

Technical Response Note

29 February 2024
Version 1.0
Issue



UTC Modelling Comments

UTC Comment

“Saturation flows need to be reviewed to take account of driver behaviour and carriageway utilisation.”

Fore Response

- A62 Cooper Bridge Road has been extended back to beyond the underbridge. It is considered by Fore that the extent of the model and resultant link flows on the edge of the model will not impact Degree of Saturation results.
- Site quality factor for all links has been set from ‘N/A’ to ‘Average’. Width of link 3/1 remains at 9.80m.
- The resulting changes bring the highest DoS from 105% to 109% in the weekday AM peak hour, and from 97% to 109% in the weekday PM peak hour. This is applicable to the results presented by UTC in their comments document, with the model changes applied.

UTC Comment

“Signal timing changes needed, including Phase E.”

Fore Response

- For the Cooper Bridge roundabout, for Delay: Phase E from Stage 2 to Stage 3, the gaining absolute delay has been altered from 1 second to 4 seconds.

UTC Comment

“Some discrepancies in traffic flows have been identified in the flow inputs that need checking.”

Fore Response

- The discrepancies in values between the flows presented in the O-D matrix and Paths tab is because both ‘Normal’ and ‘Bus’ O-D matrices have been inputted into the TRANSYT model.
- The ‘Normal’ flows are total vehicles minus buses, and adjusted to PCU values. The ‘Bus’ flows have been adjusted by a PCU value of 2.
- Therefore, the discrepancies identified by UTC match the flows presented in the ‘Bus’ O-D matrices.

UTC Comment

“There are also some discrepancies in the base traffic flows when they are compared to other modelling work previously undertaken by UTC. From my review of the UTC observations, it appears to be the low left turn flow in the AM period from Leeds Road towards M62 (Outbound flows from zone 1 to 2) that is the main area of concern. If you could provide your base traffic data, and check if there are any reasons for the flow discrepancies that would be helpful in the first instance. Any other count data you may have to validate the modelled flows would also be helpful.”

Fore Response

- Classified turning count traffic surveys and queue length surveys were undertaken at the Cooper Bridge roundabout and A62 Leeds Rd / A644 Huddersfield Rd junction on Wednesday 7 December 2022. Additional classified turning count surveys took place at the Yorkshire Water access, and the four access junctions to the existing John Cotton premises.
- The raw traffic survey data is provided to Kirklees Council alongside this response note.
- Base traffic flows in the TRANSYT models are in PCU values, for the weekday AM and PM peak hours with the highest total traffic flows through each junction; comprising 07:00-08:00 and 17:00-18:00, respectively, for both the Cooper Bridge roundabout and A62 Leeds Rd / A644 Huddersfield Rd junction.
- It should be noted that as the Cooper Bridge roundabout and A62 Leeds Rd / A644 Huddersfield Rd junction were surveyed separately, there are slight discrepancies in traffic flows entering / egressing the junctions. E.g. westbound flows exiting the A62 Leeds Rd / A644 Huddersfield Rd junction do not exactly match to the flows entering the Cooper Bridge roundabout from the A62 (E) arm.

- As above, the discrepancies identified by UTC within the TRANSYT model match the flows presented in the 'Bus' O-D matrices.

UTC Comment

“UTC have asked for confirmation that the flows are in PCU’s. From my check against your traffic figures, it appears that they are, but the flows didn’t appear to directly tally and need further checking.”

Fore Response

- Base flows in the TRANSYT model are in PCU values, and based on the weekday AM and PM peak hours with the highest total traffic flows through each junction; comprising 07:00-08:00 and 17:00-18:00, respectively, for both the Cooper Bridge roundabout and A62 Leeds Rd / A644 Huddersfield Rd junction.

Trip Generation and Trip Distribution

An updated version of the Trip Generation and Trip Distribution calculation spreadsheet is provided to Kirklees Council alongside this response note, with Table 1 outlining the changes made to Figures 6-25.

Regarding the point about internalisation of HGV trips, it is considered not to be feasible in the context of the planning application.



Table 1: Flow Diagram Changes

Figure	Fore Comment
6	28% of Light Vehicle trips from Huddersfield Rd (E) now turn left entry into Access A.
7	28% of Light Vehicle to Huddersfield Rd (E) now turn left on exit from Access A and U-turn around the Cooper Bridge roundabout. The 26% of trips to A62 Leeds Rd (E) and Stocks Bank Rd do the same manoeuvre, but travel on A62 Leeds Rd, instead of A644 Huddersfield Rd.
8	No Change.
9	
10	Updated flows based on changes to Figures 6 & 7.
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12	No Change.
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16	HGV trips now turn left on exit from Access A and U-turn around the Cooper Bridge roundabout, before travelling on A644 Huddersfield Rd (E) and into Access C. No scope to internalise trips. Boxes to include traffic on entry / egress of Access Z included.
17	
18	Updated flows based on changes to Figure 16. Boxes to include traffic on entry / egress of Access Z included.
19	Updated flows based on changes to Figure 17. Boxes to include traffic on entry / egress of Access Z included.
20	Updated flows based on changes to Figure 16.
21	Updated flows based on changes to Figure 17.
22	Updated flows based on traffic flow changes to Figures 10 & 20.
23	Updated flows based on traffic flow changes to Figures 11 & 21.
24	Updated flows based on traffic flow changes to Figures 10 & 20.
25	Updated flows based on traffic flow changes to Figures 11 & 21.

TRANSYT Modelling

An updated TRANSYT model is provided, based on the UTC changes presented above, and with the inclusion of 2028 Do Minimum and With Development assessment scenarios. The matrices inputted into the TRANSYT model are presented in the tabs in the back of the Master Calcs spreadsheet.

Development traffic is included within the model, however given the location and proximity to the stop-line, the exit junction on Huddersfield Road isn't explicitly included.

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