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Sent: 20 June 2019 17:08

To: A30 Chiverton to Carland Cross <A30ChivertontoCarlandCross@planninginspectorate.gov.uk>

Subject: A30 Chiverton to Carland Cross Improvement Scheme

Dear Sirs,

We attach a technical note from our client's Highways Consultant.

Given the conclusions in that technical note, it is considered that the statements made on behalf of Highways England at the issue specific hearing must be revisited. In particular, the suggestion that "it is not even close" cannot be made out given the issues identified. The data included in Table 4-1 cannot be relied upon as being an accurate estimate.

Consequently the basis on which Highways England have determined to omit east facing junctions is therefore flawed and must be reviewed.

Journey times

When the inevitable alterations to the existing route are taken into account the effect on journey times is marked. In 2023, HE's figures suggest that only half of the journey types in the table would experience a noticeable decrease in journey time as a result of the scheme. With the consideration of the alterations to speed limits, the journey time improvements as a result of the scheme are limited – the benefits of the scheme would be significantly greater if the east facing junctions were provided. The new information on journey times on the existing route should be compared with Table 4-4 in document 8.17 in order to identify the benefit that east facing slips would provide.

Junction analysis

The labelling of the Chybucca West junction in Annex B of the ComMA Report (HA551502-ARP-GEN-SW_WCH-RP-TR-000001 P08 | S4 dated 06/08/18) transposes arms B and C between the diagram and the table (see below).



At this stage we have been unable to confirm with our client's highways consultant as to how this affects the validity of the traffic model. E.g. with reference to the diagram, the junction turning flows suggest that (am peak) 943 vehicles are leaving the B3284 turning right across A30 traffic, to proceed westbound on the A30. In contrast, only 1 vehicle is proceeding along the A30 eastbound.

EIA

As set out in the issues specific hearing, it is inevitable that as a result of this scheme the local highway authority will reduce the speed of traffic on the existing route. The current proposal includes 30mph zones with gateways. The scheme takes no account of this notwithstanding that the effects of this will be to result in vehicles accelerating and braking between these various sections, resulting in increased noise, vibration and air pollution. Such factors have not been taken into account notwithstanding that they are "likely significant effects" of the scheme, if not directly, then cumulatively, and they are reasonably foreseeable and quantifiable. HE suggested that the environmental impacts of east facing slips were significant, that is not accepted by our client, particularly when considered in context of the west facing slips and the scheme as a whole, however, it is clear that the effect of east facing slips has not been considered against the effect on the environment of requiring HGVs to take a route which will involve changes of speed along the existing route.

Conclusion

Without the addition of east facing slip roads the proposal will not deliver the benefits stated in the NPSNN as referred to Appendix 1 of the letter dated 21 Sep 2017, included in REP-2-35.

Yours,

Chris Tofts

Christopher Tofts

For and on behalf of Stephens Scown LLP

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MR SAM PARKER

A30 CHIVERTON TO CARLAND CROSS SCHEME

TN1 – REVIEW OF TRAFFIC MODELLING DATA

19TH JUNE 2019

1.0 Introduction

- 1.1 Connect Consultants Limited (CCL) is a firm of specialist highways, traffic and transportation planning consultants that have been instructed by Sam Parker in respect of the Examination in relation to a Development Consent Order for the A30 Chiverton to Carland Cross Scheme.
- 1.2 The proposed layout for the A30 Chybucca junction does not include east facing slip roads on to the new A30 dual carriageway; the scheme's proposers have relied upon low demand being a reason not to include east facing slip roads in the proposed layout.
- 1.3 It is our client's concern that the demand for such slip roads may have been underestimated, and that the actual demand for east facing slip roads may provide sufficient weight to include them in the design.

2.0 Review of Documents

- 2.1 CCL have been provided with copies of a suite of documents from Project Control Framework (PCF) Stage 3, all of which have informed the Transport Appraisals being presented to the Examining Authority.
- 2.2 This review will focus on the establishing of baseline conditions, as detailed in the Traffic Data Collection Report (TDCR), and the Local Model Validation Report (LMVR) for the SATURN traffic model used to inform the scheme.
- 2.3 The TDCR – document titled 'A30 Carland to Chiverton Cross, Traffic Data Collection Report, August 2017', revision 02 dated 30/08/2017, reference 'HA551502-WSP-GEN-0000-RE-TR-0012-P02'. This report details all recent data collected, including turning movement traffic counts as many junctions along the A30 corridor, surveyed in 2014 and 2015, including the A30 Chybucca junction.
- 2.4 The LMVR – document titled 'A30 Chiverton to Carland Cross, Stage 3 Local Model Validation Report, January 2018', revision 04 dated 22/01/2018, reference 'HA551502-WSP-GEN-0000-RE-TR-0013-P04'.
- 2.5 The LMVR states that the traffic model used for the scheme is based on the 2009 Truro SATURN model, which utilised traffic surveys from 2003, with two traffic surveys from 2009. The 2003 surveys were modified to reflect 2009 in the following manner: *"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."*

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- 2.6 With respect to updating the model to 2015, Section 3 of the LMVR states *“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.”*
- 2.7 In terms of which data was taken from the TDCR, the LMVR states: *“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 [Road Side Interview] sites are stated in the PCF Stage 2 LMVR (HA551502-WSP-GEN-0000-RE-TR-00003-P05).”*
- 2.8 It is unclear whether *“updated... to a 2015 base year”* means that the 2015 junction turning counts detailed in the TDCR are fully reflected in the SATURN model, although it would be a reasonable assumption that the most recent traffic counts are utilised, as presumably traffic demand (both total volumes and patterns of turning proportions) will have changed somewhat from 2003, through 2009, to 2015.
- 2.9 Nevertheless, we will compare the Manually Classified Count (MCC) data presented in the TDCR with the “Observed” flows (and “Modelled” flows) listed at junctions in the LMVR.

3.0 General Observations

- 3.1 The Chybucca junction has been surveyed and modelled as two, separate, three arm T-junctions. This means that the MCC surveys did not establish the absolute vehicular demand from B3284 to B3284 (i.e. across the A30 at Chybucca) compared with the A30 – B3284 (joining / leaving the A30 at Chybucca).
- 3.2 Assumptions can be made, but if demand on/off the A30 is the basis on which the need for east facing slip roads is being determined, then accurate data would appear to be necessary.
- 3.3 The eastern and western parts of the Chybucca junction were surveyed on different days, meaning that A30 flows between the two halves of the junction are inconsistent; it is not clear how these differences have been reconciled.

4.0 Comparison of Traffic Data

- 4.1 CCL have compared the MCC diagrams at Annex A of the TDCR, and the junction turning flows at Annex D of the LMVR.
- 4.2 The TDCR shows most recent MCC traffic count information, the “Observed” flows in the LMVR shows the target turning counts that the SATURN model is aiming for, and the “Modelled” flows in LMVR is the actual traffic assigned through the junction by the model.

Review of the AM Peak

Figure 1 – Extract from TDCR – AM Peak Hour

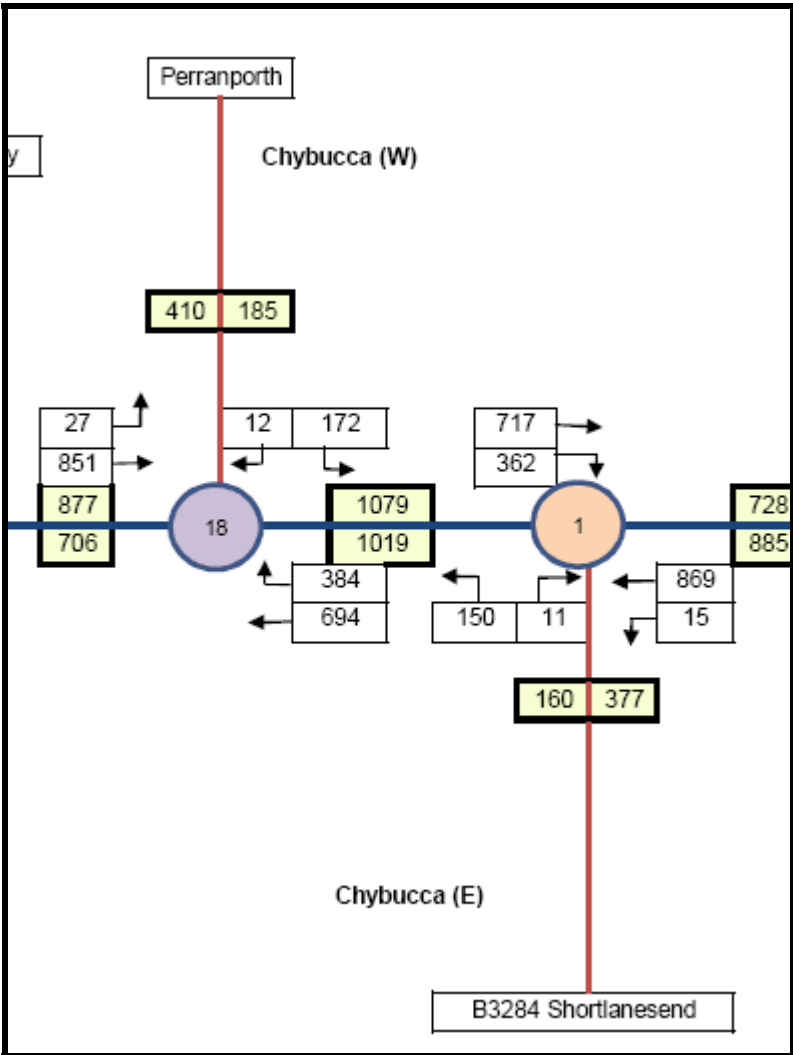
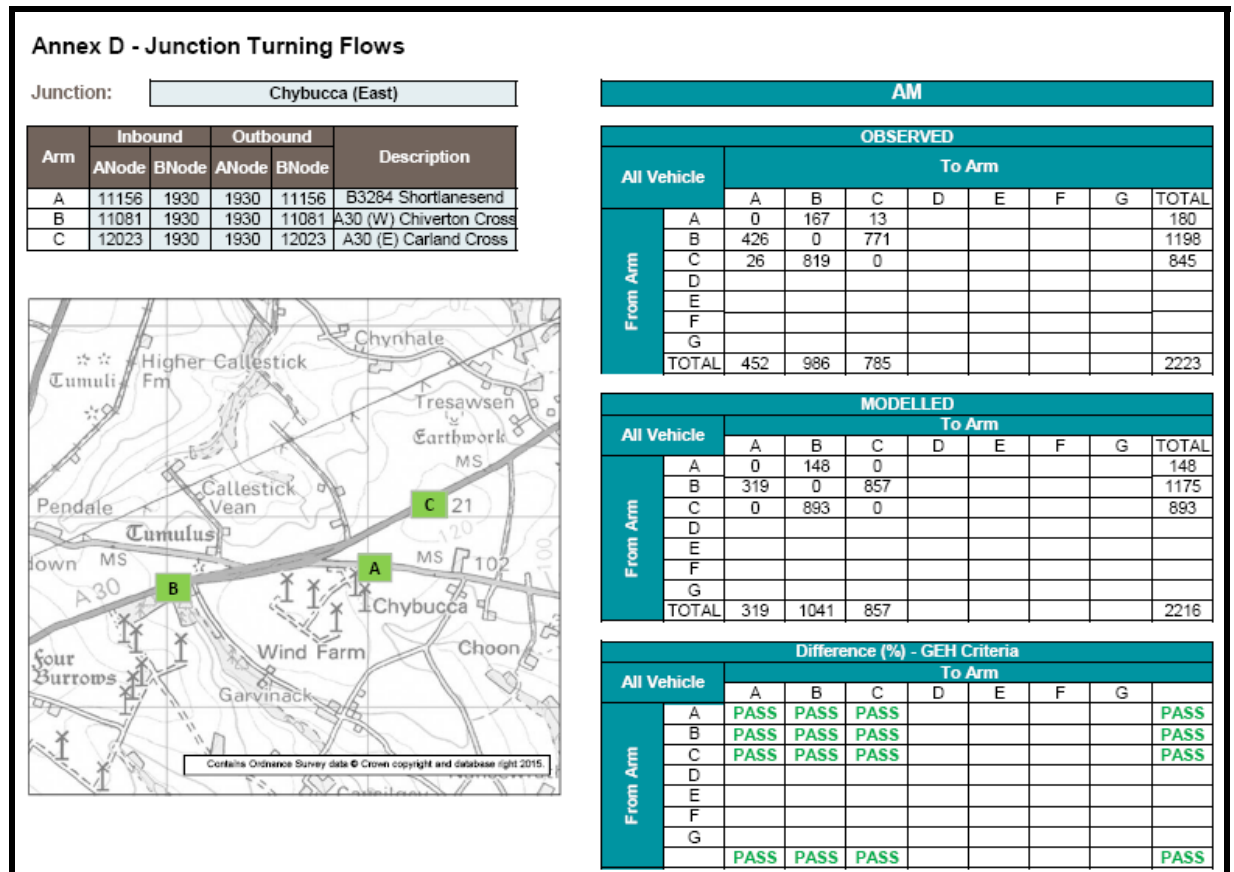
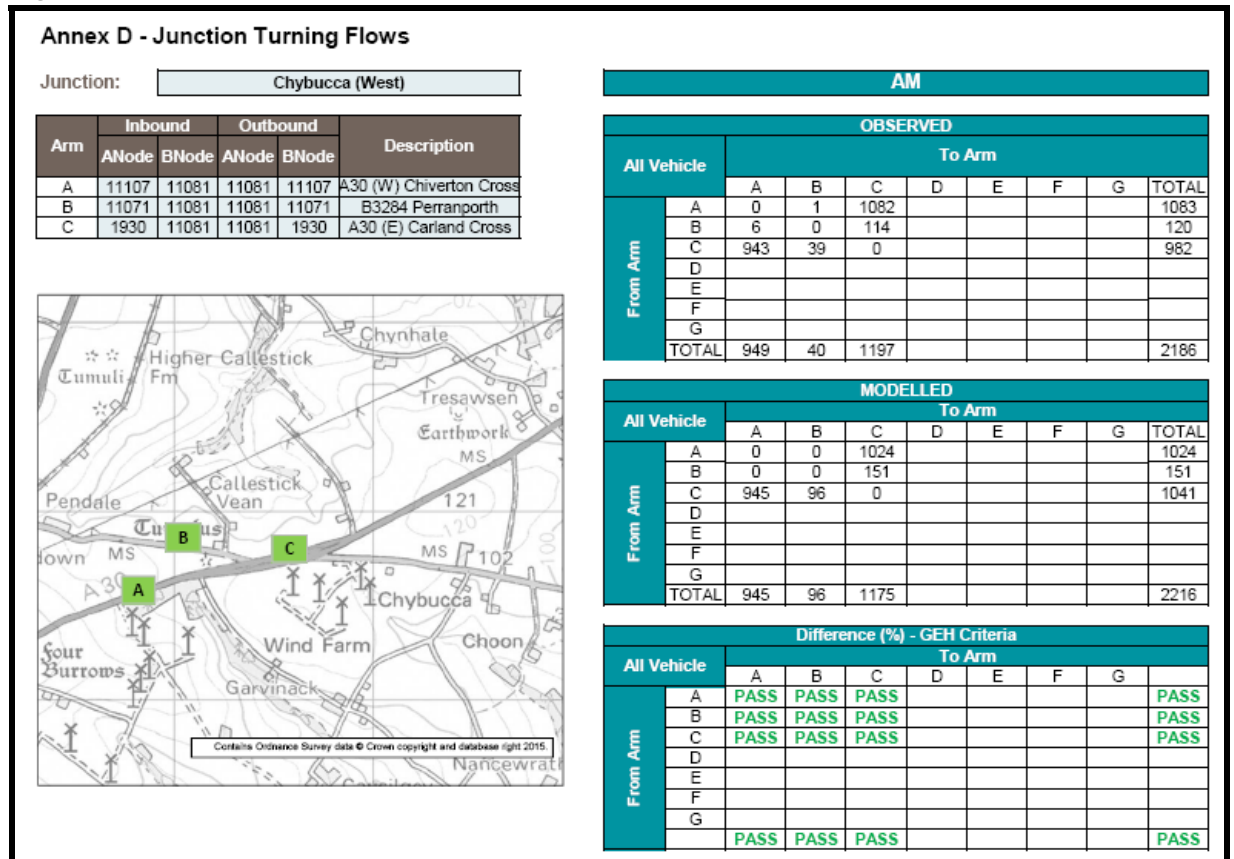


Figure 2 – Extract from LMVR – AM Peak Hour



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- 4.3 Reviewing the right turning traffic at Chybucca (W) from A30 westbound to the B3284 "Perranporth" northwest bound, the TDCR MCC data suggests 384 movements, the LMVR "Observed" (Origin Destination matrix movement C to B) shows 39 movements, and the LMVR "Modelled" shows 96 movements.
- 4.4 There is no explanation as to why the TDCR MCC and LMVR "Observed" movements differ by, in this case, a factor of 10.
- 4.5 Turning to whether this traffic is genuine A30 westbound to B3284 northwest bound, or B3284 (from Truro / Shortlanesend) to B3284 northwest bound, there is no direct survey evidence to determine the absolute number (as the two parts of the Chybucca junction have been surveyed separately).
- 4.6 It could be that the majority of B3284 (from Truro / Shortlanesend) left turn to A30 westbound are, in actuality, heading across the A30 to B3284 northwest bound. Even if this were the case that all 150 left turning vehicles (as per the TDCR MCC) also turn right towards the B3284 northwest bound "Perranporth", then there are at least 234 vehicles turning right from the A30 westbound (from the A30 east of Chybucca (E)) towards the B3284 northwest bound "Perranporth".
- 4.7 This is substantially higher than the figures which have been quoted by the highway authorities in their previous responses, and warrants further explanation and/or investigation.
- 4.8 Furthermore, comparing the "Observed" to "Modelled" flows from the LMVR extract shows that, at Chybucca (E), between the B3284 Shortlanesend and the A30 Eastbound, the "Observed" flows of 13 right turning vehicles and 26 left turning vehicles are modelled as zero in the SATURN model (Origin Destination pairs A-C and C-A respectively). In fact, all peak periods are reported as modelling zero traffic flow for this pair of movements when the TDCR MCC and LMVR "Observed" flows are all non-zero.
- 4.9 On the face of it, there are two points to be drawn from this:
- The model does not appear to reflect the most recently collected traffic turning count data in the AM Peak.
 - The most recent turning count data appears to suggest demand for east facing slip roads in the AM Peak of at least 234 vehicles turning from the A30 westbound to the B3284 towards Perranporth.

Review of the PM Peak

- 4.10 The information available for the PM Peak hour has been reviewed in a similar manner, and shows similar unexplained discrepancies.

Figure 3 – Extract from TDCR – PM Peak Hour

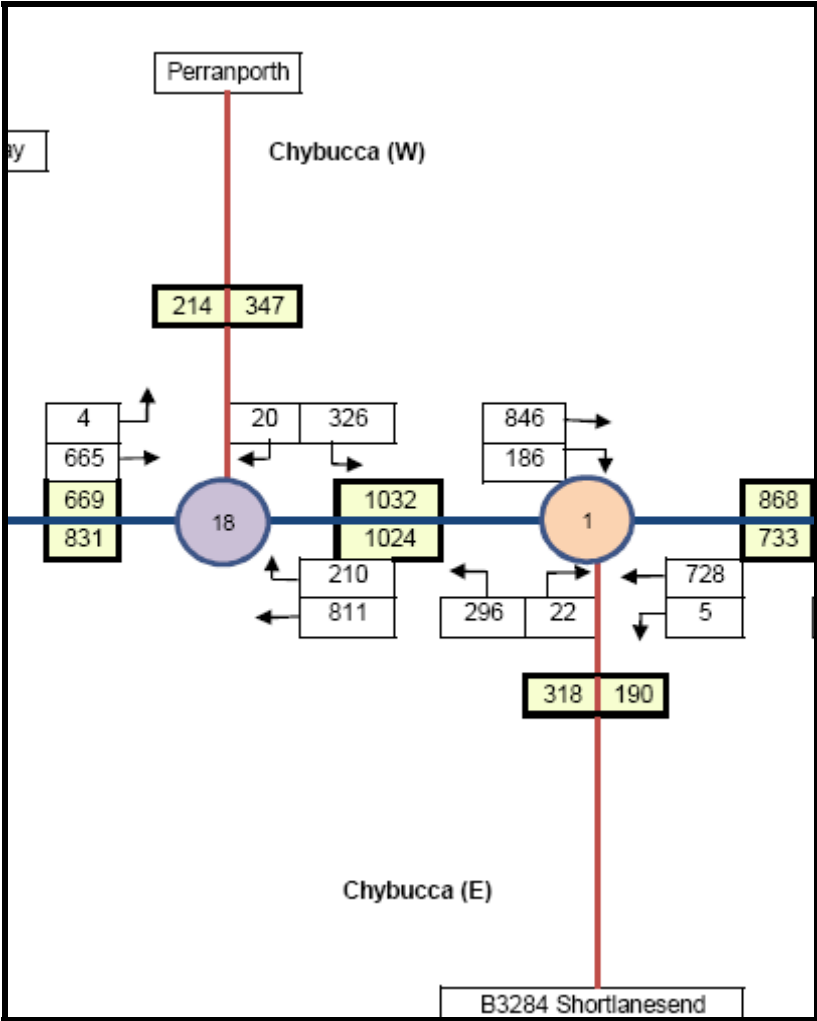
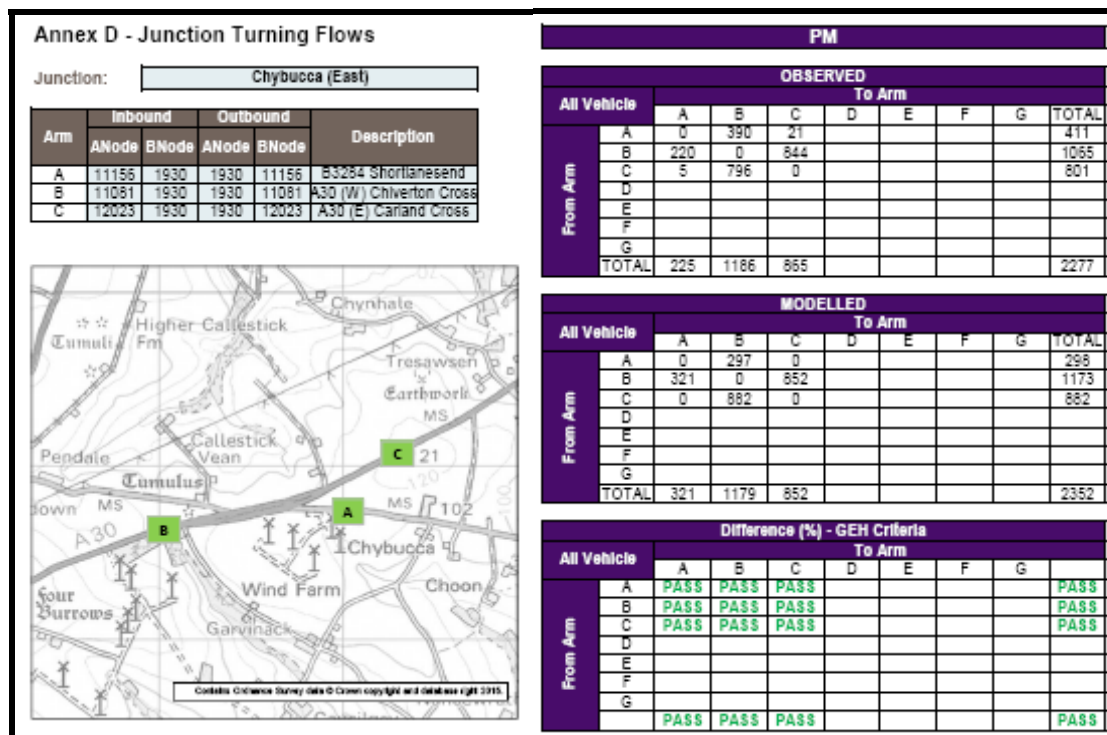
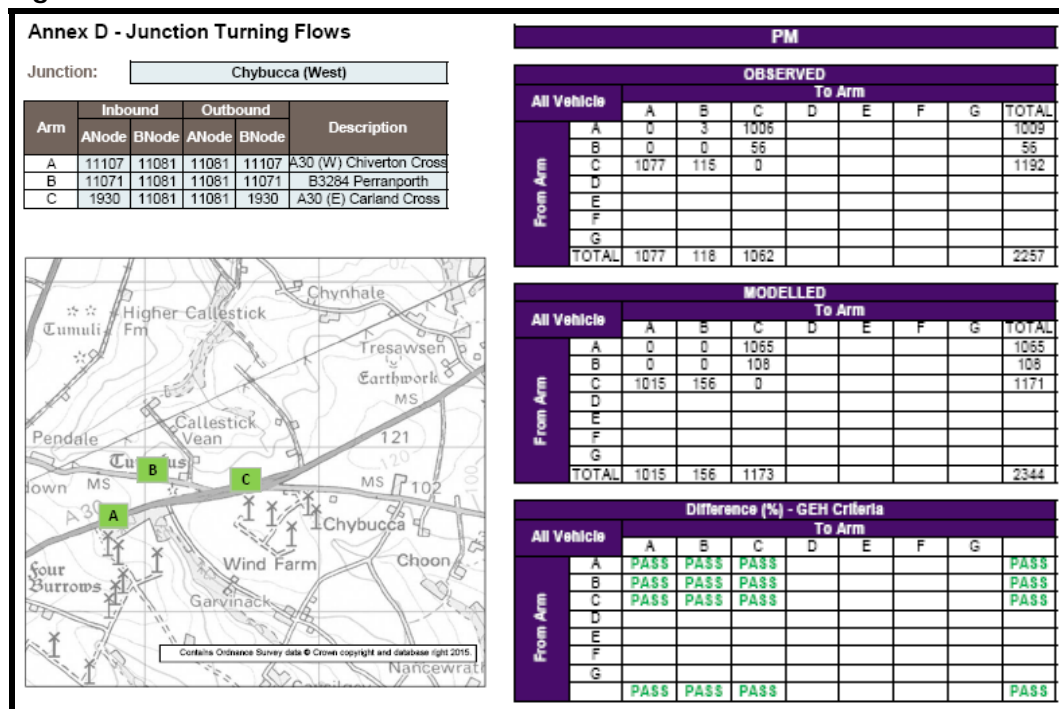


Figure 4 – Extract from LMVR – PM Peak Hour



- 4.11 Reviewing the left turning traffic at Chybuca (W) from the B3284 "Perranporth" southeast bound to the A30 eastbound, the TDCR MCC data suggests 326 movements, the LMVR "Observed" (Origin Destination matrix movement B to C) shows 56 movements, and the LMVR "Modelled" shows 108 movements.

- 4.12 There is no explanation as to why the TDCR MCC and LMVR "Observed" movements differ by, in this case, a factor of 6.
- 4.13 Turning again to whether this traffic is genuine B3284 southeast bound to A30 eastbound, or B3284 southeast bound towards B3284 (to Truro / Shortlanesend, i.e. across the A30), there is no direct survey evidence to determine the absolute number.
- 4.14 It could be that the majority of right turns from the A30 eastbound to B3284 (to Truro / Shortlanesend) are, in actuality, heading across the A30 to from the B3284 "Perranporth". Even if this were the case for all 186 right turning vehicles (at Chybucca (E), as per the TDCR MCC), then there are 140 remaining vehicles recorded to turn left from B3284 Perranporth on to the A30 eastbound.
- 4.15 This is substantially higher than the figures which have been quoted by the highway authorities in their previous responses, and warrants further explanation and/or investigation.
- 4.16 At the Chybucca (E) junction, once again the modelled vehicles between B3284 Shortlanesend and A30 to the east of Chybucca are zero, when the TDCR MCC and LMVR "Observed" flows are all non-zero.
- 4.17 On the face of it, there are two further points to be drawn from this:
- The model does not appear to reflect the most recently collected traffic turning count data in the PM Peak.
 - The most recent turning count data appears to suggest demand for east facing slip roads in the PM Peak of at least 140 vehicles turning from the B3284 from Perranporth on to the A30 eastbound.

5.0 Conclusion

- 5.1 Connect Consultants Limited have reviewed the Traffic Data Collection Report, and Local Model Validation Report which both feed in to the Transport Report which is presented to the Examining Authority.
- 5.2 Substantial unexplained discrepancies have been revealed between the most recently collected traffic count data (as detailed at Annex A of the Traffic Data Collection Report) and the "Observed" traffic counts set as target turning count flows for the SATURN model (as detailed at Annex D of the Local Model Validation Report).
- 5.3 Specifically, these relate to the volumes of traffic travelling between the A30 east of Chybucca and the B3284 northwest of Chybucca.
- 5.4 Due to the nature of surveys collected, it is not possible to determine directly the demand for on/off the A30 compared with the demand crossing the A30 at Chybucca, however based on the most recent traffic surveys, there appears to be demand for east facing slip roads at the Chybucca junction in the order of, at least, hundreds of vehicles during the peak hours in the baseline case.
- 5.5 In our view, this warrants further explanation and investigation and, possibly, inclusion of east facing slip roads at the proposed Chybucca junction.