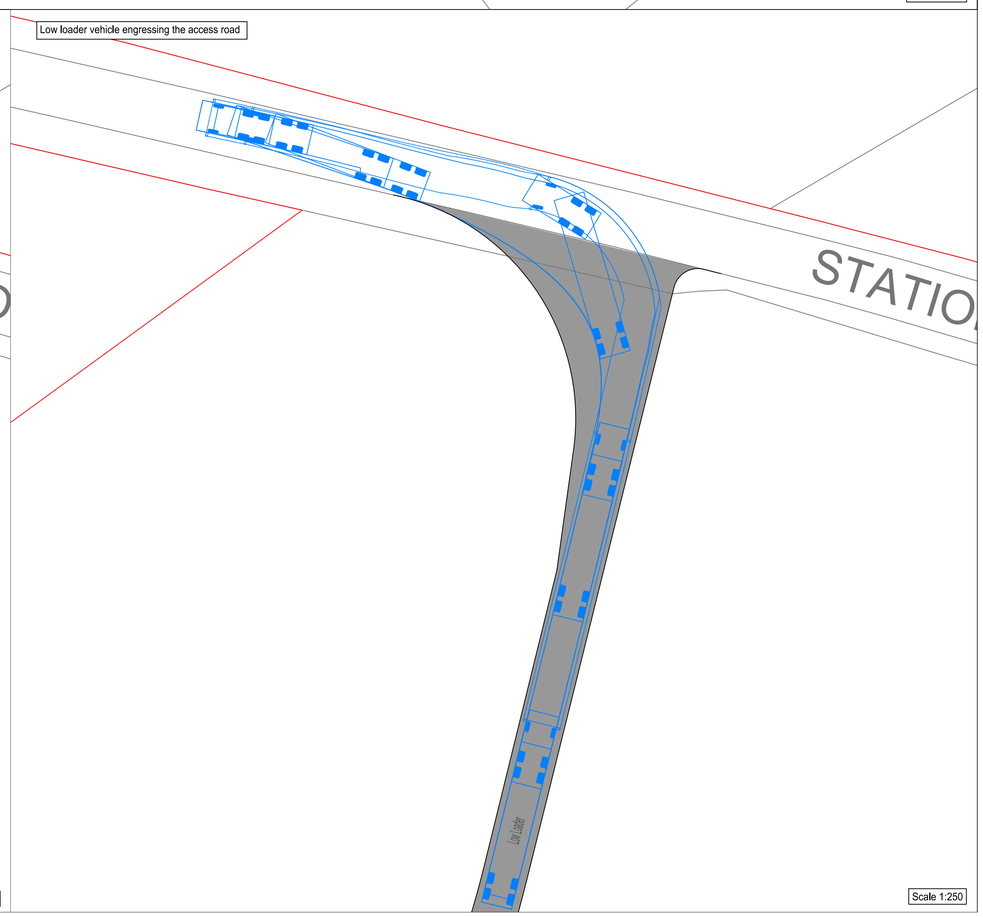
Scale 1:500

Low loader vehicle entering the access road



Scale 1:250

Low loader vehicle engressing the access road

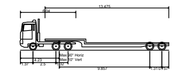


Scale 1:250

Key:

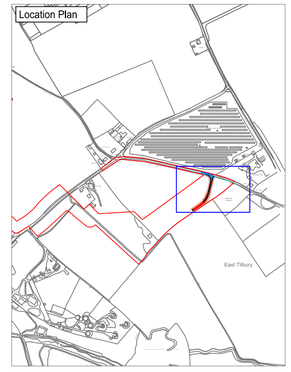
- Development Boundary
- Proposed carriageway
- 5m Working Width

Vehicle Profile:



Low Loader	
Overall Length	16.154m
Overall Width	2.520m
Overall Body Height	3.315m
Min Body Ground Clearance	0.315m
Max Track Width	2.500m
Lock-to-lock time	6.00s
Curb to Curb Turning Radius	6.990m

Location Plan



Date: 11/02/2020
Created by: HN
Checked by: DA
Doc no: JNY9639-29
Reference System: OSGB36
Projection: BNG

Rev	Date	Date

APFP Regulations Reference: 5(2)(k)
Application Document Number: A2.5

Thurrock Flexible Generation Plant

Illustrative Station Road Access to National Grid Gas Connection Compound

MAKING COMPLEX EASY

THURROCK POWER

O:\10872 Tilbury Peaking Point DCO\Tech\Drawings\10872-0225-003.dwg

Proposed Access Road Layout

Sunny Side

Low Street

Drain

Stopping Sight Distance 33m

45m

LC

3.0m

Westbound railway barrier

Forward Visibility 69m

2.4m

STATION

Proposed access road to be joined with the internal road network. See drawing JNY9639-11

2.4 x 69m Visibility Splay

7.94m

6.7m

6.0m

Pond

SP

LC

SP

Low loader entering and exiting the access road

Low Street

LC

3.0m

Low loader turning into the access road

2.4m

STATION RO

Low loader turning out of the access road

d

SP

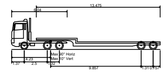
SP

O:\10872 Tilbury Peaking Point DCO\Tech\Drawings\10872-0226-003.dwg

Key:

- Proposed Access Road Alignment
- Highway Boundary
- 5m Working Width

Vehicle Profile:



Low Loader	
Overall Length	16.154m
Overall Width	2.530m
Overall Body Height	3.393m
Min Body Ground Clearance	0.318m
Max Track Width	2.500m
Lock-to-lock time	6.00s
Curb to Curb Turning Radius	6.990m

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Location Plan

Date: 11/02/2020
Created by: HN
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Doc no: JNY9639-06
Scale: A1@ 1:500
Reference System: OSGB36
Projection: BNG

Rev	Date	Date

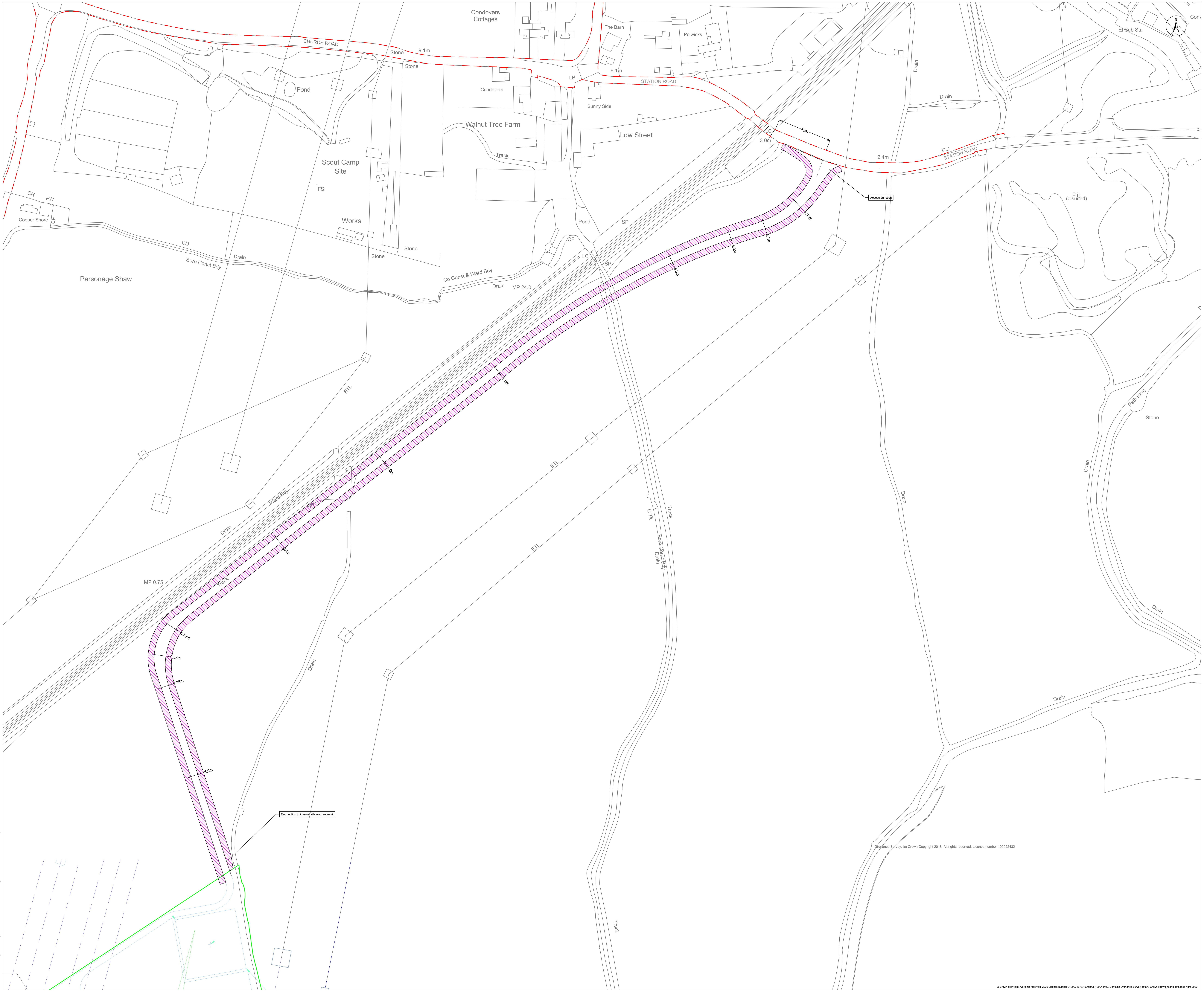
APFP Regulations Reference: 5(2)(k)
Application Document Number: A2.5

Thurrock Flexible Generation Plant

Illustrative Access Junction and Access Road from Station Road

RPS MAKING COMPLEX EASY

THURROCK POWER

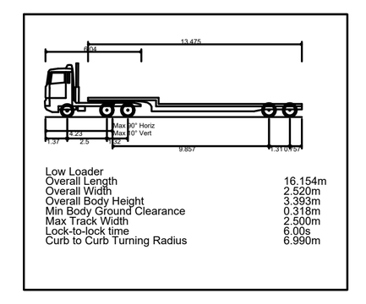


Key:

Proposed Access Road Alignment

Highway Boundary

5m Working Width



Low Loader	
Overall Length	16.154m
Overall Width	2.520m
Overall Body Height	3.393m
Min Body Ground Clearance	0.318m
Max Track Width	2.500m
Lock-to-lock time	6.00s
Curb to Curb Turning Radius	6.990m

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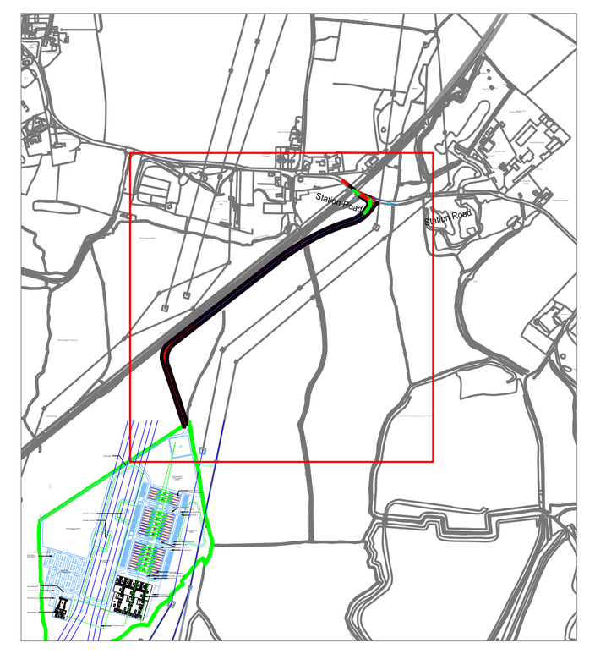

Date: 11/02/2020
Created by: HN
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Doc no: JNY9639-011
Scale: A0@ 1:1000
Reference System: OSGB36
Projection: BNG

Rev	Date	Date

APFP Regulations Reference: 5(2)(k)
Application Document Number: A2.5

Thurrock Flexible Generation Plant

Illustrative Station Road Access Road and Junction

RPS MAKING COMPLEX EASY
THURROCK POWER

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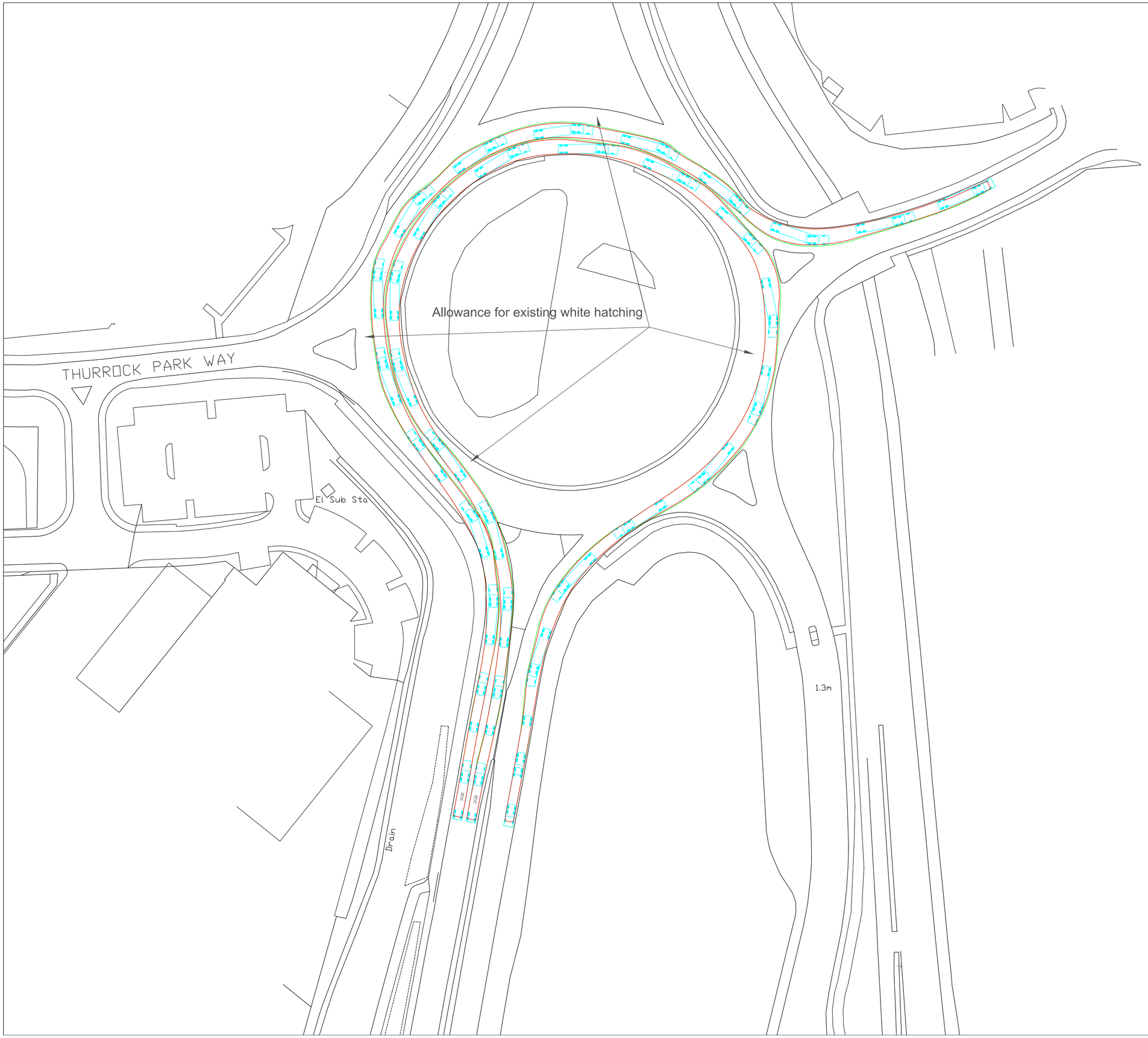
Annex F Swept Path Analysis Drawings



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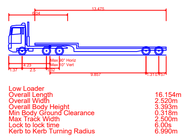

Date: 11/02/2020
Created by: CM
Checked by: DA
Doc no: JNY9639-30
Scale: A1@ 1:500
Reference System: OSGB36
Projection: BNG

Rev	Date	Date

Thurrock Flexible Generation Plant

Low Loader Swept Path Analysis ASDA roundabout

MAKING COMPLEX EASY

THURROCK POWER

O:\10872 Tilbury Peaking Point DCO\Tech\Drawings\10872-0183-05.dwg

Annex G Committed Development Flows

Road Link ID	Road Link / Description	Data	Committed Traffic Flow
			24 hr AADT
1	A13 between M25 junction 30 and A126	Total	6099
		HV	3491
2	A13 between A126 and A1012	Total	6407
		HV	3491
3	A13 between A1089 and A1012	Total	6407
		HV	3491
4	A1089,between Marshfoot Road roundabout and A13	Total	7950
		HV	4224
11	Coopers Shaw Road / Church Road / Station Road, between Gun Hill Road and EMR East Tilbury junction	Total	60
		HV	60
15	A13, between Orsett Cock roundabout and A1089	Total	3664
		HV	880
16	A1089 Dock Approach Road, between Marshfoot Road roundabout and ASDA roundabout	Total	9439
		HV	4224
17	A1089 St Andrews Road, between ASDA Roundabout and Port of Tilbury Gate 1	Total	3221
		HV	2561
18	A1089 St Andrews Road, between Tilbury Gate 1 and RWE Road	Total	3050
		HV	2425
19	RWE Road, between A1089 St Andrews Road and Fort Road	Total	3050
		HV	2425
20	Fort Road between RWE Road and Brennan Road	Total	196
		HV	60
21	Fort Road between Brennan Road and Coopers Shaw Road	Total	60
		HV	60

Annex H Cumulative Development Traffic Flows

Road Link ID	Road Link / Description	Data	Cumulative Traffic Flow
			24 hr AADT
1	A13 between M25 junction 30 and A126	Total	3250
		HV	849
2	A13 between A126 and A1012	Total	3250
		HV	849
3	A13 between A1089 and A1012	Total	3250
		HV	849
4	A1089,between Marshfoot Road roundabout and A13	Total	735
		HV	332
11	Coopers Shaw Road / Church Road / Station Road, between Gun Hill Road and EMR East Tilbury junction	Total	0
		HV	0
15	A13, between Orsett Cock roundabout and A1089	Total	3346
		HV	853
16	A1089 Dock Approach Road, between Marshfoot Road roundabout and ASDA roundabout	Total	735
		HV	332
17	A1089 St Andrews Road, between ASDA Roundabout and Port of Tilbury Gate 1	Total	460
		HV	300
18	A1089 St Andrews Road, between Tilbury Gate 1 and RWE Road	Total	0
		HV	0
19	RWE Road, between A1089 St Andrews Road and Fort Road	Total	0
		HV	0
20	Fort Road between RWE Road and Brennan Road	Total	0
		HV	0
21	Fort Road between Brennan Road and Coopers Shaw Road	Total	0
		HV	0

Annex I Fort Road, Coopers Shaw Road, Church Road, Station Road, Assessment of Passing Places

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Doc no: JNY9639-17
Scale: A1@ 1:250
Reference System: OSGB36
Projection: BNG

Rev	Date	Date

Thurrock Flexible Generation Plant

Forward Visibility
Section 1

MAKING COMPLEX EASY

THURROCK POWER

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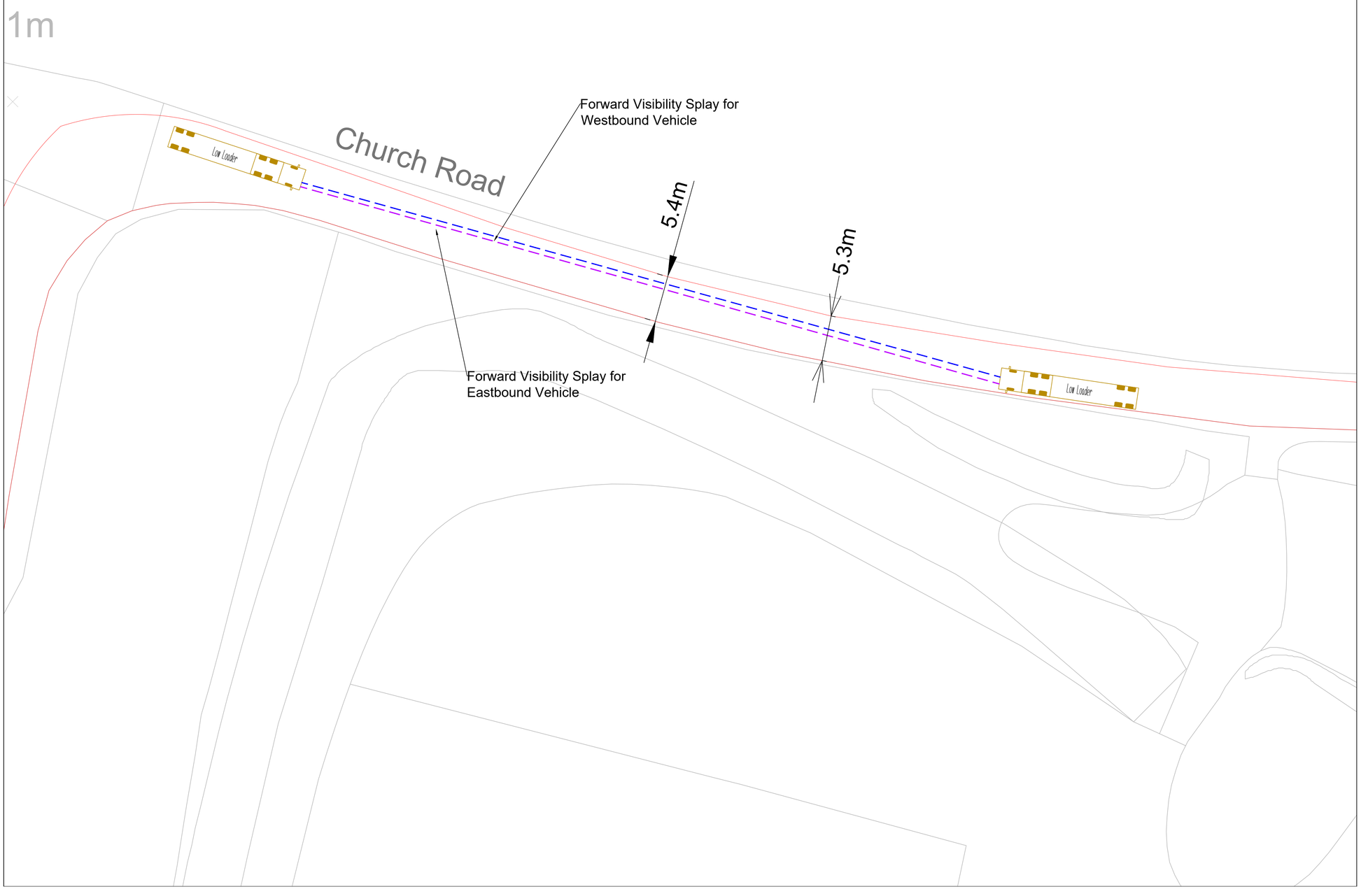

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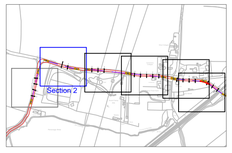

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Created by: HN
Checked by: DA
Doc no: JNY9639-18
Scale: A1@ 1:250
Reference System: OSGB36
Projection: BNG

Rev	Date	Date

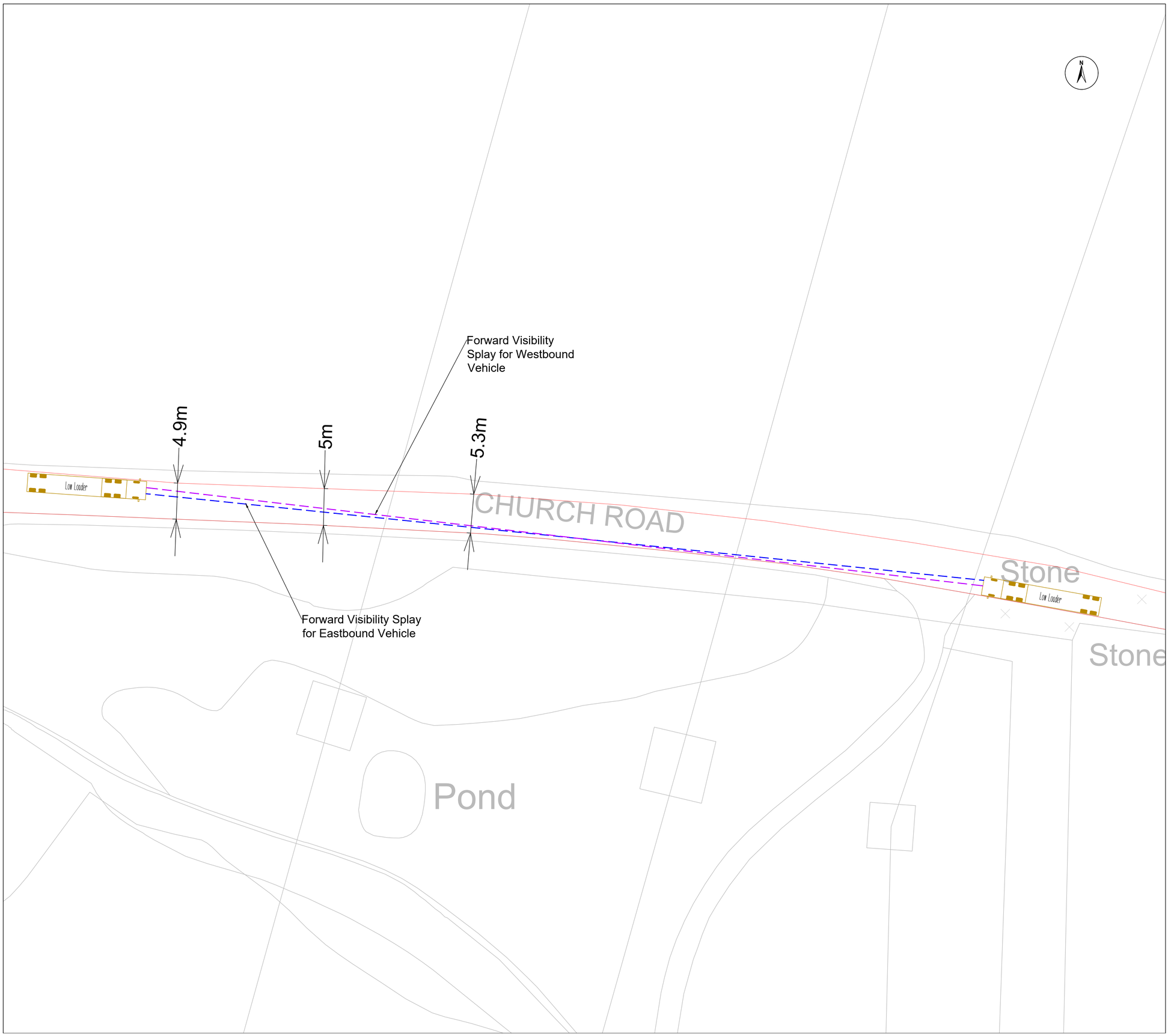
Thurrock Flexible Generation Plant

Forward Visibility
Section 2

MAKING COMPLEX EASY

THURROCK POWER

O:\10872 Tilbury Peaking Point DCO\Tech\Drawings\10872-0227-03.dwg



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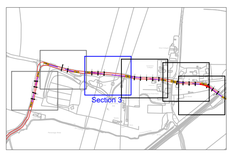

Date: 11/02/2020
Created by: HN
Checked by: DA
Doc no: JNY9639-19
Scale: A1@ 1:250
Reference System: OSGB36
Projection: BNG

Rev	Date	Date

Thurrock Flexible Generation Plant

Forward Visibility
Section 3

MAKING COMPLEX EASY

THURROCK POWER

O:\10872 Tilbury Peaking Point DCO\Tech\Drawings\10872-0227-03.dwg

Condovers
Cottages

Forward Visibility
Splay for Westbound
Vehicle

9.1m

4.6m

4.4m

4.2m

4.7m

5.3m

Stone

Low Loader

Stone

Low Loader

Forward Visibility Splay
for Eastbound Vehicle

Condovers

Walnut Tree Farm

3

7

O:\10872 Tilbury Peaking Point DCO\Tech\Drawings\10872-0227-03.dwg

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Date: 11/02/2020
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Checked by: DA
Doc no: JNY9639-20
Scale: A1@ 1:250
Reference System: OSGB36
Projection: BNG

Rev	Date	Date

Thurrock Flexible Generation Plant

Forward Visibility
Section 4

MAKING COMPLEX EASY

THURROCK POWER

The Barn

Polwicks

Sunny Side

Low Street

4

5

LB

Low Loader

Low Loader

Low Loader

Low Loader

5.2m

6.4m

4.2m

4.72m

4.4m

Forward Visibility Splay for Westbound Vehicle

Forward Visibility Splay for Eastbound Vehicle

N

NOTES

1. This drawing has been prepared in accordance with the scope of RPS's appointment with its client and is subject to the terms and conditions of that appointment. RPS accepts no liability for any use of this document other than by its client and only for the purposes for which it was prepared and provided.
2. If received electronically it is the recipients responsibility to print to correct scale. Only written dimensions should be used.
3. This drawing is to be read in conjunction with all relevant scheme drawings.

Date: 11/02/2020
Created by: HN
Checked by: DA
Doc no: JNY9639-21
Scale: A1@ 1:250
Reference System: OSGB36
Projection: BNG

Rev	Date	Date

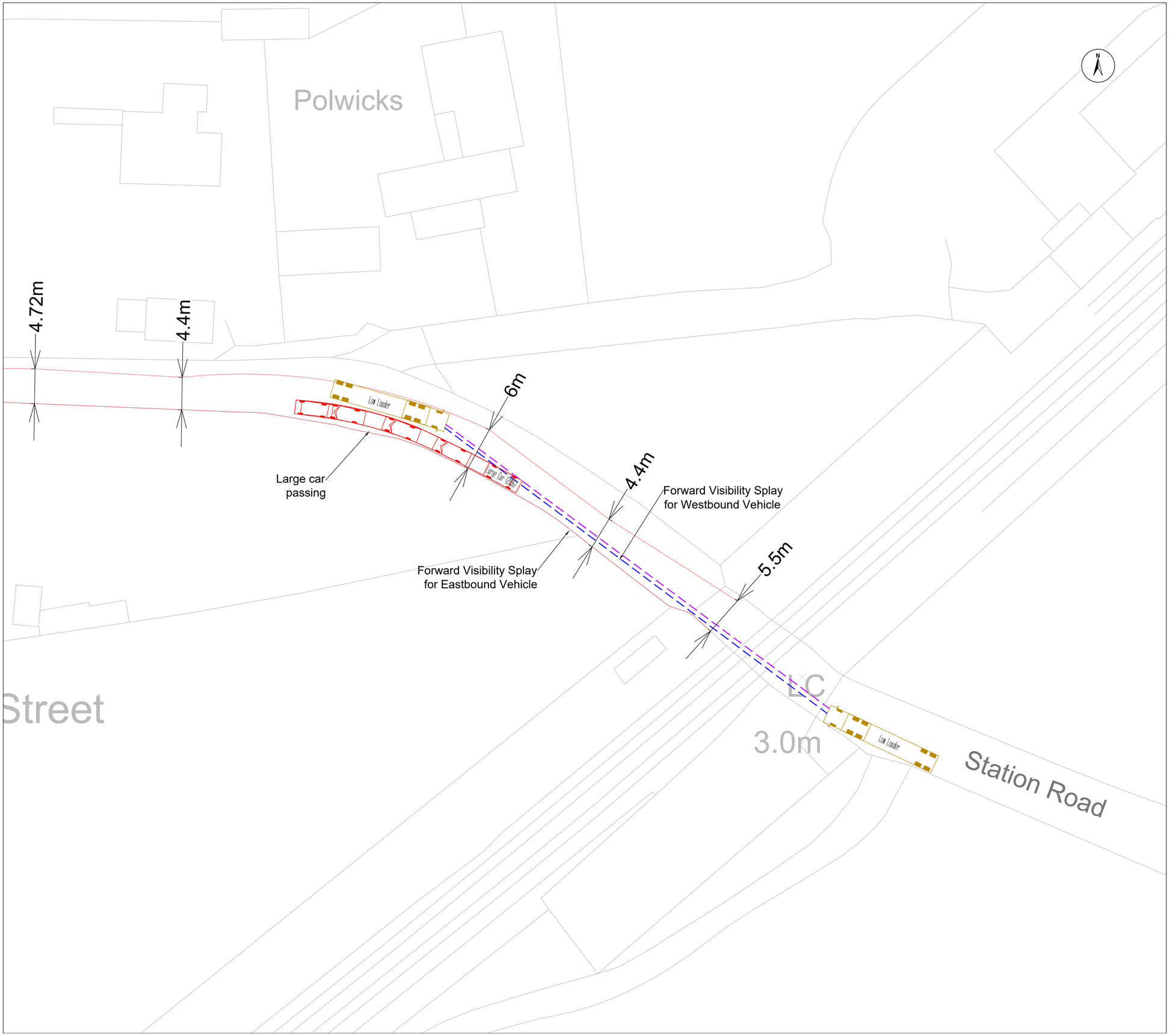
Thurrock Flexible Generation Plant

Forward Visibility
Section 5

MAKING COMPLEX EASY

THURROCK POWER

O:\10872 Tilbury Peaking Point DCO\TechDrawings\10872-0227-03.dwg



NOTES

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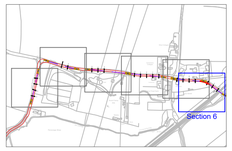


Date: 11/02/2020
Created by: HN
Checked by: DA
Doc no: JNY9639-22
Scale: A1@ 1:250
Reference System: OSGB36
Projection: BNG

Rev	Date	Date

Thurrock Flexible Generation Plant

Forward Visibility
Section 6

MAKING COMPLEX EASY

THURROCK POWER

O:\10872 Tilbury Peaking Point DCO\Tech\Drawings\10872-0227-03.dwg

Annex J Church Street Capacity Assessment

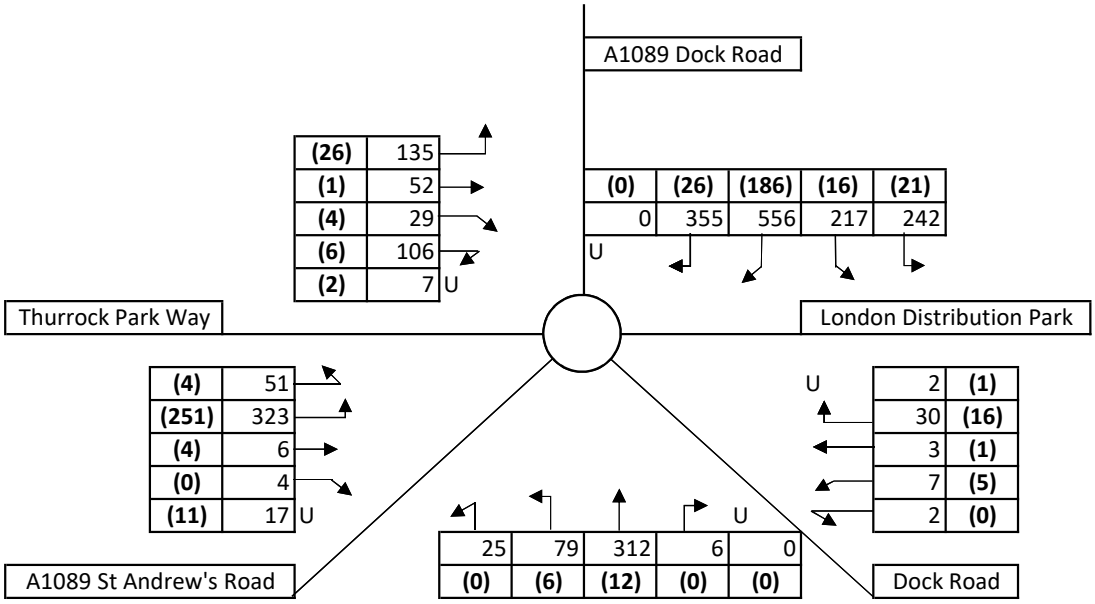
Capacity assessment of the longest section of road narrowing on Church Street, between Coopers Shaw Road and Low Street Lane			
Description	Value	Unit	Comments
Length of Road Narrowing	120	meters	measured
Distance for HGV to pass other HGV	20	meters	measured
Total distance of section of road narrowing	140	meters	
Total distance of section of road narrowing in miles	0.09	miles	140 divided by 1609 to convert metres to miles
Station Road maximum hour	14:45 to 15:45	Time	
Station Road maximum hour two way total traffic flow from 2017 observed traffic flow movements	119	vehicles	Taken from 18/00458/FUL Pulverised Fuel Ash Extraction, Ashfields Site Transport Statement
Station Road maximum hour two way HGV traffic flow from 2017 observed traffic flow movements	30	vehicles	Taken from 18/00458/FUL Pulverised Fuel Ash Extraction, Ashfields Site Transport Statement
Station Road maximum hour two way non HGV traffic flow from 2017 observed traffic flow movements	89	vehicles	
Tempro Growth Rate from 2017 to 2022	1.10	growth rate	
Station Road maximum hour two way total traffic flow from 2022 Base traffic flow movements	131	vehicles	Growthed
Station Road maximum hour two way HGV traffic flow from 2022 Base traffic flow movements	33	vehicles	Growthed
Station Road maximum hour two way non HGV traffic flow from 2022 Base traffic flow movements	98	vehicles	Growthed
Committed Development two way total hourly traffic flow along Station Road	6	vehicles	Committed development hourly two way flow along road
Committed Development two way HGV hourly traffic flow along Station Road	6	vehicles	Committed development hourly two way flow along road
Station Road maximum hour two way non HGV traffic flow from 2022 Base traffic flow movements	0	vehicles	Committed development hourly two way flow along road
Station Road maximum hour two way total traffic flow from 2022 Baseline traffic flow movements	137	vehicles	2022 Base traffic flow plus committed traffic flow to for 2022 baseline traffic flow
Station Road maximum hour two way HGV traffic flow from 2022 Baseline traffic flow movements	39	vehicles	2023 Base traffic flow plus committed traffic flow to for 2022 baseline traffic flow
Station Road maximum hour two way non HGV traffic flow from 2022 Baseline traffic flow movements	98	vehicles	2024 Base traffic flow plus committed traffic flow to for 2022 baseline traffic flow
Average non HGV speed along longest section of road narrowing on Church Street, between Coopers Shaw Road and Low Street Lane	20	mph	
Average HGV speed along longest section of road narrowing on Church Street, between Coopers Shaw Road and Low Street Lane	10	mph	
Time taken for 1 non HGV to travel 140 meters at 20 mph	0.00	hours	Derived by dividing the total distance of road narrowing in miles (0.09) by the non HGV speed along the road narrowing in mph (20)
Time taken for 1 HGV to travel 140 meters at 10 mph	0.01	hours	Derived by dividing the total distance of road narrowing in miles (0.09) by the HGV speed along the road narrowing in mph (10)
Time taken for 98 non HGVs to travel 140 meters at 20 mph	0.43	hours	Derived by multiplying the Time taken for 1 non HGV to travel 140 meters at 20 mph by the number of non HGVs in the maximum hour
Time taken for 29 HGVs to travel 140 meters at 10 mph	0.34	hours	Derived by multiplying the Time taken for 1 HGV to travel 140 meters at 10 mph by the number of HGVs in the maximum hour
Total time taken for HGV plus non HGV to travel 140 meters	0.77	hours	Adding the time taken for HGVs plus non HGVs together
Time remaining in the hour	0.23	hours	
Proportion of HGVs from Total vehicles from 2022 base	25%	% vehicles	Dervied from the 2022 base number of HGVs divided by the total number of vehicles
Proportion of non HGVs from Total vehicles from 2022 base	75%	% vehicles	Dervied from the 2022 base number of non HGVs divided by the total number of vehicles
Remaining time in hour proportion of HGVs	0.06	hour	Proportion of HGVs from Total vehicles from 2022 base multiplied by time remaining in hour
Remaining time in hour proportion of non HGVs	0.17	hours	Proportion of non HGVs from Total vehicles from 2022 base multiplied by time remaining in hour
Number of HGVs two way traffic flow along narrow section of road in remaining time	7	vehicles	Remaining time in hour proportion of HGVs divided by Time taken for 1 HGV to travel 140 meters at 10 mph
Number of non HGVs two way traffic flow along narrow section of road in remaining time	40	vehicles	Remaining time in hour proportion of non HGVs divided by Time taken for 1 non HGV to travel 140 meters at 200 mph
Hourly capacity of road for HGV	46	vehicles	Number of HGVs two way traffic flow along narrow section of road in remaining time plus Station Road maximum hour two way HGV traffic flow from 2022 Base traffic flow movements
Hourly capacity of road for non HGV	138	vehicles	Number of non HGVs two way traffic flow along narrow section of road in remaining time plus Station Road maximum hour two way non HGV traffic flow from 2022 Baseline traffic flow movements
Hourly capacity of road for total vehicles	184	vehicles	HGVs plus non HGVs
Capacity of road at 2022 baseline scenario	75%	% vehicles	Station Road maximum hour two way total traffic flow from 2022 Baseline traffic flow movements divided by hourly capacity of road for total vehicles
Number of two-way peak construction HGV movements	16	vehicles	Construction HGVs from peak scenario
Total number of two way vehicle movements in maximum hour 2022 baseline plus peak construction scenario	154	vehicles	2022 Baseline scenario plus peak construction scenario
Capacity of road at 2022 baseline scenario plus peak construction scenario	84%	% vehicles	2022 Baseline scenario plus peak construction scenario divided by hourly capacity of road for total vehicles

Annex K Traffic Flow Diagrams

KEY

Hour: 07:00-08:00

10	Totals
(1)	HGVs

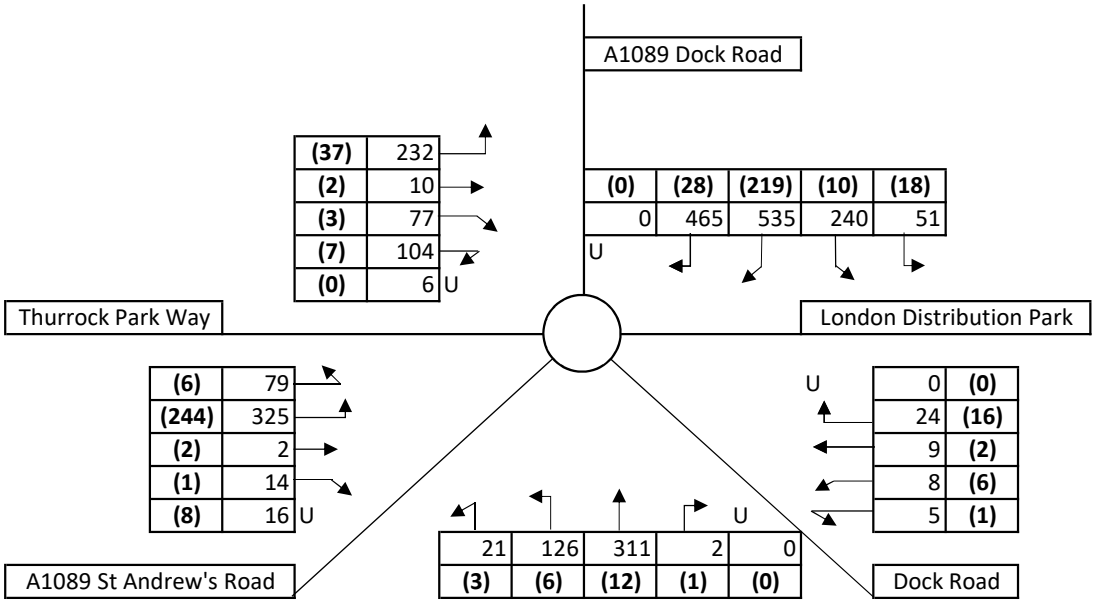


Project	JNY9639, Thurrock Generation Plant
Appendix	K
Title	2017 Observed Year 07:00 - 08:00 Hour Traffic Flows

KEY

Hour: 08:15-09:15

10	Totals
(1)	HGVs

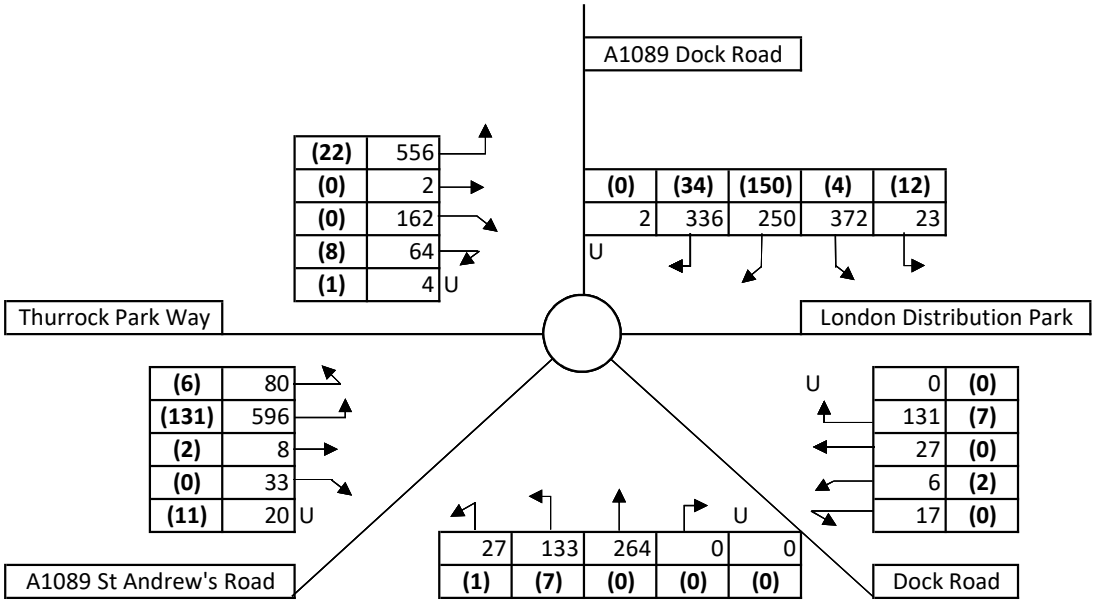


MAKING COMPLEX EASY	Project	JNY9639, Thurrock Generation Plant
	Figure	K
	Title	2017 Observed Year 08:15 - 09:15 Hour Traffic Flows

KEY

Hour: 17:00-18:00

10	Totals
(1)	HGVs

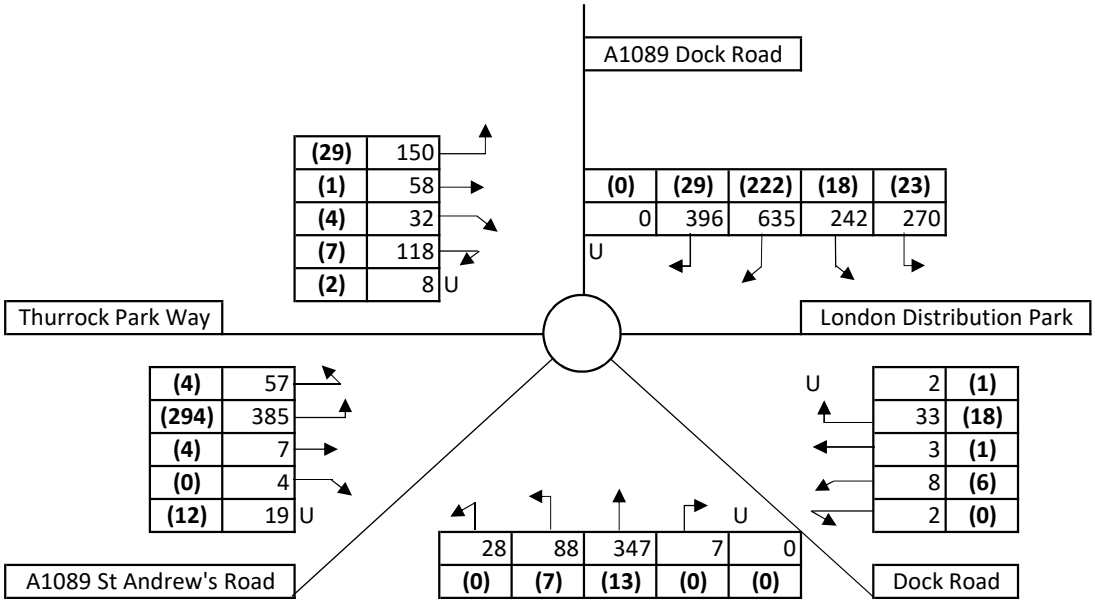


MAKING COMPLEX EASY	Project	JNY9639, Thurrock Generation Plant
	Figure	K
	Title	2017 Observed Year 17:00 - 18:00 Hour Traffic Flows

KEY

Hour: 07:00-08:00

10	Totals
(1)	HGVs

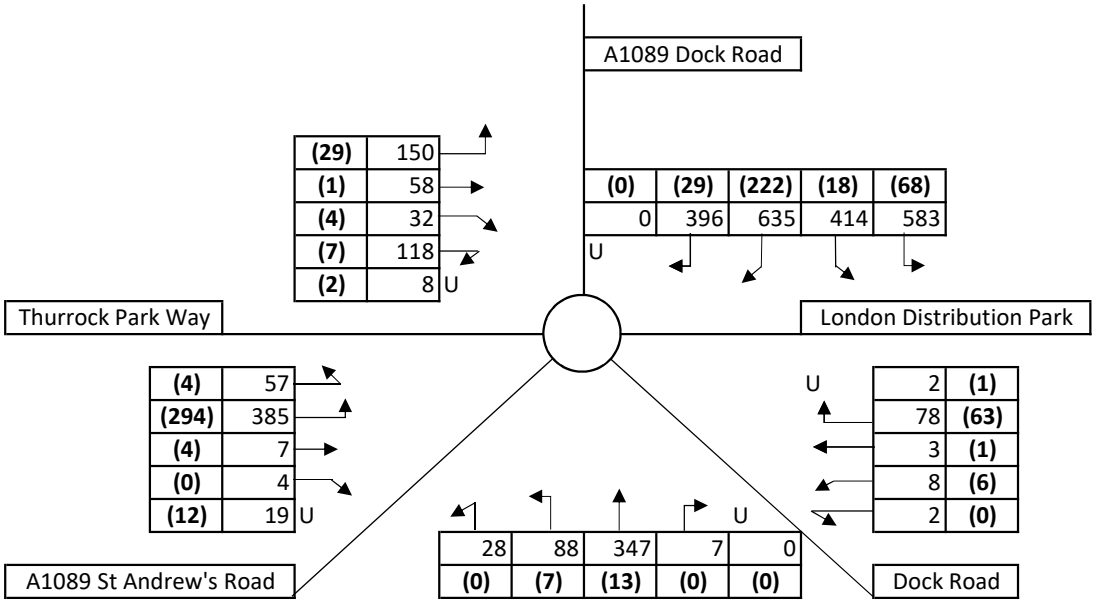


Project	JNY9639, Thurrock Generation Plant
Figure	K
Title	2022 Baseline (excluding Tilbury 2 and Amazon) 07:00 to 08:00 Hour Traffic Flows

KEY

Hour: 07:00-08:00

10	Totals
(1)	HGVs

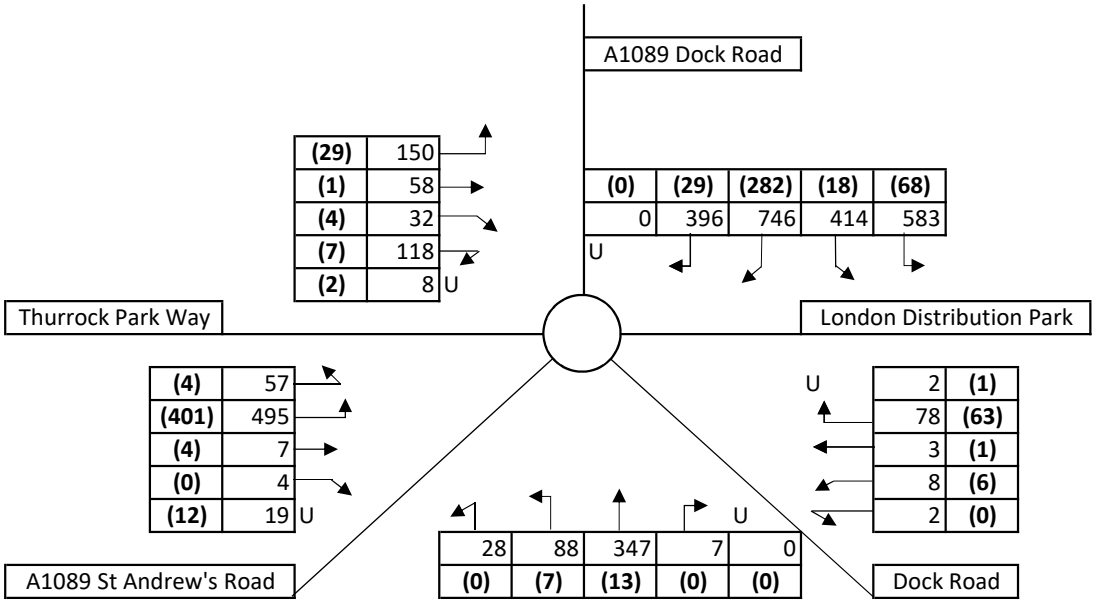


MAKING COMPLEX EASY	Project	JNY9639, Thurrock Generation Plant
	Figure	K
	Title	2022 Baseline (excluding Tilbury 2) 07:00 to 08:00 Hour Traffic Flows

KEY

Hour: 07:00-08:00

10	Totals
(1)	HGVs

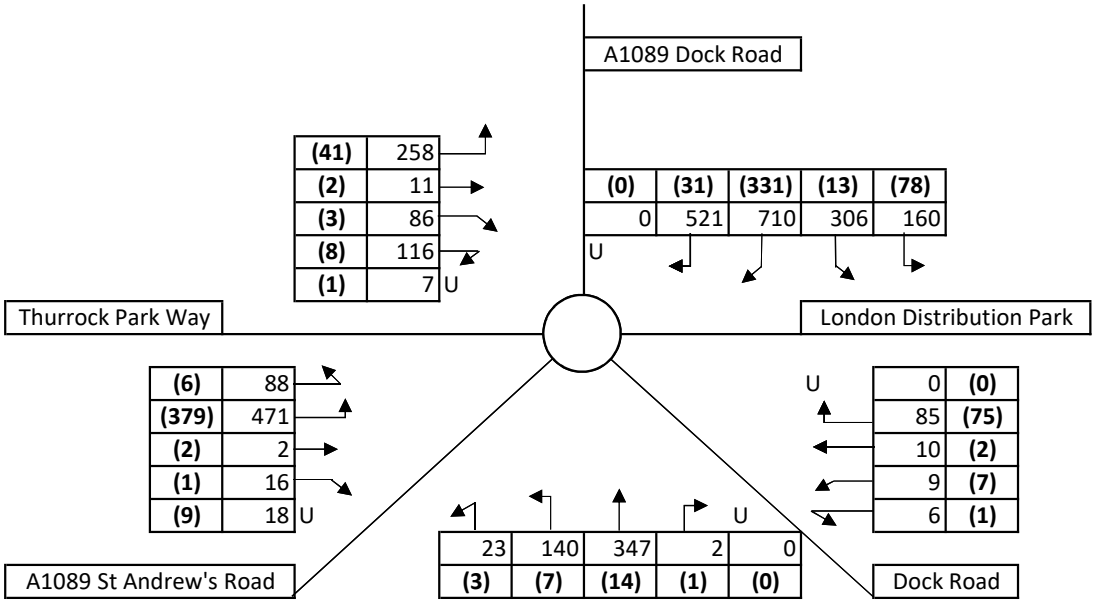


MAKING COMPLEX EASY	Project	JNY9639, Thurrock Generation Plant
	Figure	K
	Title	2022 Baseline 07:00 to 08:00 Hour Traffic Flows

KEY

Hour: 08:15-09:15

10	Totals
(1)	HGVs

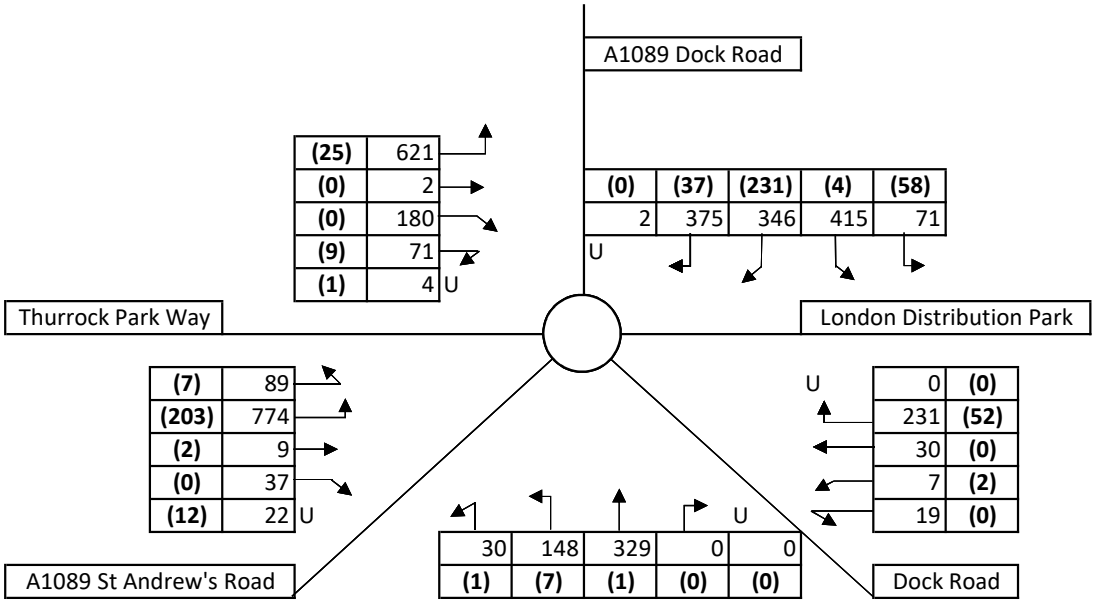


MAKING COMPLEX EASY	Project	JNY9639, Thurrock Generation Plant
	Figure	K
	Title	2022 Baseline 08:15 to 09:15 Hour Traffic Flows

KEY

Hour: 17:00 - 18:00

10	Totals
(1)	HGVs

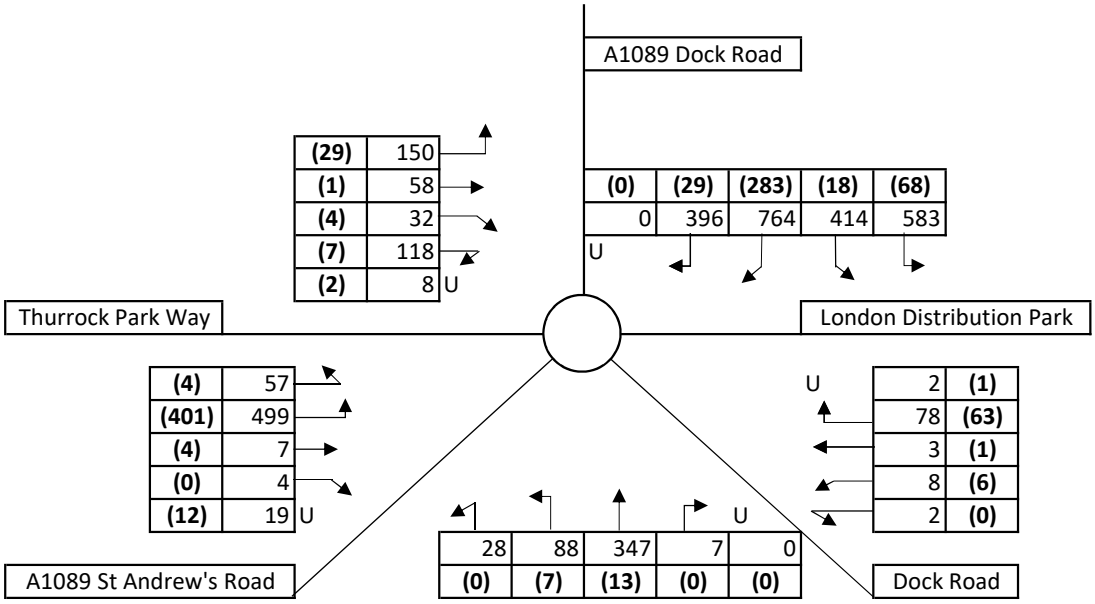


MAKING COMPLEX EASY	Project	JNY9639, Thurrock Generation Plant
	Figure	K
	Title	2022 Baseline 17:00 to 18:00 Hour Traffic Flows

KEY

Hour: 07:00-08:00

10	Totals
(1)	HGVs

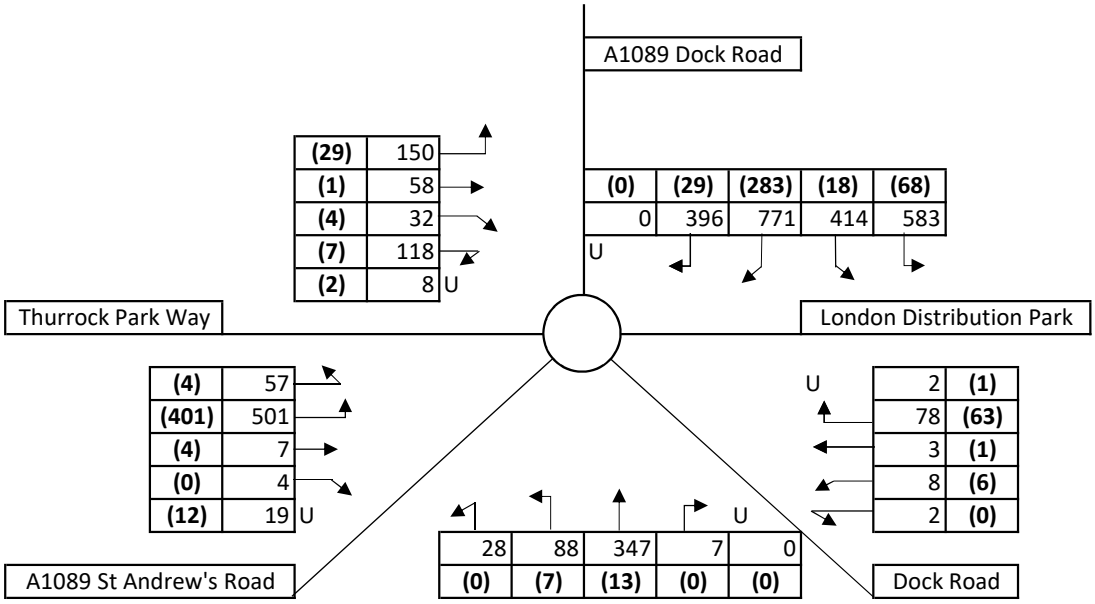


MAKING COMPLEX EASY	Project	JNY9639, Thurrock Generation Plant
	Figure	K
	Title	2022 Baseline + Average Construction 07:00 to 08:00 Hour Traffic Flows

KEY

Hour: 07:00-08:00

10	Totals
(1)	HGVs

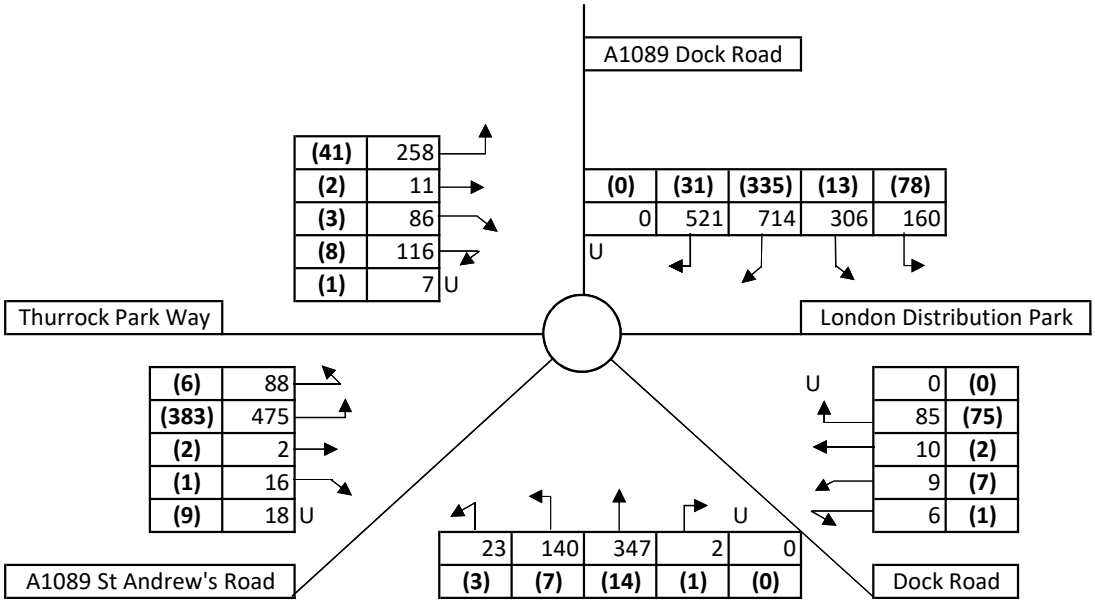


MAKING COMPLEX EASY	Project	JNY9639, Thurrock Generation Plant
	Figure	K
	Title	2022 Baseline + Peak Construction 07:00 to 08:00 Hour Traffic Flows

KEY

Hour: 08:15-09:15

10	Totals
(1)	HGVs

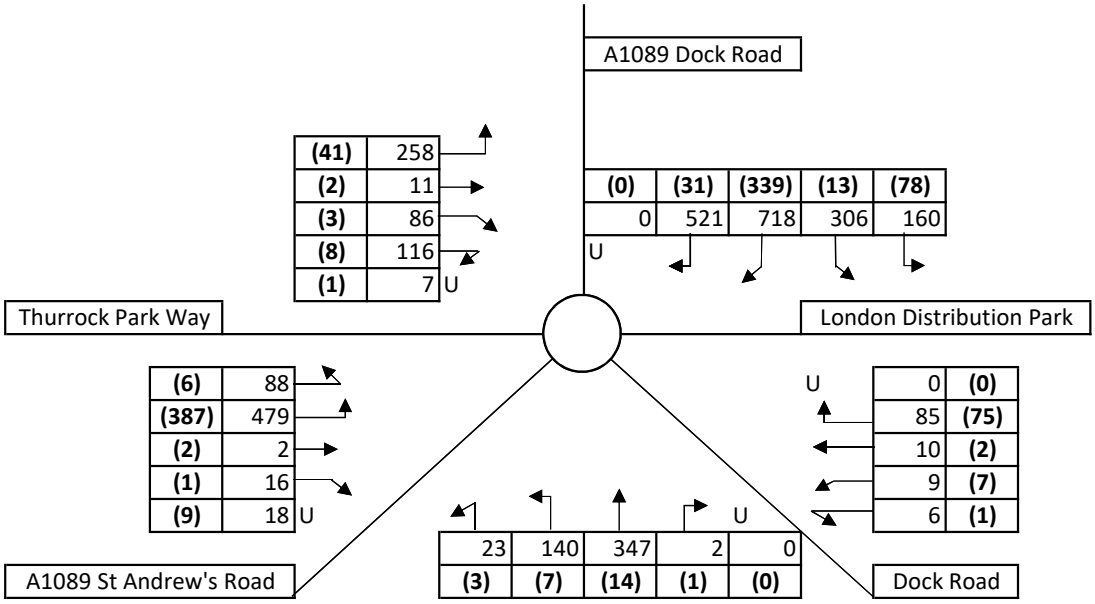


MAKING COMPLEX EASY	Project	JNY9639, Thurrock Generation Plant
	Figure	K
	Title	2022 Baseline + Average Construction 08:15 to 09:15 Hour Traffic Flows

KEY

Hour: 08:15-09:15

10	Totals
(1)	HGVs

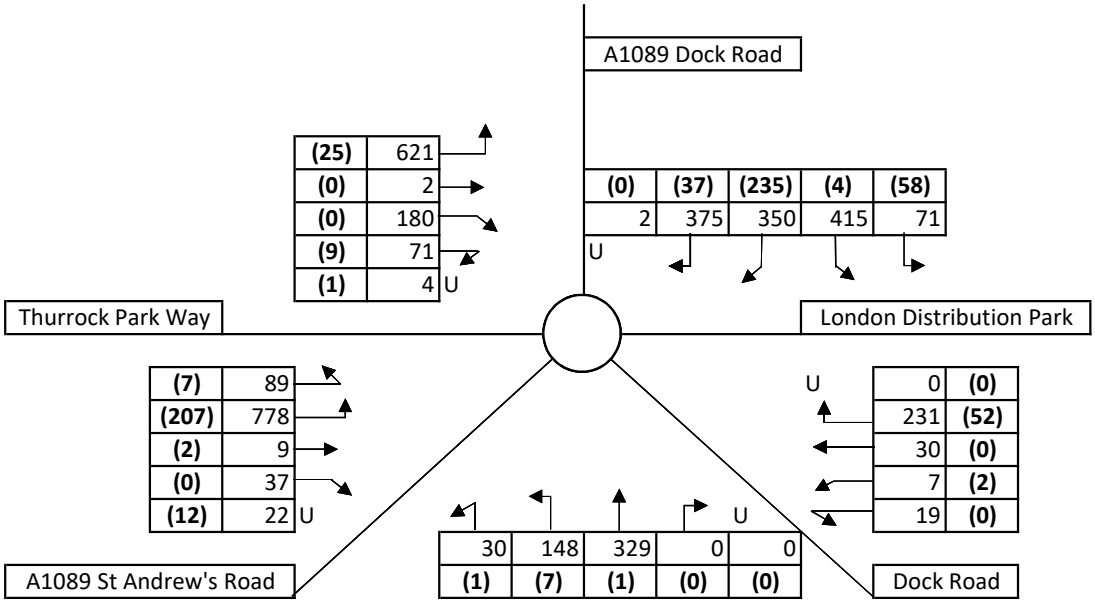


MAKING COMPLEX EASY	Project	JNY9639, Thurrock Generation Plant
	Figure	K
	Title	2022 Baseline + Peak Construction 08:15 to 09:15 Hour Traffic Flows

KEY

Hour: 17:00 - 18:00

10	Totals
(1)	HGVs

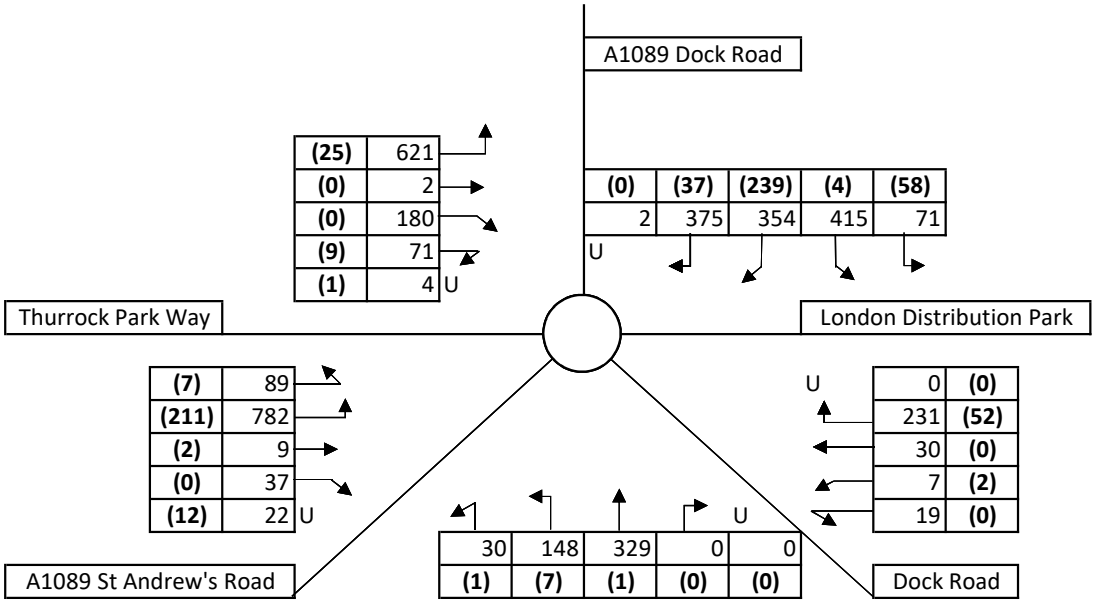


MAKING COMPLEX EASY	Project	JNY9639, Thurrock Generation Plant
	Figure	K
	Title	2022 Baseline + Average Construction 17:00 to 18:00 Hour Traffic Flows

KEY

Hour: 17:00 - 18:00

10	Totals
(1)	HGVs

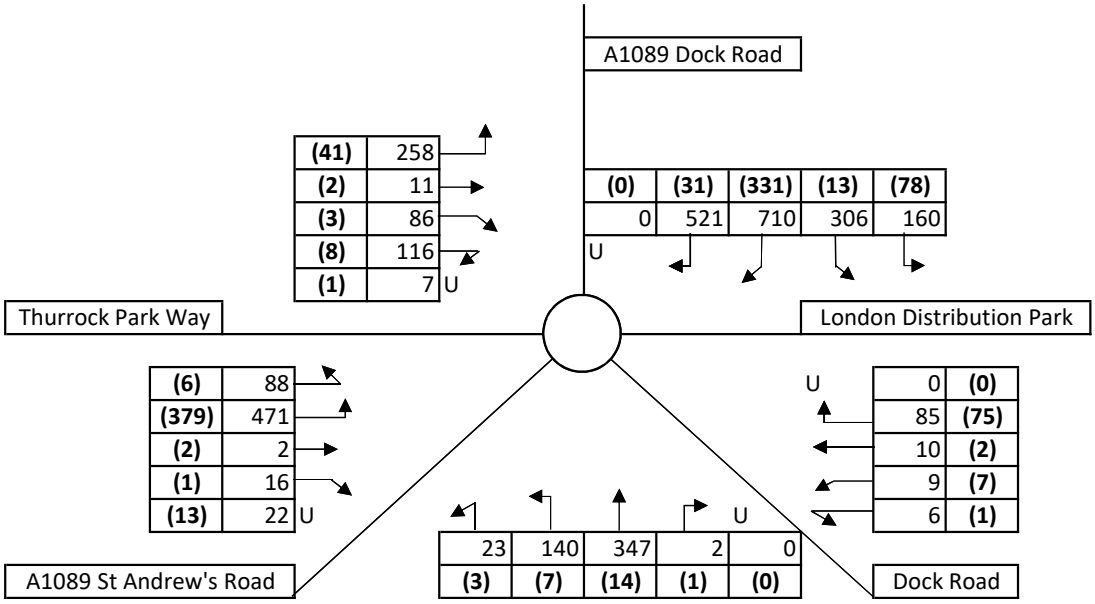


MAKING COMPLEX EASY	Project	JNY9639, Thurrock Generation Plant
	Figure	K
	Title	2022 Baseline + Peak Construction 17:00 to 18:00 Hour Traffic Flows

KEY

Hour: 08:15-09:15

10	Totals
(1)	HGVs

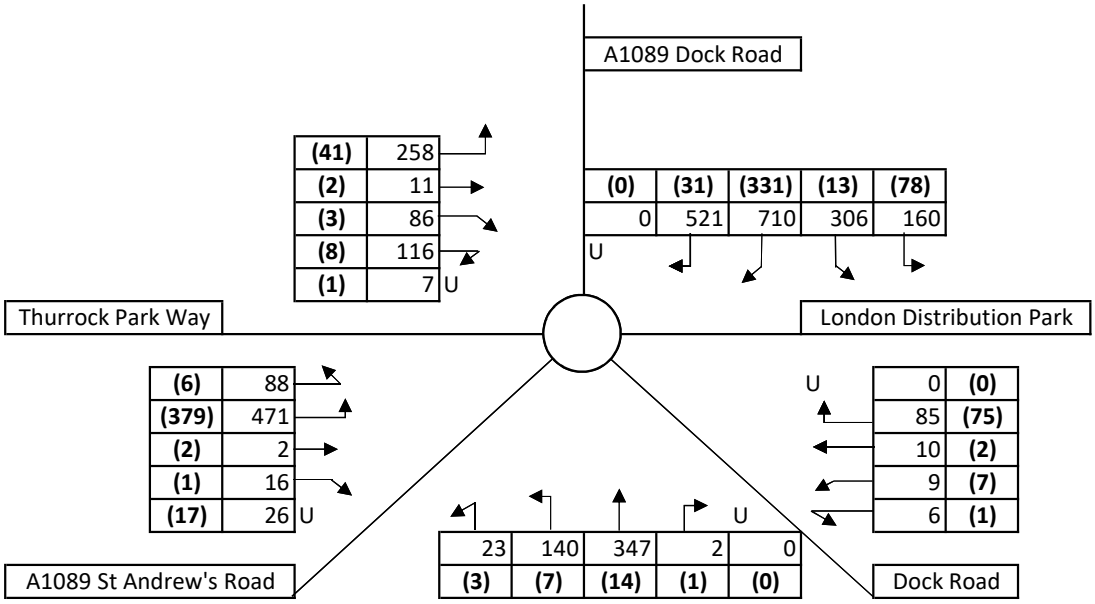


MAKING COMPLEX EASY	Project	JNY9639, Thurrock Generation Plant
	Figure	K
	Title	2022 Baseline + Average Construction (HGV U-turn) 08:15 to 09:15 Hour Traffic Flows

KEY

Hour: 08:15-09:15

10	Totals
(1)	HGVs

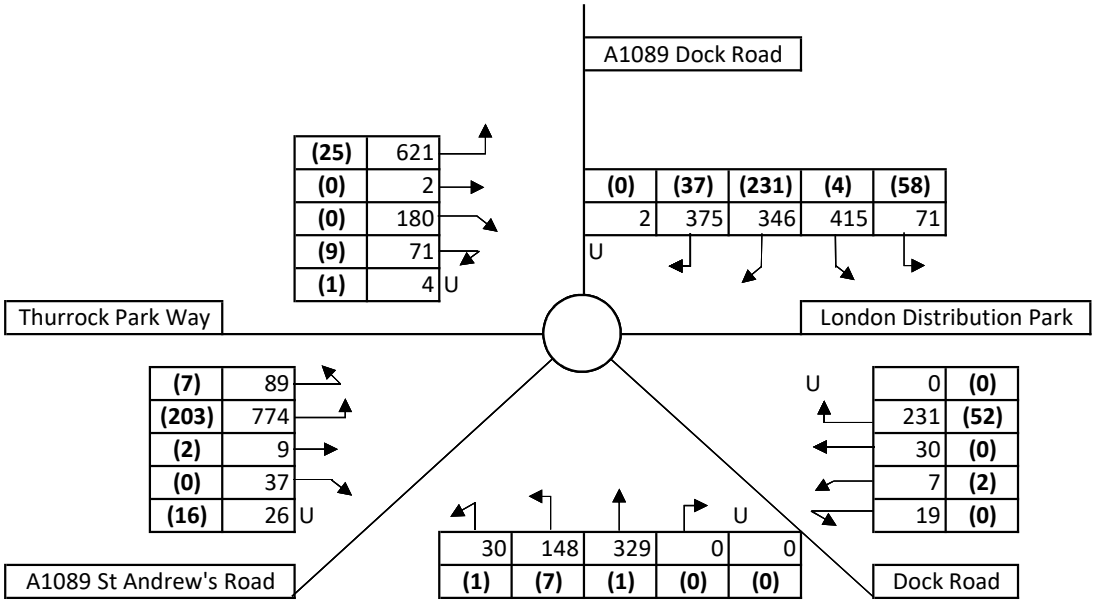


MAKING COMPLEX EASY	Project	JNY9639, Thurrock Generation Plant
	Figure	K
	Title	2022 Baseline + Peak Construction (HGV U-turn) 08:15 to 09:15 Hour Traffic Flows

KEY

Hour: 17:00 - 18:00

10	Totals
(1)	HGVs



MAKING COMPLEX EASY	Project	JNY9639, Thurrock Generation Plant
	Figure	K
	Title	2022 Baseline + Average Construction (U-turn) 17:00 to 18:00 Hour Traffic Flows

KEY

Hour: 17:00 - 18:00

10	Totals
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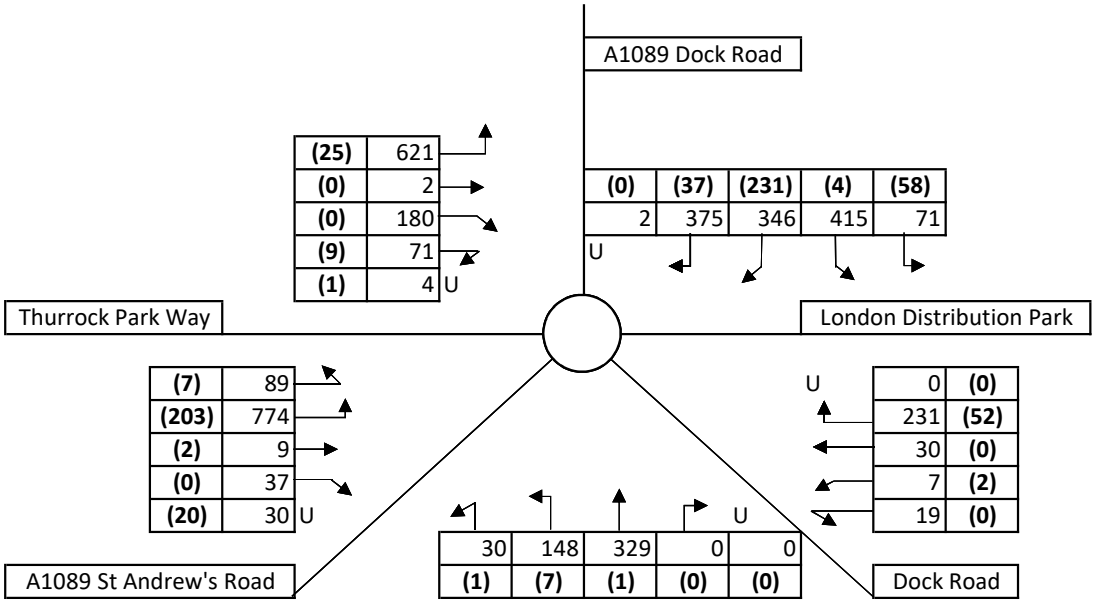
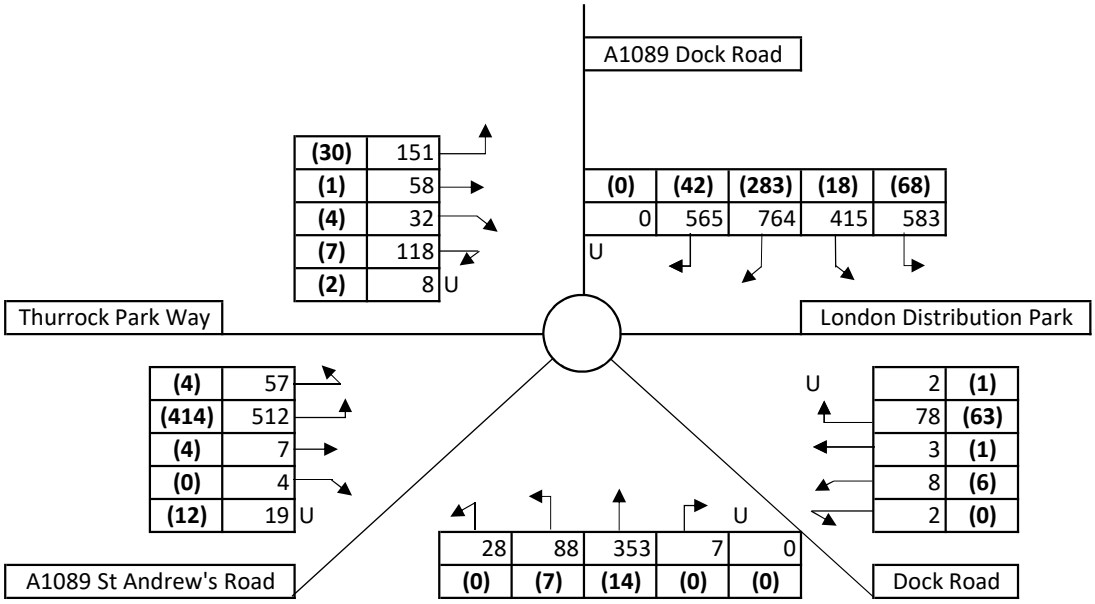


rps MAKING COMPLEX EASY	Project	JNY9639, Thurrock Generation Plant
	Figure	K
	Title	2022 Baseline + Peak Construction (U-turn) 17:00 to 18:00 Hour Traffic Flows

KEY

Hour: 07:00-08:00

10	Totals
(1)	HGVs

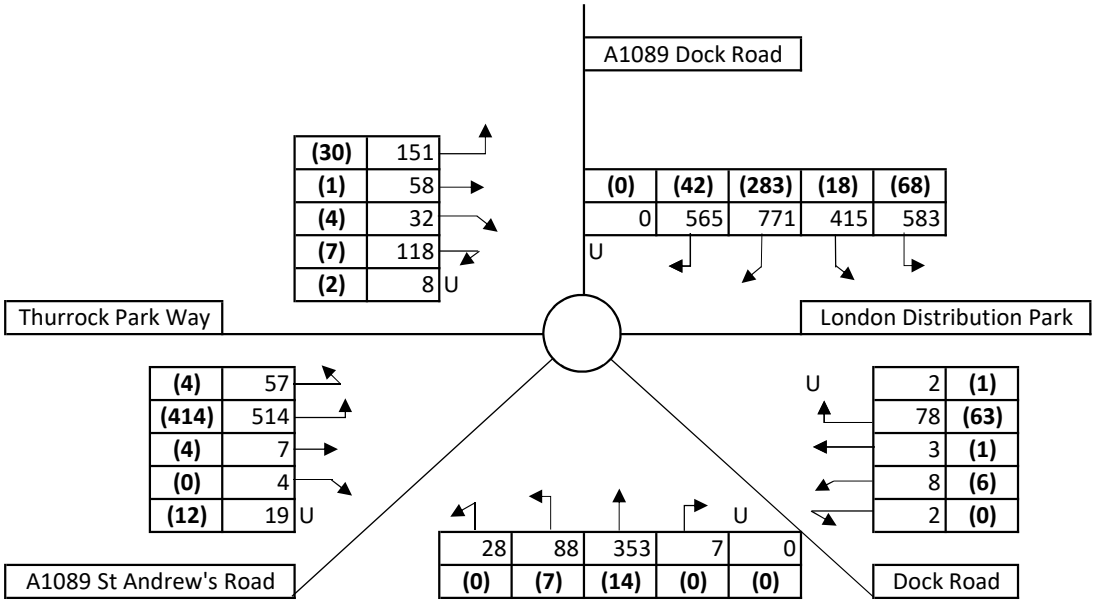


MAKING COMPLEX EASY	Project	JNY9639, Thurrock Generation Plant
	Figure	K
	Title	2022 Baseline + Average Construction + Cumulative 07:00 to 08:00 Hour Traffic Flows

KEY

Hour: 07:00-08:00

10	Totals
(1)	HGVs



MAKING COMPLEX EASY	Project	JNY9639, Thurrock Generation Plant
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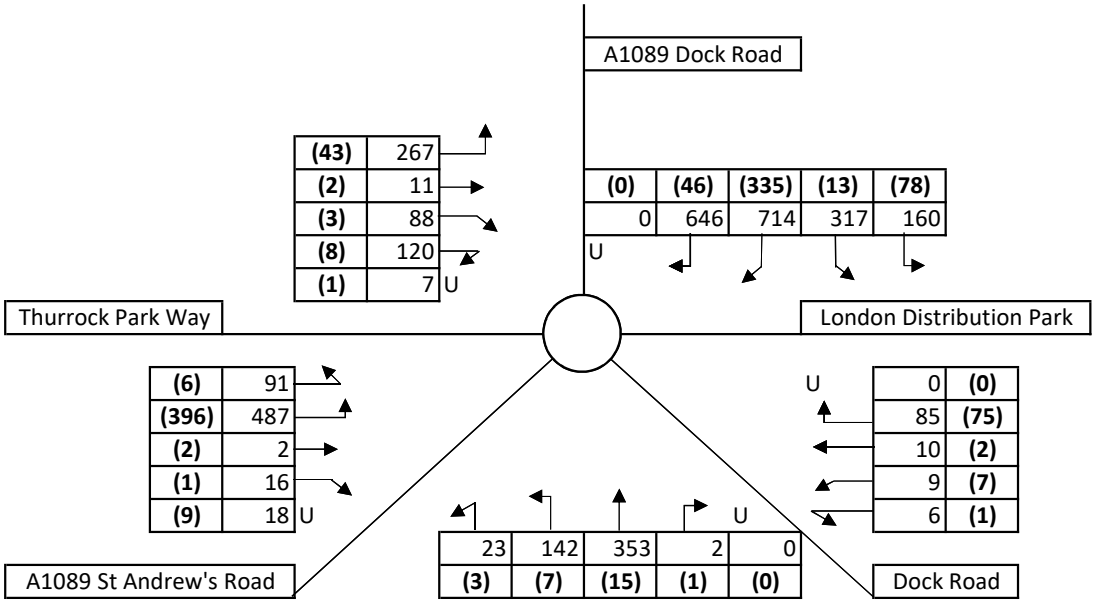
	Title	2022 Baseline + Peak Construction + Cumulative 07:00 to 08:00 Hour Traffic Flows

KEY

Hour: 08:15-09:15

10	Totals
(1)	HGVs

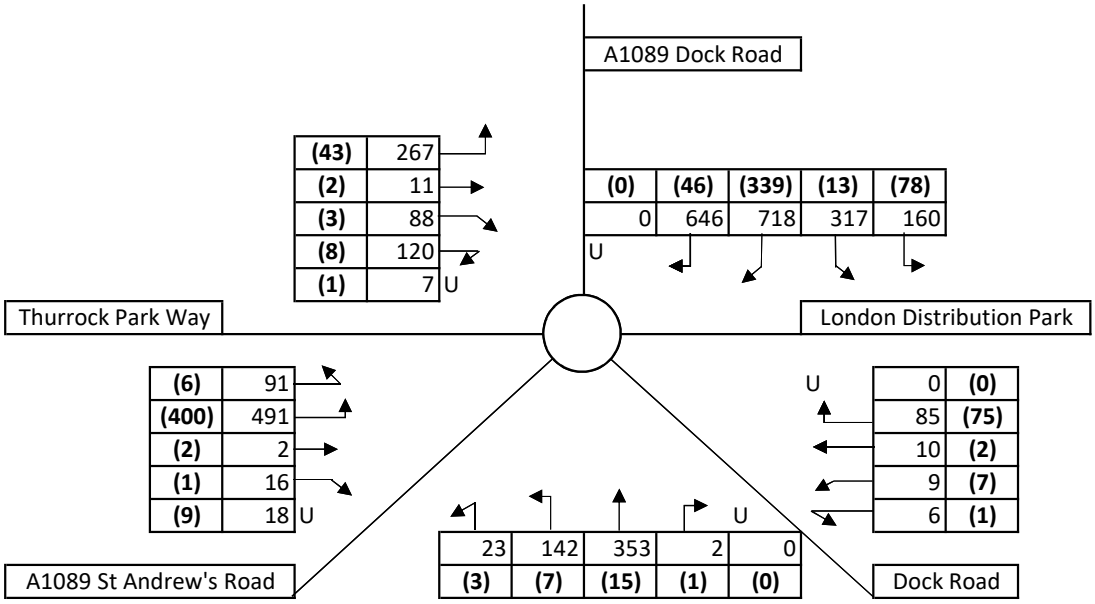


MAKING COMPLEX EASY	Project	JNY9639, Thurrock Generation Plant
	Figure	K
	Title	2022 Baseline + Average Construction + Cumulative 08:15 to 09:15 Hour Traffic Flows

KEY

Hour: 08:15-09:15

10	Totals
(1)	HGVs

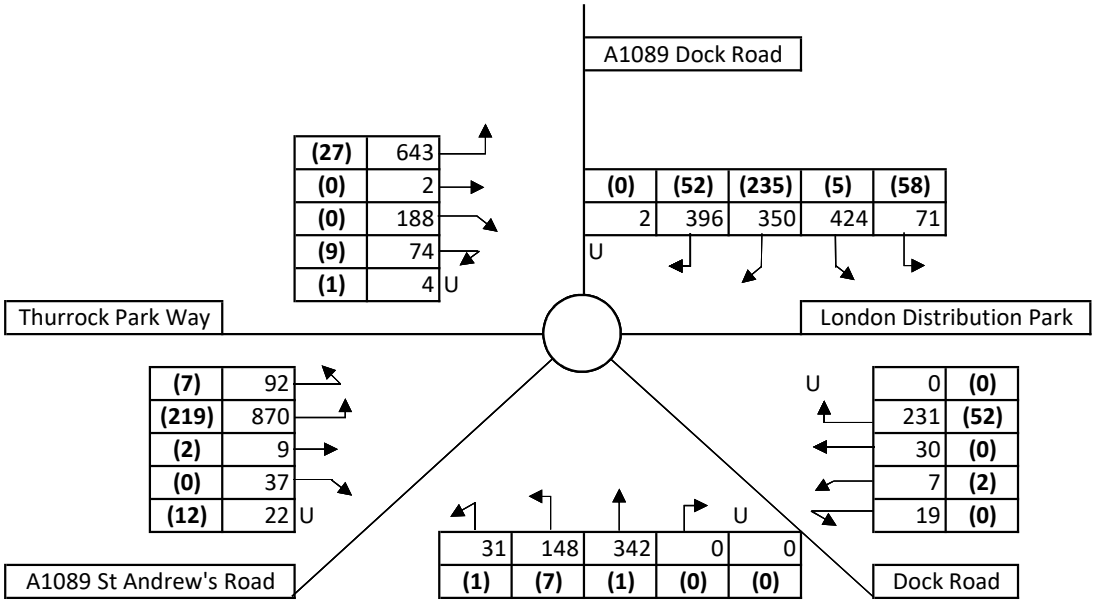


MAKING COMPLEX EASY	Project	JNY9639, Thurrock Generation Plant
	Figure	K
	Title	2022 Baseline + Peak Construction + Cumulative 08:15 to 09:15 Hour Traffic Flows

KEY

Hour: 17:00 - 18:00

10	Totals
(1)	HGVs

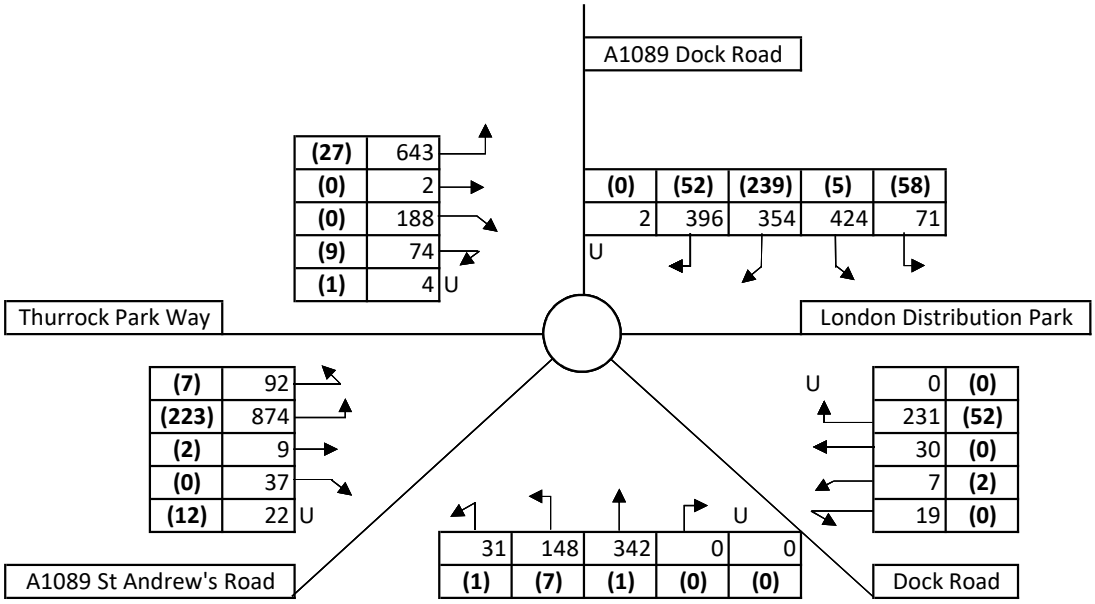


MAKING COMPLEX EASY	Project	JNY9639, Thurrock Generation Plant
	Figure	K
	Title	2022 Baseline + Average Construction + Cumulative 17:00 to 18:00 Hour Traffic Flows

KEY

Hour: 17:00 - 18:00

10	Totals
(1)	HGVs

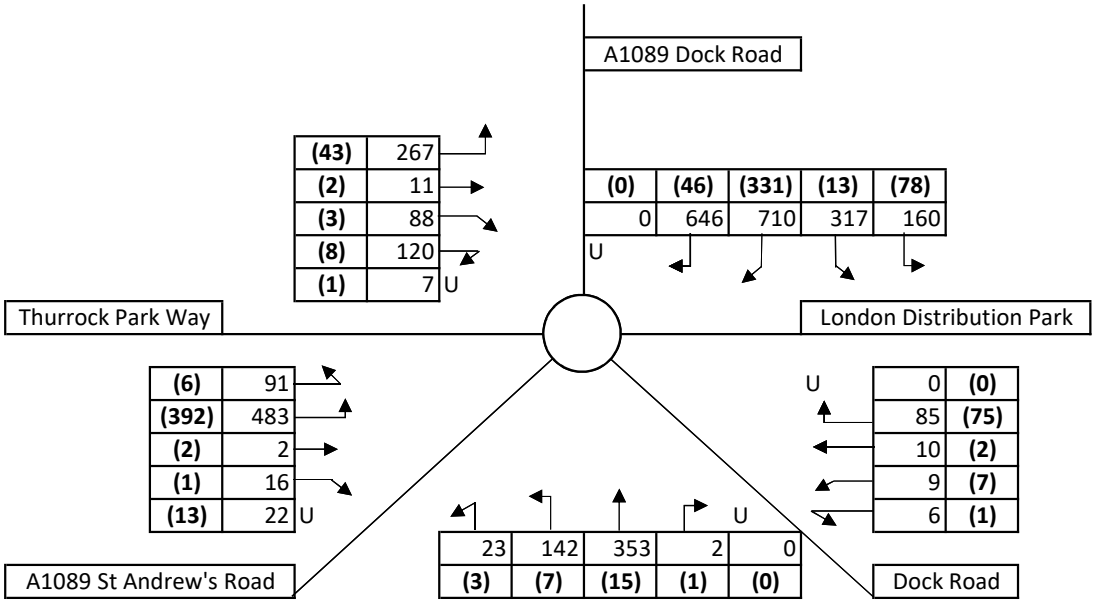


MAKING COMPLEX EASY	Project	JNY9639, Thurrock Generation Plant
	Figure	K
	Title	2022 Baseline + Peak Construction + Cumulative 17:00 to 18:00 Hour Traffic Flows

KEY

Hour: 08:15-09:15

10	Totals
(1)	HGVs

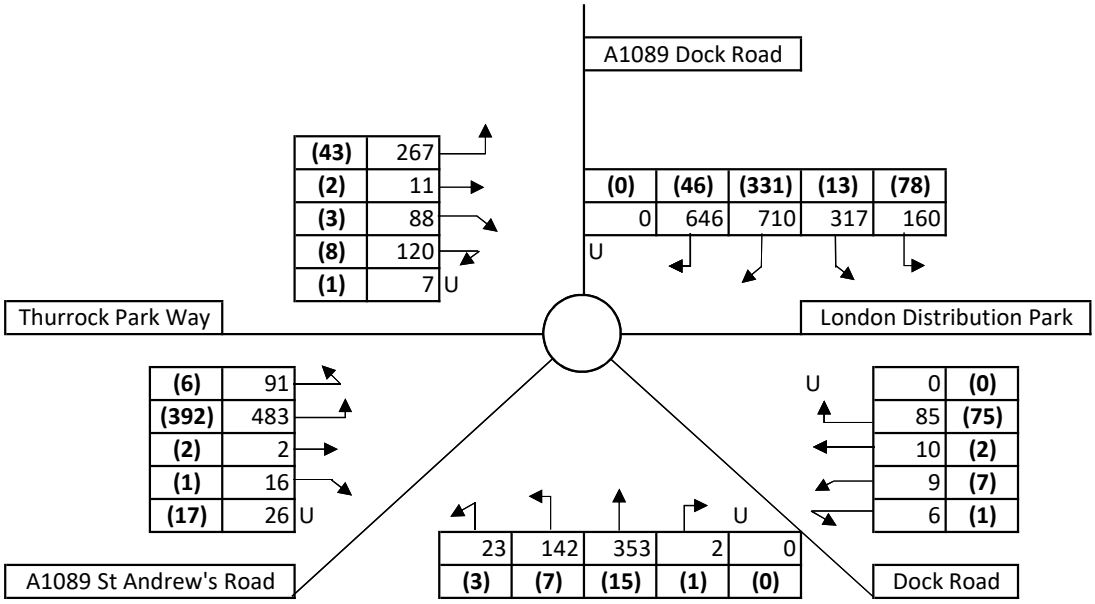


MAKING COMPLEX EASY	Project	JNY9639, Thurrock Generation Plant
	Figure	K
	Title	2022 Baseline + Average Construction (HGV U-turn) + Cumulative 08:15 to 09:15 Hour Traffic Flows

KEY

Hour: 08:15-09:15

10	Totals
(1)	HGVs

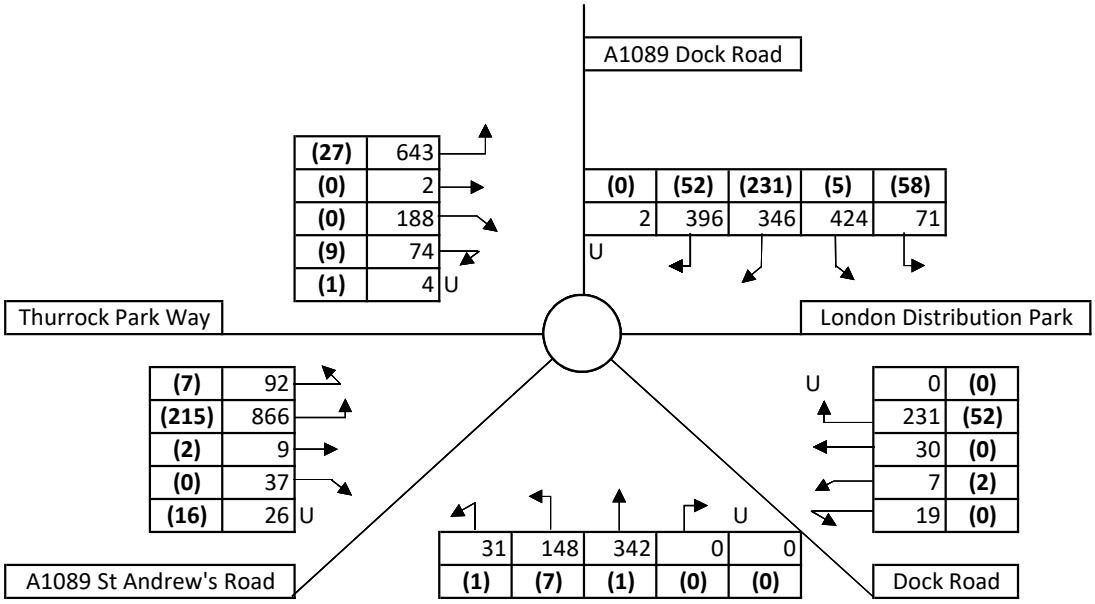


MAKING COMPLEX EASY	Project	JNY9639, Thurrock Generation Plant
	Figure	K
	Title	2022 Baseline + Peak Construction (HGV U-turn) + Cumulative 08:15 to 09:15 Hour Traffic Flows

KEY

Hour: 17:00 - 18:00

10	Totals
(1)	HGVs

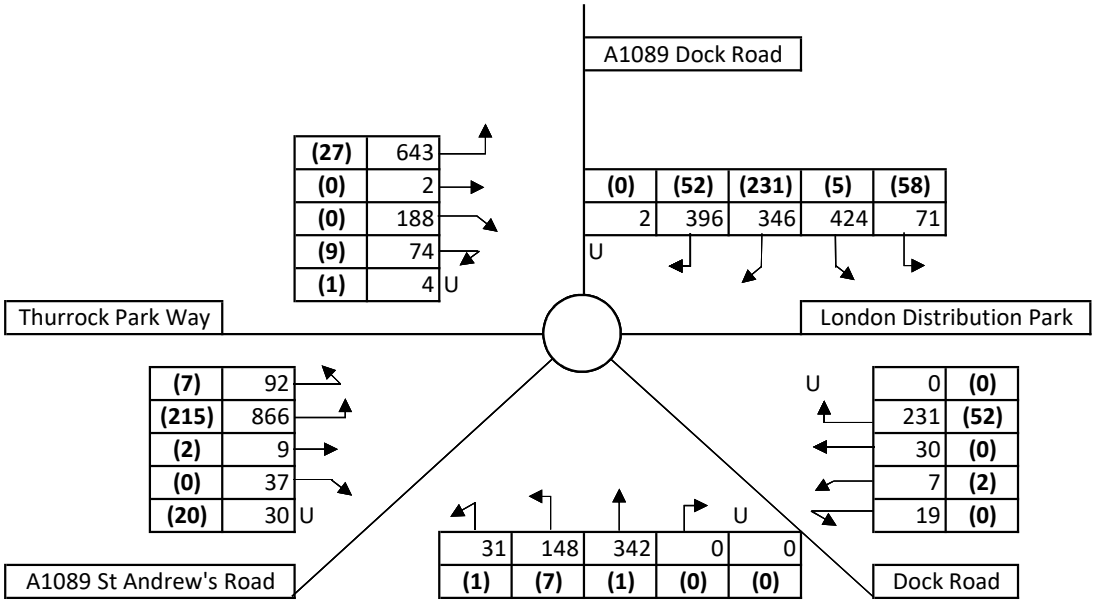


MAKING COMPLEX EASY	Project	JNY9639, Thurrock Generation Plant
	Figure	K
	Title	2022 Baseline + Average Construction (U-turn) + Cumulative 17:00 to 18:00 Hour Traffic Flows

KEY

Hour: 17:00 - 18:00

10	Totals
(1)	HGVs



MAKING COMPLEX EASY	Project	JNY9639, Thurrock Generation Plant
	Figure	K
	Title	2022 Baseline + Peak Construction (U-turn) + Cumulative 17:00 to 18:00 Hour Traffic Flows

Annex L Junction 9 Assessments

Junctions 9

ARCADY 9 - Roundabout Module

Version: 9.0.2.5947

Filename: Asda Roundabout 0700-0800.j9
Path: P:\JNY9639 - Thurrock Generation Plant\Transport\Arcady
Report generation date: 30/01/2020 11:43:07

Summary of junction performance

	AM		
	Queue (Veh)	Delay (s)	RFC
	2017		
1 - London Distribution Park	0.1	5.64	0.09
2 - Dock Road	0.7	5.15	0.40
3 - St Andrews Road	0.7	5.62	0.41
4 - Thurrock Park Way	0.4	4.17	0.31
5 - A1089 Dock Road	3.0	7.67	0.76
	2022 + Comm No Til2 No Amazon		
1 - London Distribution Park	0.1	6.59	0.10
2 - Dock Road	1.0	7.52	0.51
3 - St Andrews Road	0.9	6.19	0.48
4 - Thurrock Park Way	0.5	4.59	0.35
5 - A1089 Dock Road	9.6	21.17	0.92
	2022 + Comm No Til2		
1 - London Distribution Park	0.2	8.83	0.18
2 - Dock Road	1.1	8.44	0.53
3 - St Andrews Road	1.0	6.68	0.50
4 - Thurrock Park Way	0.6	4.81	0.36
5 - A1089 Dock Road	226.2	415.26	1.29

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	(untitled)
Location	
Site number	
Date	26/07/2019
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	EUR\Joanna.gunn
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	Veh	Veh	perTimeSegment	s	-Min	perMin

Analysis Options

Vehicle length (m)	Calculate Queue Percentiles	Calculate detailed queueing delay	Calculate residual capacity	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)
5.75				0.85	36.00	20.00

Demand Set Summary

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time period length (min)	Time segment length (min)	Run automatically
D1	2017	AM	DIRECT	07:00	08:00	60	15	✓
D2	2022 + Comm No Til2 No Amazon	AM	DIRECT	07:00	08:00	60	15	✓
D3	2022 + Comm No Til2	AM	DIRECT	07:00	08:00	60	15	✓

Analysis Set Details

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

2017, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout	1, 2, 3, 4, 5	6.43	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Name	Description
1	London Distribution Park	
2	Dock Road	
3	St Andrews Road	
4	Thurrock Park Way	
5	A1089 Dock Road	

Roundabout Geometry

Arm	V - Approach road half-width (m)	E - Entry width (m)	l' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Exit only
1 - London Distribution Park	3.50	8.60	15.0	45.0	116.0	38.0	
2 - Dock Road	3.70	7.30	22.5	21.0	116.0	32.0	
3 - St Andrews Road	7.30	7.30	0.0	40.0	116.0	20.0	
4 - Thurrock Park Way	3.70	9.00	13.5	45.0	116.0	34.0	
5 - A1089 Dock Road	7.45	7.45	0.0	60.0	116.0	25.0	

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Final slope	Final intercept (PCU/TS)
1 - London Distribution Park	0.460	449.879
2 - Dock Road	0.464	458.508
3 - St Andrews Road	0.548	585.683
4 - Thurrock Park Way	0.471	464.299
5 - A1089 Dock Road	0.550	592.526

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 period length (min)	Time segment length (min)	Run automatically
D1	2017	AM	DIRECT	07:00	08:00	60	15	✓

Vehicle mix varies over time	Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)	O-D data varies over time
✓	✓	✓	HV Percentages	2.00	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Scaling Factor (%)
1 - London Distribution Park		DIRECT	✓	100.000
2 - Dock Road		DIRECT	✓	100.000
3 - St Andrews Road		DIRECT	✓	100.000
4 - Thurrock Park Way		DIRECT	✓	100.000
5 - A1089 Dock Road		DIRECT	✓	100.000

Origin-Destination Data

07:00 - 07:15

Demand (Veh/TS)

		To				
		1 - London Distribution Park	2 - Dock Road	3 - St Andrews Road	4 - Thurrock Park Way	5 - A1089 Dock Road
From	1 - London Distribution Park	0.00	1.00	4.00	0.00	10.00
	2 - Dock Road	1.00	0.00	5.00	19.00	72.00
	3 - St Andrews Road	2.00	2.00	5.00	15.00	91.00
	4 - Thurrock Park Way	23.00	6.00	22.00	1.00	27.00
	5 - A1089 Dock Road	73.00	53.00	138.00	75.00	0.00

07:15 - 07:30

Demand (Veh/TS)

		To				
		1 - London Distribution Park	2 - Dock Road	3 - St Andrews Road	4 - Thurrock Park Way	5 - A1089 Dock Road
From	1 - London Distribution Park	0.00	0.00	1.00	1.00	7.00
	2 - Dock Road	1.00	0.00	8.00	19.00	72.00
	3 - St Andrews Road	2.00	0.00	4.00	9.00	72.00
	4 - Thurrock Park Way	10.00	4.00	26.00	3.00	30.00
	5 - A1089 Dock Road	66.00	52.00	114.00	80.00	0.00

07:30 - 07:45

Demand (Veh/TS)

		To				
		1 - London Distribution Park	2 - Dock Road	3 - St Andrews Road	4 - Thurrock Park Way	5 - A1089 Dock Road
From	1 - London Distribution Park	1.00	0.00	1.00	0.00	8.00
	2 - Dock Road	3.00	0.00	8.00	22.00	84.00
	3 - St Andrews Road	1.00	1.00	5.00	11.00	68.00
	4 - Thurrock Park Way	13.00	11.00	32.00	1.00	39.00
	5 - A1089 Dock Road	52.00	57.00	138.00	100.00	0.00

07:45 - 08:00

Demand (Veh/TS)

		To				
		1 - London Distribution Park	2 - Dock Road	3 - St Andrews Road	4 - Thurrock Park Way	5 - A1089 Dock Road
From	1 - London Distribution Park	1.00	1.00	1.00	2.00	5.00
	2 - Dock Road	1.00	0.00	4.00	19.00	84.00
	3 - St Andrews Road	1.00	1.00	3.00	16.00	92.00
	4 - Thurrock Park Way	6.00	8.00	26.00	2.00	39.00
	5 - A1089 Dock Road	51.00	55.00	166.00	100.00	0.00

Vehicle Mix

07:00 - 07:15

Heavy Vehicle Percentages

		To				
		1 - London Distribution Park	2 - Dock Road	3 - St Andrews Road	4 - Thurrock Park Way	5 - A1089 Dock Road
From	1 - London Distribution Park	0	0	75	0	60
	2 - Dock Road	0	0	0	11	6
	3 - St Andrews Road	50	0	60	0	70
	4 - Thurrock Park Way	0	17	5	0	19
	5 - A1089 Dock Road	3	9	38	13	0

07:15 - 07:30

Heavy Vehicle Percentages

		To				
		1 - London Distribution Park	2 - Dock Road	3 - St Andrews Road	4 - Thurrock Park Way	5 - A1089 Dock Road
From	1 - London Distribution Park	0	0	100	100	43
	2 - Dock Road	0	0	0	16	6
	3 - St Andrews Road	50	0	75	11	76
	4 - Thurrock Park Way	0	0	12	33	20
	5 - A1089 Dock Road	6	6	41	8	0

07:30 - 07:45

Heavy Vehicle Percentages

		To				
		1 - London Distribution Park	2 - Dock Road	3 - St Andrews Road	4 - Thurrock Park Way	5 - A1089 Dock Road
From	1 - London Distribution Park	0	0	100	0	50
	2 - Dock Road	0	0	0	0	4
	3 - St Andrews Road	100	0	60	9	85
	4 - Thurrock Park Way	8	9	3	0	21
	5 - A1089 Dock Road	17	14	30	6	0

07:45 - 08:00

Heavy Vehicle Percentages

		To				
		1 - London Distribution Park	2 - Dock Road	3 - St Andrews Road	4 - Thurrock Park Way	5 - A1089 Dock Road
From	1 - London Distribution Park	100	0	0	0	60
	2 - Dock Road	0	0	0	5	1
	3 - St Andrews Road	100	0	67	13	80
	4 - Thurrock Park Way	0	25	4	50	18
	5 - A1089 Dock Road	12	0	27	4	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/TS)	Total Junction Arrivals (Veh)
1 - London Distribution Park	0.09	5.64	0.1	A	11.00	44.00
2 - Dock Road	0.40	5.15	0.7	A	105.50	421.98
3 - St Andrews Road	0.41	5.62	0.7	A	100.25	401.00
4 - Thurrock Park Way	0.31	4.17	0.4	A	82.25	329.02
5 - A1089 Dock Road	0.76	7.67	3.0	A	342.47	1369.88

Main Results for each time segment

07:00 - 07:15

Arm	Total Demand (Veh/TS)	Junction Arrivals (Veh)	Circulating flow (Veh/TS)	Capacity (Veh/TS)	RFC	Throughput (Veh/TS)	Throughput (exit side) (Veh/TS)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - London Distribution Park	15.00	15.00	299.73	174.40	0.086	14.91	98.31	0.0	0.1	5.641	A
2 - Dock Road	97.00	97.00	253.10	287.38	0.338	96.49	61.54	0.0	0.5	4.703	A
3 - St Andrews Road	115.00	115.00	176.86	300.04	0.383	114.38	172.73	0.0	0.6	4.832	A
4 - Thurrock Park Way	79.00	79.00	182.02	313.25	0.252	78.66	109.22	0.0	0.3	3.831	A
5 - A1089 Dock Road	339.00	339.00	61.73	461.16	0.735	336.31	198.96	0.0	2.7	7.064	A

07:15 - 07:30

Arm	Total Demand (Veh/TS)	Junction Arrivals (Veh)	Circulating flow (Veh/TS)	Capacity (Veh/TS)	RFC	Throughput (Veh/TS)	Throughput (exit side) (Veh/TS)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - London Distribution Park	9.00	9.00	283.53	186.40	0.048	9.04	79.21	0.1	0.1	5.075	A
2 - Dock Road	100.00	100.00	236.46	296.58	0.337	100.00	56.11	0.5	0.5	4.577	A
3 - St Andrews Road	87.00	87.00	183.10	281.79	0.309	87.16	153.36	0.6	0.4	4.629	A
4 - Thurrock Park Way	73.00	73.00	158.16	315.09	0.232	73.04	112.10	0.3	0.3	3.717	A
5 - A1089 Dock Road	312.00	312.00	50.06	469.80	0.664	312.67	181.14	2.7	2.0	5.753	A

07:30 - 07:45

Arm	Total Demand (Veh/TS)	Junction Arrivals (Veh)	Circulating flow (Veh/TS)	Capacity (Veh/TS)	RFC	Throughput (Veh/TS)	Throughput (exit side) (Veh/TS)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - London Distribution Park	10.00	10.00	344.09	175.95	0.057	10.00	69.96	0.1	0.1	5.422	A
2 - Dock Road	117.00	117.00	285.25	291.55	0.401	116.84	68.83	0.5	0.7	5.147	A
3 - St Andrews Road	86.00	86.00	218.55	265.07	0.324	85.97	183.55	0.4	0.5	5.025	A
4 - Thurrock Park Way	96.00	96.00	170.85	314.61	0.305	95.87	133.67	0.3	0.4	4.111	A
5 - A1089 Dock Road	347.00	347.00	67.90	465.19	0.746	346.15	198.82	2.0	2.8	7.506	A

07:45 - 08:00

Arm	Total Demand (Veh/TS)	Junction Arrivals (Veh)	Circulating flow (Veh/TS)	Capacity (Veh/TS)	RFC	Throughput (Veh/TS)	Throughput (exit side) (Veh/TS)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - London Distribution Park	10.00	10.00	360.79	184.61	0.054	10.00	60.05	0.1	0.1	5.156	A
2 - Dock Road	108.00	108.00	305.77	285.45	0.378	108.05	65.02	0.7	0.6	5.074	A
3 - St Andrews Road	113.00	113.00	214.02	272.58	0.415	112.77	199.80	0.5	0.7	5.623	A
4 - Thurrock Park Way	81.00	81.00	187.84	296.98	0.273	81.06	138.95	0.4	0.4	4.169	A
5 - A1089 Dock Road	372.00	372.00	49.09	488.78	0.761	371.75	219.82	2.8	3.1	7.665	A

2022 + Comm No Til2 No Amazon, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout	1, 2, 3, 4, 5	14.01	B

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time period length (min)	Time segment length (min)	Run automatically
D2	2022 + Comm No Til2 No Amazon	AM	DIRECT	07:00	08:00	60	15	✓

Vehicle mix varies over time	Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)	O-D data varies over time
✓	✓	✓	HV Percentages	2.00	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Scaling Factor (%)
1 - London Distribution Park		DIRECT	✓	100.000
2 - Dock Road		DIRECT	✓	100.000
3 - St Andrews Road		DIRECT	✓	100.000
4 - Thurrock Park Way		DIRECT	✓	100.000
5 - A1089 Dock Road		DIRECT	✓	100.000

Origin-Destination Data

Demand (Veh/TS)

07:00 - 07:15

		To				
		1 - London Distribution Park	2 - Dock Road	3 - St Andrews Road	4 - Thurrock Park Way	5 - A1089 Dock Road
From	1 - London Distribution Park	0.00	1.00	4.00	0.00	11.00
	2 - Dock Road	1.00	0.00	6.00	21.00	80.00
	3 - St Andrews Road	2.00	2.00	6.00	17.00	108.00
	4 - Thurrock Park Way	26.00	7.00	24.00	1.00	30.00
	5 - A1089 Dock Road	81.00	59.00	158.00	84.00	0.00

07:15 - 07:30

Demand (Veh/TS)

		To				
		1 - London Distribution Park	2 - Dock Road	3 - St Andrews Road	4 - Thurrock Park Way	5 - A1089 Dock Road
From	1 - London Distribution Park	0.00	0.00	1.00	1.00	8.00
	2 - Dock Road	1.00	0.00	9.00	21.00	80.00
	3 - St Andrews Road	2.00	0.00	4.00	10.00	86.00
	4 - Thurrock Park Way	11.00	4.00	29.00	3.00	33.00
	5 - A1089 Dock Road	74.00	59.00	131.00	89.00	0.00

07:30 - 07:45

Demand (Veh/TS)

		To				
		1 - London Distribution Park	2 - Dock Road	3 - St Andrews Road	4 - Thurrock Park Way	5 - A1089 Dock Road
From	1 - London Distribution Park	1.00	0.00	1.00	0.00	9.00
	2 - Dock Road	3.00	0.00	9.00	24.00	93.00
	3 - St Andrews Road	1.00	1.00	6.00	12.00	82.00
	4 - Thurrock Park Way	14.00	12.00	36.00	1.00	43.00
	5 - A1089 Dock Road	58.00	64.00	158.00	112.00	0.00

07:45 - 08:00

Demand (Veh/TS)

		To				
		1 - London Distribution Park	2 - Dock Road	3 - St Andrews Road	4 - Thurrock Park Way	5 - A1089 Dock Road
From	1 - London Distribution Park	1.00	1.00	1.00	2.00	6.00
	2 - Dock Road	1.00	0.00	4.00	21.00	93.00
	3 - St Andrews Road	1.00	1.00	3.00	18.00	109.00
	4 - Thurrock Park Way	7.00	9.00	29.00	2.00	43.00
	5 - A1089 Dock Road	57.00	61.00	189.00	112.00	0.00

Vehicle Mix

07:00 - 07:15

Heavy Vehicle Percentages

		To				
		1 - London Distribution Park	2 - Dock Road	3 - St Andrews Road	4 - Thurrock Park Way	5 - A1089 Dock Road
From	1 - London Distribution Park	0	0	75	0	60
	2 - Dock Road	0	0	0	11	6
	3 - St Andrews Road	50	0	60	0	70
	4 - Thurrock Park Way	0	17	5	0	19
	5 - A1089 Dock Road	3	9	40	13	0

07:15 - 07:30

Heavy Vehicle Percentages

		To				
		1 - London Distribution Park	2 - Dock Road	3 - St Andrews Road	4 - Thurrock Park Way	5 - A1089 Dock Road
From	1 - London Distribution Park	0	0	75	0	60
	2 - Dock Road	0	0	0	11	6
	3 - St Andrews Road	50	0	60	0	70
	4 - Thurrock Park Way	0	17	5	0	19
	5 - A1089 Dock Road	3	9	40	13	0

07:30 - 07:45

Heavy Vehicle Percentages

		To				
		1 - London Distribution Park	2 - Dock Road	3 - St Andrews Road	4 - Thurrock Park Way	5 - A1089 Dock Road
From	1 - London Distribution Park	0	0	75	0	60
	2 - Dock Road	0	0	0	11	6
	3 - St Andrews Road	50	0	60	0	70
	4 - Thurrock Park Way	0	17	5	0	19
	5 - A1089 Dock Road	3	9	40	13	0

07:45 - 08:00

Heavy Vehicle Percentages

		To				
		1 - London Distribution Park	2 - Dock Road	3 - St Andrews Road	4 - Thurrock Park Way	5 - A1089 Dock Road
From	1 - London Distribution Park	0	0	75	0	60
	2 - Dock Road	0	0	0	11	6
	3 - St Andrews Road	50	0	60	0	70
	4 - Thurrock Park Way	0	17	5	0	19
	5 - A1089 Dock Road	3	9	40	13	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/TS)	Total Junction Arrivals (Veh)
1 - London Distribution Park	0.10	6.59	0.1	A	12.00	47.99
2 - Dock Road	0.51	7.52	1.0	A	116.75	467.00
3 - St Andrews Road	0.48	6.19	0.9	A	117.75	471.00
4 - Thurrock Park Way	0.35	4.59	0.5	A	91.00	364.01
5 - A1089 Dock Road	0.92	21.17	9.6	C	386.53	1546.12

Main Results for each time segment

07:00 - 07:15

Arm	Total Demand (Veh/TS)	Junction Arrivals (Veh)	Circulating flow (Veh/TS)	Capacity (Veh/TS)	RFC	Throughput (Veh/TS)	Throughput (exit side) (Veh/TS)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - London Distribution Park	16.00	16.00	336.92	160.01	0.100	15.89	108.81	0.0	0.1	6.241	A
2 - Dock Road	108.00	108.00	284.62	268.16	0.403	107.33	68.19	0.0	0.7	5.574	A
3 - St Andrews Road	135.00	135.00	196.21	291.55	0.463	134.15	195.75	0.0	0.9	5.687	A
4 - Thurrock Park Way	88.00	88.00	208.68	295.91	0.297	87.58	121.68	0.0	0.4	4.311	A
5 - A1089 Dock Road	382.00	382.00	68.65	453.72	0.842	377.08	227.60	0.0	4.9	11.122	B

07:15 - 07:30

Arm	Total Demand (Veh/TS)	Junction Arrivals (Veh)	Circulating flow (Veh/TS)	Capacity (Veh/TS)	RFC	Throughput (Veh/TS)	Throughput (exit side) (Veh/TS)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - London Distribution Park	10.00	10.00	320.33	172.50	0.058	10.05	88.44	0.1	0.1	5.541	A
2 - Dock Road	111.00	111.00	267.13	282.21	0.393	111.01	63.25	0.7	0.7	5.257	A
3 - St Andrews Road	102.00	102.00	203.30	284.20	0.359	102.29	174.84	0.9	0.6	4.954	A
4 - Thurrock Park Way	80.00	80.00	181.29	311.63	0.257	80.07	124.31	0.4	0.3	3.889	A
5 - A1089 Dock Road	353.00	353.00	54.10	465.38	0.758	354.67	207.26	4.9	3.2	8.252	A

07:30 - 07:45

Arm	Total Demand (Veh/TS)	Junction Arrivals (Veh)	Circulating flow (Veh/TS)	Capacity (Veh/TS)	RFC	Throughput (Veh/TS)	Throughput (exit side) (Veh/TS)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - London Distribution Park	11.00	11.00	387.24	147.62	0.075	10.98	76.73	0.1	0.1	6.586	A
2 - Dock Road	129.00	129.00	321.73	251.98	0.512	128.62	76.49	0.7	1.0	7.274	A
3 - St Andrews Road	102.00	102.00	241.70	273.12	0.373	101.97	208.65	0.6	0.6	5.258	A
4 - Thurrock Park Way	106.00	106.00	195.67	303.60	0.349	105.82	148.00	0.3	0.5	4.547	A
5 - A1089 Dock Road	392.00	392.00	74.85	449.32	0.873	389.12	226.64	3.2	6.1	14.269	B

07:45 - 08:00

Arm	Total Demand (Veh/TS)	Junction Arrivals (Veh)	Circulating flow (Veh/TS)	Capacity (Veh/TS)	RFC	Throughput (Veh/TS)	Throughput (exit side) (Veh/TS)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - London Distribution Park	11.00	11.00	403.05	156.51	0.070	11.00	66.66	0.1	0.1	6.187	A
2 - Dock Road	119.00	119.00	342.43	238.76	0.498	119.03	71.62	1.0	1.0	7.518	A
3 - St Andrews Road	132.00	132.00	237.20	276.67	0.477	131.69	224.26	0.6	0.9	6.193	A
4 - Thurrock Park Way	90.00	90.00	214.74	286.40	0.314	90.07	154.15	0.5	0.5	4.587	A
5 - A1089 Dock Road	419.00	419.00	54.10	454.38	0.922	415.61	250.71	6.1	9.5	21.174	C

2022 + Comm No Til2, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout	1, 2, 3, 4, 5	239.87	F

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time period length (min)	Time segment length (min)	Run automatically
D3	2022 + Comm No Til2	AM	DIRECT	07:00	08:00	60	15	✓

Vehicle mix varies over time	Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)	O-D data varies over time
✓	✓	✓	HV Percentages	2.00	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Scaling Factor (%)
1 - London Distribution Park		DIRECT	✓	100.000
2 - Dock Road		DIRECT	✓	100.000
3 - St Andrews Road		DIRECT	✓	100.000
4 - Thurrock Park Way		DIRECT	✓	100.000
5 - A1089 Dock Road		DIRECT	✓	100.000

Origin-Destination Data

Demand (Veh/TS)

07:00 - 07:15

		To				
		1 - London Distribution Park	2 - Dock Road	3 - St Andrews Road	4 - Thurrock Park Way	5 - A1089 Dock Road
From	1 - London Distribution Park	0.00	1.00	4.00	0.00	22.00
	2 - Dock Road	1.00	0.00	6.00	21.00	80.00
	3 - St Andrews Road	2.00	2.00	6.00	17.00	108.00
	4 - Thurrock Park Way	26.00	7.00	24.00	1.00	30.00
	5 - A1089 Dock Road	227.00	146.00	158.00	84.00	0.00

07:15 - 07:30

Demand (Veh/TS)

		To				
		1 - London Distribution Park	2 - Dock Road	3 - St Andrews Road	4 - Thurrock Park Way	5 - A1089 Dock Road
From	1 - London Distribution Park	0.00	0.00	1.00	1.00	19.00
	2 - Dock Road	1.00	0.00	9.00	21.00	80.00
	3 - St Andrews Road	2.00	0.00	4.00	10.00	86.00
	4 - Thurrock Park Way	11.00	4.00	29.00	3.00	33.00
	5 - A1089 Dock Road	219.00	144.00	131.00	89.00	0.00

07:30 - 07:45

Demand (Veh/TS)

		To				
		1 - London Distribution Park	2 - Dock Road	3 - St Andrews Road	4 - Thurrock Park Way	5 - A1089 Dock Road
From	1 - London Distribution Park	1.00	0.00	1.00	0.00	20.00
	2 - Dock Road	3.00	0.00	9.00	24.00	93.00
	3 - St Andrews Road	1.00	1.00	6.00	12.00	82.00
	4 - Thurrock Park Way	14.00	12.00	36.00	1.00	43.00
	5 - A1089 Dock Road	70.00	64.00	158.00	112.00	0.00

07:45 - 08:00

Demand (Veh/TS)

		To				
		1 - London Distribution Park	2 - Dock Road	3 - St Andrews Road	4 - Thurrock Park Way	5 - A1089 Dock Road
From	1 - London Distribution Park	1.00	1.00	1.00	2.00	17.00
	2 - Dock Road	1.00	0.00	4.00	21.00	93.00
	3 - St Andrews Road	1.00	1.00	3.00	18.00	109.00
	4 - Thurrock Park Way	7.00	9.00	29.00	2.00	43.00
	5 - A1089 Dock Road	69.00	62.00	189.00	112.00	0.00

Vehicle Mix

07:00 - 07:15

Heavy Vehicle Percentages

		To				
		1 - London Distribution Park	2 - Dock Road	3 - St Andrews Road	4 - Thurrock Park Way	5 - A1089 Dock Road
From	1 - London Distribution Park	0	0	75	0	80
	2 - Dock Road	0	0	0	11	6
	3 - St Andrews Road	50	0	60	0	70
	4 - Thurrock Park Way	0	17	5	0	19
	5 - A1089 Dock Road	6	4	40	13	0

07:15 - 07:30

Heavy Vehicle Percentages

		To				
		1 - London Distribution Park	2 - Dock Road	3 - St Andrews Road	4 - Thurrock Park Way	5 - A1089 Dock Road
From	1 - London Distribution Park	0	0	75	0	84
	2 - Dock Road	0	0	0	11	6
	3 - St Andrews Road	50	0	60	0	70
	4 - Thurrock Park Way	0	17	5	0	19
	5 - A1089 Dock Road	6	4	40	13	0

07:30 - 07:45

Heavy Vehicle Percentages

		To				
		1 - London Distribution Park	2 - Dock Road	3 - St Andrews Road	4 - Thurrock Park Way	5 - A1089 Dock Road
From	1 - London Distribution Park	0	0	75	0	87
	2 - Dock Road	0	0	0	11	6
	3 - St Andrews Road	50	0	60	0	70
	4 - Thurrock Park Way	0	17	5	0	19
	5 - A1089 Dock Road	18	9	40	13	0

07:45 - 08:00

Heavy Vehicle Percentages

		To				
		1 - London Distribution Park	2 - Dock Road	3 - St Andrews Road	4 - Thurrock Park Way	5 - A1089 Dock Road
From	1 - London Distribution Park	0	0	75	0	87
	2 - Dock Road	0	0	0	11	6
	3 - St Andrews Road	50	0	60	0	70
	4 - Thurrock Park Way	0	17	5	0	19
	5 - A1089 Dock Road	19	9	40	13	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/TS)	Total Junction Arrivals (Veh)
1 - London Distribution Park	0.18	8.83	0.2	A	23.00	91.99
2 - Dock Road	0.53	8.44	1.1	A	116.75	467.00
3 - St Andrews Road	0.50	6.68	1.0	A	117.75	470.99
4 - Thurrock Park Way	0.36	4.81	0.6	A	91.00	364.01
5 - A1089 Dock Road	1.29	415.26	226.2	F	510.10	2040.41

Main Results for each time segment

07:00 - 07:15

Arm	Total Demand (Veh/TS)	Junction Arrivals (Veh)	Circulating flow (Veh/TS)	Capacity (Veh/TS)	RFC	Throughput (Veh/TS)	Throughput (exit side) (Veh/TS)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - London Distribution Park	27.00	27.00	339.34	148.94	0.181	26.78	204.10	0.0	0.2	7.353	A
2 - Dock Road	108.00	108.00	243.46	288.28	0.375	107.41	122.66	0.0	0.6	4.960	A
3 - St Andrews Road	135.00	135.00	189.11	291.05	0.464	134.15	161.76	0.0	0.9	5.705	A
4 - Thurrock Park Way	88.00	88.00	219.63	286.48	0.307	87.56	103.62	0.0	0.4	4.514	A
5 - A1089 Dock Road	615.00	615.00	68.64	478.19	1.286	474.80	238.55	0.0	140.2	136.163	F

07:15 - 07:30

Arm	Total Demand (Veh/TS)	Junction Arrivals (Veh)	Circulating flow (Veh/TS)	Capacity (Veh/TS)	RFC	Throughput (Veh/TS)	Throughput (exit side) (Veh/TS)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - London Distribution Park	21.00	21.00	346.09	145.35	0.145	21.05	196.76	0.2	0.2	7.242	A
2 - Dock Road	111.00	111.00	243.73	291.56	0.381	110.98	123.41	0.6	0.6	4.984	A
3 - St Andrews Road	102.00	102.00	197.36	283.18	0.360	102.29	157.35	0.9	0.6	4.984	A
4 - Thurrock Park Way	80.00	80.00	192.26	302.20	0.265	80.08	107.39	0.4	0.4	4.053	A
5 - A1089 Dock Road	583.00	583.00	54.11	488.83	1.190	488.74	218.23	140.2	234.5	355.213	F

07:30 - 07:45

Arm	Total Demand (Veh/TS)	Junction Arrivals (Veh)	Circulating flow (Veh/TS)	Capacity (Veh/TS)	RFC	Throughput (Veh/TS)	Throughput (exit side) (Veh/TS)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - London Distribution Park	22.00	22.00	384.00	129.13	0.170	21.97	142.50	0.2	0.2	8.396	A
2 - Dock Road	129.00	129.00	300.74	259.83	0.496	128.64	105.23	0.6	1.0	6.840	A
3 - St Andrews Road	102.00	102.00	238.55	270.73	0.377	101.97	190.82	0.6	0.6	5.331	A
4 - Thurrock Park Way	106.00	106.00	206.67	293.88	0.361	105.80	133.85	0.4	0.6	4.780	A
5 - A1089 Dock Road	404.00	404.00	74.84	456.89	0.914	451.66	237.63	234.5	183.5	415.265	F

07:45 - 08:00

Arm	Total Demand (Veh/TS)	Junction Arrivals (Veh)	Circulating flow (Veh/TS)	Capacity (Veh/TS)	RFC	Throughput (Veh/TS)	Throughput (exit side) (Veh/TS)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - London Distribution Park	22.00	22.00	417.01	123.85	0.178	21.99	83.88	0.2	0.2	8.834	A
2 - Dock Road	119.00	119.00	361.14	225.34	0.528	118.87	77.86	1.0	1.1	8.441	A
3 - St Andrews Road	132.00	132.00	255.97	266.03	0.496	131.63	224.04	0.6	1.0	6.677	A
4 - Thurrock Park Way	90.00	90.00	225.56	277.19	0.325	90.08	162.04	0.6	0.5	4.813	A
5 - A1089 Dock Road	432.00	432.00	54.10	449.24	0.966	446.79	261.54	183.5	168.7	354.915	F

Junctions 9

ARCADY 9 - Roundabout Module

Filename: Asda Roundabout 0800-0900.j9
Path: P:\JNY9639 - Thurrock Generation Plant\Transport\Arcady
Report generation date: 30/01/2020 13:33:26

Summary of junction performance

	AM		
	Queue (Veh)	Delay (s)	RFC
	2017		
1 - London Distribution Park	0.1	6.68	0.08
2 - Dock Road	1.2	7.20	0.55
3 - St Andrews Road	0.7	5.44	0.40
4 - Thurrock Park Way	0.6	4.64	0.37
5 - A1089 Dock Road	3.9	9.76	0.81

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	(untitled)
Location	
Site number	
Date	26/07/2019
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	EUR\Joanna.gunn
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	Veh	Veh	perTimeSegment	s	-Min	perMin

Analysis Options

Vehicle length (m)	Calculate Queue Percentiles	Calculate detailed queueing delay	Calculate residual capacity	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)
5.75				0.85	36.00	20.00

Analysis Set Details

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

2017, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout	1, 2, 3, 4, 5	7.66	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Name	Description
1	London Distribution Park	
2	Dock Road	
3	St Andrews Road	
4	Thurrock Park Way	
5	A1089 Dock Road	

Roundabout Geometry

Arm	V - Approach road half-width (m)	E - Entry width (m)	l' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Exit only
1 - London Distribution Park	3.50	8.60	15.0	45.0	116.0	38.0	
2 - Dock Road	3.70	7.30	22.5	21.0	116.0	32.0	
3 - St Andrews Road	7.30	7.30	0.0	40.0	116.0	20.0	
4 - Thurrock Park Way	3.70	9.00	13.5	45.0	116.0	34.0	
5 - A1089 Dock Road	7.45	7.45	0.0	60.0	116.0	25.0	

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Final slope	Final intercept (PCU/TS)
1 - London Distribution Park	0.460	449.879
2 - Dock Road	0.464	458.508
3 - St Andrews Road	0.548	585.683
4 - Thurrock Park Way	0.471	464.299
5 - A1089 Dock Road	0.550	592.526

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 period length (min)	Time segment length (min)	Run automatically
D1	2017	AM	DIRECT	08:15	09:15	60	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)	O-D data varies over time
✓	✓	HV Percentages	2.00	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Scaling Factor (%)
1 - London Distribution Park		DIRECT	✓	100.000
2 - Dock Road		DIRECT	✓	100.000
3 - St Andrews Road		DIRECT	✓	100.000
4 - Thurrock Park Way		DIRECT	✓	100.000
5 - A1089 Dock Road		DIRECT	✓	100.000

Origin-Destination Data

08:15 - 08:30

Demand (Veh/TS)

		To				
		1 - London Distribution Park	2 - Dock Road	3 - St Andrews Road	4 - Thurrock Park Way	5 - A1089 Dock Road
From	1 - London Distribution Park	0.00	1.00	3.00	1.00	6.00
	2 - Dock Road	0.00	0.00	6.00	20.00	89.00
	3 - St Andrews Road	0.00	4.00	6.00	17.00	85.00
	4 - Thurrock Park Way	5.00	16.00	29.00	2.00	60.00
	5 - A1089 Dock Road	15.00	61.00	116.00	114.00	0.00

08:30 - 08:45

Demand (Veh/TS)

		To				
		1 - London Distribution Park	2 - Dock Road	3 - St Andrews Road	4 - Thurrock Park Way	5 - A1089 Dock Road
From	1 - London Distribution Park	0.00	1.00	3.00	4.00	6.00
	2 - Dock Road	1.00	0.00	6.00	38.00	104.00
	3 - St Andrews Road	1.00	3.00	2.00	21.00	81.00
	4 - Thurrock Park Way	0.00	11.00	26.00	1.00	61.00
	5 - A1089 Dock Road	10.00	48.00	150.00	102.00	0.00

08:45 - 09:00

Demand (Veh/TS)

		To				
		1 - London Distribution Park	2 - Dock Road	3 - St Andrews Road	4 - Thurrock Park Way	5 - A1089 Dock Road
From	1 - London Distribution Park	0.00	1.00	1.00	1.00	6.00
	2 - Dock Road	1.00	0.00	6.00	41.00	67.00
	3 - St Andrews Road	1.00	0.00	5.00	15.00	77.00
	4 - Thurrock Park Way	2.00	26.00	27.00	2.00	54.00
	5 - A1089 Dock Road	13.00	65.00	153.00	137.00	0.00

09:00 - 09:15

Demand (Veh/TS)

		To				
		1 - London Distribution Park	2 - Dock Road	3 - St Andrews Road	4 - Thurrock Park Way	5 - A1089 Dock Road
From	1 - London Distribution Park	0.00	2.00	1.00	3.00	6.00
	2 - Dock Road	0.00	0.00	3.00	27.00	51.00
	3 - St Andrews Road	0.00	7.00	3.00	26.00	82.00
	4 - Thurrock Park Way	3.00	24.00	22.00	1.00	57.00
	5 - A1089 Dock Road	13.00	66.00	116.00	112.00	0.00

Vehicle Mix

Heavy Vehicle Percentages

		To				
		1 - London Distribution Park	2 - Dock Road	3 - St Andrews Road	4 - Thurrock Park Way	5 - A1089 Dock Road
From	1 - London Distribution Park	0	15	78	17	65
	2 - Dock Road	38	0	13	5	4
	3 - St Andrews Road	88	4	50	7	75
	4 - Thurrock Park Way	15	4	7	8	16
	5 - A1089 Dock Road	35	4	41	6	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/TS)	Total Junction Arrivals (Veh)
1 - London Distribution Park	0.08	6.68	0.1	A	11.50	46.00
2 - Dock Road	0.55	7.20	1.2	A	115.00	460.00
3 - St Andrews Road	0.40	5.44	0.7	A	109.00	435.98
4 - Thurrock Park Way	0.37	4.64	0.6	A	107.25	429.00
5 - A1089 Dock Road	0.81	9.76	3.9	A	322.74	1290.98

Main Results for each time segment

08:15 - 08:30

Arm	Total Demand (Veh/TS)	Junction Arrivals (Veh)	Circulating flow (Veh/TS)	Capacity (Veh/TS)	RFC	Throughput (Veh/TS)	Throughput (exit side) (Veh/TS)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - London Distribution Park	11.00	11.00	345.86	164.12	0.067	10.93	19.88	0.0	0.1	5.872	A
2 - Dock Road	115.00	115.00	275.29	286.98	0.401	114.34	81.50	0.0	0.7	5.193	A
3 - St Andrews Road	112.00	112.00	230.60	280.32	0.400	111.34	159.03	0.0	0.7	5.306	A
4 - Thurrock Park Way	112.00	112.00	188.89	304.64	0.368	111.42	153.05	0.0	0.6	4.644	A
5 - A1089 Dock Road	306.00	306.00	61.67	461.31	0.663	304.07	238.64	0.0	1.9	5.656	A

08:30 - 08:45

Arm	Total Demand (Veh/TS)	Junction Arrivals (Veh)	Circulating flow (Veh/TS)	Capacity (Veh/TS)	RFC	Throughput (Veh/TS)	Throughput (exit side) (Veh/TS)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - London Distribution Park	14.00	14.00	342.92	171.73	0.081	13.98	12.04	0.1	0.1	5.705	A
2 - Dock Road	149.00	149.00	293.80	273.03	0.546	148.48	63.10	0.7	1.2	7.196	A
3 - St Andrews Road	108.00	108.00	255.52	273.52	0.395	108.00	186.76	0.7	0.7	5.439	A
4 - Thurrock Park Way	99.00	99.00	197.71	300.86	0.329	99.08	165.81	0.6	0.5	4.461	A
5 - A1089 Dock Road	310.00	310.00	45.09	457.44	0.678	309.87	251.70	1.9	2.1	6.091	A

08:45 - 09:00

Arm	Total Demand (Veh/TS)	Junction Arrivals (Veh)	Circulating flow (Veh/TS)	Capacity (Veh/TS)	RFC	Throughput (Veh/TS)	Throughput (exit side) (Veh/TS)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - London Distribution Park	9.00	9.00	413.13	143.73	0.063	9.02	16.92	0.1	0.1	6.681	A
2 - Dock Road	115.00	115.00	330.57	254.89	0.451	115.35	91.57	1.2	0.8	6.467	A
3 - St Andrews Road	98.00	98.00	254.56	267.12	0.367	98.07	191.36	0.7	0.6	5.325	A
4 - Thurrock Park Way	111.00	111.00	157.37	323.05	0.344	110.97	195.27	0.5	0.5	4.244	A
5 - A1089 Dock Road	368.00	368.00	63.92	456.50	0.806	366.12	204.42	2.1	3.9	9.756	A

09:00 - 09:15

Arm	Total Demand (Veh/TS)	Junction Arrivals (Veh)	Circulating flow (Veh/TS)	Capacity (Veh/TS)	RFC	Throughput (Veh/TS)	Throughput (exit side) (Veh/TS)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - London Distribution Park	12.00	12.00	352.91	177.69	0.068	12.00	16.06	0.1	0.1	5.431	A
2 - Dock Road	81.00	81.00	265.67	292.31	0.277	81.45	99.24	0.8	0.4	4.278	A
3 - St Andrews Road	118.00	118.00	201.16	301.12	0.392	117.95	145.96	0.6	0.6	4.912	A
4 - Thurrock Park Way	107.00	107.00	149.25	324.52	0.330	107.03	169.85	0.5	0.5	4.139	A
5 - A1089 Dock Road	307.00	307.00	60.02	463.90	0.662	308.95	196.26	3.9	2.0	5.881	A

Junctions 9

ARCADY 9 - Roundabout Module

Filename: Asda Roundabout 1700-1800.j9
Path: P:\JNY9639 - Thurrock Generation Plant\Transport\Arcady
Report generation date: 30/01/2020 14:48:33

Summary of junction performance

	PM		
	Queue (Veh)	Delay (s)	RFC
	2017		
1 - London Distribution Park	0.3	4.20	0.21
2 - Dock Road	0.6	4.45	0.37
3 - St Andrews Road	1.8	6.56	0.65
4 - Thurrock Park Way	3.0	12.68	0.76
5 - A1089 Dock Road	1.4	4.72	0.58

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	(untitled)
Location	
Site number	
Date	26/07/2019
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	EUR\Joanna.gunn
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	Veh	Veh	perTimeSegment	s	-Min	perMin

Analysis Options

Vehicle length (m)	Calculate Queue Percentiles	Calculate detailed queueing delay	Calculate residual capacity	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)
5.75				0.85	36.00	20.00

Analysis Set Details

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

2017, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout	1, 2, 3, 4, 5	6.98	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Name	Description
1	London Distribution Park	
2	Dock Road	
3	St Andrews Road	
4	Thurrock Park Way	
5	A1089 Dock Road	

Roundabout Geometry

Arm	V - Approach road half-width (m)	E - Entry width (m)	l' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Exit only
1 - London Distribution Park	3.50	8.60	15.0	45.0	116.0	38.0	
2 - Dock Road	3.70	7.30	22.5	21.0	116.0	32.0	
3 - St Andrews Road	7.30	7.30	0.0	40.0	116.0	20.0	
4 - Thurrock Park Way	3.70	9.00	13.5	45.0	116.0	34.0	
5 - A1089 Dock Road	7.45	7.45	0.0	60.0	116.0	25.0	

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Final slope	Final intercept (PCU/TS)
1 - London Distribution Park	0.460	449.879
2 - Dock Road	0.464	458.508
3 - St Andrews Road	0.548	585.683
4 - Thurrock Park Way	0.471	464.299
5 - A1089 Dock Road	0.550	592.526

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 period length (min)	Time segment length (min)	Run automatically
D1	2017	PM	DIRECT	17:00	18:00	60	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)	O-D data varies over time
✓	✓	HV Percentages	2.00	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Scaling Factor (%)
1 - London Distribution Park		DIRECT	✓	100.000
2 - Dock Road		DIRECT	✓	100.000
3 - St Andrews Road		DIRECT	✓	100.000
4 - Thurrock Park Way		DIRECT	✓	100.000
5 - A1089 Dock Road		DIRECT	✓	100.000

Origin-Destination Data

17:00 - 17:15

Demand (Veh/TS)

		To				
		1 - London Distribution Park	2 - Dock Road	3 - St Andrews Road	4 - Thurrock Park Way	5 - A1089 Dock Road
From	1 - London Distribution Park	0.00	7.00	4.00	5.00	40.00
	2 - Dock Road	0.00	0.00	4.00	26.00	61.00
	3 - St Andrews Road	0.00	10.00	5.00	21.00	215.00
	4 - Thurrock Park Way	1.00	46.00	13.00	1.00	148.00
	5 - A1089 Dock Road	4.00	89.00	64.00	78.00	1.00

17:15 - 17:30

Demand (Veh/TS)

		To				
		1 - London Distribution Park	2 - Dock Road	3 - St Andrews Road	4 - Thurrock Park Way	5 - A1089 Dock Road
From	1 - London Distribution Park	0.00	3.00	0.00	8.00	34.00
	2 - Dock Road	0.00	0.00	9.00	38.00	69.00
	3 - St Andrews Road	3.00	7.00	4.00	23.00	140.00
	4 - Thurrock Park Way	1.00	32.00	25.00	1.00	123.00
	5 - A1089 Dock Road	3.00	104.00	70.00	89.00	1.00

17:30 - 17:45

Demand (Veh/TS)

		To				
		1 - London Distribution Park	2 - Dock Road	3 - St Andrews Road	4 - Thurrock Park Way	5 - A1089 Dock Road
From	1 - London Distribution Park	0.00	1.00	1.00	8.00	33.00
	2 - Dock Road	0.00	0.00	5.00	27.00	72.00
	3 - St Andrews Road	3.00	7.00	7.00	21.00	122.00
	4 - Thurrock Park Way	0.00	49.00	8.00	1.00	176.00
	5 - A1089 Dock Road	9.00	91.00	44.00	84.00	0.00

17:45 - 18:00

Demand (Veh/TS)

		To				
		1 - London Distribution Park	2 - Dock Road	3 - St Andrews Road	4 - Thurrock Park Way	5 - A1089 Dock Road
From	1 - London Distribution Park	0.00	6.00	1.00	6.00	24.00
	2 - Dock Road	0.00	0.00	9.00	42.00	62.00
	3 - St Andrews Road	2.00	9.00	4.00	15.00	119.00
	4 - Thurrock Park Way	0.00	35.00	18.00	1.00	109.00
	5 - A1089 Dock Road	7.00	88.00	72.00	85.00	0.00

Vehicle Mix

Heavy Vehicle Percentages

		To				
		1 - London Distribution Park	2 - Dock Road	3 - St Andrews Road	4 - Thurrock Park Way	5 - A1089 Dock Road
From	1 - London Distribution Park	0	0	33	0	5
	2 - Dock Road	0	0	4	5	0
	3 - St Andrews Road	25	0	55	8	22
	4 - Thurrock Park Way	0	0	13	25	4
	5 - A1089 Dock Road	52	1	60	10	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/TS)	Total Junction Arrivals (Veh)
1 - London Distribution Park	0.21	4.20	0.3	A	45.25	181.00
2 - Dock Road	0.37	4.45	0.6	A	106.00	424.00
3 - St Andrews Road	0.65	6.56	1.8	A	184.25	737.00
4 - Thurrock Park Way	0.76	12.68	3.0	B	197.00	788.00
5 - A1089 Dock Road	0.58	4.72	1.4	A	245.76	983.02

Main Results for each time segment

17:00 - 17:15

Arm	Total Demand (Veh/TS)	Junction Arrivals (Veh)	Circulating flow (Veh/TS)	Capacity (Veh/TS)	RFC	Throughput (Veh/TS)	Throughput (exit side) (Veh/TS)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - London Distribution Park	56.00	56.00	304.97	269.84	0.208	55.74	4.97	0.0	0.3	4.198	A
2 - Dock Road	91.00	91.00	209.88	330.76	0.275	90.62	150.83	0.0	0.4	3.748	A
3 - St Andrews Road	251.00	251.00	211.06	384.55	0.653	249.16	89.45	0.0	1.8	6.562	A
4 - Thurrock Park Way	209.00	209.00	329.87	274.24	0.762	205.98	130.35	0.0	3.0	12.680	B
5 - A1089 Dock Road	236.00	236.00	75.01	454.10	0.520	234.93	460.84	0.0	1.1	4.087	A

17:15 - 17:30

Arm	Total Demand (Veh/TS)	Junction Arrivals (Veh)	Circulating flow (Veh/TS)	Capacity (Veh/TS)	RFC	Throughput (Veh/TS)	Throughput (exit side) (Veh/TS)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - London Distribution Park	45.00	45.00	333.14	260.22	0.173	45.05	6.99	0.3	0.2	4.185	A
2 - Dock Road	116.00	116.00	231.86	317.67	0.365	115.81	146.33	0.4	0.6	4.455	A
3 - St Andrews Road	177.00	177.00	239.74	372.39	0.475	177.93	107.92	1.8	0.9	4.651	A
4 - Thurrock Park Way	182.00	182.00	258.83	311.22	0.585	183.58	158.84	3.0	1.4	7.137	A
5 - A1089 Dock Road	267.00	267.00	73.45	456.99	0.584	266.68	368.96	1.1	1.4	4.721	A

17:30 - 17:45

Arm	Total Demand (Veh/TS)	Junction Arrivals (Veh)	Circulating flow (Veh/TS)	Capacity (Veh/TS)	RFC	Throughput (Veh/TS)	Throughput (exit side) (Veh/TS)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - London Distribution Park	43.00	43.00	291.26	283.94	0.151	43.03	11.99	0.2	0.2	3.735	A
2 - Dock Road	104.00	104.00	186.40	347.30	0.299	104.14	147.89	0.6	0.4	3.702	A
3 - St Andrews Road	160.00	160.00	225.25	377.65	0.424	160.17	65.29	0.9	0.7	4.143	A
4 - Thurrock Park Way	234.00	234.00	244.22	322.16	0.726	232.88	141.20	1.4	2.6	9.955	A
5 - A1089 Dock Road	228.00	228.00	74.83	465.58	0.490	228.42	402.27	1.4	1.0	3.800	A

17:45 - 18:00

Arm	Total Demand (Veh/TS)	Junction Arrivals (Veh)	Circulating flow (Veh/TS)	Capacity (Veh/TS)	RFC	Throughput (Veh/TS)	Throughput (exit side) (Veh/TS)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - London Distribution Park	37.00	37.00	312.03	268.82	0.138	37.02	9.01	0.2	0.2	3.882	A
2 - Dock Road	113.00	113.00	210.80	326.69	0.346	112.90	138.25	0.4	0.5	4.208	A
3 - St Andrews Road	149.00	149.00	219.91	381.51	0.391	149.10	103.80	0.7	0.6	3.875	A
4 - Thurrock Park Way	163.00	163.00	220.11	332.30	0.491	164.58	148.89	2.6	1.0	5.417	A
5 - A1089 Dock Road	252.00	252.00	69.32	450.96	0.559	251.71	315.36	1.0	1.3	4.510	A

Junctions 9

ARCADY 9 - Roundabout Module

Version: 9.0.2.5947

For sales and distribution information, program advice and maintenance, contact TRL:
+44 (0)1344 770558 software@trl.co.uk www.trlsoftware.co.uk

Filename: Asda Roundabout Mit 0700-0800.j9
Path: P:\JNY9639 - Thurrock Generation Plant\Transport\Arcady
Report generation date: 06/02/2020 14:23:03

Summary of junction performance

	AM		
	Queue (Veh)	Delay (s)	RFC
	2022 + Comm		
1 - London Distribution Park	0.2	9.01	0.18
2 - Dock Road	1.1	8.81	0.54
3 - St Andrews Road	1.3	7.23	0.56
4 - Thurrock Park Way	0.6	5.46	0.39
5 - A1089 Dock Road	310.8	581.82	1.36
	2022 + Comm + Av Con 1		
1 - London Distribution Park	0.2	9.02	0.19
2 - Dock Road	1.2	8.86	0.54
3 - St Andrews Road	1.3	7.26	0.57
4 - Thurrock Park Way	0.6	5.48	0.39
5 - A1089 Dock Road	329.0	611.75	1.37
	2022 + Comm + Peak Con 1		
1 - London Distribution Park	0.2	9.03	0.19
2 - Dock Road	1.2	8.88	0.54
3 - St Andrews Road	1.3	7.23	0.57
4 - Thurrock Park Way	0.6	5.48	0.39
5 - A1089 Dock Road	336.5	625.98	1.38
	2022 + Comm + Av Con 1 + Cumu		
1 - London Distribution Park	0.2	9.15	0.19
2 - Dock Road	1.2	9.38	0.56
3 - St Andrews Road	1.5	8.41	0.61
4 - Thurrock Park Way	0.7	5.64	0.40
5 - A1089 Dock Road	486.7	865.44	1.45
	2022 + Comm + Peak Con 1 + Cumu		
1 - London Distribution Park	0.2	9.16	0.19
2 - Dock Road	1.2	9.40	0.56
3 - St Andrews Road	1.5	8.40	0.61
4 - Thurrock Park Way	0.7	5.65	0.40
5 - A1089 Dock Road	494.1	880.50	1.46

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	(untitled)
Location	
Site number	
Date	26/07/2019
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	EUR\Joanna.gunn
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	Veh	Veh	perTimeSegment	s	-Min	perMin

Analysis Options

Vehicle length (m)	Calculate Queue Percentiles	Calculate detailed queueing delay	Calculate residual capacity	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)
5.75				0.85	36.00	20.00

Demand Set Summary

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time period length (min)	Time segment length (min)	Run automatically
D1	2022 + Comm	AM	DIRECT	07:00	08:00	60	15	✓
D2	2022 + Comm + Av Con 1	AM	DIRECT	07:00	08:00	60	15	✓
D3	2022 + Comm + Peak Con 1	AM	DIRECT	07:00	08:00	60	15	✓
D4	2022 + Comm + Av Con 1 + Cumu	AM	DIRECT	07:00	08:00	60	15	✓
D5	2022 + Comm + Peak Con 1 + Cumu	AM	DIRECT	07:00	08:00	60	15	✓

Analysis Set Details

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

2022 + Comm, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	3 - St Andrews Road - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout	1, 2, 3, 4, 5	328.80	F

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Name	Description
1	London Distribution Park	
2	Dock Road	
3	St Andrews Road	
4	Thurrock Park Way	
5	A1089 Dock Road	

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)	Exit only
1 - London Distribution Park	3.50	8.60	15.0	45.0	116.0	38.0	
2 - Dock Road	3.70	7.30	22.5	21.0	116.0	32.0	
3 - St Andrews Road	7.42	8.11	37.0	36.0	116.0	27.0	
4 - Thurrock Park Way	3.70	9.00	13.5	45.0	116.0	34.0	
5 - A1089 Dock Road	7.45	7.45	0.0	60.0	116.0	25.0	

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Final slope	Final intercept (PCU/TS)
1 - London Distribution Park	0.460	449.879
2 - Dock Road	0.464	458.508
3 - St Andrews Road	0.568	631.041
4 - Thurrock Park Way	0.471	464.299
5 - A1089 Dock Road	0.550	592.526

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 period length (min)	Time segment length (min)	Run automatically
D1	2022 + Comm	AM	DIRECT	07:00	08:00	60	15	✓

Vehicle mix varies over time	Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)	O-D data varies over time
✓	✓	✓	HV Percentages	2.00	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Scaling Factor (%)
1 - London Distribution Park		DIRECT	✓	100.000
2 - Dock Road		DIRECT	✓	100.000
3 - St Andrews Road		DIRECT	✓	100.000
4 - Thurrock Park Way		DIRECT	✓	100.000
5 - A1089 Dock Road		DIRECT	✓	100.000

Origin-Destination Data

07:00 - 07:15

Demand (Veh/TS)

		To				
		1 - London Distribution Park	2 - Dock Road	3 - St Andrews Road	4 - Thurrock Park Way	5 - A1089 Dock Road
From	1 - London Distribution Park	0.00	1.00	4.00	0.00	22.00
	2 - Dock Road	1.00	0.00	6.00	21.00	80.00
	3 - St Andrews Road	2.00	2.00	6.00	17.00	135.00
	4 - Thurrock Park Way	26.00	7.00	24.00	1.00	30.00
	5 - A1089 Dock Road	227.00	146.00	185.00	84.00	0.00

07:15 - 07:30

Demand (Veh/TS)

		To				
		1 - London Distribution Park	2 - Dock Road	3 - St Andrews Road	4 - Thurrock Park Way	5 - A1089 Dock Road
From	1 - London Distribution Park	0.00	0.00	1.00	1.00	19.00
	2 - Dock Road	1.00	0.00	9.00	21.00	80.00
	3 - St Andrews Road	2.00	0.00	4.00	10.00	114.00
	4 - Thurrock Park Way	11.00	4.00	29.00	3.00	33.00
	5 - A1089 Dock Road	219.00	144.00	159.00	89.00	0.00

07:30 - 07:45

Demand (Veh/TS)

		To				
		1 - London Distribution Park	2 - Dock Road	3 - St Andrews Road	4 - Thurrock Park Way	5 - A1089 Dock Road
From	1 - London Distribution Park	1.00	0.00	1.00	0.00	20.00
	2 - Dock Road	3.00	0.00	9.00	24.00	93.00
	3 - St Andrews Road	1.00	1.00	6.00	12.00	110.00
	4 - Thurrock Park Way	14.00	12.00	36.00	1.00	43.00
	5 - A1089 Dock Road	70.00	64.00	185.00	112.00	0.00

Demand (Veh/TS)

07:45 - 08:00

		To				
		1 - London Distribution Park	2 - Dock Road	3 - St Andrews Road	4 - Thurrock Park Way	5 - A1089 Dock Road
From	1 - London Distribution Park	1.00	1.00	1.00	2.00	17.00
	2 - Dock Road	1.00	0.00	4.00	21.00	93.00
	3 - St Andrews Road	1.00	1.00	3.00	18.00	136.00
	4 - Thurrock Park Way	7.00	9.00	29.00	2.00	43.00
	5 - A1089 Dock Road	69.00	62.00	217.00	112.00	0.00

Vehicle Mix

Heavy Vehicle Percentages

07:00 - 07:15

		To				
		1 - London Distribution Park	2 - Dock Road	3 - St Andrews Road	4 - Thurrock Park Way	5 - A1089 Dock Road
From	1 - London Distribution Park	0	0	75	0	80
	2 - Dock Road	0	0	0	11	6
	3 - St Andrews Road	50	0	60	0	75
	4 - Thurrock Park Way	0	17	5	0	19
	5 - A1089 Dock Road	6	4	42	13	0

Heavy Vehicle Percentages

07:15 - 07:30

		To				
		1 - London Distribution Park	2 - Dock Road	3 - St Andrews Road	4 - Thurrock Park Way	5 - A1089 Dock Road
From	1 - London Distribution Park	0	0	75	0	82
	2 - Dock Road	0	0	0	11	6
	3 - St Andrews Road	50	0	60	0	76
	4 - Thurrock Park Way	0	17	5	0	19
	5 - A1089 Dock Road	6	4	42	13	0

Heavy Vehicle Percentages

07:30 - 07:45

		To				
		1 - London Distribution Park	2 - Dock Road	3 - St Andrews Road	4 - Thurrock Park Way	5 - A1089 Dock Road
From	1 - London Distribution Park	0	0	75	0	87
	2 - Dock Road	0	0	0	11	6
	3 - St Andrews Road	50	0	60	0	75
	4 - Thurrock Park Way	0	17	5	0	19
	5 - A1089 Dock Road	18	9	41	13	0

Heavy Vehicle Percentages

07:45 - 08:00

		To				
		1 - London Distribution Park	2 - Dock Road	3 - St Andrews Road	4 - Thurrock Park Way	5 - A1089 Dock Road
From	1 - London Distribution Park	0	0	75	0	87
	2 - Dock Road	0	0	0	11	6
	3 - St Andrews Road	50	0	60	0	75
	4 - Thurrock Park Way	0	17	5	0	19
	5 - A1089 Dock Road	19	9	41	13	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/TS)	Total Junction Arrivals (Veh)
1 - London Distribution Park	0.18	9.01	0.2	A	23.00	91.99
2 - Dock Road	0.54	8.81	1.1	A	116.75	467.00
3 - St Andrews Road	0.56	7.23	1.3	A	145.25	580.99
4 - Thurrock Park Way	0.39	5.46	0.6	A	91.00	364.01
5 - A1089 Dock Road	1.36	581.82	310.8	F	539.55	2158.18

Main Results for each time segment

07:00 - 07:15

Arm	Total Demand (Veh/TS)	Junction Arrivals (Veh)	Circulating flow (Veh/TS)	Capacity (Veh/TS)	RFC	Throughput (Veh/TS)	Throughput (exit side) (Veh/TS)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - London Distribution Park	27.00	27.00	342.85	146.13	0.185	26.78	194.62	0.0	0.2	7.527	A
2 - Dock Road	108.00	108.00	253.06	280.84	0.385	107.38	116.57	0.0	0.6	5.170	A
3 - St Andrews Road	162.00	162.00	185.58	306.79	0.528	160.90	174.87	0.0	1.1	6.125	A
4 - Thurrock Park Way	88.00	88.00	246.37	263.97	0.333	87.50	100.11	0.0	0.5	5.085	A
5 - A1089 Dock Road	642.00	642.00	68.60	471.58	1.361	468.88	265.27	0.0	173.1	168.669	F

07:15 - 07:30

Arm	Total Demand (Veh/TS)	Junction Arrivals (Veh)	Circulating flow (Veh/TS)	Capacity (Veh/TS)	RFC	Throughput (Veh/TS)	Throughput (exit side) (Veh/TS)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - London Distribution Park	21.00	21.00	349.75	143.80	0.146	21.05	185.82	0.2	0.2	7.337	A
2 - Dock Road	111.00	111.00	254.72	283.31	0.392	110.98	116.08	0.6	0.6	5.222	A
3 - St Andrews Road	130.00	130.00	192.57	297.73	0.437	130.32	173.13	1.1	0.8	5.385	A
4 - Thurrock Park Way	80.00	80.00	220.29	279.13	0.287	80.09	102.60	0.5	0.4	4.525	A
5 - A1089 Dock Road	611.00	611.00	54.12	481.48	1.265	481.44	246.26	173.1	302.7	456.166	F

07:30 - 07:45

Arm	Total Demand (Veh/TS)	Junction Arrivals (Veh)	Circulating flow (Veh/TS)	Capacity (Veh/TS)	RFC	Throughput (Veh/TS)	Throughput (exit side) (Veh/TS)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - London Distribution Park	22.00	22.00	377.03	130.37	0.169	21.97	149.76	0.2	0.2	8.301	A
2 - Dock Road	129.00	129.00	292.60	262.20	0.492	128.68	106.40	0.6	1.0	6.724	A
3 - St Andrews Road	130.00	130.00	225.35	289.52	0.449	129.98	195.94	0.8	0.8	5.639	A
4 - Thurrock Park Way	106.00	106.00	234.71	271.39	0.391	105.77	120.61	0.4	0.6	5.426	A
5 - A1089 Dock Road	431.00	431.00	74.82	456.49	0.987	451.98	265.66	302.7	278.7	579.632	F

07:45 - 08:00

Arm	Total Demand (Veh/TS)	Junction Arrivals (Veh)	Circulating flow (Veh/TS)	Capacity (Veh/TS)	RFC	Throughput (Veh/TS)	Throughput (exit side) (Veh/TS)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - London Distribution Park	22.00	22.00	418.95	121.88	0.180	21.98	80.26	0.2	0.2	9.009	A
2 - Dock Road	119.00	119.00	366.11	220.72	0.539	118.81	74.82	1.0	1.1	8.813	A
3 - St Andrews Road	159.00	159.00	249.71	282.65	0.563	158.54	235.21	0.8	1.3	7.226	A
4 - Thurrock Park Way	90.00	90.00	252.43	255.19	0.353	90.09	155.82	0.6	0.5	5.455	A
5 - A1089 Dock Road	460.00	460.00	54.11	445.25	1.040	445.10	288.40	278.7	293.6	581.823	F

2022 + Comm + Av Con 1, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	3 - St Andrews Road - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout	1, 2, 3, 4, 5	346.36	F

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time period length (min)	Time segment length (min)	Run automatically
D2	2022 + Comm + Av Con 1	AM	DIRECT	07:00	08:00	60	15	✓

Vehicle mix varies over time	Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)	O-D data varies over time
✓	✓	✓	HV Percentages	2.00	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Scaling Factor (%)
1 - London Distribution Park		DIRECT	✓	100.000
2 - Dock Road		DIRECT	✓	100.000
3 - St Andrews Road		DIRECT	✓	100.000
4 - Thurrock Park Way		DIRECT	✓	100.000
5 - A1089 Dock Road		DIRECT	✓	100.000

Origin-Destination Data

Demand (Veh/TS)

07:00 - 07:15

		To				
		1 - London Distribution Park	2 - Dock Road	3 - St Andrews Road	4 - Thurrock Park Way	5 - A1089 Dock Road
From	1 - London Distribution Park	0.00	1.00	4.00	0.00	22.00
	2 - Dock Road	1.00	0.00	6.00	21.00	80.00
	3 - St Andrews Road	2.00	2.00	6.00	17.00	136.00
	4 - Thurrock Park Way	26.00	7.00	24.00	1.00	30.00
	5 - A1089 Dock Road	227.00	146.00	190.00	84.00	0.00

07:15 - 07:30

Demand (Veh/TS)

		To				
		1 - London Distribution Park	2 - Dock Road	3 - St Andrews Road	4 - Thurrock Park Way	5 - A1089 Dock Road
From	1 - London Distribution Park	0.00	0.00	1.00	1.00	19.00
	2 - Dock Road	1.00	0.00	9.00	21.00	80.00
	3 - St Andrews Road	2.00	0.00	4.00	10.00	115.00
	4 - Thurrock Park Way	11.00	4.00	29.00	3.00	33.00
	5 - A1089 Dock Road	219.00	144.00	163.00	89.00	0.00

07:30 - 07:45

Demand (Veh/TS)

		To				
		1 - London Distribution Park	2 - Dock Road	3 - St Andrews Road	4 - Thurrock Park Way	5 - A1089 Dock Road
From	1 - London Distribution Park	1.00	0.00	1.00	0.00	20.00
	2 - Dock Road	3.00	0.00	9.00	24.00	93.00
	3 - St Andrews Road	1.00	1.00	6.00	12.00	111.00
	4 - Thurrock Park Way	14.00	12.00	36.00	1.00	43.00
	5 - A1089 Dock Road	70.00	64.00	190.00	112.00	0.00

07:45 - 08:00

Demand (Veh/TS)

		To				
		1 - London Distribution Park	2 - Dock Road	3 - St Andrews Road	4 - Thurrock Park Way	5 - A1089 Dock Road
From	1 - London Distribution Park	1.00	1.00	1.00	2.00	17.00
	2 - Dock Road	1.00	0.00	4.00	21.00	93.00
	3 - St Andrews Road	1.00	1.00	3.00	18.00	137.00
	4 - Thurrock Park Way	7.00	9.00	29.00	2.00	43.00
	5 - A1089 Dock Road	69.00	62.00	221.00	112.00	0.00

Vehicle Mix

07:00 - 07:15

Heavy Vehicle Percentages

		To				
		1 - London Distribution Park	2 - Dock Road	3 - St Andrews Road	4 - Thurrock Park Way	5 - A1089 Dock Road
From	1 - London Distribution Park	0	0	75	0	80
	2 - Dock Road	0	0	0	11	6
	3 - St Andrews Road	50	0	60	0	75
	4 - Thurrock Park Way	0	17	5	0	19
	5 - A1089 Dock Road	6	4	41	13	0

07:15 - 07:30

Heavy Vehicle Percentages

		To				
		1 - London Distribution Park	2 - Dock Road	3 - St Andrews Road	4 - Thurrock Park Way	5 - A1089 Dock Road
From	1 - London Distribution Park	0	0	75	0	84
	2 - Dock Road	0	0	0	11	6
	3 - St Andrews Road	50	0	60	0	75
	4 - Thurrock Park Way	0	17	5	0	19
	5 - A1089 Dock Road	6	4	41	13	0

Heavy Vehicle Percentages

07:30 - 07:45

		To				
		1 - London Distribution Park	2 - Dock Road	3 - St Andrews Road	4 - Thurrock Park Way	5 - A1089 Dock Road
From	1 - London Distribution Park	0	0	75	0	82
	2 - Dock Road	0	0	0	11	6
	3 - St Andrews Road	50	0	60	0	76
	4 - Thurrock Park Way	0	17	5	0	19
	5 - A1089 Dock Road	18	9	41	13	0

Heavy Vehicle Percentages

07:45 - 08:00

		To				
		1 - London Distribution Park	2 - Dock Road	3 - St Andrews Road	4 - Thurrock Park Way	5 - A1089 Dock Road
From	1 - London Distribution Park	0	0	75	0	87
	2 - Dock Road	0	0	0	11	6
	3 - St Andrews Road	50	0	60	0	75
	4 - Thurrock Park Way	0	17	5	0	19
	5 - A1089 Dock Road	19	9	41	13	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/TS)	Total Junction Arrivals (Veh)
1 - London Distribution Park	0.19	9.02	0.2	A	23.00	91.99
2 - Dock Road	0.54	8.86	1.2	A	116.75	467.00
3 - St Andrews Road	0.57	7.26	1.3	A	146.25	584.99
4 - Thurrock Park Way	0.39	5.48	0.6	A	91.00	364.01
5 - A1089 Dock Road	1.37	611.75	329.0	F	544.47	2177.86

Main Results for each time segment

07:00 - 07:15

Arm	Total Demand (Veh/TS)	Junction Arrivals (Veh)	Circulating flow (Veh/TS)	Capacity (Veh/TS)	RFC	Throughput (Veh/TS)	Throughput (exit side) (Veh/TS)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - London Distribution Park	27.00	27.00	344.44	145.80	0.185	26.78	193.50	0.0	0.2	7.547	A
2 - Dock Road	108.00	108.00	255.36	279.96	0.386	107.38	115.85	0.0	0.6	5.196	A
3 - St Andrews Road	163.00	163.00	185.16	306.84	0.531	161.88	177.58	0.0	1.1	6.163	A
4 - Thurrock Park Way	88.00	88.00	247.35	263.23	0.334	87.50	99.69	0.0	0.5	5.107	A
5 - A1089 Dock Road	647.00	647.00	68.60	471.98	1.371	469.34	266.25	0.0	177.7	172.754	F

07:15 - 07:30

Arm	Total Demand (Veh/TS)	Junction Arrivals (Veh)	Circulating flow (Veh/TS)	Capacity (Veh/TS)	RFC	Throughput (Veh/TS)	Throughput (exit side) (Veh/TS)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - London Distribution Park	21.00	21.00	351.20	142.07	0.148	21.05	184.73	0.2	0.2	7.438	A
2 - Dock Road	111.00	111.00	256.90	282.32	0.393	110.98	115.35	0.6	0.6	5.252	A
3 - St Andrews Road	131.00	131.00	192.09	299.24	0.438	131.33	175.80	1.1	0.8	5.370	A
4 - Thurrock Park Way	80.00	80.00	221.30	278.70	0.287	80.09	102.12	0.5	0.4	4.535	A
5 - A1089 Dock Road	615.00	615.00	54.12	481.85	1.273	481.81	247.27	177.7	310.8	467.845	F

07:30 - 07:45

Arm	Total Demand (Veh/TS)	Junction Arrivals (Veh)	Circulating flow (Veh/TS)	Capacity (Veh/TS)	RFC	Throughput (Veh/TS)	Throughput (exit side) (Veh/TS)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - London Distribution Park	22.00	22.00	377.23	133.76	0.164	21.98	150.55	0.2	0.2	8.051	A
2 - Dock Road	129.00	129.00	292.70	262.80	0.491	128.69	106.52	0.6	1.0	6.696	A
3 - St Andrews Road	131.00	131.00	223.92	288.84	0.454	130.96	197.47	0.8	0.8	5.699	A
4 - Thurrock Park Way	106.00	106.00	235.71	270.60	0.392	105.77	119.17	0.4	0.6	5.452	A
5 - A1089 Dock Road	436.00	436.00	74.82	457.29	1.000	452.97	266.66	310.8	291.0	599.659	F

07:45 - 08:00

Arm	Total Demand (Veh/TS)	Junction Arrivals (Veh)	Circulating flow (Veh/TS)	Capacity (Veh/TS)	RFC	Throughput (Veh/TS)	Throughput (exit side) (Veh/TS)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - London Distribution Park	22.00	22.00	419.19	121.69	0.181	21.98	79.62	0.2	0.2	9.024	A
2 - Dock Road	119.00	119.00	366.91	220.10	0.541	118.80	74.26	1.0	1.2	8.865	A
3 - St Andrews Road	160.00	160.00	248.61	282.97	0.565	159.54	237.10	0.8	1.3	7.263	A
4 - Thurrock Park Way	90.00	90.00	253.42	254.47	0.354	90.09	154.73	0.6	0.6	5.477	A
5 - A1089 Dock Road	464.00	464.00	54.11	444.81	1.050	444.70	289.39	291.0	310.3	611.754	F

2022 + Comm + Peak Con 1, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	3 - St Andrews Road - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout	1, 2, 3, 4, 5	354.76	F

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time period length (min)	Time segment length (min)	Run automatically
D3	2022 + Comm + Peak Con 1	AM	DIRECT	07:00	08:00	60	15	✓

Vehicle mix varies over time	Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)	O-D data varies over time
✓	✓	✓	HV Percentages	2.00	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Scaling Factor (%)
1 - London Distribution Park		DIRECT	✓	100.000
2 - Dock Road		DIRECT	✓	100.000
3 - St Andrews Road		DIRECT	✓	100.000
4 - Thurrock Park Way		DIRECT	✓	100.000
5 - A1089 Dock Road		DIRECT	✓	100.000

Origin-Destination Data

Demand (Veh/TS)

07:00 - 07:15

		To				
		1 - London Distribution Park	2 - Dock Road	3 - St Andrews Road	4 - Thurrock Park Way	5 - A1089 Dock Road
From	1 - London Distribution Park	0.00	1.00	4.00	0.00	22.00
	2 - Dock Road	1.00	0.00	6.00	21.00	80.00
	3 - St Andrews Road	2.00	2.00	6.00	17.00	137.00
	4 - Thurrock Park Way	26.00	7.00	24.00	1.00	30.00
	5 - A1089 Dock Road	227.00	146.00	192.00	84.00	0.00

07:15 - 07:30

Demand (Veh/TS)

		To				
		1 - London Distribution Park	2 - Dock Road	3 - St Andrews Road	4 - Thurrock Park Way	5 - A1089 Dock Road
From	1 - London Distribution Park	0.00	0.00	1.00	1.00	19.00
	2 - Dock Road	1.00	0.00	9.00	21.00	80.00
	3 - St Andrews Road	2.00	0.00	4.00	10.00	116.00
	4 - Thurrock Park Way	11.00	4.00	29.00	3.00	33.00
	5 - A1089 Dock Road	219.00	144.00	165.00	89.00	0.00

07:30 - 07:45

Demand (Veh/TS)

		To				
		1 - London Distribution Park	2 - Dock Road	3 - St Andrews Road	4 - Thurrock Park Way	5 - A1089 Dock Road
From	1 - London Distribution Park	1.00	0.00	1.00	0.00	20.00
	2 - Dock Road	3.00	0.00	9.00	24.00	93.00
	3 - St Andrews Road	1.00	1.00	6.00	12.00	111.00
	4 - Thurrock Park Way	14.00	12.00	36.00	1.00	43.00
	5 - A1089 Dock Road	70.00	64.00	192.00	112.00	0.00

07:45 - 08:00

Demand (Veh/TS)

		To				
		1 - London Distribution Park	2 - Dock Road	3 - St Andrews Road	4 - Thurrock Park Way	5 - A1089 Dock Road
From	1 - London Distribution Park	1.00	1.00	1.00	2.00	17.00
	2 - Dock Road	1.00	0.00	4.00	21.00	93.00
	3 - St Andrews Road	1.00	1.00	3.00	18.00	138.00
	4 - Thurrock Park Way	7.00	9.00	29.00	2.00	43.00
	5 - A1089 Dock Road	69.00	62.00	223.00	112.00	0.00

Vehicle Mix

07:00 - 07:15

Heavy Vehicle Percentages

		To				
		1 - London Distribution Park	2 - Dock Road	3 - St Andrews Road	4 - Thurrock Park Way	5 - A1089 Dock Road
From	1 - London Distribution Park	0	0	75	0	80
	2 - Dock Road	0	0	0	11	6
	3 - St Andrews Road	50	0	60	0	74
	4 - Thurrock Park Way	0	17	5	0	19
	5 - A1089 Dock Road	6	4	41	13	0

07:15 - 07:30

Heavy Vehicle Percentages

		To				
		1 - London Distribution Park	2 - Dock Road	3 - St Andrews Road	4 - Thurrock Park Way	5 - A1089 Dock Road
From	1 - London Distribution Park	0	0	75	0	84
	2 - Dock Road	0	0	0	11	6
	3 - St Andrews Road	50	0	60	0	75
	4 - Thurrock Park Way	0	17	5	0	19
	5 - A1089 Dock Road	6	4	41	13	0

Heavy Vehicle Percentages

07:30 - 07:45

From	To	1 - London Distribution Park	2 - Dock Road	3 - St Andrews Road	4 - Thurrock Park Way	5 - A1089 Dock Road
	1 - London Distribution Park	0	0	75	0	82
	2 - Dock Road	0	0	0	11	6
	3 - St Andrews Road	50	0	60	0	75
	4 - Thurrock Park Way	0	17	5	0	19
	5 - A1089 Dock Road	18	9	41	13	0

Heavy Vehicle Percentages

07:45 - 08:00

From	To	1 - London Distribution Park	2 - Dock Road	3 - St Andrews Road	4 - Thurrock Park Way	5 - A1089 Dock Road
	1 - London Distribution Park	0	0	75	0	87
	2 - Dock Road	0	0	0	11	6
	3 - St Andrews Road	50	0	60	0	74
	4 - Thurrock Park Way	0	17	5	0	19
	5 - A1089 Dock Road	19	9	40	13	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/TS)	Total Junction Arrivals (Veh)
1 - London Distribution Park	0.19	9.03	0.2	A	23.00	91.99
2 - Dock Road	0.54	8.88	1.2	A	116.75	467.00
3 - St Andrews Road	0.57	7.23	1.3	A	147.00	587.99
4 - Thurrock Park Way	0.39	5.48	0.6	A	91.00	364.01
5 - A1089 Dock Road	1.38	625.98	336.5	F	546.30	2185.21

Main Results for each time segment

07:00 - 07:15

Arm	Total Demand (Veh/TS)	Junction Arrivals (Veh)	Circulating flow (Veh/TS)	Capacity (Veh/TS)	RFC	Throughput (Veh/TS)	Throughput (exit side) (Veh/TS)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - London Distribution Park	27.00	27.00	344.77	145.63	0.185	26.77	192.90	0.0	0.2	7.559	A
2 - Dock Road	108.00	108.00	256.08	279.49	0.386	107.38	115.46	0.0	0.6	5.210	A
3 - St Andrews Road	164.00	164.00	184.93	308.38	0.532	162.88	178.53	0.0	1.1	6.140	A
4 - Thurrock Park Way	88.00	88.00	248.34	263.07	0.335	87.50	99.47	0.0	0.5	5.112	A
5 - A1089 Dock Road	649.00	649.00	68.60	471.69	1.376	469.08	267.25	0.0	179.9	174.979	F

07:15 - 07:30

Arm	Total Demand (Veh/TS)	Junction Arrivals (Veh)	Circulating flow (Veh/TS)	Capacity (Veh/TS)	RFC	Throughput (Veh/TS)	Throughput (exit side) (Veh/TS)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - London Distribution Park	21.00	21.00	351.53	141.89	0.148	21.05	184.06	0.2	0.2	7.450	A
2 - Dock Road	111.00	111.00	257.69	281.80	0.394	110.98	114.89	0.6	0.6	5.268	A
3 - St Andrews Road	132.00	132.00	191.79	299.28	0.441	132.32	176.88	1.1	0.8	5.402	A
4 - Thurrock Park Way	80.00	80.00	222.29	277.96	0.288	80.09	101.82	0.5	0.4	4.552	A
5 - A1089 Dock Road	617.00	617.00	54.12	481.50	1.278	481.47	248.26	179.9	315.5	474.638	F

07:30 - 07:45

Arm	Total Demand (Veh/TS)	Junction Arrivals (Veh)	Circulating flow (Veh/TS)	Capacity (Veh/TS)	RFC	Throughput (Veh/TS)	Throughput (exit side) (Veh/TS)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - London Distribution Park	22.00	22.00	376.92	133.84	0.164	21.98	151.05	0.2	0.2	8.046	A
2 - Dock Road	129.00	129.00	292.29	262.96	0.491	128.70	106.62	0.6	0.9	6.688	A
3 - St Andrews Road	131.00	131.00	223.13	290.60	0.451	130.98	197.85	0.8	0.8	5.638	A
4 - Thurrock Park Way	106.00	106.00	235.73	271.05	0.391	105.77	118.38	0.4	0.6	5.437	A
5 - A1089 Dock Road	438.00	438.00	74.82	457.40	1.005	453.16	266.68	315.5	297.5	610.515	F

07:45 - 08:00

Arm	Total Demand (Veh/TS)	Junction Arrivals (Veh)	Circulating flow (Veh/TS)	Capacity (Veh/TS)	RFC	Throughput (Veh/TS)	Throughput (exit side) (Veh/TS)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - London Distribution Park	22.00	22.00	419.72	121.63	0.181	21.98	79.44	0.2	0.2	9.029	A
2 - Dock Road	119.00	119.00	367.58	219.94	0.541	118.79	74.11	0.9	1.2	8.877	A
3 - St Andrews Road	161.00	161.00	248.29	284.47	0.566	160.53	238.09	0.8	1.3	7.234	A
4 - Thurrock Park Way	90.00	90.00	254.40	254.32	0.354	90.08	154.42	0.6	0.6	5.484	A
5 - A1089 Dock Road	466.00	466.00	54.11	445.18	1.051	445.05	290.38	297.5	318.4	625.979	F

2022 + Comm + Av Con 1 + Cumu, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	3 - St Andrews Road - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout	1, 2, 3, 4, 5	499.82	F

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time period length (min)	Time segment length (min)	Run automatically
D4	2022 + Comm + Av Con 1 + Cumu	AM	DIRECT	07:00	08:00	60	15	✓

Vehicle mix varies over time	Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)	O-D data varies over time
✓	✓	✓	HV Percentages	2.00	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Scaling Factor (%)
1 - London Distribution Park		DIRECT	✓	100.000
2 - Dock Road		DIRECT	✓	100.000
3 - St Andrews Road		DIRECT	✓	100.000
4 - Thurrock Park Way		DIRECT	✓	100.000
5 - A1089 Dock Road		DIRECT	✓	100.000

Origin-Destination Data

Demand (Veh/TS)

07:00 - 07:15

		To				
		1 - London Distribution Park	2 - Dock Road	3 - St Andrews Road	4 - Thurrock Park Way	5 - A1089 Dock Road
From	1 - London Distribution Park	0.00	1.00	4.00	0.00	22.00
	2 - Dock Road	1.00	0.00	6.00	21.00	82.00
	3 - St Andrews Road	2.00	2.00	6.00	17.00	139.00
	4 - Thurrock Park Way	26.00	7.00	24.00	1.00	30.00
	5 - A1089 Dock Road	227.00	146.00	190.00	126.00	0.00

07:15 - 07:30

Demand (Veh/TS)

		To				
		1 - London Distribution Park	2 - Dock Road	3 - St Andrews Road	4 - Thurrock Park Way	5 - A1089 Dock Road
From	1 - London Distribution Park	0.00	0.00	1.00	1.00	19.00
	2 - Dock Road	1.00	0.00	9.00	21.00	82.00
	3 - St Andrews Road	2.00	0.00	4.00	10.00	118.00
	4 - Thurrock Park Way	11.00	4.00	29.00	3.00	34.00
	5 - A1089 Dock Road	219.00	145.00	163.00	132.00	0.00

07:30 - 07:45

Demand (Veh/TS)

		To				
		1 - London Distribution Park	2 - Dock Road	3 - St Andrews Road	4 - Thurrock Park Way	5 - A1089 Dock Road
From	1 - London Distribution Park	1.00	0.00	1.00	0.00	20.00
	2 - Dock Road	3.00	0.00	9.00	24.00	95.00
	3 - St Andrews Road	1.00	1.00	6.00	12.00	114.00
	4 - Thurrock Park Way	14.00	12.00	36.00	1.00	44.00
	5 - A1089 Dock Road	70.00	64.00	190.00	154.00	0.00

07:45 - 08:00

Demand (Veh/TS)

		To				
		1 - London Distribution Park	2 - Dock Road	3 - St Andrews Road	4 - Thurrock Park Way	5 - A1089 Dock Road
From	1 - London Distribution Park	1.00	1.00	1.00	2.00	17.00
	2 - Dock Road	1.00	0.00	4.00	21.00	95.00
	3 - St Andrews Road	1.00	1.00	3.00	18.00	141.00
	4 - Thurrock Park Way	7.00	9.00	29.00	2.00	44.00
	5 - A1089 Dock Road	69.00	62.00	221.00	154.00	0.00

Vehicle Mix

07:00 - 07:15

Heavy Vehicle Percentages

		To				
		1 - London Distribution Park	2 - Dock Road	3 - St Andrews Road	4 - Thurrock Park Way	5 - A1089 Dock Road
From	1 - London Distribution Park	0	0	75	0	80
	2 - Dock Road	0	0	0	11	6
	3 - St Andrews Road	50	0	60	0	75
	4 - Thurrock Park Way	0	17	5	0	19
	5 - A1089 Dock Road	6	4	41	12	0

07:15 - 07:30

Heavy Vehicle Percentages

		To				
		1 - London Distribution Park	2 - Dock Road	3 - St Andrews Road	4 - Thurrock Park Way	5 - A1089 Dock Road
From	1 - London Distribution Park	0	0	75	0	84
	2 - Dock Road	0	0	0	11	6
	3 - St Andrews Road	50	0	60	0	76
	4 - Thurrock Park Way	0	17	5	0	19
	5 - A1089 Dock Road	6	4	41	12	0

Heavy Vehicle Percentages

07:30 - 07:45

		To				
		1 - London Distribution Park	2 - Dock Road	3 - St Andrews Road	4 - Thurrock Park Way	5 - A1089 Dock Road
From	1 - London Distribution Park	0	0	75	0	82
	2 - Dock Road	0	0	0	11	6
	3 - St Andrews Road	50	0	60	0	76
	4 - Thurrock Park Way	0	17	5	0	19
	5 - A1089 Dock Road	18	9	41	12	0

Heavy Vehicle Percentages

07:45 - 08:00

		To				
		1 - London Distribution Park	2 - Dock Road	3 - St Andrews Road	4 - Thurrock Park Way	5 - A1089 Dock Road
From	1 - London Distribution Park	0	0	75	0	87
	2 - Dock Road	0	0	0	11	6
	3 - St Andrews Road	50	0	60	0	75
	4 - Thurrock Park Way	0	17	5	0	19
	5 - A1089 Dock Road	19	9	41	12	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/TS)	Total Junction Arrivals (Veh)
1 - London Distribution Park	0.19	9.15	0.2	A	23.00	91.99
2 - Dock Road	0.56	9.38	1.2	A	118.75	475.00
3 - St Andrews Road	0.61	8.41	1.5	A	149.50	597.99
4 - Thurrock Park Way	0.40	5.64	0.7	A	91.75	367.01
5 - A1089 Dock Road	1.45	865.44	486.7	F	589.32	2357.30

Main Results for each time segment

07:00 - 07:15

Arm	Total Demand (Veh/TS)	Junction Arrivals (Veh)	Circulating flow (Veh/TS)	Capacity (Veh/TS)	RFC	Throughput (Veh/TS)	Throughput (exit side) (Veh/TS)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - London Distribution Park	27.00	27.00	355.91	143.08	0.189	26.77	184.17	0.0	0.2	7.720	A
2 - Dock Road	110.00	110.00	272.83	272.72	0.403	109.33	109.85	0.0	0.7	5.487	A
3 - St Andrews Road	166.00	166.00	212.40	296.31	0.560	164.75	169.77	0.0	1.3	6.778	A
4 - Thurrock Park Way	88.00	88.00	252.18	260.16	0.338	87.49	124.96	0.0	0.5	5.198	A
5 - A1089 Dock Road	689.00	689.00	68.58	473.66	1.455	471.49	271.09	0.0	217.5	209.249	F

07:15 - 07:30

Arm	Total Demand (Veh/TS)	Junction Arrivals (Veh)	Circulating flow (Veh/TS)	Capacity (Veh/TS)	RFC	Throughput (Veh/TS)	Throughput (exit side) (Veh/TS)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - London Distribution Park	21.00	21.00	363.28	139.17	0.151	21.05	174.05	0.2	0.2	7.622	A
2 - Dock Road	113.00	113.00	275.74	274.32	0.412	112.97	108.60	0.7	0.7	5.578	A
3 - St Andrews Road	134.00	134.00	220.00	287.23	0.467	134.37	168.71	1.3	0.9	5.901	A
4 - Thurrock Park Way	81.00	81.00	226.33	274.77	0.295	81.09	128.04	0.5	0.4	4.650	A
5 - A1089 Dock Road	659.00	659.00	54.13	483.23	1.359	483.20	253.29	217.5	393.3	579.908	F

07:30 - 07:45

Arm	Total Demand (Veh/TS)	Junction Arrivals (Veh)	Circulating flow (Veh/TS)	Capacity (Veh/TS)	RFC	Throughput (Veh/TS)	Throughput (exit side) (Veh/TS)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - London Distribution Park	22.00	22.00	380.75	134.64	0.163	21.99	158.96	0.2	0.2	7.988	A
2 - Dock Road	131.00	131.00	293.74	265.09	0.494	130.73	109.00	0.7	1.0	6.685	A
3 - St Andrews Road	134.00	134.00	246.14	280.40	0.478	133.98	178.33	0.9	0.9	6.144	A
4 - Thurrock Park Way	107.00	107.00	240.76	267.26	0.400	106.76	139.36	0.4	0.7	5.599	A
5 - A1089 Dock Road	478.00	478.00	74.82	466.73	1.084	464.90	272.70	393.3	404.7	783.912	F

07:45 - 08:00

Arm	Total Demand (Veh/TS)	Junction Arrivals (Veh)	Circulating flow (Veh/TS)	Capacity (Veh/TS)	RFC	Throughput (Veh/TS)	Throughput (exit side) (Veh/TS)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - London Distribution Park	22.00	22.00	429.47	120.34	0.183	21.97	75.62	0.2	0.2	9.146	A
2 - Dock Road	121.00	121.00	380.58	216.33	0.559	120.72	70.86	1.0	1.2	9.382	A
3 - St Andrews Road	164.00	164.00	283.14	269.77	0.608	163.39	218.16	0.9	1.5	8.412	A
4 - Thurrock Park Way	91.00	91.00	259.22	250.61	0.363	91.09	187.32	0.7	0.6	5.644	A
5 - A1089 Dock Road	506.00	506.00	54.11	451.01	1.132	450.98	296.19	404.7	459.7	865.438	F

2022 + Comm + Peak Con 1 + Cumu, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	3 - St Andrews Road - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout	1, 2, 3, 4, 5	508.68	F

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time period length (min)	Time segment length (min)	Run automatically
D5	2022 + Comm + Peak Con 1 + Cumu	AM	DIRECT	07:00	08:00	60	15	✓

Vehicle mix varies over time	Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)	O-D data varies over time
✓	✓	✓	HV Percentages	2.00	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Scaling Factor (%)
1 - London Distribution Park		DIRECT	✓	100.000
2 - Dock Road		DIRECT	✓	100.000
3 - St Andrews Road		DIRECT	✓	100.000
4 - Thurrock Park Way		DIRECT	✓	100.000
5 - A1089 Dock Road		DIRECT	✓	100.000

Origin-Destination Data

Demand (Veh/TS)

07:00 - 07:15

		To				
		1 - London Distribution Park	2 - Dock Road	3 - St Andrews Road	4 - Thurrock Park Way	5 - A1089 Dock Road
From	1 - London Distribution Park	0.00	1.00	4.00	0.00	22.00
	2 - Dock Road	1.00	0.00	6.00	21.00	82.00
	3 - St Andrews Road	2.00	2.00	6.00	17.00	140.00
	4 - Thurrock Park Way	26.00	7.00	24.00	1.00	30.00
	5 - A1089 Dock Road	227.00	146.00	192.00	126.00	0.00

07:15 - 07:30

Demand (Veh/TS)

		To				
		1 - London Distribution Park	2 - Dock Road	3 - St Andrews Road	4 - Thurrock Park Way	5 - A1089 Dock Road
From	1 - London Distribution Park	0.00	0.00	1.00	1.00	19.00
	2 - Dock Road	1.00	0.00	9.00	21.00	82.00
	3 - St Andrews Road	2.00	0.00	4.00	10.00	119.00
	4 - Thurrock Park Way	11.00	4.00	29.00	3.00	34.00
	5 - A1089 Dock Road	219.00	145.00	165.00	132.00	0.00

07:30 - 07:45

Demand (Veh/TS)

		To				
		1 - London Distribution Park	2 - Dock Road	3 - St Andrews Road	4 - Thurrock Park Way	5 - A1089 Dock Road
From	1 - London Distribution Park	1.00	0.00	1.00	0.00	20.00
	2 - Dock Road	3.00	0.00	9.00	24.00	95.00
	3 - St Andrews Road	1.00	1.00	6.00	12.00	114.00
	4 - Thurrock Park Way	14.00	12.00	36.00	1.00	44.00
	5 - A1089 Dock Road	70.00	64.00	192.00	154.00	0.00

07:45 - 08:00

Demand (Veh/TS)

		To				
		1 - London Distribution Park	2 - Dock Road	3 - St Andrews Road	4 - Thurrock Park Way	5 - A1089 Dock Road
From	1 - London Distribution Park	1.00	1.00	1.00	2.00	17.00
	2 - Dock Road	1.00	0.00	4.00	21.00	95.00
	3 - St Andrews Road	1.00	1.00	3.00	18.00	141.00
	4 - Thurrock Park Way	7.00	9.00	29.00	2.00	44.00
	5 - A1089 Dock Road	69.00	62.00	223.00	154.00	0.00

Vehicle Mix

07:00 - 07:15

Heavy Vehicle Percentages

		To				
		1 - London Distribution Park	2 - Dock Road	3 - St Andrews Road	4 - Thurrock Park Way	5 - A1089 Dock Road
From	1 - London Distribution Park	0	0	75	0	80
	2 - Dock Road	0	0	0	11	6
	3 - St Andrews Road	50	0	60	0	75
	4 - Thurrock Park Way	0	17	5	0	19
	5 - A1089 Dock Road	6	4	41	12	0

07:15 - 07:30

Heavy Vehicle Percentages

		To				
		1 - London Distribution Park	2 - Dock Road	3 - St Andrews Road	4 - Thurrock Park Way	5 - A1089 Dock Road
From	1 - London Distribution Park	0	0	75	0	84
	2 - Dock Road	0	0	0	11	6
	3 - St Andrews Road	50	0	60	0	76
	4 - Thurrock Park Way	0	17	5	0	19
	5 - A1089 Dock Road	6	4	41	12	0

07:30 - 07:45

Heavy Vehicle Percentages

		To				
		1 - London Distribution Park	2 - Dock Road	3 - St Andrews Road	4 - Thurrock Park Way	5 - A1089 Dock Road
From	1 - London Distribution Park	0	0	75	0	87
	2 - Dock Road	0	0	0	11	6
	3 - St Andrews Road	50	0	60	0	76
	4 - Thurrock Park Way	0	17	5	0	19
	5 - A1089 Dock Road	18	9	41	12	0

07:45 - 08:00

Heavy Vehicle Percentages

		To				
		1 - London Distribution Park	2 - Dock Road	3 - St Andrews Road	4 - Thurrock Park Way	5 - A1089 Dock Road
From	1 - London Distribution Park	0	0	75	0	87
	2 - Dock Road	0	0	0	11	6
	3 - St Andrews Road	50	0	60	0	75
	4 - Thurrock Park Way	0	17	5	0	19
	5 - A1089 Dock Road	19	9	40	12	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/TS)	Total Junction Arrivals (Veh)
1 - London Distribution Park	0.19	9.16	0.2	A	23.00	91.99
2 - Dock Road	0.56	9.40	1.2	A	118.75	475.00
3 - St Andrews Road	0.61	8.40	1.5	A	150.00	599.99
4 - Thurrock Park Way	0.40	5.65	0.7	A	91.75	367.01
5 - A1089 Dock Road	1.46	880.50	494.1	F	591.06	2364.25

Main Results for each time segment

07:00 - 07:15

Arm	Total Demand (Veh/TS)	Junction Arrivals (Veh)	Circulating flow (Veh/TS)	Capacity (Veh/TS)	RFC	Throughput (Veh/TS)	Throughput (exit side) (Veh/TS)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - London Distribution Park	27.00	27.00	356.18	142.92	0.189	26.77	183.63	0.0	0.2	7.731	A
2 - Dock Road	110.00	110.00	273.45	272.31	0.404	109.33	109.50	0.0	0.7	5.501	A
3 - St Andrews Road	167.00	167.00	212.10	296.32	0.564	165.73	170.68	0.0	1.3	6.827	A
4 - Thurrock Park Way	88.00	88.00	253.17	259.42	0.339	87.49	124.66	0.0	0.5	5.220	A
5 - A1089 Dock Road	691.00	691.00	68.58	473.37	1.460	471.22	272.07	0.0	219.8	211.492	F

07:15 - 07:30

Arm	Total Demand (Veh/TS)	Junction Arrivals (Veh)	Circulating flow (Veh/TS)	Capacity (Veh/TS)	RFC	Throughput (Veh/TS)	Throughput (exit side) (Veh/TS)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - London Distribution Park	21.00	21.00	363.54	139.01	0.151	21.05	173.46	0.2	0.2	7.632	A
2 - Dock Road	113.00	113.00	276.40	273.87	0.413	112.97	108.19	0.7	0.7	5.594	A
3 - St Andrews Road	135.00	135.00	219.62	287.29	0.470	135.37	169.75	1.3	0.9	5.940	A
4 - Thurrock Park Way	81.00	81.00	227.33	274.02	0.296	81.09	127.66	0.5	0.4	4.668	A
5 - A1089 Dock Road	661.00	661.00	54.13	482.90	1.364	482.88	254.29	219.8	397.9	586.624	F

07:30 - 07:45

Arm	Total Demand (Veh/TS)	Junction Arrivals (Veh)	Circulating flow (Veh/TS)	Capacity (Veh/TS)	RFC	Throughput (Veh/TS)	Throughput (exit side) (Veh/TS)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - London Distribution Park	22.00	22.00	380.46	131.38	0.167	21.98	159.47	0.2	0.2	8.227	A
2 - Dock Road	131.00	131.00	293.32	264.80	0.495	130.73	109.12	0.7	1.0	6.699	A
3 - St Andrews Road	134.00	134.00	245.28	280.39	0.478	133.99	178.77	0.9	0.9	6.147	A
4 - Thurrock Park Way	107.00	107.00	240.76	266.84	0.401	106.76	138.51	0.4	0.7	5.614	A
5 - A1089 Dock Road	480.00	480.00	74.82	466.84	1.089	465.11	272.71	397.9	411.1	794.840	F

07:45 - 08:00

Arm	Total Demand (Veh/TS)	Junction Arrivals (Veh)	Circulating flow (Veh/TS)	Capacity (Veh/TS)	RFC	Throughput (Veh/TS)	Throughput (exit side) (Veh/TS)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - London Distribution Park	22.00	22.00	429.62	120.25	0.183	21.98	75.41	0.2	0.2	9.156	A
2 - Dock Road	121.00	121.00	380.92	216.13	0.560	120.72	70.68	1.0	1.2	9.403	A
3 - St Andrews Road	164.00	164.00	282.65	269.96	0.607	163.40	218.99	0.9	1.5	8.397	A
4 - Thurrock Park Way	91.00	91.00	259.22	250.60	0.363	91.09	186.82	0.7	0.6	5.647	A
5 - A1089 Dock Road	508.00	508.00	54.11	450.95	1.133	450.92	296.20	411.1	468.2	880.496	F

Junctions 9

ARCADY 9 - Roundabout Module

Version: 9.0.2.5947

Filename: Asda Roundabout Mit 0800-0900.j9
Path: P:\JNY9639 - Thurrock Generation Plant\Transport\Arcady
Report generation date: 30/01/2020 14:42:14

Summary of junction performance

	AM		
	Queue (Veh)	Delay (s)	RFC
	2022 + Comm		
1 - London Distribution Park	0.3	11.18	0.24
2 - Dock Road	2.8	15.47	0.75
3 - St Andrews Road	1.2	7.57	0.55
4 - Thurrock Park Way	0.9	6.68	0.48
5 - A1089 Dock Road	54.0	88.77	1.09
	2022 + Comm + Av Con 1		
1 - London Distribution Park	0.3	11.19	0.24
2 - Dock Road	2.9	15.64	0.75
3 - St Andrews Road	1.3	7.64	0.56
4 - Thurrock Park Way	0.9	6.74	0.49
5 - A1089 Dock Road	55.3	93.86	1.09
	2022 + Comm + Peak Con 1		
1 - London Distribution Park	0.3	11.22	0.24
2 - Dock Road	2.9	15.96	0.76
3 - St Andrews Road	1.3	7.71	0.56
4 - Thurrock Park Way	0.9	6.78	0.49
5 - A1089 Dock Road	58.4	100.90	1.10
	2022 + Comm + Av Con 2		
1 - London Distribution Park	0.3	11.23	0.24
2 - Dock Road	2.9	15.68	0.75
3 - St Andrews Road	1.3	7.65	0.56
4 - Thurrock Park Way	0.9	6.75	0.49
5 - A1089 Dock Road	55.0	91.59	1.09
	2022 + Comm + P Con 2		

1 - London Distribution Park	0.3	11.27	0.24
2 - Dock Road	2.9	15.89	0.76
3 - St Andrews Road	1.3	7.74	0.56
4 - Thurrock Park Way	0.9	6.77	0.49
5 - A1089 Dock Road	56.0	94.41	1.09
	2022 + Comm + Av Con 1 + Cumu		
1 - London Distribution Park	0.3	11.45	0.26
2 - Dock Road	3.8	20.25	0.81
3 - St Andrews Road	1.5	8.89	0.60
4 - Thurrock Park Way	1.0	7.06	0.50
5 - A1089 Dock Road	107.1	221.35	1.16
	2022 + Comm + P Con 1 + Cumu		
1 - London Distribution Park	0.3	11.46	0.26
2 - Dock Road	3.9	20.53	0.81
3 - St Andrews Road	1.5	8.97	0.60
4 - Thurrock Park Way	1.0	7.10	0.51
5 - A1089 Dock Road	112.8	232.84	1.17
	2022 + Comm + Av Con 2 + Cumu		
1 - London Distribution Park	0.3	11.48	0.26
2 - Dock Road	3.8	20.36	0.81
3 - St Andrews Road	1.5	8.91	0.60
4 - Thurrock Park Way	1.0	7.06	0.50
5 - A1089 Dock Road	106.6	221.01	1.16
	2022 + Comm + P Con 2 + Cumu		
1 - London Distribution Park	0.3	11.52	0.26
2 - Dock Road	3.9	20.63	0.81
3 - St Andrews Road	1.5	9.02	0.61
4 - Thurrock Park Way	1.0	7.11	0.51
5 - A1089 Dock Road	107.3	222.61	1.17

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	(untitled)
Location	
Site number	
Date	26/07/2019
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	EUR\Joanna.gunn
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	Veh	Veh	perTimeSegment	s	-Min	perMin

Analysis Options

Vehicle length (m)	Calculate Queue Percentiles	Calculate detailed queueing delay	Calculate residual capacity	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)
5.75				0.85	36.00	20.00

Demand Set Summary

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time period length (min)	Time segment length (min)	Run automatically
D1	2022 + Comm	AM	DIRECT	08:15	09:15	60	15	✓
D2	2022 + Comm + Av Con 1	AM	DIRECT	08:15	09:15	60	15	✓
D3	2022 + Comm + Peak Con 1	AM	DIRECT	08:15	09:15	60	15	✓
D4	2022 + Comm + Av Con 2	AM	DIRECT	08:15	09:15	60	15	✓
D5	2022 + Comm + P Con 2	AM	DIRECT	08:15	09:15	60	15	✓
D6	2022 + Comm + Av Con 1 + Cumu	AM	DIRECT	08:15	09:15	60	15	✓
D7	2022 + Comm + P Con 1 + Cumu	AM	DIRECT	08:15	09:15	60	15	✓
D8	2022 + Comm + Av Con 2 + Cumu	AM	DIRECT	08:15	09:15	60	15	✓
D9	2022 + Comm + P Con 2 + Cumu	AM	DIRECT	08:15	09:15	60	15	✓

Analysis Set Details

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

2022 + Comm, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	3 - St Andrews Road - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout	1, 2, 3, 4, 5	48.25	E

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Name	Description
1	London Distribution Park	
2	Dock Road	
3	St Andrews Road	
4	Thurrock Park Way	
5	A1089 Dock Road	

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)	Exit only
1 - London Distribution Park	3.50	8.60	15.0	45.0	116.0	38.0	
2 - Dock Road	3.70	7.30	22.5	21.0	116.0	32.0	
3 - St Andrews Road	7.42	8.11	37.0	36.0	116.0	27.0	
4 - Thurrock Park Way	3.70	9.00	13.5	45.0	116.0	34.0	
5 - A1089 Dock Road	7.45	7.45	0.0	60.0	116.0	25.0	

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Final slope	Final intercept (PCU/TS)
1 - London Distribution Park	0.460	449.879
2 - Dock Road	0.464	458.508
3 - St Andrews Road	0.568	631.041
4 - Thurrock Park Way	0.471	464.299
5 - A1089 Dock Road	0.550	592.526

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 period length (min)	Time segment length (min)	Run automatically
D1	2022 + Comm	AM	DIRECT	08:15	09:15	60	15	✓

Vehicle mix varies over time	Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)	O-D data varies over time
✓	✓	✓	HV Percentages	2.00	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Scaling Factor (%)
1 - London Distribution Park		DIRECT	✓	100.000
2 - Dock Road		DIRECT	✓	100.000
3 - St Andrews Road		DIRECT	✓	100.000
4 - Thurrock Park Way		DIRECT	✓	100.000
5 - A1089 Dock Road		DIRECT	✓	100.000

Origin-Destination Data

08:15 - 08:30

Demand (Veh/TS)

		To				
		1 - London Distribution Park	2 - Dock Road	3 - St Andrews Road	4 - Thurrock Park Way	5 - A1089 Dock Road
From	1 - London Distribution Park	0.00	1.00	3.00	1.00	21.00
	2 - Dock Road	0.00	0.00	7.00	22.00	99.00
	3 - St Andrews Road	0.00	4.00	7.00	19.00	122.00
	4 - Thurrock Park Way	6.00	18.00	32.00	2.00	67.00
	5 - A1089 Dock Road	43.00	78.00	158.00	128.00	0.00

08:30 - 08:45

Demand (Veh/TS)

		To				
		1 - London Distribution Park	2 - Dock Road	3 - St Andrews Road	4 - Thurrock Park Way	5 - A1089 Dock Road
From	1 - London Distribution Park	0.00	1.00	3.00	4.00	21.00
	2 - Dock Road	1.00	0.00	7.00	42.00	116.00
	3 - St Andrews Road	1.00	3.00	2.00	23.00	117.00
	4 - Thurrock Park Way	0.00	12.00	29.00	1.00	68.00
	5 - A1089 Dock Road	37.00	63.00	196.00	114.00	0.00

08:45 - 09:00

Demand (Veh/TS)

		To				
		1 - London Distribution Park	2 - Dock Road	3 - St Andrews Road	4 - Thurrock Park Way	5 - A1089 Dock Road
From	1 - London Distribution Park	0.00	1.00	1.00	1.00	21.00
	2 - Dock Road	1.00	0.00	7.00	46.00	75.00
	3 - St Andrews Road	1.00	0.00	6.00	17.00	113.00
	4 - Thurrock Park Way	2.00	29.00	30.00	2.00	60.00
	5 - A1089 Dock Road	40.00	82.00	199.00	153.00	0.00

Demand (Veh/TS)

09:00 - 09:15

		To				
		1 - London Distribution Park	2 - Dock Road	3 - St Andrews Road	4 - Thurrock Park Way	5 - A1089 Dock Road
From	1 - London Distribution Park	0.00	2.00	1.00	3.00	21.00
	2 - Dock Road	0.00	0.00	3.00	30.00	57.00
	3 - St Andrews Road	0.00	8.00	3.00	29.00	119.00
	4 - Thurrock Park Way	3.00	27.00	24.00	1.00	63.00
	5 - A1089 Dock Road	40.00	83.00	158.00	125.00	0.00

Vehicle Mix

Heavy Vehicle Percentages

08:15 - 08:30

		To				
		1 - London Distribution Park	2 - Dock Road	3 - St Andrews Road	4 - Thurrock Park Way	5 - A1089 Dock Road
From	1 - London Distribution Park	0	15	78	17	89
	2 - Dock Road	0	0	13	5	4
	3 - St Andrews Road	0	4	50	7	80
	4 - Thurrock Park Way	15	4	7	8	16
	5 - A1089 Dock Road	48	4	47	6	0

Heavy Vehicle Percentages

08:30 - 08:45

		To				
		1 - London Distribution Park	2 - Dock Road	3 - St Andrews Road	4 - Thurrock Park Way	5 - A1089 Dock Road
From	1 - London Distribution Park	0	15	78	17	89
	2 - Dock Road	38	0	13	5	4
	3 - St Andrews Road	88	4	50	7	81
	4 - Thurrock Park Way	0	4	7	8	16
	5 - A1089 Dock Road	50	4	46	6	0

Heavy Vehicle Percentages

08:45 - 09:00

		To				
		1 - London Distribution Park	2 - Dock Road	3 - St Andrews Road	4 - Thurrock Park Way	5 - A1089 Dock Road
From	1 - London Distribution Park	0	15	78	17	89
	2 - Dock Road	38	0	13	5	4
	3 - St Andrews Road	88	0	50	7	81
	4 - Thurrock Park Way	15	4	7	8	16
	5 - A1089 Dock Road	49	4	46	6	0

Heavy Vehicle Percentages

09:00 - 09:15

		To				
		1 - London Distribution Park	2 - Dock Road	3 - St Andrews Road	4 - Thurrock Park Way	5 - A1089 Dock Road
From	1 - London Distribution Park	0	15	78	17	89
	2 - Dock Road	0	0	13	5	4
	3 - St Andrews Road	0	4	50	7	81
	4 - Thurrock Park Way	15	4	7	8	16
	5 - A1089 Dock Road	49	4	47	6	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/TS)	Total Junction Arrivals (Veh)
1 - London Distribution Park	0.24	11.18	0.3	B	26.50	105.99
2 - Dock Road	0.75	15.47	2.8	C	128.25	513.01
3 - St Andrews Road	0.55	7.57	1.2	A	148.50	593.99
4 - Thurrock Park Way	0.48	6.68	0.9	A	119.00	476.01
5 - A1089 Dock Road	1.09	88.77	54.0	F	424.20	1696.79

Main Results for each time segment

08:15 - 08:30

Arm	Total Demand (Veh/TS)	Junction Arrivals (Veh)	Circulating flow (Veh/TS)	Capacity (Veh/TS)	RFC	Throughput (Veh/TS)	Throughput (exit side) (Veh/TS)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - London Distribution Park	26.00	26.00	417.66	118.83	0.219	25.72	47.91	0.0	0.3	9.639	A
2 - Dock Road	128.00	128.00	344.46	237.99	0.538	126.86	98.92	0.0	1.1	8.019	A
3 - St Andrews Road	152.00	152.00	268.55	275.12	0.552	150.79	202.76	0.0	1.2	7.172	A
4 - Thurrock Park Way	125.00	125.00	250.83	257.85	0.485	124.07	168.51	0.0	0.9	6.683	A
5 - A1089 Dock Road	407.00	407.00	68.48	437.14	0.931	397.08	306.42	0.0	9.9	19.224	C

08:30 - 08:45

Arm	Total Demand (Veh/TS)	Junction Arrivals (Veh)	Circulating flow (Veh/TS)	Capacity (Veh/TS)	RFC	Throughput (Veh/TS)	Throughput (exit side) (Veh/TS)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - London Distribution Park	29.00	29.00	418.18	119.87	0.242	28.96	39.00	0.3	0.3	9.895	A
2 - Dock Road	166.00	166.00	368.01	220.87	0.752	164.31	79.13	1.1	2.8	15.471	C
3 - St Andrews Road	146.00	146.00	297.15	264.93	0.551	146.00	235.17	1.2	1.2	7.566	A
4 - Thurrock Park Way	110.00	110.00	259.92	254.04	0.433	110.16	183.23	0.9	0.8	6.263	A
5 - A1089 Dock Road	410.00	410.00	49.17	437.19	0.938	408.01	320.92	9.9	11.9	27.802	D

08:45 - 09:00

Arm	Total Demand (Veh/TS)	Junction Arrivals (Veh)	Circulating flow (Veh/TS)	Capacity (Veh/TS)	RFC	Throughput (Veh/TS)	Throughput (exit side) (Veh/TS)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - London Distribution Park	24.00	24.00	462.08	104.51	0.230	24.01	40.49	0.3	0.3	11.182	B
2 - Dock Road	129.00	129.00	381.72	216.07	0.597	130.31	104.37	2.8	1.5	10.649	B
3 - St Andrews Road	137.00	137.00	286.07	263.89	0.519	137.12	225.96	1.2	1.1	7.109	A
4 - Thurrock Park Way	123.00	123.00	218.13	276.23	0.445	122.98	205.06	0.8	0.8	5.872	A
5 - A1089 Dock Road	474.00	474.00	70.89	435.32	1.088	431.68	270.22	11.9	54.2	78.420	F

09:00 - 09:15

Arm	Total Demand (Veh/TS)	Junction Arrivals (Veh)	Circulating flow (Veh/TS)	Capacity (Veh/TS)	RFC	Throughput (Veh/TS)	Throughput (exit side) (Veh/TS)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - London Distribution Park	27.00	27.00	453.09	112.64	0.240	26.99	44.80	0.3	0.3	10.505	B
2 - Dock Road	90.00	90.00	356.55	230.88	0.390	90.88	123.53	1.5	0.6	6.469	A
3 - St Andrews Road	159.00	159.00	246.59	290.27	0.548	158.91	200.84	1.1	1.2	6.844	A
4 - Thurrock Park Way	118.00	118.00	208.51	278.37	0.424	118.05	196.99	0.8	0.7	5.617	A
5 - A1089 Dock Road	406.00	406.00	66.06	439.80	0.923	431.83	260.50	54.2	28.4	88.767	F

2022 + Comm + Av Con 1, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	3 - St Andrews Road - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout	1, 2, 3, 4, 5	50.79	F

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time period length (min)	Time segment length (min)	Run automatically
D2	2022 + Comm + Av Con 1	AM	DIRECT	08:15	09:15	60	15	✓

Vehicle mix varies over time	Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)	O-D data varies over time
✓	✓	✓	HV Percentages	2.00	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Scaling Factor (%)
1 - London Distribution Park		DIRECT	✓	100.000
2 - Dock Road		DIRECT	✓	100.000
3 - St Andrews Road		DIRECT	✓	100.000
4 - Thurrock Park Way		DIRECT	✓	100.000
5 - A1089 Dock Road		DIRECT	✓	100.000

Origin-Destination Data

Demand (Veh/TS)

08:15 - 08:30

		To				
		1 - London Distribution Park	2 - Dock Road	3 - St Andrews Road	4 - Thurrock Park Way	5 - A1089 Dock Road
From	1 - London Distribution Park	0.00	1.00	3.00	1.00	21.00
	2 - Dock Road	0.00	0.00	7.00	22.00	99.00
	3 - St Andrews Road	0.00	4.00	7.00	19.00	123.00
	4 - Thurrock Park Way	6.00	18.00	32.00	2.00	67.00
	5 - A1089 Dock Road	43.00	78.00	159.00	128.00	0.00

08:30 - 08:45

Demand (Veh/TS)

		To				
		1 - London Distribution Park	2 - Dock Road	3 - St Andrews Road	4 - Thurrock Park Way	5 - A1089 Dock Road
From	1 - London Distribution Park	0.00	1.00	3.00	4.00	21.00
	2 - Dock Road	1.00	0.00	7.00	42.00	116.00
	3 - St Andrews Road	1.00	3.00	2.00	23.00	118.00
	4 - Thurrock Park Way	0.00	12.00	29.00	1.00	68.00
	5 - A1089 Dock Road	37.00	63.00	197.00	114.00	0.00

08:45 - 09:00

Demand (Veh/TS)

		To				
		1 - London Distribution Park	2 - Dock Road	3 - St Andrews Road	4 - Thurrock Park Way	5 - A1089 Dock Road
From	1 - London Distribution Park	0.00	1.00	1.00	1.00	21.00
	2 - Dock Road	1.00	0.00	7.00	46.00	75.00
	3 - St Andrews Road	1.00	0.00	6.00	17.00	114.00
	4 - Thurrock Park Way	2.00	29.00	30.00	2.00	60.00
	5 - A1089 Dock Road	40.00	82.00	200.00	153.00	0.00

09:00 - 09:15

Demand (Veh/TS)

		To				
		1 - London Distribution Park	2 - Dock Road	3 - St Andrews Road	4 - Thurrock Park Way	5 - A1089 Dock Road
From	1 - London Distribution Park	0.00	2.00	1.00	3.00	21.00
	2 - Dock Road	0.00	0.00	3.00	30.00	57.00
	3 - St Andrews Road	0.00	8.00	3.00	29.00	120.00
	4 - Thurrock Park Way	3.00	27.00	24.00	1.00	63.00
	5 - A1089 Dock Road	40.00	83.00	159.00	125.00	0.00

Vehicle Mix

08:15 - 08:30

Heavy Vehicle Percentages

		To				
		1 - London Distribution Park	2 - Dock Road	3 - St Andrews Road	4 - Thurrock Park Way	5 - A1089 Dock Road
From	1 - London Distribution Park	0	15	78	17	89
	2 - Dock Road	0	0	13	5	4
	3 - St Andrews Road	0	4	50	7	81
	4 - Thurrock Park Way	15	4	7	8	16
	5 - A1089 Dock Road	48	4	48	6	0

08:30 - 08:45

Heavy Vehicle Percentages

		To				
		1 - London Distribution Park	2 - Dock Road	3 - St Andrews Road	4 - Thurrock Park Way	5 - A1089 Dock Road
From	1 - London Distribution Park	0	15	78	17	89
	2 - Dock Road	38	0	13	5	4
	3 - St Andrews Road	88	4	50	7	81
	4 - Thurrock Park Way	0	4	7	8	16
	5 - A1089 Dock Road	50	4	46	6	0

08:45 - 09:00

Heavy Vehicle Percentages

		To				
		1 - London Distribution Park	2 - Dock Road	3 - St Andrews Road	4 - Thurrock Park Way	5 - A1089 Dock Road
From	1 - London Distribution Park	0	15	78	17	89
	2 - Dock Road	38	0	13	5	4
	3 - St Andrews Road	88	0	50	7	81
	4 - Thurrock Park Way	15	4	7	8	16
	5 - A1089 Dock Road	49	4	46	6	0

09:00 - 09:15

Heavy Vehicle Percentages

		To				
		1 - London Distribution Park	2 - Dock Road	3 - St Andrews Road	4 - Thurrock Park Way	5 - A1089 Dock Road
From	1 - London Distribution Park	0	15	78	17	89
	2 - Dock Road	0	0	13	5	4
	3 - St Andrews Road	0	4	50	7	81
	4 - Thurrock Park Way	15	4	7	8	16
	5 - A1089 Dock Road	49	4	48	6	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/TS)	Total Junction Arrivals (Veh)
1 - London Distribution Park	0.24	11.19	0.3	B	26.50	105.99
2 - Dock Road	0.75	15.64	2.9	C	128.25	513.01
3 - St Andrews Road	0.56	7.64	1.3	A	149.50	597.98
4 - Thurrock Park Way	0.49	6.74	0.9	A	119.00	476.01
5 - A1089 Dock Road	1.09	93.86	55.3	F	425.20	1700.80

Main Results for each time segment

08:15 - 08:30

Arm	Total Demand (Veh/TS)	Junction Arrivals (Veh)	Circulating flow (Veh/TS)	Capacity (Veh/TS)	RFC	Throughput (Veh/TS)	Throughput (exit side) (Veh/TS)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - London Distribution Park	26.00	26.00	418.18	118.22	0.220	25.72	47.85	0.0	0.3	9.701	A
2 - Dock Road	128.00	128.00	345.07	236.87	0.540	126.85	98.83	0.0	1.2	8.098	A
3 - St Andrews Road	153.00	153.00	268.38	273.73	0.559	151.76	203.54	0.0	1.2	7.307	A
4 - Thurrock Park Way	125.00	125.00	251.79	256.60	0.487	124.06	168.34	0.0	0.9	6.744	A
5 - A1089 Dock Road	408.00	408.00	68.48	435.62	0.937	397.55	307.38	0.0	10.4	20.008	C

08:30 - 08:45

Arm	Total Demand (Veh/TS)	Junction Arrivals (Veh)	Circulating flow (Veh/TS)	Capacity (Veh/TS)	RFC	Throughput (Veh/TS)	Throughput (exit side) (Veh/TS)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - London Distribution Park	29.00	29.00	419.21	119.47	0.243	28.96	39.02	0.3	0.3	9.939	A
2 - Dock Road	166.00	166.00	369.02	220.20	0.754	164.29	79.16	1.2	2.9	15.640	C
3 - St Andrews Road	147.00	147.00	297.16	264.77	0.555	147.00	236.14	1.2	1.2	7.640	A
4 - Thurrock Park Way	110.00	110.00	260.92	253.28	0.434	110.17	183.25	0.9	0.8	6.295	A
5 - A1089 Dock Road	411.00	411.00	49.17	437.01	0.941	409.06	321.91	10.4	12.4	28.877	D

08:45 - 09:00

Arm	Total Demand (Veh/TS)	Junction Arrivals (Veh)	Circulating flow (Veh/TS)	Capacity (Veh/TS)	RFC	Throughput (Veh/TS)	Throughput (exit side) (Veh/TS)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - London Distribution Park	24.00	24.00	462.20	104.42	0.230	24.01	40.42	0.3	0.3	11.195	B
2 - Dock Road	129.00	129.00	382.00	215.84	0.598	130.34	104.21	2.9	1.5	10.683	B
3 - St Andrews Road	138.00	138.00	285.80	263.87	0.523	138.13	226.54	1.2	1.1	7.165	A
4 - Thurrock Park Way	123.00	123.00	219.16	275.45	0.447	122.98	204.77	0.8	0.8	5.902	A
5 - A1089 Dock Road	475.00	475.00	70.89	435.17	1.091	431.73	271.25	12.4	55.6	80.370	F

09:00 - 09:15

Arm	Total Demand (Veh/TS)	Junction Arrivals (Veh)	Circulating flow (Veh/TS)	Capacity (Veh/TS)	RFC	Throughput (Veh/TS)	Throughput (exit side) (Veh/TS)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - London Distribution Park	27.00	27.00	452.16	112.49	0.240	26.99	44.57	0.3	0.3	10.524	B
2 - Dock Road	90.00	90.00	356.11	230.39	0.391	90.88	123.04	1.5	0.6	6.492	A
3 - St Andrews Road	160.00	160.00	245.94	290.30	0.551	159.91	201.06	1.1	1.2	6.895	A
4 - Thurrock Park Way	118.00	118.00	209.51	277.60	0.425	118.05	196.34	0.8	0.7	5.642	A
5 - A1089 Dock Road	407.00	407.00	66.06	438.43	0.928	430.67	261.50	55.6	32.0	93.862	F

2022 + Comm + Peak Con 1, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	3 - St Andrews Road - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout	1, 2, 3, 4, 5	54.32	F

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time period length (min)	Time segment length (min)	Run automatically
D3	2022 + Comm + Peak Con 1	AM	DIRECT	08:15	09:15	60	15	✓

Vehicle mix varies over time	Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)	O-D data varies over time
✓	✓	✓	HV Percentages	2.00	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Scaling Factor (%)
1 - London Distribution Park		DIRECT	✓	100.000
2 - Dock Road		DIRECT	✓	100.000
3 - St Andrews Road		DIRECT	✓	100.000
4 - Thurrock Park Way		DIRECT	✓	100.000
5 - A1089 Dock Road		DIRECT	✓	100.000

Origin-Destination Data

Demand (Veh/TS)

08:15 - 08:30

		To				
		1 - London Distribution Park	2 - Dock Road	3 - St Andrews Road	4 - Thurrock Park Way	5 - A1089 Dock Road
From	1 - London Distribution Park	0.00	1.00	3.00	1.00	21.00
	2 - Dock Road	0.00	0.00	7.00	22.00	99.00
	3 - St Andrews Road	0.00	4.00	7.00	19.00	124.00
	4 - Thurrock Park Way	6.00	18.00	32.00	2.00	67.00
	5 - A1089 Dock Road	43.00	78.00	160.00	128.00	0.00

08:30 - 08:45

Demand (Veh/TS)

		To				
		1 - London Distribution Park	2 - Dock Road	3 - St Andrews Road	4 - Thurrock Park Way	5 - A1089 Dock Road
From	1 - London Distribution Park	0.00	1.00	3.00	4.00	21.00
	2 - Dock Road	1.00	0.00	7.00	42.00	116.00
	3 - St Andrews Road	1.00	3.00	2.00	23.00	119.00
	4 - Thurrock Park Way	0.00	12.00	29.00	1.00	68.00
	5 - A1089 Dock Road	37.00	63.00	198.00	114.00	0.00

08:45 - 09:00

Demand (Veh/TS)

		To				
		1 - London Distribution Park	2 - Dock Road	3 - St Andrews Road	4 - Thurrock Park Way	5 - A1089 Dock Road
From	1 - London Distribution Park	0.00	1.00	1.00	1.00	21.00
	2 - Dock Road	1.00	0.00	7.00	46.00	75.00
	3 - St Andrews Road	1.00	0.00	6.00	17.00	115.00
	4 - Thurrock Park Way	2.00	29.00	30.00	2.00	60.00
	5 - A1089 Dock Road	40.00	82.00	201.00	153.00	0.00

09:00 - 09:15

Demand (Veh/TS)

		To				
		1 - London Distribution Park	2 - Dock Road	3 - St Andrews Road	4 - Thurrock Park Way	5 - A1089 Dock Road
From	1 - London Distribution Park	0.00	2.00	1.00	3.00	21.00
	2 - Dock Road	0.00	0.00	3.00	30.00	57.00
	3 - St Andrews Road	0.00	8.00	3.00	29.00	121.00
	4 - Thurrock Park Way	3.00	27.00	24.00	1.00	63.00
	5 - A1089 Dock Road	40.00	83.00	160.00	125.00	0.00

Vehicle Mix

08:15 - 08:30

Heavy Vehicle Percentages

		To				
		1 - London Distribution Park	2 - Dock Road	3 - St Andrews Road	4 - Thurrock Park Way	5 - A1089 Dock Road
From	1 - London Distribution Park	0	15	78	17	89
	2 - Dock Road	0	0	13	5	4
	3 - St Andrews Road	0	4	50	7	81
	4 - Thurrock Park Way	15	4	7	8	16
	5 - A1089 Dock Road	48	4	48	6	0

08:30 - 08:45

Heavy Vehicle Percentages

		To				
		1 - London Distribution Park	2 - Dock Road	3 - St Andrews Road	4 - Thurrock Park Way	5 - A1089 Dock Road
From	1 - London Distribution Park	0	15	78	17	89
	2 - Dock Road	38	0	13	5	4
	3 - St Andrews Road	88	4	50	7	81
	4 - Thurrock Park Way	0	4	7	8	16
	5 - A1089 Dock Road	50	4	47	6	0

08:45 - 09:00

Heavy Vehicle Percentages

		To				
		1 - London Distribution Park	2 - Dock Road	3 - St Andrews Road	4 - Thurrock Park Way	5 - A1089 Dock Road
From	1 - London Distribution Park	0	15	78	17	89
	2 - Dock Road	38	0	13	5	4
	3 - St Andrews Road	88	0	50	7	81
	4 - Thurrock Park Way	15	4	7	8	16
	5 - A1089 Dock Road	49	4	47	6	0

09:00 - 09:15

Heavy Vehicle Percentages

		To				
		1 - London Distribution Park	2 - Dock Road	3 - St Andrews Road	4 - Thurrock Park Way	5 - A1089 Dock Road
From	1 - London Distribution Park	0	15	78	17	89
	2 - Dock Road	0	0	13	5	4
	3 - St Andrews Road	0	4	50	7	81
	4 - Thurrock Park Way	15	4	7	8	16
	5 - A1089 Dock Road	49	4	48	6	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/TS)	Total Junction Arrivals (Veh)
1 - London Distribution Park	0.24	11.22	0.3	B	26.50	105.99
2 - Dock Road	0.76	15.96	2.9	C	128.25	513.01
3 - St Andrews Road	0.56	7.71	1.3	A	150.50	601.98
4 - Thurrock Park Way	0.49	6.78	0.9	A	119.00	476.01
5 - A1089 Dock Road	1.10	100.90	58.4	F	426.18	1704.73

Main Results for each time segment

08:15 - 08:30

Arm	Total Demand (Veh/TS)	Junction Arrivals (Veh)	Circulating flow (Veh/TS)	Capacity (Veh/TS)	RFC	Throughput (Veh/TS)	Throughput (exit side) (Veh/TS)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - London Distribution Park	26.00	26.00	418.93	117.92	0.220	25.72	47.83	0.0	0.3	9.732	A
2 - Dock Road	128.00	128.00	345.87	236.33	0.542	126.84	98.78	0.0	1.2	8.137	A
3 - St Andrews Road	154.00	154.00	268.30	273.63	0.563	152.74	204.41	0.0	1.3	7.369	A
4 - Thurrock Park Way	125.00	125.00	252.77	255.85	0.489	124.06	168.26	0.0	0.9	6.783	A
5 - A1089 Dock Road	409.00	409.00	68.47	435.44	0.939	398.28	308.36	0.0	10.7	20.381	C

08:30 - 08:45

Arm	Total Demand (Veh/TS)	Junction Arrivals (Veh)	Circulating flow (Veh/TS)	Capacity (Veh/TS)	RFC	Throughput (Veh/TS)	Throughput (exit side) (Veh/TS)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - London Distribution Park	29.00	29.00	419.74	118.74	0.244	28.96	38.97	0.3	0.3	10.020	B
2 - Dock Road	166.00	166.00	369.61	218.94	0.758	164.24	79.09	1.2	2.9	15.959	C
3 - St Andrews Road	148.00	148.00	296.98	264.69	0.559	148.00	236.87	1.3	1.3	7.712	A
4 - Thurrock Park Way	110.00	110.00	261.88	252.54	0.436	110.17	183.10	0.9	0.8	6.330	A
5 - A1089 Dock Road	412.00	412.00	49.17	435.30	0.947	409.54	322.87	10.7	13.2	30.574	D

08:45 - 09:00

Arm	Total Demand (Veh/TS)	Junction Arrivals (Veh)	Circulating flow (Veh/TS)	Capacity (Veh/TS)	RFC	Throughput (Veh/TS)	Throughput (exit side) (Veh/TS)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - London Distribution Park	24.00	24.00	461.13	104.24	0.230	24.02	40.25	0.3	0.3	11.221	B
2 - Dock Road	129.00	129.00	381.32	215.34	0.599	130.39	103.83	2.9	1.5	10.759	B
3 - St Andrews Road	139.00	139.00	285.12	263.99	0.527	139.14	226.59	1.3	1.1	7.219	A
4 - Thurrock Park Way	123.00	123.00	220.20	274.66	0.448	122.98	204.06	0.8	0.8	5.933	A
5 - A1089 Dock Road	476.00	476.00	70.89	433.55	1.097	430.49	272.29	13.2	58.7	84.442	F

09:00 - 09:15

Arm	Total Demand (Veh/TS)	Junction Arrivals (Veh)	Circulating flow (Veh/TS)	Capacity (Veh/TS)	RFC	Throughput (Veh/TS)	Throughput (exit side) (Veh/TS)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - London Distribution Park	27.00	27.00	452.34	112.30	0.240	26.99	44.43	0.3	0.3	10.548	B
2 - Dock Road	90.00	90.00	356.59	229.94	0.391	90.89	122.74	1.5	0.7	6.511	A
3 - St Andrews Road	161.00	161.00	245.68	290.20	0.555	160.91	201.80	1.1	1.2	6.954	A
4 - Thurrock Park Way	118.00	118.00	210.51	276.84	0.426	118.05	196.08	0.8	0.8	5.672	A
5 - A1089 Dock Road	408.00	408.00	66.06	438.06	0.931	430.71	262.51	58.7	36.0	100.899	F

2022 + Comm + Av Con 2, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	3 - St Andrews Road - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout	1, 2, 3, 4, 5	49.60	E

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time period length (min)	Time segment length (min)	Run automatically
D4	2022 + Comm + Av Con 2	AM	DIRECT	08:15	09:15	60	15	✓

Vehicle mix varies over time	Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)	O-D data varies over time
✓	✓	✓	HV Percentages	2.00	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Scaling Factor (%)
1 - London Distribution Park		DIRECT	✓	100.000
2 - Dock Road		DIRECT	✓	100.000
3 - St Andrews Road		DIRECT	✓	100.000
4 - Thurrock Park Way		DIRECT	✓	100.000
5 - A1089 Dock Road		DIRECT	✓	100.000

Origin-Destination Data

Demand (Veh/TS)

08:15 - 08:30

		To				
		1 - London Distribution Park	2 - Dock Road	3 - St Andrews Road	4 - Thurrock Park Way	5 - A1089 Dock Road
From	1 - London Distribution Park	0.00	1.00	3.00	1.00	21.00
	2 - Dock Road	0.00	0.00	7.00	22.00	99.00
	3 - St Andrews Road	0.00	4.00	8.00	19.00	122.00
	4 - Thurrock Park Way	6.00	18.00	32.00	2.00	67.00
	5 - A1089 Dock Road	43.00	78.00	158.00	128.00	0.00

08:30 - 08:45

Demand (Veh/TS)

		To				
		1 - London Distribution Park	2 - Dock Road	3 - St Andrews Road	4 - Thurrock Park Way	5 - A1089 Dock Road
From	1 - London Distribution Park	0.00	1.00	3.00	4.00	21.00
	2 - Dock Road	1.00	0.00	7.00	42.00	116.00
	3 - St Andrews Road	1.00	3.00	3.00	23.00	117.00
	4 - Thurrock Park Way	0.00	12.00	29.00	1.00	68.00
	5 - A1089 Dock Road	37.00	63.00	196.00	114.00	0.00

08:45 - 09:00

Demand (Veh/TS)

		To				
		1 - London Distribution Park	2 - Dock Road	3 - St Andrews Road	4 - Thurrock Park Way	5 - A1089 Dock Road
From	1 - London Distribution Park	0.00	1.00	1.00	1.00	21.00
	2 - Dock Road	1.00	0.00	7.00	46.00	75.00
	3 - St Andrews Road	1.00	0.00	7.00	17.00	113.00
	4 - Thurrock Park Way	2.00	29.00	30.00	2.00	60.00
	5 - A1089 Dock Road	40.00	82.00	199.00	153.00	0.00

09:00 - 09:15

Demand (Veh/TS)

		To				
		1 - London Distribution Park	2 - Dock Road	3 - St Andrews Road	4 - Thurrock Park Way	5 - A1089 Dock Road
From	1 - London Distribution Park	0.00	2.00	1.00	3.00	21.00
	2 - Dock Road	0.00	0.00	3.00	30.00	57.00
	3 - St Andrews Road	0.00	8.00	4.00	29.00	119.00
	4 - Thurrock Park Way	3.00	27.00	24.00	1.00	63.00
	5 - A1089 Dock Road	40.00	83.00	158.00	125.00	0.00

Vehicle Mix

08:15 - 08:30

Heavy Vehicle Percentages

		To				
		1 - London Distribution Park	2 - Dock Road	3 - St Andrews Road	4 - Thurrock Park Way	5 - A1089 Dock Road
From	1 - London Distribution Park	0	15	78	17	89
	2 - Dock Road	0	0	13	5	4
	3 - St Andrews Road	0	4	57	7	81
	4 - Thurrock Park Way	15	4	7	8	16
	5 - A1089 Dock Road	48	4	47	6	0

08:30 - 08:45

Heavy Vehicle Percentages

		To				
		1 - London Distribution Park	2 - Dock Road	3 - St Andrews Road	4 - Thurrock Park Way	5 - A1089 Dock Road
From	1 - London Distribution Park	0	15	78	17	89
	2 - Dock Road	38	0	13	5	4
	3 - St Andrews Road	88	4	66	7	81
	4 - Thurrock Park Way	0	4	7	8	16
	5 - A1089 Dock Road	50	4	46	6	0

Heavy Vehicle Percentages

08:45 - 09:00

		To				
		1 - London Distribution Park	2 - Dock Road	3 - St Andrews Road	4 - Thurrock Park Way	5 - A1089 Dock Road
From	1 - London Distribution Park	0	15	78	17	89
	2 - Dock Road	38	0	13	5	4
	3 - St Andrews Road	88	0	58	7	81
	4 - Thurrock Park Way	15	4	7	8	16
	5 - A1089 Dock Road	49	4	46	6	0

Heavy Vehicle Percentages

09:00 - 09:15

		To				
		1 - London Distribution Park	2 - Dock Road	3 - St Andrews Road	4 - Thurrock Park Way	5 - A1089 Dock Road
From	1 - London Distribution Park	0	15	78	17	89
	2 - Dock Road	0	0	13	5	4
	3 - St Andrews Road	0	4	62	7	81
	4 - Thurrock Park Way	15	4	7	8	16
	5 - A1089 Dock Road	49	4	47	6	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/TS)	Total Junction Arrivals (Veh)
1 - London Distribution Park	0.24	11.23	0.3	B	26.50	105.99
2 - Dock Road	0.75	15.68	2.9	C	128.25	513.01
3 - St Andrews Road	0.56	7.65	1.3	A	149.50	597.98
4 - Thurrock Park Way	0.49	6.75	0.9	A	119.00	476.01
5 - A1089 Dock Road	1.09	91.59	55.0	F	424.19	1696.78

Main Results for each time segment

08:15 - 08:30

Arm	Total Demand (Veh/TS)	Junction Arrivals (Veh)	Circulating flow (Veh/TS)	Capacity (Veh/TS)	RFC	Throughput (Veh/TS)	Throughput (exit side) (Veh/TS)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - London Distribution Park	26.00	26.00	418.49	118.36	0.220	25.72	47.89	0.0	0.3	9.686	A
2 - Dock Road	128.00	128.00	345.32	237.15	0.540	126.85	98.89	0.0	1.2	8.079	A
3 - St Andrews Road	153.00	153.00	268.49	273.43	0.560	151.75	203.68	0.0	1.2	7.323	A
4 - Thurrock Park Way	125.00	125.00	251.79	256.50	0.487	124.06	168.45	0.0	0.9	6.749	A
5 - A1089 Dock Road	407.00	407.00	69.47	436.25	0.933	396.91	306.39	0.0	10.1	19.500	C

08:30 - 08:45

Arm	Total Demand (Veh/TS)	Junction Arrivals (Veh)	Circulating flow (Veh/TS)	Capacity (Veh/TS)	RFC	Throughput (Veh/TS)	Throughput (exit side) (Veh/TS)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - London Distribution Park	29.00	29.00	419.10	119.38	0.243	28.96	39.00	0.3	0.3	9.949	A
2 - Dock Road	166.00	166.00	368.94	220.03	0.754	164.28	79.12	1.2	2.9	15.681	C
3 - St Andrews Road	147.00	147.00	297.10	264.60	0.556	147.00	236.12	1.2	1.2	7.651	A
4 - Thurrock Park Way	110.00	110.00	260.90	253.21	0.434	110.17	183.20	0.9	0.8	6.298	A
5 - A1089 Dock Road	410.00	410.00	50.17	436.34	0.940	407.93	320.90	10.1	12.1	28.394	D

08:45 - 09:00

Arm	Total Demand (Veh/TS)	Junction Arrivals (Veh)	Circulating flow (Veh/TS)	Capacity (Veh/TS)	RFC	Throughput (Veh/TS)	Throughput (exit side) (Veh/TS)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - London Distribution Park	24.00	24.00	462.38	104.21	0.230	24.01	40.43	0.3	0.3	11.227	B
2 - Dock Road	129.00	129.00	382.16	215.48	0.599	130.34	104.23	2.9	1.5	10.731	B
3 - St Andrews Road	138.00	138.00	285.84	263.57	0.524	138.13	226.66	1.2	1.1	7.182	A
4 - Thurrock Park Way	123.00	123.00	219.16	275.34	0.447	122.98	204.81	0.8	0.8	5.907	A
5 - A1089 Dock Road	474.00	474.00	71.89	434.42	1.090	430.92	270.25	12.1	55.2	79.834	F

09:00 - 09:15

Arm	Total Demand (Veh/TS)	Junction Arrivals (Veh)	Circulating flow (Veh/TS)	Capacity (Veh/TS)	RFC	Throughput (Veh/TS)	Throughput (exit side) (Veh/TS)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - London Distribution Park	27.00	27.00	453.46	112.32	0.240	26.99	44.72	0.3	0.3	10.545	B
2 - Dock Road	90.00	90.00	357.10	230.26	0.391	90.89	123.35	1.5	0.6	6.499	A
3 - St Andrews Road	160.00	160.00	246.39	289.95	0.552	159.91	201.59	1.1	1.2	6.914	A
4 - Thurrock Park Way	118.00	118.00	209.51	277.53	0.425	118.05	196.79	0.8	0.7	5.645	A
5 - A1089 Dock Road	406.00	406.00	67.06	438.93	0.925	431.12	260.50	55.2	30.1	91.594	F

2022 + Comm + P Con 2, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	3 - St Andrews Road - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout	1, 2, 3, 4, 5	50.95	F

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time period length (min)	Time segment length (min)	Run automatically
D5	2022 + Comm + P Con 2	AM	DIRECT	08:15	09:15	60	15	✓

Vehicle mix varies over time	Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)	O-D data varies over time
✓	✓	✓	HV Percentages	2.00	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Scaling Factor (%)
1 - London Distribution Park		DIRECT	✓	100.000
2 - Dock Road		DIRECT	✓	100.000
3 - St Andrews Road		DIRECT	✓	100.000
4 - Thurrock Park Way		DIRECT	✓	100.000
5 - A1089 Dock Road		DIRECT	✓	100.000

Origin-Destination Data

Demand (Veh/TS)

08:15 - 08:30

		To				
		1 - London Distribution Park	2 - Dock Road	3 - St Andrews Road	4 - Thurrock Park Way	5 - A1089 Dock Road
From	1 - London Distribution Park	0.00	1.00	3.00	1.00	21.00
	2 - Dock Road	0.00	0.00	7.00	22.00	99.00
	3 - St Andrews Road	0.00	4.00	9.00	19.00	122.00
	4 - Thurrock Park Way	6.00	18.00	32.00	2.00	67.00
	5 - A1089 Dock Road	43.00	78.00	158.00	128.00	0.00

08:30 - 08:45

Demand (Veh/TS)

		To				
		1 - London Distribution Park	2 - Dock Road	3 - St Andrews Road	4 - Thurrock Park Way	5 - A1089 Dock Road
From	1 - London Distribution Park	0.00	1.00	3.00	4.00	21.00
	2 - Dock Road	1.00	0.00	7.00	42.00	116.00
	3 - St Andrews Road	1.00	3.00	4.00	23.00	117.00
	4 - Thurrock Park Way	0.00	12.00	29.00	1.00	68.00
	5 - A1089 Dock Road	37.00	63.00	196.00	114.00	0.00

08:45 - 09:00

Demand (Veh/TS)

		To				
		1 - London Distribution Park	2 - Dock Road	3 - St Andrews Road	4 - Thurrock Park Way	5 - A1089 Dock Road
From	1 - London Distribution Park	0.00	1.00	1.00	1.00	21.00
	2 - Dock Road	1.00	0.00	7.00	46.00	75.00
	3 - St Andrews Road	1.00	0.00	8.00	17.00	113.00
	4 - Thurrock Park Way	2.00	29.00	30.00	2.00	60.00
	5 - A1089 Dock Road	40.00	82.00	199.00	153.00	0.00

09:00 - 09:15

Demand (Veh/TS)

		To				
		1 - London Distribution Park	2 - Dock Road	3 - St Andrews Road	4 - Thurrock Park Way	5 - A1089 Dock Road
From	1 - London Distribution Park	0.00	2.00	1.00	3.00	21.00
	2 - Dock Road	0.00	0.00	3.00	30.00	57.00
	3 - St Andrews Road	0.00	8.00	5.00	29.00	119.00
	4 - Thurrock Park Way	3.00	27.00	24.00	1.00	63.00
	5 - A1089 Dock Road	40.00	83.00	158.00	125.00	0.00

Vehicle Mix

08:15 - 08:30

Heavy Vehicle Percentages

		To				
		1 - London Distribution Park	2 - Dock Road	3 - St Andrews Road	4 - Thurrock Park Way	5 - A1089 Dock Road
From	1 - London Distribution Park	0	15	78	17	89
	2 - Dock Road	0	0	13	5	4
	3 - St Andrews Road	0	4	62	7	80
	4 - Thurrock Park Way	15	4	7	8	16
	5 - A1089 Dock Road	48	4	47	6	0

08:30 - 08:45

Heavy Vehicle Percentages

		To				
		1 - London Distribution Park	2 - Dock Road	3 - St Andrews Road	4 - Thurrock Park Way	5 - A1089 Dock Road
From	1 - London Distribution Park	0	15	78	17	89
	2 - Dock Road	38	0	13	5	4
	3 - St Andrews Road	88	4	74	7	81
	4 - Thurrock Park Way	0	4	7	8	16
	5 - A1089 Dock Road	50	4	46	6	0

08:45 - 09:00

Heavy Vehicle Percentages

		To				
		1 - London Distribution Park	2 - Dock Road	3 - St Andrews Road	4 - Thurrock Park Way	5 - A1089 Dock Road
From	1 - London Distribution Park	0	15	78	17	89
	2 - Dock Road	38	0	13	5	4
	3 - St Andrews Road	88	0	63	7	81
	4 - Thurrock Park Way	15	4	7	8	16
	5 - A1089 Dock Road	49	4	46	6	0

09:00 - 09:15

Heavy Vehicle Percentages

		To				
		1 - London Distribution Park	2 - Dock Road	3 - St Andrews Road	4 - Thurrock Park Way	5 - A1089 Dock Road
From	1 - London Distribution Park	0	15	78	17	89
	2 - Dock Road	0	0	13	5	4
	3 - St Andrews Road	0	4	69	7	81
	4 - Thurrock Park Way	15	4	7	8	16
	5 - A1089 Dock Road	49	4	47	6	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/TS)	Total Junction Arrivals (Veh)
1 - London Distribution Park	0.24	11.27	0.3	B	26.50	105.99
2 - Dock Road	0.76	15.89	2.9	C	128.25	513.01
3 - St Andrews Road	0.56	7.74	1.3	A	150.49	601.98
4 - Thurrock Park Way	0.49	6.77	0.9	A	119.00	476.01
5 - A1089 Dock Road	1.09	94.41	56.0	F	424.19	1696.76

Main Results for each time segment

08:15 - 08:30

Arm	Total Demand (Veh/TS)	Junction Arrivals (Veh)	Circulating flow (Veh/TS)	Capacity (Veh/TS)	RFC	Throughput (Veh/TS)	Throughput (exit side) (Veh/TS)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - London Distribution Park	26.00	26.00	419.32	117.91	0.221	25.72	47.87	0.0	0.3	9.734	A
2 - Dock Road	128.00	128.00	346.19	236.34	0.542	126.84	98.85	0.0	1.2	8.136	A
3 - St Andrews Road	154.00	154.00	268.42	274.39	0.561	152.74	204.61	0.0	1.3	7.325	A
4 - Thurrock Park Way	125.00	125.00	252.78	256.17	0.488	124.06	168.39	0.0	0.9	6.766	A
5 - A1089 Dock Road	407.00	407.00	70.46	435.37	0.935	396.73	306.38	0.0	10.3	19.775	C

08:30 - 08:45

Arm	Total Demand (Veh/TS)	Junction Arrivals (Veh)	Circulating flow (Veh/TS)	Capacity (Veh/TS)	RFC	Throughput (Veh/TS)	Throughput (exit side) (Veh/TS)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - London Distribution Park	29.00	29.00	420.02	118.89	0.244	28.96	38.99	0.3	0.3	10.004	B
2 - Dock Road	166.00	166.00	369.86	219.20	0.757	164.25	79.12	1.2	2.9	15.894	C
3 - St Andrews Road	148.00	148.00	297.06	264.31	0.560	147.99	237.06	1.3	1.3	7.736	A
4 - Thurrock Park Way	110.00	110.00	261.88	252.40	0.436	110.16	183.17	0.9	0.8	6.336	A
5 - A1089 Dock Road	410.00	410.00	51.17	435.50	0.942	407.85	320.87	10.3	12.4	29.000	D

08:45 - 09:00

Arm	Total Demand (Veh/TS)	Junction Arrivals (Veh)	Circulating flow (Veh/TS)	Capacity (Veh/TS)	RFC	Throughput (Veh/TS)	Throughput (exit side) (Veh/TS)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - London Distribution Park	24.00	24.00	462.71	103.92	0.231	24.01	40.37	0.3	0.3	11.268	B
2 - Dock Road	129.00	129.00	382.62	214.91	0.600	130.37	104.10	2.9	1.5	10.812	B
3 - St Andrews Road	139.00	139.00	285.62	263.34	0.528	139.13	227.37	1.3	1.1	7.256	A
4 - Thurrock Park Way	123.00	123.00	220.18	274.49	0.448	122.98	204.57	0.8	0.8	5.937	A
5 - A1089 Dock Road	474.00	474.00	72.89	433.55	1.093	430.19	270.27	12.4	56.2	81.236	F

09:00 - 09:15

Arm	Total Demand (Veh/TS)	Junction Arrivals (Veh)	Circulating flow (Veh/TS)	Capacity (Veh/TS)	RFC	Throughput (Veh/TS)	Throughput (exit side) (Veh/TS)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - London Distribution Park	27.00	27.00	453.83	112.01	0.241	26.99	44.64	0.3	0.3	10.584	B
2 - Dock Road	90.00	90.00	357.65	229.64	0.392	90.90	123.17	1.5	0.7	6.526	A
3 - St Andrews Road	161.00	161.00	246.19	289.65	0.556	160.91	202.35	1.1	1.2	6.984	A
4 - Thurrock Park Way	118.00	118.00	210.52	276.69	0.426	118.05	196.59	0.8	0.8	5.677	A
5 - A1089 Dock Road	406.00	406.00	68.06	438.07	0.926	430.41	260.51	56.2	31.8	94.408	F

2022 + Comm + Av Con 1 + Cumu, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	3 - St Andrews Road - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout	1, 2, 3, 4, 5	116.36	F

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time period length (min)	Time segment length (min)	Run automatically
D6	2022 + Comm + Av Con 1 + Cumu	AM	DIRECT	08:15	09:15	60	15	✓

Vehicle mix varies over time	Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)	O-D data varies over time
✓	✓	✓	HV Percentages	2.00	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Scaling Factor (%)
1 - London Distribution Park		DIRECT	✓	100.000
2 - Dock Road		DIRECT	✓	100.000
3 - St Andrews Road		DIRECT	✓	100.000
4 - Thurrock Park Way		DIRECT	✓	100.000
5 - A1089 Dock Road		DIRECT	✓	100.000

Origin-Destination Data

Demand (Veh/TS)

08:15 - 08:30

		To				
		1 - London Distribution Park	2 - Dock Road	3 - St Andrews Road	4 - Thurrock Park Way	5 - A1089 Dock Road
From	1 - London Distribution Park	0.00	1.00	3.00	1.00	21.00
	2 - Dock Road	0.00	0.00	7.00	22.00	101.00
	3 - St Andrews Road	0.00	4.00	7.00	20.00	126.00
	4 - Thurrock Park Way	6.00	18.00	33.00	2.00	69.00
	5 - A1089 Dock Road	43.00	80.00	159.00	159.00	0.00

08:30 - 08:45

Demand (Veh/TS)

		To				
		1 - London Distribution Park	2 - Dock Road	3 - St Andrews Road	4 - Thurrock Park Way	5 - A1089 Dock Road
From	1 - London Distribution Park	0.00	1.00	3.00	4.00	21.00
	2 - Dock Road	1.00	0.00	7.00	43.00	118.00
	3 - St Andrews Road	1.00	3.00	2.00	24.00	122.00
	4 - Thurrock Park Way	0.00	13.00	30.00	1.00	70.00
	5 - A1089 Dock Road	37.00	66.00	197.00	146.00	0.00

08:45 - 09:00

Demand (Veh/TS)

		To				
		1 - London Distribution Park	2 - Dock Road	3 - St Andrews Road	4 - Thurrock Park Way	5 - A1089 Dock Road
From	1 - London Distribution Park	0.00	1.00	1.00	1.00	21.00
	2 - Dock Road	1.00	0.00	7.00	46.00	76.00
	3 - St Andrews Road	1.00	0.00	6.00	17.00	117.00
	4 - Thurrock Park Way	2.00	29.00	31.00	2.00	62.00
	5 - A1089 Dock Road	40.00	85.00	200.00	185.00	0.00

09:00 - 09:15

Demand (Veh/TS)

		To				
		1 - London Distribution Park	2 - Dock Road	3 - St Andrews Road	4 - Thurrock Park Way	5 - A1089 Dock Road
From	1 - London Distribution Park	0.00	2.00	1.00	3.00	21.00
	2 - Dock Road	0.00	0.00	3.00	31.00	59.00
	3 - St Andrews Road	0.00	8.00	3.00	30.00	123.00
	4 - Thurrock Park Way	3.00	27.00	25.00	1.00	66.00
	5 - A1089 Dock Road	40.00	86.00	159.00	157.00	0.00

Vehicle Mix

08:15 - 08:30

Heavy Vehicle Percentages

		To				
		1 - London Distribution Park	2 - Dock Road	3 - St Andrews Road	4 - Thurrock Park Way	5 - A1089 Dock Road
From	1 - London Distribution Park	0	15	78	17	89
	2 - Dock Road	0	0	13	5	4
	3 - St Andrews Road	0	4	50	7	81
	4 - Thurrock Park Way	15	4	7	8	16
	5 - A1089 Dock Road	48	4	48	7	0

08:30 - 08:45

Heavy Vehicle Percentages

		To				
		1 - London Distribution Park	2 - Dock Road	3 - St Andrews Road	4 - Thurrock Park Way	5 - A1089 Dock Road
From	1 - London Distribution Park	0	15	78	17	89
	2 - Dock Road	38	0	13	5	4
	3 - St Andrews Road	88	4	50	7	81
	4 - Thurrock Park Way	0	4	7	8	16
	5 - A1089 Dock Road	50	4	46	7	0

Heavy Vehicle Percentages

08:45 - 09:00

		To				
		1 - London Distribution Park	2 - Dock Road	3 - St Andrews Road	4 - Thurrock Park Way	5 - A1089 Dock Road
From	1 - London Distribution Park	0	15	78	17	89
	2 - Dock Road	38	0	13	5	4
	3 - St Andrews Road	88	0	50	7	81
	4 - Thurrock Park Way	15	4	7	8	16
	5 - A1089 Dock Road	49	4	46	7	0

Heavy Vehicle Percentages

09:00 - 09:15

		To				
		1 - London Distribution Park	2 - Dock Road	3 - St Andrews Road	4 - Thurrock Park Way	5 - A1089 Dock Road
From	1 - London Distribution Park	0	15	78	17	89
	2 - Dock Road	0	0	13	5	4
	3 - St Andrews Road	0	4	50	7	81
	4 - Thurrock Park Way	15	4	7	8	16
	5 - A1089 Dock Road	49	4	48	7	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/TS)	Total Junction Arrivals (Veh)
1 - London Distribution Park	0.26	11.45	0.3	B	26.50	105.99
2 - Dock Road	0.81	20.25	3.8	C	130.50	522.01
3 - St Andrews Road	0.60	8.89	1.5	A	153.49	613.98
4 - Thurrock Park Way	0.50	7.06	1.0	A	122.50	490.01
5 - A1089 Dock Road	1.16	221.35	107.1	F	459.58	1838.32

Main Results for each time segment

08:15 - 08:30

Arm	Total Demand (Veh/TS)	Junction Arrivals (Veh)	Circulating flow (Veh/TS)	Capacity (Veh/TS)	RFC	Throughput (Veh/TS)	Throughput (exit side) (Veh/TS)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - London Distribution Park	26.00	26.00	442.19	111.79	0.233	25.70	46.87	0.0	0.3	10.420	B
2 - Dock Road	130.00	130.00	368.96	225.67	0.576	128.67	98.93	0.0	1.3	9.158	A
3 - St Andrews Road	157.00	157.00	296.77	263.33	0.596	155.56	200.86	0.0	1.4	8.245	A
4 - Thurrock Park Way	128.00	128.00	256.47	253.57	0.505	127.00	195.86	0.0	1.0	7.057	A
5 - A1089 Dock Road	441.00	441.00	69.44	439.26	1.004	419.62	314.03	0.0	21.4	32.337	D

08:30 - 08:45

Arm	Total Demand (Veh/TS)	Junction Arrivals (Veh)	Circulating flow (Veh/TS)	Capacity (Veh/TS)	RFC	Throughput (Veh/TS)	Throughput (exit side) (Veh/TS)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - London Distribution Park	29.00	29.00	447.08	111.86	0.259	28.95	38.36	0.3	0.3	10.847	B
2 - Dock Road	169.00	169.00	394.00	208.72	0.810	166.52	82.03	1.3	3.8	20.246	C
3 - St Andrews Road	152.00	152.00	328.45	253.12	0.600	151.97	232.07	1.4	1.5	8.890	A
4 - Thurrock Park Way	114.00	114.00	266.36	249.74	0.457	114.16	214.06	1.0	0.9	6.645	A
5 - A1089 Dock Road	446.00	446.00	51.17	441.31	1.011	434.27	329.35	21.4	33.1	64.634	F

08:45 - 09:00

Arm	Total Demand (Veh/TS)	Junction Arrivals (Veh)	Circulating flow (Veh/TS)	Capacity (Veh/TS)	RFC	Throughput (Veh/TS)	Throughput (exit side) (Veh/TS)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - London Distribution Park	24.00	24.00	470.71	102.69	0.234	24.04	38.44	0.3	0.3	11.448	B
2 - Dock Road	130.00	130.00	392.56	211.87	0.614	132.17	102.19	3.8	1.6	11.580	B
3 - St Andrews Road	141.00	141.00	306.55	255.71	0.552	141.23	218.18	1.5	1.3	7.879	A
4 - Thurrock Park Way	126.00	126.00	223.84	272.25	0.463	126.00	223.94	0.9	0.9	6.153	A
5 - A1089 Dock Road	510.00	510.00	71.90	437.94	1.163	437.25	277.93	33.1	105.8	150.001	F

09:00 - 09:15

Arm	Total Demand (Veh/TS)	Junction Arrivals (Veh)	Circulating flow (Veh/TS)	Capacity (Veh/TS)	RFC	Throughput (Veh/TS)	Throughput (exit side) (Veh/TS)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - London Distribution Park	27.00	27.00	465.54	109.32	0.247	26.99	41.58	0.3	0.3	10.927	B
2 - Dock Road	93.00	93.00	372.91	223.49	0.416	93.92	119.62	1.6	0.7	6.992	A
3 - St Andrews Road	164.00	164.00	272.98	279.82	0.586	163.87	193.85	1.3	1.4	7.751	A
4 - Thurrock Park Way	122.00	122.00	214.51	274.24	0.445	122.05	222.34	0.9	0.8	5.917	A
5 - A1089 Dock Road	442.00	442.00	67.06	442.21	0.999	440.06	269.50	105.8	107.7	221.346	F

2022 + Comm + P Con 1 + Cumu, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	3 - St Andrews Road - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout	1, 2, 3, 4, 5	122.17	F

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time period length (min)	Time segment length (min)	Run automatically
D7	2022 + Comm + P Con 1 + Cumu	AM	DIRECT	08:15	09:15	60	15	✓

Vehicle mix varies over time	Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)	O-D data varies over time
✓	✓	✓	HV Percentages	2.00	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Scaling Factor (%)
1 - London Distribution Park		DIRECT	✓	100.000
2 - Dock Road		DIRECT	✓	100.000
3 - St Andrews Road		DIRECT	✓	100.000
4 - Thurrock Park Way		DIRECT	✓	100.000
5 - A1089 Dock Road		DIRECT	✓	100.000

Origin-Destination Data

Demand (Veh/TS)

08:15 - 08:30

		To				
		1 - London Distribution Park	2 - Dock Road	3 - St Andrews Road	4 - Thurrock Park Way	5 - A1089 Dock Road
From	1 - London Distribution Park	0.00	1.00	3.00	1.00	21.00
	2 - Dock Road	0.00	0.00	7.00	23.00	101.00
	3 - St Andrews Road	0.00	4.00	7.00	20.00	127.00
	4 - Thurrock Park Way	6.00	18.00	33.00	2.00	69.00
	5 - A1089 Dock Road	43.00	80.00	160.00	159.00	0.00

08:30 - 08:45

Demand (Veh/TS)

		To				
		1 - London Distribution Park	2 - Dock Road	3 - St Andrews Road	4 - Thurrock Park Way	5 - A1089 Dock Road
From	1 - London Distribution Park	0.00	1.00	3.00	4.00	21.00
	2 - Dock Road	1.00	0.00	7.00	43.00	118.00
	3 - St Andrews Road	1.00	3.00	2.00	24.00	123.00
	4 - Thurrock Park Way	0.00	13.00	30.00	1.00	70.00
	5 - A1089 Dock Road	37.00	66.00	198.00	146.00	0.00

08:45 - 09:00

Demand (Veh/TS)

		To				
		1 - London Distribution Park	2 - Dock Road	3 - St Andrews Road	4 - Thurrock Park Way	5 - A1089 Dock Road
From	1 - London Distribution Park	0.00	1.00	1.00	1.00	21.00
	2 - Dock Road	1.00	0.00	7.00	46.00	76.00
	3 - St Andrews Road	1.00	0.00	6.00	17.00	118.00
	4 - Thurrock Park Way	2.00	29.00	31.00	2.00	62.00
	5 - A1089 Dock Road	40.00	85.00	201.00	185.00	0.00

09:00 - 09:15

Demand (Veh/TS)

		To				
		1 - London Distribution Park	2 - Dock Road	3 - St Andrews Road	4 - Thurrock Park Way	5 - A1089 Dock Road
From	1 - London Distribution Park	0.00	2.00	1.00	3.00	21.00
	2 - Dock Road	0.00	0.00	3.00	31.00	59.00
	3 - St Andrews Road	0.00	8.00	3.00	30.00	124.00
	4 - Thurrock Park Way	3.00	27.00	25.00	1.00	66.00
	5 - A1089 Dock Road	40.00	86.00	160.00	157.00	0.00

Vehicle Mix

08:15 - 08:30

Heavy Vehicle Percentages

		To				
		1 - London Distribution Park	2 - Dock Road	3 - St Andrews Road	4 - Thurrock Park Way	5 - A1089 Dock Road
From	1 - London Distribution Park	0	15	78	17	89
	2 - Dock Road	0	0	13	5	4
	3 - St Andrews Road	0	4	50	7	81
	4 - Thurrock Park Way	15	4	7	8	16
	5 - A1089 Dock Road	48	4	48	7	0

08:30 - 08:45

Heavy Vehicle Percentages

		To				
		1 - London Distribution Park	2 - Dock Road	3 - St Andrews Road	4 - Thurrock Park Way	5 - A1089 Dock Road
From	1 - London Distribution Park	0	15	78	17	89
	2 - Dock Road	38	0	13	5	4
	3 - St Andrews Road	88	4	50	7	81
	4 - Thurrock Park Way	0	4	7	8	16
	5 - A1089 Dock Road	50	4	47	7	0

08:45 - 09:00

Heavy Vehicle Percentages

		To				
		1 - London Distribution Park	2 - Dock Road	3 - St Andrews Road	4 - Thurrock Park Way	5 - A1089 Dock Road
From	1 - London Distribution Park	0	15	78	17	89
	2 - Dock Road	38	0	13	5	4
	3 - St Andrews Road	88	0	50	7	82
	4 - Thurrock Park Way	15	4	7	8	16
	5 - A1089 Dock Road	49	4	47	7	0

09:00 - 09:15

Heavy Vehicle Percentages

		To				
		1 - London Distribution Park	2 - Dock Road	3 - St Andrews Road	4 - Thurrock Park Way	5 - A1089 Dock Road
From	1 - London Distribution Park	0	15	78	17	89
	2 - Dock Road	0	0	13	5	4
	3 - St Andrews Road	0	4	50	7	81
	4 - Thurrock Park Way	15	4	7	8	16
	5 - A1089 Dock Road	49	4	48	7	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/TS)	Total Junction Arrivals (Veh)
1 - London Distribution Park	0.26	11.46	0.3	B	26.50	105.99
2 - Dock Road	0.81	20.53	3.9	C	130.75	523.01
3 - St Andrews Road	0.60	8.97	1.5	A	154.49	617.98
4 - Thurrock Park Way	0.51	7.10	1.0	A	122.50	490.01
5 - A1089 Dock Road	1.17	232.84	112.8	F	460.53	1842.12

Main Results for each time segment

08:15 - 08:30

Arm	Total Demand (Veh/TS)	Junction Arrivals (Veh)	Circulating flow (Veh/TS)	Capacity (Veh/TS)	RFC	Throughput (Veh/TS)	Throughput (exit side) (Veh/TS)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - London Distribution Park	26.00	26.00	442.61	111.60	0.233	25.70	46.81	0.0	0.3	10.442	B
2 - Dock Road	131.00	131.00	369.49	225.29	0.581	129.65	98.83	0.0	1.4	9.286	A
3 - St Andrews Road	158.00	158.00	297.53	262.93	0.601	156.53	201.60	0.0	1.5	8.348	A
4 - Thurrock Park Way	128.00	128.00	257.43	252.84	0.506	126.99	196.63	0.0	1.0	7.095	A
5 - A1089 Dock Road	442.00	442.00	69.43	439.08	1.007	419.99	314.99	0.0	22.0	32.995	D

08:30 - 08:45

Arm	Total Demand (Veh/TS)	Junction Arrivals (Veh)	Circulating flow (Veh/TS)	Capacity (Veh/TS)	RFC	Throughput (Veh/TS)	Throughput (exit side) (Veh/TS)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - London Distribution Park	29.00	29.00	446.48	111.54	0.260	28.95	38.23	0.3	0.3	10.890	B
2 - Dock Road	169.00	169.00	393.63	208.05	0.812	166.50	81.80	1.4	3.9	20.532	C
3 - St Andrews Road	153.00	153.00	327.89	253.19	0.604	152.97	232.25	1.5	1.5	8.973	A
4 - Thurrock Park Way	114.00	114.00	267.34	248.98	0.458	114.16	213.51	1.0	0.9	6.685	A
5 - A1089 Dock Road	447.00	447.00	51.17	439.73	1.018	433.54	330.33	22.0	35.5	68.081	F

08:45 - 09:00

Arm	Total Demand (Veh/TS)	Junction Arrivals (Veh)	Circulating flow (Veh/TS)	Capacity (Veh/TS)	RFC	Throughput (Veh/TS)	Throughput (exit side) (Veh/TS)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - London Distribution Park	24.00	24.00	469.40	102.60	0.234	24.04	38.27	0.3	0.3	11.464	B
2 - Dock Road	130.00	130.00	391.68	211.51	0.615	132.22	101.75	3.9	1.6	11.646	B
3 - St Andrews Road	142.00	142.00	305.66	254.69	0.558	142.22	218.24	1.5	1.3	8.019	A
4 - Thurrock Park Way	126.00	126.00	224.86	270.97	0.465	125.99	223.02	0.9	0.9	6.207	A
5 - A1089 Dock Road	511.00	511.00	71.90	436.37	1.169	435.77	278.96	35.5	110.7	157.698	F

09:00 - 09:15

Arm	Total Demand (Veh/TS)	Junction Arrivals (Veh)	Circulating flow (Veh/TS)	Capacity (Veh/TS)	RFC	Throughput (Veh/TS)	Throughput (exit side) (Veh/TS)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - London Distribution Park	27.00	27.00	465.63	109.12	0.247	26.99	41.43	0.3	0.3	10.954	B
2 - Dock Road	93.00	93.00	373.33	222.99	0.417	93.92	119.29	1.6	0.7	7.022	A
3 - St Andrews Road	165.00	165.00	272.65	279.75	0.590	164.88	194.61	1.3	1.4	7.823	A
4 - Thurrock Park Way	122.00	122.00	215.52	273.46	0.446	122.05	222.01	0.9	0.8	5.948	A
5 - A1089 Dock Road	443.00	443.00	67.06	441.70	1.002	440.00	270.51	110.7	113.7	232.841	F

2022 + Comm + Av Con 2 + Cumu, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	3 - St Andrews Road - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout	1, 2, 3, 4, 5	115.86	F

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time period length (min)	Time segment length (min)	Run automatically
D8	2022 + Comm + Av Con 2 + Cumu	AM	DIRECT	08:15	09:15	60	15	✓

Vehicle mix varies over time	Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)	O-D data varies over time
✓	✓	✓	HV Percentages	2.00	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Scaling Factor (%)
1 - London Distribution Park		DIRECT	✓	100.000
2 - Dock Road		DIRECT	✓	100.000
3 - St Andrews Road		DIRECT	✓	100.000
4 - Thurrock Park Way		DIRECT	✓	100.000
5 - A1089 Dock Road		DIRECT	✓	100.000

Origin-Destination Data

Demand (Veh/TS)

08:15 - 08:30

		To				
		1 - London Distribution Park	2 - Dock Road	3 - St Andrews Road	4 - Thurrock Park Way	5 - A1089 Dock Road
From	1 - London Distribution Park	0.00	1.00	3.00	1.00	21.00
	2 - Dock Road	0.00	0.00	7.00	23.00	101.00
	3 - St Andrews Road	0.00	4.00	8.00	20.00	125.00
	4 - Thurrock Park Way	6.00	18.00	33.00	2.00	69.00
	5 - A1089 Dock Road	43.00	80.00	158.00	159.00	0.00

08:30 - 08:45

Demand (Veh/TS)

		To				
		1 - London Distribution Park	2 - Dock Road	3 - St Andrews Road	4 - Thurrock Park Way	5 - A1089 Dock Road
From	1 - London Distribution Park	0.00	1.00	3.00	4.00	21.00
	2 - Dock Road	1.00	0.00	7.00	43.00	118.00
	3 - St Andrews Road	1.00	3.00	3.00	24.00	121.00
	4 - Thurrock Park Way	0.00	13.00	30.00	1.00	70.00
	5 - A1089 Dock Road	37.00	66.00	196.00	146.00	0.00

08:45 - 09:00

Demand (Veh/TS)

		To				
		1 - London Distribution Park	2 - Dock Road	3 - St Andrews Road	4 - Thurrock Park Way	5 - A1089 Dock Road
From	1 - London Distribution Park	0.00	1.00	1.00	1.00	21.00
	2 - Dock Road	1.00	0.00	7.00	46.00	76.00
	3 - St Andrews Road	1.00	0.00	7.00	17.00	116.00
	4 - Thurrock Park Way	2.00	29.00	31.00	2.00	62.00
	5 - A1089 Dock Road	40.00	85.00	199.00	185.00	0.00

09:00 - 09:15

Demand (Veh/TS)

		To				
		1 - London Distribution Park	2 - Dock Road	3 - St Andrews Road	4 - Thurrock Park Way	5 - A1089 Dock Road
From	1 - London Distribution Park	0.00	2.00	1.00	3.00	21.00
	2 - Dock Road	5.00	0.00	3.00	31.00	59.00
	3 - St Andrews Road	0.00	8.00	4.00	30.00	122.00
	4 - Thurrock Park Way	3.00	27.00	25.00	1.00	66.00
	5 - A1089 Dock Road	40.00	86.00	158.00	157.00	0.00

Vehicle Mix

08:15 - 08:30

Heavy Vehicle Percentages

		To				
		1 - London Distribution Park	2 - Dock Road	3 - St Andrews Road	4 - Thurrock Park Way	5 - A1089 Dock Road
From	1 - London Distribution Park	0	15	78	17	89
	2 - Dock Road	0	0	13	5	4
	3 - St Andrews Road	0	4	57	7	81
	4 - Thurrock Park Way	15	4	7	8	16
	5 - A1089 Dock Road	48	4	47	7	0

08:30 - 08:45

Heavy Vehicle Percentages

		To				
		1 - London Distribution Park	2 - Dock Road	3 - St Andrews Road	4 - Thurrock Park Way	5 - A1089 Dock Road
From	1 - London Distribution Park	0	15	78	17	89
	2 - Dock Road	38	0	13	5	4
	3 - St Andrews Road	88	4	66	7	81
	4 - Thurrock Park Way	0	4	7	8	16
	5 - A1089 Dock Road	50	4	46	7	0

Heavy Vehicle Percentages

08:45 - 09:00

		To				
		1 - London Distribution Park	2 - Dock Road	3 - St Andrews Road	4 - Thurrock Park Way	5 - A1089 Dock Road
From	1 - London Distribution Park	0	15	78	17	89
	2 - Dock Road	38	0	13	5	4
	3 - St Andrews Road	88	0	58	7	81
	4 - Thurrock Park Way	15	4	7	8	16
	5 - A1089 Dock Road	49	4	46	7	0

Heavy Vehicle Percentages

09:00 - 09:15

		To				
		1 - London Distribution Park	2 - Dock Road	3 - St Andrews Road	4 - Thurrock Park Way	5 - A1089 Dock Road
From	1 - London Distribution Park	0	15	78	17	89
	2 - Dock Road	0	0	13	5	4
	3 - St Andrews Road	0	4	62	7	81
	4 - Thurrock Park Way	15	4	7	8	16
	5 - A1089 Dock Road	49	4	47	7	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/TS)	Total Junction Arrivals (Veh)
1 - London Distribution Park	0.26	11.48	0.3	B	26.50	105.99
2 - Dock Road	0.81	20.36	3.8	C	131.99	527.97
3 - St Andrews Road	0.60	8.91	1.5	A	153.49	613.98
4 - Thurrock Park Way	0.50	7.06	1.0	A	122.50	490.01
5 - A1089 Dock Road	1.16	221.01	106.6	F	458.55	1834.18

Main Results for each time segment

08:15 - 08:30

Arm	Total Demand (Veh/TS)	Junction Arrivals (Veh)	Circulating flow (Veh/TS)	Capacity (Veh/TS)	RFC	Throughput (Veh/TS)	Throughput (exit side) (Veh/TS)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - London Distribution Park	26.00	26.00	442.91	111.80	0.233	25.70	46.94	0.0	0.3	10.419	B
2 - Dock Road	131.00	131.00	369.54	225.75	0.580	129.65	99.07	0.0	1.3	9.242	A
3 - St Andrews Road	157.00	157.00	298.02	262.64	0.598	155.55	201.17	0.0	1.5	8.296	A
4 - Thurrock Park Way	128.00	128.00	256.45	253.48	0.505	127.00	197.12	0.0	1.0	7.062	A
5 - A1089 Dock Road	440.00	440.00	70.43	439.80	1.000	419.42	313.02	0.0	20.6	31.488	D

08:30 - 08:45

Arm	Total Demand (Veh/TS)	Junction Arrivals (Veh)	Circulating flow (Veh/TS)	Capacity (Veh/TS)	RFC	Throughput (Veh/TS)	Throughput (exit side) (Veh/TS)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - London Distribution Park	29.00	29.00	447.15	111.72	0.259	28.95	38.36	0.3	0.3	10.866	B
2 - Dock Road	169.00	169.00	394.09	208.46	0.811	166.52	82.01	1.3	3.8	20.363	C
3 - St Andrews Road	152.00	152.00	328.44	252.96	0.601	151.97	232.18	1.5	1.5	8.905	A
4 - Thurrock Park Way	114.00	114.00	266.36	249.66	0.457	114.16	214.05	1.0	0.9	6.651	A
5 - A1089 Dock Road	445.00	445.00	52.17	440.66	1.011	433.34	328.35	20.6	32.2	63.095	F

08:45 - 09:00

Arm	Total Demand (Veh/TS)	Junction Arrivals (Veh)	Circulating flow (Veh/TS)	Capacity (Veh/TS)	RFC	Throughput (Veh/TS)	Throughput (exit side) (Veh/TS)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - London Distribution Park	24.00	24.00	470.93	102.46	0.234	24.03	38.45	0.3	0.3	11.481	B
2 - Dock Road	130.00	130.00	392.75	211.49	0.615	132.18	102.22	3.8	1.6	11.640	B
3 - St Andrews Road	141.00	141.00	306.62	255.41	0.552	141.23	218.31	1.5	1.3	7.900	A
4 - Thurrock Park Way	126.00	126.00	223.85	272.14	0.463	126.00	224.01	0.9	0.9	6.157	A
5 - A1089 Dock Road	509.00	509.00	72.90	437.19	1.163	436.48	276.94	32.2	104.7	148.379	F

09:00 - 09:15

Arm	Total Demand (Veh/TS)	Junction Arrivals (Veh)	Circulating flow (Veh/TS)	Capacity (Veh/TS)	RFC	Throughput (Veh/TS)	Throughput (exit side) (Veh/TS)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - London Distribution Park	27.00	27.00	464.91	109.71	0.246	26.99	46.45	0.3	0.3	10.879	B
2 - Dock Road	98.00	98.00	372.41	224.52	0.436	98.83	119.50	1.6	0.8	7.209	A
3 - St Andrews Road	164.00	164.00	277.63	278.02	0.590	163.85	193.61	1.3	1.4	7.869	A
4 - Thurrock Park Way	122.00	122.00	219.41	272.08	0.448	122.04	222.07	0.9	0.8	5.999	A
5 - A1089 Dock Road	441.00	441.00	72.98	440.31	1.001	438.39	268.47	104.7	107.3	221.011	F

2022 + Comm + P Con 2 + Cumu, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	3 - St Andrews Road - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout	1, 2, 3, 4, 5	116.64	F

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time period length (min)	Time segment length (min)	Run automatically
D9	2022 + Comm + P Con 2 + Cumu	AM	DIRECT	08:15	09:15	60	15	✓

Vehicle mix varies over time	Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)	O-D data varies over time
✓	✓	✓	HV Percentages	2.00	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Scaling Factor (%)
1 - London Distribution Park		DIRECT	✓	100.000
2 - Dock Road		DIRECT	✓	100.000
3 - St Andrews Road		DIRECT	✓	100.000
4 - Thurrock Park Way		DIRECT	✓	100.000
5 - A1089 Dock Road		DIRECT	✓	100.000

Origin-Destination Data

Demand (Veh/TS)

08:15 - 08:30

		To				
		1 - London Distribution Park	2 - Dock Road	3 - St Andrews Road	4 - Thurrock Park Way	5 - A1089 Dock Road
From	1 - London Distribution Park	0.00	1.00	3.00	1.00	21.00
	2 - Dock Road	0.00	0.00	7.00	23.00	101.00
	3 - St Andrews Road	0.00	4.00	9.00	20.00	125.00
	4 - Thurrock Park Way	6.00	18.00	33.00	2.00	69.00
	5 - A1089 Dock Road	43.00	80.00	158.00	159.00	0.00

08:30 - 08:45

Demand (Veh/TS)

		To				
		1 - London Distribution Park	2 - Dock Road	3 - St Andrews Road	4 - Thurrock Park Way	5 - A1089 Dock Road
From	1 - London Distribution Park	0.00	1.00	3.00	4.00	21.00
	2 - Dock Road	1.00	0.00	7.00	43.00	118.00
	3 - St Andrews Road	1.00	3.00	4.00	24.00	121.00
	4 - Thurrock Park Way	0.00	13.00	30.00	1.00	70.00
	5 - A1089 Dock Road	37.00	66.00	196.00	146.00	0.00

08:45 - 09:00

Demand (Veh/TS)

		To				
		1 - London Distribution Park	2 - Dock Road	3 - St Andrews Road	4 - Thurrock Park Way	5 - A1089 Dock Road
From	1 - London Distribution Park	0.00	1.00	1.00	1.00	21.00
	2 - Dock Road	1.00	0.00	7.00	46.00	76.00
	3 - St Andrews Road	1.00	0.00	8.00	17.00	116.00
	4 - Thurrock Park Way	2.00	29.00	31.00	2.00	62.00
	5 - A1089 Dock Road	40.00	85.00	199.00	185.00	0.00

09:00 - 09:15

Demand (Veh/TS)

		To				
		1 - London Distribution Park	2 - Dock Road	3 - St Andrews Road	4 - Thurrock Park Way	5 - A1089 Dock Road
From	1 - London Distribution Park	0.00	2.00	1.00	3.00	21.00
	2 - Dock Road	0.00	0.00	3.00	31.00	59.00
	3 - St Andrews Road	0.00	8.00	5.00	30.00	122.00
	4 - Thurrock Park Way	3.00	27.00	25.00	1.00	66.00
	5 - A1089 Dock Road	40.00	86.00	158.00	157.00	0.00

Vehicle Mix

08:15 - 08:30

Heavy Vehicle Percentages

		To				
		1 - London Distribution Park	2 - Dock Road	3 - St Andrews Road	4 - Thurrock Park Way	5 - A1089 Dock Road
From	1 - London Distribution Park	0	15	78	17	89
	2 - Dock Road	0	0	13	5	4
	3 - St Andrews Road	0	4	62	7	81
	4 - Thurrock Park Way	15	4	7	8	16
	5 - A1089 Dock Road	48	4	47	7	0

08:30 - 08:45

Heavy Vehicle Percentages

		To				
		1 - London Distribution Park	2 - Dock Road	3 - St Andrews Road	4 - Thurrock Park Way	5 - A1089 Dock Road
From	1 - London Distribution Park	0	15	78	17	89
	2 - Dock Road	38	0	13	5	4
	3 - St Andrews Road	88	4	74	7	81
	4 - Thurrock Park Way	0	4	7	8	16
	5 - A1089 Dock Road	50	4	46	7	0

08:45 - 09:00

Heavy Vehicle Percentages

		To				
		1 - London Distribution Park	2 - Dock Road	3 - St Andrews Road	4 - Thurrock Park Way	5 - A1089 Dock Road
From	1 - London Distribution Park	0	15	78	17	89
	2 - Dock Road	38	0	13	5	4
	3 - St Andrews Road	88	0	63	7	81
	4 - Thurrock Park Way	15	4	7	8	16
	5 - A1089 Dock Road	49	4	46	7	0

09:00 - 09:15

Heavy Vehicle Percentages

		To				
		1 - London Distribution Park	2 - Dock Road	3 - St Andrews Road	4 - Thurrock Park Way	5 - A1089 Dock Road
From	1 - London Distribution Park	0	15	78	17	89
	2 - Dock Road	0	0	13	5	4
	3 - St Andrews Road	0	4	69	7	81
	4 - Thurrock Park Way	15	4	7	8	16
	5 - A1089 Dock Road	49	4	47	7	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/TS)	Total Junction Arrivals (Veh)
1 - London Distribution Park	0.26	11.52	0.3	B	26.50	105.99
2 - Dock Road	0.81	20.63	3.9	C	130.75	523.01
3 - St Andrews Road	0.61	9.02	1.5	A	154.49	617.97
4 - Thurrock Park Way	0.51	7.11	1.0	A	122.50	490.01
5 - A1089 Dock Road	1.17	222.61	107.3	F	458.54	1834.17

Main Results for each time segment

08:15 - 08:30

Arm	Total Demand (Veh/TS)	Junction Arrivals (Veh)	Circulating flow (Veh/TS)	Capacity (Veh/TS)	RFC	Throughput (Veh/TS)	Throughput (exit side) (Veh/TS)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - London Distribution Park	26.00	26.00	443.50	111.42	0.233	25.70	46.90	0.0	0.3	10.464	B
2 - Dock Road	131.00	131.00	370.21	225.04	0.582	129.64	98.99	0.0	1.4	9.307	A
3 - St Andrews Road	158.00	158.00	297.85	262.37	0.602	156.52	202.00	0.0	1.5	8.390	A
4 - Thurrock Park Way	128.00	128.00	257.42	252.65	0.507	126.99	196.95	0.0	1.0	7.106	A
5 - A1089 Dock Road	440.00	440.00	71.41	438.92	1.002	418.99	313.00	0.0	21.0	31.991	D

08:30 - 08:45

Arm	Total Demand (Veh/TS)	Junction Arrivals (Veh)	Circulating flow (Veh/TS)	Capacity (Veh/TS)	RFC	Throughput (Veh/TS)	Throughput (exit side) (Veh/TS)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - London Distribution Park	29.00	29.00	447.70	111.35	0.260	28.95	38.32	0.3	0.3	10.915	B
2 - Dock Road	169.00	169.00	394.69	207.82	0.813	166.48	81.96	1.4	3.9	20.630	C
3 - St Andrews Road	153.00	153.00	328.25	252.72	0.605	152.97	232.92	1.5	1.5	9.015	A
4 - Thurrock Park Way	114.00	114.00	267.33	248.85	0.458	114.16	213.89	1.0	0.9	6.692	A
5 - A1089 Dock Road	445.00	445.00	53.17	439.81	1.013	432.85	328.32	21.0	33.1	64.630	F

08:45 - 09:00

Arm	Total Demand (Veh/TS)	Junction Arrivals (Veh)	Circulating flow (Veh/TS)	Capacity (Veh/TS)	RFC	Throughput (Veh/TS)	Throughput (exit side) (Veh/TS)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - London Distribution Park	24.00	24.00	471.15	102.20	0.235	24.04	38.39	0.3	0.3	11.519	B
2 - Dock Road	130.00	130.00	393.12	210.96	0.616	132.22	102.06	3.9	1.7	11.734	B
3 - St Andrews Road	142.00	142.00	306.32	255.24	0.556	142.23	219.03	1.5	1.3	7.984	A
4 - Thurrock Park Way	126.00	126.00	224.88	271.28	0.464	126.00	223.68	0.9	0.9	6.194	A
5 - A1089 Dock Road	509.00	509.00	73.90	436.31	1.165	435.63	276.97	33.1	106.5	151.249	F

09:00 - 09:15

Arm	Total Demand (Veh/TS)	Junction Arrivals (Veh)	Circulating flow (Veh/TS)	Capacity (Veh/TS)	RFC	Throughput (Veh/TS)	Throughput (exit side) (Veh/TS)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - London Distribution Park	27.00	27.00	466.86	108.89	0.248	26.99	41.59	0.3	0.3	10.985	B
2 - Dock Road	93.00	93.00	374.20	222.77	0.417	93.93	119.65	1.7	0.7	7.033	A
3 - St Andrews Road	165.00	165.00	273.10	279.25	0.591	164.87	195.03	1.3	1.4	7.855	A
4 - Thurrock Park Way	122.00	122.00	215.52	273.33	0.446	122.05	222.45	0.9	0.8	5.950	A
5 - A1089 Dock Road	441.00	441.00	69.06	441.62	0.998	439.39	268.50	106.5	108.1	222.608	F

Junctions 9

ARCADY 9 - Roundabout Module

Filename: Asda Roundabout Mit 1700-1800.j9
Path: P:\JNY9639 - Thurrock Generation Plant\Transport\Arcady
Report generation date: 30/01/2020 15:42:57

Summary of junction performance

	PM		
	Queue (Veh)	Delay (s)	RFC
	2022 + Comm		
1 - London Distribution Park	0.6	7.24	0.39
2 - Dock Road	1.0	6.57	0.50
3 - St Andrews Road	4.0	11.37	0.81
4 - Thurrock Park Way	23.0	61.93	1.06
5 - A1089 Dock Road	3.1	8.73	0.76
	2022 + Comm + Av Con 1		
1 - London Distribution Park	0.6	7.20	0.39
2 - Dock Road	1.0	6.60	0.50
3 - St Andrews Road	4.0	11.50	0.81
4 - Thurrock Park Way	23.4	62.77	1.07
5 - A1089 Dock Road	3.1	8.85	0.77
	2022 + Comm + P Con 1		
1 - London Distribution Park	0.6	7.27	0.39
2 - Dock Road	1.0	6.65	0.50
3 - St Andrews Road	4.3	12.01	0.82
4 - Thurrock Park Way	24.6	65.39	1.08
5 - A1089 Dock Road	3.2	9.07	0.77
	2022 + Comm + Av Con 2		
1 - London Distribution Park	0.6	7.22	0.39
2 - Dock Road	1.0	6.60	0.50
3 - St Andrews Road	4.1	11.65	0.82
4 - Thurrock Park Way	23.8	63.72	1.07
5 - A1089 Dock Road	3.1	8.81	0.77
	2022 + Comm + P Con 2		

1 - London Distribution Park	0.6	7.26	0.39
2 - Dock Road	1.0	6.65	0.50
3 - St Andrews Road	4.2	11.85	0.82
4 - Thurrock Park Way	24.2	64.63	1.07
5 - A1089 Dock Road	3.1	8.88	0.77
	2022 + Comm + Av Con 1 + Cumu		
1 - London Distribution Park	0.6	7.56	0.39
2 - Dock Road	1.1	7.00	0.52
3 - St Andrews Road	6.4	16.21	0.88
4 - Thurrock Park Way	40.2	119.83	1.17
5 - A1089 Dock Road	3.6	9.86	0.79
	2022 + Comm + P Con 1 + Cumu		
1 - London Distribution Park	0.6	7.65	0.38
2 - Dock Road	1.1	7.02	0.53
3 - St Andrews Road	4.4	11.41	0.82
4 - Thurrock Park Way	43.2	117.61	1.19
5 - A1089 Dock Road	3.6	9.82	0.79
	2022 + Comm + Av Con 2 + Cumu		
1 - London Distribution Park	0.6	7.57	0.39
2 - Dock Road	1.1	7.01	0.53
3 - St Andrews Road	6.5	16.39	0.88
4 - Thurrock Park Way	40.5	109.91	1.17
5 - A1089 Dock Road	3.5	9.80	0.79
	2022 + Comm + P Con 2 + Cumu		
1 - London Distribution Park	0.6	7.61	0.39
2 - Dock Road	1.1	7.06	0.53
3 - St Andrews Road	6.7	16.81	0.89
4 - Thurrock Park Way	41.2	114.16	1.18
5 - A1089 Dock Road	3.6	9.87	0.79

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	(untitled)
Location	
Site number	
Date	26/07/2019
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	EUR\Joanna.gunn
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	Veh	Veh	perTimeSegment	s	-Min	perMin

Analysis Options

Vehicle length (m)	Calculate Queue Percentiles	Calculate detailed queueing delay	Calculate residual capacity	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)
5.75				0.85	36.00	20.00

Demand Set Summary

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time period length (min)	Time segment length (min)	Run automatically
D1	2022 + Comm	PM	DIRECT	17:00	18:00	60	15	✓
D2	2022 + Comm + Av Con 1	PM	DIRECT	17:00	18:00	60	15	✓
D3	2022 + Comm + P Con 1	PM	DIRECT	17:00	18:00	60	15	✓
D4	2022 + Comm + Av Con 2	PM	DIRECT	17:00	18:00	60	15	✓
D5	2022 + Comm + P Con 2	PM	DIRECT	17:00	18:00	60	15	✓
D6	2022 + Comm + Av Con 1 + Cumu	PM	DIRECT	17:00	18:00	60	15	✓
D7	2022 + Comm + P Con 1 + Cumu	PM	DIRECT	17:00	18:00	60	15	✓
D8	2022 + Comm + Av Con 2 + Cumu	PM	DIRECT	17:00	18:00	60	15	✓
D9	2022 + Comm + P Con 2 + Cumu	PM	DIRECT	17:00	18:00	60	15	✓

Analysis Set Details

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

2022 + Comm, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	3 - St Andrews Road - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout	1, 2, 3, 4, 5	19.94	C

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Name	Description
1	London Distribution Park	
2	Dock Road	
3	St Andrews Road	
4	Thurrock Park Way	
5	A1089 Dock Road	

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)	Exit only
1 - London Distribution Park	3.50	8.60	15.0	45.0	116.0	38.0	
2 - Dock Road	3.70	7.30	22.5	21.0	116.0	32.0	
3 - St Andrews Road	7.42	8.11	37.0	36.0	116.0	27.0	
4 - Thurrock Park Way	3.70	9.00	13.5	45.0	116.0	34.0	
5 - A1089 Dock Road	7.45	7.45	0.0	60.0	116.0	25.0	

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Final slope	Final intercept (PCU/TS)
1 - London Distribution Park	0.460	449.879
2 - Dock Road	0.464	458.508
3 - St Andrews Road	0.568	631.041
4 - Thurrock Park Way	0.471	464.299
5 - A1089 Dock Road	0.550	592.526

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 period length (min)	Time segment length (min)	Run automatically
D1	2022 + Comm	PM	DIRECT	17:00	18:00	60	15	✓

Vehicle mix varies over time	Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)	O-D data varies over time
✓	✓	✓	HV Percentages	2.00	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Scaling Factor (%)
1 - London Distribution Park		DIRECT	✓	100.000
2 - Dock Road		DIRECT	✓	100.000
3 - St Andrews Road		DIRECT	✓	100.000
4 - Thurrock Park Way		DIRECT	✓	100.000
5 - A1089 Dock Road		DIRECT	✓	100.000

Origin-Destination Data

17:00 - 17:15

Demand (Veh/TS)

		To				
		1 - London Distribution Park	2 - Dock Road	3 - St Andrews Road	4 - Thurrock Park Way	5 - A1089 Dock Road
From	1 - London Distribution Park	0.00	8.00	4.00	6.00	66.00
	2 - Dock Road	0.00	0.00	4.00	29.00	77.00
	3 - St Andrews Road	0.00	11.00	6.00	23.00	267.00
	4 - Thurrock Park Way	1.00	51.00	14.00	1.00	165.00
	5 - A1089 Dock Road	16.00	99.00	88.00	87.00	1.00

17:15 - 17:30

Demand (Veh/TS)

		To				
		1 - London Distribution Park	2 - Dock Road	3 - St Andrews Road	4 - Thurrock Park Way	5 - A1089 Dock Road
From	1 - London Distribution Park	0.00	3.00	0.00	9.00	59.00
	2 - Dock Road	0.00	0.00	10.00	42.00	85.00
	3 - St Andrews Road	3.00	8.00	4.00	26.00	183.00
	4 - Thurrock Park Way	1.00	36.00	28.00	1.00	137.00
	5 - A1089 Dock Road	15.00	116.00	95.00	99.00	1.00

17:30 - 17:45

Demand (Veh/TS)

		To				
		1 - London Distribution Park	2 - Dock Road	3 - St Andrews Road	4 - Thurrock Park Way	5 - A1089 Dock Road
From	1 - London Distribution Park	0.00	1.00	1.00	9.00	58.00
	2 - Dock Road	0.00	0.00	6.00	30.00	89.00
	3 - St Andrews Road	3.00	8.00	8.00	23.00	163.00
	4 - Thurrock Park Way	0.00	55.00	9.00	1.00	196.00
	5 - A1089 Dock Road	21.00	102.00	66.00	94.00	0.00

Demand (Veh/TS)

17:45 - 18:00

		To				
		1 - London Distribution Park	2 - Dock Road	3 - St Andrews Road	4 - Thurrock Park Way	5 - A1089 Dock Road
From	1 - London Distribution Park	0.00	7.00	1.00	7.00	48.00
	2 - Dock Road	0.00	0.00	10.00	47.00	78.00
	3 - St Andrews Road	2.00	10.00	4.00	17.00	160.00
	4 - Thurrock Park Way	0.00	39.00	20.00	1.00	122.00
	5 - A1089 Dock Road	19.00	98.00	97.00	95.00	0.00

Vehicle Mix

Heavy Vehicle Percentages

17:00 - 17:15

		To				
		1 - London Distribution Park	2 - Dock Road	3 - St Andrews Road	4 - Thurrock Park Way	5 - A1089 Dock Road
From	1 - London Distribution Park	0	0	33	0	20
	2 - Dock Road	0	0	4	5	0
	3 - St Andrews Road	0	0	55	8	25
	4 - Thurrock Park Way	0	0	13	25	4
	5 - A1089 Dock Road	86	1	67	10	0

Heavy Vehicle Percentages

17:15 - 17:30

		To				
		1 - London Distribution Park	2 - Dock Road	3 - St Andrews Road	4 - Thurrock Park Way	5 - A1089 Dock Road
From	1 - London Distribution Park	0	0	0	0	23
	2 - Dock Road	0	0	4	5	0
	3 - St Andrews Road	25	0	55	8	26
	4 - Thurrock Park Way	0	0	13	25	4
	5 - A1089 Dock Road	89	1	66	10	0

Heavy Vehicle Percentages

17:30 - 17:45

		To				
		1 - London Distribution Park	2 - Dock Road	3 - St Andrews Road	4 - Thurrock Park Way	5 - A1089 Dock Road
From	1 - London Distribution Park	0	0	33	0	23
	2 - Dock Road	0	0	4	5	0
	3 - St Andrews Road	25	0	55	8	27
	4 - Thurrock Park Way	0	0	13	25	4
	5 - A1089 Dock Road	77	1	69	10	0

Heavy Vehicle Percentages

17:45 - 18:00

		To				
		1 - London Distribution Park	2 - Dock Road	3 - St Andrews Road	4 - Thurrock Park Way	5 - A1089 Dock Road
From	1 - London Distribution Park	0	0	33	0	26
	2 - Dock Road	0	0	4	5	0
	3 - St Andrews Road	25	0	55	8	27
	4 - Thurrock Park Way	0	0	13	25	4
	5 - A1089 Dock Road	80	1	66	10	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/TS)	Total Junction Arrivals (Veh)
1 - London Distribution Park	0.39	7.24	0.6	A	71.75	287.02
2 - Dock Road	0.50	6.57	1.0	A	126.75	507.00
3 - St Andrews Road	0.81	11.37	4.0	B	232.25	929.01
4 - Thurrock Park Way	1.06	61.93	23.0	F	219.50	878.01
5 - A1089 Dock Road	0.76	8.73	3.1	A	302.25	1209.02

Main Results for each time segment

17:00 - 17:15

Arm	Total Demand (Veh/TS)	Junction Arrivals (Veh)	Circulating flow (Veh/TS)	Capacity (Veh/TS)	RFC	Throughput (Veh/TS)	Throughput (exit side) (Veh/TS)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - London Distribution Park	84.00	84.00	349.23	217.81	0.386	83.38	16.79	0.0	0.6	6.664	A
2 - Dock Road	110.00	110.00	269.60	288.91	0.381	109.39	163.01	0.0	0.6	4.996	A
3 - St Andrews Road	307.00	307.00	265.15	378.58	0.811	302.99	113.84	0.0	4.0	11.371	B
4 - Thurrock Park Way	232.00	232.00	423.37	217.97	1.064	208.92	144.77	0.0	23.1	61.932	F
5 - A1089 Dock Road	291.00	291.00	77.11	426.51	0.682	288.90	555.17	0.0	2.1	6.446	A

17:15 - 17:30

Arm	Total Demand (Veh/TS)	Junction Arrivals (Veh)	Circulating flow (Veh/TS)	Capacity (Veh/TS)	RFC	Throughput (Veh/TS)	Throughput (exit side) (Veh/TS)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - London Distribution Park	71.00	71.00	392.45	195.30	0.364	71.05	19.04	0.6	0.6	7.244	A
2 - Dock Road	137.00	137.00	296.40	273.17	0.502	136.62	167.10	0.6	1.0	6.572	A
3 - St Andrews Road	224.00	224.00	295.41	363.38	0.616	226.38	137.61	4.0	1.6	6.680	A
4 - Thurrock Park Way	203.00	203.00	345.09	259.55	0.783	222.13	176.70	23.1	4.0	32.902	D
5 - A1089 Dock Road	326.00	326.00	86.50	426.97	0.763	324.99	480.71	2.1	3.1	8.733	A

17:30 - 17:45

Arm	Total Demand (Veh/TS)	Junction Arrivals (Veh)	Circulating flow (Veh/TS)	Capacity (Veh/TS)	RFC	Throughput (Veh/TS)	Throughput (exit side) (Veh/TS)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - London Distribution Park	69.00	69.00	342.38	220.16	0.313	69.12	24.02	0.6	0.5	5.962	A
2 - Dock Road	125.00	125.00	246.95	304.94	0.410	125.29	164.55	1.0	0.7	5.017	A
3 - St Andrews Road	205.00	205.00	281.65	366.17	0.560	205.35	90.59	1.6	1.3	5.610	A
4 - Thurrock Park Way	261.00	261.00	329.52	269.96	0.967	252.65	157.47	4.0	12.3	39.538	E
5 - A1089 Dock Road	283.00	283.00	82.21	433.21	0.653	284.18	499.96	3.1	1.9	6.086	A

17:45 - 18:00

Arm	Total Demand (Veh/TS)	Junction Arrivals (Veh)	Circulating flow (Veh/TS)	Capacity (Veh/TS)	RFC	Throughput (Veh/TS)	Throughput (exit side) (Veh/TS)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - London Distribution Park	63.00	63.00	365.78	203.64	0.309	63.01	20.99	0.5	0.5	6.399	A
2 - Dock Road	135.00	135.00	272.79	283.81	0.476	134.80	156.00	0.7	0.9	6.033	A
3 - St Andrews Road	193.00	193.00	275.76	369.95	0.522	193.19	131.84	1.3	1.1	5.098	A
4 - Thurrock Park Way	182.00	182.00	302.16	282.55	0.644	192.44	166.78	12.3	1.9	11.123	B
5 - A1089 Dock Road	309.00	309.00	78.48	423.44	0.730	308.29	416.13	1.9	2.6	7.765	A

2022 + Comm + Av Con 1, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	3 - St Andrews Road - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout	1, 2, 3, 4, 5	20.15	C

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time period length (min)	Time segment length (min)	Run automatically
D2	2022 + Comm + Av Con 1	PM	DIRECT	17:00	18:00	60	15	✓

Vehicle mix varies over time	Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)	O-D data varies over time
✓	✓	✓	HV Percentages	2.00	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Scaling Factor (%)
1 - London Distribution Park		DIRECT	✓	100.000
2 - Dock Road		DIRECT	✓	100.000
3 - St Andrews Road		DIRECT	✓	100.000
4 - Thurrock Park Way		DIRECT	✓	100.000
5 - A1089 Dock Road		DIRECT	✓	100.000

Origin-Destination Data

Demand (Veh/TS)

17:00 - 17:15

		To				
		1 - London Distribution Park	2 - Dock Road	3 - St Andrews Road	4 - Thurrock Park Way	5 - A1089 Dock Road
From	1 - London Distribution Park	0.00	8.00	4.00	6.00	66.00
	2 - Dock Road	0.00	0.00	4.00	29.00	77.00
	3 - St Andrews Road	0.00	11.00	6.00	23.00	268.00
	4 - Thurrock Park Way	1.00	51.00	14.00	1.00	165.00
	5 - A1089 Dock Road	16.00	99.00	89.00	87.00	1.00

17:15 - 17:30

Demand (Veh/TS)

		To				
		1 - London Distribution Park	2 - Dock Road	3 - St Andrews Road	4 - Thurrock Park Way	5 - A1089 Dock Road
From	1 - London Distribution Park	0.00	3.00	0.00	9.00	59.00
	2 - Dock Road	0.00	0.00	10.00	42.00	85.00
	3 - St Andrews Road	3.00	8.00	4.00	26.00	184.00
	4 - Thurrock Park Way	1.00	36.00	28.00	1.00	137.00
	5 - A1089 Dock Road	15.00	116.00	96.00	99.00	1.00

17:30 - 17:45

Demand (Veh/TS)

		To				
		1 - London Distribution Park	2 - Dock Road	3 - St Andrews Road	4 - Thurrock Park Way	5 - A1089 Dock Road
From	1 - London Distribution Park	0.00	1.00	1.00	9.00	58.00
	2 - Dock Road	0.00	0.00	6.00	30.00	89.00
	3 - St Andrews Road	3.00	8.00	8.00	23.00	164.00
	4 - Thurrock Park Way	0.00	55.00	9.00	1.00	196.00
	5 - A1089 Dock Road	21.00	102.00	67.00	94.00	0.00

17:45 - 18:00

Demand (Veh/TS)

		To				
		1 - London Distribution Park	2 - Dock Road	3 - St Andrews Road	4 - Thurrock Park Way	5 - A1089 Dock Road
From	1 - London Distribution Park	0.00	7.00	1.00	7.00	48.00
	2 - Dock Road	0.00	0.00	10.00	47.00	78.00
	3 - St Andrews Road	2.00	10.00	4.00	17.00	161.00
	4 - Thurrock Park Way	0.00	39.00	20.00	1.00	122.00
	5 - A1089 Dock Road	19.00	98.00	98.00	95.00	0.00

Vehicle Mix

17:00 - 17:15

Heavy Vehicle Percentages

		To				
		1 - London Distribution Park	2 - Dock Road	3 - St Andrews Road	4 - Thurrock Park Way	5 - A1089 Dock Road
From	1 - London Distribution Park	0	0	33	0	20
	2 - Dock Road	0	0	4	5	0
	3 - St Andrews Road	0	0	55	8	25
	4 - Thurrock Park Way	0	0	13	25	4
	5 - A1089 Dock Road	86	1	67	10	0

17:15 - 17:30

Heavy Vehicle Percentages

		To				
		1 - London Distribution Park	2 - Dock Road	3 - St Andrews Road	4 - Thurrock Park Way	5 - A1089 Dock Road
From	1 - London Distribution Park	0	0	0	0	22
	2 - Dock Road	0	0	4	5	0
	3 - St Andrews Road	25	0	55	8	27
	4 - Thurrock Park Way	0	0	13	25	4
	5 - A1089 Dock Road	89	1	66	10	0

Heavy Vehicle Percentages

17:30 - 17:45

		To				
		1 - London Distribution Park	2 - Dock Road	3 - St Andrews Road	4 - Thurrock Park Way	5 - A1089 Dock Road
From	1 - London Distribution Park	0	0	33	0	23
	2 - Dock Road	0	0	4	5	0
	3 - St Andrews Road	25	0	55	8	27
	4 - Thurrock Park Way	0	0	13	25	4
	5 - A1089 Dock Road	77	1	69	10	0

Heavy Vehicle Percentages

17:45 - 18:00

		To				
		1 - London Distribution Park	2 - Dock Road	3 - St Andrews Road	4 - Thurrock Park Way	5 - A1089 Dock Road
From	1 - London Distribution Park	0	0	33	0	26
	2 - Dock Road	0	0	4	5	0
	3 - St Andrews Road	25	0	55	8	28
	4 - Thurrock Park Way	0	0	13	25	4
	5 - A1089 Dock Road	80	1	66	10	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/TS)	Total Junction Arrivals (Veh)
1 - London Distribution Park	0.39	7.20	0.6	A	71.75	287.02
2 - Dock Road	0.50	6.60	1.0	A	126.75	507.00
3 - St Andrews Road	0.81	11.50	4.0	B	233.25	933.01
4 - Thurrock Park Way	1.07	62.77	23.4	F	219.50	878.01
5 - A1089 Dock Road	0.77	8.85	3.1	A	303.26	1213.02

Main Results for each time segment

17:00 - 17:15

Arm	Total Demand (Veh/TS)	Junction Arrivals (Veh)	Circulating flow (Veh/TS)	Capacity (Veh/TS)	RFC	Throughput (Veh/TS)	Throughput (exit side) (Veh/TS)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - London Distribution Park	84.00	84.00	350.09	217.21	0.387	83.38	16.78	0.0	0.6	6.694	A
2 - Dock Road	110.00	110.00	270.55	288.18	0.382	109.39	162.92	0.0	0.6	5.017	A
3 - St Andrews Road	308.00	308.00	265.13	378.57	0.814	303.93	114.80	0.0	4.1	11.501	B
4 - Thurrock Park Way	232.00	232.00	424.31	217.43	1.067	208.54	144.76	0.0	23.5	62.768	F
5 - A1089 Dock Road	292.00	292.00	77.00	426.12	0.685	289.87	555.85	0.0	2.1	6.507	A

17:15 - 17:30

Arm	Total Demand (Veh/TS)	Junction Arrivals (Veh)	Circulating flow (Veh/TS)	Capacity (Veh/TS)	RFC	Throughput (Veh/TS)	Throughput (exit side) (Veh/TS)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - London Distribution Park	71.00	71.00	393.50	196.00	0.362	71.06	19.04	0.6	0.6	7.205	A
2 - Dock Road	137.00	137.00	297.41	272.68	0.502	136.62	167.16	0.6	1.0	6.596	A
3 - St Andrews Road	225.00	225.00	295.41	361.26	0.623	227.40	138.62	4.1	1.7	6.840	A
4 - Thurrock Park Way	203.00	203.00	346.11	258.41	0.786	222.40	176.70	23.5	4.1	34.334	D
5 - A1089 Dock Road	327.00	327.00	86.58	426.53	0.767	325.97	481.93	2.1	3.2	8.852	A

17:30 - 17:45

Arm	Total Demand (Veh/TS)	Junction Arrivals (Veh)	Circulating flow (Veh/TS)	Capacity (Veh/TS)	RFC	Throughput (Veh/TS)	Throughput (exit side) (Veh/TS)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - London Distribution Park	69.00	69.00	343.37	219.52	0.314	69.11	24.02	0.6	0.5	5.990	A
2 - Dock Road	125.00	125.00	247.96	304.16	0.411	125.29	164.52	1.0	0.7	5.041	A
3 - St Andrews Road	206.00	206.00	281.65	366.12	0.563	206.38	91.61	1.7	1.3	5.647	A
4 - Thurrock Park Way	261.00	261.00	330.54	269.36	0.969	252.51	157.48	4.1	12.6	40.265	E
5 - A1089 Dock Road	284.00	284.00	82.18	432.69	0.656	285.21	500.87	3.2	1.9	6.154	A

17:45 - 18:00

Arm	Total Demand (Veh/TS)	Junction Arrivals (Veh)	Circulating flow (Veh/TS)	Capacity (Veh/TS)	RFC	Throughput (Veh/TS)	Throughput (exit side) (Veh/TS)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - London Distribution Park	63.00	63.00	366.82	202.99	0.310	63.01	20.99	0.5	0.5	6.429	A
2 - Dock Road	135.00	135.00	273.79	283.06	0.477	134.80	156.05	0.7	0.9	6.063	A
3 - St Andrews Road	194.00	194.00	275.76	367.48	0.528	194.17	132.83	1.3	1.1	5.200	A
4 - Thurrock Park Way	182.00	182.00	303.15	281.26	0.647	192.66	166.78	12.6	1.9	11.356	B
5 - A1089 Dock Road	310.00	310.00	78.53	423.03	0.733	309.28	417.28	1.9	2.7	7.859	A

2022 + Comm + P Con 1, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	3 - St Andrews Road - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout	1, 2, 3, 4, 5	20.86	C

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time period length (min)	Time segment length (min)	Run automatically
D3	2022 + Comm + P Con 1	PM	DIRECT	17:00	18:00	60	15	✓

Vehicle mix varies over time	Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)	O-D data varies over time
✓	✓	✓	HV Percentages	2.00	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Scaling Factor (%)
1 - London Distribution Park		DIRECT	✓	100.000
2 - Dock Road		DIRECT	✓	100.000
3 - St Andrews Road		DIRECT	✓	100.000
4 - Thurrock Park Way		DIRECT	✓	100.000
5 - A1089 Dock Road		DIRECT	✓	100.000

Origin-Destination Data

Demand (Veh/TS)

17:00 - 17:15

		To				
		1 - London Distribution Park	2 - Dock Road	3 - St Andrews Road	4 - Thurrock Park Way	5 - A1089 Dock Road
From	1 - London Distribution Park	0.00	8.00	4.00	6.00	66.00
	2 - Dock Road	0.00	0.00	4.00	29.00	77.00
	3 - St Andrews Road	0.00	11.00	6.00	23.00	269.00
	4 - Thurrock Park Way	1.00	51.00	14.00	1.00	165.00
	5 - A1089 Dock Road	16.00	99.00	90.00	87.00	1.00

17:15 - 17:30

Demand (Veh/TS)

		To				
		1 - London Distribution Park	2 - Dock Road	3 - St Andrews Road	4 - Thurrock Park Way	5 - A1089 Dock Road
From	1 - London Distribution Park	0.00	3.00	0.00	9.00	59.00
	2 - Dock Road	0.00	0.00	10.00	42.00	85.00
	3 - St Andrews Road	3.00	8.00	4.00	26.00	185.00
	4 - Thurrock Park Way	1.00	36.00	28.00	1.00	137.00
	5 - A1089 Dock Road	15.00	116.00	97.00	99.00	1.00

17:30 - 17:45

Demand (Veh/TS)

		To				
		1 - London Distribution Park	2 - Dock Road	3 - St Andrews Road	4 - Thurrock Park Way	5 - A1089 Dock Road
From	1 - London Distribution Park	0.00	1.00	1.00	9.00	58.00
	2 - Dock Road	0.00	0.00	6.00	30.00	89.00
	3 - St Andrews Road	3.00	8.00	8.00	23.00	165.00
	4 - Thurrock Park Way	0.00	55.00	9.00	1.00	196.00
	5 - A1089 Dock Road	21.00	102.00	68.00	94.00	0.00

17:45 - 18:00

Demand (Veh/TS)

		To				
		1 - London Distribution Park	2 - Dock Road	3 - St Andrews Road	4 - Thurrock Park Way	5 - A1089 Dock Road
From	1 - London Distribution Park	0.00	7.00	1.00	7.00	48.00
	2 - Dock Road	0.00	0.00	10.00	47.00	78.00
	3 - St Andrews Road	2.00	10.00	4.00	17.00	162.00
	4 - Thurrock Park Way	0.00	39.00	20.00	1.00	122.00
	5 - A1089 Dock Road	19.00	98.00	99.00	95.00	0.00

Vehicle Mix

17:00 - 17:15

Heavy Vehicle Percentages

		To				
		1 - London Distribution Park	2 - Dock Road	3 - St Andrews Road	4 - Thurrock Park Way	5 - A1089 Dock Road
From	1 - London Distribution Park	0	0	33	0	20
	2 - Dock Road	0	0	4	5	0
	3 - St Andrews Road	0	0	55	8	26
	4 - Thurrock Park Way	0	0	13	25	4
	5 - A1089 Dock Road	86	1	67	10	0

17:15 - 17:30

Heavy Vehicle Percentages

		To				
		1 - London Distribution Park	2 - Dock Road	3 - St Andrews Road	4 - Thurrock Park Way	5 - A1089 Dock Road
From	1 - London Distribution Park	0	0	0	0	22
	2 - Dock Road	0	0	4	5	0
	3 - St Andrews Road	25	0	55	8	27
	4 - Thurrock Park Way	0	0	13	25	4
	5 - A1089 Dock Road	89	1	67	10	0

17:30 - 17:45

Heavy Vehicle Percentages

		To				
		1 - London Distribution Park	2 - Dock Road	3 - St Andrews Road	4 - Thurrock Park Way	5 - A1089 Dock Road
From	1 - London Distribution Park	0	0	33	0	23
	2 - Dock Road	0	0	4	5	0
	3 - St Andrews Road	25	0	55	8	28
	4 - Thurrock Park Way	0	0	13	25	4
	5 - A1089 Dock Road	77	1	70	10	0

17:45 - 18:00

Heavy Vehicle Percentages

		To				
		1 - London Distribution Park	2 - Dock Road	3 - St Andrews Road	4 - Thurrock Park Way	5 - A1089 Dock Road
From	1 - London Distribution Park	0	0	33	0	26
	2 - Dock Road	0	0	4	5	0
	3 - St Andrews Road	25	0	55	8	28
	4 - Thurrock Park Way	0	0	13	25	4
	5 - A1089 Dock Road	80	1	67	10	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/TS)	Total Junction Arrivals (Veh)
1 - London Distribution Park	0.39	7.27	0.6	A	71.75	287.02
2 - Dock Road	0.50	6.65	1.0	A	126.75	507.00
3 - St Andrews Road	0.82	12.01	4.3	B	234.25	937.01
4 - Thurrock Park Way	1.08	65.39	24.6	F	219.50	878.01
5 - A1089 Dock Road	0.77	9.07	3.2	A	304.26	1217.02

Main Results for each time segment

17:00 - 17:15

Arm	Total Demand (Veh/TS)	Junction Arrivals (Veh)	Circulating flow (Veh/TS)	Capacity (Veh/TS)	RFC	Throughput (Veh/TS)	Throughput (exit side) (Veh/TS)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - London Distribution Park	84.00	84.00	350.72	216.71	0.388	83.37	16.78	0.0	0.6	6.719	A
2 - Dock Road	110.00	110.00	271.45	287.47	0.383	109.39	162.64	0.0	0.6	5.037	A
3 - St Andrews Road	309.00	309.00	265.12	375.91	0.822	304.72	115.72	0.0	4.3	12.009	B
4 - Thurrock Park Way	232.00	232.00	425.11	215.77	1.075	207.36	144.73	0.0	24.6	65.393	F
5 - A1089 Dock Road	293.00	293.00	76.65	425.84	0.688	290.84	555.82	0.0	2.2	6.567	A

17:15 - 17:30

Arm	Total Demand (Veh/TS)	Junction Arrivals (Veh)	Circulating flow (Veh/TS)	Capacity (Veh/TS)	RFC	Throughput (Veh/TS)	Throughput (exit side) (Veh/TS)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - London Distribution Park	71.00	71.00	394.77	194.88	0.364	71.06	19.04	0.6	0.6	7.273	A
2 - Dock Road	137.00	137.00	298.44	271.48	0.505	136.61	167.39	0.6	1.0	6.655	A
3 - St Andrews Road	226.00	226.00	295.39	361.20	0.626	228.59	139.66	4.3	1.7	6.914	A
4 - Thurrock Park Way	203.00	203.00	347.28	257.74	0.788	223.51	176.69	24.6	4.1	36.741	E
5 - A1089 Dock Road	328.00	328.00	86.91	425.00	0.772	326.91	483.88	2.2	3.2	9.067	A

17:30 - 17:45

Arm	Total Demand (Veh/TS)	Junction Arrivals (Veh)	Circulating flow (Veh/TS)	Capacity (Veh/TS)	RFC	Throughput (Veh/TS)	Throughput (exit side) (Veh/TS)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - London Distribution Park	69.00	69.00	344.31	218.63	0.316	69.12	24.02	0.6	0.5	6.025	A
2 - Dock Road	125.00	125.00	248.98	303.06	0.412	125.30	164.44	1.0	0.7	5.072	A
3 - St Andrews Road	207.00	207.00	281.66	363.78	0.569	207.36	92.62	1.7	1.3	5.767	A
4 - Thurrock Park Way	261.00	261.00	331.54	268.05	0.974	252.05	157.49	4.1	13.1	41.660	E
5 - A1089 Dock Road	285.00	285.00	82.07	431.39	0.661	286.25	501.51	3.2	2.0	6.256	A

17:45 - 18:00

Arm	Total Demand (Veh/TS)	Junction Arrivals (Veh)	Circulating flow (Veh/TS)	Capacity (Veh/TS)	RFC	Throughput (Veh/TS)	Throughput (exit side) (Veh/TS)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - London Distribution Park	63.00	63.00	367.93	201.94	0.312	63.01	20.99	0.5	0.5	6.480	A
2 - Dock Road	135.00	135.00	274.79	281.86	0.479	134.80	156.15	0.7	0.9	6.110	A
3 - St Andrews Road	195.00	195.00	275.75	367.43	0.531	195.19	133.84	1.3	1.1	5.231	A
4 - Thurrock Park Way	182.00	182.00	304.17	280.68	0.649	193.18	166.77	13.1	1.9	11.579	B
5 - A1089 Dock Road	311.00	311.00	78.66	421.55	0.738	310.25	418.69	2.0	2.7	8.029	A

2022 + Comm + Av Con 2, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	3 - St Andrews Road - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout	1, 2, 3, 4, 5	20.39	C

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time period length (min)	Time segment length (min)	Run automatically
D4	2022 + Comm + Av Con 2	PM	DIRECT	17:00	18:00	60	15	✓

Vehicle mix varies over time	Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)	O-D data varies over time
✓	✓	✓	HV Percentages	2.00	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Scaling Factor (%)
1 - London Distribution Park		DIRECT	✓	100.000
2 - Dock Road		DIRECT	✓	100.000
3 - St Andrews Road		DIRECT	✓	100.000
4 - Thurrock Park Way		DIRECT	✓	100.000
5 - A1089 Dock Road		DIRECT	✓	100.000

Origin-Destination Data

Demand (Veh/TS)

17:00 - 17:15

		To				
		1 - London Distribution Park	2 - Dock Road	3 - St Andrews Road	4 - Thurrock Park Way	5 - A1089 Dock Road
From	1 - London Distribution Park	0.00	8.00	4.00	6.00	66.00
	2 - Dock Road	0.00	0.00	4.00	29.00	77.00
	3 - St Andrews Road	0.00	11.00	7.00	23.00	267.00
	4 - Thurrock Park Way	1.00	51.00	14.00	1.00	165.00
	5 - A1089 Dock Road	16.00	99.00	88.00	87.00	1.00

17:15 - 17:30

Demand (Veh/TS)

		To				
		1 - London Distribution Park	2 - Dock Road	3 - St Andrews Road	4 - Thurrock Park Way	5 - A1089 Dock Road
From	1 - London Distribution Park	0.00	3.00	0.00	9.00	59.00
	2 - Dock Road	0.00	0.00	10.00	42.00	85.00
	3 - St Andrews Road	3.00	8.00	5.00	26.00	183.00
	4 - Thurrock Park Way	1.00	36.00	28.00	1.00	137.00
	5 - A1089 Dock Road	15.00	116.00	95.00	99.00	1.00

17:30 - 17:45

Demand (Veh/TS)

		To				
		1 - London Distribution Park	2 - Dock Road	3 - St Andrews Road	4 - Thurrock Park Way	5 - A1089 Dock Road
From	1 - London Distribution Park	0.00	1.00	1.00	9.00	58.00
	2 - Dock Road	0.00	0.00	6.00	30.00	89.00
	3 - St Andrews Road	3.00	8.00	9.00	23.00	163.00
	4 - Thurrock Park Way	0.00	55.00	9.00	1.00	196.00
	5 - A1089 Dock Road	21.00	102.00	66.00	94.00	0.00

17:45 - 18:00

Demand (Veh/TS)

		To				
		1 - London Distribution Park	2 - Dock Road	3 - St Andrews Road	4 - Thurrock Park Way	5 - A1089 Dock Road
From	1 - London Distribution Park	0.00	7.00	1.00	7.00	48.00
	2 - Dock Road	0.00	0.00	10.00	47.00	78.00
	3 - St Andrews Road	2.00	10.00	5.00	17.00	160.00
	4 - Thurrock Park Way	0.00	39.00	20.00	1.00	122.00
	5 - A1089 Dock Road	19.00	98.00	97.00	95.00	0.00

Vehicle Mix

17:00 - 17:15

Heavy Vehicle Percentages

		To				
		1 - London Distribution Park	2 - Dock Road	3 - St Andrews Road	4 - Thurrock Park Way	5 - A1089 Dock Road
From	1 - London Distribution Park	0	0	33	0	21
	2 - Dock Road	0	0	4	5	0
	3 - St Andrews Road	0	0	62	8	25
	4 - Thurrock Park Way	0	0	13	25	4
	5 - A1089 Dock Road	86	1	67	10	0

17:15 - 17:30

Heavy Vehicle Percentages

		To				
		1 - London Distribution Park	2 - Dock Road	3 - St Andrews Road	4 - Thurrock Park Way	5 - A1089 Dock Road
From	1 - London Distribution Park	0	0	0	0	22
	2 - Dock Road	0	0	4	5	0
	3 - St Andrews Road	25	0	63	8	26
	4 - Thurrock Park Way	0	0	13	25	4
	5 - A1089 Dock Road	89	1	66	10	0

17:30 - 17:45

Heavy Vehicle Percentages

		To				
		1 - London Distribution Park	2 - Dock Road	3 - St Andrews Road	4 - Thurrock Park Way	5 - A1089 Dock Road
From	1 - London Distribution Park	0	0	33	0	23
	2 - Dock Road	0	0	4	5	0
	3 - St Andrews Road	25	0	60	8	27
	4 - Thurrock Park Way	0	0	13	25	4
	5 - A1089 Dock Road	77	1	66	10	0

17:45 - 18:00

Heavy Vehicle Percentages

		To				
		1 - London Distribution Park	2 - Dock Road	3 - St Andrews Road	4 - Thurrock Park Way	5 - A1089 Dock Road
From	1 - London Distribution Park	0	0	33	0	26
	2 - Dock Road	0	0	4	5	0
	3 - St Andrews Road	25	0	63	8	27
	4 - Thurrock Park Way	0	0	13	25	4
	5 - A1089 Dock Road	80	1	66	10	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/TS)	Total Junction Arrivals (Veh)
1 - London Distribution Park	0.39	7.22	0.6	A	71.75	287.02
2 - Dock Road	0.50	6.60	1.0	A	126.75	507.00
3 - St Andrews Road	0.82	11.65	4.1	B	233.25	933.01
4 - Thurrock Park Way	1.07	63.72	23.8	F	219.50	878.01
5 - A1089 Dock Road	0.77	8.81	3.1	A	302.26	1209.03

Main Results for each time segment

17:00 - 17:15

Arm	Total Demand (Veh/TS)	Junction Arrivals (Veh)	Circulating flow (Veh/TS)	Capacity (Veh/TS)	RFC	Throughput (Veh/TS)	Throughput (exit side) (Veh/TS)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - London Distribution Park	84.00	84.00	349.97	215.68	0.389	83.37	16.78	0.0	0.6	6.781	A
2 - Dock Road	110.00	110.00	270.51	287.73	0.382	109.39	162.82	0.0	0.6	5.029	A
3 - St Andrews Road	308.00	308.00	265.13	377.49	0.816	303.87	114.77	0.0	4.1	11.647	B
4 - Thurrock Park Way	232.00	232.00	424.25	216.82	1.070	208.11	144.75	0.0	23.9	63.722	F
5 - A1089 Dock Road	291.00	291.00	77.86	425.75	0.683	288.89	554.50	0.0	2.1	6.479	A

17:15 - 17:30

Arm	Total Demand (Veh/TS)	Junction Arrivals (Veh)	Circulating flow (Veh/TS)	Capacity (Veh/TS)	RFC	Throughput (Veh/TS)	Throughput (exit side) (Veh/TS)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - London Distribution Park	71.00	71.00	393.66	195.81	0.363	71.06	19.04	0.6	0.6	7.216	A
2 - Dock Road	137.00	137.00	297.46	272.52	0.503	136.62	167.27	0.6	1.0	6.604	A
3 - St Andrews Road	225.00	225.00	295.42	362.71	0.620	227.47	138.66	4.1	1.7	6.773	A
4 - Thurrock Park Way	203.00	203.00	346.18	258.88	0.785	222.87	176.71	23.9	4.0	34.611	D
5 - A1089 Dock Road	326.00	326.00	87.73	426.02	0.765	324.97	481.33	2.1	3.1	8.811	A

17:30 - 17:45

Arm	Total Demand (Veh/TS)	Junction Arrivals (Veh)	Circulating flow (Veh/TS)	Capacity (Veh/TS)	RFC	Throughput (Veh/TS)	Throughput (exit side) (Veh/TS)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - London Distribution Park	69.00	69.00	343.36	220.16	0.313	69.12	24.02	0.6	0.5	5.962	A
2 - Dock Road	125.00	125.00	247.97	304.92	0.410	125.30	164.50	1.0	0.7	5.020	A
3 - St Andrews Road	206.00	206.00	281.66	365.10	0.564	206.35	91.60	1.7	1.3	5.681	A
4 - Thurrock Park Way	261.00	261.00	330.52	269.05	0.970	252.36	157.49	4.0	12.7	40.500	E
5 - A1089 Dock Road	283.00	283.00	83.14	434.76	0.651	284.23	499.74	3.1	1.9	6.027	A

17:45 - 18:00

Arm	Total Demand (Veh/TS)	Junction Arrivals (Veh)	Circulating flow (Veh/TS)	Capacity (Veh/TS)	RFC	Throughput (Veh/TS)	Throughput (exit side) (Veh/TS)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - London Distribution Park	63.00	63.00	366.83	202.89	0.311	63.01	20.99	0.5	0.5	6.434	A
2 - Dock Road	135.00	135.00	273.78	282.94	0.477	134.80	156.06	0.7	0.9	6.066	A
3 - St Andrews Road	194.00	194.00	275.74	368.89	0.526	194.19	132.84	1.3	1.1	5.157	A
4 - Thurrock Park Way	182.00	182.00	303.16	281.68	0.646	192.79	166.77	12.7	1.9	11.331	B
5 - A1089 Dock Road	309.00	309.00	79.56	422.59	0.731	308.26	416.38	1.9	2.6	7.817	A

2022 + Comm + P Con 2, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	3 - St Andrews Road - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout	1, 2, 3, 4, 5	20.65	C

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time period length (min)	Time segment length (min)	Run automatically
D5	2022 + Comm + P Con 2	PM	DIRECT	17:00	18:00	60	15	✓

Vehicle mix varies over time	Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)	O-D data varies over time
✓	✓	✓	HV Percentages	2.00	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Scaling Factor (%)
1 - London Distribution Park		DIRECT	✓	100.000
2 - Dock Road		DIRECT	✓	100.000
3 - St Andrews Road		DIRECT	✓	100.000
4 - Thurrock Park Way		DIRECT	✓	100.000
5 - A1089 Dock Road		DIRECT	✓	100.000

Origin-Destination Data

Demand (Veh/TS)

17:00 - 17:15

		To				
		1 - London Distribution Park	2 - Dock Road	3 - St Andrews Road	4 - Thurrock Park Way	5 - A1089 Dock Road
From	1 - London Distribution Park	0.00	8.00	4.00	6.00	66.00
	2 - Dock Road	0.00	0.00	4.00	29.00	77.00
	3 - St Andrews Road	0.00	11.00	8.00	23.00	267.00
	4 - Thurrock Park Way	1.00	51.00	14.00	1.00	165.00
	5 - A1089 Dock Road	16.00	99.00	87.00	87.00	1.00

17:15 - 17:30

Demand (Veh/TS)

		To				
		1 - London Distribution Park	2 - Dock Road	3 - St Andrews Road	4 - Thurrock Park Way	5 - A1089 Dock Road
From	1 - London Distribution Park	0.00	3.00	0.00	9.00	59.00
	2 - Dock Road	0.00	0.00	10.00	42.00	85.00
	3 - St Andrews Road	3.00	8.00	6.00	26.00	183.00
	4 - Thurrock Park Way	1.00	36.00	28.00	1.00	137.00
	5 - A1089 Dock Road	15.00	116.00	95.00	99.00	1.00

17:30 - 17:45

Demand (Veh/TS)

		To				
		1 - London Distribution Park	2 - Dock Road	3 - St Andrews Road	4 - Thurrock Park Way	5 - A1089 Dock Road
From	1 - London Distribution Park	0.00	1.00	1.00	9.00	58.00
	2 - Dock Road	0.00	0.00	6.00	30.00	89.00
	3 - St Andrews Road	3.00	8.00	10.00	23.00	163.00
	4 - Thurrock Park Way	0.00	55.00	9.00	1.00	196.00
	5 - A1089 Dock Road	21.00	102.00	66.00	94.00	0.00

17:45 - 18:00

Demand (Veh/TS)

		To				
		1 - London Distribution Park	2 - Dock Road	3 - St Andrews Road	4 - Thurrock Park Way	5 - A1089 Dock Road
From	1 - London Distribution Park	0.00	7.00	1.00	7.00	48.00
	2 - Dock Road	0.00	0.00	10.00	47.00	78.00
	3 - St Andrews Road	2.00	10.00	6.00	17.00	160.00
	4 - Thurrock Park Way	0.00	39.00	20.00	1.00	122.00
	5 - A1089 Dock Road	19.00	98.00	97.00	95.00	0.00

Vehicle Mix

17:00 - 17:15

Heavy Vehicle Percentages

		To				
		1 - London Distribution Park	2 - Dock Road	3 - St Andrews Road	4 - Thurrock Park Way	5 - A1089 Dock Road
From	1 - London Distribution Park	0	0	33	0	20
	2 - Dock Road	0	0	4	5	0
	3 - St Andrews Road	0	0	67	8	25
	4 - Thurrock Park Way	0	0	13	25	4
	5 - A1089 Dock Road	86	1	67	10	0

17:15 - 17:30

Heavy Vehicle Percentages

		To				
		1 - London Distribution Park	2 - Dock Road	3 - St Andrews Road	4 - Thurrock Park Way	5 - A1089 Dock Road
From	1 - London Distribution Park	0	0	0	0	22
	2 - Dock Road	0	0	4	5	0
	3 - St Andrews Road	25	0	69	8	26
	4 - Thurrock Park Way	0	0	13	25	4
	5 - A1089 Dock Road	89	1	66	10	0

17:30 - 17:45

Heavy Vehicle Percentages

		To				
		1 - London Distribution Park	2 - Dock Road	3 - St Andrews Road	4 - Thurrock Park Way	5 - A1089 Dock Road
From	1 - London Distribution Park	0	0	33	0	23
	2 - Dock Road	0	0	4	5	0
	3 - St Andrews Road	25	0	64	8	27
	4 - Thurrock Park Way	0	0	13	25	4
	5 - A1089 Dock Road	77	1	69	10	0

17:45 - 18:00

Heavy Vehicle Percentages

		To				
		1 - London Distribution Park	2 - Dock Road	3 - St Andrews Road	4 - Thurrock Park Way	5 - A1089 Dock Road
From	1 - London Distribution Park	0	0	33	0	26
	2 - Dock Road	0	0	4	5	0
	3 - St Andrews Road	25	0	69	8	27
	4 - Thurrock Park Way	0	0	13	25	4
	5 - A1089 Dock Road	80	1	66	10	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/TS)	Total Junction Arrivals (Veh)
1 - London Distribution Park	0.39	7.26	0.6	A	71.75	287.02
2 - Dock Road	0.50	6.65	1.0	A	126.75	507.00
3 - St Andrews Road	0.82	11.85	4.2	B	234.25	937.02
4 - Thurrock Park Way	1.07	64.63	24.2	F	219.50	878.01
5 - A1089 Dock Road	0.77	8.88	3.1	A	302.01	1208.02

Main Results for each time segment

17:00 - 17:15

Arm	Total Demand (Veh/TS)	Junction Arrivals (Veh)	Circulating flow (Veh/TS)	Capacity (Veh/TS)	RFC	Throughput (Veh/TS)	Throughput (exit side) (Veh/TS)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - London Distribution Park	84.00	84.00	349.85	217.04	0.387	83.38	16.78	0.0	0.6	6.703	A
2 - Dock Road	110.00	110.00	270.49	287.89	0.382	109.39	162.73	0.0	0.6	5.025	A
3 - St Andrews Road	309.00	309.00	265.13	377.02	0.820	304.78	114.74	0.0	4.2	11.851	B
4 - Thurrock Park Way	232.00	232.00	425.17	216.25	1.073	207.70	144.75	0.0	24.3	64.634	F
5 - A1089 Dock Road	290.00	290.00	78.72	425.40	0.682	287.91	554.14	0.0	2.1	6.451	A

17:15 - 17:30

Arm	Total Demand (Veh/TS)	Junction Arrivals (Veh)	Circulating flow (Veh/TS)	Capacity (Veh/TS)	RFC	Throughput (Veh/TS)	Throughput (exit side) (Veh/TS)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - London Distribution Park	71.00	71.00	394.71	195.03	0.364	71.06	19.04	0.6	0.6	7.264	A
2 - Dock Road	137.00	137.00	298.44	271.62	0.504	136.61	167.33	0.6	1.0	6.647	A
3 - St Andrews Road	226.00	226.00	295.39	361.76	0.625	228.53	139.66	4.2	1.7	6.879	A
4 - Thurrock Park Way	203.00	203.00	347.23	257.96	0.788	223.20	176.70	24.3	4.1	36.003	E
5 - A1089 Dock Road	326.00	326.00	88.83	425.12	0.767	324.93	481.60	2.1	3.2	8.883	A

17:30 - 17:45

Arm	Total Demand (Veh/TS)	Junction Arrivals (Veh)	Circulating flow (Veh/TS)	Capacity (Veh/TS)	RFC	Throughput (Veh/TS)	Throughput (exit side) (Veh/TS)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - London Distribution Park	69.00	69.00	344.27	218.67	0.316	69.12	24.02	0.6	0.5	6.021	A
2 - Dock Road	125.00	125.00	248.96	303.11	0.412	125.30	164.43	1.0	0.7	5.069	A
3 - St Andrews Road	207.00	207.00	281.65	364.05	0.569	207.36	92.60	1.7	1.3	5.759	A
4 - Thurrock Park Way	261.00	261.00	331.53	268.14	0.973	252.06	157.48	4.1	13.0	41.530	E
5 - A1089 Dock Road	283.00	283.00	84.08	431.51	0.656	284.21	499.52	3.2	1.9	6.162	A

17:45 - 18:00

Arm	Total Demand (Veh/TS)	Junction Arrivals (Veh)	Circulating flow (Veh/TS)	Capacity (Veh/TS)	RFC	Throughput (Veh/TS)	Throughput (exit side) (Veh/TS)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - London Distribution Park	63.00	63.00	367.94	202.08	0.312	63.01	20.99	0.5	0.5	6.471	A
2 - Dock Road	135.00	135.00	274.80	282.01	0.479	134.80	156.15	0.7	0.9	6.104	A
3 - St Andrews Road	195.00	195.00	275.75	367.76	0.530	195.19	133.85	1.3	1.1	5.223	A
4 - Thurrock Park Way	182.00	182.00	304.17	280.78	0.649	193.14	166.78	13.0	1.9	11.552	B
5 - A1089 Dock Road	309.00	309.00	80.65	421.69	0.733	308.28	416.66	1.9	2.7	7.881	A

2022 + Comm + Av Con 1 + Cumu, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	3 - St Andrews Road - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout	1, 2, 3, 4, 5	34.82	D

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time period length (min)	Time segment length (min)	Run automatically
D6	2022 + Comm + Av Con 1 + Cumu	PM	DIRECT	17:00	18:00	60	15	✓

Vehicle mix varies over time	Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)	O-D data varies over time
✓	✓	✓	HV Percentages	2.00	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Scaling Factor (%)
1 - London Distribution Park		DIRECT	✓	100.000
2 - Dock Road		DIRECT	✓	100.000
3 - St Andrews Road		DIRECT	✓	100.000
4 - Thurrock Park Way		DIRECT	✓	100.000
5 - A1089 Dock Road		DIRECT	✓	100.000

Origin-Destination Data

Demand (Veh/TS)

17:00 - 17:15

		To				
		1 - London Distribution Park	2 - Dock Road	3 - St Andrews Road	4 - Thurrock Park Way	5 - A1089 Dock Road
From	1 - London Distribution Park	0.00	8.00	4.00	6.00	66.00
	2 - Dock Road	0.00	0.00	5.00	29.00	80.00
	3 - St Andrews Road	0.00	11.00	6.00	24.00	291.00
	4 - Thurrock Park Way	1.00	53.00	15.00	1.00	171.00
	5 - A1089 Dock Road	16.00	102.00	89.00	92.00	1.00

17:15 - 17:30

Demand (Veh/TS)

		To				
		1 - London Distribution Park	2 - Dock Road	3 - St Andrews Road	4 - Thurrock Park Way	5 - A1089 Dock Road
From	1 - London Distribution Park	0.00	3.00	0.00	9.00	59.00
	2 - Dock Road	0.00	0.00	10.00	42.00	89.00
	3 - St Andrews Road	3.00	8.00	4.00	26.00	208.00
	4 - Thurrock Park Way	1.00	38.00	29.00	1.00	143.00
	5 - A1089 Dock Road	15.00	118.00	96.00	104.00	1.00

17:30 - 17:45

Demand (Veh/TS)

		To				
		1 - London Distribution Park	2 - Dock Road	3 - St Andrews Road	4 - Thurrock Park Way	5 - A1089 Dock Road
From	1 - London Distribution Park	0.00	1.00	1.00	9.00	58.00
	2 - Dock Road	0.00	0.00	6.00	30.00	92.00
	3 - St Andrews Road	3.00	8.00	8.00	24.00	188.00
	4 - Thurrock Park Way	0.00	57.00	10.00	1.00	202.00
	5 - A1089 Dock Road	21.00	104.00	67.00	99.00	0.00

17:45 - 18:00

Demand (Veh/TS)

		To				
		1 - London Distribution Park	2 - Dock Road	3 - St Andrews Road	4 - Thurrock Park Way	5 - A1089 Dock Road
From	1 - London Distribution Park	0.00	7.00	1.00	7.00	48.00
	2 - Dock Road	0.00	0.00	10.00	47.00	81.00
	3 - St Andrews Road	2.00	10.00	4.00	17.00	184.00
	4 - Thurrock Park Way	0.00	41.00	21.00	1.00	202.00
	5 - A1089 Dock Road	19.00	100.00	98.00	100.00	0.00

Vehicle Mix

17:00 - 17:15

Heavy Vehicle Percentages

		To				
		1 - London Distribution Park	2 - Dock Road	3 - St Andrews Road	4 - Thurrock Park Way	5 - A1089 Dock Road
From	1 - London Distribution Park	0	0	33	0	20
	2 - Dock Road	0	0	4	5	0
	3 - St Andrews Road	0	0	55	8	24
	4 - Thurrock Park Way	0	0	12	25	4
	5 - A1089 Dock Road	86	1	67	13	0

17:15 - 17:30

Heavy Vehicle Percentages

		To				
		1 - London Distribution Park	2 - Dock Road	3 - St Andrews Road	4 - Thurrock Park Way	5 - A1089 Dock Road
From	1 - London Distribution Park	0	0	0	0	22
	2 - Dock Road	0	0	4	5	0
	3 - St Andrews Road	25	0	55	8	25
	4 - Thurrock Park Way	0	0	13	25	4
	5 - A1089 Dock Road	89	1	66	13	0

Heavy Vehicle Percentages

17:30 - 17:45

		To				
		1 - London Distribution Park	2 - Dock Road	3 - St Andrews Road	4 - Thurrock Park Way	5 - A1089 Dock Road
From	1 - London Distribution Park	0	0	33	0	23
	2 - Dock Road	0	0	4	5	0
	3 - St Andrews Road	25	0	55	8	26
	4 - Thurrock Park Way	0	0	12	25	4
	5 - A1089 Dock Road	77	1	69	13	0

Heavy Vehicle Percentages

17:45 - 18:00

		To				
		1 - London Distribution Park	2 - Dock Road	3 - St Andrews Road	4 - Thurrock Park Way	5 - A1089 Dock Road
From	1 - London Distribution Park	0	0	33	0	26
	2 - Dock Road	0	0	4	5	0
	3 - St Andrews Road	25	0	55	8	26
	4 - Thurrock Park Way	0	0	13	25	4
	5 - A1089 Dock Road	80	1	66	13	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/TS)	Total Junction Arrivals (Veh)
1 - London Distribution Park	0.39	7.56	0.6	A	71.75	287.02
2 - Dock Road	0.52	7.00	1.1	A	130.25	521.00
3 - St Andrews Road	0.88	16.21	6.4	C	257.26	1029.02
4 - Thurrock Park Way	1.17	119.83	40.2	F	247.03	988.12
5 - A1089 Dock Road	0.79	9.86	3.6	A	310.50	1242.02

Main Results for each time segment

17:00 - 17:15

Arm	Total Demand (Veh/TS)	Junction Arrivals (Veh)	Circulating flow (Veh/TS)	Capacity (Veh/TS)	RFC	Throughput (Veh/TS)	Throughput (exit side) (Veh/TS)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - London Distribution Park	84.00	84.00	355.94	213.72	0.393	83.36	16.71	0.0	0.6	6.872	A
2 - Dock Road	114.00	114.00	275.22	284.70	0.400	113.34	164.07	0.0	0.7	5.232	A
3 - St Andrews Road	332.00	332.00	272.93	375.99	0.883	325.55	115.63	0.0	6.5	16.207	C
4 - Thurrock Park Way	241.00	241.00	448.04	205.69	1.172	200.71	150.44	0.0	40.3	98.734	F
5 - A1089 Dock Road	300.00	300.00	74.97	425.94	0.704	297.68	573.78	0.0	2.3	6.899	A

17:15 - 17:30

Arm	Total Demand (Veh/TS)	Junction Arrivals (Veh)	Circulating flow (Veh/TS)	Capacity (Veh/TS)	RFC	Throughput (Veh/TS)	Throughput (exit side) (Veh/TS)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - London Distribution Park	71.00	71.00	405.01	190.10	0.374	71.05	19.05	0.6	0.6	7.563	A
2 - Dock Road	141.00	141.00	303.04	268.60	0.525	140.57	173.02	0.7	1.1	7.005	A
3 - St Andrews Road	249.00	249.00	304.29	359.63	0.692	253.15	139.32	6.5	2.3	8.760	A
4 - Thurrock Park Way	212.00	212.00	375.70	244.07	0.870	238.18	181.73	40.3	14.1	108.340	F
5 - A1089 Dock Road	334.00	334.00	91.33	422.69	0.790	332.73	522.56	2.3	3.6	9.857	A

17:30 - 17:45

Arm	Total Demand (Veh/TS)	Junction Arrivals (Veh)	Circulating flow (Veh/TS)	Capacity (Veh/TS)	RFC	Throughput (Veh/TS)	Throughput (exit side) (Veh/TS)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - London Distribution Park	69.00	69.00	351.73	214.90	0.321	69.13	24.07	0.6	0.5	6.180	A
2 - Dock Road	128.00	128.00	254.70	299.51	0.427	128.33	166.16	1.1	0.8	5.267	A
3 - St Andrews Road	231.00	231.00	289.75	362.82	0.637	231.53	93.28	2.3	1.8	6.885	A
4 - Thurrock Park Way	270.00	270.00	357.73	254.85	1.059	251.41	163.55	14.1	32.7	96.198	F
5 - A1089 Dock Road	291.00	291.00	83.36	430.13	0.676	292.44	525.78	3.6	2.1	6.606	A

17:45 - 18:00

Arm	Total Demand (Veh/TS)	Junction Arrivals (Veh)	Circulating flow (Veh/TS)	Capacity (Veh/TS)	RFC	Throughput (Veh/TS)	Throughput (exit side) (Veh/TS)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - London Distribution Park	63.00	63.00	374.35	198.83	0.317	63.01	20.99	0.5	0.5	6.626	A
2 - Dock Road	138.00	138.00	277.97	279.76	0.493	137.79	159.39	0.8	1.0	6.330	A
3 - St Andrews Road	217.00	217.00	283.68	366.43	0.592	217.31	132.09	1.8	1.5	6.050	A
4 - Thurrock Park Way	265.00	265.00	329.27	268.48	0.988	263.45	171.72	32.7	34.3	119.827	F
5 - A1089 Dock Road	317.00	317.00	79.14	421.30	0.753	316.20	513.58	2.1	2.9	8.491	A

2022 + Comm + P Con 1 + Cumu, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	3 - St Andrews Road - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout	1, 2, 3, 4, 5	31.88	D

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time period length (min)	Time segment length (min)	Run automatically
D7	2022 + Comm + P Con 1 + Cumu	PM	DIRECT	17:00	18:00	60	15	✓

Vehicle mix varies over time	Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)	O-D data varies over time
✓	✓	✓	HV Percentages	2.00	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Scaling Factor (%)
1 - London Distribution Park		DIRECT	✓	100.000
2 - Dock Road		DIRECT	✓	100.000
3 - St Andrews Road		DIRECT	✓	100.000
4 - Thurrock Park Way		DIRECT	✓	100.000
5 - A1089 Dock Road		DIRECT	✓	100.000

Origin-Destination Data

Demand (Veh/TS)

17:00 - 17:15

		To				
		1 - London Distribution Park	2 - Dock Road	3 - St Andrews Road	4 - Thurrock Park Way	5 - A1089 Dock Road
From	1 - London Distribution Park	0.00	8.00	4.00	6.00	66.00
	2 - Dock Road	0.00	0.00	5.00	29.00	80.00
	3 - St Andrews Road	0.00	11.00	6.00	24.00	292.00
	4 - Thurrock Park Way	1.00	53.00	15.00	1.00	171.00
	5 - A1089 Dock Road	16.00	102.00	90.00	32.00	1.00

17:15 - 17:30

Demand (Veh/TS)

		To				
		1 - London Distribution Park	2 - Dock Road	3 - St Andrews Road	4 - Thurrock Park Way	5 - A1089 Dock Road
From	1 - London Distribution Park	0.00	3.00	0.00	9.00	59.00
	2 - Dock Road	0.00	0.00	10.00	42.00	89.00
	3 - St Andrews Road	3.00	8.00	4.00	26.00	209.00
	4 - Thurrock Park Way	1.00	38.00	29.00	1.00	143.00
	5 - A1089 Dock Road	15.00	118.00	97.00	104.00	1.00

17:30 - 17:45

Demand (Veh/TS)

		To				
		1 - London Distribution Park	2 - Dock Road	3 - St Andrews Road	4 - Thurrock Park Way	5 - A1089 Dock Road
From	1 - London Distribution Park	0.00	1.00	1.00	9.00	58.00
	2 - Dock Road	0.00	0.00	6.00	30.00	92.00
	3 - St Andrews Road	3.00	8.00	8.00	24.00	189.00
	4 - Thurrock Park Way	0.00	57.00	10.00	1.00	202.00
	5 - A1089 Dock Road	21.00	104.00	68.00	99.00	0.00

17:45 - 18:00

Demand (Veh/TS)

		To				
		1 - London Distribution Park	2 - Dock Road	3 - St Andrews Road	4 - Thurrock Park Way	5 - A1089 Dock Road
From	1 - London Distribution Park	0.00	7.00	1.00	7.00	48.00
	2 - Dock Road	0.00	0.00	10.00	47.00	81.00
	3 - St Andrews Road	2.00	10.00	4.00	17.00	185.00
	4 - Thurrock Park Way	0.00	41.00	21.00	1.00	127.00
	5 - A1089 Dock Road	19.00	100.00	99.00	100.00	0.00

Vehicle Mix

17:00 - 17:15

Heavy Vehicle Percentages

		To				
		1 - London Distribution Park	2 - Dock Road	3 - St Andrews Road	4 - Thurrock Park Way	5 - A1089 Dock Road
From	1 - London Distribution Park	0	0	33	0	21
	2 - Dock Road	0	0	4	5	0
	3 - St Andrews Road	0	0	55	8	25
	4 - Thurrock Park Way	0	0	13	25	4
	5 - A1089 Dock Road	87	1	67	14	0

17:15 - 17:30

Heavy Vehicle Percentages

		To				
		1 - London Distribution Park	2 - Dock Road	3 - St Andrews Road	4 - Thurrock Park Way	5 - A1089 Dock Road
From	1 - London Distribution Park	0	0	0	0	23
	2 - Dock Road	0	0	4	5	0
	3 - St Andrews Road	25	0	55	8	25
	4 - Thurrock Park Way	0	0	13	25	4
	5 - A1089 Dock Road	89	1	66	13	0

17:30 - 17:45

Heavy Vehicle Percentages

		To				
		1 - London Distribution Park	2 - Dock Road	3 - St Andrews Road	4 - Thurrock Park Way	5 - A1089 Dock Road
From	1 - London Distribution Park	0	0	33	0	23
	2 - Dock Road	0	0	4	5	0
	3 - St Andrews Road	25	0	55	8	26
	4 - Thurrock Park Way	0	0	13	25	4
	5 - A1089 Dock Road	78	1	70	13	0

17:45 - 18:00

Heavy Vehicle Percentages

		To				
		1 - London Distribution Park	2 - Dock Road	3 - St Andrews Road	4 - Thurrock Park Way	5 - A1089 Dock Road
From	1 - London Distribution Park	0	0	33	0	27
	2 - Dock Road	0	0	4	5	0
	3 - St Andrews Road	25	0	55	8	26
	4 - Thurrock Park Way	0	0	13	25	4
	5 - A1089 Dock Road	81	1	67	13	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/TS)	Total Junction Arrivals (Veh)
1 - London Distribution Park	0.38	7.65	0.6	A	71.75	287.02
2 - Dock Road	0.53	7.02	1.1	A	130.25	521.00
3 - St Andrews Road	0.82	11.41	4.4	B	258.25	1033.02
4 - Thurrock Park Way	1.19	117.61	43.2	F	228.25	913.00
5 - A1089 Dock Road	0.79	9.82	3.6	A	296.50	1186.01

Main Results for each time segment

17:00 - 17:15

Arm	Total Demand (Veh/TS)	Junction Arrivals (Veh)	Circulating flow (Veh/TS)	Capacity (Veh/TS)	RFC	Throughput (Veh/TS)	Throughput (exit side) (Veh/TS)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - London Distribution Park	84.00	84.00	297.08	237.77	0.353	83.46	16.73	0.0	0.5	5.813	A
2 - Dock Road	114.00	114.00	216.85	314.08	0.363	113.44	163.69	0.0	0.6	4.473	A
3 - St Andrews Road	333.00	333.00	213.63	403.67	0.825	328.62	116.66	0.0	4.4	11.406	B
4 - Thurrock Park Way	241.00	241.00	451.11	202.24	1.192	197.68	91.14	0.0	43.3	106.006	F
5 - A1089 Dock Road	241.00	241.00	74.19	412.49	0.584	239.61	574.59	0.0	1.4	5.165	A

17:15 - 17:30

Arm	Total Demand (Veh/TS)	Junction Arrivals (Veh)	Circulating flow (Veh/TS)	Capacity (Veh/TS)	RFC	Throughput (Veh/TS)	Throughput (exit side) (Veh/TS)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - London Distribution Park	71.00	71.00	405.04	188.58	0.377	70.95	19.01	0.5	0.6	7.647	A
2 - Dock Road	141.00	141.00	303.02	268.13	0.526	140.47	172.97	0.6	1.1	7.020	A
3 - St Andrews Road	250.00	250.00	303.57	359.65	0.695	252.04	139.93	4.4	2.3	8.516	A
4 - Thurrock Park Way	212.00	212.00	374.61	244.36	0.869	238.85	181.01	43.3	16.5	117.609	F
5 - A1089 Dock Road	335.00	335.00	91.32	422.26	0.793	332.74	522.14	1.4	3.6	9.815	A

17:30 - 17:45

Arm	Total Demand (Veh/TS)	Junction Arrivals (Veh)	Circulating flow (Veh/TS)	Capacity (Veh/TS)	RFC	Throughput (Veh/TS)	Throughput (exit side) (Veh/TS)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - London Distribution Park	69.00	69.00	352.85	213.89	0.323	69.12	24.08	0.6	0.5	6.221	A
2 - Dock Road	128.00	128.00	255.91	298.26	0.429	128.33	166.05	1.1	0.8	5.308	A
3 - St Andrews Road	232.00	232.00	289.74	362.80	0.640	232.54	94.50	2.3	1.8	6.940	A
4 - Thurrock Park Way	270.00	270.00	358.72	254.16	1.062	251.23	163.56	16.5	35.2	104.597	F
5 - A1089 Dock Road	292.00	292.00	83.48	428.51	0.681	293.45	526.47	3.6	2.2	6.737	A

17:45 - 18:00

Arm	Total Demand (Veh/TS)	Junction Arrivals (Veh)	Circulating flow (Veh/TS)	Capacity (Veh/TS)	RFC	Throughput (Veh/TS)	Throughput (exit side) (Veh/TS)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - London Distribution Park	63.00	63.00	383.13	193.49	0.326	63.00	20.98	0.5	0.5	6.896	A
2 - Dock Road	138.00	138.00	281.51	277.02	0.498	137.78	164.62	0.8	1.0	6.452	A
3 - St Andrews Road	218.00	218.00	283.74	366.15	0.595	218.31	135.55	1.8	1.5	6.101	A
4 - Thurrock Park Way	190.00	190.00	330.25	267.59	0.711	222.63	171.80	35.2	2.6	34.853	D
5 - A1089 Dock Road	318.00	318.00	87.05	416.23	0.764	317.07	465.83	2.2	3.1	8.984	A

2022 + Comm + Av Con 2 + Cumu, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	3 - St Andrews Road - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout	1, 2, 3, 4, 5	31.45	D

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time period length (min)	Time segment length (min)	Run automatically
D8	2022 + Comm + Av Con 2 + Cumu	PM	DIRECT	17:00	18:00	60	15	✓

Vehicle mix varies over time	Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)	O-D data varies over time
✓	✓	✓	HV Percentages	2.00	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Scaling Factor (%)
1 - London Distribution Park		DIRECT	✓	100.000
2 - Dock Road		DIRECT	✓	100.000
3 - St Andrews Road		DIRECT	✓	100.000
4 - Thurrock Park Way		DIRECT	✓	100.000
5 - A1089 Dock Road		DIRECT	✓	100.000

Origin-Destination Data

Demand (Veh/TS)

17:00 - 17:15

		To				
		1 - London Distribution Park	2 - Dock Road	3 - St Andrews Road	4 - Thurrock Park Way	5 - A1089 Dock Road
From	1 - London Distribution Park	0.00	8.00	4.00	6.00	66.00
	2 - Dock Road	0.00	0.00	5.00	29.00	80.00
	3 - St Andrews Road	0.00	11.00	7.00	24.00	290.00
	4 - Thurrock Park Way	1.00	53.00	15.00	1.00	171.00
	5 - A1089 Dock Road	16.00	102.00	88.00	92.00	1.00

17:15 - 17:30

Demand (Veh/TS)

		To				
		1 - London Distribution Park	2 - Dock Road	3 - St Andrews Road	4 - Thurrock Park Way	5 - A1089 Dock Road
From	1 - London Distribution Park	0.00	3.00	0.00	9.00	59.00
	2 - Dock Road	0.00	0.00	10.00	42.00	89.00
	3 - St Andrews Road	3.00	8.00	5.00	26.00	207.00
	4 - Thurrock Park Way	1.00	38.00	29.00	1.00	143.00
	5 - A1089 Dock Road	15.00	118.00	95.00	104.00	1.00

17:30 - 17:45

Demand (Veh/TS)

		To				
		1 - London Distribution Park	2 - Dock Road	3 - St Andrews Road	4 - Thurrock Park Way	5 - A1089 Dock Road
From	1 - London Distribution Park	0.00	1.00	1.00	9.00	58.00
	2 - Dock Road	0.00	0.00	6.00	30.00	92.00
	3 - St Andrews Road	3.00	8.00	9.00	24.00	187.00
	4 - Thurrock Park Way	0.00	57.00	10.00	1.00	202.00
	5 - A1089 Dock Road	21.00	104.00	66.00	99.00	0.00

17:45 - 18:00

Demand (Veh/TS)

		To				
		1 - London Distribution Park	2 - Dock Road	3 - St Andrews Road	4 - Thurrock Park Way	5 - A1089 Dock Road
From	1 - London Distribution Park	0.00	7.00	1.00	7.00	48.00
	2 - Dock Road	0.00	0.00	10.00	47.00	81.00
	3 - St Andrews Road	2.00	10.00	5.00	17.00	183.00
	4 - Thurrock Park Way	0.00	41.00	21.00	1.00	127.00
	5 - A1089 Dock Road	19.00	100.00	97.00	100.00	0.00

Vehicle Mix

17:00 - 17:15

Heavy Vehicle Percentages

		To				
		1 - London Distribution Park	2 - Dock Road	3 - St Andrews Road	4 - Thurrock Park Way	5 - A1089 Dock Road
From	1 - London Distribution Park	0	0	33	0	20
	2 - Dock Road	0	0	4	5	0
	3 - St Andrews Road	0	0	62	8	24
	4 - Thurrock Park Way	0	0	12	25	4
	5 - A1089 Dock Road	86	1	67	13	0

17:15 - 17:30

Heavy Vehicle Percentages

		To				
		1 - London Distribution Park	2 - Dock Road	3 - St Andrews Road	4 - Thurrock Park Way	5 - A1089 Dock Road
From	1 - London Distribution Park	0	0	0	0	22
	2 - Dock Road	0	0	4	5	0
	3 - St Andrews Road	25	0	63	8	25
	4 - Thurrock Park Way	0	0	13	25	4
	5 - A1089 Dock Road	89	1	66	13	0

Heavy Vehicle Percentages

17:30 - 17:45

		To				
		1 - London Distribution Park	2 - Dock Road	3 - St Andrews Road	4 - Thurrock Park Way	5 - A1089 Dock Road
From	1 - London Distribution Park	0	0	33	0	23
	2 - Dock Road	0	0	4	5	0
	3 - St Andrews Road	25	0	60	8	25
	4 - Thurrock Park Way	0	0	12	25	4
	5 - A1089 Dock Road	77	1	69	13	0

Heavy Vehicle Percentages

17:45 - 18:00

		To				
		1 - London Distribution Park	2 - Dock Road	3 - St Andrews Road	4 - Thurrock Park Way	5 - A1089 Dock Road
From	1 - London Distribution Park	0	0	33	0	26
	2 - Dock Road	0	0	4	5	0
	3 - St Andrews Road	25	0	63	8	25
	4 - Thurrock Park Way	0	0	13	25	4
	5 - A1089 Dock Road	80	1	66	13	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/TS)	Total Junction Arrivals (Veh)
1 - London Distribution Park	0.39	7.57	0.6	A	71.75	287.02
2 - Dock Road	0.53	7.01	1.1	A	130.25	521.00
3 - St Andrews Road	0.88	16.39	6.5	C	257.25	1029.02
4 - Thurrock Park Way	1.17	109.91	40.5	F	228.27	913.06
5 - A1089 Dock Road	0.79	9.80	3.5	A	309.51	1238.03

Main Results for each time segment

17:00 - 17:15

Arm	Total Demand (Veh/TS)	Junction Arrivals (Veh)	Circulating flow (Veh/TS)	Capacity (Veh/TS)	RFC	Throughput (Veh/TS)	Throughput (exit side) (Veh/TS)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - London Distribution Park	84.00	84.00	355.85	213.61	0.393	83.36	16.71	0.0	0.6	6.877	A
2 - Dock Road	114.00	114.00	275.20	284.55	0.401	113.34	164.02	0.0	0.7	5.237	A
3 - St Andrews Road	332.00	332.00	272.93	375.25	0.885	325.46	115.60	0.0	6.5	16.388	C
4 - Thurrock Park Way	241.00	241.00	447.96	205.38	1.173	200.43	150.44	0.0	40.6	99.402	F
5 - A1089 Dock Road	299.00	299.00	75.86	425.55	0.703	296.70	572.53	0.0	2.3	6.869	A

17:15 - 17:30

Arm	Total Demand (Veh/TS)	Junction Arrivals (Veh)	Circulating flow (Veh/TS)	Capacity (Veh/TS)	RFC	Throughput (Veh/TS)	Throughput (exit side) (Veh/TS)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - London Distribution Park	71.00	71.00	404.93	190.02	0.374	71.05	19.05	0.6	0.6	7.566	A
2 - Dock Road	141.00	141.00	302.99	268.48	0.525	140.57	172.99	0.7	1.1	7.011	A
3 - St Andrews Road	249.00	249.00	304.29	358.82	0.694	253.22	139.28	6.5	2.3	8.842	A
4 - Thurrock Park Way	212.00	212.00	375.76	243.72	0.871	237.88	181.74	40.6	14.7	109.913	F
5 - A1089 Dock Road	333.00	333.00	92.24	422.27	0.789	331.74	521.40	2.3	3.6	9.797	A

17:30 - 17:45

Arm	Total Demand (Veh/TS)	Junction Arrivals (Veh)	Circulating flow (Veh/TS)	Capacity (Veh/TS)	RFC	Throughput (Veh/TS)	Throughput (exit side) (Veh/TS)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - London Distribution Park	69.00	69.00	351.89	214.72	0.321	69.13	24.07	0.6	0.5	6.188	A
2 - Dock Road	128.00	128.00	254.77	299.33	0.428	128.33	166.25	1.1	0.8	5.273	A
3 - St Andrews Road	231.00	231.00	289.75	364.23	0.634	231.56	93.35	2.3	1.8	6.813	A
4 - Thurrock Park Way	270.00	270.00	357.76	255.33	1.057	251.93	163.56	14.7	32.8	97.053	F
5 - A1089 Dock Road	290.00	290.00	84.54	429.68	0.675	291.43	525.15	3.6	2.1	6.576	A

17:45 - 18:00

Arm	Total Demand (Veh/TS)	Junction Arrivals (Veh)	Circulating flow (Veh/TS)	Capacity (Veh/TS)	RFC	Throughput (Veh/TS)	Throughput (exit side) (Veh/TS)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - London Distribution Park	63.00	63.00	381.60	195.82	0.322	63.00	20.98	0.5	0.5	6.778	A
2 - Dock Road	138.00	138.00	280.47	278.34	0.496	137.78	164.13	0.8	1.0	6.392	A
3 - St Andrews Road	217.00	217.00	283.75	367.95	0.590	217.31	134.51	1.8	1.5	5.986	A
4 - Thurrock Park Way	190.00	190.00	329.25	268.91	0.707	220.25	171.81	32.8	2.6	30.474	D
5 - A1089 Dock Road	316.00	316.00	87.47	417.59	0.757	315.12	462.03	2.1	3.0	8.702	A

2022 + Comm + P Con 2 + Cumu, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	3 - St Andrews Road - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout	1, 2, 3, 4, 5	32.44	D

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time period length (min)	Time segment length (min)	Run automatically
D9	2022 + Comm + P Con 2 + Cumu	PM	DIRECT	17:00	18:00	60	15	✓

Vehicle mix varies over time	Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)	O-D data varies over time
✓	✓	✓	HV Percentages	2.00	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Scaling Factor (%)
1 - London Distribution Park		DIRECT	✓	100.000
2 - Dock Road		DIRECT	✓	100.000
3 - St Andrews Road		DIRECT	✓	100.000
4 - Thurrock Park Way		DIRECT	✓	100.000
5 - A1089 Dock Road		DIRECT	✓	100.000

Origin-Destination Data

Demand (Veh/TS)

17:00 - 17:15

		To				
		1 - London Distribution Park	2 - Dock Road	3 - St Andrews Road	4 - Thurrock Park Way	5 - A1089 Dock Road
From	1 - London Distribution Park	0.00	8.00	4.00	6.00	66.00
	2 - Dock Road	0.00	0.00	5.00	29.00	80.00
	3 - St Andrews Road	0.00	11.00	8.00	24.00	290.00
	4 - Thurrock Park Way	1.00	53.00	15.00	1.00	171.00
	5 - A1089 Dock Road	16.00	102.00	88.00	92.00	1.00

17:15 - 17:30

Demand (Veh/TS)

		To				
		1 - London Distribution Park	2 - Dock Road	3 - St Andrews Road	4 - Thurrock Park Way	5 - A1089 Dock Road
From	1 - London Distribution Park	0.00	3.00	0.00	9.00	59.00
	2 - Dock Road	0.00	0.00	10.00	42.00	89.00
	3 - St Andrews Road	3.00	8.00	6.00	26.00	207.00
	4 - Thurrock Park Way	1.00	38.00	29.00	1.00	143.00
	5 - A1089 Dock Road	15.00	118.00	95.00	104.00	1.00

17:30 - 17:45

Demand (Veh/TS)

		To				
		1 - London Distribution Park	2 - Dock Road	3 - St Andrews Road	4 - Thurrock Park Way	5 - A1089 Dock Road
From	1 - London Distribution Park	0.00	1.00	1.00	9.00	58.00
	2 - Dock Road	0.00	0.00	6.00	30.00	92.00
	3 - St Andrews Road	3.00	8.00	10.00	24.00	187.00
	4 - Thurrock Park Way	0.00	57.00	10.00	1.00	202.00
	5 - A1089 Dock Road	21.00	104.00	66.00	99.00	0.00

17:45 - 18:00

Demand (Veh/TS)

		To				
		1 - London Distribution Park	2 - Dock Road	3 - St Andrews Road	4 - Thurrock Park Way	5 - A1089 Dock Road
From	1 - London Distribution Park	0.00	7.00	1.00	7.00	48.00
	2 - Dock Road	0.00	0.00	10.00	47.00	81.00
	3 - St Andrews Road	2.00	10.00	6.00	17.00	183.00
	4 - Thurrock Park Way	0.00	41.00	21.00	1.00	127.00
	5 - A1089 Dock Road	19.00	100.00	97.00	100.00	0.00

Vehicle Mix

17:00 - 17:15

Heavy Vehicle Percentages

		To				
		1 - London Distribution Park	2 - Dock Road	3 - St Andrews Road	4 - Thurrock Park Way	5 - A1089 Dock Road
From	1 - London Distribution Park	0	0	33	0	20
	2 - Dock Road	0	0	4	5	0
	3 - St Andrews Road	0	0	67	8	24
	4 - Thurrock Park Way	0	0	12	25	4
	5 - A1089 Dock Road	86	1	67	13	0

17:15 - 17:30

Heavy Vehicle Percentages

		To				
		1 - London Distribution Park	2 - Dock Road	3 - St Andrews Road	4 - Thurrock Park Way	5 - A1089 Dock Road
From	1 - London Distribution Park	0	0	0	0	22
	2 - Dock Road	0	0	4	5	0
	3 - St Andrews Road	25	0	69	8	25
	4 - Thurrock Park Way	0	0	13	25	4
	5 - A1089 Dock Road	89	1	66	13	0

17:30 - 17:45

Heavy Vehicle Percentages

		To				
		1 - London Distribution Park	2 - Dock Road	3 - St Andrews Road	4 - Thurrock Park Way	5 - A1089 Dock Road
From	1 - London Distribution Park	0	0	33	0	23
	2 - Dock Road	0	0	4	5	0
	3 - St Andrews Road	25	0	64	8	25
	4 - Thurrock Park Way	0	0	12	25	4
	5 - A1089 Dock Road	77	1	69	13	0

17:45 - 18:00

Heavy Vehicle Percentages

		To				
		1 - London Distribution Park	2 - Dock Road	3 - St Andrews Road	4 - Thurrock Park Way	5 - A1089 Dock Road
From	1 - London Distribution Park	0	0	33	0	26
	2 - Dock Road	0	0	4	5	0
	3 - St Andrews Road	25	0	69	8	25
	4 - Thurrock Park Way	0	0	13	25	4
	5 - A1089 Dock Road	80	1	66	13	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/TS)	Total Junction Arrivals (Veh)
1 - London Distribution Park	0.39	7.61	0.6	A	71.75	287.02
2 - Dock Road	0.53	7.06	1.1	A	130.25	521.00
3 - St Andrews Road	0.89	16.81	6.7	C	258.25	1033.01
4 - Thurrock Park Way	1.18	114.16	41.2	F	228.27	913.06
5 - A1089 Dock Road	0.79	9.87	3.6	A	309.51	1238.03

Main Results for each time segment

17:00 - 17:15

Arm	Total Demand (Veh/TS)	Junction Arrivals (Veh)	Circulating flow (Veh/TS)	Capacity (Veh/TS)	RFC	Throughput (Veh/TS)	Throughput (exit side) (Veh/TS)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - London Distribution Park	84.00	84.00	356.61	212.93	0.395	83.36	16.70	0.0	0.6	6.914	A
2 - Dock Road	114.00	114.00	276.11	283.68	0.402	113.34	163.85	0.0	0.7	5.264	A
3 - St Andrews Road	333.00	333.00	272.92	374.53	0.889	326.24	116.53	0.0	6.8	16.814	C
4 - Thurrock Park Way	241.00	241.00	448.75	204.58	1.178	199.74	150.41	0.0	41.3	101.112	F
5 - A1089 Dock Road	299.00	299.00	76.63	424.80	0.704	296.68	571.86	0.0	2.3	6.907	A

17:15 - 17:30

Arm	Total Demand (Veh/TS)	Junction Arrivals (Veh)	Circulating flow (Veh/TS)	Capacity (Veh/TS)	RFC	Throughput (Veh/TS)	Throughput (exit side) (Veh/TS)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - London Distribution Park	71.00	71.00	405.64	189.37	0.375	71.05	19.04	0.6	0.6	7.610	A
2 - Dock Road	141.00	141.00	303.82	267.66	0.527	140.57	172.86	0.7	1.1	7.057	A
3 - St Andrews Road	250.00	250.00	304.27	357.95	0.699	254.38	140.12	6.8	2.4	9.035	A
4 - Thurrock Park Way	212.00	212.00	376.92	242.74	0.875	237.02	181.74	41.3	16.3	114.160	F
5 - A1089 Dock Road	333.00	333.00	92.95	421.54	0.790	331.73	520.98	2.3	3.6	9.874	A

17:30 - 17:45

Arm	Total Demand (Veh/TS)	Junction Arrivals (Veh)	Circulating flow (Veh/TS)	Capacity (Veh/TS)	RFC	Throughput (Veh/TS)	Throughput (exit side) (Veh/TS)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - London Distribution Park	69.00	69.00	352.88	213.95	0.323	69.13	24.08	0.6	0.5	6.221	A
2 - Dock Road	128.00	128.00	255.92	298.34	0.429	128.34	166.09	1.1	0.8	5.306	A
3 - St Andrews Road	232.00	232.00	289.76	363.26	0.639	232.58	94.50	2.4	1.8	6.921	A
4 - Thurrock Park Way	270.00	270.00	358.78	254.40	1.061	251.42	163.56	16.3	34.9	103.486	F
5 - A1089 Dock Road	290.00	290.00	85.52	428.80	0.676	291.44	524.67	3.6	2.1	6.619	A

17:45 - 18:00

Arm	Total Demand (Veh/TS)	Junction Arrivals (Veh)	Circulating flow (Veh/TS)	Capacity (Veh/TS)	RFC	Throughput (Veh/TS)	Throughput (exit side) (Veh/TS)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - London Distribution Park	63.00	63.00	383.10	194.87	0.323	63.00	20.98	0.5	0.5	6.827	A
2 - Dock Road	138.00	138.00	281.54	277.40	0.497	137.78	164.55	0.8	1.0	6.435	A
3 - St Andrews Road	218.00	218.00	283.75	366.91	0.594	218.31	135.58	1.8	1.5	6.072	A
4 - Thurrock Park Way	190.00	190.00	330.26	268.02	0.710	222.28	171.81	34.9	2.6	33.942	D
5 - A1089 Dock Road	316.00	316.00	88.98	416.53	0.759	315.10	463.56	2.1	3.0	8.789	A