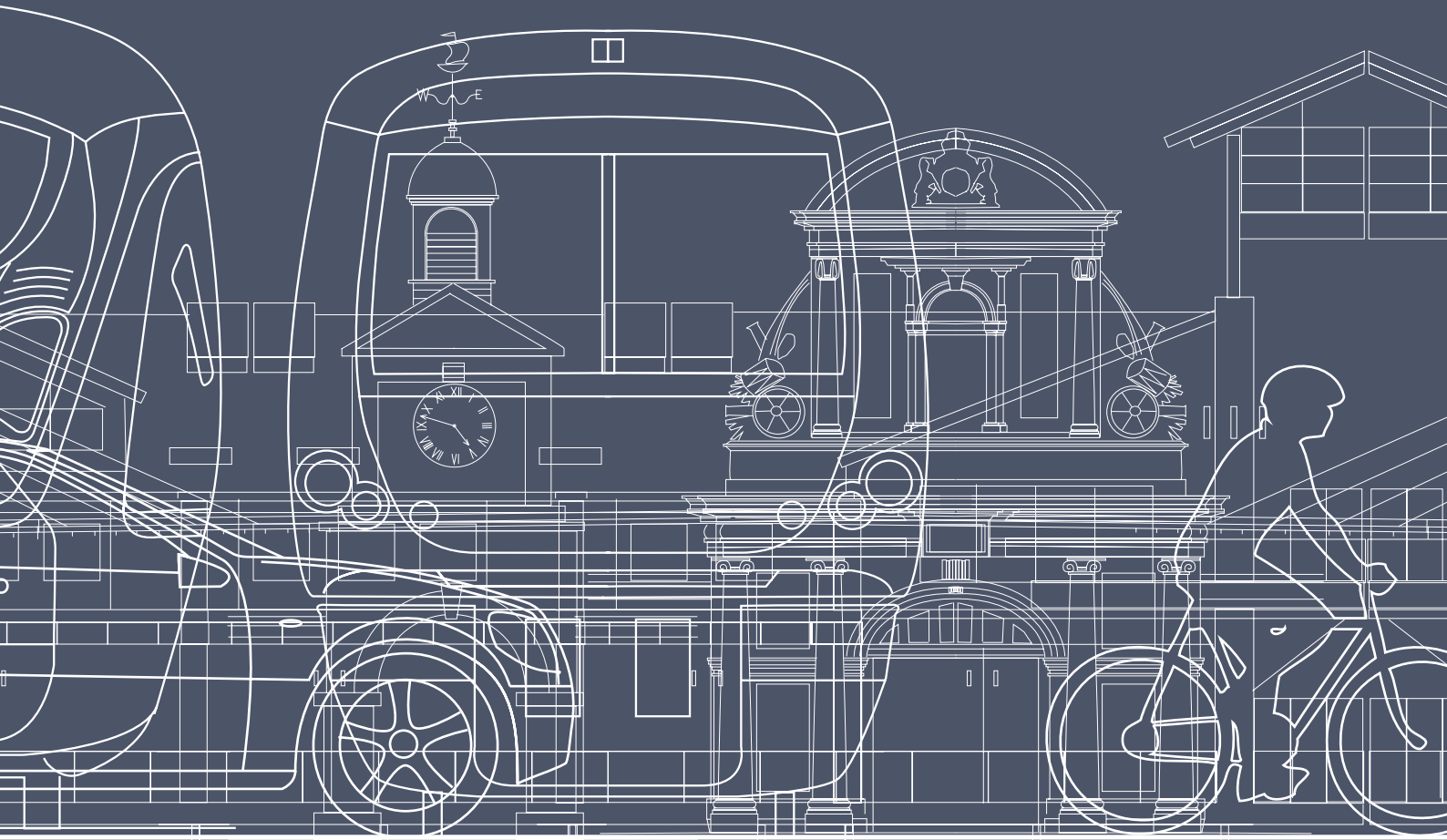


# DRAFT



## Thurrock Local Transport Plan

# ISSUES & Opportunities

Appendix A - LTP Baseline Borough-wide figures

FEBRUARY 2023





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This document presents the findings of a Transport Baseline Study undertaken by Stantec Limited. Maps and diagrams are reproduced from that report with their kind permission.



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# 1. INTRODUCTION



# 2. ACCESSIBILITY

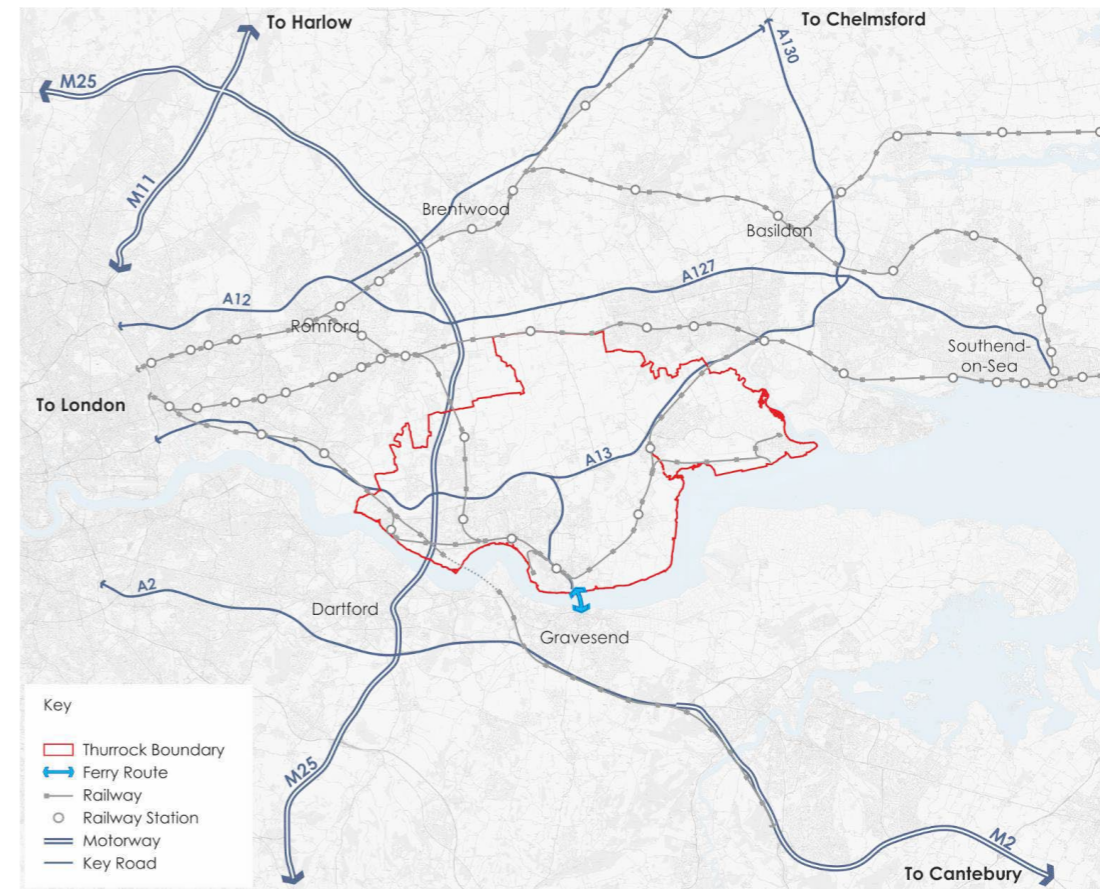


Figure 1. Key transport links (Stantec)

## 1.1 Introduction

1.1.1 The Thurrock Local Transport Plan Issues and Options Report documents the borough's existing transport and travel situation.

1.1.2 This Report Appendices sets out data, diagrams, and maps from the Local Plan Transport Baseline review by consultants Stantec.

1.1.3 Data is drawn from several sources, including:

- Census 2011
- Department for Transport
- National Travel Survey (NTS)
- TEMPro 7.2
- Ordnance Survey
- Office of Rail and Road

- Royal Mail postcode
- Police injury accident records
- Thurrock Council

## 2.1 Urban Density

2.1.1 Figure 2 indicates the current clustering of residential development within Thurrock. It identifies nine key locations: Purfleet, Aveley, Ockendon, Gray and Chafford Hundred, Tilbury, Chadwell St Mary, East Tilbury, Stanford-le-Hope and Corringham.

2.1.2 The retail and business zone of Purfleet and Lakeside and the M25/A282 corridor create a separation between Purfleet and Aveley residential areas and Grays and Chafford Hundred.

2.1.3 Whilst the corridor of A1089 and the retail and industrial environment around it create a western boundary to Chadwell St Mary and Tilbury, the areas to the east are lightly populated with East Tilbury, Stanford-le-Hope and Corringham being surrounded by open land."Employment Accessibility.

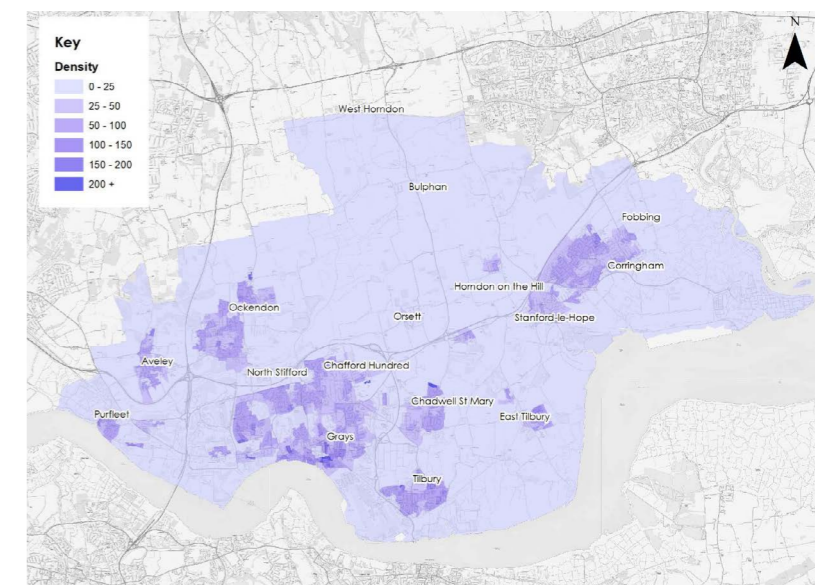


Figure 2. Current clustering of residential development within Thurrock (Stantec)



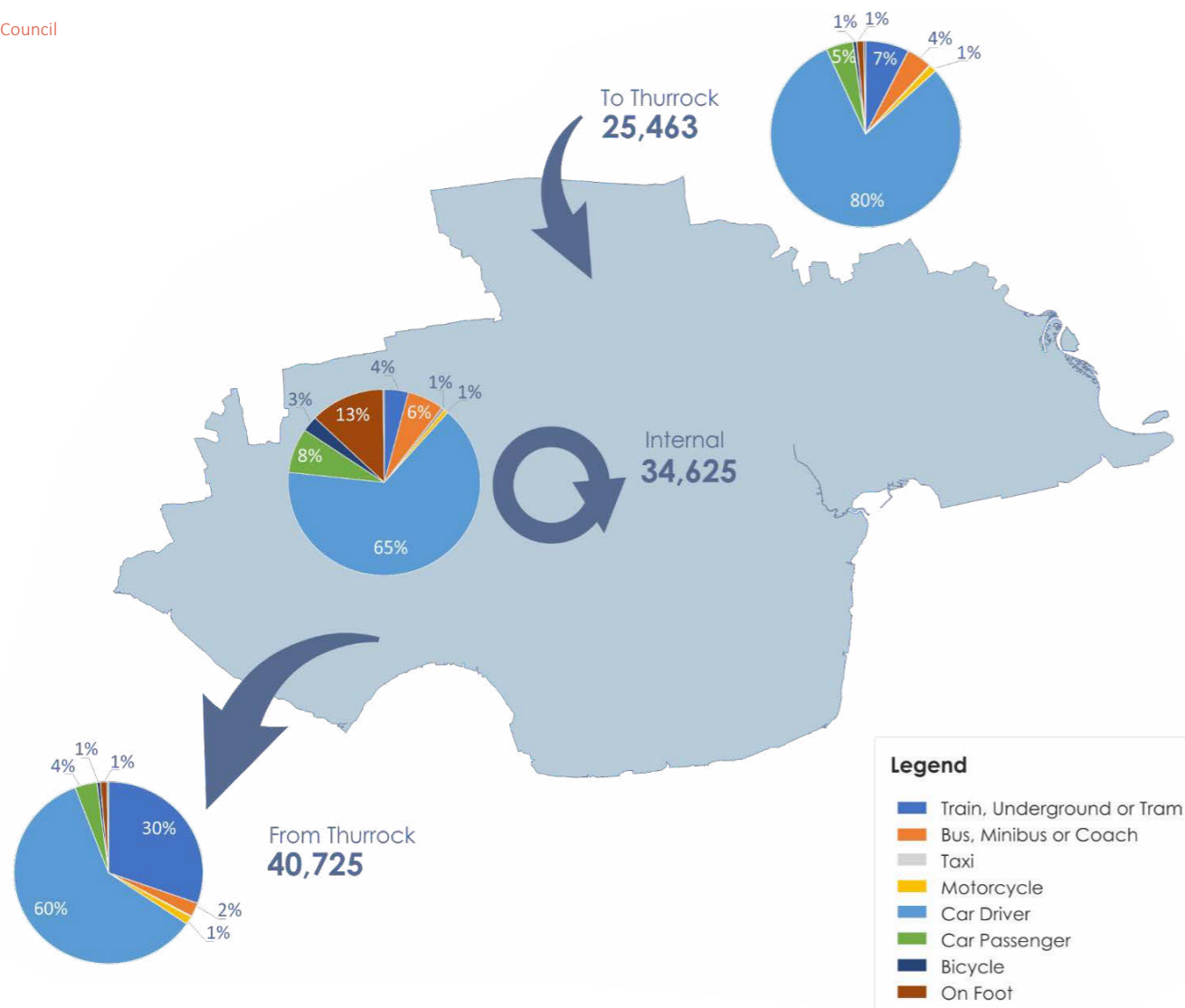


Figure 3. Number of employment trips and mode share

## 2.2 Employment Accessibility

2.2.1 The Figure 3 illustrates the number of employment trips and breaks this down by transport mode. The data is taken from Office of National Statistics Journey to work data gathered from the 2011 census and represents all daily work journeys made within, to and from Thurrock.

2.2.2 Around 75% work related journeys to, from and internally in Thurrock are made by private car.

2.2.3 Rail makes up a significant proportion of employment journeys from Thurrock, around 25%.

2.2.4 Figure 4 illustrates the key employment districts, industrial zones and retail centres within the borough.

2.2.5 Primary industrial and commercial land uses are scattered across urban areas in the Borough. Shopping areas are concentrated in town centres and urban areas, the large shopping area to the west is the Lakeside Shopping Centre.

2.2.6 Figure 5 data is taken from Office of National Statistics Journey to work data gathered from the 2011 census and projected up to a 2019 estimation using the Tempro growth data set which predicts increases in movement between two comparator years.

2.2.7 The height of each stack represents inbound daily work journeys made to destinations within Thurrock, both from within the authority and from outside Thurrock.

2.2.8 Analysis shows employment trips are concentrated on several key areas in Thurrock, mainly the terminal and port areas: Purfleet, Tilbury and London Gateway. The employment and retail centre of the Lakeside basin is a clear attractor to workforce journeys.

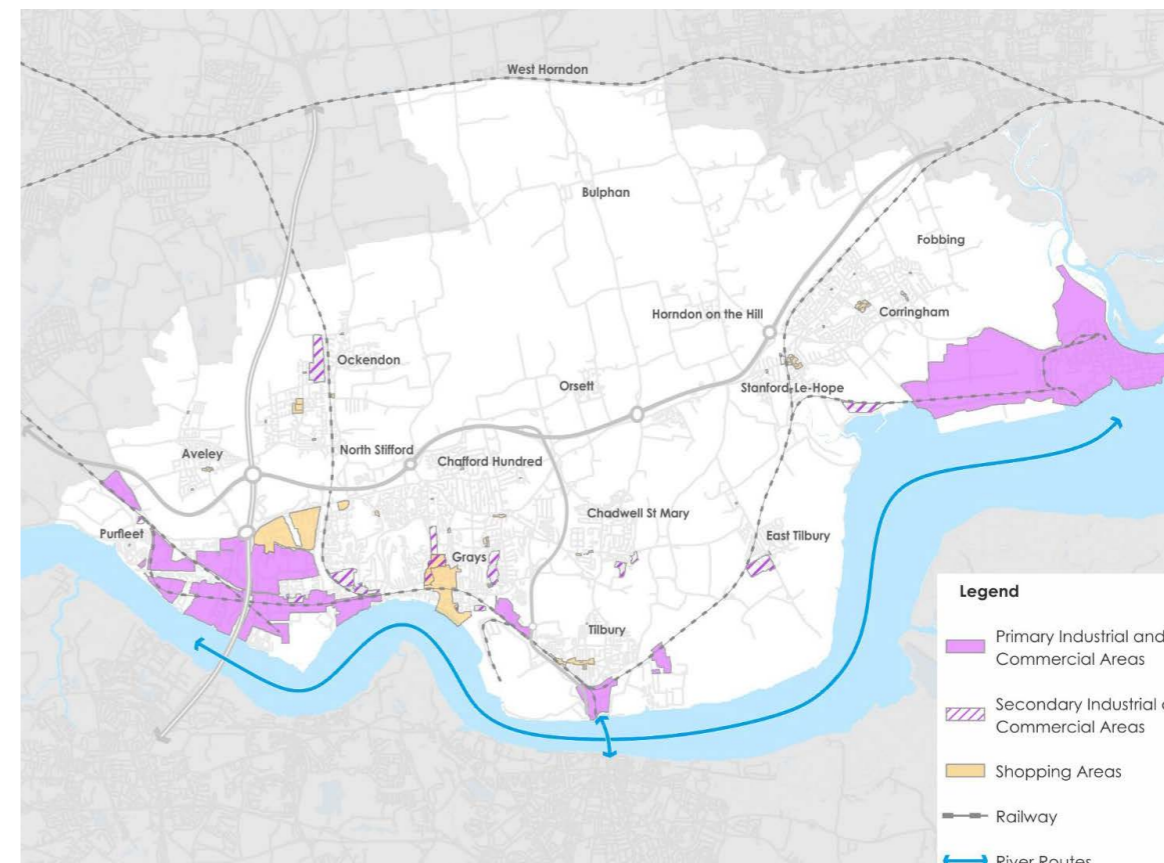


Figure 4. Key Employment Districts, Industrial Zones and Retail Centres within the borough. (Stantec)

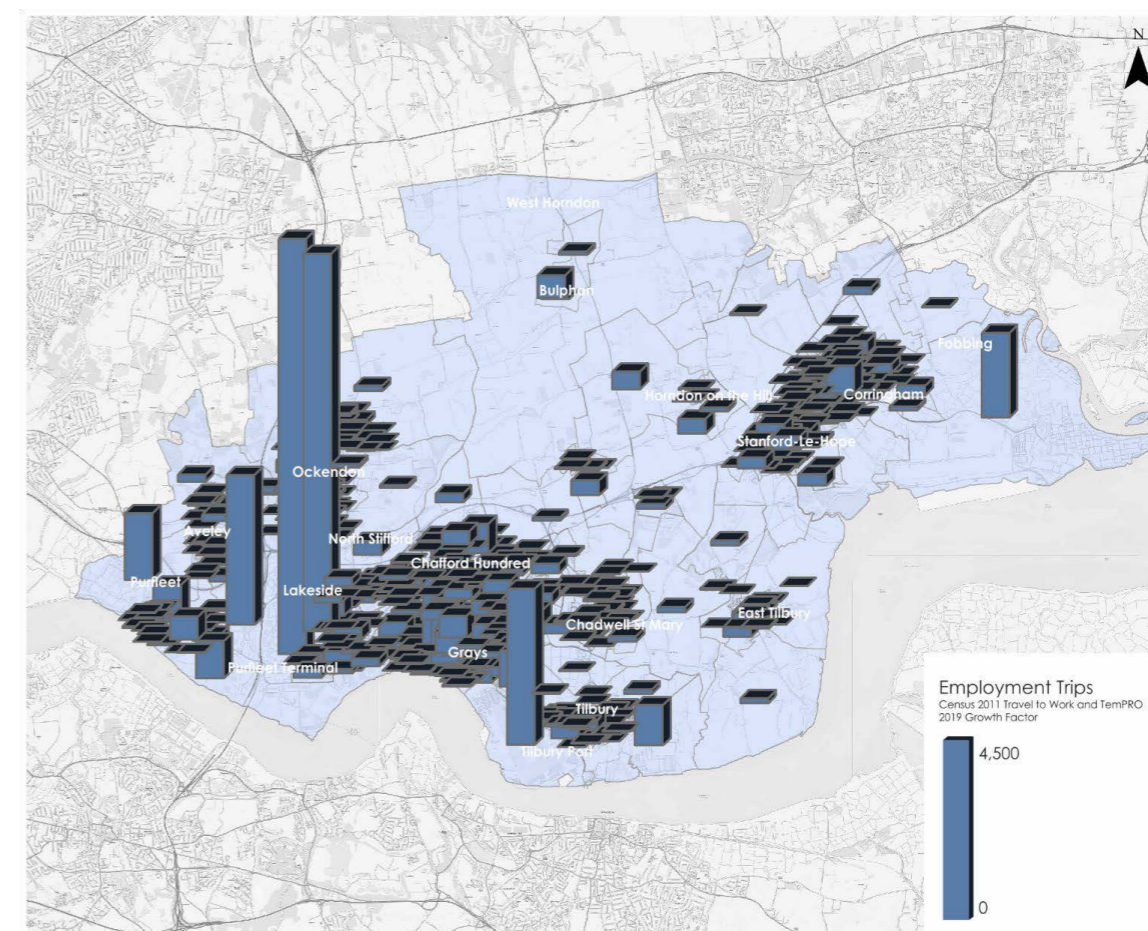


Figure 5. Employment trips - destination. (Stantec)



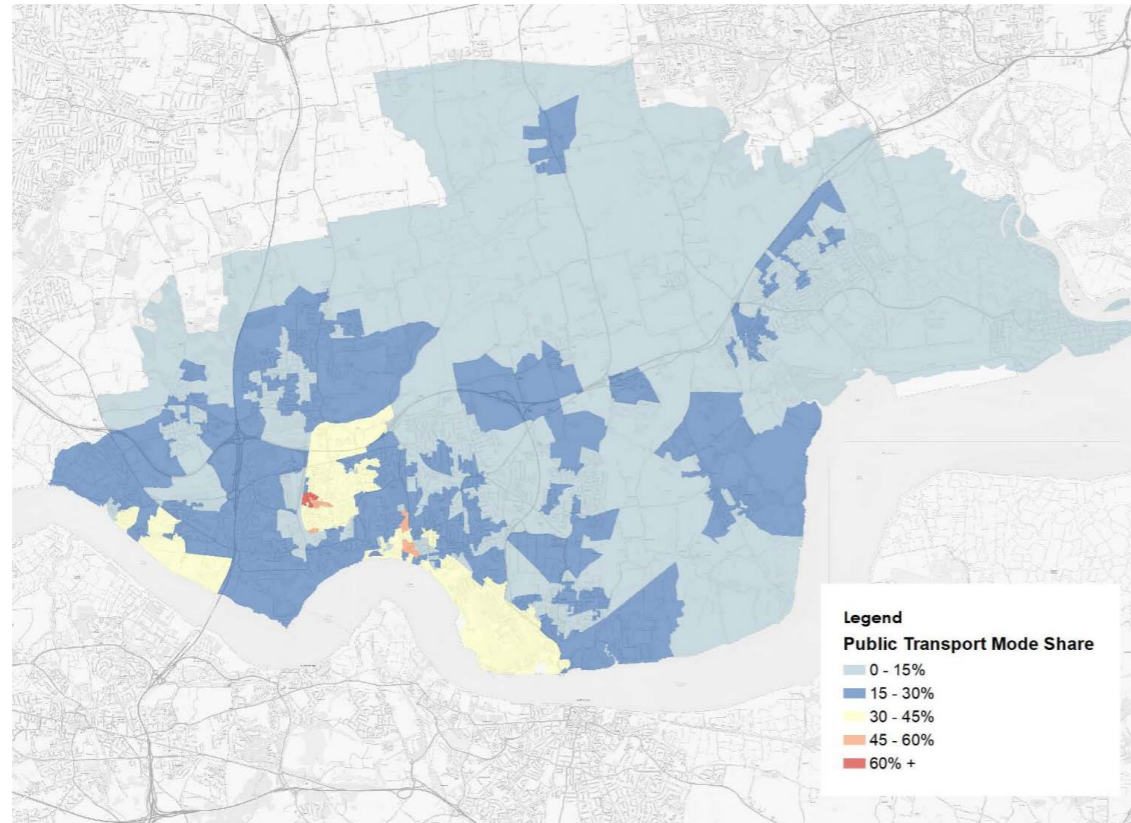


Figure 6. Public transport mode share- bus and rail combined (Stantec)

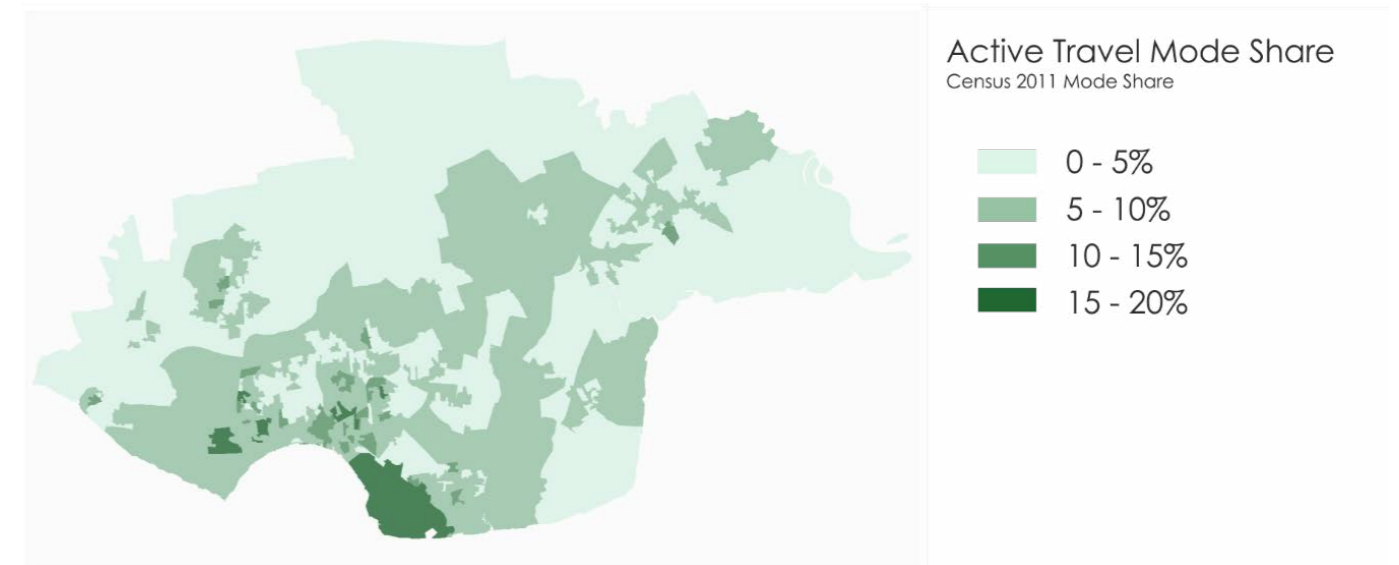


Figure 7. Active travel mode share (Stantec)

### 2.3 Public Transport mode share - bus and rail combined

2.3.1 Figure 6 illustrates the proportion of daily trips originating each output area in Thurrock that use public transport (bus, ferry and/or rail) as the main mode to travel to work on an average weekday. This data is taken from Office of National Statistics Journey to work data gathered from the 2011 census.

2.3.2 For all journeys from Thurrock data taken from the NTS indicates that 8% of journeys within, into or out of Thurrock use public transport. This compares with 9.1% share of journeys across England.

### 2.4 Travel by active modes and Public Transport

2.4.1 Figures 7 and 8 presents data taken from Office of National Statistics Journey to work data gathered from the 2011 census and represents all daily work journeys made from Thurrock. This dataset was chosen as it provides the most detailed analysis available of modal choice by location, and demonstrates the dependency of active modes and public transport on location.

2.4.2 Analysis of mode share trip data for both work and other journey purposes shows that active travel (walking and cycling) and public transport makes up a significant proportion of trips in Thurrock urban areas. Across the Borough as a whole the average is 31%, which compares with 37% nationally for England.

2.4.3 Both datasets show similar geographic trends with active travel and public transport use most prevalent around the more urban areas. Less predicted is the greater than 5% active travel in the more rural areas along the north to south central band of the borough.”

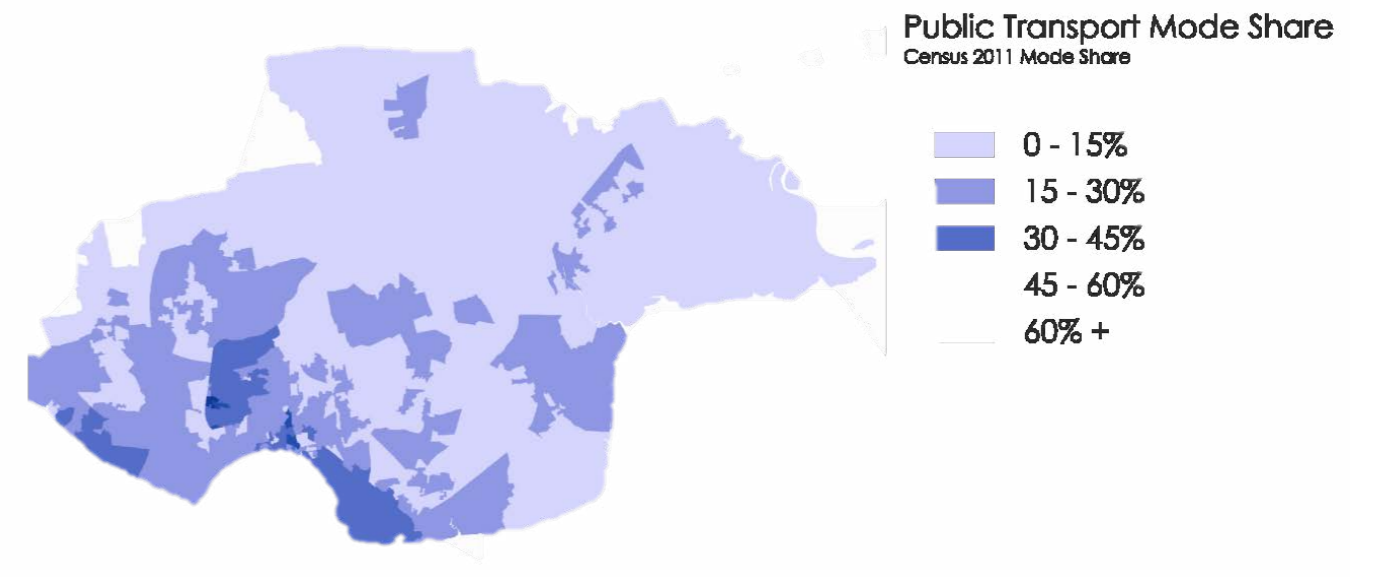


Figure 8. Public transport mode share (Stantec)

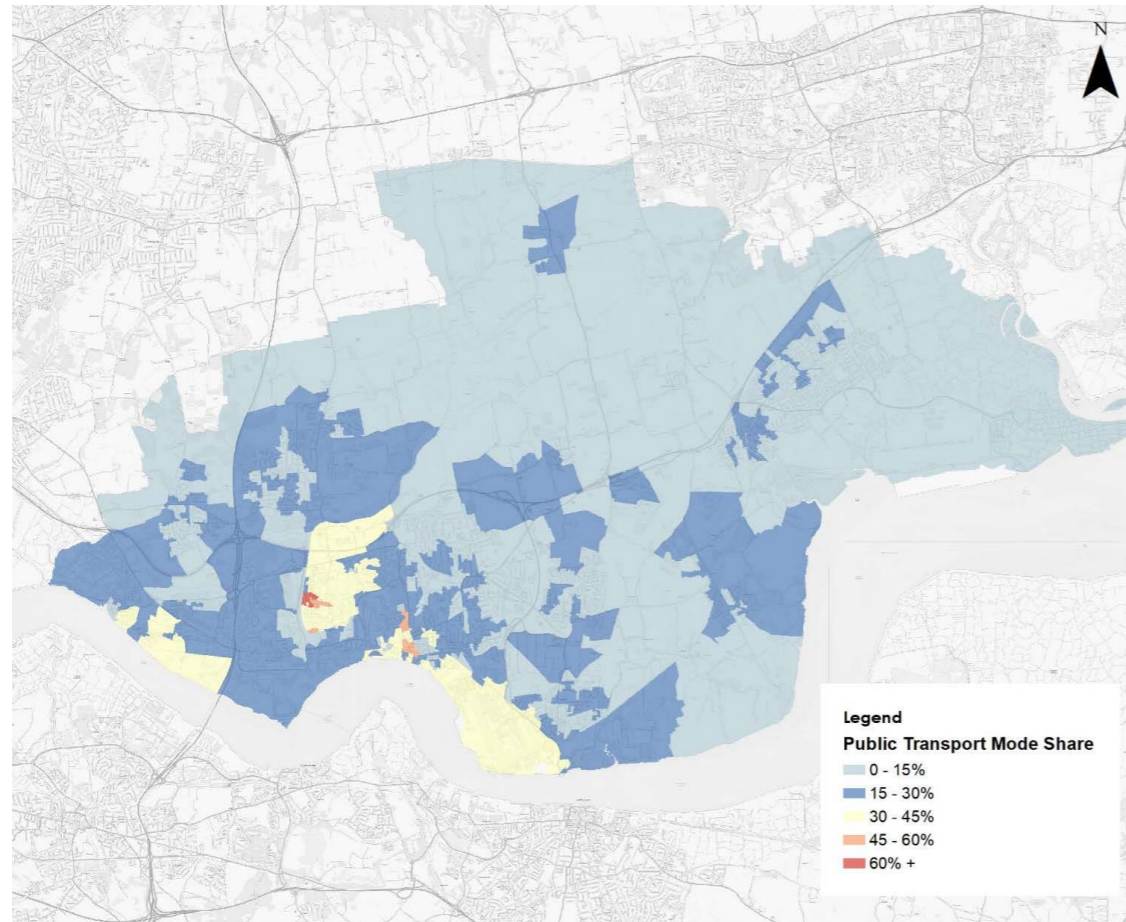


Figure 9. Proportion of daily trips originating in Thurrock that use rail as the main mode on an average weekday (Stantec).

## 2.5 Rail Usage in Thurrock

2.5.1 Figure 9 illustrates the proportion of daily trips originating in Thurrock that use rail as the main mode on an average weekday. This data is taken from Office of National Statistics Journey to work data gathered from the 2011 census.

2.5.2 This corresponds with information gathered by the rail operator C2C through online surveys which indicated the main mode of travel to the stations within Thurrock was on foot. The percentage of journeys on foot to stations (from surveys undertaken in 2015) was around 60-70%.

2.5.3 Rail usage for journeys to work from homes within Thurrock varies with proximity to higher frequency service and station facilities correlating closely with rail modal share. In areas where people are able to easily walk to the station the highest mode shares are over 60% for journeys to work.

2.5.4 The average rail mode share for employment trips from Thurrock to areas outside of Thurrock is 29%. Rail usage for journeys to work from areas outside of Thurrock is a lot lower, at 6% modal share.

2.5.5 For all journeys from Thurrock data taken from the NTS indicates the modal share for rail is 1.8%, which compares with a national average for England of 2.2%.

2.5.6 Rail travel in Thurrock has grown consistently over the past 15 years, with a growth of 79% in patronage over that period. This compares with a average across Great Britain of 95% growth in patronage.”

Railway Station	2019 Demand	2019 (Daily AM Peak estimate)	2031 Demand	2031 (Daily AM Peak estimate)	AM Peak % Increase
Chafford Hundred	2900000	3200	4400000	4900	53%
East Tilbury	450000	500	600000	700	40%
Ockendon	1150000	1300	2400000	2700	108%
Purfleet	700000	800	1500000	1600	100%
Stanford-le-Hope	1150000	1300	1350000	1500	15%
Tilbury Town	1250000	1400	2050000	2300	64%
Grays	4150000	4600	6250000	7000	52%

Figure 10. Railway station demand (Source: Office of Rail and Road, formerly Office of Rail Regulation)

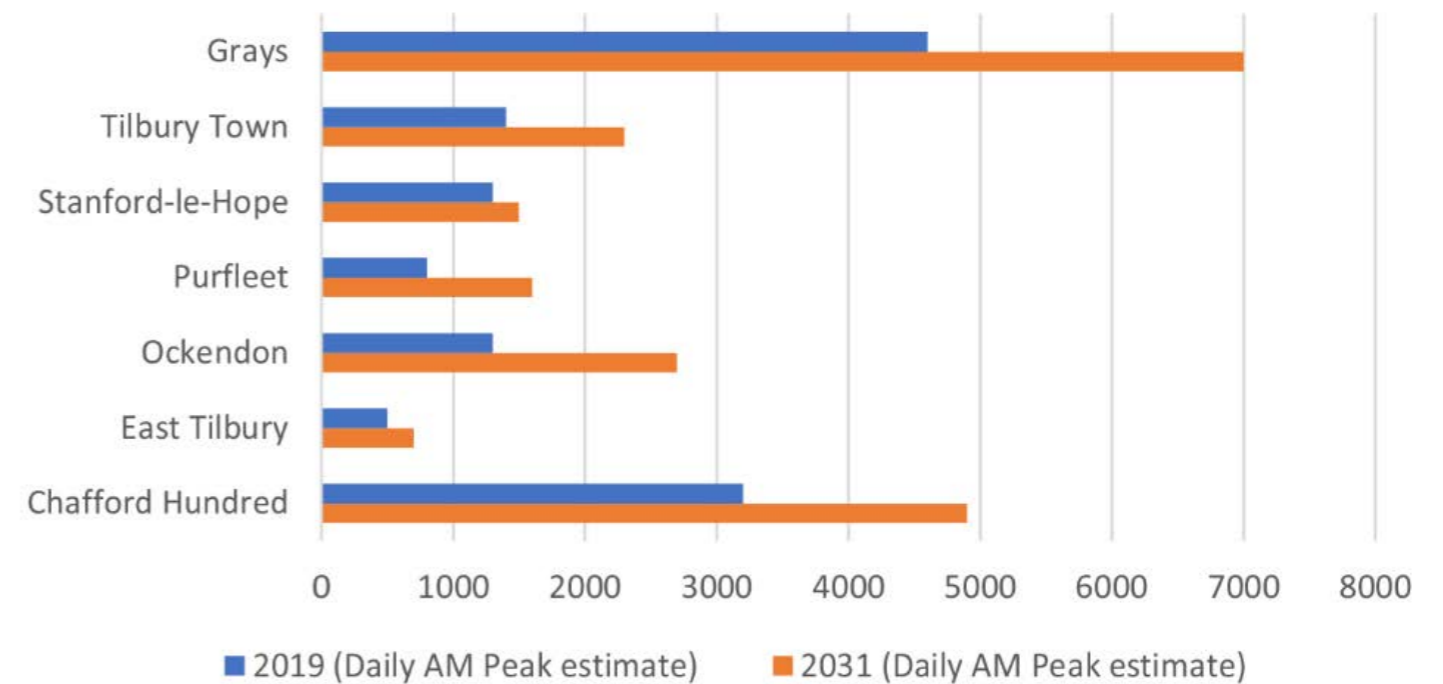


Figure 11. Rail demand projection (Source: Office of Rail and Road, formerly Office of Rail Regulation)



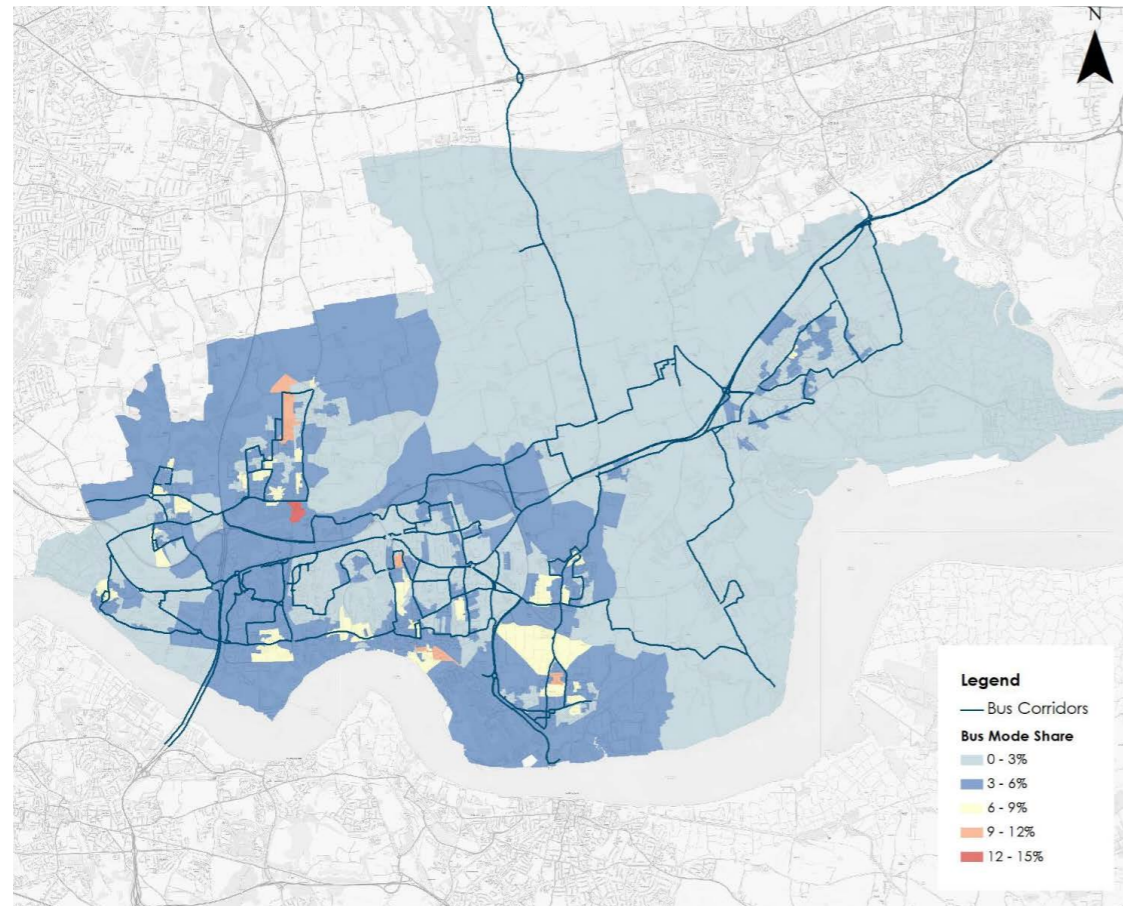


Figure 12. Proportion of daily journeys originating in Thurrock that use a bus as the main mode on an average weekday (Stantec)

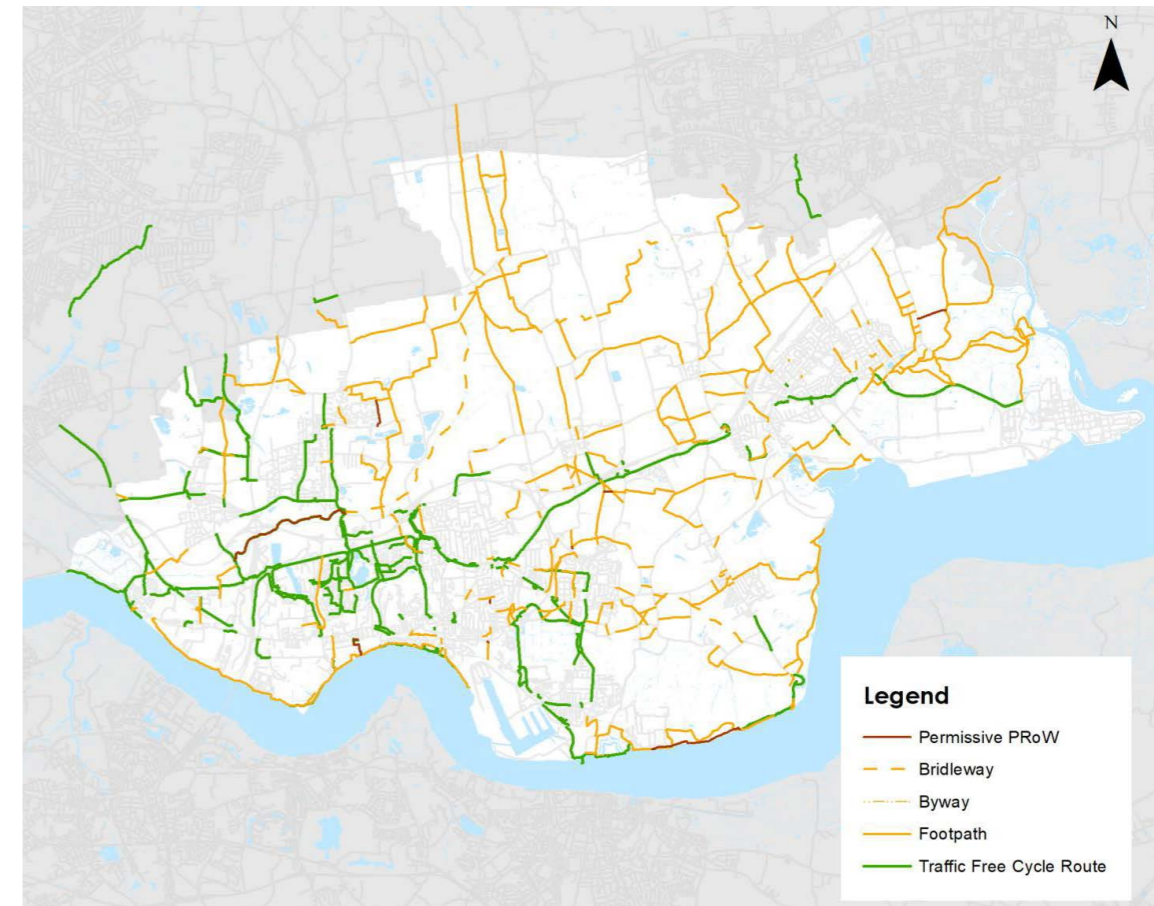


Figure 13. Cycle, bridleway and Public Rights of Way

## 2.6 Bus Usage in Thurrock

2.6.1 Figure 12 illustrates the proportion of daily journeys originating in Thurrock that use a bus as the main mode on an average weekday. This data is taken from Office of National Statistics Journey to work data gathered from the 2011 census.

2.6.2 Data giving origin and destinations of journeys by bus for non-work travel is not currently available.

2.6.3 For all journeys from Thurrock data taken from the NTS shows 6.2% of journeys within Thurrock use a bus. This compares with 6.9% share of journeys across England, (although these are disproportionately raised by London), and 5.9% of journeys in Essex as a whole.”

## 2.7 Walking, Cycling and Riding network

2.7.1 Figure 13 illustrates the cycle and bridleway and Public Rights of Way facilities across Thurrock taken from data provide by Thurrock Council.

## 2.8 Travel by active modes

2.8.1 Figure 14 illustrates the proportion of daily trips originating in Thurrock that are made by active travel modes (walking and cycling) as the main mode on an average weekday. This data is taken from Office of National Statistics Journey to work data gathered from the 2011 census.

2.8.2 For all journeys from Thurrock data taken from the NTS shows 22.6% of journeys within Thurrock are undertaken on foot, cycle or horseback. This compares with 34.7% as the average modal share for England.

2.8.3 No data is currently available of equestrian activity within the borough.

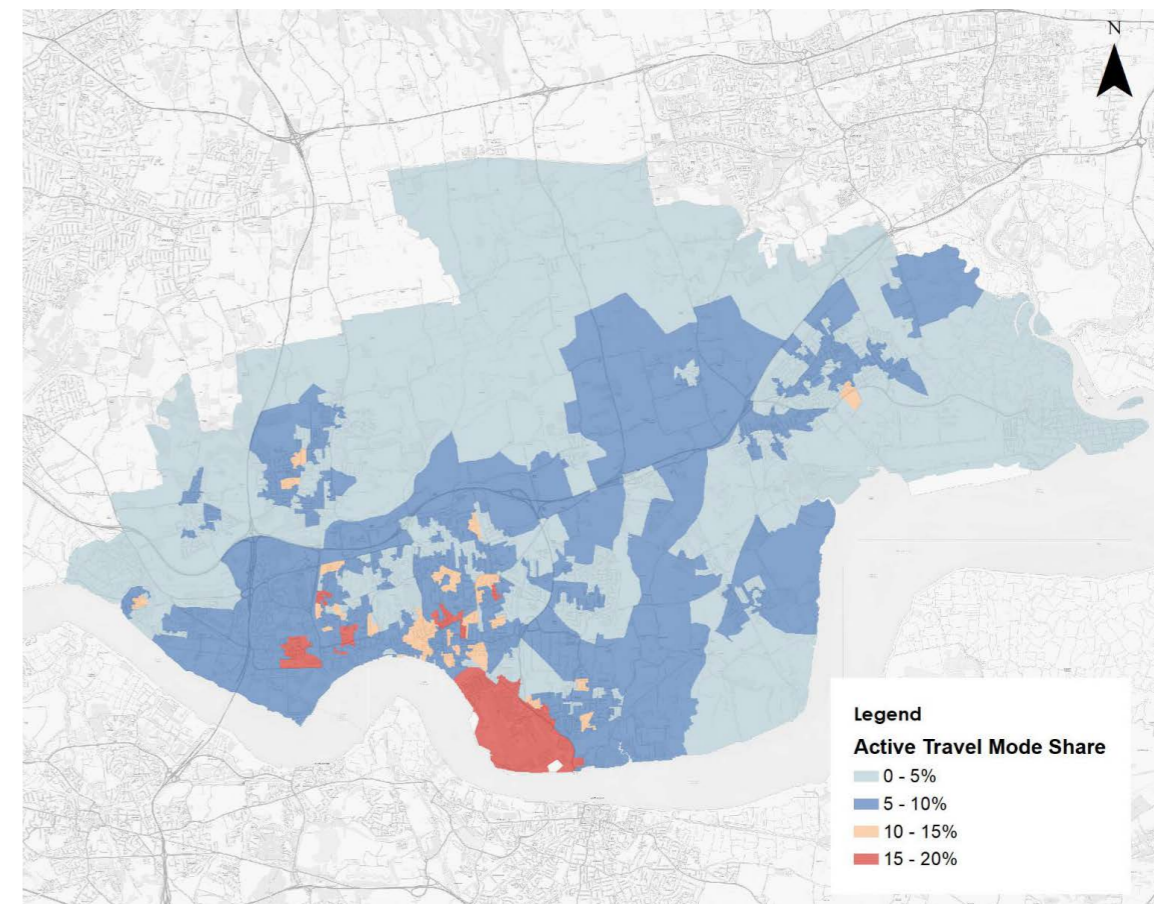


Figure 14. Proportion of daily trips originating in Thurrock that are made by active travel modes (walking and cycling) as the main mode on an average weekday.



## 2.9 Walking Mode Share

2.9.1 Figure 15 illustrates the proportion of daily trips originating in Thurrock that are made by walking on an average weekday. This data is taken from Office of National Statistics Journey to work data gathered from the 2011 census.

2.9.2 For all journeys from Thurrock data taken from the NTS shows 20.9% of journeys within Thurrock are undertaken on foot. This compares with 26.2% as the average modal share for England."

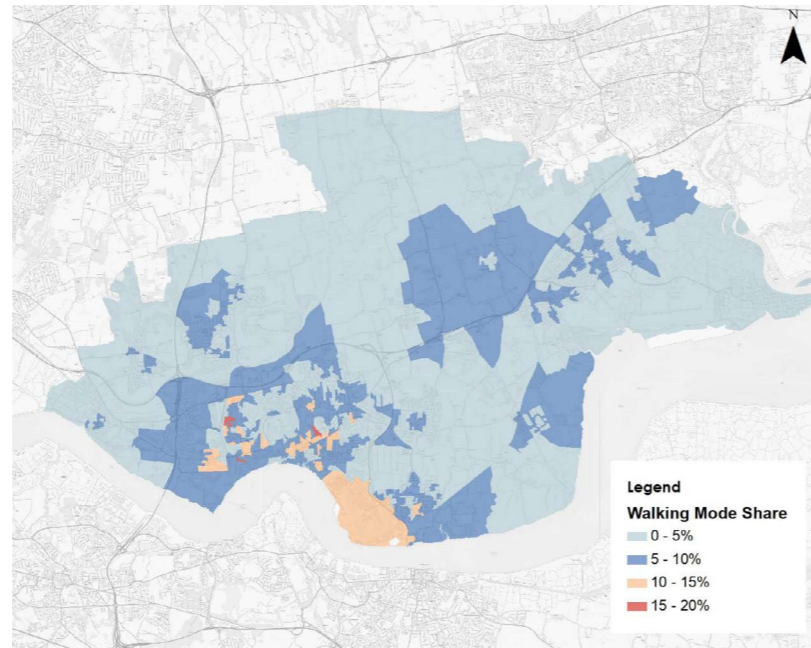


Figure 15. Proportion of daily trips originating in Thurrock that are made by walking on an average weekday.

## 2.10 Cycling Mode Share

2.10.1 Figure 17 illustrates the proportion of daily trips originating in Thurrock that are made by cycle on an average weekday. This data is taken from Office of National Statistics Journey to work data gathered from the 2011 census.

2.10.2 For all journeys from Thurrock data taken from the NTS shows 1.8% of journeys within Thurrock are undertaken on foot. This compares with 1.7% as the average modal share for England."

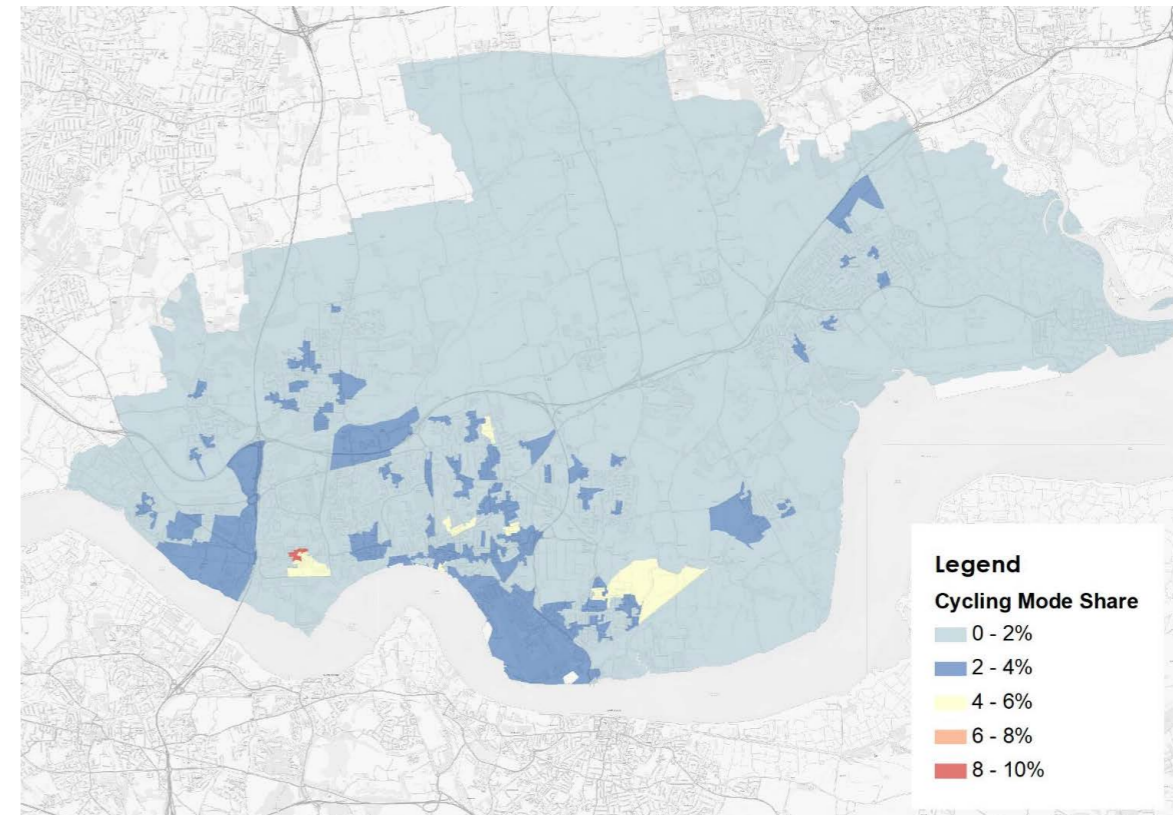


Figure 17. Proportion of daily trips originating in Thurrock that are made by cycle on an average weekday.

## 2.11 Accessibility to Local Facilities

2.11.1 Accessibility to local facilities within Thurrock has been considered using the CIHT Guidelines for Providing for Journeys by Foot. This document provides suggested acceptable walking distances to different local facilities.

2.11.2 Thurrock has good walking accessibility to local bus stops, and reasonable accessibility to both primary and secondary schools.

2.11.3 Food stores however are not as accessible, with only 31% of residents within the suggested 400m of a local food store.

2.11.4 Figure 16 shows the proportion of the population able to access local facilities in the recommended distances.

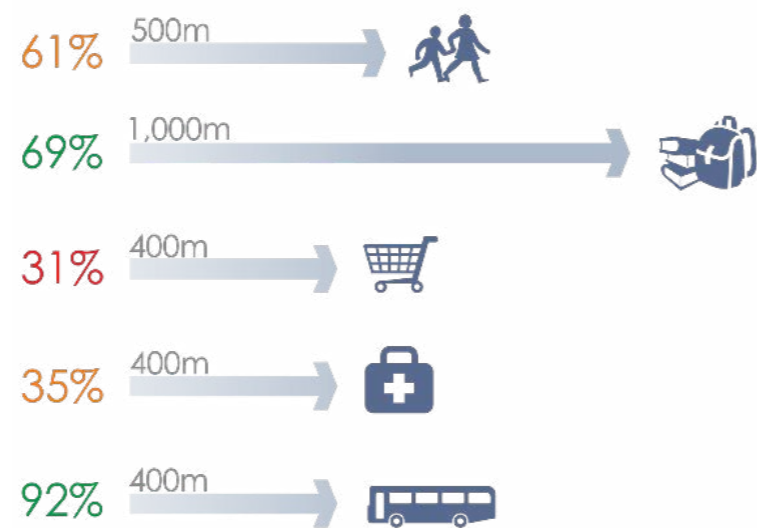


Figure 16. Accessibility to local facilities

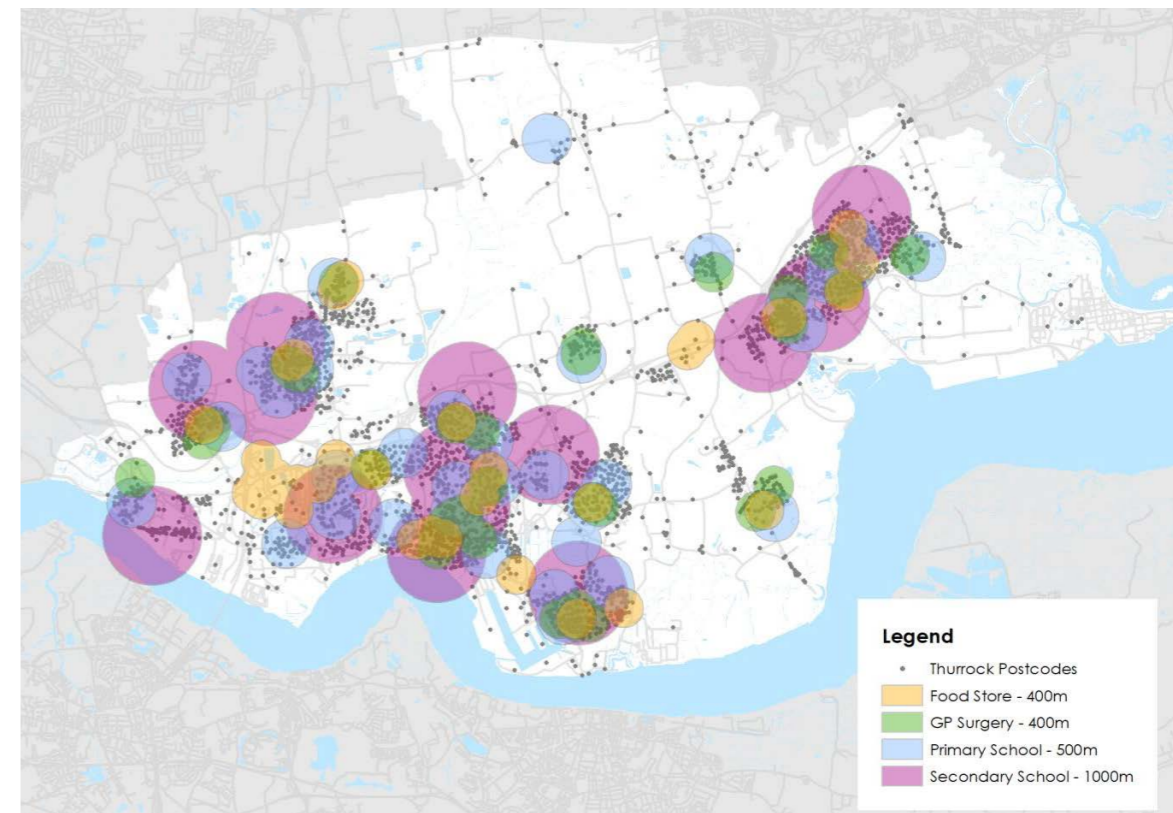


Figure 18. Accessibility to local facilities within Thurrock - CIHT Guidelines for Providing for Journeys by Foot) (Stantec)



# 3. CONGESTION

## 3.1 Morning Peak Hour Traffic into Thurrock

3.1.1 Figure 19 illustrates the morning peak hour traffic flows that are destined for Thurrock and proportion of traffic that are Heavy Goods Vehicles (HGVs). This data is taken from a local cordon of the Lower Thames Area Model, developed by National Highways and used to assess the effects of the proposed Lower Thames Crossing.

3.1.2 A considerable proportion of traffic come to Thurrock via the M25 motorway, particularly for HGVs with east-west A-roads and more local roads from the north also carrying much traffic.

## 3.2 Daily Traffic into Thurrock

3.2.1 Figure 20 illustrates the daily traffic flows that are destined for Thurrock and proportion of traffic that are Heavy Goods Vehicles (HGVs), on an average weekday. This data is taken from a local cordon of the Lower Thames Area Model, developed by National Highways and used to assess the effects of the proposed Lower Thames Crossing.

3.2.2 As with the morning peak demand, considerable amounts of traffic comes to Thurrock via the M25 motorway, particularly for HGVs with east-west A-roads and more local roads from the north also carrying much traffic.

## 3.3 Morning Peak Hour Traffic out of Thurrock

3.3.1 Figure 21 illustrates morning peak hour traffic flows that originate in and departs Thurrock, and proportion of traffic that are Heavy Goods Vehicles (HGVs). This data is taken from a local cordon of the Lower Thames Area Model, developed by National Highways and used to assess the effects of the proposed Lower Thames Crossing.

3.3.2 Considerable amounts of traffic leaves Thurrock via the M25 motorway, particularly for HGVs. East-west A-roads and more local roads from the north also carry much traffic.

## 3.4 Daily Traffic out of Thurrock

3.4.1 Figure 22 illustrates daily traffic flows that originate in and departs Thurrock, and proportion of traffic that are Heavy Goods Vehicles (HGVs). This data is taken from a local cordon of the Lower Thames Area Model, developed by National Highways and used to assess the effects of the proposed Lower Thames Crossing.

3.4.2 Considerable amounts of traffic leaves Thurrock via the M25 motorway, particularly for HGVs. East-west A-roads and more local roads from the north also carry much traffic.

## 3.5 Morning Peak hour traffic within Thurrock

3.5.1 Figure 23 illustrates morning peak hour traffic flows within Thurrock and the proportion of traffic that are Heavy Goods Vehicles (HGVs). This data is provided by Thurrock Council and assimilated from a series of empirical traffic counts across a range of years from 2016 to 2019.

3.5.2 Considerable amounts of traffic use the east-west A-roads but some more minor roads in urban areas are also used. Routes leading to ports have high proportions of HGV traffic.

## 3.6 Daily traffic within Thurrock

3.6.1 Figure 24 map illustrates daily traffic flows within Thurrock and the proportion of traffic that are Heavy Goods Vehicles (HGVs), average weekday. This data is provided by Thurrock Council and assimilated from a series of empirical traffic counts across a range of years from 2016 to 2019.

3.6.2 Considerable amounts of traffic use the east-west A-roads but some more minor roads in urban areas are also used. Routes leading to ports have high proportions of HGV traffic.

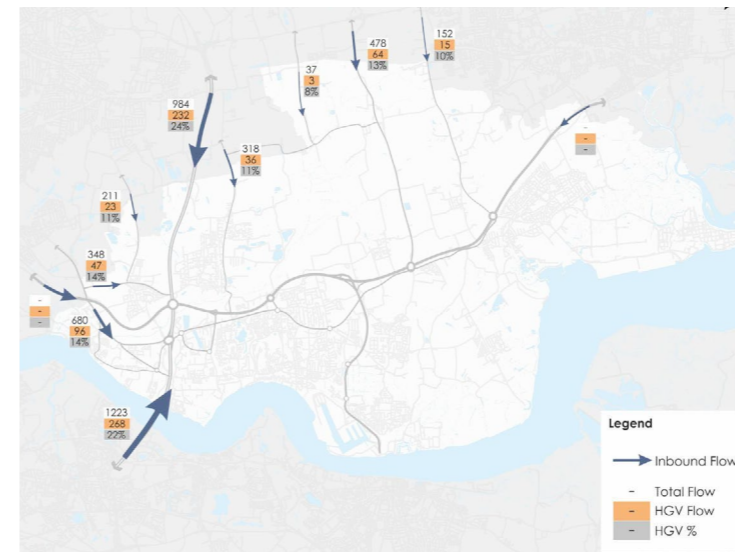


Figure 19. Morning peak hour traffic flows that are destined for Thurrock and proportion of traffic that are Heavy Goods Vehicles (Stantec)

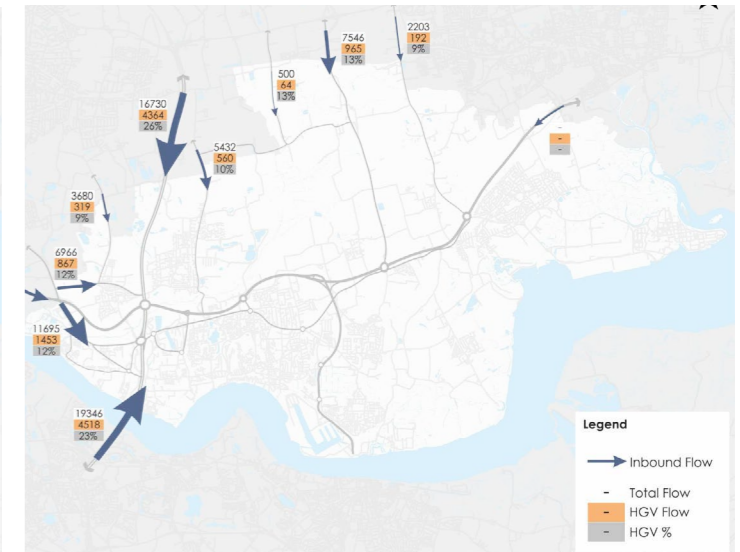


Figure 20. Daily traffic flows that are destined for Thurrock and proportion of traffic that are Heavy Goods Vehicles (HGVs), on an average weekday

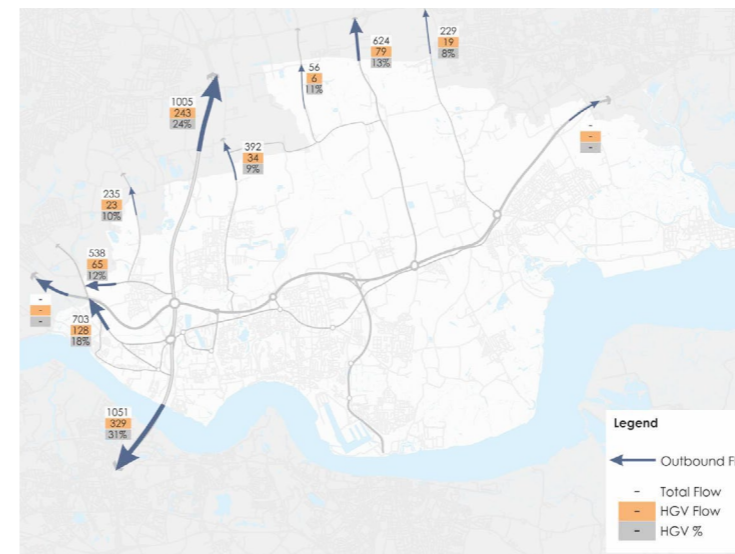


Figure 21. Morning peak hour traffic flows that originate in and depart Thurrock, and proportion of traffic that are Heavy Goods Vehicles (HGVs), on an average weekday

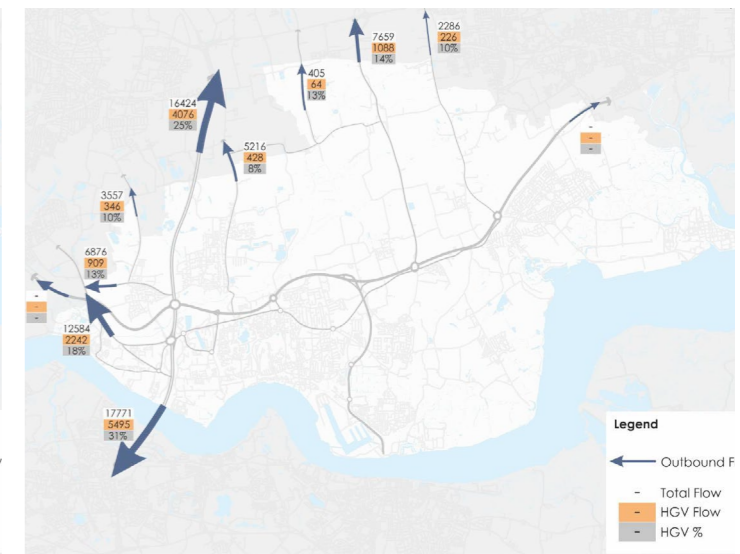


Figure 22. Daily traffic flows that originate in and depart Thurrock, and proportion of traffic that are Heavy Goods Vehicles (HGVs), on an average weekday

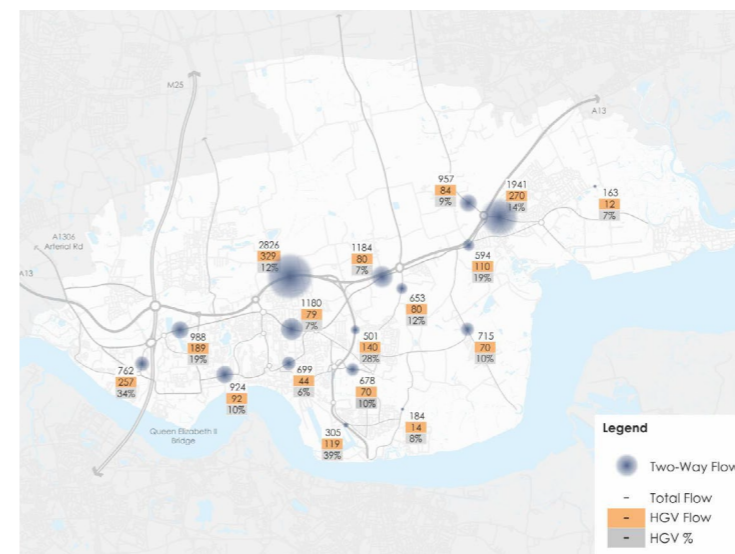


Figure 23. morning peak hour traffic flows within Thurrock and the proportion of traffic that are Heavy Goods Vehicles (HGVs) (Stantec)

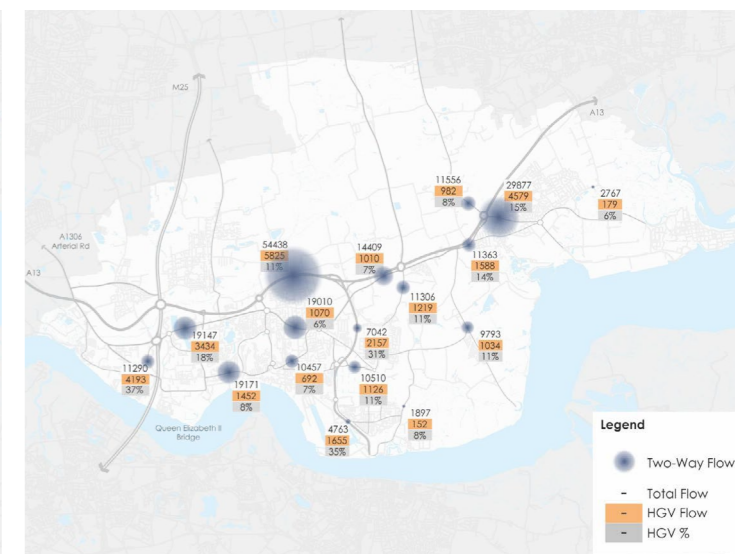


Figure 24. daily traffic flows within Thurrock and the proportion of traffic that are Heavy Goods Vehicles (HGVs) (Stantec)



### 3.7 AM Highway Speeds

- 3.7.1 Figure 25 illustrates highway average speeds in Thurrock in the morning peak hour (0800-0900) taken from the TrafficMaster database.
- 3.7.2 The map shows that large sections of the strategic road network in Thurrock, the M25 motorway and A roads have high average speeds (50+mph) but also shows that speeds are low on sections of the strategic network and local roads indicating possible areas of congestion.

### 3.8 Off-peak Highway Speeds

- 3.8.1 Figure 26 illustrates highway average speeds in Thurrock in the off-peak hours (1000-1600) taken from the TrafficMaster database.
- 3.8.2 The map shows that large sections of the strategic road network in Thurrock, the M25 motorway and A roads continue to have high average speeds (50+mph) during the off-peak period but that sections of both the strategic and local road network have areas of lower speed indicating possible areas of congestion – not eased from the AM peak period.

### 3.9 PM Highway Speeds and Congestion

- 3.9.1 Figure 27 illustrates highway average speeds in Thurrock in the evening peak hour (1700-1800) taken from the TrafficMaster database.
- 3.9.2 The map shows that many key roads of the strategic road network maintain high average speeds (50+mph) but with sections of lower average speed unchanged from the AM peak period.
- 3.9.3 The London Road corridor and North Stifford junction indicate very low average speeds indicating areas of congestion.

### 3.10 AM Highway Speed Reductions

- 3.10.1 Figure 28 illustrates the comparative reduction from off-peak highway average speeds in Thurrock in the morning peak hour (0800-0900) taken from the TrafficMaster database.
- 3.10.2 The map indicates that across much of the network there are only minor variances between the AM peak period traffic speed and the inter-peak period.
- 3.10.3 The variance in average speed around M25 junction 3 and to the west of The Manorway junction are most notable.

### 3.11 PM Highway Speed Reductions

- 3.11.1 Figure 29 illustrates the reduction from off-peak highway average speeds in Thurrock in the evening peak hour (1700-1800) taken from the TrafficMaster database.
- 3.11.2 The map shows that average vehicle speeds reduce around M25 junction 30, along London Road and at the Orsett Cock roundabout. This indicates the impact of PM peak traffic on speeds in comparison to the off-peak period.
- 3.11.3 The indication from this data is that journey time reliability is lower in the evening peak hour than the morning peak hour.

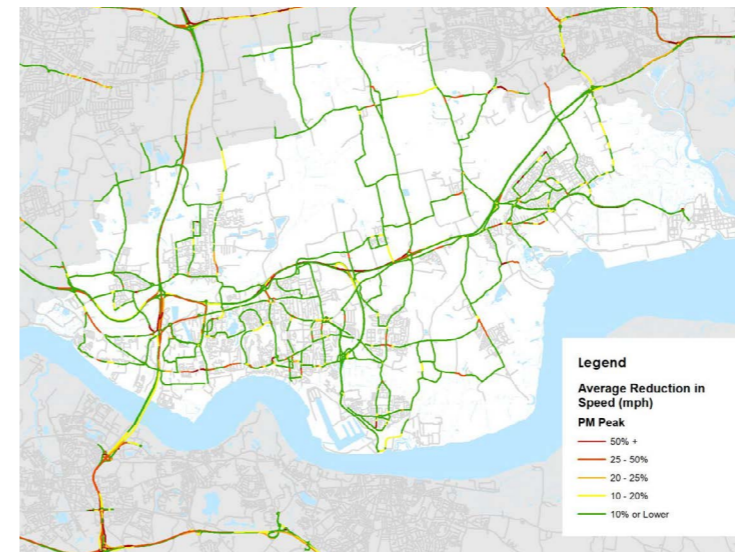


Figure 25. highway average speeds in Thurrock in the morning peak hour (0800-0900) (Stantec)

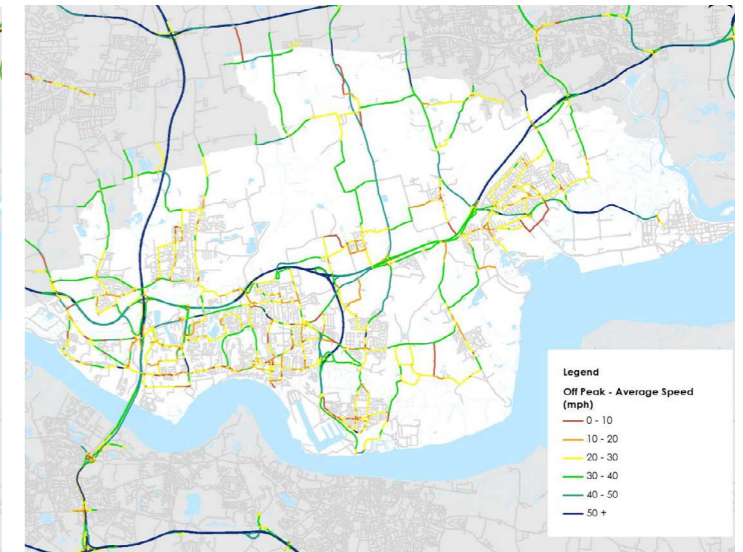


Figure 26. Highway average speeds in Thurrock in the off-peak hours (1000-1600)

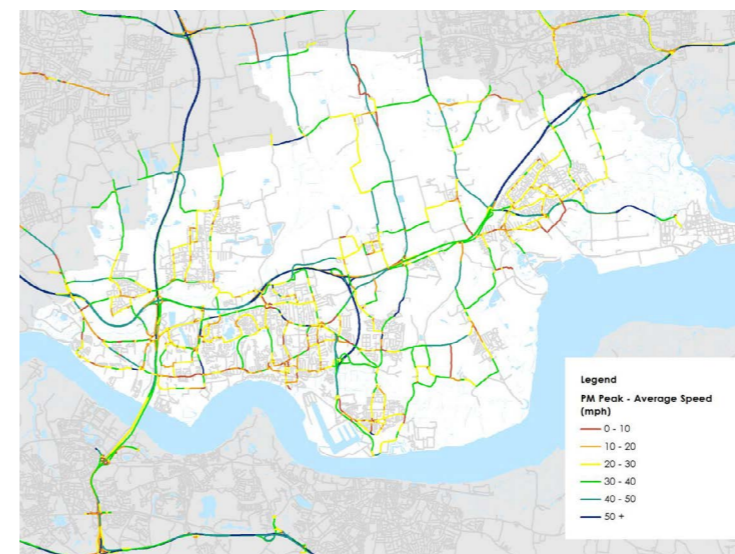


Figure 27. Highway average speeds in Thurrock in the evening peak hour (1700-1800)

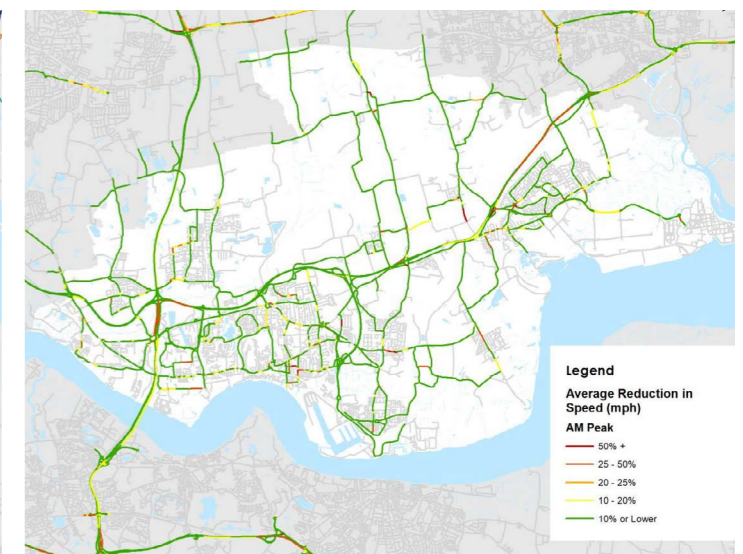


Figure 28. Comparative reduction from off-peak highway average speeds in Thurrock in the morning peak hour (0800-0900)

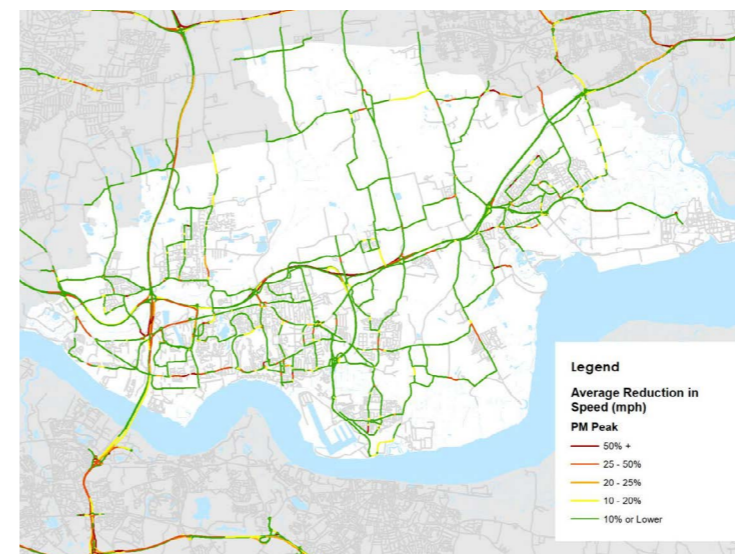
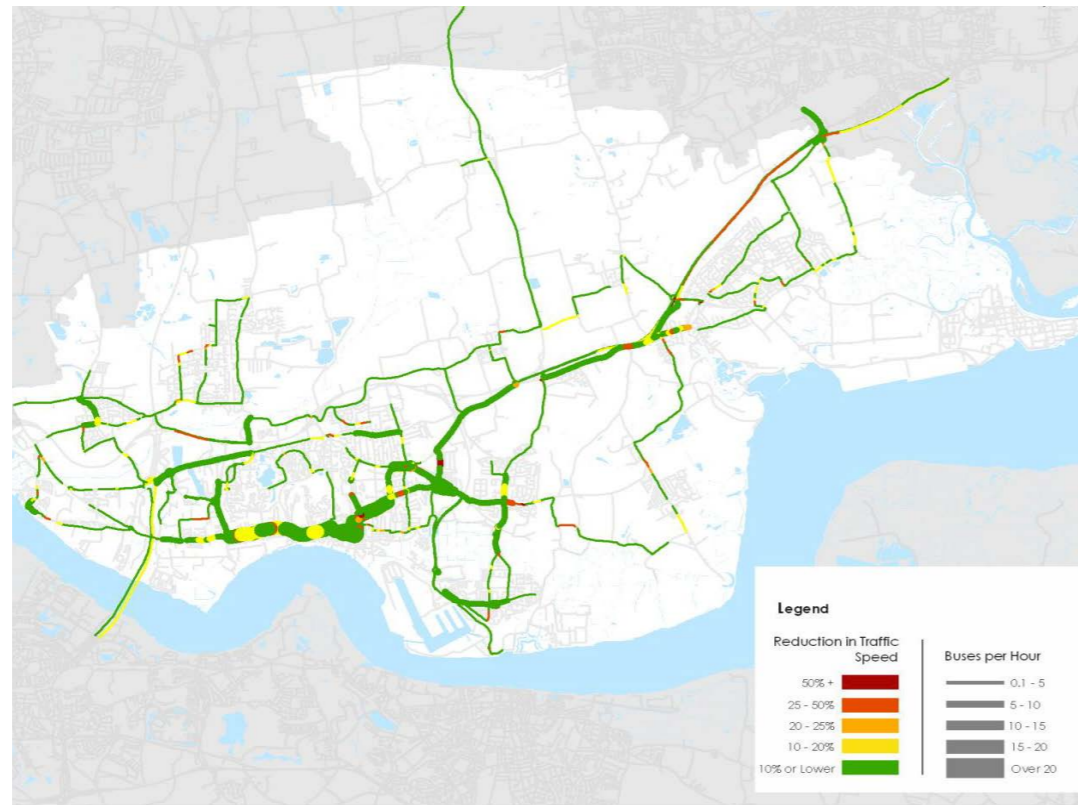
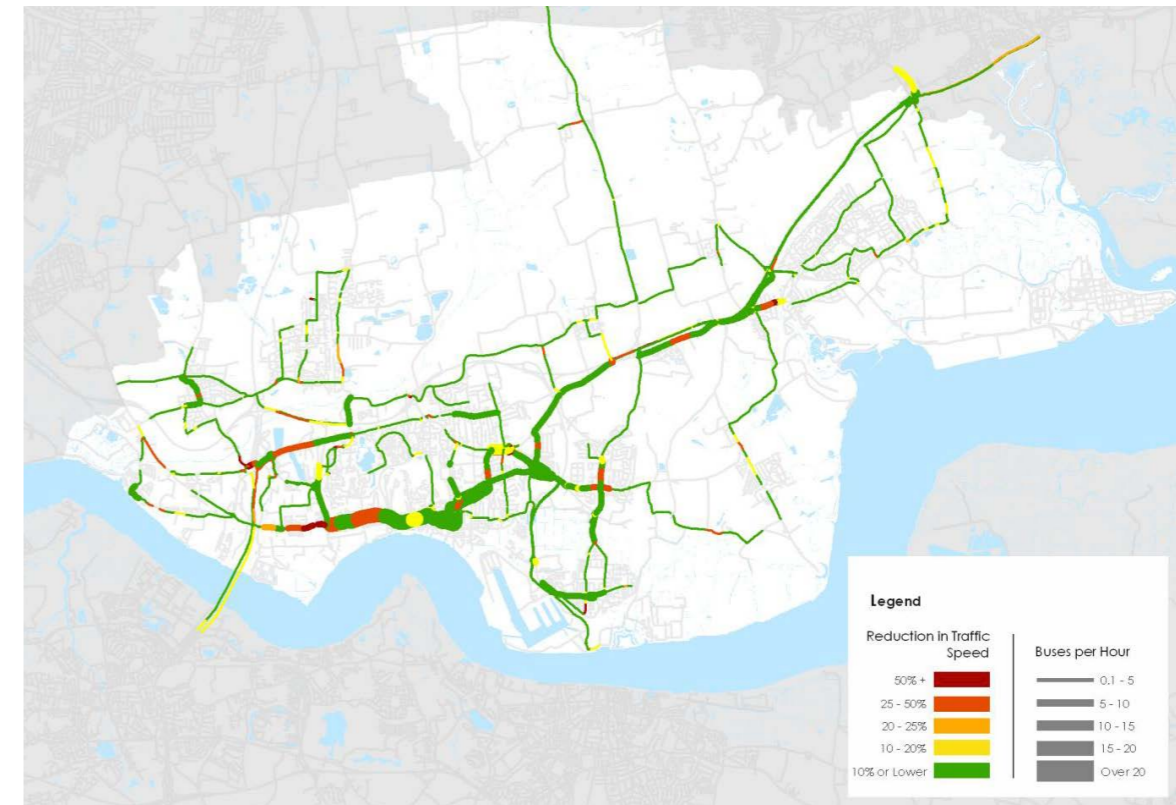


Figure 29. Reduction from off-peak highway average speeds in Thurrock in the evening peak hour (1700-1800)





**Figure 30.** Combination of reduction of highway speeds and number of buses on each route, in Thurrock, in the AM peak hour (0800-0900). (Stantec)



**Figure 31.** Combination of reduction of highway speeds and number of buses on each route, in Thurrock, in the PM peak hour (1700-1800). (Stantec)

### 3.12 AM Public transport and traffic delay

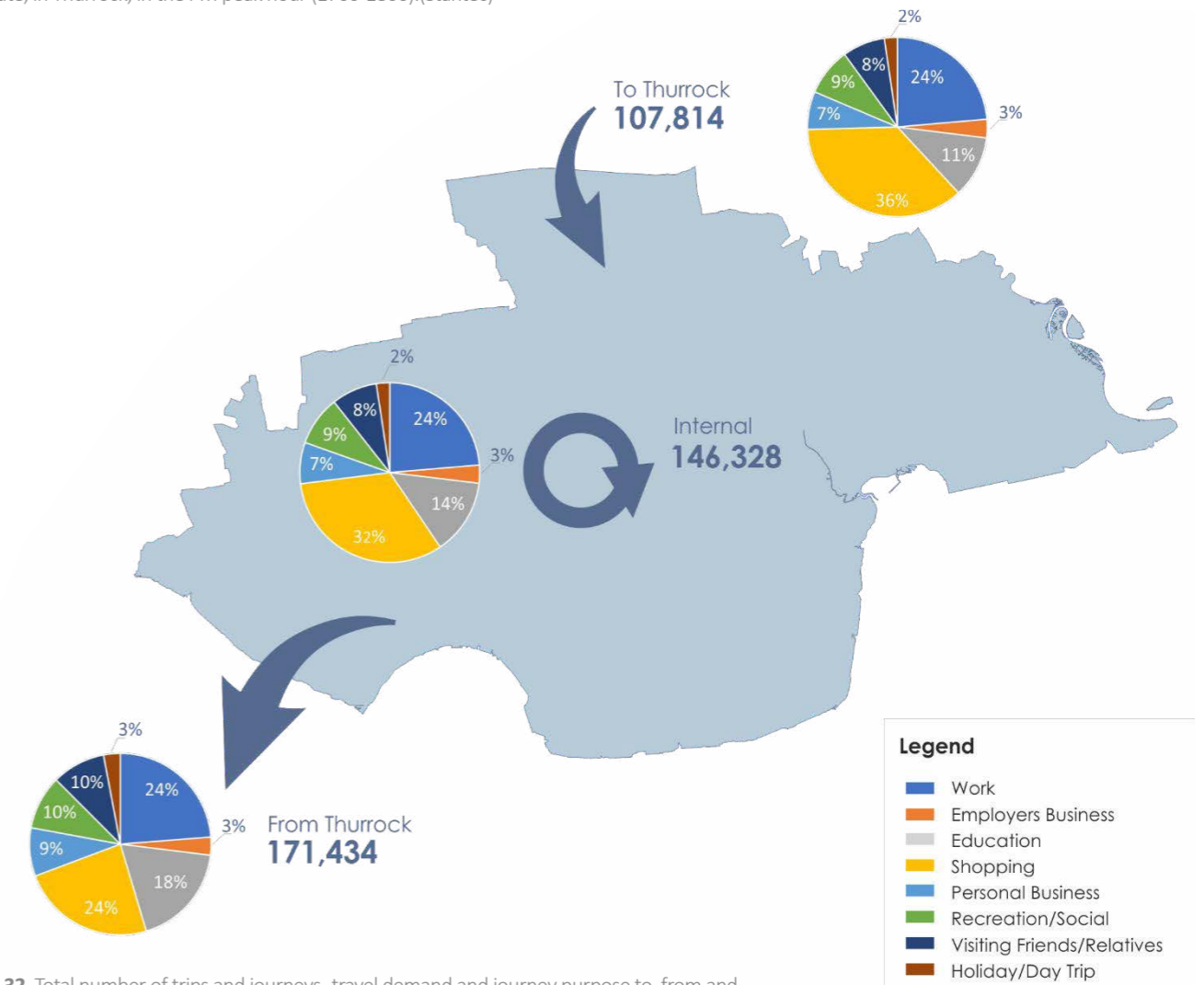
- 3.12.1 Figure 30 illustrates a combination of reduction of highway speeds and number of buses on each route, in Thurrock, in the AM peak hour (0800-0900).
- 3.12.2 The map shows that many key bus routes experience highway congestion with yellow, orange and red hotspots on main bus routes, in particular along the London Road corridor.

### 3.13 PM Public transport and traffic delay

- 3.13.1 Figure 31 illustrates a combination of reduction of highway speeds and number of buses on each route, in Thurrock, in the PM peak hour (1700-1800).
- 3.13.2 The map shows that many key bus routes experience highway congestion with yellow, orange and red hotspots on main bus routes.
- 3.13.3 The impact on the London Road and Arterial Road West corridors within Grays is marked.

### 3.14 Travel Demand Journey Purpose

- 3.14.1 Figure 32 illustrates travel demand and journey purpose to, from and in Thurrock, on an average weekday in 2019 (factored from 2011 census data).
- 3.14.2 The strong proportion of shopping related movements is noticeable for inbound and internal trips. This is perhaps due to the age of the data and the Lakeside retail centre.



**Figure 32.** Total number of trips and journeys- travel demand and journey purpose to, from and in Thurrock, on an average weekday in 2019 (factored from 2011 census data).



# 4. MOBILITY

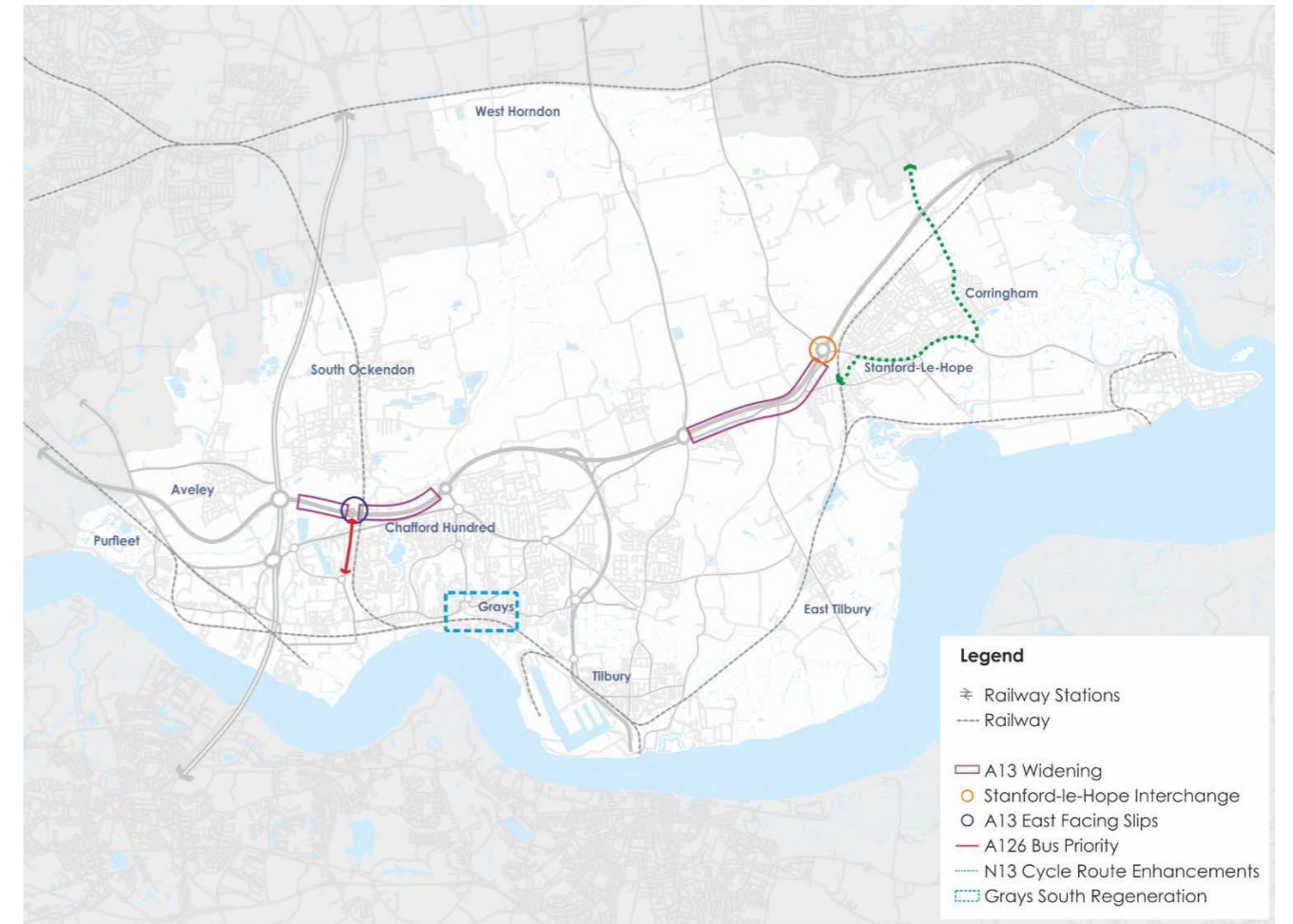


Figure 33. Transport schemes identified by Thurrock Council and National Highways.

## 4.1 Road Network in Thurrock Committed changes

4.1.1 Figure 33 shows schemes which have been identified by Thurrock Council and National Highways as committed schemes which will be coming forward to change and improve the road transport network within Thurrock.

4.1.2 This data does not include the Lower Thames Crossing which is due to be examined in late 2021 through the Development Consent Order process.

## 4.2 Lower Thames Crossing

4.2.1 The proposal of an additional river crossing and new strategic link crossing Thurrock presents opportunities for improving the transport network within Thurrock if the linkages with other levels of the transport network are made.

4.2.2 At present the details of the proposals are being considered and submission of a revised application is expected in late 2021.

4.2.3 Critical functions for the trunk road within Thurrock is the effective transit of freight from the existing and expected expansions of the ports. This would support economic development both within Thurrock itself and the wider region including the movement of freight into London.

4.2.4 Thurrock Council is working with National Highways to minimise the impact of the Lower Thames Crossing on Thurrock and the travel network and enhance connectivity across and along that corridor.

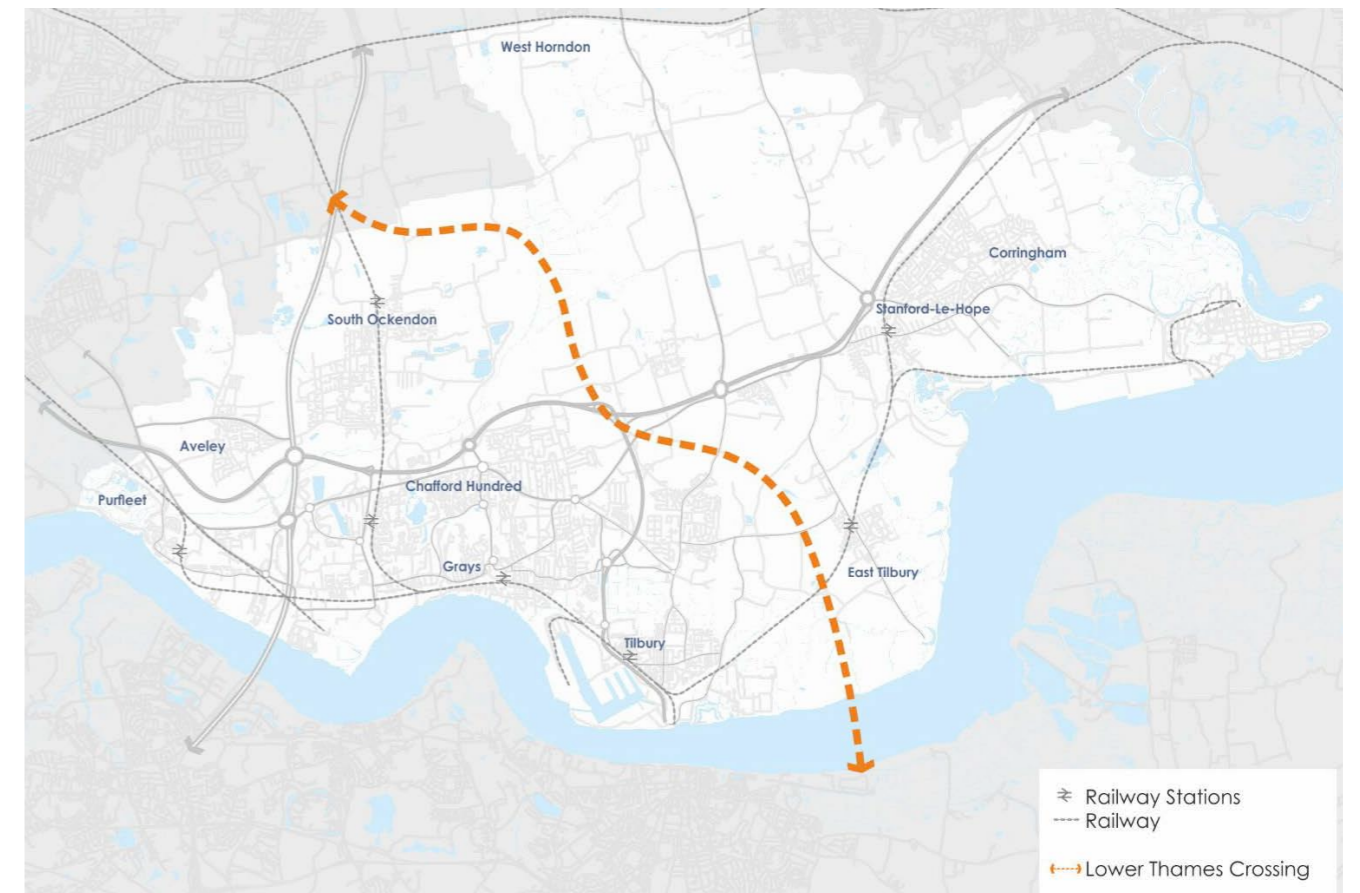


Figure 34. Approximate alignment of the proposed Lower Thames Crossing.



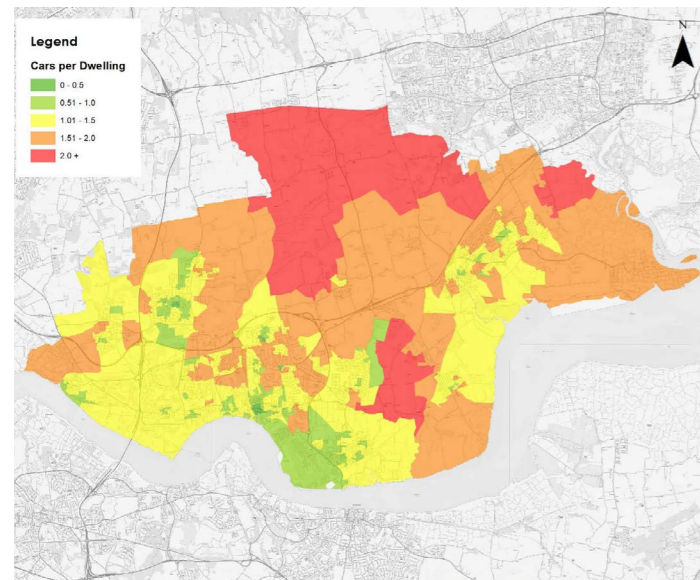


Figure 35. Car ownership across Thurrock in average cars per dwelling

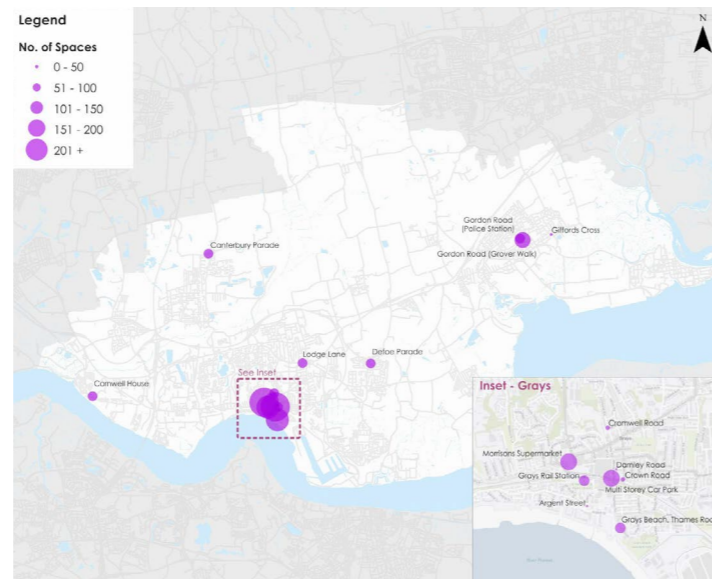


Figure 36. Key public car parking areas in Thurrock

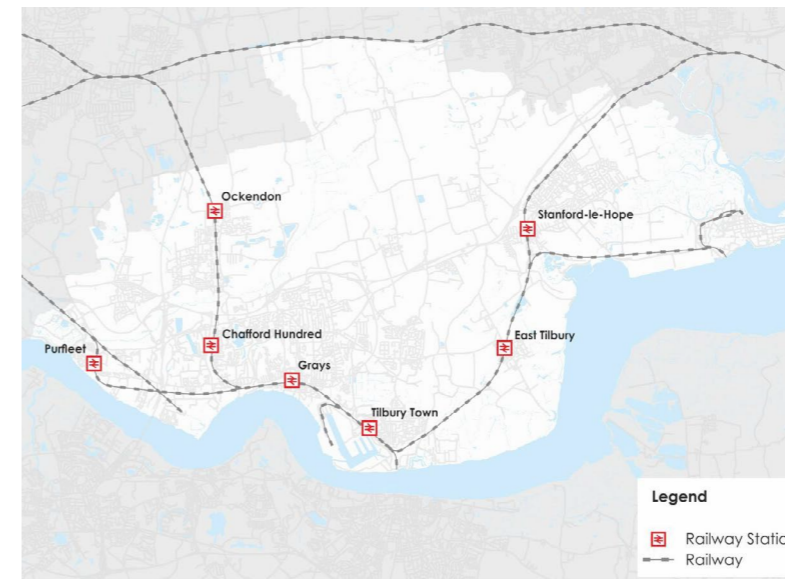


Figure 37. Rail network in Thurrock

### 4.3 Car Ownership Cars per Dwelling

- 4.3.1 Figure 35 illustrates car ownership across Thurrock in average cars per dwelling.
- 4.3.2 There is a clear pattern that residents living in the more rural areas of Thurrock own more cars, two or more per dwelling. This makes sense as rural areas have less public transport services, residents are more car dependent.
- 4.3.3 Residents living in urban areas own less cars. In particular, residents in Tilbury and Ockendon areas are the most likely not to own a car.

### 4.4 Car Parking in Thurrock

- 4.4.1 Figure 36 illustrates key public car parking areas in Thurrock. It shows there are few large parking areas and that parking is concentrated around Grays in the southwest.
- 4.4.2 Thurrock Council has commissioned a Parking Strategy for the borough which informs the location for parking places, the form of those parking places and how that provision should be co-ordinated with emerging development.

### 4.5 Rail Network in Thurrock

- 4.5.1 There are seven rail stations within Thurrock, with up to nine trains per hour (Grays) serving destinations including London Fenchurch Street, Southend and Basildon. Both London Fenchurch Street and Southend are 35-40 minutes journey from Grays.
- 4.5.2 This map shows that Thurrock's rail connections are generally east- west, serving demand to/from London. There are no direct rail connections to the north or south across the river. The high-speed 1 (HS1) line runs through Thurrock in the southwest but does not have an interchange.
- 4.5.3 The rail network also serves the large distribution and port locations within Thurrock, providing a strategic alternative to HGV transport of goods. These journeys share rail network sections with the passenger rail network.

### 4.6 Bus frequency

- 4.6.1 There is an extensive bus network operating in Thurrock which has some connections externally, including services into Greater London, Essex and Kent.
- 4.6.2 The highest frequency areas run through the centre of Grays, which is also close to Grays Rail Station, providing interchange opportunities.

### 4.7 Ferry services within Thurrock

- 4.7.1 Figure 39 shows the ferry link across the river Thames, linking Tilbury in Thurrock to Gravesend in Kent.
- 4.7.2 Demand for the service is higher in summer months but still significant through the winter.
- 4.7.3 The service is for passengers only and crossings take between 5 and 10 minutes, depending on river traffic. Services run around every 30 mins. during the day, 5:30am – 7pm, Mon-Saturday.
- 4.7.4 In the future there are plans to expand ferry services, and for additional ferry terminals which could serve both passengers and light freight. This is understood to be through the extension of the Thames Clipper services out of London and to provide additional crossing opportunities as well as journey into and out from London.

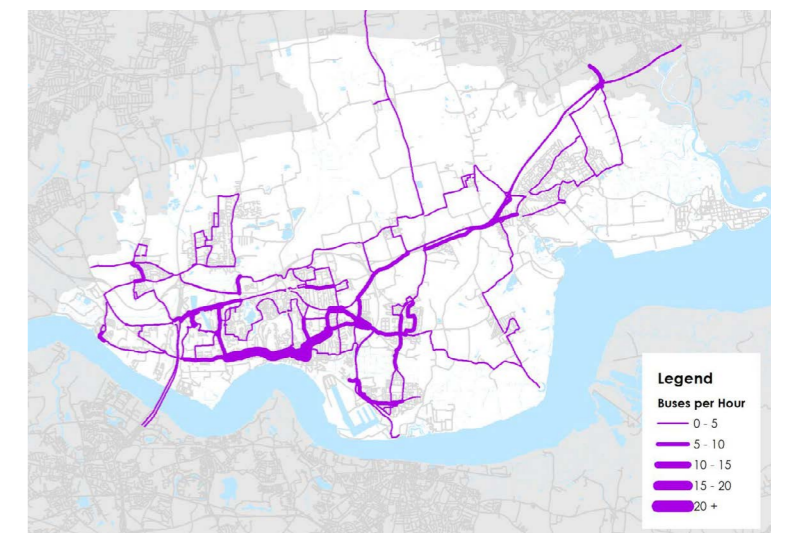


Figure 38. Bus frequency

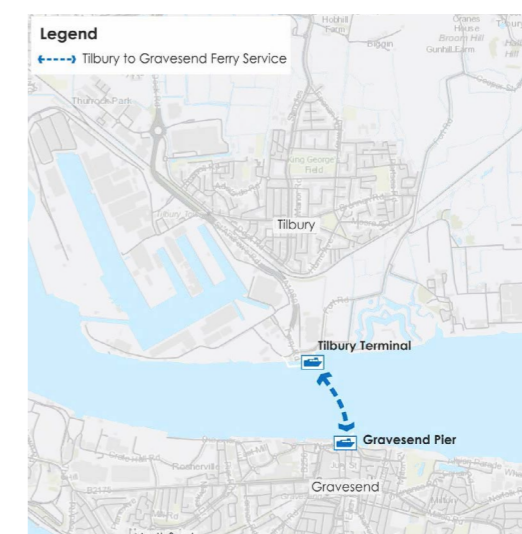


Figure 39. Ferry services and passenger numbers

Month (2019)	Passenger Journeys
January	7149
February	5362
March	8507
April	11909
May	15233
June	12857
July	4008
August	11250
September	13086



# 5. SAFETY

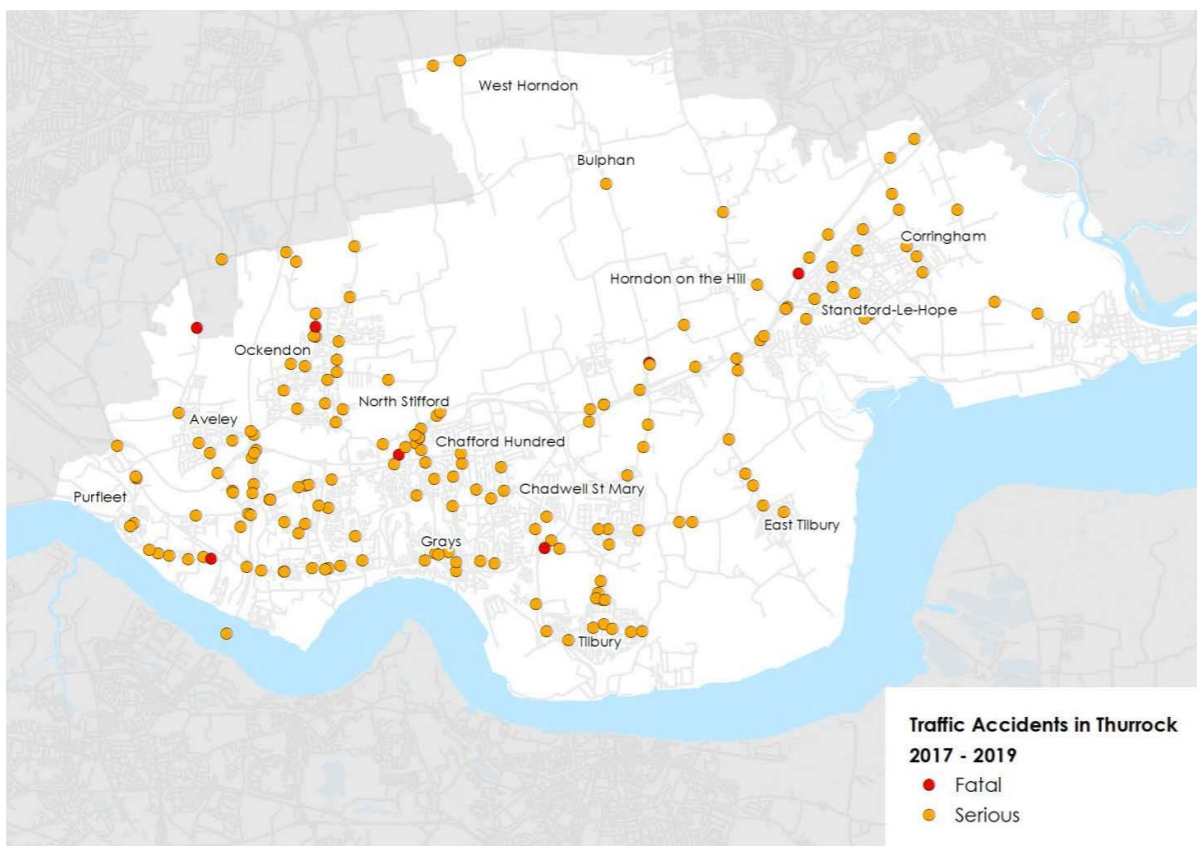


Figure 40. Serious and fatal accidents recorded over a three year period

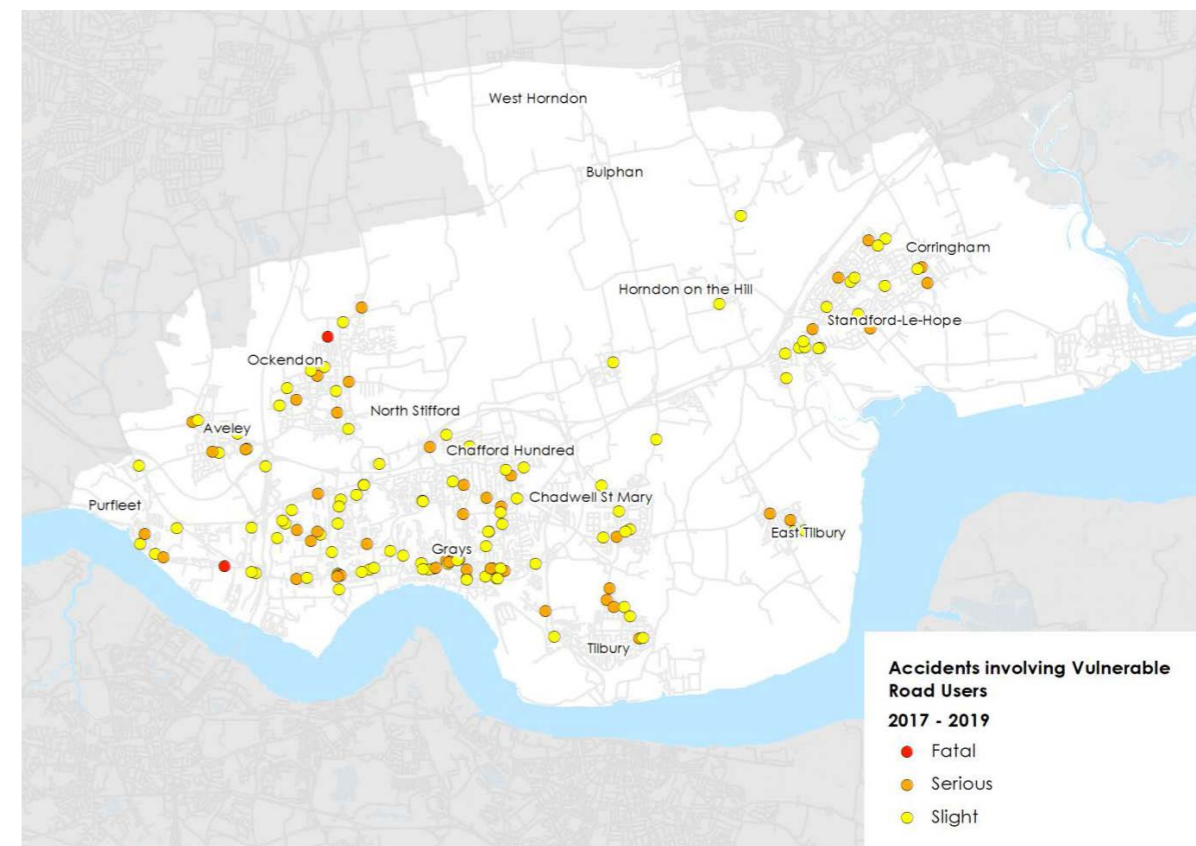


Figure 41. Accidents involving vulnerable road users

## 5.1 Accident data

5.1.1 Figure 40 shows serious and fatal accidents recorded over a three year period. Slight accidents have not been plotted for clarity.

5.1.2 This data set has been provided by Thurrock Council, and includes information only on those accidents recorded by the police.

5.1.3 Between 2017 and 2019, there were 853 road traffic accidents across Thurrock, with 7 of these fatal accidents (1%), 177 serious accidents (21%) and 669 slight accidents (78%).

5.1.4 Of the seven fatal accidents, two involved vulnerable road users.

## 5.2 Vulnerable road user safety

5.2.1 Between 2017 and 2019, there were 152 road traffic accidents across Thurrock that involved pedestrians or cyclists.

5.2.2 Accident clusters for vulnerable road users are apparent in predominantly urban areas, including around Grays, Ockendon and Stanford-Le-Hope, with less prevalence in The Fens.

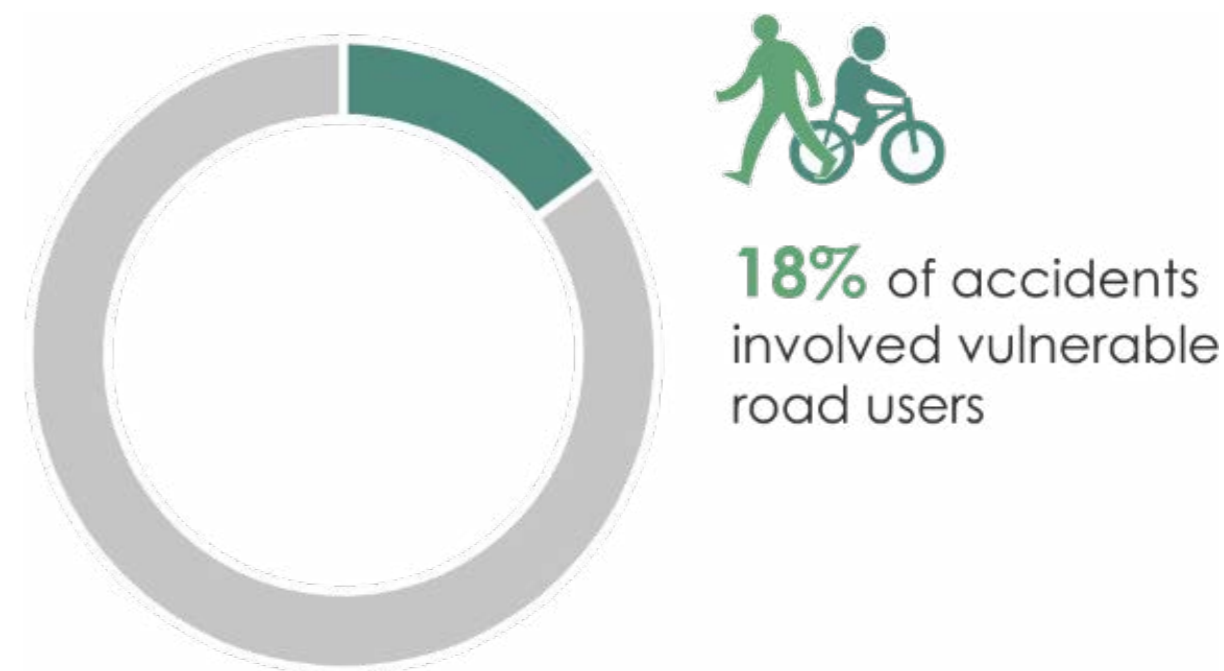


Figure 42. Percentage of accidents involving vulnerable road users



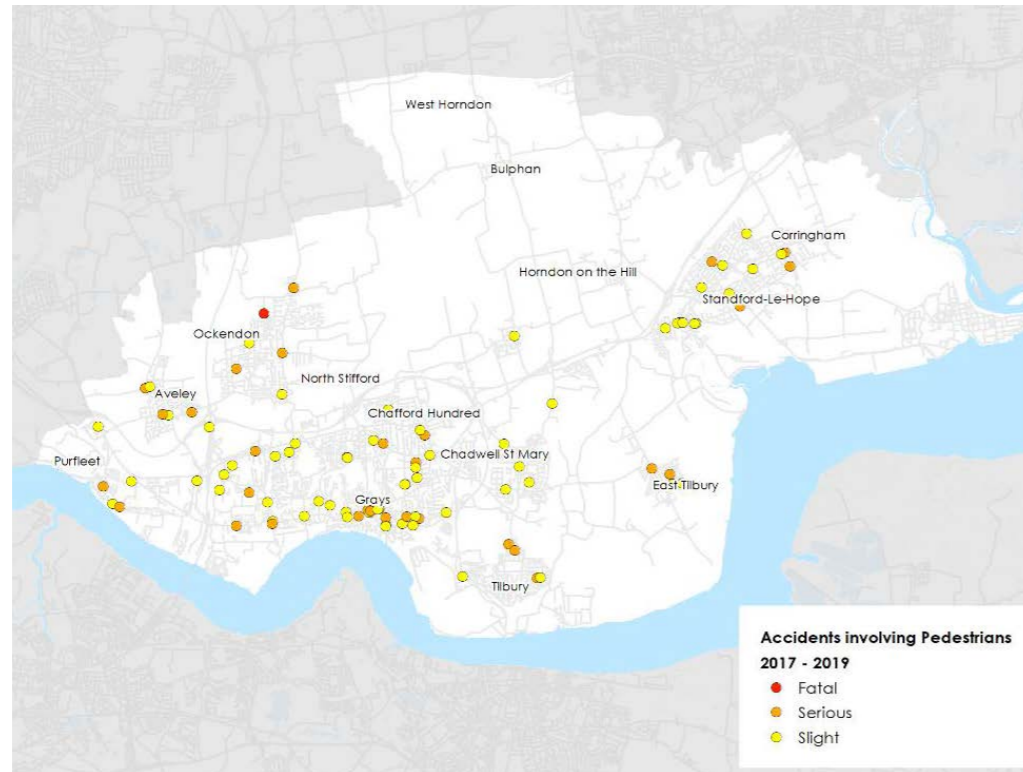


Figure 43. Accidents involving pedestrians 2017-2019

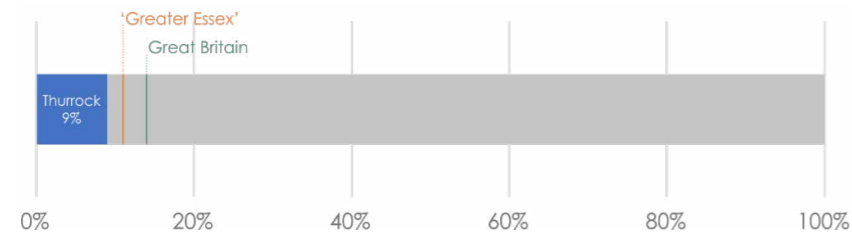


Figure 44. Pedestrian casualties in 2019

### 5.3 Pedestrian safety

- 5.3.1 National and regional data has been obtained to provide a benchmark for Thurrock accidents. The Department for Transport provides road traffic accident data for Great Britain, and the Safer Essex Roads Partnership (SERP) provides a road safety service across 'Greater Essex' (including Essex County Council, Southend-on-Sea Borough Council and Thurrock Council).
- 5.3.2 Between the years of 2017 and 2019, there have been 104 pedestrian casualties as a result of road traffic accidents in Thurrock, which is 9% of the total number of casualties.
- 5.3.3 One pedestrian fatality was recorded in this time period, located in South Ockendon.
- 5.3.4 From data obtained from the Department for Transport Reported Road Casualties in Great Britain: 2019 Annual Report, pedestrians represented 14% of all casualties in 2019 in the UK. Whereas in Thurrock, pedestrians represented only 9% of all casualties in 2019.
- 5.3.5 SERP data obtained for 2019 shows that pedestrians represented 11% of all casualties in 2019, higher than Thurrock.

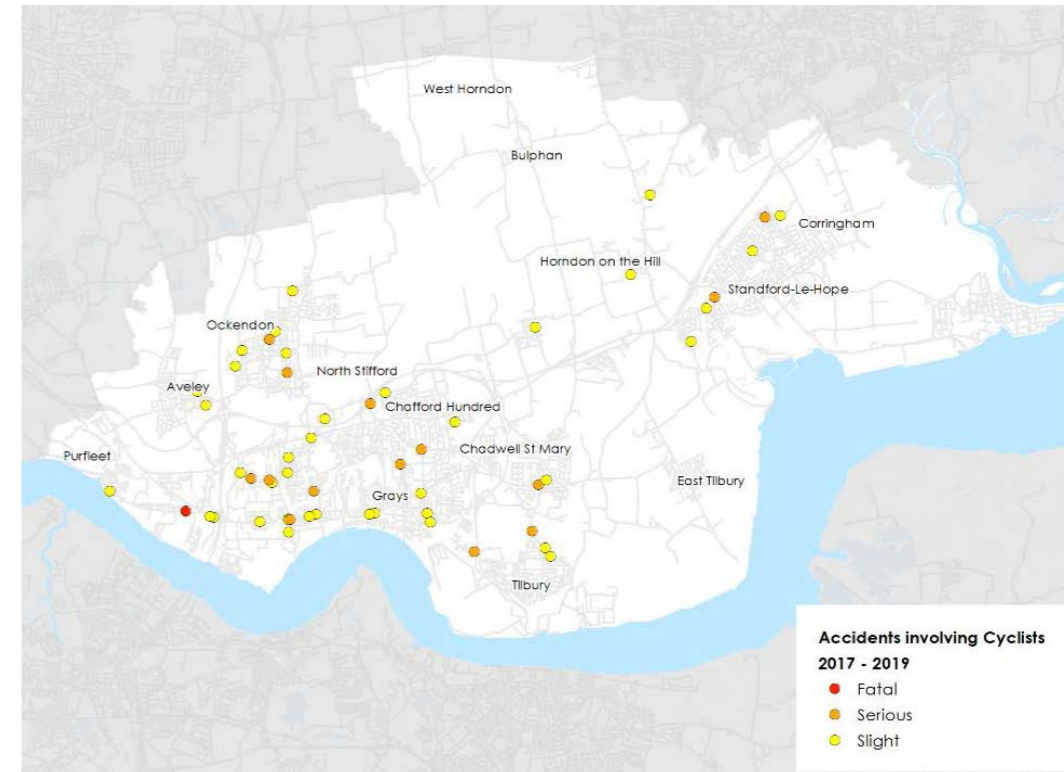


Figure 45. Accidents involving cyclists 2017-2019

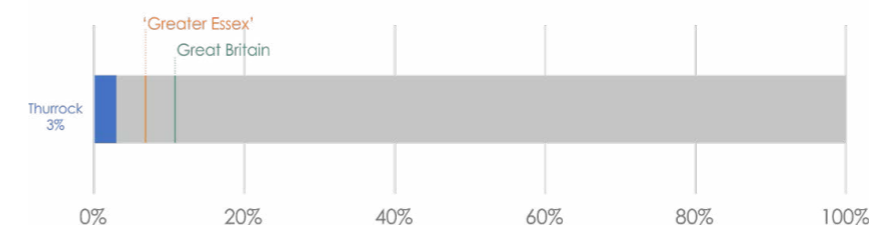


Figure 46. Cyclist casualties in 2019

### 5.4 Cyclist safety

- 5.4.1 Between the years of 2017 and 2019, there have been 54 cyclist casualties as a result of road traffic accidents in Thurrock, which is 5% of the total number of casualties over the three year period.
- 5.4.2 In this time period, one recorded accident was fatal, occurring on London Road in Purfleet.
- 5.4.3 From data obtained from the Department for Transport Reported Road Casualties in Great Britain: 2019 Annual Report, cyclists represented 11% of all casualties in 2019 in the UK. Whereas in Thurrock, pedestrians represented only 3% of all casualties in 2019.
- 5.4.4 SERP data obtained for 2019 shows that cyclists represented 7% of all casualties in 2019, again greater than Thurrock.





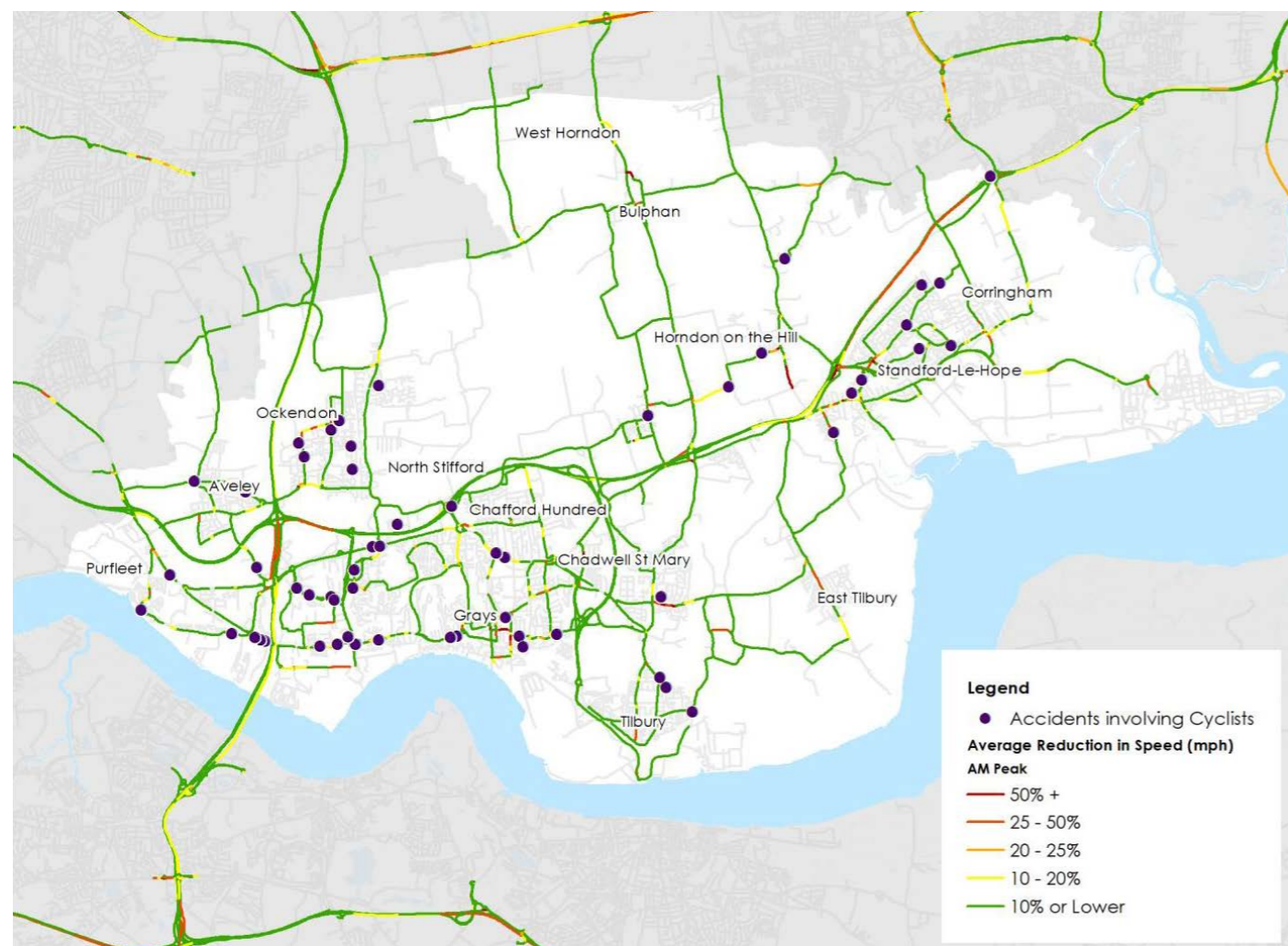


Figure 47. Road traffic accidents involving cyclists over the past three years

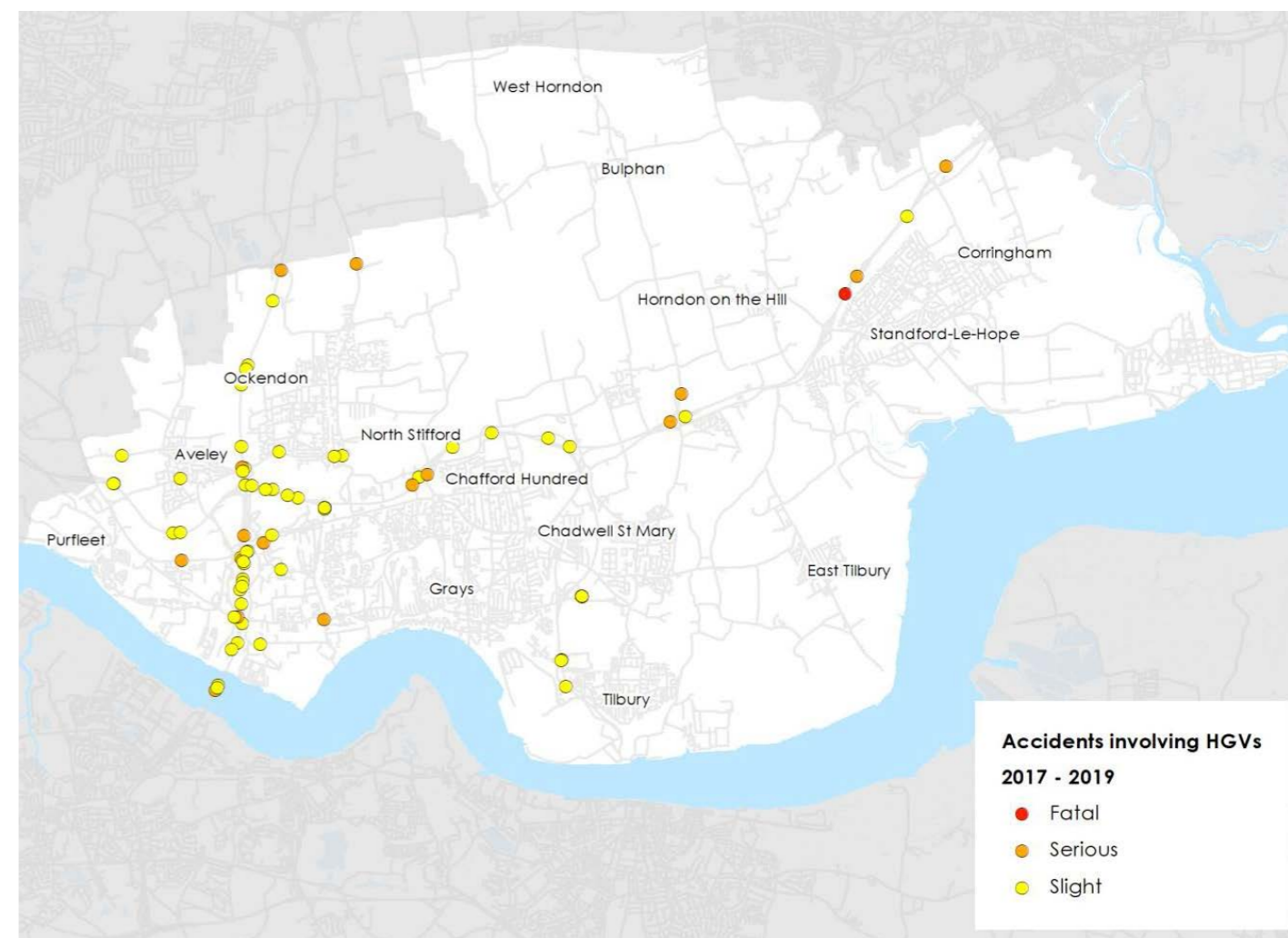


Figure 48. Accidents involving HGVs 2017-2019

### 5.5 Cyclist safety and congestion

- 5.5.1 Figure 47 highlights road traffic accidents involving cyclists over the past three years. The information is overlaid on the AM peak period (08:00-09:00) average speed to indicate any correlation between congestion and poor cycle safety.
- 5.5.2 The London Road Oliver Road corridor and B186 indicate routes with poor cycle safety records.

### 5.6 Accidents involving HGVs

- 5.6.1 Between 2017 and 2019, there were 77 accidents involving HGVs (9%)
- 5.6.2 One of the recorded accidents was fatal, occurring on the A13 near Stanford-Le-Hope.
- 5.6.3 The accidents involving HGVs are located primarily on the trunk roads and motorway sections that run through Thurrock (A13 and M25).
- 5.6.4 Some accidents are also located towards Tilbury and Purfleet.



Figure 49. Percentage of accidents involving HGVs



# 6. POLLUTION, CARBON REDUCTION AND HEALTH

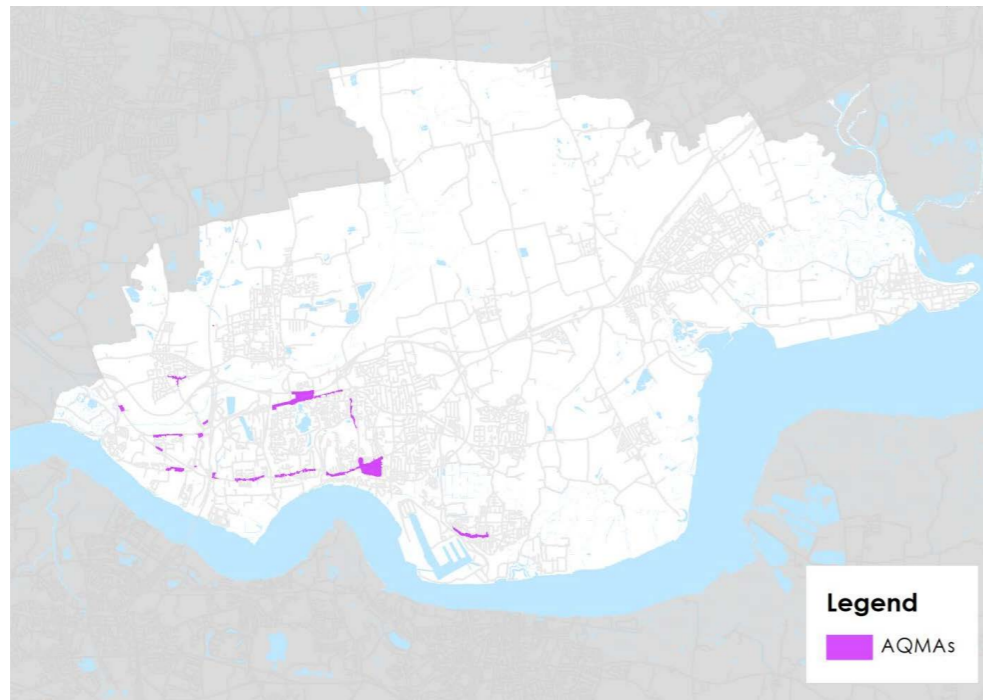


Figure 50. Thurrock's current Air quality Management Areas (AQMAs)

## 6.1 Air Quality Management Areas (AQMAs)

6.1.1 Figure 50 illustrates Thurrock's current Air quality Management Areas (AQMAs). Areas designated as AQMAs are areas that local authorities assess to be areas of possible poor air quality. The objective is to monitor the potential exposure of residents to poor air quality and ensure the national air quality objectives are reached.

6.1.2 Thurrock's AQMAs are concentrated around the Grays urban area and key arterial urban roads.

## 6.2 Morning Peak Hour Congestion and Air Quality

6.2.1 Figure 52 illustrates AM peak hour congestion levels and location of Air Quality Management Areas (AQMAs).

6.2.2 In particular, the London Road, running west from Grays experiences significant congestion in peak periods and is an AQMA.

6.2.3 Arterial Road North Stifford experience a lower change in average vehicle speeds but is classified as an AQMA.

6.2.4 The road network in the AQMA around Grays has delays and congestion during the peak period.

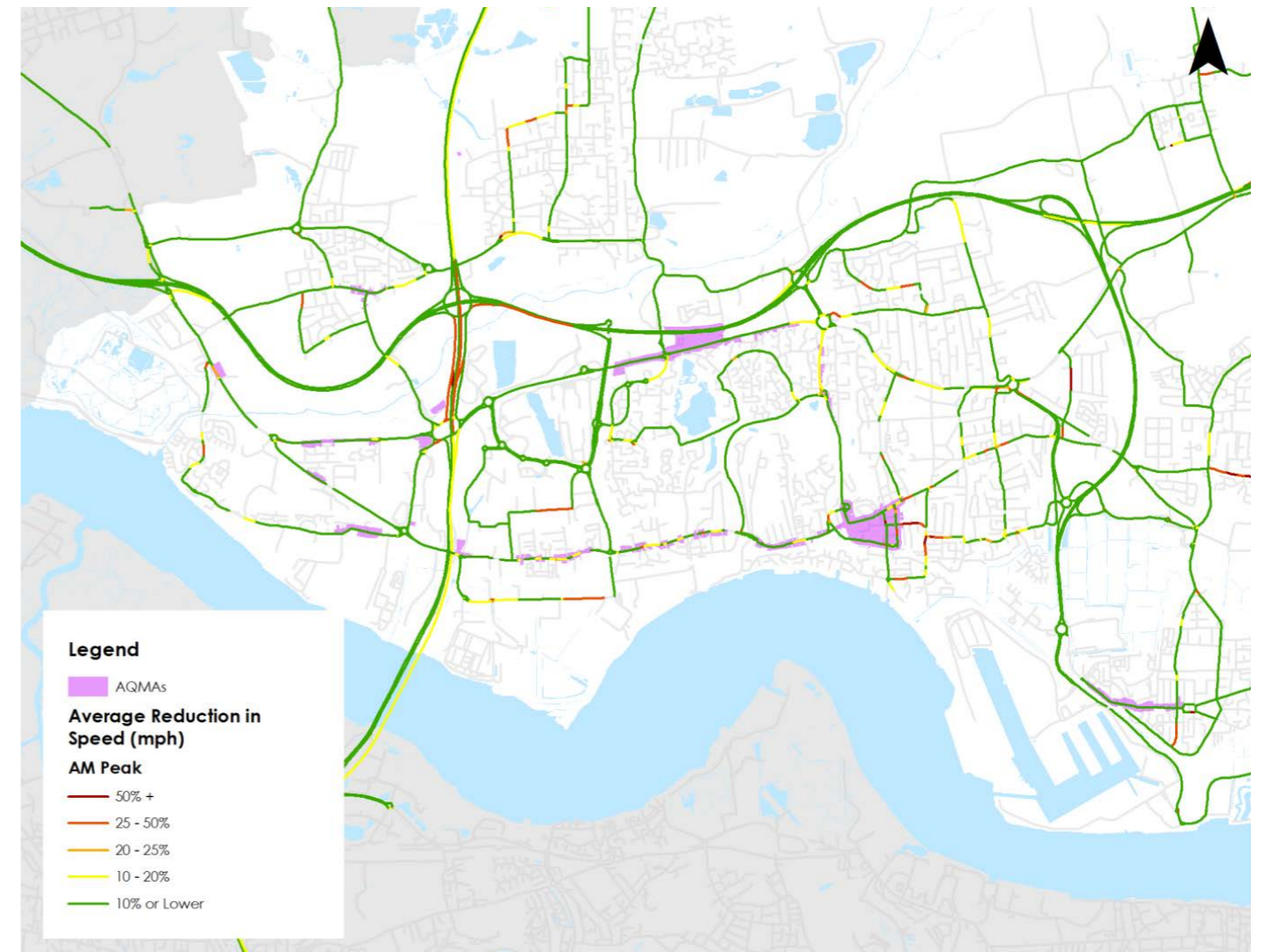


Figure 51. AM peak hour congestion levels and location of Air Quality Management Areas (AQMAs)

## 6.3 Evening Peak Hour Congestion and Air Quality

6.3.1 Figure 53 illustrates PM peak hour congestion levels and location of Air Quality Management Areas (AQMAs).

6.3.2 This includes the Arterial Road North Stifford road that runs east-west parallel to London Road from the M25 motorway. It also includes London Road, running west from Grays which experiences significant congestion in the PM peak and is an AQMA.

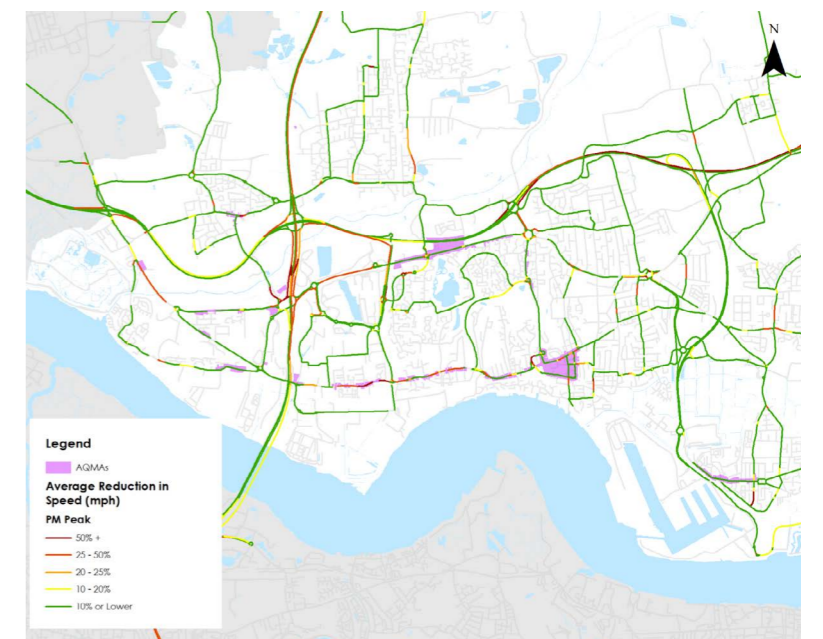


Figure 52. PM peak hour congestion levels and location of Air Quality Management Areas (AQMAs)



# 7. AFFORDABILITY

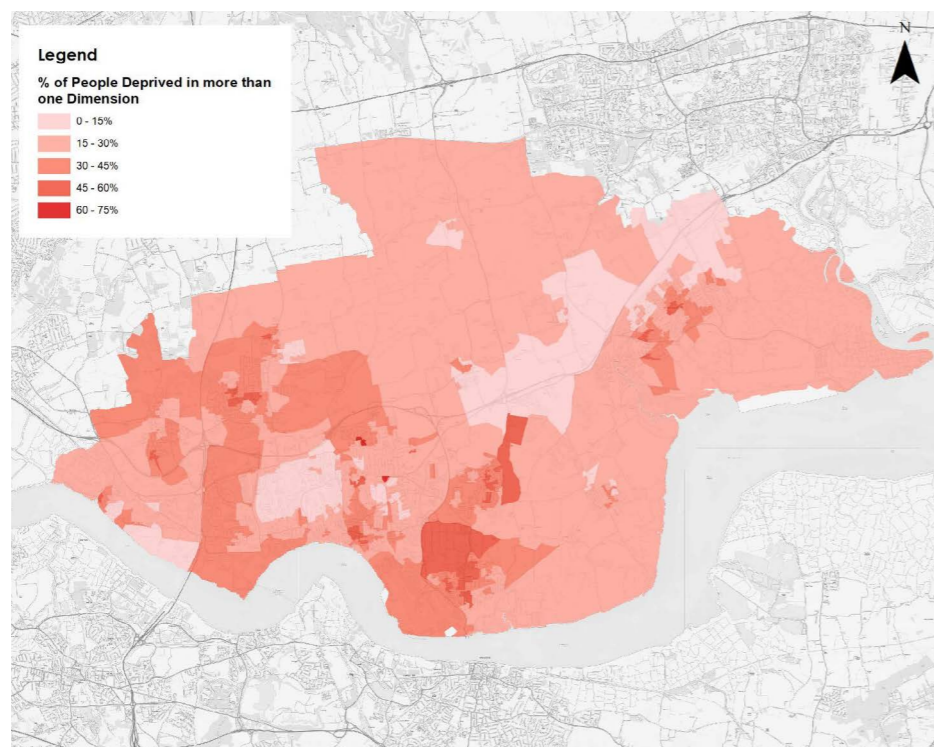


Figure 53. Percentage of people deprived in more than one dimension

## 7.1 Dimensions of Deprivation

- 7.1.1 Figure 54 uses data from the Census 2011 and illustrates areas where residents are classed as deprived in more than one dimension (including deprived, bad health and low education).
- 7.1.2 Map shows that the most deprived areas of Thurrock are concentrated around urban areas, in particular, Tilbury and Ockendon.

## 7.2 Health

- 7.2.1 Figure 55 uses data from the Census 2011 and illustrates areas where residents are classed as in bad or very bad health and low.
- 7.2.2 The map shows that the most deprived areas of Thurrock are concentrated around urban areas, in particular, Tilbury, Chadwell St Mary, Corringham and South Ockendon.

## 7.3 Population aged 66 and over

- 7.3.1 Figure 56 uses data from the Census 2011 and illustrates spread of Thurrock residents who are 66 years old and over. It shows a general trend that more rural and suburban areas have higher concentrations of older residents. This indicates younger residents live in urban areas, perhaps to be closer to employment areas.
- 7.3.2 However, there are pockets of areas with high concentrations, 40%+ of older residents in Tilbury.

## 7.4 People with Level 1 or fewer Qualifications

- 7.4.1 Figure 57 uses data from the Census 2011 and illustrates areas where residents have limited qualifications. This is equivalent to fewer than 5 GCSE passes between grades 4 to 9.
- 7.4.2 The map shows that the most qualification deprived areas of Thurrock are concentrated around urban areas, in particular, Tilbury and Ockendon.

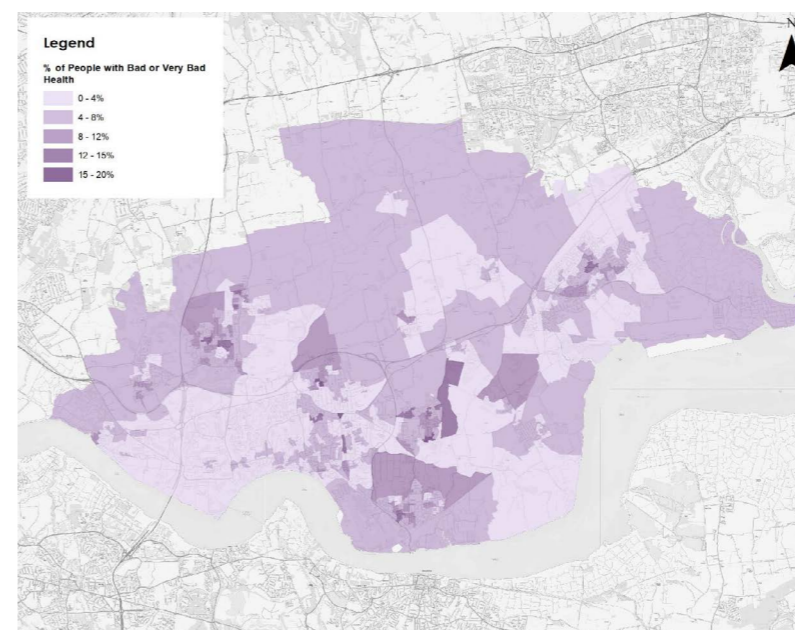


Figure 54. Percentage of people with bad or very bad health

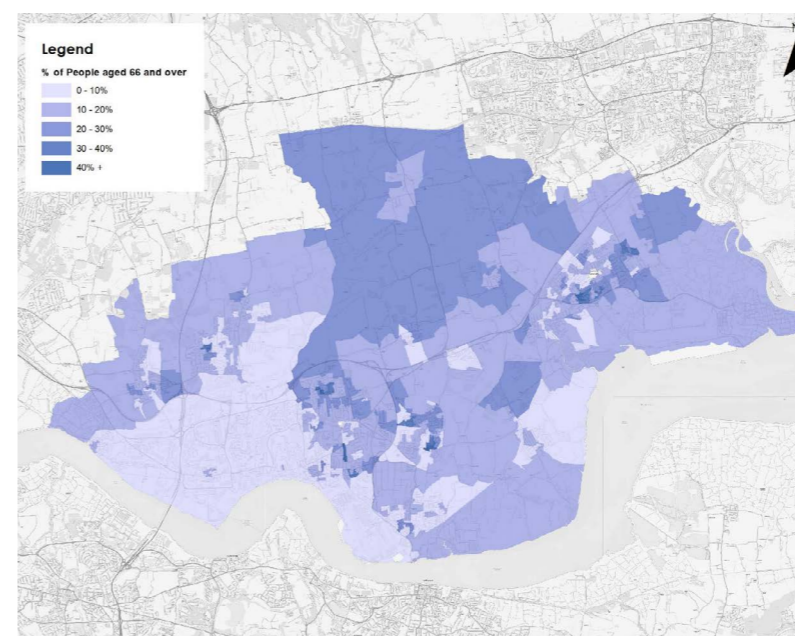


Figure 55. Percentage of people age 66 and over

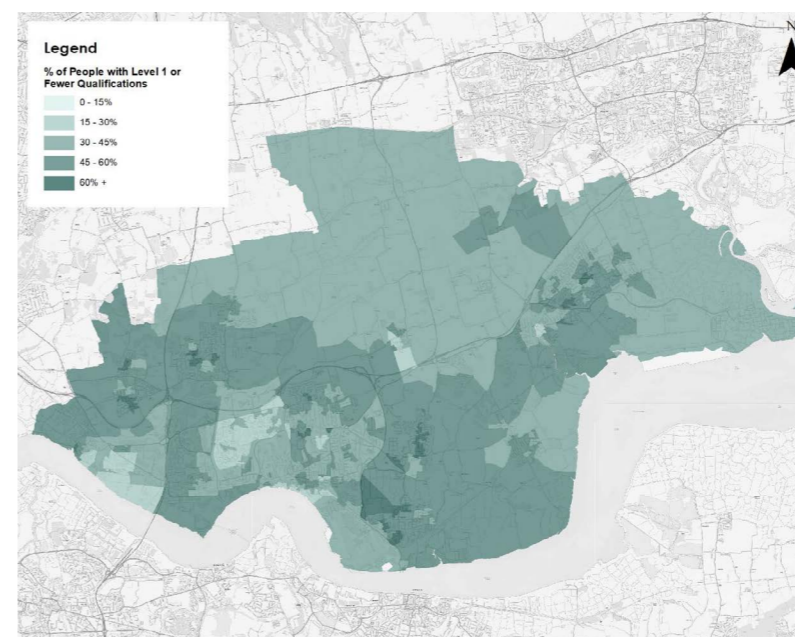


Figure 56. Percentage of people with Level 1 or fewer qualifications



# GLOSSARY

**A SELA** THE ASSOCIATION OF SOUTH ESSEX LOCAL AUTHORITIES - a partnership of neighbouring councils that have come together to promote growth and prosperity in the region (<https://www.southessex.org.uk>)

**AQMA** AIR QUALITY MANAGEMENT AREA

**BLUE GRID** - A multi-functional network of greenspace and links along and across Thurrock's rivers, waterways, and water bodies.

**BRT** BUS RAPID TRANSIT - A high-quality bus-based transit system that delivers fast and efficient service that may include dedicated lanes, busways, traffic signal priority, off-board fare collection, elevated platforms, and enhanced stations.

**C2C** A train operating company operating the Essex Thameside railway contract.

**CCTV** CLOSED CIRCUIT TELEVISION

**CIHT** CHARTERED INSTITUTION OF HIGHWAYS AND TRANSPORTATION- Guidelines for Providing Journeys by Foot (<https://www.ciht.org.uk>).

**CO<sub>2</sub>** CARBON DIOXIDE - Carbon dioxide gas emissions stem from burning fossil fuels such as petrol car engines and cause pollution and leading to climate change.

**DROIDS** – Small, semi and fully autonomous vehicles acting as couriers that may reduce the need for cars or lorry deliveries in built-up areas.

**DRONES** - A driverless aerial vehicle typically used to distribute packages to consumers during the 'last mile' delivery process. These drones generally have 4-8 propellers, rechargeable batteries, and the ability to carry lightweight containers.

**ENGLAND COASTAL PATH** – A long-distance National Trail proposed by Natural England following the coast of England.

**FASTRACK** - A Bus Rapid Transit system serving Dartford, Bluewater, Ebbsfleet and Gravesend connecting major existing and new developments with planned core express routes on which only Fastrack services will run.

**FREEPORTS** special areas within the UK's borders where different economic regulations apply. (<https://www.gov.uk/guidance/freeports>)

**GREEN GRID** - A sustainable network of multi-functional green space and links within Thurrock's towns and countryside.

**HEALTHY STREETS** – A framework for prioritising people and their health in transport, the public realm and planning policies and strategies (<https://www.healthystreets.com/what-is-healthy-streets>).

**HGV** HEAVY GOODS VEHICLE

**HS1 HIGH SPEED 1** – A 109km high-speed railway rail line between St Pancras International in London and the Channel Tunnel with intermediate stations at Stratford International and Ebbsfleet International. The line with international high-speed rail links to Paris, Brussels and Amsterdam. The route is also used by the 'Javelin' domestic route from London to Kent.

**HS2** HIGH SPEED 2 - A new railway from London to Birmingham and further north. The railway's London terminus will be at Euston, with a west London interchange at Old Oak Common.

**JAVELIN** – A high-speed train service operated by Southeastern trains between London St Pancras and Kent using the HS1 line (<https://www.southeasternrailway.co.uk>).

**KENNEX** - A proposed tram link. The planned network connects Ebbsfleet International, Grays & Gravesend to Northfleet, Swanscombe Peninsular, Chafford Hundred & Purfleet-on-Thames (<https://kenextranet.co.uk>).

**LGV** LIGHT GOODS VEHICLE

**LTC** LOWER THAMES CROSSING - A road crossing of the Thames estuary downstream of the Dartford Crossing linking Kent and Essex proposed by National Highways (<https://nationalhighways.co.uk/our-roads/lower-thames-crossing>)

**MICRO-MOBILITY** - A range of small, lightweight vehicles operating at speeds typically below 25 km/h (15 mph) and driven by users personally. Micro-mobility devices include bicycles, e-bikes, electric pedal-assisted bikes, electric scooters, electric skateboards and shared bicycle fleets.

**MODAL SHIFT** - Changes in travel behaviour and habits. For example, travelling by public transport instead of a private car.

**MODE** - The different ways passengers and/or goods can be transported. Transport. Modes for passengers and goods may include rail; maritime (sea); road; bus, and rivers.

**MRT** MASS RAPID TRANSIT - High-capacity, higher-speed road or rail-based public transport systems generally found in urban areas and travelling along dedicated paths.

**MULTI-MODAL ROADS** - Streets designed to serve different modes and provide multiple mobility options for their users. (<https://globaldesigningcities.org/publication/global-street-design-guide/defining-streets/multimodal-streets-serve-people>)

**NPPF** NATIONAL PLANNING POLICY FRAMEWORK-revised on 20 July 2021. (<https://www.gov.uk/government/publications/national-planning-policy-framework>)

**NET ZERO** - Policies and proposals for decarbonising the UK economy to reduce net global greenhouse gas emissions to near zero by 2050.

**NO<sub>x</sub>** NITROUS OXIDE

**NTS** OFFICE FOR NATIONAL STATISTICS

**PARK AND GLIDE** – A combined remote parking and commuter boat transfer service. 'Thames Clipper' currently operates a service from the O2 in Greenwich into central London.

**PPG** PLANNING POLICY GUIDANCE.

**RIVERBUS** – Boat services and access piers along the Thames, including the 'Thames Clipper' commuter service (<https://www.thamesclippers.com>).

**RTI** REAL-TIME TRAVEL INFORMATION.

**SERP** SAFER ESSEX ROADS PARTNERSHIP

**SERT** SOUTH ESSEX RAPID TRANSIT. Proposal for a fast, reliable and high quality bus-based public transport system in south Essex including 'Route 1a' serving Lakeside, Grays, A13, and Basildon Hospital.

**SHORT SEA SHIPPING** - Maritime transport of goods over relatively short distances, as opposed to the intercontinental cross-ocean deep sea shipping.

**SRN** STRATEGIC ROAD NETWORK - The major road transport network comprising secondary arterial roads, primary arterial roads, expressways and motorways managed by National Highways.

**STB** SUB-NATIONAL TRANSPORT BODY.

**TFL** TRANSPORT FOR LONDON - the organization responsible for managing the public transport services in London, including bus and underground train services, taxi services and the road (<https://tfl.gov.uk/corporate/about-tfl>).

**THAMES ESTUARY** – The lower reaches of the Thames including outer east and south east London, North Kent, and South Essex.

**THAMES ESTUARY GROWTH BOARD** - A private sector organisation covering North Kent, South Essex, East London, the City of London and the River Thames that has developed an action plan, 'The Green Blue' (<http://thamesestuary.org.uk>).

**THAMES PATH** - National Trail following the River Thames from its source to the Woolwich in south east London. The Trail connects with the England Coastal Path to form a 'Source to Sea' route.

**THURROCK LOCAL PLAN** - A long-term planning policy framework setting out the amount of development for Thurrock and its distribution across the borough that, by law, must be used when deciding all future planning applications (<https://www.thurrock.gov.uk/new-local-plan-for-thurrock/thurrock-local-plan>).

**THURROCK LOCAL TRANSPORT PLAN** – A plan describing future outcomes and priorities for transport and travel across Thurrock, including the action needed to implement the strategy. The plans consist of four parts- 'Issues and Opportunities', 'Vision 2050', 'Strategy', and 'Action and Implementation Plan(s)'.

**TRANSPORT EAST** – A sub-National transport body to deliver a collective vision for the future of transport in Essex, Norfolk, Suffolk, Southend-on-Sea and Thurrock.

**TRANSPORT SOUTH EAST** - A sub-national transport body for the South East of England

**TOC** TRAIN OPERATING COMPANY - A business operating passenger trains under the collective National Rail brand, typically as a franchise, such as C2C.



