



Astime Properties

**Residential Development
Low Road, Whitehaven
Transport Assessment**

WYG
St James Gate
Newcastle upon Tyne
NE1 4AD

Report No. A089228

Date: November 2014

REPORT CONTROL

Document: Transport Assessment

Project: Low Road, Whitehaven

Client: Astime Properties

Job Number: A089228

File Origin: -

Document Checking:

Primary Author	Narendra Sadhale	Initialled:	NS
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Checked By	Arnold Ashton	Initialled:	AA
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Review By	Nick Bunn	Initialled:	NB
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Issue	Date	Status	Checked for Issue
1	24/ 11/ 2014	Draft to Client	AA
2			
3			
4			
5			

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1 INTRODUCTION

- 1.1 WYG have been engaged by Astime Properties to produce the Transport Assessment (TA) in support of a full planning application for residential development of 110 homes on land on Low Road approximately 1.5km south of Whitehaven town centre.
- 1.2 The site benefits from an outline planning consent for 114 homes dated October 2012 and there are no conditions requiring off-site works, hence the highway implications of this amount of residential development have been considered acceptable.
- 1.3 This report was produced having due regard for the advice contained in:
- National Planning Policy Framework (NPPF), published by the Department for Communities & Local Government (DCLG) in March 2012.
 - Guidance on Transport Assessment, published by the Department for Transport (DfT) in March 2007.
 - The DfT's Manual for Streets (MfS) and Manual for Streets 2 (MfS 2), March 2007 and September 2010 respectively.
- 1.4 The main purposes of the TA are to review the accessibility of the site for pedestrians, cyclists and users of public transport to ensure there is a choice of transport mode, and to establish the impacts of traffic generated by the proposed development on the local road network.
- 1.5 Prior to the production of this report a scoping note was submitted to the highway officers of Cumbria County Council (CCC). In response CCC indicated that the committed developments to be included are Albion Square and Rhodia - Magellan Park developments, and that the following junctions should be considered:
- Mirehouse Road/ B5345 St Bees Road.
 - Mirehouse Road/ A595 Egremont Road.
 - A595 Loop Road South/ A5094 Inkermann Terrace.
 - B5345 Meadow View/ Ginns to Kells Road, and narrow section of B5345 to the north.
 - B5345 Gins/ Coach Road.



- 1.6 The TA has been prepared solely in connection with the proposed development. Whilst every reasonable effort has been made to ensure its accuracy, use of the information contained in the report by a third party for any other purpose is entirely at their own risk.

2 EXISTING SITUATION

- 2.1 The development site is located approximately 1.5km south of Whitehaven town, bound by Low Road to the east, vacant land to the south and west, and a cemetery to the north. A plan showing the site location and the adjoining highway network is shown at Figure 1 in Appendix A.

Local Transportation Networks

- 2.2 The B5345 Low Road is a 7m wide single carriageway which runs in a general north-south direction connecting Whitehaven with Mirehouse and St Bees. Along the site frontage there is a 2.2m wide footway on the western side of the carriageway. There is no footway on the eastern side. The road is lit and subject to a 30mph speed limit.
- 2.3 The immediate junctions in the vicinity of the site are
- B5345 Low Road/ Meadow Road - 3 arm priority junction about 500m to the north of site access.
 - B5345 Low Road/ Woodhouse Road - 3 arm priority junction about 200m to the south of site access.
- 2.4 Meadow Road has a carriageway width of approximately 6m and provides access to residential area located to the east of the site, bound by Low Road, Mirehouse Road and the A595. It also provides connection to Mirehouse Road and the A595.
- 2.5 Woodhouse Road has a carriageway width of approximately 5.5m wide and provides access to residential area to the west of the site.
- 2.6 Approximately 1km south of the site is the junction of Mirehouse Road/ B5345 St Bees Road which connects to the junction of the A595(T) Egremont Road/ Mirehouse Road to the east. Mirehouse Road is a 7m wide single carriageway and is subject to a 30mph speed limit, but has a narrow bridge part way along.

- 2.7 The A595(T) runs in a north-south direction linking north to Distington, Workington and Cockermouth, and south to Egremont and Sellafield. The speed limit on the A595 at its junction with Mirehouse Road is 40mph, but this changes to the national speed limit some approximately 200m south of this junction.

Committed Developments

- 2.8 The traffic flows associated with the following committed development flows are considered within this assessment.
- Albion Square Development (10,500sqm B1 employment).
 - Rhodia Residential Development (575 dwellings and school of 210 pupils), which includes Magellan Park.

Committed Highway Schemes

- 2.9 As a part of the Pinch Point program, the Highways Agency (HA) is to signalise the junction of the A595(T)/ Mirehouse Road, with work scheduled to commence in January 2015 and to be completed by March 2015.

Traffic Surveys

- 2.10 Traffic surveys were carried out on Wednesday 22nd October 2014 during the morning and early evening peak periods. The surveyed peak hours were observed to be 7:45am to 8:45am and 4:15pm to 5:15pm, and the numbers of vehicles converted using Webtag factors into Passenger Car Units (PCUs) are shown at Figures 1 and 2 in Appendix D.

3 PROPOSED DEVELOPMENT

- 3.1 The development proposal comprises 110 homes, and the current indicative layout is shown at Figure 2 in Appendix A. The site benefits from an outline consent for 114 units dated October 2012.
- 3.2 There are 1.8m wide footways on both sides of the internal road of the site, which provide pedestrian access between the individual dwellings and the existing footways on Low Road.
- 3.3 It is also proposed to provide additional pedestrian access towards the northeast section of the site offering convenient access to Low Road. Figure 2 shows its location on the plan. This pedestrian link would reduce the walk distance required to reach the bus stops and other facilities on Low Road, especially for the residents living in the dwellings located towards the northern section of the site.

Proposed Site Access

- 3.4 A new three-arm priority junction on Low Road will serve as access to the proposed development. The main access road is a single carriageway road with approximate width of 5.5m.
- 3.5 At the proposed site access location the speed limit on Low Road is 30mph. Therefore, the visibility requirements set out in Manual for Streets (MfS) apply in this case and recommend a minimum visibility splays of 2.4m x 40m for a road with speed limit for 30mph.
- 3.6 Figure 3 in Appendix A shows the visibility splays which would be provided at the site access, the right side visibility splay being 2.4m x 114m and the left side visibility splay being 2.4m x 114m. Both are well in excess of the MfS requirement.

Parking Proposals

- 3.7 The current proposal consists of 110 dwellings, the houses ranging from 2 to 4 bedrooms. All the 3 and 4 bed houses have a garage and a driveway adequate to accommodate 2 cars. The 2 bed houses have a driveway for parking 1 car.

- 3.8 CCC parking guidelines recommend that 2 bed houses have an allocation of 2 spaces per unit and 2.5 spaces for houses with 3 or 4 bedrooms. The guidance also indicates that the garage should be counted as 1 parking space only if its dimensions are at least 7 x 3m, otherwise it should be counted as 0.5 space.
- 3.9 Table 3.1 below shows the comparison of the spaces provided at the site against the CCC guidelines. Please note that for the purpose of the calculations, the garage is considered as 0.5 space as it is less than 7 x 3m in dimension.

Table 3.1: Comparison of Parking Spaces Proposed and CCC Guidelines

No of dwellings	No of bedrooms	Spaces per dwelling as per CCC guidelines	Parking Spaces	
			Requirement	Proposed
12	2	2	24	12
55	3	2.5	137.5	137.5
43	4	2.5	107.5	107.5
Total			269	257

- 3.10 The parking provision on site is slightly below the CCC guidelines, by 12 spaces, but it is considered sufficient allowing the proposed development to operate in a safe manner without overproviding for the car.

4 ACCESSIBILITY

- 4.1 NPPF replaces a number of national policy documents, including Planning Policy Guidance note 13 (PPG 13). At bullet 11 of paragraph 17 NPPF explains planning “should make the fullest possible use of public transport, walking and cycling” and at Paragraph 10 it guides “plans and decisions need to take local circumstances into account, so they respond to the different opportunities for achieving sustainable development in different areas”.
- 4.2 Table 4.1 below summarises the nearest amenities and their approximate distance from the centre of the site.

Table 4.1: Location of Nearest Amenities from Proposed Development

Route No.	Route Description	Distance (m)	Time	
			Walk (min)	Cycle (min)
1	Bus stop- Low Road opposite Cemetery Lodge	400	4	1
2	Alternative Bus Stop- Woodland Road	600	6	2
3	Railway Station - Corkickle	1600	20	8
4	Primary School- Valley Primary School	1440	18	7
5	Junior School- Monkwray School	1500	20	7
6	Retail shopping – Asda Supermarket, Preston Street	1560	21	7
7	Retail Shopping- The Co-Operative Food store	1360	18	7
8	Sport facilities- Whitehaven Sports Centre	1960	24	10

Walking

- 4.3 WYG have analysed walking for all purposes as the main mode of travel, from home, by interrogating data collected through the 2010 National Travel Survey (NTS) to calculate the average and 85th percentile distances travelled. The survey data was collected from 7,700 households covering over 18,000 individuals, and so provides a robust sample which can be reviewed for variations across UK regions and variations between different reasons for travelling. The analysis revealed that the average distance people walk is 1.2km and the 85th percentile distance is 1.9km. The NTS data is available on request.

- 4.4 For this review an acceptable maximum walk distance of 1.9km has been adopted, i.e. approximately a 24 min walk (at a typical walking speed of 1.3m per sec) from the centre of the proposed development. Figure 4 in Appendix A and Table 4.1 shows the accessible facilities within 1.2km and 1.9km walk distances.
- 4.5 The Co-operative retail shop on Lakeland Avenue is the nearest shop within 1.2km of the site. Larger retail stores like Asda and Aldi are located around 1.5km north of site on Preston Street.
- 4.6 Whitehaven Town Centre, a number of Junior and Primary schools, railway station and leisure facilities are located within 1.9km from the site.

Cycling

- 4.7 WYG have analysed cycling for all purposes as the main mode of travel, from home, by interrogating data collected through the 2010 NTS to calculate the average and 85th percentile distances travelled. The survey data was again collected from 7,700 households covering over 18,000 individuals. The analysis revealed the average distance people cycle is 4.5km and the 85th percentile distance is 7.2km. The NTS data is available on request.
- 4.8 For this review an acceptable maximum cycle distance of 7.2km has been adopted, i.e. approximately a 35 min ride. Accessibility on bike to and from the proposed development for facilities and amenities within 4.5km and 7.2km cycle distances has been assessed, and they are shown at Figure 5 in Appendix A.
- 4.9 All the areas within acceptable walking distance are also accessible by bicycle. Whitehaven town centre is within the 4.5km cycling catchment giving access to more retail and leisure facilities. St Bee's town centre and areas of Hensingham are within the 7.2km catchment area providing access to West Cumberland Hospital, a number primary and high schools and West lakes Science and Technology Park.
- 4.10 Whitehaven is the starting point of the popular 140km long C2C cycle route which travels from Whitehaven to Sunderland and its location is shown in Figure 8 in Appendix A.
- 4.11 The Whitehaven-St Bees Circular cycle route is within 1km of the site and runs along the C2C cycle route to the east and along High Street (Blue 72 route signs) to the west of the proposed

site. The location of the Whitehaven-St Bees Circular Route is shown at Figure 8 in Appendix A.

- 4.12 Hence the residents at the proposed development have a good level of accessibility to retail, leisure, recreational and educational opportunities within a reasonable distance by both walking and cycle modes.

Public Transport

- 4.13 WYG have analysed walk distances for bus as the first stage of the journey, from home, by interrogating data collected through the 2010 NTS to calculate the average and 85th percentile distances on foot to a stop. The survey data provides a robust sample. The analysis revealed outside of London the average distance people walk to a bus stop is 640m. The NTS data is available on request. Figure 6 in Appendix A shows bus stops located within 640m from site.
- 4.14 The nearest bus stop is located on Low Road, opposite Cemetery Lodge, approximately within 400m walk from the centre of the site. There are additional bus stops on Woodland Road to the south of the site within 600m walk from the site. The bus services are summarised at Table 4.2 below. Services 2, 2A, 22 and 26 can be accessed via these bus stops and they provide connection to Whitehaven, and other nearby areas like Kells, Woodhouse, Egremount, St Bees, Mirehouse and Frizington.

Table 4.2: Bus Routes Accessible from Proposed Development

Route No.	Route Description	Monday to Friday		Saturday		Sunday
		Day	Eve	Day	Eve	
2	Whitehaven- Kells-Woodhouse-Greenbank-Whitehaven	2 per hour	1 per hour till 7pm	2 per hour	1 per hour till 7pm	No service
2A	Whitehaven- Kells-Woodhouse-Greenbank-Whitehaven	1 morning service only	No service	No service	No service	No service
22	Whitehaven- Kells- Woodhouse-Mirehouse-Frizington	No service	No service	No service	No service	1 per 2 hrs
26	Whitehaven- Moor Row-Egremont-St Bees-Whitehaven	1 per hour till 3pm	No service	1 per hour till 3pm	No service	No service
3	Whitehaven-Corkickle-Mirehouse-Whitehaven	2 per hour till 5pm	1 per hour till 7pm	2 per hour till 5pm	1 per hour till 7pm	3 services 10am-5pm
4	Whitehaven-Corkickle-Mirehouse-Whitehaven	2 per hour till 6pm	1 per hour till 7pm	2 per hour till 6pm	1 per hour till 7pm	No service
86	Bransty-Whitehaven-Mirehouse-West Cumberland Hospital-Egremount- Sellafeld	1 morning service only	1 evening service	No service	No service	No service

4.15 There are additional bus services on Meadow Road about 600m from the centre of the site providing frequent service to nearby areas like Sellafield, Cumberland Hospital and Bransty. The services no. 3, 4 and 86 can be accessed through the walking route opposite the site which connects to Meadow Road and Copeland Road. Figure 7 in Appendix A shows the routes maps for all the services.

4.16 Table 4.2 above shows that there are at least 2 services per hour within easy and convenient walking distance from site providing connection to main employment centres like Whitehaven and other places of interest.

Railway Station

4.17 The site is approximately 1,900m to the south of Corkickle Station which operates train services to Whitehaven, Workington, Carlisle and Barrow-in-Furness as well as a number of other population centres along the route.

4.18 Whitehaven Station is located approximately 3km to the north of the proposed site. The station lies on the same line as Corkickle Station and has services which operate to the same destinations. It provides connection to nearby areas like Carlisle, Barrow-in-Furnace and Preston.

4.19 Both stations provide services like shelters with waiting and seating facilities, step free access, customer service and ticketing facilities, and car parking amongst other facilities.

Conclusion

4.20 The proposed development has good accessibility on foot, bike and public transport to a range of useful local amenities and destinations, and there is a public transport option available for journeys further afield.

5 TRIP GENERATION AND TRAFFIC ASSIGNMENT

- 5.1 The TRICS database has been used to derive suitable multi-modal trip generation rates for the 110 homes approx on site during the critical weekday AM and PM peak hours.
- 5.2 The following criteria were applied to the TRICS category "03/ A, Residential - Houses Privately Owned":
- Sites in London, Republic of Ireland or Northern Ireland were excluded.
 - Only weekday surveys were included.
 - Only Edge of Town sites were included.
 - Only sites between 70 and 150 homes were included.
 - Only the most recent survey was included for each site.
- 5.3 The TRICS database indicates the highest trips recorded from similar developments are most likely to be generated between 8:00am and 9:00am during the morning peak hour and between 5:00pm and 6:00pm in the early evening peak.
- 5.4 A total of 18 sites remained in the dataset, and person trip rates by different modes of travel were determined. Vehicle trip rates for the weekday AM and PM peak hours have been extracted, and they are respectively shown at Table 5.1 below. These rates have been used to predict the traffic flows likely to be generated by 110 homes. TRICS output files are attached in Appendix B.

Table 5.1: Vehicle Trip Rates and Generated Traffic Flows for 110 Homes

Time Period	Arrivals		Departures		Total
	Trip Rate	Vehicles	Trip Rate	Vehicles	
AM Peak Hour (08:00-09:00)	0.159	17	0.418	46	63
PM Peak Hour (17:00-18:00)	0.388	43	0.215	24	66

Trip rate is per dwelling

Traffic Assignment

- 5.5 In considering the routing of generated traffic due consideration needs to be given to the purposes for which journeys are undertaken, for example the routing of vehicle trips to schools may be different to that for work purposes. In order to consider these possible effects WYG have requested journey purpose data for drivers in the morning and early evening periods from the DfT's National Travel Survey (NTS). The NTS is a travel diary survey undertaken in some 7,700 households across the UK covering over 18,000 individuals and provides the data for a wide range of travel statistics.
- 5.6 The DfT have provided the NTS journey purpose data for the 5 years between 2008 and 2012, the most recently published survey data available, for the two hours in the AM peak period (7:00am to 7:59am and 8:00am to 8:59am) and two hours in the PM peak period (4:00pm to 4:59pm and 5:00pm to 5:59pm). The NTS data is summarised at Tables A and B in Appendix E.
- 5.7 The NTS records 23 different journey purposes, including Home, and to simplify the analysis WYG have grouped together several of the journey purposes as below:
- Work Related, marked by yellow in the tables, comprise;
 - Commuting, and taking others to/ from work (e.g. car share), and
 - Business, trips during the working day (including giving a lift to others in the course of work).
 - Education Related, marked by blue, comprise;
 - Students driving themselves to/ from schools or colleges, and
 - Parents escorting children to/ from school.
 - Other Purposes, marked by green, comprise both direct and escort journeys for;
 - Shopping, both food and non-food,
 - Health/ medical related,
 - Social, entertaining and sport (including visiting friends),
 - Holiday, and
 - Personal business and other.

NTS AM Peak (8:00am to 8:59pm)

- 5.8 From Table A vehicle trips starting at, or ending at, home were distributed between the grouped journey purposes as set out in Table 5.2 below.

Table 5.2: AM Peak Hour, Purpose of Journeys Starting At or Ending At Home

	Arrivals	Departures
Work	19.2%	55.9%
Education	54%	25.7%
Other	26.9%	18.5%

- 5.9 Table 5.2 shows, during the AM peak hour, Work trips account for just over one-half of the departure journeys with Education trips accounting for just over one-quarter. Nearly one-fifth of the departure journeys are for Other trip purposes. The Education element is dominated by escort journeys, i.e. Education Escort is 25.7% of departure journeys, and parents after completing the escort trip either return home or travel to another destination. Looking at the "From Education Escort" column, it can be seen the second leg of the trip is 35% to Work, 51% to Home, or 14% for Other purposes. These proportions have been used to assign the second leg trips after Escort education.

NTS PM Peak (5:00pm to 5:59pm)

- 5.10 From Table B vehicle trips starting at, or ending at, homes were distributed between the grouped journey purposes as set out in Table 5.3 below.

Table 5.3: PM Peak Hour, Purpose of Journeys Starting At or Ending At Home

	Arrivals	Departures
Work	65.9%	21.6%
Education	2.2%	2.9%
Other	31.9%	75.6%

- 5.11 During the PM peak the proportion of Education trips is much smaller, and therefore no special consideration of these trips is needed.
- 5.12 Table 5.4 below summarises the proportions for each of those journey purposes among car driver trips during the AM peak and PM peak periods separately. These proportions have been applied to the vehicle trips predicted for the proposed development at Table 5.1.

Table 5.4: Proposed Development, Vehicle Trips by Journey Purpose

Time Period	Journey Purpose			Total
	Work	Education	Other	
Weekday AM Peak (%)	55.9% (home to work) 8.9% (home-school-work)	25.7%	18.5% (home to other) 3.7% (home-school-other)	100%
Vehicles Departures	26 (home to work) 4 (home-school-work)	12	9 (home to other) 2 (home-school-other)	47
Weekday AM Peak (%)	19.9%	52.3%	27.9%	100%
Vehicles Arrivals	3	9	5	17
Time Period	Work	Education	Other	Total
Weekday PM Peak (%)	20.9%	2.8%	76.4%	100%
Vehicles Departures	5	1	18	24
Weekday PM Peak (%)	66.1%	2.1%	31.8%	100%
Vehicles Arrivals	28	1	14	43

Journeys for Work

- 5.13 Work related vehicle trips have been distributed onto the local road network using an assignment based on Journey to Work data for car trips among residents of the Copeland 005 ward taken from the 2011 Census. Local knowledge of the route choices available, and relative congestion on the network during the commuter peak periods, has also been considered to derive a realistic assignment.
- 5.14 Figure 1 in Appendix E shows geographically this ward in relation to the development site.
- 5.15 Table 1 in Appendix E shows in tabular form the routing assumptions on the local road network from the site to each of the workplace destinations and Figure 2 in Appendix D shows diagrammatically the resulting assignment.

- 5.16 For return work trips, it is assumed that the return journey will be undertaken through the same route (as in the departure) but in a reverse direction. Figure 14 in Appendix D shows diagrammatically the resulting assignment.
- 5.17 Figures 3 and 15 in Appendix D show assigned vehicle trips for work purposes for the AM and PM peak hours respectively.

Journeys for Education

- 5.18 As discussed at the third bullet of paragraph 5.10 above the education trips are split into following types
- Education-only trips. These are journeys carried out of the sole purpose of dropping kids to schools. Hence the journey starts at home and returns home after drop off at schools.
 - Education-work trips. These are journeys which start from home and proceed to workplace after drop off at the schools.
 - Education-other trips. These are journeys which start at home and proceed to other destination, like retail shopping etc, after drop off at school.
- 5.19 In this assessment, the education trips are assigned to the following schools in the nearby areas.
- Monkway Junior School on Monkway Brow.
 - Kells Infant School on High Road.
 - Whitehaven Academy on Cleator Moor Road, Hensingham.
 - St Benedict's High school off Red Lonning, Hensingham.
 - Valley Primary School on Whinlatter Road.
- 5.20 The education trips have been split equally between schools in the primary and the secondary sectors and the distribution of education trips is shown at Figure 5 and 17 (Figure 6 has been removed) for the AM and PM peak hours respectively.

Journeys for Other Purposes

- 5.21 As discussed at the third bullet of paragraph 5.8 above Other purpose trips combine a range of journey purposes, however for the most part it is reasonable to assume these trips are to/ from local facilities in nearby town/ city centres.
- 5.22 Whitehaven provides the nearest shopping, retail and leisure facilities and services like restaurant, cinemas, retail shopping and other high street shops. Hence the other trips are shown on the local highway network in the direction of Whitehaven.
- 5.23 Figures 4 and 16 in Appendix D show the assignment of "Other" trips to/ from the development on the network in the AM and PM peak hour.

Full Development

- 5.24 Total numbers of development generated vehicle trips during the AM and PM peak hours are respectively shown at Figures 7 and 18 in Appendix D.

Committed Developments

- 5.25 The following committed development flows are considered within this assessment.
- Albion Square Development (10,500sqm B1 employment), which comprises 1,000 staff including transfer from Sellafield Main Site, and
 - Rhodia Residential Development (575 dwellings and school of 210 pupils).
- 5.26 The traffic effects associated with these developments have been taken from the SATURN model outputs provided by CCC for the Rhodia TA and Albion Square TA.
- 5.27 Figures 8 and 19 in Appendix D show the traffic effects associated with Albion Square for the AM and PM peak hours. In the SATURN model the vehicle trips generated by the development were distributed using anonymised postcode data for existing staff at Sellafield site. Due to the scale of that development a substantial redistribution of baseline traffic is expected, which explains and is represented in the negative values in Figures 8 and 19.

- 5.28 Figures 9 and 20 in Appendix D show the traffic effects associated with Rhodia for the AM and PM peak hours. In the SATURN model the vehicle trips associated with the development were distributed using an assignment pattern derived based on journey to work data from 2001 Census data.

6 FUTURE YEARS

- 6.1 A planning application for the proposed development is to be submitted in 2014. In this TA 2014 has been taken as the base year and 2024 the future year as 10 years hence, i.e. 2024.
- 6.2 Traffic flows surveyed in 2014 have been projected to 2024 by applying factors extracted from the DfT's TEMPRO computer program using the definitive National Trip End Model (NTEM) v6.2 database and the current National Transport Model (NTM) AF09 dataset in line with WebTAG Unit 3.15.2 Use of TEMPRO Data. Whitehaven (16UE1) has been selected as the defined area with "Urban" Area type and "Minor" Road types selected.
- 6.3 The proposed development is for 110 dwellings in Whitehaven. Additionally there is committed development of 575 dwellings (Rhodia Site) and employment 1,000 jobs (Albion Square). The NTEM projection for Whitehaven (16UE1) includes for the increase due to the planned and committed developments. Therefore the household and job projection have been reduced by 685 and 1,000 respectively to avoid double-counting. The selected local area chosen was "Urban" and "Minor" was selected as the road type. Table 6.1 below summarises the growth factors to be applied to the 2014 traffic surveys. The details of growth factor calculations are included in Appendix C.

Table 6.1: TEMPRO Growth Factors 2014 to 2024

	Period	
	AM Peak	PM Peak
2014 to 2024	1.0204	1.0255

- 6.4 Figures 10 and 21 in Appendix D show the surveyed traffic flows factored to 2024. These represent the Base Case for the year 2024, and are referred as Baseline Flows.
- 6.5 No Development traffic comprises 2024 Baseline flows plus committed development. Figures 11 and 22 in Appendix D show 2024 No Development flows for the AM and PM peak hours.
- 6.6 With Development traffic comprises 2024 No Development flows plus the proposed development. Figures 12 and 23 in Appendix D show 2024 With Development flows for the AM and PM peak hours.

7 OPERATIONAL ASSESSMENT

7.1 CCC had requested that the following junctions should be considered within this TA.

- A595/ A5064 - traffic signals.
- B5345/ Ginns/ Kells Road.
- B5345/ Coach Road.
- A595 Egremont Road/ Mirehouse Road.
- B5345 St Bees Road/ Mirehouse Road.

7.2 It is noted that the site currently benefits from an outline application for 114 homes and there are no planning conditions requiring off-site highway works. In granting this consent the Local Planning Authority, Copeland Borough Council, must have been satisfied that there were no significant highway impacts on the local road network.

7.3 As discussed below only two priority junctions require capacity assessment using TRL's PICADY software program. The key junction performance indicators presented in the subsequent sections are Ratio of Flow to Capacity (RFC) values, ranging from 0 to 1.0, the average number of vehicles queuing (in PCUs), and vehicle delay (mins per PCU).

A595(T)/ A5094 Junction

7.4 Figures 7 and 18 in Appendix D indicate there is an increase of less than 1 pcu every 10 mins (two-way flow) in the AM and PM peak hour respectively at the junction of the A595/ A5094, which in our view will not have any noticeable impacts on the prevailing operating conditions. Indeed such increases are substantially less than day to day variations. No further consideration of the traffic signals is required.

B5345 Meadow View /Ginns to Kells Road Junction

7.5 From Figures 7 and 18, Appendix D it can be seen that the proposed development is expected to increase the volume of traffic passing along the B5343 by less than 1 pcu every 2 mins during the AM peak hour and less than 1 pcu per min in the PM peak. The impact of this small increase in traffic will be not severe, and this junction has not been assessed any further.

B5345/ Ginns/ Coach Road

- 7.6 From Figures 7 and 18, Appendix D it can be seen that the proposed development is expected to increase the volume of traffic passing along the B5343 by less than 1 pcu every 2 mins during the AM peak hour and less than 1 pcu per min in the PM peak. The impact of this small increase in traffic will be not severe, and hence this junction has not been assessed any further.

B5345 Meadow View

- 7.7 From Figures 7 and 18, Appendix D it can be seen that the proposed development is expected to increase the volume of traffic passing through the narrow section of the B5345 by less than 1 pcu every 2 mins during the AM peak hour and less than 1 pcu per min in the PM peak. The effect of this small increase in traffic on existing highway conditions in the locality is not significant and no further assessment is required.

Mirehouse Road/ St Bees Junction

- 7.8 The layout of the junction is such that the B5345 St Bees Road forms the major arm and Mirehouse Road is the minor arm. Additionally traffic turning left from St Bees Road North to Mirehouse Road gives way to right turning traffic from St Bees Road to Mirehouse Road. Hence to represent the junction accurately, the junction is modelled in two parts as shown below:
- St Bees/ Mirehouse Road, and
 - St Bees North (give way)/ Mirehouse Road.
- 7.9 A full set of PICADY outputs are enclosed in Appendix F.

Table 7.1: Junction Performance Summary for St Bees/ Mirehouse Road

		AM Peak Hour Flows			PM Peak Hour Flows		
		Survey 2014	2024 No Dev	2024 With Dev	Survey 2014	2024 No Dev	2024 With Dev
St Bees North	Max RFC Max Q Av Delay	-	-	-	-	-	-
Mirehouse Rd Left turn	Max RFC Max Q Av Delay	0.23 0 7 secs	0.32 0 8 secs	0.32 0 8 secs	0.20 0 8 secs	0.28 0 10 secs	0.29 0 10 secs
Mirehouse Rd Right turn	Max RFC Max Q Av Delay	0.20 0 10 secs	0.42 1 15 secs	0.44 1 16 secs	0.51 1 17 secs	0.59 1 22 secs	0.63 2 23 secs
St Bees South	Max RFC Max Q Av Delay	0.29 0 7 secs	0.45 1 10 secs	0.45 1 10 secs	0.37 1 8 secs	0.42 1 9 secs	0.42 1 9 secs

Table 7.2: Junction Performance Summary for St Bees North (give way)

		AM Peak Hour Flows			PM Peak Hour Flows		
		Survey 2014	2024 No Dev	2024 With Dev	Survey 2014	2024 No Dev	2024 With Dev
St Bees South	Max RFC Max Q Av Delay	-	-	-	-	-	-
St Bees Give Way	Max RFC Max Q Av Delay	0.13 0 6 secs	0.09 0 6 secs	0.13 0 7 secs	0.17 0 7 secs	0.24 0 7 secs	0.24 0 7 secs
Mirehouse Road	Max RFC Max Q Av Delay	-	-	-	-	-	-

7.10 Tables 7.1 and 7.2 above summarise the results from capacity assessment using PICADY. The results show that all the arms of the junction operate well within their operational capacity with significant spare capacity and minimal queuing.

7.11 It can be observed that the proposed development flows do not have any significant impact on the operational capacity, queuing or delays at the junction in the AM and PM peak hours.

Mirehouse Road/ A595

7.12 The layout of the junction is such that the A595 forms the major arm and Mirehouse Road is the minor arm. Additionally traffic turning left from the A595 South to Mirehouse Road gives way to right turning traffic from the A595 North. Hence to represent the junction accurately, the junction is modelled in two parts as below:

- A595/ Mirehouse Road, and
- A595 South (give way)/ Mirehouse Road.

7.13 A full set of PICADY outputs are enclosed in Appendix F.

Table 7.3: Junction Performance Summary for A595/ Mirehouse Road

		AM Peak Hour Flows			PM Peak Hour Flows		
		Survey 2014	2024 No Dev	2024 With Dev	Survey 2014	2024 No Dev	2024 With Dev
A595 South	Max RFC Max Q Av Delay	-	-	-	-	-	-
Mirehouse Rd Left turn	Max RFC Max Q Av Delay	0.51 1 16 secs	0.65 2 23 secs	0.71 2 30 secs	0.48 1 16 secs	0.78 2 44 secs	0.83 4 55 secs
Mirehouse Rd Right turn	Max RFC Max Q Av Delay	0.56 1 48 secs	0.68 2 1 min	0.75 3 1¼ mins	0.58 1 53 secs	0.84 4 1¾ mins	0.86 4 2 mins
A595 North	Max RFC Max Q Av Delay	0.33 0 11 secs	0.37 1 12 secs	0.38 1 13 secs	0.5 1 16 secs	0.54 1 17 secs	0.56 1 17 secs

Table 7.4: Junction Performance Summary for A595 South (give way)

		AM Peak Hour Flows			PM Peak Hour Flows		
		Survey 2014	2024 No Dev	2024 With Dev	Survey 2014	2024 No Dev	2024 With Dev
A595 North	Max RFC Max Q Av Delay	-	-	-	-	-	-
A595 South	Max RFC Max Q Av Delay	0.13 0 6 secs	0.29 0 7 secs	0.28 0 7 secs	0.24 0 7 secs	0.29 0 7 secs	0.29 0 7 secs
Mirehouse Road	Max RFC Max Q Av Delay	-	-	-	-	-	-

- 7.14 Tables 7.3 and 7.4 above summarise the results from capacity assessment using PICADY. The results show that the RFC for all the arms of the junction operate within their operational capacity with short queues.
- 7.15 It can be observed that the proposed development flows do not have any significant impact on the operational capacity, queuing or delays at the junction in the AM and PM peak hours.
- 7.16 As a part of their Pinch Point program the HA have plans to signalise the junction of the A595/ Mirehouse Road, with work scheduled to commence in January 2015 and expected to be completed by March 2015.
- 7.17 The HA anticipates that the scheme would benefit the junction by:
- Help reduce daily congestion,
 - Reduce journey times,
 - Boost economy, and
 - Improve safety.
- 7.18 It is anticipated that proposed signalisation of the junction will improve its capacity, in particular assisting turns in to and out of Mirehouse Road. We consider the traffic signals layout will be able to readily accommodate traffic flows predicted to be generated by the proposed development.

8 HIGHWAY SAFETY

- 8.1 A review of recent accident records for the road network local to the development site has been carried out in accordance with the DfT Guidance. The study area covers the junctions on the B5345 Low Road between Coach Road and St Bees, Mirehouse Road and the A595(T) Egremont Road/ Mirehouse Road junction to the east.
- 8.2 The accident records were obtained from CCC, and are in Appendix G. The records cover the most recent 3 years of data available ending 31st May 2014.

Low Road/ Site Access

- 8.3 There was only 1 reported accident in the vicinity of the proposed junction during the assessment period:
- Accident ref 140000211 occurred during daylight and in wet/ damp conditions when vehicle 1 (bus) had to brake sharply because of traffic conditions, as a result, the child passenger bumped his forehead on the grab rail. The main contributory factor was not recorded, but it appears it was the sudden braking. The incident resulted in slight injury.

B5345 St Bees Road/ Mirehouse Road

- 8.4 There were 6 reported accidents at the junction during the assessment period:
- Accident ref 110002801 occurred during night and in wet/ damp conditions when vehicle 1 travelling south toward the junction, vehicle 2 travelling north waiting in the ghost island lane at the junction to turn right into Mirehouse Road. Vehicle 2 turned into the path of and collided with vehicle 1. The main contributory factor was the driver of vehicle 2 failed to judge vehicle 1's path/ speed (driver error). The incident resulted in a slight injury.
 - Accident ref 120001223 occurred during daylight and in dry conditions when vehicle 1 travelling S-N on St Bees Road, vehicle 2 travelling N-S and vehicle 3 stationary at the junction intending to turn right into St Bees Road. Vehicle 1 turned right into Mirehouse Road and collided with vehicle 2. The main contributory factors were the driver of vehicle 1 attempted a poor turn/ manoeuvre (driver error) and failed to look properly (driver error). The incident resulted in a slight injury.

- Accident ref 120001138 occurred during daylight and in dry conditions when vehicle 1 travelling northbound along St Bees Road and was preparing to turn right into Mirehouse Road. Vehicle 2 was travelling along St Bees Road in the opposite direction. Initially, vehicle 2 indicated to turn left into Mirehouse Road and then a collision with vehicle 1 occurred. The main contributory factors were the driver of vehicle 1 failed to judge vehicle 2's path/ speed (driver error) and the driver of vehicle 2 failed to signal/ misleading signal (driver error). The incident resulted in a slight injury.
- Accident ref 130000956 occurred during daylight in wet/ damp conditions when vehicle 2 was approaching the junction and vehicle 1 pulled across the path of vehicle 2 whilst turning right. The main contributory factors were the driver of vehicle 1 failed to look properly (driver error) and failed to judge vehicle 2's path/ speed (driver error). The incident resulted in a slight injury.
- Accident ref 130000181 occurred during daylight in dry conditions when vehicle 1 travelling from St Bees towards Whitehaven, turning right into Mirehouse Road and vehicle 2 travelling from Whitehaven towards St Bees. Vehicle 1 turned into the path of vehicle 2 resulting in the collision. The main contributory factor was the driver of vehicle 1 failed to judge vehicle 2's path/ speed (driver error). The incident resulted in a slight injury.
- Accident ref 130000110 occurred during the dark in dry conditions when vehicle 1 was travelling north approaching the junction. Vehicle 1 slowed to turn right and entered the filter lane, but the driver did not see a second vehicle and collided with it. The main contributory factors were vehicle 2 possibly exceeding the speed limit (driver injudicious) and the driver of vehicle 1 failed to look properly (driver error). The incident resulted in a slight injury.

8.5 The number of accidents at the junction during the 3 year period is relatively low, although a number of those incidents relate to vehicles colliding as one of the drivers turn right into Mirehouse Road. The proposed development adds a small number of vehicles to the junction, and in particular does not add any vehicles to that right turn movement, such that there should be no noticeable adverse effect on the prevailing accident trend. Highway works to mitigate for safety reasons are not required.

B5345/ Wilson Pit Road

8.6 There was only 1 reported accident at the junction during the assessment period:

- Accident ref 120000531 occurred during daylight in wet/ damp conditions when vehicle 1 was travelling on an incline, entered the left-hand bend, lost control and collided with vehicle 2 travelling in the opposite direction. The main contributory factors were vehicle 1 loss of control (driver error) and the inclement weather (driver vision affected). There is a natural bend in the road, but the driver of vehicle 1 would have had sufficient visibility to see vehicle 2 but for the weather conditions which may have reduced visibility. This was the only accident to occur during the assessment period, and it resulted in a slight injury.

A595 Egremont Road/ Mirehouse Road

8.7 There were 4 reported accidents at the junction during the assessment period:

- Accident ref 120002444 occurred when vehicle 1 turned right out of the junction. The driver of vehicle 2 travelling on the main road touched his brakes and tried to steer around vehicle 1 but lost control and skidded, hit a lamppost and rolled into a field. The main contributory factors were vehicle 2 experienced a slippery road due to weather (road environment), was travelling too fast for the conditions (driver injudicious) and the driver of vehicle 1 conducted a poor turn or manoeuvre (driver error). The incident resulted in a slight injury.
- Accident ref 140001924 occurred when vehicle 2 travelling on the A595 in the direction of Whitehaven. Vehicle 1 has been waiting at the junction, however proceeded to pull out directly in front of vehicle 2 causing both vehicles to collide. The main contributory factor was the driver of vehicle 1 being careless (driver behaviour). The incident resulted in a slight injury.
- Accident ref 120001325 occurred during daylight in wet/ damp conditions when vehicle 1, facing south-east on the A595, was in the right hand filter lane to turn into Mirehouse Road. Vehicle 1 turned in front of vehicle 2 travelling north-west. The main contributory factors were the driver of vehicle 1 failed to judge vehicle 2's path/ speed (driver error), he was careless (driver error) and conducted a poor turn or manoeuvre (driver error). The incident resulted in a slight injury.

- Accident ref 130001034 occurred during daylight in dry conditions when vehicle 1 entered the slip road to turn right. Vehicle 1 failed to give way and collided with vehicle 2 travelling in the opposite direction. The main contributory factors were the driver of vehicle 1 disobeyed give way or stop sign markings (driver injudicious), she conducted a poor turn of manoeuvre (driver error) and failed to look properly (driver error). The incident resulted in a slight injury.

8.8 The number of accidents during the 3 year period is relatively low, given its volumes of traffic, and the proposed development adds a small number of vehicles to the junction. There should be no noticeable adverse effect on the prevailing accident trend. Highway works to mitigate for safety reasons are not required.

Mirehouse Road

8.9 There were 3 reported accidents along Mirehouse Road during the assessment period:

- Accident ref 130001138 occurred during daylight in dry conditions when vehicle 1 heading east failed to notice vehicle 2 parked on the nearside of the road. Vehicle 1 collided with the rear of vehicle 2. The main contributory factors were the driver of vehicle 1 failed to look properly (driver error) and he may have been fatigued (driver impairment). The incident resulted in a slight injury.
- Accident ref 130001587 occurred during daylight in dry conditions when the driver of vehicle 1 was travelling along Mirehouse Road and lost control. The contributory factor was the loss of control (rider error). The incident resulted in a slight injury.
- Accident ref 140002316 occurred during darkness in dry conditions when vehicle 1 was travelling along Mirehouse Road towards the B5345 St Bees Road and collided with the railway bridge wall causing the vehicle to spin and damage the wall. The main contributory factor was vehicle 1 was travelling too fast for the conditions (driver injudicious). The incident resulted in a slight injury.

8.10 The number of accidents during the 3 year period is low and each of the incidents was the result of different driver errors rather than inadequate highway design. Highway works to mitigate for safety reasons are not required.

B5345 Meadow View

- 8.11 There is a short stretch of the B5345 Meadow View where there is a short row of terraced houses which have no off street parking, and so there are often cars parked on the west side of the road causing shuttle working. In the most recent three year period there were no accidents were reported at this location.
- 8.12 Drivers successfully negotiate the narrowed section with caution. The proposed development adds a small number of vehicles through the section. Highway works to mitigate for safety reasons are not required.

9 SUMMARY

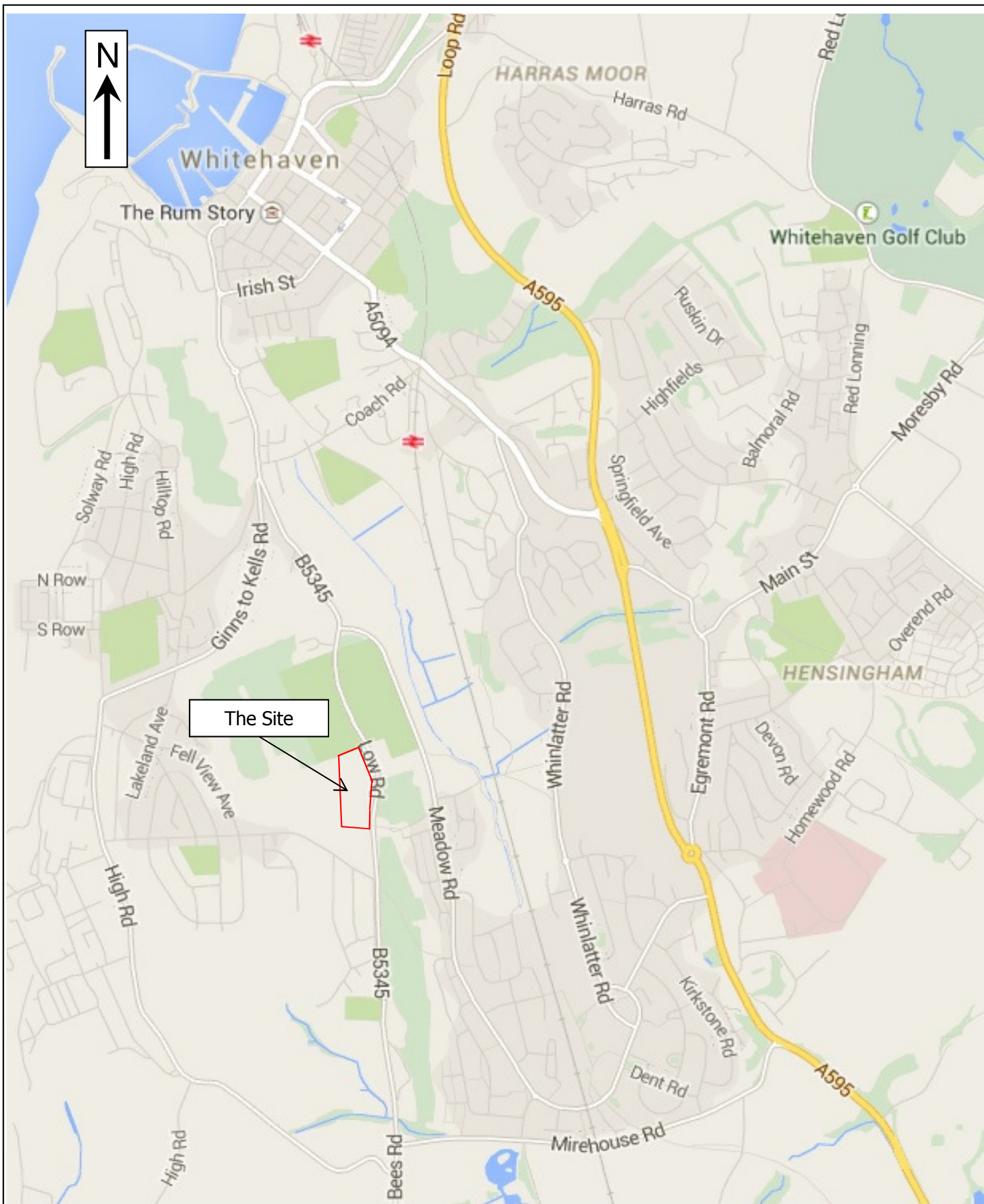
- 9.1 WYG were engaged by Astime Properties to produce this Transport Assessment in support of a full planning application for residential development of 110 homes on land on Low Road in Whitehaven. The site benefits from an outline consent for 114 units dated October 2012, and hence the highway implications of this amount of residential development have been considered acceptable.
- 9.2 The development is to be accessed from a new simple t-junction arrangement onto the B5345 Low Road. Visibility from the proposed site access on to Low Road in each direction is well in excess of the requirements set out in the Manual for Streets. The internal road layout broadly complies with the advice given in Cumbria Design Guide Volume 1.
- 9.3 Residents at the site have a good level of accessibility on foot and by cycle to retail, leisure and educational opportunities. The proposed development is also well served by regular and frequent bus services from stops on Lowe Road.
- 9.4 The volume of traffic likely to be generated has been estimated by TRICS and assigned to the local road network taking account of the different distributions arising from Work, Education and Other journey purposes. The impacts of development generated traffic have been assessed at a number of junctions, as requested by CCC, in a future year of 2024 with and without development traffic.
- 9.5 To the north of the site the volume of development generated traffic is not high, amounting to some 2 additional vehicles per min in the AM peak and 1 additional vehicle in the PM peak, and so the impact on the B5345, including its junctions with the Ginns-to-Kells Road and Coach Road and the narrow section at Meadow View, is sufficiently low in all cases that detailed modelling is not necessary and there is no severe impact.
- 9.6 The greater proportion of development traffic uses the B5345 to the south of the site to reach the A595(T) via Mirehouse Road. The volumes are sufficient to warrant a detailed capacity assessment using PICADY. The junction model for the B5345 St Bees Road/ Mirehouse Road show that the development has no significant impact on its operation and no mitigation works are required. This is also the case at the A595(T) Mirehouse Road junction, although the HA are commencing a Pinch Point Scheme in January 2015 to install traffic signals.



- 9.7 The numbers of recorded accidents on the local highway network over the three years are low. There are no particular clusters of similar accidents and the proposed development is not expected to have any significant impact on the accident trends in the local area. Hence mitigation measures for highway safety reasons are not required.
- 9.8 The proposed development meets the sustainable objectives of the National Planning Policy Framework and its residual traffic impacts are not severe. On those bases there is no justifiable transportation reason why planning consent should be withheld.



APPENDIX A - PLANS



Low Road, Whitehaven

Site Location Plan

Figure 1

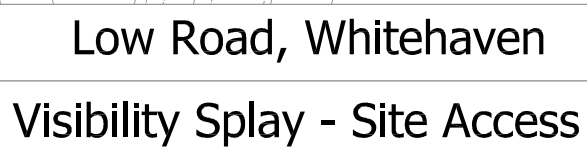




Low Road, Whitehaven
Site Plan

Figure 2





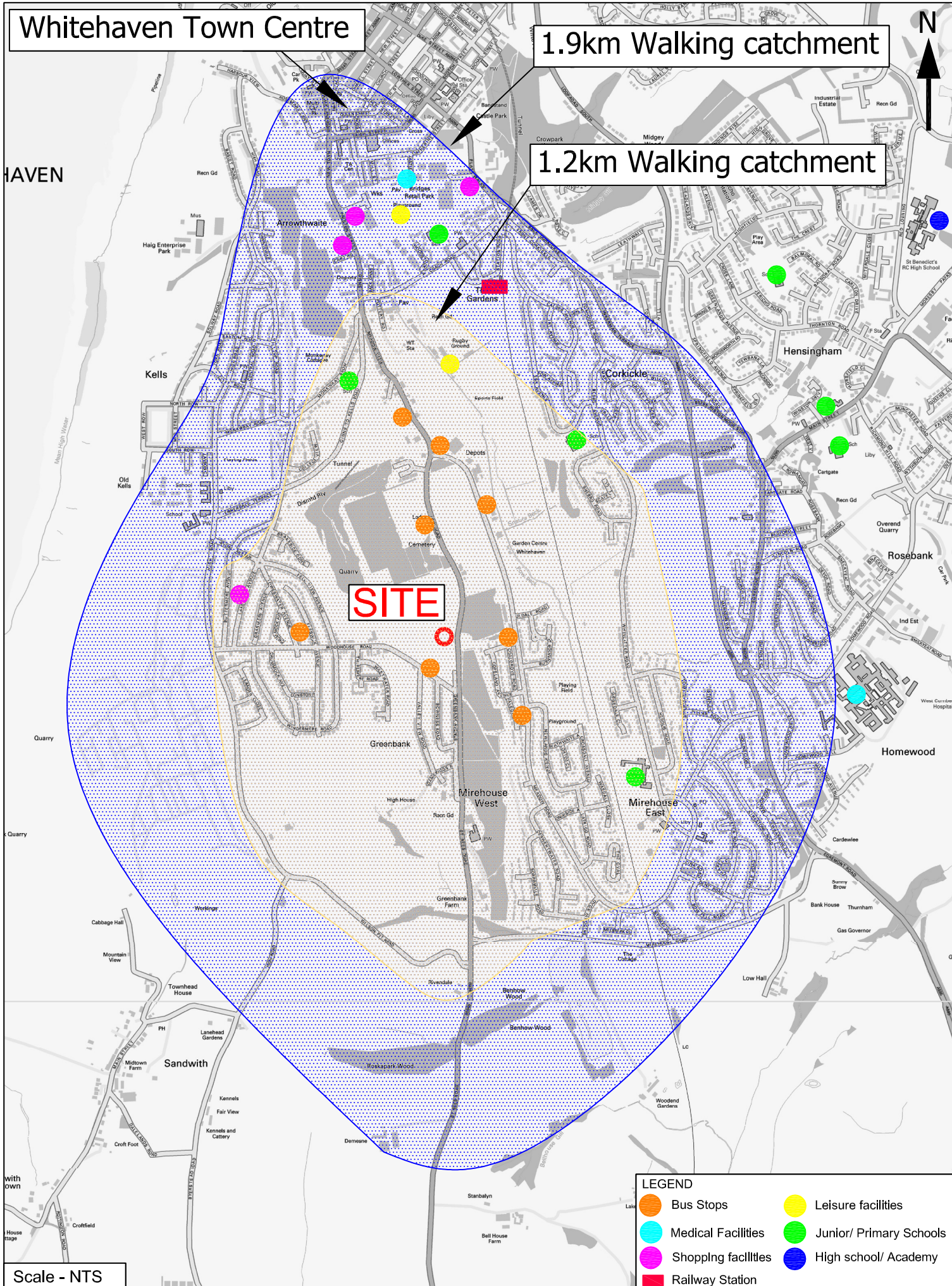
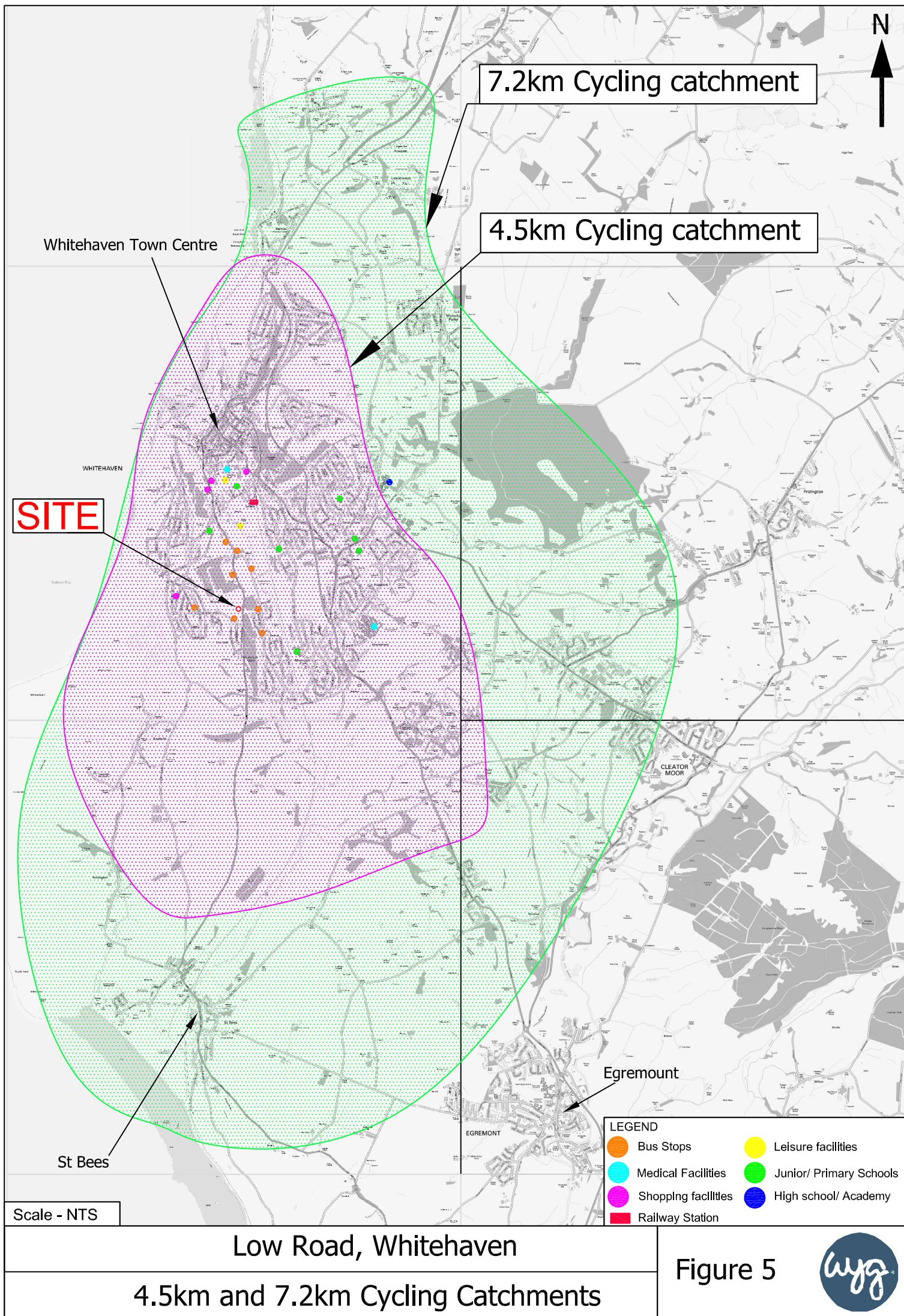


Figure 4





Scale - NTS

Low Road, Whitehaven

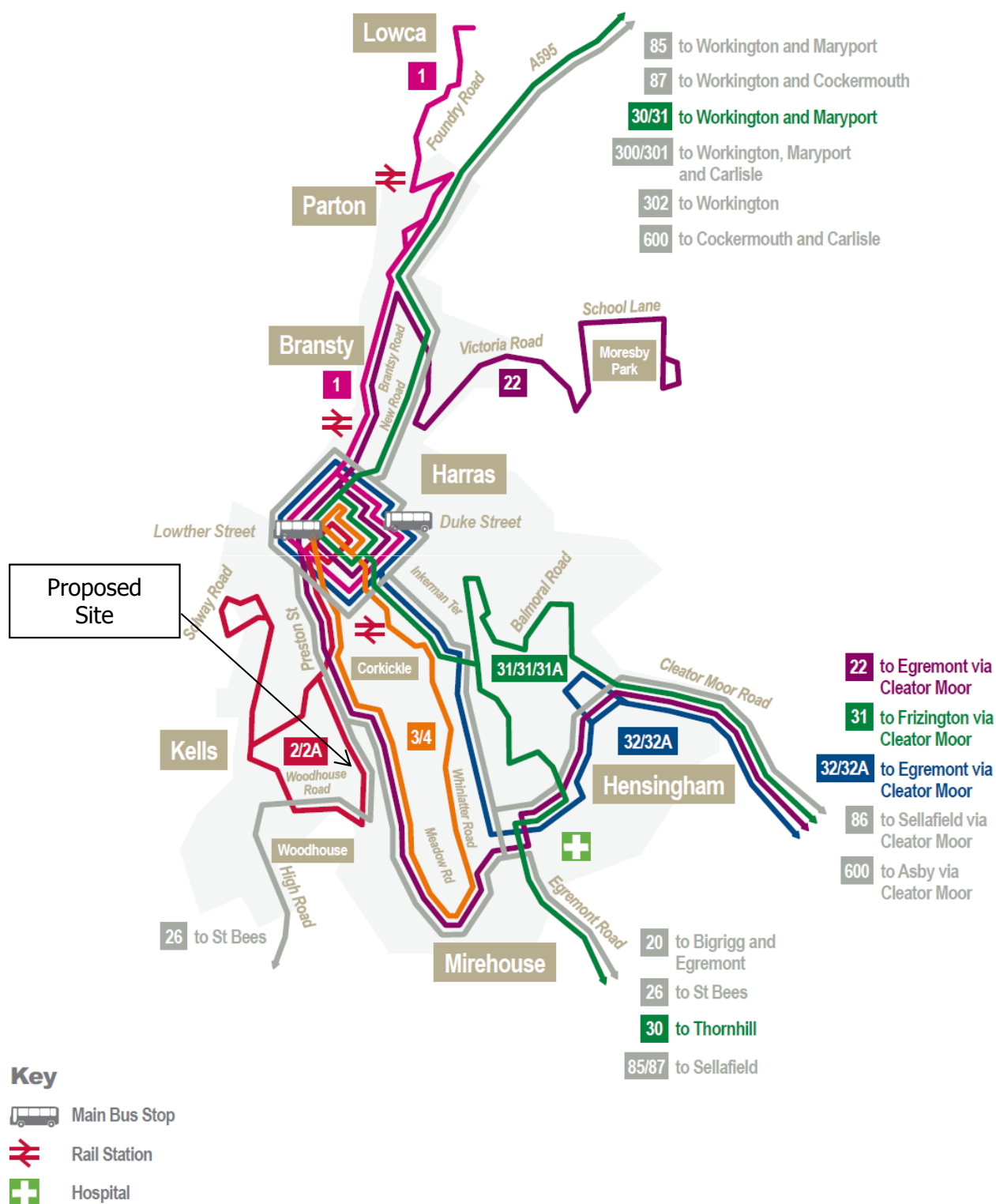
Bus Stops within 640m of Site Access

Figure 6



Whitehaven

Town services route map

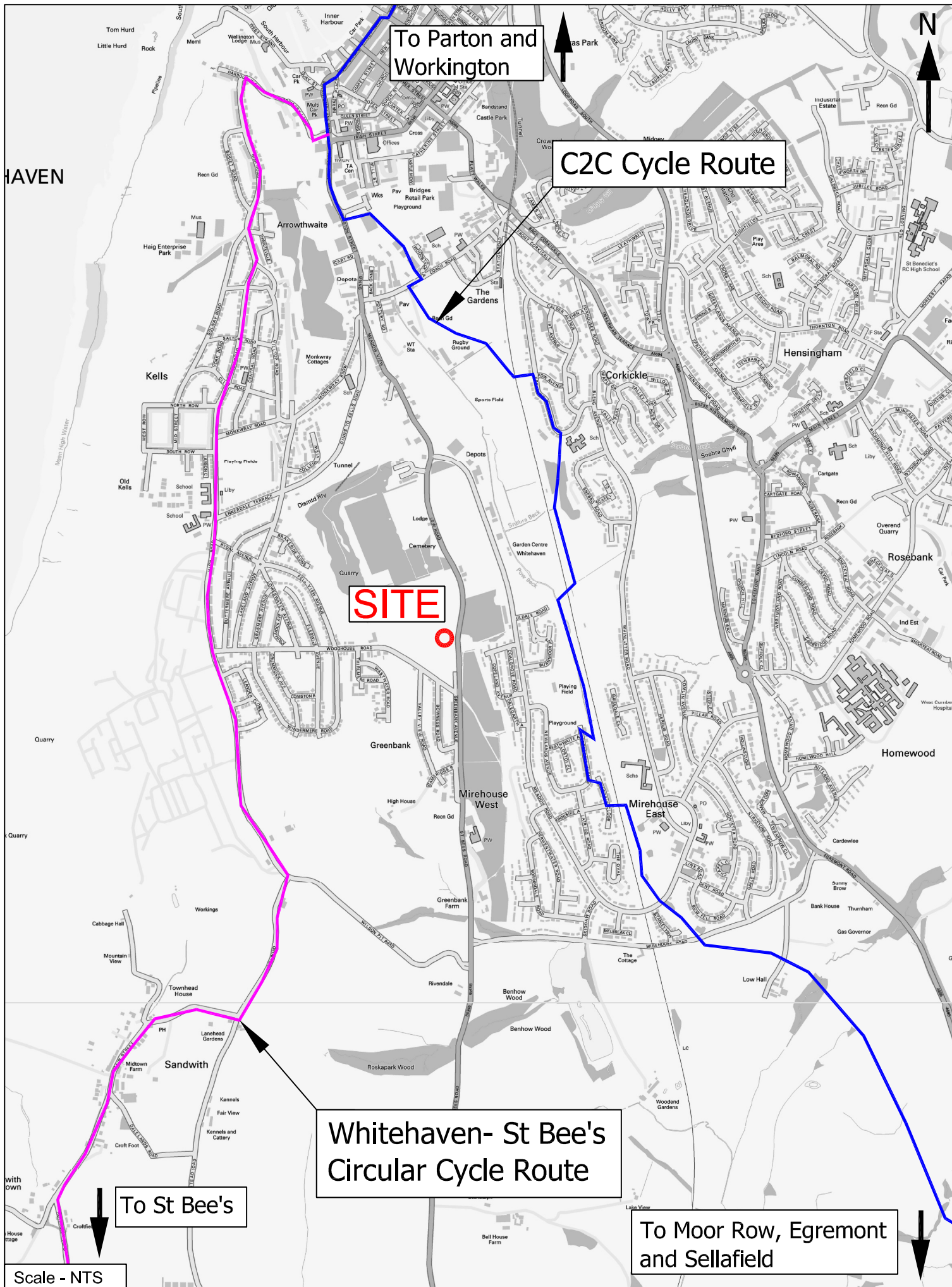


Low Road, Whitehaven

Bus Route Map

Figure 7





Low Road, Whitehaven

Cycle Routes in the Vicinity of the Proposed Site

Figure 8



APPENDIX B - TRIP RATE CALCULATIONS

TRIP RATE CALCULATION SELECTION PARAMETERS:

Land Use : 03 - RESIDENTIAL
Category : A - HOUSES PRIVATELY OWNED
MULTI-MODAL VEHICLES

Selected regions and areas:

02	SOUTH EAST	
	SC SURREY	1 days
03	SOUTH WEST	
	CW CORNWALL	1 days
	WL WILTSHIRE	1 days
04	EAST ANGLIA	
	NF NORFOLK	1 days
	SF SUFFOLK	2 days
05	EAST MIDLANDS	
	LN LINCOLNSHIRE	1 days
06	WEST MIDLANDS	
	SH SHROPSHIRE	1 days
	WM WEST MIDLANDS	2 days
	WO WORCESTERSHIRE	1 days
07	YORKSHIRE & NORTH LINCOLNSHIRE	
	NY NORTH YORKSHIRE	2 days
08	NORTH WEST	
	CH CHESHIRE	1 days
09	NORTH	
	CB CUMBRIA	1 days
11	SCOTLAND	
	HI HIGHLAND	2 days
	SR STIRLING	1 days

This section displays the number of survey days per TRICS® sub-region in the selected set

Filtering Stage 2 selection:

This data displays the chosen trip rate parameter and its selected range. Only sites that fall within the parameter range are included in the trip rate calculation.

Parameter: Number of dwellings
Actual Range: 71 to 150 (units:)
Range Selected by User: 70 to 150 (units:)

Public Transport Provision:

Selection by: Include all surveys

Date Range: 01/01/06 to 23/01/14

This data displays the range of survey dates selected. Only surveys that were conducted within this date range are included in the trip rate calculation.

Selected survey days:

Monday	6 days
Tuesday	4 days
Wednesday	1 days
Thursday	2 days
Friday	5 days

This data displays the number of selected surveys by day of the week.

Selected survey types:

Manual count	18 days
Directional ATC Count	0 days

This data displays the number of manual classified surveys and the number of unclassified ATC surveys, the total adding up to the overall number of surveys in the selected set. Manual surveys are undertaken using staff, whilst ATC surveys are undertaken using machines.

Selected Locations:

Suburban Area (PPS6 Out of Centre)	10
Edge of Town	8

This data displays the number of surveys per main location category within the selected set. The main location categories consist of Free Standing, Edge of Town, Suburban Area, Neighbourhood Centre, Edge of Town Centre, Town Centre and Not Known.

Selected Location Sub Categories:

Residential Zone	13
Out of Town	1
No Sub Category	4

This data displays the number of surveys per location sub-category within the selected set. The location sub-categories consist of Commercial Zone, Industrial Zone, Development Zone, Residential Zone, Retail Zone, Built-Up Zone, Village, Out of Town, High Street and No Sub Category.

Filtering Stage 3 selection:

Use Class:

C3	18 days
----	---------

This data displays the number of surveys per Use Class classification within the selected set. The Use Classes Order 2005 has been used for this purpose, which can be found within the Library module of TRICS®.

Filtering Stage 3 selection (Cont.):

Population within 1 mile:

1,001 to 5,000	1 days
5,001 to 10,000	5 days
10,001 to 15,000	3 days
15,001 to 20,000	4 days
20,001 to 25,000	3 days
25,001 to 50,000	2 days

This data displays the number of selected surveys within stated 1-mile radii of population.

Population within 5 miles:

5,001 to 25,000	1 days
25,001 to 50,000	3 days
50,001 to 75,000	3 days
75,001 to 100,000	3 days
100,001 to 125,000	4 days
125,001 to 250,000	2 days
250,001 to 500,000	2 days

This data displays the number of selected surveys within stated 5-mile radii of population.

Car ownership within 5 miles:

0.5 or Less	1 days
0.6 to 1.0	4 days
1.1 to 1.5	13 days

This data displays the number of selected surveys within stated ranges of average cars owned per residential dwelling, within a radius of 5-miles of selected survey sites.

Travel Plan:

No	18 days
----	---------

This data displays the number of surveys within the selected set that were undertaken at sites with Travel Plans in place, and the number of surveys that were undertaken at sites without Travel Plans.

LIST OF SITES relevant to selection parameters

1	CB-03-A-04	SEMI DETACHED	CUMBRIA
	MOORCLOSE ROAD		
	SALTERBACK		
	WORKINGTON		
	Edge of Town		
	No Sub Category		
	Total Number of dwellings:	82	
	Survey date: FRIDAY	24/04/09	Survey Type: MANUAL
2	CH-03-A-06	SEMI-DET./BUNGALOWS	CHESHIRE
	CREWE ROAD		
	CREWE		
	Suburban Area (PPS6 Out of Centre)		
	No Sub Category		
	Total Number of dwellings:	129	
	Survey date: TUESDAY	14/10/08	Survey Type: MANUAL
3	CW-03-A-02	SEMI D./DETACHED	CORNWALL
	BOSVEAN GARDENS		
	TRURO		
	Suburban Area (PPS6 Out of Centre)		
	Residential Zone		
	Total Number of dwellings:	73	
	Survey date: TUESDAY	18/09/07	Survey Type: MANUAL
4	HI-03-A-11	BUNGALOWS	HIGHLAND
	STEVENSON ROAD		
	INSHES		
	INVERNESS		
	Edge of Town		
	Residential Zone		
	Total Number of dwellings:	85	
	Survey date: MONDAY	05/06/06	Survey Type: MANUAL
5	HI-03-A-14	SEMI-DETACHED	HIGHLAND
	CALEDONIAN ROAD		
	DALNEIGH		
	INVERNESS		
	Suburban Area (PPS6 Out of Centre)		
	Residential Zone		
	Total Number of dwellings:	73	
	Survey date: FRIDAY	13/05/11	Survey Type: MANUAL
6	LN-03-A-01	MIXED HOUSES	LINCOLNSHIRE
	BRANT ROAD		
	BRACEBRIDGE		
	LINCOLN		
	Edge of Town		
	Residential Zone		
	Total Number of dwellings:	150	
	Survey date: TUESDAY	15/05/07	Survey Type: MANUAL
7	NF-03-A-02	HOUSES & FLATS	NORFOLK
	DEREHAM ROAD		
	NORWICH		
	Suburban Area (PPS6 Out of Centre)		
	Residential Zone		
	Total Number of dwellings:	98	
	Survey date: MONDAY	22/10/12	Survey Type: MANUAL

LIST OF SITES relevant to selection parameters (Cont.)

8	NY-03-A-06	BUNGALOWS & SEMI DET.		NORTH YORKSHIRE
		HORSEFAIR		
		BOROUGHBRIDGE		
		Suburban Area (PPS6 Out of Centre)		
		Residential Zone		
		Total Number of dwellings:	115	
		Survey date: FRIDAY	14/10/11	Survey Type: MANUAL
9	NY-03-A-10	HOUSES AND FLATS		NORTH YORKSHIRE
		BOROUGHBRIDGE ROAD		
		RIPON		
		Edge of Town		
		No Sub Category		
		Total Number of dwellings:	71	
		Survey date: TUESDAY	17/09/13	Survey Type: MANUAL
10	SC-03-A-04	DETACHED & TERRACED		SURREY
		HIGH ROAD		
		BYFLEET		
		Edge of Town		
		Residential Zone		
		Total Number of dwellings:	71	
		Survey date: THURSDAY	23/01/14	Survey Type: MANUAL
11	SF-03-A-01	SEMI DETACHED		SUFFOLK
		A1156 FELIXSTOWE ROAD		
		RACECOURSE		
		IPSWICH		
		Suburban Area (PPS6 Out of Centre)		
		Residential Zone		
		Total Number of dwellings:	77	
		Survey date: WEDNESDAY	23/05/07	Survey Type: MANUAL
12	SF-03-A-03	MIXED HOUSES		SUFFOLK
		BARTON HILL		
		FORNHAM ST MARTIN		
		BURY ST EDMUNDS		
		Edge of Town		
		Out of Town		
		Total Number of dwellings:	101	
		Survey date: MONDAY	15/05/06	Survey Type: MANUAL
13	SH-03-A-04	TERRACED		SHROPSHIRE
		ST MICHAEL'S STREET		
		SHREWSBURY		
		Suburban Area (PPS6 Out of Centre)		
		No Sub Category		
		Total Number of dwellings:	108	
		Survey date: THURSDAY	11/06/09	Survey Type: MANUAL
14	SR-03-A-01	DETACHED		STIRLING
		BENVIEW		
		STIRLING		
		Suburban Area (PPS6 Out of Centre)		
		Residential Zone		
		Total Number of dwellings:	115	
		Survey date: MONDAY	23/04/07	Survey Type: MANUAL

LIST OF SITES relevant to selection parameters (Cont.)

15	WL-03-A-01	SEMI D./TERRACED W. BASSETT	WILTSHIRE
	MAPLE DRIVE		
	WOOTTON BASSETT		
	Edge of Town		
	Residential Zone		
	Total Number of dwellings:	99	
	Survey date: MONDAY	02/10/06	Survey Type: MANUAL
16	WM-03-A-01	TERRACED	WEST MIDLANDS
	FOLESHILL ROAD		
	FOLESHILL		
	COVENTRY		
	Suburban Area (PPS6 Out of Centre)		
	Residential Zone		
	Total Number of dwellings:	79	
	Survey date: FRIDAY	03/02/06	Survey Type: MANUAL
17	WM-03-A-03	MIXED HOUSING	WEST MIDLANDS
	BASELEY WAY		
	ROWLEYS GREEN		
	COVENTRY		
	Edge of Town		
	Residential Zone		
	Total Number of dwellings:	84	
	Survey date: MONDAY	24/09/07	Survey Type: MANUAL
18	WO-03-A-03	DETACHED	WORCESTERSHIRE
	BLAKEBROOK		
	BLAKEBROOK		
	KIDDERMINSTER		
	Suburban Area (PPS6 Out of Centre)		
	Residential Zone		
	Total Number of dwellings:	138	
	Survey date: FRIDAY	05/05/06	Survey Type: MANUAL

This section provides a list of all survey sites and days in the selected set. For each individual survey site, it displays a unique site reference code and site address, the selected trip rate calculation parameter and its value, the day of the week and date of each survey, and whether the survey was a manual classified count or an ATC count.

TRIP RATE for Land Use 03 - RESIDENTIAL/A - HOUSES PRIVATELY OWNED

MULTI-MODAL VEHICLES

Calculation factor: 1 DWELLS

BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	18	97	0.065	18	97	0.299	18	97	0.364
08:00 - 09:00	18	97	0.159	18	97	0.418	18	97	0.577
09:00 - 10:00	18	97	0.177	18	97	0.237	18	97	0.414
10:00 - 11:00	18	97	0.150	18	97	0.181	18	97	0.331
11:00 - 12:00	18	97	0.181	18	97	0.170	18	97	0.351
12:00 - 13:00	18	97	0.194	18	97	0.180	18	97	0.374
13:00 - 14:00	18	97	0.197	18	97	0.183	18	97	0.380
14:00 - 15:00	18	97	0.194	18	97	0.199	18	97	0.393
15:00 - 16:00	18	97	0.279	18	97	0.218	18	97	0.497
16:00 - 17:00	18	97	0.318	18	97	0.182	18	97	0.500
17:00 - 18:00	18	97	0.388	18	97	0.215	18	97	0.603
18:00 - 19:00	18	97	0.264	18	97	0.196	18	97	0.460
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			2.566			2.678			5.244

This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected survey days that have count data available for the stated time period. Then, the average count is divided by the average trip rate parameter value, and multiplied by the stated calculation factor (shown just above the table and abbreviated here as FACT). So, the method is: $COUNT/TRP*FACT$. Trip rates are then rounded to 3 decimal places.

Parameter summary

Trip rate parameter range selected: 71 - 150 (units:)
 Survey date range: 01/01/06 - 23/01/14
 Number of weekdays (Monday-Friday): 18
 Number of Saturdays: 0
 Number of Sundays: 0
 Surveys manually removed from selection: 1

This section displays a quick summary of some of the data filtering selections made by the TRICS® user. The trip rate calculation parameter range of all selected surveys is displayed first, followed by the range of minimum and maximum survey dates selected by the user. Then, the total number of selected weekdays and weekend days in the selected set of surveys are shown. Finally, the number of survey days that have been manually removed from the selected set outside of the standard filtering procedure are displayed.



APPENDIX C - GROWTH FACTORS

Dataset Version:	62
Result Type:	Trip ends by time period
Base Year:	2014
Future Year:	2024
Trip Purpose Group:	All purposes
Time Period:	Weekday AM peak period (0700 - 0959)
Trip End Type:	Origin/Destination
Alternative Assumptions applied:	No

Development details
Proposed development
Committed development

Housing	Employment
110	0
575	1000

TEMPRO Growth Factor

Area Description		All purposes		
Level	Name	Origin	Destination	
GB	GB	1.0736	1.0736	
Region	NW	1.0552	1.0552	
County	Cumbria	1.0253	1.0304	
Authority	Copeland	1.0314	1.0357	
16UE1	Whitehaven	1.0156	1.0316	

Original without adjustment

NTM Traffic Growth Calculations

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1: Select NTM Dataset:

NTM Dataset Description	From	To
NTM AF09 Dataset	2003	2035
NTM AF08 Dataset	2003	2025

2: Select Areas to make up the geographic region:

☐ GB

☒ NW

☒ Cumbria

☒ Copeland

☒ Whitehaven (16UE1)

3. Select area type:

☒ Urban

☐ Rural

☐ All

4. Select road type:

☐ Motorway

☐ Trunk

☐ Principal

☒ Minor

☐ All

5. Select which area it serves:

☒ Region

☐ England

Calculate the adjusted local growth figure

Results

Level	Area	Local Growth Figure
Region	NW	1.1364
County	Cumbria	1.1069
Authority	Copeland	1.1132
16UE1	Whitehaven	1.1024

NTM factors with adjustment

NTM Traffic Growth Calculations

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1: Select NTM Dataset:

NTM Dataset Description	From	To
NTM AF09 Dataset	2003	2035
NTM AF08 Dataset	2003	2025

2: Select Areas to make up the geographic region:

☐ GB

☒ NW

☒ Cumbria

☒ Copeland

☒ Whitehaven (16UE1)

3. Select area type:

☒ Urban

☐ Rural

☐ All

4. Select road type:

☐ Motorway

☐ Trunk

☐ Principal

☒ Minor

☐ All

5. Select which area it serves:

☒ Region

☐ England

Calculate the adjusted local growth figure

Results

Level	Area	Local Growth Figure
Region	NW	1.1365
County	Cumbria	1.1070
Authority	Copeland	1.1132
16UE1	Whitehaven	1.0204

Weekday AM peak period (0700 - 0959)

LOCAL GROWTH FIGURE (NTM)		
Level	Area	Local Growth Figure
Region	NW	1.136468956
County	Cumbria	1.107012525
Authority	Copeland	1.113151525
16UE1	Whitehaven	1.02

Original assumptions

Apply Alternative Assumptions

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Normalise Alternative Assumptions

Area	Current Assumptions				Alternative Assumptions			
	Base HH	Base Jobs	Future HH	Future Jobs	Base HH	Base Jobs	Future HH	Future Jobs
GB (GB)	26914863	30544896	29430045	31945151	26914863	30544896	29430045	31945151
NW (Region)	3070008	3359231	3297562	3466090	3070008	3359231	3297562	3466090
Cumbria (County)	226637	266263	242240	265644	226637	266263	242240	265644
Copeland (Authority)	31609	36816	33910	37155	31609	36816	33910	37155
Whitehaven (16UE1)	11460	10803	12099	10966	11460	10803	12099	10966

Alternative assumptions taking into account development

	Future	dev	Future adjusted
Housing	12099	685	11414
Employmer	10966	1000	9966

Apply Alternative Assumptions

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Normalise Alternative Assumptions

Area	Current Assumptions				Alternative Assumptions			
	Base HH	Base Jobs	Future HH	Future Jobs	Base HH	Base Jobs	Future HH	Future Jobs
NW (Region)	3070008	3359231	3297562	3466090	3070008	3359231	3297562	3466090
Cumbria (County)	226637	266263	242240	265644	226637	266263	242240	265644
Copeland (Authority)	31609	36816	33910	37155	31609	36816	33910	37155
Whitehaven (16UE1)	11460	10803	12099	10966	11460	10803	11366	9612

Dataset Version:	62
Result Type:	Trip ends by time period
Base Year:	2014
Future Year:	2024
Trip Purpose Group:	All purposes
Time Period:	Weekday PM peak period (1600 - 1859)
Trip End Type:	Origin/Destination
Alternative Assumptions applied:	No

Development details	Housing	Employment
Proposed development	110	0
Committed development	575	1000

TEMPRO Growth Factor

Level	Area Description	Name	Origin	All purposes	Destination
GB	GB		1.0764		1.0764
Region	NW		1.0568		1.0568
County	Cumbria		1.0358		1.0325
Authority	Copeland		1.041		1.0382
16UE1	Whitehaven		1.0334		1.021

Original without adjustment

NTM Traffic Growth Calculations

1: Select NTM Dataset:

NTM Dataset Description	From	To
NTM AF09 Dataset	2003	2035
NTM AF08 Dataset	2003	2025

2: Select Areas to make up the geographic region:

☐ GB

☒ NW

☒ Cumbria

☒ Copeland

☒ Whitehaven (16UE1)

3. Select area type:

☒ Urban

☐ Rural

☐ All

4. Select road type:

☐ Motorway

☐ Trunk

☐ Principal

☒ Minor

☐ All

5. Select which area it serves:

☒ Region

☐ England

Calculate the adjusted local growth figure

Results

Level	Area	Local Growth Figure
Region	NW	1.1382
County	Cumbria	1.1138
Authority	Copeland	1.1197
16UE1	Whitehaven	1.1063

NTM factors with adjustment

NTM Traffic Growth Calculations

1: Select NTM Dataset:

NTM Dataset Description	From	To
NTM AF09 Dataset	2003	2035
NTM AF08 Dataset	2003	2025

2: Select Areas to make up the geographic region:

☐ GB

☒ NW

☒ Cumbria

☒ Copeland

☒ Whitehaven (16UE1)

3. Select area type:

☒ Urban

☐ Rural

☐ All

4. Select road type:

☐ Motorway

☐ Trunk

☐ Principal

☒ Minor

☐ All

5. Select which area it serves:

☒ Region

☐ England

Calculate the adjusted local growth figure

Results

Level	Area	Local Growth Figure
Region	NW	1.1382
County	Cumbria	1.1139
Authority	Copeland	1.1197
16UE1	Whitehaven	1.0255

Weekday PM peak period (1600 - 1859)

LOCAL GROWTH FIGURE (NTM)		
Level	Area	Local Growth Figure
Region	NW	1.138192184
County	Cumbria	1.113851587
Authority	Copeland	1.119721333
16UE1	Whitehaven	1.025

Original assumptions

Apply Alternative Assumptions

Normalise Alternative Assumptions

Area	Current Assumptions				Alternative Assumptions			
	Base HH	Base Jobs	Future HH	Future Jobs	Base HH	Base Jobs	Future HH	Future Jobs
GB (GB)	26914863	30544896	29430045	31945151	26914863	30544896	29430045	31945151
NW (Region)	3070008	3359231	3297562	3466090	3070008	3359231	3297562	3466090
Cumbria (County)	226637	266263	242240	265644	226637	266263	242240	265644
Copeland (Authority)	31609	36816	33910	37155	31609	36816	33910	37155
Whitehaven (16UE1)	11460	10803	12099	10966	11460	10803	12099	10966

Alternative assumptions taking into account development

Apply Alternative Assumptions

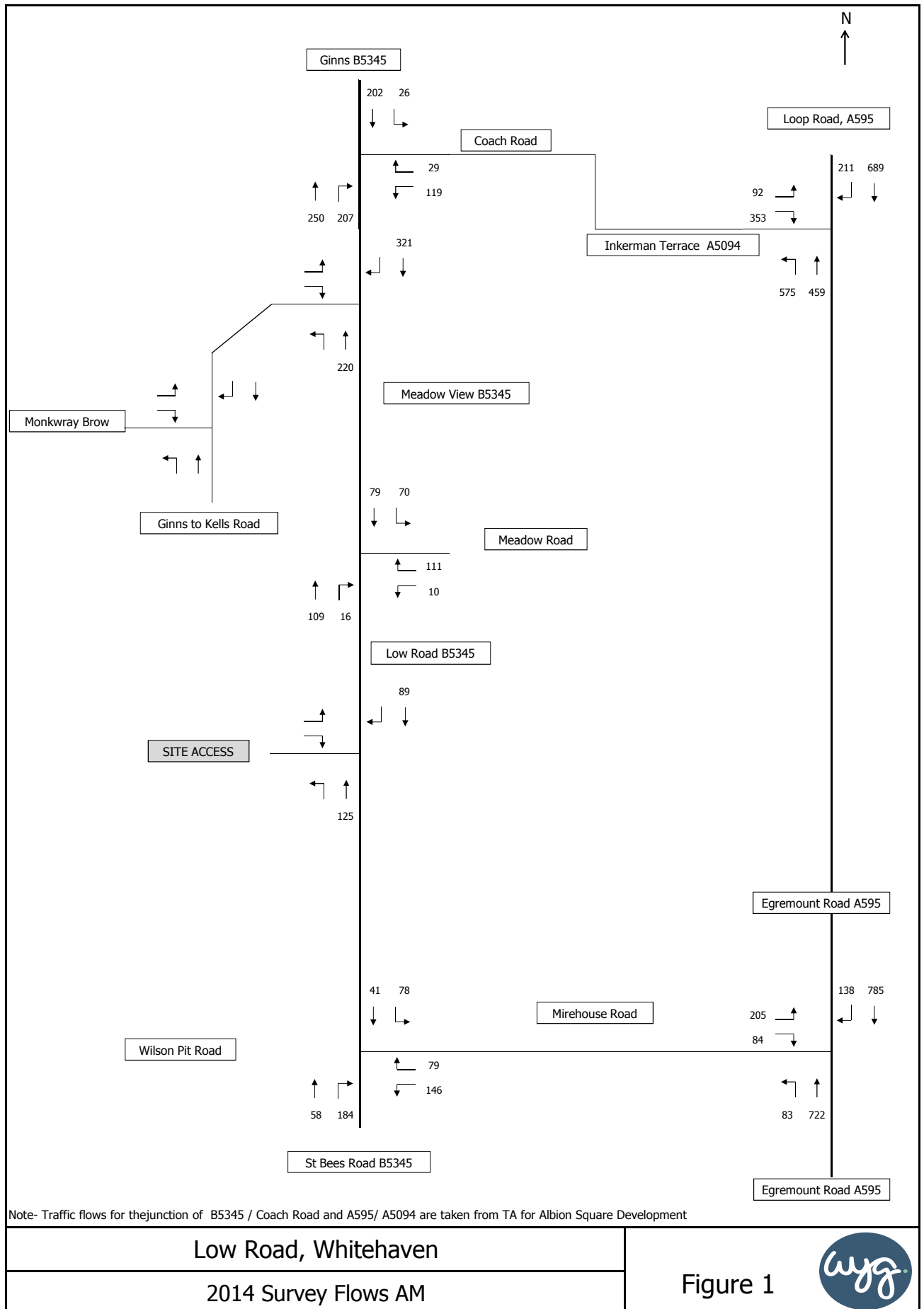
Normalise Alternative Assumptions

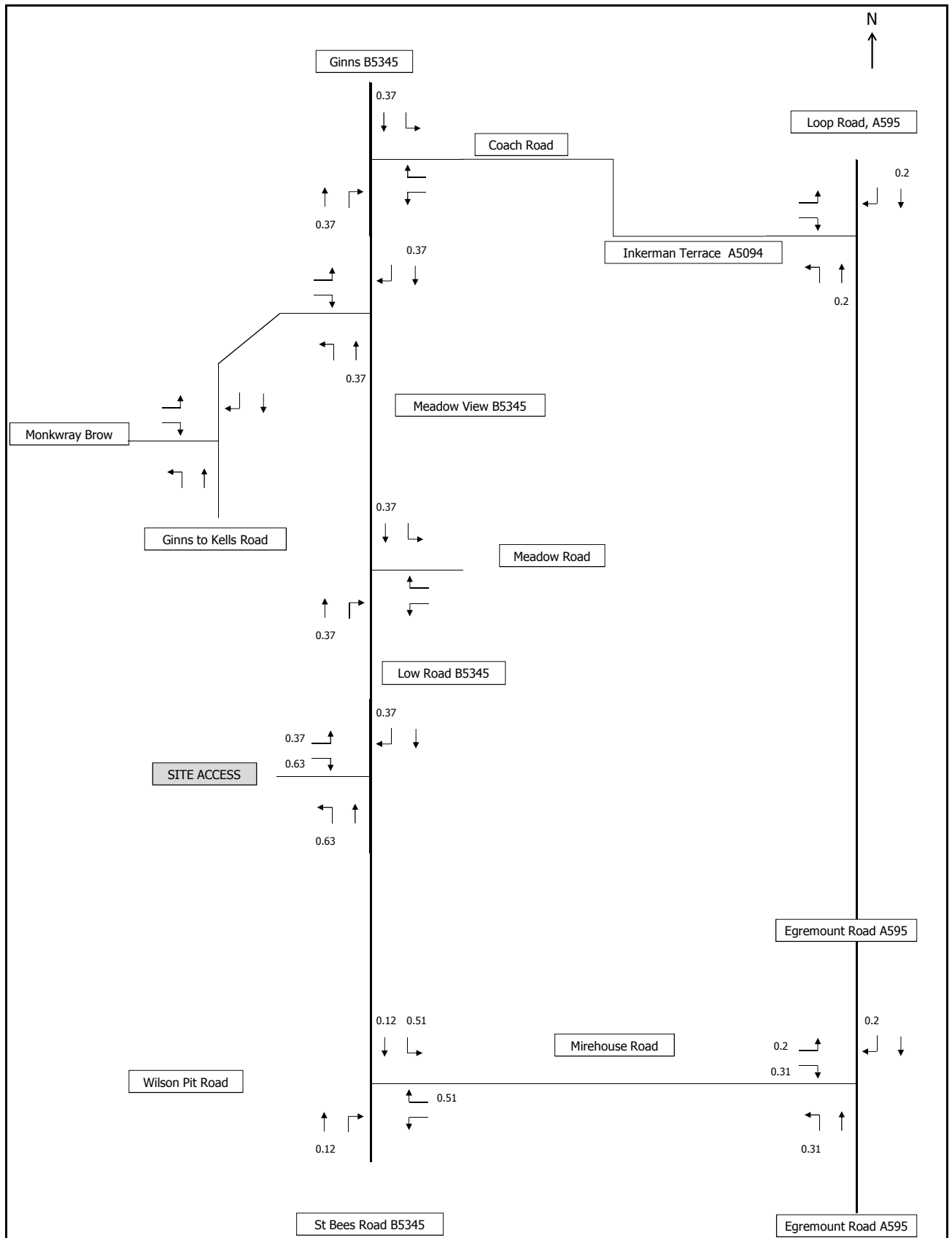
Area	Current Assumptions				Alternative Assumptions			
	Base HH	Base Jobs	Future HH	Future Jobs	Base HH	Base Jobs	Future HH	Future Jobs
NW (Region)	3070008	3359231	3297562	3466090	3070008	3359231	3297562	3466090
Cumbria (County)	226637	266263	242240	265644	226637	266263	242240	265644
Copeland (Authority)	31609	36816	33910	37155	31609	36816	33910	37155
Whitehaven (16UE1)	11460	10803	12099	10966	11460	10803	11366	9612

	Future	dev	Future adjusted
Housing	12099	685	11414
Employer	10966	1000	9966



APPENDIX D - TRIP GENERATION AND DISTRIBUTION





Note: Calculations based on Census data for 2011

Low Road, Whitehaven

Journey to Work Distribution based on Census Data AM

Figure 2



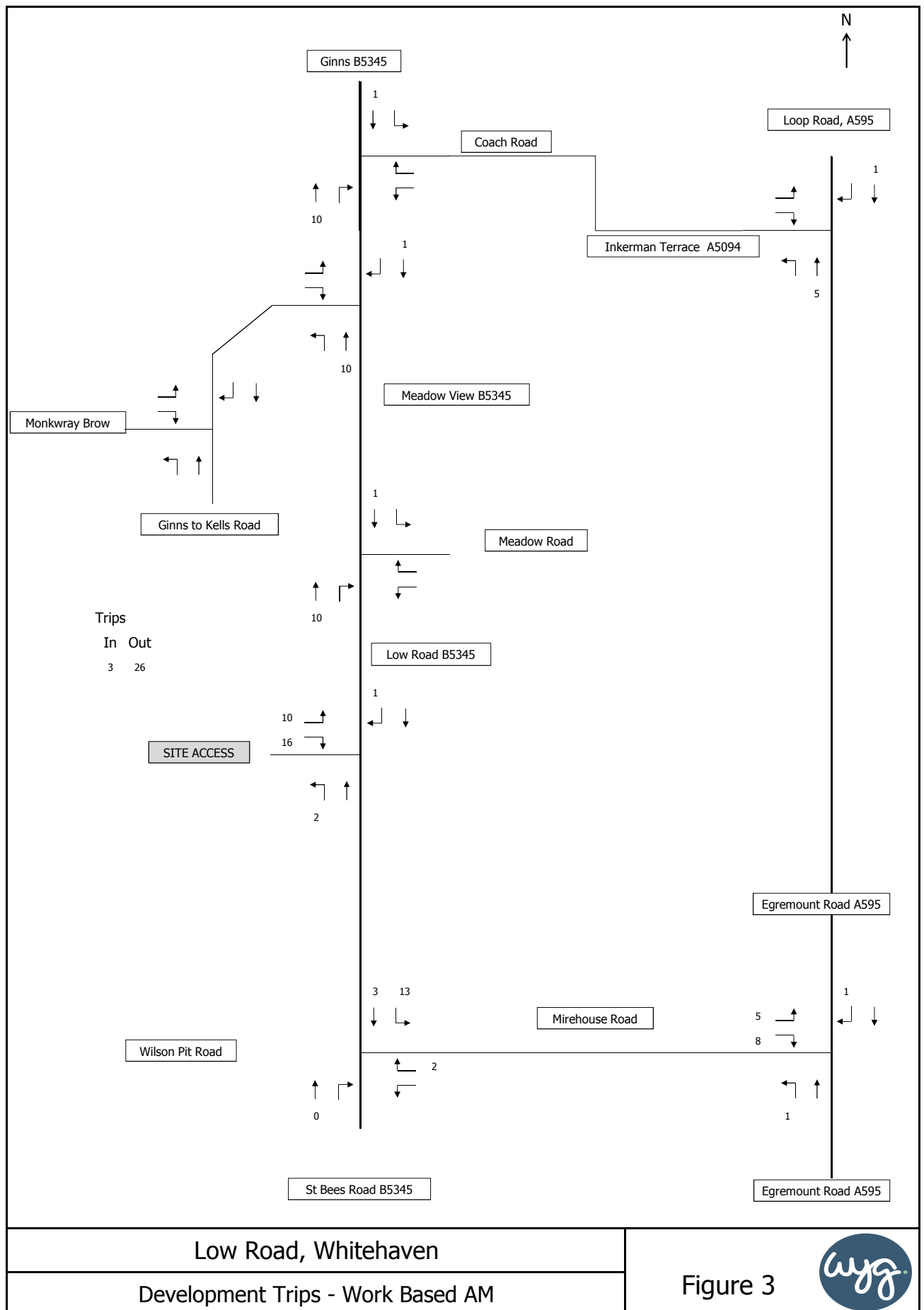
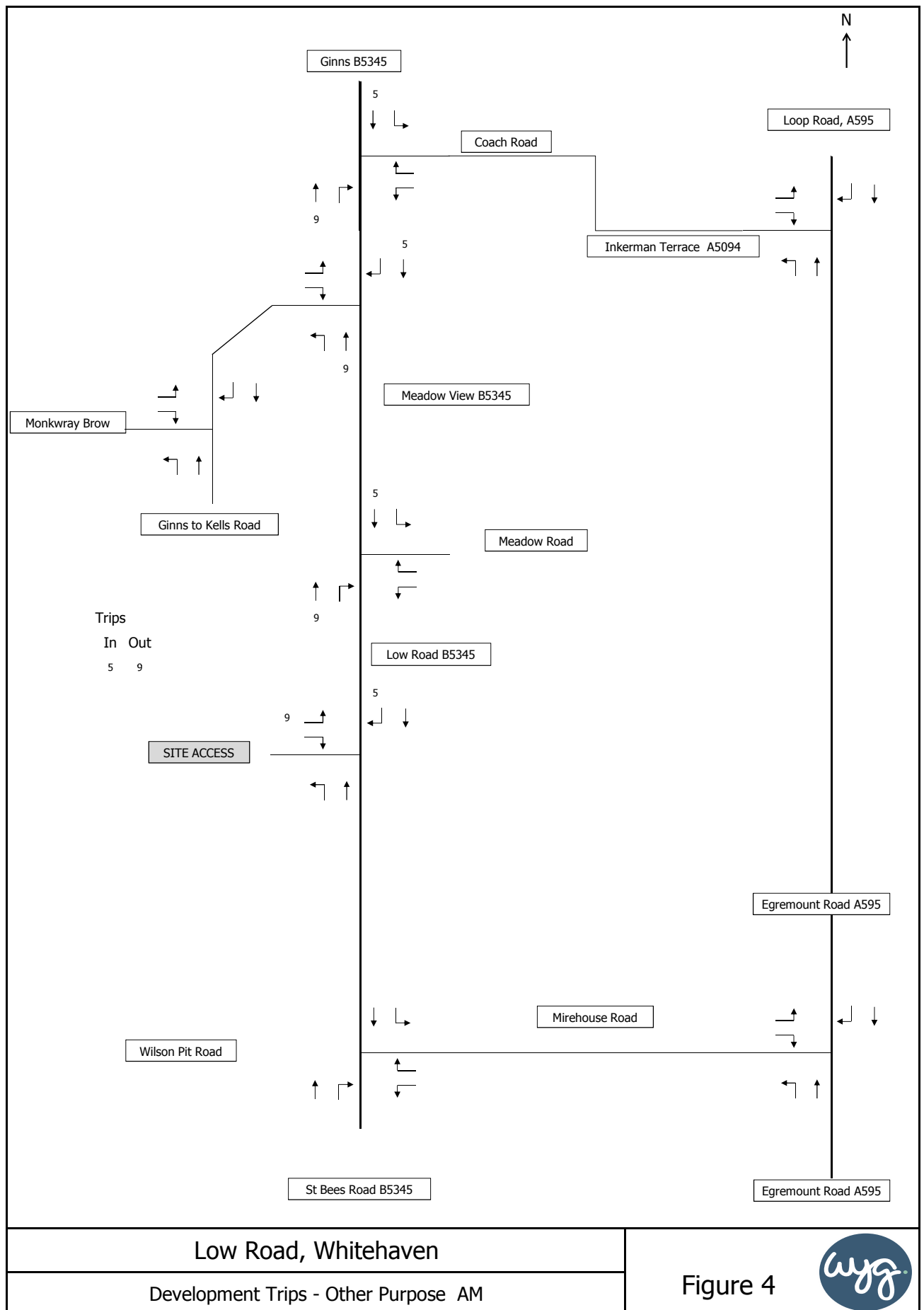
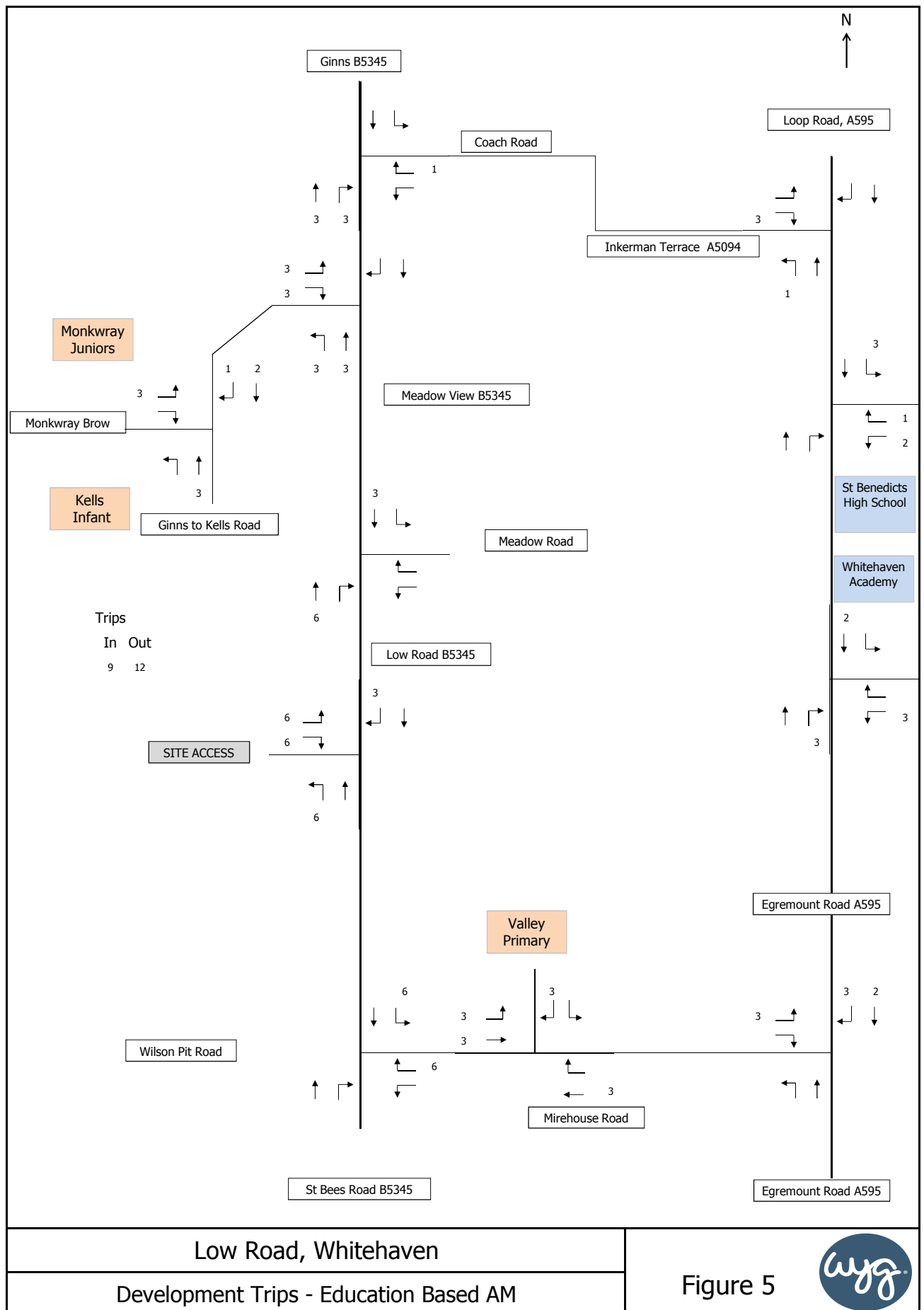
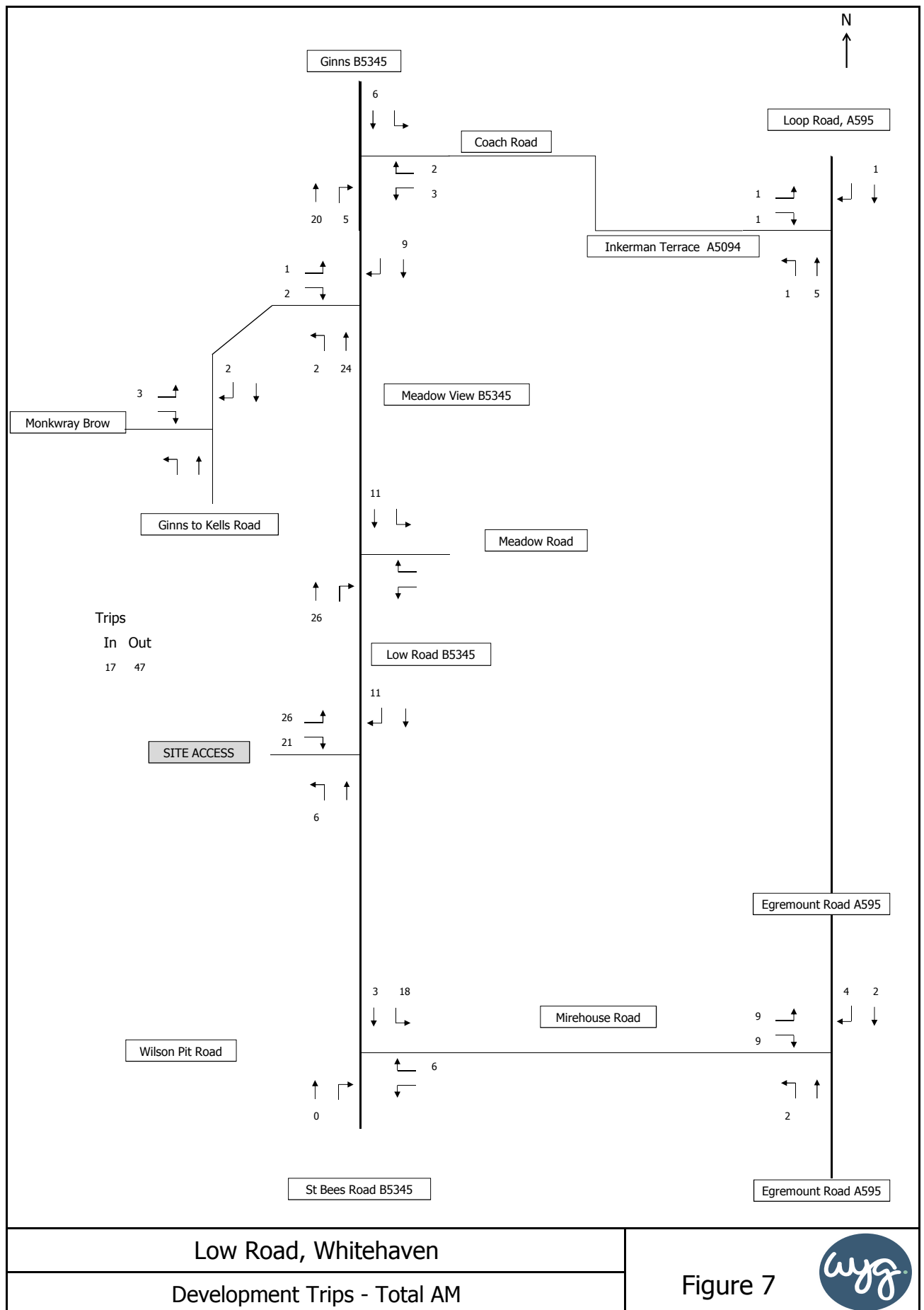


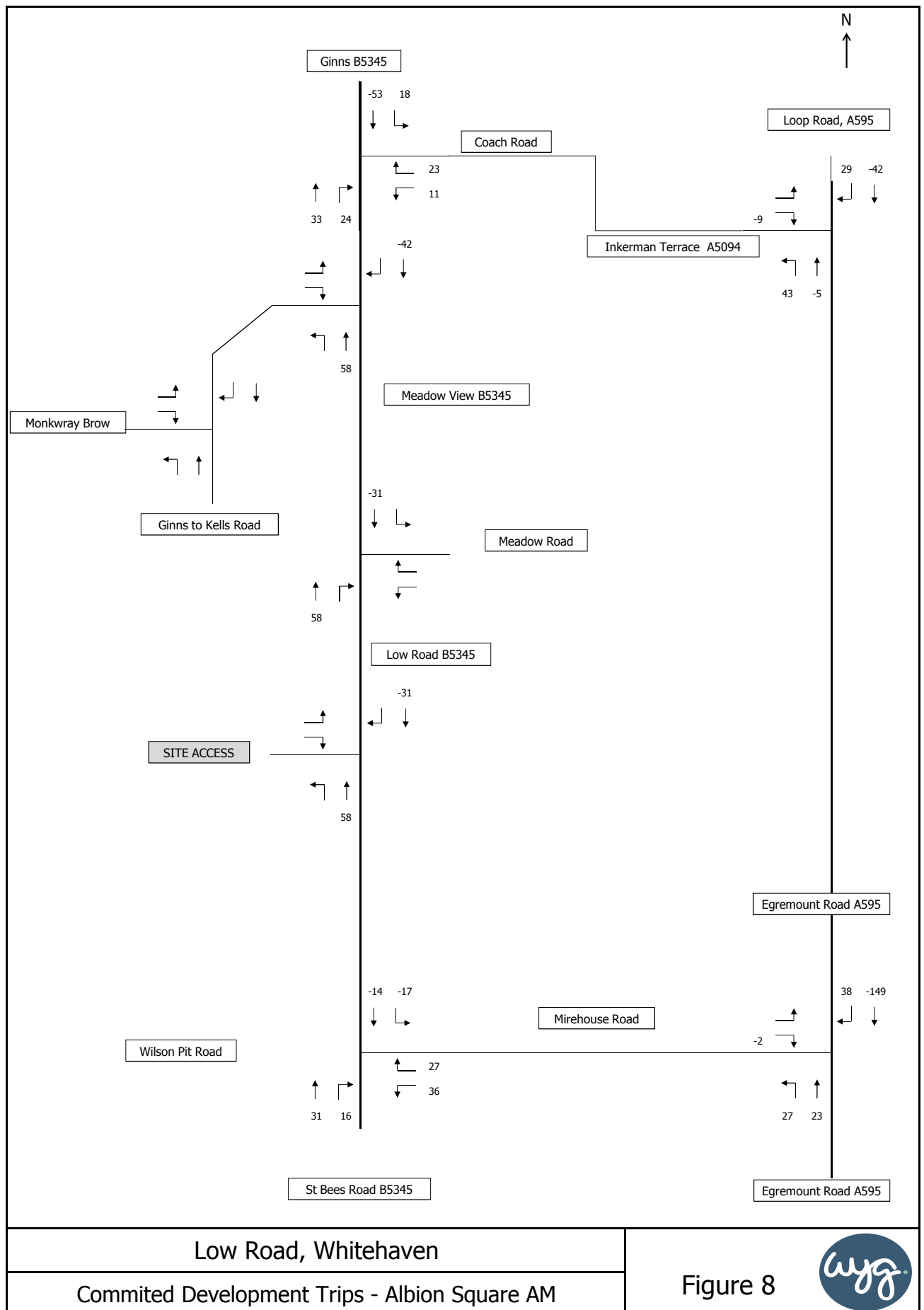
Figure 3

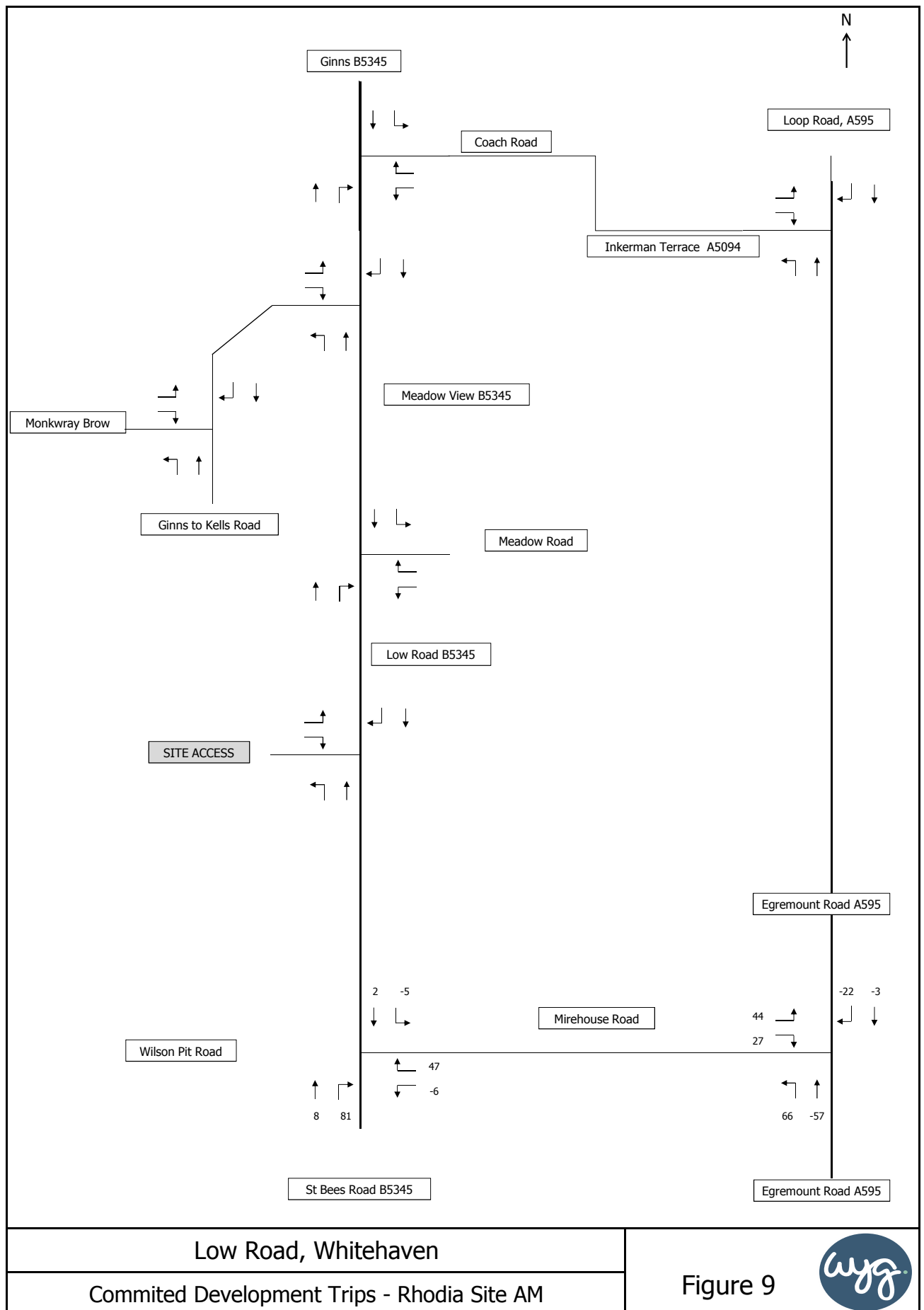


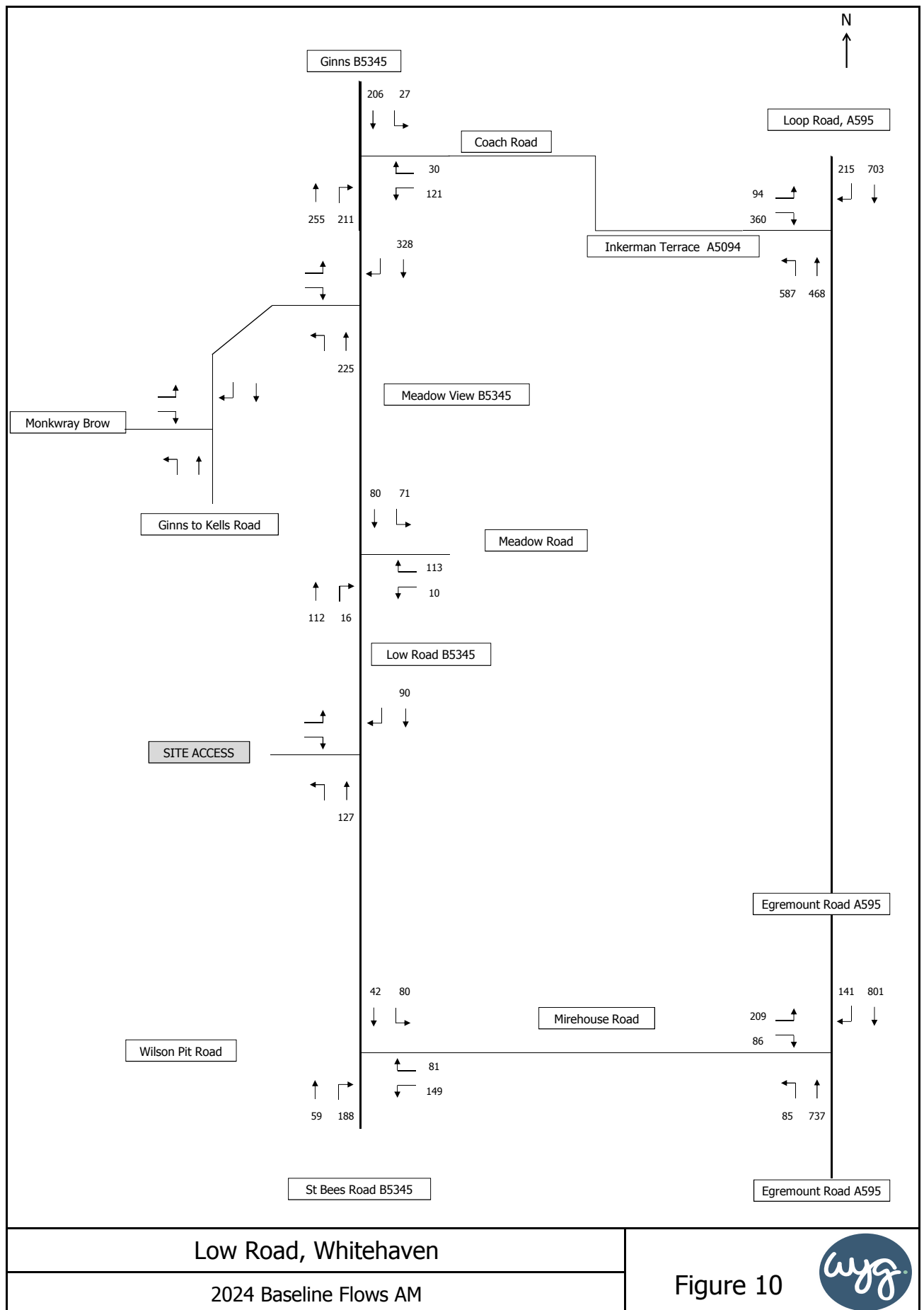


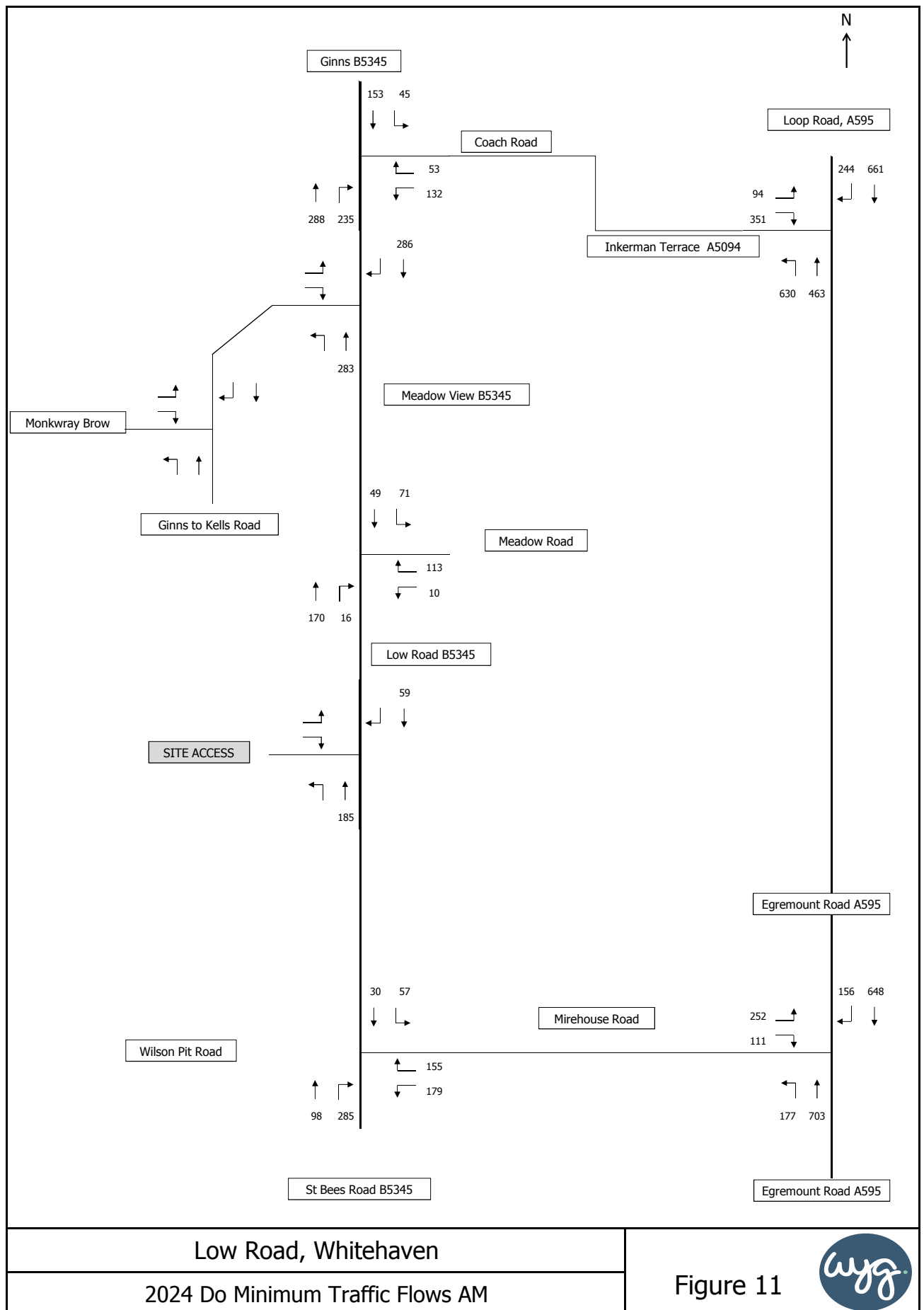


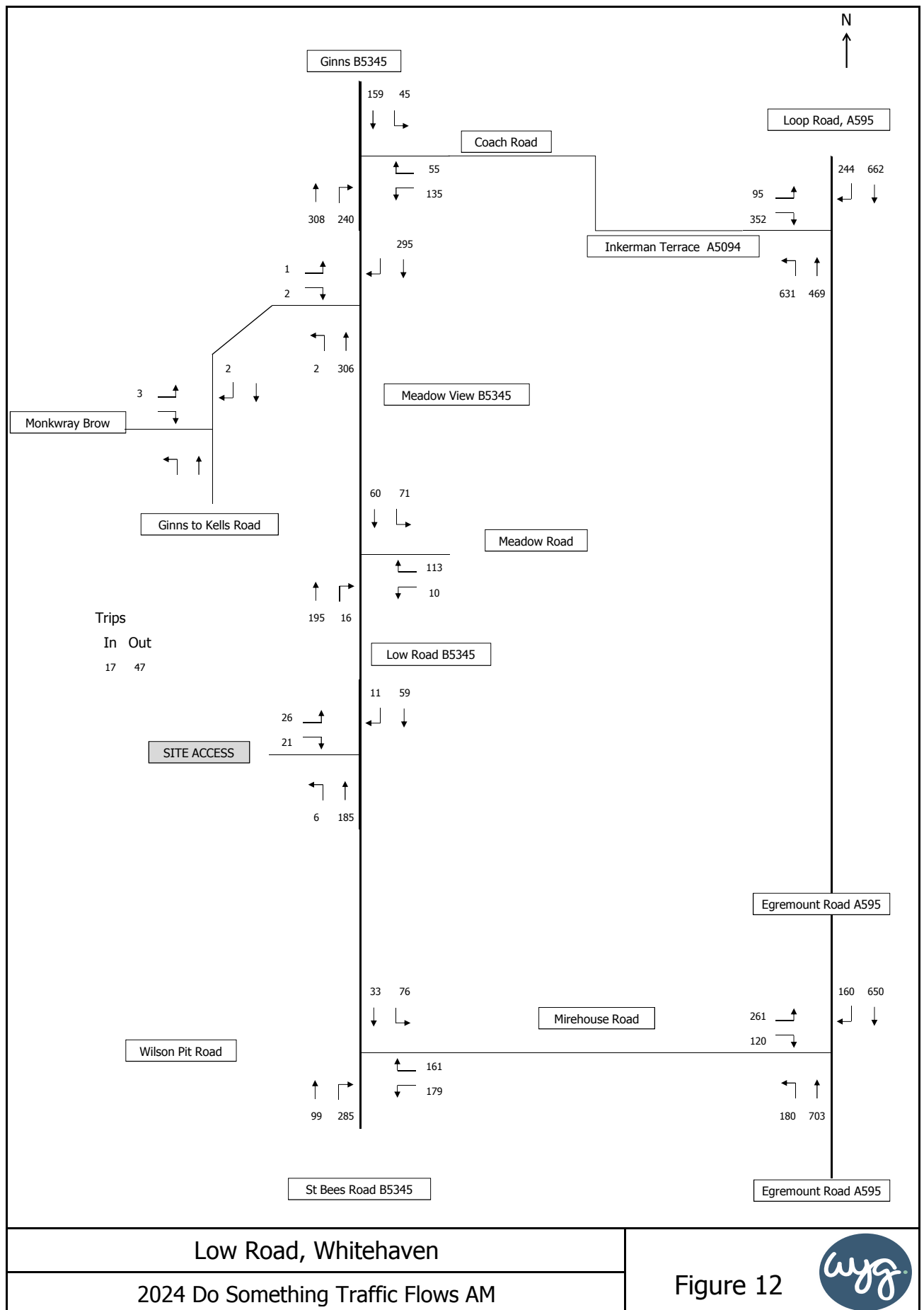










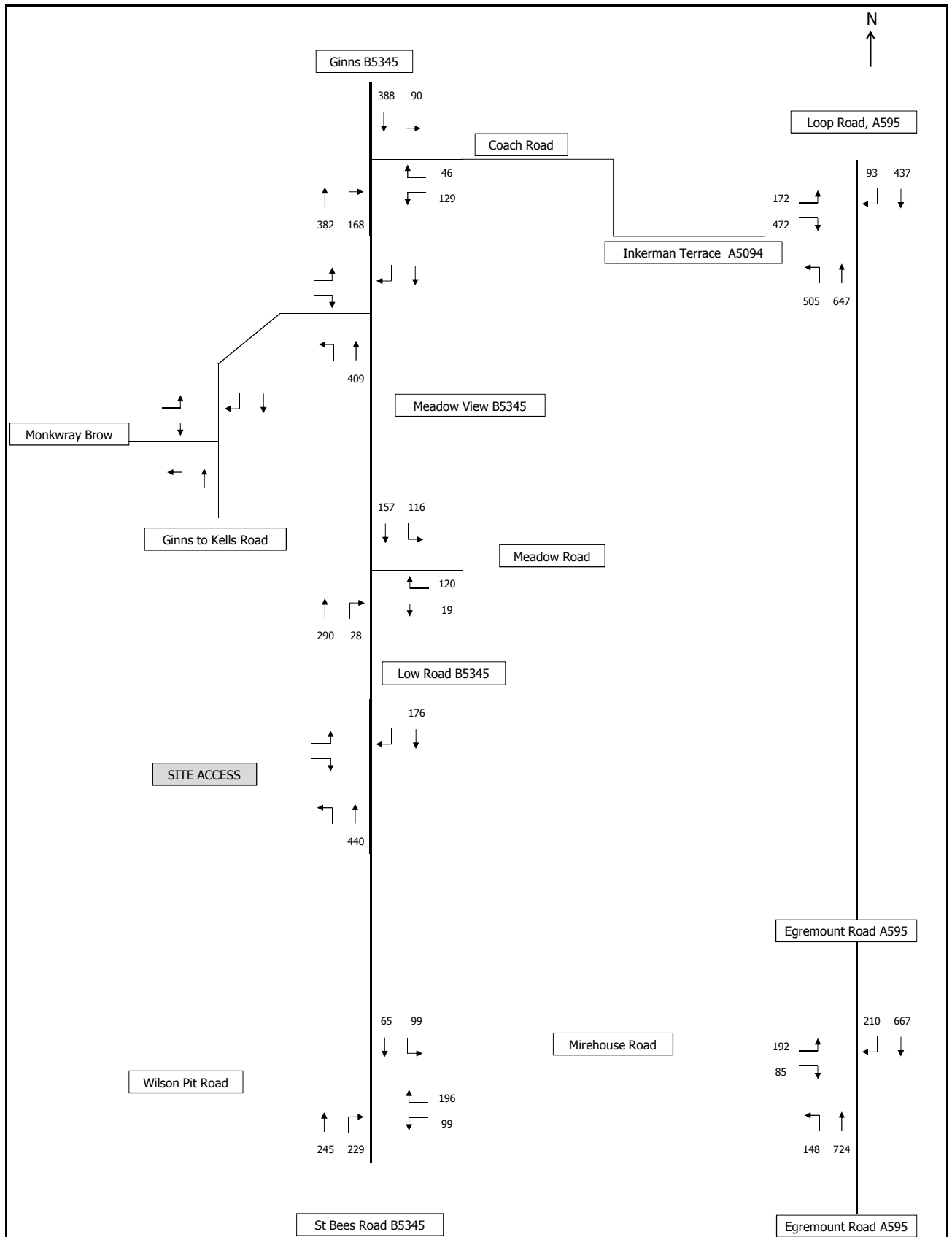


Low Road, Whitehaven

2024 Do Something Traffic Flows AM

Figure 12





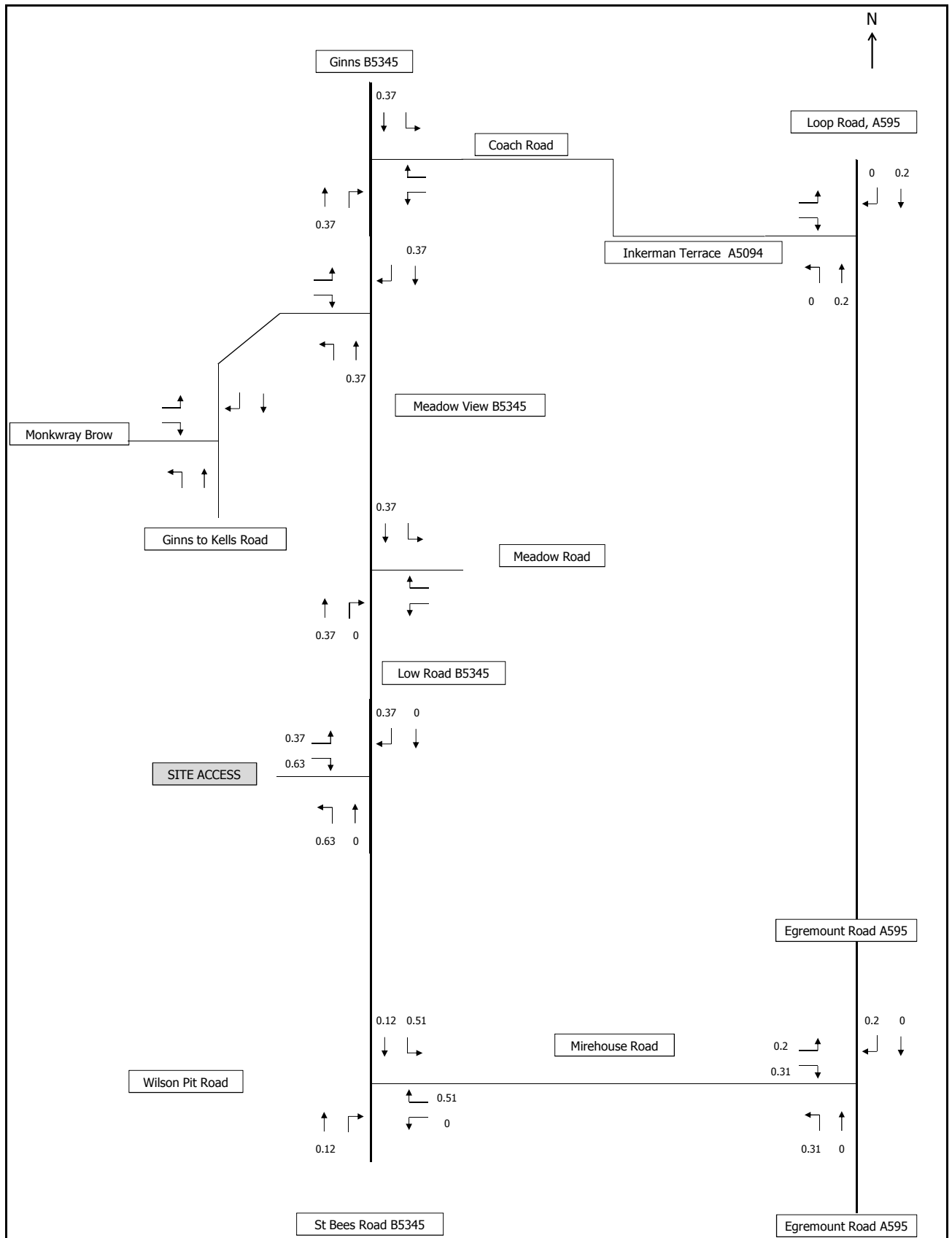
Note- Traffic flows for the junction of B5345 / Coach Road and A595/ A5094 are taken from TA for Albion Square Development

Low Road, Whitehaven

2014 Survey Flows PM

Figure 13





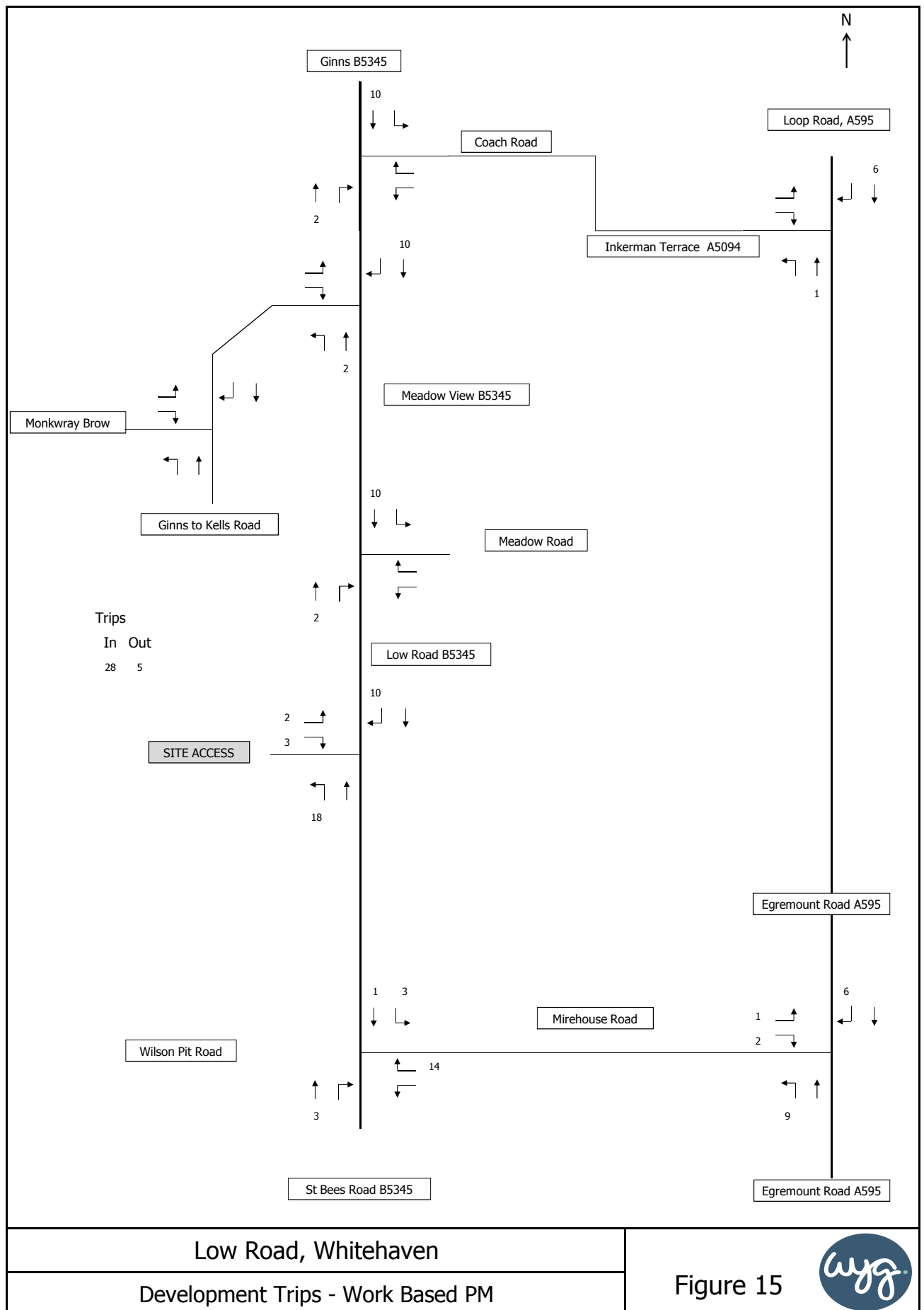
Note: Calculations based on Census data for 2011

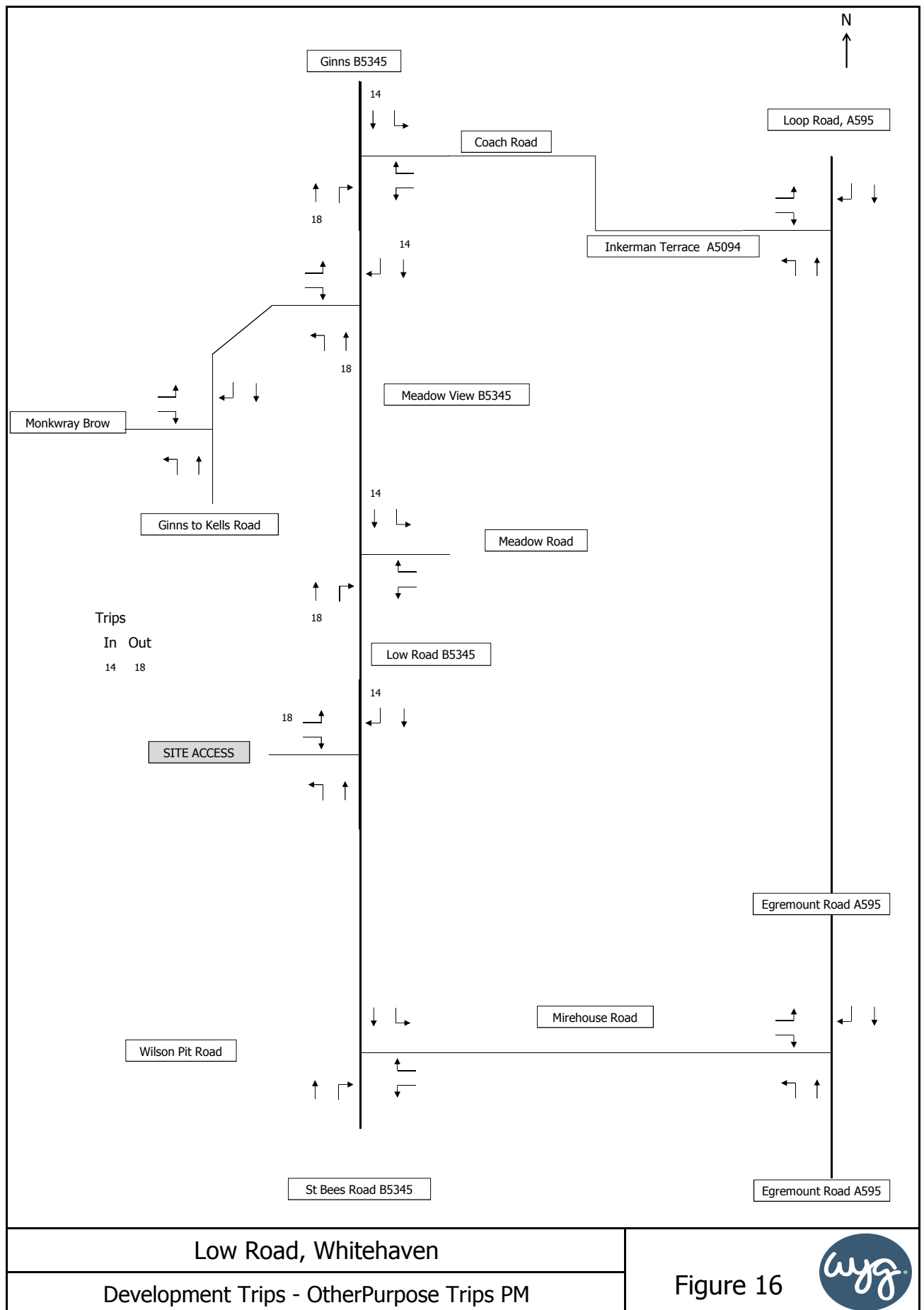
Low Road, Whitehaven

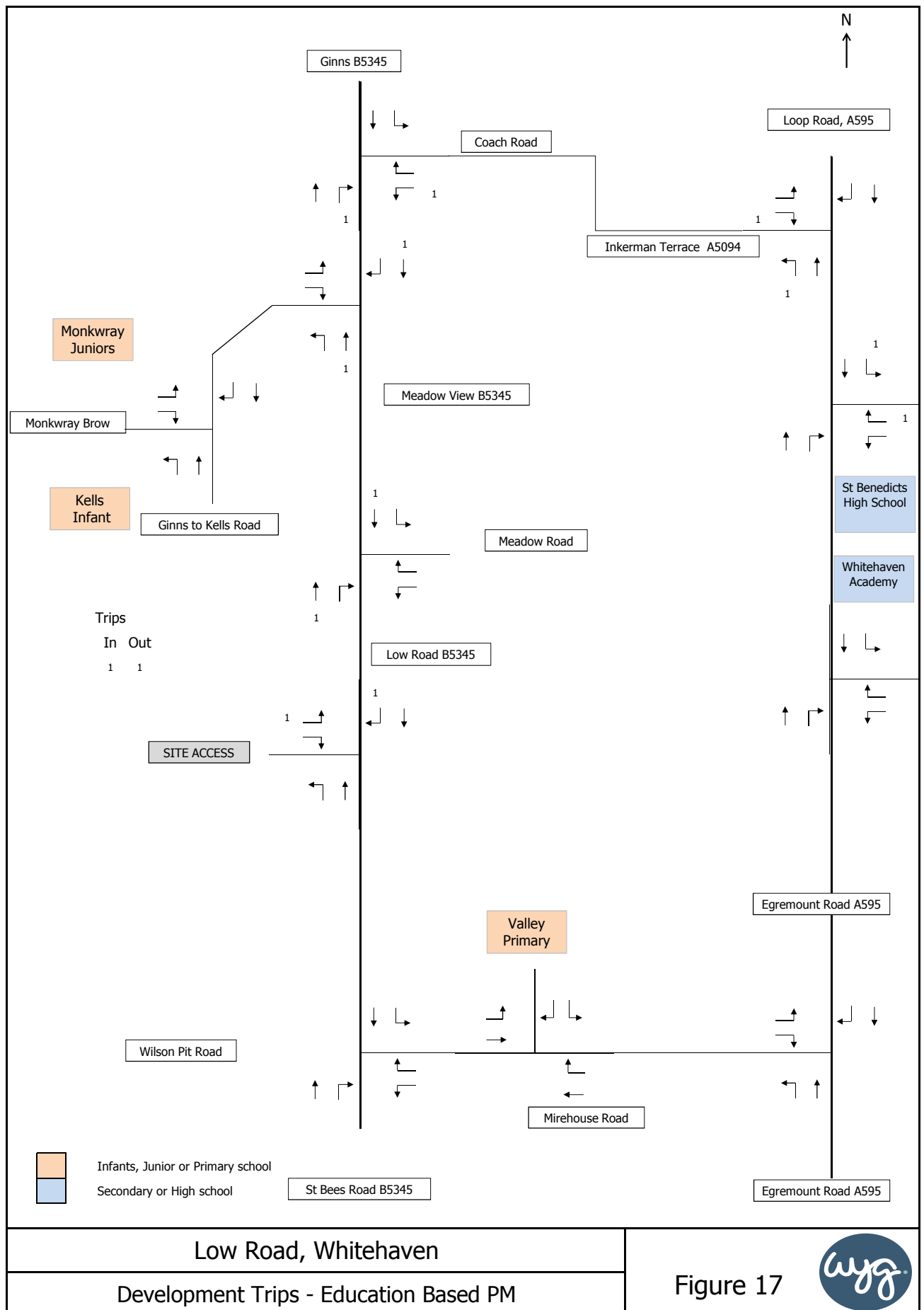
Journey to Work Distribution based on Census Data

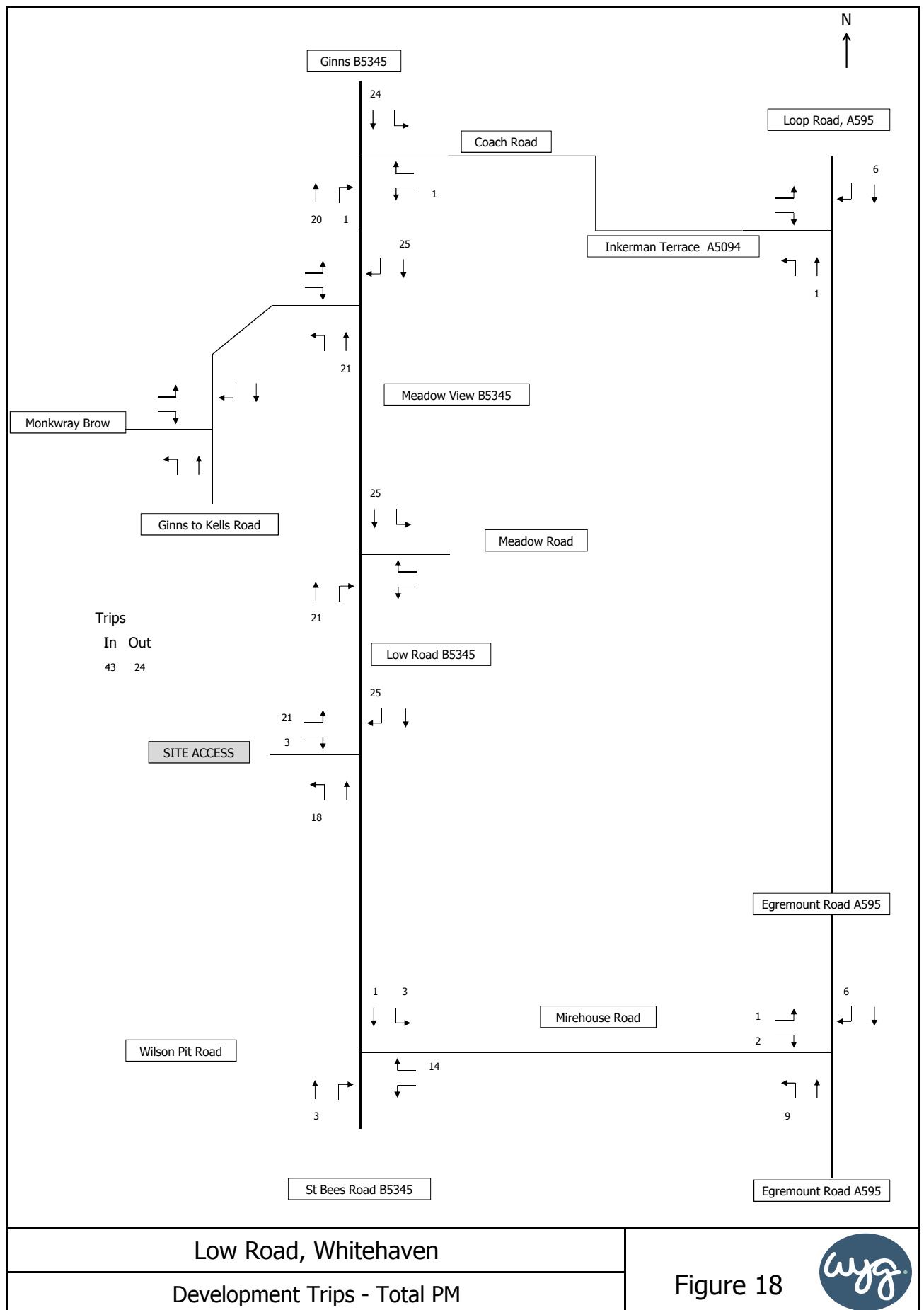
Figure 14











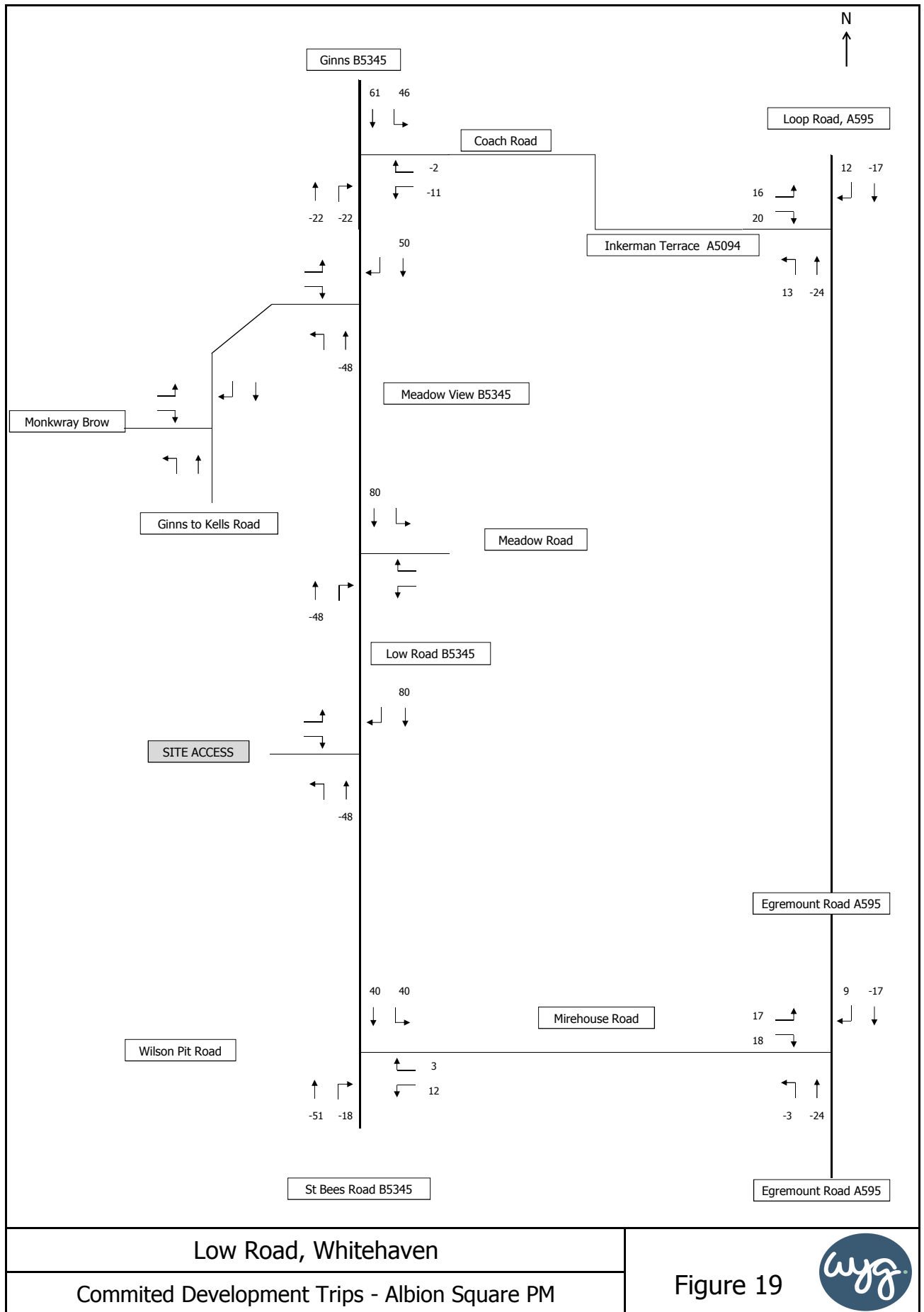
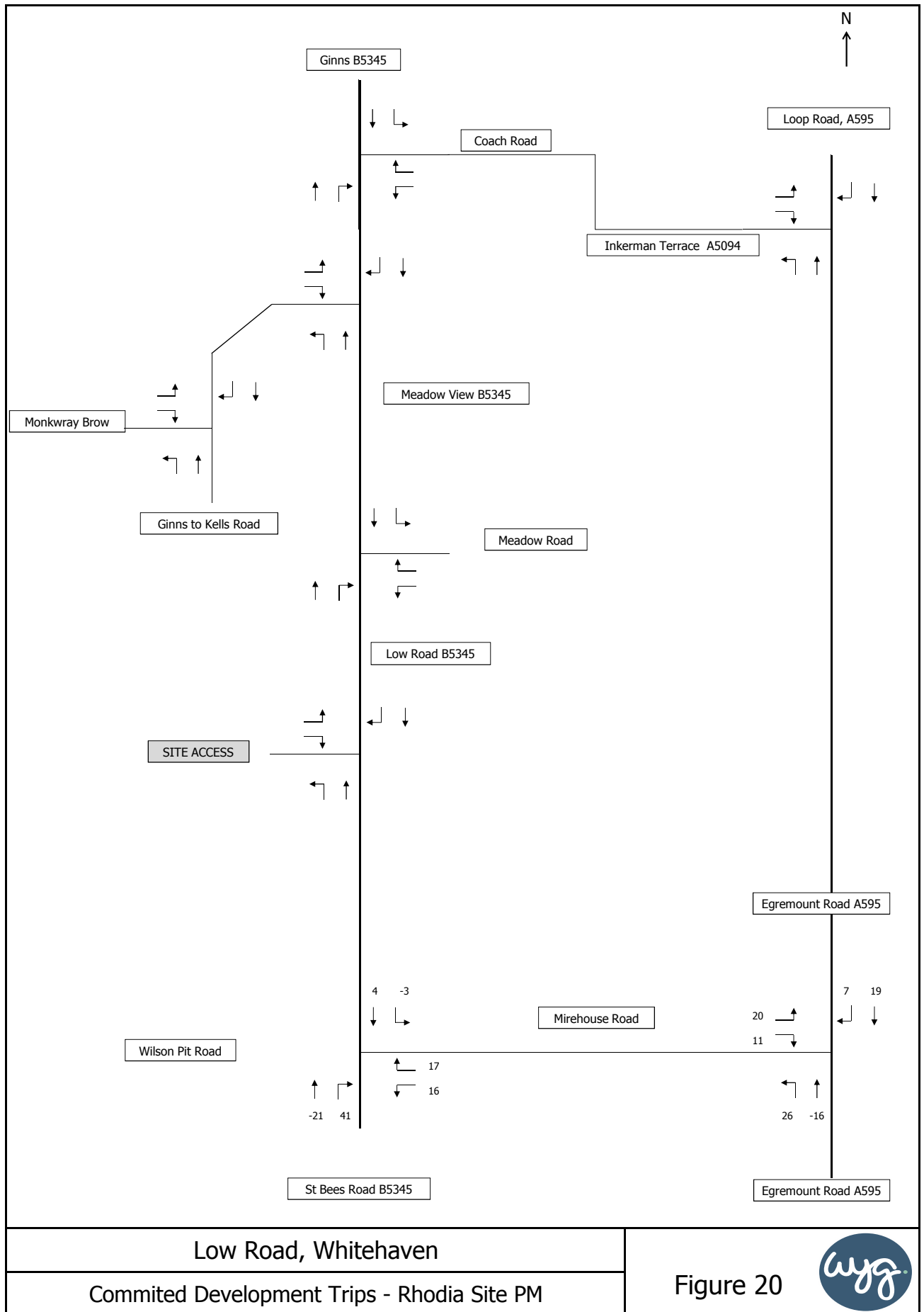
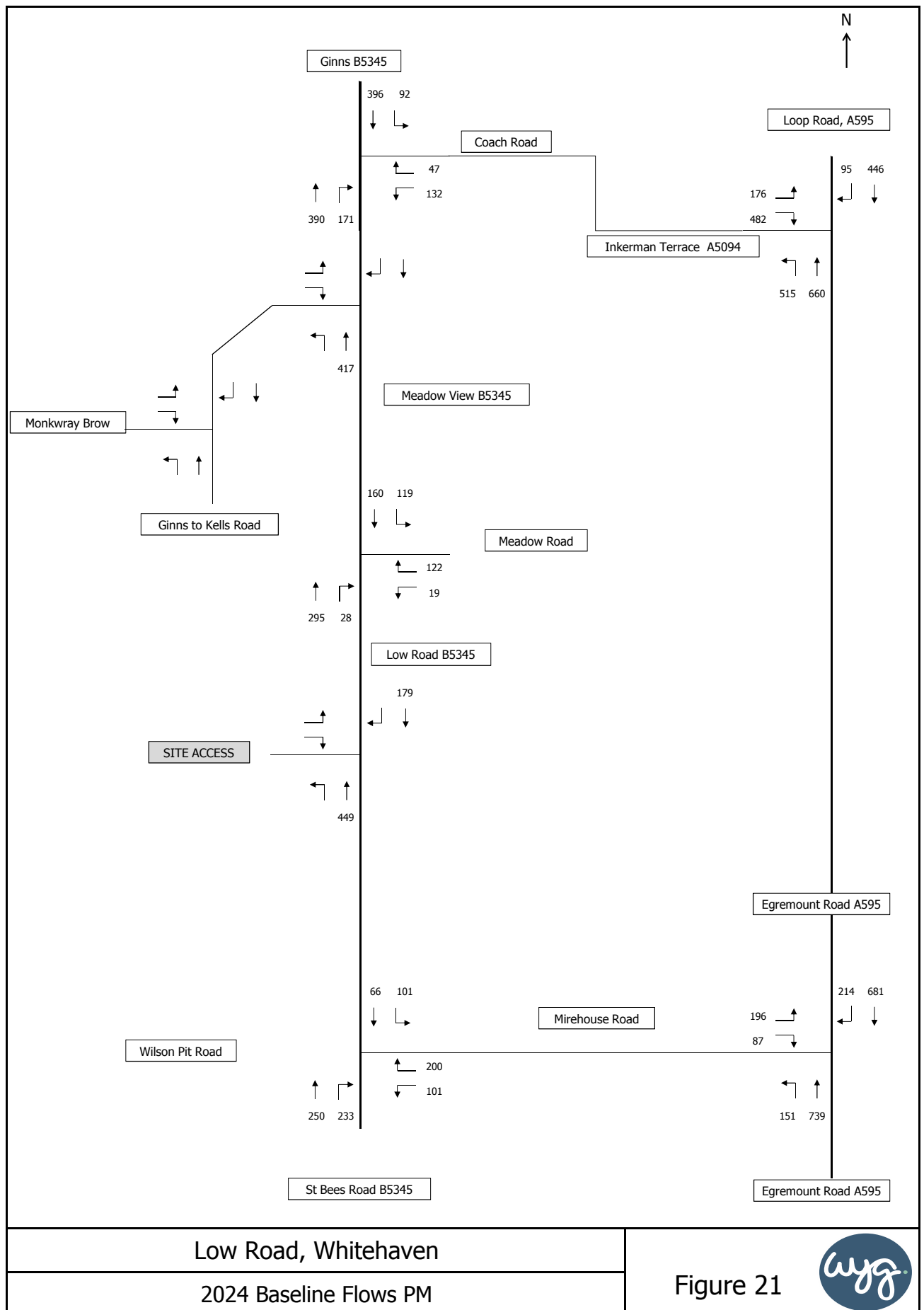
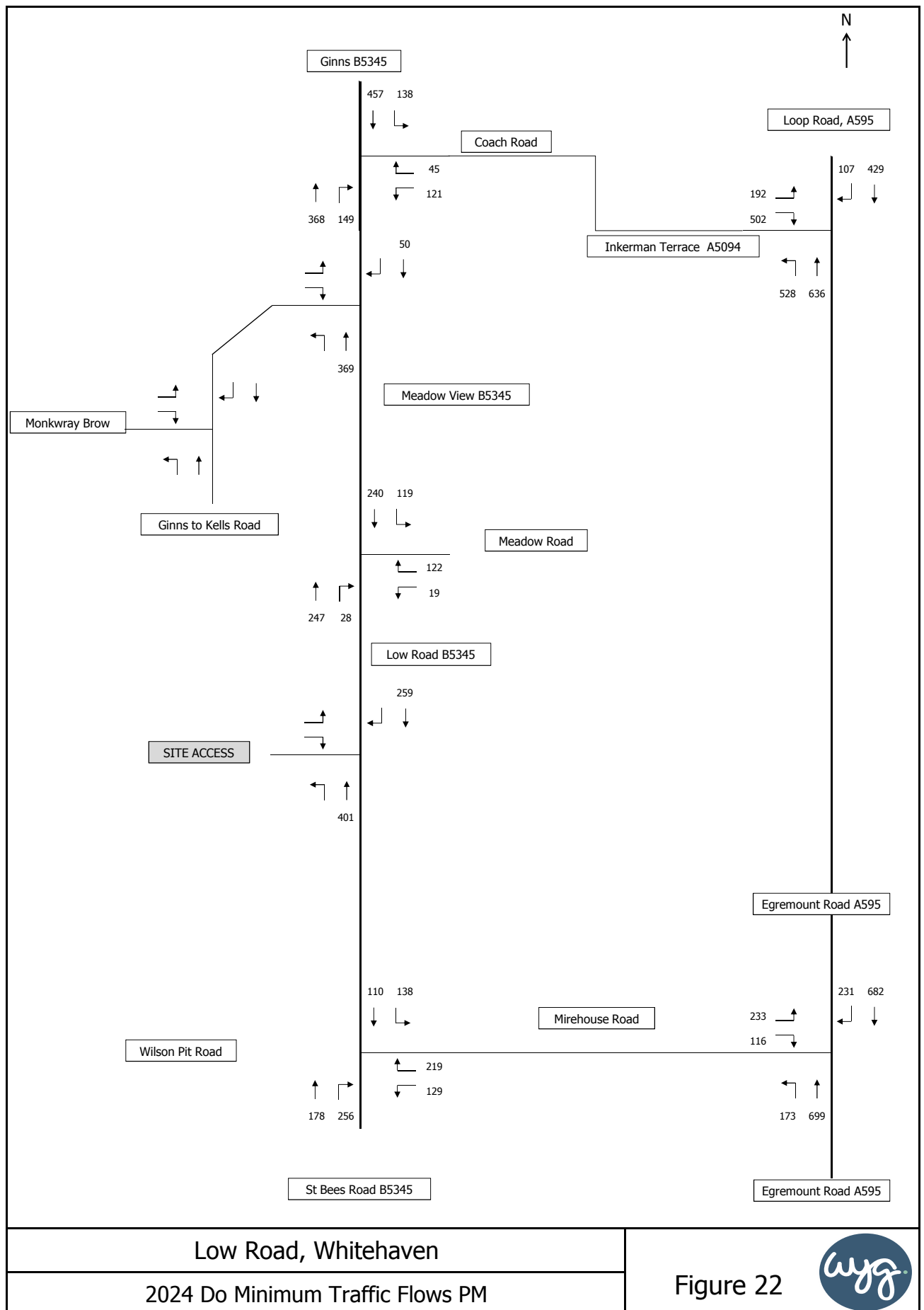


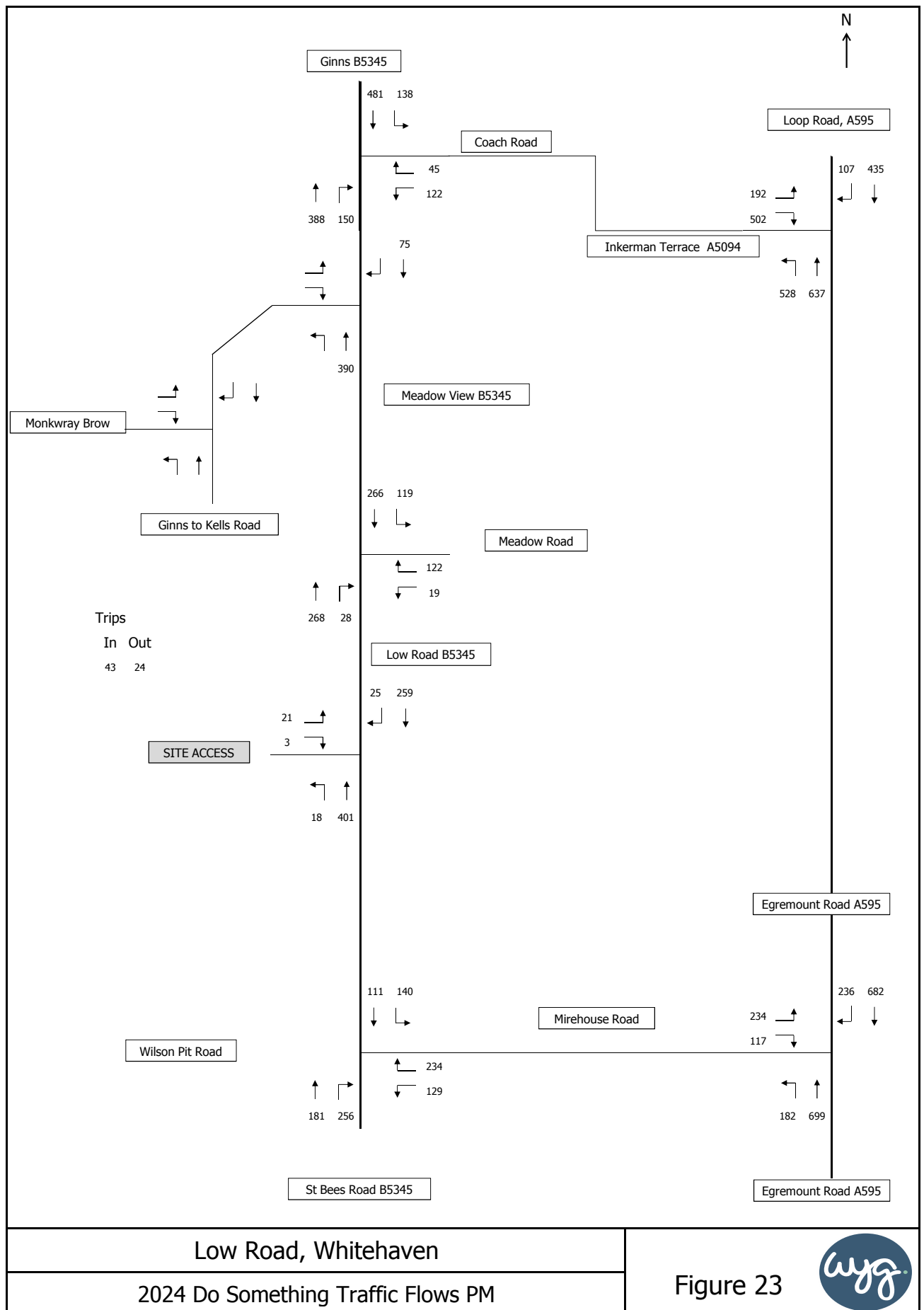
Figure 19













APPENDIX E - CENSUS 2011 DATA

2011 Middle Super Output Areas by Local Authority Districts

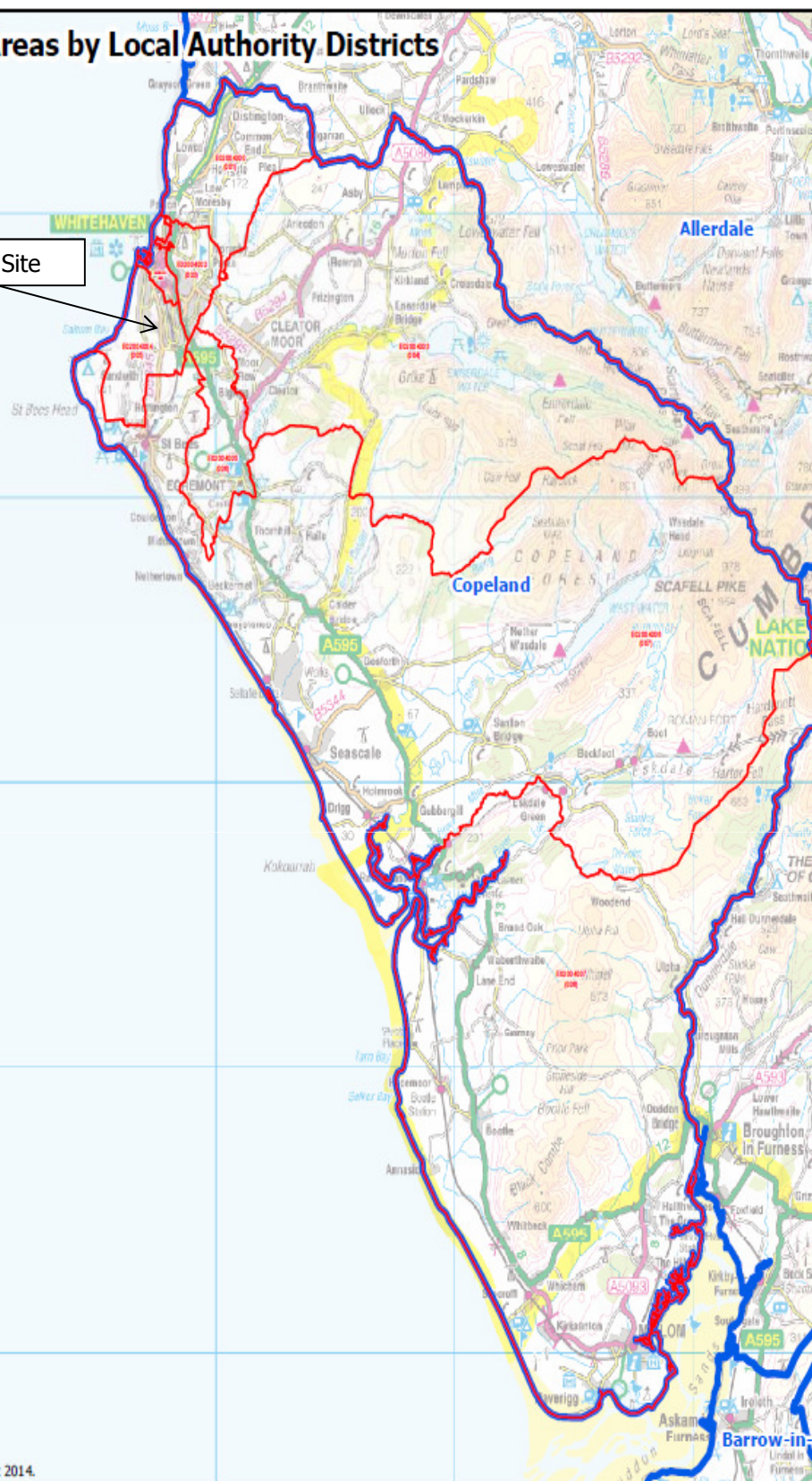
LAD Code: E07000029

LAD Name: Copeland

Page 69 of 348



The Site



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Low Road, Whitehaven

Copeland 005 Middle Super Output Area (MSOA)

Figure 1



Table A AM Peak (08:00 to 08:59)

Trip purpose to and from with trip start time between 08:00 and 08:59, Monday to Friday (car / van driver trips only): England: 2009/13

	Trip purpose from																										
Trip purpose to	Work	In course of work	Education	Food shopping	Non food shopping	Personal business medical	Personal business eat / drink	Personal business other	Eat / drink with friends	Visit friends	Other social	Entertain / public activity	Sport: participate	Holiday: base	Day trip / just walk	Other non-escort	Escort home	Escort work	Escort in course of work	Escort education	Escort shopping / personal business	Other escort	Home	% Home	All purposes		
Work	0	91	0	43	60	47	1	83	5	133	1	73	17	45	35	0	7	430	1	2,017	524	336	16,480	47.0%	20,429		
In course of work	181	260	5	5	8	6	0	6	2	24	1	7	0	25	2	0	1	50	11	170	26	17	1,995	5.7%	2,800		
Education	2	3	0	0	1	0	0	2	0	12	0	1	0	15	0	0	0	8	1	24	3	4	518	1.5%	595		
Food shopping	10	2	0	7	3	7	0	13	2	6	1	7	0	2	1	0	0	32	1	224	20	4	804	2.3%	1,145		
Non food shopping	13	1	0	8	4	10	0	9	0	7	0	2	2	4	5	0	1	19	0	148	20	6	626	1.8%	884		
Personal business medical	16	0	0	3	5	3	0	2	2	5	0	0	0	0	0	0	2	11	0	34	5	5	632	1.8%	724		
Personal business eat / drink	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5	0.0%	5		
Personal business other	14	1	0	6	7	4	0	14	0	12	1	2	5	4	7	0	0	23	0	85	18	10	922	2.6%	1,135		
Eat / drink with friends	0	0	0	0	1	0	0	1	1	0	0	0	0	1	0	0	0	0	0	6	1	2	21	0.1%	34		
Visit friends	15	1	1	6	7	1	0	7	0	8	0	0	0	4	3	0	0	15	0	112	7	9	489	1.4%	687		
Other social	0	0	0	1	0	0	0	0	0	2	2	0	0	0	0	0	0	1	0	5	0	0	29	0.1%	41		
Entertain / public activity	1	0	0	3	0	0	0	5	0	3	0	3	0	4	1	0	0	16	0	54	5	7	419	1.2%	521		
Sport: participate	1	0	0	0	0	0	0	3	1	1	0	1	1	4	0	0	0	2	4	20	0	2	284	0.8%	324		
Holiday: base	0	0	0	2	3	0	0	2	0	0	1	0	0	1	1	0	0	3	0	6	1	1	27	0.1%	47		
Day trip / just walk	2	0	0	2	2	0	0	2	0	9	1	0	0	12	2	0	0	9	0	46	2	3	325	0.9%	417		
Other non-escort	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	8	0.0%	10		
Escort home	0	1	0	2	2	0	0	0	1	0	0	0	0	1	0	0	0	1	0	6	1	2	17	0.0%	35		
Escort work	3	3	0	3	1	1	0	8	1	17	0	1	0	3	0	0	0	18	0	45	14	5	1,079	3.1%	1,203		
Escort in course of work	1	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	0	0	0	0	0	22	0.1%	26		
Escort education	27	4	0	5	9	3	0	4	0	60	2	0	0	10	0	0	0	63	1	551	106	52	8,469	24.2%	9,365		
Escort shopping / personal business	4	1	0	0	4	1	0	2	1	20	0	0	0	2	0	0	0	8	0	133	24	28	1,178	3.4%	1,404		
Other escort	9	4	0	2	3	0	0	4	0	3	0	0	0	7	0	0	1	19	0	52	8	23	684	2.0%	820		
Home	395	94	2	220	272	84	0	167	4	104	3	71	51	12	176	1	10	667	14	3,292	289	174	0		6,103		
% Home	6.5%	1.5%	0.0%	3.6%	4.5%	1.4%	0.0%	2.7%	0.1%	1.7%	0.1%	1.2%	0.8%	0.2%	2.9%	0.0%	0.2%	10.9%	0.2%	53.9%	4.7%	2.9%					
All purposes	693	468	8	318	393	166	1	333	19	426	13	169	75	158	232	3	22	1,397	33	7,028	1,074	692	35,033		48,754		
Unweighted sample size: trip	642	453	8	306	395	158	1	325	19	409	13	159	80	161	245	3	17	1,219	32	6,730	1,026	673	33,041		46,115		

Telephone: 020 7944 3097
Email: national.travelsurvey@df.t.gsi.gov.uk
[Notes & definitions](#)

Source: National Travel Survey, Department for Tra

AM Peak Car Arrivals

Work Trips	19.2%
Education	54.0%
Other Trips	26.9%

AM Peak Car Departures

Work Trips	55.9%
Education	25.7%
Other Trips	18.5%

Education Escort Linked Trips

	Trips	%	Next stage journey purpose
Trips from Escort education to Home	3,292	51%	
Trips from Escort education to Work	2,232	35%	8.9%
Trips from Escort education to Other	929	14%	3.7%

AM Peak Car Departures Adjusted for Education Escort Linked Trips

Work Trips	64.8%	(8.9% via Escort education)
Education	13.1%	
Other Trips	22.2%	(3.7% via Esacort education)

Table B PM Peak (17:00 to 17:59)

Trip purpose to and from with trip start time between 17:00 and 17:59, Monday to Friday (car / van driver trips only): England: 2009/13

	Trip purpose from																								
Trip purpose to	Work	In course of work	Education	Food shopping	Non food shopping	Personal business medical	Personal business eat / drink	Personal business other	Eat / drink with friends	Visit friends	Other social	Entertain / public activity	Sport: participate	Holiday: base	Day trip / just walk	Other non-escort	Escort home	Escort work	Escort in course of work	Escort education	Escort shopping / personal business	Other escort	Home	% Home	All purposes
Work	0	37	1	6	13	1	0	6	0	20	1	0	2	0	2	0	7	3	0	0	1	9	920	11.1%	1,029
In course of work	130	156	0	6	1	5	1	4	1	4	1	2	0	2	0	0	3	0	0	1	0	2	223	2.7%	541
Education	8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	28	0.3%	37
Food shopping	460	40	4	32	42	18	1	37	6	53	3	13	9	9	14	0	9	28	0	14	22	45	804	9.7%	1,663
Non food shopping	280	26	0	20	43	7	0	19	2	35	2	10	3	5	1	0	5	17	0	3	14	34	432	5.2%	959
Personal business medical	34	2	0	5	5	6	0	1	0	8	0	1	0	0	0	0	0	0	0	0	0	0	136	1.6%	198
Personal business eat / drink	3	1	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1	0.0%	6
Personal business other	164	13	0	13	10	1	0	22	0	23	2	1	2	5	5	0	6	4	1	3	13	12	538	6.5%	839
Eat / drink with friends	48	6	0	1	9	3	0	3	2	18	0	9	1	8	10	0	1	4	0	2	3	22	224	2.7%	374
Visit friends	439	55	6	45	63	16	0	40	8	100	3	23	6	6	22	0	16	32	0	9	20	34	946	11.4%	1,887
Other social	29	4	1	1	4	1	0	0	0	5	2	4	2	0	0	0	1	1	0	0	0	2	80	1.0%	135
Entertain / public activity	277	20	3	7	10	0	0	7	7	19	1	7	1	3	1	0	6	9	0	3	3	22	823	9.9%	1,228
Sport: participate	80	3	1	2	1	1	0	4	0	11	0	0	2	1	0	0	0	3	0	1	0	9	305	3.7%	422
Holiday: base	56	22	3	11	20	0	0	5	2	15	2	9	4	0	59	0	0	2	0	0	2	3	32	0.4%	245
Day trip / just walk	49	0	0	3	4	1	0	5	2	9	0	1	0	4	2	0	0	0	0	1	1	4	257	3.1%	342
Other non-escort	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	0.1%	4
Escort home	71	3	0	18	25	1	0	9	7	12	2	6	1	1	9	0	13	17	1	5	14	41	109	1.3%	366
Escort work	244	22	2	6	14	0	0	4	6	21	0	4	2	2	2	0	5	7	0	14	12	8	625	7.5%	1,000
Escort in course of work	1	1	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1	0	0	0	0	25	0.3%	31
Escort education	173	14	5	11	4	0	0	1	0	2	1	3	1	0	1	0	0	1	0	8	15	10	211	2.5%	462
Escort shopping / personal business	341	18	4	9	6	0	0	4	1	8	0	3	2	0	5	0	3	16	0	26	14	20	319	3.8%	799
Other escort	373	25	3	29	20	4	0	12	4	33	1	9	4	4	5	0	4	8	0	35	27	79	1,271	15.3%	1,950
Home	17,276	1,547	117	1,666	1,270	333	4	992	90	1,342	79	427	218	32	398	9	415	934	32	558	950	1,357	0		30,045
% Home	57.5%	5.2%	0.4%	5.5%	4.2%	1.1%	0.0%	3.3%	0.3%	4.5%	0.3%	1.4%	0.7%	0.1%	1.3%	0.0%	1.4%	3.1%	0.1%	1.9%	3.2%	4.5%			
All purposes	20,535	2,016	150	1,891	1,562	397	6	1,176	136	1,737	101	531	262	83	536	9	494	1,088	34	684	1,112	1,711	8,312		44,563
Unweighted sample size: trip	18,395	1,950	131	1,698	1,398	388	6	1,120	138	1,745	104	540	267	83	551	9	469	938	30	654	1,060	1,625	7,847		41,146

Telephone: 020 7944 3097
Email: national.travelsurvey@df.t.gsi.gov.uk
[Notes & definitions](#)

Source: National Travel Survey, Department for Transport

PM Peak Car Arrivals

Work Trips	65.9%
Education	2.2%
Other Trips	31.9%

PM Peak Car Departures

Work Trips	21.6%
Education	2.9%
Other Trips	75.6%

Table 1

WU03EW - Location of usual residence and place of work by method of travel to work (MSOA level)

ONS Crown Copyright Reserved [from Nomis on 16 October 2014]

population

units

date

usual residence

All usual residents aged 16 and over in employment the week before the census

Persons

2011

Copeland 005 (2011 super output area - middle layer)

place of work : 2011 super output area - middle layer	All categories: Method of travel to work (2001 specification)	Driving a car or van					Split				Final percentage values			
			Total	North-Low Road	North-A595	A595 South	South-St Bees				North-Low Road	North-A595	A595 South	South-St Bees
Allerdale 001	13	8	0.35%	0.5	0.5	0	1				0.0018	0.0018	0	0
Allerdale 003	5	4	0.18%	0.5	0.5	0	1				0.0009	0.0009	0	0
Allerdale 004	7	6	0.26%	0.5	0.5	0	1				0.0013	0.0013	0	0
Allerdale 005	12	7	0.31%	0.5	0.5	0	1				0.0015	0.0015	0	0
Allerdale 006	12	11	0.48%	0.5	0.5	0	1				0.0024	0.0024	0	0
Allerdale 007	19	17	0.75%	0.5	0.5	0	1				0.0037	0.0037	0	0
Allerdale 008	85	66	2.90%	0.5	0.5	0	1				0.0145	0.0145	0	0
Allerdale 009	138	99	4.35%	0.5	0.5	0	1				0.0217	0.0217	0	0
Allerdale 010	10	7	0.31%	0.5	0.5	0	1				0.0015	0.0015	0	0
Allerdale 011	134	96	4.22%	0.5	0.5	0	1				0.0211	0.0211	0	0
Allerdale 012	10	6	0.26%	0.5	0.5	0	1				0.0013	0.0013	0	0
Barnet 008	1	1	0.04%	0	0	1	1				0	0	0.0004	0
Barrow-in-Furness 003	3	2	0.09%	0	0	1	1				0	0	0.0009	0
Barrow-in-Furness 004	9	8	0.35%	0	0	1	1				0	0	0.0035	0
Barrow-in-Furness 005	1	1	0.04%	0	0	1	1				0	0	0.0004	0
Barrow-in-Furness 008	8	5	0.22%	0	0	1	1				0	0	0.0022	0
Barrow-in-Furness 009	2	1	0.04%	0	0	1	1				0	0	0.0004	0
Bedford 004	1	1	0.04%	0.5	0.5	0	1				0.0002	0.0002	0	0
Birmingham 015	1	1	0.04%	0.5	0.5	0	1				0.0002	0.0002	0	0
Birmingham 071	2	2	0.09%	0.5	0.5	0	1				0.0004	0.0004	0	0
Blaby 004	1	1	0.04%	0.5	0.5	0	1				0.0002	0.0002	0	0
Bradford 038	1	1	0.04%	0.5	0.5	0	1				0.0002	0.0002	0	0
Brentwood 006	2	1	0.04%	0.5	0.5	0	1				0.0002	0.0002	0	0
Bury 005	1	1	0.04%	0.5	0.5	0	1				0.0002	0.0002	0	0
Carlisle 001	2	1	0.04%	0.5	0.5	0	1				0.0002	0.0002	0	0
Carlisle 003	7	5	0.22%	0.5	0.5	0	1				0.0011	0.0011	0	0
Carlisle 004	5	4	0.18%	0.5	0.5	0	1				0.0009	0.0009	0	0
Carlisle 005	3	2	0.09%	0.5	0.5	0	1				0.0004	0.0004	0	0
Carlisle 006	12	9	0.40%	0.5	0.5	0	1				0.002	0.002	0	0
Carlisle 007	2	2	0.09%	0.5	0.5	0	1				0.0004	0.0004	0	0
Carlisle 008	5	4	0.18%	0.5	0.5	0	1				0.0009	0.0009	0	0
Carlisle 009	1	1	0.04%	0.5	0.5	0	1				0.0002	0.0002	0	0
Carlisle 010	6	5	0.22%	0.5	0.5	0	1				0.0011	0.0011	0	0
Carlisle 011	2	2	0.09%	0.5	0.5	0	1				0.0004	0.0004	0	0
Carlisle 012	1	1	0.04%	0.5	0.5	0	1				0.0002	0.0002	0	0
Carlisle 013	6	5	0.22%	0.5	0.5	0	1				0.0011	0.0011	0	0
Central Bedfordshire 024	1	1	0.04%	0.5	0.5	0	1				0.0002	0.0002	0	0
Cheshire East 004	1	1	0.04%	0.5	0.5	0	1				0.0002	0.0002	0	0
Cheshire East 007	2	2	0.09%	0.5	0.5	0	1				0.0004	0.0004	0	0
Colchester 015	1	1	0.04%	0.5	0.5	0	1				0.0002	0.0002	0	0
Copeland 001	54	38	1.67%	0.5	0.5	0	1				0.0083	0.0083	0	0
Copeland 002	843	415	18.23%	1	0	0	1				0.1823	0	0	0
Copeland 003	371	239	10.50%	0.5	0.5	0	1				0.0525	0.0525	0	0
Copeland 004	107	74	3.25%	0	0.5	0.5	1				0	0.0162	0.0162	0
Copeland 005	342	133	5.84%	0.34	0.33	0	1				0.0199	0.0193	0	0.0193
Copeland 006	174	145	6.37%	0	0	0.75	1				0	0	0.0478	0.0159
Copeland 007	954	708	31.09%	0	0	0.75	1				0	0	0.2332	0.0777
Copeland 008	50	29	1.27%	0	0	0.5	1				0	0	0.0064	0.0064
County Durham 042	1	1	0.04%	0.5	0.5	0	1				0.0002	0.0002	0	0
Darlington 008	1	1	0.04%	0.5	0.5	0	1				0.0002	0.0002	0	0
Eastleigh 010	1	1	0.04%	0.5	0.5	0	1				0.0002	0.0002	0	0
Eden 001	11	5	0.22%	0.5	0.5	0	1				0.0011	0.0011	0	0
Eden 002	2	2	0.09%	0.5	0.5	0	1				0.0004	0.0004	0	0
Eden 003	26	10	0.44%	0.5	0.5	0	1				0.0022	0.0022	0	0
Eden 004	5	4	0.18%	0.5	0.5	0	1				0.0009	0.0009	0	0
Eden 005	3	1	0.04%	0.5	0.5	0	1				0.0002	0.0002	0	0
Eden 006	36	13	0.57%	0.5	0.5	0	1				0.0029	0.0029	0	0
Eden 007	6	5	0.22%	0.5	0.5	0	1				0.0011	0.0011	0	0
Gloucester 007	1	1	0.04%	0.5	0.5	0	1				0.0002	0.0002	0	0
Hambleton 001	2	1	0.04%	0.5	0.5	0	1				0.0002	0.0002	0	0
Horsham 015	2	1	0.04%	0.5	0.5	0	1				0.0002	0.0002	0	0
Kirklees 043	1	1	0.04%	0.5	0.5	0	1				0.0002	0.0002	0	0
Lancaster 014	1	1	0.04%	0.5	0.5	0	1				0.0002	0.0002	0	0
Leeds 039	1	1	0.04%	0.5	0.5	0	1				0.0002	0.0002	0	0
Liverpool 058	1	1	0.04%	0.5	0.5	0	1				0.0002	0.0002	0	0
Maldon 006	1	1	0.04%	0.5	0.5	0	1				0.0002	0.0002	0	0
Manchester 047	1	1	0.04%	0.5	0.5	0	1				0.0002	0.0002	0	0
Manchester 052	1	1	0.04%	0.5	0.5	0	1				0.0002	0.0002	0	0
Manchester 055	2	2	0.09%	0.5	0.5	0	1				0.0004	0.0004	0	0
Manchester 060	1	1	0.04%	0.5	0.5	0	1				0.0002	0.0002	0	0
Middlesbrough 001	3	3	0.13%	0.5	0.5	0	1				0.0007	0.0007	0	0

WU03EW - Location of usual residence and place of work by method of travel to work (MSOA level)

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population

units

date

usual residence

All usual residents aged 16 and over in employment the week before the census

Persons

2011

Copeland 005 (2011 super output area - middle layer)

place of work : 2011 super output area - middle layer	All categories: Method of travel to work (2001 specification)	Driving a car or van	Total	Split				Final percentage values			
				North-Low Road	North-A595	A595 South	South-St Bees	North-Low Road	North-A595	A595 South	South-St Bees
Newark and Sherwood 001	1	1	0.04%	0.5	0.5	0	1	0.0002	0.0002	0	0
Newcastle upon Tyne 024	1	1	0.04%	0.5	0.5	0	1	0.0002	0.0002	0	0
North West Leicestershire 003	1	1	0.04%	0.5	0.5	0	1	0.0002	0.0002	0	0
Northampton 017	1	1	0.04%	0.5	0.5	0	1	0.0002	0.0002	0	0
Northumberland 005	1	1	0.04%	0.5	0.5	0	1	0.0002	0.0002	0	0
Northumberland 037	1	1	0.04%	0.5	0.5	0	1	0.0002	0.0002	0	0
Nuneaton and Bedworth 014	1	1	0.04%	0.5	0.5	0	1	0.0002	0.0002	0	0
Oldham 013	1	1	0.04%	0.5	0.5	0	1	0.0002	0.0002	0	0
Powys 008	4	1	0.04%	0.5	0.5	0	1	0.0002	0.0002	0	0
Preston 004	1	1	0.04%	0.25	0.25	0.25	1	0.0001	0.0001	0.0001	0.0001
Reading 011	1	1	0.04%	0.5	0.5	0	1	0.0002	0.0002	0	0
Richmondshire 004	4	2	0.09%	0.5	0.5	0	1	0.0004	0.0004	0	0
Sheffield 030	1	1	0.04%	0.5	0.5	0	1	0.0002	0.0002	0	0
South Lakeland 001	4	3	0.13%	0.25	0.25	0.5	1	0.0003	0.0003	0.0007	0
South Lakeland 004	2	2	0.09%	0.25	0.25	0.5	1	0.0002	0.0002	0.0004	0
South Lakeland 006	3	3	0.13%	0.25	0.25	0.5	1	0.0003	0.0003	0.0007	0
South Lakeland 008	3	3	0.13%	0.25	0.25	0.5	1	0.0003	0.0003	0.0007	0
South Lakeland 012	4	3	0.13%	0.25	0.25	0.5	1	0.0003	0.0003	0.0007	0
Sunderland 009	2	1	0.04%	0.5	0.5	0	1	0.0002	0.0002	0	0
Tameside 010	1	1	0.04%	0.5	0.5	0	1	0.0002	0.0002	0	0
Tameside 013	1	1	0.04%	0.5	0.5	0	1	0.0002	0.0002	0	0
Trafford 020	1	1	0.04%	0.5	0.5	0	1	0.0002	0.0002	0	0
Wakefield 044	2	2	0.09%	0.5	0.5	0	1	0.0004	0.0004	0	0
Warrington 015	1	1	0.04%	0.5	0.5	0	1	0.0002	0.0002	0	0
West Oxfordshire 014	3	1	0.04%	0.5	0.5	0	1	0.0002	0.0002	0	0
West Somerset 004	1	1	0.04%	0.5	0.5	0	1	0.0002	0.0002	0	0
Wyre 009	1	1	0.04%	0.25	0.25	0.5	1	0.0001	0.0001	0.0002	0
Totals		2,277	100.00%					0.3661	0.1996	0.3149	0.1194
Total Percentage								0.37	0.2	0.31	0.12

In order to protect against disclosure of personal information, records have been swapped between different geographic areas. Some counts will be affected, particularly small counts at the lowest geographies.



APPENDIX F - JUNCTION OUTPUT FILES



MIREHOUSE ROAD / B5345 ST BEE'S ROAD PICADY OUTPUT FILES

TRL LIMITED

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CAPACITIES, QUEUES, AND DELAYS AT 3 OR 4-ARM MAJOR/MINOR PRIORITY JUNCTIONS

PICADY 5.1 ANALYSIS PROGRAM
RELEASE 5.0 (JUNE 2010)

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THE USER OF THIS COMPUTER PROGRAM FOR THE SOLUTION OF AN ENGINEERING PROBLEM IS
IN NO WAY RELIEVED OF HIS/HER RESPONSIBILITY FOR THE CORRECTNESS OF THE SOLUTION

Run with file:-

"\\newcastle13\\data3\\Projects\\A089001 - A089500\\A089228 - Low Road, Whitehaven\\Analysis\\Traffic Models\\
Junction assessments\\With Tempro adjustment for comt dev\\Actual HGV percentage\\St Bees-Mirehouse Rd\\St Bees-Mirehouse Rd.vpi"
(drive-on-the-left) at 10:57:32 on Wednesday, 19 November 2014

RUN INFORMATION

RUN TITLE : Mirehouse Road/ St Bees Road
LOCATION : Whitehaven
DATE : 06/11/14
CLIENT : Astime Properties
ENUMERATOR : narendra.sadhale [2147LT]
JOB NUMBER : A089228
STATUS : Completed
DESCRIPTION :

MAJOR/MINOR JUNCTION CAPACITY AND DELAY

INPUT DATA

MAJOR ROAD (ARM C) ----- MAJOR ROAD (ARM A)
I
I
I
I
I
I
MINOR ROAD (ARM B)

ARM A IS St Bees Road North
ARM B IS Mirehouse Road
ARM C IS St Bees Road South

STREAM LABELLING CONVENTION

STREAM A-B CONTAINS TRAFFIC GOING FROM ARM A TO ARM B
STREAM B-AC CONTAINS TRAFFIC GOING FROM ARM B TO ARM A AND TO ARM C
ETC.

GEOMETRIC DATA

I	DATA ITEM	I	MINOR ROAD B	I
I	TOTAL MAJOR ROAD CARRIAGEWAY WIDTH	I	(W) 6.00 M.	I
I	CENTRAL RESERVE WIDTH	I	(WCR) 0.00 M.	I
I		I		I
I	MAJOR ROAD RIGHT TURN - WIDTH	I	(WC-B) 3.50 M.	I
I	- VISIBILITY	I	(VC-B) 75.00 M.	I
I	- BLOCKS TRAFFIC (SPACES)	I	YES (3)	I
I		I		I
I	MINOR ROAD - VISIBILITY TO LEFT	I	(VB-C) 60.0 M.	I
I	- VISIBILITY TO RIGHT	I	(VB-A) 75.0 M.	I
I	- LANE 1 WIDTH	I	(WB-C) -	I
I	- LANE 2 WIDTH	I	(WB-A) -	I
I	WIDTH AT 0 M FROM JUNCTION	I	10.00 M.	I
I	WIDTH AT 5 M FROM JUNCTION	I	8.50 M.	I
I	WIDTH AT 10 M FROM JUNCTION	I	5.60 M.	I
I	WIDTH AT 15 M FROM JUNCTION	I	5.30 M.	I
I	WIDTH AT 20 M FROM JUNCTION	I	4.70 M.	I
I	- LENGTH OF FLARED SECTION	I	DERIVED: 3 PCU	I

.SLOPES AND INTERCEPT

(NB:Streams may be combined, in which case capacity will be adjusted)

I	Intercept For	Slope For Opposing	Slope For Opposing	I
I	STREAM B-C	STREAM A-C	STREAM A-B	I
I	0.00	0.00	0.00	I

* Due to the presence of a flare, data is not available

I	Intercept For	Slope For Opposing	Slope For Opposing	Slope For Opposing	Slope For Opposing	I
I	STREAM B-A	STREAM A-C	STREAM A-B	STREAM C-A	STREAM C-B	I
I	0.00	0.00	0.00	0.00	0.00	I

* Due to the presence of a flare, data is not available

I	Intercept For	Slope For Opposing	Slope For Opposing	I
I	STREAM C-B	STREAM A-C	STREAM A-B	I
I	704.75	0.27	0.27	I

(NB These values do not allow for any site specific corrections)

TRAFFIC DEMAND DATA

I	ARM	I	FLOW SCALE(%)	I
I	A	I	100	I
I	B	I	100	I
I	C	I	100	I

Demand set: 2014 Base AM

TIME PERIOD BEGINS 07.30 AND ENDS 09.00

LENGTH OF TIME PERIOD - 90 MIN.

LENGTH OF TIME SEGMENT - 15 MIN.

DEMAND FLOW PROFILES ARE SYNTHESISED FROM TURNING COUNT DATA

I	ARM	I	NUMBER OF MINUTES FROM START WHEN	I	RATE OF FLOW (VEH/MIN)	I
I	I	I	I FLOW STARTS I TOP OF PEAK I FLOW STOPS I BEFORE I AT TOP I AFTER	I	I	I
I	I	I	I TO RISE I IS REACHED I FALLING I PEAK I OF PEAK I PEAK	I	I	I
I		I		I		I
I	ARM A	I	15.00 I 45.00 I 75.00 I 0.51 I 0.77 I 0.51	I		I
I	ARM B	I	15.00 I 45.00 I 75.00 I 2.81 I 4.22 I 2.81	I		I
I	ARM C	I	15.00 I 45.00 I 75.00 I 3.03 I 4.54 I 3.03	I		I

Demand set: 2014 Base AM

I		I	TURNING PROPORTIONS	I
I		I	TURNING COUNTS	I
I		I	(PERCENTAGE OF H.V.S)	I
I		I		I
I	TIME	I	FROM/TO I ARM A I ARM B I ARM C	I
I	07.30 - 09.00	I		I
I		I	ARM A I 0.000 I 0.000 I 1.000	I
I		I	I 0.0 I 0.0 I 41.0	I
I		I	I (0.0) I (0.0) I (0.0)	I
I		I	I I I	I
I		I	ARM B I 0.351 I 0.000 I 0.649	I
I		I	I 79.0 I 0.0 I 146.0	I
I		I	I (0.0) I (0.0) I (0.0)	I
I		I	I I I	I
I		I	ARM C I 0.240 I 0.760 I 0.000	I
I		I	I 58.0 I 184.0 I 0.0	I
I		I	I (0.0) I (0.0) I (0.0)	I
I		I	I I I	I

TURNING PROPORTIONS ARE CALCULATED FROM TURNING COUNT DATA

QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

FOR DEMAND SET 2014 Base AM
AND FOR TIME PERIOD 1

I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	07.30-07.45										I
I	B-C	1.83	11.79	0.155		0.00	0.18	2.7		0.10	I
I	B-A	0.99	7.69	0.129		0.00	0.15	2.1		0.15	I
I	C-AB	2.31	11.61	0.199		0.00	0.25	3.7		0.11	I
I	A-B	0.00									I
I	A-C	0.51									I

I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	07.45-08.00										I
I	B-C	2.19	11.67	0.187		0.18	0.23	3.4		0.11	I
I	B-A	1.18	7.49	0.158		0.15	0.19	2.7		0.16	I
I	C-AB	2.76	11.58	0.238		0.25	0.31	4.7		0.11	I
I	A-B	0.00									I
I	A-C	0.61									I

I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	08.00-08.15										I
I	B-C	2.68	11.50	0.233		0.23	0.30	4.4		0.11	I
I	B-A	1.45	7.21	0.201		0.19	0.25	3.6		0.17	I
I	C-AB	3.38	11.54	0.293		0.31	0.41	6.2		0.12	I
I	A-B	0.00									I
I	A-C	0.75									I

I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	08.15-08.30										I
I	B-C	2.68	11.50	0.233		0.30	0.30	4.5		0.11	I
I	B-A	1.45	7.21	0.201		0.25	0.25	3.7		0.17	I
I	C-AB	3.38	11.54	0.293		0.41	0.41	6.2		0.12	I
I	A-B	0.00									I
I	A-C	0.75									I

I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	08.30-08.45										I
I	B-C	2.19	11.67	0.187		0.30	0.23	3.6		0.11	I
I	B-A	1.18	7.48	0.158		0.25	0.19	2.9		0.16	I
I	C-AB	2.76	11.58	0.238		0.41	0.32	4.7		0.11	I
I	A-B	0.00									I
I	A-C	0.61									I

I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	08.45-09.00										I
I	B-C	1.83	11.79	0.155		0.23	0.19	2.8		0.10	I
I	B-A	0.99	7.69	0.129		0.19	0.15	2.3		0.15	I
I	C-AB	2.31	11.61	0.199		0.32	0.25	3.8		0.11	I
I	A-B	0.00									I
I	A-C	0.51									I

WARNING NO MARGINAL ANALYSIS OF CAPACITIES AS MAJOR ROAD BLOCKING MAY OCCUR

TIME SEGMENT	NO. OF VEHICLES ENDING IN QUEUE
07.45	0.2
08.00	0.2
08.15	0.3
08.30	0.3
08.45	0.2
09.00	0.2

TIME SEGMENT	NO. OF VEHICLES ENDING IN QUEUE
07.45	0.1
08.00	0.2
08.15	0.2
08.30	0.2
08.45	0.2
09.00	0.1

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
07.45	0.2
08.00	0.3
08.15	0.4
08.30	0.4
08.45	0.3
09.00	0.3

I	I	I	I	* QUEUEING *		* INCLUSIVE QUEUEING *			
				* DELAY *		* DELAY *			
I	I	I	I	(MIN)	(MIN/VEH)	(MIN)	(MIN/VEH)		
I	B-C	I	201.0	I	134.0	I	21.4	I	0.11
I	B-A	I	108.7	I	72.5	I	17.4	I	0.16
I	C-AB	I	253.3	I	168.8	I	29.2	I	0.12
I	A-B	I	0.0	I	0.0	I		I	
I	A-C	I	56.4	I	37.6	I		I	
I	ALL	I	699.2	I	466.1	I	68.0	I	0.10

*****END OF RUN*****

(NB:Streams may be combined, in which case capacity will be adjusted)

I	Intercept	For Slope	For Opposing	Slope For Opposing	I
I	STREAM	B-C	STREAM	A-C	STREAM
				A-B	
I	0.00		0.00		0.00

* Due to the presence of a flare, data is not available

I	Intercept For I STREAM B-A	Slope For STREAM A-C	Opposing A-B	Slope For STREAM C-A	Opposing C-B	Opposing I
I	0.00	0.00	0.00	0.00	0.00	I

* Due to the presence of a flare, data is not available

I	Intercept	For	Slope	For	Opposing	Slope	For	Opposing	I
I	STREAM	C-B	STREAM	A-C	STREAM	A-B	STREAM	A-B	I
I	704.75			0.27		0.27			I

(NB These values do not allow for any site specific corrections)

I	ARM	I	FLOW	SCALE (%)	I
I	A	I		100	I
I	B	I		100	I
I	C	I		100	I

Demand set: 2014 Base PM

TIME PERIOD BEGINS 16.00 AND ENDS 17.30

LENGTH OF TIME PERIOD - 90 MIN.
LENGTH OF TIME SEGMENT - 15 MIN.

DEMAND FLOW PROFILES ARE SYNTHESISED FROM TURNING COUNT DATA

		NUMBER OF MINUTES FROM START WHEN			RATE OF FLOW (VEH/MIN)									
I	ARM	I	FLOW STARTS	I	TOP OF PEAK	I	FLOW STOPS	I	BEFORE	I	AT TOP	I	AFTER	
I		I	TO RISE	I	IS REACHED	I	FALLING	I	PEAK	I	OF PEAK	I	PEAK	
I		I		I		I		I		I		I		
I	ARM	A	I	15.00	I	45.00	I	75.00	I	0.81	I	1.22	I	0.81
I	ARM	B	I	15.00	I	45.00	I	75.00	I	3.69	I	5.53	I	3.69
I	ARM	C	I	15.00	I	45.00	I	75.00	I	5.93	I	8.89	I	5.93

Demand set: 2014 Base PM

TIME	TURNING PROPORTIONS TURNING COUNTS (PERCENTAGE OF H.V.S)						
	FROM/TO	ARM	A	ARM	B	ARM	C
16.00 - 17.30	ARM A	I	0.000	I	0.000	I	1.000
		I	0.0	I	0.0	I	65.0
		I (0.0)	I (0.0)	I (0.0)	I (0.0)	I	
	ARM B	I	0.664	I	0.000	I	0.336
		I	196.0	I	0.0	I	99.0
		I (0.0)	I (0.0)	I (0.0)	I (0.0)	I	
	ARM C	I	0.517	I	0.483	I	0.000
		I	245.0	I	229.0	I	0.0
		I (0.0)	I (0.0)	I (0.0)	I (0.0)	I	

TURNING PROPORTIONS ARE CALCULATED FROM TURNING COUNT DATA

QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

FOR DEMAND SET 2014 Base PM
AND FOR TIME PERIOD 2

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
16.00-16.15									
B-C	1.24	9.86	0.126		0.00	0.14	2.1		0.12
B-A	2.46	7.99	0.308		0.00	0.44	6.2		0.18
C-AB	2.87	11.52	0.249		0.00	0.33	4.9		0.12
A-B	0.00								
A-C	0.82								

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
16.15-16.30									
B-C	1.48	9.56	0.155		0.14	0.18	2.7		0.12
B-A	2.94	7.62	0.385		0.44	0.61	8.8		0.21
C-AB	3.43	11.48	0.299		0.33	0.43	6.4		0.12
A-B	0.00								
A-C	0.97								

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
16.30-16.45									
B-C	1.82	9.03	0.201		0.18	0.25	3.6		0.14
B-A	3.60	7.12	0.505		0.61	0.99	13.9		0.28
C-AB	4.20	11.42	0.368		0.43	0.58	8.8		0.14
A-B	0.00								
A-C	1.19								

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
16.45-17.00									
B-C	1.82	9.02	0.201		0.25	0.25	3.8		0.14
B-A	3.60	7.11	0.506		0.99	1.00	15.0		0.28
C-AB	4.20	11.42	0.368		0.58	0.59	8.9		0.14
A-B	0.00								
A-C	1.19								

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
17.00-17.15									
B-C	1.48	9.55	0.155		0.25	0.19	2.9		0.12
B-A	2.94	7.62	0.386		1.00	0.64	10.1		0.22
C-AB	3.43	11.48	0.299		0.59	0.43	6.5		0.12
A-B	0.00								
A-C	0.97								

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
17.15-17.30									
B-C	1.24	9.84	0.126		0.19	0.15	2.2		0.12
B-A	2.46	7.98	0.308		0.64	0.45	7.1		0.18
C-AB	2.87	11.52	0.249		0.43	0.34	5.1		0.12
A-B	0.00								
A-C	0.82								

WARNING NO MARGINAL ANALYSIS OF CAPACITIES AS MAJOR ROAD BLOCKING MAY OCCUR

 QUEUE FOR STREAM B-C

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
16.15	0.1
16.30	0.2
16.45	0.2
17.00	0.3
17.15	0.2
17.30	0.1

QUEUE FOR STREAM B-A

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
16.15	0.4	
16.30	0.6	*
16.45	1.0	*
17.00	1.0	*
17.15	0.6	*
17.30	0.5	

QUEUE FOR STREAM C-AB

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
16.15	0.3	
16.30	0.4	
16.45	0.6	*
17.00	0.6	*
17.15	0.4	
17.30	0.3	

QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

I	STREAM	I	TOTAL DEMAND	I	* QUEUEING *	I	* INCLUSIVE QUEUEING *	I
I	I	I	I	I	* DELAY *	I	* DELAY *	I
I	I	I	(VEH)	(VEH/H)	(MIN)	(MIN/VEH)	(MIN)	(MIN/VEH)
I	B-C	I	136.3	I	90.8	I	17.2	I
I	B-A	I	269.8	I	179.9	I	61.1	I
I	C-AB	I	315.2	I	210.1	I	40.6	I
I	A-B	I	0.0	I	0.0	I		I
I	A-C	I	89.5	I	59.6	I		I
I	ALL	I	1147.9	I	765.3	I	118.9	I

 * DELAY IS THAT OCCURRING ONLY WITHIN THE TIME PERIOD
 * INCLUSIVE DELAY INCLUDES DELAY SUFFERED BY VEHICLES
 WHICH ARE STILL QUEUEING AFTER THE END OF THE TIME PERIOD
 * THESE WILL ONLY BE SIGNIFICANTLY DIFFERENT IF THERE IS
 A LARGE QUEUE REMAINING AT THE END OF THE TIME PERIOD.

*****END OF RUN*****

===== end of file =====

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CAPACITIES, QUEUES, AND DELAYS AT 3 OR 4-ARM MAJOR/MINOR PRIORITY JUNCTIONS

PICADY 5.1 ANALYSIS PROGRAM
RELEASE 5.0 (JUNE 2010)

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Run with file:-

"\\newcastle13\data3\Projects\A089001 - A089500\A089228 - Low Road, Whitehaven\Analysis\Traffic Models\
Junction assessments\With Tempro adjustment for comt dev\Actual HGV percentage\St Bees-Mirehouse Rd\St Bees-Mirehouse Rd_oneyway.vpi"
(drive-on-the-left) at 11:00:18 on Wednesday, 19 November 2014

RUN INFORMATION

RUN TITLE : St Bees North (Minor Road)/Mirehouse Road
LOCATION : Whitehaven
DATE : 07/11/14
CLIENT :
ENUMERATOR : narendra.sadhale [2147LT]
JOB NUMBER : A089228
STATUS : Completed
DESCRIPTION :

MAJOR/MINOR JUNCTION CAPACITY AND DELAY

INPUT DATA

MAJOR ROAD (ARM C) ----- MAJOR ROAD (ARM A)
I
I
I
I
I
I
MINOR ROAD (ARM B)

ARM A IS St Bees Road South
ARM B IS St Bees Road North
ARM C IS Mirehouse Road

STREAM LABELLING CONVENTION

STREAM A-B CONTAINS TRAFFIC GOING FROM ARM A TO ARM B
STREAM B-AC CONTAINS TRAFFIC GOING FROM ARM B TO ARM A AND TO ARM C
ETC.

GEOMETRIC DATA

I	DATA ITEM	I	MINOR ROAD B	I
I	TOTAL MAJOR ROAD CARRIAGEWAY WIDTH	I	(W) 12.00 M.	I
I	CENTRAL RESERVE WIDTH	I	(WCR) 0.00 M.	I
I		I		I
I	MAJOR ROAD RIGHT TURN - WIDTH	I	(WC-B) 2.20 M.	I
I	- VISIBILITY	I	(VC-B) 0.00 M.	I
I	- BLOCKS TRAFFIC (SPACES)	I	NO (0)	I
I		I		I
I	MINOR ROAD - VISIBILITY TO LEFT	I	(VB-C) 75.0 M.	I
I	- VISIBILITY TO RIGHT	I	(VB-A) 50.0 M.	I
I	- LANE 1 WIDTH	I	(WB-C) -	I
I	- LANE 2 WIDTH	I	(WB-A) -	I
I	WIDTH AT 0 M FROM JUNCTION	I	8.00 M.	I
I	WIDTH AT 5 M FROM JUNCTION	I	4.50 M.	I
I	WIDTH AT 10 M FROM JUNCTION	I	3.60 M.	I
I	WIDTH AT 15 M FROM JUNCTION	I	3.00 M.	I
I	WIDTH AT 20 M FROM JUNCTION	I	2.50 M.	I
I	- LENGTH OF FLARED SECTION	I	1 VEHs	I

.SLOPES AND INTERCEPT

(NB:Streams may be combined, in which case capacity will be adjusted)

I	Intercept For	Slope For Opposing	Slope For Opposing	I
I	STREAM B-C	STREAM A-C	STREAM A-B	I
I	0.00	0.00	0.00	I

* Due to the presence of a flare, data is not available

I	Intercept For	Slope For Opposing	Slope For Opposing	Slope For Opposing	Slope For Opposing	I
I	STREAM B-A	STREAM A-C	STREAM A-B	STREAM C-A	STREAM C-B	I
I	0.00	0.00	0.00	0.00	0.00	I

* Due to the presence of a flare, data is not available

I	Intercept For	Slope For Opposing	Slope For Opposing	I
I	STREAM C-B	STREAM A-C	STREAM A-B	I
I	573.96	0.16	0.16	I

(NB These values do not allow for any site specific corrections)

TRAFFIC DEMAND DATA

I	ARM	I	FLOW SCALE(%)	I
I	A	I	100	I
I	B	I	100	I
I	C	I	100	I

Demand set: 2014AM

TIME PERIOD BEGINS 07.30 AND ENDS 09.00

LENGTH OF TIME PERIOD - 90 MIN.
 LENGTH OF TIME SEGMENT - 15 MIN.

DEMAND FLOW PROFILES ARE SYNTHESISED FROM TURNING COUNT DATA

I	ARM	I	NUMBER OF MINUTES FROM START WHEN	I	RATE OF FLOW (VEH/MIN)	I
I	I	I	I FLOW STARTS I TOP OF PEAK I FLOW STOPS I BEFORE I AT TOP I AFTER	I	I	I
I	I	I	I TO RISE I IS REACHED I FALLING I PEAK I OF PEAK I PEAK	I	I	I
I	A	I	15.00 I 45.00 I 75.00 I 2.30 I 3.45 I 2.30	I		I
I	B	I	15.00 I 45.00 I 75.00 I 0.98 I 1.46 I 0.98	I		I
I	C	I	15.00 I 45.00 I 75.00 I 0.00 I 0.00 I 0.00	I		I

Demand set: 2014AM

I		I	TURNING PROPORTIONS	I
I		I	TURNING COUNTS	I
I		I	(PERCENTAGE OF H.V.S)	I
I		I		I
I	TIME	I	FROM/TO I ARM A I ARM B I ARM C	I
I	07.30 - 09.00	I		I
I		I	ARM A I 0.000 I 0.000 I 1.000	I
I		I	I 0.0 I 0.0 I 184.0	I
I		I	I (0.0) I (0.0) I (0.0)	I
I		I	I	I
I		I	ARM B I 0.000 I 0.000 I 1.000	I
I		I	I 0.0 I 0.0 I 78.0	I
I		I	I (0.0) I (0.0) I (0.0)	I
I		I	I	I
I		I	ARM C I 0.000 I 0.000 I 0.000	I
I		I	I 0.0 I 0.0 I 0.0	I
I		I	I (0.0) I (0.0) I (0.0)	I
I		I	I	I

TURNING PROPORTIONS ARE CALCULATED FROM TURNING COUNT DATA

QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

FOR DEMAND SET 2014AM
 AND FOR TIME PERIOD 1

I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	07.30-07.45										I
I	B-C	0.98	11.25	0.087		0.00	0.09	1.4		0.10	I
I	B-A	0.00	6.46	0.000		0.00	0.00	0.0		0.00	I
I	C-A	0.00									I
I	C-B	0.00	8.35	0.000		0.00	0.00	0.0		0.00	I
I	A-B	0.00									I
I	A-C	2.31									I

I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	07.45-08.00										I
I	B-C	1.17	11.16	0.105		0.09	0.12	1.7		0.10	I
I	B-A	0.00	6.40	0.000		0.00	0.00	0.0		0.00	I
I	C-A	0.00									I
I	C-B	0.00	8.28	0.000		0.00	0.00	0.0		0.00	I
I	A-B	0.00									I
I	A-C	2.76									I

I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	08.00-08.15										I
I	B-C	1.43	11.03	0.130		0.12	0.15	2.2		0.10	I
I	B-A	0.00	6.32	0.000		0.00	0.00	0.0		0.00	I
I	C-A	0.00									I
I	C-B	0.00	8.19	0.000		0.00	0.00	0.0		0.00	I
I	A-B	0.00									I
I	A-C	3.38									I

I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	08.15-08.30										I
I	B-C	1.43	11.03	0.130		0.15	0.15	2.2		0.10	I
I	B-A	0.00	6.32	0.000		0.00	0.00	0.0		0.00	I
I	C-A	0.00									I
I	C-B	0.00	8.19	0.000		0.00	0.00	0.0		0.00	I
I	A-B	0.00									I
I	A-C	3.38									I

I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	08.30-08.45										I
I	B-C	1.17	11.16	0.105		0.15	0.12	1.8		0.10	I
I	B-A	0.00	6.40	0.000		0.00	0.00	0.0		0.00	I
I	C-A	0.00									I
I	C-B	0.00	8.28	0.000		0.00	0.00	0.0		0.00	I
I	A-B	0.00									I
I	A-C	2.76									I

I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	08.45-09.00										I
I	B-C	0.98	11.25	0.087		0.12	0.10	1.5		0.10	I
I	B-A	0.00	6.46	0.000		0.00	0.00	0.0		0.00	I
I	C-A	0.00									I
I	C-B	0.00	8.35	0.000		0.00	0.00	0.0		0.00	I
I	A-B	0.00									I
I	A-C	2.31									I

QUEUE FOR STREAM B-C

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
07.45	0.1
08.00	0.1
08.15	0.1
08.30	0.1
08.45	0.1
09.00	0.1

QUEUE FOR STREAM B-A

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
07.45	0.0
08.00	0.0
08.15	0.0
08.30	0.0
08.45	0.0
09.00	0.0

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
07.45	0.0
08.00	0.0
08.15	0.0
08.30	0.0
08.45	0.0
09.00	0.0

I	STREAM	I	TOTAL DEMAND	I	* QUEUEING *	I	* INCLUSIVE QUEUEING *	I	
I		I		I	* DELAY *	I	* DELAY *	I	
I		I	(VEH)	I	(MIN)	I	(MIN)	I	
I		I	(VEH/H)	I	(MIN/VEH)	I	(MIN/VEH)	I	
I	B-C	I	107.4	I	71.6	I	10.8	I	0.10
I	B-A	I	0.0	I	0.0	I	0.0	I	0.00
I	C-A	I	0.0	I	0.0	I	0.0	I	0.00
I	C-B	I	0.0	I	0.0	I	0.0	I	0.00
I	A-B	I	0.0	I	0.0	I	0.0	I	0.00
I	A-C	I	253.3	I	168.8	I	10.8	I	0.10
I	ALL	I	360.6	I	240.4	I	10.8	I	0.03

*****END OF RUN*****

(NB:Streams may be combined, in which case capacity will be adjusted)

I	Intercept For	Slope For Opposing	Slope For Opposing I
I	STREAM B-C	STREAM A-C	STREAM A-B
I	0.00	0.00	0.00

* Due to the presence of a flare, data is not available

I	Intercept For I STREAM B-A	Slope For STREAM	Opposing A-C	Slope For STREAM	Opposing A-B	Slope For STREAM	Opposing C-A	Slope For STREAM	Opposing C-B	I
I	0.00		0.00		0.00		0.00		0.00	I

* Due to the presence of a flare, data is not available

I	Intercept For	Slope For	Opposing	Slope For	Opposing	I
I	STREAM C-B	STREAM	A-C	STREAM	A-B	I
I	573.96		0.16		0.16	I

(NB These values do not allow for any site specific corrections)

I	ARM	I	FLOW	SCALE (%)	I
I	A	I		100	I
I	B	I		100	I
I	C	I		100	I

Demand set: 2014 PM

TIME PERIOD BEGINS 16.00 AND ENDS 17.30

LENGTH OF TIME PERIOD - 90 MIN.
LENGTH OF TIME SEGMENT - 15 MIN.

DEMAND FLOW PROFILES ARE SYNTHESISED FROM TURNING COUNT DATA

		NUMBER OF MINUTES FROM START WHEN					RATE OF FLOW (VEH/MIN)							
I	ARM	I	FLOW STARTS	I	TOP OF PEAK	I	FLOW STOPS	I	BEFORE	I	AT TOP	I	AFTER	
I		I	TO RISE	I	IS REACHED	I	FALLING	I	PEAK	I	OF PEAK	I	PEAK	
I		I		I		I		I		I		I		
I	ARM	A	I	15.00	I	45.00	I	75.00	I	2.86	I	4.29	I	2.86
I	ARM	B	I	15.00	I	45.00	I	75.00	I	1.24	I	1.86	I	1.24
I	ARM	C	I	15.00	I	45.00	I	75.00	I	0.00	I	0.00	I	0.00

Demand set: 2014 PM

TIME	TURNING PROPORTIONS TURNING COUNTS (PERCENTAGE OF H.V.S)						
	FROM/TO	ARM	A	ARM	B	ARM	C
16.00 - 17.30	ARM A	I	0.000	I	0.000	I	1.000
		I	0.0	I	0.0	I	229.0
		I (0.0)	I (0.0)	I (0.0)	I (0.0)	I	
	ARM B	I	0.000	I	0.000	I	1.000
		I	0.0	I	0.0	I	99.0
		I (0.0)	I (0.0)	I (0.0)	I (0.0)	I	
	ARM C	I	0.000	I	0.000	I	0.000
		I	0.0	I	0.0	I	0.0
		I (0.0)	I (0.0)	I (0.0)	I (0.0)	I	

TURNING PROPORTIONS ARE CALCULATED FROM TURNING COUNT DATA

QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

FOR DEMAND SET 2014 PM
AND FOR TIME PERIOD 2

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
16.00-16.15									
B-C	1.24	11.13	0.112		0.00	0.12	1.8		0.10
B-A	0.00	6.39	0.000		0.00	0.00	0.0		0.00
C-A	0.00								
C-B	0.00	8.27	0.000		0.00	0.00	0.0		0.00
A-B	0.00								
A-C	2.87								

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
16.15-16.30									
B-C	1.48	11.02	0.135		0.12	0.15	2.3		0.10
B-A	0.00	6.31	0.000		0.00	0.00	0.0		0.00
C-A	0.00								
C-B	0.00	8.18	0.000		0.00	0.00	0.0		0.00
A-B	0.00								
A-C	3.43								

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
16.30-16.45									
B-C	1.82	10.87	0.167		0.15	0.20	2.9		0.11
B-A	0.00	6.20	0.000		0.00	0.00	0.0		0.00
C-A	0.00								
C-B	0.00	8.07	0.000		0.00	0.00	0.0		0.00
A-B	0.00								
A-C	4.20								

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
16.45-17.00									
B-C	1.82	10.87	0.167		0.20	0.20	3.0		0.11
B-A	0.00	6.20	0.000		0.00	0.00	0.0		0.00
C-A	0.00								
C-B	0.00	8.07	0.000		0.00	0.00	0.0		0.00
A-B	0.00								
A-C	4.20								

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
17.00-17.15									
B-C	1.48	11.02	0.135		0.20	0.16	2.4		0.10
B-A	0.00	6.31	0.000		0.00	0.00	0.0		0.00
C-A	0.00								
C-B	0.00	8.18	0.000		0.00	0.00	0.0		0.00
A-B	0.00								
A-C	3.43								

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
17.15-17.30									
B-C	1.24	11.13	0.112		0.16	0.13	1.9		0.10
B-A	0.00	6.39	0.000		0.00	0.00	0.0		0.00
C-A	0.00								
C-B	0.00	8.27	0.000		0.00	0.00	0.0		0.00
A-B	0.00								
A-C	2.87								

QUEUE FOR STREAM B-C	
TIME	NO. OF
SEGMENT	VEHICLES
ENDING	IN QUEUE
16.15	0.1
16.30	0.2
16.45	0.2
17.00	0.2
17.15	0.2
17.30	0.1

QUEUE FOR STREAM B-A	
TIME	NO. OF
SEGMENT	VEHICLES
ENDING	IN QUEUE
16.15	0.0
16.30	0.0
16.45	0.0
17.00	0.0
17.15	0.0
17.30	0.0

QUEUE FOR STREAM C-B	
TIME	NO. OF
SEGMENT	VEHICLES
ENDING	IN QUEUE
16.15	0.0
16.30	0.0
16.45	0.0
17.00	0.0
17.15	0.0
17.30	0.0

QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

I	STREAM	I	TOTAL DEMAND		I	* QUEUEING *		I	* INCLUSIVE QUEUEING *		I
I	I	I	I		I	* DELAY *		I	* DELAY *		I
I	I	I	I		I	I		I	I		I
I	I	I	(VEH)	(VEH/H)	I	(MIN)	(MIN/VEH)	I	(MIN)	(MIN/VEH)	I
I	B-C	I	136.3	I 90.8	I	14.3	I 0.11	I	14.3	I 0.11	I
I	B-A	I	0.0	I 0.0	I	0.0	I 0.00	I	0.0	I 0.00	I
I	C-A	I	0.0	I 0.0	I	I	I	I	I	I	I
I	C-B	I	0.0	I 0.0	I	0.0	I 0.00	I	0.0	I 0.00	I
I	A-B	I	0.0	I 0.0	I	I	I	I	I	I	I
I	A-C	I	315.2	I 210.1	I	I	I	I	I	I	I
I	ALL	I	451.5	I 301.0	I	14.3	I 0.03	I	14.3	I 0.03	I

* DELAY IS THAT OCCURRING ONLY WITHIN THE TIME PERIOD
 * INCLUSIVE DELAY INCLUDES DELAY SUFFERED BY VEHICLES
 WHICH ARE STILL QUEUEING AFTER THE END OF THE TIME PERIOD
 * THESE WILL ONLY BE SIGNIFICANTLY DIFFERENT IF THERE IS
 A LARGE QUEUE REMAINING AT THE END OF THE TIME PERIOD.

*****END OF RUN*****

===== end of file =====

TRL LIMITED

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CAPACITIES, QUEUES, AND DELAYS AT 3 OR 4-ARM MAJOR/MINOR PRIORITY JUNCTIONS

PICADY 5.1 ANALYSIS PROGRAM
RELEASE 5.0 (JUNE 2010)

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Run with file:-

"\\newcastle13\\data3\\Projects\\A089001 - A089500\\A089228 - Low Road, Whitehaven\\Analysis\\Traffic Models\\
Junction assessments\\With Tempro adjustment for comt dev\\Actual HGV percentage\\St Bees-Mirehouse Rd\\St Bees-Mirehouse Rd.vpi"
(drive-on-the-left) at 10:58:31 on Wednesday, 19 November 2014

RUN INFORMATION

RUN TITLE : Mirehouse Road/ St Bees Road
LOCATION : Whitehaven
DATE : 06/11/14
CLIENT : Astime Properties
ENUMERATOR : narendra.sadhale [2147LT]
JOB NUMBER : A089228
STATUS : Completed
DESCRIPTION :

MAJOR/MINOR JUNCTION CAPACITY AND DELAY

INPUT DATA

MAJOR ROAD (ARM C) ----- MAJOR ROAD (ARM A)

I
I
I
I
I
I
I

MINOR ROAD (ARM B)

ARM A IS St Bees Road North
ARM B IS Mirehouse Road
ARM C IS St Bees Road South

STREAM LABELLING CONVENTION

STREAM A-B CONTAINS TRAFFIC GOING FROM ARM A TO ARM B
STREAM B-AC CONTAINS TRAFFIC GOING FROM ARM B TO ARM A AND TO ARM C
ETC.

FOR DEMAND SET 2024 DM AM
AND FOR TIME PERIOD 1

I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	07.30-07.45										I
I	B-C	2.25	10.97	0.205		0.00	0.25	3.7		0.11	I
I	B-A	1.94	7.54	0.258		0.00	0.34	4.9		0.18	I
I	C-AB	3.58	11.64	0.307		0.00	0.44	6.5		0.12	I
I	A-B	0.00									I
I	A-C	0.38									I

I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	07.45-08.00										I
I	B-C	2.68	10.75	0.250		0.25	0.33	4.8		0.12	I
I	B-A	2.32	7.22	0.322		0.34	0.47	6.7		0.20	I
I	C-AB	4.27	11.62	0.367		0.44	0.58	8.7		0.14	I
I	A-B	0.00									I
I	A-C	0.45									I

I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	08.00-08.15										I
I	B-C	3.28	10.39	0.316		0.33	0.46	6.6		0.14	I
I	B-A	2.84	6.78	0.419		0.47	0.70	10.0		0.25	I
I	C-AB	5.23	11.60	0.451		0.58	0.82	12.2		0.16	I
I	A-B	0.00									I
I	A-C	0.55									I

I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	08.15-08.30										I
I	B-C	3.28	10.38	0.316		0.46	0.46	6.9		0.14	I
I	B-A	2.84	6.78	0.420		0.70	0.71	10.6		0.25	I
I	C-AB	5.23	11.60	0.451		0.82	0.83	12.5		0.16	I
I	A-B	0.00									I
I	A-C	0.55									I

I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	08.30-08.45										I
I	B-C	2.68	10.74	0.250		0.46	0.34	5.2		0.12	I
I	B-A	2.32	7.21	0.322		0.71	0.48	7.6		0.21	I
I	C-AB	4.27	11.62	0.367		0.83	0.59	8.9		0.14	I
I	A-B	0.00									I
I	A-C	0.45									I

I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	08.45-09.00										I
I	B-C	2.25	10.96	0.205		0.34	0.26	4.0		0.11	I
I	B-A	1.94	7.52	0.258		0.48	0.35	5.5		0.18	I
I	C-AB	3.58	11.64	0.307		0.59	0.45	6.8		0.12	I
I	A-B	0.00									I
I	A-C	0.38									I

WARNING NO MARGINAL ANALYSIS OF CAPACITIES AS MAJOR ROAD BLOCKING MAY OCCUR

TIME SEGMENT	NO. OF VEHICLES ENDING IN QUEUE
07.45	0.3
08.00	0.3
08.15	0.5
08.30	0.5
08.45	0.3
09.00	0.3

TIME SEGMENT	NO. OF VEHICLES ENDING IN QUEUE	
07.45	0.3	
08.00	0.5	
08.15	0.7	*
08.30	0.7	*
08.45	0.5	
09.00	0.4	

QUEUE FOR STREAM C-AB

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
07.45	0.4
08.00	0.6 *
08.15	0.8 *
08.30	0.8 *
08.45	0.6 *
09.00	0.4

QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

I	STREAM	I	TOTAL DEMAND	I	* QUEUEING *	I	* INCLUSIVE QUEUEING *	I
I	I	I	I	I	* DELAY *	I	* DELAY *	I
I	I	I	(VEH)	(VEH/H)	(MIN)	(MIN/VEH)	(MIN)	(MIN/VEH)
I	B-C	I	246.4	I	164.3	I	31.2	I
I	B-A	I	213.3	I	142.2	I	45.4	I
I	C-AB	I	392.3	I	261.5	I	55.6	I
I	A-B	I	0.0	I	0.0	I	I	I
I	A-C	I	41.3	I	27.5	I	I	I
I	ALL	I	1028.2	I	685.5	I	132.1	I

* DELAY IS THAT OCCURRING ONLY WITHIN THE TIME PERIOD
* INCLUSIVE DELAY INCLUDES DELAY SUFFERED BY VEHICLES
WHICH ARE STILL QUEUEING AFTER THE END OF THE TIME PERIOD
* THESE WILL ONLY BE SIGNIFICANTLY DIFFERENT IF THERE IS
A LARGE QUEUE REMAINING AT THE END OF THE TIME PERIOD.

*****END OF RUN*****

.SLOPES AND INTERCEPT

(NB:Streams may be combined, in which case capacity will be adjusted)

I	Intercept For	Slope For	Opposing	Slope For	Opposing I
I	STREAM B-C	STREAM	A-C	STREAM A-B	I
I	0.00		0.00	0.00	I

* Due to the presence of a flare, data is not available

I	Intercept For	Slope For	Opposing	Slope For	Opposing	Slope For	Opposing	I
I	STREAM B-A	STREAM	A-C	STREAM A-B	STREAM	C-A	STREAM	C-B
I	0.00		0.00	0.00		0.00	0.00	I

* Due to the presence of a flare, data is not available

I	Intercept For	Slope For	Opposing	Slope For	Opposing I
I	STREAM C-B	STREAM	A-C	STREAM A-B	I
I	704.75		0.27	0.27	I

(NB These values do not allow for any site specific corrections)

TRAFFIC DEMAND DATA

I	ARM	I	FLOW SCALE(%)	I
I	A	I	100	I
I	B	I	100	I
I	C	I	100	I

Demand set: 2024 DM PM

TIME PERIOD BEGINS 16.00 AND ENDS 17.30

LENGTH OF TIME PERIOD - 90 MIN.
LENGTH OF TIME SEGMENT - 15 MIN.

DEMAND FLOW PROFILES ARE SYNTHESISED FROM TURNING COUNT DATA

I	ARM	I	NUMBER OF MINUTES FROM START WHEN	I	RATE OF FLOW (VEH/MIN)	I
I	I	I	FLOW STARTS	I	BEFORE	I
I	I	I	TO RISE	I	AT TOP	I
I	I	I	IS REACHED	I	OF PEAK	I
I	I	I	FALLING	I	PEAK	I
I	A	I	15.00	I	1.38	I
I	B	I	15.00	I	4.35	I
I	C	I	15.00	I	5.43	I

Demand set: 2024 DM PM

TIME	TURNING PROPORTIONS TURNING COUNTS (PERCENTAGE OF H.V.S)						
	FROM/TO	ARM	A	ARM	B	ARM	C
16.00 - 17.30	ARM A	I	0.000	I	0.000	I	1.000
		I	0.0	I	0.0	I	110.0
		I (0.0)	I (0.0)	I (0.0)	I (0.0)	I (0.0)	I (0.0)
	ARM B	I	0.629	I	0.000	I	0.371
		I	219.0	I	0.0	I	129.0
		I (0.0)	I (0.0)	I (0.0)	I (0.0)	I (0.0)	I (0.0)
	ARM C	I	0.410	I	0.590	I	0.000
		I	178.0	I	256.0	I	0.0
		I (0.0)	I (0.0)	I (0.0)	I (0.0)	I (0.0)	I (0.0)

TURNING PROPORTIONS ARE CALCULATED FROM TURNING COUNT DATA

QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

FOR DEMAND SET 2024 DM PM
AND FOR TIME PERIOD 2

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
16.00-16.15									
B-C	1.62	9.70	0.167		0.00	0.20	2.9		0.12
B-A	2.75	7.77	0.353		0.00	0.54	7.6		0.20
C-AB	3.21	11.37	0.283		0.00	0.39	5.8		0.12
A-B	0.00								
A-C	1.38								

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
16.15-16.30									
B-C	1.93	9.31	0.208		0.20	0.26	3.8		0.14
B-A	3.28	7.38	0.445		0.54	0.78	11.1		0.24
C-AB	3.84	11.30	0.340		0.39	0.51	7.7		0.13
A-B	0.00								
A-C	1.65								

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
16.30-16.45									
B-C	2.37	8.53	0.277		0.26	0.38	5.5		0.16
B-A	4.02	6.83	0.588		0.78	1.36	18.8		0.35
C-AB	4.70	11.19	0.420		0.51	0.73	10.9		0.15
A-B	0.00								
A-C	2.02								

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
16.45-17.00									
B-C	2.37	8.49	0.279		0.38	0.38	5.7		0.16
B-A	4.02	6.82	0.589		1.36	1.39	20.7		0.36
C-AB	4.70	11.19	0.420		0.73	0.73	11.1		0.15
A-B	0.00								
A-C	2.02								

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
17.00-17.15									
B-C	1.93	9.27	0.208		0.38	0.27	4.1		0.14
B-A	3.28	7.37	0.445		1.39	0.83	13.2		0.25
C-AB	3.84	11.30	0.340		0.73	0.53	7.9		0.13
A-B	0.00								
A-C	1.65								

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
17.15-17.30									
B-C	1.62	9.67	0.167		0.27	0.20	3.1		0.12
B-A	2.75	7.76	0.354		0.83	0.56	8.8		0.20
C-AB	3.21	11.37	0.283		0.53	0.40	6.0		0.12
A-B	0.00								
A-C	1.38								

WARNING NO MARGINAL ANALYSIS OF CAPACITIES AS MAJOR ROAD BLOCKING MAY OCCUR

 QUEUE FOR STREAM B-C

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
16.15	0.2
16.30	0.3
16.45	0.4
17.00	0.4
17.15	0.3
17.30	0.2

QUEUE FOR STREAM B-A

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
16.15	0.5	*
16.30	0.8	*
16.45	1.4	*
17.00	1.4	*
17.15	0.8	*
17.30	0.6	*

QUEUE FOR STREAM C-AB

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
16.15	0.4	
16.30	0.5	*
16.45	0.7	*
17.00	0.7	*
17.15	0.5	*
17.30	0.4	

 QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

I	STREAM	I	TOTAL DEMAND	I	* QUEUEING *	I	* INCLUSIVE QUEUEING *	I
I	I	I	I	I	* DELAY *	I	* DELAY *	I
I	I	I	I	I	I	I	I	I
I	I	I	(VEH)	(VEH/H)	(MIN)	(MIN/VEH)	(MIN)	(MIN/VEH)
I	B-C	I	177.6	I 118.4	I 25.1	I 0.14	I 25.1	I 0.14
I	B-A	I	301.4	I 201.0	I 80.1	I 0.27	I 80.2	I 0.27
I	C-AB	I	352.4	I 234.9	I 49.3	I 0.14	I 49.4	I 0.14
I	A-B	I	0.0	I 0.0	I	I	I	I
I	A-C	I	151.4	I 100.9	I	I	I	I
I	ALL	I	1227.8	I 818.5	I 154.6	I 0.13	I 154.6	I 0.13

 * DELAY IS THAT OCCURRING ONLY WITHIN THE TIME PERIOD
 * INCLUSIVE DELAY INCLUDES DELAY SUFFERED BY VEHICLES
 WHICH ARE STILL QUEUEING AFTER THE END OF THE TIME PERIOD
 * THESE WILL ONLY BE SIGNIFICANTLY DIFFERENT IF THERE IS
 A LARGE QUEUE REMAINING AT THE END OF THE TIME PERIOD.

*****END OF RUN*****

===== end of file =====

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CAPACITIES, QUEUES, AND DELAYS AT 3 OR 4-ARM MAJOR/MINOR PRIORITY JUNCTIONS

PICADY 5.1 ANALYSIS PROGRAM
RELEASE 5.0 (JUNE 2010)

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Run with file:-

"\\newcastle13\data3\Projects\A089001 - A089500\A089228 - Low Road, Whitehaven\Analysis\Traffic Models\
Junction assessments\With Tempro adjustment for comt dev\Actual HGV percentage\St Bees-Mirehouse Rd\St Bees-Mirehouse Rd_oneyway.vpi"
(drive-on-the-left) at 11:00:45 on Wednesday, 19 November 2014

RUN INFORMATION

RUN TITLE : St Bees North (Minor Road)/Mirehouse Road
LOCATION : Whitehaven
DATE : 07/11/14
CLIENT :
ENUMERATOR : narendra.sadhale [2147LT]
JOB NUMBER : A089228
STATUS : Completed
DESCRIPTION :

MAJOR/MINOR JUNCTION CAPACITY AND DELAY

INPUT DATA

MAJOR ROAD (ARM C) ----- MAJOR ROAD (ARM A)
I
I
I
I
I
I
I
MINOR ROAD (ARM B)

ARM A IS St Bees Road South
ARM B IS St Bees Road North
ARM C IS Mirehouse Road

STREAM LABELLING CONVENTION

STREAM A-B CONTAINS TRAFFIC GOING FROM ARM A TO ARM B
STREAM B-AC CONTAINS TRAFFIC GOING FROM ARM B TO ARM A AND TO ARM C
ETC.

GEOMETRIC DATA

I	DATA ITEM	I	MINOR ROAD B	I
I	TOTAL MAJOR ROAD CARRIAGEWAY WIDTH	I	(W) 12.00 M.	I
I	CENTRAL RESERVE WIDTH	I	(WCR) 0.00 M.	I
I		I		I
I	MAJOR ROAD RIGHT TURN - WIDTH	I	(WC-B) 2.20 M.	I
I	- VISIBILITY	I	(VC-B) 0.00 M.	I
I	- BLOCKS TRAFFIC (SPACES)	I	NO (0)	I
I		I		I
I	MINOR ROAD - VISIBILITY TO LEFT	I	(VB-C) 75.0 M.	I
I	- VISIBILITY TO RIGHT	I	(VB-A) 50.0 M.	I
I	- LANE 1 WIDTH	I	(WB-C) -	I
I	- LANE 2 WIDTH	I	(WB-A) -	I
I	WIDTH AT 0 M FROM JUNCTION	I	8.00 M.	I
I	WIDTH AT 5 M FROM JUNCTION	I	4.50 M.	I
I	WIDTH AT 10 M FROM JUNCTION	I	3.60 M.	I
I	WIDTH AT 15 M FROM JUNCTION	I	3.00 M.	I
I	WIDTH AT 20 M FROM JUNCTION	I	2.50 M.	I
I	- LENGTH OF FLARED SECTION	I	1 VEHs	I

.SLOPES AND INTERCEPT

(NB:Streams may be combined, in which case capacity will be adjusted)

I	Intercept For	Slope For Opposing	Slope For Opposing	I
I	STREAM B-C	STREAM A-C	STREAM A-B	I
I	0.00	0.00	0.00	I

* Due to the presence of a flare, data is not available

I	Intercept For	Slope For Opposing	Slope For Opposing	Slope For Opposing	Slope For Opposing	I
I	STREAM B-A	STREAM A-C	STREAM A-B	STREAM C-A	STREAM C-B	I
I	0.00	0.00	0.00	0.00	0.00	I

* Due to the presence of a flare, data is not available

I	Intercept For	Slope For Opposing	Slope For Opposing	I
I	STREAM C-B	STREAM A-C	STREAM A-B	I
I	573.96	0.16	0.16	I

(NB These values do not allow for any site specific corrections)

TRAFFIC DEMAND DATA

I	ARM	I	FLOW SCALE(%)	I
I	A	I	100	I
I	B	I	100	I
I	C	I	100	I

Demand set: 2024 DM AM

TIME PERIOD BEGINS 07.30 AND ENDS 09.00

LENGTH OF TIME PERIOD - 90 MIN.

LENGTH OF TIME SEGMENT - 15 MIN.

DEMAND FLOW PROFILES ARE SYNTHESISED FROM TURNING COUNT DATA

I	ARM	I	NUMBER OF MINUTES FROM START WHEN	I	RATE OF FLOW (VEH/MIN)	I
I	I	I	I	I	I	I
I	I	I	I	I	I	I
I	I	I	I	I	I	I
I	I	I	I	I	I	I
I	ARM A	I	15.00	I	45.00	I
I	ARM B	I	15.00	I	45.00	I
I	ARM C	I	15.00	I	45.00	I

Demand set: 2024 DM AM

I	TIME	I	FROM/TO	I	ARM	A	I	ARM	B	I	ARM	C	I
I	I	I	I	I	I	I	I	I	I	I	I	I	I
I	07.30 - 09.00	I	ARM A	I	0.000	I	0.000	I	1.000	I			I
I		I		I	0.0	I	0.0	I	285.0	I			I
I		I	(0.0)	I	(0.0)	I	(0.0)	I	(0.0)	I			I
I		I		I		I		I		I			I
I		I	ARM B	I	0.000	I	0.000	I	1.000	I			I
I		I		I	0.0	I	0.0	I	57.0	I			I
I		I	(0.0)	I	(0.0)	I	(0.0)	I	(0.0)	I			I
I		I		I		I		I		I			I
I		I	ARM C	I	0.000	I	0.000	I	0.000	I			I
I		I		I	0.0	I	0.0	I	0.0	I			I
I		I	(0.0)	I	(0.0)	I	(0.0)	I	(0.0)	I			I
I		I		I		I		I		I			I

TURNING PROPORTIONS ARE CALCULATED FROM TURNING COUNT DATA

QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

FOR DEMAND SET 2024 DM AM
AND FOR TIME PERIOD 1

I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	07.30-07.45										I
I	B-C	0.72	10.99	0.065		0.00	0.07	1.0		0.10	I
I	B-A	0.00	6.29	0.000		0.00	0.00	0.0		0.00	I
I	C-A	0.00									I
I	C-B	0.00	8.16	0.000		0.00	0.00	0.0		0.00	I
I	A-B	0.00									I
I	A-C	3.58									I

I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	07.45-08.00										I
I	B-C	0.85	10.85	0.079		0.07	0.08	1.3		0.10	I
I	B-A	0.00	6.19	0.000		0.00	0.00	0.0		0.00	I
I	C-A	0.00									I
I	C-B	0.00	8.06	0.000		0.00	0.00	0.0		0.00	I
I	A-B	0.00									I
I	A-C	4.27									I

I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	08.00-08.15										I
I	B-C	1.05	10.66	0.098		0.08	0.11	1.6		0.10	I
I	B-A	0.00	6.06	0.000		0.00	0.00	0.0		0.00	I
I	C-A	0.00									I
I	C-B	0.00	7.92	0.000		0.00	0.00	0.0		0.00	I
I	A-B	0.00									I
I	A-C	5.23									I

I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	08.15-08.30										I
I	B-C	1.05	10.66	0.098		0.11	0.11	1.6		0.10	I
I	B-A	0.00	6.06	0.000		0.00	0.00	0.0		0.00	I
I	C-A	0.00									I
I	C-B	0.00	7.92	0.000		0.00	0.00	0.0		0.00	I
I	A-B	0.00									I
I	A-C	5.23									I

I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	08.30-08.45										I
I	B-C	0.85	10.85	0.079		0.11	0.09	1.3		0.10	I
I	B-A	0.00	6.19	0.000		0.00	0.00	0.0		0.00	I
I	C-A	0.00									I
I	C-B	0.00	8.06	0.000		0.00	0.00	0.0		0.00	I
I	A-B	0.00									I
I	A-C	4.27									I

I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	08.45-09.00										I
I	B-C	0.72	10.99	0.065		0.09	0.07	1.1		0.10	I
I	B-A	0.00	6.29	0.000		0.00	0.00	0.0		0.00	I
I	C-A	0.00									I
I	C-B	0.00	8.16	0.000		0.00	0.00	0.0		0.00	I
I	A-B	0.00									I
I	A-C	3.58									I

QUEUE FOR STREAM B-C

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
07.45	0.1
08.00	0.1
08.15	0.1
08.30	0.1
08.45	0.1
09.00	0.1

QUEUE FOR STREAM B-A

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
07.45	0.0
08.00	0.0
08.15	0.0
08.30	0.0
08.45	0.0
09.00	0.0

QUEUE FOR STREAM C-B

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
07.45	0.0
08.00	0.0
08.15	0.0
08.30	0.0
08.45	0.0
09.00	0.0

QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

I	STREAM	I	TOTAL DEMAND	I	* QUEUEING *	I	* INCLUSIVE QUEUEING *	I
I	I	I	I	I	* DELAY *	I	* DELAY *	I
I	I	I	I	I	I	I	I	I
I	I	I	(VEH)	I	(MIN)	I	(MIN)	I
I	I	I	(VEH/H)	I	(MIN/VEH)	I	(MIN/VEH)	I
I	B-C	I	78.5	I	52.3	I	7.9	I
I	B-A	I	0.0	I	0.0	I	0.0	I
I	C-A	I	0.0	I	0.0	I	0.0	I
I	C-B	I	0.0	I	0.0	I	0.0	I
I	A-B	I	0.0	I	0.0	I	0.0	I
I	A-C	I	392.3	I	261.5	I		I
I	ALL	I	470.7	I	313.8	I	7.9	I

* DELAY IS THAT OCCURRING ONLY WITHIN THE TIME PERIOD

* INCLUSIVE DELAY INCLUDES DELAY SUFFERED BY VEHICLES WHICH ARE STILL QUEUEING AFTER THE END OF THE TIME PERIOD

* THESE WILL ONLY BE SIGNIFICANTLY DIFFERENT IF THERE IS A LARGE QUEUE REMAINING AT THE END OF THE TIME PERIOD.

*****END OF RUN*****

.SLOPES AND INTERCEPT

(NB:Streams may be combined, in which case capacity will be adjusted)

I	Intercept For	Slope For Opposing	Slope For Opposing	I
I	STREAM B-C	STREAM A-C	STREAM A-B	I
I	0.00	0.00	0.00	I

* Due to the presence of a flare, data is not available

I	Intercept For	Slope For Opposing	Slope For Opposing	Slope For Opposing	Slope For Opposing	I
I	STREAM B-A	STREAM A-C	STREAM A-B	STREAM C-A	STREAM C-B	I
I	0.00	0.00	0.00	0.00	0.00	I

* Due to the presence of a flare, data is not available

I	Intercept For	Slope For Opposing	Slope For Opposing	I
I	STREAM C-B	STREAM A-C	STREAM A-B	I
I	573.96	0.16	0.16	I

(NB These values do not allow for any site specific corrections)

TRAFFIC DEMAND DATA

I	ARM	I	FLOW SCALE(%)	I
I	A	I	100	I
I	B	I	100	I
I	C	I	100	I

Demand set: 2024 DM PM

TIME PERIOD BEGINS 16.00 AND ENDS 17.30

LENGTH OF TIME PERIOD - 90 MIN.

LENGTH OF TIME SEGMENT - 15 MIN.

DEMAND FLOW PROFILES ARE SYNTHESISED FROM TURNING COUNT DATA

I	ARM	I	NUMBER OF MINUTES FROM START WHEN	I	RATE OF FLOW (VEH/MIN)	I
I	I	I	FLOW STARTS I TOP OF PEAK I FLOW STOPS I BEFORE I AT TOP I AFTER	I	I	I
I	I	I	TO RISE I IS REACHED I FALLING I PEAK I OF PEAK I PEAK	I	I	I
I	I	I	I	I	I	I
I	ARM A	I	15.00	I	45.00	I
I	ARM B	I	15.00	I	45.00	I
I	ARM C	I	15.00	I	45.00	I

Demand set: 2024 DM PM

TIME	TURNING PROPORTIONS TURNING COUNTS (PERCENTAGE OF H.V.S)						
	FROM/TO	ARM	A	ARM	B	ARM	C
16.00 - 17.30	ARM A	I	0.000	I	0.000	I	1.000
		I	0.0	I	0.0	I	256.0
		I (0.0)	I (0.0)	I (0.0)	I (0.0)	I (0.0)	I (0.0)
	ARM B	I	0.000	I	0.000	I	1.000
		I	0.0	I	0.0	I	138.0
		I (0.0)	I (0.0)	I (0.0)	I (0.0)	I (0.0)	I (0.0)
	ARM C	I	0.000	I	0.000	I	0.000
		I	0.0	I	0.0	I	0.0
		I (0.0)	I (0.0)	I (0.0)	I (0.0)	I (0.0)	I (0.0)

TURNING PROPORTIONS ARE CALCULATED FROM TURNING COUNT DATA

QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

FOR DEMAND SET 2024 DM PM
AND FOR TIME PERIOD 2

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
16.00-16.15									
B-C	1.73	11.06	0.156		0.00	0.18	2.7		0.11
B-A	0.00	6.34	0.000		0.00	0.00	0.0		0.00
C-A	0.00								
C-B	0.00	8.22	0.000		0.00	0.00	0.0		0.00
A-B	0.00								
A-C	3.21								

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
16.15-16.30									
B-C	2.07	10.94	0.189		0.18	0.23	3.4		0.11
B-A	0.00	6.25	0.000		0.00	0.00	0.0		0.00
C-A	0.00								
C-B	0.00	8.12	0.000		0.00	0.00	0.0		0.00
A-B	0.00								
A-C	3.84								

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
16.30-16.45									
B-C	2.53	10.77	0.235		0.23	0.30	4.5		0.12
B-A	0.00	6.13	0.000		0.00	0.00	0.0		0.00
C-A	0.00								
C-B	0.00	7.99	0.000		0.00	0.00	0.0		0.00
A-B	0.00								
A-C	4.70								

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
16.45-17.00									
B-C	2.53	10.77	0.235		0.30	0.31	4.6		0.12
B-A	0.00	6.13	0.000		0.00	0.00	0.0		0.00
C-A	0.00								
C-B	0.00	7.99	0.000		0.00	0.00	0.0		0.00
A-B	0.00								
A-C	4.70								

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
17.00-17.15									
B-C	2.07	10.94	0.189		0.31	0.24	3.6		0.11
B-A	0.00	6.25	0.000		0.00	0.00	0.0		0.00
C-A	0.00								
C-B	0.00	8.12	0.000		0.00	0.00	0.0		0.00
A-B	0.00								
A-C	3.84								

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
17.15-17.30									
B-C	1.73	11.06	0.156		0.24	0.19	2.9		0.11
B-A	0.00	6.34	0.000		0.00	0.00	0.0		0.00
C-A	0.00								
C-B	0.00	8.22	0.000		0.00	0.00	0.0		0.00
A-B	0.00								
A-C	3.21								

QUEUE FOR STREAM B-C	
TIME	NO. OF
SEGMENT	VEHICLES
ENDING	IN QUEUE
16.15	0.2
16.30	0.2
16.45	0.3
17.00	0.3
17.15	0.2
17.30	0.2

QUEUE FOR STREAM B-A	
TIME	NO. OF
SEGMENT	VEHICLES
ENDING	IN QUEUE
16.15	0.0
16.30	0.0
16.45	0.0
17.00	0.0
17.15	0.0
17.30	0.0

QUEUE FOR STREAM C-B	
TIME	NO. OF
SEGMENT	VEHICLES
ENDING	IN QUEUE
16.15	0.0
16.30	0.0
16.45	0.0
17.00	0.0
17.15	0.0
17.30	0.0

QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

I	STREAM	I	TOTAL DEMAND		I	* QUEUEING *		I	* INCLUSIVE QUEUEING *		I
I	I	I	I		I	* DELAY *		I	* DELAY *		I
I	I	I	I		I	I		I	I		I
I	I	I	(VEH)	(VEH/H)	I	(MIN)	(MIN/VEH)	I	(MIN)	(MIN/VEH)	I
I	B-C	I	189.9	I 126.6	I	21.6	I 0.11	I	21.6	I 0.11	I
I	B-A	I	0.0	I 0.0	I	0.0	I 0.00	I	0.0	I 0.00	I
I	C-A	I	0.0	I 0.0	I	I	I	I	I	I	I
I	C-B	I	0.0	I 0.0	I	0.0	I 0.00	I	0.0	I 0.00	I
I	A-B	I	0.0	I 0.0	I	I	I	I	I	I	I
I	A-C	I	352.4	I 234.9	I	I	I	I	I	I	I
I	ALL	I	542.3	I 361.5	I	21.6	I 0.04	I	21.6	I 0.04	I

* DELAY IS THAT OCCURRING ONLY WITHIN THE TIME PERIOD
 * INCLUSIVE DELAY INCLUDES DELAY SUFFERED BY VEHICLES
 WHICH ARE STILL QUEUEING AFTER THE END OF THE TIME PERIOD
 * THESE WILL ONLY BE SIGNIFICANTLY DIFFERENT IF THERE IS
 A LARGE QUEUE REMAINING AT THE END OF THE TIME PERIOD.

*****END OF RUN*****

===== end of file =====

TRL LIMITED

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CAPACITIES, QUEUES, AND DELAYS AT 3 OR 4-ARM MAJOR/MINOR PRIORITY JUNCTIONS

PICADY 5.1 ANALYSIS PROGRAM
RELEASE 5.0 (JUNE 2010)

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Run with file:-

"\\newcastle13\\data3\\Projects\\A089001 - A089500\\A089228 - Low Road, Whitehaven\\Analysis\\Traffic Models\\
Junction assessments\\With Tempro adjustment for comt dev\\Actual HGV percentage\\St Bees-Mirehouse Rd\\St Bees-Mirehouse Rd.vpi"
(drive-on-the-left) at 10:59:00 on Wednesday, 19 November 2014

RUN INFORMATION

RUN TITLE : Mirehouse Road/ St Bees Road
LOCATION : Whitehaven
DATE : 06/11/14
CLIENT : Astime Properties
ENUMERATOR : narendra.sadhale [2147LT]
JOB NUMBER : A089228
STATUS : Completed
DESCRIPTION :

MAJOR/MINOR JUNCTION CAPACITY AND DELAY

INPUT DATA

MAJOR ROAD (ARM C) ----- MAJOR ROAD (ARM A)
I
I
I
I
I
I
MINOR ROAD (ARM B)

ARM A IS St Bees Road North
ARM B IS Mirehouse Road
ARM C IS St Bees Road South

STREAM LABELLING CONVENTION

STREAM A-B CONTAINS TRAFFIC GOING FROM ARM A TO ARM B
STREAM B-AC CONTAINS TRAFFIC GOING FROM ARM B TO ARM A AND TO ARM C
ETC.

GEOMETRIC DATA

DATA ITEM		MINOR ROAD B
TOTAL MAJOR ROAD CARRIAGEWAY WIDTH		(W) 6.00 M.
CENTRAL RESERVE WIDTH		(WCR) 0.00 M.
MAJOR ROAD RIGHT TURN - WIDTH		(WC-B) 3.50 M.
- VISIBILITY		(VC-B) 75.00 M.
- BLOCKS TRAFFIC (SPACES)		YES (3)
MINOR ROAD - VISIBILITY TO LEFT		(VB-C) 60.0 M.
- VISIBILITY TO RIGHT		(VB-A) 75.0 M.
- LANE 1 WIDTH		(WB-C) -
- LANE 2 WIDTH		(WB-A) -
WIDTH AT 0 M FROM JUNCTION		10.00 M.
WIDTH AT 5 M FROM JUNCTION		8.50 M.
WIDTH AT 10 M FROM JUNCTION		5.60 M.
WIDTH AT 15 M FROM JUNCTION		5.30 M.
WIDTH AT 20 M FROM JUNCTION		4.70 M.
- LENGTH OF FLARED SECTION		DERIVED: 3 PCU

.SLOPES AND INTERCEPT

(NB:Streams may be combined, in which case capacity will be adjusted)

I	Intercept	For Slope	For Opposing	Slope For Opposing	I
I	STREAM	B-C	STREAM	A-C	STREAM
				A-B	
I	0.00		0.00		I
				0.00	

* Due to the presence of a flare, data is not available

I Intercept For	Slope For	Opposing	Slope For	Opposing	Slope For	Opposing	Slope For	Opposing
I STREAM B-A	STREAM	A-C	STREAM	A-B	STREAM	C-A	STREAM	C-B
I	0.00	0.00	0.00		0.00		0.00	I

* Due to the presence of a flare, data is not available

I	Intercept For	Slope For	Opposing	Slope For	Opposing	I
I	STREAM C-B	STREAM	A-C	STREAM	A-B	I
I	704.75		0.27		0.27	I

(NB These values do not allow for any site specific corrections)

TRAFFIC DEMAND DATA

I	ARM	I	FLOW	SCALE (%)	I
I	A	I		100	I
I	B	I		100	I
I	C	I		100	I

Demand set: 2024 DS AM

TIME PERIOD BEGINS 07.30 AND ENDS 09.00

LENGTH OF TIME PERIOD - 90 MIN.
LENGTH OF TIME SEGMENT - 15 MIN.

DEMAND FLOW PROFILES ARE SYNTHESISED FROM TURNING COUNT DATA

		NUMBER OF MINUTES FROM START WHEN			RATE OF FLOW (VEH/MIN)										
I	ARM	I	I	I	I	I	I	I							
		FLOW STARTS	TOP OF PEAK	FLOW STOPS	BEFORE	AT TOP	AFTER								
I		I	I	I	I	I	I	I							
I		TO RISE	IS REACHED	FALLING	PEAK	OF PEAK	PEAK	I							
I		I	I	I	I	I	I	I							

I	ARM	A	I	15.00	I	45.00	I	75.00	I	0.41	I	0.62	I	0.41	I
I	ARM	B	I	15.00	I	45.00	I	75.00	I	4.25	I	6.38	I	4.25	I
I	ARM	C	I	15.00	I	45.00	I	75.00	I	4.80	I	7.20	I	4.80	I

Demand set: 2024 DS AM

		TURNING PROPORTIONS							
		TURNING COUNTS							
		(PERCENTAGE OF H.V.S)							
TIME		FROM/TO	ARM	A	ARM	B	ARM	C	
07.30 - 09.00									
	ARM A		0.000		0.000		1.000		
			0.0		0.0		33.0		
			(0.0)		(0.0)		(0.0)		
	ARM B		0.474		0.000		0.526		
			161.0		0.0		179.0		
			(0.0)		(0.0)		(0.0)		
	ARM C		0.258		0.742		0.000		
			99.0		285.0		0.0		
			(0.0)		(0.0)		(0.0)		

TURNING PROPORTIONS ARE CALCULATED FROM TURNING COUNT DATA

QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

FOR DEMAND SET 2024 DS AM
AND FOR TIME PERIOD 1

I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	07.30-07.45										I
I	B-C	2.25	10.89	0.206		0.00	0.26	3.7		0.12	I
I	B-A	2.02	7.56	0.267		0.00	0.36	5.1		0.18	I
I	C-AB	3.58	11.63	0.307		0.00	0.44	6.5		0.12	I
I	A-B	0.00									I
I	A-C	0.41									I

I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	07.45-08.00										I
I	B-C	2.68	10.65	0.252		0.26	0.33	4.9		0.13	I
I	B-A	2.41	7.24	0.333		0.36	0.49	7.1		0.21	I
I	C-AB	4.27	11.61	0.368		0.44	0.58	8.7		0.14	I
I	A-B	0.00									I
I	A-C	0.49									I

I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	08.00-08.15										I
I	B-C	3.28	10.27	0.320		0.33	0.46	6.7		0.14	I
I	B-A	2.95	6.79	0.435		0.49	0.75	10.6		0.26	I
I	C-AB	5.23	11.58	0.452		0.58	0.82	12.3		0.16	I
I	A-B	0.00									I
I	A-C	0.61									I

I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	08.15-08.30										I
I	B-C	3.28	10.26	0.320		0.46	0.47	7.0		0.14	I
I	B-A	2.95	6.79	0.435		0.75	0.76	11.3		0.26	I
I	C-AB	5.23	11.58	0.452		0.82	0.83	12.5		0.16	I
I	A-B	0.00									I
I	A-C	0.61									I

I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	08.30-08.45										I
I	B-C	2.68	10.64	0.252		0.47	0.34	5.3		0.13	I
I	B-A	2.41	7.23	0.334		0.76	0.51	8.0		0.21	I
I	C-AB	4.27	11.61	0.368		0.83	0.59	8.9		0.14	I
I	A-B	0.00									I
I	A-C	0.49									I

I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	08.45-09.00										I
I	B-C	2.25	10.87	0.207		0.34	0.26	4.0		0.12	I
I	B-A	2.02	7.55	0.268		0.51	0.37	5.8		0.18	I
I	C-AB	3.58	11.63	0.307		0.59	0.45	6.8		0.12	I
I	A-B	0.00									I
I	A-C	0.41									I

WARNING NO MARGINAL ANALYSIS OF CAPACITIES AS MAJOR ROAD BLOCKING MAY OCCUR

TIME SEGMENT	NO. OF VEHICLES ENDING IN QUEUE
07.45	0.3
08.00	0.3
08.15	0.5
08.30	0.5
08.45	0.3
09.00	0.3

TIME SEGMENT	NO. OF VEHICLES ENDING IN QUEUE	
07.45	0.4	
08.00	0.5	
08.15	0.7	*
08.30	0.8	*
08.45	0.5	*
09.00	0.4	

QUEUE FOR STREAM C-AB

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
07.45	0.4
08.00	0.6 *
08.15	0.8 *
08.30	0.8 *
08.45	0.6 *
09.00	0.5

QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

I	STREAM	I	TOTAL DEMAND	I	* QUEUEING *	I	* INCLUSIVE QUEUEING *	I
I	I	I	I	I	* DELAY *	I	* DELAY *	I
I	I	I	(VEH)	(VEH/H)	(MIN)	(MIN/VEH)	(MIN)	(MIN/VEH)
I	B-C	I	246.4	I	164.3	I	31.6	I
I	B-A	I	221.6	I	147.7	I	47.9	I
I	C-AB	I	392.3	I	261.5	I	55.7	I
I	A-B	I	0.0	I	0.0	I	I	I
I	A-C	I	45.4	I	30.3	I	I	I
I	ALL	I	1042.0	I	694.6	I	135.3	I

* DELAY IS THAT OCCURRING ONLY WITHIN THE TIME PERIOD
* INCLUSIVE DELAY INCLUDES DELAY SUFFERED BY VEHICLES
WHICH ARE STILL QUEUEING AFTER THE END OF THE TIME PERIOD
* THESE WILL ONLY BE SIGNIFICANTLY DIFFERENT IF THERE IS
A LARGE QUEUE REMAINING AT THE END OF THE TIME PERIOD.

*****END OF RUN*****

.SLOPES AND INTERCEPT

(NB:Streams may be combined, in which case capacity will be adjusted)

I	Intercept For	Slope For	Opposing	Slope For	Opposing I
I	STREAM B-C	STREAM	A-C	STREAM A-B	I
I	0.00		0.00	0.00	I

* Due to the presence of a flare, data is not available

I	Intercept For	Slope For	Opposing	Slope For	Opposing	Slope For	Opposing	I
I	STREAM B-A	STREAM	A-C	STREAM A-B	STREAM	C-A	STREAM	C-B
I	0.00		0.00	0.00		0.00	0.00	I

* Due to the presence of a flare, data is not available

I	Intercept For	Slope For	Opposing	Slope For	Opposing I
I	STREAM C-B	STREAM	A-C	STREAM A-B	I
I	704.75		0.27	0.27	I

(NB These values do not allow for any site specific corrections)

TRAFFIC DEMAND DATA

I	ARM	I	FLOW SCALE(%)	I
I	A	I	100	I
I	B	I	100	I
I	C	I	100	I

Demand set: 2024 DS PM

TIME PERIOD BEGINS 16.00 AND ENDS 17.30

LENGTH OF TIME PERIOD - 90 MIN.
LENGTH OF TIME SEGMENT - 15 MIN.

DEMAND FLOW PROFILES ARE SYNTHESISED FROM TURNING COUNT DATA

I	ARM	I	NUMBER OF MINUTES FROM START WHEN	I	RATE OF FLOW (VEH/MIN)	I
I	I	I	FLOW STARTS	I	BEFORE	I
I	I	I	TO RISE	I	AT TOP	I
I	I	I	IS REACHED	I	OF PEAK	I
I	I	I	FALLING	I	PEAK	I
I	A	I	15.00	I	1.39	I
I	B	I	15.00	I	4.54	I
I	C	I	15.00	I	5.46	I

Demand set: 2024 DS PM

TIME	TURNING PROPORTIONS							
	TURNING COUNTS (PERCENTAGE OF H.V.S)							
FROM/TO	ARM	A	ARM	B	ARM	C		
16.00 - 17.30								
ARM A		0.000		0.000		1.000		
		0.0		0.0		111.0		
	(0.0)	(0.0)		(0.0)		(0.0)		
ARM B		0.645		0.000		0.355		
		234.0		0.0		129.0		
	(0.0)	(0.0)		(0.0)		(0.0)		
ARM C		0.414		0.586		0.000		
		181.0		256.0		0.0		
	(0.0)	(0.0)		(0.0)		(0.0)		

TURNING PROPORTIONS ARE CALCULATED FROM TURNING COUNT DATA

QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

FOR DEMAND SET 2024 DS PM
AND FOR TIME PERIOD 2

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
16.00-16.15									
B-C	1.62	9.57	0.169		0.00	0.20	2.9		0.13
B-A	2.94	7.80	0.377		0.00	0.59	8.3		0.20
C-AB	3.21	11.37	0.283		0.00	0.39	5.8		0.12
A-B	0.00								
A-C	1.39								

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
16.15-16.30									
B-C	1.93	9.14	0.212		0.20	0.27	3.9		0.14
B-A	3.51	7.40	0.474		0.59	0.87	12.5		0.25
C-AB	3.84	11.29	0.340		0.39	0.51	7.7		0.13
A-B	0.00								
A-C	1.66								

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
16.30-16.45									
B-C	2.37	8.22	0.288		0.27	0.40	5.8		0.17
B-A	4.29	6.84	0.627		0.87	1.58	21.7		0.38
C-AB	4.70	11.19	0.420		0.51	0.73	10.9		0.15
A-B	0.00								
A-C	2.04								

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
16.45-17.00									
B-C	2.37	8.17	0.290		0.40	0.40	6.0		0.17
B-A	4.29	6.84	0.628		1.58	1.63	24.2		0.39
C-AB	4.70	11.19	0.420		0.73	0.73	11.1		0.15
A-B	0.00								
A-C	2.04								

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
17.00-17.15									
B-C	1.93	9.10	0.213		0.40	0.27	4.2		0.14
B-A	3.51	7.39	0.475		1.63	0.93	14.9		0.26
C-AB	3.84	11.29	0.340		0.73	0.53	7.9		0.13
A-B	0.00								
A-C	1.66								

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
17.15-17.30									
B-C	1.62	9.54	0.170		0.27	0.21	3.2		0.13
B-A	2.94	7.78	0.377		0.93	0.62	9.7		0.21
C-AB	3.21	11.37	0.283		0.53	0.40	6.0		0.12
A-B	0.00								
A-C	1.39								

WARNING NO MARGINAL ANALYSIS OF CAPACITIES AS MAJOR ROAD BLOCKING MAY OCCUR

 QUEUE FOR STREAM B-C

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
16.15	0.2
16.30	0.3
16.45	0.4
17.00	0.4
17.15	0.3
17.30	0.2

 QUEUE FOR STREAM B-A

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
16.15	0.6	*
16.30	0.9	*
16.45	1.6	**
17.00	1.6	**
17.15	0.9	*
17.30	0.6	*

 QUEUE FOR STREAM C-AB

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
16.15	0.4	
16.30	0.5	*
16.45	0.7	*
17.00	0.7	*
17.15	0.5	*
17.30	0.4	

 QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

I	STREAM	I	TOTAL DEMAND	I	* QUEUEING *	I	* INCLUSIVE QUEUEING *	I
I	I	I	I	I	* DELAY *	I	* DELAY *	I
I	I	I	I	I	I	I	I	I
I	I	I	(VEH)	(VEH/H)	(MIN)	(MIN/VEH)	(MIN)	(MIN/VEH)
I	B-C	I	177.6	I 118.4	I 26.0	I 0.15	I 26.0	I 0.15
I	B-A	I	322.1	I 214.7	I 91.3	I 0.28	I 91.4	I 0.28
I	C-AB	I	352.4	I 234.9	I 49.4	I 0.14	I 49.4	I 0.14
I	A-B	I	0.0	I 0.0	I	I	I	I
I	A-C	I	152.8	I 101.9	I	I	I	I
I	ALL	I	1253.9	I 835.9	I 166.7	I 0.13	I 166.7	I 0.13

 * DELAY IS THAT OCCURRING ONLY WITHIN THE TIME PERIOD
 * INCLUSIVE DELAY INCLUDES DELAY SUFFERED BY VEHICLES
 WHICH ARE STILL QUEUEING AFTER THE END OF THE TIME PERIOD
 * THESE WILL ONLY BE SIGNIFICANTLY DIFFERENT IF THERE IS
 A LARGE QUEUE REMAINING AT THE END OF THE TIME PERIOD.

*****END OF RUN*****

===== end of file =====

TRL LIMITED

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CAPACITIES, QUEUES, AND DELAYS AT 3 OR 4-ARM MAJOR/MINOR PRIORITY JUNCTIONS

PICADY 5.1 ANALYSIS PROGRAM
RELEASE 5.0 (JUNE 2010)

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Run with file:-

"\\newcastle13\data3\Projects\A089001 - A089500\A089228 - Low Road, Whitehaven\Analysis\Traffic Models\
Junction assessments\With Tempro adjustment for comt dev\Actual HGV percentage\St Bees-Mirehouse Rd\St Bees-Mirehouse Rd_oneyway.vpi"
(drive-on-the-left) at 11:02:29 on Wednesday, 19 November 2014

RUN INFORMATION

RUN TITLE : St Bees North (Minor Road)/Mirehouse Road
LOCATION : Whitehaven
DATE : 07/11/14
CLIENT :
ENUMERATOR : narendra.sadhale [2147LT]
JOB NUMBER : A089228
STATUS : Completed
DESCRIPTION :

MAJOR/MINOR JUNCTION CAPACITY AND DELAY

INPUT DATA

MAJOR ROAD (ARM C) ----- MAJOR ROAD (ARM A)
I
I
I
I
I
I
MINOR ROAD (ARM B)

ARM A IS St Bees Road South
ARM B IS St Bees Road North
ARM C IS Mirehouse Road

STREAM LABELLING CONVENTION

STREAM A-B CONTAINS TRAFFIC GOING FROM ARM A TO ARM B
STREAM B-AC CONTAINS TRAFFIC GOING FROM ARM B TO ARM A AND TO ARM C
ETC.

GEOMETRIC DATA

I	DATA ITEM	I	MINOR ROAD B	I
I	TOTAL MAJOR ROAD CARRIAGEWAY WIDTH	I	(W) 12.00 M.	I
I	CENTRAL RESERVE WIDTH	I	(WCR) 0.00 M.	I
I		I		I
I	MAJOR ROAD RIGHT TURN - WIDTH	I	(WC-B) 2.20 M.	I
I	- VISIBILITY	I	(VC-B) 0.00 M.	I
I	- BLOCKS TRAFFIC (SPACES)	I	NO (0)	I
I		I		I
I	MINOR ROAD - VISIBILITY TO LEFT	I	(VB-C) 75.0 M.	I
I	- VISIBILITY TO RIGHT	I	(VB-A) 50.0 M.	I
I	- LANE 1 WIDTH	I	(WB-C) -	I
I	- LANE 2 WIDTH	I	(WB-A) -	I
I	WIDTH AT 0 M FROM JUNCTION	I	8.00 M.	I
I	WIDTH AT 5 M FROM JUNCTION	I	4.50 M.	I
I	WIDTH AT 10 M FROM JUNCTION	I	3.60 M.	I
I	WIDTH AT 15 M FROM JUNCTION	I	3.00 M.	I
I	WIDTH AT 20 M FROM JUNCTION	I	2.50 M.	I
I	- LENGTH OF FLARED SECTION	I	1 VEHs	I

.SLOPES AND INTERCEPT

(NB:Streams may be combined, in which case capacity will be adjusted)

I	Intercept For	Slope For Opposing	Slope For Opposing	I
I	STREAM B-C	STREAM A-C	STREAM A-B	I
I	0.00	0.00	0.00	I

* Due to the presence of a flare, data is not available

I	Intercept For	Slope For Opposing	Slope For Opposing	Slope For Opposing	Slope For Opposing	I
I	STREAM B-A	STREAM A-C	STREAM A-B	STREAM C-A	STREAM C-B	I
I	0.00	0.00	0.00	0.00	0.00	I

* Due to the presence of a flare, data is not available

I	Intercept For	Slope For Opposing	Slope For Opposing	I
I	STREAM C-B	STREAM A-C	STREAM A-B	I
I	573.96	0.16	0.16	I

(NB These values do not allow for any site specific corrections)

TRAFFIC DEMAND DATA

I	ARM	I	FLOW SCALE(%)	I
I	A	I	100	I
I	B	I	100	I
I	C	I	100	I

Demand set: 2024 DS AM

TIME PERIOD BEGINS 07.30 AND ENDS 09.00

LENGTH OF TIME PERIOD - 90 MIN.
 LENGTH OF TIME SEGMENT - 15 MIN.

DEMAND FLOW PROFILES ARE SYNTHESISED FROM TURNING COUNT DATA

I	ARM	I	NUMBER OF MINUTES FROM START WHEN	I	RATE OF FLOW (VEH/MIN)	I
I	I	I	I	I	I	I
I	I	I	I	I	I	I
I	I	I	I	I	I	I
I	I	I	I	I	I	I
I	ARM A	I	15.00	I	45.00	I
I	ARM B	I	15.00	I	45.00	I
I	ARM C	I	15.00	I	45.00	I

Demand set: 2024 DS AM

I	TIME	I	FROM/TO	I	ARM	A	I	ARM	B	I	ARM	C	I
I	07.30 - 09.00	I	ARM A	I	0.000	I	0.000	I	1.000	I			I
I		I		I	0.0	I	0.0	I	285.0	I			I
I		I	(0.0)	I	(0.0)	I	(0.0)	I	(0.0)	I			I
I		I	ARM B	I	0.000	I	0.000	I	1.000	I			I
I		I		I	0.0	I	0.0	I	76.0	I			I
I		I	(0.0)	I	(0.0)	I	(0.0)	I	(0.0)	I			I
I		I	ARM C	I	0.000	I	0.000	I	0.000	I			I
I		I		I	0.0	I	0.0	I	0.0	I			I
I		I	(0.0)	I	(0.0)	I	(0.0)	I	(0.0)	I			I

TURNING PROPORTIONS ARE CALCULATED FROM TURNING COUNT DATA

QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

FOR DEMAND SET 2024 DS AM
 AND FOR TIME PERIOD 1

I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	07.30-07.45										I
I	B-C	0.95	10.99	0.087		0.00	0.09	1.4		0.10	I
I	B-A	0.00	6.29	0.000		0.00	0.00	0.0		0.00	I
I	C-A	0.00									I
I	C-B	0.00	8.16	0.000		0.00	0.00	0.0		0.00	I
I	A-B	0.00									I
I	A-C	3.58									I

I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	07.45-08.00										I
I	B-C	1.14	10.85	0.105		0.09	0.12	1.7		0.10	I
I	B-A	0.00	6.19	0.000		0.00	0.00	0.0		0.00	I
I	C-A	0.00									I
I	C-B	0.00	8.06	0.000		0.00	0.00	0.0		0.00	I
I	A-B	0.00									I
I	A-C	4.27									I

I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	08.00-08.15										I
I	B-C	1.39	10.66	0.131		0.12	0.15	2.2		0.11	I
I	B-A	0.00	6.06	0.000		0.00	0.00	0.0		0.00	I
I	C-A	0.00									I
I	C-B	0.00	7.92	0.000		0.00	0.00	0.0		0.00	I
I	A-B	0.00									I
I	A-C	5.23									I

I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	08.15-08.30										I
I	B-C	1.39	10.66	0.131		0.15	0.15	2.2		0.11	I
I	B-A	0.00	6.06	0.000		0.00	0.00	0.0		0.00	I
I	C-A	0.00									I
I	C-B	0.00	7.92	0.000		0.00	0.00	0.0		0.00	I
I	A-B	0.00									I
I	A-C	5.23									I

I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	08.30-08.45										I
I	B-C	1.14	10.85	0.105		0.15	0.12	1.8		0.10	I
I	B-A	0.00	6.19	0.000		0.00	0.00	0.0		0.00	I
I	C-A	0.00									I
I	C-B	0.00	8.06	0.000		0.00	0.00	0.0		0.00	I
I	A-B	0.00									I
I	A-C	4.27									I

I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	08.45-09.00										I
I	B-C	0.95	10.99	0.087		0.12	0.10	1.5		0.10	I
I	B-A	0.00	6.29	0.000		0.00	0.00	0.0		0.00	I
I	C-A	0.00									I
I	C-B	0.00	8.16	0.000		0.00	0.00	0.0		0.00	I
I	A-B	0.00									I
I	A-C	3.58									I

QUEUE FOR STREAM B-C

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
07.45	0.1
08.00	0.1
08.15	0.1
08.30	0.1
08.45	0.1
09.00	0.1

QUEUE FOR STREAM B-A

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
07.45	0.0
08.00	0.0
08.15	0.0
08.30	0.0
08.45	0.0
09.00	0.0

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
07.45	0.0
08.00	0.0
08.15	0.0
08.30	0.0
08.45	0.0
09.00	0.0

.....

* DELAY IS THAT OCCURRING ONLY WITHIN THE TIME PERIOD
* INCLUSIVE DELAY INCLUDES DELAY SUFFERED BY VEHICLES
* WHICH ARE STILL QUEUEING AFTER THE END OF THE TIME PERIOD
* THESE WILL ONLY BE SIGNIFICANTLY DIFFERENT IF THERE IS
* A LARGE QUEUE REMAINING AT THE END OF THE TIME PERIOD.

I	Intercept For	Slope For	Opposing	Slope For	Opposing	I
I	STREAM B-C	STREAM	A-C	STREAM	A-B	I
I	0.00		0.00		0.00	I

I	Intercept For I STREAM B-A	Slope For STREAM	Opposing A-C	Slope For STREAM	Opposing A-B	Slope For STREAM	Opposing C-A	Slope For STREAM	Opposing C-B	I
I	0.00		0.00		0.00		0.00		0.00	I

I	Intercept For	Slope For	Opposing	Slope For	Opposing	I
I	STREAM C-B	STREAM	A-C	STREAM	A-B	I
I	573.96		0.16		0.16	I

I	ARM	I	FLOW	SCALE (%)	I
I	A	I		100	I
I	B	I		100	I
I	C	I		100	I

TIME PERIOD BEGINS 16.00 AND ENDS 17.30

DEMAND FLOW PROFILES ARE SYNTHESISED FROM TURNING COUNT DATA

		NUMBER OF MINUTES FROM START WHEN					RATE OF FLOW (VEH/MIN)							
I	ARM	I	FLOW STARTS	I	TOP OF PEAK	I	FLOW STOPS	I	BEFORE	I	AT TOP	I	AFTER	
I		I	TO RISE	I	IS REACHED	I	FALLING	I	PEAK	I	OF PEAK	I	PEAK	
I		I		I		I		I		I		I		
I	ARM	A	I	15.00	I	45.00	I	75.00	I	3.20	I	4.80	I	3.20
I	ARM	B	I	15.00	I	45.00	I	75.00	I	1.75	I	2.63	I	1.75
I	ARM	C	I	15.00	I	45.00	I	75.00	I	0.00	I	0.00	I	0.00

Demand set: 2024 DS PM

TIME	TURNING PROPORTIONS TURNING COUNTS (PERCENTAGE OF H.V.S)						
	FROM/TO	ARM	A	ARM	B	ARM	C
16.00 - 17.30	ARM A	I	0.000	I	0.000	I	1.000
		I	0.0	I	0.0	I	256.0
		I (0.0)	I (0.0)	I (0.0)	I (0.0)	I (0.0)	I (0.0)
	ARM B	I	0.000	I	0.000	I	1.000
		I	0.0	I	0.0	I	140.0
		I (0.0)	I (0.0)	I (0.0)	I (0.0)	I (0.0)	I (0.0)
	ARM C	I	0.000	I	0.000	I	0.000
		I	0.0	I	0.0	I	0.0
		I (0.0)	I (0.0)	I (0.0)	I (0.0)	I (0.0)	I (0.0)

TURNING PROPORTIONS ARE CALCULATED FROM TURNING COUNT DATA

QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

FOR DEMAND SET 2024 DS PM
AND FOR TIME PERIOD 2

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
16.00-16.15									
B-C	1.76	11.06	0.159		0.00	0.19	2.7		0.11
B-A	0.00	6.34	0.000		0.00	0.00	0.0		0.00
C-A	0.00								
C-B	0.00	8.22	0.000		0.00	0.00	0.0		0.00
A-B	0.00								
A-C	3.21								

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
16.15-16.30									
B-C	2.10	10.94	0.192		0.19	0.24	3.5		0.11
B-A	0.00	6.25	0.000		0.00	0.00	0.0		0.00
C-A	0.00								
C-B	0.00	8.12	0.000		0.00	0.00	0.0		0.00
A-B	0.00								
A-C	3.84								

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
16.30-16.45									
B-C	2.57	10.77	0.239		0.24	0.31	4.5		0.12
B-A	0.00	6.13	0.000		0.00	0.00	0.0		0.00
C-A	0.00								
C-B	0.00	7.99	0.000		0.00	0.00	0.0		0.00
A-B	0.00								
A-C	4.70								

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
16.45-17.00									
B-C	2.57	10.77	0.239		0.31	0.31	4.7		0.12
B-A	0.00	6.13	0.000		0.00	0.00	0.0		0.00
C-A	0.00								
C-B	0.00	7.99	0.000		0.00	0.00	0.0		0.00
A-B	0.00								
A-C	4.70								

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
17.00-17.15									
B-C	2.10	10.94	0.192		0.31	0.24	3.7		0.11
B-A	0.00	6.25	0.000		0.00	0.00	0.0		0.00
C-A	0.00								
C-B	0.00	8.12	0.000		0.00	0.00	0.0		0.00
A-B	0.00								
A-C	3.84								

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
17.15-17.30									
B-C	1.76	11.06	0.159		0.24	0.19	2.9		0.11
B-A	0.00	6.34	0.000		0.00	0.00	0.0		0.00
C-A	0.00								
C-B	0.00	8.22	0.000		0.00	0.00	0.0		0.00
A-B	0.00								
A-C	3.21								

QUEUE FOR STREAM B-C	
TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
16.15	0.2
16.30	0.2
16.45	0.3
17.00	0.3
17.15	0.2
17.30	0.2

QUEUE FOR STREAM B-A	
TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
16.15	0.0
16.30	0.0
16.45	0.0
17.00	0.0
17.15	0.0
17.30	0.0

QUEUE FOR STREAM C-B	
TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
16.15	0.0
16.30	0.0
16.45	0.0
17.00	0.0
17.15	0.0
17.30	0.0

QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

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* DELAY IS THAT OCCURRING ONLY WITHIN THE TIME PERIOD
 * INCLUSIVE DELAY INCLUDES DELAY SUFFERED BY VEHICLES
 WHICH ARE STILL QUEUEING AFTER THE END OF THE TIME PERIOD
 * THESE WILL ONLY BE SIGNIFICANTLY DIFFERENT IF THERE IS
 A LARGE QUEUE REMAINING AT THE END OF THE TIME PERIOD.

*****END OF RUN*****

===== end of file =====



A595 EGREMONT ROAD / MIREHOUSE ROAD PICADY OUTPUT FILES

TRL LIMITED

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CAPACITIES, QUEUES, AND DELAYS AT 3 OR 4-ARM MAJOR/MINOR PRIORITY JUNCTIONS

PICADY 5.1 ANALYSIS PROGRAM
RELEASE 5.0 (JUNE 2010)

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IN NO WAY RELIEVED OF HIS/HER RESPONSIBILITY FOR THE CORRECTNESS OF THE SOLUTION

Run with file:-
"\\newcastle13\data3\Projects\A089001 - A089500\A089228 - Low Road, Whitehaven\Analysis\Traffic Models\
Junction assessments\With Tempro adjustment for comt dev\Actual HGV percentage\A595 junction\A595-Mirehouse Road_2lane minor rd AA.vpi"
(drive-on-the-left) at 10:40:02 on Wednesday, 19 November 2014

RUN INFORMATION

RUN TITLE : Mirehouse Road/ A595
LOCATION : Whitehaven
DATE : 07/11/14
CLIENT :
ENUMERATOR : narendra.sadhale [2147LT]
JOB NUMBER : A089228
STATUS : Completed
DESCRIPTION :

MAJOR/MINOR JUNCTION CAPACITY AND DELAY

INPUT DATA

MAJOR ROAD (ARM C) ----- MAJOR ROAD (ARM A)
I
I
I
I
I
I
I
MINOR ROAD (ARM B)

ARM A IS A595 South
ARM B IS Mirehouse Road
ARM C IS A595 North

STREAM LABELLING CONVENTION

STREAM A-B CONTAINS TRAFFIC GOING FROM ARM A TO ARM B
STREAM B-AC CONTAINS TRAFFIC GOING FROM ARM B TO ARM A AND TO ARM C
ETC.

GEOMETRIC DATA

DATA ITEM		MINOR ROAD B	
TOTAL MAJOR ROAD CARRIAGEWAY WIDTH	(W)	7.87 M.	
CENTRAL RESERVE WIDTH	(WCR)	0.00 M.	
MAJOR ROAD RIGHT TURN - WIDTH	(WC-B)	2.60 M.	
- VISIBILITY	(VC-B)	75.00 M.	
- BLOCKS TRAFFIC (SPACES)		YES (11)	
MINOR ROAD - VISIBILITY TO LEFT	(VB-C)	60.0 M.	
- VISIBILITY TO RIGHT	(VB-A)	75.0 M.	
- LANE 1 WIDTH	(WB-C)	-	
- LANE 2 WIDTH	(WB-A)	-	
WIDTH AT 0 M FROM JUNCTION		10.00 M.	
WIDTH AT 5 M FROM JUNCTION		6.70 M.	
WIDTH AT 10 M FROM JUNCTION		5.50 M.	
WIDTH AT 15 M FROM JUNCTION		4.50 M.	
WIDTH AT 20 M FROM JUNCTION		4.50 M.	
- LENGTH OF FLARED SECTION		4 VEHs	

.SLOPES AND INTERCEPT

(NB:Streams may be combined, in which case capacity will be adjusted)

I	Intercept For I STREAM B-C	Slope For STREAM A-C	Opposing Slope For STREAM A-B	Opposing I
I	0.00	0.00	0.00	I

* Due to the presence of a flare, data is not available

I	Intercept For STREAM B-A	Slope For STREAM A-C	Opposing A-C	Slope For Opposing STREAM A-B	Slope For Opposing STREAM C-A	Opposing C-A	Slope For Opposing STREAM C-B	Opposing C-B	I
I	0.00	0.00		0.00		0.00	0.00		I

* Due to the presence of a flare, data is not available

I	Intercept For	Slope For	Opposing	Slope For	Opposing	I
I	STREAM C-B	STREAM	A-C	STREAM	A-B	I
I	644.27		0.23		0.23	I

(NB These values do not allow for any site specific corrections)

TRAFFIC DEMAND DATA

I	ARM	I	FLOW	SCALE (%)	I
I	A	I		100	I
I	B	I		100	I
I	C	I		100	I

Demand set: 2014 Base AM

TIME PERIOD BEGINS 07.30 AND ENDS 09.00

LENGTH OF TIME PERIOD - 90 MIN.

LENGTH OF TIME SEGMENT - 15 MIN.

DEMAND FLOW PROFILES ARE SYNTHESISED FROM TURNING COUNT DATA

I		I	NUMBER OF MINUTES FROM START WHEN	I	RATE OF FLOW (VEH/MIN)	I
I	ARM	I	FLOW STARTS I TOP OF PEAK I FLOW STOPS	I	BEFORE I AT TOP I AFTER	I
I		I	TO RISE I IS REACHED I FALLING	I	PEAK I OF PEAK I PEAK	I
I	ARM A	I	15.00 I 45.00 I 75.00	I	9.02 I 13.54 I 9.02	I
I	ARM B	I	15.00 I 45.00 I 75.00	I	3.61 I 5.42 I 3.61	I
I	ARM C	I	15.00 I 45.00 I 75.00	I	11.54 I 17.31 I 11.54	I

Demand set: 2014 Base AM

		I		TURNING PROPORTIONS		I
		I		TURNING COUNTS		I
		I		(PERCENTAGE OF H.V.S)		I
	TIME	I	FROM/TO	I ARM A I ARM B I ARM C I		I
I	07.30 - 09.00	I		I		I
I		I	ARM A	I 0.000 I 0.000 I 1.000 I		I
I		I		I 0.0 I 0.0 I 722.0 I		I
I		I		I (0.0) I (0.0) I (0.0) I		I
I		I		I I I I		I
I		I	ARM B	I 0.291 I 0.000 I 0.709 I		I
I		I		I 84.0 I 0.0 I 205.0 I		I
I		I		I (0.0) I (0.0) I (0.0) I		I
I		I		I I I I		I
I		I	ARM C	I 0.850 I 0.150 I 0.000 I		I
I		I		I 785.0 I 138.0 I 0.0 I		I
I		I		I (0.0) I (0.0) I (0.0) I		I
I		I		I I I I		I

TURNING PROPORTIONS ARE CALCULATED FROM TURNING COUNT DATA
THE PERCENTAGE OF HEAVY VEHICLES VARIES OVER TURNING MOVEMENTS

QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

FOR DEMAND SET 2014 Base AM
AND FOR TIME PERIOD 1

I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	07.30-07.45										I
I	B-C	2.57	9.35	0.275		0.00	0.37	5.4		0.15	I
I	B-A	1.05	4.52	0.233		0.00	0.30	4.1		0.29	I
I	C-AB	1.73	8.66	0.200		0.00	0.25	3.7		0.14	I
I	A-B	0.00									I
I	A-C	9.06									I

I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	07.45-08.00										I
I	B-C	3.07	8.67	0.354		0.37	0.54	7.8		0.18	I
I	B-A	1.26	3.80	0.331		0.30	0.48	6.7		0.39	I
I	C-AB	2.07	8.26	0.250		0.25	0.33	4.9		0.16	I
I	A-B	0.00									I
I	A-C	10.82									I

I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	08.00-08.15										I
I	B-C	3.76	7.53	0.499		0.54	0.97	13.6		0.26	I
I	B-A	1.54	2.78	0.554		0.48	1.12	14.7		0.76	I
I	C-AB	2.53	7.70	0.329		0.33	0.48	7.2		0.19	I
I	A-B	0.00									I
I	A-C	13.25									I

I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	08.15-08.30										I
I	B-C	3.76	7.48	0.503		0.97	0.99	14.7		0.27	I
I	B-A	1.54	2.78	0.555		1.12	1.18	17.3		0.80	I
I	C-AB	2.53	7.70	0.329		0.48	0.49	7.3		0.19	I
I	A-B	0.00									I
I	A-C	13.25									I

I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	08.30-08.45										I
I	B-C	3.07	8.63	0.356		0.99	0.56	8.9		0.18	I
I	B-A	1.26	3.79	0.332		1.18	0.52	8.5		0.41	I
I	C-AB	2.07	8.26	0.250		0.49	0.34	5.1		0.16	I
I	A-B	0.00									I
I	A-C	10.82									I

I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	08.45-09.00										I
I	B-C	2.57	9.33	0.276		0.56	0.39	6.0		0.15	I
I	B-A	1.05	4.52	0.233		0.52	0.31	4.9		0.29	I
I	C-AB	1.73	8.66	0.200		0.34	0.25	3.8		0.14	I
I	A-B	0.00									I
I	A-C	9.06									I

WARNING NO MARGINAL ANALYSIS OF CAPACITIES AS MAJOR ROAD BLOCKING MAY OCCUR

TIME SEGMENT	NO. OF VEHICLES ENDING IN QUEUE	
07.45	0.4	
08.00	0.5	*
08.15	1.0	*
08.30	1.0	*
08.45	0.6	*
09.00	0.4	

TIME SEGMENT	NO. OF VEHICLES ENDING IN QUEUE	
07.45	0.3	
08.00	0.5	
08.15	1.1	*
08.30	1.2	*
08.45	0.5	*
09.00	0.3	

QUEUE FOR STREAM C-AB

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
07.45	0.2
08.00	0.3
08.15	0.5
08.30	0.5
08.45	0.3
09.00	0.3

QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

I	STREAM	I	TOTAL DEMAND	I	* QUEUEING *	I	* INCLUSIVE QUEUEING *	I
I	I	I	I	I	* DELAY *	I	* DELAY *	I
I	I	I	(VEH)	I	(MIN)	I	(MIN)	I
I	I	I	(VEH/H)	I	(MIN/VEH)	I	(MIN/VEH)	I
I	B-C	I	282.2	I	188.1	I	56.3	I
I	B-A	I	115.6	I	77.1	I	56.4	I
I	C-AB	I	189.9	I	126.6	I	32.1	I
I	A-B	I	0.0	I	0.0	I	I	I
I	A-C	I	993.8	I	662.5	I	I	I
I	ALL	I	2662.0	I	1774.7	I	144.8	I

* DELAY IS THAT OCCURRING ONLY WITHIN THE TIME PERIOD
 * INCLUSIVE DELAY INCLUDES DELAY SUFFERED BY VEHICLES
 WHICH ARE STILL QUEUEING AFTER THE END OF THE TIME PERIOD
 * THESE WILL ONLY BE SIGNIFICANTLY DIFFERENT IF THERE IS
 A LARGE QUEUE REMAINING AT THE END OF THE TIME PERIOD.

*****END OF RUN*****

.SLOPES AND INTERCEPT

(NB:Streams may be combined, in which case capacity will be adjusted)

I	Intercept For	Slope For	Opposing	Slope For	Opposing	I
I	STREAM B-C	STREAM	A-C	STREAM	A-B	I
I	0.00		0.00		0.00	I

* Due to the presence of a flare, data is not available

I	Intercept For	Slope For	Opposing	Slope For	Opposing	Slope For	Opposing	Slope For	Opposing	I
I	STREAM B-A	STREAM	A-C	STREAM	A-B	STREAM	C-A	STREAM	C-B	I
I	0.00		0.00		0.00		0.00		0.00	I

* Due to the presence of a flare, data is not available

I	Intercept For	Slope For	Opposing	Slope For	Opposing	I
I	STREAM C-B	STREAM	A-C	STREAM	A-B	I
I	644.27		0.23		0.23	I

(NB These values do not allow for any site specific corrections)

TRAFFIC DEMAND DATA

I	ARM	I	FLOW SCALE(%)	I
I	A	I	100	I
I	B	I	100	I
I	C	I	100	I

Demand set: 2014 Base PM

TIME PERIOD BEGINS 16.00 AND ENDS 17.30

LENGTH OF TIME PERIOD - 90 MIN.

LENGTH OF TIME SEGMENT - 15 MIN.

DEMAND FLOW PROFILES ARE SYNTHESISED FROM TURNING COUNT DATA

I	ARM	I	NUMBER OF MINUTES FROM START WHEN	I	RATE OF FLOW (VEH/MIN)	I
I	I	I	FLOW STARTS	I	BEFORE	I
I	I	I	TO RISE	I	AT TOP	I
I	I	I	IS REACHED	I	OF PEAK	I
I	I	I	FALLING	I	PEAK	I
I	I	I	I	I	I	I
I	A	I	15.00	I	45.00	I
I	B	I	15.00	I	45.00	I
I	C	I	15.00	I	45.00	I

Demand set: 2014 Base PM

TIME	TURNING PROPORTIONS TURNING COUNTS (PERCENTAGE OF H.V.S)						
	FROM/TO	ARM	A	ARM	B	ARM	C
16.00 - 17.30	ARM A	I	0.000	I	0.000	I	1.000
		I	0.0	I	0.0	I	724.0
		I (0.0)	I (0.0)	I (0.0)	I (0.0)	I	
	ARM B	I	0.307	I	0.000	I	0.693
		I	85.0	I	0.0	I	192.0
		I (0.0)	I (0.0)	I (0.0)	I (0.0)	I	
	ARM C	I	0.761	I	0.239	I	0.000
		I	667.0	I	210.0	I	0.0
		I (0.0)	I (0.0)	I (0.0)	I (0.0)	I	

TURNING PROPORTIONS ARE CALCULATED FROM TURNING COUNT DATA
THE PERCENTAGE OF HEAVY VEHICLES VARIES OVER TURNING MOVEMENTS

QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

FOR DEMAND SET 2014 Base PM
AND FOR TIME PERIOD 2

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
16.00-16.15									
B-C	2.41	9.27	0.260		0.00	0.35	5.0		0.14
B-A	1.07	4.48	0.238		0.00	0.31	4.3		0.29
C-AB	2.63	8.65	0.304		0.00	0.43	6.4		0.16
A-B	0.00								
A-C	9.08								

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
16.15-16.30									
B-C	2.88	8.59	0.335		0.35	0.50	7.2		0.17
B-A	1.27	3.73	0.342		0.31	0.50	7.0		0.40
C-AB	3.15	8.25	0.381		0.43	0.60	9.1		0.19
A-B	0.00								
A-C	10.85								

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
16.30-16.45									
B-C	3.52	7.36	0.478		0.50	0.89	12.5		0.26
B-A	1.56	2.68	0.581		0.50	1.23	16.0		0.82
C-AB	3.85	7.69	0.501		0.60	0.97	14.5		0.26
A-B	0.00								
A-C	13.29								

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
16.45-17.00									
B-C	3.52	7.29	0.483		0.89	0.92	13.6		0.26
B-A	1.56	2.68	0.583		1.23	1.31	19.2		0.88
C-AB	3.85	7.69	0.501		0.97	0.99	15.0		0.26
A-B	0.00								
A-C	13.29								

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
17.00-17.15									
B-C	2.88	8.54	0.337		0.92	0.52	8.1		0.18
B-A	1.27	3.71	0.343		1.31	0.54	9.0		0.43
C-AB	3.15	8.25	0.381		0.99	0.63	9.5		0.20
A-B	0.00								
A-C	10.85								

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
17.15-17.30									
B-C	2.41	9.25	0.260		0.52	0.36	5.5		0.15
B-A	1.07	4.46	0.239		0.54	0.32	5.1		0.30
C-AB	2.63	8.65	0.304		0.63	0.44	6.7		0.17
A-B	0.00								
A-C	9.08								

WARNING NO MARGINAL ANALYSIS OF CAPACITIES AS MAJOR ROAD BLOCKING MAY OCCUR

 QUEUE FOR STREAM B-C

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
16.15	0.3	
16.30	0.5	
16.45	0.9	*
17.00	0.9	*
17.15	0.5	*
17.30	0.4	

QUEUE FOR STREAM B-A

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
16.15	0.3	
16.30	0.5	*
16.45	1.2	*
17.00	1.3	*
17.15	0.5	*
17.30	0.3	

QUEUE FOR STREAM C-AB

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
16.15	0.4	
16.30	0.6	*
16.45	1.0	*
17.00	1.0	*
17.15	0.6	*
17.30	0.4	

 QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

I	STREAM	I	TOTAL DEMAND	I	* QUEUEING *	I	* INCLUSIVE QUEUEING *	I
I	I	I	I	I	* DELAY *	I	* DELAY *	I
I	I	I	I	I	I	I	I	I
I	I	I	(VEH)	(VEH/H)	(MIN)	(MIN/VEH)	(MIN)	(MIN/VEH)
I	B-C	I	264.3	I	176.2	I	51.9	I
I	B-A	I	117.0	I	78.0	I	60.6	I
I	C-AB	I	289.0	I	192.7	I	61.2	I
I	A-B	I	0.0	I	0.0	I	I	I
I	A-C	I	996.5	I	664.4	I	I	I
I	ALL	I	2584.9	I	1723.3	I	173.7	I

 * DELAY IS THAT OCCURRING ONLY WITHIN THE TIME PERIOD
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 WHICH ARE STILL QUEUEING AFTER THE END OF THE TIME PERIOD
 * THESE WILL ONLY BE SIGNIFICANTLY DIFFERENT IF THERE IS
 A LARGE QUEUE REMAINING AT THE END OF THE TIME PERIOD.

*****END OF RUN*****

===== end of file =====

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CAPACITIES, QUEUES, AND DELAYS AT 3 OR 4-ARM MAJOR/MINOR PRIORITY JUNCTIONS

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Run with file:-

"\\newcastle13\data3\Projects\A089001 - A089500\A089228 - Low Road, Whitehaven\Analysis\Traffic Models\
Junction assessments\With Tempro adjustment for comt dev\Actual HGV percentage\A595 junction\A595-Mirehouse Road_oneway.vpi"
(drive-on-the-left) at 10:49:59 on Wednesday, 19 November 2014RUN INFORMATION
*****RUN TITLE : A595(as Minor Road)/Mirehouse Road
LOCATION : Whitehaven
DATE : 07/11/14
CLIENT :
ENUMERATOR : narendra.sadhale [2147LT]
JOB NUMBER : A089228
STATUS : Completed
DESCRIPTION :MAJOR/MINOR JUNCTION CAPACITY AND DELAY
*****INPUT DATA
-----MAJOR ROAD (ARM C) ----- MAJOR ROAD (ARM A)
I
I
I
I
I
I
I
MINOR ROAD (ARM B)ARM A IS A595 North
ARM B IS A595 South
ARM C IS Mirehouse RoadSTREAM LABELLING CONVENTION
-----STREAM A-B CONTAINS TRAFFIC GOING FROM ARM A TO ARM B
STREAM B-AC CONTAINS TRAFFIC GOING FROM ARM B TO ARM A AND TO ARM C
ETC.GEOMETRIC DATA

I	DATA ITEM	I	MINOR ROAD B	I
I	TOTAL MAJOR ROAD CARRIAGEWAY WIDTH	I	(W) 12.00 M.	I
I	CENTRAL RESERVE WIDTH	I	(WCR) 0.00 M.	I
I		I		I
I	MAJOR ROAD RIGHT TURN - WIDTH	I	(WC-B) 2.20 M.	I
I	- VISIBILITY	I	(VC-B) 0.00 M.	I
I	- BLOCKS TRAFFIC (SPACES)	I	NO (0)	I
I		I		I
I	MINOR ROAD - VISIBILITY TO LEFT	I	(VB-C) 75.0 M.	I
I	- VISIBILITY TO RIGHT	I	(VB-A) 75.0 M.	I
I	- LANE 1 WIDTH	I	(WB-C) 4.00 M.	I
I	- LANE 2 WIDTH	I	(WB-A) 0.00 M.	I

.SLOPES AND INTERCEPT

(NB:Streams may be combined, in which case capacity will be adjusted)

I	Intercept For	Slope For Opposing	Slope For Opposing	I
I	STREAM B-C	STREAM A-C	STREAM A-B	I
I	738.35	0.21	0.08	I

I	Intercept For	Slope For Opposing	Slope For Opposing	Slope For Opposing	Slope For Opposing	I
I	STREAM B-A	STREAM A-C	STREAM A-B	STREAM C-A	STREAM C-B	I
I	593.44	0.20	0.08	0.13	0.29	I

I	Intercept For	Slope For Opposing	Slope For Opposing	I
I	STREAM C-B	STREAM A-C	STREAM A-B	I
I	573.96	0.16	0.16	I

(NB These values do not allow for any site specific corrections)

I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	08.30-08.45										I
I	B-AC	1.24	11.87	0.105		0.15	0.12	1.8		0.09	I
I	C-A	0.00									I
I	C-B	0.00	8.39	0.000		0.00	0.00	0.0		0.00	I
I	A-B	0.00									I
I	A-C	2.07									I

I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	08.45-09.00										I
I	B-AC	1.04	11.94	0.087		0.12	0.10	1.5		0.09	I
I	C-A	0.00									I
I	C-B	0.00	8.44	0.000		0.00	0.00	0.0		0.00	I
I	A-B	0.00									I
I	A-C	1.73									I

QUEUE FOR STREAM B-AC

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
07.45	0.1
08.00	0.1
08.15	0.1
08.30	0.1
08.45	0.1
09.00	0.1

QUEUE FOR STREAM C-B

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
07.45	0.0
08.00	0.0
08.15	0.0
08.30	0.0
08.45	0.0
09.00	0.0

QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

I	STREAM	I	TOTAL DEMAND	I	* QUEUEING * * DELAY *	I	* INCLUSIVE QUEUEING * * DELAY *	I	
I	I	I	I	I	I	I	I	I	
I	I	I	(VEH)	(VEH/H)	(MIN)	(MIN/VEH)	(MIN)	(MIN/VEH)	
I	B-AC	I	114.2	I	76.2	I	10.8	I	0.09
I	C-A	I	0.0	I	0.0	I		I	
I	C-B	I	0.0	I	0.0	I	0.00	I	0.00
I	A-B	I	0.0	I	0.0	I		I	
I	A-C	I	189.9	I	126.6	I		I	
I	ALL	I	304.2	I	202.8	I	10.8	I	0.04

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 WHICH ARE STILL QUEUEING AFTER THE END OF THE TIME PERIOD
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 A LARGE QUEUE REMAINING AT THE END OF THE TIME PERIOD.

*****END OF RUN*****

.SLOPES AND INTERCEPT

(NB:Streams may be combined, in which case capacity will be adjusted)

I	Intercept For	Slope For Opposing	Slope For Opposing	I
I	STREAM B-C	STREAM A-C	STREAM A-B	I
I	738.35	0.21	0.08	I

I	Intercept For	Slope For Opposing	Slope For Opposing	Slope For Opposing	Slope For Opposing	I
I	STREAM B-A	STREAM A-C	STREAM A-B	STREAM C-A	STREAM C-B	I
I	593.44	0.20	0.08	0.13	0.29	I

I	Intercept For	Slope For Opposing	Slope For Opposing	I
I	STREAM C-B	STREAM A-C	STREAM A-B	I
I	573.96	0.16	0.16	I

(NB These values do not allow for any site specific corrections)

TRAFFIC DEMAND DATA

I	ARM	I	FLOW	SCALE(%)	I
I	A	I	100		I
I	B	I	100		I
I	C	I	100		I

I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	17.15-17.30										I
I	B-AC	1.86	11.75	0.158		0.24	0.19	2.9		0.10	I
I	C-A	0.00									I
I	C-B	0.00	8.30	0.000		0.00	0.00	0.0		0.00	I
I	A-B	0.00									I
I	A-C	2.63									I

QUEUE FOR STREAM B-AC

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
16.15	0.2
16.30	0.2
16.45	0.3
17.00	0.3
17.15	0.2
17.30	0.2

QUEUE FOR STREAM C-B

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
16.15	0.0
16.30	0.0
16.45	0.0
17.00	0.0
17.15	0.0
17.30	0.0

QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

I	STREAM	I	TOTAL DEMAND	I	* QUEUEING *	I	* INCLUSIVE QUEUEING *	I
I	I	I	I	I	* DELAY *	I	* DELAY *	I
I	I	I	(VEH)	I	(MIN)	I	(MIN)	I
I	I	I	(VEH/H)	I	(MIN/VEH)	I	(MIN/VEH)	I
I	B-AC	I	203.7	I	135.8	I	21.8	I
I	C-A	I	0.0	I	0.0	I	0.11	I
I	C-B	I	0.0	I	0.0	I	0.00	I
I	A-B	I	0.0	I	0.0	I	0.0	I
I	A-C	I	289.0	I	192.7	I	0.00	I
I	ALL	I	492.8	I	328.5	I	21.8	I

* DELAY IS THAT OCCURRING ONLY WITHIN THE TIME PERIOD
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 WHICH ARE STILL QUEUEING AFTER THE END OF THE TIME PERIOD
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*****END OF RUN*****

===== end of file =====

Printed at 10:50:17 on 19/11/2014]

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CAPACITIES, QUEUES, AND DELAYS AT 3 OR 4-ARM MAJOR/MINOR PRIORITY JUNCTIONS

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Run with file:-
"\\newcastle13\data3\Projects\A089001 - A089500\A089228 - Low Road, Whitehaven\Analysis\Traffic Models\
Junction assessments\With Tempro adjustment for comt dev\Actual HGV percentage\A595 junction\A595-Mirehouse Road_2lane minor rd AA.vpi"
(drive-on-the-left) at 10:38:00 on Wednesday, 19 November 2014

RUN INFORMATION

RUN TITLE : Mirehouse Road/ A595
LOCATION : Whitehaven
DATE : 07/11/14
CLIENT :
ENUMERATOR : narendra.sadhale [2147LT]
JOB NUMBER : A089228
STATUS : Completed
DESCRIPTION :

MAJOR/MINOR JUNCTION CAPACITY AND DELAY

INPUT DATA

MAJOR ROAD (ARM C) ----- MAJOR ROAD (ARM A)
I
I
I
I
I
I
I
MINOR ROAD (ARM B)

ARM A IS A595 South
ARM B IS Mirehouse Road
ARM C IS A595 North

STREAM LABELLING CONVENTION

STREAM A-B CONTAINS TRAFFIC GOING FROM ARM A TO ARM B
STREAM B-AC CONTAINS TRAFFIC GOING FROM ARM B TO ARM A AND TO ARM C
ETC.

.....

DATA ITEM		MINOR ROAD B
TOTAL MAJOR ROAD CARRIAGEWAY WIDTH		(W) 7.87 M.
CENTRAL RESERVE WIDTH		(WCR) 0.00 M.
MAJOR ROAD RIGHT TURN - WIDTH		(WC-B) 2.60 M.
- VISIBILITY		(VC-B) 75.00 M.
- BLOCKS TRAFFIC (SPACES)		YES (11)
MINOR ROAD - VISIBILITY TO LEFT		(VB-C) 60.0 M.
- VISIBILITY TO RIGHT		(VB-A) 75.0 M.
- LANE 1 WIDTH		(WB-C) -
- LANE 2 WIDTH		(WB-A) -
WIDTH AT 0 M FROM JUNCTION		10.00 M.
WIDTH AT 5 M FROM JUNCTION		6.70 M.
WIDTH AT 10 M FROM JUNCTION		5.50 M.
WIDTH AT 15 M FROM JUNCTION		4.50 M.
WIDTH AT 20 M FROM JUNCTION		4.50 M.
- LENGTH OF FLARED SECTION		4 VEHs

I	Intercept For STREAM B-C	Slope For STREAM A-C	Slope For STREAM A-B	Opposing I
I	0.00	0.00	0.00	I

I	Intercept For I STREAM B-A	Slope For STREAM	Opposing A-C	Slope For Opposing STREAM A-B	Slope For Opposing STREAM C-A	Slope For Opposing STREAM C-B	Opposing I
I	0.00		0.00	0.00	0.00	0.00	I

I	Intercept For	Slope For	Opposing	Slope For	Opposing	I
I	STREAM C-B	STREAM	A-C	STREAM	A-B	I
I	644.27		0.23		0.23	I

.....

I	ARM	I	FLOW	SCALE (%)	I
I	A	I		100	I
I	B	I		100	I
I	C	I		100	I

LENGTH OF TIME SEGMENT - 15 MIN.

		NUMBER OF MINUTES FROM START WHEN			RATE OF FLOW (VEH/MIN)		
ARM		FLOW STARTS	TOP OF PEAK	FLOW STOPS	BEFORE PEAK	AT TOP OF PEAK	AFTER PEAK
		TO RISE	IS REACHED	FALLING			
ARM A	B	15.00	45.00	75.00	8.79	13.18	8.79
ARM B	C	15.00	45.00	75.00	4.54	6.81	4.54
ARM C	B	15.00	45.00	75.00	10.05	15.08	10.05

.....

		TURNING PROPORTIONS							
		TURNING COUNTS							
		(PERCENTAGE OF H.V.S)							
TIME		FROM/TO	ARM	A	ARM	B	ARM	C	I
07.30 - 09.00	ARM A	I	0.000	I	0.000	I	1.000	I	I
		I	0.0	I	0.0	I	703.0	I	I
		I	(0.0)	I	(0.0)	I	(0.0)	I	I
	ARM B	I	0.306	I	0.000	I	0.694	I	I
		I	111.0	I	0.0	I	252.0	I	I
		I	(0.0)	I	(0.0)	I	(0.0)	I	I
	ARM C	I	0.806	I	0.194	I	0.000	I	I
		I	648.0	I	156.0	I	0.0	I	I
		I	(0.0)	I	(0.0)	I	(0.0)	I	I

AND FOR TIME PERIOD 1

I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	07.30-07.45										I
I	B-C	3.16	9.21	0.343		0.00	0.51	7.3		0.16	I
I	B-A	1.39	4.76	0.293		0.00	0.40	5.6		0.29	I
I	C-AB	1.96	8.72	0.225		0.00	0.29	4.2		0.15	I
I	A-B	0.00									I
I	A-C	8.82									I

I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	07.45-08.00										I
I	B-C	3.78	8.48	0.445		0.51	0.78	11.2		0.21	I
I	B-A	1.66	4.07	0.409		0.40	0.66	9.3		0.41	I
I	C-AB	2.34	8.32	0.281		0.29	0.38	5.8		0.17	I
I	A-B	0.00									I
I	A-C	10.53									I

I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	08.00-08.15										I
I	B-C	4.62	7.26	0.637		0.78	1.65	22.4		0.36	I
I	B-A	2.04	3.03	0.673		0.66	1.75	22.2		0.89	I
I	C-AB	2.86	7.78	0.368		0.38	0.57	8.5		0.20	I
I	A-B	0.00									I
I	A-C	12.90									I

I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	08.15-08.30										I
I	B-C	4.62	7.15	0.647		1.65	1.75	25.7		0.39	I
I	B-A	2.04	3.01	0.677		1.75	1.90	27.6		1.00	I
I	C-AB	2.86	7.78	0.368		0.57	0.58	8.7		0.20	I
I	A-B	0.00									I
I	A-C	12.90									I

I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	08.30-08.45										I
I	B-C	3.78	8.41	0.449		1.75	0.83	13.4		0.22	I
I	B-A	1.66	4.06	0.409		1.90	0.72	12.3		0.44	I
I	C-AB	2.34	8.32	0.281		0.58	0.40	6.0		0.17	I
I	A-B	0.00									I
I	A-C	10.53									I

I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	08.45-09.00										I
I	B-C	3.16	9.18	0.344		0.83	0.53	8.4		0.17	I
I	B-A	1.39	4.75	0.293		0.72	0.43	6.8		0.30	I
I	C-AB	1.96	8.72	0.225		0.40	0.29	4.4		0.15	I
I	A-B	0.00									I
I	A-C	8.82									I

WARNING NO MARGINAL ANALYSIS OF CAPACITIES AS MAJOR ROAD BLOCKING MAY OCCUR

TIME SEGMENT	NO. OF VEHICLES ENDING IN QUEUE	
07.45	0.5	*
08.00	0.8	*
08.15	1.6	**
08.30	1.8	**
08.45	0.8	*
09.00	0.5	*

TIME SEGMENT	NO. OF VEHICLES ENDING IN QUEUE	
07.45	0.4	
08.00	0.7	*
08.15	1.7	**
08.30	1.9	**
08.45	0.7	*
09.00	0.4	

QUEUE FOR STREAM C-AB

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
07.45	0.3	
08.00	0.4	
08.15	0.6	*
08.30	0.6	*
08.45	0.4	
09.00	0.3	

QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

I	STREAM	I	TOTAL DEMAND	I	* QUEUEING *	I	* INCLUSIVE QUEUEING *	I	
I	I	I	I	I	* DELAY *	I	* DELAY *	I	
I	I	I	I	I	I	I	I	I	
I	I	I	(VEH)	(VEH/H)	(MIN)	(MIN/VEH)	(MIN)	(MIN/VEH)	
I	B-C	I	346.9	I	231.2	I	88.4	I	0.25
I	B-A	I	152.8	I	101.9	I	83.7	I	0.55
I	C-AB	I	214.7	I	143.1	I	37.7	I	0.18
I	A-B	I	0.0	I	0.0	I	I	I	I
I	A-C	I	967.6	I	645.1	I	I	I	I
I	ALL	I	2573.9	I	1715.9	I	209.8	I	0.08

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 A LARGE QUEUE REMAINING AT THE END OF THE TIME PERIOD.

*****END OF RUN*****

.SLOPES AND INTERCEPT

(NB:Streams may be combined, in which case capacity will be adjusted)

I	Intercept For	Slope For	Opposing	Slope For	Opposing	I
I	STREAM B-C	STREAM	A-C	STREAM	A-B	I
I	0.00		0.00		0.00	I

* Due to the presence of a flare, data is not available

I	Intercept For	Slope For	Opposing	Slope For	Opposing	Slope For	Opposing	Slope For	Opposing	I
I	STREAM B-A	STREAM	A-C	STREAM	A-B	STREAM	C-A	STREAM	C-B	I
I	0.00		0.00		0.00		0.00		0.00	I

* Due to the presence of a flare, data is not available

I	Intercept For	Slope For	Opposing	Slope For	Opposing	I
I	STREAM C-B	STREAM	A-C	STREAM	A-B	I
I	644.27		0.23		0.23	I

(NB These values do not allow for any site specific corrections)

TRAFFIC DEMAND DATA

I	ARM	I	FLOW SCALE(%)	I
I	A	I	100	I
I	B	I	100	I
I	C	I	100	I

Demand set: 2024 DM PM

TIME PERIOD BEGINS 16.00 AND ENDS 17.30

LENGTH OF TIME PERIOD - 90 MIN.
 LENGTH OF TIME SEGMENT - 15 MIN.

DEMAND FLOW PROFILES ARE SYNTHESISED FROM TURNING COUNT DATA

		I	NUMBER OF		MINUTES FROM START WHEN			I	RATE OF FLOW (VEH/MIN)		I				
I	ARM	I	I	FLOW STARTS	I	TOP OF PEAK	I	FLOW STOPS	I	BEFORE	I	AT TOP	I	AFTER	I
I	I	I	I	TO RISE	I	IS REACHED	I	FALLING	I	I	I	OF PEAK	I	I	I
I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I
I	ARM A	I	15.00	I	45.00	I	75.00	I	8.74	I	13.11	I	8.74	I	
I	ARM B	I	15.00	I	45.00	I	75.00	I	4.36	I	6.54	I	4.36	I	
I	ARM C	I	15.00	I	45.00	I	75.00	I	11.41	I	17.12	I	11.41	I	

Demand set: 2024 DM PM

		TURNING PROPORTIONS								
		TURNING COUNTS								
		(PERCENTAGE OF H.V.S)								

 QUEUE FOR STREAM B-C

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
16.15	0.5	
16.30	0.7	*
16.45	2.1	**
17.00	3.0	***
17.15	0.8	*
17.30	0.5	

 QUEUE FOR STREAM B-A

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
16.15	0.5	
16.30	0.8	*
16.45	3.0	***
17.00	3.7	****
17.15	0.9	*
17.30	0.5	

 QUEUE FOR STREAM C-AB

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
16.15	0.5	
16.30	0.7	*
16.45	1.1	*
17.00	1.2	*
17.15	0.7	*
17.30	0.5	*

 QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

I	STREAM	I	TOTAL DEMAND	I	* QUEUEING *	I	* INCLUSIVE QUEUEING *	I
I	I	I	I	I	* DELAY *	I	* DELAY *	I
I	I	I	(VEH)	(VEH/H)	(MIN)	(MIN/VEH)	(MIN)	(MIN/VEH)
I	B-C	I	320.7	I 213.8	I 105.6	I 0.33	I 105.6	I 0.33
I	B-A	I	159.7	I 106.4	I 129.9	I 0.81	I 129.9	I 0.81
I	C-AB	I	318.0	I 212.0	I 71.1	I 0.22	I 71.2	I 0.22
I	A-B	I	0.0	I 0.0	I	I	I	I
I	A-C	I	962.1	I 641.4	I	I	I	I
I	ALL	I	2699.2	I 1799.4	I 306.7	I 0.11	I 306.7	I 0.11

 * DELAY IS THAT OCCURRING ONLY WITHIN THE TIME PERIOD
 * INCLUSIVE DELAY INCLUDES DELAY SUFFERED BY VEHICLES
 WHICH ARE STILL QUEUEING AFTER THE END OF THE TIME PERIOD
 * THESE WILL ONLY BE SIGNIFICANTLY DIFFERENT IF THERE IS
 A LARGE QUEUE REMAINING AT THE END OF THE TIME PERIOD.

*****END OF RUN*****

===== end of file =====

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CAPACITIES, QUEUES, AND DELAYS AT 3 OR 4-ARM MAJOR/MINOR PRIORITY JUNCTIONS

PICADY 5.1 ANALYSIS PROGRAM
RELEASE 5.0 (JUNE 2010)

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Run with file:-

"\\newcastle13\data3\Projects\A089001 - A089500\A089228 - Low Road, Whitehaven\Analysis\Traffic Models\
Junction assessments\With Tempro adjustment for comt dev\Actual HGV percentage\A595 junction\A595-Mirehouse Road_oneway.vpi"
(drive-on-the-left) at 10:50:51 on Wednesday, 19 November 2014

RUN INFORMATION *****

RUN TITLE : A595(as Minor Road)/Mirehouse Road
LOCATION : Whitehaven
DATE : 07/11/14
CLIENT :
ENUMERATOR : narendra.sadhale [2147LT]
JOB NUMBER : A089228
STATUS : Completed
DESCRIPTION :

MAJOR/MINOR JUNCTION CAPACITY AND DELAY *****

INPUT DATA

```

MAJOR ROAD (ARM C) ----- MAJOR ROAD (ARM A)
                        I
                        I
                        I
                        I
                        I
                        I
                        I
MINOR ROAD (ARM B)
    
```

ARM A IS A595 North
ARM B IS A595 South
ARM C IS Mirehouse Road

STREAM LABELLING CONVENTION

STREAM A-B CONTAINS TRAFFIC GOING FROM ARM A TO ARM B
STREAM B-AC CONTAINS TRAFFIC GOING FROM ARM B TO ARM A AND TO ARM C
ETC.

GEOMETRIC DATA

I	DATA ITEM	I	MINOR ROAD B	I
I	TOTAL MAJOR ROAD CARRIAGEWAY WIDTH	I	(W) 12.00 M.	I
I	CENTRAL RESERVE WIDTH	I	(WCR) 0.00 M.	I
I		I		I
I	MAJOR ROAD RIGHT TURN - WIDTH	I	(WC-B) 2.20 M.	I
I	- VISIBILITY	I	(VC-B) 0.00 M.	I
I	- BLOCKS TRAFFIC (SPACES)	I	NO (0)	I
I		I		I
I	MINOR ROAD - VISIBILITY TO LEFT	I	(VB-C) 75.0 M.	I
I	- VISIBILITY TO RIGHT	I	(VB-A) 75.0 M.	I
I	- LANE 1 WIDTH	I	(WB-C) 4.00 M.	I
I	- LANE 2 WIDTH	I	(WB-A) 0.00 M.	I

.SLOPES AND INTERCEPT

(NB:Streams may be combined, in which case capacity will be adjusted)

I	Intercept For	Slope For Opposing	Slope For Opposing	I
I	STREAM B-C	STREAM A-C	STREAM A-B	I
I	738.35	0.21	0.08	I

I	Intercept For	Slope For Opposing	Slope For Opposing	Slope For Opposing	Slope For Opposing	I
I	STREAM B-A	STREAM A-C	STREAM A-B	STREAM C-A	STREAM C-B	I
I	593.44	0.20	0.08	0.13	0.29	I

I	Intercept For	Slope For Opposing	Slope For Opposing	I
I	STREAM C-B	STREAM A-C	STREAM A-B	I
I	573.96	0.16	0.16	I

(NB These values do not allow for any site specific corrections)

I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	08.30-08.45										I
I	B-AC	2.65	11.81	0.225		0.38	0.29	4.5		0.11	I
I	C-A	0.00									I
I	C-B	0.00	8.35	0.000		0.00	0.00	0.0		0.00	I
I	A-B	0.00									I
I	A-C	2.34									I

I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	08.45-09.00										I
I	B-AC	2.22	11.89	0.187		0.29	0.23	3.5		0.10	I
I	C-A	0.00									I
I	C-B	0.00	8.40	0.000		0.00	0.00	0.0		0.00	I
I	A-B	0.00									I
I	A-C	1.96									I

QUEUE FOR STREAM B-AC

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
07.45	0.2
08.00	0.3
08.15	0.4
08.30	0.4
08.45	0.3
09.00	0.2

QUEUE FOR STREAM C-B

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
07.45	0.0
08.00	0.0
08.15	0.0
08.30	0.0
08.45	0.0
09.00	0.0

QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

I	STREAM	I	TOTAL	DEMAND	I	* QUEUEING	*	I	* INCLUSIVE	QUEUEING	*	I
I	I	I	I	I	I	* DELAY	*	I	* DELAY	*	I	I
I	I	I	(VEH)	(VEH/H)	I	(MIN)	(MIN/VEH)	I	(MIN)	(MIN/VEH)	I	I
I	B-AC	I	243.6	I	162.4	I	26.8	I	0.11	I	26.8	I
I	C-A	I	0.0	I	0.0	I		I		I		I
I	C-B	I	0.0	I	0.0	I	0.00	I	0.0	I	0.00	I
I	A-B	I	0.0	I	0.0	I		I		I		I
I	A-C	I	214.7	I	143.1	I		I		I		I
I	ALL	I	458.3	I	305.6	I	26.8	I	0.06	I	26.8	I

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 WHICH ARE STILL QUEUEING AFTER THE END OF THE TIME PERIOD
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 A LARGE QUEUE REMAINING AT THE END OF THE TIME PERIOD.

*****END OF RUN*****

.SLOPES AND INTERCEPT

(NB:Streams may be combined, in which case capacity will be adjusted)

I	Intercept For	Slope For Opposing	Slope For Opposing	I
I	STREAM B-C	STREAM A-C	STREAM A-B	I
I	738.35	0.21	0.08	I

I	Intercept For	Slope For Opposing	Slope For Opposing	Slope For Opposing	Slope For Opposing	I
I	STREAM B-A	STREAM A-C	STREAM A-B	STREAM C-A	STREAM C-B	I
I	593.44	0.20	0.08	0.13	0.29	I

I	Intercept For	Slope For Opposing	Slope For Opposing	I
I	STREAM C-B	STREAM A-C	STREAM A-B	I
I	573.96	0.16	0.16	I

(NB These values do not allow for any site specific corrections)

TRAFFIC DEMAND DATA

I	ARM	I	FLOW	SCALE(%)	I
I	A	I	100		I
I	B	I	100		I
I	C	I	100		I

I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	17.15-17.30										I
I	B-AC	2.17	11.69	0.186		0.29	0.23	3.5		0.11	I
I	C-A	0.00									I
I	C-B	0.00	8.26	0.000		0.00	0.00	0.0		0.00	I
I	A-B	0.00									I
I	A-C	2.90									I

QUEUE FOR STREAM B-AC

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
16.15	0.2
16.30	0.3
16.45	0.4
17.00	0.4
17.15	0.3
17.30	0.2

QUEUE FOR STREAM C-B

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
16.15	0.0
16.30	0.0
16.45	0.0
17.00	0.0
17.15	0.0
17.30	0.0

QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

I	STREAM	I	TOTAL DEMAND	I	* QUEUEING *	I	* INCLUSIVE QUEUEING *	I
I	I	I	I	I	* DELAY *	I	* DELAY *	I
I	I	I	(VEH)	I	(MIN)	I	(MIN)	I
I	I	I	(VEH/H)	I	(MIN/VEH)	I	(MIN/VEH)	I
I	B-AC	I	238.1	I	158.7	I	26.8	I
I	C-A	I	0.0	I	0.0	I	0.11	I
I	C-B	I	0.0	I	0.0	I	0.00	I
I	A-B	I	0.0	I	0.0	I	0.0	I
I	A-C	I	318.0	I	212.0	I	0.00	I
I	ALL	I	556.1	I	370.7	I	26.8	I

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 WHICH ARE STILL QUEUEING AFTER THE END OF THE TIME PERIOD
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 A LARGE QUEUE REMAINING AT THE END OF THE TIME PERIOD.

*****END OF RUN*****

===== end of file =====

Printed at 10:50:59 on 19/11/2014]

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CAPACITIES, QUEUES, AND DELAYS AT 3 OR 4-ARM MAJOR/MINOR PRIORITY JUNCTIONS

PICADY 5.1 ANALYSIS PROGRAM
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Run with file:-

"\\newcastle13\data3\Projects\A089001 - A089500\A089228 - Low Road, Whitehaven\Analysis\Traffic Models\
Junction assessments\With Tempro adjustment for comt dev\Actual HGV percentage\A595 junction\A595-Mirehouse Road_2lane minor rd AA.vpi"
(drive-on-the-left) at 10:35:18 on Wednesday, 19 November 2014

RUN INFORMATION

RUN TITLE : Mirehouse Road/ A595
LOCATION : Whitehaven
DATE : 07/11/14
CLIENT :
ENUMERATOR : narendra.sadhale [2147LT]
JOB NUMBER : A089228
STATUS : Completed
DESCRIPTION :

MAJOR/MINOR JUNCTION CAPACITY AND DELAY

INPUT DATA

MAJOR ROAD (ARM C) ----- MAJOR ROAD (ARM A)

I
I
I
I
I
I
I

MINOR ROAD (ARM B)

ARM A IS A595 South
ARM B IS Mirehouse Road
ARM C IS A595 North

STREAM LABELLING CONVENTION

STREAM A-B CONTAINS TRAFFIC GOING FROM ARM A TO ARM B
STREAM B-AC CONTAINS TRAFFIC GOING FROM ARM B TO ARM A AND TO ARM C
ETC.

.....

DATA ITEM		MINOR ROAD	B
TOTAL MAJOR ROAD CARRIAGEWAY WIDTH		(W)	7.87 M.
CENTRAL RESERVE WIDTH		(WCR)	0.00 M.
MAJOR ROAD RIGHT TURN - WIDTH		(WC-B)	2.60 M.
- VISIBILITY		(VC-B)	75.00 M.
- BLOCKS TRAFFIC (SPACES)		YES	(11)
MINOR ROAD - VISIBILITY TO LEFT		(VB-C)	60.0 M.
- VISIBILITY TO RIGHT		(VB-A)	75.0 M.
- LANE 1 WIDTH		(WB-C)	-
- LANE 2 WIDTH		(WB-A)	-
WIDTH AT 0 M FROM JUNCTION			10.00 M.
WIDTH AT 5 M FROM JUNCTION			6.70 M.
WIDTH AT 10 M FROM JUNCTION			5.50 M.
WIDTH AT 15 M FROM JUNCTION			4.50 M.
WIDTH AT 20 M FROM JUNCTION			4.50 M.
- LENGTH OF FLARED SECTION			4 VEHs

(NB:Streams may be combined, in which case capacity will be adjusted)

I	Intercept For I STREAM B-C	Slope For STREAM A-C	Slope For STREAM A-B	Opposing I
I	0.00	0.00	0.00	I

* Due to the presence of a flare, data is not available

I	Intercept For I STREAM B-A	Slope For STREAM	Opposing A-C	Slope For Opposing STREAM A-B	Slope For Opposing STREAM C-A	Slope For Opposing STREAM C-B	Opposing I
I	0.00		0.00	0.00	0.00	0.00	I

* Due to the presence of a flare, data is not available

I	Intercept For I STREAM C-B	Slope For STREAM A-C	Slope For STREAM A-B	Opposing I
I	644.27	0.23	0.23	I

(NB These values do not allow for any site specific corrections)

.....

I	ARM	I	FLOW	SCALE (%)	I
I	A	I		100	I
I	B	I		100	I
I	C	I		100	I

Demand set: 2024 DS AM

TIME PERIOD BEGINS 07.30 AND ENDS 09.00

LENGTH OF TIME PERIOD - 90 MIN.

LENGTH OF TIME SEGMENT - 15 MIN.

DEMAND FLOW PROFILES ARE SYNTHESISED FROM TURNING COUNT DATA

		NUMBER OF MINUTES FROM START WHEN			RATE OF FLOW (VEH/MIN)		
I	ARM	I	I	I	I	I	I
		FLOW STARTS	TOP OF PEAK	FLOW STOPS	BEFORE	AT TOP	AFTER
		TO RISE	IS REACHED	FALLING	PEAK	OF PEAK	PEAK
I		I	I	I	I	I	I
I	ARM	A	I	I	I	I	I
I	ARM	B	I	I	I	I	I
I	ARM	C	I	I	I	I	I

Demand set: 2024 DS AM

		TURNING PROPORTIONS TURNING COUNTS (PERCENTAGE OF H.V.S)							
TIME		FROM/TO	ARM	A	ARM	B	ARM	C	
07.30 - 09.00		ARM A	0.000	0.000	1.000				
			0.0	0.0	703.0				
			(0.0)	(0.0)	(0.0)				
		ARM B	0.315	0.000	0.685				
			120.0	0.0	261.0				
			(0.0)	(0.0)	(0.0)				
		ARM C	0.802	0.198	0.000				
			650.0	160.0	0.0				
			(0.0)	(0.0)	(0.0)				

TURNING PROPORTIONS ARE CALCULATED FROM TURNING COUNT DATA
THE PERCENTAGE OF HEAVY VEHICLES VARIES OVER TURNING MOVEMENTS

QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

FOR DEMAND SET 2024 DS AM
AND FOR TIME PERIOD 1

I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	07.30-07.45										I
I	B-C	3.27	9.11	0.359		0.00	0.55	7.8		0.17	I
I	B-A	1.51	4.76	0.316		0.00	0.45	6.2		0.30	I
I	C-AB	2.01	8.72	0.230		0.00	0.30	4.4		0.15	I
I	A-B	0.00									I
I	A-C	8.82									I

I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	07.45-08.00										I
I	B-C	3.91	8.36	0.468		0.55	0.86	12.2		0.22	I
I	B-A	1.80	4.06	0.442		0.45	0.76	10.5		0.43	I
I	C-AB	2.40	8.32	0.288		0.30	0.40	6.0		0.17	I
I	A-B	0.00									I
I	A-C	10.53									I

I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	08.00-08.15										I
I	B-C	4.79	6.95	0.689		0.86	2.03	27.1		0.43	I
I	B-A	2.20	2.97	0.741		0.76	2.26	27.7		1.05	I
I	C-AB	2.94	7.78	0.377		0.40	0.59	8.9		0.21	I
I	A-B	0.00									I
I	A-C	12.90									I

I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	08.15-08.30										I
I	B-C	4.79	6.73	0.711		2.03	2.29	33.0		0.50	I
I	B-A	2.20	2.94	0.749		2.26	2.56	36.5		1.26	I
I	C-AB	2.94	7.78	0.377		0.59	0.60	9.1		0.21	I
I	A-B	0.00									I
I	A-C	12.90									I

I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	08.30-08.45										I
I	B-C	3.91	8.26	0.474		2.29	0.93	15.1		0.24	I
I	B-A	1.80	4.06	0.443		2.56	0.84	14.7		0.49	I
I	C-AB	2.40	8.32	0.288		0.60	0.41	6.2		0.17	I
I	A-B	0.00									I
I	A-C	10.53									I

I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	08.45-09.00										I
I	B-C	3.27	9.08	0.361		0.93	0.57	9.0		0.17	I
I	B-A	1.51	4.75	0.317		0.84	0.48	7.6		0.31	I
I	C-AB	2.01	8.72	0.230		0.41	0.30	4.6		0.15	I
I	A-B	0.00									I
I	A-C	8.82									I

WARNING NO MARGINAL ANALYSIS OF CAPACITIES AS MAJOR ROAD BLOCKING MAY OCCUR

QUEUE FOR STREAM B-C

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
07.45	0.6 *
08.00	0.9 *
08.15	2.0 **
08.30	2.3 **
08.45	0.9 *
09.00	0.6 *

QUEUE FOR STREAM B-A

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
07.45	0.4
08.00	0.8 *
08.15	2.3 **
08.30	2.6 ***
08.45	0.8 *
09.00	0.5

QUEUE FOR STREAM C-AB

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
07.45	0.3	
08.00	0.4	
08.15	0.6	*
08.30	0.6	*
08.45	0.4	
09.00	0.3	

QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

I	STREAM	I	TOTAL DEMAND	I	* QUEUEING *	I	* INCLUSIVE QUEUEING *	I
I	I	I	I	I	* DELAY *	I	* DELAY *	I
I	I	I	(VEH)	I	(MIN)	I	(MIN)	I
I	I	I	(VEH/H)	I	(MIN/VEH)	I	(MIN/VEH)	I
I	B-C	I	359.2	I	239.5	I	104.2	I
I	B-A	I	165.2	I	110.1	I	103.3	I
I	C-AB	I	220.2	I	146.8	I	39.1	I
I	A-B	I	0.0	I	0.0	I	I	I
I	A-C	I	967.6	I	645.1	I	I	I
I	ALL	I	2607.0	I	1738.0	I	246.7	I

* DELAY IS THAT OCCURRING ONLY WITHIN THE TIME PERIOD
 * INCLUSIVE DELAY INCLUDES DELAY SUFFERED BY VEHICLES
 WHICH ARE STILL QUEUEING AFTER THE END OF THE TIME PERIOD
 * THESE WILL ONLY BE SIGNIFICANTLY DIFFERENT IF THERE IS
 A LARGE QUEUE REMAINING AT THE END OF THE TIME PERIOD.

*****END OF RUN*****

.SLOPES AND INTERCEPT

(NB:Streams may be combined, in which case capacity will be adjusted)

I	Intercept For	Slope For	Opposing	Slope For	Opposing	I
I	STREAM B-C	STREAM	A-C	STREAM	A-B	I
I	0.00		0.00		0.00	I

* Due to the presence of a flare, data is not available

I	Intercept For	Slope For	Opposing	Slope For	Opposing	Slope For	Opposing	I
I	STREAM B-A	STREAM	A-C	STREAM	A-B	STREAM	C-A	I
I	0.00		0.00		0.00		0.00	I

* Due to the presence of a flare, data is not available

I	Intercept For	Slope For	Opposing	Slope For	Opposing	I
I	STREAM C-B	STREAM	A-C	STREAM	A-B	I
I	644.27		0.23		0.23	I

(NB These values do not allow for any site specific corrections)

TRAFFIC DEMAND DATA

I	ARM	I	FLOW SCALE(%)	I
I	A	I	100	I
I	B	I	100	I
I	C	I	100	I

Demand set: 2024 DS PM

TIME PERIOD BEGINS 16.00 AND ENDS 17.30

LENGTH OF TIME PERIOD - 90 MIN.
 LENGTH OF TIME SEGMENT - 15 MIN.

DEMAND FLOW PROFILES ARE SYNTHESISED FROM TURNING COUNT DATA

I	ARM	I	NUMBER OF MINUTES FROM START WHEN	I	RATE OF FLOW (VEH/MIN)	I
I	I	I	FLOW STARTS	I	BEFORE	I
I	I	I	TO RISE	I	AT TOP	I
I	I	I	IS REACHED	I	OF PEAK	I
I	I	I	FALLING	I	OF PEAK	I
I	I	I	I	I	I	I
I	ARM A	I	15.00	I	45.00	I
I	ARM B	I	15.00	I	45.00	I
I	ARM C	I	15.00	I	45.00	I

Demand set: 2024 DS PM

TIME	TURNING PROPORTIONS TURNING COUNTS (PERCENTAGE OF H.V.S)						
	FROM/TO	ARM	A	ARM	B	ARM	C
16.00 - 17.30	ARM A	I	0.000	I	0.000	I	1.000
		I	0.0	I	0.0	I	699.0
		I (0.0)	I (0.0)	I (0.0)	I (0.0)	I	
	ARM B	I	0.333	I	0.000	I	0.667
		I	117.0	I	0.0	I	234.0
		I (0.0)	I (0.0)	I (0.0)	I (0.0)	I	
	ARM C	I	0.743	I	0.257	I	0.000
		I	682.0	I	236.0	I	0.0
		I (0.0)	I (0.0)	I (0.0)	I (0.0)	I	

TURNING PROPORTIONS ARE CALCULATED FROM TURNING COUNT DATA
THE PERCENTAGE OF HEAVY VEHICLES VARIES OVER TURNING MOVEMENTS

QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

FOR DEMAND SET 2024 DS PM
AND FOR TIME PERIOD 2

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
16.00-16.15									
B-C	2.94	9.03	0.325		0.00	0.47	6.8		0.16
B-A	1.47	4.47	0.328		0.00	0.47	6.5		0.33
C-AB	2.96	8.73	0.339		0.00	0.50	7.4		0.17
A-B	0.00								
A-C	8.77								

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
16.15-16.30									
B-C	3.51	8.24	0.425		0.47	0.72	10.4		0.21
B-A	1.75	3.69	0.475		0.47	0.85	11.7		0.50
C-AB	3.54	8.34	0.424		0.50	0.72	10.8		0.21
A-B	0.00								
A-C	10.47								

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
16.30-16.45									
B-C	4.29	5.96	0.721		0.72	2.29	29.5		0.54
B-A	2.15	2.55	0.842		0.85	3.21	36.5		1.50
C-AB	4.33	7.80	0.555		0.72	1.20	17.8		0.28
A-B	0.00								
A-C	12.83								

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
16.45-17.00									
B-C	4.29	5.21	0.825		2.29	3.68	48.0		0.91
B-A	2.15	2.51	0.857		3.21	4.02	55.0		2.06
C-AB	4.33	7.80	0.555		1.20	1.23	18.7		0.29
A-B	0.00								
A-C	12.83								

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
17.00-17.15									
B-C	3.51	8.05	0.436		3.68	0.79	14.0		0.24
B-A	1.75	3.67	0.478		4.02	0.98	19.7		0.64
C-AB	3.54	8.34	0.424		1.23	0.75	11.5		0.21
A-B	0.00								
A-C	10.47								

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
17.15-17.30									
B-C	2.94	9.00	0.326		0.79	0.49	7.7		0.17
B-A	1.47	4.45	0.330		0.98	0.51	8.2		0.34
C-AB	2.96	8.73	0.339		0.75	0.52	7.9		0.17
A-B	0.00								
A-C	8.77								

WARNING NO MARGINAL ANALYSIS OF CAPACITIES AS MAJOR ROAD BLOCKING MAY OCCUR

 QUEUE FOR STREAM B-C

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
16.15	0.5	
16.30	0.7	*
16.45	2.3	**
17.00	3.7	****
17.15	0.8	*
17.30	0.5	

 QUEUE FOR STREAM B-A

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
16.15	0.5	
16.30	0.9	*
16.45	3.2	***
17.00	4.0	****
17.15	1.0	*
17.30	0.5	*

 QUEUE FOR STREAM C-AB

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
16.15	0.5	*
16.30	0.7	*
16.45	1.2	*
17.00	1.2	*
17.15	0.8	*
17.30	0.5	*

 QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

I	STREAM	I	TOTAL DEMAND	I	* QUEUEING *	I	* INCLUSIVE QUEUEING *	I
I	I	I	I	I	* DELAY *	I	* DELAY *	I
I	I	I	(VEH)	(VEH/H)	(MIN)	(MIN/VEH)	(MIN)	(MIN/VEH)
I	B-C	I	322.1	I 214.7	I 116.3	I 0.36	I 116.3	I 0.36
I	B-A	I	161.0	I 107.4	I 137.6	I 0.85	I 137.7	I 0.85
I	C-AB	I	324.8	I 216.6	I 74.1	I 0.23	I 74.1	I 0.23
I	A-B	I	0.0	I 0.0	I	I	I	I
I	A-C	I	962.1	I 641.4	I	I	I	I
I	ALL	I	2708.8	I 1805.9	I 328.0	I 0.12	I 328.1	I 0.12

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 WHICH ARE STILL QUEUEING AFTER THE END OF THE TIME PERIOD
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 A LARGE QUEUE REMAINING AT THE END OF THE TIME PERIOD.

*****END OF RUN*****

===== end of file =====

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CAPACITIES, QUEUES, AND DELAYS AT 3 OR 4-ARM MAJOR/MINOR PRIORITY JUNCTIONS

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Run with file:-

"\\newcastle13\data3\Projects\A089001 - A089500\A089228 - Low Road, Whitehaven\Analysis\Traffic Models\
Junction assessments\With Tempro adjustment for comt dev\Actual HGV percentage\A595 junction\A595-Mirehouse Road_oneyay.vpi"
(drive-on-the-left) at 10:54:33 on Wednesday, 19 November 2014RUN INFORMATION
*****RUN TITLE : A595(as Minor Road)/Mirehouse Road
LOCATION : Whitehaven
DATE : 07/11/14
CLIENT :
ENUMERATOR : narendra.sadhale [2147LT]
JOB NUMBER : A089228
STATUS : Completed
DESCRIPTION :MAJOR/MINOR JUNCTION CAPACITY AND DELAY
*****INPUT DATA
-----MAJOR ROAD (ARM C) ----- MAJOR ROAD (ARM A)
I
I
I
I
I
I
I
MINOR ROAD (ARM B)ARM A IS A595 North
ARM B IS A595 South
ARM C IS Mirehouse RoadSTREAM LABELLING CONVENTION
-----STREAM A-B CONTAINS TRAFFIC GOING FROM ARM A TO ARM B
STREAM B-AC CONTAINS TRAFFIC GOING FROM ARM B TO ARM A AND TO ARM C
ETC.GEOMETRIC DATA

I	DATA ITEM	I	MINOR ROAD B	I
I	TOTAL MAJOR ROAD CARRIAGEWAY WIDTH	I	(W) 12.00 M.	I
I	CENTRAL RESERVE WIDTH	I	(WCR) 0.00 M.	I
I		I		I
I	MAJOR ROAD RIGHT TURN - WIDTH	I	(WC-B) 2.20 M.	I
I	- VISIBILITY	I	(VC-B) 0.00 M.	I
I	- BLOCKS TRAFFIC (SPACES)	I	NO (0)	I
I		I		I
I	MINOR ROAD - VISIBILITY TO LEFT	I	(VB-C) 75.0 M.	I
I	- VISIBILITY TO RIGHT	I	(VB-A) 75.0 M.	I
I	- LANE 1 WIDTH	I	(WB-C) 4.00 M.	I
I	- LANE 2 WIDTH	I	(WB-A) 0.00 M.	I

.SLOPES AND INTERCEPT

(NB:Streams may be combined, in which case capacity will be adjusted)

I	Intercept For	Slope For Opposing	Slope For Opposing	I
I	STREAM B-C	STREAM A-C	STREAM A-B	I
I	738.35	0.21	0.08	I

I	Intercept For	Slope For Opposing	Slope For Opposing	Slope For Opposing	Slope For Opposing	I
I	STREAM B-A	STREAM A-C	STREAM A-B	STREAM C-A	STREAM C-B	I
I	593.44	0.20	0.08	0.13	0.29	I

I	Intercept For	Slope For Opposing	Slope For Opposing	I
I	STREAM C-B	STREAM A-C	STREAM A-B	I
I	573.96	0.16	0.16	I

(NB These values do not allow for any site specific corrections)

I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	08.30-08.45										I
I	B-AC	2.70	11.80	0.229		0.39	0.30	4.6		0.11	I
I	C-A	0.00									I
I	C-B	0.00	8.34	0.000		0.00	0.00	0.0		0.00	I
I	A-B	0.00									I
I	A-C	2.40									I

I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	08.45-09.00										I
I	B-AC	2.26	11.88	0.190		0.30	0.24	3.6		0.10	I
I	C-A	0.00									I
I	C-B	0.00	8.40	0.000		0.00	0.00	0.0		0.00	I
I	A-B	0.00									I
I	A-C	2.01									I

QUEUE FOR STREAM B-AC

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
07.45	0.2
08.00	0.3
08.15	0.4
08.30	0.4
08.45	0.3
09.00	0.2

QUEUE FOR STREAM C-B

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
07.45	0.0
08.00	0.0
08.15	0.0
08.30	0.0
08.45	0.0
09.00	0.0

QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

I	STREAM	I	TOTAL	DEMAND	I	* QUEUEING *	I	* INCLUSIVE QUEUEING *	I
I	I	I	I	I	I	* DELAY *	I	* DELAY *	I
I	I	I	(VEH)	(VEH/H)	I	(MIN)	(MIN/VEH)	(MIN)	(MIN/VEH)
I	B-AC	I	247.8	I 165.2	I	27.5	I 0.11	I 27.5	I 0.11
I	C-A	I	0.0	I 0.0	I		I	I	I
I	C-B	I	0.0	I 0.0	I	0.0	I 0.00	I 0.0	I 0.00
I	A-B	I	0.0	I 0.0	I		I	I	I
I	A-C	I	220.2	I 146.8	I		I	I	I
I	ALL	I	468.0	I 312.0	I	27.5	I 0.06	I 27.5	I 0.06

* DELAY IS THAT OCCURRING ONLY WITHIN THE TIME PERIOD
 * INCLUSIVE DELAY INCLUDES DELAY SUFFERED BY VEHICLES
 WHICH ARE STILL QUEUEING AFTER THE END OF THE TIME PERIOD
 * THESE WILL ONLY BE SIGNIFICANTLY DIFFERENT IF THERE IS
 A LARGE QUEUE REMAINING AT THE END OF THE TIME PERIOD.

*****END OF RUN*****

.SLOPES AND INTERCEPT

(NB:Streams may be combined, in which case capacity will be adjusted)

I	Intercept For	Slope For Opposing	Slope For Opposing	I
I	STREAM B-C	STREAM A-C	STREAM A-B	I
I	738.35	0.21	0.08	I

I	Intercept For	Slope For Opposing	Slope For Opposing	Slope For Opposing	Slope For Opposing	I
I	STREAM B-A	STREAM A-C	STREAM A-B	STREAM C-A	STREAM C-B	I
I	593.44	0.20	0.08	0.13	0.29	I

I	Intercept For	Slope For Opposing	Slope For Opposing	I
I	STREAM C-B	STREAM A-C	STREAM A-B	I
I	573.96	0.16	0.16	I

(NB These values do not allow for any site specific corrections)

TRAFFIC DEMAND DATA

I	ARM	I	FLOW	SCALE(%)	I
I	A	I	100		I
I	B	I	100		I
I	C	I	100		I

I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	17.15-17.30										I
I	B-AC	2.28	11.68	0.196		0.31	0.25	3.8		0.11	I
I	C-A	0.00									I
I	C-B	0.00	8.25	0.000		0.00	0.00	0.0		0.00	I
I	A-B	0.00									I
I	A-C	2.96									I

QUEUE FOR STREAM B-AC

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
16.15	0.2
16.30	0.3
16.45	0.4
17.00	0.4
17.15	0.3
17.30	0.2

QUEUE FOR STREAM C-B

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
16.15	0.0
16.30	0.0
16.45	0.0
17.00	0.0
17.15	0.0
17.30	0.0

QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

I	STREAM	I	TOTAL DEMAND	I	* QUEUEING *	I	* INCLUSIVE QUEUEING *	I
I	I	I	I	I	* DELAY *	I	* DELAY *	I
I	I	I	(VEH)	I	(MIN)	I	(MIN)	I
I	I	I	(VEH/H)	I	(MIN/VEH)	I	(MIN/VEH)	I
I	B-AC	I	250.5	I	167.0	I	28.7	I
I	C-A	I	0.0	I	0.0	I	0.11	I
I	C-B	I	0.0	I	0.0	I	0.00	I
I	A-B	I	0.0	I	0.0	I	0.0	I
I	A-C	I	324.8	I	216.6	I	0.00	I
I	ALL	I	575.3	I	383.6	I	28.7	I

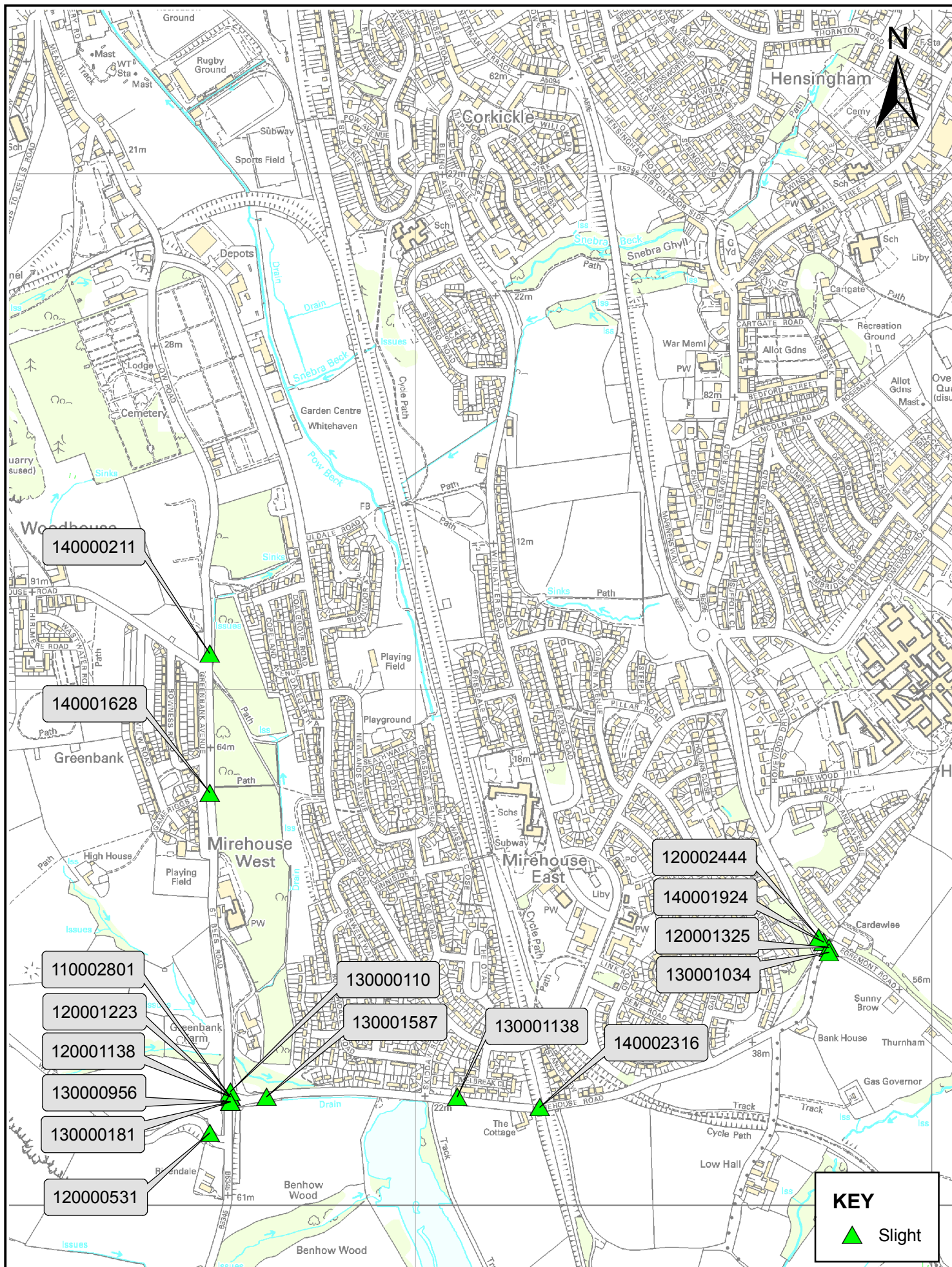
* DELAY IS THAT OCCURRING ONLY WITHIN THE TIME PERIOD
 * INCLUSIVE DELAY INCLUDES DELAY SUFFERED BY VEHICLES
 WHICH ARE STILL QUEUEING AFTER THE END OF THE TIME PERIOD
 * THESE WILL ONLY BE SIGNIFICANTLY DIFFERENT IF THERE IS
 A LARGE QUEUE REMAINING AT THE END OF THE TIME PERIOD.

*****END OF RUN*****

===== end of file =====



APPENDIX G - ACCIDENT DATA



SEVERITY SLIGHT	District Ref.No	Copeland 110002801	Low Road Whitehaven three years Collision Report 14/10/11 - 13/10/14				Grid Reference 297640 / 515210		Police Officer Attend: Yes	
Date Time Weather Road Surface Street Lighting		02/12/2011 Day Friday 16:48 Raining without high winds Wet/Damp Dark: street lights present and lit		Road B5345 Location B5345 St. Bees Whitehaven Road At Junction With Mirehouse Road. Description of Accident V2 Travelling South Towards Junction - From Direction Of Whitehaven. V2 Travelled North - Waiting In Central Reservation Lane At Juntion To Turn Right Into Mirehouse Road. V2 Commences Right Turn Into Path Of & Collides With V1.						
SITE DETAILS			SPECIAL SITE CONDITIONS		CONTRIBUTORY FACTORS			PARTICIPANT	PROBABILITY	
Speed Limit 30 MPH			None		405 Failed to look properly (Driver/Rider - Error)			Vehicle 002	A	
Carriageway Single carriageway					406 Failed to judge other person's path/speed (Driver/Rider - Error)			Vehicle 002	A	
Junction Detail T or staggered junction										
Junction Control Give way or uncontrolled										
2nd Road Number C			CARRIAGEWAY HAZARDS							
Pedestrian Facilities None within 50 metres			None							
No physical crossing facility within 50 metre										
VEHICLES INVOLVED 2					CASUALTIES INVOLVED 1					
Veh.No. 1 Vehicle type Car Make Model Manoeuvre Turning right Veh. direction from South to East Towing? No tow or articulation Skidded No skidding, jack-knifing or overturning Veh location at impact (restricted lane) On main carriageway not in restricted lane Junct. location of veh. at 1st impact Mid junction - on roundabout or main road Veh left carriageway? Did not leave carriageway Hit object in c'way? None Hit object off c'way? None First point of impact Nearside Veh registration no. Other veh.hit (ref.no) 2 Hit and run Not hit and run Drivers age 57 yrs Sex Male Breath test Negative Driving Lic Left Hand Drive Unknown Foreign veh. Not foreign registered vehicle Journey purpose Other					Cas No 1 Cas Class Driver or Rider Veh ref No 2 Severity SLIGHT Age 70 yrs Sex Male Post code Car Passenger? Not a passenger PSV Passenger? Not a passenger Seat Belt Unknown Cycle Helmet Ped Movement Not applicable Ped Location Not applicable Ped Direction to Not applicable School Pupil Other Roadworker injured					
Veh.No. 2 Vehicle type Car Make Model Manoeuvre Going ahead other Veh. direction from North to South Towing? No tow or articulation Skidded No skidding, jack-knifing or overturning Veh location at impact (restricted lane) On main carriageway not in restricted lane Junct. location of veh. at 1st impact Mid junction - on roundabout or main road Veh left carriageway? Did not leave carriageway Hit object in c'way? None Hit object off c'way? None First point of impact Front Veh registration no. Other veh.hit (ref.no) 1 Hit and run Not hit and run Drivers age 70 yrs Sex Male Breath test Negative Driving Lic Left Hand Drive Unknown Foreign veh. Not foreign registered vehicle Journey purpose Journey as part of work					Other Details					
Full Details					05-November-2014		Accident Ref.No 110002801			

SEVERITY SLIGHT	District Ref.No	Copeland 120000531	Low Road Whitehaven three years Collision Report 14/10/11 - 13/10/14				Grid Reference 297600 / 515140	Police Officer Attend: Yes	
Date Time Weather Road Surface Street Lighting	04/03/2012 Day Sunday 12:44 Raining without high winds Wet/Damp Daylight		Road C4034	Location Wilson Pit Road 25 Metres West of Junction with B5345 St Bees Road Junction, Whitehaven.					
			Description of Accident	V1 Travelling on Incline - Entered Lefthand Bend Losing Traction. V1 Collides with V2 Travelling Opposite Direction.					
SITE DETAILS			SPECIAL SITE CONDITIONS		CONTRIBUTORY FACTORS		PARTICIPANT	PROBABILITY	
Speed Limit 60 MPH			None		410 Loss of control (Driver/Rider - Error)		Vehicle 001	A	
Carriageway Slip road					703 Road layout (Driver/Rider - Vision Affected)		Vehicle 001	A	
Junction Detail Not at or within 20 metres of junction					707 Rain, sleet, snow or fog (Driver/Rider - Vision Affected)		Vehicle 001	A	
Junction Control			CARRIAGEWAY HAZARDS						
2nd Road Number			None						
Pedestrian Facilities None within 50 metres No physical crossing facility within 50 metre									
VEHICLES INVOLVED 2					CASUALTIES INVOLVED 1				
Veh.No. 1	Vehicle type Car		Make	Model		Cas No 1	Cas Class	Driver or Rider	Veh ref No 2
Manoeuvre	Going ahead left hand bend					Severity SLIGHT	Age 43 yrs	Sex Male	Post code
Veh. direction from	Northwest to West		Towing?	No tow or articulation		Car Passenger?	Not a passenger		PSV Passenger? Not a passenger
Skidded	Skidded					Seat Belt	Unknown		Cycle Helmet
Veh location at impact (restricted lane)	On main carriageway not in restricted lane					Ped Movement	Not applicable		
Junct. location of veh. at 1st impact	Not at or within 20m of junction					Ped Location	Not applicable		
Veh left carriageway?	Did not leave carriageway					Ped Direction to	Not applicable		
Hit object in c'way?	None					School Pupil	Other		
Hit object off c'way?	None					Roadworker injured			
First point of impact	Offside					<u>Other Details</u>			
Veh registration no.		Other veh.hit (ref.no) 2	Hit and run	Not hit and run					
Drivers age 18 yrs	Sex Male	Breath test Negative	Driving Lic						
Left Hand Drive	Unknown	Foreign veh. Not foreign registered vehicle							
Journey purpose	Other								
Veh.No. 2	Vehicle type Car		Make	Model					
Manoeuvre	Going ahead right hand bend								
Veh. direction from	East to Northwest		Towing?	No tow or articulation					
Skidded	No skidding, jack-knifing or overturning								
Veh location at impact (restricted lane)	On main carriageway not in restricted lane								
Junct. location of veh. at 1st impact	Not at or within 20m of junction								
Veh left carriageway?	Did not leave carriageway								
Hit object in c'way?	None								
Hit object off c'way?	None								
First point of impact	Offside								
Veh registration no.		Other veh.hit (ref.no) 1	Hit and run	Not hit and run					
Drivers age 43 yrs	Sex Male	Breath test Negative	Driving Lic						
Left Hand Drive	Unknown	Foreign veh. Not foreign registered vehicle							
Journey purpose	Other								
Full Details					05-November-2014		Accident Ref.No 120000531		

SEVERITY SLIGHT	District Ref.No	Copeland 120001138	Low Road Whitehaven three years Collision Report 14/10/11 - 13/10/14				Grid Reference 297640 / 515210				
			Police Officer Attend: Yes								
Date 29/05/2012 Day Tuesday Time 06:48 Weather Fine without high winds Road Surface Dry Street Lighting Daylight			Road B5345 Location B5345 St Bees Road/Mirehouse Road Junction, Whitehaven. Description V1 Travelling Along St Bees Rd In Direction Of Whitehaven And Was Preparing To Turn Right Onto Mirehouse Rd. V2 Was Travelling of Accident Along St Bees Rd In Opposite Direction (Toward St Bees(. Initially V2 Indicated To Turn Left Onto Mirehou								
SITE DETAILS Speed Limit 30 MPH Carriageway Single carriageway Junction Detail T or staggered junction Junction Control Give way or uncontrolled 2nd Road Number U Pedestrian Facilities None within 50 metres No physical crossing facility within 50 metre			SPECIAL SITE CONDITIONS None		CONTRIBUTORY FACTORS 406 Failed to judge other person's path/speed (Driver/Rider - Error) 404 Failed to signal/misleading signal (Driver/Rider - Error)		PARTICIPANT Vehicle 001 Vehicle 002		PROBABILITY A A		
VEHICLES INVOLVED 2						CASUALTIES INVOLVED 1					
Veh.No. 1 Vehicle type Car Make Model Manoeuvre Turning right Veh. direction from South to East Towing? No tow or articulation Skidded No skidding, jack-knifing or overturning Veh location at impact (restricted lane) On main carriageway not in restricted lane Junct. location of veh. at 1st impact Mid junction - on roundabout or main road Veh left carriageway? Did not leave carriageway Hit object in c'way? None Hit object off c'way? None First point of impact Front Veh registration no. Other veh.hit (ref.no) 2 Hit and run Not hit and run Drivers age 49 yrs Sex Female Breath test Negative Driving Lic Left Hand Drive Unknown Foreign veh. Not foreign registered vehicle Journey purpose Journey as part of work						Cas No 1 Cas Class Driver or Rider Veh ref No 1 Severity SLIGHT Age 49 yrs Sex Female Post code Car Passenger? Not a passenger PSV Passenger? Not a passenger Seat Belt Unknown Cycle Helmet Ped Movement Not applicable Ped Location Not applicable Ped Direction to Not applicable School Pupil Other Roadworker injured					
Veh.No. 2 Vehicle type Car Make Model Manoeuvre Going ahead other Veh. direction from North to South Towing? No tow or articulation Skidded No skidding, jack-knifing or overturning Veh location at impact (restricted lane) On main carriageway not in restricted lane Junct. location of veh. at 1st impact Mid junction - on roundabout or main road Veh left carriageway? Did not leave carriageway Hit object in c'way? None Hit object off c'way? None First point of impact Front Veh registration no. Other veh.hit (ref.no) 1 Hit and run Not hit and run Drivers age 35 yrs Sex Male Breath test Negative Driving Lic Left Hand Drive Unknown Foreign veh. Not foreign registered vehicle Journey purpose Journey as part of work						Other Details					
Full Details 05-November-2014 Accident Ref.No 120001138											

SEVERITY SLIGHT	District Ref.No	Copeland 120001223	Low Road Whitehaven three years Collision Report 14/10/11 - 13/10/14				Grid Reference 297640 / 515210				
			Police Officer Attend: Yes								
Date 26/03/2012 Day Monday Time 16:50 Weather Fine without high winds Road Surface Dry Street Lighting Daylight			Road B5345 Location B5345 St Bees Road/Mirehouse Road Junction, Whitehaven. Description V1 Travelling S-N St Bees Rd.Ýüv2 Travelling N-S St Bees Rd.Ýüv3 Stationary At Junction With Mirehouse Rd, Intending To Turn of Accident Right (N) Into St Bees Rd.Ýüv1 Turns Right (E) Into Mirehouse Rd Into Path Of V2. Collision Occurs And Then								
SITE DETAILS Speed Limit 30 MPH Carriageway Single carriageway Junction Detail T or staggered junction Junction Control Give way or uncontrolled 2nd Road Number U Pedestrian Facilities None within 50 metres No physical crossing facility within 50 metre			SPECIAL SITE CONDITIONS None		CONTRIBUTORY FACTORS 403 Poor turn or manoeuvre (Driver/Rider - Error) 405 Failed to look properly (Driver/Rider - Error)		PARTICIPANT Vehicle 001 Vehicle 001		PROBABILITY A A		
VEHICLES INVOLVED 3						CASUALTIES INVOLVED 1					
Veh.No. 1 Vehicle type Car Make Model Manoeuvre Turning right Veh. direction from South to East Towing? No tow or articulation Skidded No skidding, jack-knifing or overturning Veh location at impact (restricted lane) On main carriageway not in restricted lane Junct. location of veh. at 1st impact Approaching junction or waiting Veh left carriageway? Did not leave carriageway Hit object in c'way? None Hit object off c'way? None First point of impact Front Veh registration no. Other veh.hit (ref.no) 2 Hit and run Not hit and run Drivers age 23 yrs Sex Female Breath test Negative Driving Lic Left Hand Drive Unknown Foreign veh. Not foreign registered vehicle Journey purpose Other						Cas No 1 Cas Class Driver or Rider Veh ref No 1 Severity SLIGHT Age 23 yrs Sex Female Post code Car Passenger? Not a passenger PSV Passenger? Not a passenger Seat Belt Unknown Cycle Helmet Ped Movement Not applicable Ped Location Not applicable Ped Direction to Not applicable School Pupil Other Roadworker injured					
Veh.No. 2 Vehicle type Van/Goods < 3.5t Make Model Manoeuvre Going ahead other Veh. direction from North to South Towing? No tow or articulation Skidded No skidding, jack-knifing or overturning Veh location at impact (restricted lane) On main carriageway not in restricted lane Junct. location of veh. at 1st impact Approaching junction or waiting Veh left carriageway? Did not leave carriageway Hit object in c'way? None Hit object off c'way? None First point of impact Front Veh registration no. Other veh.hit (ref.no) 1 Hit and run Not hit and run Drivers age 33 yrs Sex Male Breath test Negative Driving Lic Left Hand Drive Unknown Foreign veh. Not foreign registered vehicle Journey purpose Commuting to/from work						Other Details					
Full Details 05-November-2014 Accident Ref.No 120001223											

Veh.No.	3	Vehicle type	Car	Make		Model	
Manoeuvre	Waiting to turn right						
Veh. direction from	East to North		Towing?	No tow or articulation			
Skidded	No skidding, jack-knifing or overturning						
Veh location at impact (restricted lane)	On main carriageway not in restricted lane						
Junct. location of veh. at 1st impact	Approaching junction or waiting						
Veh left carriageway?	Did not leave carriageway						
Hit object in c'way?	None						
Hit object off c'way?	None						
First point of impact	Offside						
Veh registration no.		Other veh.hit (ref.no)	2	Hit and run	Not hit and run		
Drivers age	37 yrs	Sex	Female	Breath test	Negative		
Left Hand Drive	Unknown	Foreign veh.	Not foreign registered vehicle				
Journey purpose	Other						

SEVERITY SLIGHT	District Ref.No	Copeland 120001325	Low Road Whitehaven three years Collision Report 14/10/11 - 13/10/14				Grid Reference 298800 / 515500		Police Officer Attend: Yes	
Date Time Weather Road Surface Street Lighting		21/06/2012 Day Thursday 20:40 Raining without high winds Wet/Damp Daylight		Road A Location A595 Egremont Road/Mirehouse Road Junction, Whitehaven. Description of Accident V1 Facing Se on A595 in right Hand Filter Lane to Turn into Mirehouse Road. V2 Travelling Nw on A595 Continuing Straight On. V1 Has Turned in Front of V2 Path Giving no Time for it to Take Evasive Action. V1 and V2 Collided Almost H						
SITE DETAILS Speed Limit 40 MPH Carriageway Single carriageway Junction Detail Slip road Junction Control Give way or uncontrolled 2nd Road Number U Pedestrian Facilities None within 50 metres No physical crossing facility within 50 metre				SPECIAL SITE CONDITIONS None		CONTRIBUTORY FACTORS 406 Failed to judge other person's path/speed (Driver/Rider - Error) 602 Careless/Reckless (Driver/Rider - Behaviour) 403 Poor turn or manoeuvre (Driver/Rider - Error) 405 Failed to look properly (Driver/Rider - Error) 103 Slippery road due to weather (Road Environment Contrib)		PARTICIPANT Vehicle 001 Vehicle 001 Vehicle 001 Vehicle 001 Vehicle 001		PROBABILITY A A A B B
VEHICLES INVOLVED 3						CASUALTIES INVOLVED 4				
Veh.No. 1 Vehicle type Car Make Model Manoeuvre Turning right Veh. direction from Northwest to Southeast Towing? No tow or articulation Skidded Skidded Veh location at impact (restricted lane) On main carriageway not in restricted lane Junct. location of veh. at 1st impact Leaving main road Veh left carriageway? Did not leave carriageway Hit object in c'way? None Hit object off c'way? None First point of impact Front Veh registration no. Other veh.hit (ref.no) 2 Hit and run Not hit and run Drivers age 33 yrs Sex Male Breath test Negative Driving Lic Left Hand Drive Unknown Foreign veh. Not foreign registered vehicle Journey purpose Journey as part of work						Cas No 1 Cas Class Driver or Rider Veh ref No 1 Severity SLIGHT Age 33 yrs Sex Male Post code Car Passenger? Not a passenger PSV Passenger? Not a passenger Seat Belt Unknown Cycle Helmet Ped Movement Not applicable Ped Location Not applicable Ped Direction to Not applicable School Pupil Other Roadworker injured				
Veh.No. 2 Vehicle type Car Make Model Manoeuvre Going ahead other Veh. direction from Southeast to Northwest Towing? No tow or articulation Skidded No skidding, jack-knifing or overturning Veh location at impact (restricted lane) On main carriageway not in restricted lane Junct. location of veh. at 1st impact Cleared junction or waiting Veh left carriageway? Did not leave carriageway Hit object in c'way? None Hit object off c'way? None First point of impact Front Veh registration no. Other veh.hit (ref.no) 1 Hit and run Not hit and run Drivers age 49 yrs Sex Female Breath test Negative Driving Lic Left Hand Drive Unknown Foreign veh. Not foreign registered vehicle Journey purpose Other						Cas No 2 Cas Class Driver or Rider Veh ref No 2 Severity SLIGHT Age 49 yrs Sex Female Post code Car Passenger? Not a passenger PSV Passenger? Not a passenger Seat Belt Unknown Cycle Helmet Ped Movement Not applicable Ped Location Not applicable Ped Direction to Not applicable School Pupil Other Roadworker injured				
						Cas No 3 Cas Class Driver or Rider Veh ref No 3 Severity SLIGHT Age 42 yrs Sex Male Post code Car Passenger? Not a passenger PSV Passenger? Not a passenger Seat Belt Unknown Cycle Helmet Ped Movement Not applicable Ped Location Not applicable Ped Direction to Not applicable School Pupil Other Roadworker injured				
Full Details						05-November-2014				
						Accident Ref.No 120001325				

Veh.No.	3	Vehicle type	Taxi	Make		Model	
Manoeuvre		Waiting to turn right					
Veh. direction from		Southwest to Northeast		Towing?	No tow or articulation		
Skidded		No skidding, jack-knifing or overturning					
Veh location at impact (restricted lane)		On main carriageway not in restricted lane					
Junct. location of veh. at 1st impact		Cleared junction or waiting					
Veh left carriageway?		Did not leave carriageway					
Hit object in c'way?		None					
Hit object off c'way?		None					
First point of impact		Front					
Veh registration no.			Other veh.hit (ref.no)	2	Hit and run	Not hit and run	
Drivers age	42 yrs	Sex	Male	Breath test	Negative	Driving Lic	
Left Hand Drive		Unknown	Foreign veh.	Not foreign registered vehicle			
Journey purpose		Journey as part of work					

Cas No	4	Cas Class	Passenger	Veh ref No	2
Severity	SLIGHT	Age	51 yrs	Sex	Female
				Post code	
Car Passenger?	Front seat passenger	PSV Passenger?	Not a passenger		
Seat Belt	Unknown	Cycle Helmet			
Ped Movement	Not applicable				
Ped Location	Not applicable				
Ped Direction to	Not applicable				
School Pupil	Other				
Roadworker injured					

Other Details

SEVERITY SLIGHT	District Ref.No	Copeland 120002444	Low Road Whitehaven three years Collision Report 14/10/11 - 13/10/14				Grid Reference 298780 / 515520	Police Officer Attend: Yes
Date Time Weather Road Surface Street Lighting	12/11/2012 Day Monday 04:42 Raining without high winds Wet/Damp Dark: street lights present and lit		Road A	Location A595 Whitehaven Description V1 Turned right out of the Junction. V2 Travelling on the Main Road Touched his Brakes and Tried to Steer Around V1 but Lost of Accident Control and Skidded, Hit a Lampost and Rolled into a Field.				
SITE DETAILS Speed Limit 40 MPH Carriageway Single carriageway Junction Detail T or staggered junction Junction Control Give way or uncontrolled 2nd Road Number U Pedestrian Facilities None within 50 metres No physical crossing facility within 50 metre			SPECIAL SITE CONDITIONS None		CONTRIBUTORY FACTORS 103 Slippery road due to weather (Road Environment Contrib) 403 Poor turn or manoeuvre (Driver/Rider - Error) 307 Travelling too fast for conditions (Driver/Rider - Injudicious)		PARTICIPANT Vehicle 002 Vehicle 001 Vehicle 002	PROBABILITY B B A
VEHICLES INVOLVED 2					CASUALTIES INVOLVED 1			
Veh.No. 1 Vehicle type Van/Goods < 3.5t Make Model Manoeuvre Going ahead other Veh. direction from Southwest to North Towing? No tow or articulation Skidded No skidding, jack-knifing or overturning Veh location at impact (restricted lane) On main carriageway not in restricted lane Junct. location of veh. at 1st impact Entering main road Veh left carriageway? Did not leave carriageway Hit object in c'way? None Hit object off c'way? None First point of impact Did not impact Veh registration no. Other veh.hit (ref.no) 0 Hit and run Non-stop vehicle, Drivers age ? yrs Sex Not know Breath test Driver not contacted Driving Lic Left Hand Drive Unknown Foreign veh. Not foreign registered vehicle Journey purpose Other					Cas No 1 Cas Class Driver or Rider Veh ref No 2 Severity SLIGHT Age 26 yrs Sex Male Post code Car Passenger? Not a passenger PSV Passenger? Not a passenger Seat Belt Unknown Cycle Helmet Ped Movement Not applicable Ped Location Not applicable Ped Direction to Not applicable School Pupil Other Roadworker injured			
Veh.No. 2 Vehicle type Car Make Model Manoeuvre Going ahead right hand bend Veh. direction from Northwest to Southeast Towing? No tow or articulation Skidded Overturned Veh location at impact (restricted lane) On main carriageway not in restricted lane Junct. location of veh. at 1st impact Approaching junction or waiting Veh left carriageway? Left carriageway offside Hit object in c'way? None Hit object off c'way? Lamp post First point of impact Did not impact Veh registration no. Other veh.hit (ref.no) 0 Hit and run Not hit and run Drivers age 26 yrs Sex Male Breath test Negative Driving Lic Left Hand Drive Unknown Foreign veh. Not foreign registered vehicle Journey purpose Journey as part of work					Other Details			
Full Details					05-November-2014			
					Accident Ref.No 120002444			

SEVERITY SLIGHT	District Ref.No	Copeland 130000110	Low Road Whitehaven three years Collision Report 14/10/11 - 13/10/14				Grid Reference 297640 / 515220		Police Officer Attend: Yes		
Date Time Weather Road Surface Street Lighting		17/01/2013 Day Thursday 06:39 Fine without high winds Dry Dark: street lights present and lit		Road B5345 Location B5345 St Bees Road, Whitehaven Description of Accident V1 Was Travelling North Approaching Junction. V1 Had Slowed To Turn Right And Entered Filter Lane. Driver Of V1 Had Noticed A Vehicle (Unconnected) At Give Way Lines Waiting To Turn Left. Driver Of V1 Had Not Seen Any Approaching							
SITE DETAILS				SPECIAL SITE CONDITIONS		CONTRIBUTORY FACTORS		PARTICIPANT		PROBABILITY	
Speed Limit 30 MPH				None		306 Exceeding speed limit (Driver/Rider - Injudicious)		Vehicle 002		B	
Carriageway Single carriageway						405 Failed to look properly (Driver/Rider - Error)		Vehicle 001		A	
Junction Detail T or staggered junction											
Junction Control Give way or uncontrolled											
2nd Road Number U											
Pedestrian Facilities None within 50 metres											
No physical crossing facility within 50 metre											
VEHICLES INVOLVED 2						CASUALTIES INVOLVED 1					
Veh.No. 1 Vehicle type Car Make Model Manoeuvre Slowing or stopping Veh. direction from South to East Towing? No tow or articulation Skidded No skidding, jack-knifing or overturning Veh location at impact (restricted lane) On main carriageway not in restricted lane Junct. location of veh. at 1st impact Mid junction - on roundabout or main road Veh left carriageway? Did not leave carriageway Hit object in c'way? Bollard/refuge Hit object off c'way? None First point of impact Nearside Veh registration no. Other veh.hit (ref.no) 0 Hit and run Not hit and run Drivers age 23 yrs Sex Female Breath test Negative Driving Lic Left Hand Drive Unknown Foreign veh. Not foreign registered vehicle Journey purpose Commuting to/from work						Cas No 1 Cas Class Driver or Rider Veh ref No 1 Severity SLIGHT Age 23 yrs Sex Female Post code Car Passenger? Not a passenger PSV Passenger? Not a passenger Seat Belt Unknown Cycle Helmet Ped Movement Not applicable Ped Location Not applicable Ped Direction to Not applicable School Pupil Other Roadworker injured					
Veh.No. 2 Vehicle type Car Make Model Manoeuvre Going ahead other Veh. direction from North to South Towing? No tow or articulation Skidded No skidding, jack-knifing or overturning Veh location at impact (restricted lane) On main carriageway not in restricted lane Junct. location of veh. at 1st impact Approaching junction or waiting Veh left carriageway? Did not leave carriageway Hit object in c'way? Bollard/refuge Hit object off c'way? None First point of impact Front Veh registration no. Other veh.hit (ref.no) 0 Hit and run Not hit and run Drivers age 29 yrs Sex Male Breath test Negative Driving Lic Left Hand Drive Unknown Foreign veh. Not foreign registered vehicle Journey purpose Commuting to/from work						Other Details					
Full Details						05-November-2014					
						Accident Ref.No 130000110					

SEVERITY SLIGHT	District Copeland Ref.No 130000181	Low Road Whitehaven three years Collision Report 14/10/11 - 13/10/14				Grid Reference 297640 / 515200 Police Officer Attend: Yes
Date 23/01/2013 Time 15:07 Weather Fine without high winds Road Surface Dry Street Lighting Daylight	Day Wednesday	Road B5345 Location B5345 St Bees Road at Junction with Mirehouse Road, Whitehaven Description of Accident V1 Travelling From St. Bees Towards Whitehaven, Turning Right Onto Mirehouse Road. V2 Travelling From Whitehaven Towards St. Bees. V1 Turned Into Path Of V2 Causing Collision.				
SITE DETAILS Speed Limit 30 MPH Carriageway Single carriageway Junction Detail Slip road Junction Control Give way or uncontrolled 2nd Road Number U Pedestrian Facilities None within 50 metres No physical crossing facility within 50 metre		SPECIAL SITE CONDITIONS None		CONTRIBUTORY FACTORS PARTICIPANT PROBABILITY		
VEHICLES INVOLVED 2				CASUALTIES INVOLVED 2		
Veh.No. 1 Vehicle type Car Make Model Manoeuvre Turning right Veh. direction from Southeast to Northwest Towing? No tow or articulation Skidded No skidding, jack-knifing or overturning Veh location at impact (restricted lane) On main carriageway not in restricted lane Junct. location of veh. at 1st impact Leaving main road Veh left carriageway? Did not leave carriageway Hit object in c'way? None Hit object off c'way? None First point of impact Front Veh registration no. Other veh.hit (ref.no) 2 Hit and run Not hit and run Drivers age 66 yrs Sex Female Breath test Negative Driving Lic Left Hand Drive Unknown Foreign veh. Not foreign registered vehicle Journey purpose Other				Cas No 1 Cas Class Driver or Rider Veh ref No 1 Severity SLIGHT Age 66 yrs Sex Female Post code Car Passenger? Not a passenger PSV Passenger? Not a passenger Seat Belt Unknown Cycle Helmet Ped Movement Not applicable Ped Location Not applicable Ped Direction to Not applicable School Pupil Other Roadworker injured		
Veh.No. 2 Vehicle type Car Make Model Manoeuvre Going ahead other Veh. direction from Northeast to Southwest Towing? No tow or articulation Skidded No skidding, jack-knifing or overturning Veh location at impact (restricted lane) On main carriageway not in restricted lane Junct. location of veh. at 1st impact Approaching junction or waiting Veh left carriageway? Did not leave carriageway Hit object in c'way? None Hit object off c'way? None First point of impact Front Veh registration no. Other veh.hit (ref.no) 1 Hit and run Not hit and run Drivers age 29 yrs Sex Female Breath test Negative Driving Lic Left Hand Drive Unknown Foreign veh. Not foreign registered vehicle Journey purpose Other				Cas No 2 Cas Class Driver or Rider Veh ref No 2 Severity SLIGHT Age 29 yrs Sex Female Post code Car Passenger? Not a passenger PSV Passenger? Not a passenger Seat Belt Unknown Cycle Helmet Ped Movement Not applicable Ped Location Not applicable Ped Direction to Not applicable School Pupil Other Roadworker injured		
				Other Details		
Full Details				05-November-2014		Accident Ref.No 130000181

SEVERITY SLIGHT	District Copeland Ref.No 130000956	Low Road Whitehaven three years Collision Report 14/10/11 - 13/10/14				Grid Reference 297640 / 515200 Police Officer Attend: Yes	
Date 12/05/2013 Time 16:03 Weather Raining without high winds Road Surface Wet/Damp Street Lighting Daylight	Day Sunday	Road B5345 Location B5345 St Bees Road J/W Mirehouse Road, Whitehaven Description V2 Approaching Junction. V1 Pulled Across The Path Of V2 Whilst Turning Right. of Accident					
SITE DETAILS Speed Limit 30 MPH Carriageway Single carriageway Junction Detail Other junction Junction Control Give way or uncontrolled 2nd Road Number U Pedestrian Facilities None within 50 metres No physical crossing facility within 50 metre		SPECIAL SITE CONDITIONS None		CONTRIBUTORY FACTORS 405 Failed to look properly (Driver/Rider - Error) 406 Failed to judge other person's path/speed (Driver/Rider - Error)		PARTICIPANT Vehicle 001 Vehicle 001	PROBABILITY A A
VEHICLES INVOLVED 2				CASUALTIES INVOLVED 1			
Veh.No. 1 Vehicle type Car Make Model Manoeuvre Turning right Veh. direction from South to East Towing? No tow or articulation Skidded No skidding, jack-knifing or overturning Veh location at impact (restricted lane) Footway (pavement) Junct. location of veh. at 1st impact Entering from slip road Veh left carriageway? Did not leave carriageway Hit object in c'way? None Hit object off c'way? None First point of impact Nearside Veh registration no. Other veh.hit (ref.no) 0 Hit and run Not hit and run Drivers age 67 yrs Sex Male Breath test Negative Driving Lic Left Hand Drive Unknown Foreign veh. Not foreign registered vehicle Journey purpose Other				Cas No 1 Cas Class Driver or Rider Veh ref No 2 Severity SLIGHT Age 45 yrs Sex Female Post code Car Passenger? Not a passenger PSV Passenger? Not a passenger Seat Belt Unknown Cycle Helmet Ped Movement Not applicable Ped Location Not applicable Ped Direction to Not applicable School Pupil Other Roadworker injured			
Veh.No. 2 Vehicle type Car Make Model Manoeuvre Going ahead other Veh. direction from North to South Towing? No tow or articulation Skidded No skidding, jack-knifing or overturning Veh location at impact (restricted lane) On main carriageway not in restricted lane Junct. location of veh. at 1st impact Approaching junction or waiting Veh left carriageway? Did not leave carriageway Hit object in c'way? None Hit object off c'way? None First point of impact Front Veh registration no. Other veh.hit (ref.no) 0 Hit and run Not hit and run Drivers age 45 yrs Sex Female Breath test Negative Driving Lic Left Hand Drive Unknown Foreign veh. Not foreign registered vehicle Journey purpose Other				Other Details			
Full Details				05-November-2014		Accident Ref.No 130000956	

SEVERITY SLIGHT	District Ref.No	Copeland 130001034	Low Road Whitehaven three years Collision Report 14/10/11 - 13/10/14				Grid Reference 298800 / 515490			
			Police Officer Attend: Yes							
Date 21/05/2013 Day Tuesday Time 17:00 Weather Fine without high winds Road Surface Dry Street Lighting Daylight			Road B5345 Location B5345 St Bees Road J/W Mirehouse Road, Whitehaven Description of Accident V1 Has Entered Slip Road To Her Offside In Order To Turn Right. V2 Has Been Travelling On Opposite Carriageway. V1 Has Failed To Give Way To V2 And Has Collided.							
SITE DETAILS Speed Limit 30 MPH Carriageway Slip road Junction Detail Slip road Junction Control Give way or uncontrolled 2nd Road Number U Pedestrian Facilities None within 50 metres No physical crossing facility within 50 metre			SPECIAL SITE CONDITIONS None		CONTRIBUTORY FACTORS 302 Disobeyed give way or stop sign markings (Driver/Rider - Injud 403 Poor turn or manoeuvre (Driver/Rider - Error) 405 Failed to look properly (Driver/Rider - Error) 406 Failed to judge other person's path/speed (Driver/Rider - Error) 603 Nervous/Uncertain (Driver/Rider - Behaviour) 605 Inexperienced or learner driver/rider (Driver/Rider - Behaviour)		PARTICIPANT Vehicle 001 Vehicle 001 Vehicle 001 Vehicle 001 Vehicle 001 Vehicle 001		PROBABILITY A A A B B B	
VEHICLES INVOLVED 2					CASUALTIES INVOLVED 2					
Veh.No. 1 Vehicle type Car Make Model Manoeuvre Turning right Veh. direction from South to East Towing? No tow or articulation Skidded No skidding, jack-knifing or overturning Veh location at impact (restricted lane) On main carriageway not in restricted lane Junct. location of veh. at 1st impact Entering from slip road Veh left carriageway? Did not leave carriageway Hit object in c'way? None Hit object off c'way? None First point of impact Front Veh registration no. Other veh.hit (ref.no) 0 Hit and run Not hit and run Drivers age 18 yrs Sex Female Breath test Negative Driving Lic Left Hand Drive Unknown Foreign veh. Not foreign registered vehicle Journey purpose Other					Cas No 1 Cas Class Driver or Rider Veh ref No 1 Severity SLIGHT Age 18 yrs Sex Female Post code Car Passenger? Not a passenger PSV Passenger? Not a passenger Seat Belt Unknown Cycle Helmet Ped Movement Not applicable Ped Location Not applicable Ped Direction to Not applicable School Pupil Other Roadworker injured					
Veh.No. 2 Vehicle type Car Make Model Manoeuvre Going ahead other Veh. direction from North to South Towing? No tow or articulation Skidded No skidding, jack-knifing or overturning Veh location at impact (restricted lane) On main carriageway not in restricted lane Junct. location of veh. at 1st impact Mid junction - on roundabout or main road Veh left carriageway? Did not leave carriageway Hit object in c'way? None Hit object off c'way? None First point of impact Front Veh registration no. Other veh.hit (ref.no) 0 Hit and run Not hit and run Drivers age 44 yrs Sex Female Breath test Negative Driving Lic Left Hand Drive Unknown Foreign veh. Not foreign registered vehicle Journey purpose Other					Cas No 2 Cas Class Driver or Rider Veh ref No 2 Severity SLIGHT Age 44 yrs Sex Female Post code Car Passenger? Not a passenger PSV Passenger? Not a passenger Seat Belt Unknown Cycle Helmet Ped Movement Not applicable Ped Location Not applicable Ped Direction to Not applicable School Pupil Other Roadworker injured					
					Other Details					
Full Details										
05-November-2014										
Accident Ref.No 130001034										

SEVERITY SLIGHT	District Ref.No	Copeland 130001138	Low Road Whitehaven three years Collision Report 14/10/11 - 13/10/14				Grid Reference 298080 / 515210		Police Officer Attend: Yes	
Date Time Weather Road Surface Street Lighting		30/05/2013 Day Thursday 17:15 Fine without high winds Dry Daylight		Road C4035 Location Mirehouse Road, Whitehaven Description Vehicle 1 Heading East Failed to Notice Vehicle 2 Parked on Nearside of Road Facing East. Vehicle 1 Collided with Rear of Vehicle 2. of Accident						
SITE DETAILS Speed Limit 30 MPH Carriageway Single carriageway Junction Detail Not at or within 20 metres of junction Junction Control 2nd Road Number Pedestrian Facilities None within 50 metres No physical crossing facility within 50 metre				SPECIAL SITE CONDITIONS None		CONTRIBUTORY FACTORS 405 Failed to look properly (Driver/Rider - Error) 503 Fatigue (Driver/Rider - Impairment)		PARTICIPANT Vehicle 001 Vehicle 001		PROBABILITY A B
VEHICLES INVOLVED 2						CASUALTIES INVOLVED 1				
Veh.No. 1 Vehicle type Car Make Model Manoeuvre Going ahead other Veh. direction from West to East Towing? No tow or articulation Skidded No skidding, jack-knifing or overturning Veh location at impact (restricted lane) On main carriageway not in restricted lane Junct. location of veh. at 1st impact Not at or within 20m of junction Veh left carriageway? Did not leave carriageway Hit object in c'way? None Hit object off c'way? None First point of impact Front Veh registration no. Other veh.hit (ref.no) 0 Hit and run Not hit and run Drivers age 36 yrs Sex Male Breath test Negative Driving Lic Left Hand Drive Unknown Foreign veh. Not foreign registered vehicle Journey purpose Other						Cas No 1 Cas Class Passenger Veh ref No 1 Severity SLIGHT Age 40 yrs Sex Female Post code Car Passenger? Front seat passenger PSV Passenger? Not a passenger Seat Belt Unknown Cycle Helmet Ped Movement Not applicable Ped Location Not applicable Ped Direction to Not applicable School Pupil Other Roadworker injured				
Veh.No. 2 Vehicle type Car Make Model Manoeuvre Parked Veh. direction from Parked to Parked Towing? No tow or articulation Skidded No skidding, jack-knifing or overturning Veh location at impact (restricted lane) On main carriageway not in restricted lane Junct. location of veh. at 1st impact Not at or within 20m of junction Veh left carriageway? Did not leave carriageway Hit object in c'way? None Hit object off c'way? None First point of impact Back Veh registration no. Other veh.hit (ref.no) 0 Hit and run Not hit and run Drivers age 32 yrs Sex Male Breath test Not requested Driving Lic Left Hand Drive Unknown Foreign veh. Not foreign registered vehicle Journey purpose Other						Other Details				
Full Details						05-November-2014				
						Accident Ref.No 130001138				

SEVERITY SLIGHT	District Ref.No	Copeland 130001587	Low Road Whitehaven three years Collision Report 14/10/11 - 13/10/14				Grid Reference Police Officer Attend:	297710 / 515210 Yes
Date Time Weather Road Surface Street Lighting	26/07/2013 Day Friday 17:00 Fine without high winds Dry Daylight		Road C4035	Location Mirehouse Road, Whitehaven. Description V1 Travelling Along Has Lost Control Due to Rider Error. of Accident				
SITE DETAILS Speed Limit 30 MPH Carriageway Single carriageway Junction Detail Not at or within 20 metres of junction Junction Control 2nd Road Number Pedestrian Facilities None within 50 metres No physical crossing facility within 50 metre			SPECIAL SITE CONDITIONS None		CONTRIBUTORY FACTORS 410 Loss of control (Driver/Rider - Error)		PARTICIPANT Vehicle 001	PROBABILITY A
VEHICLES INVOLVED 1					CASUALTIES INVOLVED 1			
Veh.No. 1 Vehicle type M/cycle 125 - 500cc Make Model Manoeuvre Going ahead other Veh. direction from East to West Towing? No tow or articulation Skidded No skidding, jack-knifing or overturning Veh location at impact (restricted lane) On main carriageway not in restricted lane Junct. location of veh. at 1st impact Not at or within 20m of junction Veh left carriageway? Did not leave carriageway Hit object in c'way? None Hit object off c'way? None First point of impact Nearside Veh registration no. Other veh.hit (ref.no) 0 Hit and run Not hit and run Drivers age 33 yrs Sex Male Breath test Negative Driving Lic Left Hand Drive Unknown Foreign veh. Not foreign registered vehicle Journey purpose Other					Cas No 1 Cas Class Driver or Rider Veh ref No 1 Severity SLIGHT Age 33 yrs Sex Male Post code Car Passenger? Not a passenger PSV Passenger? Not a passenger Seat Belt Not applicable Cycle Helmet Ped Movement Not applicable Ped Location Not applicable Ped Direction to Not applicable School Pupil Other Roadworker injured			
					Other Details			
Full Details 05-November-2014 Accident Ref.No 130001587								

SEVERITY SLIGHT		District Copeland Ref.No 140000211		Low Road Whitehaven three years Collision Report 14/10/11 - 13/10/14			Grid Reference 297600 / 516070 Police Officer Attend: No - reported over the counter		
Date 25/01/2014 Day Saturday Time 12:25 Weather Raining without high winds Road Surface Wet/Damp Street Lighting Daylight		Road B5345 Location B5345 Low Road, Whitehaven. Description V1, A Psv, Had To Brake Sharply Because Of Traffic Conditions. In Doing So, Child Passenger Has Bumped His Forehead On Grab of Accident Rail.							
SITE DETAILS		SPECIAL SITE CONDITIONS		CONTRIBUTORY FACTORS			PARTICIPANT PROBABILITY		
Speed Limit 30 MPH Carriageway Single carriageway Junction Detail Not at or within 20 metres of junction Junction Control 2nd Road Number Pedestrian Facilities None within 50 metres No physical crossing facility within 50 metre		None CARRIAGEWAY HAZARDS None							
VEHICLES INVOLVED 1				CASUALTIES INVOLVED 1					
Veh.No. 1 Vehicle type Bus or Coach Make Model Manoeuvre Slowing or stopping Veh. direction from North to South Towing? No tow or articulation Skidded No skidding, jack-knifing or overturning Veh location at impact (restricted lane) On main carriageway not in restricted lane Junct. location of veh. at 1st impact Not at or within 20m of junction Veh left carriageway? Did not leave carriageway Hit object in c'way? None Hit object off c'way? None First point of impact Did not impact Veh registration no. Other veh.hit (ref.no) 0 Hit and run Not hit and run Drivers age 29 yrs Sex Male Breath test Driver not contacted Driving Lic Left Hand Drive Unknown Foreign veh. Not foreign registered vehicle Journey purpose Journey as part of work				Cas No 1 Cas Class Passenger Veh ref No 1 Severity SLIGHT Age -1 yrs Sex Male Post code Car Passenger? Not a passenger PSV Passenger? Seated passenger Seat Belt Unknown Cycle Helmet Ped Movement Not applicable Ped Location Not applicable Ped Direction to Not applicable School Pupil Other Roadworker injured					
				<u>Other Details</u>					
Full Details				05-November-2014				Accident Ref.No 140000211	

SEVERITY SLIGHT	District Copeland Ref.No 140001628	Low Road Whitehaven three years Collision Report 14/10/11 - 13/10/14				Grid Reference 297600 / 515800 Police Officer Attend: Yes
Date 08/07/2014 Day Tuesday Time 16:29 Weather Fine without high winds Road Surface Dry Street Lighting Daylight		Road B5345 Location B5345 St Bees Road at Junction with Gumeriggs Road, Whitehaven Description V1 Travelling South On St Bees Road Has Attempted To Turn Right Into Gumeriggs Road. Driver Of V1 Has Failed To Notice V2 of Accident Travelling In The Opposite Direction, Resulting In The Vehicles Colliding With Each Other At The Junction.				
SITE DETAILS Speed Limit 30 MPH Carriageway Single carriageway Junction Detail T or staggered junction Junction Control Give way or uncontrolled 2nd Road Number U Pedestrian Facilities None within 50 metres No physical crossing facility within 50 metre		SPECIAL SITE CONDITIONS None		CONTRIBUTORY FACTORS 405 Failed to look properly (Driver/Rider - Error) 306 Exceeding speed limit (Driver/Rider - Injudicious) 406 Failed to judge other person's path/speed (Driver/Rider - Error) 403 Poor turn or manoeuvre (Driver/Rider - Error)		
				PARTICIPANT	PROBABILITY	
				Vehicle 001	A	
				Vehicle 002	B	
				Vehicle 001	B	
				Vehicle 001	A	
VEHICLES INVOLVED 2				CASUALTIES INVOLVED 2		
Veh.No. 1 Vehicle type Car Make Model Manoeuvre Turning right Veh. direction from North to South Towing? No tow or articulation Skidded No skidding, jack-knifing or overturning Veh location at impact (restricted lane) On main carriageway not in restricted lane Junct. location of veh. at 1st impact Approaching junction or waiting Veh left carriageway? Left carriageway nearside Hit object in c'way? None Hit object off c'way? Entered ditch First point of impact Front Veh registration no. Other veh.hit (ref.no) 2 Hit and run Not hit and run Drivers age 31 yrs Sex Male Breath test Negative Driving Lic Left Hand Drive Unknown Foreign veh. Not foreign registered vehicle Journey purpose Other				Cas No 1 Cas Class Driver or Rider Veh ref No 1 Severity SLIGHT Age 31 yrs Sex Male Post code Car Passenger? Not a passenger PSV Passenger? Not a passenger Seat Belt Unknown Cycle Helmet Ped Movement Not applicable Ped Location Not applicable Ped Direction to Not applicable School Pupil Other Roadworker injured		
Veh.No. 2 Vehicle type Car Make Model Manoeuvre Going ahead other Veh. direction from South to North Towing? No tow or articulation Skidded No skidding, jack-knifing or overturning Veh location at impact (restricted lane) On main carriageway not in restricted lane Junct. location of veh. at 1st impact Approaching junction or waiting Veh left carriageway? Did not leave carriageway Hit object in c'way? None Hit object off c'way? None First point of impact Front Veh registration no. Other veh.hit (ref.no) 1 Hit and run Not hit and run Drivers age 41 yrs Sex Male Breath test Negative Driving Lic Left Hand Drive Unknown Foreign veh. Not foreign registered vehicle Journey purpose Commuting to/from work				Cas No 2 Cas Class Driver or Rider Veh ref No 2 Severity SLIGHT Age 41 yrs Sex Male Post code Car Passenger? Not a passenger PSV Passenger? Not a passenger Seat Belt Unknown Cycle Helmet Ped Movement Not applicable Ped Location Not applicable Ped Direction to Not applicable School Pupil Other Roadworker injured		
				Other Details		
Full Details				05-November-2014		
				Accident Ref.No 140001628		

SEVERITY SLIGHT	District Copeland Ref.No 140001924	Low Road Whitehaven three years Collision Report 14/10/11 - 13/10/14				Grid Reference 298790 / 515510 Police Officer Attend: Yes	
Date 13/08/2014 Time 07:30 Weather Raining without high winds Road Surface Wet/Damp Street Lighting Daylight	Day Wednesday	Road A595 Location A595 at Junction with Mirehouse Road, Whitehaven Description of Accident V2 Travelling On The A595 In The Direction Of Whitehaven. V1 Has Been Waiting At The Junction, However, Has Proceeded To Pull Out Directly In Front Of V2 Causing Both Vehicles To Collide.					
SITE DETAILS Speed Limit 40 MPH Carriageway Dual carriageway Junction Detail Junction - more than 4 arms (not a roundabout) Junction Control Give way or uncontrolled 2nd Road Number U Pedestrian Facilities None within 50 metres No physical crossing facility within 50 metre		SPECIAL SITE CONDITIONS None		CONTRIBUTORY FACTORS 602 Careless/Reckless (Driver/Rider - Behaviour)		PARTICIPANT Vehicle 001	PROBABILITY A
VEHICLES INVOLVED 2				CASUALTIES INVOLVED 1			
Veh.No. 1 Vehicle type Car Make Model Manoeuvre Moving off Veh. direction from West to North Towing? No tow or articulation Skidded No skidding, jack-knifing or overturning Veh location at impact (restricted lane) On main carriageway not in restricted lane Junct. location of veh. at 1st impact Approaching junction or waiting Veh left carriageway? Did not leave carriageway Hit object in c'way? None Hit object off c'way? None First point of impact Front Veh registration no. Other veh.hit (ref.no) 2 Hit and run Not hit and run Drivers age 31 yrs Sex Male Breath test Negative Driving Lic Left Hand Drive Unknown Foreign veh. Not foreign registered vehicle Journey purpose Commuting to/from work				Cas No 1 Cas Class Driver or Rider Veh ref No 2 Severity SLIGHT Age 39 yrs Sex Female Post code Car Passenger? Not a passenger PSV Passenger? Not a passenger Seat Belt Unknown Cycle Helmet Ped Movement Not applicable Ped Location Not applicable Ped Direction to Not applicable School Pupil Other Roadworker injured			
Veh.No. 2 Vehicle type Car Make Model Manoeuvre Going ahead other Veh. direction from Southwest to North Towing? No tow or articulation Skidded No skidding, jack-knifing or overturning Veh location at impact (restricted lane) On main carriageway not in restricted lane Junct. location of veh. at 1st impact Approaching junction or waiting Veh left carriageway? Did not leave carriageway Hit object in c'way? None Hit object off c'way? None First point of impact Nearside Veh registration no. Other veh.hit (ref.no) 1 Hit and run Not hit and run Drivers age 39 yrs Sex Female Breath test Not provided (medical reasons) Driving Lic Left Hand Drive Unknown Foreign veh. Not foreign registered vehicle Journey purpose Commuting to/from work				Other Details			
Full Details				05-November-2014			
				Accident Ref.No 140001924			

SEVERITY SLIGHT		District Copeland Ref.No 140002316		Low Road Whitehaven three years Collision Report 14/10/11 - 13/10/14				Grid Reference 298240 / 515190 Police Officer Attend: Yes			
Date 26/09/2014 Day Friday Time 20:51 Weather Fine without high winds Road Surface Dry Street Lighting Dark: street lights present and lit		Road U Location Mirehouse Road, Whitehaven Description of Accident V1 Travelling Along Mirehouse Road Towards B5345 St.Bee's Road, Collided With Railway Bridge Wall Causing The Vehicle To Spin And Damage The Wall.									
SITE DETAILS Speed Limit 30 MPH Carriageway Single carriageway Junction Detail Not at or within 20 metres of junction Junction Control 2nd Road Number Pedestrian Facilities None within 50 metres No physical crossing facility within 50 metre		SPECIAL SITE CONDITIONS None CARRIAGEWAY HAZARDS None		CONTRIBUTORY FACTORS 307 Travelling too fast for conditions (Driver/Rider - Injudicious)				PARTICIPANT Vehicle 001		PROBABILITY A	
VEHICLES INVOLVED 1				CASUALTIES INVOLVED 1							
Veh.No. 1 Vehicle type Car Make Model Manoeuvre Going ahead other Veh. direction from East to West Towing? No tow or articulation Skidded Skidded Veh location at impact (restricted lane) On main carriageway not in restricted lane Junct. location of veh. at 1st impact Not at or within 20m of junction Veh left carriageway? Did not leave carriageway Hit object in c'way? Bridge - side Hit object off c'way? None First point of impact Front Veh registration no. Other veh.hit (ref.no) 0 Hit and run Not hit and run Drivers age 47 yrs Sex Male Breath test Negative Driving Lic Left Hand Drive Unknown Foreign veh. Not foreign registered vehicle Journey purpose Other				Cas No 1 Cas Class Driver or Rider Veh ref No 1 Severity SLIGHT Age 47 yrs Sex Male Post code Car Passenger? Not a passenger PSV Passenger? Not a passenger Seat Belt Unknown Cycle Helmet Ped Movement Not applicable Ped Location Not applicable Ped Direction to Not applicable School Pupil Other Roadworker injured							
				<u>Other Details</u>							
Full Details				05-November-2014				Accident Ref.No 140002316			