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# A30 Chiverton to Carland Cross

## Stage 3 Local Model Validation Report

January 2018
Highways England

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Highways England

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# Issue and revision record

| Revision | Date | Originator | Checker | Approver | Description |
|---|---|---|---|---|---|
| 01 | 20/07/2017 | Martin Drapier Gomis / Joe Payne | Michael Rolfe / Holly Moon | Ian Beavis | First Draft |
| 02 | 25/08/2017 | Martin Drapier Gomis / Joe Payne | Michael Rolfe / Holly Moon | Ian Beavis | Final Draft |
| 03 | 01/12/2017 | Martin Drapier Gomis / Joe Payne | Michael Rolfe / Holly Moon | Ian Beavis | Final Draft |
| 04 | 22/01/2018 | Martin Drapier Gomis | Holly Moon | Ian Beavis | Final Draft |

The A30 Chiverton to Carland Cross Improvement scheme is part of the Department for Transport Road Investment Programme, being delivered by Highways England, and is receiving a funding contribution of up to £8m from the European Regional Development Fund to support the development phase of the scheme.

Information class: Standard

This document has been prepared on behalf of Highways England by WSP | Parsons Brinckerhoff.

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# Content

Figure Title Page



Table Title Page

## Annexes

# Executive Summary

The section of the A30 in Cornwall between Chiverton Cross and Carland Cross, north of Truro, experiences congestion and delays throughout the year, with poor journey time reliability. The route is in need of improvement to meet Highways England's objectives of maintaining the smooth flow of traffic, making the network safer and supporting economic growth.

The scope of the scheme is to upgrade 12.5km of single carriageway to dual carriageway on the A30 between Chiverton Cross Roundabout and Carland Cross roundabout.

The specific Transport Objectives are:

- to contribute to regeneration and sustainable economic growth
  - to support employment & residential development opportunities
- to improve the safety, operation & efficiency of the transport network
- improve network reliability and reduce journey times
  - to deliver capacity enhancements to the SRN
- supporting the use of sustainable modes of transport
- delivering better environmental outcomes, and;
- to improve local and strategic connectivity

This report details the development of the base year traffic model that has been used in the appraisal of the scheme for Highways England Project Control Framework (PCF) Stage 3 in support of the Development Consent Order.

## Summary of Content

The report has been produced in accordance with the guidance set out in Highways England's Interim Advice Note 106/08 and the PCF product description for the Local Model Validation Report (version 10 dated 6/3/2014). The table below provides a checklist for the requirements.

## Summary of Content

| Local Model Validation Report Requirements | Related Chapter |
|---|---|
| **1. Study Overview** | 1 |
| a. Statement of Scheme objectives | 1.2 |
| b. Explanation of the purpose of the model and the schemes likely to be assessed using the model | 1.3 |
| **2. Model Description / Specification** | 2 |
| a. Description of the demand modelling system | 2.1 |
| b. Explanation of how the highway model relates to other components of the demand model | 2.2 |
| c. Description of any land use transport interaction models used | 2.3 |
| d. Description and justification of type of highway model used | 2.4 |
| e. Description and justification of type of public transport model used | 2.5 |
| f. Description of how parking, park-and-ride and slow modes are modelled | 2.6 |
| g. Description, plan and justification of geographical model coverage | 2.7 |
| h. Statement of software package and version used | 2.8 |
| **3. Summary of Data Collection** | 3 |
| a. Outline description of data sources and units - surveys, existing models, national databases | 3.1 |
| b. References to the Traffic Data Collection Report | 3 |
| c. Identification of calibration data | 3.2 |
| d. Identification of validation data | 3.3 |
| e. Comparison of comparable data from different sources | 3.4 |
| **4. Highway Model Development** | 4 |
| **Network** | 4.1 |
| a. Description of network structure, providing information on the extent of the 'Detailed Study Area' and 'Feeder' network, including a plan/map | 4.1.1 |
| b. Description of coding process used to determine link length and node locations | 4.1.2 |
| c. Evidence for assessment of speed limits / road types for use in determining network speeds | 4.1.3 |
| d. Location, value and justification of fixed speeds and/or speed-flow curves used on links | 4.1.3 |
| e. Description of calculation and assumptions behind junction saturation capacities | 4.1.4 |
| f. Description of any network inventory undertaken | 4.1.5 |
| g. Description of any junction operation data collected such as signal times and estimates of gaps at roundabouts and priorities | 4.1.6 |
| h. Description of modelling assumptions such as values used for queue length per PCU, conversion factors between PCUs and vehicles | 4.1.7 |
| i. Description of modelling of PT services and bus priority measures included in the highway network | 4.1.8 |
| j. Description of treatment of Freight Transport | 4.1.9 |
| k. Description of network assumptions relating to representation of Tolls, High Occupancy Vehicles Lanes, Active Traffic Management and Variable Speed Limits | 4.1.10 |
| **Matrices** | 4.2 |
| a. Description of zone structure | 4.2.1 |
| b. Specification and justification of any demand segmentation within the traffic model | 4.2.2 |
| c. Description of data sources including previous study matrices, new RSI data, synthetic matrices | 4.2.3 |
| d. Description of matrix building process including process of adjusting for unobserved directions and unobserved periods, reference to dealing with double counting and substitution of old data with new/more reliable data | 4.2.4 |
| e. Description of any matrix infilling process including the use of synthetic trip matrices / gravity models | 4.2.5 |
| f. Description of the matrix estimation process | 4.2.6 |
| g. Discussion of where the model is less robust with statement on how this impacts on the model's performance | 4.2.7 |
| **Assignment Process** | 4.3 |
| a. Description of approach used | 4.3.1 |
| b. Description of time slices used and the interaction between time-slices | 4.3.2 |
| c. Definition of assignment costs calculation with reference to generalised cost, VOT and VOC including sensitivity test results and the treatment of different vehicle types and trip purposes | 4.3.3 |
| d. Assignment convergence criteria used | 4.3.4 |
| e. Summary of assignment parameters used by the software | 4.3.5 |
| **5. Highway Model Calibration** | 5 |
| **Network** | 5.1 |
| a. Evidence of checks of network structure to include:<br>· Graphical review of network structure to identify missing links<br>· Checks of modelled link lengths vs. crow-fly distance | 5.1.1<br>5.1.2<br>5.1.3 |

| Local Model Validation Report Requirements | Related Chapter |
|---|---|
| · Check model links are two-way where appropriate and one-way links are accurately represented, including slip roads<br>· Check HGV access restriction are represented | 5.1.4 |
| **Assignment Process** | 5.2 |
| a. Evidence of checking that link speeds on the network are realistic | 5.2 |
| b. Evidence of checks to ensure delay calculations at junctions are operating realistically | 5.2 |
| **Matrices** | 5.3 |
| a. Identification of counts used in the process | 3.2 |
| b. Matrix estimation monitoring by comparison of before and after: | |
| · link flows against counts | 5.4.2, 5.4.3 |
| · matrix zonal cell values | 5.3.1 |
| · matrix zonal trip ends | 5.3.1 |
| · trip length distributions | 5.3.2 |
| · sector matrices | 5.3.3 |
| c. Discussion of where the model is less robust with statement on how this impacts on the model's performance. | 5.3, 5.4 |
| **6. Highway Model Validation** | 6 |
| **Network** | 6.1 |
| a. Analysis of paths | 6.1.1 |
| b. Justification and description of speed-flow curves used for over-capacity formulation | 6.1.2 |
| c. Description of junction coding approach where appropriate | 6.1.3 |
| d. Description of the coding of other network characteristics | N/A |
| e. Examination and justification of paths used on preliminary assignments | N/A |
| f. Evidence of ad-hoc network validation checks | N/A |
| **Matrices** | 6.3 |
| a. Zone plan | 4.2.1 |
| b. Distinction between observed and synthesised movements | N/A |
| c. Comparison of modelled zonal demand for key movements against independent data if available | N/A |
| d. Comparison of modelled sector-to-sector demand with any independent screenline counts | N/A |
| e. Plans of zones, sectors and screenlines used in the above comparisons | N/A |
| f. Discussion of where the model is less robust with statement on how this impacts on the model's performance. | N/A |
| **Assignment** | 6.2 |
| a. List of, and justification for, deviations from any default parameters used in the assignment software | N/A |
| b. Statement / explanation regarding independence of validation data | 6.2.1 |
| For each time period and vehicle type as well as totals for (c), (d), (e) and (f): | N/A |
| c. Tabular comparison of modelled flows with observed site and screenline counts | 6.2.4 |
| d. Map-based comparison of modelled flows with observed site and screenline counts | N/A |
| e. Tabular comparison of modelled and observed journey times | 6.2.3 |
| f. Diagrammatic comparison of modelled and observed journey times | N/A |
| g. Statement of convergence stability | 6.2.5 |
| h. Statement of convergence proximity | 6.2.5 |
| i. Discussion of model validation in the context of the wider demand modelling system | N/A |
| j. Discussion of where the model is less robust with statement on how this impacts on the model's performance | 6.2 |
| **7. Variable Demand Model** | 7 |
| **Model Development** | |
| a. Basis of whether to include variable demand in the model | 7.1 |
| b. Description of variable demand model including incremental or absolute | 7.1 |
| c. Responses included in model including hierarchy of responses | 7.2 |
| d. Model area and zone size | 4.2.1 |
| e. Segmentation: Trip and person types | 7.2.7 |
| f. Forms of Trip Matrices:<br>· Production/Attraction or Origin/Destination<br>· Vehicle Occupancy | 7.2.8 |
| g. Representation of public transport supply and demand | 7.2.9 |
| h. Software used | 7.1 |
| **Calibration** | |

| Local Model Validation Report Requirements | Related Chapter |
|---|---|
| a. Calibration of variable demand model | 7.3.1 |
| b. Choice of model parameters and comparison against published values | 7.3.2 |
| c. Description of any cost damping mechanisms used | 7.3.3 |
| d. Description of model convergence | 7.3.4 |
| e. Discussion of where the model is less robust with statement on how this impacts on the model's performance | 7.4 |
| **Validation** | |
| a. Realism testing to establish robustness of base model in relation to its use as the 'reference pivot' for subsequent variable demand modelling | 7.3.5 |
| b. Discussion of where the model is less robust with statement on how this impacts on the model's performance | 7.4 |
| **8. Conclusion** | 8 |
| a. Conclusion on the robustness of the model to be used for forecasting | 8 |
| b. Discussion of where the model is less robust with statement on how this impacts on the model's performance | 8 |
| c. Discussion of where the model's representation of traffic and travel could be further improved in the future | 8 |

# 1. Study Overview

## 1.1 Background

The section of the A30 in Cornwall between Chiverton Cross and Carland Cross, north of Truro, is currently a winding single carriageway route. Once the single carriageway section of the A30 between Temple and Higher Carblake near Bodmin is completed in 2017, the A30 Chiverton to Carland Cross section will remain as the only single carriageway section of the A30 route between the M5 at Exeter and Camborne in west Cornwall.

Due to the low standard, this section of the A30 experiences congestion and delays throughout the year, with poor journey time reliability. These problems are exacerbated in summer months, when traffic flows increase due to tourist traffic. The route is in need of improvement to meet Highways England's objectives of maintaining the smooth flow of traffic, making the network safer and supporting economic growth. The desire for improvements to this route is strongly supported by local and regional strategies from Cornwall Council, the Cornwall and Isles of Scilly Local Enterprise Partnership, businesses and local stakeholders.

The scheme will have a significant impact on travel on the A30 within Cornwall; it will significantly reduce current journey times on the route and congestion at key junctions. Due to the improvement in performance, travel patterns in the area will be affected and the improved route will be likely to attract traffic from other routes. Truro is a major attractor of trips within Cornwall, and travel patterns for traffic using routes across the existing A30, such as from Newquay, Perranporth and other towns to Truro, will be affected. The traffic model has therefore been designed to be able to model the impact of travel patterns across a wide area.

## 1.2 Scheme Objectives

The scope of the scheme is to upgrade 12.5km of single carriageway to dual carriageway on the A30 between Chiverton Cross Roundabout and Carland Cross roundabout.

The scheme will contribute to economic growth by supporting employment and residential development opportunities.

The scheme will contribute to regeneration by enhancing the opportunities for previous, existing and future regeneration projects to realise their full potential.

The scheme will minimise the environmental impact of operating, maintaining and improving the network and seek to protect and enhance the quality of its surrounding environment while conforming to the principals of sustainable transport.

The specific Transport Objectives are:

- to contribute to regeneration and sustainable economic growth
  - to support employment & residential development opportunities
- to improve the safety, operation & efficiency of the transport network
- improve network reliability and reduce journey times
  - to deliver capacity enhancements to the SRN

- supporting the use of sustainable modes of transport
- delivering better environmental outcomes, and;
- to improve local and strategic connectivity

## 1.3 Purpose of the Model

The model will be used for the PCF Stage 3 appraisal of the A30 Carland to Chiverton Cross improvement scheme.

# 2. Model Description and Specification

## 2.1 Description of the Demand Modelling System

The PCF Stage 3 A30 Carland to Chiverton SATURN model is a variable demand highway model. The future year demand forecasting is based on the PCF Stage 3 base year model, which in turn is based on the 2009 Truro SATURN model matrices. These matrices were updated to a base year of 2015 in Stage 1 using roadside interview data collected for this study, which includes a site located on the A30.

The 2009 Truro SATURN model was designed to assess the impact of developments and highway improvement schemes in the vicinity of the city of Truro, Cornwall. The Truro 2009 demand matrices were built using RSI data from six sites on the key routes into Truro. Two of the sites, on the A390 near Highertown and the B3284 near Shortlanesend were surveyed in 2009; the other sites were surveyed in 2003. A gravity model was then used to estimate unobserved trips. A30 through trips were added from an older model matrix, and updated to 2009 volumes.

The 2009 Truro model covered the time periods listed below and carried forward to this study:

- AM Peak Hour – 08:00 to 09:00
- PM Peak Hour – 17:00 to 18:00

An additional interpeak hour model (average interpeak hour from 10:00 to 16:00) was constructed during the development of the Stage 1 model, which has also been updated for Stages 2 and 3.

## 2.2 Explanation of how the Model Relates to other Components of the Demand Model

Variable demand modelling was carried out at PCF Stage 2 and will also be carried out at PCF Stage 3. The variable demand model will be an incremental type of model (also known as a “pivot-point” model) as recommended in WebTAG. The demand response in the model will therefore be a function of relative changes in cost between a forecast and comparator scenario.

Two separate stages will be required to produce the Do Minimum and Do Something forecasts.

- Do Minimum – pivot off base model (i.e. demand model will use base year costs as a comparator)
- Do Something – pivot off Do Minimum (i.e. demand model will use future year Do Minimum costs as a comparator)

The Department for Transport’s DIADEM software programme (Version 5) will be used to specify and operate the demand model processes.

The PCF Stage 3 model will include the key roads in across Great Britain in order to model full trip lengths as required for variable demand modelling.

## 2.3 Description of Land Use Interaction Models Used

There is no interaction with land use transport interaction models; however, planned development is included within the forecast models in line with WebTAG and constrained to TEMPRO.

## 2.4 Description and Justification of type of Highway Model Used

The 2009 Truro SATURN model was used as the basis for the PCF Stage 2 appraisal work. This model is considered to be the most suitable and appropriate model for the PCF Stage 3 appraisal work; the model has good network coverage in the area of interest and was developed in compliance with WebTAG guidance at the time.

In Stage 3, this model is still considered to be the most suitable basis for the development of the Stage 3 base model, as stated in the PCF Stage 3 Appraisal Specification Report (HA551502-WSP-GEN-0000-RE-TR-00009) which was agreed with TAME on 03/02/17. In order to achieve the calibration and validation requirements set out in WebTAG, several modifications have been carried out. These modifications include definition of new roads, new zones, changes in the geometrical characteristics of the roads and capacity of junctions. With these changes the model has moved from a robust and efficient model of the region to a model precisely tailored for this scheme.

For PCF Stage 2, the level of detail within the model around the A30 was refined and the model updated to a base year of 2015. As part of PCF Stage 3, the level of detail within the model around the A30 has been further refined to ensure that the model is capable of analysing changes to flows on key links around the A30, including routes to Truro and Newquay, as a result of the scheme. The network to be used in the Stage 3 model has been developed in consultation with Cornwall Council, as the local highway authority.

## 2.5 Description and Justification of type of Public Transport Model Used

A public transport model has not been developed for PCF Stage 3 as the impact of the scheme on public transport routes and usage is not considered to be significant. This was agreed in the PCF Stage 3 Appraisal Specification Report.

## 2.6 Description of how Parking, Park-and-Ride and Slow Modes are modelled

The base year model includes zones for major car parks within Truro, and also a zone for the western Park and Ride site, located on the A390 to the west of Truro city centre. Trips to and from these zones have therefore been included in the model, with demand determined through the roadside interview surveys and origin/destination surveys at the Park and Ride site.

## 2.7 Description, Plan and Justification of Geographical Model Coverage

The detailed modelled area includes the A30 between Redruth and Indian Queens. Further routes in the detailed network include the A3075 to Newquay, B3284 from Truro to St Agnes, and the A390 and A39 to Truro, along with several other important minor routes providing access to towns and villages in the vicinity of the A30 scheme area.

The wider study area includes the major routes to the west of Redruth, the A390 to the south of Truro towards Falmouth and the major strategic routes within Cornwall and Devon such as the A39, A38 and A30. The rest of the UK is modelled using the key Strategic Road Network routes to link the various regions. Figure 4-1 in Section 4.1.1 of this report shows the extents of the network in the vicinity of Cornwall.

## 2.8 Software Package and Version Used

The model has been developed using version 11.3.12F of the software package SATURN.

# 3. Summary of Data Collection

## 3.1 Outline Description of Data Sources and Units

This chapter outlines the data used in the development of the base year model.

The PCF Stage 3 Traffic Data Collection Report (HA551502-WSP-GEN-0000-RE-TR-00012) details the traffic data that has been used to inform the appraisal of the scheme.

### 3.1.1 Surveys and National Databases

During Stage 1, Mott MacDonald Sweco commissioned Nationwide Data Collection Ltd (NDC) to undertake a series of RSI surveys at key locations on the A30 and on other key roads in the vicinity of the scheme area to aid the development of the base year A30 Carland to Chiverton traffic assignment model. Each of these surveys was supported by an Automatic Traffic Counts (ATC) undertaken over the two weeks before and during the survey.

The surveys were undertaken on the 21st and 22nd of October 2015 at the following locations:

Wednesday 21st October 2015

a. C1 – A30 westbound approaching Chiverton Roundabout – Roadside Interview (RSI)
b. C2 – A3075 southbound approaching Chiverton Roundabout – Postcard Survey
c. C3 – A390 northbound approaching Chiverton Roundabout– Postcard Survey

Thursday 22nd October 2015

d. C4 – B3298 eastbound towards Truro - RSI
e. C5 – B3285 eastbound towards A30 - RSI

The following existing surveys and national databases were used in the update of the PCF Stage 2 model carried out in Stage 3:

- Highways England Traffic Flow Data System (TRADS) – ATC count data for the A30 and A38;
- Highways England Journey Time Database (JTDB) – Journey time data for the A30;
- Manual Classified Count (MCC) data from local Cornwall Council sources;
- ATC data from Cornwall Council sources;
- Journey Time Data from Cornwall Council sources;
- Origin/Destination data in the form of Roadside Interviews (RSI) conducted in November 2011 in support of the A30 Temple to Higher Carblake scheme;
- Accident data;
- Queue length data; and,
- Ordnance Survey (OS) mapping.

### 3.1.2 Existing Models

The existing Truro SATURN model was used as the basis for the PCF Stage 1 modelling work, and subsequently the Stage 2 and Stage 3 models. The model has a base year of 2009 and covers the AM peak (08:00-09:00) and PM peak (17:00-18:00) hours only. The original 2009 base SATURN network was

developed to assess the traffic impact of strategic developments in and around Truro and western Cornwall. It encompasses a large area which incorporates the whole of Cornwall. This modelled area includes all the primary and strategic routes in Cornwall, with the following sections coded in detail in the simulation part of the network; the A390 between the A30 Chiverton Cross Roundabout and Truro, the A39 between the A30 Carland Cross Roundabout and Truro. The highway network outside this area is coded as buffer-type links, and includes no simulation-type coding of junctions. The Truro 2009 matrices were built using RSI data from six sites on the key routes into Truro. Two of the sites, on the A390 near Highertown and the B3284 near Shortlanesend were surveyed in 2009; the other sites were surveyed in 2003. A gravity model was then used to estimate unobserved trips. A30 through trips were added from an older model matrix.

This model was updated in PCF Stage 1 to a 2015 base year and for the average peak period hour in the AM (07:00-10:00), interpeak (10:00-16:00) and PM (16:00-19:00) peak periods. The updated base year model incorporated recent counts and RSI data from four sites on routes identified as strategic to the A30 Chiverton to Carland Cross scheme. The locations of the count and RSI sites are stated in the PCF Stage 2 LMVR (HA551502-WSP-GEN-0000-RE-TR-00003-P05).

The modelled network in the Stage 1 base model covers the key routes across Cornwall and the South West and is more detailed around the Truro area, including the A30 section from Chiverton to Carland Cross. The Truro model was constructed in compliance with WebTAG guidance at that time, but to make the model more robust for the Stage 3 appraisal, modifications have been, including enhancements to the level of detail in the network and zoning structure, to ensure that the model complies with current WebTAG guidance and provides sufficient detail in the area of influence of the scheme.

## 3.2 Identification of Calibration Data

### 3.2.1 Count Data

Surveys have been identified on the A30 and on key links in the wider study area as part of the traffic data collection process. The table below identifies the surveys that have included as calibration data:

Table 3-1- Link Flow Surveys identified for inclusion in Calibration

| ID | Site Location | Direction | Survey Year |
|---|---|---|---|
| TRADS_3703 | A30, Between Carland Cross Rbt and Mitchell | EB | 2015 |
| TRADS_3704 | A30, Between Carland Cross Rbt and Mitchell | WB | 2015 |
| TRADS_5242 | A30, Between Mitchell and Chapel Town | EB | 2015 |
| TRADS_5243 | A30, Between Mitchell and Chapel Town | WB | 2015 |
| TRADS_30012506 | A30, Between Scorrier and Chiverton Cross Rbt | WB | 2015 |
| TRADS_30012507 | A30, Between Scorrier and Chiverton Cross Rbt | EB | 2015 |
| TRADS_30012508 | A30, Between Chybucca and Marazanvose | EB | 2015 |
| TRADS_30012509 | A30, Between Chybucca and Marazanvose | WB | 2015 |
| ATC_5_NB | B3284, Between Mithian and Perranporth | NB | 2015 |
| ATC_5_SB | B3284, Between Mithian and Perranporth | SB | 2015 |

| | | | |
|---|---|---|---|
| ATC_35_NB | A39, Between Truro and Carnon Downs | NB | 2015 |
| ATC_35_SB | A39, Between Truro and Carnon Downs | SB | 2015 |
| ATC_41_EB | A390, Between Treliske Hospital and Truro | EB | 2015 |
| ATC_41_WB | A390, Between Treliske Hospital and Truro | WB | 2015 |
| ATC_76_EB | A390, Between Truro and Probus | EB | 2015 |
| ATC_76_WB | A390, Between Truro and Probus | WB | 2015 |
| ATC_77_NB | B3284, Between Shortlanesend and Truro | NB | 2015 |
| ATC_77_SB | B3284, Between Shortlanesend and Truro | SB | 2015 |
| ATC_218_NB | A39, Between Truro and Carland Cross Rbt | NB | 2015 |
| ATC_218_SB | A39, Between Truro and Carland Cross Rbt | SB | 2015 |
| ATC_973_EB | EB, Chacewater Hill between Threemilestone and Chacewater | EB | 2015 |
| ATC_973_WB | WB, Chacewater Hill between Threemilestone and Chacewater | WB | 2015 |
| ATC_135_NB | A3075 Between Chiverton and Newquay | NB | 2015 |
| ATC_135_SB | A3075 Between Chiverton and Newquay | SB | 2015 |
| ATC_165_NB | A3058 between Summercourt and Quintrell Downs | NB | 2015 |
| ATC_165_SB | A3058 between Summercourt and Quintrell Downs | SB | 2015 |
| ATC_167_NB | A3076 Between Mitchell and Gummows Shop | NB | 2015 |
| ATC_167_SB | A3076 Between Mitchell and Gummows Shop | SB | 2015 |
| ATC_132_NB | A3075 Between Goonhavern and Newquay | NB | 2015 |
| ATC_132_SB | A3075 Between Goonhavern and Newquay | SB | 2015 |
| MCC_16_SB | B3285 Between Goonhavern and A30 | SB | 2015 |
| MCC_16_NB | B3285 Between A30 and Goonhavern | NB | 2015 |
| MCC_17_NB | B3284 Chybucca towards Perranporth | NB | 2015 |
| MCC_17_SB | B3284 Chybucca from Perranporth | SB | 2015 |
| MCC_19_NB | B3277 Chiverton towards St Agnes | NB | 2015 |
| MCC_19_SB | B3277 Chiverton from St Agnes | SB | 2015 |
| MCC_8_NB | Henver Road Zelah | NB | 2015 |
| MCC_8_SB | Henver Road Zelah | SB | 2015 |
| MCC_1_NB | B3284 Between Chybucca and Shortlanesend | NB | 2015 |
| MCC_1_SB | B3284 Between Chybucca and Shortlanesend | SB | 2015 |
| MCC_2_NB | Route between A30 and B3284 via Allet | NB | 2015 |
| MCC_2_SB | Route between A30 and B3284 via Allet | SB | 2015 |
| MCC_2_C49_Callestick_SB | C49_Callestick_SB | SB | 2014 |
| MCC_2_C49_Callestick_NB | C49_Callestick_NB | NB | 2014 |
| MCC_3_U6083 Lower Ventongimps SB | U6083 Lower Ventongimps SB | SB | 2014 |

| | | | |
|---|---|---|---|
| MCC_3_U6083 Lower Ventongimps NB | U6083 Lower Ventongimps NB | NB | 2014 |
| MCC_5_U6082 Shortlanesend NB | U6082 Shortlanesend NB | NB | 2014 |
| MCC_5_U6082 Shortlanesend SB | U6082 Shortlanesend SB | SB | 2014 |
| MCC_6_C178 Perranzabuloe SB | C178 Perranzabuloe SB | SB | 2014 |
| MCC_6_C178 Perranzabuloe NB | C178 Perranzabuloe NB | NB | 2014 |
| MCC_7_C364 Zelah off slip | C364 Zelah off slip | NB | 2014 |
| MCC_8_Shortlanesend-Zelah NB | Shortlanesend-Zelah NB | NB | 2014 |
| MCC_8_Shortlanesend-Zelah SB | Shortlanesend-Zelah SB | SB | 2014 |
| MCC_10_Lane to/from St Allen NB | Lane to/from St Allen NB | NB | 2014 |
| MCC_10_Lane to/from St Allen SB | Lane to/from St Allen SB | SB | 2014 |
| MCC_13_Trispen NB | Trispin NB | NB | 2014 |
| MCC_13_Trispen SB | Trispin SB | SB | 2014 |
| MCC_14_Ventonteague NB | Ventonteague NB | NB | 2014 |
| MCC_14_Ventonteague SB | Ventonteague SB | SB | 2014 |

The ATC surveys provided by Cornwall Council (CC) and the Highways England TRADS surveys are all from 2015. The MCC surveys provided by Cornwall were undertaken in 2014 with no more recent data available. There is minimal growth between 2014 and 2015 so the MCCs were considered acceptable for use in the model calibration and assist in providing a wider coverage of links for inclusion in the calibration process.

Figure 3-1 shows the location of the ATC surveys sites used in the calibration process.

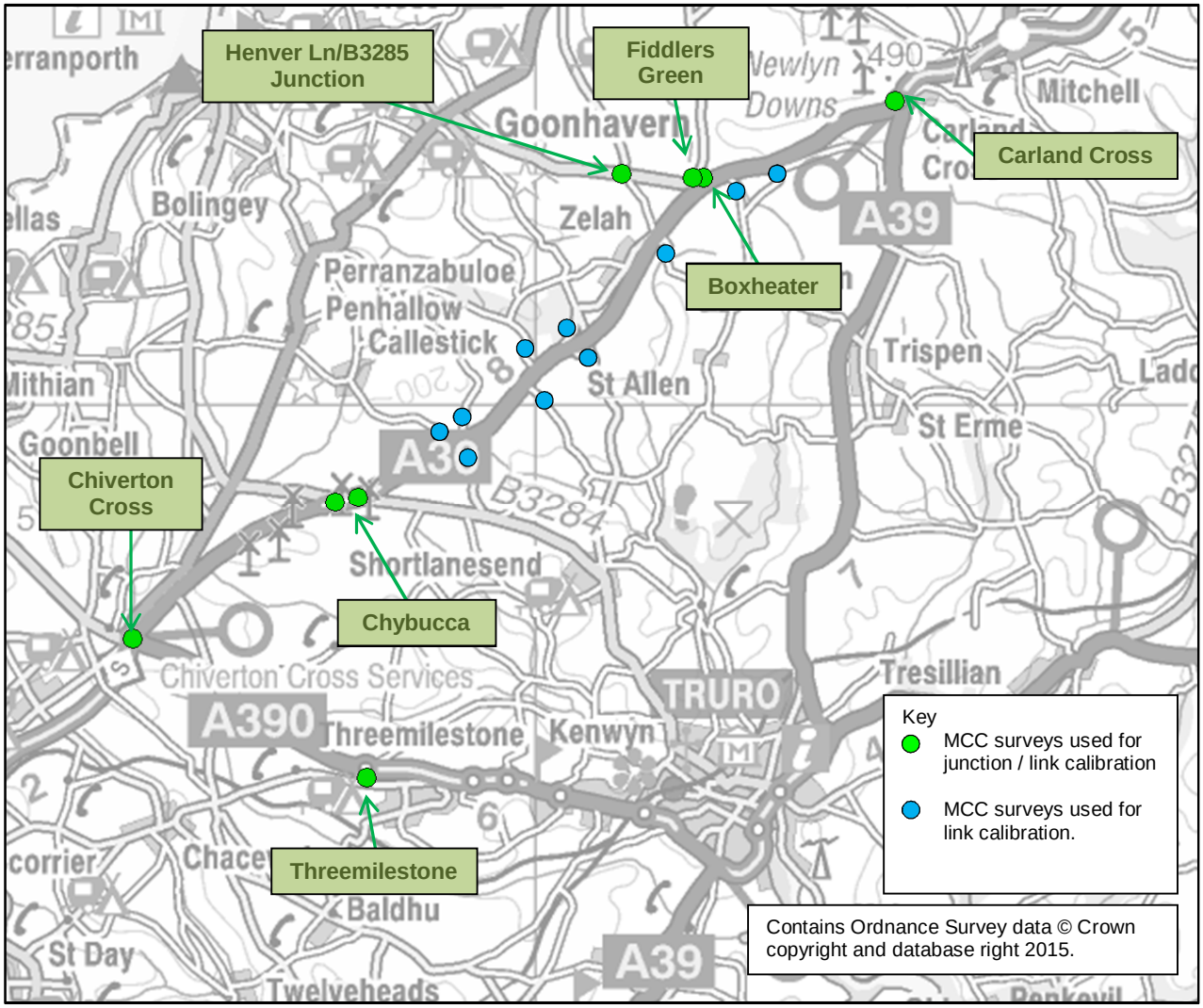
Figure 3-1 - ATC Surveys (TRADS and CC surveys) used for Calibration


It is important that the model accurately simulates the turning movements at key junctions within the study area. To ensure this is the case, the MCC surveys for the following junctions have been included in the calibration data for the Stage 3 modelling:

- Chiverton Cross Roundabout
- Chybucca (undertaken as two three arm T-junction counts)
- Boxheater
- Carland Cross Roundabout
- Fiddler's Green Junction
- Henver Ln/B3285 Junction
- Threemilestone Roundabout

Figure 3-2 shows the location of these junctions:

Figure 3-2 - Location of MCC Surveys used in Calibration




### 3.2.2 Screenlines

The screenlines identified in Figure 3-3 provide coverage to the east, north and west of Truro. Each screenline has been assessed separately for each direction. The west and north of Truro screenlines have been used in calibration and the east of Truro screenline has been used for validation. The following routes are included within the screenlines:

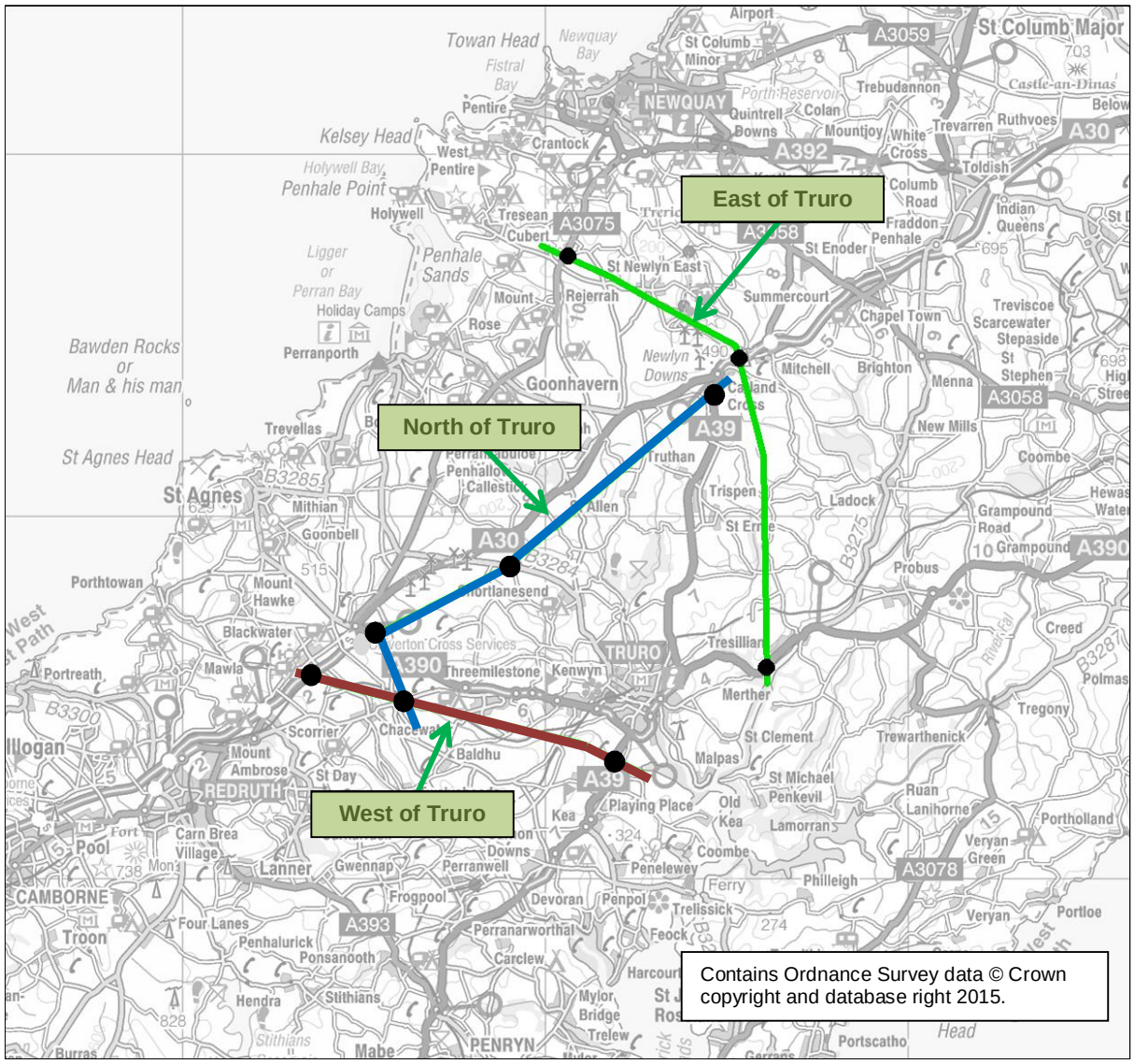
- **West of Truro (calibration)**
  - A39 – South of Arch Hill Roundabout
  - A30 – West of Chiverton Cross
  - Chacewater Hill, Chacewater
- **North of Truro (calibration)**
  - A390 – South of Chiverton Cross
  - B3284 – South of Shortlanesend
  - A39 – South of Carland Cross

- Chacewater Hill, Chacewater

¡ **East of Truro (validation)**

- A3075 – South of Newquay
- A30 – East of Carland Cross
- A390 – East of Truro

Figure 3-3 - Locations of Calibration and Validation Screenlines




## 3.3 Identification of Validation Data

### 3.3.1 Count Data

It is important to hold some surveys in key locations back for use in the validation process. This provides an independent check to ensure that following calibration the model is providing a realistic representation of the traffic conditions within the study area. It is important that these counts cover A30 within and either side of the study area.

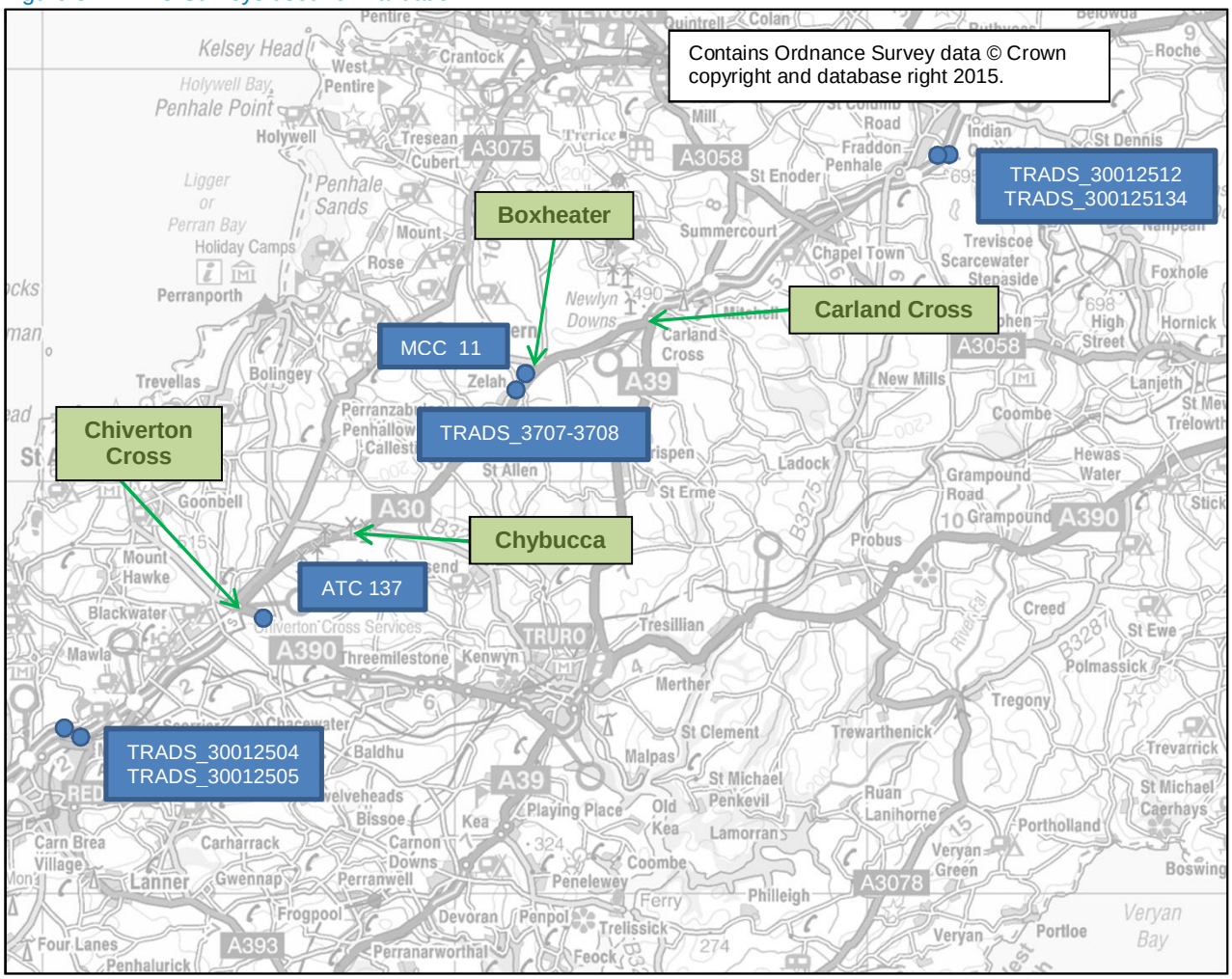
Table 3-2 below outlines the surveys that have been included in the validation process.

Table 3-2 - Link Flow Surveys identified for inclusion in Validation

| ID | Site Location | Direction | Survey Year |
|---|---|---|---|
| **TRADS_3707** | A30, Between Zelah and Carland Cross Rbt | EB | 2015 |
| **TRADS_3708** | A30, Between Zelah and Carland Cross Rbt | WB | 2015 |
| **TRADS_30012504** | A30, Between Scorrier and Redruth | EB | 2015 |
| **TRADS_30012505** | A30, Between Scorrier and Redruth | WB | 2015 |
| **TRADS_30012512** | A30, Between Summercourt and Indian Queens | EB | 2015 |
| **TRADS_30012513** | A30, Between Summercourt and Indian Queens | WB | 2015 |
| **ATC_137_EB** | A390, Between Chiverton Cross and Threemilestone | EB | 2015 |
| **ATC_137_WB** | A390, Between Chiverton Cross and Threemilestone | WB | 2015 |
| **MCC_17_EB** | Boxheater West to Fiddlers Green Junction | EB | 2014 |
| **MCC_17_WB** | Boxheater West from Fiddlers Green Junction | WB | 2014 |

Figure 3-4 shows the location of these counts.

Figure 3-4 - ATC Surveys used for Validation



### 3.3.2 Journey Times

Accurately modelling journey times is important as journey time savings form a key part of economic analysis. As such it is good practice, as set out in WebTAG, to validate the model against journey times, ensuring that the journey time routes provide a good coverage of key routes.

Highways England HATRIS journey time routes on the A30 have been included in the validation process between the following points:

- A3074 Hayle and Penzance (Westbound only);
- A3074 Nut Lane, Lelant and Tolvaddon Interchange;
- Tolvaddon Interchange and Scorrier Interchange;
- Scorrier Interchange and Chiverton Cross roundabout;
- Chiverton Cross roundabout and Carland Cross roundabout;
- Carland Cross roundabout and Mitchell Interchange;
- Mitchell Interchange and Chapel Town;
- Chapel Town and St Enoder;
- St Enoder and Indian Queens;
- Indian Queens and junction with A389/A391;
- Junction with A389/ A391 and Carminnow Cross; and,
- Carminnow Cross and Launceston Rd, Bodmin;

These A30 journey time routes have been split into three sections for validation, A3074 Hayle to Chiverton Cross (west of the scheme); Chiverton Cross to Carland Cross; and Carland Cross to Launceston Rd, Bodmin (east of the scheme).

Cornwall Council has provided additional journey time data that will be included in the validation checks for the following routes:

- A3075 – Chiverton Cross and Newquay;
- A390 – Chiverton Cross and County Hall;
- B3284 – Kenwyn Hill and Chybucca;
- A39 – Carland Cross and Union Hill;
- A39 – Truro and Devoran;
- B3285 – Goonhavern and Boxheater;
- B3277 – St. Agnes and Chiverton Cross; and,
- A30 – Chiverton Cross and Carland Cross;

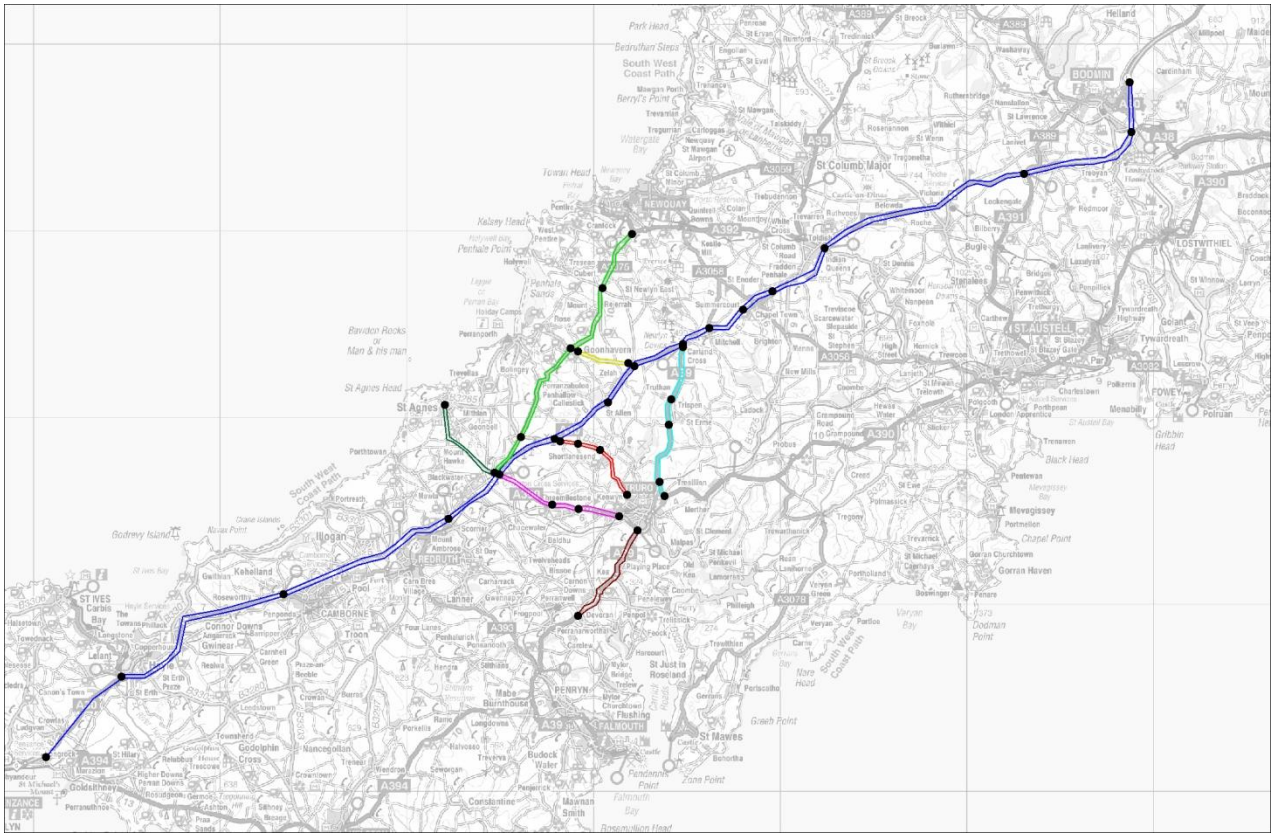
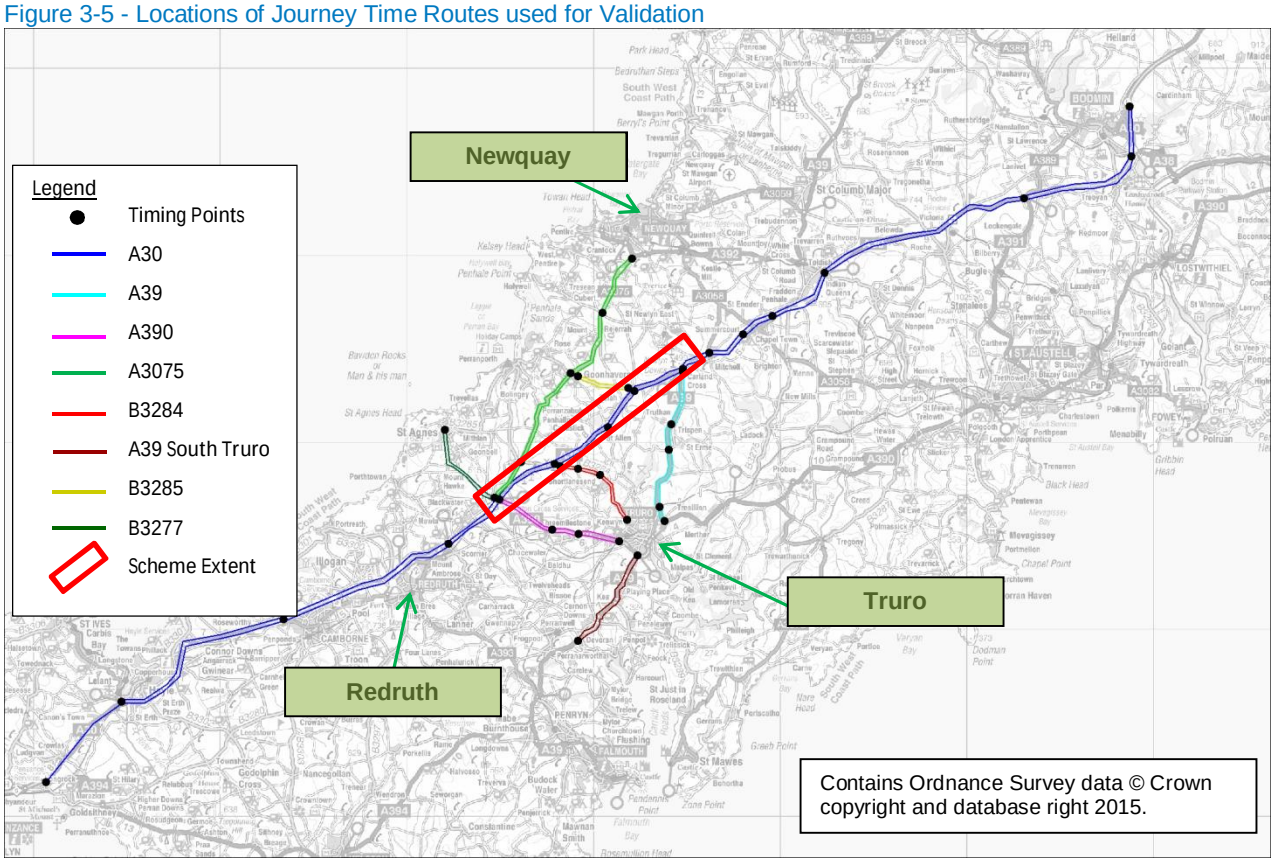



Figure 3-5 shows these journey time routes.

Figure 3-5 - Locations of Journey Time Routes used for Validation




Both sources included the A30 Chiverton to Carland Cross and presented some differences between them. They are summarised in the Table 3-3.

Table 3-3 - Journey time differences (seconds) between HATRIS and Cornwall Council between Chiverton Cross and Carland Cross

| | | AM | IP | PM |
|---|---|---|---|---|
| **Eastbound** | **Cornwall Council** | 684 | 642 | 702 |
| | **HATRIS** | 656 | 652 | 697 |
| | **Relative Difference** | 4.09% | -1.56% | 0.71% |
| **Westbound** | **Cornwall Council** | 804 | 673 | 748 |
| | **HATRIS** | 734 | 657 | 690 |
| | **Relative Difference** | 8.71% | 2.38% | 7.75% |

As shown above, there are only two significant differences. These are in the westbound direction during the AM and PM peaks. These differences are 70 and 58 seconds, which represent, approximately, 8- 9% of the journey time. Given that the HATRIS data was described as low quality, it was agreed with TAME[1] to use the Cornwall Council data that was collected during two neutral months (September and October).

[1] Agreed with TAME via email on 22/02/17.

## 3.4 Comparison of Comparable Data from Different Sources

Data has been used from both Highways England and Cornwall Council, all of which has been used in the calibration/validation process. During the model calibration and validation process it was noticed that discrepancies existed between the TRADS count to the east of Zelah and the MCC at Carland Cross, especially in the interpeak period. This is discussed further in Section 6.1.3.

# 4. Highway Model Development

## 4.1 Network

### 4.1.1 Description of Network Structure

From Stage 1 onwards, the model for this scheme was based in the original 2009 base SATURN network, which was developed to assess the traffic impact of strategic developments around Truro. For the purposes of the subsequent modelling stages, further development of this network was undertaken to provide more detail to the simulation network along the A30 between Redruth and Indian Queens. The level of detail in the network to the north and south of the A30 has also been increased to represent the key routes to population centres in the north Cornwall such as Newquay, St Agnes and Perranporth.

During the PCF Stage 3 model development, the network has been further enhanced along the A30 corridor by the inclusion of all junctions with smaller unclassified roads between the Chiverton Cross and Carland Cross roundabouts. Where necessary, new zones have been created for these accesses to reflect the localised demand generated by adjacent farms and hamlets. Cornwall Council has been consulted to assist in the identification of the additional network required.

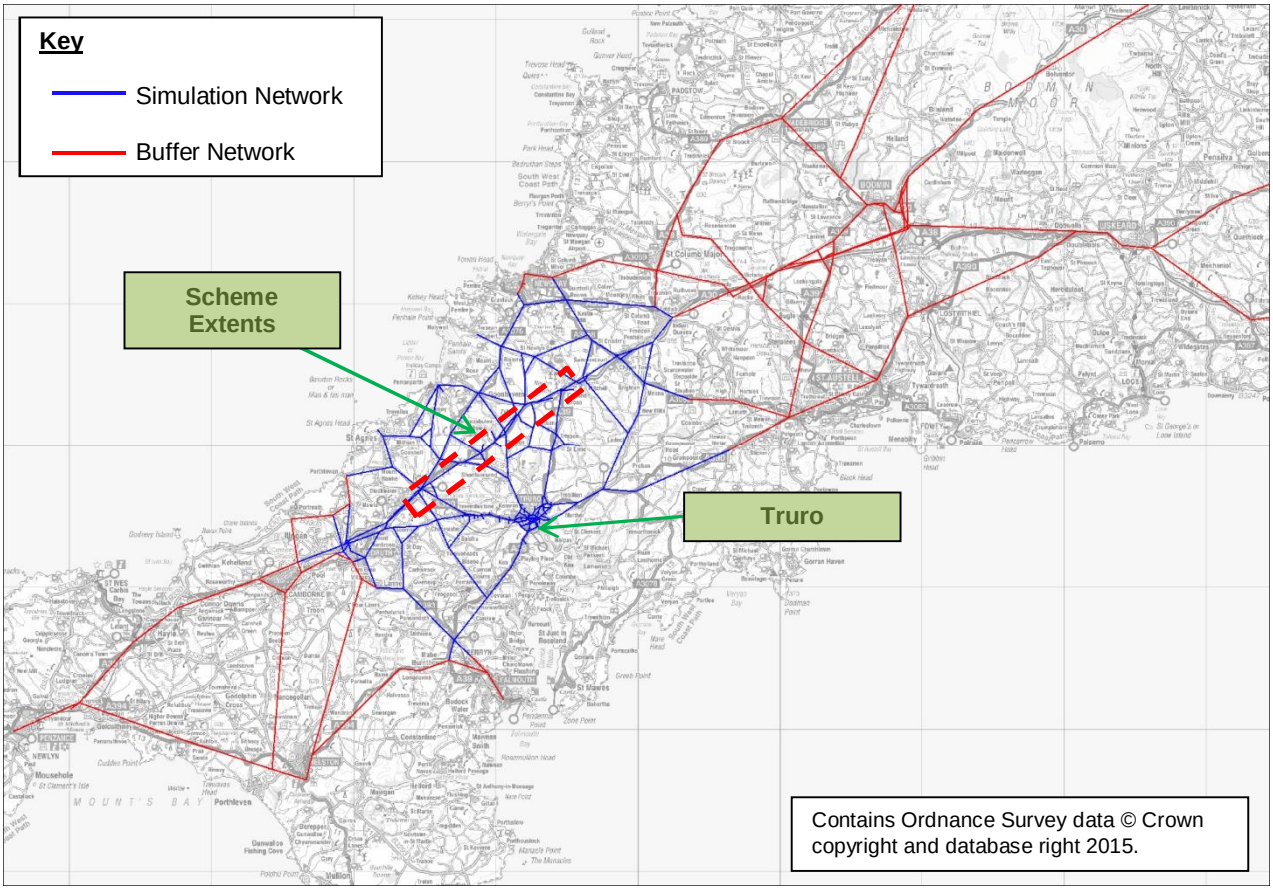
The existing network provided detail of the major routes to and from Truro with the following sections coded in simulation part of the network; the A390 between the A30 Chiverton Cross Roundabout and Truro, the city of Truro, the A3075, the A30 between Scorrier and Mitchell, and the A39 between the A30 Carland Cross Roundabout and Truro.

The buffer network has also been extended to include the key roads in Great Britain to enable the modelling of long distance trips. Fixed speeds were coded on these links because there is only partial trip representation in this area.

The extent of the detailed and wider study area is illustrated in Figure 4-1. The simulation network is now formed of the following sections:

- A30 between Indian Queens and Redruth
- A3075 between Chiverton Cross Roundabout and Newquay
- The city of Truro
- The key routes around the western side of Redruth
- Minor routes to smaller population centres have been added including routes to Perranporth and St Agnes located north of the A30.

Figure 4-1 – Simulation and Buffer Network Extents

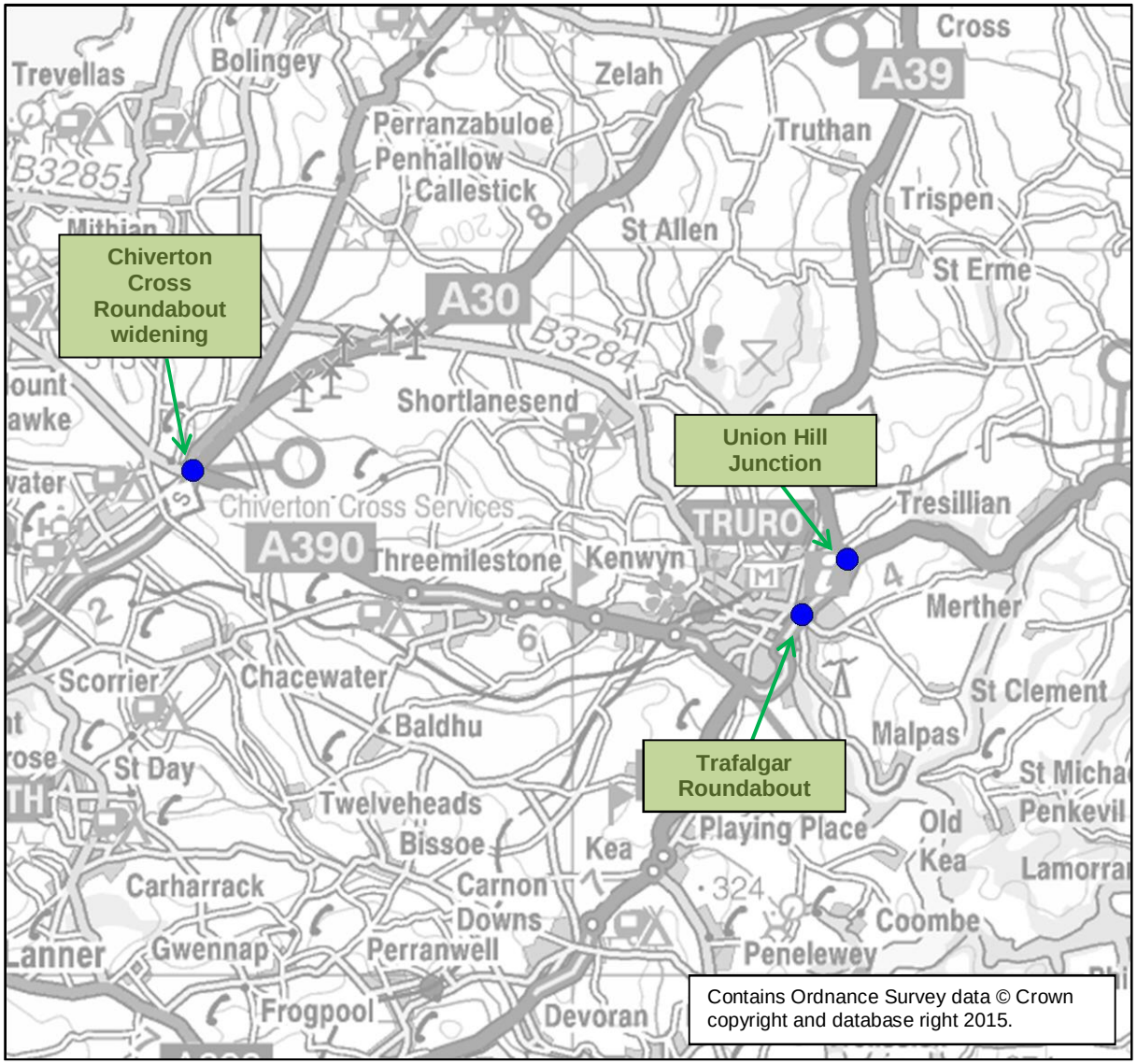



A number of schemes have been identified as being introduced before the new base year of 2015. The following schemes have been added into the network coding:

- **Trafalgar Roundabout (Truro):** Increased the number of approach lanes on the A390 Tregolls Road and the B3284 St Austell Street. The improvements also saw an increase in the number of circulatory lanes.
- **Union Hill junction (Truro):** These improvements were introduced as part of the Tregurra Park P&R site; the improvements saw the number of lanes increase to two on the A39 Newquay Road towards Truro. The improvements also introduced a new arm to north providing access to the P&R site for buses.
- **Chiverton Cross Roundabout widening:** This scheme introduced additional lanes on the entry arms of the roundabout along with an additional circulatory lane to increase the roundabout capacity.

Figure 4-2 shows the location of the three improvement schemes.

Figure 4-2 - Junction Improvement Scheme Locations




### 4.1.2 Description of Coding Process

All node locations have been validated using MapInfo GIS software. Link lengths have been determined through the use of satellite imagery on Google Earth Pro. The calculation of saturation flows and speed limits are covered in Sections 4.1.4 and 4.1.3 respectively. Information on how signal timings were calculated is outlined in Section 4.1.6.

### 4.1.3 Evidence for Assessment of Speed Limits/Road Types

Speed flow curves were added to a number of routes through the network in order to limit link capacity and provide a better representation of traffic speed at times of high traffic flow. This was particularly important to accurately model the difference in capacities between dual and single carriageway sections of the A30. Speed Flow Curves have been added to routes in rural areas. In these areas link capacity, rather than junction capacity, is the key constraint on flow.

The speed flow curves have been obtained from the Regional Traffic Models Network Coding Manual. The exception to this is the speed flow curve 39 - Rural Lane two directions with difficulty passing. Some of the routes in the modelled network are very narrow, but still represent important local roads that have needed to be modelled. On these roads, two cars travelling in opposite directions can only pass with difficulty, usually one of them having to stop or pull in to let the other vehicles pass. It is considered reasonable to describe a new speed flow curve that would have a limited speed and half the capacity of a regular road to accurately model the characteristics of these routes.

Table 4-1 below shows the speed flow curves which have been used in the simulated network for this purpose.

Table 4-1 – List of Speed Flows Curves used in the Model

| Index | Description | Free Flow Speed (kph) | Speed at Capacity (kph) | One-Way Link Capacity (pcu/hr) | No. Lanes | Power |
|---|---|---|---|---|---|---|
| **20** | **Rural - Dual Carriageway (2 Lane, All Purpose)** | 112 | 73 | 4,199 | 2 | 2.7 |
| **21** | **Rural WS2 10.0m A Road** | 93 | 55 | 1,686 | 1 | 2.15 |
| **22** | **Rural – Single Carriageway (10m width, Typical)** | 87 | 58 | 1,328 | 1 | 2.0 |
| **23** | **Rural - Single Carriageway (7.3m width, Good)** | 82 | 53 | 1,328 | 1 | 2.0 |
| **24** | **Rural - Single Carriageway (7m width, Typical)** | 64 | 34 | 1,328 | 1 | 2.4 |
| **25** | **Rural - Single Carriageway (6.5m width, Bad)** | 67 | 45 | 1,010 | 1 | 1.8 |
| **26** | **Suburban D2 (Slight Development)** | 75 | 35 | 3,540 | 2 | 2.56 |
| **27** | **Suburban – Dual Carriageway (Typical Development)** | 71 | 35 | 3,540 | 2 | 2.0 |
| **29** | **Suburban – Single Carriageway (Slight Development)** | 65 | 25 | 1,680 | 1 | 2.6 |
| **30** | **Suburban - Single Carriageway (Typical Development)** | 61 | 25 | 1,680 | 1 | 1.6 |
| **31** | **Suburban - Single Carriageway (Heavy Development)** | 58 | 25 | 1,680 | 1 | 1.0 |
| **32** | **Small Town (35% Development)** | 63 | 32 | 1,344 | 1 | 2.9 |
| **33** | **Small Town (60% Development)** | 56 | 30 | 1,344 | 1 | 2.4 |
| **34** | **Small Town(90% Development)** | 46 | 30 | 1,344 | 1 | 1.3 |
| **35** | **Rural Village** | 47 | 30 | 1,100 | 1 | 2.5 |
| **36** | **Rural Village - Traffic Calmed** | 30 | 20 | 1,100 | 1 | 2.5 |
| **37** | **Rural S2 narrow carriageway** | 82 | 53 | 950 | 1 | 2.1 |
| **38** | **Rural S2 Other Road (slow, narrow carriageway)** | 54 | 35 | 950 | 1 | 1.5 |
| **39** | **Rural Lane two directions with difficulty passing** | 45 | 35 | 475 | 1 | 1.5 |

Table 4-2 below details the speed flow curves applied to the key routes within the model.

Table 4-2 – Speed Flow Curves applied to Key Routes.

| Route | Curve Index |
|---|---|
| **A30 from Hayle to Bodmin** | 20, 21, 23 |
| **A39 from Carland Cross to Bodmin Road** | 21, 23, 25, 30 |
| **A39 from Falmouth to Calenick/Arch Hill** | 23, 24 |
| **A39 Morlaix Avenue** | 20 |
| **A390 between Treliske Roundabout and Dalvenie Roundabout** | 33 |
| **A390 from Chiverton to Threemilestone Roundabout** | 23 |
| **A390 from Tresillian to Union Hill** | 23 |
| **A3047 through Redruth and Camborne** | 26, 34 |
| **A3058 from St Austell to A30** | 24, 25, 30 |
| **A3075 from Chiverton Cross Roundabout to Newquay** | 24, 25 |
| **A391 from St Austell to A30** | 23 |
| **A393 from Redruth to Four Cross** | 24, 30, 34, 35 |
| **B3274 from St Austell to A30** | 25 |
| **B3284 between Chybucca Crossroads and Pydar Street** | 24, 25, 36, 38 |
| **B3284 at Shortlanesend** | 33, 35 |
| **B3303 and B3297 from Helston to Camborne/Redruth** | 25 |
| **Station Road between Blackwater and Chasewater** | 39 |

### 4.1.4 Description of Calculation and Assumptions

Saturation flows, based on the characteristics of the individual junctions, have been used for junctions in the simulation network. The tables below shows the typical saturation flows coded within the A30 Carland Cross to Chiverton model. These saturation flows are based upon Highways England's RTM Network Coding V 08 guidance.

Table 4-3 - Priority Junction Saturation Flows

| Movement | Saturation Flow (PCU/hr) |
|---|---|
| **Major Straight Ahead** | 1,980 |
| **Major Left Turn** | 1,530 |
| **Major Right Turn**[2] | 830 |
| **Minor Left Turn**[3] | 770 |
| **Minor Right Turn**[4] | 640 |

[2] Standard Major Lane to Minor Lane right turn, crossing traffic with good visibility (RTM Network Coding V 08)

[3] Standard Minor Lane to Major Lane left turn, with average visibility and without central reserve (RTM Network Coding V 08)

[4] Standard Minor Lane to Major Lane right turn, with average visibility and without central reserve (RTM Network Coding V 08)

Table 4-4 - Signalised Junction Saturation Flows

| Movement | Saturation Flow (PCU/hr) |
|---|---|
| **Straight Ahead** | 1,980 |
| **Turn** | 1,740 |

Table 4-5 - Roundabout Saturation Flows (PCU/Hr)

| Approach Lanes | Number of Entry Lanes | | |
|---|---|---|---|
| | 1 | 2 | 3 |
| **Single (3.5m)**[5] | 1,100 | 1,620 | 1,800 |
| **Single (5.0m)**[6] | 1,380 | 1,920 | 2,100 |
| **Dual 2 Lane**[7] | - | 2,200 | 2,760 |
| **Dual 3 Lane**[8] | - | - | 3,320 |

### 4.1.5 Description of any Network Inventory Undertaken

No additional network inventory has been undertaken at this stage of the modelling process.

### 4.1.6 Description of any Junction Operation Data

Where new signalised schemes have been added to the network, such as Union Hill signalised junction, fixed signal times obtained from Cornwall Council have been coded into the network. Where schemes operate via vehicle actuation, fixed signal timings have also been used due to the limitation that SATURN cannot model vehicle actuation at discrete junctions. The existing signalised junctions in the base model have not been updated as part of the A30 Chiverton to Carland Cross appraisal work.

Merges were introduced to the network on the A30 entry links at Scorrier and Avers Roundabout where detail has been coded into the model. Merges have been used at these points in the network to ensure that all traffic entering the mainline of the A30 do so in the correct manner and are not modelled to stop at the entrance to the junction. All merges in the SATURN model have been coded using the 'M' marker, which indicates a turn merging with another turning movement at a priority junction.

### 4.1.7 Description of any Modelling Assumptions

The model has 3 vehicle classifications: Cars, Light Goods Vehicles (LGV) and Heavy Goods Vehicles (HGV). The car vehicle class has been further split into the following purposes, resulting in a total of 5 User classes:

- Employers business

[5] Standard Width Entry Capacity (RTM Network Coding V 08)
[6] Wide Width Entry Capacity (RTM Network Coding V 08)
[7] Standard Width Entry Capacity for 2 Lanes(RTM Network Coding V 08)
[8] Standard Width Entry Capacity for 3 Lanes(RTM Network Coding V 08)

- Commute
- Other

The trip matrices are specified in Passenger Car Units (PCUs).

The PCU factors used are shown in Table 4-6.

Table 4-6 – PCU Factors

| Vehicle Class | PCU Factor |
|---|---|
| **Car** | 1 |
| **LGV** | 1 |
| **HGV** | 2 |

The PCU factor of 2 for HGVs has come from the 2009 Truro model. TAG Unit M3.1 states that the PCU equivalent for HGVs on motorways and all-purpose dual carriageways should be 2.5 and the PCU equivalent for HGVs on other road types should be 2.0. This model study area includes dual carriageway on the A30 to the east of Carland Cross and the west of Chiverton Cross but focuses on the single carriageway section of the A30 between Carland and Chiverton Cross, and other road types around Truro and the routes. The PCU factor is therefore thought to be reasonable.

A queue length of 5.75m per PCU has been assumed in the model. This is the default PCU length value within SATURN.

### 4.1.8 Description of any Public Transport Modelling

The bus routes present in the 2009 Truro model have been preserved in the A30 Carland Cross to Chiverton modelling. Updates to these have been made where necessary due to the use of version 11.3.12U of SATURN.

### 4.1.9 Description of Treatment of Freight Transport

HGVs have been included as User Class 5 of the model. No further disaggregation for long haul freight has been undertaken.

### 4.1.10 Description of network assumptions relating to representation of Tolls, High Occupancy Vehicles Lanes, Active Traffic Management and Variable Speed Limits

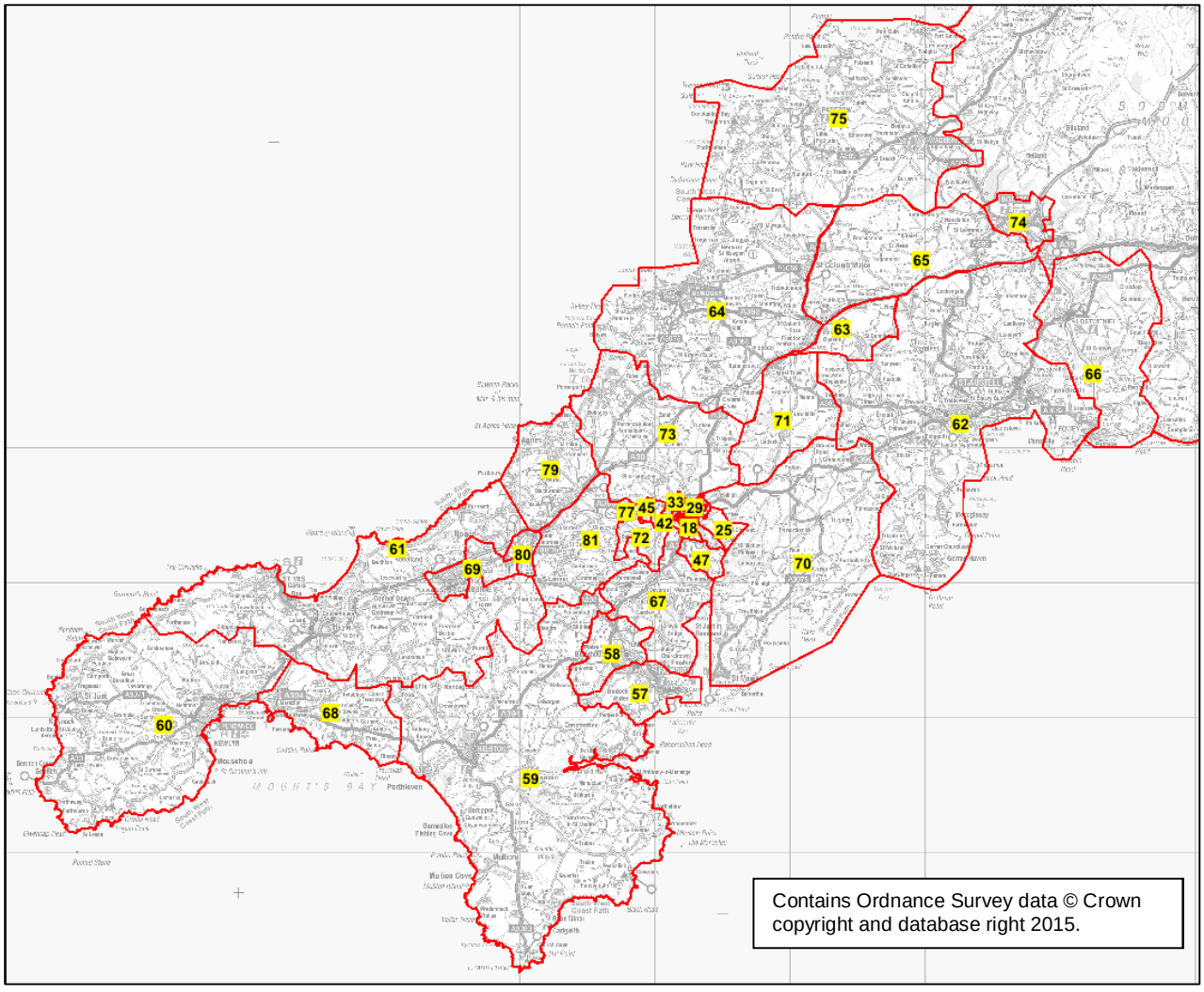
There are no toll routes within Cornwall. The Tamar Bridge between Plymouth and Saltash is the nearest toll route. This is located within the buffer network and is deemed unlikely to affect routing via the scheme location as the A38 joins the A30 before this location so does not provide an alternative route. The toll has not been included in A38 coding for the A30 Carland to Chiverton Cross model.

## 4.2 Matrices

### 4.2.1 Description of Zone Structure

The original zone system was plotted in GIS software to understand the zone coverage of the original model. To accurately model the traffic, further detail was required for the zoning system in the vicinity of the study area. To do this, several larger zones containing multiple larger population centres were disaggregated into smaller zones as detailed later in this section.

Figure 4-3 – Truro Model Zone Structure

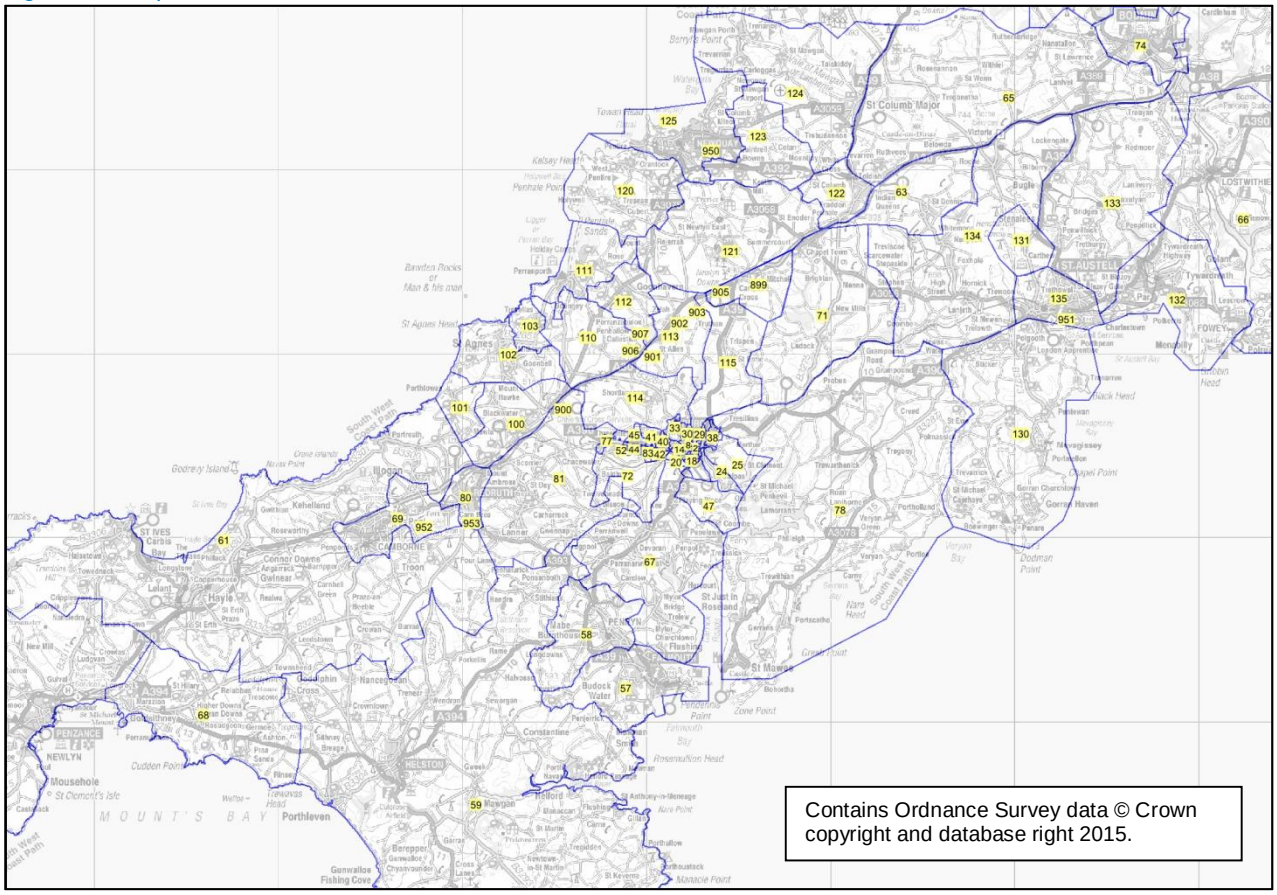



The figure above shows that the zone structure is very detailed within Truro itself but the surrounding areas have been grouped into larger zones with the exception of Camborne, Redruth, Penryn and Falmouth which are large population centres near to Truro. The other zones contained several settlements of varying sizes.

The following stages were undertaken to form the zone system used during the Stage 3 modelling:

1. Zones 79, 73 and 64 were identified as requiring further separation due to additional simulation network being added to the SATURN model. Zone 62 was also identified as requiring further disaggregation due to it including St Austell, which is a large population centre, alongside other towns and settlements that would likely have varied route choices. The new zones are centred around population centres which are likely to use similar loading points on the network. The boundaries of these new zones are based upon combined boundaries of the 2011 Census Output Areas that form them.

Figure 4-4 – Updated Cornwall Zone Structure

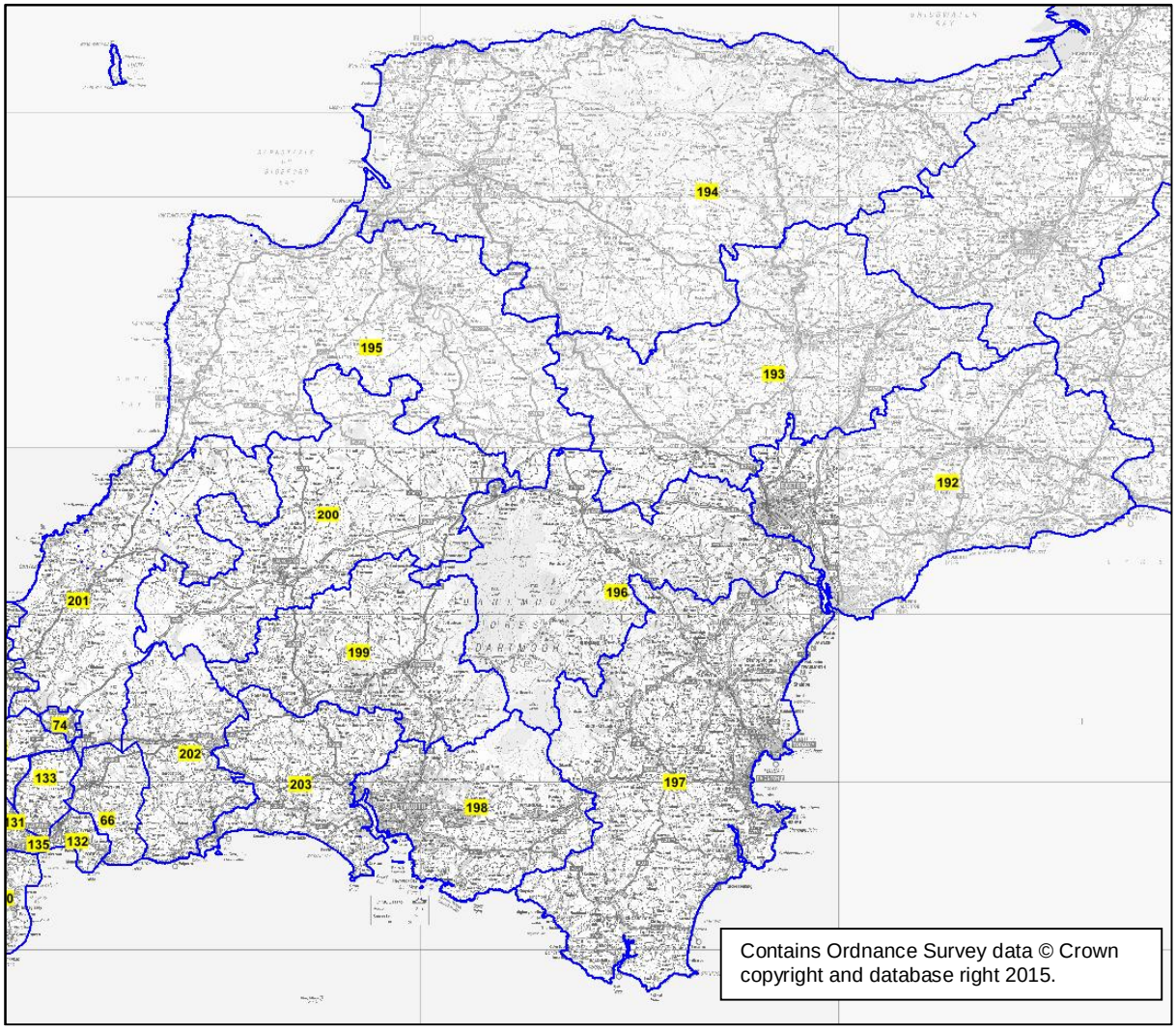



To disaggregate the trips from the larger original zones, the original trip volumes were assigned in proportion to the population of the new smaller zones.

A table showing the populations is shown in Annex A.

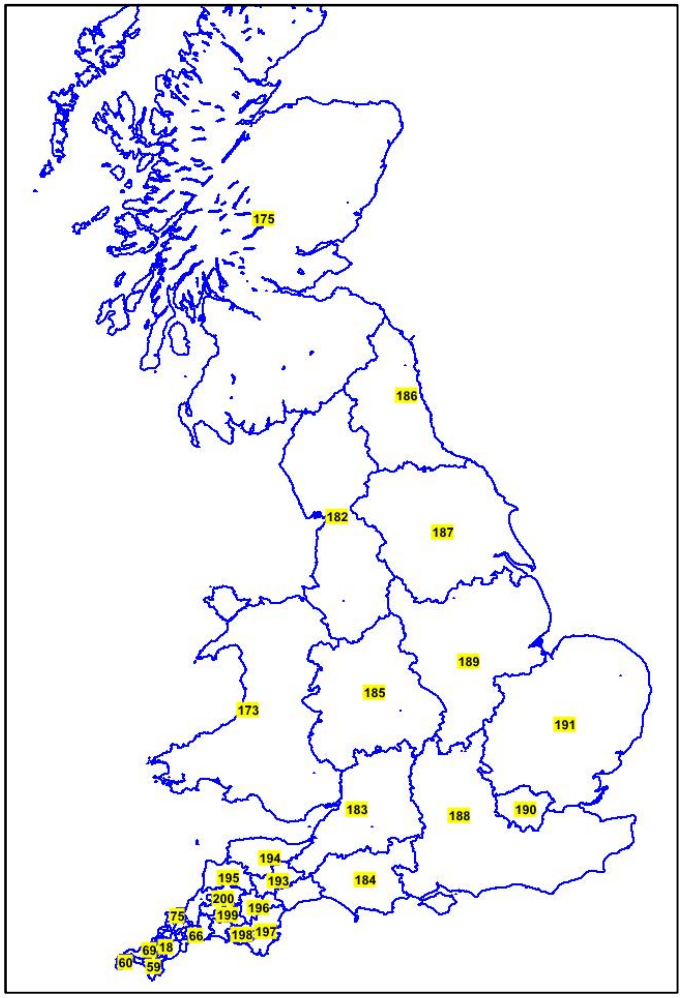
2. The original coverage of the 2009 Truro model included a single zone, Zone 76, which encompassed most of Devon, Exeter and the rest of the UK.

Figure 4-5 – Devon Zone Structure




The Devon zone has been disaggregated around larger settlements and their surrounding hinterland. These zones will load onto the network at the location of the main population centre they contain e.g. Tavistock, Plymouth or Exeter.

Figure 4-6 – Rest of the UK Zone Structure




The rest of the UK zones have been assigned based upon a regional structure with the South West showing a further disaggregation given its proximity to the study area (relative to the remainder of the UK).

For the purposes of assigning trips to these zones, trips to and from Zone 76 in the original matrices have been assigned to these zones based upon proportions of trips originating or finishing within the new zones according to proportions taken from the RSIs undertaken by NDC in support of the PCF Stage 1 and Stage 2 modelling.

During Stage 3, new zones have been defined in order to increase the level of detail in key areas of the network. Zones 900-907 represent different small accesses, farms and hamlets that interact with the A30 through the whole length of the scheme. Zone 121 (St. Newlyn East) has been split in two zones, 121 and 899, to represent Mitchell as a different demographic unit that accesses the A30 by different roads to St. Newlyn's East.

### 4.2.2 Specification and justification of any demand segmentation within the traffic model

The model has five user classes. There are three car classes and one for LGV. OGV 1 and OGV 2 class vehicles have been grouped to form a single HGV user class. This is deemed a suitable disaggregation for the economic assessment for PCF Stage 3. The table below outlines the user classes in the model.

Table 4-7 - Modelled User Classes

| User Class | Purpose | Vehicle Type |
|---|---|---|
| **1** | Employers Business | Car |
| **2** | Commute | |
| **3** | Other | |
| **4** | All | LGV |
| **5** | All | HGV |

The totals and respective proportions of each user class in each post ME2 average peak hour matrix are shown in the table below. These have been compared to the proportions quoted in TAG Data Book March 2017.

Table 4-8 - Post ME2 Average Peak Hour Matrix User Class Totals

| UC | Vehicle Type | AM | | | Interpeak | | | PM | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | Total Trips | Proportion | TAG Proportions | Total Trips | Proportion | TAG Proportions | Total Trips | Proportion | TAG Proportions |
| **1** | Car | 4,688 | 25% | **16.5%** | 3,906 | 22% | **16.5%** | 3,661 | 18% | **11.8%** |
| **2** | | 5,990 | 32% | **44.1%** | 4,273 | 24% | **11.8%** | 5,908 | 29% | **41.3%** |
| **3** | | 8,022 | 43% | **39.5%** | 9,406 | 53% | **71.7%** | 10,491 | 52% | **46.9%** |
| **4** | LGV | 2,524 | 100% | **100%** | 2,390 | 100% | **100%** | 2,694 | 100% | **100%** |
| **5** | HGV | 1,474 | 100% | **100%** | 1,272 | 100% | **100%** | 1,226 | 100% | **100%** |

Table 4-8 shows that User Class 3 (UC3), Car – Other, forms the largest part of the matrix in all peak periods. Commute trips are shown to form a lower proportion of the AM and PM matrices when compared to the TAG average proportions.

Truro is expected to be the largest attraction for Employers Business trips. Route choice exists when accessing the city, especially from the west and north, although the alternatives from the north are often more minor routes. Trips to and from Truro from these directions would not necessarily use the Chiverton to Carland Cross section of the A30, instead routing via the A39 or Shortlanesend.

### 4.2.3 Description of data sources including previous study matrices, new RSI data, synthetic matrices

The Truro 2009 demand matrices were built using RSI data from six sites on the key routes into Truro. Two of the sites, on the A390 near Highertown and the B3284 near Shortlanesend, were surveyed in 2009. The

other sites were surveyed in 2003. A gravity model was then used to estimate unobserved trips. A30 through trips were added from an older model matrix, and updated to 2009 volumes.

The surveys undertaken by NDC on behalf of Mott MacDonald Sweco, as detailed in Section 3.1.1, were used to aid the development of the 2015 Carland to Chiverton Cross base year model. ATC and MCC counts undertaken at these locations were also used to expand the RSI data to average peak hour volumes.

The use of an RSI from November 2011 undertaken on the A30 to the east of Bodmin in support of the A30 Temple to Higher Carblake improvements provided additional data for the A30 and was included in the base model matrix building process along with the 2015 surveys.

### 4.2.4 Description of matrix building process including process of adjusting for unobserved directions and unobserved periods, reference to dealing with double counting and substitution of old data with new/more reliable data

The following steps have been carried out to convert the existing 2009 AM and PM peak hour matrices to 2015 peak period matrices.

1. TEMPRO factors have been applied to the 2009 matrices to growth them to 2015. The factors used are:

Table 4-9 – TEMPRO Factors to growth 2009 traffic flows to 2015 volumes

| TEMPRO Factor 2009 – 2015 Cornwall - Average Origin Destination | AM | PM |
|---|---|---|
| | 1.06 | 1.07 |

2. A factor derived from TRADS data from sites on the A30 between Chiverton and Carland Cross has been applied to the AM and PM peak hour matrices to convert to average AM and PM peak period matrices. The factors used are:

Table 4-10 – Factors to convert Peak Hour to Average Peak Period Hour

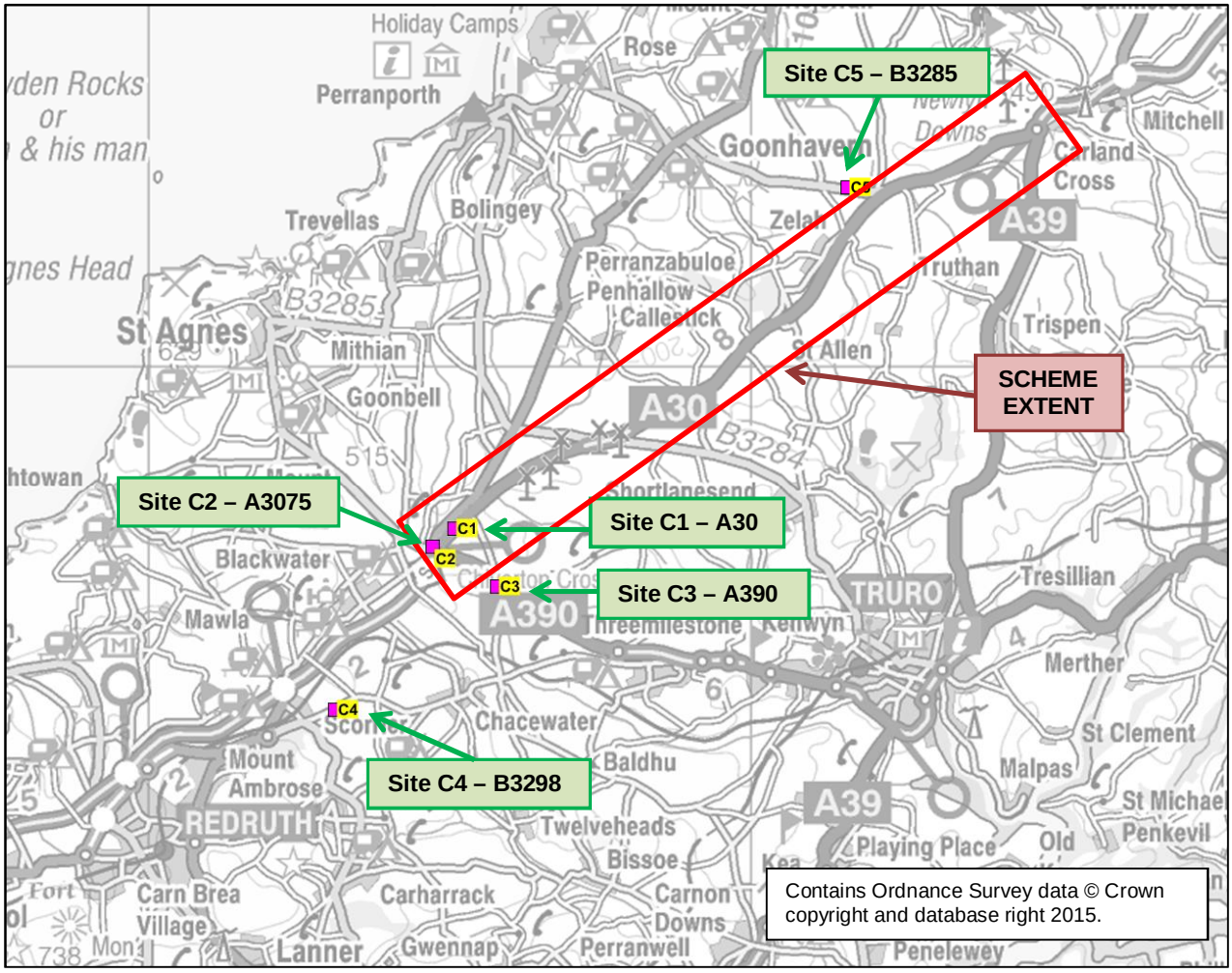
| Peak hour to peak period factor TRADS data on A30 | AM | PM |
|---|---|---|
| | 0.93 | 0.89 |

3. Some of the zones in the vicinity of the scheme have been split into smaller, more detailed zones using census population data. The zone which covered the rest of the country was split into regions in order to model full trip lengths.

4. An interpeak average hour matrix was created by adding the AM and PM peak period matrices and multiplying by a factor of 44.3%, derived from TRADS data on the A30.

Roadside interview data collected at five locations in October 2015 was incorporated into the existing 2015 peak period matrices. Further information about the roadside interview surveys is in the Traffic Data Collection Report (Report No. HA551502-WSP-GEN-0000-RE-TR-00002-P01). The locations of the roadside interview surveys are shown in Figure 4-7.

Figure 4-7 - RSI Locations




The following steps describe the process undertaken to incorporate the roadside interview data into the 2015 peak period prior matrices.

1. Each site was assessed by user class to examine the sample rates based on the direction of the traffic. A minimum sample threshold of 5% of the average neutral weekday ATC traffic for the period was set, under which the data was deemed to be unrepresentative of the site traffic. Such data would not be incorporated into the matrix update.

   To create the matrix for the non-interview direction in the interpeak and PM peaks, the time period was assigned based on the estimated return time, if they answered that the journey was a two way trip. The question asked 'If this journey is part of a 2-way return trip, please give the start time of your trip in the other direction?' To create the non-interview direction matrices for the AM peak, the PM interview direction sample was transposed and then expanded using factors calculated using the total transposed sample. The AM non-interview direction matrix was created this way due to the low AM sample in this direction from the RSI as illustrated in Table 4-11 below.

   Table 4-11 shows the sample rates at each survey site by modelled vehicle type for both the interview and non-interview directions.

Table 4-11 – Sample Rate by Vehicle Type

| Direction | Vehicle Type | Period | C1 | C2 | C3 | C4 | C5 |
|---|---|---|---|---|---|---|---|
| Interview Direction | *Car* | AM | 5% | 4% | 12% | 25% | 32% |
| | | IP | 9% | 4% | 8% | 27% | 39% |
| | | PM | 8% | 4% | 5% | 29% | 24% |
| | *LGV* | AM | 13% | 4% | 14% | 30% | 40% |
| | | IP | 15% | 2% | 11% | 23% | 37% |
| | | PM | 13% | 14% | 1% | 36% | 75% |
| | *HGV* | AM | 20% | 0% | 18% | 100% | 0% |
| | | IP | 28% | 4% | 9% | 138% [9] | 20% |
| | | PM | 4% | 0% | 0% | 41% | 0% |
| Non-Interview Direction | *Car* | AM | 0% | 2% | 6% | 4% | 1% |
| | | IP | 3% | 3% | 5% | 11% | 10% |
| | | PM | 5% | 5% | 8% | 14% | 19% |
| | *LGV* | AM | 1% | 3% | 3% | 2% | 0% |
| | | IP | 6% | 3% | 6% | 10% | 8% |
| | | PM | 13% | 6% | 15% | 23% | 44% |
| | *HGV* | AM | 0% | 0% | 2% | 54% | 0% |
| | | IP | 13% | 4% | 7% | 62% | 7% |
| | | PM | 20% | 12% | 10% | 29% | 0% |

Table 4-11 shows that the sample rates at Site C2 are below the 5% threshold in all but four instances. For this reason, data from site C2 was excluded from the final matrix as it is not be considered a representative sample of demand on the route.

The majority of the low sample rates occur in the non-interview direction, particularly in the AM. This is thought to be because of the wording of the question regarding 'return' trips. While the survey asks if the trip is two way, this question asks what time the person will make the 'return' journey. In the PM peak, it is thought that interviewees may be unlikely to answer that they have made the reverse trip in the morning of the survey leading to a small AM sample in the non-interview direction.

The sample rate for HGV vehicles was low at several sites so HGV's were excluded from both the Select Link and RSI matrices for the purposes of matrix building. The LGV sample rate for Site C3 was low in the PM peak in the interview direction and AM peak in the non-interview direction. This meant that no data was available to be transposed to create these peaks. LGVs were therefore excluded from the Site C3. Enough data was present at the other sites to allow LGV's to be included for the other sites.

Due to the low sample rates in the AM non-interview direction, the non-interview direction matrix for the AM peak was created by transposing the PM interview direction matrix before the application of any expansion factors.

[9] Number of interviews higher than average ATC count for the Interpeak period

2. Expansion factors to grow the RSI data to the average peak period traffic volume were created using ATC data collected in the two week period before the roadside interview. Data from the day of the survey was not included as the road was not under normal traffic conditions and Nationwide Data Collection, the survey provider, noted that the ATC for these days exhibited errors due to the slow moving traffic caused by the survey traffic management.

   The expansion factors were created directionally by vehicle type with the car expansion factor applied to User Classes 1, 2 and 3 and the LGV factor applied to User Class 4. This is in line with the types of vehicle represented by each user class. These factors growth the RSI interviews from each peak period up to the average trips within the period. The expanded number of trips is then divided by the number of hours in the relevant peak period (3 hours in the AM and PM and 6 hours in the interpeak period).

   The tables below detail the peak period expansion factors used for each site.

Table 4-12 – Expansion Factor by Vehicle Type at Site C1

| Site | Direction | Vehicle Type | Peak Period | Total RSI Trips | Ave Period ATC Trips | Expansion Factor to Average Peak Hour |
|---|---|---|---|---|---|---|
| C1 | Interview Direction | *Car* | AM | 122 | 2,491 | **20.42** |
| | | | IP | 366 | 4,098 | **11.20** |
| | | | PM | 219 | 2,660 | **12.15** |
| | | *LGV* | AM | 37 | 289 | **7.80** |
| | | | IP | 73 | 489 | **6.70** |
| | | | PM | 23 | 184 | **8.00** |
| | Non-Interview Direction | *Car* | AM | *219*[10] | *2,682* | ***12.25*** |
| | | | IP | 120 | 4,361 | **36.34** |
| | | | PM | 130 | 2,511 | **19.32** |
| | | *LGV* | AM | *23*[2] | *268* | **11.64** |
| | | | IP | 34 | 524 | **15.41** |
| | | | PM | 27 | 210 | **7.78** |

[10] Based on total of the transpose of the PM Interview Direction Matrix

Table 4-13 – Expansion Factor by Vehicle Type at Site C3

| Site | Direction | Vehicle Type | Peak Period | Total RSI Trips | Ave Period ATC Trips | Expansion Factor to Average Peak Hour |
|---|---|---|---|---|---|---|
| C3 | Interview Direction | *Car* | AM | 200 | 1,698 | **8.49** |
| | | | IP | 363 | 4,591 | **12.65** |
| | | | PM | 163 | 3,085 | **18.92** |
| | Non-Interview Direction | *Car* | AM | *163*[2] | *2,647* | ***16.24*** |
| | | | IP | 231 | 4,372 | **18.92** |
| | | | PM | 144 | 1,874 | **13.01** |

Table 4-14 – Expansion Factor by Vehicle Type at Site C4

| Site | Direction | Vehicle Type | Peak Period | Total RSI Trips | Ave Period ATC Trips | Expansion Factor to Average Peak Hour |
|---|---|---|---|---|---|---|
| C4 | Interview Direction | *Car* | AM | 228 | 916 | **4.02** |
| | | | IP | 302 | 1,105 | **3.66** |
| | | | PM | 137 | 479 | **3.50** |
| | | *LGV* | AM | 30 | 99 | **3.30** |
| | | | IP | 33 | 142 | **4.30** |
| | | | PM | 16 | 45 | **2.79** |
| | Non-Interview Direction | *Car* | AM | *137*[11] | *374* | ***2.73*** |
| | | | IP | 134 | 1,212 | **9.05** |
| | | | PM | 137 | 988 | **7.21** |
| | | *LGV* | AM | *16*[12] | *47* | ***2.92*** |
| | | | IP | 13 | 124 | **9.54** |
| | | | PM | 15 | 67 | **4.44** |

[11] Based on total of the transpose of the PM Interview Direction Matrix

[12] Based on total of the transpose of the PM Interview Direction Matrix

Table 4-15 – Expansion Factor by Vehicle Type at Site C5

| Site | Direction | Vehicle Type | Peak Period | Total RSI Trips | Ave Period ATC Trips | Expansion Factor to Average Peak Hour |
|---|---|---|---|---|---|---|
| C5 | Interview Direction | *Car* | AM | 106 | 334 | **3.15** |
| | | | IP | 199 | 516 | **2.59** |
| | | | PM | 82 | 339 | **4.14** |
| | | *LGV* | AM | 14 | 35 | **2.47** |
| | | | IP | 26 | 71 | **2.74** |
| | | | PM | 18 | 24 | **1.33** |
| | Non-Interview Direction | *Car* | AM | *82*[13] | *329* | ***4.01*** |
| | | | IP | 52 | 546 | **10.49** |
| | | | PM | 73 | 388 | **5.31** |
| | | *LGV* | AM | *18* | *41* | ***2.29*** |
| | | | IP | 6 | 75 | **12.52** |
| | | | PM | 14 | 32 | **2.27** |

3. For each site, a roadside interview matrix for each time period and user class was created for each direction. Each interview record has been assigned a model user class, based on origin and destination purpose, and the time period in which the interview was conducted. The table below shows how the origin and destination trip purposes were combined into model user classes for the Car vehicle type. LGV and HGV trips were grouped by vehicle type and trip purpose was not used for assigning these vehicle classifications a User Class.

Table 4-16 – Model User Classes

| User Class | Vehicle Type | Purpose |
|---|---|---|
| **1** | Car | Employers Business |
| **2** | Car | Commute |
| **3** | Car | Other |
| **4** | LGV | All |
| **5** | HGV | All |

[13] Based on total of the transpose of the PM Interview Direction Matrix

Table 4-17 – Car Trip Purpose to User Class Matrix

| | | Destination Purpose | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Permanent Home | Holiday Home | Place of Work | Employers Business | Education | Shopping | Personal Business | Visit Friends | Recreation/ leisure | Other |
| Origin Purpose | Permanent Home | - | 3 | 2 | 1 | 3 | 3 | 3 | 3 | 3 | 3 |
| | Holiday Home | 3 | - | 3 | 1 | 3 | 3 | 3 | 3 | 3 | 3 |
| | Place of Work | 2 | 3 | 1 | 1 | 3 | 3 | 3 | 3 | 3 | 3 |
| | Employers Business | 1 | 3 | 3 | 1 | 3 | 3 | 3 | 3 | 3 | 3 |
| | Education | 3 | 3 | 3 | 1 | 3 | 3 | 3 | 3 | 3 | 3 |
| | Shopping | 3 | 3 | 3 | 1 | 3 | 3 | 3 | 3 | 3 | 3 |
| | Personal Business | 3 | 3 | 3 | 1 | 3 | 3 | 3 | 3 | 3 | 3 |
| | Visit Friends | 3 | 3 | 3 | 1 | 3 | 3 | 3 | 3 | 3 | 3 |
| | Recreation/leisure | 3 | 3 | 3 | 1 | 3 | 3 | 3 | 3 | 3 | 3 |
| | Other | 3 | 3 | 3 | 1 | 3 | 3 | 3 | 3 | 3 | 3 |

4. To ensure the model accurately modelled the level of traffic along the A30, the RSI data from November 2011 collected as part of the A30 Temple to Higher Carblake project has also been incorporated into the model using the same data processing methodology as Sites C1 to C5.

5. It was identified that there was the possibility of trips being double counted at the roadside interview locations. The survey data was therefore incorporated into the existing matrix in a number of stages, with priority given to the data on the A30 (Site C1) as this location is the key focus of the scheme assessment, then the A30 Temple RSI added only in the stage before C1 and C4 were added. To incorporate the RSI data, two-way select link matrices were extracted from the existing model at the locations of the RSI sites. These were then subtracted in order of importance. At each subtraction phase, the relevant RSI matrices were added to the matrix, effectively replacing the Select Link trips. This approach eliminates any double counting.

### 4.2.5 Description of any matrix infilling process including the use of synthetic trip matrices / gravity models

The 2009 Truro matrices were updated with 2011 and 2015 RSI data. No matrix infilling processes were carried out as part of this update.

### 4.2.6 Description of the Matrix Estimation Process

Matrix estimation was used to calibrate the matrices, using guidance set out in WebTAG.

In the PM peak some zones were frozen as part of the calibration process. This included the local accesses along the A30, the services at Carland and the Threemilestone Park and Ride (zones 899, 900, 901, 902, 903, 904, 905, 906, 907, 111, 114, 120).

### 4.2.7 Discussion of where the model is less robust with statement on how this impacts on the model's performance

Table 4-18 to Table 4-21 show the statistically representative sample rates needed at each RSI site for each vehicle type. These have been calculated as per the calculations outlined in Appendix D13 of the Traffic Appraisal Manual (August 1991)[14].

Table 4-18 – Site C1 - Comparison of Statistically Representative Sample Rate to Actual Sample Rate

| Site | Direction | Vehicle Type | Peak Period | Statistically Representative Sample Rate | Actual Sample Rate |
|---|---|---|---|---|---|
| C1 | Interview Direction | *Car* | AM | 8% | 5% |
| | | | IP | 5% | 9% |
| | | | PM | 5% | 8% |
| | | *LGV* | AM | 83% | 13% |
| | | | IP | 74% | 15% |
| | | | PM | 89% | 13% |
| | | *HGV* | AM | 94% | 20% |
| | | | IP | 89% | 28% |
| | | | PM | 95% | 4% |

Table 4-19 – Site C3 - Comparison of Statistically Representative Sample Rate to Actual Sample Rate

| Site | Direction | Vehicle Type | Peak Period | Statistically Representative Sample Rate | Actual Sample Rate |
|---|---|---|---|---|---|
| C3 | Interview Direction | *Car* | AM | 9% | 5% |
| | | | IP | 3% | 8% |
| | | | PM | 3% | 5% |
| | | *LGV* | AM | 88% | 14% |
| | | | IP | 78% | 11% |
| | | | PM | 91% | 1% |
| | | *HGV* | AM | 98% | 18% |
| | | | IP | 95% | 9% |
| | | | PM | 97% | 0% |

[14] DMRB Volume 12 Section 1 (November 1997) *The Application of Traffic Appraisal to Trunk Road Schemes*. Available at: http://www.standardsforhighways.co.uk/ha/standards/dmrb/vol12/section1/12s1p1.pdf

Table 4-20 – Site C4 - Comparison of Statistically Representative Sample Rate to Actual Sample Rate

| Site | Direction | Vehicle Type | Peak Period | Statistically Representative Sample Rate | Actual Sample Rate |
|---|---|---|---|---|---|
| C4 | Interview Direction | *Car* | AM | 14% | 5% |
| | | | IP | 14% | 27% |
| | | | PM | 22% | 29% |
| | | *LGV* | AM | 93% | 30% |
| | | | IP | 91% | 23% |
| | | | PM | 97% | 36% |
| | | *HGV* | AM | 100% | 100% |
| | | | IP | 99% | 138% |
| | | | PM | 100% | 41% |

Table 4-21 – Site C5 - Comparison of Statistically Representative Sample Rate to Actual Sample Rate

| Site | Direction | Vehicle Type | Peak Period | Statistically Representative Sample Rate | Actual Sample Rate |
|---|---|---|---|---|---|
| C5 | Interview Direction | *Car* | AM | 34% | 32% |
| | | | IP | 30% | 39% |
| | | | PM | 26% | 24% |
| | | *LGV* | AM | 98% | 40% |
| | | | IP | 95% | 37% |
| | | | PM | 98% | 75% |
| | | *HGV* | AM | 100% | 0% |
| | | | IP | 99% | 20% |
| | | | PM | 100% | 0% |

The tables show that the sample rate for cars is approximately as required to be statistically reliable. To achieve statistical reliability, the LGV and HGV sample rates are much higher. However the HGV data was not used so the low actual sample does not affect the model. The LGV sample rate may affect the reliability of the model for this vehicle type but in the absence of alternative data, the RSI data has been used in the A30 Carland to Chiverton Cross model.

## 4.3 Assignment Process

### 4.3.1 Description of Approach Used

The assignment methodology used within SATURN in this assessment is based on Wardrop's Principle of Traffic Equilibrium. This method of assignment has been chosen because there is congestion evident on the network and it is therefore essential to account for the effects of capacity restraint on route choice. Wardrop's Principle states that 'traffic arranges itself on congested networks such that the cost of travel on all routes used between each O-D pair is equal to the minimum cost of travel and all unused routes have equal or greater cost' .

### 4.3.2 Model Time Slices

The following time periods have been modelled:

- 07:00 – 10:00 Average hour - AM peak period
- 10:00 – 16:00 Average hour – Interpeak period
- 16:00 – 19:00 Average hour - PM peak period

The average hour peak period matrices are consistent with those being developed for Highways England's Regional Model (average peak period rather than peak hour) and will thus minimize the difference between the emerging models.

There is no interaction between the three time periods.

### 4.3.3 Generalised Cost Calculation

All assignment techniques within SATURN assume that individual drivers seek to minimise their travel cost. The travel cost has been defined as a generalised cost, which is a linear combination of time and distance defined by:

$$c = at + bd$$

where *c = cost (pence), t = time (minutes), d = distance (km), a = pence per minute (PPM), b = pence per kilometre (PPK)*

The generalised cost parameters *a* and *b* used in the 2015 base year model are shown in Table 4-22. The values have been calculated using the DfT consultation values of time released in October 2015 and GDP growth rates, purpose splits, and vehicle operating costs from the TAG Databook November 2016. An average network speed of 54 kph has been assumed in the calculation of the PPK parameters.

Table 4-22 – Generalised Cost Equation parameters

| Time Period | Parameter | Car Employers Business | Car Commute | Car Other | LGV | HGV |
|---|---|---|---|---|---|---|
| **AM** | PPM | 29.82 | 20.00 | 13.80 | 21.08 | 21.40 |
| | PPK | 12.19 | 5.66 | 5.66 | 12.67 | 43.88 |
| **Interpeak** | PPM | 30.56 | 20.32 | 14.70 | 21.08 | 21.40 |
| | PPK | 12.19 | 5.66 | 5.66 | 12.67 | 43.88 |
| **PM** | PPM | 30.25 | 20.07 | 14.45 | 21.08 | 21.40 |
| | PPK | 12.19 | 5.66 | 5.66 | 12.67 | 43.88 |

### 4.3.4 Assignment convergence criteria

Convergence is required in order to provide stable, consistent and robust model results and to differentiate between real changes and those associated with differing degrees of convergence. The convergence criteria guidance from TAG has been used and is shown in Table 4-23.

Table 4-23 – Convergence Criteria

| Measure of Convergence | Base Model Acceptable Values |
|---|---|
| **Delta and %GAP** | Less than 0.1% or at least stable with convergence fully documented and all other criteria met |
| **Percentage of links with flow change (P) < 1%** | Four consecutive iterations greater than 98% |
| **Percentage of links with cost change (P2) < 1%** | Four consecutive iterations greater than 98% |
| Source: TAG Unit M3.1 Highway Assignment Modelling \| Table 4 | |

### 4.3.5 Assignment parameters used by the software

The assignment parameters used in SATURN and the values used in the model are described in Table 4-24.

Table 4-24 – SATURN Assignment parameters

| Parameter | Definition | Value |
|---|---|---|
| **PCNEAR** | Percentage change in flows judged to be "near" in successive assignments | **1** |
| **RSTOP** | Used in the test for convergence of the assignment/simulation loops. The loops stop automatically if STOP % of the link flows change by less than "PCNEAR" percent (default 5%) from one assignment to the next. | **98** |
| **STPGAP** | Critical gap value (IN %) used to terminate assignment-simulation loops when KONSTP = 1 | **0.1** |
| **NISTOP** | The number of successive loops which must satisfy the "ISTOP" criteria in the test for convergence of the assignment/simulation loops. | **4** |
| **KONSTP** | "KONtrol of Stopping Criteria". The stopping criteria for assignment – simulation loops are based on either: ISTOP (KONSTP = 0); %GAP value (1); CPU time (2); ISTOP and/or CPU (3); %GAP and/or CPU (4); %GAP and ISTOP (5); %GAP or %ISTOP (6). | **5** |
| **MASL** | Maximum number of assignment / simulation loops. | **150** |
| **NITA** | Maximum number of assignment iterations. | **10** |
| **NITS** | Maximum number of simulation iterations. | **150** |

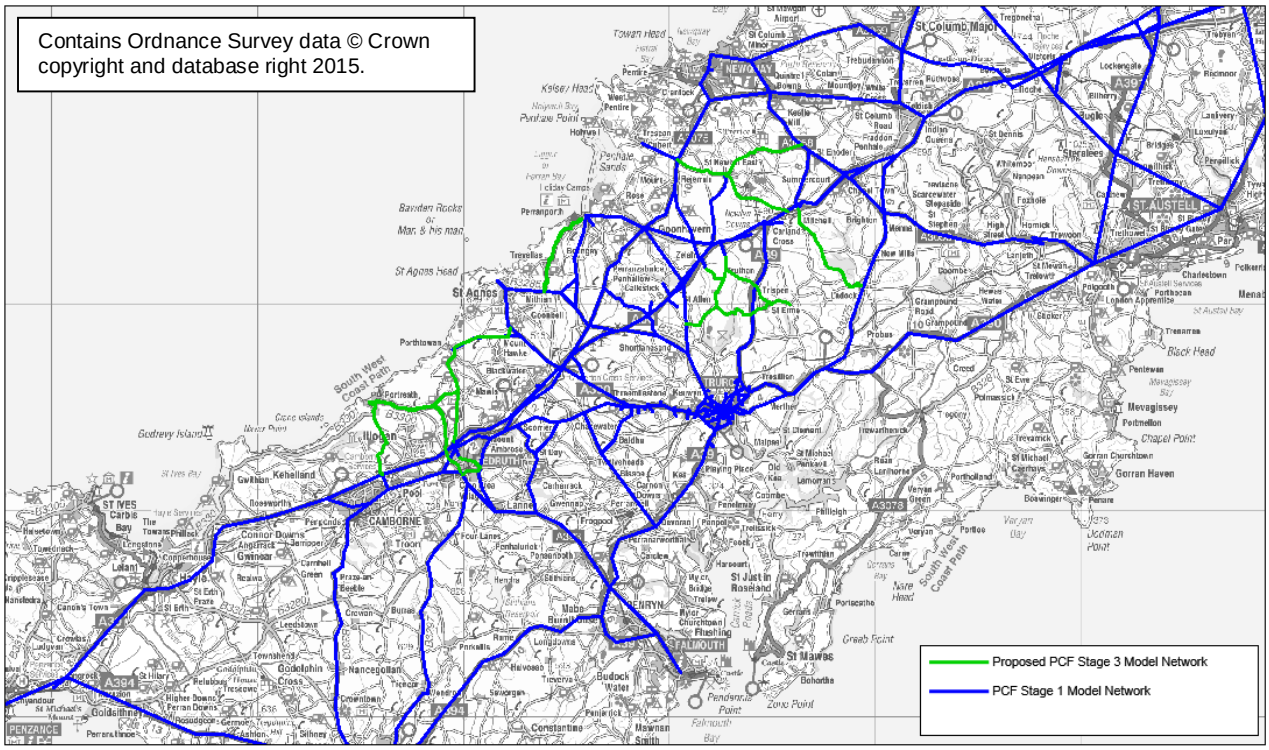
# 5. Highway Model Calibration

## 5.1 Network

### 5.1.1 Network Structure

Checks were undertaken to ensure that the network provided good coverage and realistic route choice. To understand the detailed part of the network, an assessment was undertaken of the network in GIS.

Figure 5-1 – Network Coverage in the vicinity of the Scheme Area




The figure above shows the existing Stage 1 and 2 network in blue. The green links represent routes that were added in Stage 3 to more fully represent alternative options in the area immediately surrounding the scheme. The additional network also allowed the disaggregation of the zone structure to the north of the A30 detailed in Section 4.2 of this report. Some zone connectors have also been modified and now join to the new network, including at Trispen and St Allen, where it was deemed likely that this would represent the more suitable loading point for these trips.

### 5.1.2 Link Length Checks

To check for potential errors within the modelled link distances, the coded distances were compared to the crow-fly distances between the two nodes at either end of the link. This allowed the identification of suspect link distances which could then be checked with Google Earth Pro. Discrepancies can arise due to multiple bends in the route. A table showing the results of the original check can be found in Annex B.

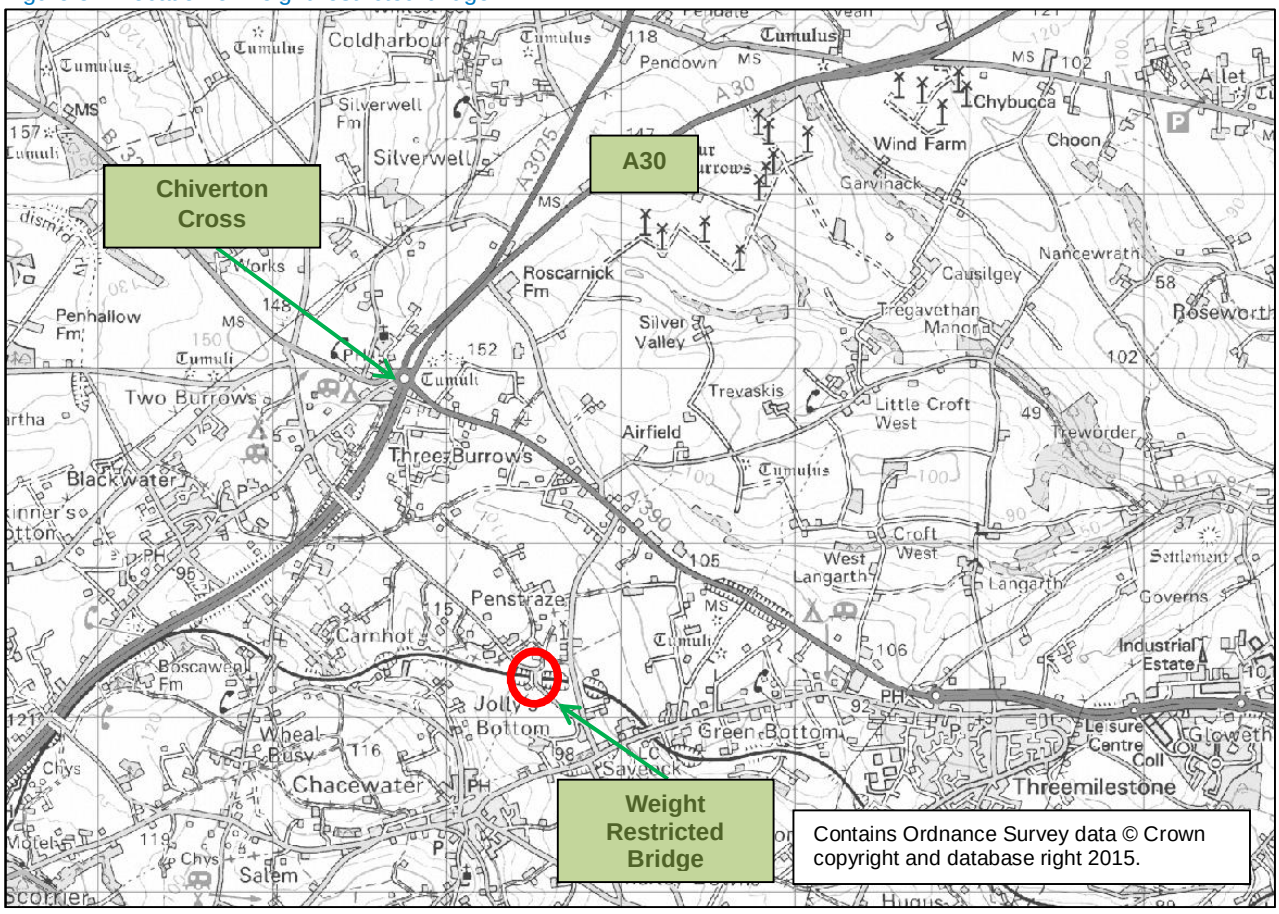
### 5.1.3 One-way Links

The coding of one-way links has been reviewed across the network, particularly on the slip roads of the A30, due to the strategic focus of the model. All one-way links have been correctly coded within the model.

### 5.1.4 HGV Restrictions

There is one HGV restriction in the network. It is located on the unnamed road that joins the old A30, east of Blackwater, to Chacewater Hill, east of Chacewater. The restriction of HGV is due to a small bridge over the railway. The location of this structure can be found in the following figure.

Figure 5-2 Location of weight restricted bridge




There is an 18 tonne weight restriction in place on the bridge but given the narrowness of the structure it does not seem realistic that any HGV would attempt to use the bridge. This HGV restriction was included in the network coding.

### 5.1.5 Speed Flow Curves Check

To validate the capacity of the modelled link, checks were undertaken using Google Earth Pro to ensure that the Speed Flow Curves (SFC) were representative of the actual conditions of the infrastructure.

Speeds and flows were checked for the three modelled time periods to ensure that the model links were responding to different levels of traffic in a similar way to the actual roads.

### 5.1.6 Junction Saturation Flows

Values in Table 4-3 and Table 4-5 offer the general values of the saturation flows in the junctions based upon Highways England's RTM Network Coding V 08 guidance. Checks were carried out using Google Earth Pro to assess the width, visibility and turn radius in the junctions within the key study area to model turning saturation flows as realistically as possible.

## 5.2 Assignment Process

Link speeds and junction delays have been checked and amendments made as part of the initial network development phase where suspect routing was identified.

## 5.3 Matrices

The WebTAG criteria apply for the matrix estimation carried out at this stage. The criteria is included with the results in Table 5-1.

### 5.3.1 Matrix Zonal Demand Changes

WebTAG requires monitoring of the changes made by the Matrix estimation; the zonal movement statistics are reported in Table 5-1.

Table 5-1 - Matrix Zonal Statistics

| Measurement | | Requirement | AM | Interpeak | PM |
|---|---|---|---|---|---|
| **Cells** | ***Slope*** | *Within 0.98 and 1.02* | 0.97 | 0.993 | 0.995 |
| | ***Intercept*** | *Near 0* | -0.034 | -0.024 | 0.008 |
| | ***R-Sq*** | *> 0.95* | 0.9774 | 0.9917 | 0.9901 |
| **Rows** | ***Slope*** | *Within 0.99 and 1.01* | 0.952 | 0.989 | 0.991 |
| | ***Intercept*** | *Near 0* | -1.297 | -2.263 | 1.788 |
| | ***R-Sq*** | *> 0.98* | 0.9882 | 0.996 | 0.9932 |
| **Columns** | ***Slope*** | *Within 0.99 and 1.01* | 0.952 | 1.002 | 1.007 |
| | ***Intercept*** | *Near 0* | -1.364 | -4.62 | -1.095 |
| | ***R-Sq*** | > 0.98 | 0.9835 | 0.9928 | 0.993 |
| **Trip Length Distributions** | ***Mean*** | *Within 5%* | 0.8% | 1.2% | 7.3% |
| | ***Standard Dev.*** | *Within 5%* | 3.1% | 1.2% | 1.5% |

The table shows that the overall matrix estimation statistics are generally good and generally comply with WebTAG. Where the statistics do not fully meet WebTAG criteria, the differences are minimal. Routing choices have been sense checked using tree plots and journey time paths and these are considered acceptable for the purposes of the PCF Stage 3 modelling.

The total number of trips by user class before and after the matrix estimation are shown in Table 5-2.

Table 5-2 - Matrix totals per user class, before and after matrix estimation

| | UC 1 | UC 2 | UC 3 | UC4 | UC5 | Totals |
|---|---|---|---|---|---|---|
| **AM Prior** | 4976 | 7058 | 8782 | 1739 | 1474 | 24029 |
| **AM Post** | 4689 | 5991 | 8022 | 2524 | 1474 | 22700 |
| **IP Prior** | 4156 | 4705 | 10121 | 1684 | 1151 | 21816 |
| **IP Post** | 3906 | 4274 | 9407 | 2390 | 1272 | 21249 |
| **PM Prior** | 3888 | 6336 | 11272 | 1663 | 795 | 23953 |
| **PM Post** | 3662 | 5909 | 10491 | 2695 | 1226 | 23982 |

Any changes between the prior and post matrices have been checked and assessed; there are no significant changes in the matrices as a result of the matrix estimation process. This is reported further in Section 5.3.3.

The matrix estimation process has made some changes to the UC4 and UC5 totals. This is due to an historic issue with Truro model under-representing these trips, which the matrix estimation process has corrected to enhance calibration and validation. The UC4 and UC5 trips using the A30 and parallel routes were observed through the road side interviews and were accurately represented in the prior matrices.

The results from the matrix estimation process are therefore considered to be acceptable.

### 5.3.2 Trip Length Distribution

The figures below show the changes in trip length distribution between the prior and post matrix estimation models.

Figure 5-3 - AM Peak Trip Length Distribution

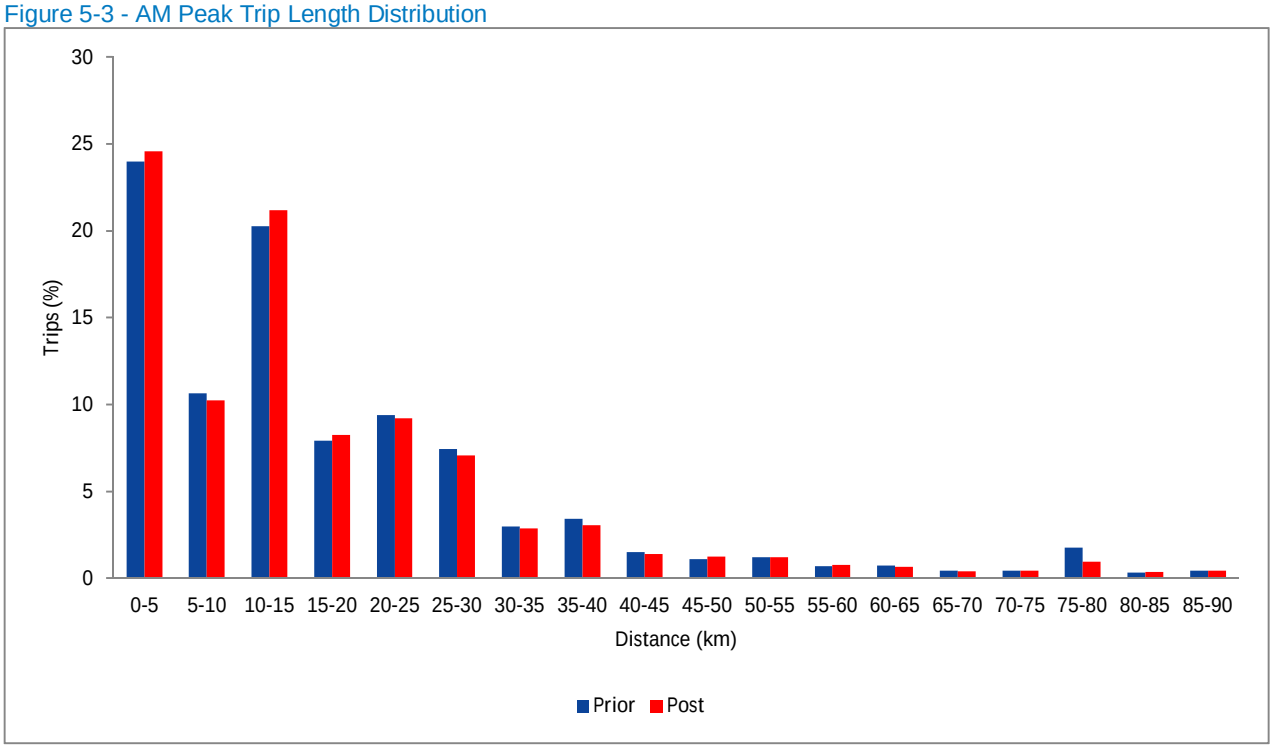


Figure 5-4 - Interpeak Trip Length Distribution

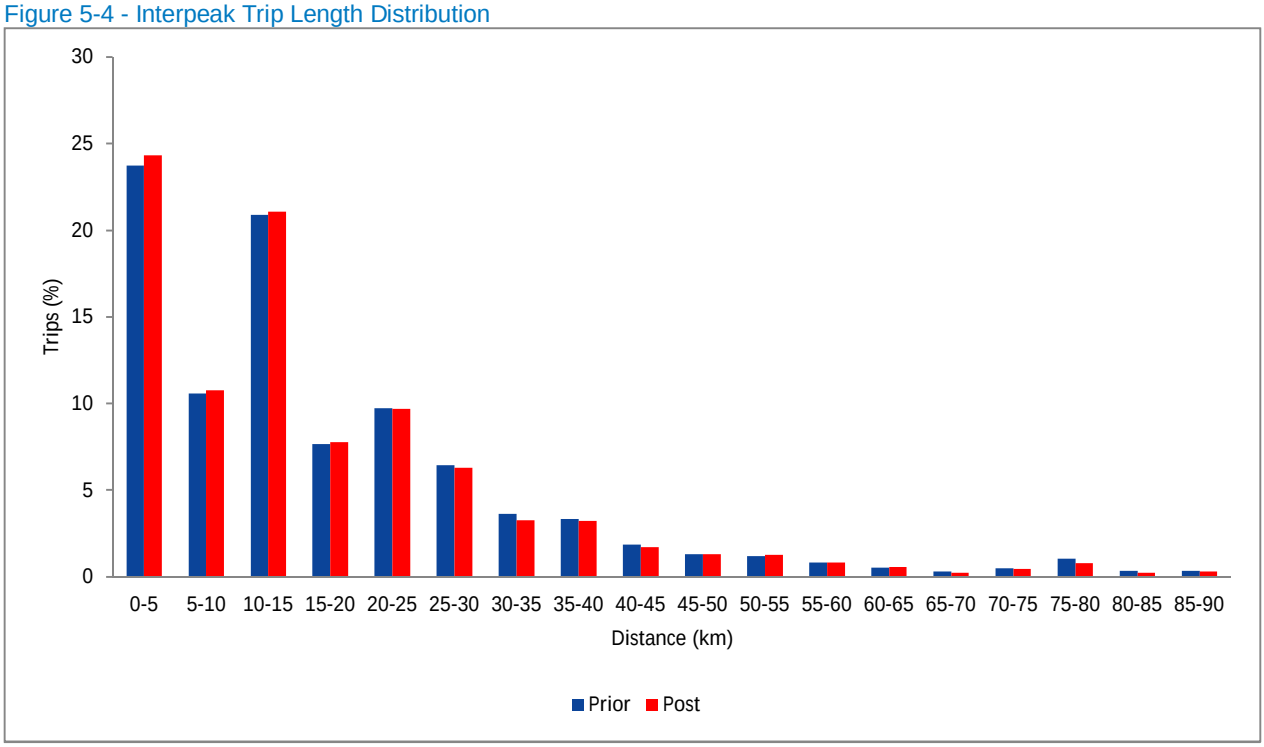
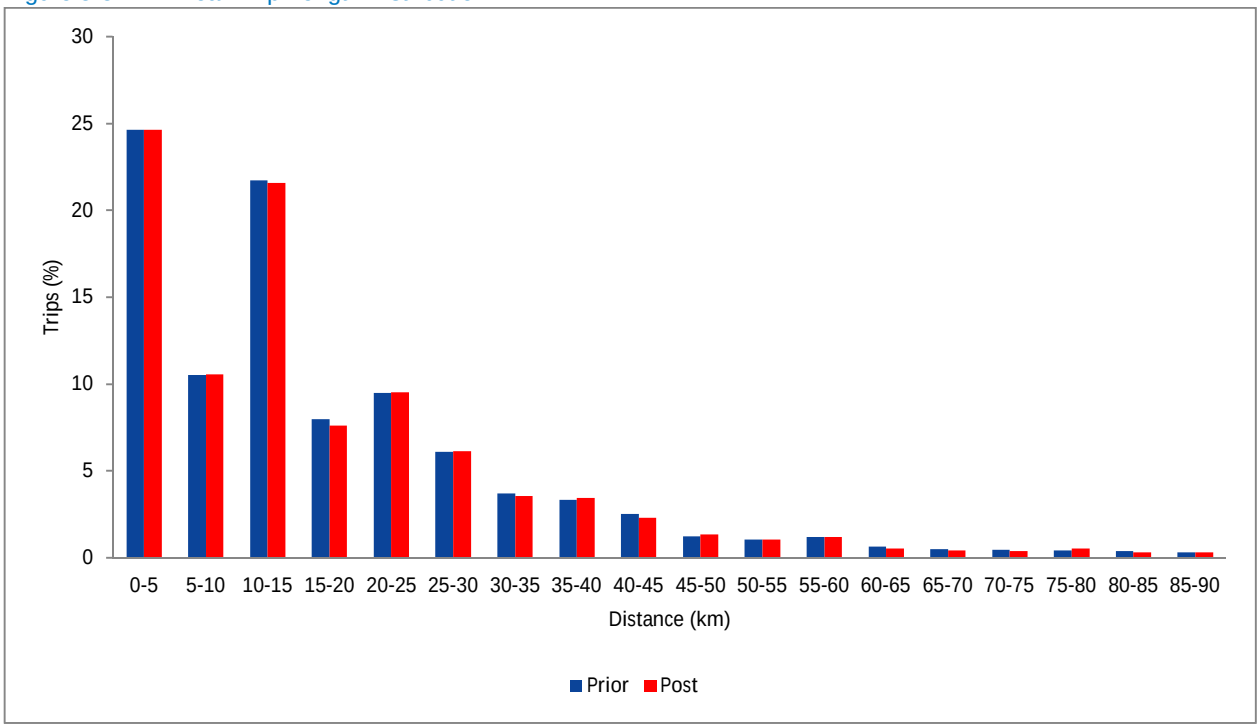



Figure 5-5 - PM Peak Trip Length Distribution




The figures show that there are no significant changes in trip length distribution in any of the peaks as a result of the matrix estimation process.

### 5.3.3 Sector Matrices

A sector system was created to analyse the movements between the sectors within the model and assess whether these matched previous and observed proportions. Figure 5-6 below shows the sector system used in this analysis.

Figure 5-6 – Overview of Sector System

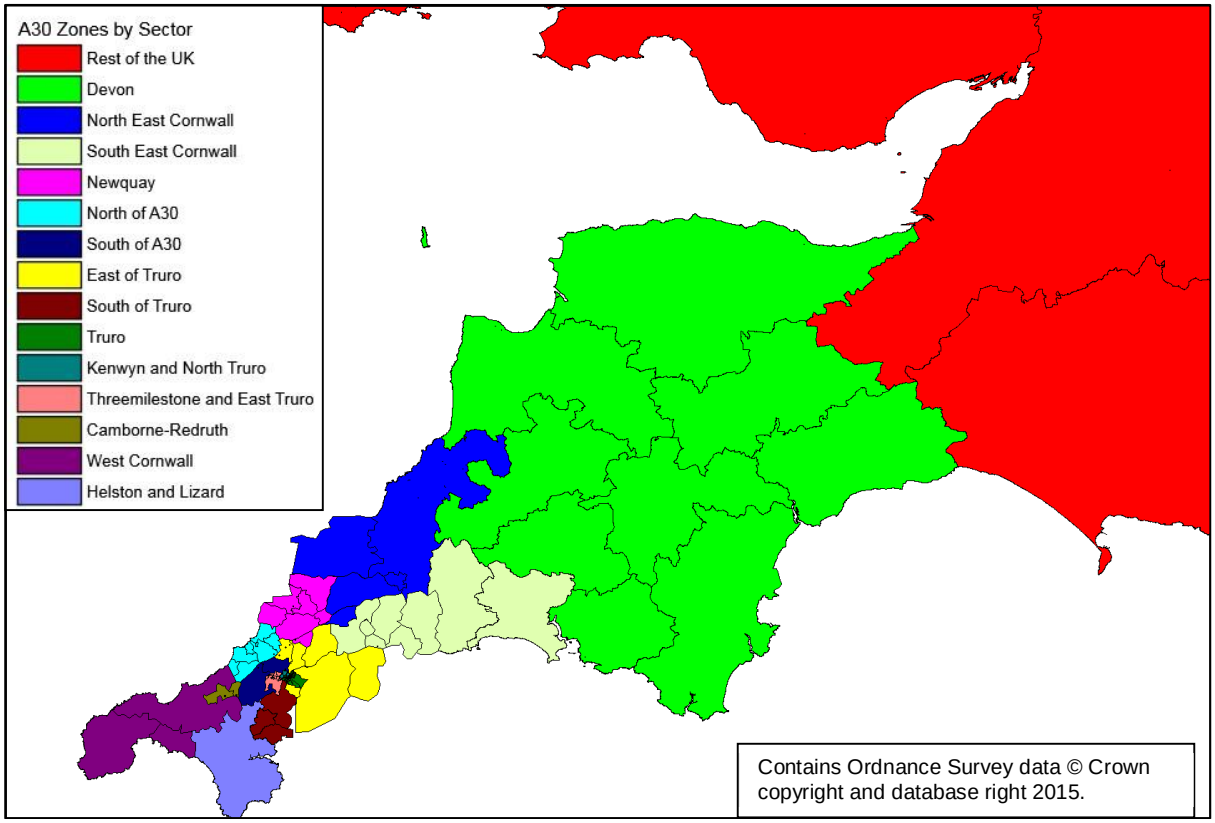
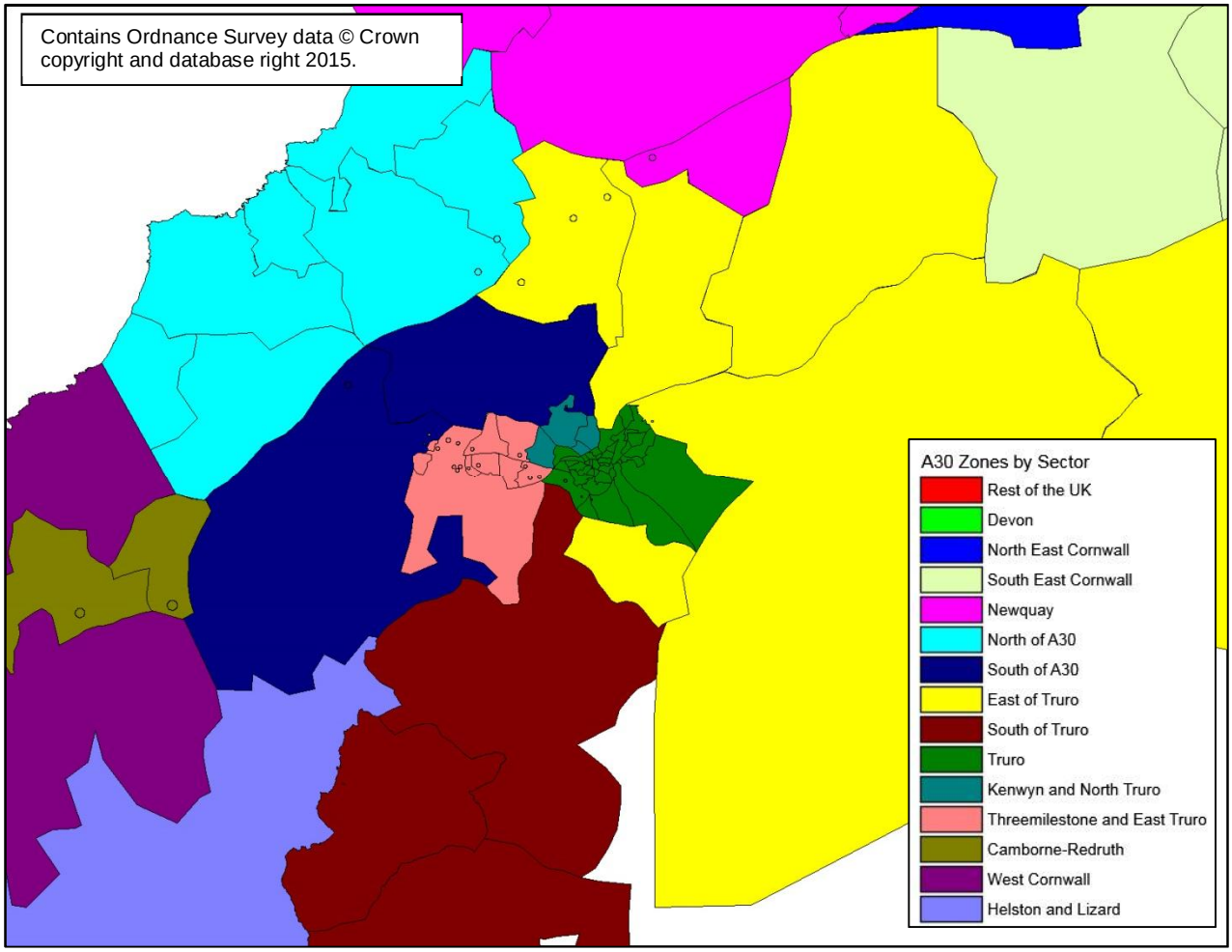


Figure 5-7 – Close view of sectors near Truro




The full Post ME2 matrix was compared to the Prior ME2 matrix to understand if there had been any significant changes in the distribution of the trips due to the matrix estimation process. The tables below show the changes in the proportion of movements between sectors when the two matrices are compared against each other in each of the peak periods.

Table 5-3– AM Peak period Proportional changes in sector movements in the Post ME2 matrix compared to the Prior ME2 matrix

| Sector | | Origin | Destination |
|---|---|---|---|
| Rest UK | 1 | -7% | 1% |
| Devon | 2 | -1% | 7% |
| NE Cornwall | 3 | -6% | -1% |
| Newquay | 4 | -14% | 12% |
| East of Truro | 5 | -9% | -13% |
| North of A30 | 6 | 11% | 1% |
| South of Truro | 7 | -1% | 0% |
| Truro | 8 | -5% | -13% |
| South of A30 | 9 | -4% | 2% |
| West Cornwall | 10 | -4% | -18% |
| Camborne-Redruth | 11 | 7% | -3% |
| Kenwyn and North Truro | 12 | -8% | -5% |
| Threemilestone and E Truro | 13 | -11% | -8% |
| SE Cornwall | 14 | -7% | -11% |
| Helston and Lizard | 15 | -12% | 1% |

Table 5-4 – Interpeak period Proportional changes in sector movements in the Post ME2 matrix compared to the Prior ME2 matrix

| Sector | | Origin | Destination |
|---|---|---|---|
| Rest UK | 1 | 0% | -5% |
| Devon | 2 | 1% | -5% |
| NE Cornwall | 3 | -2% | -6% |
| Newquay | 4 | 0% | 4% |
| East of Truro | 5 | -15% | -14% |
| North of A30 | 6 | -5% | -15% |
| South of Truro | 7 | 0% | 2% |
| Truro | 8 | -7% | -6% |
| South of A30 | 9 | 15% | 15% |
| West Cornwall | 10 | 2% | 2% |
| Camborne-Redruth | 11 | 2% | 12% |
| Kenwyn and North Truro | 12 | -1% | -3% |
| Threemilestone and E Truro | 13 | -1% | 0% |
| SE Cornwall | 14 | -8% | -12% |
| Helston and Lizard | 15 | 1% | 5% |

Table 5-5 – PM peak period Proportional changes in sector movements in the Post ME2 matrix compared to the Prior ME2 matrix

| Sector | | Origin | Destination |
|---|---|---|---|
| Rest UK | 1 | 7% | 18% |
| Devon | 2 | 19% | 2% |
| NE Cornwall | 3 | 3% | -5% |
| Newquay | 4 | 11% | 4% |
| East of Truro | 5 | -14% | -7% |
| North of A30 | 6 | 16% | -1% |
| South of Truro | 7 | 0% | 4% |
| Truro | 8 | -7% | 0% |
| South of A30 | 9 | 32% | 12% |
| West Cornwall | 10 | 9% | 4% |
| Camborne-Redruth | 11 | 3% | 18% |
| Kenwyn and North Truro | 12 | -2% | 8% |
| Threemilestone and E Truro | 13 | 10% | 6% |
| SE Cornwall | 14 | -8% | -9% |
| Helston and Lizard | 15 | 0% | -2% |

The tables show that the matrix estimation processes have produced some changes in all of the peak periods with regards to the proportion of trips originating or travelling to the sectors. The largest changes shown in any of the peaks are up to 32% which is shown in the Sector 9 origin trips. Despite this, the majority of changes sector do not exceed ±15%.which is considered within acceptable thresholds for the PCF Stage 3 modelling.

The sector differences as a result of matrix estimation have been compared to the economic benefits of the scheme for each sector (shown in Annex G). This shows that although some changes in the matrices as a result of the matrix estimation process are above the WebTAG threshold, these changes do not correspond to the sectors with the largest benefits.

Based on this analysis presented above, the limited changes to trip length distributions and the general compliance of the matrix estimation statistics with WebTAG, the changes made to the matrices during the ME process are not considered to be significant and are within acceptable thresholds.

## 5.4 Overall Model Calibration

### 5.4.1 Calibration Criteria

The link and turning flows of the key junctions in the model included in the calibration must pass parameters set in in Table 2 of TAG unit M3.1[15]. These are detailed in the table below.

[15] Department for Transport (2014) *TAG Unit M3.1 – Highway Assignment Modelling* [Online]. Available at: (https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/427124/webtag-tag-unit-m3-1-highway-assignment-modelling.pdf)

Table 5-6 – TAG Unit M3.1 Table 2: Link and Turning Flow Criteria and Acceptability Guidelines

| Criteria | Level of Flow | Description of Criteria | Acceptability Guidelines |
|---|---|---|---|
| 1 | <700 veh/hr | Individual flows within 100 veh/hr of observed | **>85% of cases** |
| | 700< **x** >2,700 veh/hr | Individual flows within 15% of observed | **>85% of cases** |
| | >2,700 veh/hr | Individual flows within 400 veh/hr of observed | **>85% of cases** |
| 2 | Any | GEH <5% | **>85% of cases** |

The screenlines included in the calibration must pass the criteria in Table 5-7, a parameter set in in Table 1 of TAG unit M3.1.

Table 5-7 – TAG Unit M3.1 Table 1: Screenline Criteria and Acceptability Guidelines

| Level of Flow | Description of Criteria | Acceptability Guidelines |
|---|---|---|
| Any | Modelled flow within 5% of observed | **All or nearly all screenlines** |

### 5.4.2 Link Flows and Screenlines

The model has been calibrated to a number of counts and screenlines. The post ME2 modelled flows were compared to the observed flows at the calibration link and screenline locations. The table below provides an overview of the number of links and screenlines that pass criteria as defined in Table 5-6.

Table 5-8 - Number of Calibration Links and Screenlines that pass WebTAG criteria

| Count | AM | | IP | | PM | |
|---|---|---|---|---|---|---|
| | GEH Pass | Flow Pass | GEH Pass | Flow Pass | GEH Pass | Flow Pass |
| **Link Flows** | **92%** | **98%** | **94%** | **100%** | **78%** | **97%** |
| **Screenlines** | | **3** of 4 | | **4** of 4 | | **3** of 4 |

The results above show that the AM and Interpeak models calibrate well against the observed data with over 90% of the links passing both GEH and Flow criteria. The PM model shows slightly less than 80% of links passing the GEH criteria with 97% passing the Flow criteria.

Screenlines are only assessed regarding flow levels, in the interpeak period, all four screenlines are within 5% of the observed flow. In the AM and PM peaks, 3 out of 4 pass the criteria.

A full breakdown of the results of the link flow and screenline analyses can be found in Annex C.

### 5.4.3 Junction Turning Flows

It is important that the model accurately replicates the turning movements at the key junctions within the study area. The following four junctions were included in the calibration process:

- Chybucca (undertaken as two three arm T-junction counts)
- Henver Ln/B3285 Junction
- Fiddler's Green Junction
- Boxheater

- Chiverton Cross Roundabout
- Threemilestone Roundabout
- Carland Cross Roundabout

The table below shows the proportion of turns that pass the TAG flow criteria.

Table 5-9 - Proportion of Turns at Key Junctions that pass WebTAG criteria

| Junctions | AM | IP | PM |
|---|---|---|---|
| | Pass | Pass | Pass |
| **Chybucca (East)** | 100% | 100% | 100% |
| **Chybucca (west)** | 100% | 100% | 100% |
| **Henver Ln/B3285 Junction** | 100% | 100% | 94% |
| **Fiddlers Green Junction** | 100% | 100% | 100% |
| **Boxheater** | 100% | 100% | 100% |
| **Chiverton Cross Roundabout** | 96% | 96% | 92% |
| **Threemilestone Roundabout** | 100% | 88% | 94% |
| **Carland Cross Roundabout** | 100% | 94% | 100% |

The results show that at least 88% of the turning movements at all junctions in all peak periods pass the flow criteria set in Table 5-6. The model is therefore considered to provide a good representation of the key junctions within the study area.

A full breakdown of the results of the Junction Turning Flow analysis can be found in Annex D.

The results presented above demonstrate the model calibrates in accordance with WebTAG and therefore that the model calibration is acceptable.

# 6. Highway Model Validation

## 6.1 Network

### 6.1.1 Analysis of Paths

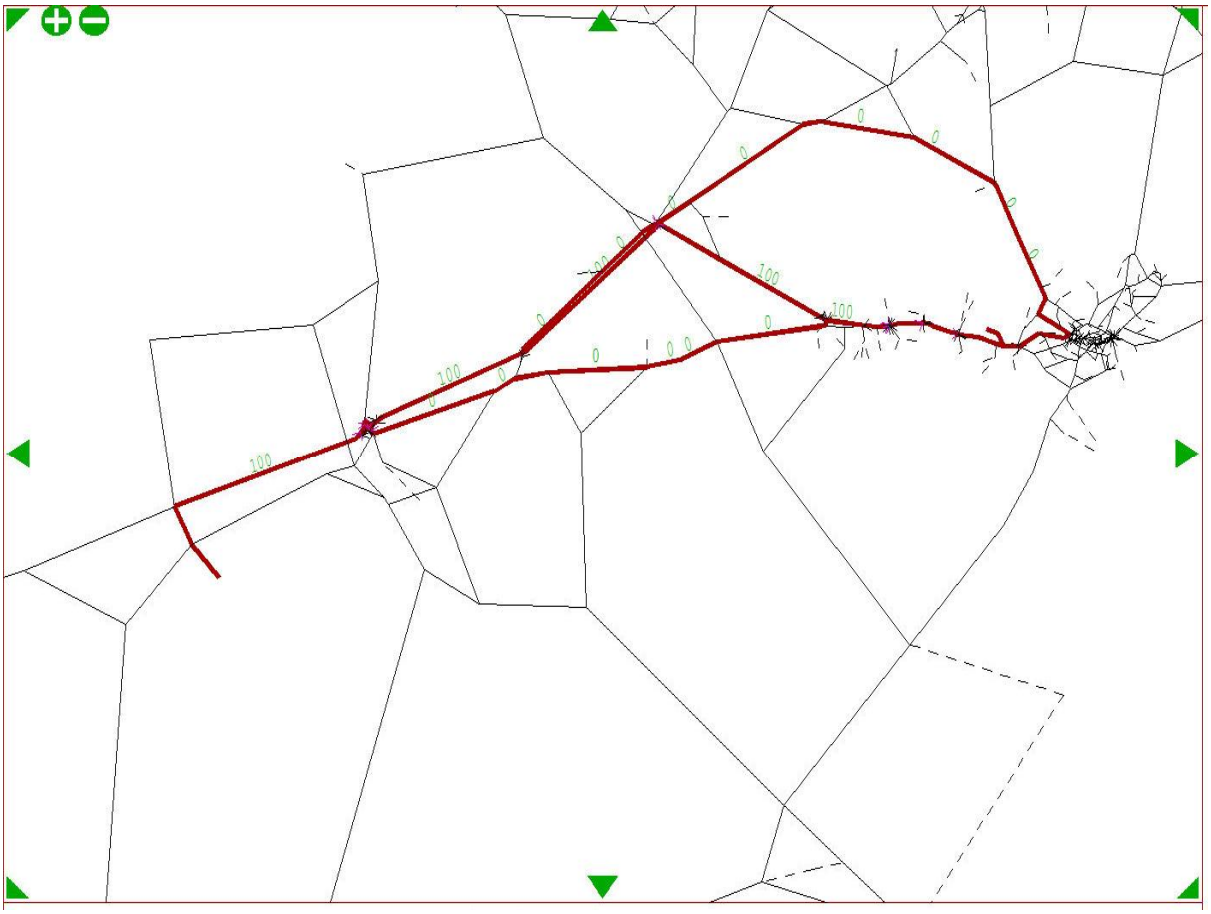
Journey paths have been assessed to ensure that the model is providing sensible routing. The paths in the model appear to be realistic.

Origin/Destination (OD) Trees for the following paths have been provided in Annex E:

- A30 East of Truro – to and from west Truro
- A30 East of Truro – to and from north Truro
- A30 West of Truro – to and from west Truro
- A30 West of Truro – to and from north Truro
- Through route on the A30

Figure 6-1 shows the OD Tree for trips from Camborne to West Truro.

Figure 6-1 - OD Tree for the West of Truro (AM Peak period)



Three routes are identified in the figure, of which the A30 and A390 route shows nearly all the traffic flow. This is reasonable from Camborne especially given the destination location. Further Trees are found in Annex E; these all show reasonable routing for the origin/destination pairs assessed.

### 6.1.2 Application of Speed Flow Curves

To represent the reduction in network capacity related to increasing demand, Speed Flow Curves (SFCs) have been implemented within the model. The need for SFCs comes from the interaction between vehicles on the road. SFCs are of increased importance in rural roads with the national speed limit but that only offer a high speed to users when flows are low.

A description of the standard speed flow curves can be found in the Table 4-1 above. Within the detailed study area, these have been applied following checks of the route in Google Earth Pro. To further assess their suitability, routing checks were undertaken after implementation.

The SFC types 20 to 25 represent various grades of rural road with few or no adjacent property frontages, the lack of which allows faster link speeds. The different types represent the different geometrical characteristics such as width and number of lanes.

The SFC types 27 to 31 represent suburban roads with some properties nearby which influence the speed and capacity. The different types represent the different geometrical characteristic and also the level of development along the link.

The SFC types 34 to 36 represent the small town roads or rural minor routes which are constrained by their geometrical features such as tight turns or poor visibility. Different SFCs have been produced to represent the levels of development.

Routing checks have been carried out to ensure that traffic remains sensible and that minor roads are not attracting an unrealistic level of traffic from the major routes. The types of SFC applied do not always perfectly match the links' location and a rural road may need a suburban road speed flow curve due to the standard of carriageway or the level of development along its length.

In addition, the inclusion of some unclassified roads as alternative routes in the study area required the creation of new SFCs (37, 38 and 39) to reflect the limited speed and capacity of narrow country lanes where vehicles cannot pass comfortably on many stretches.

### 6.1.3 Junction coding

Junctions have been coded according to Highway England's RTM Network Coding V 08 guidance.

Junctions within the key study area have been updated to implement the latest values for the saturation turning flows. Checks have been carried out using Google Earth Pro to assess the visibility, turning radius, priority and number of lanes at intersections so that the correct saturation flow can be coded.

Where new network was added, routing checks were carried out to ensure that the distribution of users remained realistic. There are differences between some of the MCC and the ATC and TRADS in some of the key routes of the scheme. The ATC and TRADS have a more robust data because their collection covers a longer period of time, but they do not include the turns which do appear in the MCC. It has been assumed that the turning proportions are constant and accordingly decided to factor the turns in the MCC

to match the ATC and TRADS. It is considered reasonable compared to surveys on either side of the scheme. As such this is considered a more robust representation of the flows on the A30.

### 6.1.4 Other network

The coded link distances have been compared against the crow-fly distances between the relevant nodes to ensure these have been coded accurately. Discrepancies may arise for reasons such as frequent turning or approximation of coordinates and these checks were designed to identify whether there is a mistake or a genuine reason for the difference.

Some small zones, representing traffic from the side roads on the A30, were moved to connect to nodes in the newly added rural network since it offered a more realistic location.

### 6.1.5 Network routing checks

Traffic matrices from the PCF Stage 1 base model were assigned to the updated PCF Stage 3 model network to assess whether the changes to the network resulted in significant changes in traffic behaviour.

The additional rural network was checked to ensure that it did not reroute an unrealistic volume of users from the main routes. The junctions between the additional rural network and the major routes were checked to ensure that they were sufficiently constraining the side roads. Checks were undertaken to ensure that the rural routes were not more attractive than the major network roads in instances when the distance was shorter on the rural option.

## 6.2 Assignment

### 6.2.1 Independence of Validation Data

The datasets used for validation purposes have been kept independent of the calibration data and were not included in the matrix estimation process. The locations of data sets are detailed in Section 3 of this report.

### 6.2.2 Validation Criteria

It is important that journey times are accurately modelled for the purposes of the economic analysis. These must meet criteria set in TAG unit M3.1.

Table 6-1 - TAG Unit M3.1 Table 3: Journey Time Criteria and Acceptability Guidelines

| Length of Route | Description of Criteria | Acceptability Guidelines |
|---|---|---|
| Any | Modelled time within 15% of observed (or 1 minute is higher than 15%) | **>85% of cases** |

Additionally, several counts were also held back for inclusion in the validation data set as detailed in Figure 3-4. The modelled flows at these locations must conform to the criteria previously outlined in Table 5-6 for calibration and validation counts.

### 6.2.3 Journey Time Validation

The model has been validated against a number journey time routes. The post ME2 modelled flows and times were compared to the observed data. The table below shows the proportion of routes that pass the TAG Journey Time criteria

Table 6-2 - Number of Validation Journey Times that pass WebTAG criteria

| Type | AM | IP | PM |
|---|---|---|---|
| | Pass | Pass | Pass |
| **Journey Times** | **95%** ( **19** out of 20) | **95%** ( **19** out of 20) | **85%** ( **17** out of 20) |

The results show that over 85% of the journey time routes pass the validation criteria in all peaks. The model is deemed to therefore reasonably model journey times on key routes.

The individual results for each journey time route are found in Annex F.

### 6.2.4 Link Flow and Screenline Validation

A number of counts were retained to validate the model against along the key A30 corridor and to the north of the A30 where the majority of the zonal changes have occurred.

Table 6-3 - Number of Validation Link Flows that pass WebTAG criteria

| Count | AM | | IP | | PM | |
|---|---|---|---|---|---|---|
| | GEH Pass | Flow Pass | GEH Pass | Flow Pass | GEH Pass | Flow Pass |
| **Link Flows** | **100%** | **100%** | **100%** | **90%** | **90%** | **90%** |
| **Screenlines** | | **2** of 2 | | **2**of 2 | | **2** of 2 |

The results show that at least 90% of the PM peak and interpeak links meet the criteria. In the AM Peak, 100% of the links pass the Flow and GEH criteria.

Further analysis shows that it is only two of the validation counts that are over this threshold, between Carland Cross and Zelah (eastbound) and between Boxheater West and Fiddler's Green Junction (eastbound).

The validation screenline is only assessed regarding flow levels and all the differences between modelled and observed values are below the 5% recommended by WebTAG.

Table 6-4 to Table 6-6 show the validation results for all vehicles at the validation count sites.

Table 6-4 – AM Peak Validation Count Results

| | | | AM Peak | | | | |
|---|---|---|---|---|---|---|---|
| | | | ALL VEHICLES | | | | |
| ID | Site Location | Data Type | Observed | Modelled | GEH | GEH Pass? | Flow Pass? |
| TRADS_3707 | A30, Between Zelah and Carland Cross Rbt | TRADS ATC | 914 | 809 | 3.577 | Yes | Yes |
| TRADS_3708 | A30, Between Zelah and Carland Cross Rbt | TRADS ATC | 987 | 927 | 1.958 | Yes | Yes |
| TRADS_30012504 | A30, Between Redruth and Scorrier | TRADS ATC | 1611 | 1520 | 2.306 | Yes | Yes |
| TRADS_30012505 | A30, Between Redruth and Scorrier | TRADS ATC | 1125 | 1245 | 3.473 | Yes | Yes |
| TRADS_30012512 | A30, Between Summercourt and Indian Queens | TRADS ATC | 1214 | 1334 | 3.351 | Yes | Yes |
| TRADS_30012513 | A30, Between Summercourt and Indian Queens | TRADS ATC | 1325 | 1468 | 3.813 | Yes | Yes |
| ATC_137_EB | A390, Between Chiverton Cross and Threemilestone | CC ATC | 965 | 903 | 2.049 | Yes | Yes |
| ATC_137_WB | A390, Between Chiverton Cross and Threemilestone | CC ATC | 705 | 611 | 3.695 | Yes | Yes |
| MCC_17_SW | Road Between Boxheater West and Fiddler's Green Junction | MCC | 22 | 14 | 1.961 | Yes | Yes |
| MCC_17_NE | Road Between Boxheater West and Fiddler's Green Junction | MCC | 14 | 10 | 1.105 | Yes | Yes |

Table 6-5 – Interpeak Validation Count Results

| | | | Interpeak | | | | |
|---|---|---|---|---|---|---|---|
| | | | ALL VEHICLES | | | | |
| ID | Site Location | Data Type | Observed | Modelled | GEH | GEH Pass? | Flow Pass? |
| TRADS_3707 | A30, Between Zelah and Carland Cross Rbt | TRADS ATC | 885 | 753 | 4.588 | Yes | Yes |
| TRADS_3708 | A30, Between Zelah and Carland Cross Rbt | TRADS ATC | 853 | 844 | 0.327 | Yes | Yes |
| TRADS_30012504 | A30, Between Redruth and Scorrier | TRADS ATC | 1291 | 1268 | 0.639 | Yes | Yes |
| TRADS_30012505 | A30, Between Redruth and Scorrier | TRADS ATC | 1149 | 1322 | 4.906 | Yes | No |
| TRADS_30012512 | A30, Between Summercourt and Indian Queens | TRADS ATC | 1227 | 1289 | 1.751 | Yes | Yes |
| TRADS_30012513 | A30, Between Summercourt and Indian Queens | TRADS ATC | 1160 | 1208 | 1.406 | Yes | Yes |
| ATC_137_EB | A390, Between Chiverton Cross and Threemilestone | CC ATC | 826 | 786 | 1.425 | Yes | Yes |
| ATC_137_WB | A390, Between Chiverton Cross and Threemilestone | CC ATC | 935 | 848 | 2.921 | Yes | Yes |
| MCC_17_SW | Road Between Boxheater West and Fiddler's Green Junction | MCC | 16 | 27 | 2.380 | Yes | Yes |
| MCC_17_NE | Road Between Boxheater West and Fiddler's Green Junction | MCC | 18 | 46 | 4.893 | Yes | Yes |

Table 6-6 – PM Peak Validation Count Results

| | | | PM Peak | | | | |
|---|---|---|---|---|---|---|---|
| | | | ALL VEHICLES | | | | |
| ID | Site Location | Data Type | Observed | Modelled | GEH | GEH Pass? | Flow Pass? |
| TRADS_3707 | A30, Between Zelah and Carland Cross Rbt | TRADS ATC | 1030 | 847 | 5.975 | No | No |
| TRADS_3708 | A30, Between Zelah and Carland Cross Rbt | TRADS ATC | 988 | 869 | 3.913 | Yes | Yes |
| TRADS_30012504 | A30, Between Redruth and Scorrier | TRADS ATC | 1369 | 1234 | 3.738 | Yes | Yes |
| TRADS_30012505 | A30, Between Redruth and Scorrier | TRADS ATC | 1455 | 1535 | 2.078 | Yes | Yes |
| TRADS_30012512 | A30, Between Summercourt and Indian Queens | TRADS ATC | 1363 | 1472 | 2.891 | Yes | Yes |
| TRADS_30012513 | A30, Between Summercourt and Indian Queens | TRADS ATC | 1282 | 1282 | 0.017 | Yes | Yes |
| ATC_137_EB | A390, Between Chiverton Cross and Threemilestone | CC ATC | 699 | 610 | 3.447 | Yes | Yes |
| ATC_137_WB | A390, Between Chiverton Cross and Threemilestone | CC ATC | 1152 | 1243 | 2.613 | Yes | Yes |
| MCC_17_SW | Road Between Boxheater West and Fiddler's Green Junction | MCC | 14 | 12 | 0.425 | Yes | Yes |
| MCC_17_NE | Road Between Boxheater West and Fiddler's Green Junction | MCC | 29 | 45 | 2.607 | Yes | Yes |

The full results for the validation link flow and screenline analysis by vehicle type are found in Annex C.

The results demonstrate that the model validates in accordance with WebTAG criteria in all modelled time periods.

### 6.2.5 Convergence

The final 4 iterations of the SATURN assignments for each time period are presented in Table 6-7 to Table 6-9 below.

Table 6-7 – AM Peak – Final 4 SATURN Iterations

| Iteration | Delta | %Flow | %Gap |
|---|---|---|---|
| **24** | 0.0039 | 98 | 0.0024 |
| **25** | 0.0035 | 99.1 | 0.0026 |
| **26** | 0.0028 | 99.4 | 0.002 |
| **27** | 0.0031 | 99.6 | 0.002 |

Table 6-8 – Interpeak – Final 4 SATURN Iterations

| Iteration | Delta | %Flow | %Gap |
|---|---|---|---|
| **15** | 0.0011 | 98.8 | 0.00071 |
| **16** | 0.0008 | 99.2 | 0.00062 |
| **17** | 0.0007 | 98.9 | 0.00059 |
| **18** | 0.0004 | 99 | 0.0005 |

Table 6-9 – PM Peak – Final 4 SATURN Iterations

| Iteration | Delta | %Flow | %Gap |
|---|---|---|---|
| **44** | 0.0212 | 98.5 | 0.021 |
| **45** | 0.0131 | 98 | 0.021 |
| **46** | 0.0216 | 98.3 | 0.012 |
| **47** | 0.0218 | 98.5 | 0.025 |

Table 6-10 provides a summary of the convergence parameters used in the SATURN model against TAG Unit M3.1 criteria.

Table 6-10 – Summary of Model Convergence

| Measure of convergence | Acceptability Criteria | AM | Interpeak | PM |
|---|---|---|---|---|
| **'Delta' and %GAP** | Less than 0.1% or at least stable with convergence fully documented and all other criteria met | **Pass** | **Pass** | **Pass** |
| **Percentage of links with flow change < 1%** | Four consecutive iterations greater than 98% | **Pass** | **Pass** | **Pass** |
| **Percentage change in total user costs** | Four consecutive iterations less than 0.1% | **Pass** | **Pass** | **Pass** |

The convergence results show stability within the final iterations with a flow percentage greater than 98% in all peak periods. The Delta value is stable and less than 0.1 all peaks which is considered acceptable.

## 6.3 Matrices

### 6.3.1 Matrix Zonal Demand Changes

A comparison of the matrix demand against the South West Regional Transport Model (SWRTM) data is provided in Annex G.

# 7. Variable Demand Model

## 7.1 Overview

Variable demand modelling has been carried out at Stage 3. The demand model is an incremental type of model (also known as a "pivot-point" model) as recommended in WebTAG. The demand response in the model is therefore a function of relative changes in cost between a forecast and comparator scenario.

Two separate stages were required to produce the Do Minimum and Do Something forecasts:

- Do Minimum – pivot off base model (i.e. demand model will use base year costs as a comparator)
- Do Something – pivot off Do Minimum (i.e. demand model will use future year Do Minimum costs as a comparator)

The Department for Transport's DIADEM software programme (Version 5) has been used to specify and operate the demand model processes.

The PCF Stage 3 model includes the key roads in across Great Britain in order to model full trip lengths as required for variable demand modelling.

## 7.2 Demand Response Selection

### 7.2.1 Demand Responses: Distribution

This is the most fundamental demand response and WebTAG recommends that it is included in all variable demand models.

In line with the advice in WebTAG, a doubly-constrained distribution model has been used for the commuting trip purpose. Therefore the total number of commute trips generated by, and attracted to, each zone in the model remains constant but it is possible for the relative amount of commute trips between each zone to vary.

An origin-constrained model has been used for the other purposes. In this case the total number of trips generated by each zone does not change but the amount of trips attracted to each zone may increase or decrease in response to travel costs.

### 7.2.2 Demand Responses: Mode Choice

WebTAG states that it is desirable to include a representation of mode choice in the demand model but it recommends that the level of detail required for modelling this response should depend on the importance attached to it in the assessment.

There is very low modal competition on the A30 and public transport does not represent a viable alternative mode. This is because long distance public transport alternatives are few, with only rail services providing a public transport alternative for the vast majority of journeys. However, rail journey times are significantly longer than car, and the number and locations of rail stations in Cornwall does not cover much of the population of the county.

Mode choice has not therefore been modelled as a separate response in the demand model, though trip frequency response is used to act as a proxy for mode choice. This is an approach recommended in

WebTAG for cases where mode choice is not a significant factor and it would not be proportionate to fully model mode choice separately.

### 7.2.3 Demand Responses: Macro Time Period Choice

This response relates to the retiming of trips between the broad time periods within the day (i.e. AM peak, inter-peak, PM peak and off-peak). WebTAG suggests that macro time period choice should be considered when strong cost differentials between the modelled time periods are expected to develop or change.

It is likely that the relative cost of travel on the A30 across each broad time period will remain similar in the future years as there are no known changes planned in the locality (other than the proposed scheme) which would fundamentally alter the cost of travel in certain time periods only. Therefore it is considered that including macro time period choice in the demand model is not essential to obtain a suitable future year Do Minimum scenario.

For the Do Something scenario, the proposed scheme will provide additional highway capacity on the A30 and therefore might be expected to reduce the relative cost of travel, especially in the AM and PM peak periods. However, it is considered that the types of trip made at these times would be more likely to include a higher proportion of essential trips (for example commuting and education) which may have more limited scope to be made during other time periods.

Given these considerations, there does not appear to be a strong need to include macro time period choice response in the demand model.

### 7.2.4 Demand Responses: Micro Time Period Choice

This response refers to the re-timing of trips within the peak hours or peak periods (i.e. 'peak spreading') where travellers may choose to travel at times other than their preferred time (within the same overall period) to reduce overall travel costs.

It is not proposed that micro time period choice is included as a separate response in the demand model because the traffic models represent average hours in the AM peak (07:00-10:00), interpeak (10:00-16:00) and PM peak (16:00-19:00) periods.

### 7.2.5 Demand Responses: Trip Frequency

Trip frequency is a minor response which WebTAG states is mainly reflective of the transfer between the active and mechanised modes (if this has not been modelled separately). However, it can also act as a proxy for other demand responses which are not explicitly represented in the demand model, such as mode choice.

In this case, as mode choice will not be modelled separately, the sensitivity of the trip frequency response has been increased to reflect demand response associated with mode choice.

The trip frequency response was calibrated during realism testing so that the journey time elasticity due to this response alone is similar to the illustrative elasticity values in WebTAG.

### 7.2.6 Realism Testing

Realism tests have been carried out to demonstrate that the model has suitable fuel cost and journey time elasticity, in line with elasticity ranges given in WebTAG. Where a model has an elasticity value that is outside of the ideal range, adjustments have been made to the model sensitivity parameters or by introducing and adjusting parameters associated with cost damping.

### 7.2.7 Trip Purposes

The assignment model trip matrices are segmented into vehicle types and trip purposes as shown in Table 7-1 enable the model to represent a variation in generalised cost for different types of trip.

Table 7-1 – Trip Purpose

| User Class | Vehicle Type | Trip Purpose | Demand Responses | DIADEM Demand Segment |
|---|---|---|---|---|
| 1 | Car | Business | Frequency<br>Distribution – Origin constrained | 1 |
| 2 | | Commuting | Frequency<br>Distribution – Doubly constrained | 2 |
| 3 | | Other | Frequency<br>Distribution – Origin constrained | 3 |
| 4 | LGV | | Fixed | - |
| 5 | HGV | | Fixed | - |

All goods vehicle trips remain fixed and not subject to the effects of variable demand. It was not necessary to freeze certain movements in the car demand segments where demand response is not required.

### 7.2.8 Form of Matrices

WebTAG recommends modelling home based trips in 24 hour P/A format where possible because this maintains consistency between mode choice and destination choice for the outbound and return trips to home (i.e. a car trip from home to a workplace in the morning is likely to be followed by a return by car from the same workplace in the evening).

However, as the assignment model trip matrices have been developed in O/D format (and do not include a division between home based and non-home based trips) it was not possible to undertake the demand modelling of home based trips on a P/A basis. It is recognised that modelling discrete time periods may reduce the accuracy of modelling to some extent but this considered to be a minor effect and the approach is necessary in this case.

### 7.2.9 Representation of Public Transport Supply and Demand

There is very low modal competition on the A30 and public transport does not represent a viable alternative mode. This is because long distance public transport alternatives are few, with only rail services providing a public transport alternative for the vast majority of journeys. However, rail journey times are significantly longer than car, and the number and locations of rail stations in Cornwall does not cover much of the population of the County.

Variable demand modelling has therefore been undertaken for highway only and mode choice has not been modelled as a separate response in the demand model. However, the trip frequency response will be

used to act as a proxy for mode choice. This is an approach recommended in WebTAG for cases where mode choice is not a significant factor and it would not be proportionate to fully model mode choice separately.

## 7.3 Base Year Realism Testing

### 7.3.1 Overview

Realism tests are required to demonstrate that the model has suitable fuel cost and journey time elasticity, in line with elasticity ranges given in WebTAG.

In the fuel cost elasticity test, the demand model was run using the base year model as both the 'forecast' and the 'comparator'. Vehicle operating costs were increased for the 'forecast' scenario to reflect a 20% increase in fuel cost. The demand elasticity with respect to fuel cost was calculated based of the change in the total distance travelled in each variable demand segment.

The total distance travelled was derived using a matrix-based approach, i.e. by skimming the average assigned trip distance for each origin-destination pair and multiplying this through by the number of trips for that pair.

The elasticity value was calculated as the ratio of the proportionate change in PCU-kilometres (compared to the base model) and the proportionate change in fuel cost. An annual elasticity value was calculated as a weighted average (based on annualisation factors) of the elasticity value calculated for each modelled time period. It is noted that the annual elasticity value does not incorporate off-peak or weekend periods as these have not been modelled.

Journey time elasticity has been calculated using the approach outlined in the DIADEM user manual.[16] This approach approximates journey time elasticity by scaling the fuel cost elasticity value by the proportion of generalised cost attributed to journey time.

To determine the relative proportion of generalised cost due to travel time cost and fuel cost, values for each were calculated by multiplying the total hours travelled by the value of time, and total distance travelled by the fuel cost.

### 7.3.2 Model Parameters

Illustrative parameter values from WebTAG were used as a starting point and these were subsequently calibrated through trial and error during the realism tests.

The initial parameters used for the distribution model based on the guidance from WebTAG Unit M2, Table 5.1, and the final input parameters for the realism testing, are as shown in Table 7-2.

[16] DIADEM User Manual Version 5.0, Section 8.1.3

Table 7-2 – DIADEM Parameters

| User Class | Input Parameters (Initial) | | Input Parameters (final) | |
|---|---|---|---|---|
| | λ | ϑ | λ | ϑ |
| **Employer's Business** | -0.074 | 0.1 | -0.078 | 0.01 |
| **Commute** | -0.065 | 0.1 | -0.07 | 0.125 |
| **Other** | -0.084 | 0.1 | -0.084 | 0.01 |

### 7.3.3 Cost Damping

WebTAG recommends that the demand model should be run without cost damping initially, and that it should only be implemented as required during realism testing. The first iteration of the realism tests gave fuel price elasticity figures which were well outside the desired range set out by WebTAG and therefore it was considered appropriate to incorporate cost damping into subsequent runs.

Various cost damping methods are available within DIADEM but for simplicity cost damping as a function of distance has been used. The following formula has been used:

$$G' = \left(\frac{d}{k}\right)^{-\alpha} \times \left(\frac{t+c}{VOT}\right)$$

Where *t, c* are the trip time and monetary cost, respectively

*VOT* is the value of time

*G'* is the damped generalised cost

*D* is the trip length

$\alpha$ and *k* are parameters that need to be provided or calibrated.

Cost damping has been used to reduce the sensitivity of some trips to changes in generalised cost. The strength parameter ($\alpha$) has been calibrated through trial and error during the realism tests. The *k* parameter (which acts as a reference distance for each OD pair within the cost damping calculations) has been set as equal to the average base year trip length for each variable demand segment. The same value was also adopted for d', a cut-off point below which cost damping is not applied.

The final cost-damping parameters used are shown in Table 7-3.

Table 7-3 – Cost Damping Parameters

| Demand Segment | Cost Damping Parameters | | |
|---|---|---|---|
| | K | α | d' |
| Employers Business | 30 | 0.5 | 30 |
| Commute | 30 | 0.1 | 30 |
| Other | 30 | 0.7 | 30 |

### 7.3.4 Model convergence

The DIADEM software manages the interface between the demand and supply models and iterates between each until a suitable level of convergence has been achieved. DIADEM has been run using the "Fixed Step Length" algorithm.

A relative gap value of 0.1-0.2% is recommended in WebTAG as a suitable level of convergence between demand and supply and this was used as the primary stopping criteria.

DIADEM was configured to skim costs as an average over all paths from each assignment (essential if cost-damping is used) so it was important that the number of post-assignment "SAVEIT" loops were sufficiently high to ensure that the paths skimmed are a close match to the actual assigned paths.

DIADEM achieved a Gap of 0.05% after 7 iterations.

The assignment convergence results for the fuel cost elasticity test models show stability within the final iterations with a flow percentage greater than 98% in all peak periods. The Delta value is stable and less than 0.1 all peaks which is considered acceptable. The final 4 iterations of the SATURN assignments for each time period are presented in Table 7-4 to Table 7-6.

Table 7-4 – AM Peak - Convergence of assignment after DIADEM

| Iteration | Delta | %Flow | %Gap |
|---|---|---|---|
| **21** | 0.0042 | 98.3 | 0.0030 |
| **22** | 0.0072 | 98.5 | 0.0037 |
| **23** | 0.0025 | 98.7 | 0.0046 |
| **24** | 0.0023 | 98.6 | 0.0074 |

Table 7-5 – Interpeak – Convergence of assignment after DIADEM

| Iteration | Delta | %Flow | %Gap |
|---|---|---|---|
| **17** | 0.0012 | 98.7 | 0.00079 |
| **18** | 0.0008 | 98.6 | 0.00096 |
| **19** | 0.0006 | 98.6 | 0.00078 |
| **20** | 0.0005 | 99.3 | 0.00056 |

Table 7-6 – PM Peak – Convergence of assignment after DIADEM

| Iteration | Delta | %Flow | %Gap |
|---|---|---|---|
| **53** | 0.0160 | 98.3 | 0.018 |
| **54** | 0.0161 | 98.3 | 0.013 |
| **55** | 0.0119 | 98.6 | 0.010 |
| **56** | 0.0104 | 99 | 0.040 |

### 7.3.5 Results

The fuel cost elasticities have been calculated for a 10% increase in fuel-based vehicle operating costs for the car trip user classes. Both the matrix and network based fuel cost elasticities have been calculated for the Stage 3 base year models. The matrix-based daily weighted average elasticity, along with the constituent peak period values are shown in Table 7-7.

Table 7-7 – Fuel Cost Elasticities - Matrix

| User Class | AM Peak | Interpeak | PM Peak | Daily | WebTAG Target Values |
|---|---|---|---|---|---|
| **Employer's Business** | -0.07 | -0.14 | -0.10 | -0.11 | Near to -0.1 |
| **Commute** | -0.32 | -0.32 | -0.30 | -0.32 | Somewhere near the average |
| **Other** | -0.58 | -0.40 | -0.22 | -0.40 | Near to -0.4 |
| **Overall** | -0.41 | -0.34 | -0.24 | -0.33 | -0.25 to -0.35 |

The network-based daily weighted average fuel cost elasticity, along with the constituent peak period values are shown in Table 7-8.

Table 7-8 – Fuel Cost Elasticities - Network

| User Class | AM Peak | Interpeak | PM Peak | Daily | WebTAG Target Values |
|---|---|---|---|---|---|
| **Employer's Business** | -0.07 | -0.13 | -0.10 | -0.11 | Near to -0.1 |
| **Commute** | -0.31 | -0.31 | -0.29 | -0.31 | Somewhere near the average |
| **Other** | -0.56 | -0.39 | -0.21 | -0.39 | Near to -0.4 |
| **Overall** | -0.36 | -0.31 | -0.22 | -0.30 | -0.25 to -0.35 |

The fuel cost elasticity values shown in Table 7-7 and Table 7-8 demonstrate that the highway demand within the model reacts to changes in fuel cost as defined in WebTAG.

The daily weighted average journey time elasticity, along with the constituent peak period values are shown in Table 7-9.

Table 7-9 – Journey Time Elasticities

| User Class | AM Peak | Interpeak | PM Peak | Daily | WebTAG Target Values |
|---|---|---|---|---|---|
| **Employer's Business** | -0.37 | -0.68 | -0.56 | -0.57 | Not stronger than -2.0 |
| **Commute** | -0.89 | -0.88 | -0.89 | -0.88 | |
| **Other** | -1.12 | -0.76 | -0.45 | -0.78 | |
| **Overall** | -0.99 | -0.82 | -0.61 | -0.81 | |

The journey time elasticity values shown in Table 7-9 demonstrate that the highway demand within the model reacts to changes in travel time as directed in WebTAG Unit M2.

## 7.4 Conclusion

The realism tests show that the demand model has suitable fuel cost and journey time elasticity in line with elasticity ranges given in WebTAG. It is therefore proposed that the model parameters in Table 7-2 and the cost damping parameters in Table 7-3 are used in the forecast demand models.

# 8. Conclusion

The 2015 traffic model for use in the appraisal of the dualling of the single carriageway on the A30 between Carland and Chiverton was based primarily on the 2009 Truro SATURN model updated with Roadside Interview data collected at sites around the scheme area in October 2015 and factors from TEMPRO to represent traffic growth between 2009 and 2015. A matrix estimation process was then applied using the ME2 module of SATURN. This was calibrated to TRADS, MCC and local ATC counts and validated against journey time data and select TRADS counts.

Model calibration and validation has been focused on the key routes in the model: the A30, where the scheme is located; and other key routes: the A39, the A390 and the A3075. The calibration and validation statistics demonstrate that the traffic model satisfactorily represents the existing traffic situation within the detailed study area.

The model achieved an acceptable level of convergence, satisfying WebTAG criteria in all cases.

It is recommended that the calibrated and validated 2015 model be carried forward for use in the forecasting procedures. The model satisfactorily represents the current traffic situation and produces stable and robust traffic flows in most locations, making it suitable for use as the basis for the traffic forecasting and economics appraisal of the A30 Chiverton to Carland Cross improvement scheme.

# Annex A - Zone Populations

## Annex A - Zone Populations

| 2009 Truro Model Zone | 2015 Carland to Chiverton Model Zone | Disagregated Area Description | Population | Proportion of 2009 Truro Model Zone |
|---|---|---|---|---|
| 79 | ***100*** | Blackwater/Mount Hawke | 2606 | **32%** |
| | ***101*** | Porthtowan | 1075 | **13%** |
| | ***102*** | St Agnes | 3927 | **49%** |
| | ***103*** | Trevallas | 454 | **6%** |
| 73 | ***110*** | Callestick/Penhallow | 710 | **8%** |
| | ***111*** | Perranporth | 4136 | **47%** |
| | ***112*** | Goonhavern | 1136 | **13%** |
| | ***113*** | St Allen & Zelah | 456 | **5%** |
| | ***114*** | Shortlanesend | 1227 | **14%** |
| | ***115*** | Trispin and St Erme | 1208 | **14%** |
| 64 | ***120*** | Tresean & Crantock | 2128 | **6%** |
| | ***121*** | St Newlyn East | 1669 | **5%** |
| | ***122*** | Indian Queens | 3448 | **10%** |
| | ***123*** | Quintrell Downs | 1428 | **4%** |
| | ***124*** | St Columb Major | 5681 | **16%** |
| | ***125*** | Newquay | 20262 | **59%** |
| 62 | ***130*** | South of A390 | 6840 | **11%** |
| | ***131*** | West Calclaze | 269 | **0%** |
| | ***132*** | Par & Fowey | 11948 | **19%** |
| | ***133*** | East of A391 | 7549 | **12%** |
| | ***134*** | West of A391 | 12702 | **20%** |
| | ***135*** | St Austell | 24559 | **38%** |

| STAGE 1 Truro Model Zone | 2015 STAGE 3 Truro Model Zone | Disagregated Area Description | Population | Proportion of STAGE 1Truro Model Zone |
|---|---|---|---|---|
| 121 | ***121*** | St. Newlyn East | 1307 | **78%** |
| | ***899*** | Mitchell | 362 | **22%** |

# Annex B - Model Link Length Checks

## Annex B - Model Link Length Checks

| A Node | B Node | Ax | Ay | Bx | By | Modelled (m) | Crow Fly (m) | Modelled/Crow Fly | Comment |
|---|---|---|---|---|---|---|---|---|---|
| 11055 | 11058 | 176633 | 34855 | 179378 | 33976 | 71 | 2882 | 0.025 | Buffer Network |
| 11058 | 11055 | 179378 | 33976 | 176633 | 34855 | 71 | 2882 | 0.025 | Buffer Network |
| 1261 | 1272 | 226111 | 63918 | 231233 | 67226 | 710 | 6097 | 0.116 | Buffer Network |
| 1238 | 1938 | 200068 | 73081 | 195738 | 71527 | 600 | 4600 | 0.130 | Buffer Network |
| 1938 | 1238 | 195738 | 71527 | 200068 | 73081 | 600 | 4600 | 0.130 | Buffer Network |
| 1272 | 1261 | 231233 | 67226 | 226111 | 63918 | 1030 | 6097 | 0.169 | Buffer Network |
| 12020 | 12021 | 175890 | 54300 | 176250 | 53840 | 100 | 584 | 0.171 | stub end |
| 12021 | 12020 | 176250 | 53840 | 175890 | 54300 | 100 | 584 | 0.171 | stub end |
| 12010 | 12011 | 169590 | 43070 | 169760 | 42530 | 100 | 566 | 0.177 | stub end |
| 12011 | 12010 | 169760 | 42530 | 169590 | 43070 | 100 | 566 | 0.177 | stub end |
| 12018 | 12019 | 171990 | 50740 | 171620 | 51130 | 100 | 538 | 0.186 | stub end |
| 12019 | 12018 | 171620 | 51130 | 171990 | 50740 | 100 | 538 | 0.186 | stub end |
| 11055 | 11056 | 176633 | 34855 | 174680 | 34090 | 430 | 2097 | 0.205 | Buffer Network |
| 11056 | 11055 | 174680 | 34090 | 176633 | 34855 | 430 | 2097 | 0.205 | Buffer Network |
| 1271 | 1943 | 223000 | 65000 | 224000 | 64100 | 300 | 1345 | 0.223 | Buffer Network |
| 1943 | 1271 | 224000 | 64100 | 223000 | 65000 | 300 | 1345 | 0.223 | Buffer Network |
| 1502 | 1693 | 181339 | 44647 | 181178 | 44497 | 50 | 220 | 0.227 | stub end |
| 1693 | 1502 | 181178 | 44497 | 181339 | 44647 | 50 | 220 | 0.227 | stub end |
| 11131 | 1508 | 183392 | 46463 | 183385 | 46367 | 23 | 97 | 0.238 | Flare for Rbt entry, Coordinates wrong, Distance acceptable, Edge of Truro |
| 1508 | 11131 | 183385 | 46367 | 183392 | 46463 | 23 | 97 | 0.238 | Flare for Rbt entry, Coordinates wrong, Distance acceptable, Edge of Truro |
| 11132 | 1508 | 183409 | 46323 | 183385 | 46367 | 12 | 50 | 0.240 | Flare for Rbt entry, Coordinates wrong, Distance acceptable, Edge of Truro |
| 1508 | 11132 | 183385 | 46367 | 183409 | 46323 | 12 | 50 | 0.240 | Flare for Rbt entry, Coordinates wrong, Distance acceptable, Edge of Truro |
| 11133 | 1508 | 183339 | 46349 | 183385 | 46367 | 12 | 49 | 0.243 | Flare for Rbt entry, Coordinates wrong, Distance acceptable, Edge of Truro |
| 1508 | 11133 | 183385 | 46367 | 183339 | 46349 | 12 | 49 | 0.243 | Flare for Rbt entry, Coordinates wrong, Distance acceptable, Edge of Truro |
| 1200 | 1201 | 184459 | 53934 | 184561 | 54033 | 35 | 142 | 0.247 | Coordinates wrong, Distance acceptable, Carland Cross Rbt |
| 1583 | 1683 | 182292 | 44151 | 182469 | 44057 | 50 | 200 | 0.249 | stub end |
| 1683 | 1583 | 182469 | 44057 | 182292 | 44151 | 50 | 200 | 0.249 | stub end |
| 1201 | 1202 | 184561 | 54033 | 184671 | 53963 | 35 | 130 | 0.269 | Coordinates wrong, Distance acceptable, Carland Cross Rbt |
| 11156 | 1930 | 177806 | 48777 | 177696 | 48785 | 30 | 110 | 0.273 | 11156 is a dummynode. Route length is good. |
| 1930 | 11156 | 177696 | 48785 | 177806 | 48777 | 30 | 110 | 0.273 | 11156 is a dummynode. Route length is good. |
| 11134 | 1924 | 189664 | 51641 | 189985 | 52355 | 220 | 783 | 0.281 | stub end |
| 1924 | 11134 | 189985 | 52355 | 189664 | 51641 | 220 | 783 | 0.281 | stub end |
| 1245 | 1941 | 209944 | 82397 | 212268 | 85275 | 1090 | 3699 | 0.295 | Buffer Network |
| 1941 | 1245 | 212268 | 85275 | 209944 | 82397 | 1090 | 3699 | 0.295 | Buffer Network |
| 1550 | 1650 | 183293 | 46331 | 183170 | 46219 | 50 | 166 | 0.301 | stub end |
| 1650 | 1550 | 183170 | 46219 | 183293 | 46331 | 50 | 166 | 0.301 | stub end |
| 1564 | 1664 | 181998 | 45390 | 181974 | 45226 | 50 | 166 | 0.302 | stub end |
| 1664 | 1564 | 181974 | 45226 | 181998 | 45390 | 50 | 166 | 0.302 | stub end |
| 1199 | 1200 | 184564 | 53862 | 184459 | 53934 | 40 | 128 | 0.313 | Coordinates wrong, Distance acceptable, Carland Cross Rbt |
| 1034 | 11135 | 177031 | 36266 | 177420 | 36768 | 200 | 635 | 0.315 | Buffer Network |
| 11135 | 1034 | 177420 | 36768 | 177031 | 36266 | 200 | 635 | 0.315 | Buffer Network |
| 1563 | 1564 | 181932 | 45427 | 181998 | 45390 | 25 | 76 | 0.330 | Coordinates wrong, Distance acceptable, Edge of Truro |
| 1564 | 1563 | 181998 | 45390 | 181932 | 45427 | 25 | 76 | 0.330 | Coordinates wrong, Distance acceptable, Edge of Truro |
| 8033 | 8034 | 367046 | 102374 | 371686 | 106395 | 2039 | 6140 | 0.332 | Buffer Network |
| 8034 | 8033 | 371686 | 106395 | 367046 | 102374 | 2039 | 6140 | 0.332 | Buffer Network |
| 12008 | 12002 | 169430 | 43190 | 169440 | 43310 | 40 | 120 | 0.332 | Coordinates wrong, Distance acceptable, A30 Redruth |
| 1506 | 2217 | 182957 | 44830 | 182943 | 44871 | 15 | 43 | 0.346 | Coordinates wrong, Distance acceptable, Trafalgar Rbt |
| 1224 | 1942 | 211215 | 70911 | 213742 | 73595 | 1300 | 3686 | 0.353 | Buffer Network |
| 1942 | 1224 | 213742 | 73595 | 211215 | 70911 | 1300 | 3686 | 0.353 | Buffer Network |
| 1200 | 1202 | 184459 | 53934 | 184671 | 53963 | 80 | 214 | 0.374 | Coordinates wrong, Distance acceptable, Carland Cross Rbt |
| 5893 | 1589 | 179510 | 45093 | 179556 | 45120 | 20 | 53 | 0.375 | Coordinates wrong, Distance acceptable, Treliske Hospital Rbt |
| 1007 | 1008 | 177700 | 45041 | 177638 | 44926 | 50 | 131 | 0.382 | stub end |
| 1008 | 1007 | 177638 | 44926 | 177700 | 45041 | 50 | 131 | 0.382 | stub end |
| 1573 | 1673 | 182495 | 44574 | 182590 | 44487 | 50 | 129 | 0.388 | stub end |
| 1673 | 1573 | 182590 | 44487 | 182495 | 44574 | 50 | 129 | 0.388 | stub end |
| 1202 | 12047 | 184671 | 53963 | 184636 | 53907 | 26 | 66 | 0.394 | Coordinates wrong, Distance acceptable, Carland Cross Rbt |
| 12100 | 12101 | 173020 | 45333 | 173740 | 46047 | 400 | 1014 | 0.394 | Dummy node. Route length is good |
| 12101 | 12100 | 173740 | 46047 | 173020 | 45333 | 400 | 1014 | 0.394 | Dummy node. Route length is good |
| 5892 | 5893 | 179554 | 45068 | 179510 | 45093 | 20 | 51 | 0.395 | Coordinates wrong, Distance acceptable, Treliske Hospital Rbt |
| 1560 | 1660 | 182718 | 45428 | 182701 | 45677 | 100 | 250 | 0.401 | stub end |
| 1660 | 1560 | 182701 | 45677 | 182718 | 45428 | 100 | 250 | 0.401 | stub end |
| 1701 | 1901 | 181554 | 42377 | 181012 | 41376 | 462 | 1138 | 0.406 | Coordinates wrong, Distance acceptable, A39 Falmouth bound |
| 1901 | 1701 | 181012 | 41376 | 181554 | 42377 | 462 | 1138 | 0.406 | Coordinates wrong, Distance acceptable, A39 Falmouth bound |
| 1232 | 1905 | 191267 | 62378 | 194248 | 61742 | 1250 | 3048 | 0.410 | Buffer Network |
| 1905 | 1232 | 194248 | 61742 | 191267 | 62378 | 1250 | 3048 | 0.410 | Buffer Network |
| 12131 | 1546 | 180113 | 48078 | 180846 | 47655 | 350 | 846 | 0.414 | Coordinates wrong, Distance acceptable. Shortlanesend |
| 1546 | 12131 | 180846 | 47655 | 180113 | 48078 | 350 | 846 | 0.414 | Coordinates wrong, Distance acceptable. Shortlanesend |
| 12029 | 12030 | 179970 | 50420 | 179630 | 51050 | 300 | 716 | 0.419 | stub end |
| 12030 | 12029 | 179630 | 51050 | 179970 | 50420 | 300 | 716 | 0.419 | stub end |
| 12012 | 1507 | 183850 | 46000 | 183854 | 45763 | 100 | 237 | 0.422 | stub end |
| 11056 | 11057 | 174680 | 34090 | 173181 | 34252 | 640 | 1508 | 0.424 | Buffer Network |
| 11057 | 11056 | 173181 | 34252 | 174680 | 34090 | 640 | 1508 | 0.424 | Buffer Network |
| 1558 | 1510 | 182934 | 45139 | 182856 | 44918 | 100 | 234 | 0.427 | Link lengths updated |
| 1198 | 1200 | 184350 | 53898 | 184459 | 53934 | 50 | 115 | 0.437 | Coordinates wrong, Distance acceptable, Carland Cross Rbt |
| 1200 | 1198 | 184459 | 53934 | 184350 | 53898 | 50 | 115 | 0.437 | Coordinates wrong, Distance acceptable, Carland Cross Rbt |
| 12101 | 12102 | 173740 | 46047 | 173520 | 46023 | 100 | 221 | 0.452 | stub end |
| 12102 | 12101 | 173520 | 46023 | 173740 | 46047 | 100 | 221 | 0.452 | stub end |
| 1565 | 1665 | 182033 | 45015 | 182013 | 45123 | 50 | 110 | 0.455 | stub end |
| 1665 | 1565 | 182013 | 45123 | 182033 | 45015 | 50 | 110 | 0.455 | stub end |
| 11071 | 11098 | 176061 | 49022 | 176011 | 48965 | 35 | 76 | 0.459 | Coordinates wrong. Distance acceptable. A3075-B3284 |
| 11098 | 11071 | 176011 | 48965 | 176061 | 49022 | 35 | 76 | 0.459 | Coordinates wrong. Distance acceptable. A3075-B3285 |
| 12002 | 12003 | 169440 | 43310 | 169510 | 43260 | 40 | 86 | 0.465 | Coordinates wrong, Distance acceptable, A30 Redruth |
| 12003 | 12004 | 169510 | 43260 | 169560 | 43140 | 61 | 130 | 0.469 | Coordinates wrong, Distance acceptable, A30 Redruth |
| 1251 | 1598 | 190413 | 54431 | 193575 | 53317 | 1580 | 3352 | 0.471 | Buffer Network |
| 1598 | 1251 | 193575 | 53317 | 190413 | 54431 | 1580 | 3352 | 0.471 | Buffer Network |
| 6540 | 1654 | 183331 | 45640 | 183348 | 45575 | 32 | 67 | 0.476 | stub end |
| 1520 | 1575 | 182371 | 44663 | 182360 | 44496 | 80 | 167 | 0.478 | Distance acceptable, In Truro |
| 1575 | 1520 | 182360 | 44496 | 182371 | 44663 | 80 | 167 | 0.478 | stub end |
| 1273 | 1932 | 181846 | 61426 | 182054 | 61413 | 100 | 208 | 0.480 | stub end |
| 1932 | 1273 | 182054 | 61413 | 181846 | 61426 | 100 | 208 | 0.480 | stub end |
| 11101 | 1507 | 183943 | 45792 | 183854 | 45763 | 45 | 94 | 0.481 | Coordinates wrong, Distance acceptable, P&R Junction Truro |
| 1507 | 11101 | 183854 | 45763 | 183943 | 45792 | 45 | 94 | 0.481 | Coordinates wrong, Distance acceptable, P&R Junction Truro |
| 1242 | 1937 | 207977 | 66531 | 207291 | 67103 | 430 | 893 | 0.481 | Buffer Network |
| 1937 | 1242 | 207291 | 67103 | 207977 | 66531 | 430 | 893 | 0.481 | Buffer Network |
| 12051 | 12056 | 189870 | 56860 | 189680 | 56780 | 100 | 206 | 0.485 | Dummy node. Represents change of section. Distance acceptable. |

| A Node | B Node | Ax | Ay | Bx | By | Modelled (m) | Crow Fly (m) | Modelled/Crow Fly | Comment |
|---|---|---|---|---|---|---|---|---|---|
| 12056 | 12051 | 189680 | 56780 | 189870 | 56860 | 100 | 206 | 0.485 | Dummy node. Represents change of section. Distance acceptable. |
| 1006 | 11122 | 177789 | 45052 | 177742 | 45044 | 23 | 47 | 0.485 | Coordinates wrong, Distance acceptable, Threemilestone |
| 11122 | 1006 | 177742 | 45044 | 177789 | 45052 | 23 | 47 | 0.485 | Coordinates wrong, Distance acceptable, Threemilestone |
| 11102 | 1580 | 181837 | 44628 | 181857 | 44633 | 10 | 20 | 0.491 | Distance acceptable, In Truro |
| 1580 | 11102 | 181857 | 44633 | 181837 | 44628 | 10 | 20 | 0.491 | Distance acceptable, In Truro |
| 1654 | 6540 | 183348 | 45575 | 183331 | 45640 | 33 | 67 | 0.491 | stub end |
| 12027 | 12028 | 179860 | 50270 | 180320 | 49890 | 300 | 597 | 0.503 | stub end |
| 12028 | 12027 | 180320 | 49890 | 179860 | 50270 | 300 | 597 | 0.503 | stub end |
| 1166 | 1598 | 196703 | 53211 | 193575 | 53317 | 1580 | 3130 | 0.505 | Buffer Network |
| 1598 | 1166 | 193575 | 53317 | 196703 | 53211 | 1580 | 3130 | 0.505 | Buffer Network |
| 1536 | 1550 | 183214 | 45792 | 183293 | 46331 | 278 | 545 | 0.510 | Buffer Network |
| 1550 | 1536 | 183293 | 46331 | 183214 | 45792 | 278 | 545 | 0.510 | Buffer Network |
| 5891 | 5892 | 179582 | 45094 | 179554 | 45068 | 20 | 38 | 0.523 | Coordinates wrong, Distance acceptable, Treliske Hospital Rbt |
| 1653 | 6530 | 183284 | 45736 | 183223 | 45725 | 33 | 62 | 0.532 | stub end |
| 13630 | 1546 | 180870 | 47614 | 180846 | 47655 | 25 | 47 | 0.533 | Distance accetable Shortlanesend |
| 1546 | 13630 | 180846 | 47655 | 180870 | 47614 | 25 | 47 | 0.533 | Distance accetable Shortlanesend |
| 1561 | 1562 | 182520 | 45085 | 182445 | 45031 | 50 | 92 | 0.541 | Distance acceptable, In Truro |
| 1562 | 1561 | 182445 | 45031 | 182520 | 45085 | 50 | 92 | 0.541 | Distance acceptable, In Truro |
| 12043 | 12045 | 182894 | 53127 | 182984 | 53103 | 50 | 92 | 0.541 | Distance correct, Coordinates in place for visual purpose |
| 12045 | 12043 | 182984 | 53103 | 182894 | 53127 | 50 | 92 | 0.541 | Distance correct, Coordinates in place for visual purpose |
| 1589 | 5891 | 179556 | 45120 | 179582 | 45094 | 20 | 37 | 0.544 | Coordinates wrong, Distance acceptable, Treliske Hospital Rbt |
| 1518 | 1572 | 182512 | 44593 | 182631 | 44733 | 100 | 184 | 0.544 | Distance acceptable, In Truro |
| 1572 | 1518 | 182631 | 44733 | 182512 | 44593 | 100 | 184 | 0.544 | Distance acceptable, In Truro |
| 12050 | 12055 | 188360 | 56410 | 188210 | 56510 | 100 | 180 | 0.555 | Dummy node. Distance of route are good. |
| 12055 | 12050 | 188210 | 56510 | 188360 | 56410 | 100 | 180 | 0.555 | Dummy node. Distance of route are good. |
| 1006 | 11121 | 177789 | 45052 | 177810 | 45050 | 12 | 21 | 0.559 | Distance acceptable, near Scorrier |
| 11121 | 1006 | 177810 | 45050 | 177789 | 45052 | 12 | 21 | 0.559 | Distance acceptable, near Scorrier |
| 1588 | 11137 | 180180 | 44892 | 180198 | 44890 | 10 | 18 | 0.560 | Distance acceptable, near Truro |
| 1575 | 1675 | 182360 | 44496 | 182288 | 44548 | 50 | 89 | 0.563 | stub end |
| 1675 | 1575 | 182288 | 44548 | 182360 | 44496 | 50 | 89 | 0.563 | stub end |
| 11138 | 1688 | 180183 | 44882 | 180250 | 44575 | 180 | 314 | 0.573 | stub end |
| 1688 | 11138 | 180250 | 44575 | 180183 | 44882 | 180 | 314 | 0.573 | stub end |
| 12044 | 12045 | 182973 | 53155 | 182984 | 53103 | 30 | 52 | 0.574 | Distance correct, Coordinates in place for visual purpose |
| 12045 | 12044 | 182984 | 53103 | 182973 | 53155 | 30 | 52 | 0.574 | Distance correct, Coordinates in place for visual purpose |
| 11111 | 11112 | 181679 | 45756 | 181844 | 45814 | 100 | 174 | 0.575 | stub end |
| 11112 | 11111 | 181844 | 45814 | 181679 | 45756 | 100 | 174 | 0.575 | stub end |
| 1519 | 1573 | 182365 | 44426 | 182495 | 44574 | 114 | 197 | 0.579 | Distance acceptable, In Truro |
| 1573 | 1519 | 182495 | 44574 | 182365 | 44426 | 114 | 197 | 0.579 | Distance acceptable, In Truro |
| 1241 | 1937 | 207199 | 66937 | 207291 | 67103 | 110 | 190 | 0.580 | Buffer Network |
| 1232 | 1913 | 191267 | 62378 | 187234 | 63129 | 2390 | 4102 | 0.583 | Buffer Network |
| 1913 | 1232 | 187234 | 63129 | 191267 | 62378 | 2390 | 4102 | 0.583 | Buffer Network |
| 11137 | 11138 | 180198 | 44890 | 180183 | 44882 | 10 | 17 | 0.585 | Distance acceptable, near Truro |
| 11142 | 13612 | 170528 | 40570 | 169866 | 41756 | 800 | 1358 | 0.589 | Coordinates wrong. Distances good. |
| 13612 | 11142 | 169866 | 41756 | 170528 | 40570 | 800 | 1358 | 0.589 | Coordinates wrong. Distances good. |
| 11087 | 1584 | 182905 | 44281 | 182860 | 44221 | 45 | 75 | 0.603 | Distance acceptable, In Truro |
| 1258 | 1939 | 208982 | 59142 | 208108 | 63690 | 2800 | 4631 | 0.605 | Buffer Network |
| 1939 | 1258 | 208108 | 63690 | 208982 | 59142 | 2800 | 4631 | 0.605 | Buffer Network |
| 11059 | 1179 | 200600 | 52000 | 206780 | 54667 | 4100 | 6731 | 0.609 | Buffer Network |
| 1179 | 11059 | 206780 | 54667 | 200600 | 52000 | 4100 | 6731 | 0.609 | Buffer Network |
| 12025 | 12026 | 178960 | 49480 | 179070 | 50120 | 400 | 649 | 0.616 | stub end |
| 12026 | 12025 | 179070 | 50120 | 178960 | 49480 | 400 | 649 | 0.616 | stub end |
| 1010 | 1500 | 182224 | 43892 | 182205 | 43907 | 15 | 24 | 0.620 | Distance acceptable, In Truro |
| 1500 | 1010 | 182205 | 43907 | 182224 | 43892 | 15 | 24 | 0.620 | Distance acceptable, In Truro |
| 12057 | 12058 | 188710 | 56130 | 188850 | 56050 | 100 | 161 | 0.620 | Dummy node. Created as visual help |
| 12058 | 12057 | 188850 | 56050 | 188710 | 56130 | 100 | 161 | 0.620 | Dummy node. Created as visual help |
| 1570 | 1670 | 182579 | 44827 | 182552 | 44901 | 50 | 79 | 0.635 | stub end |
| 1670 | 1570 | 182552 | 44901 | 182579 | 44827 | 50 | 79 | 0.635 | stub end |
| 1511 | 1512 | 182681 | 44824 | 182811 | 44769 | 90 | 141 | 0.638 | Distance acceptable, In Truro |
| 1512 | 1511 | 182811 | 44769 | 182681 | 44824 | 90 | 141 | 0.638 | Distance acceptable, In Truro |
| 1258 | 1944 | 208982 | 59142 | 218211 | 63323 | 6577 | 10132 | 0.649 | Buffer Network |
| 1944 | 1258 | 218211 | 63323 | 208982 | 59142 | 6577 | 10132 | 0.649 | Buffer Network |
| 1511 | 1510 | 182681 | 44824 | 182856 | 44918 | 129 | 199 | 0.649 | Distance acceptable, In Truro |
| 1580 | 1680 | 181857 | 44633 | 181868 | 44557 | 50 | 77 | 0.651 | stub end |
| 1680 | 1580 | 181868 | 44557 | 181857 | 44633 | 50 | 77 | 0.651 | stub end |
| 11141 | 13611 | 171519 | 39930 | 170735 | 42081 | 1500 | 2289 | 0.655 | Coordinates wrong. Distance good |
| 13611 | 11141 | 170735 | 42081 | 171519 | 39930 | 1500 | 2289 | 0.655 | Coordinates wrong. Distance good |
| 1217 | 1219 | 208720 | 65320 | 208960 | 65595 | 240 | 365 | 0.658 | Buffer Network |
| 12043 | 12044 | 182894 | 53127 | 182973 | 53155 | 55 | 83 | 0.659 | Distance correct, Coordinates in place for visual purpose |
| 12044 | 12043 | 182973 | 53155 | 182894 | 53127 | 55 | 83 | 0.659 | Distance correct, Coordinates in place for visual purpose |
| 11155 | 1541 | 183829 | 44762 | 183379 | 44695 | 300 | 455 | 0.660 | Buffer Network |
| 1541 | 11155 | 183379 | 44695 | 183829 | 44762 | 300 | 455 | 0.660 | Buffer Network |
| 5895 | 5896 | 179710 | 45060 | 180060 | 44920 | 250 | 377 | 0.663 | Distance correct, Coordinates close |
| 5896 | 5895 | 180060 | 44920 | 179710 | 45060 | 250 | 377 | 0.663 | Distance correct, Coordinates close |
| 11063 | 1582 | 181655 | 44389 | 181735 | 44262 | 100 | 150 | 0.666 | Buffer Network |
| 1582 | 11063 | 181735 | 44262 | 181655 | 44389 | 100 | 150 | 0.666 | Buffer Network |
| 12049 | 12054 | 186130 | 54890 | 186130 | 55040 | 100 | 150 | 0.667 | Dummy node. Created as visual help |
| 12054 | 12049 | 186130 | 55040 | 186130 | 54890 | 100 | 150 | 0.667 | Dummy node. Created as visual help |
| 1315 | 1590 | 178975 | 45041 | 178927 | 45032 | 33 | 49 | 0.676 | Buffer Network |
| 1563 | 1663 | 181932 | 45427 | 182015 | 45549 | 100 | 148 | 0.678 | stub end |
| 1663 | 1563 | 182015 | 45549 | 181932 | 45427 | 100 | 148 | 0.678 | stub end |
| 11141 | 11142 | 171519 | 39930 | 170528 | 40570 | 800 | 1180 | 0.678 | Buffer Network |
| 11142 | 11141 | 170528 | 40570 | 171519 | 39930 | 800 | 1180 | 0.678 | Buffer Network |
| 1034 | 13622 | 177031 | 36266 | 177027 | 36252 | 10 | 15 | 0.680 | Small change in small distance |
| 13622 | 1034 | 177027 | 36252 | 177031 | 36266 | 10 | 15 | 0.680 | Small change in small distance |
| 12013 | 13618 | 174460 | 46760 | 175266 | 45556 | 1000 | 1449 | 0.690 | Coordinates are wrong. Distances are good. Constraint Bridge |
| 13618 | 12013 | 175266 | 45556 | 174460 | 46760 | 1000 | 1449 | 0.690 | Coordinates are wrong. Distances are good. Constraint Bridge |
| 11087 | 1539 | 182905 | 44281 | 182882 | 44496 | 150 | 217 | 0.692 | Distance acceptable, In Truro |
| 1539 | 11087 | 182882 | 44496 | 182905 | 44281 | 150 | 217 | 0.692 | Distance acceptable, In Truro |
| 1506 | 1542 | 182957 | 44830 | 182981 | 44866 | 30 | 43 | 0.693 | Distance acceptable, Trafalgar Rbt |
| 12052 | 12053 | 186220 | 54640 | 186470 | 54990 | 300 | 430 | 0.697 | 13618 represents a bridge. Route distance is fine. |
| 12053 | 12052 | 186470 | 54990 | 186220 | 54640 | 300 | 430 | 0.697 | 13618 represents a bridge. Route distance is fine. |
| 2005 | 20052 | 175150 | 44430 | 175485 | 44590 | 260 | 371 | 0.700 | Coordinates wrong. Distances fine. |
| 20052 | 2005 | 175485 | 44590 | 175150 | 44430 | 260 | 371 | 0.700 | Coordinates wrong. Distances fine. |
| 12013 | 12101 | 174460 | 46760 | 173740 | 46047 | 710 | 1013 | 0.701 | Distance acceptable. Blackwater |
| 12101 | 12013 | 173740 | 46047 | 174460 | 46760 | 710 | 1013 | 0.701 | Distance acceptable. Blackwater |
| 1502 | 1538 | 181339 | 44647 | 181275 | 44677 | 50 | 71 | 0.707 | Distance acceptable, In Truro |
| 1538 | 1502 | 181275 | 44677 | 181339 | 44647 | 50 | 71 | 0.707 | Distance acceptable, In Truro |

| A Node | B Node | Ax | Ay | Bx | By | Modelled (m) | Crow Fly (m) | Modelled/Crow Fly | Comment |
|---|---|---|---|---|---|---|---|---|---|
| 1587 | 5889 | 180870 | 44724 | 180709 | 44779 | 121 | 170 | 0.711 | Distance acceptable, near Truro |
| 5889 | 1587 | 180709 | 44779 | 180870 | 44724 | 121 | 170 | 0.711 | Distance acceptable, near Truro |
| 1569 | 1523 | 182487 | 44804 | 182440 | 44800 | 34 | 47 | 0.721 | Distance acceptable, In Truro |
| 11144 | 1802 | 166307 | 41032 | 166002 | 41727 | 550 | 759 | 0.725 | Buffer Network |
| 1802 | 11144 | 166002 | 41727 | 166307 | 41032 | 550 | 759 | 0.725 | Buffer Network |
| 1526 | 1566 | 182266 | 44885 | 182280 | 44997 | 82 | 113 | 0.726 | Distance acceptable, In Truro |
| 12005 | 12006 | 169550 | 43100 | 169480 | 43080 | 53 | 73 | 0.728 | Coordinates wrong, Distance acceptable, A30 Redruth |
| 12038 | 13601 | 181740 | 51720 | 182572 | 51254 | 700 | 953 | 0.734 | Previous stub end, now dummy node. Route length is good |
| 13601 | 12038 | 182572 | 51254 | 181740 | 51720 | 700 | 953 | 0.734 | Previous stub end, now dummy node. Route length is good |
| 6901 | 1590 | 178965 | 45018 | 178927 | 45032 | 30 | 40 | 0.741 | stub end |
| 11123 | 1585 | 182172 | 43815 | 182155 | 43792 | 21 | 28 | 0.744 | Distance acceptable, near Truro |
| 1585 | 11123 | 182155 | 43792 | 182172 | 43815 | 21 | 28 | 0.744 | Distance acceptable, near Truro |
| 8001 | 8002 | 361400 | 183520 | 362440 | 178170 | 4063 | 5450 | 0.745 | Buffer Network |
| 8002 | 8001 | 362440 | 178170 | 361400 | 183520 | 4063 | 5450 | 0.745 | Buffer Network |
| 11086 | 1555 | 183437 | 45277 | 183398 | 45241 | 40 | 53 | 0.748 | Distance acceptable, In Truro |
| 1555 | 11086 | 183398 | 45241 | 183437 | 45277 | 40 | 53 | 0.748 | Distance acceptable, In Truro |
| 1275 | 1430 | 203507 | 62164 | 202917 | 63169 | 874 | 1165 | 0.750 | Buffer Network |
| 1430 | 1275 | 202917 | 63169 | 203507 | 62164 | 874 | 1165 | 0.750 | Buffer Network |
| 1204 | 12053 | 186050 | 54760 | 186470 | 54990 | 360 | 479 | 0.752 | Distance acceptable. Mitchell |
| 12053 | 1204 | 186470 | 54990 | 186050 | 54760 | 360 | 479 | 0.752 | Distance acceptable. Mitchell |
| 1065 | 1066 | 180121 | 44919 | 180144 | 44943 | 25 | 33 | 0.752 | Distance acceptable, near Truro |
| 1066 | 1065 | 180144 | 44943 | 180121 | 44919 | 25 | 33 | 0.752 | Distance acceptable, near Truro |
| 1204 | 12049 | 186050 | 54760 | 186130 | 54890 | 115 | 153 | 0.753 | Distance acceptable. Mitchell |
| 12049 | 1204 | 186130 | 54890 | 186050 | 54760 | 115 | 153 | 0.753 | Distance acceptable. Mitchell |
| 12003 | 1801 | 169510 | 43260 | 169760 | 43380 | 212 | 277 | 0.764 | Distance correct, Coordinates in place for visual purpose |
| 11152 | 1325 | 176650 | 42750 | 178130 | 44630 | 1830 | 2393 | 0.765 | Route distance is fine |
| 1325 | 11152 | 178130 | 44630 | 176650 | 42750 | 1830 | 2393 | 0.765 | Route distance is fine |
| 1274 | 1430 | 203772 | 63673 | 202917 | 63169 | 760 | 992 | 0.766 | Buffer Network |
| 1430 | 1274 | 202917 | 63169 | 203772 | 63673 | 760 | 992 | 0.766 | Buffer Network |
| 11147 | 13611 | 171790 | 43850 | 170735 | 42081 | 1600 | 2060 | 0.777 | Coordinates wrong. Distances correct |
| 13611 | 11147 | 170735 | 42081 | 171790 | 43850 | 1600 | 2060 | 0.777 | Coordinates wrong. Distances correct |
| 11064 | 11126 | 181770 | 44230 | 182175 | 43925 | 394 | 507 | 0.777 | Change of section. Route length is good. |
| 11126 | 11064 | 182175 | 43925 | 181770 | 44230 | 394 | 507 | 0.777 | Change of section. Route length is good. |
| 11147 | 12010 | 171790 | 43850 | 169590 | 43070 | 1820 | 2334 | 0.780 | Distance correct |
| 12010 | 11147 | 169590 | 43070 | 171790 | 43850 | 1820 | 2334 | 0.780 | Distance correct |
| 1220 | 1218 | 209126 | 65534 | 208947 | 65254 | 260 | 332 | 0.782 | Buffer Network |
| 1225 | 1226 | 229000 | 83000 | 234169 | 83627 | 4090 | 5207 | 0.785 | Buffer Network |
| 1226 | 1225 | 234169 | 83627 | 229000 | 83000 | 4090 | 5207 | 0.785 | Buffer Network |
| 12049 | 12052 | 186130 | 54890 | 186220 | 54640 | 210 | 266 | 0.790 | Coordinates wrong. Distances correct |
| 12052 | 12049 | 186220 | 54640 | 186130 | 54890 | 210 | 266 | 0.790 | Coordinates wrong. Distances correct |
| 3112 | 5893 | 179447 | 45090 | 179510 | 45093 | 50 | 63 | 0.793 | Distance acceptable, near Truro |
| 5893 | 3112 | 179510 | 45093 | 179447 | 45090 | 50 | 63 | 0.793 | Distance acceptable, near Truro |
| 1801 | 12004 | 169760 | 43380 | 169560 | 43140 | 248 | 312 | 0.794 | Distance correct, Coordinates in place for visual purpose |
| 11061 | 1312 | 178713 | 45023 | 178913 | 45042 | 160 | 201 | 0.796 | Distance acceptable, near Truro |
| 1312 | 11061 | 178913 | 45042 | 178713 | 45023 | 160 | 201 | 0.796 | Distance acceptable, near Truro |
| 1948 | 1951 | 296831 | 91318 | 297000 | 93125 | 1460 | 1815 | 0.804 | Buffer Network |
| 1951 | 1948 | 297000 | 93125 | 296831 | 91318 | 1460 | 1815 | 0.804 | Buffer Network |
| 11109 | 1517 | 182709 | 44545 | 182590 | 44580 | 100 | 124 | 0.805 | Distance acceptable, In Truro |
| 1517 | 11109 | 182590 | 44580 | 182709 | 44545 | 100 | 124 | 0.805 | Distance acceptable, In Truro |
| 6530 | 1653 | 183223 | 45725 | 183284 | 45736 | 50 | 62 | 0.807 | stub end |
| 1512 | 1505 | 182811 | 44769 | 182893 | 44741 | 70 | 87 | 0.808 | Distance acceptable, In Truro |
| 1544 | 1545 | 183027 | 44842 | 182982 | 44796 | 52 | 64 | 0.808 | Distance acceptable, Trafalgar Rbt |
| 12035 | 13629 | 180320 | 57040 | 181952 | 56517 | 1400 | 1714 | 0.817 | Distances are correct |
| 13629 | 12035 | 181952 | 56517 | 180320 | 57040 | 1400 | 1714 | 0.817 | Distances are correct |
| 1262 | 1272 | 236424 | 69251 | 231233 | 67226 | 4618 | 5572 | 0.829 | Buffer Network |
| 1272 | 1262 | 231233 | 67226 | 236424 | 69251 | 4618 | 5572 | 0.829 | Buffer Network |
| 1167 | 1923 | 196415 | 49684 | 189784 | 46705 | 6026 | 7269 | 0.829 | stub end |
| 1923 | 1167 | 189784 | 46705 | 196415 | 49684 | 6026 | 7269 | 0.829 | stub end |
| 1654 | 6104 | 183348 | 45575 | 183312 | 45387 | 159 | 191 | 0.831 | Distance acceptable, In Truro |
| 6104 | 1654 | 183312 | 45387 | 183348 | 45575 | 159 | 191 | 0.831 | Distance acceptable, In Truro |
| 1505 | 1512 | 182893 | 44741 | 182811 | 44769 | 72 | 87 | 0.831 | Distance acceptable, In Truro |
| 1567 | 1667 | 182255 | 44798 | 182218 | 44845 | 50 | 60 | 0.836 | stub end |
| 1667 | 1567 | 182218 | 44845 | 182255 | 44798 | 50 | 60 | 0.836 | stub end |
| 1672 | 1572 | 182682 | 44702 | 182631 | 44733 | 50 | 60 | 0.838 | Distance acceptable, In Truro |
| 1348 | 1448 | 177791 | 45240 | 177813 | 45171 | 61 | 72 | 0.842 | stub end |
| 1448 | 1348 | 177813 | 45171 | 177791 | 45240 | 61 | 72 | 0.842 | stub end |
| 1502 | 1537 | 181339 | 44647 | 181317 | 44702 | 50 | 59 | 0.844 | Distance acceptable, In Truro |
| 1537 | 1502 | 181317 | 44702 | 181339 | 44647 | 50 | 59 | 0.844 | Distance acceptable, In Truro |
| 1571 | 1671 | 182638 | 44788 | 182697 | 44788 | 50 | 59 | 0.847 | stub end |
| 1671 | 1571 | 182697 | 44788 | 182638 | 44788 | 50 | 59 | 0.847 | stub end |
| 11111 | 12130 | 181679 | 45756 | 181263 | 46706 | 880 | 1037 | 0.849 | Distances are correct |
| 12130 | 11111 | 181263 | 46706 | 181679 | 45756 | 880 | 1037 | 0.849 | Distances are correct |
| 1553 | 1653 | 183271 | 45781 | 183284 | 45736 | 40 | 47 | 0.854 | |
| 1653 | 1553 | 183284 | 45736 | 183271 | 45781 | 40 | 47 | 0.854 | |
| 1248 | 1448 | 177804 | 45142 | 177813 | 45171 | 26 | 30 | 0.856 | |
| 1448 | 1248 | 177813 | 45171 | 177804 | 45142 | 26 | 30 | 0.856 | |
| 1219 | 1244 | 208960 | 65595 | 208532 | 66412 | 790 | 922 | 0.857 | |
| 1244 | 1219 | 208532 | 66412 | 208960 | 65595 | 790 | 922 | 0.857 | |
| 1522 | 1567 | 182334 | 44805 | 182255 | 44798 | 68 | 79 | 0.857 | |
| 1203 | 1204 | 184841 | 54063 | 186050 | 54760 | 1200 | 1395 | 0.860 | |
| 1204 | 1203 | 186050 | 54760 | 184841 | 54063 | 1200 | 1395 | 0.860 | |
| 11155 | 1656 | 183829 | 44762 | 183404 | 44918 | 390 | 453 | 0.860 | |
| 1656 | 11155 | 183404 | 44918 | 183829 | 44762 | 390 | 453 | 0.860 | |
| 1536 | 1553 | 183214 | 45792 | 183271 | 45781 | 50 | 58 | 0.861 | |
| 1553 | 1536 | 183271 | 45781 | 183214 | 45792 | 50 | 58 | 0.861 | |
| 1005 | 11058 | 180518 | 32102 | 179378 | 33976 | 1897 | 2194 | 0.865 | |
| 11058 | 1005 | 179378 | 33976 | 180518 | 32102 | 1897 | 2194 | 0.865 | |
| 1576 | 1580 | 182073 | 44715 | 181857 | 44633 | 200 | 231 | 0.866 | |
| 1580 | 1576 | 181857 | 44633 | 182073 | 44715 | 200 | 231 | 0.866 | |
| 11087 | 11088 | 182905 | 44281 | 182950 | 44245 | 50 | 58 | 0.868 | |
| 11088 | 11087 | 182950 | 44245 | 182905 | 44281 | 50 | 58 | 0.868 | |
| 1261 | 1264 | 226111 | 63918 | 233120 | 58888 | 7510 | 8627 | 0.871 | |
| 1264 | 1261 | 233120 | 58888 | 226111 | 63918 | 7510 | 8627 | 0.871 | |
| 1509 | 1560 | 183173 | 45735 | 182718 | 45428 | 479 | 549 | 0.873 | |
| 1560 | 1509 | 182718 | 45428 | 183173 | 45735 | 479 | 549 | 0.873 | |
| 1215 | 13620 | 191013 | 57290 | 190920 | 57375 | 110 | 126 | 0.873 | |
| 13620 | 1215 | 190920 | 57375 | 191013 | 57290 | 110 | 126 | 0.873 | |

| A Node | B Node | Ax | Ay | Bx | By | Modelled (m) | Crow Fly (m) | Modelled/Crow Fly | Comment |
|---|---|---|---|---|---|---|---|---|---|
| 11077 | 12031 | 181437 | 52157 | 181390 | 52184 | 47 | 54 | 0.874 | |
| 12031 | 11077 | 181390 | 52184 | 181437 | 52157 | 47 | 54 | 0.874 | |
| 11143 | 13616 | 168748 | 42331 | 169794 | 41878 | 1000 | 1140 | 0.877 | |
| 13616 | 11143 | 169794 | 41878 | 168748 | 42331 | 1000 | 1140 | 0.877 | |
| 1107 | 13628 | 191132 | 59800 | 191326 | 59337 | 440 | 502 | 0.877 | |
| 13628 | 1107 | 191326 | 59337 | 191132 | 59800 | 440 | 502 | 0.877 | |
| 11062 | 1115 | 181078 | 44676 | 181010 | 44679 | 60 | 68 | 0.880 | |
| 1115 | 11062 | 181010 | 44679 | 181078 | 44676 | 60 | 68 | 0.880 | |
| 11110 | 1585 | 182162 | 43679 | 182155 | 43792 | 100 | 114 | 0.880 | |
| 1585 | 11110 | 182155 | 43792 | 182162 | 43679 | 100 | 114 | 0.880 | |
| 1193 | 13604 | 183896 | 49634 | 184789 | 50133 | 900 | 1023 | 0.880 | |
| 13604 | 1193 | 184789 | 50133 | 183896 | 49634 | 900 | 1023 | 0.880 | |
| 2216 | 1506 | 182952 | 44801 | 182957 | 44830 | 26 | 29 | 0.884 | |
| 1582 | 1682 | 181735 | 44262 | 182166 | 44434 | 410 | 464 | 0.884 | |
| 1682 | 1582 | 182166 | 44434 | 181735 | 44262 | 410 | 464 | 0.884 | |
| 11129 | 1503 | 182808 | 44605 | 182779 | 44525 | 75 | 85 | 0.886 | |
| 1503 | 11129 | 182779 | 44525 | 182808 | 44605 | 75 | 85 | 0.886 | |
| 12047 | 1199 | 184636 | 53907 | 184564 | 53862 | 75 | 85 | 0.887 | |
| 11077 | 12037 | 181437 | 52157 | 181510 | 52260 | 112 | 126 | 0.887 | |
| 12037 | 11077 | 181510 | 52260 | 181437 | 52157 | 112 | 126 | 0.887 | |
| 1250 | 13608 | 187534 | 46896 | 189285 | 50923 | 3900 | 4391 | 0.888 | |
| 13608 | 1250 | 189285 | 50923 | 187534 | 46896 | 3900 | 4391 | 0.888 | |
| 11108 | 12059 | 175875 | 46271 | 175550 | 47050 | 750 | 844 | 0.889 | |
| 12059 | 11108 | 175550 | 47050 | 175875 | 46271 | 750 | 844 | 0.889 | |
| 1525 | 1526 | 182333 | 44866 | 182266 | 44885 | 62 | 70 | 0.890 | |
| 1526 | 1525 | 182266 | 44885 | 182333 | 44866 | 62 | 70 | 0.890 | |
| 3111 | 3112 | 179113 | 45085 | 179447 | 45090 | 300 | 334 | 0.898 | |
| 3112 | 3111 | 179447 | 45090 | 179113 | 45085 | 300 | 334 | 0.898 | |
| 1274 | 1275 | 203772 | 63673 | 203507 | 62164 | 1376 | 1532 | 0.898 | |
| 1275 | 1274 | 203507 | 62164 | 203772 | 63673 | 1376 | 1532 | 0.898 | |
| 1304 | 1945 | 295223 | 113817 | 270125 | 128125 | 25960 | 28890 | 0.899 | |
| 1945 | 1304 | 270125 | 128125 | 295223 | 113817 | 25960 | 28890 | 0.899 | |
| 1510 | 1559 | 182856 | 44918 | 182765 | 44982 | 100 | 111 | 0.900 | |
| 1559 | 1510 | 182765 | 44982 | 182856 | 44918 | 100 | 111 | 0.900 | |
| 1235 | 1237 | 192736 | 66262 | 193872 | 68340 | 2132 | 2368 | 0.900 | |
| 1237 | 1235 | 193872 | 68340 | 192736 | 66262 | 2132 | 2368 | 0.900 | |
| 11095 | 11107 | 174760 | 46938 | 175309 | 47310 | 600 | 663 | 0.905 | |
| 2005 | 20051 | 175150 | 44430 | 174849 | 44359 | 280 | 309 | 0.905 | |
| 20051 | 2005 | 174849 | 44359 | 175150 | 44430 | 280 | 309 | 0.905 | |
| 1031 | 2003 | 172157 | 44078 | 172752 | 44197 | 550 | 607 | 0.906 | |
| 2003 | 1031 | 172752 | 44197 | 172157 | 44078 | 550 | 607 | 0.906 | |
| 11104 | 1576 | 182145 | 44743 | 182073 | 44715 | 70 | 77 | 0.907 | |
| 1576 | 11104 | 182073 | 44715 | 182145 | 44743 | 70 | 77 | 0.907 | |
| 11079 | 12041 | 182175 | 52970 | 182450 | 53050 | 260 | 286 | 0.908 | |
| 12041 | 11079 | 182450 | 53050 | 182175 | 52970 | 260 | 286 | 0.908 | |
| 11157 | 12020 | 177642 | 54244 | 175890 | 54300 | 1600 | 1753 | 0.913 | |
| 12047 | 12048 | 184636 | 53907 | 185430 | 54000 | 730 | 799 | 0.913 | |
| 12048 | 12047 | 185430 | 54000 | 184636 | 53907 | 730 | 799 | 0.913 | |
| 1524 | 1569 | 182519 | 44818 | 182487 | 44804 | 32 | 35 | 0.916 | |
| 1241 | 1259 | 207199 | 66937 | 206522 | 67055 | 630 | 687 | 0.917 | |
| 1259 | 1241 | 206522 | 67055 | 207199 | 66937 | 630 | 687 | 0.917 | |
| 1322 | 1325 | 178127 | 45020 | 178130 | 44630 | 359 | 390 | 0.920 | |
| 1325 | 1322 | 178130 | 44630 | 178127 | 45020 | 359 | 390 | 0.920 | |
| 11128 | 1503 | 182755 | 44532 | 182779 | 44525 | 23 | 25 | 0.922 | |
| 1503 | 11128 | 182779 | 44525 | 182755 | 44532 | 23 | 25 | 0.922 | |
| 13601 | 13603 | 182572 | 51254 | 182269 | 49880 | 1300 | 1408 | 0.923 | |
| 13603 | 13601 | 182269 | 49880 | 182572 | 51254 | 1300 | 1408 | 0.923 | |
| 12034 | 12035 | 180500 | 57270 | 180320 | 57040 | 270 | 292 | 0.924 | |
| 12035 | 12034 | 180320 | 57040 | 180500 | 57270 | 270 | 292 | 0.924 | |
| 11086 | 1554 | 183437 | 45277 | 183762 | 45578 | 410 | 443 | 0.926 | |
| 1554 | 11086 | 183762 | 45578 | 183437 | 45277 | 410 | 443 | 0.926 | |
| 11081 | 1930 | 177376 | 48738 | 177696 | 48785 | 300 | 323 | 0.928 | |
| 1930 | 11081 | 177696 | 48785 | 177376 | 48738 | 300 | 323 | 0.928 | |
| 11093 | 11089 | 174717 | 46943 | 174753 | 46934 | 35 | 38 | 0.928 | |
| 11154 | 11155 | 184594 | 45153 | 183829 | 44762 | 800 | 859 | 0.931 | |
| 11155 | 11154 | 183829 | 44762 | 184594 | 45153 | 800 | 859 | 0.931 | |
| 11090 | 2000 | 174749 | 46907 | 174813 | 46888 | 62 | 66 | 0.934 | |
| 2000 | 11090 | 174813 | 46888 | 174749 | 46907 | 62 | 66 | 0.934 | |
| 1517 | 1518 | 182590 | 44580 | 182512 | 44593 | 74 | 79 | 0.936 | |
| 1518 | 1517 | 182512 | 44593 | 182590 | 44580 | 74 | 79 | 0.936 | |
| 8000 | 8001 | 361550 | 183740 | 361400 | 183520 | 250 | 266 | 0.939 | |
| 8001 | 8000 | 361400 | 183520 | 361550 | 183740 | 250 | 266 | 0.939 | |
| 11075 | 12029 | 180164 | 50586 | 179970 | 50420 | 240 | 255 | 0.940 | |
| 12029 | 11075 | 179970 | 50420 | 180164 | 50586 | 240 | 255 | 0.940 | |
| 11094 | 13619 | 174668 | 46894 | 174155 | 47174 | 550 | 584 | 0.941 | |
| 13619 | 11094 | 174155 | 47174 | 174668 | 46894 | 550 | 584 | 0.941 | |
| 12056 | 12057 | 189680 | 56780 | 188710 | 56130 | 1100 | 1168 | 0.942 | |
| 12057 | 12056 | 188710 | 56130 | 189680 | 56780 | 1100 | 1168 | 0.942 | |
| 1350 | 1716 | 182100 | 43085 | 181842 | 43352 | 350 | 371 | 0.943 | |
| 1716 | 1350 | 181842 | 43352 | 182100 | 43085 | 350 | 371 | 0.943 | |
| 1534 | 1578 | 182152 | 44856 | 182107 | 44828 | 50 | 53 | 0.943 | |
| 1578 | 1534 | 182107 | 44828 | 182152 | 44856 | 50 | 53 | 0.943 | |
| 12010 | 13613 | 169590 | 43070 | 169255 | 42468 | 650 | 689 | 0.944 | |
| 13613 | 12010 | 169255 | 42468 | 169590 | 43070 | 650 | 689 | 0.944 | |
| 11148 | 11152 | 179312 | 39194 | 176650 | 42750 | 4200 | 4442 | 0.945 | |
| 11152 | 11148 | 176650 | 42750 | 179312 | 39194 | 4200 | 4442 | 0.945 | |
| 1529 | 1525 | 182328 | 45001 | 182333 | 44866 | 128 | 135 | 0.947 | |
| 1222 | 1243 | 208895 | 68386 | 208344 | 67317 | 1140 | 1203 | 0.948 | |
| 12007 | 1802 | 169290 | 42990 | 166002 | 41727 | 3340 | 3522 | 0.948 | |
| 1802 | 12007 | 166002 | 41727 | 169290 | 42990 | 3340 | 3522 | 0.948 | |
| 11064 | 1582 | 181770 | 44230 | 181735 | 44262 | 45 | 47 | 0.949 | |
| 1582 | 11064 | 181735 | 44262 | 181770 | 44230 | 45 | 47 | 0.949 | |
| 11085 | 1555 | 183366 | 45213 | 183398 | 45241 | 40 | 42 | 0.950 | |
| 1555 | 11085 | 183398 | 45241 | 183366 | 45213 | 40 | 42 | 0.950 | |
| 1503 | 1584 | 182779 | 44525 | 182860 | 44221 | 300 | 315 | 0.954 | |
| 1584 | 1503 | 182860 | 44221 | 182779 | 44525 | 300 | 315 | 0.954 | |
| 12056 | 1209 | 189680 | 56780 | 188590 | 56405 | 1100 | 1153 | 0.954 | |

| A Node | B Node | Ax | Ay | Bx | By | Modelled (m) | Crow Fly (m) | Modelled/Crow Fly | Comment |
|---|---|---|---|---|---|---|---|---|---|
| 1209 | 12056 | 188590 | 56405 | 189680 | 56780 | 1100 | 1153 | 0.954 | |
| 11127 | 1500 | 182212 | 43923 | 182205 | 43907 | 17 | 18 | 0.955 | |
| 1500 | 11127 | 182205 | 43907 | 182212 | 43923 | 17 | 18 | 0.955 | |
| 11129 | 1504 | 182808 | 44605 | 182837 | 44684 | 81 | 85 | 0.957 | |
| 1504 | 11129 | 182837 | 44684 | 182808 | 44605 | 81 | 85 | 0.957 | |
| 1222 | 1218 | 208895 | 68386 | 208947 | 65254 | 3000 | 3132 | 0.958 | |
| 1196 | 1197 | 184384 | 52658 | 184423 | 52937 | 270 | 282 | 0.959 | |
| 1197 | 1196 | 184423 | 52937 | 184384 | 52658 | 270 | 282 | 0.959 | |
| 1537 | 1579 | 181317 | 44702 | 181650 | 44911 | 377 | 393 | 0.959 | |
| 1579 | 1537 | 181650 | 44911 | 181317 | 44702 | 377 | 393 | 0.959 | |
| 11138 | 1588 | 180183 | 44882 | 180180 | 44892 | 10 | 10 | 0.961 | |
| 1104 | 1410 | 199026 | 61860 | 199782 | 62347 | 865 | 899 | 0.962 | |
| 1410 | 1104 | 199782 | 62347 | 199026 | 61860 | 865 | 899 | 0.962 | |
| 11085 | 1556 | 183366 | 45213 | 183157 | 45011 | 280 | 291 | 0.962 | |
| 1556 | 11085 | 183157 | 45011 | 183366 | 45213 | 280 | 291 | 0.962 | |
| 11104 | 1578 | 182145 | 44743 | 182107 | 44828 | 90 | 94 | 0.962 | |
| 1578 | 11104 | 182107 | 44828 | 182145 | 44743 | 90 | 94 | 0.962 | |
| 1525 | 1524 | 182333 | 44866 | 182519 | 44818 | 185 | 192 | 0.963 | |
| 12015 | 13610 | 169400 | 47830 | 169678 | 45878 | 1900 | 1972 | 0.964 | |
| 13610 | 12015 | 169678 | 45878 | 169400 | 47830 | 1900 | 1972 | 0.964 | |
| 1504 | 1505 | 182837 | 44684 | 182893 | 44741 | 77 | 80 | 0.964 | |
| 1505 | 1504 | 182893 | 44741 | 182837 | 44684 | 77 | 80 | 0.964 | |
| 1033 | 2004 | 173453 | 39870 | 173352 | 43081 | 3100 | 3213 | 0.965 | |
| 2004 | 1033 | 173352 | 43081 | 173453 | 39870 | 3100 | 3213 | 0.965 | |
| 1107 | 13627 | 191132 | 59800 | 192373 | 59070 | 1390 | 1440 | 0.966 | |
| 13627 | 1107 | 192373 | 59070 | 191132 | 59800 | 1390 | 1440 | 0.966 | |
| 1554 | 1654 | 183762 | 45578 | 183348 | 45575 | 400 | 414 | 0.966 | |
| 1654 | 1554 | 183348 | 45575 | 183762 | 45578 | 400 | 414 | 0.966 | |
| 1526 | 1527 | 182266 | 44885 | 182194 | 44892 | 70 | 72 | 0.968 | |
| 1527 | 1526 | 182194 | 44892 | 182266 | 44885 | 70 | 72 | 0.968 | |
| 12027 | 12029 | 179860 | 50270 | 179970 | 50420 | 180 | 186 | 0.968 | |
| 12029 | 12027 | 179970 | 50420 | 179860 | 50270 | 180 | 186 | 0.968 | |
| 1648 | 1925 | 177835 | 45144 | 178516 | 45054 | 665 | 687 | 0.968 | |
| 1925 | 1648 | 178516 | 45054 | 177835 | 45144 | 665 | 687 | 0.968 | |
| 11058 | 11136 | 179378 | 33976 | 178103 | 35217 | 1723 | 1780 | 0.968 | |
| 11136 | 11058 | 178103 | 35217 | 179378 | 33976 | 1723 | 1780 | 0.968 | |
| 12045 | 12046 | 182984 | 53103 | 183970 | 53410 | 1000 | 1033 | 0.968 | |
| 12046 | 12045 | 183970 | 53410 | 182984 | 53103 | 1000 | 1033 | 0.968 | |
| 1523 | 1568 | 182440 | 44800 | 182386 | 44808 | 53 | 55 | 0.971 | |
| 1306 | 1949 | 278548 | 71962 | 248449 | 57691 | 32460 | 33311 | 0.974 | |
| 1949 | 1306 | 248449 | 57691 | 278548 | 71962 | 32460 | 33311 | 0.974 | |
| 5888 | 6000 | 180354 | 44867 | 180542 | 44842 | 185 | 190 | 0.975 | |
| 6000 | 5888 | 180542 | 44842 | 180354 | 44867 | 185 | 190 | 0.975 | |
| 11097 | 11098 | 174721 | 46950 | 176011 | 48965 | 2340 | 2392 | 0.978 | |
| 11098 | 11097 | 176011 | 48965 | 174721 | 46950 | 2340 | 2392 | 0.978 | |
| 1591 | 1691 | 178957 | 45063 | 178925 | 45150 | 91 | 93 | 0.982 | |
| 1691 | 1591 | 178925 | 45150 | 178957 | 45063 | 91 | 93 | 0.982 | |
| 1925 | 1323 | 178516 | 45054 | 178454 | 45042 | 62 | 63 | 0.982 | |
| 8020 | 8030 | 501640 | 167720 | 504560 | 178520 | 11000 | 11188 | 0.983 | |
| 8030 | 8020 | 504560 | 178520 | 501640 | 167720 | 11000 | 11188 | 0.983 | |
| 1912 | 1228 | 181947 | 59921 | 184892 | 60301 | 2920 | 2969 | 0.983 | |
| 1701 | 1716 | 181554 | 42377 | 181842 | 43352 | 1000 | 1017 | 0.984 | |
| 1716 | 1701 | 181842 | 43352 | 181554 | 42377 | 1000 | 1017 | 0.984 | |
| 11071 | 12024 | 176061 | 49022 | 176740 | 50830 | 1900 | 1931 | 0.984 | |
| 12024 | 11071 | 176740 | 50830 | 176061 | 49022 | 1900 | 1931 | 0.984 | |
| 1233 | 1240 | 203712 | 64454 | 206100 | 66975 | 3420 | 3472 | 0.985 | |
| 1240 | 1233 | 206100 | 66975 | 203712 | 64454 | 3420 | 3472 | 0.985 | |
| 1193 | 13617 | 183896 | 49634 | 184228 | 50805 | 1200 | 1217 | 0.986 | |
| 13617 | 1193 | 184228 | 50805 | 183896 | 49634 | 1200 | 1217 | 0.986 | |
| 1556 | 1656 | 183157 | 45011 | 183404 | 44918 | 260 | 263 | 0.987 | |
| 1656 | 1556 | 183404 | 44918 | 183157 | 45011 | 260 | 263 | 0.987 | |
| 1527 | 1565 | 182194 | 44892 | 182033 | 45015 | 200 | 203 | 0.987 | |
| 1565 | 1527 | 182033 | 45015 | 182194 | 44892 | 200 | 203 | 0.987 | |
| 1520 | 1521 | 182371 | 44663 | 182211 | 44768 | 189 | 191 | 0.988 | |
| 1521 | 1520 | 182211 | 44768 | 182371 | 44663 | 189 | 191 | 0.988 | |
| 12032 | 12033 | 181140 | 53010 | 180210 | 55580 | 2700 | 2733 | 0.988 | |
| 12033 | 12032 | 180210 | 55580 | 181140 | 53010 | 2700 | 2733 | 0.988 | |
| 11082 | 11083 | 177715 | 45192 | 177742 | 45241 | 55 | 56 | 0.989 | |
| 8020 | C188 | 501640 | 167720 | 468710 | 172910 | 33000 | 33336 | 0.990 | |
| 1501 | 1502 | 181549 | 44548 | 181339 | 44647 | 230 | 232 | 0.991 | |
| 1502 | 1501 | 181339 | 44647 | 181549 | 44548 | 230 | 232 | 0.991 | |
| 11104 | 1521 | 182145 | 44743 | 182211 | 44768 | 70 | 71 | 0.991 | |
| 1521 | 11104 | 182211 | 44768 | 182145 | 44743 | 70 | 71 | 0.991 | |
| 2217 | 1542 | 182943 | 44871 | 182981 | 44866 | 38 | 38 | 0.991 | |
| 11133 | 1550 | 183339 | 46349 | 183293 | 46331 | 49 | 49 | 0.992 | |
| 1550 | 11133 | 183293 | 46331 | 183339 | 46349 | 49 | 49 | 0.992 | |
| 8030 | C190 | 504560 | 178520 | 532760 | 178390 | 28000 | 28200 | 0.993 | |
| 11078 | 12039 | 182034 | 52956 | 181980 | 55070 | 2100 | 2115 | 0.993 | |
| 12039 | 11078 | 181980 | 55070 | 182034 | 52956 | 2100 | 2115 | 0.993 | |
| 1592 | 1686 | 181633 | 45265 | 181373 | 44983 | 381 | 384 | 0.993 | |
| 1686 | 1592 | 181373 | 44983 | 181633 | 45265 | 381 | 384 | 0.993 | |
| 1581 | 1682 | 182345 | 44406 | 182166 | 44434 | 180 | 181 | 0.994 | |
| 1682 | 1581 | 182166 | 44434 | 182345 | 44406 | 180 | 181 | 0.994 | |
| 1535 | 1551 | 183610 | 45912 | 183465 | 45842 | 160 | 161 | 0.994 | |
| 1551 | 1535 | 183465 | 45842 | 183610 | 45912 | 160 | 161 | 0.994 | |
| 11082 | 1248 | 177715 | 45192 | 177804 | 45142 | 102 | 102 | 0.997 | |
| 1248 | 11082 | 177804 | 45142 | 177715 | 45192 | 102 | 102 | 0.997 | |
| 1105 | 1410 | 200483 | 62748 | 199782 | 62347 | 805 | 808 | 0.997 | |
| 1410 | 1105 | 199782 | 62347 | 200483 | 62748 | 805 | 808 | 0.997 | |
| 11074 | 11077 | 180543 | 50824 | 181437 | 52157 | 1600 | 1605 | 0.997 | |
| 11077 | 11074 | 181437 | 52157 | 180543 | 50824 | 1600 | 1605 | 0.997 | |
| 13600 | 13603 | 180768 | 49071 | 182269 | 49880 | 1700 | 1705 | 0.997 | |
| 13603 | 13600 | 182269 | 49880 | 180768 | 49071 | 1700 | 1705 | 0.997 | |
| 1006 | 1248 | 177789 | 45052 | 177804 | 45142 | 91 | 91 | 0.997 | |
| 1248 | 1006 | 177804 | 45142 | 177789 | 45052 | 91 | 91 | 0.997 | |
| 1552 | 1553 | 183374 | 45797 | 183271 | 45781 | 104 | 104 | 0.998 | |
| 1553 | 1552 | 183271 | 45781 | 183374 | 45797 | 104 | 104 | 0.998 | |

| A Node | B Node | Ax | Ay | Bx | By | Modelled (m) | Crow Fly (m) | Modelled/Crow Fly | Comment |
|---|---|---|---|---|---|---|---|---|---|
| 1581 | 1583 | 182345 | 44406 | 182292 | 44151 | 260 | 260 | 0.998 | |
| 1583 | 1581 | 182292 | 44151 | 182345 | 44406 | 260 | 260 | 0.998 | |
| 1510 | 1558 | 182856 | 44918 | 182934 | 45139 | 234 | 234 | 0.998 | |
| 1007 | 11149 | 177700 | 45041 | 175820 | 44751 | 1900 | 1902 | 0.999 | |
| 11149 | 1007 | 175820 | 44751 | 177700 | 45041 | 1900 | 1902 | 0.999 | |
| 1103 | 1255 | 197984 | 61226 | 198727 | 60219 | 1250 | 1251 | 0.999 | |
| 1255 | 1103 | 198727 | 60219 | 197984 | 61226 | 1250 | 1251 | 0.999 | |
| 11100 | 1564 | 182301 | 45148 | 181998 | 45390 | 387 | 387 | 0.999 | |
| 1564 | 11100 | 181998 | 45390 | 182301 | 45148 | 387 | 387 | 0.999 | |
| 11062 | 11084 | 181078 | 44676 | 181183 | 44673 | 105 | 105 | 0.999 | |
| 11084 | 11062 | 181183 | 44673 | 181078 | 44676 | 105 | 105 | 0.999 | |
| 1929 | 2002 | 172342 | 44572 | 172791 | 45004 | 623 | 623 | 0.999 | |
| 2002 | 1929 | 172791 | 45004 | 172342 | 44572 | 623 | 623 | 0.999 | |
| 11063 | 1501 | 181655 | 44389 | 181549 | 44548 | 191 | 191 | 1.000 | |
| 1501 | 11063 | 181549 | 44548 | 181655 | 44389 | 191 | 191 | 1.000 | |
| 1509 | 1557 | 183173 | 45735 | 183011 | 45410 | 363 | 363 | 1.000 | |
| 1557 | 1509 | 183011 | 45410 | 183173 | 45735 | 363 | 363 | 1.000 | |
| 11072 | 11114 | 178829 | 53765 | 179217 | 54453 | 790 | 790 | 1.000 | |
| 11114 | 11072 | 179217 | 54453 | 178829 | 53765 | 790 | 790 | 1.000 | |
| 1215 | 13623 | 191013 | 57290 | 192168 | 58811 | 1910 | 1910 | 1.000 | |
| 13623 | 1215 | 192168 | 58811 | 191013 | 57290 | 1910 | 1910 | 1.000 | |
| 1557 | 1558 | 183011 | 45410 | 182934 | 45139 | 282 | 282 | 1.001 | |
| 1558 | 1557 | 182934 | 45139 | 183011 | 45410 | 282 | 282 | 1.001 | |
| 1557 | 1657 | 183011 | 45410 | 182878 | 45253 | 206 | 206 | 1.001 | |
| 1657 | 1557 | 182878 | 45253 | 183011 | 45410 | 206 | 206 | 1.001 | |
| 1507 | 1554 | 183854 | 45763 | 183762 | 45578 | 207 | 207 | 1.002 | |
| 1554 | 1507 | 183762 | 45578 | 183854 | 45763 | 207 | 207 | 1.002 | |
| 12025 | 12027 | 178960 | 49480 | 179860 | 50270 | 1200 | 1198 | 1.002 | |
| 12027 | 12025 | 179860 | 50270 | 178960 | 49480 | 1200 | 1198 | 1.002 | |
| 1303 | 1945 | 257766 | 132191 | 270125 | 128125 | 13060 | 13011 | 1.004 | |
| 1512 | 1516 | 182811 | 44769 | 182772 | 44703 | 77 | 77 | 1.004 | |
| 1551 | 1552 | 183465 | 45842 | 183374 | 45797 | 102 | 102 | 1.005 | |
| 1552 | 1551 | 183374 | 45797 | 183465 | 45842 | 102 | 102 | 1.005 | |
| 11078 | 12032 | 182034 | 52956 | 181140 | 53010 | 900 | 896 | 1.005 | |
| 12032 | 11078 | 181140 | 53010 | 182034 | 52956 | 900 | 896 | 1.005 | |
| 11114 | 12033 | 179217 | 54453 | 180210 | 55580 | 1510 | 1502 | 1.005 | |
| 12033 | 11114 | 180210 | 55580 | 179217 | 54453 | 1510 | 1502 | 1.005 | |
| 11074 | 11075 | 180543 | 50824 | 180164 | 50586 | 450 | 448 | 1.006 | |
| 11075 | 11074 | 180164 | 50586 | 180543 | 50824 | 450 | 448 | 1.006 | |
| 1916 | 1917 | 193090 | 64838 | 195104 | 64597 | 2040 | 2028 | 1.006 | |
| 1917 | 1916 | 195104 | 64597 | 193090 | 64838 | 2040 | 2028 | 1.006 | |
| 11144 | 11145 | 166307 | 41032 | 165118 | 39565 | 1900 | 1888 | 1.006 | |
| 11145 | 11144 | 165118 | 39565 | 166307 | 41032 | 1900 | 1888 | 1.006 | |
| 11150 | 1531 | 182713 | 45007 | 182543 | 45090 | 190 | 189 | 1.007 | |
| 1531 | 11150 | 182543 | 45090 | 182713 | 45007 | 190 | 189 | 1.007 | |
| 1226 | 1946 | 234169 | 83627 | 255000 | 92000 | 22600 | 22451 | 1.007 | |
| 1946 | 1226 | 255000 | 92000 | 234169 | 83627 | 22600 | 22451 | 1.007 | |
| 11108 | 2000 | 175875 | 46271 | 174813 | 46888 | 1238 | 1228 | 1.008 | |
| 2000 | 11108 | 174813 | 46888 | 175875 | 46271 | 1238 | 1228 | 1.008 | |
| 11126 | 1500 | 182175 | 43925 | 182205 | 43907 | 35 | 35 | 1.008 | |
| 1500 | 11126 | 182205 | 43907 | 182175 | 43925 | 35 | 35 | 1.008 | |
| 11098 | 11099 | 176011 | 48965 | 175380 | 49830 | 1080 | 1071 | 1.009 | |
| 11099 | 11098 | 175380 | 49830 | 176011 | 48965 | 1080 | 1071 | 1.009 | |
| 11140 | 1179 | 201678 | 57315 | 206780 | 54667 | 5800 | 5748 | 1.009 | |
| 1179 | 11140 | 206780 | 54667 | 201678 | 57315 | 5800 | 5748 | 1.009 | |
| 11130 | 1539 | 182796 | 44520 | 182882 | 44496 | 90 | 89 | 1.009 | |
| 1539 | 11130 | 182882 | 44496 | 182796 | 44520 | 90 | 89 | 1.009 | |
| 1261 | 1943 | 226111 | 63918 | 224000 | 64100 | 2140 | 2119 | 1.010 | |
| 1943 | 1261 | 224000 | 64100 | 226111 | 63918 | 2140 | 2119 | 1.010 | |
| 1518 | 1520 | 182512 | 44593 | 182371 | 44663 | 159 | 157 | 1.010 | |
| 1520 | 1518 | 182371 | 44663 | 182512 | 44593 | 159 | 157 | 1.010 | |
| 11070 | 12037 | 181963 | 52829 | 181510 | 52260 | 735 | 727 | 1.011 | |
| 12037 | 11070 | 181510 | 52260 | 181963 | 52829 | 735 | 727 | 1.011 | |
| 12014 | 13619 | 172680 | 48490 | 174155 | 47174 | 2000 | 1977 | 1.012 | |
| 13619 | 12014 | 174155 | 47174 | 172680 | 48490 | 2000 | 1977 | 1.012 | |
| 11153 | 11154 | 185811 | 45999 | 184594 | 45153 | 1500 | 1482 | 1.012 | |
| 11154 | 11153 | 184594 | 45153 | 185811 | 45999 | 1500 | 1482 | 1.012 | |
| 12041 | 12042 | 182450 | 53050 | 182700 | 52300 | 800 | 791 | 1.012 | |
| 12042 | 12041 | 182700 | 52300 | 182450 | 53050 | 800 | 791 | 1.012 | |
| 1322 | 1323 | 178127 | 45020 | 178454 | 45042 | 332 | 328 | 1.013 | |
| 1323 | 1322 | 178454 | 45042 | 178127 | 45020 | 332 | 328 | 1.013 | |
| 1301 | 1804 | 150634 | 31870 | 154440 | 36147 | 5800 | 5725 | 1.013 | |
| 1804 | 1301 | 154440 | 36147 | 150634 | 31870 | 5800 | 5725 | 1.013 | |
| 1202 | 1203 | 184671 | 53963 | 184841 | 54063 | 200 | 197 | 1.014 | |
| 1203 | 1202 | 184841 | 54063 | 184671 | 53963 | 200 | 197 | 1.014 | |
| 8002 | C183 | 362440 | 178170 | 368350 | 178450 | 6000 | 5917 | 1.014 | |
| 1529 | 1530 | 182328 | 45001 | 182418 | 45054 | 106 | 104 | 1.015 | |
| 1530 | 1529 | 182418 | 45054 | 182328 | 45001 | 106 | 104 | 1.015 | |
| 11149 | 11152 | 175820 | 44751 | 176650 | 42750 | 2200 | 2166 | 1.016 | |
| 11152 | 11149 | 176650 | 42750 | 175820 | 44751 | 2200 | 2166 | 1.016 | |
| 11081 | 11107 | 177376 | 48738 | 175309 | 47310 | 2555 | 2513 | 1.017 | |
| 11107 | 11081 | 175309 | 47310 | 177376 | 48738 | 2555 | 2513 | 1.017 | |
| 1520 | 1523 | 182371 | 44663 | 182440 | 44800 | 156 | 153 | 1.017 | |
| 1523 | 1520 | 182440 | 44800 | 182371 | 44663 | 156 | 153 | 1.017 | |
| 1568 | 1522 | 182386 | 44808 | 182334 | 44805 | 53 | 52 | 1.018 | |
| 1115 | 1587 | 181010 | 44679 | 180870 | 44724 | 150 | 147 | 1.020 | |
| 1587 | 1115 | 180870 | 44724 | 181010 | 44679 | 150 | 147 | 1.020 | |
| 1946 | 1947 | 255000 | 92000 | 247625 | 73750 | 20090 | 19684 | 1.021 | |
| 1947 | 1946 | 247625 | 73750 | 255000 | 92000 | 20090 | 19684 | 1.021 | |
| 11075 | 11076 | 180164 | 50586 | 180534 | 51163 | 700 | 685 | 1.021 | |
| 1302 | 1803 | 157553 | 38518 | 163273 | 40547 | 6200 | 6069 | 1.022 | |
| 1803 | 1302 | 163273 | 40547 | 157553 | 38518 | 6200 | 6069 | 1.022 | |
| 1232 | 1235 | 191267 | 62378 | 192736 | 66262 | 4250 | 4153 | 1.023 | |
| 1235 | 1232 | 192736 | 66262 | 191267 | 62378 | 4250 | 4153 | 1.023 | |
| 13611 | 13612 | 170735 | 42081 | 169866 | 41756 | 950 | 927 | 1.024 | |
| 13612 | 13611 | 169866 | 41756 | 170735 | 42081 | 950 | 927 | 1.024 | |
| 12033 | 12035 | 180210 | 55580 | 180320 | 57040 | 1500 | 1464 | 1.024 | |

| A Node | B Node | Ax | Ay | Bx | By | Modelled (m) | Crow Fly (m) | Modelled/Crow Fly | Comment |
|---|---|---|---|---|---|---|---|---|---|
| 12035 | 12033 | 180320 | 57040 | 180210 | 55580 | 1500 | 1464 | 1.024 | |
| 12011 | 13611 | 169760 | 42530 | 170735 | 42081 | 1100 | 1073 | 1.025 | |
| 13611 | 12011 | 170735 | 42081 | 169760 | 42530 | 1100 | 1073 | 1.025 | |
| 1259 | 1937 | 206522 | 67055 | 207291 | 67103 | 790 | 770 | 1.025 | |
| 1937 | 1259 | 207291 | 67103 | 206522 | 67055 | 790 | 770 | 1.025 | |
| 1217 | 1221 | 208720 | 65320 | 208523 | 68002 | 2760 | 2689 | 1.026 | |
| 12023 | 1930 | 178890 | 49440 | 177696 | 48785 | 1400 | 1362 | 1.028 | |
| 1930 | 12023 | 177696 | 48785 | 178890 | 49440 | 1400 | 1362 | 1.028 | |
| 11072 | 12032 | 178829 | 53765 | 181140 | 53010 | 2500 | 2431 | 1.028 | |
| 12032 | 11072 | 181140 | 53010 | 178829 | 53765 | 2500 | 2431 | 1.028 | |
| 13604 | 13617 | 184789 | 50133 | 184228 | 50805 | 900 | 875 | 1.029 | |
| 13617 | 13604 | 184228 | 50805 | 184789 | 50133 | 900 | 875 | 1.029 | |
| 1521 | 1534 | 182211 | 44768 | 182152 | 44856 | 109 | 106 | 1.029 | |
| 12023 | 12025 | 178890 | 49440 | 178960 | 49480 | 83 | 81 | 1.029 | |
| 12025 | 12023 | 178960 | 49480 | 178890 | 49440 | 83 | 81 | 1.029 | |
| 1305 | 1951 | 305081 | 114044 | 297000 | 93125 | 23100 | 22426 | 1.030 | |
| 1951 | 1305 | 297000 | 93125 | 305081 | 114044 | 23100 | 22426 | 1.030 | |
| 11082 | 11108 | 177715 | 45192 | 175875 | 46271 | 2200 | 2133 | 1.031 | |
| 11108 | 11082 | 175875 | 46271 | 177715 | 45192 | 2200 | 2133 | 1.031 | |
| 11059 | 11140 | 200600 | 52000 | 201678 | 57315 | 5600 | 5423 | 1.033 | |
| 11140 | 11059 | 201678 | 57315 | 200600 | 52000 | 5600 | 5423 | 1.033 | |
| 11055 | 13622 | 176633 | 34855 | 177027 | 36252 | 1500 | 1451 | 1.034 | |
| 13622 | 11055 | 177027 | 36252 | 176633 | 34855 | 1500 | 1451 | 1.034 | |
| 1801 | 1929 | 169760 | 43380 | 172342 | 44572 | 2940 | 2844 | 1.034 | |
| 1929 | 1801 | 172342 | 44572 | 169760 | 43380 | 2940 | 2844 | 1.034 | |
| 1945 | 1303 | 270125 | 128125 | 257766 | 132191 | 13460 | 13011 | 1.035 | |
| 1565 | 1592 | 182033 | 45015 | 181633 | 45265 | 488 | 472 | 1.035 | |
| 1592 | 1565 | 181633 | 45265 | 182033 | 45015 | 488 | 472 | 1.035 | |
| 5889 | 6000 | 180709 | 44779 | 180542 | 44842 | 185 | 178 | 1.036 | |
| 6000 | 5889 | 180542 | 44842 | 180709 | 44779 | 185 | 178 | 1.036 | |
| 12039 | 13629 | 181980 | 55070 | 181952 | 56517 | 1500 | 1447 | 1.037 | |
| 13629 | 12039 | 181952 | 56517 | 181980 | 55070 | 1500 | 1447 | 1.037 | |
| 12022 | 12023 | 179380 | 48500 | 178890 | 49440 | 1100 | 1060 | 1.038 | |
| 12023 | 12022 | 178890 | 49440 | 179380 | 48500 | 1100 | 1060 | 1.038 | |
| 11084 | 1586 | 181183 | 44673 | 181241 | 44673 | 60 | 58 | 1.038 | |
| 1586 | 11084 | 181241 | 44673 | 181183 | 44673 | 60 | 58 | 1.038 | |
| 1230 | 1231 | 182001 | 62129 | 183925 | 61850 | 2020 | 1944 | 1.039 | |
| 1231 | 1230 | 183925 | 61850 | 182001 | 62129 | 2020 | 1944 | 1.039 | |
| 1032 | 20051 | 174549 | 44290 | 174849 | 44359 | 320 | 308 | 1.040 | |
| 20051 | 1032 | 174849 | 44359 | 174549 | 44290 | 320 | 308 | 1.040 | |
| 11071 | 11081 | 176061 | 49022 | 177376 | 48738 | 1400 | 1345 | 1.041 | |
| 11081 | 11071 | 177376 | 48738 | 176061 | 49022 | 1400 | 1345 | 1.041 | |
| 1103 | 1104 | 197984 | 61226 | 199026 | 61860 | 1270 | 1220 | 1.041 | |
| 1104 | 1103 | 199026 | 61860 | 197984 | 61226 | 1270 | 1220 | 1.041 | |
| 1448 | 1548 | 177813 | 45171 | 177823 | 45144 | 30 | 29 | 1.042 | |
| 1559 | 1659 | 182765 | 44982 | 182734 | 44945 | 50 | 48 | 1.042 | |
| 1659 | 1559 | 182734 | 44945 | 182765 | 44982 | 50 | 48 | 1.042 | |
| 1507 | 1535 | 183854 | 45763 | 183610 | 45912 | 298 | 286 | 1.042 | |
| 1535 | 1507 | 183610 | 45912 | 183854 | 45763 | 298 | 286 | 1.042 | |
| 1545 | 1506 | 182982 | 44796 | 182957 | 44830 | 44 | 42 | 1.043 | |
| 1532 | 1563 | 181768 | 45552 | 181932 | 45427 | 215 | 206 | 1.043 | |
| 1563 | 1532 | 181932 | 45427 | 181768 | 45552 | 215 | 206 | 1.043 | |
| 12006 | 12008 | 169480 | 43080 | 169430 | 43190 | 126 | 121 | 1.043 | |
| 1228 | 1912 | 184892 | 60301 | 181947 | 59921 | 3100 | 2969 | 1.044 | |
| 11102 | 1679 | 181837 | 44628 | 181766 | 44806 | 200 | 192 | 1.044 | |
| 1679 | 11102 | 181766 | 44806 | 181837 | 44628 | 200 | 192 | 1.044 | |
| 1304 | 1305 | 295223 | 113817 | 305081 | 114044 | 10300 | 9861 | 1.045 | |
| 1305 | 1304 | 305081 | 114044 | 295223 | 113817 | 10300 | 9861 | 1.045 | |
| 1107 | 1228 | 191132 | 59800 | 184892 | 60301 | 6540 | 6260 | 1.045 | |
| 1228 | 1107 | 184892 | 60301 | 191132 | 59800 | 6540 | 6260 | 1.045 | |
| 1248 | 1548 | 177804 | 45142 | 177823 | 45144 | 20 | 19 | 1.047 | |
| 1548 | 1248 | 177823 | 45144 | 177804 | 45142 | 20 | 19 | 1.047 | |
| 1541 | 1544 | 183379 | 44695 | 183027 | 44842 | 400 | 382 | 1.048 | |
| 1544 | 1541 | 183027 | 44842 | 183379 | 44695 | 400 | 382 | 1.048 | |
| 1227 | 13606 | 186749 | 57465 | 186402 | 57793 | 500 | 477 | 1.048 | |
| 13606 | 1227 | 186402 | 57793 | 186749 | 57465 | 500 | 477 | 1.048 | |
| 1065 | 1588 | 180121 | 44919 | 180180 | 44892 | 68 | 65 | 1.048 | |
| 1588 | 1065 | 180180 | 44892 | 180121 | 44919 | 68 | 65 | 1.048 | |
| 11099 | 12016 | 175380 | 49830 | 175440 | 51260 | 1500 | 1431 | 1.048 | |
| 12016 | 11099 | 175440 | 51260 | 175380 | 49830 | 1500 | 1431 | 1.048 | |
| 1194 | 13617 | 184224 | 51663 | 184228 | 50805 | 900 | 858 | 1.049 | |
| 13617 | 1194 | 184228 | 50805 | 184224 | 51663 | 900 | 858 | 1.049 | |
| 1522 | 1525 | 182334 | 44805 | 182333 | 44866 | 64 | 61 | 1.049 | |
| 1104 | 1255 | 199026 | 61860 | 198727 | 60219 | 1750 | 1668 | 1.049 | |
| 1255 | 1104 | 198727 | 60219 | 199026 | 61860 | 1750 | 1668 | 1.049 | |
| 11057 | 1926 | 173181 | 34252 | 167046 | 28186 | 9054 | 8628 | 1.049 | |
| 1926 | 11057 | 167046 | 28186 | 173181 | 34252 | 9054 | 8628 | 1.049 | |
| 1532 | 1592 | 181768 | 45552 | 181633 | 45265 | 333 | 317 | 1.050 | |
| 1592 | 1532 | 181633 | 45265 | 181768 | 45552 | 333 | 317 | 1.050 | |
| 11076 | 12031 | 180534 | 51163 | 181390 | 52184 | 1400 | 1332 | 1.051 | |
| 12031 | 11076 | 181390 | 52184 | 180534 | 51163 | 1400 | 1332 | 1.051 | |
| 1192 | 1193 | 183628 | 47944 | 183896 | 49634 | 1800 | 1710 | 1.052 | |
| 1193 | 1192 | 183896 | 49634 | 183628 | 47944 | 1800 | 1710 | 1.052 | |
| 11145 | 1803 | 165118 | 39565 | 163273 | 40547 | 2200 | 2090 | 1.052 | |
| 1803 | 11145 | 163273 | 40547 | 165118 | 39565 | 2200 | 2090 | 1.052 | |
| 11145 | 11146 | 165118 | 39565 | 164227 | 27156 | 13100 | 12441 | 1.053 | |
| 11146 | 11145 | 164227 | 27156 | 165118 | 39565 | 13100 | 12441 | 1.053 | |
| 13610 | 13614 | 169678 | 45878 | 168508 | 45066 | 1500 | 1425 | 1.053 | |
| 13614 | 13610 | 168508 | 45066 | 169678 | 45878 | 1500 | 1425 | 1.053 | |
| 11061 | 1925 | 178713 | 45023 | 178516 | 45054 | 210 | 199 | 1.053 | |
| 1925 | 11061 | 178516 | 45054 | 178713 | 45023 | 210 | 199 | 1.053 | |
| 11132 | 1535 | 183409 | 46323 | 183610 | 45912 | 482 | 458 | 1.053 | |
| 1535 | 11132 | 183610 | 45912 | 183409 | 46323 | 482 | 458 | 1.053 | |
| 1509 | 1536 | 183173 | 45735 | 183214 | 45792 | 74 | 70 | 1.054 | |
| 1536 | 1509 | 183214 | 45792 | 183173 | 45735 | 74 | 70 | 1.054 | |
| 11076 | 11080 | 180534 | 51163 | 178730 | 53719 | 3300 | 3129 | 1.055 | |
| 11080 | 11076 | 178730 | 53719 | 180534 | 51163 | 3300 | 3129 | 1.055 | |

| A Node | B Node | Ax | Ay | Bx | By | Modelled (m) | Crow Fly (m) | Modelled/Crow Fly | Comment |
|---|---|---|---|---|---|---|---|---|---|
| 8010 | 8033 | 437260 | 113430 | 367046 | 102374 | 75000 | 71080 | 1.055 | |
| 8033 | 8010 | 367046 | 102374 | 437260 | 113430 | 75000 | 71080 | 1.055 | |
| 1929 | 12000 | 172342 | 44572 | 172260 | 44360 | 240 | 227 | 1.056 | |
| 11107 | 11095 | 175309 | 47310 | 174760 | 46938 | 700 | 663 | 1.056 | |
| 1247 | 1303 | 246177 | 127900 | 257766 | 132191 | 13060 | 12358 | 1.057 | |
| 1303 | 1247 | 257766 | 132191 | 246177 | 127900 | 13060 | 12358 | 1.057 | |
| 1313 | 1591 | 178927 | 45049 | 178957 | 45063 | 35 | 33 | 1.057 | |
| 12018 | 13609 | 171990 | 50740 | 173880 | 50658 | 2000 | 1892 | 1.057 | |
| 13609 | 12018 | 173880 | 50658 | 171990 | 50740 | 2000 | 1892 | 1.057 | |
| 13600 | 1546 | 180768 | 49071 | 180846 | 47655 | 1500 | 1418 | 1.058 | |
| 1546 | 13600 | 180846 | 47655 | 180768 | 49071 | 1500 | 1418 | 1.058 | |
| 12020 | 13609 | 175890 | 54300 | 173880 | 50658 | 4400 | 4160 | 1.058 | |
| 13609 | 12020 | 173880 | 50658 | 175890 | 54300 | 4400 | 4160 | 1.058 | |
| 11078 | 11079 | 182034 | 52956 | 182175 | 52970 | 150 | 142 | 1.059 | |
| 11079 | 11078 | 182175 | 52970 | 182034 | 52956 | 150 | 142 | 1.059 | |
| 12034 | 1912 | 180500 | 57270 | 181947 | 59921 | 3200 | 3020 | 1.060 | |
| 1912 | 12034 | 181947 | 59921 | 180500 | 57270 | 3200 | 3020 | 1.060 | |
| 12050 | 12057 | 188360 | 56410 | 188710 | 56130 | 475 | 448 | 1.060 | |
| 12057 | 12050 | 188710 | 56130 | 188360 | 56410 | 475 | 448 | 1.060 | |
| 1239 | 1245 | 204202 | 68862 | 209944 | 82397 | 15600 | 14703 | 1.061 | |
| 1245 | 1239 | 209944 | 82397 | 204202 | 68862 | 15600 | 14703 | 1.061 | |
| 1555 | 6104 | 183398 | 45241 | 183312 | 45387 | 180 | 169 | 1.062 | |
| 6104 | 1555 | 183312 | 45387 | 183398 | 45241 | 180 | 169 | 1.062 | |
| 1228 | 1231 | 184892 | 60301 | 183925 | 61850 | 1940 | 1826 | 1.062 | |
| 1231 | 1228 | 183925 | 61850 | 184892 | 60301 | 1940 | 1826 | 1.062 | |
| 11156 | 12022 | 177806 | 48777 | 179380 | 48500 | 1700 | 1599 | 1.063 | |
| 12022 | 11156 | 179380 | 48500 | 177806 | 48777 | 1700 | 1599 | 1.063 | |
| 1263 | 1949 | 241440 | 60085 | 248449 | 57691 | 7880 | 7407 | 1.064 | |
| 1949 | 1263 | 248449 | 57691 | 241440 | 60085 | 7880 | 7407 | 1.064 | |
| 13620 | 1251 | 190920 | 57375 | 190413 | 54431 | 3180 | 2987 | 1.065 | |
| 1107 | 1232 | 191132 | 59800 | 191267 | 62378 | 2750 | 2582 | 1.065 | |
| 1232 | 1107 | 191267 | 62378 | 191132 | 59800 | 2750 | 2582 | 1.065 | |
| 1010 | 1584 | 182224 | 43892 | 182860 | 44221 | 764 | 716 | 1.067 | |
| 1584 | 1010 | 182860 | 44221 | 182224 | 43892 | 764 | 716 | 1.067 | |
| 12055 | 1227 | 188210 | 56510 | 186749 | 57465 | 1865 | 1745 | 1.069 | |
| 1227 | 12055 | 186749 | 57465 | 188210 | 56510 | 1865 | 1745 | 1.069 | |
| 1197 | 1199 | 184423 | 52937 | 184564 | 53862 | 1000 | 936 | 1.069 | |
| 1199 | 1197 | 184564 | 53862 | 184423 | 52937 | 1000 | 936 | 1.069 | |
| 1225 | 1246 | 229000 | 83000 | 213824 | 86690 | 16700 | 15618 | 1.069 | |
| 1246 | 1225 | 213824 | 86690 | 229000 | 83000 | 16700 | 15618 | 1.069 | |
| 1235 | 1916 | 192736 | 66262 | 193090 | 64838 | 1570 | 1467 | 1.070 | |
| 1916 | 1235 | 193090 | 64838 | 192736 | 66262 | 1570 | 1467 | 1.070 | |
| 13613 | 13614 | 169255 | 42468 | 168508 | 45066 | 2900 | 2703 | 1.073 | |
| 13614 | 13613 | 168508 | 45066 | 169255 | 42468 | 2900 | 2703 | 1.073 | |
| 1103 | 1917 | 197984 | 61226 | 195104 | 64597 | 4760 | 4434 | 1.074 | |
| 1917 | 1103 | 195104 | 64597 | 197984 | 61226 | 4760 | 4434 | 1.074 | |
| 1195 | 1196 | 184300 | 52153 | 184384 | 52658 | 550 | 512 | 1.074 | |
| 1196 | 1195 | 184384 | 52658 | 184300 | 52153 | 550 | 512 | 1.074 | |
| 1114 | 1115 | 180904 | 44907 | 181010 | 44679 | 270 | 251 | 1.074 | |
| 1115 | 1114 | 181010 | 44679 | 180904 | 44907 | 270 | 251 | 1.074 | |
| 1513 | 1570 | 182646 | 44826 | 182579 | 44827 | 72 | 67 | 1.075 | |
| 1570 | 1513 | 182579 | 44827 | 182646 | 44826 | 72 | 67 | 1.075 | |
| 11073 | 11076 | 180670 | 50817 | 180534 | 51163 | 400 | 372 | 1.076 | |
| 11076 | 11073 | 180534 | 51163 | 180670 | 50817 | 400 | 372 | 1.076 | |
| 1578 | 1579 | 182107 | 44828 | 181650 | 44911 | 500 | 464 | 1.076 | |
| 1579 | 1578 | 181650 | 44911 | 182107 | 44828 | 500 | 464 | 1.076 | |
| 12039 | 12040 | 181980 | 55070 | 182670 | 56280 | 1500 | 1393 | 1.077 | |
| 2001 | 2002 | 174735 | 46867 | 172791 | 45004 | 2900 | 2692 | 1.077 | |
| 2002 | 2001 | 172791 | 45004 | 174735 | 46867 | 2900 | 2692 | 1.077 | |
| 1233 | 1935 | 203712 | 64454 | 202624 | 63781 | 1380 | 1279 | 1.079 | |
| 1935 | 1233 | 202624 | 63781 | 203712 | 64454 | 1380 | 1279 | 1.079 | |
| 12054 | 1227 | 186130 | 55040 | 186749 | 57465 | 2700 | 2503 | 1.079 | |
| 1227 | 12054 | 186749 | 57465 | 186130 | 55040 | 2700 | 2503 | 1.079 | |
| 1066 | 1113 | 180144 | 44943 | 180222 | 44993 | 100 | 93 | 1.079 | |
| 1113 | 1066 | 180222 | 44993 | 180144 | 44943 | 100 | 93 | 1.079 | |
| 11099 | 12017 | 175380 | 49830 | 174690 | 50580 | 1100 | 1019 | 1.079 | |
| 12017 | 11099 | 174690 | 50580 | 175380 | 49830 | 1100 | 1019 | 1.079 | |
| 1566 | 1666 | 182280 | 44997 | 182275 | 45043 | 50 | 46 | 1.081 | |
| 1666 | 1566 | 182275 | 45043 | 182280 | 44997 | 50 | 46 | 1.081 | |
| 1229 | 1912 | 181492 | 60726 | 181947 | 59921 | 1000 | 925 | 1.081 | |
| 1912 | 1229 | 181947 | 59921 | 181492 | 60726 | 1000 | 925 | 1.081 | |
| 12035 | 12036 | 180320 | 57040 | 178650 | 57850 | 2010 | 1856 | 1.083 | |
| 12036 | 12035 | 178650 | 57850 | 180320 | 57040 | 2010 | 1856 | 1.083 | |
| 1033 | 1034 | 173453 | 39870 | 177031 | 36266 | 5500 | 5078 | 1.083 | |
| 1034 | 1033 | 177031 | 36266 | 173453 | 39870 | 5500 | 5078 | 1.083 | |
| 11080 | 12024 | 178730 | 53719 | 176740 | 50830 | 3800 | 3508 | 1.083 | |
| 12024 | 11080 | 176740 | 50830 | 178730 | 53719 | 3800 | 3508 | 1.083 | |
| 1238 | 1245 | 200068 | 73081 | 209944 | 82397 | 14710 | 13577 | 1.083 | |
| 1245 | 1238 | 209944 | 82397 | 200068 | 73081 | 14710 | 13577 | 1.083 | |
| 12020 | 11157 | 175890 | 54300 | 177642 | 54244 | 1900 | 1753 | 1.084 | |
| 1542 | 1543 | 182981 | 44866 | 183026 | 44856 | 50 | 46 | 1.085 | |
| 1250 | 1923 | 187534 | 46896 | 189784 | 46705 | 2450 | 2258 | 1.085 | |
| 1923 | 1250 | 189784 | 46705 | 187534 | 46896 | 2450 | 2258 | 1.085 | |
| 12002 | 13610 | 169440 | 43310 | 169678 | 45878 | 2800 | 2579 | 1.086 | |
| 13610 | 12002 | 169678 | 45878 | 169440 | 43310 | 2800 | 2579 | 1.086 | |
| 12016 | 12017 | 175440 | 51260 | 174690 | 50580 | 1100 | 1012 | 1.087 | |
| 12017 | 12016 | 174690 | 50580 | 175440 | 51260 | 1100 | 1012 | 1.087 | |
| 1218 | 1430 | 208947 | 65254 | 202917 | 63169 | 6940 | 6380 | 1.088 | |
| 13602 | 13617 | 182736 | 51708 | 184228 | 50805 | 1900 | 1745 | 1.089 | |
| 13617 | 13602 | 184228 | 50805 | 182736 | 51708 | 1900 | 1745 | 1.089 | |
| 1410 | 1430 | 199782 | 62347 | 202917 | 63169 | 3530 | 3241 | 1.089 | |
| 1430 | 1410 | 202917 | 63169 | 199782 | 62347 | 3530 | 3241 | 1.089 | |
| 13624 | 1410 | 192566 | 59155 | 199782 | 62347 | 8600 | 7891 | 1.090 | |
| 1410 | 13624 | 199782 | 62347 | 192566 | 59155 | 8600 | 7891 | 1.090 | |
| 12001 | 12000 | 172300 | 44620 | 172260 | 44360 | 287 | 263 | 1.091 | |
| 12040 | 13606 | 182670 | 56280 | 186402 | 57793 | 4400 | 4027 | 1.093 | |
| 13606 | 12040 | 186402 | 57793 | 182670 | 56280 | 4400 | 4027 | 1.093 | |

| A Node | B Node | Ax | Ay | Bx | By | Modelled (m) | Crow Fly (m) | Modelled/Crow Fly | Comment |
|---|---|---|---|---|---|---|---|---|---|
| 1228 | 13606 | 184892 | 60301 | 186402 | 57793 | 3200 | 2928 | 1.093 | |
| 13606 | 1228 | 186402 | 57793 | 184892 | 60301 | 3200 | 2928 | 1.093 | |
| 12023 | 12024 | 178890 | 49440 | 176740 | 50830 | 2800 | 2560 | 1.094 | |
| 12024 | 12023 | 176740 | 50830 | 178890 | 49440 | 2800 | 2560 | 1.094 | |
| 12000 | 12001 | 172260 | 44360 | 172300 | 44620 | 288 | 263 | 1.095 | |
| 1534 | 1577 | 182152 | 44856 | 182176 | 44871 | 31 | 28 | 1.095 | |
| 1577 | 1534 | 182176 | 44871 | 182152 | 44856 | 31 | 28 | 1.095 | |
| 12001 | 1929 | 172300 | 44620 | 172342 | 44572 | 70 | 64 | 1.098 | |
| 1929 | 12001 | 172342 | 44572 | 172300 | 44620 | 70 | 64 | 1.098 | |
| 12041 | 12043 | 182450 | 53050 | 182894 | 53127 | 495 | 451 | 1.098 | |
| 12043 | 12041 | 182894 | 53127 | 182450 | 53050 | 495 | 451 | 1.098 | |
| 12053 | 1209 | 186470 | 54990 | 188590 | 56405 | 2800 | 2549 | 1.099 | |
| 1209 | 12053 | 188590 | 56405 | 186470 | 54990 | 2800 | 2549 | 1.099 | |
| 11072 | 11080 | 178829 | 53765 | 178730 | 53719 | 120 | 109 | 1.099 | |
| 11080 | 11072 | 178730 | 53719 | 178829 | 53765 | 120 | 109 | 1.099 | |
| 5891 | 5894 | 179582 | 45094 | 179702 | 45068 | 135 | 123 | 1.099 | |
| 5894 | 5891 | 179702 | 45068 | 179582 | 45094 | 135 | 123 | 1.099 | |
| 11073 | 11074 | 180670 | 50817 | 180543 | 50824 | 140 | 127 | 1.101 | |
| 11074 | 11073 | 180543 | 50824 | 180670 | 50817 | 140 | 127 | 1.101 | |
| 12014 | 12018 | 172680 | 48490 | 171990 | 50740 | 2600 | 2353 | 1.105 | |
| 12018 | 12014 | 171990 | 50740 | 172680 | 48490 | 2600 | 2353 | 1.105 | |
| 12016 | 12020 | 175440 | 51260 | 175890 | 54300 | 3400 | 3073 | 1.106 | |
| 12020 | 12016 | 175890 | 54300 | 175440 | 51260 | 3400 | 3073 | 1.106 | |
| 1305 | 8001 | 305081 | 114044 | 361400 | 183520 | 99000 | 89436 | 1.107 | |
| 8001 | 1305 | 361400 | 183520 | 305081 | 114044 | 99000 | 89436 | 1.107 | |
| 1571 | 1513 | 182638 | 44788 | 182646 | 44826 | 43 | 39 | 1.107 | |
| 12037 | 12038 | 181510 | 52260 | 181740 | 51720 | 650 | 587 | 1.107 | |
| 12038 | 12037 | 181740 | 51720 | 181510 | 52260 | 650 | 587 | 1.107 | |
| 1194 | 1195 | 184224 | 51663 | 184300 | 52153 | 550 | 496 | 1.109 | |
| 1195 | 1194 | 184300 | 52153 | 184224 | 51663 | 550 | 496 | 1.109 | |
| 11103 | 1679 | 181735 | 44773 | 181766 | 44806 | 50 | 45 | 1.110 | |
| 1679 | 11103 | 181766 | 44806 | 181735 | 44773 | 50 | 45 | 1.110 | |
| 1262 | 1263 | 236424 | 69251 | 241440 | 60085 | 11600 | 10449 | 1.110 | |
| 1263 | 1262 | 241440 | 60085 | 236424 | 69251 | 11600 | 10449 | 1.110 | |
| 1585 | 1716 | 182155 | 43792 | 181842 | 43352 | 600 | 540 | 1.110 | |
| 1716 | 1585 | 181842 | 43352 | 182155 | 43792 | 600 | 540 | 1.110 | |
| 11127 | 1583 | 182212 | 43923 | 182292 | 44151 | 268 | 241 | 1.111 | |
| 1583 | 11127 | 182292 | 44151 | 182212 | 43923 | 268 | 241 | 1.111 | |
| 12040 | 13607 | 182670 | 56280 | 185810 | 54410 | 4060 | 3655 | 1.111 | |
| 13607 | 12040 | 185810 | 54410 | 182670 | 56280 | 4060 | 3655 | 1.111 | |
| 11140 | 1255 | 201678 | 57315 | 198727 | 60219 | 4600 | 4141 | 1.111 | |
| 1255 | 11140 | 198727 | 60219 | 201678 | 57315 | 4600 | 4141 | 1.111 | |
| 1510 | 2217 | 182856 | 44918 | 182943 | 44871 | 110 | 99 | 1.112 | |
| 2217 | 1510 | 182943 | 44871 | 182856 | 44918 | 110 | 99 | 1.112 | |
| 11146 | 1805 | 164227 | 27156 | 158241 | 29117 | 7010 | 6299 | 1.113 | |
| 1805 | 11146 | 158241 | 29117 | 164227 | 27156 | 7010 | 6299 | 1.113 | |
| 11135 | 11148 | 177420 | 36768 | 179312 | 39194 | 3432 | 3077 | 1.115 | |
| 11148 | 11135 | 179312 | 39194 | 177420 | 36768 | 3432 | 3077 | 1.115 | |
| 8010 | 8020 | 437260 | 113430 | 501640 | 167720 | 94000 | 84215 | 1.116 | |
| 8020 | 8010 | 501640 | 167720 | 437260 | 113430 | 94000 | 84215 | 1.116 | |
| 11150 | 1559 | 182713 | 45007 | 182765 | 44982 | 65 | 58 | 1.117 | |
| 1559 | 11150 | 182765 | 44982 | 182713 | 45007 | 65 | 58 | 1.117 | |
| 8000 | 8030 | 361550 | 183740 | 504560 | 178520 | 160000 | 143105 | 1.118 | |
| 8030 | 8000 | 504560 | 178520 | 361550 | 183740 | 160000 | 143105 | 1.118 | |
| 1527 | 1577 | 182194 | 44892 | 182176 | 44871 | 31 | 28 | 1.121 | |
| 1577 | 1527 | 182176 | 44871 | 182194 | 44892 | 31 | 28 | 1.121 | |
| 1430 | 1217 | 202917 | 63169 | 208720 | 65320 | 6940 | 6189 | 1.121 | |
| 13613 | 13616 | 169255 | 42468 | 169794 | 41878 | 900 | 799 | 1.126 | |
| 13616 | 13613 | 169794 | 41878 | 169255 | 42468 | 900 | 799 | 1.126 | |
| 1105 | 1935 | 200483 | 62748 | 202624 | 63781 | 2680 | 2377 | 1.127 | |
| 1935 | 1105 | 202624 | 63781 | 200483 | 62748 | 2680 | 2377 | 1.127 | |
| 1505 | 2216 | 182893 | 44741 | 182952 | 44801 | 95 | 84 | 1.129 | |
| 2216 | 1505 | 182952 | 44801 | 182893 | 44741 | 95 | 84 | 1.129 | |
| 1926 | 1927 | 167046 | 28186 | 166631 | 26408 | 2062 | 1826 | 1.129 | |
| 1927 | 1926 | 166631 | 26408 | 167046 | 28186 | 2062 | 1826 | 1.129 | |
| 11150 | 11151 | 182713 | 45007 | 182732 | 45047 | 50 | 44 | 1.129 | |
| 11151 | 11150 | 182732 | 45047 | 182713 | 45007 | 50 | 44 | 1.129 | |
| 1226 | 1262 | 234169 | 83627 | 236424 | 69251 | 16440 | 14552 | 1.130 | |
| 1262 | 1226 | 236424 | 69251 | 234169 | 83627 | 16440 | 14552 | 1.130 | |
| 11131 | 1192 | 183392 | 46463 | 183628 | 47944 | 1700 | 1500 | 1.134 | |
| 1192 | 11131 | 183628 | 47944 | 183392 | 46463 | 1700 | 1500 | 1.134 | |
| 1237 | 1938 | 193872 | 68340 | 195738 | 71527 | 4190 | 3693 | 1.135 | |
| 1938 | 1237 | 195738 | 71527 | 193872 | 68340 | 4190 | 3693 | 1.135 | |
| 1238 | 1239 | 200068 | 73081 | 204202 | 68862 | 6710 | 5907 | 1.136 | |
| 1239 | 1238 | 204202 | 68862 | 200068 | 73081 | 6710 | 5907 | 1.136 | |
| 1307 | 1946 | 293003 | 87901 | 255000 | 92000 | 43440 | 38223 | 1.136 | |
| 1946 | 1307 | 255000 | 92000 | 293003 | 87901 | 43440 | 38223 | 1.136 | |
| 1251 | 13620 | 190413 | 54431 | 190920 | 57375 | 3400 | 2987 | 1.138 | |
| 1263 | 1264 | 241440 | 60085 | 233120 | 58888 | 9570 | 8406 | 1.139 | |
| 1264 | 1263 | 233120 | 58888 | 241440 | 60085 | 9570 | 8406 | 1.139 | |
| 11073 | 13600 | 180670 | 50817 | 180768 | 49071 | 2000 | 1749 | 1.144 | |
| 13600 | 11073 | 180768 | 49071 | 180670 | 50817 | 2000 | 1749 | 1.144 | |
| 1802 | 1803 | 166002 | 41727 | 163273 | 40547 | 3403 | 2973 | 1.145 | |
| 1803 | 1802 | 163273 | 40547 | 166002 | 41727 | 3403 | 2973 | 1.145 | |
| 1102 | 1103 | 196674 | 60530 | 197984 | 61226 | 1700 | 1483 | 1.146 | |
| 1103 | 1102 | 197984 | 61226 | 196674 | 60530 | 1700 | 1483 | 1.146 | |
| 11101 | 11153 | 183943 | 45792 | 185811 | 45999 | 2155 | 1880 | 1.146 | |
| 11153 | 11101 | 185811 | 45999 | 183943 | 45792 | 2155 | 1880 | 1.146 | |
| 12040 | 12039 | 182670 | 56280 | 181980 | 55070 | 1600 | 1393 | 1.149 | |
| 1302 | 1804 | 157553 | 38518 | 154440 | 36147 | 4500 | 3913 | 1.150 | Buffer Network |
| 1804 | 1302 | 154440 | 36147 | 157553 | 38518 | 4500 | 3913 | 1.150 | Buffer Network |
| 1198 | 12044 | 184350 | 53898 | 182973 | 53155 | 1800 | 1565 | 1.150 | Distance correct |
| 12044 | 1198 | 182973 | 53155 | 184350 | 53898 | 1800 | 1565 | 1.150 | Distance correct |
| 12052 | 13608 | 186220 | 54640 | 189285 | 50923 | 5550 | 4818 | 1.152 | Distance is correct |
| 13608 | 12052 | 189285 | 50923 | 186220 | 54640 | 5550 | 4818 | 1.152 | Distance is correct |
| 1948 | 8033 | 296831 | 91318 | 367046 | 102374 | 82000 | 71080 | 1.154 | Buffer Network |
| 8033 | 1948 | 367046 | 102374 | 296831 | 91318 | 82000 | 71080 | 1.154 | Buffer Network |

| A Node | B Node | Ax | Ay | Bx | By | Modelled (m) | Crow Fly (m) | Modelled/Crow Fly | Comment |
|---|---|---|---|---|---|---|---|---|---|
| 1105 | 1430 | 200483 | 62748 | 202917 | 63169 | 2850 | 2470 | 1.154 | Buffer Network |
| 1430 | 1105 | 202917 | 63169 | 200483 | 62748 | 2850 | 2470 | 1.154 | Buffer Network |
| 1301 | 1805 | 150634 | 31870 | 158241 | 29117 | 9336 | 8090 | 1.154 | Buffer Network |
| 1805 | 1301 | 158241 | 29117 | 150634 | 31870 | 9336 | 8090 | 1.154 | Buffer Network |
| 11136 | 13622 | 178103 | 35217 | 177027 | 36252 | 1723 | 1493 | 1.154 | Distance is correct |
| 13622 | 11136 | 177027 | 36252 | 178103 | 35217 | 1723 | 1493 | 1.154 | Distance is correct |
| 1220 | 1260 | 209126 | 65534 | 220815 | 65141 | 13500 | 11696 | 1.154 | Buffer Network |
| 1260 | 1220 | 220815 | 65141 | 209126 | 65534 | 13500 | 11696 | 1.154 | Buffer Network |
| 11109 | 11128 | 182709 | 44545 | 182755 | 44532 | 55 | 48 | 1.155 | Distance acceptable, In Truro |
| 11128 | 11109 | 182755 | 44532 | 182709 | 44545 | 55 | 48 | 1.155 | Distance acceptable, In Truro |
| 13604 | 13605 | 184789 | 50133 | 185844 | 50010 | 1230 | 1062 | 1.158 | Stub end |
| 13605 | 13604 | 185844 | 50010 | 184789 | 50133 | 1230 | 1062 | 1.158 | Stub end |
| 11149 | 20052 | 175820 | 44751 | 175485 | 44590 | 430 | 371 | 1.158 | Distance is correct |
| 12031 | 12032 | 181390 | 52184 | 181140 | 53010 | 1000 | 863 | 1.158 | Distance correct |
| 12032 | 12031 | 181140 | 53010 | 181390 | 52184 | 1000 | 863 | 1.158 | Distance correct |
| 11142 | 1926 | 170528 | 40570 | 167046 | 28186 | 14900 | 12864 | 1.158 | Buffer Network |
| 1926 | 11142 | 167046 | 28186 | 170528 | 40570 | 14900 | 12864 | 1.158 | Buffer Network |
| 13615 | 1802 | 165556 | 44800 | 166002 | 41727 | 3600 | 3105 | 1.160 | Distance is correct |
| 1802 | 13615 | 166002 | 41727 | 165556 | 44800 | 3600 | 3105 | 1.160 | Distance is correct |
| 12005 | 12010 | 169550 | 43100 | 169590 | 43070 | 58 | 50 | 1.160 | Distance correct |
| 12010 | 12005 | 169590 | 43070 | 169550 | 43100 | 58 | 50 | 1.160 | Distance correct |
| 11121 | 1322 | 177810 | 45050 | 178127 | 45020 | 369 | 318 | 1.160 | Distance acceptable, threemilestone |
| 1322 | 11121 | 178127 | 45020 | 177810 | 45050 | 369 | 318 | 1.160 | Distance acceptable, threemilestone |
| 1568 | 1668 | 182386 | 44808 | 182361 | 44773 | 50 | 43 | 1.162 | Stub end |
| 1668 | 1568 | 182361 | 44773 | 182386 | 44808 | 50 | 43 | 1.162 | Stub end |
| 1240 | 1259 | 206100 | 66975 | 206522 | 67055 | 500 | 430 | 1.164 | Buffer Network |
| 1259 | 1240 | 206522 | 67055 | 206100 | 66975 | 500 | 430 | 1.164 | Buffer Network |
| 12013 | 13619 | 174460 | 46760 | 174155 | 47174 | 600 | 514 | 1.167 | Coordinates are wrong. Distances are correct |
| 13619 | 12013 | 174155 | 47174 | 174460 | 46760 | 600 | 514 | 1.167 | Coordinates are wrong. Distances are correct |
| 12017 | 13609 | 174690 | 50580 | 173880 | 50658 | 950 | 814 | 1.167 | Distance correct |
| 13609 | 12017 | 173880 | 50658 | 174690 | 50580 | 950 | 814 | 1.167 | Distance correct |
| 1653 | 6104 | 183284 | 45736 | 183312 | 45387 | 410 | 350 | 1.171 | Distance correct |
| 6104 | 1653 | 183312 | 45387 | 183284 | 45736 | 410 | 350 | 1.171 | Distance correct |
| 8000 | 8070 | 361550 | 183740 | 402580 | 294180 | 138000 | 117815 | 1.171 | Buffer Network |
| 8030 | 8040 | 504560 | 178520 | 511290 | 203230 | 30000 | 25610 | 1.171 | Buffer Network |
| 1243 | 1221 | 208344 | 67317 | 208523 | 68002 | 830 | 708 | 1.172 | Buffer Network |
| 1010 | 11123 | 182224 | 43892 | 182172 | 43815 | 109 | 93 | 1.173 | Distance acceptable, Near Truro |
| 11123 | 1010 | 182172 | 43815 | 182224 | 43892 | 109 | 93 | 1.173 | Distance acceptable, Near Truro |
| 11070 | 11079 | 181963 | 52829 | 182175 | 52970 | 300 | 255 | 1.178 | Distance correct |
| 11079 | 11070 | 182175 | 52970 | 181963 | 52829 | 300 | 255 | 1.178 | Distance correct |
| 1307 | 1948 | 293003 | 87901 | 296831 | 91318 | 6050 | 5131 | 1.179 | Buffer Network |
| 1948 | 1307 | 296831 | 91318 | 293003 | 87901 | 6050 | 5131 | 1.179 | Buffer Network |
| 12042 | 13602 | 182700 | 52300 | 182736 | 51708 | 700 | 593 | 1.181 | Dummy node. Route length is good |
| 13602 | 12042 | 182736 | 51708 | 182700 | 52300 | 700 | 593 | 1.181 | Dummy node. Route length is good |
| 1301 | 1806 | 150634 | 31870 | 145989 | 29835 | 6000 | 5071 | 1.183 | Buffer Network |
| 1806 | 1301 | 145989 | 29835 | 150634 | 31870 | 6000 | 5071 | 1.183 | Buffer Network |
| 1524 | 1570 | 182519 | 44818 | 182579 | 44827 | 72 | 61 | 1.187 | Distance acceptable, in Truro |
| 1570 | 1524 | 182579 | 44827 | 182519 | 44818 | 72 | 61 | 1.187 | Distance acceptable, in Truro |
| 1260 | 1271 | 220815 | 65141 | 223000 | 65000 | 2600 | 2190 | 1.187 | Buffer Network |
| 1271 | 1260 | 223000 | 65000 | 220815 | 65141 | 2600 | 2190 | 1.187 | Buffer Network |
| 1100 | 13624 | 192374 | 59069 | 192566 | 59155 | 250 | 210 | 1.189 | Distance correct |
| 13624 | 1100 | 192566 | 59155 | 192374 | 59069 | 250 | 210 | 1.189 | Distance correct |
| 11146 | 1927 | 164227 | 27156 | 166631 | 26408 | 3000 | 2518 | 1.192 | Buffer Network |
| 1927 | 11146 | 166631 | 26408 | 164227 | 27156 | 3000 | 2518 | 1.192 | Buffer Network |
| 11100 | 1530 | 182301 | 45148 | 182418 | 45054 | 180 | 151 | 1.196 | Distance acceptable, in Truro |
| 1530 | 11100 | 182418 | 45054 | 182301 | 45148 | 180 | 151 | 1.196 | Distance acceptable, in Truro |
| 1315 | 6901 | 178975 | 45041 | 178965 | 45018 | 30 | 25 | 1.196 | Distance correct |
| 13624 | 13625 | 192566 | 59155 | 192377 | 59069 | 250 | 208 | 1.204 | Distance correct |
| 11111 | 1532 | 181679 | 45756 | 181768 | 45552 | 270 | 223 | 1.212 | Distance acceptable, Near Truro |
| 1532 | 11111 | 181768 | 45552 | 181679 | 45756 | 270 | 223 | 1.212 | Distance acceptable, Near Truro |
| 1100 | 13623 | 192374 | 59069 | 192168 | 58811 | 400 | 330 | 1.212 | Distance correct |
| 13623 | 1100 | 192168 | 58811 | 192374 | 59069 | 400 | 330 | 1.212 | Distance correct |
| 13623 | 13627 | 192168 | 58811 | 192373 | 59070 | 400 | 330 | 1.213 | Distance correct |
| 1226 | 1247 | 234169 | 83627 | 246177 | 127900 | 55760 | 45873 | 1.216 | Buffer Network |
| 1247 | 1226 | 246177 | 127900 | 234169 | 83627 | 55760 | 45873 | 1.216 | Buffer Network |
| 11140 | 1275 | 201678 | 57315 | 203507 | 62164 | 6300 | 5183 | 1.216 | Buffer Network |
| 1275 | 11140 | 203507 | 62164 | 201678 | 57315 | 6300 | 5183 | 1.216 | Buffer Network |
| 13626 | 13623 | 192374 | 59067 | 192168 | 58811 | 400 | 328 | 1.219 | Distance correct |
| 1032 | 2003 | 174549 | 44290 | 172752 | 44197 | 2200 | 1800 | 1.223 | Distance acceptable, near Scorrier |
| 2003 | 1032 | 172752 | 44197 | 174549 | 44290 | 2200 | 1800 | 1.223 | Distance acceptable, near Scorrier |
| 3110 | 3111 | 178986 | 45054 | 179113 | 45085 | 160 | 131 | 1.224 | Coordinates wrong, Distance acceptable, Edge of Truro |
| 3111 | 3110 | 179113 | 45085 | 178986 | 45054 | 160 | 131 | 1.224 | Coordinates wrong, Distance acceptable, Edge of Truro |
| 12014 | 12015 | 172680 | 48490 | 169400 | 47830 | 4100 | 3346 | 1.225 | Stub end |
| 12015 | 12014 | 169400 | 47830 | 172680 | 48490 | 4100 | 3346 | 1.225 | Stub end |
| 11143 | 11144 | 168748 | 42331 | 166307 | 41032 | 3400 | 2765 | 1.230 | Buffer Network |
| 11144 | 11143 | 166307 | 41032 | 168748 | 42331 | 3400 | 2765 | 1.230 | Buffer Network |
| 11134 | 13608 | 189664 | 51641 | 189285 | 50923 | 1000 | 812 | 1.232 | Distance correct |
| 13608 | 11134 | 189285 | 50923 | 189664 | 51641 | 1000 | 812 | 1.232 | Distance correct |
| 1032 | 2004 | 174549 | 44290 | 173352 | 43081 | 2100 | 1701 | 1.235 | Distance correct |
| 2004 | 1032 | 173352 | 43081 | 174549 | 44290 | 2100 | 1701 | 1.235 | Distance correct |
| 11137 | 5888 | 180198 | 44890 | 180354 | 44867 | 195 | 158 | 1.235 | Distance acceptable, Near Truro |
| 5888 | 11137 | 180354 | 44867 | 180198 | 44890 | 195 | 158 | 1.235 | Distance acceptable, Near Truro |
| 11070 | 11078 | 181963 | 52829 | 182034 | 52956 | 180 | 145 | 1.237 | Distance correct |
| 11078 | 11070 | 182034 | 52956 | 181963 | 52829 | 180 | 145 | 1.237 | Distance correct |
| 12130 | 13630 | 181263 | 46706 | 180870 | 47614 | 1225 | 990 | 1.237 | Distance is correct |
| 13630 | 12130 | 180870 | 47614 | 181263 | 46706 | 1225 | 990 | 1.237 | Distance is correct |
| 2000 | 2001 | 174813 | 46888 | 174735 | 46867 | 100 | 81 | 1.238 | Distance correct |
| 13601 | 13602 | 182572 | 51254 | 182736 | 51708 | 600 | 483 | 1.243 | Buffer Network |
| 13602 | 13601 | 182736 | 51708 | 182572 | 51254 | 600 | 483 | 1.243 | Buffer Network |
| 1243 | 1244 | 208344 | 67317 | 208532 | 66412 | 1150 | 924 | 1.244 | Buffer Network |
| 1244 | 1243 | 208532 | 66412 | 208344 | 67317 | 1150 | 924 | 1.244 | Buffer Network |
| 1225 | 1942 | 229000 | 83000 | 213742 | 73595 | 22300 | 17924 | 1.244 | Buffer Network |
| 1942 | 1225 | 213742 | 73595 | 229000 | 83000 | 22300 | 17924 | 1.244 | Buffer Network |
| 11151 | 1657 | 182732 | 45047 | 182878 | 45253 | 315 | 252 | 1.249 | Distance correct |
| 1657 | 11151 | 182878 | 45253 | 182732 | 45047 | 315 | 252 | 1.249 | Distance correct |
| 1230 | 1273 | 182001 | 62129 | 181846 | 61426 | 900 | 720 | 1.250 | Buffer Network |
| 1273 | 1230 | 181846 | 61426 | 182001 | 62129 | 900 | 720 | 1.250 | Buffer Network |

| A Node | B Node | Ax | Ay | Bx | By | Modelled (m) | Crow Fly (m) | Modelled/Crow Fly | Comment |
|---|---|---|---|---|---|---|---|---|---|
| 1905 | 1906 | 194248 | 61742 | 195916 | 61384 | 2140 | 1706 | 1.254 | Buffer Network |
| 1906 | 1905 | 195916 | 61384 | 194248 | 61742 | 2140 | 1706 | 1.254 | Buffer Network |
| 1239 | 1240 | 204202 | 68862 | 206100 | 66975 | 3360 | 2676 | 1.255 | Buffer Network |
| 1240 | 1239 | 206100 | 66975 | 204202 | 68862 | 3360 | 2676 | 1.255 | Buffer Network |
| 1242 | 1243 | 207977 | 66531 | 208344 | 67317 | 1090 | 867 | 1.257 | Buffer Network |
| 1243 | 1242 | 208344 | 67317 | 207977 | 66531 | 1090 | 867 | 1.257 | Buffer Network |
| 8000 | 8010 | 361550 | 183740 | 437260 | 113430 | 130000 | 103322 | 1.258 | Buffer Network |
| 8010 | 8000 | 437260 | 113430 | 361550 | 183740 | 130000 | 103322 | 1.258 | Buffer Network |
| 1531 | 1560 | 182543 | 45090 | 182718 | 45428 | 479 | 381 | 1.258 | Distance acceptable, in Truro |
| 1560 | 1531 | 182718 | 45428 | 182543 | 45090 | 479 | 381 | 1.258 | Distance acceptable, in Truro |
| 11059 | 1167 | 200600 | 52000 | 196415 | 49684 | 6026 | 4783 | 1.260 | Buffer Network |
| 1167 | 11059 | 196415 | 49684 | 200600 | 52000 | 6026 | 4783 | 1.260 | Buffer Network |
| 12007 | 1801 | 169290 | 42990 | 169760 | 43380 | 770 | 611 | 1.261 | Coordinates wrong for visual purpose, Distance acceptable, A30 Redruth |
| 1801 | 12007 | 169760 | 43380 | 169290 | 42990 | 770 | 611 | 1.261 | Coordinates wrong for visual purpose, Distance acceptable, A30 Redruth |
| 1223 | 1224 | 208995 | 68998 | 211215 | 70911 | 3700 | 2931 | 1.263 | Buffer Network |
| 1224 | 1223 | 211215 | 70911 | 208995 | 68998 | 3700 | 2931 | 1.263 | Buffer Network |
| 1306 | 1307 | 278548 | 71962 | 293003 | 87901 | 27170 | 21517 | 1.263 | Buffer Network |
| 1307 | 1306 | 293003 | 87901 | 278548 | 71962 | 27170 | 21517 | 1.263 | Buffer Network |
| 11102 | 1501 | 181837 | 44628 | 181549 | 44548 | 379 | 299 | 1.267 | Distance acceptable, in Truro |
| 1501 | 11102 | 181549 | 44548 | 181837 | 44628 | 379 | 299 | 1.267 | Distance acceptable, in Truro |
| 1031 | 11147 | 172157 | 44078 | 171790 | 43850 | 548 | 432 | 1.269 | Distance correct |
| 12007 | 12008 | 169290 | 42990 | 169430 | 43190 | 310 | 244 | 1.270 | Coordinates wrong for visual purpose, Distance acceptable, A30 Redruth |
| 1262 | 1947 | 236424 | 69251 | 247625 | 73750 | 15400 | 12071 | 1.276 | Buffer Network |
| 1947 | 1262 | 247625 | 73750 | 236424 | 69251 | 15400 | 12071 | 1.276 | Buffer Network |
| 12052 | 13607 | 186220 | 54640 | 185810 | 54410 | 600 | 470 | 1.276 | Dummy node. Route length is good |
| 13607 | 12052 | 185810 | 54410 | 186220 | 54640 | 600 | 470 | 1.276 | Dummy node. Route length is good |
| 1567 | 1521 | 182255 | 44798 | 182211 | 44768 | 68 | 53 | 1.277 | Distance acceptable, in Truro |
| 1579 | 1679 | 181650 | 44911 | 181766 | 44806 | 200 | 156 | 1.278 | Distance acceptable, in Truro |
| 1679 | 1579 | 181766 | 44806 | 181650 | 44911 | 200 | 156 | 1.278 | Distance acceptable, in Truro |
| 1516 | 1515 | 182772 | 44703 | 182696 | 44724 | 101 | 79 | 1.281 | Distance acceptable, in Truro |
| 11153 | 1250 | 185811 | 45999 | 187534 | 46896 | 2490 | 1942 | 1.282 | Distance acceptable, in Truro |
| 1250 | 11153 | 187534 | 46896 | 185811 | 45999 | 2490 | 1942 | 1.282 | Distance acceptable, in Truro |
| 1012 | 1556 | 183022 | 44871 | 183157 | 45011 | 250 | 194 | 1.285 | Distance acceptable, in Truro |
| 1556 | 1012 | 183157 | 45011 | 183022 | 44871 | 250 | 194 | 1.285 | Distance acceptable, in Truro |
| 11148 | 1901 | 179312 | 39194 | 181012 | 41376 | 3568 | 2766 | 1.290 | Distance acceptable, near Truro |
| 1901 | 11148 | 181012 | 41376 | 179312 | 39194 | 3568 | 2766 | 1.290 | Distance acceptable, near Truro |
| 1540 | 1545 | 183033 | 44491 | 182982 | 44796 | 400 | 309 | 1.294 | Stub end |
| 1545 | 1540 | 182982 | 44796 | 183033 | 44491 | 400 | 309 | 1.294 | Stub end |
| 1246 | 1247 | 213824 | 86690 | 246177 | 127900 | 68040 | 52393 | 1.299 | Buffer Network |
| 1247 | 1246 | 246177 | 127900 | 213824 | 86690 | 68040 | 52393 | 1.299 | Buffer Network |
| 12050 | 1209 | 188360 | 56410 | 188590 | 56405 | 300 | 230 | 1.304 | Distance is correct |
| 1209 | 12050 | 188590 | 56405 | 188360 | 56410 | 300 | 230 | 1.304 | Distance is correct |
| 1586 | 1686 | 181241 | 44673 | 181373 | 44983 | 441 | 337 | 1.309 | Distance acceptable, in Truro |
| 1686 | 1586 | 181373 | 44983 | 181241 | 44673 | 441 | 337 | 1.309 | Distance acceptable, in Truro |
| 1517 | 1593 | 182590 | 44580 | 182637 | 44640 | 100 | 76 | 1.312 | Stub end |
| 1593 | 1517 | 182637 | 44640 | 182590 | 44580 | 100 | 76 | 1.312 | Stub end |
| 1690 | 6901 | 179127 | 44808 | 178965 | 45018 | 349 | 265 | 1.316 | Stub end |
| 6901 | 1690 | 178965 | 45018 | 179127 | 44808 | 349 | 265 | 1.316 | Stub end |
| 13614 | 13615 | 168508 | 45066 | 165556 | 44800 | 3900 | 2964 | 1.316 | Distance is correct |
| 13615 | 13614 | 165556 | 44800 | 168508 | 45066 | 3900 | 2964 | 1.316 | Distance is correct |
| 1514 | 1571 | 182632 | 44751 | 182638 | 44788 | 50 | 37 | 1.334 | Distance acceptable, in Truro |
| 2003 | 2004 | 172752 | 44197 | 173352 | 43081 | 1700 | 1266 | 1.342 | Distance correct |
| 2004 | 2003 | 173352 | 43081 | 172752 | 44197 | 1700 | 1266 | 1.342 | Distance correct |
| 11091 | 2001 | 174725 | 46901 | 174735 | 46867 | 49 | 35 | 1.386 | Coordinates wrong for visual purpose, Distance acceptable, Chiverton |
| 2001 | 11091 | 174735 | 46867 | 174725 | 46901 | 49 | 35 | 1.386 | Coordinates wrong for visual purpose, Distance acceptable, Chiverton |
| 12004 | 12005 | 169560 | 43140 | 169550 | 43100 | 58 | 41 | 1.407 | Distance correct |
| 1561 | 1661 | 182520 | 45085 | 182539 | 45055 | 50 | 36 | 1.408 | Stub end |
| 1661 | 1561 | 182539 | 45055 | 182520 | 45085 | 50 | 36 | 1.408 | Stub end |
| 13612 | 13616 | 169866 | 41756 | 169794 | 41878 | 200 | 141 | 1.414 | Distance is correct |
| 13616 | 13612 | 169794 | 41878 | 169866 | 41756 | 200 | 141 | 1.414 | Distance is correct |
| 1681 | 1682 | 182076 | 44475 | 182166 | 44434 | 140 | 99 | 1.416 | Stub end |
| 1682 | 1681 | 182166 | 44434 | 182076 | 44475 | 140 | 99 | 1.416 | Stub end |
| 1543 | 1544 | 183026 | 44856 | 183027 | 44842 | 20 | 14 | 1.425 | Distance correct |
| 20052 | 11149 | 175485 | 44590 | 175820 | 44751 | 530 | 371 | 1.427 | Coordinates are wrong. Distances are good. |
| 1065 | 5898 | 180121 | 44919 | 180080 | 44920 | 59 | 41 | 1.439 | Coordinates are wrong. Distances are good. |
| 5898 | 1065 | 180080 | 44920 | 180121 | 44919 | 59 | 41 | 1.439 | Coordinates are wrong. Distances are good. |
| 13620 | 13621 | 190920 | 57375 | 191110 | 57297 | 300 | 206 | 1.460 | Distance is correct |
| 13621 | 13620 | 191110 | 57297 | 190920 | 57375 | 300 | 206 | 1.460 | Distance is correct |
| 1538 | 1586 | 181275 | 44677 | 181241 | 44673 | 50 | 34 | 1.461 | Distance acceptable, in Truro |
| 1586 | 1538 | 181241 | 44673 | 181275 | 44677 | 50 | 34 | 1.461 | Distance acceptable, in Truro |
| 1430 | 1935 | 202917 | 63169 | 202624 | 63781 | 1000 | 679 | 1.474 | Buffer Network |
| 1935 | 1430 | 202624 | 63781 | 202917 | 63169 | 1000 | 679 | 1.474 | Buffer Network |
| 11059 | 1166 | 200600 | 52000 | 196703 | 53211 | 6026 | 4081 | 1.477 | Buffer Network |
| 1166 | 11059 | 196703 | 53211 | 200600 | 52000 | 6026 | 4081 | 1.477 | Buffer Network |
| 1251 | 1924 | 190413 | 54431 | 189985 | 52355 | 3140 | 2120 | 1.481 | Buffer Network |
| 1924 | 1251 | 189985 | 52355 | 190413 | 54431 | 3140 | 2120 | 1.481 | Buffer Network |
| 1530 | 1562 | 182418 | 45054 | 182445 | 45031 | 53 | 35 | 1.494 | Distance acceptable, in Truro |
| 1562 | 1530 | 182445 | 45031 | 182418 | 45054 | 53 | 35 | 1.494 | Distance acceptable, in Truro |
| 1576 | 1676 | 182073 | 44715 | 182095 | 44690 | 50 | 33 | 1.501 | Stub end |
| 1676 | 1576 | 182095 | 44690 | 182073 | 44715 | 50 | 33 | 1.501 | Stub end |
| 1031 | 12000 | 172157 | 44078 | 172260 | 44360 | 455 | 300 | 1.515 | Coordinates are wrong. Distances are good. |
| 12000 | 1031 | 172260 | 44360 | 172157 | 44078 | 455 | 300 | 1.515 | Coordinates are wrong. Distances are good. |
| 11149 | 13618 | 175820 | 44751 | 175266 | 45556 | 1500 | 977 | 1.535 | Coordinates are wrong. Distances are good. Constraint Bridge |
| 13618 | 11149 | 175266 | 45556 | 175820 | 44751 | 1500 | 977 | 1.535 | Coordinates are wrong. Distances are good. Constraint Bridge |
| 1215 | 13621 | 191013 | 57290 | 191110 | 57297 | 150 | 97 | 1.544 | Distance is correct |
| 13621 | 1215 | 191110 | 57297 | 191013 | 57290 | 150 | 97 | 1.544 | Distance is correct |
| 1033 | 11141 | 173453 | 39870 | 171519 | 39930 | 3000 | 1935 | 1.551 | Stub end |
| 11141 | 1033 | 171519 | 39930 | 173453 | 39870 | 3000 | 1935 | 1.551 | Stub end |
| 1323 | 1324 | 178454 | 45042 | 178483 | 44771 | 424 | 273 | 1.556 | Stub end |
| 1324 | 1323 | 178483 | 44771 | 178454 | 45042 | 424 | 273 | 1.556 | Stub end |
| 11061 | 11139 | 178713 | 45023 | 178727 | 44896 | 200 | 127 | 1.570 | Stub end |
| 11139 | 11061 | 178727 | 44896 | 178713 | 45023 | 200 | 127 | 1.570 | Stub end |
| 1545 | 2216 | 182982 | 44796 | 182952 | 44801 | 48 | 30 | 1.578 | Coordinates wrong, Distance acceptable, Trafalgar Rbt |
| 12040 | 13629 | 182670 | 56280 | 181952 | 56517 | 1200 | 756 | 1.588 | Coordinates are wrong. Distances are good. |
| 13629 | 12040 | 181952 | 56517 | 182670 | 56280 | 1200 | 756 | 1.588 | Coordinates are wrong. Distances are good. |
| 12022 | 12131 | 179380 | 48500 | 180113 | 48078 | 1350 | 846 | 1.596 | Coordinates are wrong. Distances are good. |
| 12131 | 12022 | 180113 | 48078 | 179380 | 48500 | 1350 | 846 | 1.596 | Coordinates are wrong. Distances are good. |

| A Node | B Node | Ax | Ay | Bx | By | Modelled (m) | Crow Fly (m) | Modelled/Crow Fly | Comment |
|---|---|---|---|---|---|---|---|---|---|
| 12001 | 12100 | 172300 | 44620 | 173020 | 45333 | 1620 | 1013 | 1.599 | Dummy node. Route length is good |
| 12100 | 12001 | 173020 | 45333 | 172300 | 44620 | 1620 | 1013 | 1.599 | Dummy node. Route length is good |
| 1587 | 1687 | 180870 | 44724 | 180850 | 44475 | 400 | 250 | 1.601 | Stub end |
| 1687 | 1587 | 180850 | 44475 | 180870 | 44724 | 400 | 250 | 1.601 | Stub end |
| 1551 | 1651 | 183465 | 45842 | 183441 | 45899 | 100 | 62 | 1.617 | Stub end |
| 1651 | 1551 | 183441 | 45899 | 183465 | 45842 | 100 | 62 | 1.617 | Stub end |
| 11143 | 13613 | 168748 | 42331 | 169255 | 42468 | 850 | 525 | 1.619 | Coordinates are wrong. Distances are good. |
| 13613 | 11143 | 169255 | 42468 | 168748 | 42331 | 850 | 525 | 1.619 | Coordinates are wrong. Distances are good. |
| 1241 | 1939 | 207199 | 66937 | 208108 | 63690 | 5500 | 3372 | 1.631 | Buffer Network |
| 1939 | 1241 | 208108 | 63690 | 207199 | 66937 | 5500 | 3372 | 1.631 | Buffer Network |
| 1193 | 13603 | 183896 | 49634 | 182269 | 49880 | 2700 | 1645 | 1.641 | Difficult geometry |
| 13603 | 1193 | 182269 | 49880 | 183896 | 49634 | 2700 | 1645 | 1.641 | Difficult geometry |
| 11080 | 11157 | 178730 | 53719 | 177642 | 54244 | 2000 | 1208 | 1.656 | Coordinates are wrong. Distances are good. |
| 11157 | 11080 | 177642 | 54244 | 178730 | 53719 | 2000 | 1208 | 1.656 | Coordinates are wrong. Distances are good. |
| 1555 | 1655 | 183398 | 45241 | 183487 | 45162 | 200 | 119 | 1.681 | Stub end |
| 1655 | 1555 | 183487 | 45162 | 183398 | 45241 | 200 | 119 | 1.681 | Stub end |
| 8000 | 8150 | 361550 | 183740 | 314200 | 181540 | 80000 | 47401 | 1.688 | Buffer Network |
| 1566 | 1529 | 182280 | 44997 | 182328 | 45001 | 82 | 48 | 1.702 | Distance acceptable, in Truro |
| 1179 | 1258 | 206780 | 54667 | 208982 | 59142 | 8500 | 4987 | 1.704 | Buffer Network |
| 1258 | 1179 | 208982 | 59142 | 206780 | 54667 | 8500 | 4987 | 1.704 | Buffer Network |
| 1231 | 1913 | 183925 | 61850 | 187234 | 63129 | 6130 | 3548 | 1.728 | Buffer Network |
| 1913 | 1231 | 187234 | 63129 | 183925 | 61850 | 6130 | 3548 | 1.728 | Buffer Network |
| 12006 | 12007 | 169480 | 43080 | 169290 | 42990 | 370 | 210 | 1.760 | Coordinates wrong for visual purpose, Distance acceptable, A30 Redruth |
| 1242 | 1244 | 207977 | 66531 | 208532 | 66412 | 1000 | 568 | 1.762 | Buffer Network |
| 1244 | 1242 | 208532 | 66412 | 207977 | 66531 | 1000 | 568 | 1.762 | Buffer Network |
| 1542 | 1012 | 182981 | 44866 | 183022 | 44871 | 73 | 41 | 1.767 | Coordinates wrong, Distance acceptable, Trafalgar Rbt |
| 1519 | 1581 | 182365 | 44426 | 182345 | 44406 | 50 | 28 | 1.768 | Distance acceptable, in Truro |
| 1581 | 1519 | 182345 | 44406 | 182365 | 44426 | 50 | 28 | 1.768 | Distance acceptable, in Truro |
| 11090 | 11091 | 174749 | 46907 | 174725 | 46901 | 45 | 25 | 1.815 | Coordinates wrong for visual purpose, Distance acceptable, Chiverton |
| 1007 | 11122 | 177700 | 45041 | 177742 | 45044 | 77 | 42 | 1.819 | Small distance. Distance acceptable |
| 11122 | 1007 | 177742 | 45044 | 177700 | 45041 | 77 | 42 | 1.819 | Small distance. Distance acceptable |
| 1102 | 1906 | 196674 | 60530 | 195916 | 61384 | 2080 | 1142 | 1.822 | Buffer Network |
| 1906 | 1102 | 195916 | 61384 | 196674 | 60530 | 2080 | 1142 | 1.822 | Buffer Network |
| 1233 | 1274 | 203712 | 64454 | 203772 | 63673 | 1450 | 783 | 1.851 | Buffer Network |
| 1274 | 1233 | 203772 | 63673 | 203712 | 64454 | 1450 | 783 | 1.851 | Buffer Network |
| 1219 | 1220 | 208960 | 65595 | 209126 | 65534 | 330 | 177 | 1.866 | Buffer Network |
| 1220 | 1219 | 209126 | 65534 | 208960 | 65595 | 330 | 177 | 1.866 | Buffer Network |
| 11089 | 11090 | 174753 | 46934 | 174749 | 46907 | 50 | 27 | 1.875 | Coordinates wrong for visual purpose, Distance acceptable, Chiverton |
| 11106 | 1589 | 179552 | 45183 | 179556 | 45120 | 120 | 64 | 1.888 | Coordinates wrong, Distance acceptable, Treliske Hospital Rbt |
| 1589 | 11106 | 179556 | 45120 | 179552 | 45183 | 120 | 64 | 1.888 | Coordinates wrong, Distance acceptable, Treliske Hospital Rbt |
| 13627 | 13624 | 192373 | 59070 | 192566 | 59155 | 400 | 211 | 1.894 | Coordinates are wrong. Distances are good. |
| 11106 | 1689 | 179552 | 45183 | 179548 | 45236 | 100 | 53 | 1.897 | Stub end |
| 1689 | 11106 | 179548 | 45236 | 179552 | 45183 | 100 | 53 | 1.897 | Stub end |
| 12058 | 1251 | 188850 | 56050 | 190413 | 54431 | 4300 | 2250 | 1.911 | Dummy node. Route length is good |
| 1251 | 12058 | 190413 | 54431 | 188850 | 56050 | 4300 | 2250 | 1.911 | Dummy node. Route length is good |
| 1515 | 1672 | 182696 | 44724 | 182682 | 44702 | 50 | 26 | 1.917 | Distance acceptable, in Truro |
| 11130 | 1503 | 182796 | 44520 | 182779 | 44525 | 35 | 18 | 1.944 | Distance acceptable, in Truro |
| 1503 | 11130 | 182779 | 44525 | 182796 | 44520 | 35 | 18 | 1.944 | Distance acceptable, in Truro |
| 12051 | 1215 | 189870 | 56860 | 191013 | 57290 | 2410 | 1221 | 1.973 | |
| 1215 | 12051 | 191013 | 57290 | 189870 | 56860 | 2410 | 1221 | 1.973 | |
| 1577 | 1677 | 182176 | 44871 | 182158 | 44888 | 50 | 25 | 2.019 | Stub end |
| 1677 | 1577 | 182158 | 44888 | 182176 | 44871 | 50 | 25 | 2.019 | Stub end |
| 1538 | 1537 | 181275 | 44677 | 181317 | 44702 | 100 | 49 | 2.046 | Distance correct |
| 1260 | 1944 | 220815 | 65141 | 218211 | 63323 | 6577 | 3176 | 2.071 | Buffer Network |
| 1944 | 1260 | 218211 | 63323 | 220815 | 65141 | 6577 | 3176 | 2.071 | Buffer Network |
| 11107 | 12059 | 175309 | 47310 | 175550 | 47050 | 750 | 355 | 2.114 | Distance correct |
| 12059 | 11107 | 175550 | 47050 | 175309 | 47310 | 750 | 355 | 2.114 | Distance correct |
| 1531 | 1561 | 182543 | 45090 | 182520 | 45085 | 50 | 24 | 2.124 | Distance correct |
| 1561 | 1531 | 182520 | 45085 | 182543 | 45090 | 50 | 24 | 2.124 | Distance correct |
| 1519 | 1574 | 182365 | 44426 | 182358 | 44463 | 80 | 38 | 2.124 | Distance correct |
| 1574 | 1519 | 182358 | 44463 | 182365 | 44426 | 80 | 38 | 2.124 | Distance correct |
| 1574 | 1674 | 182358 | 44463 | 182381 | 44466 | 50 | 23 | 2.156 | Stub end |
| 1674 | 1574 | 182381 | 44466 | 182358 | 44463 | 50 | 23 | 2.156 | Stub end |
| 1502 | 9032 | 181339 | 44647 | 181367 | 44691 | 115 | 52 | 2.205 | Stub end |
| 11147 | 1031 | 171790 | 43850 | 172157 | 44078 | 960 | 432 | 2.223 | Distance correct |
| 1229 | 1273 | 181492 | 60726 | 181846 | 61426 | 1760 | 784 | 2.244 | Buffer Network |
| 1273 | 1229 | 181846 | 61426 | 181492 | 60726 | 1760 | 784 | 2.244 | Buffer Network |
| 1012 | 1543 | 183022 | 44871 | 183026 | 44856 | 35 | 16 | 2.255 | Coordinates wrong, Distance acceptable, Trafalgar Rbt |
| 1246 | 1941 | 213824 | 86690 | 212268 | 85275 | 4780 | 2103 | 2.273 | Buffer Network |
| 1941 | 1246 | 212268 | 85275 | 213824 | 86690 | 4780 | 2103 | 2.273 | Buffer Network |
| 11092 | 11093 | 174711 | 46918 | 174717 | 46943 | 60 | 25 | 2.363 | Coordinates wrong for visual purpose, Distance acceptable, Chiverton |
| 11091 | 11092 | 174725 | 46901 | 174711 | 46918 | 55 | 22 | 2.446 | Coordinates wrong for visual purpose, Distance acceptable, Chiverton |
| 1574 | 1575 | 182358 | 44463 | 182360 | 44496 | 81 | 33 | 2.450 | Distance correct |
| 1575 | 1574 | 182360 | 44496 | 182358 | 44463 | 81 | 33 | 2.450 | Distance correct |
| 11094 | 11096 | 174668 | 46894 | 174703 | 46914 | 100 | 40 | 2.475 | Coordinates wrong for visual purpose, Distance acceptable, Chiverton |
| 11096 | 11094 | 174703 | 46914 | 174668 | 46894 | 100 | 40 | 2.475 | Coordinates wrong for visual purpose, Distance acceptable, Chiverton |
| 1590 | 1313 | 178927 | 45032 | 178927 | 45049 | 47 | 17 | 2.765 | Coordinates wrong, Distance acceptable, Truro College |
| 1312 | 1313 | 178913 | 45042 | 178927 | 45049 | 45 | 16 | 2.875 | Coordinates wrong, Distance acceptable, Truro College |
| 1511 | 1513 | 182681 | 44824 | 182646 | 44826 | 105 | 35 | 2.995 | Distance acceptable, in Truro |
| 1513 | 1511 | 182646 | 44826 | 182681 | 44824 | 105 | 35 | 2.995 | Distance acceptable, in Truro |
| 5896 | 5898 | 180060 | 44920 | 180080 | 44920 | 60 | 20 | 3.000 | Dummynode for shape purposes. Route length is good |
| 5898 | 5896 | 180080 | 44920 | 180060 | 44920 | 60 | 20 | 3.000 | Dummynode for shape purposes. Route length is good |
| 1591 | 1311 | 178957 | 45063 | 178980 | 45052 | 80 | 25 | 3.138 | Coordinates wrong, Distance acceptable, Truro College |
| 8034 | C184 | 371686 | 106395 | 376480 | 110440 | 20000 | 6273 | 3.189 | |
| 1221 | 1223 | 208523 | 68002 | 208995 | 68998 | 3630 | 1102 | 3.293 | Buffer Network |
| 1591 | 1315 | 178957 | 45063 | 178975 | 45041 | 100 | 28 | 3.518 | Coordinates wrong, Distance acceptable, Truro College |
| 11092 | 11096 | 174711 | 46918 | 174703 | 46914 | 35 | 10 | 3.648 | Coordinates wrong for visual purpose, Distance acceptable, Chiverton |
| 11096 | 11092 | 174703 | 46914 | 174711 | 46918 | 35 | 10 | 3.648 | Coordinates wrong for visual purpose, Distance acceptable, Chiverton |
| 1548 | 1648 | 177823 | 45144 | 177835 | 45144 | 50 | 12 | 4.167 | Coordinates wrong, Distance acceptable, P&R Junction Threemilestone |
| 1648 | 1548 | 177835 | 45144 | 177823 | 45144 | 50 | 12 | 4.167 | Coordinates wrong, Distance acceptable, P&R Junction Threemilestone |
| 11094 | 12013 | 174668 | 46894 | 174460 | 46760 | 1100 | 247 | 4.453 | Coordinates wrong, distance acceptable |
| 12013 | 11094 | 174460 | 46760 | 174668 | 46894 | 1100 | 247 | 4.453 | Coordinates wrong, distance acceptable |
| 1518 | 1573 | 182512 | 44593 | 182495 | 44574 | 114 | 25 | 4.471 | coordinates wrong, Distsance acceptable, in Truro |
| 1573 | 1518 | 182495 | 44574 | 182512 | 44593 | 114 | 25 | 4.471 | coordinates wrong, Distsance acceptable, in Truro |
| 1572 | 1514 | 182631 | 44733 | 182632 | 44751 | 84 | 18 | 4.659 | coordinates wrong, Distsance acceptable, in Truro |
| 11093 | 11097 | 174717 | 46943 | 174721 | 46950 | 40 | 9 | 4.662 | Coordinates wrong for visual purpose, Distance acceptable, Chiverton |
| 11097 | 11093 | 174721 | 46950 | 174717 | 46943 | 40 | 9 | 4.662 | Coordinates wrong for visual purpose, Distance acceptable, Chiverton |

| A Node | B Node | Ax | Ay | Bx | By | Modelled (m) | Crow Fly (m) | Modelled/Crow Fly | Comment |
|---|---|---|---|---|---|---|---|---|---|
| 1590 | 1312 | 178927 | 45032 | 178913 | 45042 | 83 | 17 | 4.824 | Coordinates wrong, Distance acceptable, Truro College |
| 1223 | 1222 | 208995 | 68998 | 208895 | 68386 | 3390 | 620 | 5.467 | Buffer Network |
| 13625 | 13627 | 192377 | 59069 | 192373 | 59070 | 25 | 4 | 6.033 | Node added to represent visually a multinode intersection. |
| 1301 | 1928 | 150634 | 31870 | 150052 | 31374 | 6209 | 765 | 8.120 | Buffer Network |
| 1928 | 1301 | 150052 | 31374 | 150634 | 31870 | 6209 | 765 | 8.120 | Buffer Network |
| 1311 | 1315 | 178980 | 45052 | 178975 | 45041 | 100 | 12 | 8.276 | Coordinates wrong, Distance acceptable, Truro College |
| 5894 | 5895 | 179702 | 45068 | 179710 | 45060 | 100 | 11 | 8.839 | Coordinates wrong, Distance acceptable, Truro College |
| 5895 | 5894 | 179710 | 45060 | 179702 | 45068 | 100 | 11 | 8.839 | Coordinates wrong, Distance acceptable, Truro College |
| 1311 | 3110 | 178980 | 45052 | 178986 | 45054 | 90 | 6 | 14.230 | Coordinates wrong, Distance acceptable, Truro College |
| 3110 | 1311 | 178986 | 45054 | 178980 | 45052 | 90 | 6 | 14.230 | Coordinates wrong, Distance acceptable, Truro College |
| 11089 | 11095 | 174753 | 46934 | 174760 | 46938 | 120 | 8 | 14.538 | Coordinates wrong for visual purpose, Distance acceptable, Chiverton |
| 11095 | 11089 | 174760 | 46938 | 174753 | 46934 | 120 | 8 | 14.538 | Coordinates wrong for visual purpose, Distance acceptable, Chiverton |
| 13627 | 13626 | 192373 | 59070 | 192374 | 59067 | 400 | 3 | 115.808 | Node added as visual help. Dummy node. |

# Annex C - Link Flow and Screenlines

## Annex C - Link Flow Calibration and Validation Analysis

| Calibration / Validation | Ref | Site Location | Dir | AM Peak | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | ALL VEHICLES | | | | | CAR | | | | | LGV | | | HGV | | |
| | | | | Observed | Modelled | GEH | GEH Pass? | Flow Pass? | Observed | Modelled | GEH | GEH Pass? | Flow Pass? | Observed | Modelled | GEH | Observed | Modelled | GEH |
| Calibration | TRADS_3703 | EB, A30, Between Carland Cross Rbt and Mitchell | EB | 1249 | 1319 | 1.967 | Yes | Yes | 950 | 1000 | 1.579 | Yes | Yes | 234 | 233 | 0.075 | 64 | 86 | 2.580 |
| Calibration | TRADS_3704 | WB, A30, Between Carland Cross Rbt and Mitchell | WB | 1505 | 1651 | 3.681 | Yes | Yes | 1114 | 1184 | 2.067 | Yes | Yes | 271 | 351 | 4.554 | 120 | 116 | 0.382 |
| Validation | TRADS_3707 | EB, A30, Between Zelah and Carland Cross Rbt | EB | 914 | 809 | 3.577 | Yes | Yes | 654 | 584 | 2.827 | Yes | Yes | 182 | 157 | 1.888 | 78 | 68 | 1.178 |
| Validation | TRADS_3708 | WB, A30, Between Zelah and Carland Cross Rbt | WB | 987 | 927 | 1.958 | Yes | Yes | 698 | 635 | 2.454 | Yes | Yes | 201 | 215 | 0.960 | 89 | 77 | 1.213 |
| Calibration | TRADS_5242 | EB, A30, Between Mitchell and Chapel Town | EB | 1193 | 1269 | 2.146 | Yes | Yes | 908 | 956 | 1.550 | Yes | Yes | 224 | 229 | 0.303 | 61 | 84 | 2.746 |
| Calibration | TRADS_5243 | WB, A30, Between Mitchell and Chapel Town | WB | 1401 | 1599 | 5.102 | No | Yes | 1037 | 1135 | 2.967 | Yes | Yes | 252 | 349 | 5.567 | 112 | 115 | 0.316 |
| Validation | TRADS_30012504 | EB, A30, Between Redruth and Scorrier | EB | 1611 | 1520 | 2.306 | Yes | Yes | 1228 | 1171 | 1.655 | Yes | Yes | 287 | 270 | 1.001 | 96 | 79 | 1.845 |
| Validation | TRADS_30012505 | WB, A30, Between Redruth and Scorrier | WB | 1125 | 1245 | 3.473 | Yes | Yes | 857 | 929 | 2.415 | Yes | Yes | 211 | 240 | 1.880 | 57 | 77 | 2.342 |
| Calibration | TRADS_30012506 | WB, A30, Between Scorrier and Chiverton Cross Rbt | WB | 1342 | 1409 | 1.807 | Yes | Yes | 1022 | 1065 | 1.345 | Yes | Yes | 252 | 267 | 0.904 | 68 | 77 | 1.059 |
| Calibration | TRADS_30012507 | EB, A30, Between Scorrier and Chiverton Cross Rbt | EB | 1551 | 1483 | 1.755 | Yes | Yes | 1183 | 1122 | 1.794 | Yes | Yes | 276 | 275 | 0.075 | 92 | 86 | 0.661 |
| Calibration | TRADS_30012508 | EB, A30, Between Chybucca and Marazanvose | EB | 785 | 857 | 2.491 | Yes | Yes | 562 | 642 | 3.258 | Yes | Yes | 156 | 147 | 0.708 | 67 | 67 | 0.020 |
| Calibration | TRADS_30012509 | WB, A30, Between Chybucca and Marazanvose | WB | 844 | 893 | 1.659 | Yes | Yes | 597 | 607 | 0.432 | Yes | Yes | 172 | 210 | 2.784 | 76 | 76 | 0.020 |
| Validation | TRADS_30012512 | EB, A30, Between Summercourt and Indian Queens | EB | 1214 | 1334 | 3.351 | Yes | Yes | 924 | 1026 | 3.254 | Yes | Yes | 228 | 225 | 0.219 | 62 | 83 | 2.500 |
| Validation | TRADS_30012513 | WB, A30, Between Summercourt and Indian Queens | WB | 1325 | 1468 | 3.813 | Yes | Yes | 981 | 1056 | 2.370 | Yes | Yes | 239 | 299 | 3.682 | 106 | 113 | 0.623 |
| Calibration | ATC_5_NB | NB, B3284, Between Mithian and Perranporth | NB | 103 | 119 | 1.500 | Yes | Yes | 86 | 102 | 1.650 | Yes | Yes | 14 | 14 | 0.038 | 3 | 3 | 0.018 |
| Calibration | ATC_5_SB | SB, B3284, Between Mithian and Perranporth | SB | 127 | 146 | 1.623 | Yes | Yes | 106 | 124 | 1.698 | Yes | Yes | 17 | 21 | 0.728 | 4 | 1 | 1.501 |
| Calibration | ATC_35_NB | NB, A39, Between Truro and Carnon Downs | NB | 996 | 915 | 2.626 | Yes | Yes | 793 | 796 | 0.102 | Yes | Yes | 148 | 89 | 5.439 | 56 | 31 | 3.787 |
| Calibration | ATC_35_SB | SB, A39, Between Truro and Carnon Downs | SB | 720 | 745 | 0.936 | Yes | Yes | 573 | 635 | 2.529 | Yes | Yes | 107 | 77 | 3.074 | 40 | 33 | 1.206 |
| Calibration | ATC_41_EB | EB, A390, Between Treliske Hospital and Truro | EB | 870 | 982 | 3.681 | Yes | Yes | 754 | 859 | 3.697 | Yes | Yes | 99 | 106 | 0.640 | 17 | 17 | 0.138 |
| Calibration | ATC_41_WB | WB, A390, Between Treliske Hospital and Truro | WB | 1090 | 1127 | 1.111 | Yes | Yes | 945 | 1003 | 1.865 | Yes | Yes | 125 | 103 | 2.078 | 21 | 22 | 0.206 |
| Calibration | ATC_76_EB | EB, A390, Between Truro and Probus | EB | 479 | 473 | 0.291 | Yes | Yes | 381 | 377 | 0.205 | Yes | Yes | 71 | 68 | 0.373 | 27 | 27 | 0.147 |
| Calibration | ATC_76_WB | WB, A390, Between Truro and Probus | WB | 856 | 821 | 1.213 | Yes | Yes | 681 | 711 | 1.144 | Yes | Yes | 127 | 60 | 6.895 | 48 | 49 | 0.217 |
| Calibration | ATC_77_NB | NB, B3284, Between Shortlanesend and Truro | NB | 239 | 226 | 0.857 | Yes | Yes | 198 | 194 | 0.290 | Yes | Yes | 35 | 18 | 3.351 | 6 | 14 | 2.518 |
| Calibration | ATC_77_SB | SB, B3284, Between Shortlanesend and Truro | SB | 587 | 555 | 1.330 | Yes | Yes | 486 | 484 | 0.079 | Yes | Yes | 85 | 70 | 1.771 | 16 | 1 | 5.023 |
| Validation | ATC_137_EB | EB, A390, Between Chiverton Cross and Threemilestone | EB | 965 | 903 | 2.049 | Yes | Yes | 803 | 771 | 1.141 | Yes | Yes | 135 | 115 | 1.753 | 27 | 16 | 2.373 |
| Validation | ATC_137_WB | WB, A390, Between Chiverton Cross and Threemilestone | WB | 705 | 611 | 3.695 | Yes | Yes | 587 | 550 | 1.539 | Yes | Yes | 99 | 49 | 5.782 | 20 | 11 | 2.134 |
| Calibration | ATC_218_NB | NB, A39, Between Truro and Carland Cross Rbt | NB | 444 | 467 | 1.062 | Yes | Yes | 354 | 391 | 1.943 | Yes | Yes | 66 | 63 | 0.366 | 25 | 13 | 2.737 |
| Calibration | ATC_218_SB | SB, A39, Between Truro and Carland Cross Rbt | SB | 612 | 610 | 0.075 | Yes | Yes | 487 | 467 | 0.923 | Yes | Yes | 91 | 112 | 2.115 | 34 | 31 | 0.529 |
| Calibration | ATC_973_EB | EB, Chacewater Hill between Threemilestone and Chacewater | EB | 531 | 588 | 2.426 | Yes | Yes | 454 | 465 | 0.516 | Yes | Yes | 65 | 91 | 2.952 | 11 | 31 | 4.406 |
| Calibration | ATC_973_WB | WB, Chacewater Hill between Threemilestone and Chacewater | WB | 209 | 146 | 4.728 | Yes | Yes | 179 | 96 | 7.064 | No | Yes | 26 | 44 | 3.075 | 4 | 6 | 0.754 |
| Calibration | ATC_135_NB | A3075 Between Chiverton and Newquay | NB | 361 | 369 | 0.408 | Yes | Yes | 281 | 284 | 0.166 | Yes | Yes | 69 | 70 | 0.128 | 11 | 15 | 1.104 |
| Calibration | ATC_135_SB | A3075 Between Chiverton and Newquay | SB | 422 | 440 | 0.868 | Yes | Yes | 329 | 341 | 0.678 | Yes | Yes | 80 | 87 | 0.803 | 13 | 11 | 0.510 |
| Calibration | ATC_165_NB | A3058 between Summercourt and Quintrell Downs | NB | 140 | 111 | 2.651 | Yes | Yes | 110 | 90 | 1.912 | Yes | Yes | 27 | 18 | 1.779 | 4 | 2 | 1.212 |
| Calibration | ATC_165_SB | A3058 between Summercourt and Quintrell Downs | SB | 153 | 201 | 3.606 | Yes | Yes | 119 | 167 | 3.972 | Yes | Yes | 29 | 30 | 0.082 | 5 | 5 | 0.005 |
| Calibration | ATC_167_NB | A3076 Between Mitchell and Gummows Shop | NB | 77 | 66 | 1.247 | Yes | Yes | 60 | 58 | 0.260 | Yes | Yes | 15 | 8 | 1.982 | 2 | 0 | 1.630 |
| Calibration | ATC_167_SB | A3076 Between Mitchell and Gummows Shop | SB | 111 | 74 | 3.817 | Yes | Yes | 86 | 60 | 3.113 | Yes | Yes | 21 | 11 | 2.645 | 3 | 4 | 0.230 |
| Calibration | ATC_132_NB | A3075 Between Goonhavern and Newquay | NB | 430 | 439 | 0.392 | Yes | Yes | 336 | 344 | 0.454 | Yes | Yes | 82 | 83 | 0.109 | 13 | 12 | 0.336 |
| Calibration | ATC_132_SB | A3075 Between Goonhavern and Newquay | SB | 605 | 520 | 3.595 | Yes | Yes | 472 | 406 | 3.143 | Yes | Yes | 115 | 100 | 1.418 | 18 | 13 | 1.181 |
| Calibration | MCC_16_SB | B3285 Between Goonhavern and A30 | SB | 119 | 117 | 0.192 | Yes | Yes | 88 | 92 | 0.386 | Yes | Yes | 20 | 17 | 0.635 | 11 | 8 | 0.977 |
| Calibration | MCC_16_NB | B3285 Between A30 and Goonhavern | NB | 113 | 168 | 4.628 | Yes | Yes | 86 | 137 | 4.806 | Yes | Yes | 21 | 24 | 0.665 | 6 | 7 | 0.379 |
| Calibration | MCC_17_NB | B3284 Chybucca towards Perranporth | NB | 42 | 96 | 6.482 | No | Yes | 31 | 64 | 4.889 | Yes | Yes | 8 | 25 | 4.191 | 3 | 6 | 1.365 |
| Calibration | MCC_17_SB | B3284 Chybucca from Perranporth | SB | 109 | 151 | 3.743 | Yes | Yes | 90 | 121 | 3.031 | Yes | Yes | 16 | 26 | 2.216 | 4 | 5 | 0.747 |
| Calibration | MCC_19_NB | B3277 Chiverton towards St Agnes | NB | 324 | 236 | 5.238 | No | Yes | 251 | 180 | 4.856 | Yes | Yes | 57 | 45 | 1.639 | 16 | 11 | 1.269 |
| Calibration | MCC_19_SB | B3277 Chiverton from St Agnes | SB | 534 | 463 | 3.170 | Yes | Yes | 421 | 357 | 3.268 | Yes | Yes | 95 | 89 | 0.679 | 18 | 18 | 0.035 |
| Calibration | MCC_9_NB | Henver Road Zelah | NB | 24 | 28 | 0.750 | Yes | Yes | 19 | 23 | 0.823 | Yes | Yes | 4 | 4 | 0.040 | 1 | 1 | 0.131 |
| Calibration | MCC_9_SB | Henver Road Zelah | SB | 50 | 82 | 3.906 | Yes | Yes | 42 | 73 | 4.072 | Yes | Yes | 7 | 8 | 0.316 | 1 | 1 | 0.020 |
| Calibration | MCC_1_NB | B3284 Between Chybucca and Shortlanesend | NB | 184 | 148 | 2.834 | Yes | Yes | 153 | 132 | 1.732 | Yes | Yes | 25 | 10 | 3.571 | 6 | 5 | 0.360 |
| Calibration | MCC_1_SB | B3284 Between Chybucca and Shortlanesend | SB | 411 | 309 | 5.389 | No | No | 298 | 215 | 5.151 | No | Yes | 81 | 75 | 0.721 | 32 | 19 | 2.648 |
| Calibration | MCC_2_NB | Route between A30 and B3284 via Allet | NB | 32 | 38 | 1.010 | Yes | Yes | 24 | 33 | 1.639 | Yes | Yes | 5 | 5 | 0.122 | 3 | 1 | 1.874 |
| Calibration | MCC_2_SB | Route between A30 and B3284 via Allet | SB | 78 | 129 | 4.978 | Yes | Yes | 62 | 126 | 6.622 | No | Yes | 11 | 2 | 3.379 | 5 | 0 | 3.101 |
| Calibration | MCC_2_C49_Callestick_SB | C49_Callestick_SB | SB | 5 | 4 | 0.301 | Yes | Yes | 4 | 4 | 0.085 | Yes | Yes | 1 | 1 | 0.486 | 0 | 0 | 0.883 |
| Calibration | MCC_2_C49_Callestick_NB | C49_Callestick_NB | NB | 5 | 1 | 2.701 | Yes | Yes | 4 | 0 | 2.787 | Yes | Yes | 1 | 0 | 1.238 | 0 | 1 | 0.252 |
| Calibration | MCC_3_U6083 Lower Ventongimps SB | U6083 Lower Ventongimps SB | SB | 3 | 0 | 2.259 | Yes | Yes | 2 | 0 | 1.939 | Yes | Yes | 1 | 0 | 1.044 | 0 | 0 | 0.522 |
| Calibration | MCC_3_U6083 Lower Ventongimps NB | U6083 Lower Ventongimps NB | NB | 1 | 1 | 0.040 | Yes | Yes | 1 | 1 | 0.281 | Yes | Yes | 0 | 0 | 0.674 | 0 | 0 | 0.000 |
| Calibration | MCC_5_U6082 Shortlanesend NB | U6082 Shortlanesend NB | NB | 2 | 0 | 1.826 | Yes | Yes | 1 | 0 | 1.298 | Yes | Yes | 1 | 0 | 1.214 | 0 | 0 | 0.459 |
| Calibration | MCC_5_U6082 Shortlanesend SB | U6082 Shortlanesend SB | SB | 1 | 0 | 1.214 | Yes | Yes | 0 | 0 | 0.673 | Yes | Yes | 1 | 0 | 1.044 | 0 | 0 | 0.000 |
| Calibration | MCC_6_C178 Perranzabuloe SB | C178 Perranzabuloe SB | SB | 2 | 0 | 1.826 | Yes | Yes | 2 | 0 | 1.765 | Yes | Yes | 0 | 0 | 0.471 | 0 | 0 | 0.000 |
| Calibration | MCC_6_C178 Perranzabuloe NB | C178 Perranzabuloe NB | NB | 1 | 1 | 0.040 | Yes | Yes | 1 | 1 | 0.214 | Yes | Yes | 0 | 0 | 0.577 | 0 | 0 | 0.000 |
| Calibration | MCC_7_C364 Zelah off slip | C364 Zelah off slip | NB | 10 | 0 | 4.472 | Yes | Yes | 7 | 0 | 3.742 | Yes | Yes | 2 | 0 | 2.000 | 1 | 0 | 1.414 |
| Calibration | MCC_8_Shortlanesend-Zelah NB | Shortlanesend-Zelah NB | NB | 31 | 0 | 7.870 | No | Yes | 25 | 0 | 7.064 | No | Yes | 4 | 0 | 2.688 | 2 | 0 | 2.194 |
| Calibration | MCC_8_Shortlanesend-Zelah SB | Shortlanesend-Zelah SB | SB | 28 | 44 | 2.713 | Yes | Yes | 22 | 42 | 3.482 | Yes | Yes | 4 | 2 | 1.355 | 2 | 1 | 0.850 |
| Calibration | MCC_10_Lane to/from St Allen NB | Lane to/from St Allen NB | NB | 1 | 1 | 0.108 | Yes | Yes | 1 | 1 | 0.266 | Yes | Yes | 0 | 0 | 0.795 | 0 | 0 | 0.032 |
| Calibration | MCC_10_Lane to/from St Allen SB | Lane to/from St Allen SB | SB | 3 | 3 | 0.150 | Yes | Yes | 3 | 3 | 0.226 | Yes | Yes | 0 | 0 | 0.299 | 0 | 0 | 0.078 |
| Validation | MCC_17_SW | Road Between Boxheater West and Fiddler's Green Junction | SW | 22 | 14 | 1.961 | Yes | Yes | 18 | 10 | 2.117 | Yes | Yes | 4 | 3 | 0.598 | 0 | 1 | 0.817 |
| Validation | MCC_17_NE | Road Between Boxheater West and Fiddler's Green Junction | NE | 14 | 10 | 1.105 | Yes | Yes | 11 | 7 | 1.181 | Yes | Yes | 3 | 1 | 1.569 | 0 | 2 | 1.490 |
| Calibration | MCC_13_Trispen NB | Trispin NB | NB | 7 | 3 | 1.978 | Yes | Yes | 5 | 3 | 1.416 | Yes | Yes | 1 | 0 | 1.698 | 0 | 0 | 0.227 |
| Calibration | MCC_13_Trispen SB | Trispin SB | SB | 3 | 1 | 1.880 | Yes | Yes | 3 | 0 | 2.292 | Yes | Yes | 0 | 0 | 0.719 | 0 | 1 | 0.762 |
| Calibration | MCC_14_Ventonteague NB | Wentonteague NB | NB | 4 | 2 | 1.370 | Yes | Yes | 3 | 2 | 0.641 | Yes | Yes | 1 | 0 | 1.451 | 0 | 0 | 0.795 |
| Calibration | MCC_14_Ventonteague SB | Wentonteague SB | SB | 4 | 2 | 1.334 | Yes | Yes | 3 | 2 | 0.792 | Yes | Yes | 1 | 0 | 1.345 | 0 | 0 | 0.535 |

## Annex C - Link Flow Calibration and Validation Analysis

| Calibration / Validation | Ref | Site Location | Dir | Interpeak | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | ALL VEHICLES | | | | | CAR | | | | | LGV | | | HGV | | |
| | | | | Observed | Modelled | GEH | GEH Pass? | Flow Pass? | Observed | Modelled | GEH | GEH Pass? | Flow Pass? | Observed | Modelled | GEH | Observed | Modelled | GEH |
| Calibration | TRADS_3703 | EB, A30, Between Carland Cross Rbt and Mitchell | EB | 1320 | 1325 | 0.128 | Yes | Yes | 1005 | 1009 | 0.138 | Yes | Yes | 248 | 248 | 0.033 | 67 | 67 | 0.028 |
| Calibration | TRADS_3704 | WB, A30, Between Carland Cross Rbt and Mitchell | WB | 1260 | 1360 | 2.774 | Yes | Yes | 932 | 987 | 1.784 | Yes | Yes | 227 | 270 | 2.771 | 101 | 102 | 0.142 |
| Validation | TRADS_3707 | EB, A30, Between Zelah and Carland Cross Rbt | EB | 885 | 753 | 4.588 | Yes | Yes | 633 | 549 | 3.467 | Yes | Yes | 176 | 153 | 1.795 | 76 | 52 | 3.009 |
| Validation | TRADS_3708 | WB, A30, Between Zelah and Carland Cross Rbt | WB | 853 | 844 | 0.327 | Yes | Yes | 603 | 557 | 1.914 | Yes | Yes | 174 | 211 | 2.705 | 77 | 76 | 0.109 |
| Calibration | TRADS_5242 | EB, A30, Between Mitchell and Chapel Town | EB | 1232 | 1236 | 0.119 | Yes | Yes | 937 | 938 | 0.023 | Yes | Yes | 231 | 233 | 0.084 | 63 | 65 | 0.277 |
| Calibration | TRADS_5243 | WB, A30, Between Mitchell and Chapel Town | WB | 1177 | 1295 | 3.365 | Yes | Yes | 871 | 932 | 2.019 | Yes | Yes | 212 | 263 | 3.321 | 94 | 101 | 0.664 |
| Validation | TRADS_30012504 | EB, A30, Between Redruth and Scorrier | EB | 1291 | 1268 | 0.639 | Yes | Yes | 984 | 970 | 0.472 | Yes | Yes | 230 | 250 | 1.295 | 77 | 49 | 3.563 |
| Validation | TRADS_30012505 | WB, A30, Between Redruth and Scorrier | WB | 1149 | 1322 | 4.906 | Yes | No | 875 | 975 | 3.299 | Yes | Yes | 216 | 280 | 4.078 | 59 | 67 | 0.998 |
| Calibration | TRADS_30012506 | WB, A30, Between Scorrier and Chiverton Cross Rbt | WB | 1335 | 1522 | 4.962 | Yes | Yes | 1016 | 1129 | 3.451 | Yes | Yes | 251 | 324 | 4.321 | 68 | 69 | 0.156 |
| Calibration | TRADS_30012507 | EB, A30, Between Scorrier and Chiverton Cross Rbt | EB | 1278 | 1349 | 1.963 | Yes | Yes | 974 | 1029 | 1.737 | Yes | Yes | 228 | 266 | 2.412 | 76 | 54 | 2.692 |
| Calibration | TRADS_30012508 | EB, A30, Between Chybucca and Marazanvose | EB | 767 | 746 | 0.780 | Yes | Yes | 549 | 543 | 0.260 | Yes | Yes | 152 | 152 | 0.016 | 66 | 50 | 1.994 |
| Calibration | TRADS_30012509 | WB, A30, Between Chybucca and Marazanvose | WB | 734 | 831 | 3.470 | Yes | Yes | 518 | 543 | 1.056 | Yes | Yes | 149 | 214 | 4.784 | 66 | 74 | 0.988 |
| Validation | TRADS_30012512 | EB, A30, Between Summercourt and Indian Queens | EB | 1227 | 1289 | 1.751 | Yes | Yes | 934 | 1005 | 2.303 | Yes | Yes | 230 | 219 | 0.728 | 63 | 64 | 0.164 |
| Validation | TRADS_30012513 | WB, A30, Between Summercourt and Indian Queens | WB | 1160 | 1208 | 1.406 | Yes | Yes | 858 | 886 | 0.918 | Yes | Yes | 209 | 228 | 1.267 | 93 | 95 | 0.264 |
| Calibration | ATC_5_NB | NB, B3284, Between Mithian and Perranporth | NB | 156 | 156 | 0.051 | Yes | Yes | 130 | 131 | 0.103 | Yes | Yes | 21 | 21 | 0.090 | 5 | 5 | 0.060 |
| Calibration | ATC_5_SB | SB, B3284, Between Mithian and Perranporth | SB | 145 | 145 | 0.005 | Yes | Yes | 121 | 123 | 0.177 | Yes | Yes | 20 | 21 | 0.190 | 4 | 1 | 1.687 |
| Calibration | ATC_35_NB | NB, A39, Between Truro and Carnon Downs | NB | 859 | 845 | 0.465 | Yes | Yes | 683 | 735 | 1.924 | Yes | Yes | 128 | 71 | 5.657 | 48 | 39 | 1.268 |
| Calibration | ATC_35_SB | SB, A39, Between Truro and Carnon Downs | SB | 838 | 758 | 2.861 | Yes | Yes | 667 | 669 | 0.054 | Yes | Yes | 125 | 54 | 7.477 | 47 | 35 | 1.805 |
| Calibration | ATC_41_EB | EB, A390, Between Treliske Hospital and Truro | EB | 1086 | 1091 | 0.146 | Yes | Yes | 941 | 948 | 0.220 | Yes | Yes | 124 | 123 | 0.120 | 21 | 20 | 0.135 |
| Calibration | ATC_41_WB | WB, A390, Between Treliske Hospital and Truro | WB | 1099 | 1065 | 1.021 | Yes | Yes | 952 | 942 | 0.312 | Yes | Yes | 126 | 104 | 2.020 | 21 | 19 | 0.526 |
| Calibration | ATC_76_EB | EB, A390, Between Truro and Probus | EB | 621 | 632 | 0.410 | Yes | Yes | 494 | 504 | 0.455 | Yes | Yes | 92 | 93 | 0.020 | 35 | 35 | 0.017 |
| Calibration | ATC_76_WB | WB, A390, Between Truro and Probus | WB | 604 | 566 | 1.553 | Yes | Yes | 480 | 480 | 0.036 | Yes | Yes | 90 | 54 | 4.187 | 34 | 32 | 0.217 |
| Calibration | ATC_77_NB | NB, B3284, Between Shortlanesend and Truro | NB | 286 | 355 | 3.827 | Yes | Yes | 237 | 309 | 4.319 | Yes | Yes | 42 | 35 | 1.046 | 8 | 11 | 1.191 |
| Calibration | ATC_77_SB | SB, B3284, Between Shortlanesend and Truro | SB | 291 | 333 | 2.390 | Yes | Yes | 241 | 296 | 3.387 | Yes | Yes | 42 | 36 | 0.945 | 8 | 0 | 3.704 |
| Validation | ATC_137_EB | EB, A390, Between Chiverton Cross and Threemilestone | EB | 826 | 786 | 1.425 | Yes | Yes | 688 | 697 | 0.369 | Yes | Yes | 116 | 84 | 3.114 | 23 | 4 | 5.169 |
| Validation | ATC_137_WB | WB, A390, Between Chiverton Cross and Threemilestone | WB | 935 | 848 | 2.921 | Yes | Yes | 778 | 767 | 0.413 | Yes | Yes | 131 | 76 | 5.448 | 26 | 6 | 5.124 |
| Calibration | ATC_218_NB | NB, A39, Between Truro and Carland Cross Rbt | NB | 514 | 576 | 2.674 | Yes | Yes | 409 | 477 | 3.256 | Yes | Yes | 76 | 86 | 1.060 | 29 | 13 | 3.433 |
| Calibration | ATC_218_SB | SB, A39, Between Truro and Carland Cross Rbt | SB | 486 | 503 | 0.761 | Yes | Yes | 387 | 450 | 3.077 | Yes | Yes | 72 | 34 | 5.182 | 27 | 19 | 1.703 |
| Calibration | ATC_973_EB | EB, Chacewater Hill between Threemilestone and Chacewater | EB | 363 | 297 | 3.625 | Yes | Yes | 311 | 212 | 6.078 | No | Yes | 45 | 64 | 2.613 | 7 | 21 | 3.524 |
| Calibration | ATC_973_WB | WB, Chacewater Hill between Threemilestone and Chacewater | WB | 394 | 304 | 4.789 | Yes | Yes | 337 | 240 | 5.725 | No | Yes | 48 | 46 | 0.317 | 8 | 18 | 2.762 |
| Calibration | ATC_135_NB | A3075 Between Chiverton and Newquay | NB | 433 | 426 | 0.350 | Yes | Yes | 338 | 331 | 0.370 | Yes | Yes | 82 | 82 | 0.053 | 13 | 13 | 0.001 |
| Calibration | ATC_135_SB | A3075 Between Chiverton and Newquay | SB | 417 | 411 | 0.341 | Yes | Yes | 326 | 325 | 0.055 | Yes | Yes | 79 | 79 | 0.042 | 13 | 7 | 1.790 |
| Calibration | ATC_165_NB | A3058 between Summercourt and Quintrell Downs | NB | 157 | 129 | 2.404 | Yes | Yes | 123 | 93 | 2.881 | Yes | Yes | 30 | 30 | 0.011 | 5 | 6 | 0.480 |
| Calibration | ATC_165_SB | A3058 between Summercourt and Quintrell Downs | SB | 151 | 189 | 2.896 | Yes | Yes | 118 | 154 | 3.098 | Yes | Yes | 29 | 29 | 0.112 | 5 | 6 | 0.458 |
| Calibration | ATC_167_NB | A3076 Between Mitchell and Gummows Shop | NB | 102 | 98 | 0.446 | Yes | Yes | 80 | 77 | 0.278 | Yes | Yes | 19 | 19 | 0.096 | 3 | 1 | 1.045 |
| Calibration | ATC_167_SB | A3076 Between Mitchell and Gummows Shop | SB | 98 | 71 | 2.947 | Yes | Yes | 76 | 51 | 3.140 | Yes | Yes | 19 | 17 | 0.494 | 3 | 3 | 0.051 |
| Calibration | ATC_132_NB | A3075 Between Goonhavern and Newquay | NB | 542 | 534 | 0.309 | Yes | Yes | 422 | 424 | 0.097 | Yes | Yes | 103 | 95 | 0.774 | 16 | 15 | 0.374 |
| Calibration | ATC_132_SB | A3075 Between Goonhavern and Newquay | SB | 540 | 465 | 3.326 | Yes | Yes | 421 | 366 | 2.782 | Yes | Yes | 103 | 89 | 1.366 | 16 | 10 | 1.652 |
| Calibration | MCC_16_SB | B3285 Between Goonhavern and A30 | SB | 102 | 117 | 1.391 | Yes | Yes | 76 | 93 | 1.894 | Yes | Yes | 17 | 18 | 0.314 | 9 | 5 | 1.601 |
| Calibration | MCC_16_NB | B3285 Between A30 and Goonhavern | NB | 109 | 158 | 4.210 | Yes | Yes | 81 | 118 | 3.680 | Yes | Yes | 20 | 31 | 2.191 | 8 | 9 | 0.296 |
| Calibration | MCC_17_NB | B3284 Chybucca towards Perranporth | NB | 61 | 111 | 5.362 | No | Yes | 45 | 81 | 4.599 | Yes | Yes | 12 | 25 | 3.048 | 5 | 5 | 0.077 |
| Calibration | MCC_17_SB | B3284 Chybucca from Perranporth | SB | 65 | 84 | 2.224 | Yes | Yes | 53 | 62 | 1.212 | Yes | Yes | 9 | 18 | 2.340 | 2 | 3 | 0.795 |
| Calibration | MCC_19_NB | B3277 Chiverton towards St Agnes | NB | 368 | 342 | 1.372 | Yes | Yes | 289 | 266 | 1.353 | Yes | Yes | 62 | 62 | 0.004 | 17 | 14 | 0.837 |
| Calibration | MCC_19_SB | B3277 Chiverton from St Agnes | SB | 428 | 406 | 1.054 | Yes | Yes | 338 | 323 | 0.833 | Yes | Yes | 76 | 75 | 0.156 | 14 | 9 | 1.481 |
| Calibration | MCC_9_NB | Henver Road Zelah | NB | 21 | 60 | 6.079 | No | Yes | 17 | 56 | 6.405 | No | Yes | 3 | 3 | 0.000 | 1 | 1 | 0.000 |
| Calibration | MCC_9_SB | Henver Road Zelah | SB | 37 | 51 | 2.167 | Yes | Yes | 31 | 44 | 2.144 | Yes | Yes | 5 | 7 | 0.880 | 1 | 0 | 1.223 |
| Calibration | MCC_1_NB | B3284 Between Chybucca and Shortlanesend | NB | 165 | 208 | 3.125 | Yes | Yes | 137 | 178 | 3.302 | Yes | Yes | 23 | 25 | 0.346 | 5 | 4 | 0.232 |
| Calibration | MCC_1_SB | B3284 Between Chybucca and Shortlanesend | SB | 156 | 201 | 3.396 | Yes | Yes | 113 | 179 | 5.460 | No | Yes | 31 | 21 | 1.869 | 12 | 1 | 4.317 |
| Calibration | MCC_2_NB | Route between A30 and B3284 via Allet | NB | 33 | 56 | 3.420 | Yes | Yes | 24 | 53 | 4.670 | Yes | Yes | 6 | 2 | 1.804 | 3 | 1 | 1.890 |
| Calibration | MCC_2_SB | Route between A30 and B3284 via Allet | SB | 43 | 25 | 3.140 | Yes | Yes | 34 | 23 | 2.116 | Yes | Yes | 6 | 2 | 2.000 | 3 | 0 | 2.449 |
| Calibration | MCC_2_C49_Callestick_SB | C49_Callestick_SB | SB | 9 | 7 | 0.688 | Yes | Yes | 7 | 5 | 0.621 | Yes | Yes | 2 | 2 | 0.180 | 1 | 0 | 1.184 |
| Calibration | MCC_2_C49_Callestick_NB | C49_Callestick_NB | NB | 9 | 1 | 3.828 | Yes | Yes | 7 | 0 | 3.718 | Yes | Yes | 1 | 0 | 1.507 | 1 | 1 | 0.202 |
| Calibration | MCC_3_U6083 Lower Ventongimps SB | U6083 Lower Ventongimps SB | SB | 1 | 1 | 0.000 | Yes | Yes | 1 | 1 | 0.241 | Yes | Yes | 0 | 0 | 0.603 | 0 | 0 | 0.302 |
| Calibration | MCC_3_U6083 Lower Ventongimps NB | U6083 Lower Ventongimps NB | NB | 2 | 2 | 0.000 | Yes | Yes | 2 | 2 | 0.341 | Yes | Yes | 0 | 0 | 0.953 | 0 | 0 | 0.000 |
| Calibration | MCC_5_U6082 Shortlanesend NB | U6082 Shortlanesend NB | NB | 2 | 1 | 0.816 | Yes | Yes | 1 | 1 | 0.152 | Yes | Yes | 1 | 0 | 1.214 | 0 | 0 | 0.459 |
| Calibration | MCC_5_U6082 Shortlanesend SB | U6082 Shortlanesend SB | SB | 2 | 1 | 0.807 | Yes | Yes | 1 | 1 | 0.259 | Yes | Yes | 1 | 0 | 1.193 | 0 | 0 | 0.000 |
| Calibration | MCC_6_C178 Perranzabuloe SB | C178 Perranzabuloe SB | SB | 2 | 2 | 0.000 | Yes | Yes | 2 | 2 | 0.080 | Yes | Yes | 0 | 0 | 0.471 | 0 | 0 | 0.000 |
| Calibration | MCC_6_C178 Perranzabuloe NB | C178 Perranzabuloe NB | NB | 1 | 1 | 0.000 | Yes | Yes | 1 | 1 | 0.174 | Yes | Yes | 0 | 0 | 0.577 | 0 | 0 | 0.000 |
| Calibration | MCC_7_C364 Zelah off slip | C364 Zelah off slip | NB | 10 | 0 | 4.472 | Yes | Yes | 7 | 0 | 3.742 | Yes | Yes | 2 | 0 | 2.000 | 1 | 0 | 1.414 |
| Calibration | MCC_8_Shortlanesend-Zelah NB | Shortlanesend-Zelah NB | NB | 15 | 0 | 5.390 | No | Yes | 12 | 0 | 4.838 | Yes | Yes | 2 | 0 | 1.822 | 1 | 0 | 1.526 |
| Calibration | MCC_8_Shortlanesend-Zelah SB | Shortlanesend-Zelah SB | SB | 10 | 38 | 5.745 | No | Yes | 8 | 33 | 5.566 | No | Yes | 1 | 4 | 1.853 | 1 | 1 | 0.015 |
| Calibration | MCC_10_Lane to/from St Allen NB | Lane to/from St Allen NB | NB | 2 | 5 | 1.649 | Yes | Yes | 1 | 3 | 1.046 | Yes | Yes | 1 | 1 | 0.119 | 0 | 2 | 1.579 |
| Calibration | MCC_10_Lane to/from St Allen SB | Lane to/from St Allen SB | SB | 2 | 2 | 0.053 | Yes | Yes | 2 | 2 | 0.003 | Yes | Yes | 0 | 0 | 0.092 | 0 | 0 | 0.104 |
| Validation | MCC_17_SW | Road Between Boxheater West and Fiddler's Green Junction | SW | 16 | 27 | 2.380 | Yes | Yes | 13 | 26 | 2.921 | Yes | Yes | 3 | 1 | 1.229 | 0 | 0 | 0.020 |
| Validation | MCC_17_NE | Road Between Boxheater West and Fiddler's Green Junction | NE | 18 | 46 | 4.893 | Yes | Yes | 14 | 40 | 4.914 | Yes | Yes | 3 | 4 | 0.185 | 1 | 2 | 1.485 |
| Calibration | MCC_13_Trispen NB | Trispin NB | NB | 4 | 4 | 0.030 | Yes | Yes | 3 | 3 | 0.045 | Yes | Yes | 1 | 0 | 1.260 | 0 | 1 | 1.139 |
| Calibration | MCC_13_Trispen SB | Trispin SB | SB | 5 | 0 | 3.120 | Yes | Yes | 5 | 0 | 3.024 | Yes | Yes | 0 | 0 | 0.824 | 0 | 0 | 0.163 |
| Calibration | MCC_14_Ventonteague NB | Wentonteague NB | NB | 2 | 1 | 0.816 | Yes | Yes | 1 | 1 | 0.293 | Yes | Yes | 1 | 0 | 1.026 | 0 | 0 | 0.562 |
| Calibration | MCC_14_Ventonteague SB | Wentonteague SB | SB | 3 | 2 | 0.632 | Yes | Yes | 2 | 2 | 0.257 | Yes | Yes | 1 | 0 | 1.047 | 0 | 0 | 0.378 |

## Annex C - Link Flow Calibration and Validation Analysis

| Calibration / Validation | Ref | Site Location | Dir | PM Peak | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | ALL VEHICLES | | | | | CAR | | | | | LGV | | | HGV | | |
| | | | | Observed | Modelled | GEH | GEH Pass? | Flow Pass? | Observed | Modelled | GEH | GEH Pass? | Flow Pass? | Observed | Modelled | GEH | Observed | Modelled | GEH |
| Calibration | TRADS_3703 | EB, A30, Between Carland Cross Rbt and Mitchell | EB | 1515 | 1564 | 1.252 | Yes | Yes | 1153 | 1190 | 1.070 | Yes | Yes | 285 | 299 | 0.846 | 77 | 75 | 0.224 |
| Calibration | TRADS_3704 | WB, A30, Between Carland Cross Rbt and Mitchell | WB | 1370 | 1455 | 2.274 | Yes | Yes | 1013 | 1084 | 2.192 | Yes | Yes | 247 | 252 | 0.350 | 110 | 119 | 0.838 |
| Validation | TRADS_3707 | EB, A30, Between Zelah and Carland Cross Rbt | EB | 1030 | 847 | 5.975 | No | No | 737 | 617 | 4.595 | Yes | No | 205 | 182 | 1.606 | 88 | 47 | 5.000 |
| Validation | TRADS_3708 | WB, A30, Between Zelah and Carland Cross Rbt | WB | 988 | 869 | 3.913 | Yes | Yes | 698 | 633 | 2.523 | Yes | Yes | 201 | 149 | 3.905 | 89 | 86 | 0.261 |
| Calibration | TRADS_5242 | EB, A30, Between Mitchell and Chapel Town | EB | 1422 | 1438 | 0.417 | Yes | Yes | 1083 | 1087 | 0.146 | Yes | Yes | 267 | 278 | 0.633 | 73 | 73 | 0.060 |
| Calibration | TRADS_5243 | WB, A30, Between Mitchell and Chapel Town | WB | 1316 | 1436 | 3.228 | Yes | Yes | 974 | 1073 | 3.096 | Yes | Yes | 237 | 248 | 0.730 | 105 | 115 | 0.890 |
| Validation | TRADS_30012504 | EB, A30, Between Redruth and Scorrier | EB | 1369 | 1234 | 3.738 | Yes | Yes | 1044 | 910 | 4.294 | Yes | Yes | 244 | 283 | 2.383 | 81 | 42 | 5.007 |
| Validation | TRADS_30012505 | WB, A30, Between Redruth and Scorrier | WB | 1455 | 1535 | 2.078 | Yes | Yes | 1107 | 1182 | 2.203 | Yes | Yes | 273 | 297 | 1.436 | 74 | 56 | 2.287 |
| Calibration | TRADS_30012506 | WB, A30, Between Scorrier and Chiverton Cross Rbt | WB | 1669 | 1915 | 5.813 | No | Yes | 1270 | 1544 | 7.299 | No | No | 313 | 300 | 0.782 | 85 | 71 | 1.589 |
| Calibration | TRADS_30012507 | EB, A30, Between Scorrier and Chiverton Cross Rbt | EB | 1358 | 1431 | 1.959 | Yes | Yes | 1035 | 1075 | 1.233 | Yes | Yes | 242 | 291 | 3.008 | 81 | 65 | 1.879 |
| Calibration | TRADS_30012508 | EB, A30, Between Chybucca and Marazanvose | EB | 869 | 852 | 0.582 | Yes | Yes | 622 | 626 | 0.162 | Yes | Yes | 173 | 180 | 0.542 | 74 | 46 | 3.653 |
| Calibration | TRADS_30012509 | WB, A30, Between Chybucca and Marazanvose | WB | 804 | 882 | 2.676 | Yes | Yes | 568 | 649 | 3.248 | Yes | Yes | 164 | 148 | 1.241 | 72 | 85 | 1.474 |
| Validation | TRADS_30012512 | EB, A30, Between Summercourt and Indian Queens | EB | 1363 | 1472 | 2.891 | Yes | Yes | 1037 | 1136 | 3.005 | Yes | Yes | 256 | 263 | 0.459 | 69 | 72 | 0.282 |
| Validation | TRADS_30012513 | WB, A30, Between Summercourt and Indian Queens | WB | 1282 | 1282 | 0.017 | Yes | Yes | 948 | 947 | 0.041 | Yes | Yes | 231 | 228 | 0.197 | 103 | 107 | 0.474 |
| Calibration | ATC_5_NB | NB, B3284, Between Mithian and Perranporth | NB | 211 | 194 | 1.216 | Yes | Yes | 176 | 188 | 0.957 | Yes | Yes | 29 | 4 | 6.307 | 6 | 2 | 2.393 |
| Calibration | ATC_5_SB | SB, B3284, Between Mithian and Perranporth | SB | 137 | 136 | 0.062 | Yes | Yes | 114 | 115 | 0.152 | Yes | Yes | 19 | 20 | 0.193 | 4 | 1 | 2.030 |
| Calibration | ATC_35_NB | NB, A39, Between Truro and Carnon Downs | NB | 832 | 884 | 1.802 | Yes | Yes | 662 | 752 | 3.387 | Yes | Yes | 124 | 69 | 5.518 | 46 | 63 | 2.293 |
| Calibration | ATC_35_SB | SB, A39, Between Truro and Carnon Downs | SB | 1060 | 928 | 4.200 | Yes | Yes | 844 | 738 | 3.740 | Yes | Yes | 158 | 141 | 1.344 | 59 | 48 | 1.475 |
| Calibration | ATC_41_EB | EB, A390, Between Treliske Hospital and Truro | EB | 1059 | 1055 | 0.142 | Yes | Yes | 918 | 917 | 0.035 | Yes | Yes | 121 | 118 | 0.282 | 20 | 20 | 0.106 |
| Calibration | ATC_41_WB | WB, A390, Between Treliske Hospital and Truro | WB | 1049 | 1107 | 1.753 | Yes | Yes | 909 | 967 | 1.876 | Yes | Yes | 120 | 120 | 0.035 | 20 | 20 | 0.064 |
| Calibration | ATC_76_EB | EB, A390, Between Truro and Probus | EB | 886 | 948 | 2.065 | Yes | Yes | 705 | 756 | 1.905 | Yes | Yes | 132 | 140 | 0.731 | 49 | 52 | 0.353 |
| Calibration | ATC_76_WB | WB, A390, Between Truro and Probus | WB | 576 | 554 | 0.954 | Yes | Yes | 459 | 436 | 1.054 | Yes | Yes | 86 | 85 | 0.095 | 32 | 33 | 0.087 |
| Calibration | ATC_77_NB | NB, B3284, Between Shortlanesend and Truro | NB | 555 | 548 | 0.313 | Yes | Yes | 460 | 484 | 1.083 | Yes | Yes | 81 | 53 | 3.411 | 15 | 12 | 0.837 |
| Calibration | ATC_77_SB | SB, B3284, Between Shortlanesend and Truro | SB | 314 | 455 | 7.197 | No | No | 260 | 406 | 7.994 | No | No | 46 | 49 | 0.470 | 8 | 0 | 3.849 |
| Validation | ATC_137_EB | EB, A390, Between Chiverton Cross and Threemilestone | EB | 699 | 610 | 3.447 | Yes | Yes | 581 | 547 | 1.434 | Yes | Yes | 98 | 51 | 5.382 | 19 | 12 | 1.932 |
| Validation | ATC_137_WB | WB, A390, Between Chiverton Cross and Threemilestone | WB | 1152 | 1243 | 2.613 | Yes | Yes | 959 | 1138 | 5.519 | No | No | 161 | 101 | 5.282 | 32 | 4 | 6.513 |
| Calibration | ATC_218_NB | NB, A39, Between Truro and Carland Cross Rbt | NB | 574 | 657 | 3.328 | Yes | Yes | 457 | 542 | 3.837 | Yes | Yes | 85 | 94 | 0.908 | 32 | 20 | 2.311 |
| Calibration | ATC_218_SB | SB, A39, Between Truro and Carland Cross Rbt | SB | 507 | 463 | 2.016 | Yes | Yes | 404 | 362 | 2.120 | Yes | Yes | 75 | 71 | 0.504 | 28 | 30 | 0.256 |
| Calibration | ATC_973_EB | EB, Chacewater Hill between Threemilestone and Chacewater | EB | 260 | 173 | 5.972 | No | Yes | 223 | 131 | 6.943 | No | Yes | 32 | 37 | 0.832 | 5 | 5 | 0.184 |
| Calibration | ATC_973_WB | WB, Chacewater Hill between Threemilestone and Chacewater | WB | 656 | 634 | 0.889 | Yes | Yes | 562 | 504 | 2.499 | Yes | Yes | 81 | 101 | 2.143 | 13 | 28 | 3.222 |
| Calibration | ATC_135_NB | A3075 Between Chiverton and Newquay | NB | 635 | 626 | 0.373 | Yes | Yes | 495 | 486 | 0.417 | Yes | Yes | 121 | 121 | 0.020 | 19 | 19 | 0.079 |
| Calibration | ATC_135_SB | A3075 Between Chiverton and Newquay | SB | 433 | 429 | 0.202 | Yes | Yes | 338 | 341 | 0.173 | Yes | Yes | 82 | 83 | 0.075 | 13 | 5 | 2.692 |
| Calibration | ATC_165_NB | A3058 between Summercourt and Quintrell Downs | NB | 196 | 153 | 3.289 | Yes | Yes | 153 | 108 | 3.954 | Yes | Yes | 37 | 37 | 0.007 | 6 | 8 | 0.649 |
| Calibration | ATC_165_SB | A3058 between Summercourt and Quintrell Downs | SB | 164 | 187 | 1.690 | Yes | Yes | 128 | 150 | 1.904 | Yes | Yes | 31 | 30 | 0.134 | 5 | 6 | 0.284 |
| Calibration | ATC_167_NB | A3076 Between Mitchell and Gummows Shop | NB | 119 | 135 | 1.418 | Yes | Yes | 93 | 110 | 1.736 | Yes | Yes | 23 | 23 | 0.064 | 4 | 2 | 1.115 |
| Calibration | ATC_167_SB | A3076 Between Mitchell and Gummows Shop | SB | 91 | 40 | 6.208 | No | Yes | 71 | 24 | 6.811 | No | Yes | 17 | 14 | 0.725 | 3 | 2 | 0.340 |
| Calibration | ATC_132_NB | A3075 Between Goonhavern and Newquay | NB | 755 | 713 | 1.528 | Yes | Yes | 589 | 559 | 1.230 | Yes | Yes | 143 | 131 | 1.024 | 23 | 23 | 0.014 |
| Calibration | ATC_132_SB | A3075 Between Goonhavern and Newquay | SB | 541 | 491 | 2.217 | Yes | Yes | 422 | 388 | 1.678 | Yes | Yes | 103 | 95 | 0.784 | 16 | 7 | 2.549 |
| Calibration | MCC_16_SB | B3285 Between Goonhavern and A30 | SB | 112 | 184 | 5.899 | No | Yes | 83 | 148 | 6.086 | No | Yes | 19 | 26 | 1.516 | 10 | 9 | 0.309 |
| Calibration | MCC_16_NB | B3285 Between A30 and Goonhavern | NB | 124 | 209 | 6.582 | No | Yes | 94 | 171 | 6.677 | No | Yes | 23 | 35 | 2.215 | 7 | 3 | 1.701 |
| Calibration | MCC_17_NB | B3284 Chybucca towards Perranporth | NB | 99 | 156 | 5.030 | No | Yes | 72 | 135 | 6.131 | No | Yes | 19 | 9 | 2.683 | 7 | 12 | 1.474 |
| Calibration | MCC_17_SB | B3284 Chybucca from Perranporth | SB | 55 | 108 | 5.944 | No | Yes | 45 | 71 | 3.433 | Yes | Yes | 8 | 35 | 5.883 | 2 | 2 | 0.171 |
| Calibration | MCC_19_NB | B3277 Chiverton towards St Agnes | NB | 443 | 363 | 4.005 | Yes | Yes | 344 | 271 | 4.177 | Yes | Yes | 77 | 75 | 0.187 | 22 | 16 | 1.255 |
| Calibration | MCC_19_SB | B3277 Chiverton from St Agnes | SB | 492 | 461 | 1.406 | Yes | Yes | 389 | 368 | 1.076 | Yes | Yes | 87 | 85 | 0.241 | 16 | 8 | 2.158 |
| Calibration | MCC_9_NB | Henver Road Zelah | NB | 32 | 33 | 0.140 | Yes | Yes | 26 | 30 | 0.672 | Yes | Yes | 5 | 3 | 1.261 | 1 | 1 | 0.320 |
| Calibration | MCC_9_SB | Henver Road Zelah | SB | 61 | 46 | 2.080 | Yes | Yes | 51 | 41 | 1.400 | Yes | Yes | 9 | 4 | 1.845 | 1 | 0 | 1.271 |
| Calibration | MCC_1_NB | B3284 Between Chybucca and Shortlanesend | NB | 346 | 298 | 2.701 | Yes | Yes | 288 | 255 | 1.988 | Yes | Yes | 48 | 35 | 2.050 | 10 | 7 | 0.847 |
| Calibration | MCC_1_SB | B3284 Between Chybucca and Shortlanesend | SB | 214 | 321 | 6.535 | No | No | 155 | 280 | 8.493 | No | No | 42 | 40 | 0.245 | 17 | 0 | 5.762 |
| Calibration | MCC_2_NB | Route between A30 and B3284 via Allet | NB | 45 | 37 | 1.325 | Yes | Yes | 33 | 34 | 0.157 | Yes | Yes | 8 | 2 | 2.608 | 4 | 1 | 2.333 |
| Calibration | MCC_2_SB | Route between A30 and B3284 via Allet | SB | 45 | 10 | 6.552 | No | Yes | 36 | 10 | 5.556 | No | Yes | 6 | 1 | 2.680 | 3 | 0 | 2.449 |
| Calibration | MCC_2_C49_Callestick_SB | C49_Callestick_SB | SB | 7 | 11 | 1.223 | Yes | Yes | 5 | 10 | 1.676 | Yes | Yes | 1 | 1 | 0.344 | 1 | 0 | 1.044 |
| Calibration | MCC_2_C49_Callestick_NB | C49_Callestick_NB | NB | 6 | 30 | 5.600 | No | Yes | 5 | 27 | 5.669 | No | Yes | 1 | 2 | 0.802 | 0 | 1 | 0.114 |
| Calibration | MCC_3_U6083 Lower Ventongimps SB | U6083 Lower Ventongimps SB | SB | 2 | 2 | 0.000 | Yes | Yes | 2 | 2 | 0.341 | Yes | Yes | 0 | 0 | 0.853 | 0 | 0 | 0.426 |
| Calibration | MCC_3_U6083 Lower Ventongimps NB | U6083 Lower Ventongimps NB | NB | 3 | 2 | 0.639 | Yes | Yes | 2 | 2 | 0.224 | Yes | Yes | 1 | 0 | 1.168 | 0 | 0 | 0.000 |
| Calibration | MCC_5_U6082 Shortlanesend NB | U6082 Shortlanesend NB | NB | 1 | 1 | 0.000 | Yes | Yes | 1 | 1 | 0.474 | Yes | Yes | 0 | 0 | 0.858 | 0 | 0 | 0.324 |
| Calibration | MCC_5_U6082 Shortlanesend SB | U6082 Shortlanesend SB | SB | 2 | 1 | 0.816 | Yes | Yes | 1 | 1 | 0.269 | Yes | Yes | 1 | 0 | 1.193 | 0 | 0 | 0.000 |
| Calibration | MCC_6_C178 Perranzabuloe SB | C178 Perranzabuloe SB | SB | 0 | 0 | 0.447 | Yes | Yes | 0 | 0 | 0.447 | Yes | Yes | 0 | 0 | 0.000 | 0 | 0 | 0.000 |
| Calibration | MCC_6_C178 Perranzabuloe NB | C178 Perranzabuloe NB | NB | 1 | 1 | 0.000 | Yes | Yes | 1 | 1 | 0.174 | Yes | Yes | 0 | 0 | 0.577 | 0 | 0 | 0.000 |
| Calibration | MCC_7_C364 Zelah off slip | C364 Zelah off slip | NB | 16 | 0 | 5.657 | No | Yes | 11 | 0 | 4.690 | Yes | Yes | 3 | 0 | 2.449 | 2 | 0 | 2.000 |
| Calibration | MCC_8_Shortlanesend-Zelah NB | Shortlanesend-Zelah NB | NB | 13 | 0 | 5.076 | No | Yes | 10 | 0 | 4.551 | Yes | Yes | 2 | 0 | 1.740 | 1 | 0 | 1.421 |
| Calibration | MCC_8_Shortlanesend-Zelah SB | Shortlanesend-Zelah SB | SB | 5 | 8 | 1.180 | Yes | Yes | 4 | 7 | 1.122 | Yes | Yes | 1 | 1 | 0.069 | 0 | 0 | 0.849 |
| Calibration | MCC_10_Lane to/from St Allen NB | Lane to/from St Allen NB | NB | 2 | 4 | 1.257 | Yes | Yes | 1 | 3 | 1.272 | Yes | Yes | 1 | 0 | 0.557 | 0 | 1 | 0.984 |
| Calibration | MCC_10_Lane to/from St Allen SB | Lane to/from St Allen SB | SB | 0 | 8 | 3.946 | Yes | Yes | 0 | 8 | 3.942 | Yes | Yes | 0 | 0 | 0.000 | 0 | 0 | 0.173 |
| Validation | MCC_17_SW | Road Between Boxheater West and Fiddler's Green Junction | SW | 14 | 12 | 0.425 | Yes | Yes | 11 | 12 | 0.133 | Yes | Yes | 3 | 0 | 2.263 | 0 | 1 | 0.825 |
| Validation | MCC_17_NE | Road Between Boxheater West and Fiddler's Green Junction | NE | 29 | 45 | 2.607 | Yes | Yes | 23 | 44 | 3.649 | Yes | Yes | 5 | 0 | 3.198 | 1 | 1 | 0.015 |
| Calibration | MCC_13_Trispen NB | Trispin NB | NB | 7 | 10 | 1.117 | Yes | Yes | 5 | 8 | 1.182 | Yes | Yes | 1 | 1 | 0.606 | 0 | 1 | 1.044 |
| Calibration | MCC_13_Trispen SB | Trispin SB | SB | 7 | 0 | 3.738 | Yes | Yes | 7 | 0 | 3.611 | Yes | Yes | 0 | 0 | 0.886 | 0 | 0 | 0.382 |
| Calibration | MCC_14_Ventonteague NB | Wentonteague NB | NB | 3 | 2 | 0.674 | Yes | Yes | 2 | 2 | 0.024 | Yes | Yes | 1 | 0 | 1.257 | 0 | 0 | 0.688 |
| Calibration | MCC_14_Ventonteague SB | Wentonteague SB | SB | 3 | 2 | 0.626 | Yes | Yes | 2 | 2 | 0.250 | Yes | Yes | 1 | 0 | 1.047 | 0 | 0 | 0.378 |

## Annex C - Screenline Analysis

| Name | Status | Site Location | Direction | AM Peak | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | All | | | | Car | | | | LGV | | | | HGV | | | |
| | | | | Observed | Modelled | Diff. | GEH | Observed | Modelled | Diff. | GEH | Observed | Modelled | Diff. | GEH | Observed | Modelled | Diff. | GEH |
| **West of Truro - NB** | Calibration | EB, A30, Between Scorrier and Chiverton Cross Rbt | EB | 1551 | 1483 | -4% | 1.755 | 1183 | 1122 | -5% | 1.794 | 276 | 275 | 0% | 0.075 | 92 | 86 | -7% | 0.661 |
| | | EB, Chacewater Hill between Threemilestone and Chacewater | EB | 531 | 588 | 11% | 2.426 | 454 | 465 | 2% | 0.516 | 65 | 91 | 40% | 2.952 | 11 | 31 | 186% | 4.406 |
| | | NB, A39, Between Truro and Carnon Downs | NB | 996 | 915 | -8% | 2.626 | 793 | 796 | 0% | 0.102 | 148 | 89 | -40% | 5.439 | 56 | 31 | -45% | 3.787 |
| | **TOTAL** | | | 3078 | 2986 | -3% | 1.674 | 2430 | 2383 | -2% | 0.957 | 490 | 456 | 7% | 1.578 | 159 | 148 | 7% | 0.883 |
| **West of Truro - SB** | Calibration | WB, A30, Between Scorrier and Chiverton Cross Rbt | WB | 1342 | 1409 | 5% | 1.807 | 1022 | 1065 | 4% | 1.345 | 252 | 267 | 6% | 0.904 | 68 | 77 | 13% | 1.059 |
| | | WB, Chacewater Hill between Threemilestone and Chacewater | WB | 209 | 146 | -30% | 4.728 | 179 | 96 | -46% | 7.064 | 26 | 44 | 71% | 3.075 | 4 | 6 | 40% | 0.754 |
| | | SB, A39, Between Truro and Carnon Downs | SB | 720 | 745 | 4% | 0.936 | 573 | 635 | 11% | 2.529 | 107 | 77 | -28% | 3.074 | 40 | 33 | -18% | 1.206 |
| | **TOTAL** | | | 2271 | 2300 | 1% | 0.616 | 1773 | 1796 | 1% | 0.540 | 385 | 388 | -1% | 0.160 | 113 | 116 | -3% | 0.324 |
| **East of Truro - WB** | Validation | WB, A390, Between Truro and Probus | WB | 856 | 821 | -4% | 1.213 | 681 | 711 | 4% | 1.144 | 127 | 60 | -52% | 6.895 | 48 | 49 | 3% | 0.217 |
| | | WB, A30, Between Carland Cross Rbt and Mitchell | WB | 1505 | 1651 | 10% | 3.681 | 1114 | 1184 | 6% | 2.067 | 271 | 351 | 30% | 4.554 | 120 | 116 | -3% | 0.382 |
| | | A3075 Between Goonhavern and Newquay | SB | 605 | 520 | -14% | 3.595 | 472 | 406 | -14% | 3.143 | 115 | 100 | -13% | 1.418 | 18 | 13 | -26% | 1.181 |
| | **TOTAL** | | | 2966 | 2992 | 1% | 0.474 | 2266 | 2301 | 2% | 0.719 | 513 | 512 | 0% | 0.052 | 186 | 179 | 4% | 0.544 |
| **East of Truro - EB** | Validation | EB, A390, Between Truro and Probus | EB | 479 | 473 | -1% | 0.291 | 381 | 377 | -1% | 0.205 | 71 | 68 | -4% | 0.373 | 27 | 27 | 3% | 0.147 |
| | | EB, A30, Between Carland Cross Rbt and Mitchell | EB | 1249 | 1319 | 6% | 1.967 | 950 | 1000 | 5% | 1.579 | 234 | 233 | 0% | 0.075 | 64 | 86 | 35% | 2.580 |
| | | A3075 Between Goonhavern and Newquay | NB | 430 | 439 | 2% | 0.392 | 336 | 344 | 2% | 0.454 | 82 | 83 | 1% | 0.109 | 13 | 12 | -9% | 0.336 |
| | **TOTAL** | | | 2158 | 2230 | 3% | 1.543 | 1667 | 1721 | 3% | 1.304 | 387 | 384 | 1% | 0.167 | 103 | 125 | -21% | 2.049 |
| **North of Truro - NB** | Calibration | WB, A390, Between Chiverton Cross and Threemilestone | WB | 705 | 611 | -13% | 3.695 | 587 | 550 | -6% | 1.539 | 99 | 49 | -50% | 5.782 | 20 | 11 | -43% | 2.134 |
| | | WB, Chacewater Hill between Threemilestone and Chacewater | WB | 209 | 146 | -30% | 4.728 | 179 | 96 | -46% | 7.064 | 26 | 44 | 71% | 3.075 | 4 | 6 | 40% | 0.754 |
| | | NB, B3284, Between Shortlanesend and Truro | NB | 239 | 226 | -5% | 0.857 | 198 | 194 | -2% | 0.290 | 35 | 18 | -49% | 3.351 | 6 | 14 | 128% | 2.518 |
| | | NB, A39, Between Truro and Carland Cross Rbt | NB | 444 | 467 | 5% | 1.062 | 354 | 391 | 11% | 1.943 | 66 | 63 | -4% | 0.366 | 25 | 13 | -48% | 2.737 |
| | **TOTAL** | | | 1598 | 1450 | -9% | 3.794 | 1318 | 1232 | -7% | 2.409 | 225 | 174 | 23% | 3.658 | 55 | 45 | 19% | 1.481 |
| **North of Truro - SB** | Calibration | EB, A390, Between Chiverton Cross and Threemilestone | EB | 965 | 903 | -6% | 2.049 | 803 | 771 | -4% | 1.141 | 135 | 115 | -15% | 1.753 | 27 | 16 | -41% | 2.373 |
| | | EB, Chacewater Hill between Threemilestone and Chacewater | EB | 531 | 588 | 11% | 2.426 | 454 | 465 | 2% | 0.516 | 65 | 91 | 40% | 2.952 | 11 | 31 | 186% | 4.406 |
| | | SB, B3284, Between Shortlanesend and Truro | SB | 587 | 555 | -5% | 1.330 | 486 | 484 | 0% | 0.079 | 85 | 70 | -18% | 1.771 | 16 | 1 | -93% | 5.023 |
| | | SB, A39, Between Truro and Carland Cross Rbt | SB | 612 | 610 | 0% | 0.075 | 487 | 467 | -4% | 0.923 | 91 | 112 | 23% | 2.115 | 34 | 31 | -9% | 0.529 |
| | **TOTAL** | | | 2694 | 2655 | -1% | 0.752 | 2230 | 2188 | -2% | 0.912 | 376 | 389 | -3% | 0.627 | 87 | 79 | 9% | 0.909 |

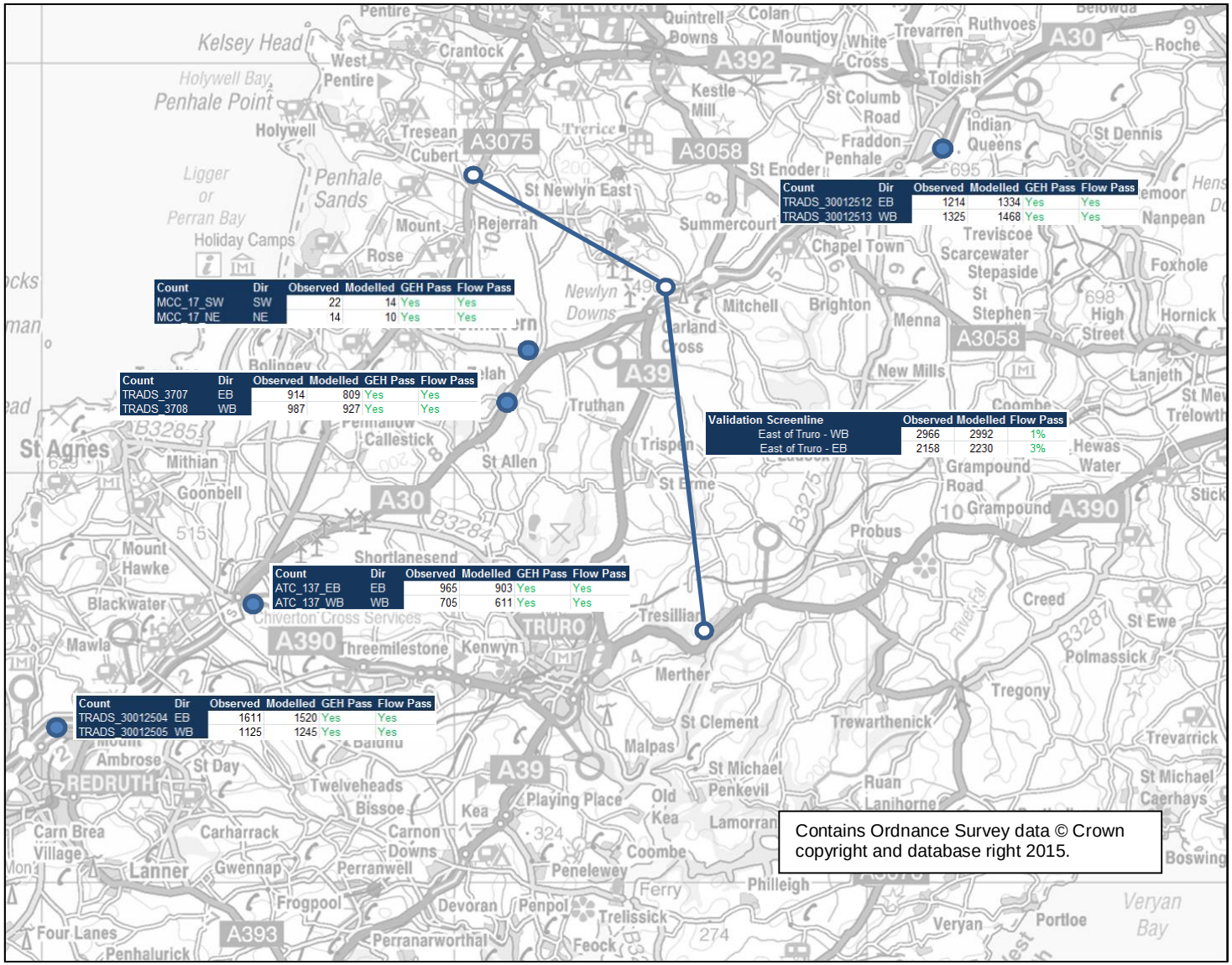
## Annex C - Screenline Analysis

| Name | Status | Site Location | Direction | Interpeak | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | All | | | | Car | | | | LGV | | | | HGV | | | |
| | | | | Observed | Modelled | Diff. | GEH | Observed | Modelled | Diff. | GEH | Observed | Modelled | Diff. | GEH | Observed | Modelled | Diff. | GEH |
| **West of Truro - NB** | Calibration | EB, A30, Between Scorrier and Chiverton Cross Rbt | EB | 1278 | 1349 | 6% | 1.963 | 974 | 1029 | 6% | 1.737 | 228 | 266 | 17% | 2.412 | 76 | 54 | -29% | 2.692 |
| | | EB, Chacewater Hill between Threemilestone and Chacewater | EB | 363 | 297 | -18% | 3.625 | 311 | 212 | -32% | 6.078 | 45 | 64 | 43% | 2.613 | 7 | 21 | 178% | 3.524 |
| | | NB, A39, Between Truro and Carnon Downs | NB | 859 | 845 | -2% | 0.465 | 683 | 735 | 7% | 1.924 | 128 | 71 | -44% | 5.657 | 48 | 39 | -18% | 1.268 |
| | **TOTAL** | | | 2500 | 2492 | 0% | 0.166 | 1969 | 1977 | 0% | 0.178 | 400 | 401 | 0% | 0.036 | 131 | 114 | 13% | 1.525 |
| **West of Truro - SB** | Calibration | WB, A30, Between Scorrier and Chiverton Cross Rbt | WB | 1335 | 1522 | 14% | 4.962 | 1016 | 1129 | 11% | 3.451 | 251 | 324 | 29% | 4.321 | 68 | 69 | 2% | 0.156 |
| | | WB, Chacewater Hill between Threemilestone and Chacewater | WB | 394 | 304 | -23% | 4.789 | 337 | 240 | -29% | 5.725 | 48 | 46 | -5% | 0.317 | 8 | 18 | 124% | 2.762 |
| | | SB, A39, Between Truro and Carnon Downs | SB | 838 | 758 | -10% | 2.861 | 667 | 669 | 0% | 0.054 | 125 | 54 | -57% | 7.477 | 47 | 35 | -25% | 1.805 |
| | **TOTAL** | | | 2567 | 2584 | 1% | 0.341 | 2020 | 2037 | 1% | 0.382 | 424 | 424 | 0% | 0.019 | 123 | 123 | 0% | 0.025 |
| **East of Truro - WB** | Validation | WB, A390, Between Truro and Probus | WB | 604 | 566 | -6% | 1.553 | 480 | 480 | 0% | 0.036 | 90 | 54 | -40% | 4.187 | 34 | 32 | -4% | 0.217 |
| | | WB, A30, Between Carland Cross Rbt and Mitchell | WB | 1260 | 1360 | 8% | 2.774 | 932 | 987 | 6% | 1.784 | 227 | 270 | 19% | 2.771 | 101 | 102 | 1% | 0.142 |
| | | A3075 Between Goonhavern and Newquay | SB | 540 | 465 | -14% | 3.326 | 421 | 366 | -13% | 2.782 | 103 | 89 | -13% | 1.366 | 16 | 10 | -37% | 1.652 |
| | **TOTAL** | | | 2403 | 2392 | 0% | 0.240 | 1834 | 1833 | 0% | 0.016 | 419 | 414 | 1% | 0.256 | 151 | 145 | 4% | 0.479 |
| **East of Truro - EB** | Validation | EB, A390, Between Truro and Probus | EB | 621 | 632 | 2% | 0.410 | 494 | 504 | 2% | 0.455 | 92 | 93 | 0% | 0.020 | 35 | 35 | 0% | 0.017 |
| | | EB, A30, Between Carland Cross Rbt and Mitchell | EB | 1320 | 1325 | 0% | 0.128 | 1005 | 1009 | 0% | 0.138 | 248 | 248 | 0% | 0.033 | 67 | 67 | 0% | 0.028 |
| | | A3075 Between Goonhavern and Newquay | NB | 542 | 534 | -1% | 0.309 | 422 | 424 | 0% | 0.097 | 103 | 95 | -7% | 0.774 | 16 | 15 | -9% | 0.374 |
| | **TOTAL** | | | 2483 | 2491 | 0% | 0.156 | 1921 | 1938 | 1% | 0.377 | 443 | 436 | 2% | 0.333 | 118 | 116 | 2% | 0.166 |
| **North of Truro - NB** | Calibration | WB, A390, Between Chiverton Cross and Threemilestone | WB | 935 | 848 | -9% | 2.921 | 778 | 767 | -1% | 0.413 | 131 | 76 | -42% | 5.448 | 26 | 6 | -78% | 5.124 |
| | | WB, Chacewater Hill between Threemilestone and Chacewater | WB | 394 | 304 | -23% | 4.789 | 337 | 240 | -29% | 5.725 | 48 | 46 | -5% | 0.317 | 8 | 18 | 124% | 2.762 |
| | | NB, B3284, Between Shortlanesend and Truro | NB | 286 | 355 | 24% | 3.827 | 237 | 309 | 30% | 4.319 | 42 | 35 | -16% | 1.046 | 8 | 11 | 48% | 1.191 |
| | | NB, A39, Between Truro and Carland Cross Rbt | NB | 514 | 576 | 12% | 2.674 | 409 | 477 | 17% | 3.256 | 76 | 86 | 13% | 1.060 | 29 | 13 | -55% | 3.433 |
| | **TOTAL** | | | 2129 | 2083 | -2% | 0.997 | 1762 | 1793 | 2% | 0.739 | 297 | 243 | 18% | 3.314 | 70 | 48 | 32% | 2.920 |
| **North of Truro - SB** | Calibration | EB, A390, Between Chiverton Cross and Threemilestone | EB | 826 | 786 | -5% | 1.425 | 688 | 697 | 1% | 0.369 | 116 | 84 | -27% | 3.114 | 23 | 4 | -83% | 5.169 |
| | | EB, Chacewater Hill between Threemilestone and Chacewater | EB | 363 | 297 | -18% | 3.625 | 311 | 212 | -32% | 6.078 | 45 | 64 | 43% | 2.613 | 7 | 21 | 178% | 3.524 |
| | | SB, B3284, Between Shortlanesend and Truro | SB | 291 | 333 | 15% | 2.390 | 241 | 296 | 23% | 3.387 | 42 | 36 | -14% | 0.945 | 8 | 0 | -96% | 3.704 |
| | | SB, A39, Between Truro and Carland Cross Rbt | SB | 486 | 503 | 3% | 0.761 | 387 | 450 | 16% | 3.077 | 72 | 34 | -52% | 5.182 | 27 | 19 | -30% | 1.703 |
| | **TOTAL** | | | 1966 | 1919 | -2% | 1.071 | 1626 | 1656 | 2% | 0.737 | 275 | 219 | 20% | 3.542 | 65 | 44 | 33% | 2.895 |

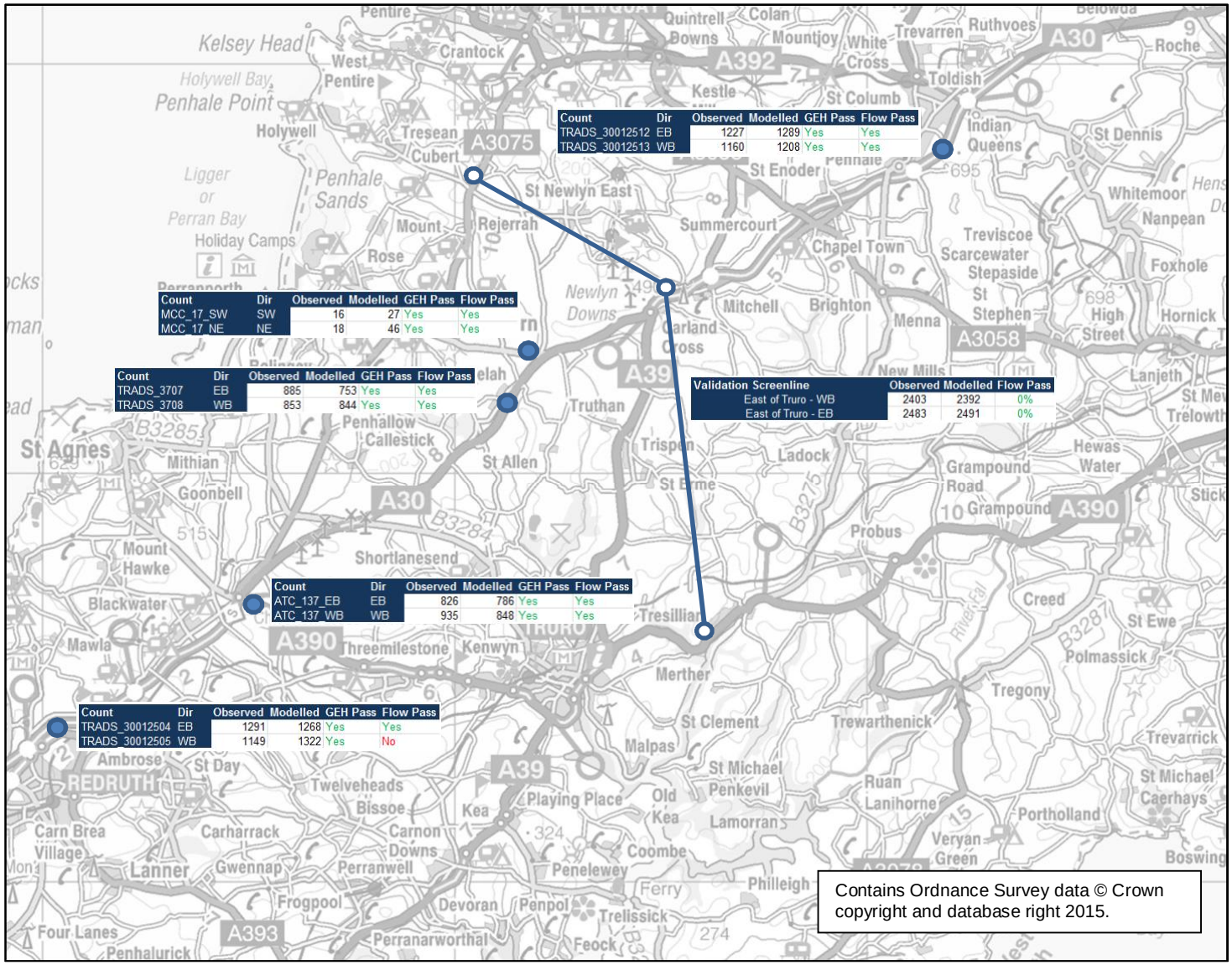
## Annex C - Screenline Analysis

| Name | Status | Site Location | Direction | PM Peak | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | All | | | | Car | | | | LGV | | | | HGV | | | |
| | | | | Observed | Modelled | Diff. | GEH | Observed | Modelled | Diff. | GEH | Observed | Modelled | Diff. | GEH | Observed | Modelled | Diff. | GEH |
| **West of Truro - NB** | Calibration | EB, A30, Between Scorrier and Chiverton Cross Rbt | EB | 1358 | 1431 | 5% | 1.959 | 1035 | 1075 | 4% | 1.233 | 242 | 291 | 20% | 3.008 | 81 | 65 | -20% | 1.879 |
| | | EB, Chacewater Hill between Threemilestone and Chacewater | EB | 260 | 173 | -34% | 5.972 | 223 | 131 | -41% | 6.943 | 32 | 37 | 15% | 0.832 | 5 | 5 | -8% | 0.184 |
| | | NB, A39, Between Truro and Carnon Downs | NB | 832 | 884 | 6% | 1.802 | 662 | 752 | 14% | 3.387 | 124 | 69 | -44% | 5.518 | 46 | 63 | 37% | 2.293 |
| | **TOTAL** | | | 2450 | 2488 | 2% | 0.766 | 1920 | 1958 | 2% | 0.857 | 398 | 397 | 0% | 0.011 | 132 | 133 | 0% | 0.047 |
| **West of Truro - SB** | Calibration | WB, A30, Between Scorrier and Chiverton Cross Rbt | WB | 1669 | 1915 | 15% | 5.813 | 1270 | 1544 | 22% | 7.299 | 313 | 300 | -4% | 0.782 | 85 | 71 | -17% | 1.589 |
| | | WB, Chacewater Hill between Threemilestone and Chacewater | WB | 656 | 634 | -3% | 0.889 | 562 | 504 | -10% | 2.499 | 81 | 101 | 25% | 2.143 | 13 | 28 | 109% | 3.222 |
| | | SB, A39, Between Truro and Carnon Downs | SB | 1060 | 928 | -12% | 4.200 | 844 | 738 | -12% | 3.740 | 158 | 141 | -10% | 1.344 | 59 | 48 | -18% | 1.475 |
| | **TOTAL** | | | 3385 | 3476 | 3% | 1.555 | 2676 | 2786 | 4% | 2.122 | 552 | 542 | 2% | 0.413 | 158 | 147 | 6% | 0.822 |
| **East of Truro - WB** | Validation | WB, A390, Between Truro and Probus | WB | 576 | 554 | -4% | 0.954 | 459 | 436 | -5% | 1.054 | 86 | 85 | -1% | 0.095 | 32 | 33 | 2% | 0.087 |
| | | WB, A30, Between Carland Cross Rbt and Mitchell | WB | 1370 | 1455 | 6% | 2.274 | 1013 | 1084 | 7% | 2.192 | 247 | 252 | 2% | 0.350 | 110 | 119 | 8% | 0.838 |
| | | A3075 Between Goonhavern and Newquay | SB | 541 | 491 | -9% | 2.217 | 422 | 388 | -8% | 1.678 | 103 | 95 | -8% | 0.784 | 16 | 7 | -54% | 2.549 |
| | **TOTAL** | | | 2487 | 2499 | 0% | 0.249 | 1894 | 1909 | 1% | 0.342 | 435 | 432 | 1% | 0.152 | 158 | 159 | 0% | 0.053 |
| **East of Truro - EB** | Validation | EB, A390, Between Truro and Probus | EB | 886 | 948 | 7% | 2.065 | 705 | 756 | 7% | 1.905 | 132 | 140 | 6% | 0.731 | 49 | 52 | 5% | 0.353 |
| | | EB, A30, Between Carland Cross Rbt and Mitchell | EB | 1515 | 1564 | 3% | 1.252 | 1153 | 1190 | 3% | 1.070 | 285 | 299 | 5% | 0.846 | 77 | 75 | -3% | 0.224 |
| | | A3075 Between Goonhavern and Newquay | NB | 755 | 713 | -5% | 1.528 | 589 | 559 | -5% | 1.230 | 143 | 131 | -8% | 1.024 | 23 | 23 | 0% | 0.014 |
| | **TOTAL** | | | 3156 | 3226 | 2% | 1.244 | 2447 | 2505 | 2% | 1.179 | 560 | 571 | -2% | 0.462 | 149 | 150 | 0% | 0.051 |
| **North of Truro - NB** | Calibration | WB, A390, Between Chiverton Cross and Threemilestone | WB | 1152 | 1243 | 8% | 2.613 | 959 | 1138 | 19% | 5.519 | 161 | 101 | -37% | 5.282 | 32 | 4 | -87% | 6.513 |
| | | WB, Chacewater Hill between Threemilestone and Chacewater | WB | 656 | 634 | -3% | 0.889 | 562 | 504 | -10% | 2.499 | 81 | 101 | 25% | 2.143 | 13 | 28 | 109% | 3.222 |
| | | NB, B3284, Between Shortlanesend and Truro | NB | 555 | 548 | -1% | 0.313 | 460 | 484 | 5% | 1.083 | 81 | 53 | -35% | 3.411 | 15 | 12 | -21% | 0.837 |
| | | NB, A39, Between Truro and Carland Cross Rbt | NB | 574 | 657 | 14% | 3.328 | 457 | 542 | 19% | 3.837 | 85 | 94 | 10% | 0.908 | 32 | 20 | -37% | 2.311 |
| | **TOTAL** | | | 2938 | 3081 | 5% | 2.608 | 2438 | 2668 | 9% | 4.558 | 408 | 349 | 15% | 3.047 | 92 | 64 | 30% | 3.161 |
| **North of Truro - SB** | Calibration | EB, A390, Between Chiverton Cross and Threemilestone | EB | 699 | 610 | -13% | 3.447 | 581 | 547 | -6% | 1.434 | 98 | 51 | -48% | 5.382 | 19 | 12 | -39% | 1.932 |
| | | EB, Chacewater Hill between Threemilestone and Chacewater | EB | 260 | 173 | -34% | 5.972 | 223 | 131 | -41% | 6.943 | 32 | 37 | 15% | 0.832 | 5 | 5 | -8% | 0.184 |
| | | SB, B3284, Between Shortlanesend and Truro | SB | 314 | 455 | 45% | 7.197 | 260 | 406 | 56% | 7.994 | 46 | 49 | 7% | 0.470 | 8 | 0 | -96% | 3.849 |
| | | SB, A39, Between Truro and Carland Cross Rbt | SB | 507 | 463 | -9% | 2.016 | 404 | 362 | -10% | 2.120 | 75 | 71 | -6% | 0.504 | 28 | 30 | 5% | 0.256 |
| | **TOTAL** | | | 1780 | 1701 | -4% | 1.900 | 1468 | 1446 | -1% | 0.575 | 251 | 208 | 17% | 2.817 | 61 | 47 | 24% | 1.996 |

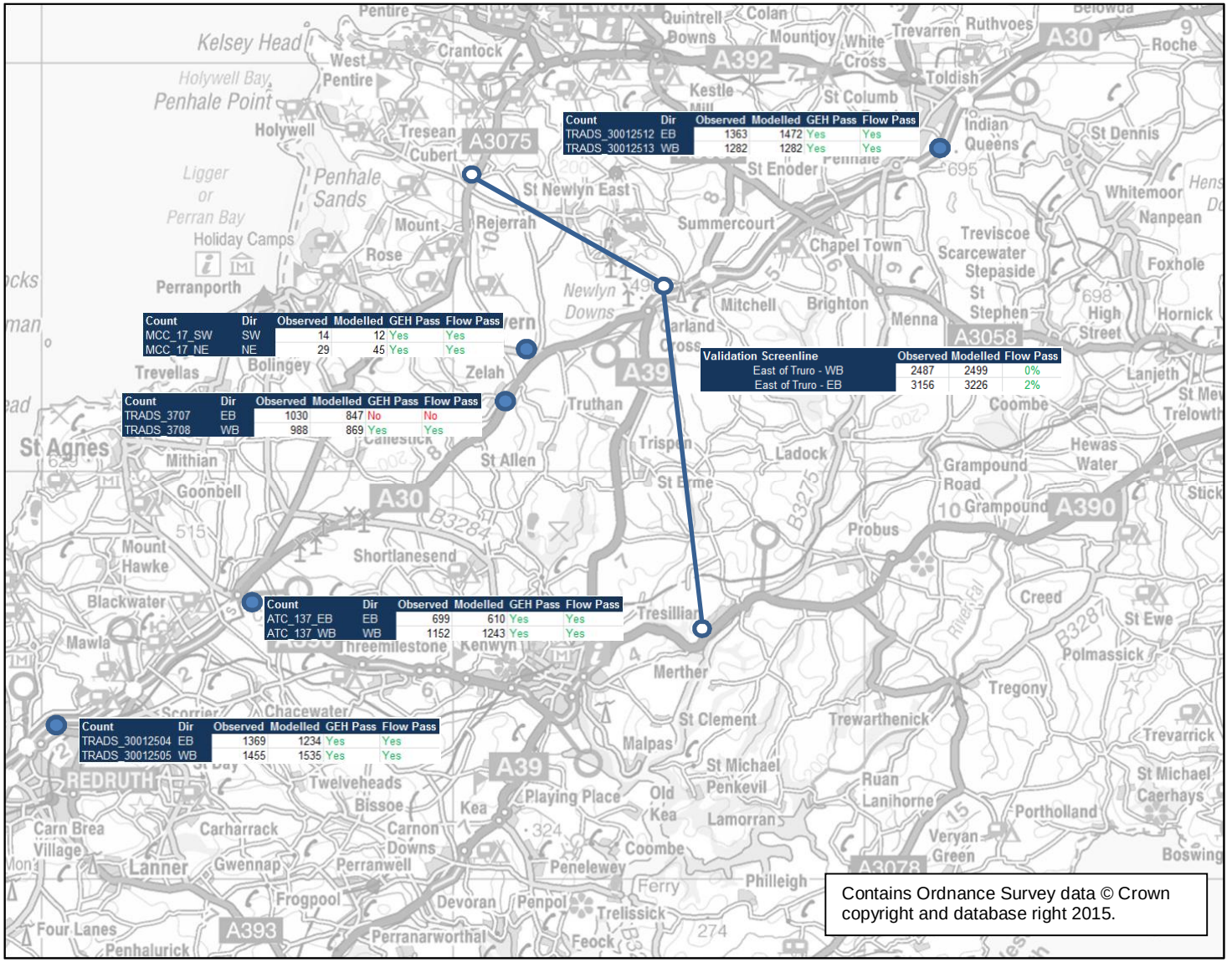
# Validation counts and screenline – AM Peak



# Validation counts and screenline – Interpeak



# Validation counts and screenline – PM Peak

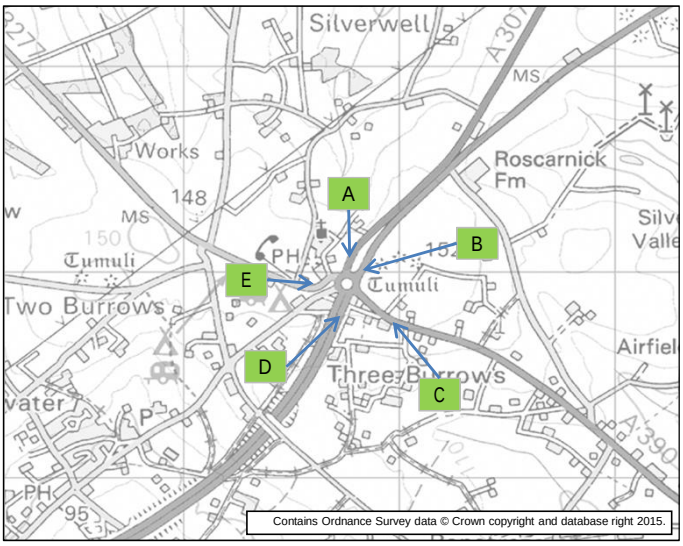


# Annex D - Junction Turning Flows

## Annex D - Junction Turning Flows

**Junction:** Chiverton Cross Roundabout

| Arm | Inbound | | Outbound | | Description |
|---|---|---|---|---|---|
| | ANode | BNode | ANode | BNode | |
| A | 11097 | 11093 | 11093 | 11097 | A3075 Newquay |
| B | 11095 | 11089 | 11089 | 11095 | A30 (E) Bodmin |
| C | 11108 | 2000 | 2000 | 11108 | A390 Truro |
| D | 2002 | 2001 | 2001 | 2002 | A30 (W) Redruth |
| E | 11096 | 11092 | 11092 | 11096 | B3277 St Agnes |




## AM

**OBSERVED**

| All Vehicle | | To Arm | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | A | B | C | D | E | F | G | TOTAL |
| From Arm | A | 0 | 4 | 153 | 252 | 38 | | | 447 |
| | B | 2 | 0 | 88 | 657 | 82 | | | 829 |
| | C | 85 | 109 | 0 | 340 | 123 | | | 658 |
| | D | 170 | 712 | 586 | 0 | 81 | | | 1550 |
| | E | 80 | 194 | 170 | 93 | 0 | | | 538 |
| | F | | | | | | | | |
| | G | | | | | | | | |
| | TOTAL | 337 | 1020 | 998 | 1342 | 324 | | | 4021 |

**MODELLED**

| All Vehicle | | To Arm | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | A | B | C | D | E | F | G | TOTAL |
| From Arm | A | 0 | 0 | 175 | 214 | 51 | | | 440 |
| | B | 0 | 0 | 83 | 801 | 61 | | | 945 |
| | C | 152 | 81 | 0 | 279 | 98 | | | 610 |
| | D | 138 | 752 | 567 | 0 | 26 | | | 1483 |
| | E | 76 | 191 | 82 | 111 | 0 | | | 460 |
| | F | | | | | | | | |
| | G | | | | | | | | |
| | TOTAL | 366 | 1024 | 907 | 1405 | 236 | | | 3938 |

**Difference (%) - GEH Criteria**

| All Vehicle | | To Arm | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | A | B | C | D | E | F | G | |
| From Arm | A | PASS | PASS | PASS | PASS | PASS | | | PASS |
| | B | PASS | PASS | PASS | PASS | PASS | | | PASS |
| | C | PASS | PASS | PASS | PASS | PASS | | | PASS |
| | D | PASS | FAIL | PASS | PASS | PASS | | | PASS |
| | E | PASS | PASS | PASS | PASS | PASS | | | PASS |
| | F | | | | | | | | |
| | G | | | | | | | | |
| | | PASS | PASS | PASS | PASS | PASS | | | PASS |

## IP

**OBSERVED**

| All Vehicle | | To Arm | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | A | B | C | D | E | F | G | TOTAL |
| From Arm | A | 0 | 5 | 127 | 175 | 42 | | | 349 |
| | B | 2 | 0 | 102 | 568 | 92 | | | 764 |
| | C | 139 | 151 | 0 | 495 | 179 | | | 965 |
| | D | 167 | 560 | 472 | 0 | 80 | | | 1279 |
| | E | 71 | 124 | 169 | 97 | 0 | | | 461 |
| | F | | | | | | | | |
| | G | | | | | | | | |
| | TOTAL | 379 | 841 | 869 | 1336 | 394 | | | 3818 |

**MODELLED**

| All Vehicle | | To Arm | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | A | B | C | D | E | F | G | TOTAL |
| From Arm | A | 0 | 0 | 112 | 223 | 75 | | | 410 |
| | B | 0 | 0 | 72 | 763 | 92 | | | 927 |
| | C | 152 | 74 | 0 | 478 | 142 | | | 846 |
| | D | 169 | 683 | 466 | 0 | 33 | | | 1351 |
| | E | 105 | 106 | 136 | 59 | 0 | | | 406 |
| | F | | | | | | | | |
| | G | | | | | | | | |
| | TOTAL | 426 | 863 | 786 | 1523 | 342 | | | 3940 |

**Difference (%) - GEH Criteria**

| All Vehicle | | To Arm | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | A | B | C | D | E | F | G | |
| From Arm | A | PASS | PASS | PASS | PASS | PASS | | | PASS |
| | B | PASS | PASS | PASS | PASS | PASS | | | PASS |
| | C | PASS | PASS | PASS | PASS | PASS | | | PASS |
| | D | PASS | PASS | PASS | PASS | PASS | | | PASS |
| | E | PASS | PASS | PASS | PASS | PASS | | | PASS |
| | F | | | | | | | | |
| | G | | | | | | | | |
| | | PASS | PASS | PASS | PASS | PASS | | | PASS |

## PM

**OBSERVED**

| All Vehicle | | To Arm | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | A | B | C | D | E | F | G | TOTAL |
| From Arm | A | 0 | 5 | 121 | 196 | 40 | | | 362 |
| | B | 1 | 0 | 65 | 718 | 146 | | | 931 |
| | C | 177 | 209 | 0 | 646 | 194 | | | 1227 |
| | D | 254 | 635 | 390 | 0 | 79 | | | 1358 |
| | E | 94 | 153 | 156 | 107 | 0 | | | 509 |
| | F | | | | | | | | |
| | G | | | | | | | | |
| | TOTAL | 526 | 1002 | 733 | 1668 | 459 | | | 4387 |

**MODELLED**

| All Vehicle | | To Arm | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | A | B | C | D | E | F | G | TOTAL |
| From Arm | A | 0 | 0 | 151 | 242 | 38 | | | 431 |
| | B | 0 | 0 | 78 | 817 | 119 | | | 1014 |
| | C | 185 | 107 | 0 | 784 | 167 | | | 1243 |
| | D | 287 | 782 | 326 | 0 | 36 | | | 1431 |
| | E | 157 | 178 | 63 | 63 | 0 | | | 461 |
| | F | | | | | | | | |
| | G | | | | | | | | |
| | TOTAL | 629 | 1067 | 618 | 1906 | 360 | | | 4580 |

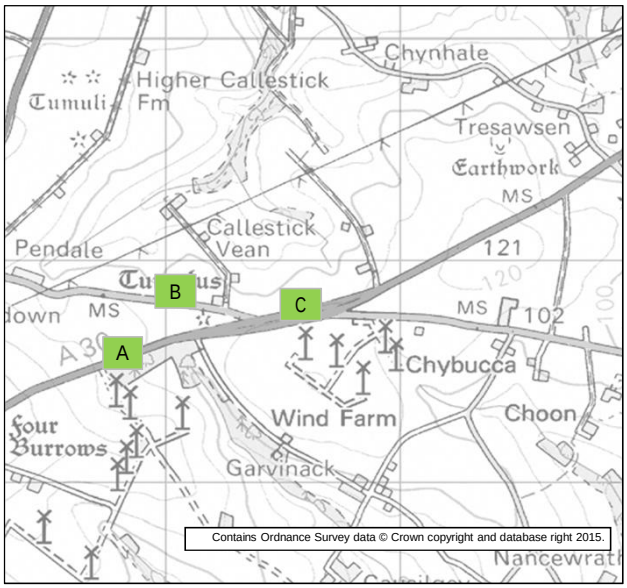
**Difference (%) - GEH Criteria**

| All Vehicle | | To Arm | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | A | B | C | D | E | F | G | |
| From Arm | A | PASS | PASS | PASS | PASS | PASS | | | PASS |
| | B | PASS | PASS | PASS | PASS | PASS | | | PASS |
| | C | PASS | PASS | PASS | PASS | PASS | | | PASS |
| | D | PASS | PASS | PASS | PASS | PASS | | | PASS |
| | E | PASS | PASS | PASS | PASS | PASS | | | PASS |
| | F | | | | | | | | |
| | G | | | | | | | | |
| | | PASS | PASS | PASS | PASS | PASS | | | PASS |

## Annex D - Junction Turning Flows

**Junction:** Chybucca (West)

| Arm | Inbound | | Outbound | | Description |
|---|---|---|---|---|---|
| | ANode | BNode | ANode | BNode | |
| A | 11107 | 11081 | 11081 | 11107 | A30 (W) Chiverton Cross |
| B | 11071 | 11081 | 11081 | 11071 | B3284 Perranporth |
| C | 1930 | 11081 | 11081 | 1930 | A30 (E) Carland Cross |




## AM

**OBSERVED**

| All Vehicle | | To Arm | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | A | B | C | D | E | F | G | TOTAL |
| From Arm | A | 0 | 1 | 1082 | | | | | 1083 |
| | B | 6 | 0 | 114 | | | | | 120 |
| | C | 943 | 39 | 0 | | | | | 982 |
| | D | | | | | | | | |
| | E | | | | | | | | |
| | F | | | | | | | | |
| | G | | | | | | | | |
| | TOTAL | 949 | 40 | 1197 | | | | | 2186 |

**MODELLED**

| All Vehicle | | To Arm | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | A | B | C | D | E | F | G | TOTAL |
| From Arm | A | 0 | 0 | 1024 | | | | | 1024 |
| | B | 0 | 0 | 151 | | | | | 151 |
| | C | 945 | 96 | 0 | | | | | 1041 |
| | D | | | | | | | | |
| | E | | | | | | | | |
| | F | | | | | | | | |
| | G | | | | | | | | |
| | TOTAL | 945 | 96 | 1175 | | | | | 2216 |

**Difference (%) - GEH Criteria**

| All Vehicle | | To Arm | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | A | B | C | D | E | F | G | |
| From Arm | A | PASS | PASS | PASS | | | | | PASS |
| | B | PASS | PASS | PASS | | | | | PASS |
| | C | PASS | PASS | PASS | | | | | PASS |
| | D | | | | | | | | |
| | E | | | | | | | | |
| | F | | | | | | | | |
| | G | | | | | | | | |
| | | PASS | PASS | PASS | | | | | PASS |

## IP

**OBSERVED**

| All Vehicle | | To Arm | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | A | B | C | D | E | F | G | TOTAL |
| From Arm | A | 0 | 1 | 858 | | | | | 859 |
| | B | 1 | 0 | 77 | | | | | 78 |
| | C | 839 | 71 | 0 | | | | | 910 |
| | D | | | | | | | | |
| | E | | | | | | | | |
| | F | | | | | | | | |
| | G | | | | | | | | |
| | TOTAL | 840 | 72 | 935 | | | | | 1847 |

**MODELLED**

| All Vehicle | | To Arm | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | A | B | C | D | E | F | G | TOTAL |
| From Arm | A | 0 | 0 | 864 | | | | | 864 |
| | B | 0 | 0 | 84 | | | | | 84 |
| | C | 927 | 111 | 0 | | | | | 1038 |
| | D | | | | | | | | |
| | E | | | | | | | | |
| | F | | | | | | | | |
| | G | | | | | | | | |
| | TOTAL | 927 | 111 | 947 | | | | | 1986 |

**Difference (%) - GEH Criteria**

| All Vehicle | | To Arm | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | A | B | C | D | E | F | G | |
| From Arm | A | PASS | PASS | PASS | | | | | PASS |
| | B | PASS | PASS | PASS | | | | | PASS |
| | C | PASS | PASS | PASS | | | | | PASS |
| | D | | | | | | | | |
| | E | | | | | | | | |
| | F | | | | | | | | |
| | G | | | | | | | | |
| | | PASS | PASS | PASS | | | | | PASS |

## PM

**OBSERVED**

| All Vehicle | | To Arm | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | A | B | C | D | E | F | G | TOTAL |
| From Arm | A | 0 | 3 | 1006 | | | | | 1009 |
| | B | 0 | 0 | 56 | | | | | 56 |
| | C | 1077 | 115 | 0 | | | | | 1192 |
| | D | | | | | | | | |
| | E | | | | | | | | |
| | F | | | | | | | | |
| | G | | | | | | | | |
| | TOTAL | 1077 | 118 | 1062 | | | | | 2257 |

**MODELLED**

| All Vehicle | | To Arm | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | A | B | C | D | E | F | G | TOTAL |
| From Arm | A | 0 | 0 | 1065 | | | | | 1065 |
| | B | 0 | 0 | 108 | | | | | 108 |
| | C | 1015 | 156 | 0 | | | | | 1171 |
| | D | | | | | | | | |
| | E | | | | | | | | |
| | F | | | | | | | | |
| | G | | | | | | | | |
| | TOTAL | 1015 | 156 | 1173 | | | | | 2344 |

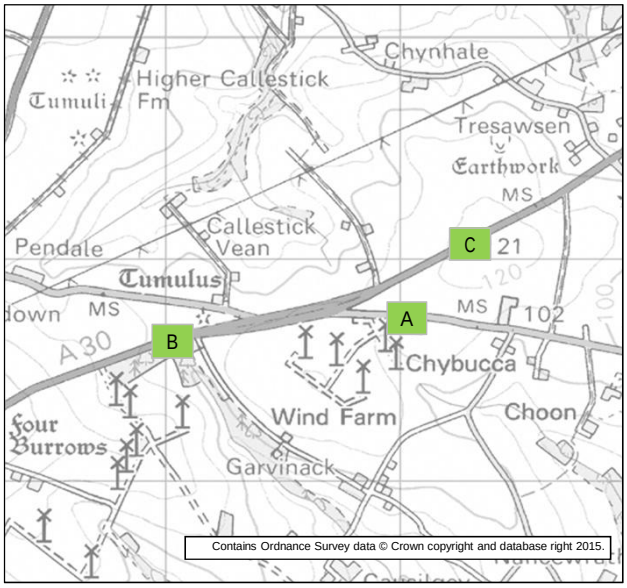
**Difference (%) - GEH Criteria**

| All Vehicle | | To Arm | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | A | B | C | D | E | F | G | |
| From Arm | A | PASS | PASS | PASS | | | | | PASS |
| | B | PASS | PASS | PASS | | | | | PASS |
| | C | PASS | PASS | PASS | | | | | PASS |
| | D | | | | | | | | |
| | E | | | | | | | | |
| | F | | | | | | | | |
| | G | | | | | | | | |
| | | PASS | PASS | PASS | | | | | PASS |

## Annex D - Junction Turning Flows

**Junction:** Chybucca (East)

| Arm | Inbound | | Outbound | | Description |
|---|---|---|---|---|---|
| | ANode | BNode | ANode | BNode | |
| A | 11156 | 1930 | 1930 | 11156 | B3284 Shortlanesend |
| B | 11081 | 1930 | 1930 | 11081 | A30 (W) Chiverton Cross |
| C | 12023 | 1930 | 1930 | 12023 | A30 (E) Carland Cross |




## AM

**OBSERVED**

| All Vehicle | | To Arm | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | A | B | C | D | E | F | G | TOTAL |
| From Arm | A | 0 | 167 | 13 | | | | | 180 |
| | B | 426 | 0 | 771 | | | | | 1198 |
| | C | 26 | 819 | 0 | | | | | 845 |
| | D | | | | | | | | |
| | E | | | | | | | | |
| | F | | | | | | | | |
| | G | | | | | | | | |
| | TOTAL | 452 | 986 | 785 | | | | | 2223 |

**MODELLED**

| All Vehicle | | To Arm | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | A | B | C | D | E | F | G | TOTAL |
| From Arm | A | 0 | 148 | 0 | | | | | 148 |
| | B | 319 | 0 | 857 | | | | | 1175 |
| | C | 0 | 893 | 0 | | | | | 893 |
| | D | | | | | | | | |
| | E | | | | | | | | |
| | F | | | | | | | | |
| | G | | | | | | | | |
| | TOTAL | 319 | 1041 | 857 | | | | | 2216 |

**Difference (%) - GEH Criteria**

| All Vehicle | | To Arm | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | A | B | C | D | E | F | G | |
| From Arm | A | PASS | PASS | PASS | | | | | PASS |
| | B | PASS | PASS | PASS | | | | | PASS |
| | C | PASS | PASS | PASS | | | | | PASS |
| | D | | | | | | | | |
| | E | | | | | | | | |
| | F | | | | | | | | |
| | G | | | | | | | | |
| | | PASS | PASS | PASS | | | | | PASS |

## IP

**OBSERVED**

| All Vehicle | | To Arm | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | A | B | C | D | E | F | G | TOTAL |
| From Arm | A | 0 | 186 | 11 | | | | | 196 |
| | B | 178 | 0 | 755 | | | | | 932 |
| | C | 11 | 725 | 0 | | | | | 735 |
| | D | | | | | | | | |
| | E | | | | | | | | |
| | F | | | | | | | | |
| | G | | | | | | | | |
| | TOTAL | 188 | 910 | 766 | | | | | 1864 |

**MODELLED**

| All Vehicle | | To Arm | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | A | B | C | D | E | F | G | TOTAL |
| From Arm | A | 0 | 208 | 0 | | | | | 208 |
| | B | 201 | 0 | 746 | | | | | 947 |
| | C | 0 | 831 | 0 | | | | | 831 |
| | D | | | | | | | | |
| | E | | | | | | | | |
| | F | | | | | | | | |
| | G | | | | | | | | |
| | TOTAL | 201 | 1038 | 746 | | | | | 1986 |

**Difference (%) - GEH Criteria**

| All Vehicle | | To Arm | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | A | B | C | D | E | F | G | |
| From Arm | A | PASS | PASS | PASS | | | | | PASS |
| | B | PASS | PASS | PASS | | | | | PASS |
| | C | PASS | PASS | PASS | | | | | PASS |
| | D | | | | | | | | |
| | E | | | | | | | | |
| | F | | | | | | | | |
| | G | | | | | | | | |
| | | PASS | PASS | PASS | | | | | PASS |

## PM

**OBSERVED**

| All Vehicle | | To Arm | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | A | B | C | D | E | F | G | TOTAL |
| From Arm | A | 0 | 390 | 21 | | | | | 411 |
| | B | 220 | 0 | 844 | | | | | 1065 |
| | C | 5 | 796 | 0 | | | | | 801 |
| | D | | | | | | | | |
| | E | | | | | | | | |
| | F | | | | | | | | |
| | G | | | | | | | | |
| | TOTAL | 225 | 1186 | 865 | | | | | 2277 |

**MODELLED**

| All Vehicle | | To Arm | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | A | B | C | D | E | F | G | TOTAL |
| From Arm | A | 0 | 297 | 0 | | | | | 298 |
| | B | 321 | 0 | 852 | | | | | 1173 |
| | C | 0 | 882 | 0 | | | | | 882 |
| | D | | | | | | | | |
| | E | | | | | | | | |
| | F | | | | | | | | |
| | G | | | | | | | | |
| | TOTAL | 321 | 1179 | 852 | | | | | 2352 |

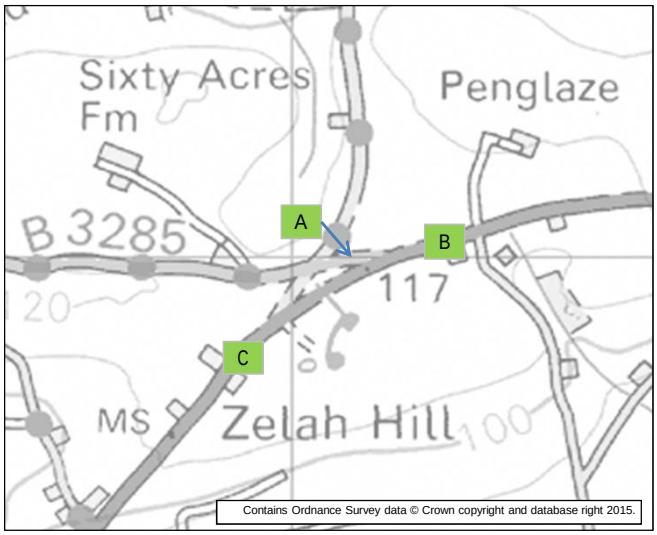
**Difference (%) - GEH Criteria**

| All Vehicle | | To Arm | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | A | B | C | D | E | F | G | |
| From Arm | A | PASS | PASS | PASS | | | | | PASS |
| | B | PASS | PASS | PASS | | | | | PASS |
| | C | PASS | PASS | PASS | | | | | PASS |
| | D | | | | | | | | |
| | E | | | | | | | | |
| | F | | | | | | | | |
| | G | | | | | | | | |
| | | PASS | PASS | PASS | | | | | PASS |

## Annex D - Junction Turning Flows

**Junction:** Chybucca (East)

| Arm | Inbound | | Outbound | | Description |
|---|---|---|---|---|---|
| | ANode | BNode | ANode | BNode | |
| A | 11078 | 11079 | 11079 | 11078 | B3285 Goonhavern |
| B | 12041 | 11079 | 11079 | 12041 | A30 (E) Carland Cross |
| C | 11070 | 11079 | 11079 | 11070 | A30 (W) Chiverton Cross |




## AM

**OBSERVED**

| All Vehicle | | To Arm | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | A | B | C | D | E | F | G | TOTAL |
| From Arm | A | 0 | 157 | 0 | | | | | 157 |
| | B | 108 | 0 | 987 | | | | | 1096 |
| | C | 0 | 914 | 0 | | | | | 914 |
| | D | | | | | | | | |
| | E | | | | | | | | |
| | F | | | | | | | | |
| | G | | | | | | | | |
| | TOTAL | 108 | 1071 | 987 | | | | | 2166 |

**MODELLED**

| All Vehicle | | To Arm | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | A | B | C | D | E | F | G | TOTAL |
| From Arm | A | 0 | 121 | 9 | | | | | 130 |
| | B | 175 | 0 | 904 | | | | | 1079 |
| | C | 0 | 799 | 0 | | | | | 799 |
| | D | | | | | | | | |
| | E | | | | | | | | |
| | F | | | | | | | | |
| | G | | | | | | | | |
| | TOTAL | 175 | 920 | 913 | | | | | 2008 |

**Difference (%) - GEH Criteria**

| All Vehicle | | To Arm | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | A | B | C | D | E | F | G | |
| From Arm | A | PASS | PASS | PASS | | | | | PASS |
| | B | PASS | PASS | PASS | | | | | PASS |
| | C | PASS | PASS | PASS | | | | | PASS |
| | D | | | | | | | | |
| | E | | | | | | | | |
| | F | | | | | | | | |
| | G | | | | | | | | |
| | | PASS | PASS | PASS | | | | | PASS |

## IP

**OBSERVED**

| All Vehicle | | To Arm | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | A | B | C | D | E | F | G | TOTAL |
| From Arm | A | 0 | 122 | 1 | | | | | 123 |
| | B | 124 | 0 | 853 | | | | | 977 |
| | C | 0 | 884 | 0 | | | | | 884 |
| | D | | | | | | | | |
| | E | | | | | | | | |
| | F | | | | | | | | |
| | G | | | | | | | | |
| | TOTAL | 124 | 1006 | 854 | | | | | 1984 |

**MODELLED**

| All Vehicle | | To Arm | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | A | B | C | D | E | F | G | TOTAL |
| From Arm | A | 0 | 113 | 11 | | | | | 124 |
| | B | 165 | 0 | 806 | | | | | 971 |
| | C | 0 | 708 | 0 | | | | | 708 |
| | D | | | | | | | | |
| | E | | | | | | | | |
| | F | | | | | | | | |
| | G | | | | | | | | |
| | TOTAL | 165 | 821 | 817 | | | | | 1802 |

**Difference (%) - GEH Criteria**

| All Vehicle | | To Arm | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | A | B | C | D | E | F | G | |
| From Arm | A | PASS | PASS | PASS | | | | | PASS |
| | B | PASS | PASS | PASS | | | | | PASS |
| | C | PASS | PASS | PASS | | | | | PASS |
| | D | | | | | | | | |
| | E | | | | | | | | |
| | F | | | | | | | | |
| | G | | | | | | | | |
| | | PASS | PASS | PASS | | | | | PASS |

## PM

**OBSERVED**

| All Vehicle | | To Arm | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | A | B | C | D | E | F | G | TOTAL |
| From Arm | A | 0 | 122 | 0 | | | | | 122 |
| | B | 161 | 0 | 988 | | | | | 1149 |
| | C | 0 | 1029 | 0 | | | | | 1029 |
| | D | | | | | | | | |
| | E | | | | | | | | |
| | F | | | | | | | | |
| | G | | | | | | | | |
| | TOTAL | 161 | 1151 | 988 | | | | | 2299 |

**MODELLED**

| All Vehicle | | To Arm | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | A | B | C | D | E | F | G | TOTAL |
| From Arm | A | 0 | 184 | 0 | | | | | 184 |
| | B | 209 | 0 | 856 | | | | | 1065 |
| | C | 0 | 802 | 0 | | | | | 802 |
| | D | | | | | | | | |
| | E | | | | | | | | |
| | F | | | | | | | | |
| | G | | | | | | | | |
| | TOTAL | 209 | 986 | 856 | | | | | 2051 |

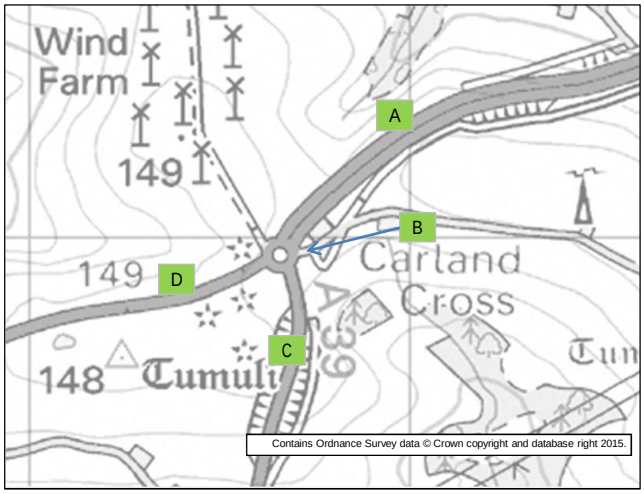
**Difference (%) - GEH Criteria**

| All Vehicle | | To Arm | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | A | B | C | D | E | F | G | |
| From Arm | A | PASS | PASS | PASS | | | | | PASS |
| | B | PASS | PASS | PASS | | | | | PASS |
| | C | PASS | PASS | PASS | | | | | PASS |
| | D | | | | | | | | |
| | E | | | | | | | | |
| | F | | | | | | | | |
| | G | | | | | | | | |
| | | PASS | PASS | PASS | | | | | PASS |

## Annex D - Junction Turning Flows

**Junction:** Carland Cross Roundabout

| Arm | Inbound | | Outbound | | Description |
|---|---|---|---|---|---|
| | ANode | BNode | ANode | BNode | |
| A | 1203 | 1202 | 1202 | 1203 | A30 (E) Bodmin |
| B | 12048 | 12047 | 12047 | 12048 | Services |
| C | 1197 | 1199 | 1199 | 1197 | A39 Truro |
| D | 1198 | 1200 | 1200 | 1198 | A30 (W) Redruth |




### AM

**OBSERVED**

| All Vehicle | | To Arm | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | A | B | C | D | E | F | G | TOTAL |
| From Arm | A | 2 | 46 | 540 | 924 | | | | 1512 |
| | B | 32 | 0 | 26 | 29 | | | | 87 |
| | C | 377 | 11 | 0 | 50 | | | | 438 |
| | D | 843 | 29 | 42 | 0 | | | | 914 |
| | E | | | | | | | | |
| | F | | | | | | | | |
| | G | | | | | | | | |
| | TOTAL | 1255 | 86 | 607 | 1003 | | | | 2951 |

**MODELLED**

| All Vehicle | | To Arm | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | A | B | C | D | E | F | G | TOTAL |
| From Arm | A | 0 | 21 | 581 | 1051 | | | | 1653 |
| | B | 24 | 0 | 20 | 20 | | | | 64 |
| | C | 433 | 11 | 0 | 22 | | | | 466 |
| | D | 866 | 33 | 21 | 0 | | | | 920 |
| | E | | | | | | | | |
| | F | | | | | | | | |
| | G | | | | | | | | |
| | TOTAL | 1323 | 65 | 622 | 1093 | | | | 3103 |

**Difference (%) - GEH Criteria**

| All Vehicle | | To Arm | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | A | B | C | D | E | F | G | |
| From Arm | A | PASS | PASS | PASS | PASS | | | | PASS |
| | B | PASS | PASS | PASS | PASS | | | | PASS |
| | C | PASS | PASS | PASS | PASS | | | | PASS |
| | D | PASS | PASS | PASS | PASS | | | | PASS |
| | E | | | | | | | | |
| | F | | | | | | | | |
| | G | | | | | | | | |
| | | PASS | PASS | PASS | PASS | | | | PASS |

### IP

**OBSERVED**

| All Vehicle | | To Arm | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | A | B | C | D | E | F | G | TOTAL |
| From Arm | A | 1 | 38 | 449 | 750 | | | | 1238 |
| | B | 44 | 0 | 19 | 24 | | | | 87 |
| | C | 471 | 13 | 0 | 41 | | | | 525 |
| | D | 792 | 28 | 39 | 2 | | | | 861 |
| | E | | | | | | | | |
| | F | | | | | | | | |
| | G | | | | | | | | |
| | TOTAL | 1309 | 79 | 507 | 817 | | | | 2712 |

**MODELLED**

| All Vehicle | | To Arm | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | A | B | C | D | E | F | G | TOTAL |
| From Arm | A | 0 | 8 | 440 | 913 | | | | 1361 |
| | B | 16 | 0 | 24 | 23 | | | | 63 |
| | C | 537 | 10 | 0 | 28 | | | | 575 |
| | D | 770 | 8 | 42 | 0 | | | | 820 |
| | E | | | | | | | | |
| | F | | | | | | | | |
| | G | | | | | | | | |
| | TOTAL | 1323 | 26 | 506 | 964 | | | | 2819 |

**Difference (%) - GEH Criteria**

| All Vehicle | | To Arm | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | A | B | C | D | E | F | G | |
| From Arm | A | PASS | PASS | PASS | PASS | | | | PASS |
| | B | PASS | PASS | PASS | PASS | | | | PASS |
| | C | PASS | PASS | PASS | PASS | | | | PASS |
| | D | PASS | PASS | PASS | PASS | | | | PASS |
| | E | | | | | | | | |
| | F | | | | | | | | |
| | G | | | | | | | | |
| | | PASS | PASS | PASS | PASS | | | | PASS |

### PM

**OBSERVED**

| All Vehicle | | To Arm | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | A | B | C | D | E | F | G | TOTAL |
| From Arm | A | 0 | 41 | 444 | 882 | | | | 1367 |
| | B | 36 | 0 | 21 | 36 | | | | 93 |
| | C | 525 | 10 | 0 | 64 | | | | 599 |
| | D | 928 | 27 | 43 | 0 | | | | 998 |
| | E | | | | | | | | |
| | F | | | | | | | | |
| | G | | | | | | | | |
| | TOTAL | 1489 | 78 | 508 | 981 | | | | 3057 |

**MODELLED**

| All Vehicle | | To Arm | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | A | B | C | D | E | F | G | TOTAL |
| From Arm | A | 0 | 28 | 403 | 1025 | | | | 1456 |
| | B | 21 | 0 | 6 | 43 | | | | 70 |
| | C | 646 | 11 | 0 | 0 | | | | 657 |
| | D | 897 | 33 | 54 | 0 | | | | 984 |
| | E | | | | | | | | |
| | F | | | | | | | | |
| | G | | | | | | | | |
| | TOTAL | 1564 | 72 | 463 | 1068 | | | | 3167 |

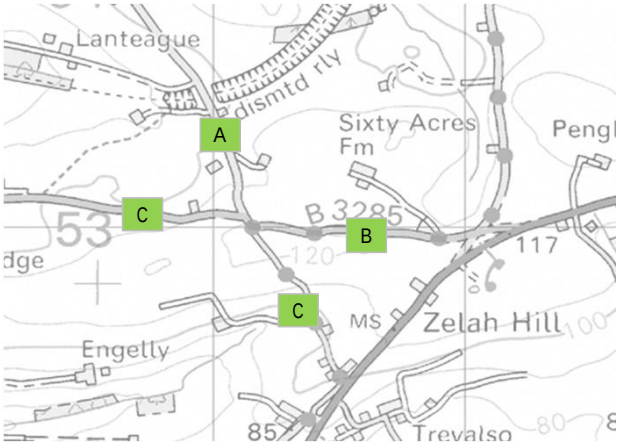
**Difference (%) - GEH Criteria**

| All Vehicle | | To Arm | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | A | B | C | D | E | F | G | |
| From Arm | A | PASS | PASS | PASS | PASS | | | | PASS |
| | B | PASS | PASS | PASS | PASS | | | | PASS |
| | C | PASS | PASS | PASS | PASS | | | | PASS |
| | D | PASS | PASS | PASS | PASS | | | | PASS |
| | E | | | | | | | | |
| | F | | | | | | | | |
| | G | | | | | | | | |
| | | PASS | PASS | PASS | PASS | | | | PASS |

# Annex D - Junction Turning Flows

**Junction:** Scotland Road/Henver Lane Junction

| Arm | Inbound | | Outbound | | Description |
|---|---|---|---|---|---|
| | ANode | BNode | ANode | BNode | |
| A | 12033 | 12032 | 12032 | 12033 | C364 Rejerrah |
| B | 11078 | 12032 | 12032 | 11078 | B3285 Boxheater |
| C | 12031 | 12032 | 12032 | 12031 | C364 Zelah |
| D | 11072 | 12032 | 12032 | 11072 | B3285 Goonhavern |






## AM

**OBSERVED**

| All Vehicle | | To Arm | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | A | B | C | D | E | F | G | TOTAL |
| From Arm | A | 0 | 24 | 152 | 1 | | | | 177 |
| | B | 11 | 0 | 10 | 92 | | | | 113 |
| | C | 25 | 0 | 0 | 3 | | | | 28 |
| | D | 2 | 90 | 2 | 0 | | | | 94 |
| | E | | | | | | | | |
| | F | | | | | | | | |
| | G | | | | | | | | |
| | TOTAL | 38 | 114 | 164 | 96 | | | | 412 |

**MODELLED**

| All Vehicle | | To Arm | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | A | B | C | D | E | F | G | TOTAL |
| From Arm | A | 0 | 34 | 127 | 0 | | | | 161 |
| | B | 9 | 0 | 0 | 158 | | | | 168 |
| | C | 34 | 1 | 0 | 0 | | | | 35 |
| | D | 0 | 83 | 2 | 0 | | | | 85 |
| | E | | | | | | | | |
| | F | | | | | | | | |
| | G | | | | | | | | |
| | TOTAL | 44 | 117 | 129 | 159 | | | | 449 |

**Difference (%) - GEH Criteria**

| All Vehicle | | To Arm | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | A | B | C | D | E | F | G | |
| From Arm | A | PASS | PASS | PASS | PASS | | | | PASS |
| | B | PASS | PASS | PASS | PASS | | | | PASS |
| | C | PASS | PASS | PASS | PASS | | | | PASS |
| | D | PASS | PASS | PASS | PASS | | | | PASS |
| | E | | | | | | | | |
| | F | | | | | | | | |
| | G | | | | | | | | |
| | | PASS | PASS | PASS | PASS | | | | PASS |

## IP

**OBSERVED**

| All Vehicle | | To Arm | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | A | B | C | D | E | F | G | TOTAL |
| From Arm | A | 0 | 15 | 43 | 2 | | | | 60 |
| | B | 17 | 0 | 4 | 80 | | | | 101 |
| | C | 36 | 3 | 0 | 5 | | | | 44 |
| | D | 2 | 86 | 0 | 0 | | | | 88 |
| | E | | | | | | | | |
| | F | | | | | | | | |
| | G | | | | | | | | |
| | TOTAL | 55 | 104 | 47 | 87 | | | | 293 |

**MODELLED**

| All Vehicle | | To Arm | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | A | B | C | D | E | F | G | TOTAL |
| From Arm | A | 0 | 50 | 91 | 0 | | | | 141 |
| | B | 10 | 0 | 0 | 147 | | | | 158 |
| | C | 73 | 0 | 0 | 4 | | | | 76 |
| | D | 0 | 67 | 1 | 0 | | | | 68 |
| | E | | | | | | | | |
| | F | | | | | | | | |
| | G | | | | | | | | |
| | TOTAL | 83 | 117 | 92 | 151 | | | | 442 |

**Difference (%) - GEH Criteria**

| All Vehicle | | To Arm | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | A | B | C | D | E | F | G | |
| From Arm | A | PASS | PASS | PASS | PASS | | | | PASS |
| | B | PASS | PASS | PASS | PASS | | | | PASS |
| | C | PASS | PASS | PASS | PASS | | | | PASS |
| | D | PASS | PASS | PASS | PASS | | | | PASS |
| | E | | | | | | | | |
| | F | | | | | | | | |
| | G | | | | | | | | |
| | | PASS | PASS | PASS | PASS | | | | PASS |

## PM

**OBSERVED**

| All Vehicle | | To Arm | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | A | B | C | D | E | F | G | TOTAL |
| From Arm | A | 0 | 16 | 34 | 0 | | | | 50 |
| | B | 25 | 0 | 4 | 94 | | | | 123 |
| | C | 116 | 11 | 0 | 5 | | | | 132 |
| | D | 2 | 81 | 0 | 0 | | | | 83 |
| | E | | | | | | | | |
| | F | | | | | | | | |
| | G | | | | | | | | |
| | TOTAL | 143 | 108 | 38 | 99 | | | | 388 |

**MODELLED**

| All Vehicle | | To Arm | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | A | B | C | D | E | F | G | TOTAL |
| From Arm | A | 0 | 61 | 75 | 0 | | | | 135 |
| | B | 3 | 0 | 0 | 206 | | | | 209 |
| | C | 115 | 0 | 0 | 0 | | | | 116 |
| | D | 0 | 123 | 0 | 0 | | | | 123 |
| | E | | | | | | | | |
| | F | | | | | | | | |
| | G | | | | | | | | |
| | TOTAL | 119 | 184 | 75 | 206 | | | | 583 |

**Difference (%) - GEH Criteria**

| All Vehicle | | PASS | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | A | B | C | D | E | F | G | |
| From Arm | A | PASS | PASS | PASS | PASS | | | | PASS |
| | B | PASS | PASS | PASS | PASS | | | | PASS |
| | C | PASS | PASS | PASS | PASS | | | | PASS |
| | D | PASS | PASS | PASS | PASS | | | | PASS |
| | E | | | | | | | | |
| | F | | | | | | | | |
| | G | | | | | | | | |
| | | PASS | PASS | PASS | PASS | | | | PASS |

## Annex D - Junction Turning Flows

**Junction:** Fiddler's Green Junction

| Arm | Inbound | | Outbound | | Description |
|---|---|---|---|---|---|
| | ANode | BNode | ANode | BNode | |
| A | 12039 | 11078 | 11078 | 12039 | Fiddlers Green |
| B | 11079 | 11078 | 11078 | 11079 | B3285 Carland Cross |
| C | 11070 | 11078 | 11078 | 11070 | Chiverton Cross |
| D | 12032 | 11078 | 11078 | 12032 | B3285 Goonhavern |




## AM

**OBSERVED**

| All Vehicle | | To Arm | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | A | B | C | D | E | F | G | TOTAL |
| From Arm | A | 0 | 15 | 18 | 19 | | | | 52 |
| | B | 9 | 0 | 1 | 89 | | | | 99 |
| | C | 11 | 1 | 0 | 5 | | | | 17 |
| | D | 5 | 109 | 4 | 0 | | | | 118 |
| | E | | | | | | | | |
| | F | | | | | | | | |
| | G | | | | | | | | |
| | TOTAL | 25 | 125 | 23 | 113 | | | | 286 |

**MODELLED**

| All Vehicle | | To Arm | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | A | B | C | D | E | F | G | TOTAL |
| From Arm | A | 0 | 18 | 14 | 0 | | | | 32 |
| | B | 7 | 0 | 0 | 168 | | | | 175 |
| | C | 10 | 0 | 0 | 0 | | | | 10 |
| | D | 5 | 112 | 0 | 0 | | | | 117 |
| | E | | | | | | | | |
| | F | | | | | | | | |
| | G | | | | | | | | |
| | TOTAL | 22 | 130 | 14 | 168 | | | | 334 |

**Difference (%) - GEH Criteria**

| All Vehicle | | To Arm | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | A | B | C | D | E | F | G | |
| From Arm | A | PASS | PASS | PASS | PASS | | | | PASS |
| | B | PASS | PASS | PASS | PASS | | | | PASS |
| | C | PASS | PASS | PASS | PASS | | | | PASS |
| | D | PASS | PASS | PASS | PASS | | | | PASS |
| | E | | | | | | | | |
| | F | | | | | | | | |
| | G | | | | | | | | |
| | | PASS | PASS | PASS | PASS | | | | PASS |

## IP

**OBSERVED**

| All Vehicle | | To Arm | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | A | B | C | D | E | F | G | TOTAL |
| From Arm | A | 0 | 11 | 12 | 11 | | | | 34 |
| | B | 9 | 0 | 0 | 84 | | | | 93 |
| | C | 9 | 0 | 0 | 13 | | | | 22 |
| | D | 10 | 82 | 11 | 0 | | | | 103 |
| | E | | | | | | | | |
| | F | | | | | | | | |
| | G | | | | | | | | |
| | TOTAL | 28 | 93 | 23 | 108 | | | | 252 |

**MODELLED**

| All Vehicle | | To Arm | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | A | B | C | D | E | F | G | TOTAL |
| From Arm | A | 0 | 11 | 27 | 2 | | | | 40 |
| | B | 9 | 0 | 0 | 156 | | | | 165 |
| | C | 46 | 0 | 0 | 0 | | | | 46 |
| | D | 4 | 113 | 0 | 0 | | | | 117 |
| | E | | | | | | | | |
| | F | | | | | | | | |
| | G | | | | | | | | |
| | TOTAL | 58 | 124 | 27 | 158 | | | | 366 |

**Difference (%) - GEH Criteria**

| All Vehicle | | To Arm | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | A | B | C | D | E | F | G | |
| From Arm | A | PASS | PASS | PASS | PASS | | | | PASS |
| | B | PASS | PASS | PASS | PASS | | | | PASS |
| | C | PASS | PASS | PASS | PASS | | | | PASS |
| | D | PASS | PASS | PASS | PASS | | | | PASS |
| | E | | | | | | | | |
| | F | | | | | | | | |
| | G | | | | | | | | |
| | | PASS | PASS | PASS | PASS | | | | PASS |

## PM

**OBSERVED**

| All Vehicle | | To Arm | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | A | B | C | D | E | F | G | TOTAL |
| From Arm | A | 0 | 9 | 12 | 9 | | | | 30 |
| | B | 11 | 0 | 0 | 110 | | | | 121 |
| | C | 26 | 0 | 0 | 4 | | | | 30 |
| | D | 15 | 95 | 2 | 0 | | | | 112 |
| | E | | | | | | | | |
| | F | | | | | | | | |
| | G | | | | | | | | |
| | TOTAL | 52 | 104 | 14 | 123 | | | | 293 |

**MODELLED**

| All Vehicle | | To Arm | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | A | B | C | D | E | F | G | TOTAL |
| From Arm | A | 0 | 2 | 12 | 6 | | | | 20 |
| | B | 6 | 0 | 0 | 203 | | | | 209 |
| | C | 45 | 0 | 0 | 0 | | | | 45 |
| | D | 2 | 182 | 0 | 0 | | | | 184 |
| | E | | | | | | | | |
| | F | | | | | | | | |
| | G | | | | | | | | |
| | TOTAL | 53 | 184 | 12 | 209 | | | | 458 |

**Difference (%) - GEH Criteria**

| All Vehicle | | PASS | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | A | B | C | D | E | F | G | |
| From Arm | A | PASS | PASS | PASS | PASS | | | | PASS |
| | B | PASS | PASS | PASS | PASS | | | | PASS |
| | C | PASS | PASS | PASS | PASS | | | | PASS |
| | D | PASS | PASS | PASS | PASS | | | | PASS |
| | E | | | | | | | | |
| | F | | | | | | | | |
| | G | | | | | | | | |
| | | PASS | PASS | PASS | PASS | | | | PASS |

## Annex D - Junction Turning Flows

**Junction:** Threemilestone P&R

| Arm | Inbound | | Outbound | | Description |
|---|---|---|---|---|---|
| | ANode | BNode | ANode | BNode | |
| A | 1448 | 1248 | 1248 | 1448 | Park and Ride |
| B | 1548 | 1248 | 1248 | 1548 | A390 Truro |
| C | 1006 | 1248 | 1248 | 1006 | Threemilestone |
| D | 11082 | 1248 | 1248 | 11082 | A390 Chiverton Cross Rb |




## AM

**OBSERVED**

| All Vehicle | | To Arm | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | A | B | C | D | E | F | G | TOTAL |
| From Arm | A | 0 | 35 | 23 | 11 | | | | 69 |
| | B | 46 | 0 | 201 | 434 | | | | 681 |
| | C | 86 | 665 | 0 | 132 | | | | 883 |
| | D | 8 | 694 | 119 | 0 | | | | 821 |
| | E | | | | | | | | |
| | F | | | | | | | | |
| | G | | | | | | | | |
| | TOTAL | 140 | 1394 | 343 | 577 | | | | 2454 |

**MODELLED**

| All Vehicle | | To Arm | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | A | B | C | D | E | F | G | TOTAL |
| From Arm | A | 0 | 33 | 22 | 10 | | | | 65 |
| | B | 68 | 0 | 215 | 403 | | | | 685 |
| | C | 83 | 786 | 0 | 198 | | | | 1067 |
| | D | 0 | 687 | 105 | 0 | | | | 791 |
| | E | | | | | | | | |
| | F | | | | | | | | |
| | G | | | | | | | | |
| | TOTAL | 150 | 1506 | 341 | 611 | | | | 2608 |

**Difference (%) - GEH Criteria**

| All Vehicle | | To Arm | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | A | B | C | D | E | F | G | |
| From Arm | A | PASS | PASS | PASS | PASS | | | | PASS |
| | B | PASS | PASS | PASS | PASS | | | | PASS |
| | C | PASS | PASS | PASS | PASS | | | | PASS |
| | D | PASS | PASS | PASS | PASS | | | | PASS |
| | E | | | | | | | | |
| | F | | | | | | | | |
| | G | | | | | | | | |
| | | PASS | PASS | PASS | PASS | | | | PASS |

## IP

**OBSERVED**

| All Vehicle | | To Arm | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | A | B | C | D | E | F | G | TOTAL |
| From Arm | A | 0 | 25 | 23 | 39 | | | | 87 |
| | B | 17 | 0 | 302 | 604 | | | | 923 |
| | C | 28 | 492 | 0 | 176 | | | | 696 |
| | D | 3 | 594 | 155 | 0 | | | | 752 |
| | E | | | | | | | | |
| | F | | | | | | | | |
| | G | | | | | | | | |
| | TOTAL | 48 | 1111 | 480 | 819 | | | | 2458 |

**MODELLED**

| All Vehicle | | To Arm | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | A | B | C | D | E | F | G | TOTAL |
| From Arm | A | 0 | 26 | 42 | 12 | | | | 81 |
| | B | 23 | 0 | 317 | 749 | | | | 1089 |
| | C | 14 | 665 | 0 | 87 | | | | 766 |
| | D | 0 | 632 | 145 | 0 | | | | 777 |
| | E | | | | | | | | |
| | F | | | | | | | | |
| | G | | | | | | | | |
| | TOTAL | 38 | 1323 | 503 | 848 | | | | 2712 |

**Difference (%) - GEH Criteria**

| All Vehicle | | To Arm | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | A | B | C | D | E | F | G | |
| From Arm | A | PASS | PASS | PASS | PASS | | | | PASS |
| | B | PASS | PASS | PASS | PASS | | | | PASS |
| | C | PASS | PASS | PASS | PASS | | | | PASS |
| | D | PASS | PASS | PASS | PASS | | | | PASS |
| | E | | | | | | | | |
| | F | | | | | | | | |
| | G | | | | | | | | |
| | | PASS | PASS | PASS | PASS | | | | PASS |

## PM

**OBSERVED**

| All Vehicle | | To Arm | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | A | B | C | D | E | F | G | TOTAL |
| From Arm | A | 0 | 52 | 77 | 126 | | | | 255 |
| | B | 25 | 0 | 374 | 763 | | | | 1162 |
| | C | 25 | 409 | 0 | 153 | | | | 587 |
| | D | 3 | 512 | 136 | 0 | | | | 651 |
| | E | | | | | | | | |
| | F | | | | | | | | |
| | G | | | | | | | | |
| | TOTAL | 53 | 973 | 587 | 1042 | | | | 2655 |

**MODELLED**

| All Vehicle | | To Arm | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | A | B | C | D | E | F | G | TOTAL |
| From Arm | A | 0 | 34 | 40 | 172 | | | | 246 |
| | B | 16 | 0 | 412 | 1032 | | | | 1461 |
| | C | 16 | 418 | 0 | 41 | | | | 475 |
| | D | 0 | 412 | 182 | 0 | | | | 593 |
| | E | | | | | | | | |
| | F | | | | | | | | |
| | G | | | | | | | | |
| | TOTAL | 33 | 864 | 634 | 1245 | | | | 2775 |

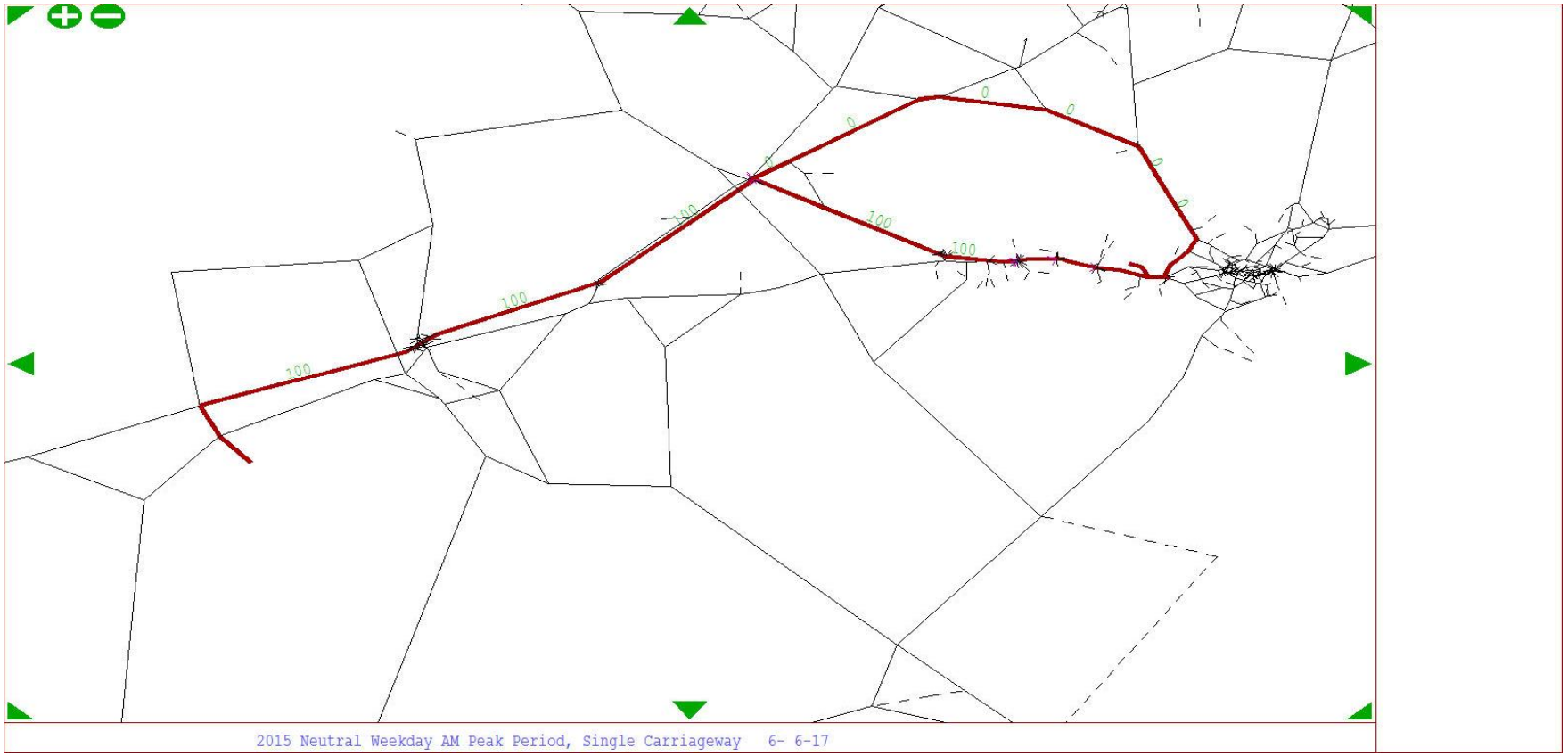
**Difference (%) - GEH Criteria**

| All Vehicle | | PASS | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | A | B | C | D | E | F | G | |
| From Arm | A | PASS | PASS | PASS | PASS | | | | PASS |
| | B | PASS | PASS | PASS | PASS | | | | PASS |
| | C | PASS | PASS | PASS | PASS | | | | PASS |
| | D | PASS | PASS | PASS | PASS | | | | PASS |
| | E | | | | | | | | |
| | F | | | | | | | | |
| | G | | | | | | | | |
| | | PASS | PASS | PASS | PASS | | | | PASS |

# Annex E - Origin/Destination Trees

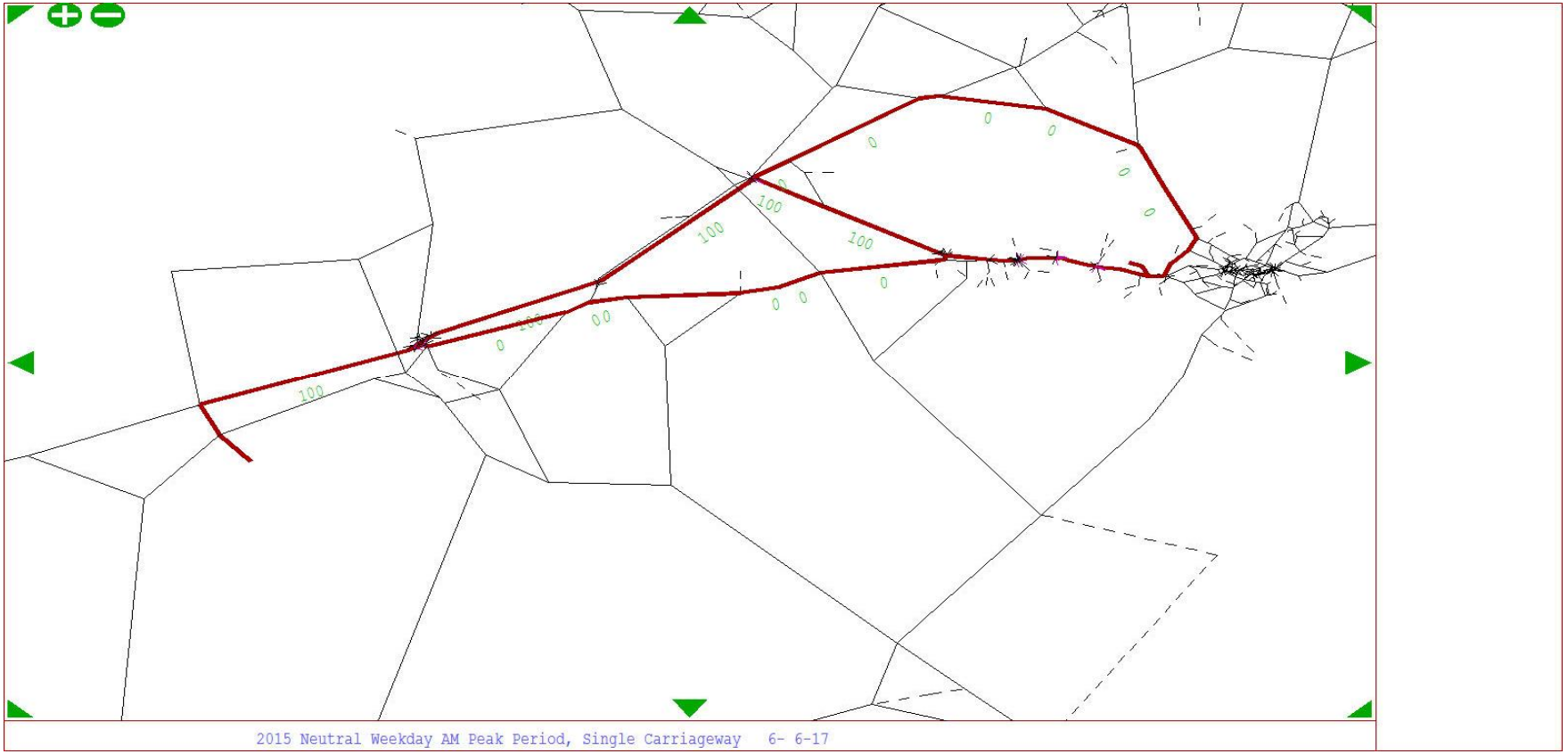
# Annex E: OD Tree Plots - Representative sample

**From Zone 69 To Zone 40 - User Class 1**



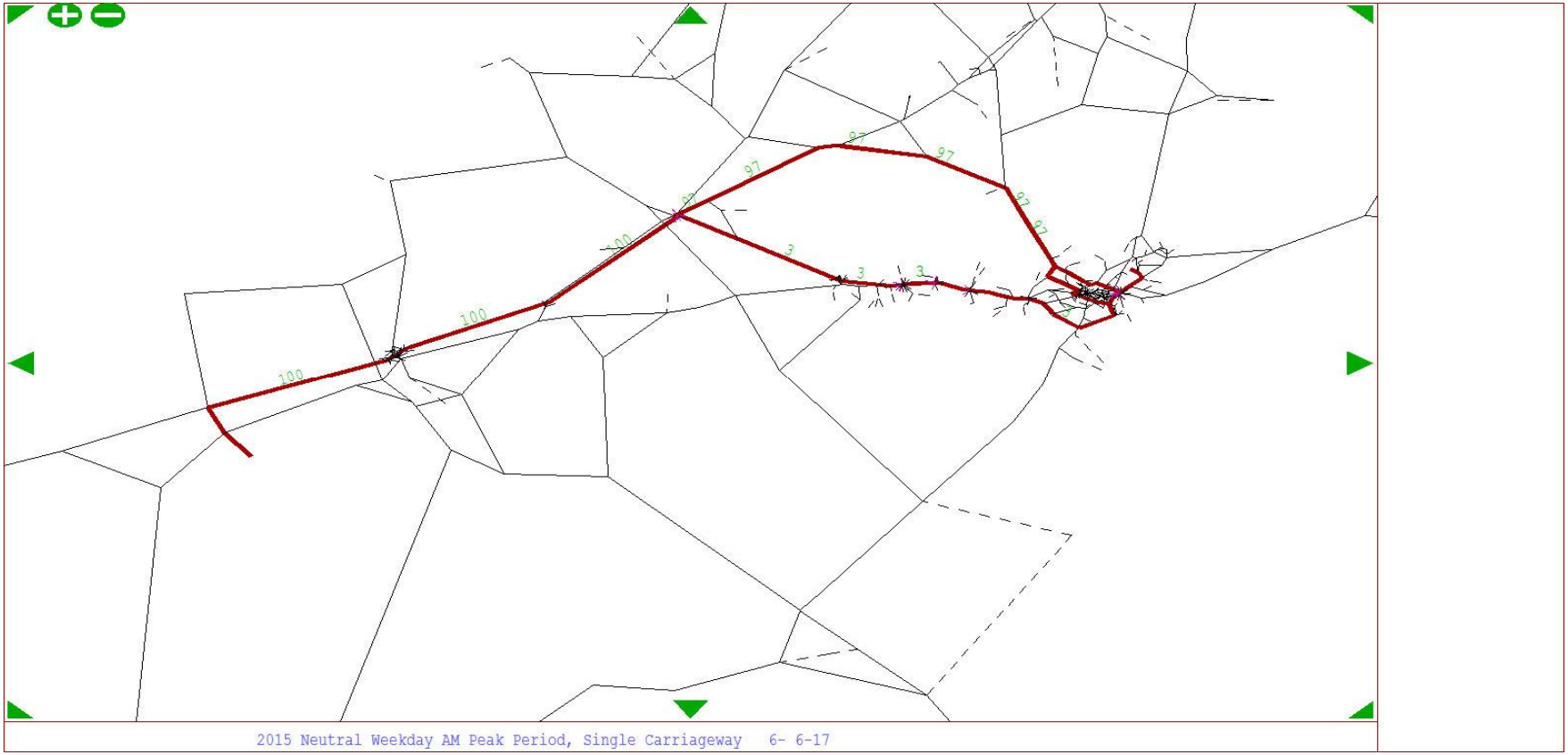

Zone 69 Camborne
Zone 40 County Hall Roundabout (Sainsbury's)

**From Zone 40 To Zone 69 - User Class 1**



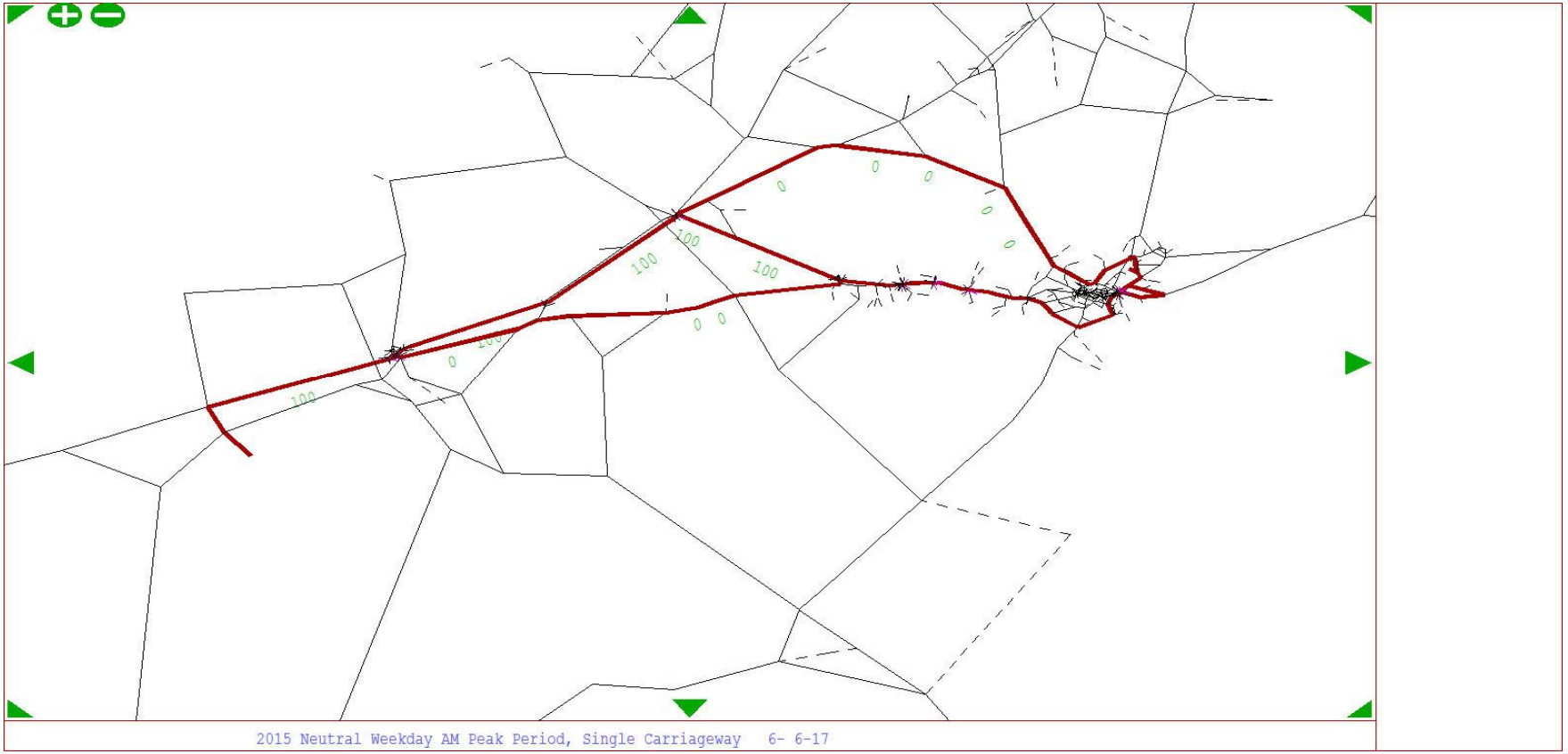

Zone 40 County Hall Roundabout (Sainsbury's)
Zone 69 Camborne

**From Zone 69 To Zone 36 - User Class 1**



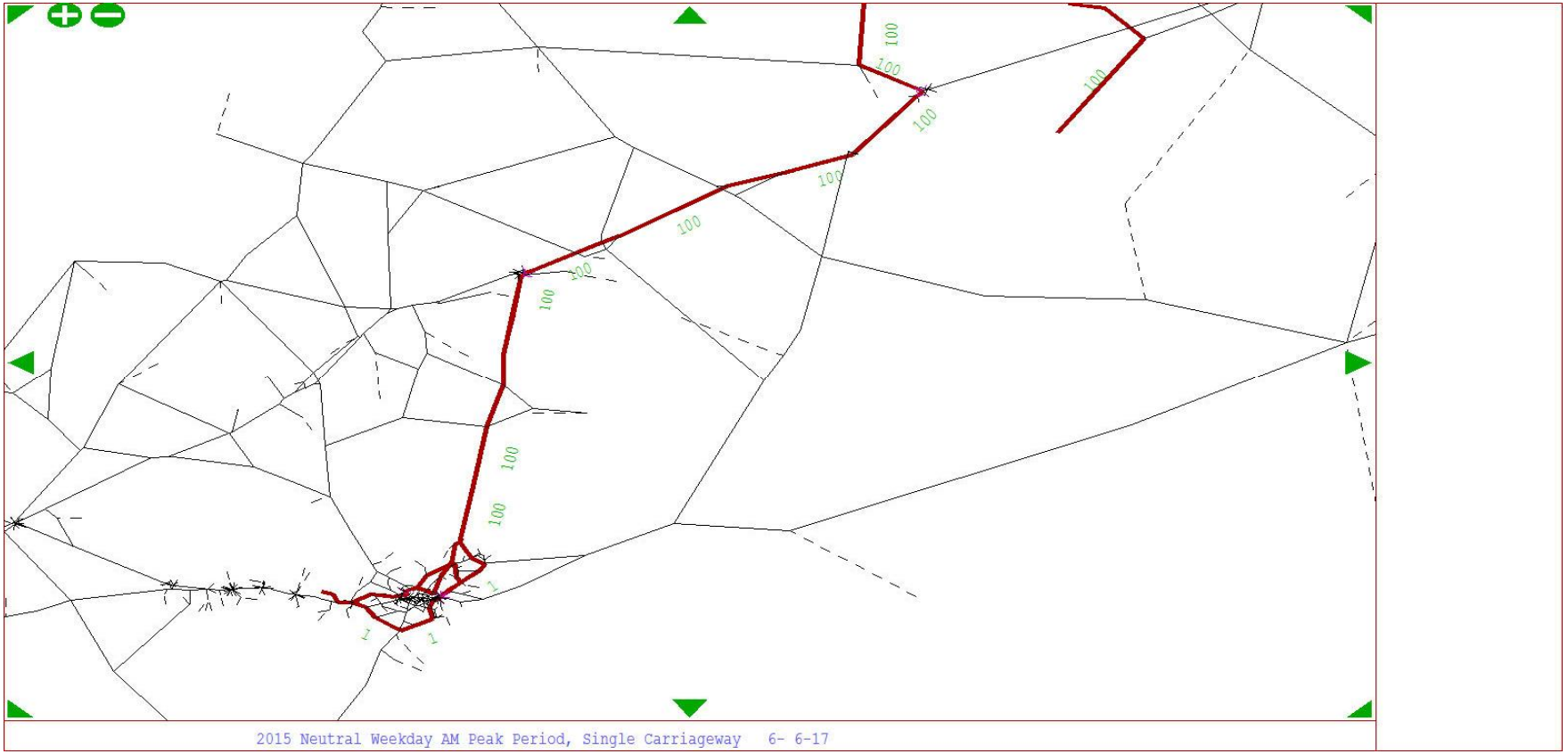

Zone 69 Camborne
Zone 36 Magistrates Court

**From Zone 36 To Zone 69 - User Class 1**



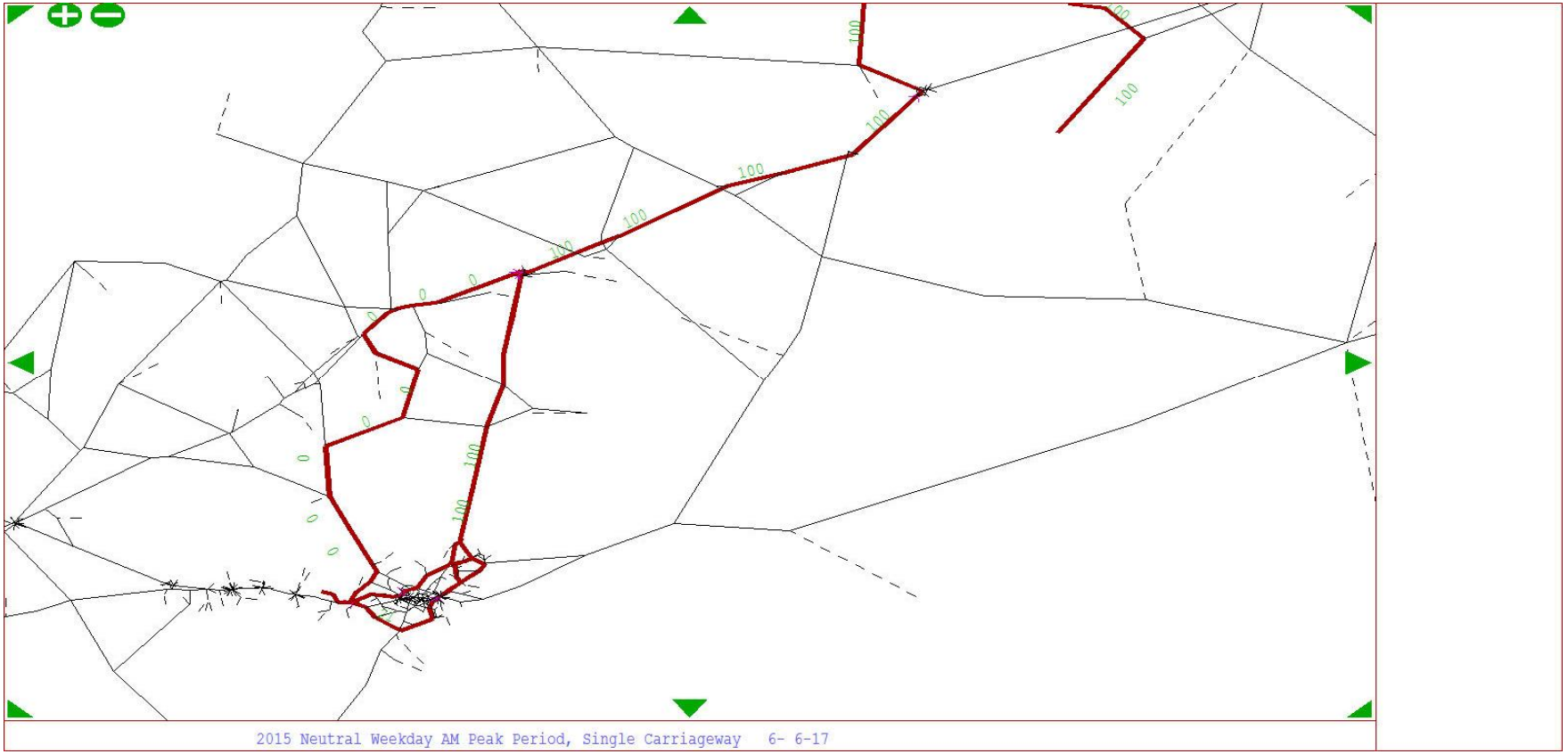

Zone 36 Magistrates Court
Zone 69 Camborne

**From Zone 63 To Zone 40 - User Class 1**



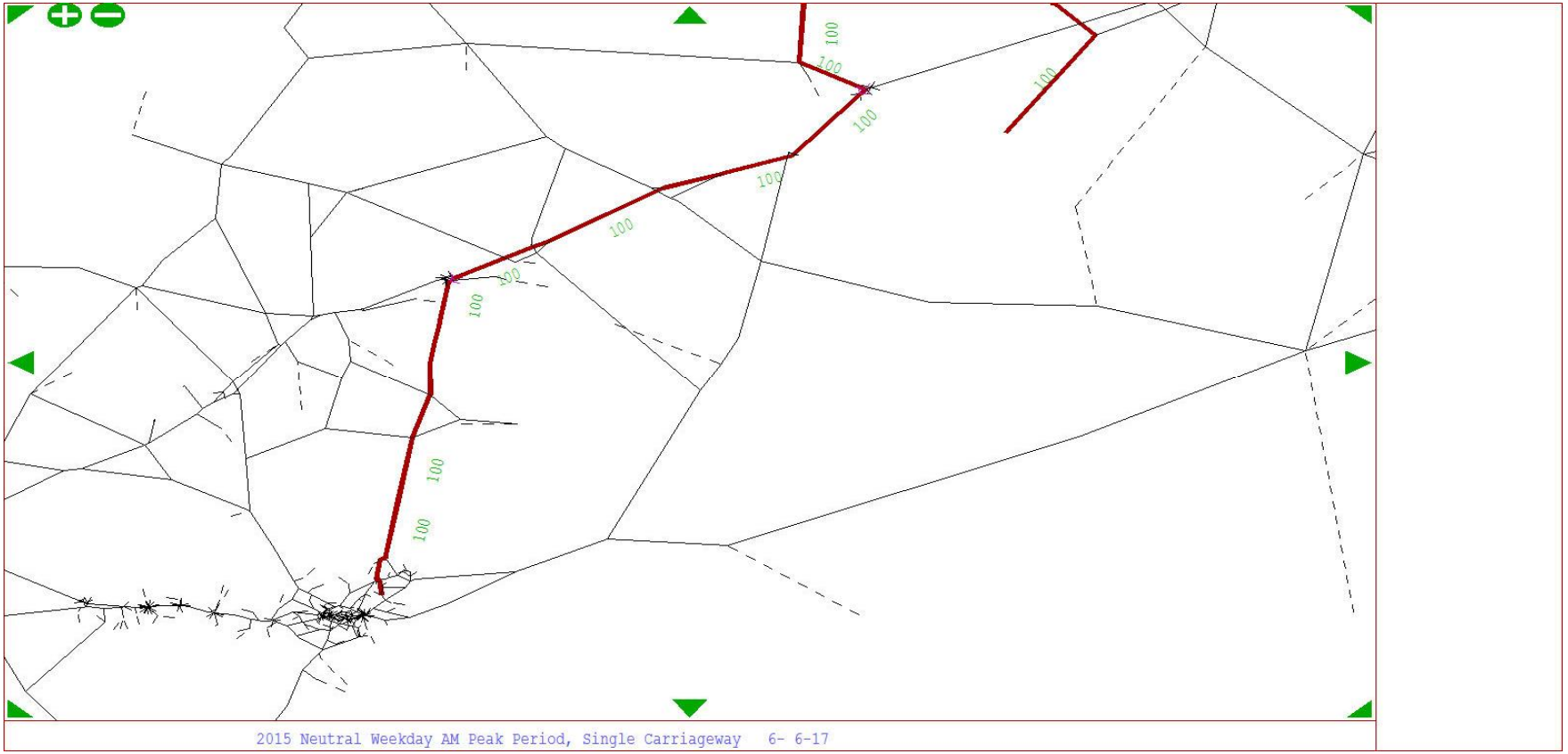

Zone 63 St. Dennis, Whitemoor
Zone 40 County Hall Roundabout (Sainsbury's)

**From Zone 40 To Zone 63 - User Class 1**



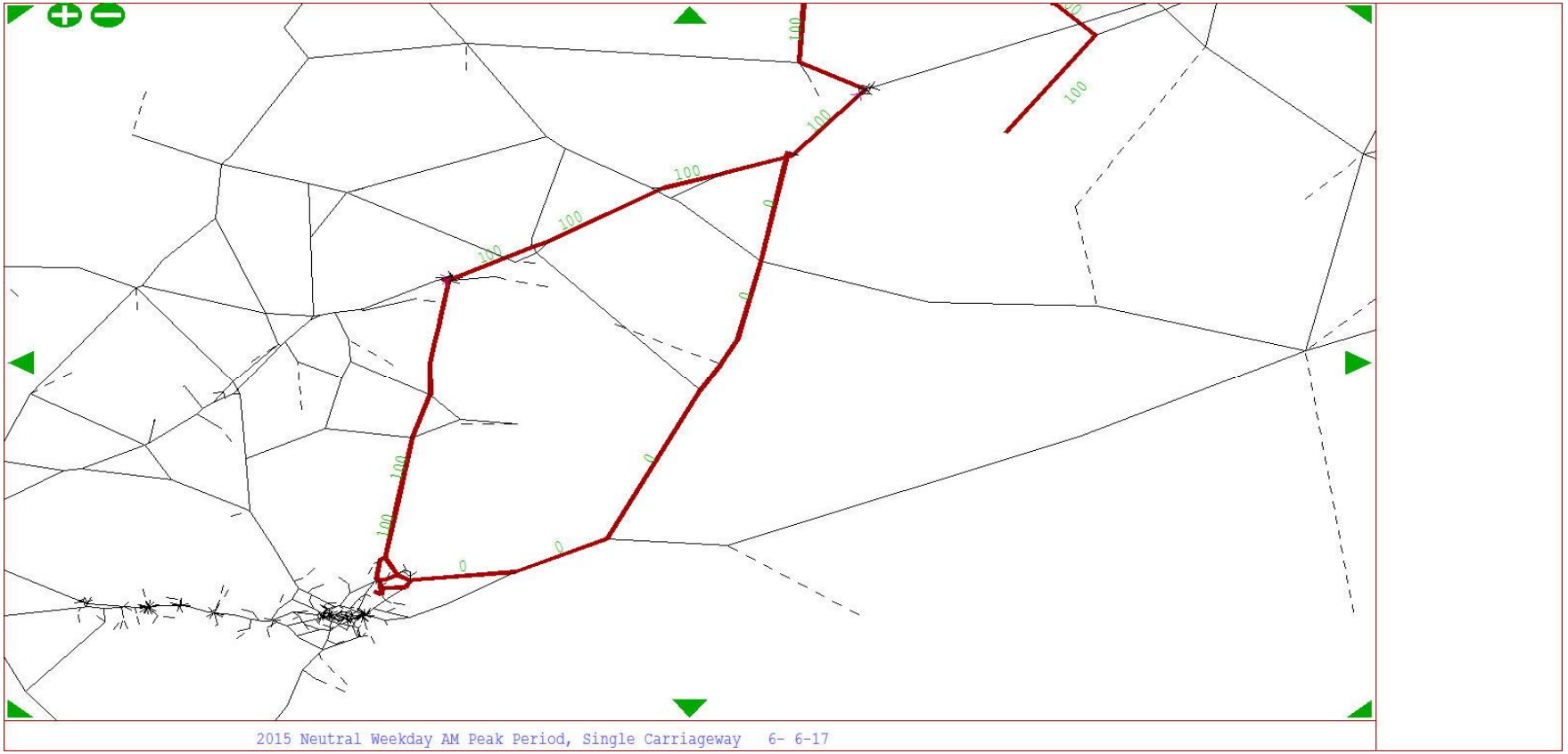

Zone 40 County Hall Roundabout (Sainsbury's)
Zone 63 St. Dennis, Whitemoor

**From Zone 63 To Zone 36 - User Class 1**



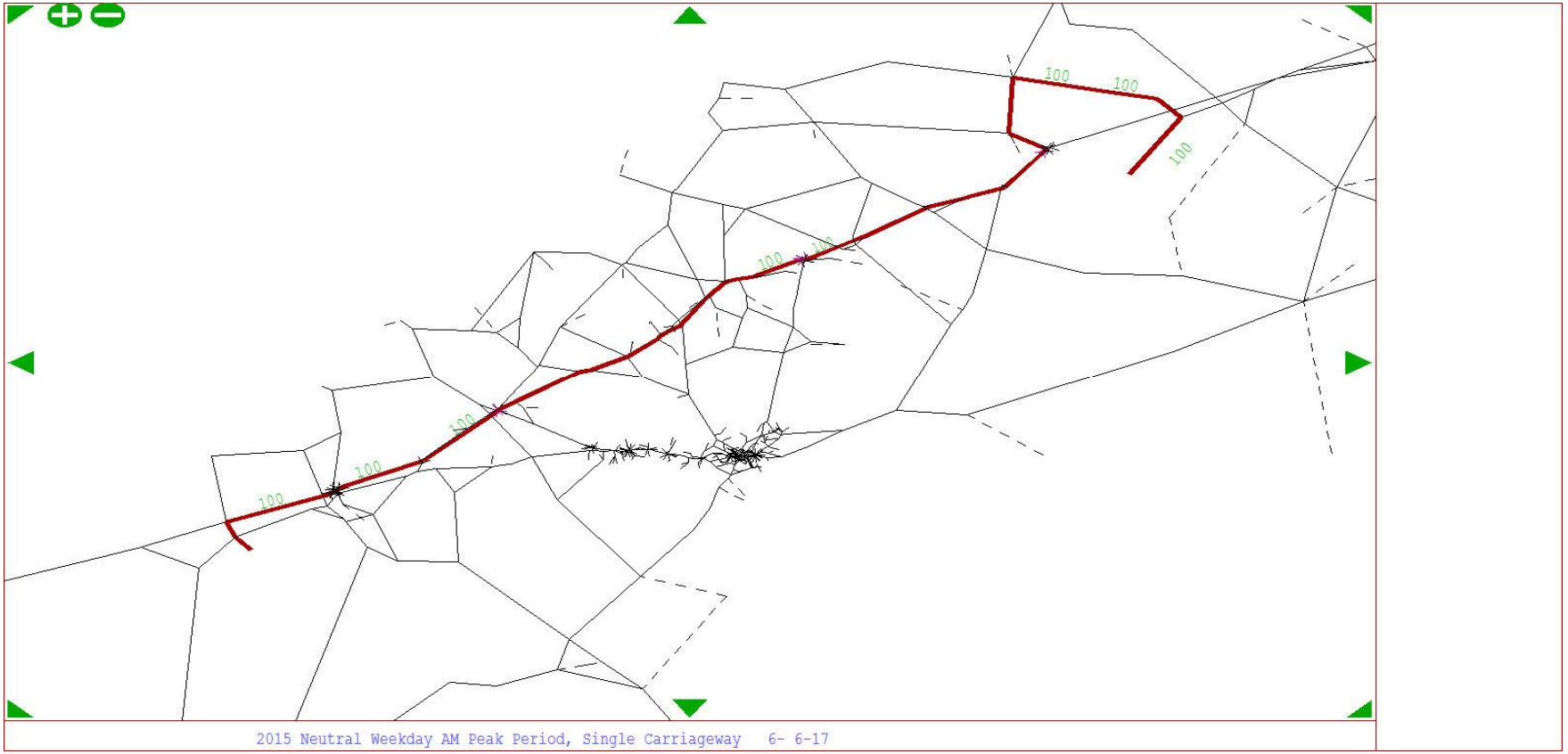

Zone 63 St. Dennis, Whitemoor
Zone 36 Magistrates Court

**From Zone 36 To Zone 63 - User Class 1**



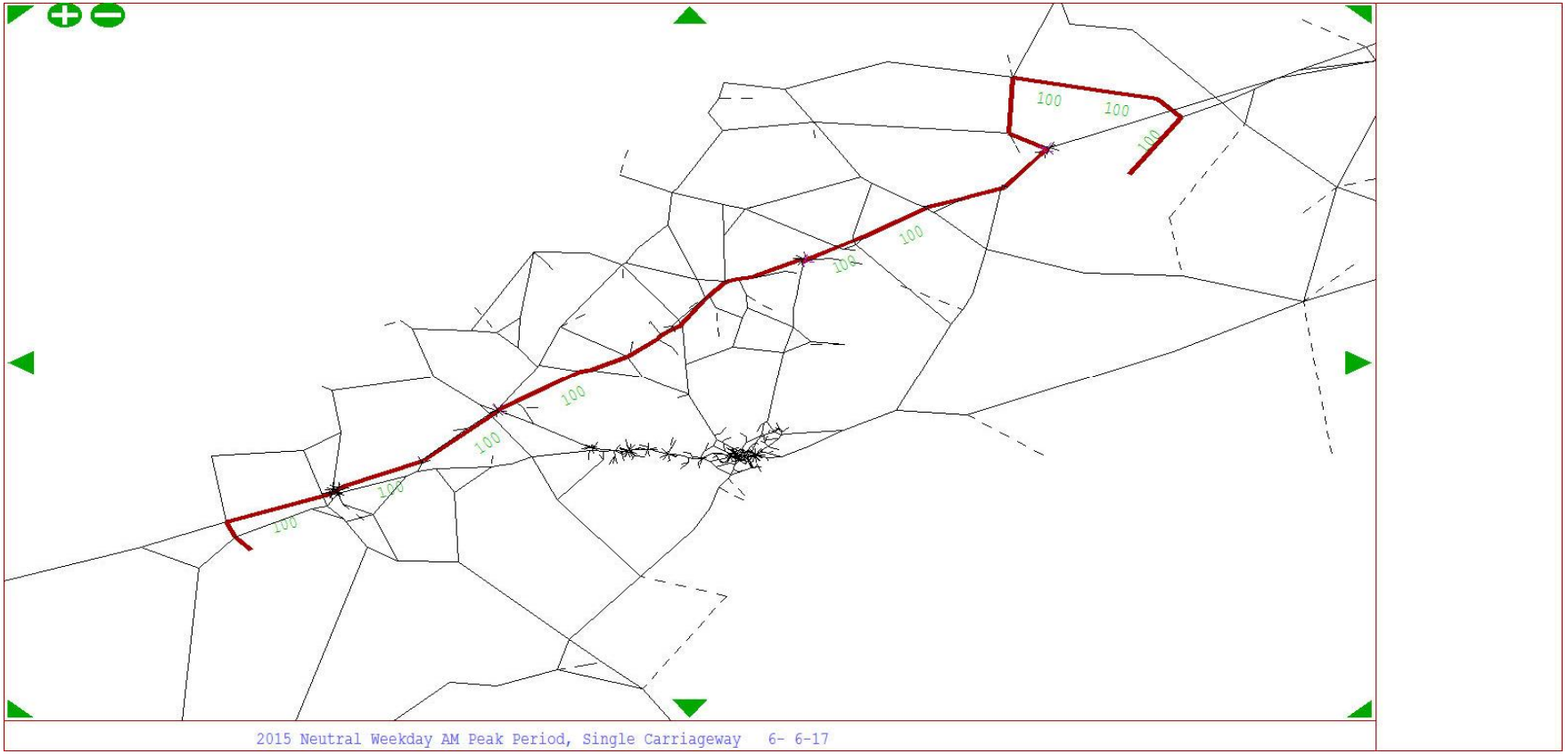

Zone 36 Magistrates Court
Zone 63 St. Dennis, Whitemoor

**From Zone 69 To Zone 63 - User Class 1**




Zone 69 Camborne
Zone 63 St. Dennis, Whitemoor

**From Zone 63 To Zone 69 - User Class 1**




Zone 63 St. Dennis, Whitemoor
Zone 69 Camborne

# Annex F - Journey Time

## Annex F - Journey Time

AM Peak

| Name | TP | Description | Intervals | Obs. Time | Min Range | Max Range | Mod. Time | Distance | Diff | % | Pass? |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **A30 West of the Scheme, WB [AL3081]** | 1 | *A30 Westbound (Between A3074 Hayle and A394 Penzance)* | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0% | |
| | 2 | | 363 | 363 | 303 | 423 | 334 | 5800 | 29 | 8% | Yes |
| | **TOTAL** | | | 363 | 303 | 423 | 334 | 5800 | 29 | 8% | Yes |
| **A30 West of the Scheme, WB [AL784]** | 1 | *A30 Westbound (Between A3047 Camborne and A3074 Hayle)* | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0% | |
| | | | | 0 | 0 | 60 | 200 | 6200 | -200 | 0% | |
| | 2 | | 473 | 473 | 402 | 544 | 459 | 10700 | 14 | 3% | Yes |
| | **TOTAL** | | | 473 | 402 | 544 | 459 | 10700 | 14 | 3% | Yes |
| **A30 West of the Scheme, WB [AL1914]** | 1 | *A30 Westbound (Between A3047 Scorrier and A3047 Camborne)* | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0% | |
| | | | | 0 | 0 | 60 | 97 | 2940 | -97 | 0% | |
| | | | | 0 | 0 | 60 | 123 | 3710 | -123 | 0% | |
| | | | | 0 | 0 | 60 | 232 | 7050 | -232 | 0% | |
| | 2 | | 320 | 320 | 260 | 380 | 342 | 10453 | -22 | -7% | Yes |
| | **TOTAL** | | | 320 | 260 | 380 | 342 | 10453 | -22 | -7% | Yes |
| **A30 West of the Scheme, WB [AL1911]** | 1 | *A30 Westbound (Between A390 Chiverton Cross Rbt and A3047 Scorrier)* | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0% | |
| | | | | 0 | 0 | 60 | 96 | 2900 | -96 | 0% | |
| | 2 | | 133 | 133 | 73 | 193 | 118 | 3523 | 15 | 11% | Yes |
| | **TOTAL** | | | 133 | 73 | 193 | 118 | 3523 | 15 | 11% | Yes |
| **A30 West of the Scheme, WB Total** | **TOTAL** | | | 1289 | | | 1254 | 30476 | 35 | 3% | Yes |
| **A30 Chiverton to Carland Cross scheme, WB [AL3084]** | 1 | *A30 Westbound (Between A39 Carland Cross Rbt and A3075 Chiverton Cross Rbt)* | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0% | |
| | | | | 0 | 0 | 60 | 3 | 50 | -3 | 0% | |
| | | | | 0 | 0 | 60 | 98 | 1850 | -98 | 0% | |
| | | | | 0 | 0 | 60 | 104 | 1905 | -104 | 0% | |
| | | | | 0 | 0 | 60 | 132 | 2400 | -132 | 0% | |
| | 2 | | 151 | 151 | 91 | 211 | 149 | 2660 | 2 | 1% | Yes |
| | | | | 151 | 91 | 211 | 171 | 2960 | -20 | -14% | |
| | | | | 151 | 91 | 211 | 219 | 3695 | -68 | -45% | |
| | | | | 151 | 91 | 211 | 231 | 3807 | -80 | -53% | |
| | 3 | | 134 | 285 | 225 | 345 | 330 | 5407 | -45 | -16% | Yes |
| | | | | 285 | 225 | 345 | 351 | 5857 | -66 | -23% | |
| | | | | 285 | 225 | 345 | 365 | 6097 | -80 | -28% | |
| | | | | 285 | 225 | 345 | 376 | 6277 | -91 | -32% | |
| | | | | 285 | 225 | 345 | 435 | 7477 | -150 | -53% | |
| | | | | 285 | 225 | 345 | 441 | 7560 | -156 | -55% | |
| | 4 | | 262 | 547 | 465 | 629 | 509 | 8960 | 38 | 7% | Yes |
| | | | | 547 | 465 | 629 | 528 | 9260 | 19 | 4% | |
| | | | | 547 | 465 | 629 | 653 | 11815 | -106 | -19% | |
| | | | | 547 | 465 | 629 | 687 | 12515 | -140 | -26% | |
| | 5 | | 257 | 804 | 683 | 925 | 701 | 12635 | 103 | 13% | Yes |
| | **TOTAL** | | | 804 | 683 | 925 | 701 | 12635 | 103 | 13% | Yes |
| **A30 East of the Scheme, WB [AL802]** | 1 | *A30 Westbound (Between A3076 Mitchell and A39 Carland Cross Rbt)* | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0% | |
| | | | | 0 | 0 | 60 | 41 | 1200 | -41 | 0% | |
| | 2 | | 68 | 68 | 8 | 128 | 51 | 1400 | 17 | 25% | Yes |
| | **TOTAL** | | | 68 | 8 | 128 | 51 | 1400 | 17 | 25% | Yes |

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **A30 East of the Scheme, WB [AL1910]** | 1 | *A30 Westbound (Between A3058 Chapel Town and A3076 Mitchell)* | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0% | |
| | | | | 0 | 0 | 60 | 95 | 2800 | -95 | 0% | |
| | 2 | | 75 | 75 | 15 | 135 | 108 | 3160 | -33 | -44% | Yes |
| | **TOTAL** | | | 75 | 15 | 135 | 108 | 3160 | -33 | -44% | Yes |
| **A30 East of the Scheme, WB [AL1908]** | 1 | *A30 Westbound (Between A3058 Summercourt and A3058 Chapel Town)* | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0% | |
| | | | | 0 | 0 | 60 | 4 | 100 | -4 | 0% | |
| | 2 | | 61 | 61 | 1 | 121 | 43 | 1200 | 18 | 30% | Yes |
| | **TOTAL** | | | 61 | 1 | 121 | 43 | 1200 | 18 | 30% | Yes |
| **A30 East of the Scheme, WB [AL3088]** | 1 | *A30 Westbound (Between A39 Indian Queens and A3058 Summercourt)* | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0% | |
| | | | | 0 | 0 | 60 | 13.72 | 400 | -14 | 0% | |
| | | | | 0 | 0 | 60 | 78 | 2310 | -78 | 0% | |
| | 2 | | 133 | 133 | 73 | 193 | 163 | 4720 | -30 | -23% | Yes |
| | **TOTAL** | | | 133 | 73 | 193 | 163 | 4720 | -30 | -23% | Yes |
| **A30 East of the Scheme, WB [AL3087A]** | 1 | *A30 Westbound (Between A391 Lanivet Junction and A39 Indian Queens)* | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0% | |
| | | | | 0 | 0 | 60 | 114 | 3530 | -114 | 0% | |
| | | | | 0 | 0 | 60 | 395 | 12130 | -395 | 0% | |
| | 2 | | 389 | 389 | 329 | 449 | 403 | 12380 | -14 | -4% | Yes |
| | **TOTAL** | | | 389 | 329 | 449 | 403 | 12380 | -14 | -4% | Yes |
| **A30 East of the Scheme, WB** | 1 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0% | |
| | 2 | | 226 | 226 | 166 | 286 | 224 | 6940 | 2 | 1% | Yes |
| | **TOTAL** | | | 226 | 166 | 286 | 224 | 6940 | 2 | 1% | Yes |
| **A30 East of the Scheme, WB [AL1919]** | 1 | *A30 Westbound (Between A30 Exit Slip Bodmin and A38 Bodmin Junction)* | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0% | |
| | 2 | | 83 | 83 | 23 | 143 | 96 | 3000 | -13 | -16% | Yes |
| | **TOTAL** | | | 83 | 23 | 143 | 96 | 3000 | -13 | -16% | Yes |
| **A30 East of the Scheme, WB Total** | **TOTAL** | | | 967 | | | 1037 | 31400 | -70 | -7% | Yes |
| **A30 West of the Scheme, EB [AL3083]** | 1 | *A30 Eastbound (Between A3074 Hayle and A3047 Camborne)* | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0% | |
| | | | | 0 | 0 | 60 | 262 | 4500 | -262 | 0% | |
| | 2 | | 445 | 445 | 378 | 512 | 466 | 10700 | -21 | -5% | Yes |
| | **TOTAL** | | | 445 | 378 | 512 | 466 | 10700 | -21 | -5% | Yes |
| **A30 West of the Scheme, EB [AL1913]** | 1 | *A30 Eastbound (Between A3047 Camborne and A3047 Scorrier)* | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0% | |
| | | | | 0 | 0 | 60 | 112 | 3403 | -112 | 0% | |
| | | | | 0 | 0 | 60 | 223 | 6743 | -223 | 0% | |
| | | | | 0 | 0 | 60 | 249 | 7513 | -249 | 0% | |
| | 2 | | 330 | 330 | 270 | 390 | 352 | 10453 | -22 | -7% | Yes |
| | **TOTAL** | | | 330 | 270 | 390 | 352 | 10453 | -22 | -7% | Yes |
| **A30 West of the Scheme, EB [AL1912]** | 1 | *A30 Eastbound (Between A3047 Scorrier and A390 Chiverton Cross Rbt)* | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0% | |
| | | | | 0 | 0 | 60 | 21 | 623 | -21 | 0% | |
| | 2 | | 139 | 139 | 79 | 199 | 121 | 3523 | 18 | 13% | Yes |
| | **TOTAL** | | | 139 | 79 | 199 | 121 | 3523 | 18 | 13% | Yes |
| **A30 West of the Scheme, WB Total** | **TOTAL** | | | 914 | | | 939 | 24676 | -25 | -3% | Yes |

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **A30 Chiverton to Carland Cross scheme, EB [AL3085]** | 1 | *A30 Eastbound (Between A3075 Chiverton Cross Rbt and A39 Carland Cross Rbt)* | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0% | |
| | | | | 0 | 0 | 60 | 6 | 120 | -6 | 0% | |
| | | | | 0 | 0 | 60 | 39 | 720 | -39 | 0% | |
| | | | | 0 | 0 | 60 | 169 | 3275 | -169 | 0% | |
| | 2 | | 222 | 222 | 162 | 282 | 189 | 3575 | 33 | 15% | Yes |
| | | | | 222 | 162 | 282 | 275 | 4975 | -53 | -24% | |
| | | | | 222 | 162 | 282 | 280 | 5058 | -58 | -26% | |
| | | | | 222 | 162 | 282 | 336 | 6258 | -114 | -51% | |
| | | | | 222 | 162 | 282 | 346 | 6438 | -124 | -56% | |
| | | | | 222 | 162 | 282 | 359 | 6678 | -137 | -62% | |
| | 3 | | 171 | 393 | 333 | 453 | 380 | 7128 | 13 | 3% | Yes |
| | | | | 393 | 333 | 453 | 469 | 8728 | -76 | -19% | |
| | | | | 393 | 333 | 453 | 479 | 8840 | -86 | -22% | |
| | | | | 393 | 333 | 453 | 523 | 9575 | -130 | -33% | |
| | 4 | | 136 | 529 | 450 | 608 | 543 | 9875 | -14 | -3% | Yes |
| | | | | 529 | 450 | 608 | 558 | 10135 | -29 | -5% | |
| | | | | 529 | 450 | 608 | 584 | 10630 | -55 | -10% | |
| | | | | 529 | 450 | 608 | 589 | 10685 | -60 | -11% | |
| | | | | 529 | 450 | 608 | 675 | 12485 | -146 | -28% | |
| | 5 | | 154 | 683 | 581 | 785 | 678 | 12535 | 5 | 1% | Yes |
| | **TOTAL** | | | 683 | 581 | 785 | 678 | 12535 | 5 | 1% | Yes |
| **A30 East of the Scheme, EB [AL801]** | 1 | *A30 Eastbound (Between A39 Carland Cross Rbt and A3076 Newquay Junction)* | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0% | |
| | | | | 0 | 0 | 60 | 7 | 200 | -7 | 0% | |
| | 2 | | 69 | 69 | 9 | 129 | 48 | 1400 | 21 | 30% | Yes |
| | **TOTAL** | | | 69 | 9 | 129 | 48 | 1400 | 21 | 30% | Yes |
| **A30 East of the Scheme, EB [AL1909]** | 1 | *A30 Eastbound (Between A3076 Mitchell and A3058 Chapel Town)* | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0% | |
| | | | | 0 | 0 | 60 | 12 | 360 | -12 | 0% | |
| | 2 | | 75 | 75 | 15 | 135 | 107 | 3160 | -32 | -43% | Yes |
| | **TOTAL** | | | 75 | 15 | 135 | 107 | 3160 | -32 | -43% | Yes |
| **A30 East of the Scheme, EB [AL1907]** | 1 | *A30 Eastbound (Between A3058 Chapel Town and A3058 Summercourt)* | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0% | |
| | | | | 0 | 0 | 60 | 36 | 1100 | -36 | 0% | |
| | 2 | | 63 | 63 | 3 | 123 | 39 | 1200 | 24 | 37% | Yes |
| | **TOTAL** | | | 63 | 3 | 123 | 39 | 1200 | 24 | 37% | Yes |
| **A30 East of the Scheme, EB [AL3089]** | 1 | *A30 Eastbound (Between A3058 Summercourt and A39 Indian Queens)* | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0% | |
| | | | | 0 | 0 | 60 | 80 | 2410 | -80 | 0% | |
| | | | | 0 | 0 | 60 | 144 | 4320 | -144 | 0% | |
| | 2 | | 141 | 141 | 81 | 201 | 157 | 4720 | -16 | -11% | Yes |
| | **TOTAL** | | | 141 | 81 | 201 | 157 | 4720 | -16 | -11% | Yes |
| **A30 East of the Scheme, EB [AL3086A]** | 1 | *A30 Eastbound (Between A39 Indian Queens and A391 Lanivet Junction)* | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0% | |
| | | | | 0 | 0 | 60 | 8.79 | 250 | -9 | 0% | |
| | | | | 0 | 0 | 60 | 290 | 8850 | -290 | 0% | |
| | 2 | | 390 | 390 | 330 | 450 | 405 | 12380 | -15 | -4% | Yes |
| | **TOTAL** | | | 390 | 330 | 450 | 405 | 12380 | -15 | -4% | Yes |

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **A30 East of the Scheme, EB [AL2195A]** | 1 | *A30 Eastbound (A391 Lanivet Junction and A38 Bodmin)* | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0% | |
| | 2 | | 224 | 224 | 164 | 284 | 225 | 6940 | -1 | 0% | Yes |
| | **TOTAL** | | | 224 | 164 | 284 | 225 | 6940 | -1 | 0% | Yes |
| **A30 East of the Scheme, EB [AL1918]** | 1 | *A30 Eastbound (A38 Bodmin and A30 Entry Slip Bodmin)* | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0% | |
| | 2 | | 90 | 90 | 30 | 150 | 89 | 2760 | 1 | 1% | Yes |
| | **TOTAL** | | | 90 | 30 | 150 | 89 | 2760 | 1 | 1% | Yes |
| **A30 East of the Scheme, WB Total** | | **TOTAL** | | 1052 | | | 1070 | 32560 | -18 | -2% | Yes |
| **A390_EB** | 1 | *A390 Eastbound (Between Chiverton and Threemilestone P&R)* | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0% | |
| | | | | 0 | 0 | 60 | 3 | 62 | -3 | 0% | |
| | | | | 0 | 0 | 60 | 77 | 1300 | -77 | 0% | |
| | | | | 0 | 0 | 60 | 202 | 3500 | -202 | 0% | |
| | 2 | *A390 Eastbound (Between Threemilestone P&R and Treliske Hospital)* | 411 | 411 | 349 | 473 | 342 | 3602 | 69 | 17% | No |
| | | | | 411 | 349 | 473 | 347 | 3622 | 64 | 15% | |
| | | | | 411 | 349 | 473 | 349 | 3672 | 62 | 15% | |
| | | | | 411 | 349 | 473 | 371 | 4337 | 40 | 10% | |
| | | | | 411 | 349 | 473 | 383 | 4547 | 28 | 7% | |
| | | | | 411 | 349 | 473 | 389 | 4707 | 22 | 5% | |
| | | | | 411 | 349 | 473 | 405 | 4752 | 6 | 1% | |
| | | | | 411 | 349 | 473 | 410 | 4787 | 1 | 0% | |
| | | | | 411 | 349 | 473 | 421 | 4867 | -10 | -3% | |
| | | | | 411 | 349 | 473 | 428 | 4957 | -17 | -4% | |
| | | | | 411 | 349 | 473 | 440 | 5117 | -29 | -7% | |
| | | | | 411 | 349 | 473 | 465 | 5417 | -54 | -13% | |
| | 3 | | 149 | 560 | 476 | 644 | 478 | 5467 | 82 | 15% | Yes |
| | | | | 560 | 476 | 644 | 506 | 5487 | 54 | 10% | |
| | | *A390 Eastbound (Between Treliske Hospital and County Hall)* | | 560 | 476 | 644 | 509 | 5507 | 51 | 9% | |
| | | | | 560 | 476 | 644 | 521 | 5642 | 39 | 7% | |
| | | | | 560 | 476 | 644 | 530 | 5742 | 30 | 5% | |
| | | | | 560 | 476 | 644 | 552 | 5992 | 8 | 1% | |
| | | | | 560 | 476 | 644 | 558 | 6052 | 2 | 0% | |
| | | | | 560 | 476 | 644 | 568 | 6111 | -8 | -1% | |
| | | | | 560 | 476 | 644 | 578 | 6179 | -18 | -3% | |
| | | | | 560 | 476 | 644 | 581 | 6189 | -21 | -4% | |
| | | | | 560 | 476 | 644 | 600 | 6384 | -40 | -7% | |
| | | | | 560 | 476 | 644 | 617 | 6569 | -57 | -10% | |
| | | | | 560 | 476 | 644 | 634 | 6754 | -74 | -13% | |
| | | | | 560 | 476 | 644 | 651 | 6875 | -91 | -16% | |
| | | | | 560 | 476 | 644 | 673 | 7025 | -113 | -20% | |
| | | | | 560 | 476 | 644 | 679 | 7085 | -119 | -21% | |
| | | | | 560 | 476 | 644 | 689 | 7190 | -129 | -23% | |
| | | | | 560 | 476 | 644 | 702 | 7250 | -142 | -25% | |
| | 4 | | 194 | 754 | 641 | 867 | 718 | 7300 | 36 | 5% | Yes |
| | **TOTAL** | | | 754 | 641 | 867 | 718 | 7300 | 36 | 5% | Yes |

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| A390_WB | 1 | *A390 Westbbound (Between County Hall and Treliske Hospital)* | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0% | |
| | | | | 0 | 0 | 60 | 13 | 50 | -13 | 0% | |
| | | | | 0 | 0 | 60 | 19 | 110 | -19 | 0% | |
| | | | | 0 | 0 | 60 | 29 | 215 | -29 | 0% | |
| | | | | 0 | 0 | 60 | 42 | 275 | -42 | 0% | |
| | | | | 0 | 0 | 60 | 64 | 425 | -64 | 0% | |
| | | | | 0 | 0 | 60 | 77 | 546 | -77 | 0% | |
| | | | | 0 | 0 | 60 | 96 | 731 | -96 | 0% | |
| | | | | 0 | 0 | 60 | 116 | 916 | -116 | 0% | |
| | | | | 0 | 0 | 60 | 148 | 1111 | -148 | 0% | |
| | | | | 0 | 0 | 60 | 152 | 1121 | -152 | 0% | |
| | | | | 0 | 0 | 60 | 159 | 1131 | -159 | 0% | |
| | | | | 0 | 0 | 60 | 181 | 1199 | -181 | 0% | |
| | | | | 0 | 0 | 60 | 187 | 1258 | -187 | 0% | |
| | | | | 0 | 0 | 60 | 193 | 1318 | -193 | 0% | |
| | | | | 0 | 0 | 60 | 220 | 1568 | -220 | 0% | |
| | | | | 0 | 0 | 60 | 231 | 1668 | -231 | 0% | |
| | 2 | *A390 Westbound (Between Treliske Hospital and Threemilestone P&R)* | 257 | 257 | 197 | 317 | 249 | 1803 | 8 | 3% | Yes |
| | | | | 257 | 197 | 317 | 250 | 1823 | 7 | 3% | |
| | | | | 257 | 197 | 317 | 252 | 1843 | 5 | 2% | |
| | | | | 257 | 197 | 317 | 257 | 1893 | 0 | 0% | |
| | | | | 257 | 197 | 317 | 280 | 2193 | -23 | -9% | |
| | | | | 257 | 197 | 317 | 292 | 2353 | -35 | -14% | |
| | | | | 257 | 197 | 317 | 299 | 2443 | -42 | -16% | |
| | | | | 257 | 197 | 317 | 324 | 2543 | -67 | -26% | |
| | | | | 257 | 197 | 317 | 328 | 2576 | -71 | -28% | |
| | | | | 257 | 197 | 317 | 334 | 2659 | -77 | -30% | |
| | | | | 257 | 197 | 317 | 351 | 2819 | -94 | -37% | |
| | | | | 257 | 197 | 317 | 358 | 3029 | -101 | -39% | |
| | | | | 257 | 197 | 317 | 380 | 3694 | -123 | -48% | |
| | | | | 257 | 197 | 317 | 381 | 3744 | -124 | -48% | |
| | 3 | *A390 Westbound (Between Threemilestone P&R and Chiverton)* | 144 | 401 | 341 | 461 | 397 | 3764 | 4 | 1% | Yes |
| | | | | 401 | 341 | 461 | 402 | 3866 | -1 | 0% | |
| | | | | 401 | 341 | 461 | 512 | 6066 | -111 | -28% | |
| | | | | 401 | 341 | 461 | 576 | 7304 | -175 | -44% | |
| | 4 | | 196 | 597 | 507 | 687 | 586 | 7366 | 11 | 2% | Yes |
| | **TOTAL** | | | 597 | 507 | 687 | 586 | 7366 | 11 | 2% | Yes |
| B3284_EB | 1 | | 0 | 0 | 0 | 60 | 2 | 30 | -2 | 0% | |
| | 2 | *B3284 Eastbound (Between Allet Common and Shortlanesend)* | 89 | 89 | 29 | 149 | 102 | 1730 | -13 | -14% | Yes |
| | | | | 89 | 29 | 149 | 183 | 3080 | -94 | -105% | |
| | 3 | *B3284 Eastbound (Between Shortlanesend and B3284 Kenwyn Hill)* | 100 | 189 | 129 | 249 | 214 | 3430 | -25 | -13% | Yes |
| | | | | 189 | 129 | 249 | 222 | 3455 | -33 | -17% | |
| | | | | 189 | 129 | 249 | 309 | 4680 | -120 | -64% | |
| | | | | 189 | 129 | 249 | 364 | 5560 | -175 | -93% | |
| | 4 | | 157 | 346 | 286 | 406 | 396 | 5830 | -50 | -14% | Yes |
| | **TOTAL** | | | 346 | 286 | 406 | 396 | 5830 | -50 | -14% | Yes |

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **B3284_WB** | 1 | *B3284 Westbound (Between B3284 Kenwyn Hill and Shortlanesend)* | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0% | |
| | | | | 0 | 0 | 60 | 23 | 270 | -23 | 0% | |
| | | | | 0 | 0 | 60 | 73 | 1150 | -73 | 0% | |
| | | | | 0 | 0 | 60 | 158 | 2375 | -158 | 0% | |
| | 2 | *B3284 Westbound (Between Shortlanesend and Allet Common)* | 140 | 140 | 80 | 200 | 162 | 2400 | -22 | -16% | Yes |
| | | | | 140 | 80 | 200 | 189 | 2750 | -49 | -35% | |
| | 3 | *B3284 Westbound (Between Allet Common and Chybucca)* | 103 | 243 | 183 | 303 | 265 | 4100 | -22 | -9% | Yes |
| | 4 | | 91 | 334 | 274 | 394 | 360 | 5800 | -26 | -8% | Yes |
| | **TOTAL** | | | 334 | 274 | 394 | 360 | 5800 | -26 | -8% | Yes |
| **A39_SB** | 1 | *A39 Southbound (Between Carland Cross and Trispen)* | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0% | |
| | | | | 0 | 0 | 60 | 42 | 1000 | -42 | 0% | |
| | | | | 0 | 0 | 60 | 54 | 1270 | -54 | 0% | |
| | | | | 0 | 0 | 60 | 77 | 1820 | -77 | 0% | |
| | | | | 0 | 0 | 60 | 100 | 2370 | -100 | 0% | |
| | 2 | | 135 | 135 | 75 | 195 | 140 | 3270 | -5 | -4% | Yes |
| | 3 | *A39 Southbound (Between Trispen and St Erme)* | 47 | 182 | 122 | 242 | 192 | 4470 | -10 | -6% | Yes |
| | | *A39 Southbound (Between St Erme and Bodmin Rd Rbt)* | | 182 | 122 | 242 | 283 | 6270 | -101 | -55% | |
| | | | | 182 | 122 | 242 | 396 | 7970 | -214 | -118% | |
| | 4 | *A39 Southbound (Between Bodmin Rd Rbt and Union Hill Junction)* | 215 | 397 | 337 | 457 | 405 | 7993 | -8 | -2% | Yes |
| | | | | 397 | 337 | 457 | 406 | 8005 | -9 | -2% | |
| | | | | 397 | 337 | 457 | 447 | 8487 | -50 | -13% | |
| | 5 | | 182 | 579 | 492 | 666 | 496 | 8785 | 83 | 14% | Yes |
| | **TOTAL** | | | 579 | 492 | 666 | 496 | 8785 | 83 | 14% | Yes |
| **A39_NB** | 1 | *A39 Northbound (Between Union Hill Junction and Bodmin Rd Rbt)* | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0% | |
| | | | | 0 | 0 | 60 | 26 | 298 | -26 | 0% | |
| | | | | 0 | 0 | 60 | 65 | 780 | -65 | 0% | |
| | 2 | *A39 Northbound (Between Bodmin Rd Rbt and St Erme)* | 69 | 69 | 9 | 129 | 81 | 792 | -12 | -17% | Yes |
| | | | | 69 | 9 | 129 | 83 | 815 | -14 | -20% | |
| | | *A39 Northbound (Between St Erme and Trispen)* | | 69 | 9 | 129 | 187 | 2515 | -118 | -171% | |
| | 3 | *A39 Northbound (Between Trispen and Carland Cross Rbt)* | 202 | 271 | 211 | 331 | 275 | 4315 | -4 | -1% | Yes |
| | 4 | | 51 | 322 | 262 | 382 | 325 | 5515 | -3 | -1% | Yes |
| | | | | 322 | 262 | 382 | 361 | 6415 | -39 | -12% | |
| | | | | 322 | 262 | 382 | 384 | 6965 | -62 | -19% | |
| | | | | 322 | 262 | 382 | 406 | 7515 | -84 | -26% | |
| | | | | 322 | 262 | 382 | 417 | 7785 | -95 | -30% | |
| | 5 | | 189 | 511 | 434 | 588 | 473 | 8785 | 38 | 7% | Yes |
| | **TOTAL** | | | 511 | 434 | 588 | 473 | 8785 | 38 | 7% | Yes |
| **A3075_NB** | 1 | *A3075 Northbound (Between Chiverton and B3284 to Chybucca)* | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0% | |
| | | | | 0 | 0 | 60 | 2 | 40 | -2 | 0% | |
| | | | | 0 | 0 | 60 | 142 | 2380 | -142 | 0% | |
| | 2 | *A3075 Northbound (Between B3284 to Chybucca and B3285 to Perranporth)* | 118 | 118 | 58 | 178 | 147 | 2415 | -29 | -25% | Yes |
| | | | | 118 | 58 | 178 | 258 | 4315 | -140 | -119% | |
| | 3 | *A3075 Northbound (Between B3285 to Perranporth and A3075 Holywell Jct)* | 331 | 449 | 382 | 516 | 484 | 8115 | -35 | -8% | Yes |
| | | | | 449 | 382 | 516 | 495 | 8235 | -46 | -10% | |
| | | | | 449 | 382 | 516 | 541 | 9025 | -92 | -21% | |
| | | | | 449 | 382 | 516 | 633 | 10535 | -184 | -41% | |
| | 4 | *A3075 Northbound (Between A3075 Holywell Jct and A392 Rbt Newquay)* | 234 | 683 | 581 | 785 | 725 | 12035 | -42 | -6% | Yes |
| | | | | 683 | 581 | 785 | 737 | 12305 | -54 | -8% | |
| | 5 | | 185 | 868 | 738 | 998 | 898 | 15505 | -30 | -3% | Yes |
| | **TOTAL** | | | 868 | 738 | 998 | 898 | 15505 | -30 | -3% | Yes |

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| A3075_SB | 1 | *A3075 Southbound (Between A392 Rbt Junction and A3075 Holywell Jct)* | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0% | |
| | | | | 0 | 0 | 60 | 150 | 3200 | -150 | 0% | |
| | 2 | *A3075 Southbound (Between A3075 Holywell Jct and B3285 to Perranporth)* | 182 | 182 | 122 | 242 | 164 | 3470 | 18 | 10% | Yes |
| | | | | 182 | 122 | 242 | 259 | 4970 | -77 | -42% | |
| | | | | 182 | 122 | 242 | 348 | 6480 | -166 | -91% | |
| | | | | 182 | 122 | 242 | 396 | 7270 | -214 | -118% | |
| | 3 | *A3075 Southbound (Between B3285 to Peranporth and B3284 to Chybucca)* | 217 | 399 | 339 | 459 | 412 | 7390 | -13 | -3% | Yes |
| | | | | 399 | 339 | 459 | 633 | 11190 | -234 | -59% | |
| | 4 | *A3075 Southbound (Between B3284 to Chybucca and Chiverton)* | 337 | 736 | 626 | 846 | 744 | 13090 | -8 | -1% | Yes |
| | | | | 736 | 626 | 846 | 749 | 13125 | -13 | -2% | |
| | | | | 736 | 626 | 846 | 890 | 15465 | -154 | -21% | |
| | 5 | | 222 | 958 | 814 | 1102 | 900 | 15505 | 58 | 6% | Yes |
| | **TOTAL** | | | 958 | 814 | 1102 | 900 | 15505 | 58 | 6% | Yes |
| A39S_SB | 1 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0% | |
| | | | | 0 | 0 | 60 | 5 | 109 | -5 | 0% | |
| | | | | 0 | 0 | 60 | 8 | 130 | -8 | 0% | |
| | | | | 0 | 0 | 60 | 37 | 730 | -37 | 0% | |
| | | | | 0 | 0 | 60 | 107 | 1730 | -107 | 0% | |
| | | | | 0 | 0 | 60 | 140 | 2192 | -140 | 0% | |
| | 2 | | 372 | 372 | 312 | 432 | 443 | 5760 | -71 | -19% | No |
| | **TOTAL** | | | 372 | 312 | 432 | 443 | 5760 | -71 | -19% | No |
| A39S_NB | 1 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0% | |
| | | | | 0 | 0 | 60 | 279 | 3568 | -279 | 0% | |
| | | | | 0 | 0 | 60 | 316 | 4030 | -316 | 0% | |
| | | | | 0 | 0 | 60 | 400 | 5030 | -400 | 0% | |
| | | | | 0 | 0 | 60 | 428 | 5630 | -428 | 0% | |
| | | | | 0 | 0 | 60 | 429 | 5651 | -429 | 0% | |
| | 2 | | 439 | 439 | 373 | 505 | 437 | 5760 | 2 | 0% | Yes |
| | **TOTAL** | | | 439 | 373 | 505 | 437 | 5760 | 2 | 0% | Yes |
| B3285_SB | 1 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0% | |
| | | | | 0 | 0 | 60 | 137 | 2500 | -137 | 0% | |
| | | | | 0 | 0 | 60 | 188 | 3400 | -188 | 0% | |
| | 2 | | 213 | 213 | 153 | 273 | 232 | 3550 | -19 | -9% | Yes |
| | **TOTAL** | | | 213 | 153 | 273 | 232 | 3550 | -19 | -9% | Yes |
| B3285_NB | 1 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0% | |
| | | | | 0 | 0 | 60 | 10 | 150 | -10 | 0% | |
| | | | | 0 | 0 | 60 | 62 | 1050 | -62 | 0% | |
| | 2 | | 205 | 205 | 145 | 265 | 208 | 3550 | -3 | -2% | Yes |
| | **TOTAL** | | | 205 | 145 | 265 | 208 | 3550 | -3 | -2% | Yes |
| B3277_NB | 1 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0% | |
| | | | | 0 | 0 | 60 | 2 | 35 | -2 | 0% | |
| | | | | 0 | 0 | 60 | 11 | 135 | -11 | 0% | |
| | | | | 0 | 0 | 60 | 42 | 685 | -42 | 0% | |
| | | | | 0 | 0 | 60 | 156 | 2685 | -156 | 0% | |
| | 2 | | 339 | 339 | 279 | 399 | 303 | 5285 | 36 | 11% | Yes |
| | **TOTAL** | | | 339 | 279 | 399 | 303 | 5285 | 36 | 11% | Yes |

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| B3277_SB | 1 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0% | |
| | | | | 0 | 0 | 60 | 149 | 2600 | -149 | 0% | | |
| | | | | 0 | 0 | 60 | 265 | 4600 | -265 | 0% | | |
| | | | | 0 | 0 | 60 | 301 | 5150 | -301 | 0% | | |
| | | | | 0 | 0 | 60 | 306 | 5250 | -306 | 0% | | |
| | 2 | | 351 | 351 | 291 | 411 | 316 | 5285 | 35 | 10% | Yes | |
| | **TOTAL** | | | 351 | 291 | 411 | 316 | 5285 | 35 | 10% | Yes | |

## Annex F - Journey Time

Interpeak

| Name | TP | Description | Intervals | Obs. Time | Min Range | Max Range | Mod. Time | Distance | Diff | % | Pass? |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **A30 West of the Scheme, WB [AL3081]** | 1 | *A30 Westbound (Between A3074 Hayle and A394 Penzance)* | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0% | |
| | 2 | | 373 | 373 | 313 | 433 | 335 | 5800 | 38 | 10% | Yes |
| | **TOTAL** | | | 373 | 313 | 433 | 335 | 5800 | 38 | 10% | Yes |
| **A30 West of the Scheme, WB [AL784]** | 1 | *A30 Westbound (Between A3047 Camborne and A3074 Hayle)* | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0% | |
| | | | | 0 | 0 | 60 | 202 | 6200 | -202 | 0% | |
| | 2 | | 508 | 508 | 432 | 584 | 462 | 10700 | 46 | 9% | Yes |
| | **TOTAL** | | | 508 | 432 | 584 | 462 | 10700 | 46 | 9% | Yes |
| **A30 West of the Scheme, WB [AL1914]** | 1 | *A30 Westbound (Between A3047 Scorrier and A3047 Camborne)* | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0% | |
| | | | | 0 | 0 | 60 | 98 | 2940 | -98 | 0% | |
| | | | | 0 | 0 | 60 | 124 | 3710 | -124 | 0% | |
| | | | | 0 | 0 | 60 | 233 | 7050 | -233 | 0% | |
| | 2 | | 326 | 326 | 266 | 386 | 344 | 10453 | -18 | -6% | Yes |
| | **TOTAL** | | | 326 | 266 | 386 | 344 | 10453 | -18 | -6% | Yes |
| **A30 West of the Scheme, WB [AL1911]** | 1 | *A30 Westbound (Between A390 Chiverton Cross Rbt and A3047 Scorrier)* | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0% | |
| | | | | 0 | 0 | 60 | 97 | 2900 | -97 | 0% | |
| | 2 | | 136 | 136 | 76 | 196 | 119 | 3523 | 17 | 12% | Yes |
| | **TOTAL** | | | 136 | 76 | 196 | 119 | 3523 | 17 | 12% | Yes |
| **A30 West of the Scheme, WB Total** | **TOTAL** | | | 1343 | | | 1260 | 30476 | 83 | 6% | Yes |
| **A30 Chiverton to Carland Cross scheme, WB [AL3084]** | 1 | *A30 Westbound (Between A39 Carland Cross Rbt and A3075 Chiverton Cross Rbt)* | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0% | |
| | | | | 0 | 0 | 60 | 2 | 50 | -2 | 0% | |
| | | | | 0 | 0 | 60 | 93 | 1850 | -93 | 0% | |
| | | | | 0 | 0 | 60 | 98 | 1905 | -98 | 0% | |
| | | | | 0 | 0 | 60 | 125 | 2400 | -125 | 0% | |
| | 2 | | 142 | 142 | 82 | 202 | 141 | 2660 | 1 | 1% | Yes |
| | | | | 142 | 82 | 202 | 161 | 2960 | -19 | -14% | |
| | | | | 142 | 82 | 202 | 206 | 3695 | -64 | -45% | |
| | | | | 142 | 82 | 202 | 217 | 3807 | -75 | -53% | |
| | 3 | | 127 | 269 | 209 | 329 | 312 | 5407 | -43 | -16% | Yes |
| | | | | 269 | 209 | 329 | 333 | 5857 | -64 | -24% | |
| | | | | 269 | 209 | 329 | 346 | 6097 | -77 | -29% | |
| | | | | 269 | 209 | 329 | 357 | 6277 | -88 | -33% | |
| | | | | 269 | 209 | 329 | 415 | 7477 | -146 | -54% | |
| | | | | 269 | 209 | 329 | 421 | 7560 | -152 | -57% | |
| | 4 | | 183 | 452 | 384 | 520 | 488 | 8960 | -36 | -8% | Yes |
| | | | | 452 | 384 | 520 | 506 | 9260 | -54 | -12% | |
| | | | | 452 | 384 | 520 | 630 | 11815 | -178 | -39% | |
| | | | | 452 | 384 | 520 | 664 | 12515 | -212 | -47% | |
| | 5 | | 221 | 673 | 572 | 774 | 677 | 12635 | -4 | -1% | Yes |
| | **TOTAL** | | | 673 | 572 | 774 | 677 | 12635 | -4 | -1% | Yes |
| **A30 East of the Scheme, WB [AL802]** | 1 | *A30 Westbound (Between A3076 Mitchell and A39 Carland Cross Rbt)* | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0% | |
| | | | | 0 | 0 | 60 | 40 | 1200 | -40 | 0% | |
| | 2 | | 65 | 65 | 5 | 125 | 50 | 1400 | 15 | 23% | Yes |
| | **TOTAL** | | | 65 | 5 | 125 | 50 | 1400 | 15 | 23% | Yes |

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **A30 East of the Scheme, WB [AL1910]** | 1 | *A30 Westbound (Between A3058 Chapel Town and A3076 Mitchell)* | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0% | |
| | | | | 0 | 0 | 60 | 93 | 2800 | -93 | 0% | |
| | 2 | | 75 | 75 | 15 | 135 | 105 | 3160 | -30 | -41% | Yes |
| | **TOTAL** | | | 75 | 15 | 135 | 105 | 3160 | -30 | -41% | Yes |
| **A30 East of the Scheme, WB [AL1908]** | 1 | *A30 Westbound (Between A3058 Summercourt and A3058 Chapel Town)* | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0% | |
| | | | | 0 | 0 | 60 | 4 | 100 | -4 | 0% | |
| | 2 | | 62 | 62 | 2 | 122 | 41 | 1200 | 21 | 33% | Yes |
| | **TOTAL** | | | 62 | 2 | 122 | 41 | 1200 | 21 | 33% | Yes |
| **A30 East of the Scheme, WB [AL3088]** | 1 | *A30 Westbound (Between A39 Indian Queens and A3058 Summercourt)* | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0% | |
| | | | | 0 | 0 | 60 | 13.62 | 400 | -14 | 0% | |
| | | | | 0 | 0 | 60 | 77 | 2310 | -77 | 0% | |
| | 2 | | 137 | 137 | 77 | 197 | 159 | 4720 | -22 | -16% | Yes |
| | **TOTAL** | | | 137 | 77 | 197 | 159 | 4720 | -22 | -16% | Yes |
| **A30 East of the Scheme, WB [AL3087A]** | 1 | *A30 Westbound (Between A391 Lanivet Junction and A39 Indian Queens)* | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0% | |
| | | | | 0 | 0 | 60 | 114 | 3530 | -114 | 0% | |
| | | | | 0 | 0 | 60 | 394 | 12130 | -394 | 0% | |
| | 2 | | 390 | 390 | 330 | 450 | 402 | 12380 | -12 | -3% | Yes |
| | **TOTAL** | | | 390 | 330 | 450 | 402 | 12380 | -12 | -3% | Yes |
| **A30 East of the Scheme, WB** | 1 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0% | |
| | 2 | | 228 | 228 | 168 | 288 | 224 | 6940 | 4 | 2% | Yes |
| | **TOTAL** | | | 228 | 168 | 288 | 224 | 6940 | 4 | 2% | Yes |
| **A30 East of the Scheme, WB [AL1919]** | 1 | *A30 Westbound (Between A30 Exit Slip Bodmin and A38 Bodmin Junction)* | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0% | |
| | 2 | | 84 | 84 | 24 | 144 | 96 | 3000 | -12 | -15% | Yes |
| | **TOTAL** | | | 84 | 24 | 144 | 96 | 3000 | -12 | -15% | Yes |
| **A30 East of the Scheme, WB Total** | **TOTAL** | | | 976 | | | 1027 | 31400 | -51 | -5% | Yes |
| **A30 West of the Scheme, EB [AL3083]** | 1 | *A30 Eastbound (Between A3074 Hayle and A3047 Camborne)* | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0% | |
| | | | | 0 | 0 | 60 | 260 | 4500 | -260 | 0% | |
| | 2 | | 456 | 456 | 388 | 524 | 461 | 10700 | -5 | -1% | Yes |
| | **TOTAL** | | | 456 | 388 | 524 | 461 | 10700 | -5 | -1% | Yes |
| **A30 West of the Scheme, EB [AL1913]** | 1 | *A30 Eastbound (Between A3047 Camborne and A3047 Scorrier)* | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0% | |
| | | | | 0 | 0 | 60 | 110 | 3403 | -110 | 0% | |
| | | | | 0 | 0 | 60 | 220 | 6743 | -220 | 0% | |
| | | | | 0 | 0 | 60 | 245 | 7513 | -245 | 0% | |
| | 2 | | 331 | 331 | 271 | 391 | 345 | 10453 | -14 | -4% | Yes |
| | **TOTAL** | | | 331 | 271 | 391 | 345 | 10453 | -14 | -4% | Yes |
| **A30 West of the Scheme, EB [AL1912]** | 1 | *A30 Eastbound (Between A3047 Scorrier and A390 Chiverton Cross Rbt)* | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0% | |
| | | | | 0 | 0 | 60 | 21 | 623 | -21 | 0% | |
| | 2 | | 138 | 138 | 78 | 198 | 119 | 3523 | 19 | 14% | Yes |
| | **TOTAL** | | | 138 | 78 | 198 | 119 | 3523 | 19 | 14% | Yes |
| **A30 West of the Scheme, WB Total** | **TOTAL** | | | 925 | | | 925 | 24676 | 0 | 0% | Yes |

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **A30 Chiverton to Carland Cross scheme, EB [AL3085]** | 1 | *A30 Eastbound (Between A3075 Chiverton Cross Rbt and A39 Carland Cross Rbt)* | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0% | |
| | | | | 0 | 0 | 60 | 6 | 120 | -6 | 0% | |
| | | | | 0 | 0 | 60 | 35 | 720 | -35 | 0% | |
| | | | | 0 | 0 | 60 | 156 | 3275 | -156 | 0% | |
| | 2 | | 180 | 180 | 120 | 240 | 172 | 3575 | 8 | 4% | Yes |
| | | | | 180 | 120 | 240 | 236 | 4975 | -56 | -31% | |
| | | | | 180 | 120 | 240 | 242 | 5058 | -62 | -35% | |
| | | | | 180 | 120 | 240 | 299 | 6258 | -119 | -66% | |
| | | | | 180 | 120 | 240 | 309 | 6438 | -129 | -72% | |
| | | | | 180 | 120 | 240 | 322 | 6678 | -142 | -79% | |
| | 3 | | 172 | 352 | 292 | 412 | 342 | 7128 | 10 | 3% | Yes |
| | | | | 352 | 292 | 412 | 432 | 8728 | -80 | -23% | |
| | | | | 352 | 292 | 412 | 441 | 8840 | -89 | -25% | |
| | | | | 352 | 292 | 412 | 483 | 9575 | -131 | -37% | |
| | 4 | | 136 | 488 | 415 | 561 | 502 | 9875 | -14 | -3% | Yes |
| | | | | 488 | 415 | 561 | 516 | 10135 | -28 | -6% | |
| | | | | 488 | 415 | 561 | 541 | 10630 | -53 | -11% | |
| | | | | 488 | 415 | 561 | 545 | 10685 | -57 | -12% | |
| | | | | 488 | 415 | 561 | 627 | 12485 | -139 | -29% | |
| | 5 | | 154 | 642 | 546 | 738 | 630 | 12535 | 12 | 2% | Yes |
| | **TOTAL** | | | 642 | 546 | 738 | 630 | 12535 | 12 | 2% | Yes |
| **A30 East of the Scheme, EB [AL801]** | 1 | *A30 Eastbound (Between A39 Carland Cross Rbt and A3076 Newquay Junction)* | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0% | |
| | | | | 0 | 0 | 60 | 7 | 200 | -7 | 0% | |
| | 2 | | 69 | 69 | 9 | 129 | 48 | 1400 | 21 | 30% | Yes |
| | **TOTAL** | | | 69 | 9 | 129 | 48 | 1400 | 21 | 30% | Yes |
| **A30 East of the Scheme, EB [AL1909]** | 1 | *A30 Eastbound (Between A3076 Mitchell and A3058 Chapel Town)* | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0% | |
| | | | | 0 | 0 | 60 | 12 | 360 | -12 | 0% | |
| | 2 | | 75 | 75 | 15 | 135 | 107 | 3160 | -32 | -42% | Yes |
| | **TOTAL** | | | 75 | 15 | 135 | 107 | 3160 | -32 | -42% | Yes |
| **A30 East of the Scheme, EB [AL1907]** | 1 | *A30 Eastbound (Between A3058 Chapel Town and A3058 Summercourt)* | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0% | |
| | | | | 0 | 0 | 60 | 36 | 1100 | -36 | 0% | |
| | 2 | | 64 | 64 | 4 | 124 | 39 | 1200 | 25 | 39% | Yes |
| | **TOTAL** | | | 64 | 4 | 124 | 39 | 1200 | 25 | 39% | Yes |
| **A30 East of the Scheme, EB [AL3089]** | 1 | *A30 Eastbound (Between A3058 Summercourt and A39 Indian Queens)* | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0% | |
| | | | | 0 | 0 | 60 | 80 | 2410 | -80 | 0% | |
| | | | | 0 | 0 | 60 | 143 | 4320 | -143 | 0% | |
| | 2 | | 140 | 140 | 80 | 200 | 156 | 4720 | -16 | -12% | Yes |
| | **TOTAL** | | | 140 | 80 | 200 | 156 | 4720 | -16 | -12% | Yes |
| **A30 East of the Scheme, EB [AL3086A]** | 1 | *A30 Eastbound (Between A39 Indian Queens and A391 Lanivet Junction)* | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0% | |
| | | | | 0 | 0 | 60 | 8.71 | 250 | -9 | 0% | |
| | | | | 0 | 0 | 60 | 288 | 8850 | -288 | 0% | |
| | 2 | | 392 | 392 | 332 | 452 | 402 | 12380 | -10 | -3% | Yes |
| | **TOTAL** | | | 392 | 332 | 452 | 402 | 12380 | -10 | -3% | Yes |

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **A30 East of the Scheme, EB [AL2195A]** | 1 | *A30 Eastbound (A391 Lanivet Junction and A38 Bodmin)* | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0% | |
| | 2 | | 228 | 228 | 168 | 288 | 224 | 6940 | 4 | 2% | Yes |
| | **TOTAL** | | | 228 | 168 | 288 | 224 | 6940 | 4 | 2% | Yes |
| **A30 East of the Scheme, EB [AL1918]** | 1 | *A30 Eastbound (A38 Bodmin and A30 Entry Slip Bodmin)* | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0% | |
| | 2 | | 100 | 100 | 40 | 160 | 89 | 2760 | 11 | 11% | Yes |
| | **TOTAL** | | | 100 | 40 | 160 | 89 | 2760 | 11 | 11% | Yes |
| **A30 East of the Scheme, WB Total** | | **TOTAL** | | 1068 | | | 1066 | 32560 | 2 | 0% | Yes |
| **A390_EB** | 1 | *A390 Eastbound (Between Chiverton and Threemilestone P&R)* | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0% | |
| | | | | 0 | 0 | 60 | 3 | 62 | -3 | 0% | |
| | | | | 0 | 0 | 60 | 72 | 1300 | -72 | 0% | |
| | | | | 0 | 0 | 60 | 190 | 3500 | -190 | 0% | |
| | 2 | *A390 Eastbound (Between Threemilestone P&R and Treliske Hospital)* | 196 | 196 | 136 | 256 | 216 | 3602 | -20 | -10% | Yes |
| | | | | 196 | 136 | 256 | 220 | 3622 | -24 | -12% | |
| | | | | 196 | 136 | 256 | 222 | 3672 | -26 | -13% | |
| | | | | 196 | 136 | 256 | 244 | 4337 | -48 | -24% | |
| | | | | 196 | 136 | 256 | 256 | 4547 | -60 | -30% | |
| | | | | 196 | 136 | 256 | 261 | 4707 | -65 | -33% | |
| | | | | 196 | 136 | 256 | 277 | 4752 | -81 | -41% | |
| | | | | 196 | 136 | 256 | 282 | 4787 | -86 | -44% | |
| | | | | 196 | 136 | 256 | 293 | 4867 | -97 | -49% | |
| | | | | 196 | 136 | 256 | 300 | 4957 | -104 | -53% | |
| | | | | 196 | 136 | 256 | 312 | 5117 | -116 | -59% | |
| | | | | 196 | 136 | 256 | 336 | 5417 | -140 | -71% | |
| | 3 | | 156 | 352 | 292 | 412 | 343 | 5467 | 9 | 3% | Yes |
| | | | | 352 | 292 | 412 | 345 | 5487 | 7 | 2% | |
| | | *A390 Eastbound (Between Treliske Hospital and County Hall)* | | 352 | 292 | 412 | 348 | 5507 | 4 | 1% | |
| | | | | 352 | 292 | 412 | 362 | 5642 | -10 | -3% | |
| | | | | 352 | 292 | 412 | 372 | 5742 | -20 | -6% | |
| | | | | 352 | 292 | 412 | 396 | 5992 | -44 | -13% | |
| | | | | 352 | 292 | 412 | 403 | 6052 | -51 | -14% | |
| | | | | 352 | 292 | 412 | 417 | 6111 | -65 | -19% | |
| | | | | 352 | 292 | 412 | 427 | 6179 | -75 | -21% | |
| | | | | 352 | 292 | 412 | 431 | 6189 | -79 | -23% | |
| | | | | 352 | 292 | 412 | 452 | 6384 | -100 | -28% | |
| | | | | 352 | 292 | 412 | 470 | 6569 | -118 | -34% | |
| | | | | 352 | 292 | 412 | 488 | 6754 | -136 | -39% | |
| | | | | 352 | 292 | 412 | 510 | 6875 | -158 | -45% | |
| | | | | 352 | 292 | 412 | 535 | 7025 | -183 | -52% | |
| | | | | 352 | 292 | 412 | 541 | 7085 | -189 | -54% | |
| | | | | 352 | 292 | 412 | 552 | 7190 | -200 | -57% | |
| | | | | 352 | 292 | 412 | 566 | 7250 | -214 | -61% | |
| | 4 | | 214 | 566 | 481 | 651 | 582 | 7300 | -16 | -3% | Yes |
| | **TOTAL** | | | 566 | 481 | 651 | 582 | 7300 | -16 | -3% | Yes |

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **A390_WB** | 1 | *A390 Westbbound (Between County Hall and Treliske Hospital)* | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0% | |
| | | | | 0 | 0 | 60 | 12 | 50 | -12 | 0% | |
| | | | | 0 | 0 | 60 | 18 | 110 | -18 | 0% | |
| | | | | 0 | 0 | 60 | 28 | 215 | -28 | 0% | |
| | | | | 0 | 0 | 60 | 40 | 275 | -40 | 0% | |
| | | | | 0 | 0 | 60 | 61 | 425 | -61 | 0% | |
| | | | | 0 | 0 | 60 | 74 | 546 | -74 | 0% | |
| | | | | 0 | 0 | 60 | 92 | 731 | -92 | 0% | |
| | | | | 0 | 0 | 60 | 111 | 916 | -111 | 0% | |
| | | | | 0 | 0 | 60 | 138 | 1111 | -138 | 0% | |
| | | | | 0 | 0 | 60 | 143 | 1121 | -143 | 0% | |
| | | | | 0 | 0 | 60 | 148 | 1131 | -148 | 0% | |
| | | | | 0 | 0 | 60 | 163 | 1199 | -163 | 0% | |
| | | | | 0 | 0 | 60 | 169 | 1258 | -169 | 0% | |
| | | | | 0 | 0 | 60 | 175 | 1318 | -175 | 0% | |
| | | | | 0 | 0 | 60 | 200 | 1568 | -200 | 0% | |
| | | | | 0 | 0 | 60 | 210 | 1668 | -210 | 0% | |
| | 2 | *A390 Westbound (Between Treliske Hospital and Threemilestone P&R)* | 201 | 201 | 141 | 261 | 228 | 1803 | -27 | -13% | Yes |
| | | | | 201 | 141 | 261 | 229 | 1823 | -28 | -14% | |
| | | | | 201 | 141 | 261 | 232 | 1843 | -31 | -15% | |
| | | | | 201 | 141 | 261 | 238 | 1893 | -37 | -18% | |
| | | | | 201 | 141 | 261 | 260 | 2193 | -59 | -29% | |
| | | | | 201 | 141 | 261 | 272 | 2353 | -71 | -35% | |
| | | | | 201 | 141 | 261 | 279 | 2443 | -78 | -39% | |
| | | | | 201 | 141 | 261 | 307 | 2543 | -106 | -53% | |
| | | | | 201 | 141 | 261 | 312 | 2576 | -111 | -55% | |
| | | | | 201 | 141 | 261 | 318 | 2659 | -117 | -58% | |
| | | | | 201 | 141 | 261 | 338 | 2819 | -137 | -68% | |
| | | | | 201 | 141 | 261 | 346 | 3029 | -145 | -72% | |
| | | | | 201 | 141 | 261 | 367 | 3694 | -166 | -83% | |
| | | | | 201 | 141 | 261 | 369 | 3744 | -168 | -84% | |
| | 3 | *A390 Westbound (Between Threemilestone P&R and Chiverton)* | 129 | 330 | 270 | 390 | 385 | 3764 | -55 | -17% | Yes |
| | | | | 330 | 270 | 390 | 390 | 3866 | -60 | -18% | |
| | | | | 330 | 270 | 390 | 511 | 6066 | -181 | -55% | |
| | | | | 330 | 270 | 390 | 582 | 7304 | -252 | -76% | |
| | 4 | | 207 | 537 | 456 | 618 | 592 | 7366 | -55 | -10% | Yes |
| | **TOTAL** | | | 537 | 456 | 618 | 592 | 7366 | -55 | -10% | Yes |
| **B3284_EB** | 1 | | 0 | 0 | 0 | 60 | 2 | 30 | -2 | 0% | |
| | 2 | *B3284 Eastbound (Between Allet Common and Shortlanesend)* | 88 | 88 | 28 | 148 | 98 | 1730 | -10 | -11% | Yes |
| | | | | 88 | 28 | 148 | 173 | 3080 | -85 | -96% | |
| | 3 | *B3284 Eastbound (Between Shortlanesend and B3284 Kenwyn Hill)* | 100 | 188 | 128 | 248 | 202 | 3430 | -14 | -7% | Yes |
| | | | | 188 | 128 | 248 | 210 | 3455 | -22 | -11% | |
| | | | | 188 | 128 | 248 | 291 | 4680 | -103 | -55% | |
| | | | | 188 | 128 | 248 | 342 | 5560 | -154 | -82% | |
| | 4 | | 140 | 328 | 268 | 388 | 371 | 5830 | -43 | -13% | Yes |
| | **TOTAL** | | | 328 | 268 | 388 | 371 | 5830 | -43 | -13% | Yes |

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **B3284_WB** | 1 | *B3284 Westbound (Between B3284 Kenwyn Hill and Shortlanesend)* | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0% | |
| | | | | 0 | 0 | 60 | 24 | 270 | -24 | 0% | |
| | | | | 0 | 0 | 60 | 75 | 1150 | -75 | 0% | |
| | | | | 0 | 0 | 60 | 162 | 2375 | -162 | 0% | |
| | 2 | *B3284 Westbound (Between Shortlanesend and Allet Common)* | 140 | 140 | 80 | 200 | 166 | 2400 | -26 | -18% | Yes |
| | | | | 140 | 80 | 200 | 193 | 2750 | -53 | -38% | |
| | 3 | *B3284 Westbound (Between Allet Common and Chybucca)* | 99 | 239 | 179 | 299 | 271 | 4100 | -32 | -14% | Yes |
| | 4 | *B3284 Westbound (Between Allet Common and Chybucca)* | 94 | 333 | 273 | 393 | 368 | 5800 | -35 | -11% | Yes |
| | **TOTAL** | | | 333 | 273 | 393 | 368 | 5800 | -35 | -11% | Yes |
| **A39_SB** | 1 | *A39 Southbound (Between Carland Cross and Trispen)* | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0% | |
| | | | | 0 | 0 | 60 | 41 | 1000 | -41 | 0% | |
| | | | | 0 | 0 | 60 | 52 | 1270 | -52 | 0% | |
| | | | | 0 | 0 | 60 | 75 | 1820 | -75 | 0% | |
| | | | | 0 | 0 | 60 | 97 | 2370 | -97 | 0% | |
| | 2 | *A39 Southbound (Between Trispen and St Erme)* | 135 | 135 | 75 | 195 | 136 | 3270 | -1 | -1% | Yes |
| | 3 | *A39 Southbound (Between Trispen and St Erme)* | 47 | 182 | 122 | 242 | 186 | 4470 | -4 | -2% | Yes |
| | | *A39 Southbound (Between St Erme and Bodmin Rd Rbt)* | | 182 | 122 | 242 | 273 | 6270 | -91 | -50% | |
| | | | | 182 | 122 | 242 | 379 | 7970 | -197 | -108% | |
| | 4 | *A39 Southbound (Between Bodmin Rd Rbt and Union Hill Junction)* | 211 | 393 | 333 | 453 | 388 | 7993 | 5 | 1% | Yes |
| | | | | 393 | 333 | 453 | 389 | 8005 | 4 | 1% | |
| | | | | 393 | 333 | 453 | 431 | 8487 | -38 | -10% | |
| | 5 | *A39 Southbound (Between Bodmin Rd Rbt and Union Hill Junction)* | 158 | 551 | 468 | 634 | 482 | 8785 | 69 | 13% | Yes |
| | **TOTAL** | | | 551 | 468 | 634 | 482 | 8785 | 69 | 13% | Yes |
| **A39_NB** | 1 | *A39 Northbound (Between Union Hill Junction and Bodmin Rd Rbt)* | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0% | |
| | | | | 0 | 0 | 60 | 26 | 298 | -26 | 0% | |
| | | | | 0 | 0 | 60 | 65 | 780 | -65 | 0% | |
| | 2 | *A39 Northbound (Between Bodmin Rd Rbt and St Erme)* | 70 | 70 | 10 | 130 | 79 | 792 | -9 | -12% | Yes |
| | | | | 70 | 10 | 130 | 80 | 815 | -10 | -15% | |
| | | *A39 Northbound (Between St Erme and Trispen)* | | 70 | 10 | 130 | 192 | 2515 | -122 | -174% | |
| | 3 | *A39 Northbound (Between Trispen and Carland Cross Rbt)* | 207 | 277 | 217 | 337 | 283 | 4315 | -6 | -2% | Yes |
| | 4 | *A39 Northbound (Between Trispen and Carland Cross Rbt)* | 51 | 328 | 268 | 388 | 335 | 5515 | -7 | -2% | Yes |
| | | | | 328 | 268 | 388 | 373 | 6415 | -45 | -14% | |
| | | | | 328 | 268 | 388 | 396 | 6965 | -68 | -21% | |
| | | | | 328 | 268 | 388 | 419 | 7515 | -91 | -28% | |
| | | | | 328 | 268 | 388 | 430 | 7785 | -102 | -31% | |
| | 5 | *A39 Northbound (Between Trispen and Carland Cross Rbt)* | 160 | 488 | 415 | 561 | 486 | 8785 | 2 | 0% | Yes |
| | **TOTAL** | | | 488 | 415 | 561 | 486 | 8785 | 2 | 0% | Yes |
| **A3075_NB** | 1 | *A3075 Northbound (Between Chiverton and B3284 to Chybucca)* | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0% | |
| | | | | 0 | 0 | 60 | 2 | 40 | -2 | 0% | |
| | | | | 0 | 0 | 60 | 145 | 2380 | -145 | 0% | |
| | 2 | *A3075 Northbound (Between B3284 to Chybucca and B3285 to Perranporth)* | 116 | 116 | 56 | 176 | 150 | 2415 | -34 | -29% | Yes |
| | | | | 116 | 56 | 176 | 262 | 4315 | -146 | -126% | |
| | 3 | *A3075 Northbound (Between B3285 to Perranporth and A3075 Holywell Jct)* | 347 | 463 | 394 | 532 | 489 | 8115 | -26 | -6% | Yes |
| | | | | 463 | 394 | 532 | 500 | 8235 | -37 | -8% | |
| | | | | 463 | 394 | 532 | 548 | 9025 | -85 | -18% | |
| | | | | 463 | 394 | 532 | 641 | 10535 | -178 | -38% | |
| | 4 | *A3075 Northbound (Between A3075 Holywell Jct and A392 Rbt Newquay)* | 274 | 737 | 626 | 848 | 736 | 12035 | 1 | 0% | Yes |
| | | | | 737 | 626 | 848 | 749 | 12305 | -12 | -2% | |
| | 5 | *A3075 Northbound (Between A3075 Holywell Jct and A392 Rbt Newquay)* | 197 | 934 | 794 | 1074 | 915 | 15505 | 19 | 2% | Yes |
| | **TOTAL** | | | 934 | 794 | 1074 | 915 | 15505 | 19 | 2% | Yes |

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **A3075_SB** | 1 | *A3075 Southbound (Between A392 Rbt Junction and A3075 Holywell Jct)* | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0% | |
| | | | | 0 | 0 | 60 | 149 | 3200 | -149 | 0% | |
| | 2 | *A3075 Southbound (Between A3075 Holywell Jct and B3285 to Perranporth)* | 225 | 225 | 165 | 285 | 163 | 3470 | 62 | 27% | No |
| | | | | 225 | 165 | 285 | 256 | 4970 | -31 | -14% | |
| | | | | 225 | 165 | 285 | 344 | 6480 | -119 | -53% | |
| | | | | 225 | 165 | 285 | 392 | 7270 | -167 | -74% | |
| | 3 | *A3075 Southbound (Between B3285 to Peranporth and B3284 to Chybucca)* | 222 | 447 | 380 | 514 | 407 | 7390 | 40 | 9% | Yes |
| | | | | 447 | 380 | 514 | 626 | 11190 | -179 | -40% | |
| | 4 | *A3075 Southbound (Between B3284 to Chybucca and Chiverton)* | 362 | 809 | 688 | 930 | 736 | 13090 | 73 | 9% | Yes |
| | | | | 809 | 688 | 930 | 741 | 13125 | 68 | 8% | |
| | | | | 809 | 688 | 930 | 880 | 15465 | -71 | -9% | |
| | 5 | | 154 | 963 | 819 | 1107 | 888 | 15505 | 75 | 8% | Yes |
| | **TOTAL** | | | 963 | 819 | 1107 | 888 | 15505 | 75 | 8% | Yes |
| **A39S_SB** | 1 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0% | |
| | | | | 0 | 0 | 60 | 5 | 109 | -5 | 0% | |
| | | | | 0 | 0 | 60 | 8 | 130 | -8 | 0% | |
| | | | | 0 | 0 | 60 | 37 | 730 | -37 | 0% | |
| | | | | 0 | 0 | 60 | 108 | 1730 | -108 | 0% | |
| | | | | 0 | 0 | 60 | 141 | 2192 | -141 | 0% | |
| | 2 | | 374 | 374 | 314 | 434 | 449 | 5760 | -75 | -20% | No |
| | **TOTAL** | | | 374 | 314 | 434 | 449 | 5760 | -75 | -20% | No |
| **A39S_NB** | 1 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0% | |
| | | | | 0 | 0 | 60 | 268 | 3568 | -268 | 0% | |
| | | | | 0 | 0 | 60 | 302 | 4030 | -302 | 0% | |
| | | | | 0 | 0 | 60 | 382 | 5030 | -382 | 0% | |
| | | | | 0 | 0 | 60 | 411 | 5630 | -411 | 0% | |
| | | | | 0 | 0 | 60 | 412 | 5651 | -412 | 0% | |
| | 2 | | 394 | 394 | 334 | 454 | 420 | 5760 | -26 | -7% | Yes |
| | **TOTAL** | | | 394 | 334 | 454 | 420 | 5760 | -26 | -7% | Yes |
| **B3285_SB** | 1 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0% | |
| | | | | 0 | 0 | 60 | 137 | 2500 | -137 | 0% | |
| | | | | 0 | 0 | 60 | 188 | 3400 | -188 | 0% | |
| | 2 | | 239 | 239 | 179 | 299 | 218 | 3550 | 21 | 9% | Yes |
| | **TOTAL** | | | 239 | 179 | 299 | 218 | 3550 | 21 | 9% | Yes |
| **B3285_NB** | 1 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0% | |
| | | | | 0 | 0 | 60 | 10 | 150 | -10 | 0% | |
| | | | | 0 | 0 | 60 | 62 | 1050 | -62 | 0% | |
| | 2 | | 223 | 223 | 163 | 283 | 207 | 3550 | 16 | 7% | Yes |
| | **TOTAL** | | | 223 | 163 | 283 | 207 | 3550 | 16 | 7% | Yes |
| **B3277_NB** | 1 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0% | |
| | | | | 0 | 0 | 60 | 2 | 35 | -2 | 0% | |
| | | | | 0 | 0 | 60 | 11 | 135 | -11 | 0% | |
| | | | | 0 | 0 | 60 | 43 | 685 | -43 | 0% | |
| | | | | 0 | 0 | 60 | 157 | 2685 | -157 | 0% | |
| | 2 | | 357 | 357 | 297 | 417 | 304 | 5285 | 53 | 15% | Yes |
| | **TOTAL** | | | 357 | 297 | 417 | 304 | 5285 | 53 | 15% | Yes |

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| B3277_SB | 1 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0% | |
| | | | | 0 | 0 | 60 | 148 | 2600 | -148 | 0% | | |
| | | | | 0 | 0 | 60 | 263 | 4600 | -263 | 0% | | |
| | | | | 0 | 0 | 60 | 298 | 5150 | -298 | 0% | | |
| | | | | 0 | 0 | 60 | 303 | 5250 | -303 | 0% | | |
| | 2 | | 342 | 342 | 282 | 402 | 311 | 5285 | 31 | 9% | Yes | |
| | TOTAL | | | 342 | 282 | 402 | 311 | 5285 | 31 | 9% | Yes | |

## Annex F - Journey Time

PM Peak

| Name | TP | Description | Intervals | Obs. Time | Min Range | Max Range | Mod. Time | Distance | Diff | % | Pass? |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **A30 West of the Scheme, WB [AL3081]** | 1 | *A30 Westbound (Between A3074 Hayle and A394 Penzance)* | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0% | |
| | 2 | | 384 | 384 | 324 | 444 | 336 | 5800 | 48 | 13% | Yes |
| | **TOTAL** | | | 384 | 324 | 444 | 336 | 5800 | 48 | 13% | Yes |
| **A30 West of the Scheme, WB [AL784]** | 1 | *A30 Westbound (Between A3047 Camborne and A3074 Hayle)* | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0% | |
| | | | | 0 | 0 | 60 | 205 | 6200 | -205 | 0% | |
| | 2 | | 537 | 537 | 456 | 618 | 465 | 10700 | 72 | 13% | Yes |
| | **TOTAL** | | | 537 | 456 | 618 | 465 | 10700 | 72 | 13% | Yes |
| **A30 West of the Scheme, WB [AL1914]** | 1 | *A30 Westbound (Between A3047 Scorrier and A3047 Camborne)* | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0% | |
| | | | | 0 | 0 | 60 | 99 | 2940 | -99 | 0% | |
| | | | | 0 | 0 | 60 | 125 | 3710 | -125 | 0% | |
| | | | | 0 | 0 | 60 | 236 | 7050 | -236 | 0% | |
| | 2 | | 324 | 324 | 264 | 384 | 348 | 10453 | -24 | -7% | Yes |
| | **TOTAL** | | | 324 | 264 | 384 | 348 | 10453 | -24 | -7% | Yes |
| **A30 West of the Scheme, WB [AL1911]** | 1 | *A30 Westbound (Between A390 Chiverton Cross Rbt and A3047 Scorrier)* | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0% | |
| | | | | 0 | 0 | 60 | 100 | 2900 | -100 | 0% | |
| | 2 | | 132 | 132 | 72 | 192 | 124 | 3523 | 8 | 6% | Yes |
| | **TOTAL** | | | 132 | 72 | 192 | 124 | 3523 | 8 | 6% | Yes |
| **A30 West of the Scheme, WB Total** | **TOTAL** | | | 1377 | | | 1273 | 30476 | 104 | 8% | Yes |
| **A30 Chiverton to Carland Cross scheme, WB [AL3084]** | 1 | *A30 Westbound (Between A39 Carland Cross Rbt and A3075 Chiverton Cross Rbt)* | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0% | |
| | | | | 0 | 0 | 60 | 3 | 50 | -3 | 0% | |
| | | | | 0 | 0 | 60 | 97 | 1850 | -97 | 0% | |
| | | | | 0 | 0 | 60 | 103 | 1905 | -103 | 0% | |
| | | | | 0 | 0 | 60 | 131 | 2400 | -131 | 0% | |
| | 2 | | 148 | 148 | 88 | 208 | 148 | 2660 | 0 | 0% | Yes |
| | | | | 148 | 88 | 208 | 169 | 2960 | -21 | -14% | |
| | | | | 148 | 88 | 208 | 215 | 3695 | -67 | -45% | |
| | | | | 148 | 88 | 208 | 226 | 3807 | -78 | -53% | |
| | 3 | | 123 | 271 | 211 | 331 | 322 | 5407 | -51 | -19% | Yes |
| | | | | 271 | 211 | 331 | 344 | 5857 | -73 | -27% | |
| | | | | 271 | 211 | 331 | 357 | 6097 | -86 | -32% | |
| | | | | 271 | 211 | 331 | 368 | 6277 | -97 | -36% | |
| | | | | 271 | 211 | 331 | 427 | 7477 | -156 | -58% | |
| | | | | 271 | 211 | 331 | 434 | 7560 | -163 | -60% | |
| | 4 | | 212 | 483 | 411 | 555 | 502 | 8960 | -19 | -4% | Yes |
| | | | | 483 | 411 | 555 | 522 | 9260 | -39 | -8% | |
| | | | | 483 | 411 | 555 | 652 | 11815 | -169 | -35% | |
| | | | | 483 | 411 | 555 | 686 | 12515 | -203 | -42% | |
| | 5 | | 265 | 748 | 636 | 860 | 700 | 12635 | 48 | 6% | Yes |
| | **TOTAL** | | | 748 | 636 | 860 | 700 | 12635 | 48 | 6% | Yes |
| **A30 East of the Scheme, WB [AL802]** | 1 | *A30 Westbound (Between A3076 Mitchell and A39 Carland Cross Rbt)* | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0% | |
| | | | | 0 | 0 | 60 | 40 | 1200 | -40 | 0% | |
| | 2 | | 65 | 65 | 5 | 125 | 50 | 1400 | 15 | 23% | Yes |
| | **TOTAL** | | | 65 | 5 | 125 | 50 | 1400 | 15 | 23% | Yes |

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **A30 East of the Scheme, WB [AL1910]** | 1 | *A30 Westbound (Between A3058 Chapel Town and A3076 Mitchell)* | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0% | |
| | | | | 0 | 0 | 60 | 94 | 2800 | -94 | 0% | |
| | 2 | | 72 | 72 | 12 | 132 | 107 | 3160 | -35 | -48% | Yes |
| | **TOTAL** | | | 72 | 12 | 132 | 107 | 3160 | -35 | -48% | Yes |
| **A30 East of the Scheme, WB [AL1908]** | 1 | *A30 Westbound (Between A3058 Summercourt and A3058 Chapel Town)* | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0% | |
| | | | | 0 | 0 | 60 | 4 | 100 | -4 | 0% | |
| | 2 | | 59 | 59 | 0 | 119 | 42 | 1200 | 17 | 29% | Yes |
| | **TOTAL** | | | 59 | 0 | 119 | 42 | 1200 | 17 | 29% | Yes |
| **A30 East of the Scheme, WB [AL3088]** | 1 | *A30 Westbound (Between A39 Indian Queens and A3058 Summercourt)* | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0% | |
| | | | | 0 | 0 | 60 | 13.66 | 400 | -14 | 0% | |
| | | | | 0 | 0 | 60 | 77 | 2310 | -77 | 0% | |
| | 2 | | 132 | 132 | 72 | 192 | 160 | 4720 | -28 | -22% | Yes |
| | **TOTAL** | | | 132 | 72 | 192 | 160 | 4720 | -28 | -22% | Yes |
| **A30 East of the Scheme, WB [AL3087A]** | 1 | *A30 Westbound (Between A391 Lanivet Junction and A39 Indian Queens)* | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0% | |
| | | | | 0 | 0 | 60 | 114 | 3530 | -114 | 0% | |
| | | | | 0 | 0 | 60 | 394 | 12130 | -394 | 0% | |
| | 2 | | 381 | 381 | 321 | 441 | 402 | 12380 | -21 | -6% | Yes |
| | **TOTAL** | | | 381 | 321 | 441 | 402 | 12380 | -21 | -6% | Yes |
| **A30 East of the Scheme, WB** | 1 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0% | |
| | 2 | | 223 | 223 | 163 | 283 | 224 | 6940 | -1 | 0% | Yes |
| | **TOTAL** | | | 223 | 163 | 283 | 224 | 6940 | -1 | 0% | Yes |
| **A30 East of the Scheme, WB [AL1919]** | 1 | *A30 Westbound (Between A30 Exit Slip Bodmin and A38 Bodmin Junction)* | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0% | |
| | 2 | | 81 | 81 | 21 | 141 | 97 | 3000 | -16 | -19% | Yes |
| | **TOTAL** | | | 81 | 21 | 141 | 97 | 3000 | -16 | -19% | Yes |
| **A30 East of the Scheme, WB Total** | **TOTAL** | | | 948 | | | 1031 | 31400 | -83 | -9% | Yes |
| **A30 West of the Scheme, EB [AL3083]** | 1 | *A30 Eastbound (Between A3074 Hayle and A3047 Camborne)* | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0% | |
| | | | | 0 | 0 | 60 | 258 | 4500 | -258 | 0% | |
| | 2 | | 445 | 445 | 378 | 512 | 458 | 10700 | -13 | -3% | Yes |
| | **TOTAL** | | | 445 | 378 | 512 | 458 | 10700 | -13 | -3% | Yes |
| **A30 West of the Scheme, EB [AL1913]** | 1 | *A30 Eastbound (Between A3047 Camborne and A3047 Scorrier)* | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0% | |
| | | | | 0 | 0 | 60 | 110 | 3403 | -110 | 0% | |
| | | | | 0 | 0 | 60 | 219 | 6743 | -219 | 0% | |
| | | | | 0 | 0 | 60 | 244 | 7513 | -244 | 0% | |
| | 2 | | 316 | 316 | 256 | 376 | 343 | 10453 | -27 | -9% | Yes |
| | **TOTAL** | | | 316 | 256 | 376 | 343 | 10453 | -27 | -9% | Yes |
| **A30 West of the Scheme, EB [AL1912]** | 1 | *A30 Eastbound (Between A3047 Scorrier and A390 Chiverton Cross Rbt)* | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0% | |
| | | | | 0 | 0 | 60 | 21 | 623 | -21 | 0% | |
| | 2 | | 142 | 142 | 82 | 202 | 120 | 3523 | 22 | 15% | Yes |
| | **TOTAL** | | | 142 | 82 | 202 | 120 | 3523 | 22 | 15% | Yes |
| **A30 West of the Scheme, WB Total** | **TOTAL** | | | 903 | | | 921 | 24676 | -18 | -2% | Yes |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **A30 Chiverton to Carland Cross scheme, EB [AL3085]** | 1 | *A30 Eastbound (Between A3075 Chiverton Cross Rbt and A39 Carland Cross Rbt)* | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0% | |
| | | | | 0 | 0 | 60 | 6 | 120 | -6 | 0% | |
| | | | | 0 | 0 | 60 | 39 | 720 | -39 | 0% | |
| | | | | 0 | 0 | 60 | 169 | 3275 | -169 | 0% | |
| | 2 | | 202 | 202 | 142 | 262 | 189 | 3575 | 13 | 7% | Yes |
| | | | | 202 | 142 | 262 | 255 | 4975 | -53 | -26% | |
| | | | | 202 | 142 | 262 | 261 | 5058 | -59 | -29% | |
| | | | | 202 | 142 | 262 | 319 | 6258 | -117 | -58% | |
| | | | | 202 | 142 | 262 | 329 | 6438 | -127 | -63% | |
| | | | | 202 | 142 | 262 | 343 | 6678 | -141 | -70% | |
| | 3 | | 177 | 379 | 319 | 439 | 363 | 7128 | 16 | 4% | Yes |
| | | | | 379 | 319 | 439 | 456 | 8728 | -77 | -20% | |
| | | | | 379 | 319 | 439 | 466 | 8840 | -87 | -23% | |
| | | | | 379 | 319 | 439 | 510 | 9575 | -131 | -35% | |
| | 4 | | 155 | 534 | 454 | 614 | 530 | 9875 | 4 | 1% | Yes |
| | | | | 534 | 454 | 614 | 546 | 10135 | -12 | -2% | |
| | | | | 534 | 454 | 614 | 572 | 10630 | -38 | -7% | |
| | | | | 534 | 454 | 614 | 578 | 10685 | -44 | -8% | |
| | | | | 534 | 454 | 614 | 665 | 12485 | -131 | -25% | |
| | 5 | | 168 | 702 | 597 | 807 | 668 | 12535 | 34 | 5% | Yes |
| | **TOTAL** | | | 702 | 597 | 807 | 668 | 12535 | 34 | 5% | Yes |
| **A30 East of the Scheme, EB [AL801]** | 1 | *A30 Eastbound (Between A39 Carland Cross Rbt and A3076 Newquay Junction)* | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0% | |
| | | | | 0 | 0 | 60 | 7 | 200 | -7 | 0% | |
| | 2 | | 67 | 67 | 7 | 127 | 49 | 1400 | 18 | 26% | Yes |
| | **TOTAL** | | | 67 | 7 | 127 | 49 | 1400 | 18 | 26% | Yes |
| **A30 East of the Scheme, EB [AL1909]** | 1 | *A30 Eastbound (Between A3076 Mitchell and A3058 Chapel Town)* | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0% | |
| | | | | 0 | 0 | 60 | 12 | 360 | -12 | 0% | |
| | 2 | | 73 | 73 | 13 | 133 | 109 | 3160 | -36 | -49% | Yes |
| | **TOTAL** | | | 73 | 13 | 133 | 109 | 3160 | -36 | -49% | Yes |
| **A30 East of the Scheme, EB [AL1907]** | 1 | *A30 Eastbound (Between A3058 Chapel Town and A3058 Summercourt)* | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0% | |
| | | | | 0 | 0 | 60 | 36 | 1100 | -36 | 0% | |
| | 2 | | 62 | 62 | 2 | 122 | 40 | 1200 | 22 | 36% | Yes |
| | **TOTAL** | | | 62 | 2 | 122 | 40 | 1200 | 22 | 36% | Yes |
| **A30 East of the Scheme, EB [AL3089]** | 1 | *A30 Eastbound (Between A3058 Summercourt and A39 Indian Queens)* | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0% | |
| | | | | 0 | 0 | 60 | 80 | 2410 | -80 | 0% | |
| | | | | 0 | 0 | 60 | 145 | 4320 | -145 | 0% | |
| | 2 | | 135 | 135 | 75 | 195 | 158 | 4720 | -23 | -17% | Yes |
| | **TOTAL** | | | 135 | 75 | 195 | 158 | 4720 | -23 | -17% | Yes |
| **A30 East of the Scheme, EB [AL3086A]** | 1 | *A30 Eastbound (Between A39 Indian Queens and A391 Lanivet Junction)* | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0% | |
| | | | | 0 | 0 | 60 | 8.7 | 250 | -9 | 0% | |
| | | | | 0 | 0 | 60 | 288 | 8850 | -288 | 0% | |
| | 2 | | 377 | 377 | 317 | 437 | 402 | 12380 | -25 | -7% | Yes |
| | **TOTAL** | | | 377 | 317 | 437 | 402 | 12380 | -25 | -7% | Yes |

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **A30 East of the Scheme, EB [AL2195A]** | 1 | *A30 Eastbound (A391 Lanivet Junction and A38 Bodmin)* | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0% | |
| | 2 | | 217 | 217 | 157 | 277 | 224 | 6940 | -7 | -3% | Yes |
| | **TOTAL** | | | 217 | 157 | 277 | 224 | 6940 | -7 | -3% | Yes |
| **A30 East of the Scheme, EB [AL1918]** | 1 | *A30 Eastbound (A38 Bodmin and A30 Entry Slip Bodmin)* | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0% | |
| | 2 | | 88 | 88 | 28 | 148 | 89 | 2760 | -1 | -1% | Yes |
| | **TOTAL** | | | 88 | 28 | 148 | 89 | 2760 | -1 | -1% | Yes |
| **A30 East of the Scheme, WB Total** | | **TOTAL** | | 1019 | | | 1070 | 32560 | -51 | -5% | Yes |
| **A390_EB** | 1 | *A390 Eastbound (Between Chiverton and Threemilestone P&R)* | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0% | |
| | | | | 0 | 0 | 60 | 3 | 62 | -3 | 0% | |
| | | | | 0 | 0 | 60 | 67 | 1300 | -67 | 0% | |
| | | | | 0 | 0 | 60 | 177 | 3500 | -177 | 0% | |
| | 2 | *A390 Eastbound (Between Threemilestone P&R and Treliske Hospital)* | 181 | 181 | 121 | 241 | 198 | 3602 | -17 | -10% | Yes |
| | | | | 181 | 121 | 241 | 201 | 3622 | -20 | -11% | |
| | | | | 181 | 121 | 241 | 202 | 3672 | -21 | -12% | |
| | | | | 181 | 121 | 241 | 224 | 4337 | -43 | -24% | |
| | | | | 181 | 121 | 241 | 235 | 4547 | -54 | -30% | |
| | | | | 181 | 121 | 241 | 240 | 4707 | -59 | -33% | |
| | | | | 181 | 121 | 241 | 257 | 4752 | -76 | -42% | |
| | | | | 181 | 121 | 241 | 262 | 4787 | -81 | -45% | |
| | | | | 181 | 121 | 241 | 273 | 4867 | -92 | -51% | |
| | | | | 181 | 121 | 241 | 279 | 4957 | -98 | -54% | |
| | | | | 181 | 121 | 241 | 291 | 5117 | -110 | -61% | |
| | | | | 181 | 121 | 241 | 315 | 5417 | -134 | -74% | |
| | 3 | | 238 | 419 | 356 | 482 | 401 | 5467 | 18 | 4% | Yes |
| | | | | 419 | 356 | 482 | 484 | 5487 | -65 | -16% | |
| | | *A390 Eastbound (Between Treliske Hospital and County Hall)* | | 419 | 356 | 482 | 487 | 5507 | -68 | -16% | |
| | | | | 419 | 356 | 482 | 500 | 5642 | -81 | -19% | |
| | | | | 419 | 356 | 482 | 511 | 5742 | -92 | -22% | |
| | | | | 419 | 356 | 482 | 535 | 5992 | -116 | -28% | |
| | | | | 419 | 356 | 482 | 541 | 6052 | -122 | -29% | |
| | | | | 419 | 356 | 482 | 555 | 6111 | -136 | -33% | |
| | | | | 419 | 356 | 482 | 565 | 6179 | -146 | -35% | |
| | | | | 419 | 356 | 482 | 569 | 6189 | -150 | -36% | |
| | | | | 419 | 356 | 482 | 589 | 6384 | -170 | -41% | |
| | | | | 419 | 356 | 482 | 607 | 6569 | -188 | -45% | |
| | | | | 419 | 356 | 482 | 625 | 6754 | -206 | -49% | |
| | | | | 419 | 356 | 482 | 645 | 6875 | -226 | -54% | |
| | | | | 419 | 356 | 482 | 666 | 7025 | -247 | -59% | |
| | | | | 419 | 356 | 482 | 672 | 7085 | -253 | -60% | |
| | | | | 419 | 356 | 482 | 682 | 7190 | -263 | -63% | |
| | | | | 419 | 356 | 482 | 693 | 7250 | -274 | -65% | |
| | 4 | | 267 | 686 | 583 | 789 | 705 | 7300 | -19 | -3% | Yes |
| | **TOTAL** | | | 686 | 583 | 789 | 705 | 7300 | -19 | -3% | Yes |

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| A390_WB | 1 | *A390 Westbbound (Between County Hall and Treliske Hospital)* | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0% | |
| | | | | 0 | 0 | 60 | 19 | 50 | -19 | 0% | |
| | | | | 0 | 0 | 60 | 25 | 110 | -25 | 0% | |
| | | | | 0 | 0 | 60 | 36 | 215 | -36 | 0% | |
| | | | | 0 | 0 | 60 | 53 | 275 | -53 | 0% | |
| | | | | 0 | 0 | 60 | 80 | 425 | -80 | 0% | |
| | | | | 0 | 0 | 60 | 93 | 546 | -93 | 0% | |
| | | | | 0 | 0 | 60 | 112 | 731 | -112 | 0% | |
| | | | | 0 | 0 | 60 | 131 | 916 | -131 | 0% | |
| | | | | 0 | 0 | 60 | 161 | 1111 | -161 | 0% | |
| | | | | 0 | 0 | 60 | 166 | 1121 | -166 | 0% | |
| | | | | 0 | 0 | 60 | 171 | 1131 | -171 | 0% | |
| | | | | 0 | 0 | 60 | 187 | 1199 | -187 | 0% | |
| | | | | 0 | 0 | 60 | 193 | 1258 | -193 | 0% | |
| | | | | 0 | 0 | 60 | 199 | 1318 | -199 | 0% | |
| | | | | 0 | 0 | 60 | 224 | 1568 | -224 | 0% | |
| | | | | 0 | 0 | 60 | 235 | 1668 | -235 | 0% | |
| | 2 | *A390 Westbound (Between Treliske Hospital and Threemilestone P&R)* | 242 | 242 | 182 | 302 | 257 | 1803 | -15 | -6% | Yes |
| | | | | 242 | 182 | 302 | 258 | 1823 | -16 | -7% | |
| | | | | 242 | 182 | 302 | 260 | 1843 | -18 | -7% | |
| | | | | 242 | 182 | 302 | 266 | 1893 | -24 | -10% | |
| | | | | 242 | 182 | 302 | 288 | 2193 | -46 | -19% | |
| | | | | 242 | 182 | 302 | 300 | 2353 | -58 | -24% | |
| | | | | 242 | 182 | 302 | 307 | 2443 | -65 | -27% | |
| | | | | 242 | 182 | 302 | 342 | 2543 | -100 | -41% | |
| | | | | 242 | 182 | 302 | 347 | 2576 | -105 | -43% | |
| | | | | 242 | 182 | 302 | 353 | 2659 | -111 | -46% | |
| | | | | 242 | 182 | 302 | 378 | 2819 | -136 | -56% | |
| | | | | 242 | 182 | 302 | 386 | 3029 | -144 | -59% | |
| | | | | 242 | 182 | 302 | 408 | 3694 | -166 | -69% | |
| | | | | 242 | 182 | 302 | 410 | 3744 | -168 | -69% | |
| | 3 | *A390 Westbound (Between Threemilestone P&R and Chiverton)* | 167 | 409 | 348 | 470 | 428 | 3764 | -19 | -5% | Yes |
| | | | | 409 | 348 | 470 | 435 | 3866 | -25 | -6% | |
| | | | | 409 | 348 | 470 | 593 | 6066 | -184 | -45% | |
| | | | | 409 | 348 | 470 | 695 | 7304 | -286 | -70% | |
| | 4 | | 323 | 732 | 622 | 842 | 706 | 7366 | 26 | 4% | Yes |
| | **TOTAL** | | | 732 | 622 | 842 | 706 | 7366 | 26 | 4% | Yes |
| B3284_EB | 1 | | 0 | 0 | 0 | 60 | 2 | 30 | -2 | 0% | |
| | 2 | *B3284 Eastbound (Between Allet Common and Shortlanesend)* | 90 | 90 | 30 | 150 | 101 | 1730 | -11 | -13% | Yes |
| | | | | 90 | 30 | 150 | 179 | 3080 | -89 | -98% | |
| | 3 | *B3284 Eastbound (Between Shortlanesend and B3284 Kenwyn Hill)* | 106 | 196 | 136 | 256 | 209 | 3430 | -13 | -6% | Yes |
| | | | | 196 | 136 | 256 | 216 | 3455 | -20 | -10% | |
| | | | | 196 | 136 | 256 | 300 | 4680 | -104 | -53% | |
| | | | | 196 | 136 | 256 | 353 | 5560 | -157 | -80% | |
| | 4 | | 140 | 336 | 276 | 396 | 385 | 5830 | -49 | -15% | Yes |
| | **TOTAL** | | | 336 | 276 | 396 | 385 | 5830 | -49 | -15% | Yes |

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **B3284_WB** | 1 | *B3284 Westbound (Between B3284 Kenwyn Hill and Shortlanesend)* | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0% | |
| | | | | 0 | 0 | 60 | 25 | 270 | -25 | 0% | |
| | | | | 0 | 0 | 60 | 80 | 1150 | -80 | 0% | |
| | | | | 0 | 0 | 60 | 173 | 2375 | -173 | 0% | |
| | 2 | *B3284 Westbound (Between Shortlanesend and Allet Common)* | 156 | 156 | 96 | 216 | 177 | 2400 | -21 | -13% | Yes |
| | | | | 156 | 96 | 216 | 205 | 2750 | -49 | -31% | |
| | 3 | *B3284 Westbound (Between Allet Common and Chybucca)* | 96 | 252 | 192 | 312 | 285 | 4100 | -33 | -13% | Yes |
| | 4 | | 120 | 372 | 312 | 432 | 387 | 5800 | -15 | -4% | Yes |
| | **TOTAL** | | | 372 | 312 | 432 | 387 | 5800 | -15 | -4% | Yes |
| **A39_SB** | 1 | *A39 Southbound (Between Carland Cross and Trispen)* | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0% | |
| | | | | 0 | 0 | 60 | 41 | 1000 | -41 | 0% | |
| | | | | 0 | 0 | 60 | 52 | 1270 | -52 | 0% | |
| | | | | 0 | 0 | 60 | 74 | 1820 | -74 | 0% | |
| | | | | 0 | 0 | 60 | 97 | 2370 | -97 | 0% | |
| | 2 | | 129 | 129 | 69 | 189 | 135 | 3270 | -6 | -5% | Yes |
| | 3 | *A39 Southbound (Between Trispen and St Erme)* | 45 | 174 | 114 | 234 | 185 | 4470 | -11 | -6% | Yes |
| | | *A39 Southbound (Between St Erme and Bodmin Rd Rbt)* | | 174 | 114 | 234 | 269 | 6270 | -95 | -55% | |
| | | | | 174 | 114 | 234 | 372 | 7970 | -198 | -114% | |
| | 4 | *A39 Southbound (Between Bodmin Rd Rbt and Union Hill Junction)* | 202 | 376 | 316 | 436 | 382 | 7993 | -6 | -2% | Yes |
| | | | | 376 | 316 | 436 | 383 | 8005 | -7 | -2% | |
| | | | | 376 | 316 | 436 | 427 | 8487 | -51 | -13% | |
| | 5 | | 167 | 543 | 462 | 624 | 569 | 8785 | -26 | -5% | Yes |
| | **TOTAL** | | | 543 | 462 | 624 | 569 | 8785 | -26 | -5% | Yes |
| **A39_NB** | 1 | *A39 Northbound (Between Union Hill Junction and Bodmin Rd Rbt)* | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0% | |
| | | | | 0 | 0 | 60 | 26 | 298 | -26 | 0% | |
| | | | | 0 | 0 | 60 | 65 | 780 | -65 | 0% | |
| | 2 | *A39 Northbound (Between Bodmin Rd Rbt and St Erme)* | 67 | 67 | 7 | 127 | 79 | 792 | -12 | -18% | Yes |
| | | | | 67 | 7 | 127 | 81 | 815 | -14 | -21% | |
| | | *A39 Northbound (Between St Erme and Trispen)* | | 67 | 7 | 127 | 199 | 2515 | -132 | -198% | |
| | 3 | *A39 Northbound (Between Trispen and Carland Cross Rbt)* | 203 | 270 | 210 | 330 | 296 | 4315 | -26 | -10% | Yes |
| | 4 | | 52 | 322 | 262 | 382 | 349 | 5515 | -27 | -8% | Yes |
| | | | | 322 | 262 | 382 | 387 | 6415 | -65 | -20% | |
| | | | | 322 | 262 | 382 | 411 | 6965 | -89 | -28% | |
| | | | | 322 | 262 | 382 | 434 | 7515 | -112 | -35% | |
| | | | | 322 | 262 | 382 | 446 | 7785 | -124 | -39% | |
| | 5 | | 215 | 537 | 456 | 618 | 583 | 8785 | -46 | -9% | Yes |
| | **TOTAL** | | | 537 | 456 | 618 | 583 | 8785 | -46 | -9% | Yes |
| **A3075_NB** | 1 | *A3075 Northbound (Between Chiverton and B3284 to Chybucca)* | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0% | |
| | | | | 0 | 0 | 60 | 3 | 40 | -3 | 0% | |
| | | | | 0 | 0 | 60 | 161 | 2380 | -161 | 0% | |
| | 2 | *A3075 Northbound (Between B3284 to Chybucca and B3285 to Perranporth)* | 115 | 115 | 55 | 175 | 168 | 2415 | -53 | -46% | Yes |
| | | | | 115 | 55 | 175 | 289 | 4315 | -174 | -152% | |
| | 3 | *A3075 Northbound (Between B3285 to Perranporth and A3075 Holywell Jct)* | 339 | 454 | 386 | 522 | 534 | 8115 | -80 | -18% | No |
| | | | | 454 | 386 | 522 | 549 | 8235 | -95 | -21% | |
| | | | | 454 | 386 | 522 | 600 | 9025 | -146 | -32% | |
| | | | | 454 | 386 | 522 | 699 | 10535 | -245 | -54% | |
| | 4 | *A3075 Northbound (Between A3075 Holywell Jct and A392 Rbt Newquay)* | 215 | 669 | 569 | 769 | 804 | 12035 | -135 | -20% | No |
| | | | | 669 | 569 | 769 | 818 | 12305 | -149 | -22% | |
| | 5 | | 185 | 854 | 726 | 982 | 996 | 15505 | -142 | -17% | No |
| | **TOTAL** | | | 854 | 726 | 982 | 996 | 15505 | -142 | -17% | No |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| A3075_SB | 1 | *A3075 Southbound (Between A392 Rbt Junction and A3075 Holywell Jct)* | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0% | |
| | | | | 0 | 0 | 60 | 150 | 3200 | -150 | 0% | |
| | 2 | *A3075 Southbound (Between A3075 Holywell Jct and B3285 to Perranporth)* | 190 | 190 | 130 | 250 | 164 | 3470 | 26 | 14% | Yes |
| | | | | 190 | 130 | 250 | 258 | 4970 | -68 | -36% | |
| | | | | 190 | 130 | 250 | 346 | 6480 | -156 | -82% | |
| | | | | 190 | 130 | 250 | 394 | 7270 | -204 | -107% | |
| | 3 | *A3075 Southbound (Between B3285 to Peranporth and B3284 to Chybucca)* | 222 | 412 | 350 | 474 | 410 | 7390 | 2 | 0% | Yes |
| | | | | 412 | 350 | 474 | 631 | 11190 | -219 | -53% | |
| | 4 | *A3075 Southbound (Between B3284 to Chybucca and Chiverton)* | 357 | 769 | 654 | 884 | 743 | 13090 | 26 | 3% | Yes |
| | | | | 769 | 654 | 884 | 749 | 13125 | 20 | 3% | |
| | | | | 769 | 654 | 884 | 888 | 15465 | -119 | -15% | |
| | 5 | | 169 | 938 | 797 | 1079 | 896 | 15505 | 42 | 4% | Yes |
| | **TOTAL** | | | 938 | 797 | 1079 | 896 | 15505 | 42 | 4% | Yes |
| A39S_SB | 1 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0% | |
| | | | | 0 | 0 | 60 | 5 | 109 | -5 | 0% | |
| | | | | 0 | 0 | 60 | 8 | 130 | -8 | 0% | |
| | | | | 0 | 0 | 60 | 38 | 730 | -38 | 0% | |
| | | | | 0 | 0 | 60 | 119 | 1730 | -119 | 0% | |
| | | | | 0 | 0 | 60 | 156 | 2192 | -156 | 0% | |
| | 2 | | 428 | 428 | 364 | 492 | 530 | 5760 | -102 | -24% | No |
| | **TOTAL** | | | 428 | 364 | 492 | 530 | 5760 | -102 | -24% | No |
| A39S_NB | 1 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0% | |
| | | | | 0 | 0 | 60 | 280 | 3568 | -280 | 0% | |
| | | | | 0 | 0 | 60 | 316 | 4030 | -316 | 0% | |
| | | | | 0 | 0 | 60 | 400 | 5030 | -400 | 0% | |
| | | | | 0 | 0 | 60 | 428 | 5630 | -428 | 0% | |
| | | | | 0 | 0 | 60 | 429 | 5651 | -429 | 0% | |
| | 2 | | 396 | 396 | 336 | 456 | 438 | 5760 | -42 | -11% | Yes |
| | **TOTAL** | | | 396 | 336 | 456 | 438 | 5760 | -42 | -11% | Yes |
| B3285_SB | 1 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0% | |
| | | | | 0 | 0 | 60 | 138 | 2500 | -138 | 0% | |
| | | | | 0 | 0 | 60 | 190 | 3400 | -190 | 0% | |
| | 2 | | 231 | 231 | 171 | 291 | 227 | 3550 | 4 | 2% | Yes |
| | **TOTAL** | | | 231 | 171 | 291 | 227 | 3550 | 4 | 2% | Yes |
| B3285_NB | 1 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0% | |
| | | | | 0 | 0 | 60 | 11 | 150 | -11 | 0% | |
| | | | | 0 | 0 | 60 | 63 | 1050 | -63 | 0% | |
| | 2 | | 217 | 217 | 157 | 277 | 212 | 3550 | 5 | 2% | Yes |
| | **TOTAL** | | | 217 | 157 | 277 | 212 | 3550 | 5 | 2% | Yes |
| B3277_NB | 1 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0% | |
| | | | | 0 | 0 | 60 | 2 | 35 | -2 | 0% | |
| | | | | 0 | 0 | 60 | 11 | 135 | -11 | 0% | |
| | | | | 0 | 0 | 60 | 43 | 685 | -43 | 0% | |
| | | | | 0 | 0 | 60 | 158 | 2685 | -158 | 0% | |
| | 2 | | 358 | 358 | 298 | 418 | 306 | 5285 | 52 | 15% | Yes |
| | **TOTAL** | | | 358 | 298 | 418 | 306 | 5285 | 52 | 15% | Yes |

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| B3277_SB | 1 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0% | | |
| | | | | 0 | 0 | 60 | 148 | 2600 | -148 | 0% | | |
| | | | | 0 | 0 | 60 | 263 | 4600 | -263 | 0% | | |
| | | | | 0 | 0 | 60 | 298 | 5150 | -298 | 0% | | |
| | | | | 0 | 0 | 60 | 303 | 5250 | -303 | 0% | | |
| | 2 | | 385 | 385 | 325 | 445 | 312 | 5285 | 73 | 19% | No | |
| | TOTAL | | | 385 | 325 | 445 | 312 | 5285 | 73 | 19% | No | |

# Annex G - Matrix Estimation Changes compared to Economic Benefits

## Annex G: Matrix Estimation Changes compared to Economic Benefits

The differences as a result of matrix estimation have been compared to the economic benefits of the scheme for each sector. The sector system is shown in Figure 1 and the results for each time period are shown in Tables 1, 2 and 3.

**Figure 1 Sector System for the SWRTM comparison**

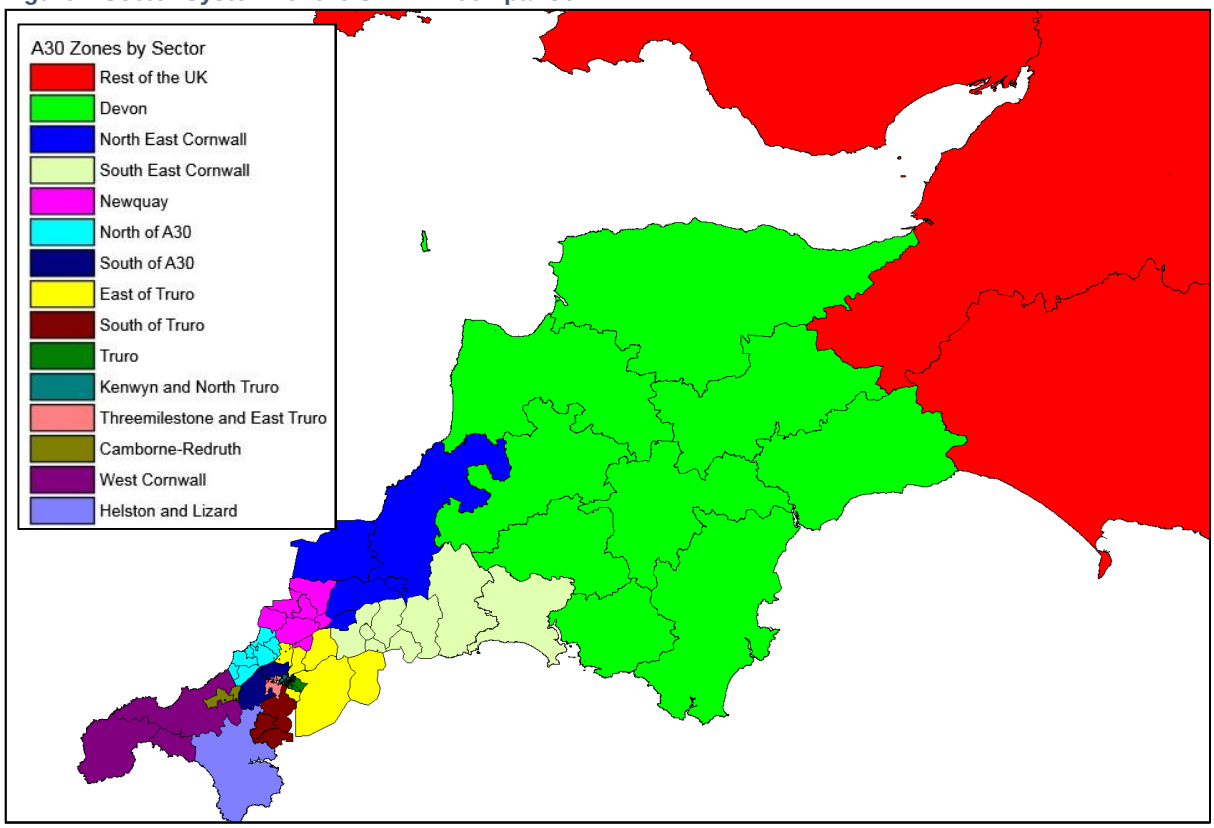



**Table 1 Comparison of the matrix estimation changes to the economic benefits by sector – AM Peak**

| Sector | ME % change | | 2023 % Benefit | | 2038 % Benefit | |
|---|---|---|---|---|---|---|
| | Origin | Destination | Origin | Destination | Origin | Destination |
| **1** | -7% | 1% | 2% | 7% | 2% | 8% |
| **2** | -1% | 7% | 5% | 8% | 5% | 9% |
| **3** | -6% | -1% | 14% | 7% | 12% | 7% |
| **4** | -14% | 12% | 9% | 7% | 10% | 8% |
| **5** | -9% | -13% | 4% | 2% | 4% | 3% |
| **6** | 11% | 1% | 5% | 3% | 6% | 3% |
| **7** | -1% | 0% | 4% | 3% | 6% | 4% |
| **8** | -5% | -13% | 8% | 15% | 9% | 16% |
| **9** | -4% | 2% | 4% | 3% | 4% | 3% |
| **10** | -4% | -18% | 9% | 13% | 9% | 10% |
| **11** | 7% | -3% | 11% | 11% | 11% | 9% |
| **12** | -8% | -5% | 1% | 1% | 1% | 1% |
| **13** | -11% | -8% | 8% | 12% | 8% | 12% |
| **14** | -7% | -11% | 13% | 6% | 10% | 6% |
| **15** | -12% | 1% | 3% | 2% | 3% | 2% |

**Table 2 Comparison of the matrix estimation changes to the economic benefits by sector – Interpeak**

| Sector | ME % change | | 2023 % Benefit | | 2038 % Benefit | |
|---|---|---|---|---|---|---|
| | Origin | Destination | Origin | Destination | Origin | Destination |
| 1 | 0% | -5% | 4% | 6% | 3% | 6% |
| 2 | 1% | -5% | 8% | 9% | 6% | 10% |
| 3 | -2% | -6% | 12% | 7% | 9% | 8% |
| 4 | 0% | 4% | 7% | 6% | 5% | 10% |
| 5 | -15% | -14% | 2% | 3% | 2% | 3% |
| 6 | -5% | -15% | 2% | 4% | 4% | 4% |
| 7 | 0% | 2% | 5% | 2% | 6% | 3% |
| 8 | -7% | -6% | 8% | 8% | 14% | 6% |
| 9 | 15% | 15% | 3% | 3% | 3% | 3% |
| 10 | 2% | 2% | 10% | 14% | 10% | 11% |
| 11 | 2% | 12% | 9% | 9% | 9% | 7% |
| 12 | -1% | -3% | 1% | 0% | 1% | 0% |
| 13 | -1% | 0% | 5% | 6% | 6% | 5% |
| 14 | -8% | -12% | 8% | 6% | 7% | 6% |
| 15 | 1% | 5% | 4% | 4% | 3% | 4% |

**Table 3 Comparison of the matrix estimation changes to the economic benefits by sector – PM Peak**

| Sector | ME % change | | 2023 % Benefit | | 2038 % Benefit | |
|---|---|---|---|---|---|---|
| | Origin | Destination | Origin | Destination | Origin | Destination |
| 1 | 7% | 18% | 3% | 3% | 2% | 3% |
| 2 | 19% | 2% | 5% | 8% | 4% | 9% |
| 3 | 3% | -5% | 9% | 14% | 7% | 15% |
| 4 | 11% | 4% | 3% | 13% | 2% | 17% |
| 5 | -14% | -7% | 3% | 10% | 2% | 8% |
| 6 | 16% | -1% | 4% | 6% | 5% | 5% |
| 7 | 0% | 4% | 8% | 5% | 10% | 4% |
| 8 | -7% | 0% | 29% | 8% | 26% | 5% |
| 9 | 32% | 12% | 3% | 3% | 3% | 3% |
| 10 | 9% | 4% | 8% | 10% | 10% | 7% |
| 11 | 3% | 18% | 7% | 10% | 8% | 8% |
| 12 | -2% | 8% | 1% | 1% | 0% | 1% |
| 13 | 10% | 6% | 15% | 6% | 16% | 6% |
| 14 | -8% | -9% | 10% | 13% | 5% | 12% |
| 15 | 0% | -2% | 5% | 3% | 5% | 2% |

The analysis shows that the matrix estimation process has not made a significant change to travel patterns, with the majority of sectors changing by less than 15% as a result of the matrix estimation process. The sectors which change by more than 15% mostly correspond with sectors where the scheme benefits are less than 5%. One exception to this is in the PM peak; in sector 11 the destination trips change by 18% and this accounts for 8% of the 2038 benefits. The other exception is sector 10 in the AM peak, where destination trips change by 18% which accounts for 10% of the benefits in 2038.

Furthermore, in the AM peak 7 out of the 8 sectors which change by between 10% and 15% correspond with sectors where the scheme benefits are less than 10%. In the interpeak all sectors which change by 10% to 15% correspond with sectors where the scheme benefits are less than 10%. In the PM peak 3 out of 4 sectors which change by between 10% and 15% correspond with sectors where the scheme benefits are less than 5%.

It can also be seen that the sector that changes the most as a result of the matrix estimation (origin trips from sector 9 change by 32% in the PM peak) only accounts for 3% of the scheme benefits.

Although some changes in the matrices as a result of the matrix estimation process are above the WebTAG threshold, these changes do not correspond to the sectors with the largest benefits.

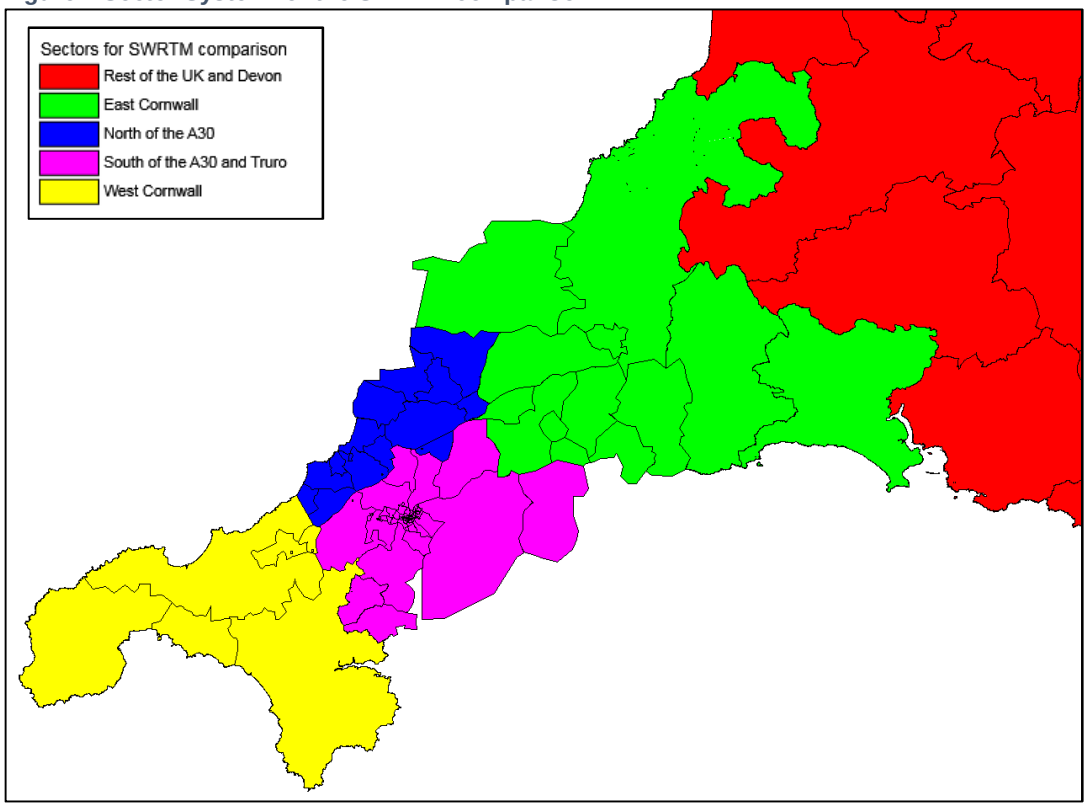
# Annex H - Matrix Zonal Demand Changes

## Annex H: Matrix Zonal Demand Changes - Validation against Independent Data

The compressed matrix data from the South West Regional Transport Model (SWRTM) was obtained from Arup Consulting. The matrices that have been provided and used for this comparison are those prior to matrix estimation being applied as part of the SWRTM calibration process.

In order to compare the two zone systems these matrices have been compressed in sectors. Due to the nature of the regional model, it has been necessary to define larger sectors for the comparison. The sector system used is shown in Figure 1.

**Figure 1 Sector System for the SWRTM comparison**




Further analysis concludes that it is not be possible to consider all the sector movements. For example, movements from Devon to the east part of Cornwall do not pass through the model study area, so these trips cannot be compared as full movements for this trips are not included in the A30 model. Therefore, only the trips that are fully modelled have been considered for the comparison. The results are shown in Table 1.

**Table 1 Comparison of the SWRTM compressed prior matrices and the Stage 3 A30 Chiverton to Carland traffic model post matrices**

| AM | Sector | 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|---|---|
| **1** | Rest of UK | | | | -35% | -36% |
| **2** | Devon / East Cornwall | | | | -10% | 21% |
| **3** | North of the A30 | | | | 8% | |
| **4** | South of the A30 and Truro | 18% | -20% | 18% | | |
| **5** | West Cornwall | -7% | -52% | | | |
| **IP** | | **1** | **2** | **3** | **4** | **5** |
| **1** | Rest of UK | | | | -25% | -1% |
| **2** | Devon / East Cornwall | | | | -5% | 51% |
| **3** | North of the A30 | | | | 36% | |
| **4** | South of the A30 and Truro | -19% | 0% | 39% | | |
| **5** | West Cornwall | 20% | 1% | | | |
| **PM** | | **1** | **2** | **3** | **4** | **5** |
| **1** | Rest of UK | | | | 6% | -7% |
| **2** | Devon / East Cornwall | | | | -11% | 29% |
| **3** | North of the A30 | | | | 19% | |
| **4** | South of the A30 and Truro | -23% | 16% | 31% | | |
| **5** | West Cornwall | -15% | 8% | | | |

The following is an extract from an email received after requesting the SWRTM matrices for use in validation of the matrices:

"Could I also please advise caution in the interpretation of any differences between RTM matrices and matrices developed for local models. The RTM models have been developed using mobile phone data which is a new methodology which may have some limitations. There are certain advantages in the use of mobile phone data, especially for such large models as the RTMs. However where local models have been developed from RSI data it is possible that these local models are able to achieve greater localised accuracy than achievable within the RTMs. Hence a difference between the two models does not automatically mean the local model should be adjusted."

The comparison between the two models does show some differences in sector movements in the two models. This is not unexpected, as the models have been constructed in different ways, and that only prior matrices from SWRTM were available for this comparison. Given the uncertainty in the SWRTM model expressed above, and the fact that the A30 model validates to WebTAG criteria, we have not made any further adjustments to our model.