

Appendix H Summary of Traffic Changes Arising from ORR CAZ B in 2020 and 2022 (FINAL 17/05/18)

1. This note provides an updated summary of the modelled forecast changes in all day (weekday 0700-1900 and estimated AADT¹) traffic flows arising with the implementation of a Clean Air Zone covering Leeds within the Outer Ring Road and applying to HGVs only (taxis are not modelled separately within the Leeds Transport Model and buses are modelled as a fixed demand based on existing routes).
2. Since the original analysis a number of elements within the transport modelling have been refined or updated to reflect the latest information. Specifically this includes:
 - Updating traffic growth from Temprow NTEM 7.0 to 7.2
 - Use of local vehicle fleet proportions rather than national
 - Use of updated behavioural change assumptions
 - Use of an updated transport model network
 - Use of the 'car' version of the LTM
3. The principal assumptions are shown below:
 - HGV included but not cars or LGV
 - Daily charges of £100 (HGV) for non-compliant vehicles
 - No suppression of non-compliant trips
 - Assumed compliance levels (%):

Table 1

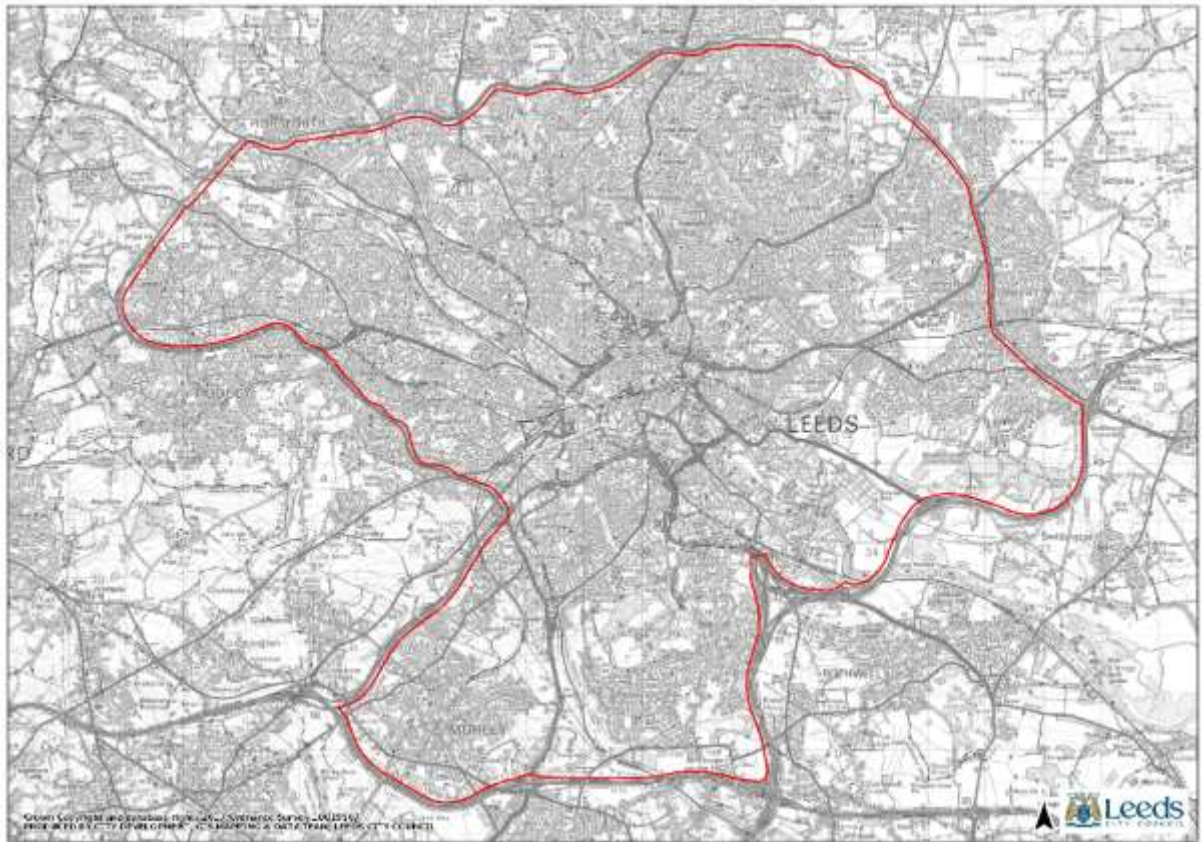
| 2020 | Car | LGV | HGV |
|-------------|-------|-------|-------|
| Within CAZ | 89.85 | 86.19 | 94.27 |
| Outside CAZ | 71.82 | 61.64 | 66.30 |

4. For the purpose of this test, the ORR has been defined as (clockwise from Colton): M1, M62, M621, A6110, A647 and A6120. See Figure 1. These roads are deemed the most appropriate diversion route for non-compliant vehicles and are therefore excluded from the CAZ.
5. The M621 between Junction 1 (A6110) and Junction 8 (M1) has been included within the CAZ. Although in practise it would not be possible to implement a CAZ on the M621, for technical reasons it has not been feasible to model this. Given that there are extremely few end to end trips on the M621 it is not considered that this will have had a material effect upon the forecasts.
6. The first section of the report considers the impacts on implementation in 2020; the second section includes a sensitivity test on the level of behavioural change; the third section examines the effect of the proposed City Centre Package (CCP) scheme which will close City Square to general traffic, reallocate highway capacity within the South Bank and provide

¹ Annual Average Daily Traffic

additional capacity at Armley Gyratory and on the M621. (The latter scheme is being delivered by Highways England.)

Figure 1 – ORR CAZ Boundary



7. Throughout this report the analysis is presented in various ways. Tables and graphs either contain direct outputs from the transport model or adjusted outputs that reflect existing traffic levels and how well the model reproduces them. The former are all labelled as Modelled the latter as Forecast. When it comes to understanding the percentage changes in traffic levels the Forecast data is regarded as being more robust. Both the Modelled and Forecast data are based on AADT estimates, with local factors applied to both traffic counts and model outputs to generate these. In addition, network plots of changes in modelled flows are also included – these are based on modelled 12 hour weekday flows.
8. Analysis of the model results indicates that there have been a few perverse outcomes, caused by the way the charges are applied in the Saturn highway model. In some locations non-compliant flows have increased within the CAZ. It is thought that these are trips that start and finish within the CAZ area, but in the DM test utilised the ORR for part of their journey. The way the charges are applied means that these trips effectively pay double to follow these routes and therefore divert to make their full journey within the CAZ. There is no apparent way to rectify this within the options available in the Saturn software.

Section 1 – Impact in 2020 On Implementation of CAZ

Review of roads with increased traffic

9. The following plots show the modelled changes in flows from a 2020 Do Minimum situation. All changes in LGV and HGV are in vehicles.
10. The impact of the ORR CAZ B has only a modest effect upon HGV traffic across Leeds. Figure 2 shows the roads where an increase of 25 or more HGV's is forecast in either direction of travel over the 12 hour weekday.
11. Roads outside the CAZ that are attracting diverted traffic include the M606 in Bradford; the M62; the A58 from Drighlington to Back La; and the A62/Town St/Gildersome La/Back La/Tong Rd route between the M62 at Gildersome and the A6110 and the Richardshaw La/Robin La/Valley Rd/Troydale La route. In addition, there are also increases on the A6120 Ring Road and the M1 to the south west of Leeds.
12. Few of these roads are affected by a greater increase than 50 LGVs (1way) - see Figure 3. This is concentrated on the M62, which is acting as a diversion route for the M621, and a section of Gildersome La.
13. Given that the A6110 is not included within the CAZ it is not clear why there is a diversion of traffic onto the Gildersome La route – and an accompanying reduction on the A6110 – see Figure 4. This may simply be a reflection of 'model noise' as small changes in delays can on occasion result in reassignment if the competing routes have very similar travel times.

Figure 2 - HGV – increase of 25 or more vehicles (12 hour)

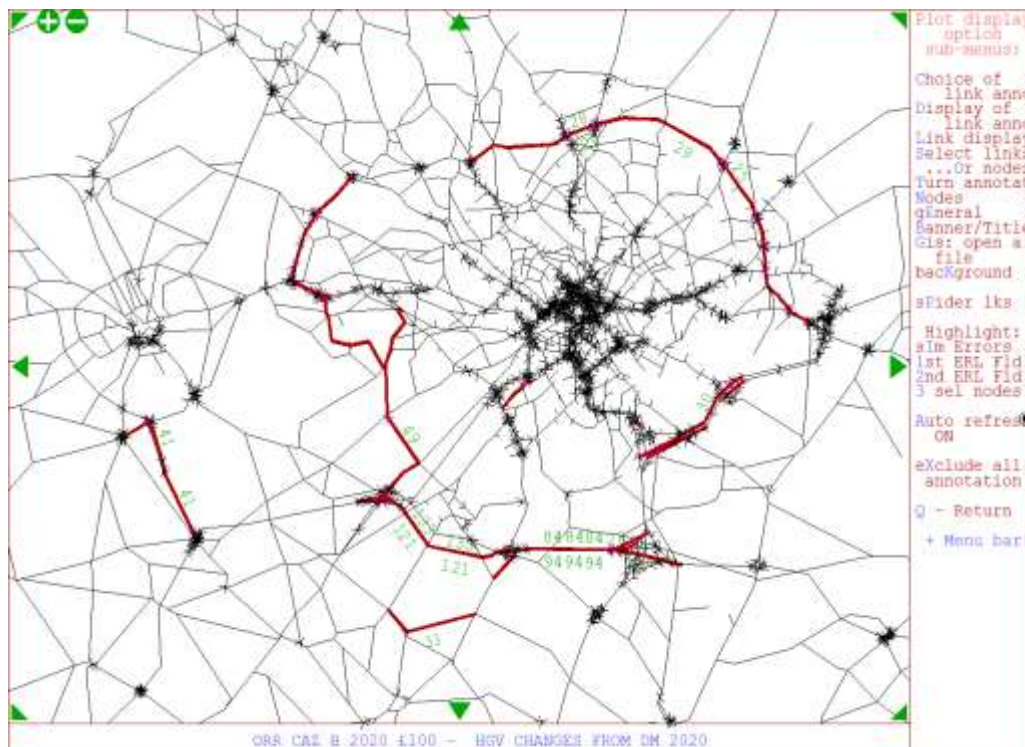


Figure 3 - HGV – increase of 50 or more vehicles (12 hour)

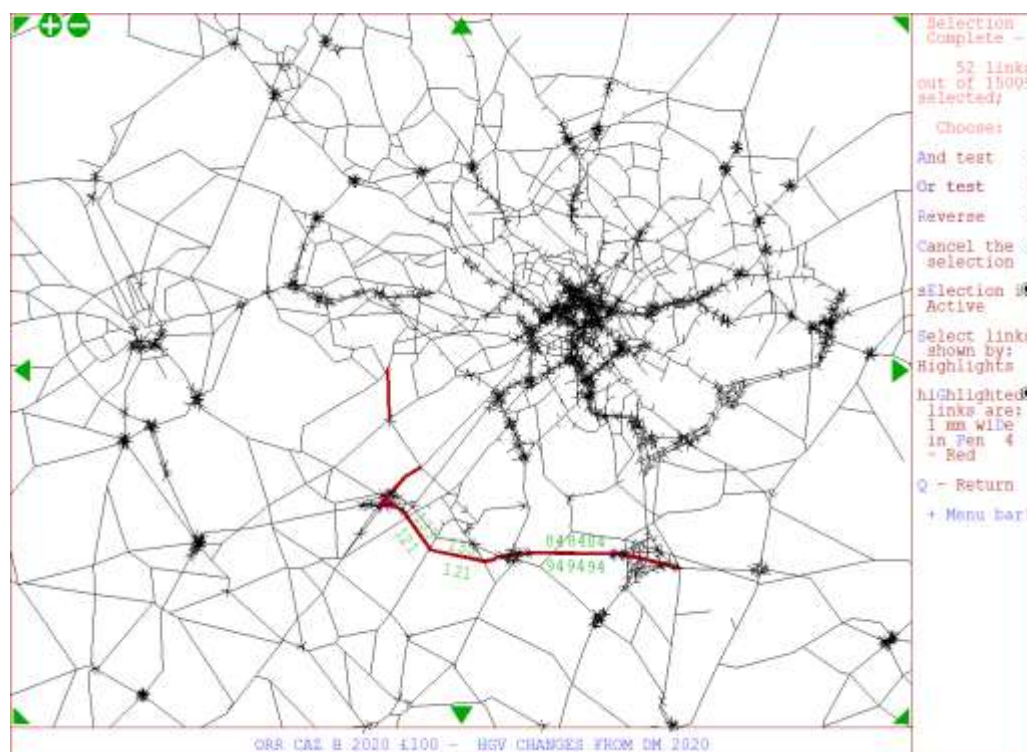
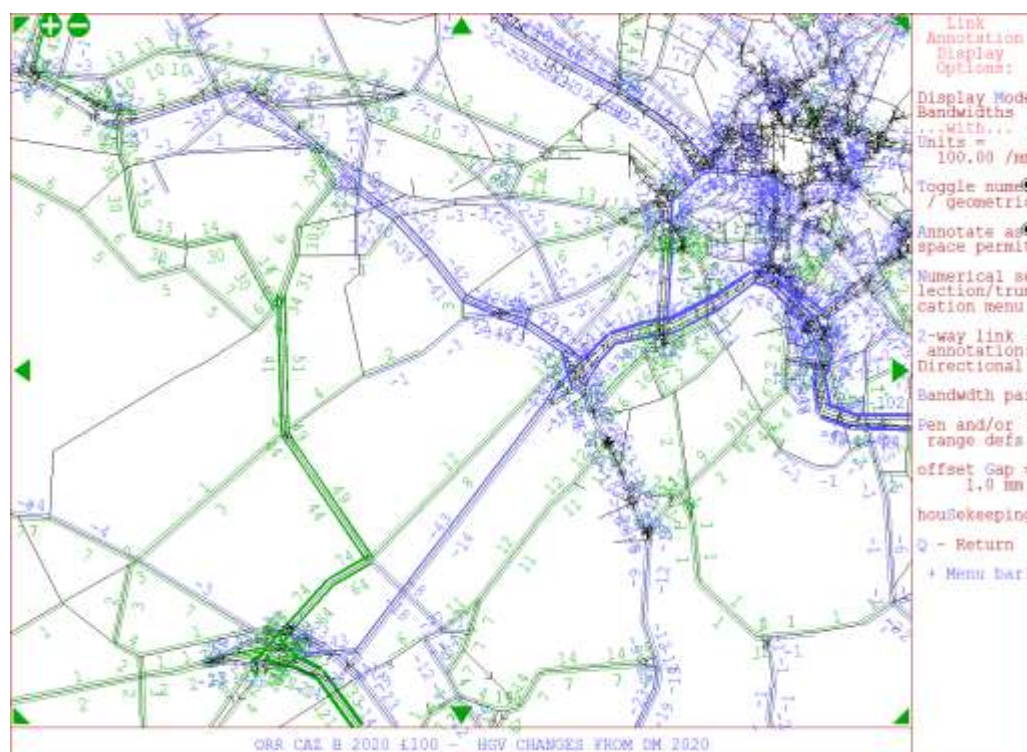


Figure 4 - HGV – changes in 12 hr weekday flows



Note: Green = increase, blue = decrease

14. Aside from an element of rerouting between the M621 and A639 to the southeast of Leeds city centre (which is unlikely to be related to the CAZ) there is no evidence of any significant reassignment of LGVs, which is as expected.

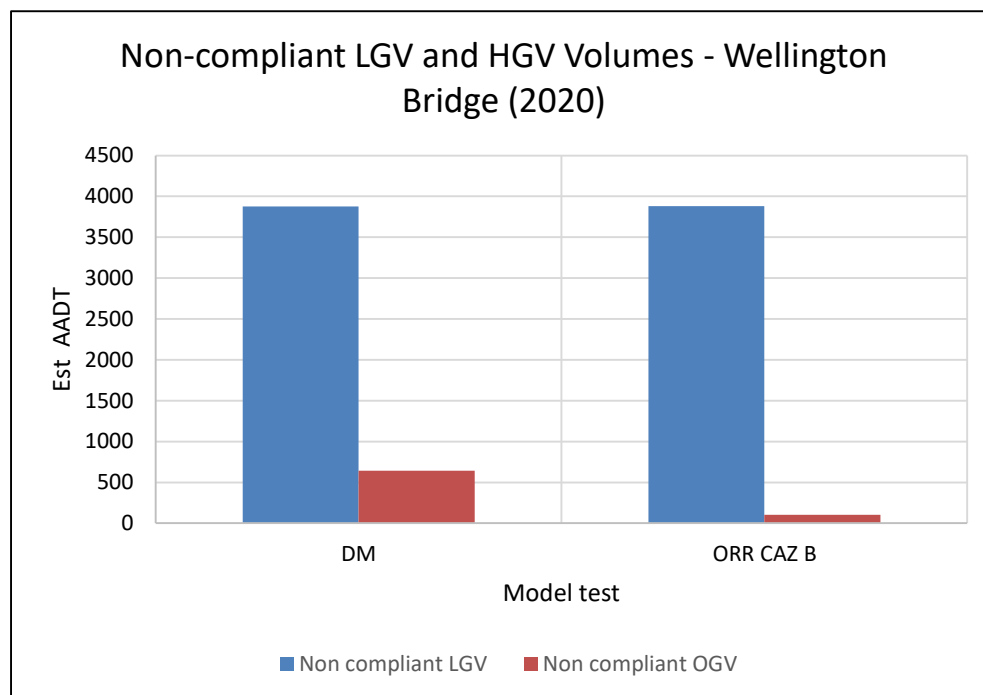
15. With regards to the routes outside Leeds District, the flow changes cannot be taken as necessarily representative as the model is not validated in this area. However, the level of change of 60 additional HGV (12 hr weekday) on the M606, is very marginal. DfT counts indicates that the HGV AADF on the M606 in 2016 was over 5,600 vehicles (2 way)².
16. It is clear, therefore, that the significant issues with displaced traffic that apply with an IRR CAZ do not apply when the boundary is extended out to the outer ring road.
17. As a comparator with the IRR CAZ C, Table 2 shows the impact of the ORR CAZ B on the minor roads to the north and west of the city centre affected by the former. This has utilised observed traffic levels together with the forecasts changes in the model to arrive at an estimated change in overall traffic arising from the ORR CAZ.

Table 2 – Forecast Change in Traffic Levels on Routes affected by an IRR CAZ C

| Road | Observed | Modelled AADT | | | Estimated 2020 AADT | | | |
|------------------|---------------|---------------|---------|----------|---------------------|----------|--------|----|
| | Est AADT 2015 | Base 2015 | DM 2020 | CAZ 2020 | DM 2020 | CAZ 2020 | Change | |
| Torre Rd | 7000 | 4072 | 4229 | 4225 | 7157 | 7153 | -4 | 0% |
| Lincoln Green Rd | 9900 | 6671 | 7388 | 7386 | 10617 | 10615 | -2 | 0% |
| Woodhouse St | 8400 | 8404 | 8706 | 8704 | 8702 | 8700 | -2 | 0% |
| Hyde Park Rd | 5800 | 8092 | 8176 | 8192 | 5884 | 5900 | 16 | 0% |
| Woodsley Rd | 5800 | 6661 | 6800 | 6817 | 5939 | 5956 | 17 | 0% |
| Canal Rd | 13100 | 18324 | 19186 | 19206 | 13962 | 13982 | 20 | 0% |
| Town St | 10300 | 12621 | 13437 | 13433 | 11116 | 11112 | -4 | 0% |
| Upper Wortley Rd | 10700 | 13389 | 13721 | 13746 | 11032 | 11057 | 25 | 0% |

18. Forecast changes in LGV and HGV flows on these roads are equally minimal – see Appendix A.
19. In contrast, the fact that traffic is not being diverted off the inner ring road onto these minor roads means that the reduction in non-compliant vehicles is significantly less and therefore the effect upon air quality is also likely to be much more limited.
20. Figure 5 shows the modelled changes in non-compliant LGV and HGV on the inner ring road at Wellington Bridge. The ORR CAZ B delivers a substantial reduction in non-compliant HGVs of around 85%. There is no real change in non-compliant LGVs.

² CP 73112 2016 AADF

Figure 5 – Modelled Levels of Non-compliant Vehicles – Leeds IRR

21. Table 3 shows the modelled changes in traffic on the Leeds routes affected by diverted traffic under the ORR CAZ B.
22. Comprehensive up to date classified counts are not available to assess the current levels of LGVs and HGVs on these routes, however, the use of a number of historic counts from 2015 has enabled a broad brush assessment of the forecast changes. The overall flow changes are very modest.
23. Overall HGV levels are forecast to rise by 32% on Gildersome La – Table 4. The increase in non-compliant vehicles is small, however, the diversion being predominantly compliant HGVs which supports the view expressed earlier that this is simply a fluctuation in the assignment (see Appendix A).

Table 3 – Forecast Change in Traffic Levels on Routes with Diverted Traffic under ORR CAZ B

| Road | Observed | Modelled AADT | | | Estimated 2020 AADT | | | |
|------------------------|---------------|---------------|---------|----------|---------------------|----------|--------|-------------|
| | Est AADT 2015 | Base 2015 | DM 2020 | CAZ 2020 | DM 2020 | CAZ 2020 | Change | %age change |
| A6120 Ring Rd Roundhay | 20320 | 18691 | 18959 | 18933 | 20588 | 20562 | -26 | 0% |
| A6120 Ring Rd Farsley | 23013 | 21846 | 22995 | 23025 | 24162 | 24192 | 30 | 0% |
| Richardshaw La | 10300 | 13631 | 13478 | 13546 | 10147 | 10215 | 68 | 1% |
| Gildersome La | 6800 | 7811 | 8511 | 8492 | 7500 | 7481 | -19 | 0% |
| Tong Rd | 11000 | 12334 | 13149 | 13128 | 11815 | 11794 | -21 | 0% |

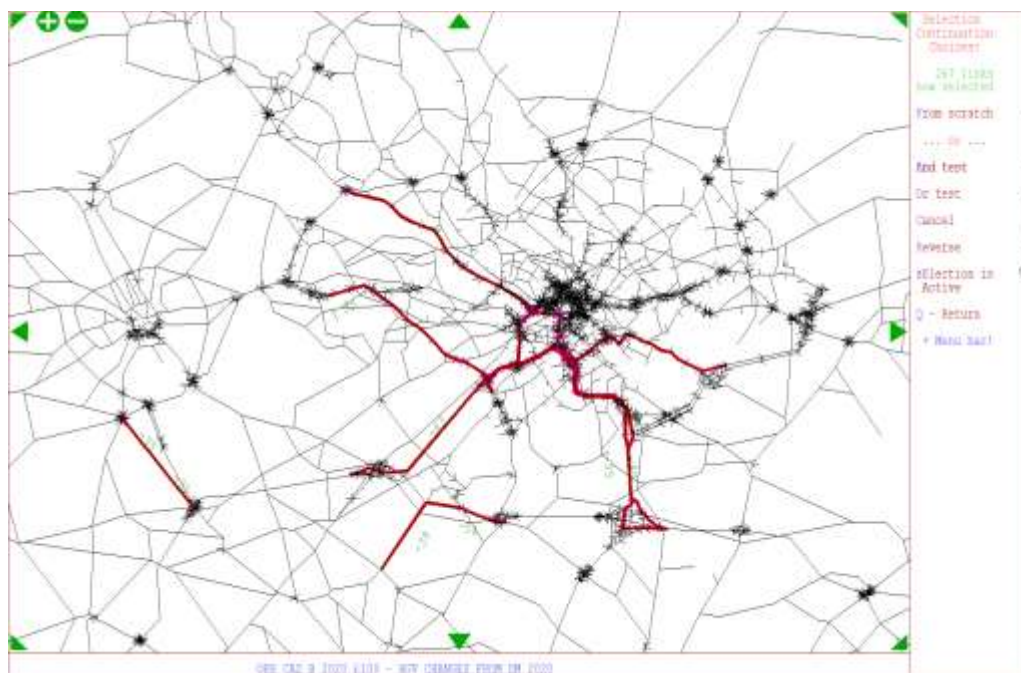
Table 4 – Forecast Change in HGVs on Routes with Diverted Traffic under ORR CAZ B

| Road | Observed | Modelled AADT | | | Estimated 2020 AADT | | | |
|------------------------|---------------|---------------|---------|----------|---------------------|----------|--------|-----|
| | Est AADT 2015 | Base 2015 | DM 2020 | CAZ 2020 | DM 2020 | CAZ 2020 | Change | |
| A6120 Ring Rd Roundhay | 564 | 436 | 564 | 616 | 692 | 744 | 52 | 8% |
| A6120 Ring Rd Farsley | 579 | 285 | 279 | 334 | 573 | 628 | 55 | 10% |
| Richardshaw La | n/a | 268 | 265 | 307 | 265 | 307 | 42 | 16% |
| Gildersome La | 250 | 282 | 296 | 381 | 264 | 349 | 85 | 32% |
| Tong Rd | 340 | 385 | 393 | 429 | 348 | 384 | 36 | 10% |

Review of roads with reduced traffic

24. Figure 6 shows the parts of the highway network where the overall volume of HGVs is forecast to fall by 25 or more vehicles per 12 hour weekday with an ORR CAZ B. The reductions cover routes where through traffic is able to divert to avoid the CAZ: the A65, A6110, Leeds IRR, M621, M1, A63 and the A650.
25. The scale of change here is relatively modest, with falls typically in the range of 40-60 HGVs, although the forecast reduction on the M621 is closer to 200 vehicles (2 way 12 hr).
26. In Bradford there is an apparent transfer of traffic between the A638 and M606 (see also Figure 2). This is probably the result of small changes in journey times within the model and is not considered a likely impact of the proposed CAZ.

Figure 6 - HGV – decrease of 25 or more vehicles (12 hour)



Conclusions

27. In summary, an ORR CAZ B would avoid the significant level of traffic re-assignment associated with an IRR CAZ, in particular there would be no diversion of non-compliant vehicles from the IRR onto unsuitable minor roads to the north and west of the city centre.
28. Outside the ORR, the model tests indicate that there would be some diversion of both compliant and non-compliant vehicles, although the volumes concerned are significantly less than with an IRR CAZ.
29. Routes affected by this reassignment include the M606 in Bradford; the M62; the A58 from Drighlington to Back La; and the A62/Town St/Gildersome La/Back La/Tong Rd route between the M62 at Gildersome and the A6110. The Leeds A6120 ring road is also forecast to attract some additional HGVs.
30. Of these, Gildersome La is forecast to attract an additional 32% HGVs, however, the increase in non-compliant vehicles is small, the diversion being predominantly compliant HGVs. It is not clear why this is being forecast, but it is likely that this is simply a fluctuation in the model assignment as the A6110 remains available for both compliant and non-compliant HGVs.

Section 2 – Impact in 2020 On Implementation of CAZ (sensitivity test)

31. A sensitivity test was undertaken to assess the impact on air quality and traffic diversion if the proportion of non-compliant HGVs being replaced fell from the assumed 83% to 66% (a 20% drop).

Review of roads with increased traffic

32. As Figures 7 and 8 demonstrate the routes attracting additional HGV traffic are very similar to the core test, comprising principally the A6120, M62 and the A62/Town St/Gildersome La/Back La/Tong Rd route between the M62 at Gildersome and the A6110 and the Richardshaw La/Robin La/Valley Rd/Troydale La route.
33. There are also several roads within the CAZ boundary that are modelled as attracting additional HGVs (Stanningley Rd, B6154 Tong Rd, the A643 and Wide La, Morley). These changes are likely to be associated with either small changes in journey times within the model or some re-routing caused by the way the charges are applied as outlines in paragraph 8. It is not considered that this is a plausible response to the CAZ.

Figure 7 - HGV – increase of 25 or more vehicles (12 hour) (Sensitivity test)

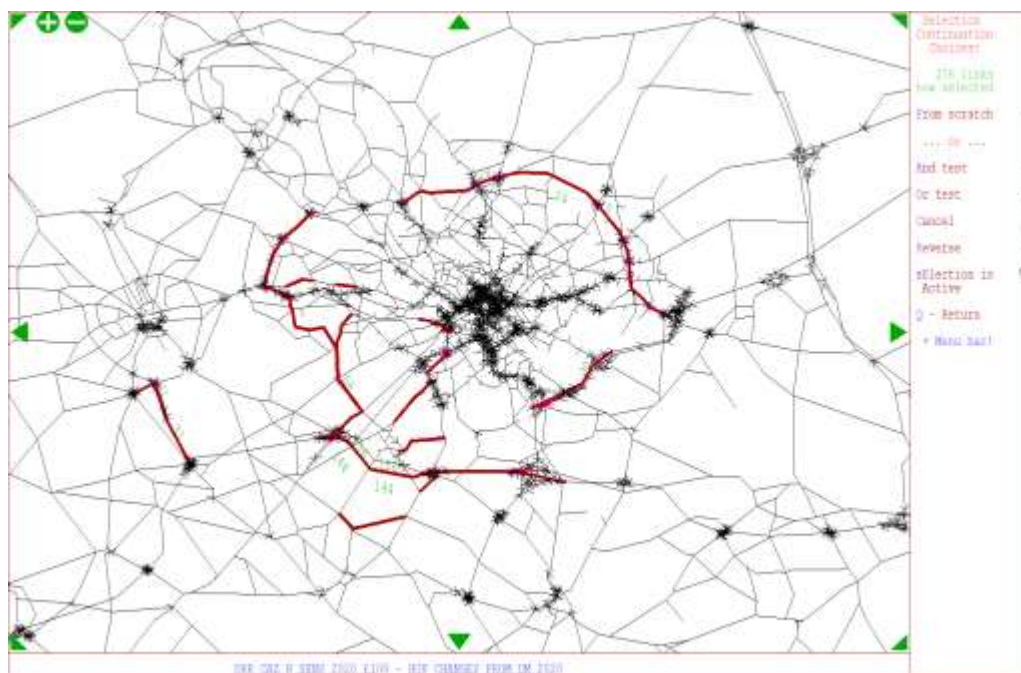


Figure 8 - HGV – increase of 50 or more vehicles (12 hour) (Sensitivity test)

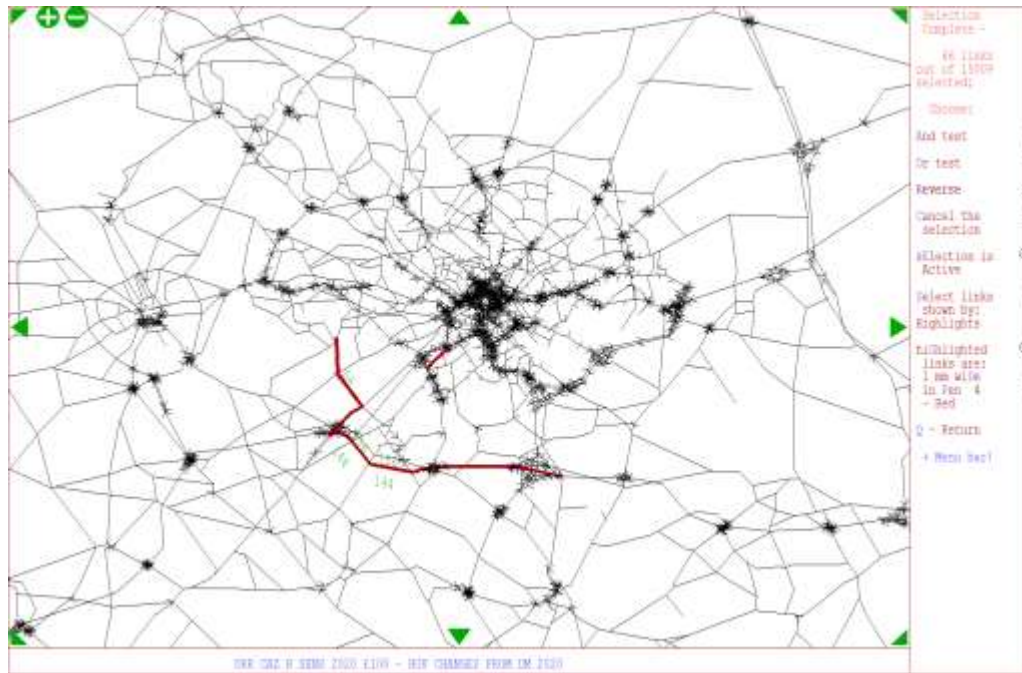
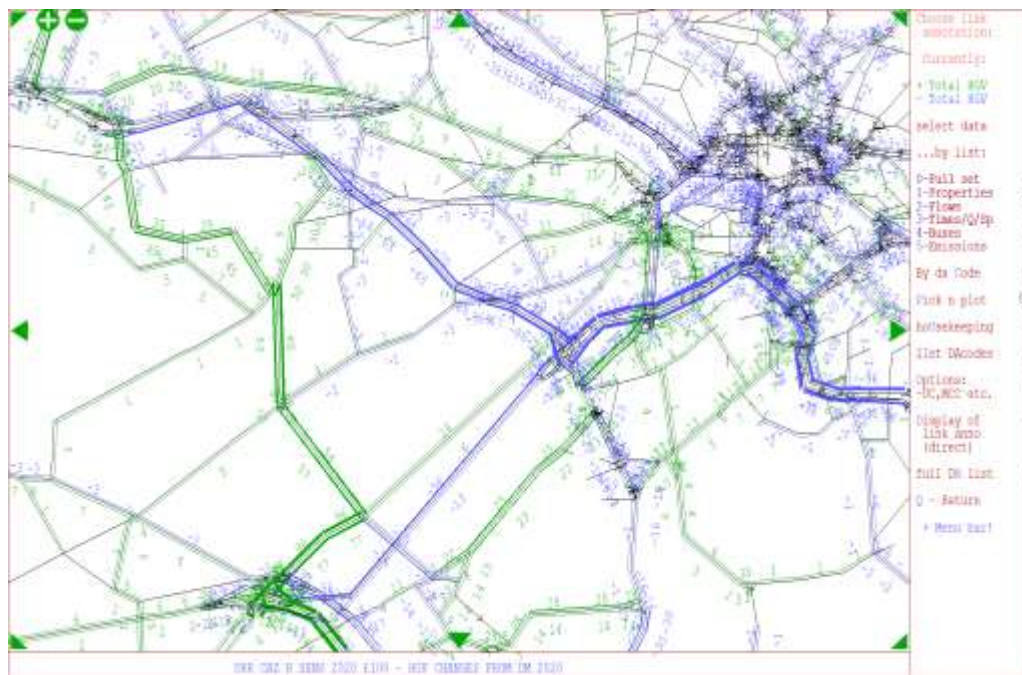


Figure 9 - HGV – changes in 12 hr weekday flows (Sensitivity test)



34. As a comparator with the IRR CAZ C, Table 5 shows the impact of the ORR CAZ B sensitivity test on the minor roads to the north and west of the city centre affected by the former. This has utilised observed traffic levels together with the forecasts changes in the model to arrive at an estimated change in overall traffic arising from the ORR CAZ.

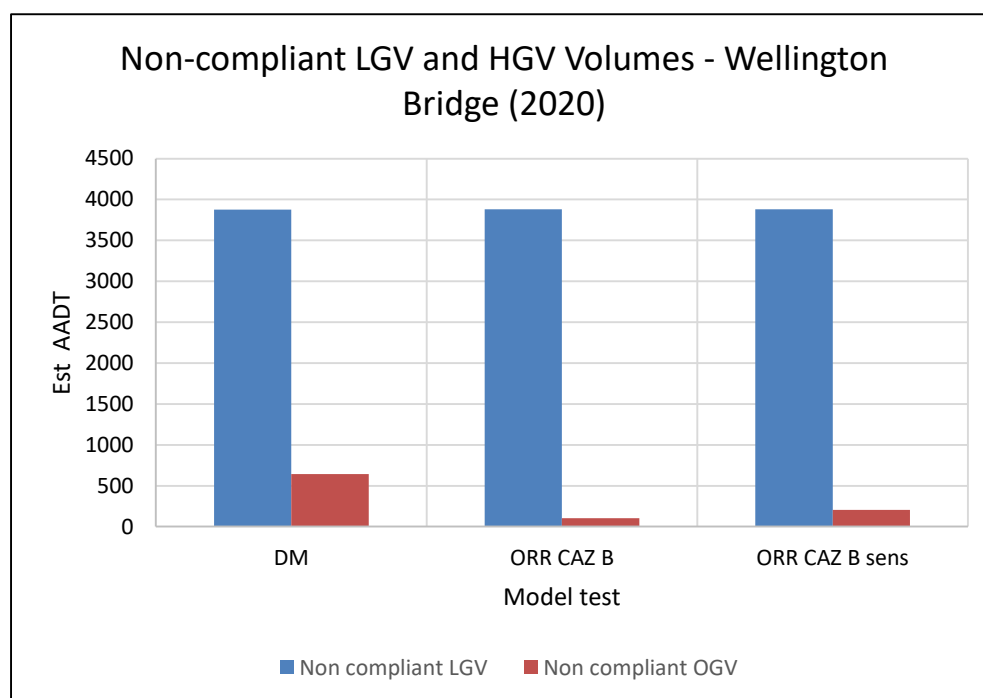
Table 5 – Forecast Change in Traffic Levels on Routes affected by an IRR CAZ C (Sensitivity test)

| Road | Observed | Modelled AADT | | | Estimated 2020 AADT | | | |
|------------------|---------------|---------------|---------|----------|---------------------|----------|--------|----|
| | Est AADT 2015 | Base 2015 | DM 2020 | CAZ 2020 | DM 2020 | CAZ 2020 | Change | |
| Torre Rd | 7000 | 4072 | 4229 | 4227 | 7157 | 7155 | -2 | 0% |
| Lincoln Green Rd | 9900 | 6671 | 7388 | 7370 | 10617 | 10599 | -18 | 0% |
| Woodhouse St | 8400 | 8404 | 8706 | 8717 | 8702 | 8713 | 11 | 0% |
| Hyde Park Rd | 5800 | 8092 | 8176 | 8194 | 5884 | 5902 | 18 | 0% |
| Woodsley Rd | 5800 | 6661 | 6800 | 6853 | 5939 | 5992 | 53 | 1% |
| Canal Rd | 13100 | 18324 | 19186 | 19212 | 13962 | 13988 | 26 | 0% |
| Town St | 10300 | 12621 | 13437 | 13432 | 11116 | 11111 | -5 | 0% |
| Upper Wortley Rd | 10700 | 13389 | 13721 | 13755 | 11032 | 11066 | 34 | 0% |

35. Forecast changes in LGV and HGV flows on these roads are equally minimal – see Appendix B.

36. In contrast, the fact that traffic is not being diverted off the inner ring road onto these minor roads means that the reduction in non-compliant vehicles is significantly less and therefore the effect upon air quality is also likely to be much more limited.

37. Figure 10 shows the modelled changes in non-compliant LGV and HGV on the inner ring road at Wellington Bridge. The ORR CAZ B delivers a substantial reduction in non-compliant HGVs of around 85%, while the reduction with the sensitivity test is a lower 68%. Unsurprisingly there is no change in non-compliant LGV levels from the Do Minimum situation.

Figure 10 – Modelled Levels of Non-compliant Vehicles – Leeds IRR (Sensitivity test)

38. Table 6 shows the modelled changes in traffic on the Leeds routes affected by diverted traffic under the ORR CAZ B sensitivity test.

39. Comprehensive up to date classified counts are not available to assess the current levels of LGVs and HGVs on these routes, however, the use of a number of historic counts from 2015

has enabled a broad brush assessment of the forecast changes. The overall flow changes are very modest.

40. Overall HGV levels are forecast to rise by 41% on Gildersome La and by 26% on Richardshaw La – Table 7. The increase in non-compliant vehicles is small on Richardshaw La, however, on Gildersome La more than half the additional HGVs are modelled as being non-compliant. As stated previously, there is no logical reason behind these increases as the existing A647/A6110 do not fall within the CAZ boundary, therefore it is considered that this is simply a fluctuation in the assignment (see Appendix B).

Table 6 – Forecast Change in Traffic Levels on Routes with Diverted Traffic under ORR CAZ B (Sensitivity test)

| Road | Observed | Modelled AADT | | | Estimated 2020 AADT | | | |
|------------------------|---------------|---------------|---------|----------|---------------------|----------|--------|----|
| | Est AADT 2015 | Base 2015 | DM 2020 | CAZ 2020 | DM 2020 | CAZ 2020 | Change | |
| A6120 Ring Rd Roundhay | 20320 | 18691 | 18959 | 18904 | 20588 | 20533 | -55 | 0% |
| A6120 Ring Rd Farsley | 23013 | 21846 | 22995 | 23024 | 24162 | 24191 | 29 | 0% |
| Richardshaw La | 10300 | 13631 | 13478 | 13577 | 10147 | 10246 | 99 | 1% |
| Gildersome La | 6800 | 7811 | 8511 | 8505 | 7500 | 7494 | -6 | 0% |
| Tong Rd | 11000 | 12334 | 13149 | 13120 | 11815 | 11786 | -29 | 0% |

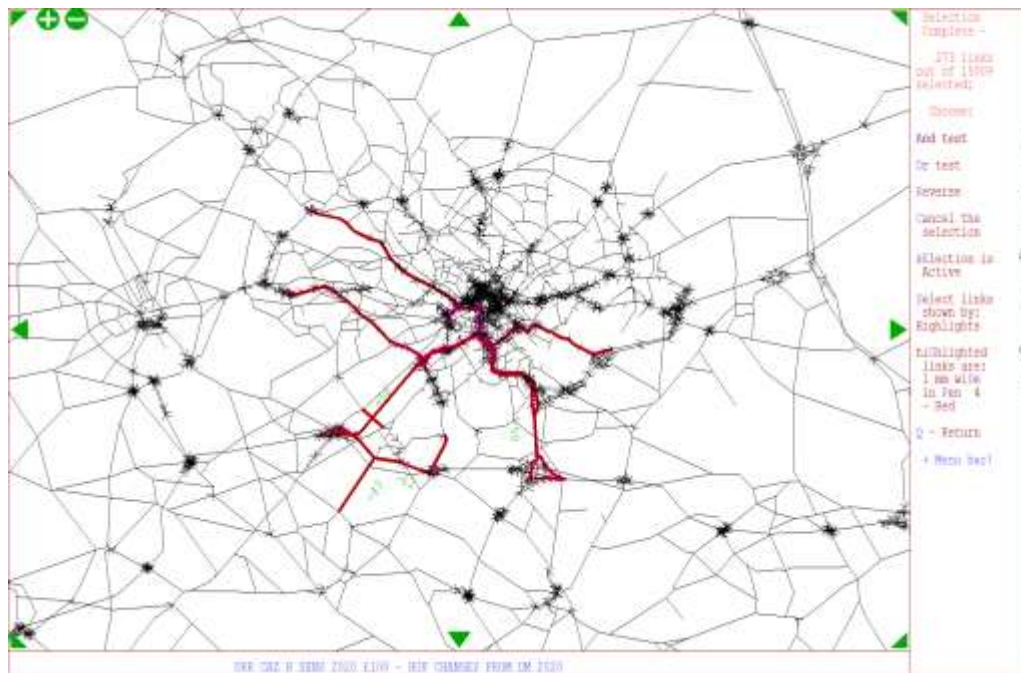
Table 7 – Forecast Change in HGVs on Routes with Diverted Traffic under ORR CAZ B (Sensitivity test)

| Road | Observed | Modelled AADT | | | Estimated 2020 AADT | | | |
|------------------------|---------------|---------------|---------|----------|---------------------|----------|--------|-----|
| | Est AADT 2015 | Base 2015 | DM 2020 | CAZ 2020 | DM 2020 | CAZ 2020 | Change | |
| A6120 Ring Rd Roundhay | 564 | 436 | 564 | 615 | 692 | 743 | 51 | 7% |
| A6120 Ring Rd Farsley | 579 | 285 | 279 | 339 | 573 | 633 | 60 | 10% |
| Richardshaw La | n/a | 268 | 265 | 334 | 265 | 334 | 69 | 26% |
| Gildersome La | 250 | 282 | 296 | 403 | 264 | 371 | 107 | 41% |
| Tong Rd | 340 | 385 | 393 | 425 | 348 | 380 | 32 | 9% |

Review of roads with reduced traffic

41. Figure 11 shows the parts of the highway network where the overall volume of HGVs is forecast to fall by 25 or more vehicles per 12 hour weekday with an ORR CAZ B (sensitivity test). The reductions cover routes where through traffic is able to divert to avoid the CAZ: the A65, A6110, Leeds IRR, M621, M1, A63 and the A650.
42. The scale of change here is relatively modest, with falls typically in the range of 75-150 HGVs, although the forecast reduction on the M621 is closer to 250 vehicles (2 way 12 hr).

Figure 11 - HGV – Decrease of 25 or more vehicles (12 hour) (Sensitivity test)



Conclusions

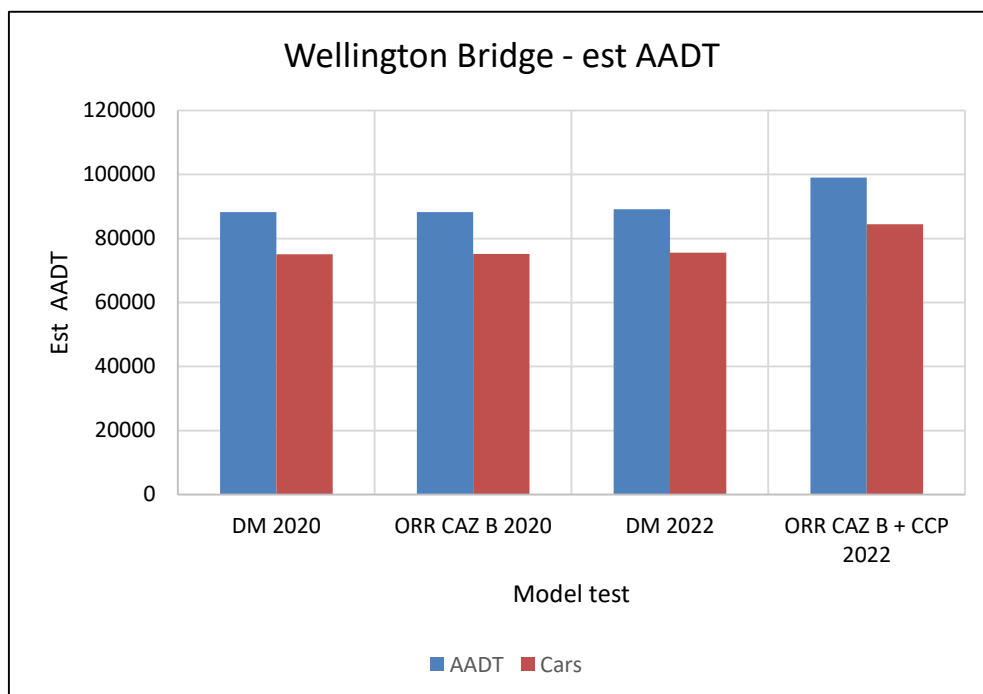
43. In summary, the sensitivity test for the ORR CAZ B results in similar changes to the core test although the forecast level of diverted traffic is slightly greater.
44. Outside the ORR, the model tests indicate that there would be some diversion of both compliant and non-compliant vehicles.
45. Routes affected by this reassignment include the M606 in Bradford; the M62; the A58 from Drighlington to Back La; the A62/Town St/Gildersome La/Back La/Tong Rd route between the M62 at Gildersome and the A6110; and the Richardshaw La/Robin La/Valley Rd/Troydale La route. The Leeds A6120 ring road is also forecast to attract some additional HGVs.
46. Of these, Gildersome La is forecast to attract an additional 41% HGVs and Richardshaw La 26%. It is not clear why this is being forecast, but it is likely that this is simply a fluctuation in the model assignment as the A6110 and A647 remain available for both compliant and non-compliant HGVs.

Section 3 – Impact in 2022 On Completion of City Centre Package

Review of roads with increased traffic

47. The CCP is designed to reduce the level of through traffic within the city centre. This is achieved through a combination of road closures and roadspace reallocation and the provision of additional circulatory capacity on the IRR and M621.
48. In particular the CCP increases traffic levels on the western IRR, the section where air quality is of most concern. Figure 12 shows the modelled changes in overall traffic on A58 Wellington Bridge in 2020 and 2022.
49. The introduction of the CAZ in 2020 results in a marginal change in total traffic. The combination of the CAZ with the CCP, however, increases traffic volumes by 12% compared with the 2020 DM (modelled flows).

Figure 12 – Wellington Bridge Modelled Traffic Changes 2020 and 2022 (AADT)



50. The impact upon non-compliant HGVs remains significant with levels falling by almost 90% from the 2020 DM situation, however, there is no forecast displacement onto the minor road network north and west of the city centre.
51. The overall levels of non-compliant LGVs and HGVs on Wellington Bridge are modelled to be 4% and 32% lower respectively in 2022 (with the ORR CAZ B and CCP) than with the ORR CAZ B in 2020 – see Figures 13 and 14.

Figure 13 – Wellington Bridge Modelled LGV/HGV Traffic Changes 2020 and 2022 (AADT)

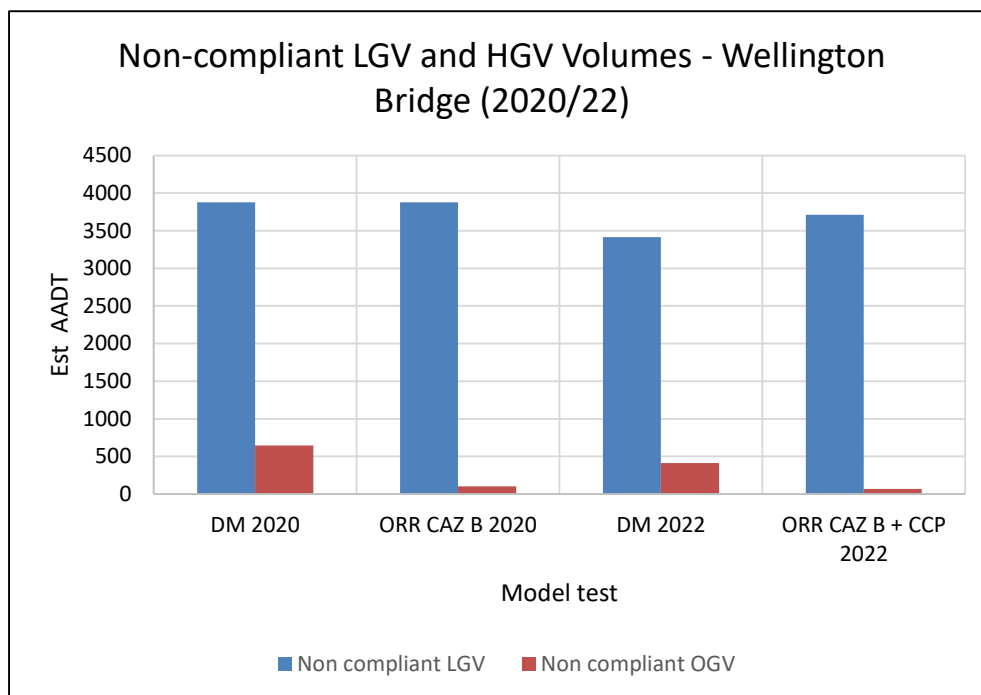
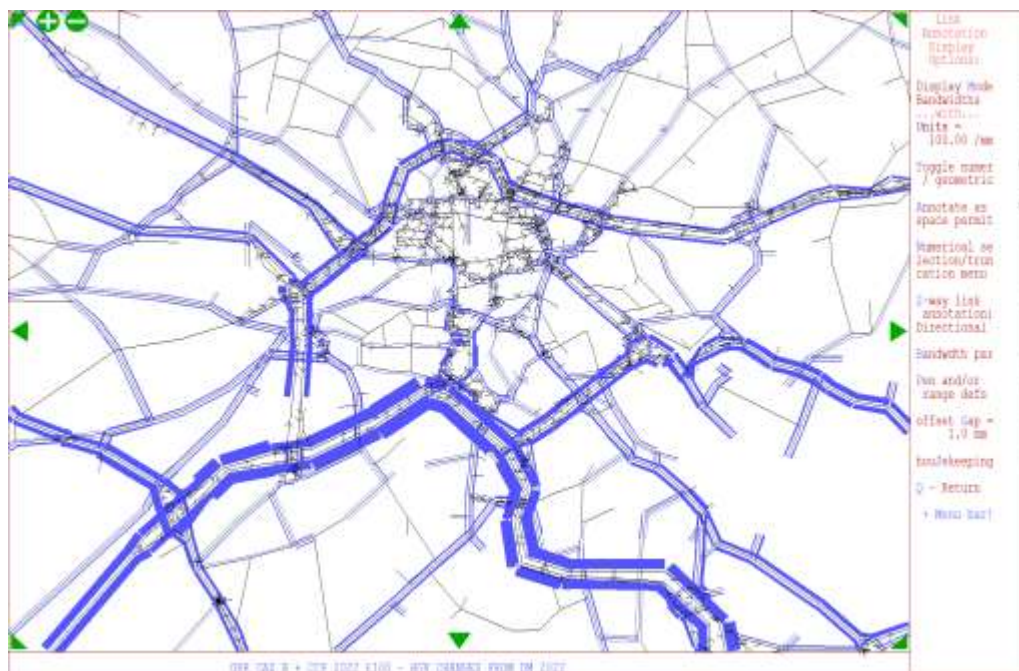


Figure 14 – Non-compliant HGV changes (12 hour) 2022



Note: Green = increase, blue = decrease

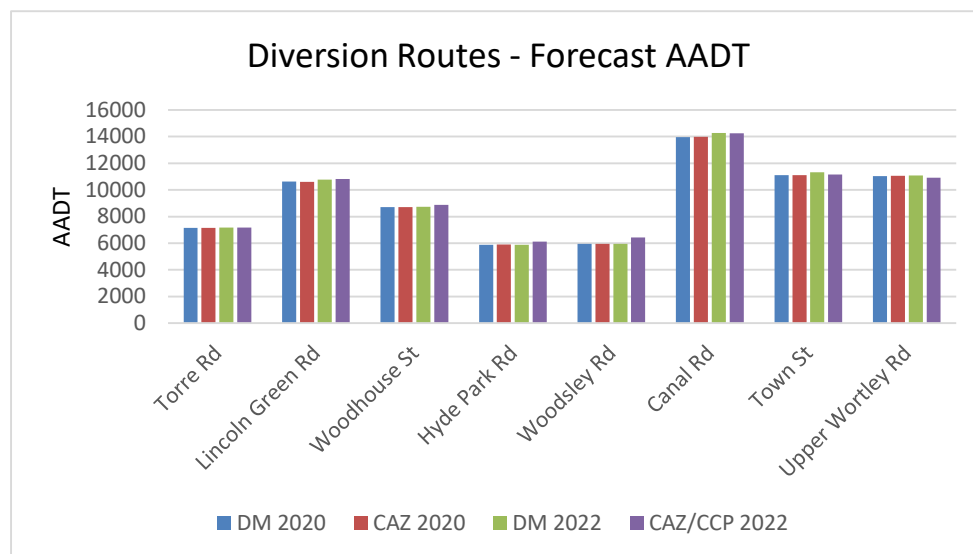
52. The section of the IRR most affected by additional traffic is A643 Ingram Distributor, where volumes are forecast to increase by 38% compared with the 2022 DM – see Table 8.

Table 8 – Forecast Change in Traffic Levels on Leeds IRR/M621 (2022)

| Road | Observed | Modelled AADT | | | Estimated 2022 AADT | | Change | %age change |
|----------------------|---------------|---------------|---------|----------|---------------------|----------|--------|-------------|
| | Est AADT 2015 | Base 2015 | DM 2022 | CAZ 2022 | DM 2022 | CAZ 2022 | | |
| IRR Lovell Park Br | 44200 | 44122 | 49959 | 55848 | 50037 | 55926 | 5889 | 12% |
| IRR Woodhouse tunnel | 71000 | 70067 | 74944 | 81995 | 75877 | 82928 | 7051 | 9% |
| IRR Wellington Br | 86700 | 85627 | 89174 | 99086 | 90247 | 100159 | 9912 | 11% |
| A643 Ingram | 53300 | 54434 | 58301 | 79861 | 57167 | 78727 | 21560 | 38% |
| M621 Jn 2 - 2a | 70000 | 69108 | 76340 | 86067 | 77232 | 86959 | 9727 | 13% |
| M621 Jn 2a - 3 | n/a | 84041 | 92267 | 94989 | 92267 | 94989 | 2722 | 3% |
| M621 Jn 3 - 4 | 69100 | 67401 | 75463 | 70120 | 77162 | 71819 | -5343 | -7% |
| John Smeaton Viaduct | 30100 | 32488 | 35539 | 38236 | 33151 | 35848 | 2697 | 8% |
| IRR East Street | 28700 | 29468 | 33319 | 38383 | 32551 | 37615 | 5064 | 16% |
| B6154 Wellington Rd | 18000 | 12961 | 13759 | 18620 | 18798 | 23659 | 4861 | 26% |

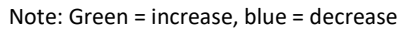
53. These increases include higher levels of LGVs and HGVs on Ingram Distributor, the IRR to the north and east of the city centre, M621 2-2a and East Street. However, the level of non-compliant HGVs is forecast to fall by around 80% on all these links compared with the 2022 DM – see Appendix C.

54. The changes in overall traffic forecast for the minor roads to the north and west of the city centre is marginal – see Figure 15, with the greatest forecast increase being just 8% on Woodsley Rd and traffic falling on several roads compared with the 2022 DM – see Appendix C. Changes in LGV and HGV volumes are forecast at broadly similar levels.

Figure 15 – Minor Road Diversion Routes – Forecast Traffic Changes 2020 and 2022 (AADT)

Review of roads with reduced traffic

55. Figure 16 shows the changes in total traffic around the city centre resulting from the combination of the ORR CAZ and the CCP. The increases on the western IRR and westbound M621 are very clear, as are the significant falls in traffic within the city centre – in particular through City Square and across Crown Point Bridge. (Note: due to network coding changes the increase in traffic on the southern section on A643 Ingram Distributor is not shown).



57. The volume of traffic entering the city centre (inside the IRR) is forecast to fall by 9.0% overall, with an 11% reduction in LGVs and 10% in HGVs – see Table 10. The fall in non-compliant vehicles is much more variable, with an 11% fall in LGVs but a substantial 83% fall in HGVs, reflecting the differential impact of the CAZ.
58. Overall traffic levels on the approach to the IRR, however, are only forecast to change marginally (up around 1%), with a marginal change in non-compliant LGVs (up 1.8%) but a very substantial 84% drop in non-compliant HGVs.

| | | | | | | | |
|-------------|-------|-------|-------|-------|-------|-------|--|
| Duke Street | 35790 | 33538 | 31599 | 30881 | 33851 | 33133 | |
|-------------|-------|-------|-------|-------|-------|-------|--|

| Road | Observed | Modelled AADT | | | Estimated 2022 AADT | | | |
|-----------------|---------------|---------------|---------|----------|---------------------|----------|--------|-------------|
| | Est AADT 2015 | Base 2015 | DM 2022 | CAZ 2022 | DM 2022 | CAZ 2022 | Change | %age change |
| Duke Street | 35790 | 33538 | 31599 | 30881 | 33851 | 33133 | -718 | -2% |
| The Calls | 11000 | 12028 | 11684 | 9188 | 10656 | 8160 | -2496 | -23% |
| Bishopgate St | 24000 | 20936 | 22920 | 744 | 25984 | 3808 | -22176 | -85% |
| Crown Point Br | 31700 | 25647 | 29095 | 18375 | 35148 | 24428 | -10720 | -30% |
| Great Wilson St | 32300 | 24557 | 26936 | 16638 | 34679 | 24381 | -10298 | -30% |

Table 10 – Modelled Changes in Traffic Crossing Cordons Around Leeds City Centre (AADT 2022)

| | | | Compliant | | | Non compliant | | | | Total | | |
|------------------------------------|--|---------|-----------|--------|--------|---------------|--------|--------|--------|---------|--------|--------|
| Summary | | AADT | Cars | LGV | OGV | Cars | LGV | OGV | PSV | Cars | LGV | OGV |
| Cordon on approaches to IRR | | | | | | | | | | | | |
| DM 2022 | | 657,496 | 448,937 | 49,096 | 15,392 | 105,894 | 23,631 | 4,222 | 10,324 | 554,831 | 72,727 | 19,614 |
| ORR CAZ B + CCP 2022 | | 664,035 | 453,118 | 49,977 | 18,969 | 106,865 | 24,065 | 691 | 10,350 | 559,983 | 74,042 | 19,660 |
| IRR Cordon Changes | | 6,539 | 4,181 | 881 | 3,577 | 971 | 434 | -3,531 | 26 | 5,152 | 1,315 | 46 |
| Percentage change | | 1.0% | 0.9% | 1.8% | 23.2% | 0.9% | 1.8% | -83.6% | 0.3% | 0.9% | 1.8% | 0.2% |
| Cordon within IRR | | | | | | | | | | | | |
| DM 2022 | | 333,261 | 229,666 | 22,338 | 5,460 | 54,005 | 10,760 | 1,499 | 9,533 | 283,671 | 33,098 | 6,959 |
| ORR CAZ B + CCP 2022 | | 303,302 | 208,918 | 19,822 | 5,984 | 49,229 | 9,545 | 255 | 9,549 | 258,147 | 29,367 | 6,239 |
| Within IRR Changes | | -29,959 | -20,748 | -2,516 | 524 | -4,776 | -1,215 | -1,244 | 16 | -25,524 | -3,731 | -720 |
| Percentage change | | -9.0% | -9.0% | -11.3% | 9.6% | -8.8% | -11.3% | -83.0% | 0.2% | -9.0% | -11.3% | -10.3% |

Conclusions

59. In summary, the impact of the City Centre Package (CCP) alongside the ORR CAZ B is marginal on the minor road network to the north and west of the city centre.
60. Traffic levels within the City Centre are forecast to reduce significantly, however, this results in additional traffic on both the M621 and western IRR, in particular A643 Ingram Distributor which is forecast to attract an additional 38% traffic (compared with the 2022 DM) , together with more LGVs and HGVs. The volume of non-compliant HGVs, however, is forecast to fall by around 80%.
61. Traffic levels on A58 Wellington St, the IRR to the north of the city centre, M621 Jn 2-2a and East Street are forecast to rise by around 10-15%, although the volumes of non-compliant HGVs are forecast to fall by around 80%.

APPENDIX A**Table A1 – Forecast Changes in LGV volumes – minor roads to N and W of city centre**

| Road | Observed | Modelled AADT | | | Estimated 2020 AADT | | | |
|------------------|---------------|---------------|---------|----------|---------------------|----------|--------|----|
| | Est AADT 2015 | Base 2015 | DM 2020 | CAZ 2020 | DM 2020 | CAZ 2020 | Change | |
| Torre Rd | 590 | 242 | 280 | 278 | 628 | 626 | -2 | 0% |
| Lincoln Green Rd | 770 | 478 | 557 | 561 | 849 | 853 | 4 | 0% |
| Woodhouse St | 820 | 785 | 905 | 905 | 940 | 940 | 0 | 0% |
| Hyde Park Rd | 500 | 532 | 601 | 601 | 569 | 569 | 0 | 0% |
| Woodsley Rd | 370 | 450 | 506 | 505 | 426 | 425 | -1 | 0% |
| Canal Rd | 980 | 1481 | 1665 | 1668 | 1164 | 1167 | 3 | 0% |
| Town St | 890 | 1030 | 1186 | 1185 | 1046 | 1045 | -1 | 0% |
| Upper Wortley Rd | 1030 | 1415 | 1636 | 1638 | 1251 | 1253 | 2 | 0% |

Note: 2015 observed AADT estimated from 2017 MCC

Table A2 – Forecast Changes in HGV volumes – minor roads to N and W of city centre

| Road | Observed | Modelled AADT | | | Estimated 2020 AADT | | | |
|------------------|---------------|---------------|---------|----------|---------------------|----------|--------|-----|
| | Est AADT 2015 | Base 2015 | DM 2020 | CAZ 2020 | DM 2020 | CAZ 2020 | Change | |
| Torre Rd | 170 | 20 | 21 | 21 | 171 | 171 | 0 | 0% |
| Lincoln Green Rd | 170 | 47 | 54 | 53 | 177 | 176 | -1 | -1% |
| Woodhouse St | 140 | 113 | 120 | 120 | 147 | 147 | 0 | 0% |
| Hyde Park Rd | 100 | 90 | 95 | 96 | 105 | 106 | 1 | 1% |
| Woodsley Rd | 80 | 124 | 128 | 128 | 84 | 84 | 0 | 0% |
| Canal Rd | 310 | 448 | 462 | 462 | 324 | 324 | 0 | 0% |
| Town St | 220 | 297 | 316 | 320 | 239 | 243 | 4 | 2% |
| Upper Wortley Rd | 290 | 344 | 357 | 352 | 303 | 298 | -5 | -2% |

Note: 2015 observed AADT estimated from 2017 MCC

Table A3 – Forecast Changes in LGV volumes – routes attracting more traffic

| Road | Observed | Modelled AADT | | | Estimated 2020 AADT | | | |
|------------------------|---------------|---------------|---------|----------|---------------------|----------|--------|-----|
| | Est AADT 2015 | Base 2015 | DM 2020 | CAZ 2020 | DM 2020 | CAZ 2020 | Change | |
| A6120 Ring Rd Roundhay | 2448 | 1985 | 1987 | 1973 | 2450 | 2436 | -14 | -1% |
| A6120 Ring Rd Farsley | 3738 | 1881 | 2076 | 2078 | 3933 | 3935 | 2 | 0% |
| Richardshaw La | n/a | 936 | 953 | 954 | 953 | 954 | 1 | 0% |
| Gildersome La | 970 | 711 | 840 | 836 | 1099 | 1095 | -4 | 0% |
| Tong Rd | 1200 | 1080 | 1314 | 1311 | 1434 | 1431 | -3 | 0% |
| M62 Jn 27-28 | 19786 | 12043 | 13675 | 13668 | 21418 | 21411 | -7 | 0% |
| M62 Jn 28-29 | 17596 | 13593 | 15489 | 15529 | 19492 | 19532 | 40 | 0% |

Note: 2015 observed AADT estimated from 2015 MCC

Table A4 – Forecast Changes in HGV volumes – routes attracting more traffic

| Road | Observed | Modelled AADT | | | Estimated 2020 AADT | | | |
|------------------------|---------------|---------------|---------|----------|---------------------|----------|--------|-----|
| | Est AADT 2015 | Base 2015 | DM 2020 | CAZ 2020 | DM 2020 | CAZ 2020 | Change | |
| A6120 Ring Rd Roundhay | 564 | 436 | 564 | 616 | 692 | 744 | 52 | 8% |
| A6120 Ring Rd Farsley | 579 | 285 | 279 | 334 | 573 | 628 | 55 | 10% |
| Richardshaw La | n/a | 268 | 265 | 307 | 265 | 307 | 42 | 16% |
| Gildersome La | 250 | 282 | 296 | 381 | 264 | 349 | 85 | 32% |
| Tong Rd | 340 | 385 | 393 | 429 | 348 | 384 | 36 | 10% |
| M62 Jn 27-28 | 20818 | 8752 | 8971 | 9206 | 21037 | 21272 | 235 | 1% |
| M62 Jn 28-29 | 19690 | 9997 | 10247 | 10412 | 19940 | 20105 | 165 | 1% |

Note: 2015 observed AADT estimated from 2015 MCC

Table A5 – Modelled changes in traffic volumes – routes attracting more traffic

| 2020 estimated AADT with ORR CAZ B | | | | | | | | | | | | |
|------------------------------------|-------------|--------|-----------|------|------|---------------|------|------|-----|--------|-------|-------|
| Road | | | Compliant | | | Non compliant | | | | Total | | |
| | Anode Bnode | AADT | Cars | LGV | OGV | Cars | LGV | OGV | PSV | Cars | LGV | OGV |
| A6120 Ring Rd Roundhay | | 18933 | 11726 | 1216 | 443 | 4592 | 757 | 173 | 26 | 16318 | 1973 | 616 |
| A6120 Ring Rd Farsley | | 23025 | 14801 | 1280 | 226 | 5812 | 798 | 108 | 0 | 20613 | 2078 | 334 |
| Richardshaw La | | 13546 | 8619 | 588 | 236 | 3385 | 366 | 71 | 281 | 12004 | 954 | 307 |
| Gildersome La | | 8492 | 5150 | 515 | 250 | 2023 | 321 | 131 | 102 | 7173 | 836 | 381 |
| Tong Rd | | 13128 | 8066 | 808 | 355 | 3168 | 503 | 74 | 154 | 11234 | 1311 | 429 |
| M62 Jn 27-28 | | 132072 | 78356 | 8420 | 5970 | 30842 | 5248 | 3236 | 0 | 109198 | 13668 | 9206 |
| M62 Jn 28-29 | | 149390 | 88619 | 9566 | 6953 | 34830 | 5963 | 3459 | 0 | 123449 | 15529 | 10412 |
| Change from 2020 DM | | | | | | | | | | | | |
| Road | | | Compliant | | | Non compliant | | | | Total | | |
| | Anode Bnode | AADT | Cars | LGV | OGV | Cars | LGV | OGV | PSV | Cars | LGV | OGV |
| A6120 Ring Rd Roundhay | | -26 | -45 | -9 | 69 | -19 | -5 | -17 | 0 | -64 | -14 | 52 |
| A6120 Ring Rd Farsley | | 30 | -19 | 1 | 41 | -8 | 1 | 14 | 0 | -27 | 2 | 55 |
| Richardshaw La | | 68 | 18 | 1 | 60 | 7 | 0 | -18 | 0 | 25 | 1 | 42 |
| Gildersome La | | -19 | -72 | -2 | 54 | -28 | -2 | 31 | 0 | -100 | -4 | 85 |
| Tong Rd | | -21 | -39 | -1 | 94 | -15 | -2 | -58 | 0 | -54 | -3 | 36 |
| M62 Jn 27-28 | | 48 | -131 | -4 | 22 | -49 | -3 | 213 | 0 | -180 | -7 | 235 |
| M62 Jn 28-29 | | 191 | -10 | 25 | 159 | -4 | 15 | 6 | 0 | -14 | 40 | 165 |
| Percentage change from 2020 DM | | | | | | | | | | | | |
| Road | | | Compliant | | | Non compliant | | | | Total | | |
| | Anode Bnode | AADT | Cars | LGV | OGV | Cars | LGV | OGV | PSV | Cars | LGV | OGV |
| A6120 Ring Rd Roundhay | | 0% | 0% | -1% | 18% | 0% | -1% | -9% | 0% | 0% | -1% | 9% |
| A6120 Ring Rd Farsley | | 0% | 0% | 0% | 22% | 0% | 0% | 15% | 0% | 0% | 0% | 20% |
| Richardshaw La | | 1% | 0% | 0% | 34% | 0% | 0% | -20% | 0% | 0% | 0% | 16% |
| Gildersome La | | 0% | -1% | 0% | 28% | -1% | -1% | 31% | 0% | -1% | 0% | 29% |
| Tong Rd | | 0% | 0% | 0% | 36% | 0% | 0% | -44% | 0% | 0% | 0% | 9% |
| M62 Jn 27-28 | | 0% | 0% | 0% | 0% | 0% | 0% | 7% | 0% | 0% | 0% | 3% |
| M62 Jn 28-29 | | 0% | 0% | 0% | 2% | 0% | 0% | 0% | 0% | 0% | 0% | 2% |

Note: Model flow validation is variable across these routes and the results must be taken as indicative only.

Table A6 – Modelled changes in traffic volumes – city centre cordons

| Two way flow changes from DM 2020 | | | | | | | | | | | | |
|-----------------------------------|--|---------|-----------|--------|--------|---------------|--------|--------|--------|---------|--------|--------|
| | | | Compliant | | | Non compliant | | | | | Total | |
| Summary | | AADT | Cars | LGV | OGV | Cars | LGV | OGV | PSV | Cars | LGV | OGV |
| Cordon on approaches to IRR | | | | | | | | | | | | |
| DM 2020 | | 646,940 | 393,096 | 43,022 | 12,824 | 154,342 | 26,809 | 6,519 | 10,328 | 547,438 | 69,831 | 19,343 |
| ORR CAZ B 2020 | | 646,719 | 393,302 | 42,965 | 17,877 | 154,421 | 26,778 | 1,047 | 10,329 | 547,723 | 69,743 | 18,924 |
| IRR Cordon Changes | | -221 | 206 | -57 | 5,053 | 79 | -31 | -5,472 | 1 | 285 | -88 | -419 |
| Percentage change | | 0.0% | 0.1% | -0.1% | 39.4% | 0.1% | -0.1% | -83.9% | 0.0% | 0.1% | -0.1% | -2.2% |
| Cordon within IRR | | | | | | | | | | | | |
| DM 2020 | | 325,954 | 199,475 | 19,656 | 4,597 | 78,100 | 12,253 | 2,334 | 9,539 | 277,575 | 31,909 | 6,931 |
| ORR CAZ B 2020 | | 326,186 | 199,708 | 19,627 | 6,440 | 78,199 | 12,238 | 434 | 9,540 | 277,907 | 31,865 | 6,874 |
| Within IRR Changes | | 232 | 232 | -29 | 1,843 | 100 | -15 | -1,900 | 1 | 332 | -44 | -57 |
| Percentage change | | 0.1% | 0.1% | -0.1% | 40.1% | 0.1% | -0.1% | -81.4% | 0.0% | 0.1% | -0.1% | -0.8% |

Table A7 – Modelled changes in traffic volumes – IRR

| 2020 estimated AADT with ORR CAZ B | | | | | | | | | | | | | |
|------------------------------------|-------------|-------|-----------|------|------|---------------|------|-------|------|-------|-------|------|--|
| Road | | | Compliant | | | Non compliant | | | | | Total | | |
| | Anode Bnode | AADT | Cars | LGV | OGV | Cars | LGV | OGV | PSV | Cars | LGV | OGV | |
| IRR Lovell Park Br | | 48903 | 30524 | 3229 | 946 | 12110 | 2034 | 60 | 0 | 42634 | 5263 | 1006 | |
| IRR Woodhouse tunnel | | 74243 | 46235 | 5171 | 1279 | 18241 | 3238 | 79 | 0 | 64476 | 8409 | 1358 | |
| IRR Wellington Br | | 88266 | 54017 | 6209 | 1741 | 21204 | 3880 | 102 | 1113 | 75221 | 10089 | 1843 | |
| A643 Ingram | | 57482 | 34546 | 4558 | 1890 | 13520 | 2828 | 140 | 0 | 48066 | 7386 | 2030 | |
| M621 Jn 2 - 2a | | 75082 | 44857 | 5403 | 3551 | 17549 | 3352 | 141 | 229 | 62406 | 8755 | 3692 | |
| M621 Jn 2a - 3 | | 90954 | 53916 | 6952 | 4248 | 21092 | 4316 | 201 | 229 | 75008 | 11268 | 4449 | |
| M621 Jn 3 - 4 | | 73819 | 43059 | 6336 | 3667 | 16682 | 3900 | 175 | 0 | 59741 | 10236 | 3842 | |
| John Smeaton Viaduct | | 35035 | 21289 | 2411 | 1413 | 8330 | 1514 | 78 | 0 | 29619 | 3925 | 1491 | |
| IRR East Street | | 32432 | 20806 | 1698 | 530 | 8182 | 1080 | 34 | 102 | 28988 | 2778 | 564 | |
| Change from 2020 DM | | | | | | | | | | | | | |
| Road | | | Compliant | | | Non compliant | | | | | Total | | |
| | Anode Bnode | AADT | Cars | LGV | OGV | Cars | LGV | OGV | PSV | Cars | LGV | OGV | |
| IRR Lovell Park Br | | -45 | -30 | 3 | 273 | -13 | 4 | -282 | 0 | -43 | 7 | -9 | |
| IRR Woodhouse tunnel | | -28 | -6 | 5 | 360 | -3 | 4 | -388 | 0 | -9 | 9 | -28 | |
| IRR Wellington Br | | 17 | 61 | 1 | 473 | 23 | 1 | -542 | 0 | 84 | 2 | -69 | |
| A643 Ingram | | -42 | 18 | -14 | 515 | 6 | -9 | -558 | 0 | 24 | -23 | -43 | |
| M621 Jn 2 - 2a | | 258 | 330 | 2 | 970 | 127 | 0 | -1171 | 0 | 457 | 2 | -201 | |
| M621 Jn 2a - 3 | | 342 | 386 | -3 | 1176 | 148 | -4 | -1361 | 0 | 534 | -7 | -185 | |
| M621 Jn 3 - 4 | | -162 | 49 | -32 | 1002 | 18 | -20 | -1179 | 0 | 67 | -52 | -177 | |
| John Smeaton Viaduct | | -24 | -5 | 18 | 398 | -8 | 11 | -438 | 0 | -13 | 29 | -40 | |
| IRR East Street | | -60 | -46 | 5 | 155 | -21 | 4 | -157 | 0 | -67 | 9 | -2 | |
| Percentage change from 2020 DM | | | | | | | | | | | | | |
| Road | | | Compliant | | | Non compliant | | | | | Total | | |
| | Anode Bnode | AADT | Cars | LGV | OGV | Cars | LGV | OGV | PSV | Cars | LGV | OGV | |
| IRR Lovell Park Br | | 0% | 0% | 0% | 41% | 0% | 0% | -82% | 0% | 0% | 0% | -1% | |
| IRR Woodhouse tunnel | | 0% | 0% | 0% | 39% | 0% | 0% | -83% | 0% | 0% | 0% | -2% | |
| IRR Wellington Br | | 0% | 0% | 0% | 37% | 0% | 0% | -84% | 0% | 0% | 0% | -4% | |
| A643 Ingram | | 0% | 0% | 0% | 37% | 0% | 0% | -80% | 0% | 0% | 0% | -2% | |
| M621 Jn 2 - 2a | | 0% | 1% | 0% | 38% | 1% | 0% | -89% | 0% | 1% | 0% | -5% | |
| M621 Jn 2a - 3 | | 0% | 1% | 0% | 38% | 1% | 0% | -87% | 0% | 1% | 0% | -4% | |
| M621 Jn 3 - 4 | | 0% | 0% | -1% | 38% | 0% | -1% | -87% | 0% | 0% | -1% | -4% | |
| John Smeaton Viaduct | | 0% | 0% | 1% | 39% | 0% | 1% | -85% | 0% | 0% | 1% | -3% | |
| IRR East Street | | 0% | 0% | 0% | 41% | 0% | 0% | -82% | 0% | 0% | 0% | 0% | |

Note: Model flow validation is variable across these routes and the results must be taken as indicative only.

APPENDIX B – Sensitivity test**Table B1 – Forecast Changes in LGV volumes – minor roads to N and W of city centre**

| Road | Observed | Modelled AADT | | | Estimated 2020 AADT | | | |
|------------------|---------------|---------------|---------|----------|---------------------|----------|--------|----|
| | Est AADT 2015 | Base 2015 | DM 2020 | CAZ 2020 | DM 2020 | CAZ 2020 | Change | |
| Torre Rd | 590 | 242 | 280 | 279 | 628 | 627 | -1 | 0% |
| Lincoln Green Rd | 770 | 478 | 557 | 559 | 849 | 851 | 2 | 0% |
| Woodhouse St | 820 | 785 | 905 | 904 | 940 | 939 | -1 | 0% |
| Hyde Park Rd | 500 | 532 | 601 | 599 | 569 | 567 | -2 | 0% |
| Woodsley Rd | 370 | 450 | 506 | 506 | 426 | 426 | 0 | 0% |
| Canal Rd | 980 | 1481 | 1665 | 1665 | 1164 | 1164 | 0 | 0% |
| Town St | 890 | 1030 | 1186 | 1182 | 1046 | 1042 | -4 | 0% |
| Upper Wortley Rd | 1030 | 1415 | 1636 | 1639 | 1251 | 1254 | 3 | 0% |

Note: 2015 observed AADT estimated from 2017 MCC

Table B2 – Forecast Changes in HGV volumes – minor roads to N and W of city centre

| Road | Observed | Modelled AADT | | | Estimated 2020 AADT | | | |
|------------------|---------------|---------------|---------|----------|---------------------|----------|--------|-----|
| | Est AADT 2015 | Base 2015 | DM 2020 | CAZ 2020 | DM 2020 | CAZ 2020 | Change | |
| Torre Rd | 170 | 20 | 21 | 21 | 171 | 171 | 0 | 0% |
| Lincoln Green Rd | 170 | 47 | 54 | 53 | 177 | 176 | -1 | -1% |
| Woodhouse St | 140 | 113 | 120 | 120 | 147 | 147 | 0 | 0% |
| Hyde Park Rd | 100 | 90 | 95 | 97 | 105 | 107 | 2 | 2% |
| Woodsley Rd | 80 | 124 | 128 | 128 | 84 | 84 | 0 | 0% |
| Canal Rd | 310 | 448 | 462 | 462 | 324 | 324 | 0 | 0% |
| Town St | 220 | 297 | 316 | 317 | 239 | 240 | 1 | 0% |
| Upper Wortley Rd | 290 | 344 | 357 | 344 | 303 | 290 | -13 | -4% |

Note: 2015 observed AADT estimated from 2017 MCC

Table B3 – Forecast Changes in LGV volumes – routes attracting more traffic

| Road | Observed | Modelled AADT | | | Estimated 2020 AADT | | | |
|------------------------|---------------|---------------|---------|----------|---------------------|----------|--------|-----|
| | Est AADT 2015 | Base 2015 | DM 2020 | CAZ 2020 | DM 2020 | CAZ 2020 | Change | |
| A6120 Ring Rd Roundhay | 2448 | 1985 | 1987 | 1972 | 2450 | 2435 | -15 | -1% |
| A6120 Ring Rd Farsley | 3738 | 1881 | 2076 | 2074 | 3933 | 3931 | -2 | 0% |
| Richardshaw La | n/a | 936 | 953 | 953 | 953 | 953 | 0 | 0% |
| Gildersome La | 970 | 711 | 840 | 831 | 1099 | 1090 | -9 | -1% |
| Tong Rd | 1200 | 1080 | 1314 | 1308 | 1434 | 1428 | -6 | 0% |
| M62 Jn 27-28 | 19786 | 12043 | 13675 | 13627 | 21418 | 21370 | -48 | 0% |
| M62 Jn 28-29 | 17596 | 13593 | 15489 | 15471 | 19492 | 19474 | -18 | 0% |

Note: 2015 observed AADT estimated from 2015 MCC

Table B4 – Forecast Changes in HGV volumes – routes attracting more traffic

| Road | Observed | Modelled AADT | | | Estimated 2020 AADT | | | |
|------------------------|---------------|---------------|---------|----------|---------------------|----------|--------|-----|
| | Est AADT 2015 | Base 2015 | DM 2020 | CAZ 2020 | DM 2020 | CAZ 2020 | Change | |
| A6120 Ring Rd Roundhay | 564 | 436 | 564 | 615 | 692 | 743 | 51 | 7% |
| A6120 Ring Rd Farsley | 579 | 285 | 279 | 339 | 573 | 633 | 60 | 10% |
| Richardshaw La | n/a | 268 | 265 | 334 | 265 | 334 | 69 | 26% |
| Gildersome La | 250 | 282 | 296 | 403 | 264 | 371 | 107 | 41% |
| Tong Rd | 340 | 385 | 393 | 425 | 348 | 380 | 32 | 9% |
| M62 Jn 27-28 | 20818 | 8752 | 8971 | 9249 | 21037 | 21315 | 278 | 1% |
| M62 Jn 28-29 | 19690 | 9997 | 10247 | 10443 | 19940 | 20136 | 196 | 1% |

Note: 2015 observed AADT estimated from 2015 MCC

Table B5 – Modelled changes in traffic volumes – routes attracting more traffic

| 2020 estimated AADT with ORR CAZ B sensitivity test | | | | | | | | | | | | |
|---|-------------|--------|-----------|------|------|---------------|------|------|-----|--------|-------|-------|
| Road | | | Compliant | | | Non compliant | | | | Total | | |
| | Anode Bnode | AADT | Cars | LGV | OGV | Cars | LGV | OGV | PSV | Cars | LGV | OGV |
| A6120 Ring Rd Roundhay | | 18904 | 11706 | 1215 | 427 | 4585 | 757 | 188 | 26 | 16291 | 1972 | 615 |
| A6120 Ring Rd Farsley | | 23024 | 14799 | 1278 | 218 | 5812 | 796 | 121 | 0 | 20611 | 2074 | 339 |
| Richardshaw La | | 13577 | 8622 | 587 | 223 | 3387 | 366 | 111 | 281 | 12009 | 953 | 334 |
| Gildersome La | | 8505 | 5147 | 512 | 239 | 2022 | 319 | 164 | 102 | 7169 | 831 | 403 |
| Tong Rd | | 13120 | 8065 | 806 | 336 | 3168 | 502 | 89 | 154 | 11233 | 1308 | 425 |
| M62 Jn 27-28 | | 132045 | 78336 | 8394 | 5966 | 30833 | 5233 | 3283 | 0 | 109169 | 13627 | 9249 |
| M62 Jn 28-29 | | 149232 | 88524 | 9530 | 6922 | 34794 | 5941 | 3521 | 0 | 123318 | 15471 | 10443 |
| Change from 2020 DM | | | | | | | | | | | | |
| Road | | | Compliant | | | Non compliant | | | | Total | | |
| | Anode Bnode | AADT | Cars | LGV | OGV | Cars | LGV | OGV | PSV | Cars | LGV | OGV |
| A6120 Ring Rd Roundhay | | -55 | -65 | -10 | 53 | -26 | -5 | -2 | 0 | -91 | -15 | 51 |
| A6120 Ring Rd Farsley | | 29 | -21 | -1 | 33 | -8 | -1 | 27 | 0 | -29 | -2 | 60 |
| Richardshaw La | | 99 | 21 | 0 | 47 | 9 | 0 | 22 | 0 | 30 | 0 | 69 |
| Gildersome La | | -6 | -74 | -5 | 43 | -30 | -4 | 64 | 0 | -104 | -9 | 107 |
| Tong Rd | | -29 | -40 | -3 | 75 | -15 | -3 | -43 | 0 | -55 | -6 | 32 |
| M62 Jn 27-28 | | 21 | -151 | -30 | 18 | -58 | -18 | 260 | 0 | -209 | -48 | 278 |
| M62 Jn 28-29 | | 33 | -104 | -11 | 128 | -41 | -7 | 68 | 0 | -145 | -18 | 196 |
| Percentage change from 2020 DM | | | | | | | | | | | | |
| Road | | | Compliant | | | Non compliant | | | | Total | | |
| | Anode Bnode | AADT | Cars | LGV | OGV | Cars | LGV | OGV | PSV | Cars | LGV | OGV |
| A6120 Ring Rd Roundhay | | 0% | -1% | -1% | 14% | -1% | -1% | -1% | 0% | -1% | -1% | 9% |
| A6120 Ring Rd Farsley | | 0% | 0% | 0% | 18% | 0% | 0% | 29% | 0% | 0% | 0% | 22% |
| Richardshaw La | | 1% | 0% | 0% | 27% | 0% | 0% | 25% | 0% | 0% | 0% | 26% |
| Gildersome La | | 0% | -1% | -1% | 22% | -1% | -1% | 64% | 0% | -1% | -1% | 36% |
| Tong Rd | | 0% | 0% | 0% | 29% | 0% | -1% | -33% | 0% | 0% | 0% | 8% |
| M62 Jn 27-28 | | 0% | 0% | 0% | 0% | 0% | 0% | 9% | 0% | 0% | 0% | 3% |
| M62 Jn 28-29 | | 0% | 0% | 0% | 2% | 0% | 0% | 2% | 0% | 0% | 0% | 2% |

Note: Model flow validation is variable across these routes and the results must be taken as indicative only.

Table B6 – Modelled changes in traffic volumes – city centre cordons

| | | | Compliant | | | Non compliant | | | | Total | | |
|-----------------------------|--|---------|-----------|--------|--------|---------------|--------|--------|--------|---------|--------|--------|
| Summary | | AADT | Cars | LGV | OGV | Cars | LGV | OGV | PSV | Cars | LGV | OGV |
| Cordon on approaches to IRR | | | | | | | | | | | | |
| DM 2020 | | 646,940 | 393,096 | 43,022 | 12,824 | 154,342 | 26,809 | 6,519 | 10,328 | 547,438 | 69,831 | 19,343 |
| ORR CAZ B sens 2020 | | 646,760 | 393,220 | 43,057 | 16,831 | 154,391 | 26,831 | 2,101 | 10,329 | 547,611 | 69,888 | 18,932 |
| IRR Cordon Changes | | -180 | 124 | 35 | 4,007 | 49 | 22 | -4,418 | 1 | 173 | 57 | -411 |
| Percentage change | | 0.0% | 0.0% | 0.1% | 31.2% | 0.0% | 0.1% | -67.8% | 0.0% | 0.0% | 0.1% | -2.1% |
| Cordon within IRR | | | | | | | | | | | | |
| DM 2020 | | 325,954 | 199,475 | 19,656 | 4,597 | 78,100 | 12,253 | 2,334 | 9,539 | 277,575 | 31,909 | 6,931 |
| ORR CAZ B sens 2020 | | 326,019 | 199,544 | 19,635 | 6,049 | 78,130 | 12,244 | 878 | 9,539 | 277,674 | 31,879 | 6,927 |
| Within IRR Changes | | 65 | 69 | -21 | 1,452 | 30 | -9 | -1,456 | 0 | 99 | -30 | -4 |
| Percentage change | | 0.0% | 0.0% | -0.1% | 31.6% | 0.0% | -0.1% | -62.4% | 0.0% | 0.0% | -0.1% | -0.1% |

Table B7 – Modelled changes in traffic volumes – IRR

| 2020 estimated AADT with ORR CAZ B sensitivity test | | | | | | | | | | | | | | |
|---|-------------|-------|-----------|------|------|---------------|------|-------|------|-------|-------|------|--|--|
| Road | | | Compliant | | | Non compliant | | | | | Total | | | |
| | Anode Bnode | AADT | Cars | LGV | OGV | Cars | LGV | OGV | PSV | Cars | LGV | OGV | | |
| IRR Lovell Park Br | | 48954 | 30560 | 3227 | 890 | 12125 | 2032 | 120 | 0 | 42685 | 5259 | 1010 | | |
| IRR Woodhouse tunnel | | 74289 | 46268 | 5170 | 1204 | 18255 | 3236 | 156 | 0 | 64523 | 8406 | 1360 | | |
| IRR Wellington Br | | 88292 | 54029 | 6211 | 1644 | 21211 | 3880 | 204 | 1113 | 75240 | 10091 | 1848 | | |
| A643 Ingram | | 57465 | 34508 | 4555 | 1786 | 13508 | 2826 | 282 | 0 | 48016 | 7381 | 2068 | | |
| M621 Jn 2 - 2a | | 74863 | 44690 | 5441 | 3355 | 17486 | 3377 | 285 | 229 | 62176 | 8818 | 3640 | | |
| M621 Jn 2a - 3 | | 90639 | 53685 | 6978 | 4001 | 21005 | 4335 | 406 | 229 | 74690 | 11313 | 4407 | | |
| M621 Jn 3 - 4 | | 73911 | 43084 | 6385 | 3462 | 16694 | 3932 | 354 | 0 | 59778 | 10317 | 3816 | | |
| John Smeaton Viaduct | | 35045 | 21295 | 2407 | 1334 | 8338 | 1512 | 159 | 0 | 29633 | 3919 | 1493 | | |
| IRR East Street | | 32446 | 20818 | 1693 | 498 | 8189 | 1077 | 69 | 102 | 29007 | 2770 | 567 | | |
| Change from 2020 DM | | | | | | | | | | | | | | |
| Road | | | Compliant | | | Non compliant | | | | | Total | | | |
| | Anode Bnode | AADT | Cars | LGV | OGV | Cars | LGV | OGV | PSV | Cars | LGV | OGV | | |
| IRR Lovell Park Br | | 6 | 6 | 1 | 217 | 2 | 2 | -222 | 0 | 8 | 3 | -5 | | |
| IRR Woodhouse tunnel | | 18 | 27 | 4 | 285 | 11 | 2 | -311 | 0 | 38 | 6 | -26 | | |
| IRR Wellington Br | | 43 | 73 | 3 | 376 | 30 | 1 | -440 | 0 | 103 | 4 | -64 | | |
| A643 Ingram | | -59 | -19 | -17 | 411 | -7 | -11 | -416 | 0 | -26 | -28 | -5 | | |
| M621 Jn 2 - 2a | | 39 | 163 | 40 | 774 | 64 | 25 | -1027 | 0 | 227 | 65 | -253 | | |
| M621 Jn 2a - 3 | | 27 | 155 | 23 | 929 | 61 | 15 | -1156 | 0 | 216 | 38 | -227 | | |
| M621 Jn 3 - 4 | | -70 | 74 | 17 | 797 | 30 | 12 | -1000 | 0 | 104 | 29 | -203 | | |
| John Smeaton Viaduct | | -14 | 1 | 14 | 319 | 0 | 9 | -357 | 0 | 1 | 23 | -38 | | |
| IRR East Street | | -46 | -34 | 0 | 123 | -14 | 1 | -122 | 0 | -48 | 1 | 1 | | |
| Percentage change from 2020 DM | | | | | | | | | | | | | | |
| Road | | | Compliant | | | Non compliant | | | | | Total | | | |
| | Anode Bnode | AADT | Cars | LGV | OGV | Cars | LGV | OGV | PSV | Cars | LGV | OGV | | |
| IRR Lovell Park Br | | 0% | 0% | 0% | 32% | 0% | 0% | -65% | 0% | 0% | 0% | 0% | | |
| IRR Woodhouse tunnel | | 0% | 0% | 0% | 31% | 0% | 0% | -67% | 0% | 0% | 0% | -2% | | |
| IRR Wellington Br | | 0% | 0% | 0% | 30% | 0% | 0% | -68% | 0% | 0% | 0% | -3% | | |
| A643 Ingram | | 0% | 0% | 0% | 30% | 0% | 0% | -60% | 0% | 0% | 0% | 0% | | |
| M621 Jn 2 - 2a | | 0% | 0% | 1% | 30% | 0% | 1% | -78% | 0% | 0% | 1% | -6% | | |
| M621 Jn 2a - 3 | | 0% | 0% | 0% | 30% | 0% | 0% | -74% | 0% | 0% | 0% | -5% | | |
| M621 Jn 3 - 4 | | 0% | 0% | 0% | 30% | 0% | 0% | -74% | 0% | 0% | 0% | -5% | | |
| John Smeaton Viaduct | | 0% | 0% | 1% | 31% | 0% | 1% | -69% | 0% | 0% | 1% | -2% | | |
| IRR East Street | | 0% | 0% | 0% | 33% | 0% | 0% | -64% | 0% | 0% | 0% | 0% | | |

Note: Model flow validation is variable across these routes and the results must be taken as indicative only.

APPENDIX C**Table C1 – Forecast Changes in LGV volumes – minor roads to N and W of city centre 2022**

| Road | Observed | Modelled AADT | | | Estimated 2022 AADT | | | |
|------------------|---------------|---------------|---------|----------|---------------------|----------|--------|-----|
| | Est AADT 2015 | Base 2015 | DM 2022 | CAZ 2022 | DM 2022 | CAZ 2022 | Change | |
| Torre Rd | 590 | 242 | 293 | 290 | 641 | 638 | -3 | 0% |
| Lincoln Green Rd | 770 | 478 | 584 | 571 | 876 | 863 | -13 | -1% |
| Woodhouse St | 820 | 785 | 960 | 982 | 995 | 1017 | 22 | 2% |
| Hyde Park Rd | 500 | 532 | 642 | 661 | 610 | 629 | 19 | 3% |
| Woodsley Rd | 370 | 450 | 542 | 588 | 462 | 508 | 46 | 10% |
| Canal Rd | 980 | 1481 | 1748 | 1717 | 1247 | 1216 | -31 | -2% |
| Town St | 890 | 1030 | 1242 | 1297 | 1102 | 1157 | 55 | 5% |
| Upper Wortley Rd | 1030 | 1415 | 1723 | 1607 | 1338 | 1222 | -116 | -9% |

Note: 2015 observed AADT estimated from 2017 MCC

Table C2 – Forecast Changes in HGV volumes – minor roads to N and W of city centre 2022

| Road | Observed | Modelled AADT | | | Estimated 2022 AADT | | | |
|------------------|---------------|---------------|---------|----------|---------------------|----------|--------|-----|
| | Est AADT 2015 | Base 2015 | DM 2022 | CAZ 2022 | DM 2022 | CAZ 2022 | Change | |
| Torre Rd | 170 | 20 | 22 | 22 | 172 | 172 | 0 | 0% |
| Lincoln Green Rd | 170 | 47 | 55 | 53 | 178 | 176 | -2 | -1% |
| Woodhouse St | 140 | 113 | 122 | 123 | 149 | 150 | 1 | 1% |
| Hyde Park Rd | 100 | 90 | 93 | 97 | 103 | 107 | 4 | 4% |
| Woodsley Rd | 80 | 124 | 126 | 137 | 82 | 93 | 11 | 13% |
| Canal Rd | 310 | 448 | 477 | 446 | 339 | 308 | -31 | -9% |
| Town St | 220 | 297 | 327 | 311 | 250 | 234 | -16 | -6% |
| Upper Wortley Rd | 290 | 344 | 369 | 356 | 315 | 302 | -13 | -4% |

Note: 2015 observed AADT estimated from 2017 MCC

Table C3 – Forecast Changes in LGV volumes – routes attracting more traffic 2022

| Road | Observed | Modelled AADT | | | Estimated 2022 AADT | | | |
|------------------------|---------------|---------------|---------|----------|---------------------|----------|--------|-----|
| | Est AADT 2015 | Base 2015 | DM 2022 | CAZ 2022 | DM 2022 | CAZ 2022 | Change | |
| A6120 Ring Rd Roundhay | 2448 | 1985 | 2051 | 2046 | 2514 | 2509 | -5 | 0% |
| A6120 Ring Rd Farsley | 3738 | 1881 | 2194 | 2098 | 4051 | 3955 | -96 | -2% |
| Gildersome La | 970 | 711 | 885 | 865 | 1144 | 1124 | -20 | -2% |
| Tong Rd | 1200 | 1080 | 1374 | 1376 | 1494 | 1496 | 2 | 0% |
| M62 Jn 27-28 | 19786 | 12043 | 14385 | 14219 | 22128 | 21962 | -166 | -1% |
| M62 Jn 28-29 | 17596 | 13593 | 16274 | 16071 | 20277 | 20074 | -203 | -1% |

Note: 2015 observed AADT estimated from 2015 MCC

Table C4 – Forecast Changes in HGV volumes – routes attracting more traffic 2022

| Road | Observed | Modelled AADT | | | Estimated 2022 AADT | | | |
|------------------------|---------------|---------------|---------|----------|---------------------|----------|--------|-----|
| | Est AADT 2015 | Base 2015 | DM 2022 | CAZ 2022 | DM 2022 | CAZ 2022 | Change | |
| A6120 Ring Rd Roundhay | 564 | 436 | 569 | 600 | 697 | 728 | 31 | 4% |
| A6120 Ring Rd Farsley | 579 | 285 | 281 | 318 | 575 | 612 | 37 | 6% |
| Gildersome La | 250 | 282 | 304 | 350 | 272 | 318 | 46 | 17% |
| Tong Rd | 340 | 385 | 401 | 428 | 356 | 383 | 27 | 8% |
| M62 Jn 27-28 | 20818 | 8752 | 9088 | 9208 | 21154 | 21274 | 120 | 1% |
| M62 Jn 28-29 | 19690 | 9997 | 10374 | 10444 | 20067 | 20137 | 70 | 0% |

Note: 2015 observed AADT estimated from 2015 MCC

Table C5 – Modelled changes in traffic volumes – routes attracting more traffic 2022

| 2022 estimated AADT with ORR CAZ B and CCP | | | | | | | | | | | | |
|--|-------------|--------|-----------|-------|------|---------------|------|------|-----|--------|-------|-------|
| Road | Anode Bnode | AADT | Compliant | | | Non compliant | | | PSV | Total | | |
| | | | Cars | LGV | OGV | Cars | LGV | OGV | | Cars | LGV | OGV |
| A6120 Ring Rd Roundhay | | 19038 | 13235 | 1381 | 489 | 3131 | 665 | 111 | 26 | 16366 | 2046 | 600 |
| A6120 Ring Rd Farsley | | 23272 | 16872 | 1416 | 246 | 3984 | 682 | 72 | 0 | 20856 | 2098 | 318 |
| Gildersome La | | 8685 | 5960 | 584 | 264 | 1408 | 281 | 86 | 102 | 7368 | 865 | 350 |
| Tong Rd | | 13427 | 9278 | 929 | 379 | 2191 | 447 | 49 | 154 | 11469 | 1376 | 428 |
| M62 Jn 27-28 | | 134293 | 89683 | 9598 | 7113 | 21183 | 4621 | 2095 | 0 | 110866 | 14219 | 9208 |
| M62 Jn 28-29 | | 151671 | 101251 | 10848 | 8205 | 23905 | 5223 | 2239 | 0 | 125156 | 16071 | 10444 |
| Change from 2022 DM | | | | | | | | | | | | |
| Road | Anode Bnode | AADT | Compliant | | | Non compliant | | | PSV | Total | | |
| | | | Cars | LGV | OGV | Cars | LGV | OGV | | Cars | LGV | OGV |
| A6120 Ring Rd Roundhay | | 37 | -1 | -4 | 43 | 12 | -1 | -12 | 0 | 11 | -5 | 31 |
| A6120 Ring Rd Farsley | | -58 | 0 | -65 | 25 | 1 | -31 | 12 | 0 | 1 | -96 | 37 |
| Gildersome La | | -25 | -42 | -13 | 26 | -9 | -7 | 20 | 0 | -51 | -20 | 46 |
| Tong Rd | | 184 | 125 | 1 | 64 | 30 | 1 | -37 | 0 | 155 | 2 | 27 |
| M62 Jn 27-28 | | 245 | 262 | -112 | -21 | 29 | -54 | 141 | 0 | 291 | -166 | 120 |
| M62 Jn 28-29 | | 130 | 225 | -137 | 61 | 38 | -66 | 9 | 0 | 263 | -203 | 70 |
| Percentage change from 2022 DM | | | | | | | | | | | | |
| Road | Anode Bnode | AADT | Compliant | | | Non compliant | | | PSV | Total | | |
| | | | Cars | LGV | OGV | Cars | LGV | OGV | | Cars | LGV | OGV |
| A6120 Ring Rd Roundhay | | 0% | 0% | 0% | 10% | 0% | 0% | -10% | 0% | 0% | 0% | 5% |
| A6120 Ring Rd Farsley | | 0% | 0% | -4% | 11% | 0% | -4% | 20% | 0% | 0% | -4% | 13% |
| Gildersome La | | 0% | -1% | -2% | 11% | -1% | -2% | 30% | 0% | -1% | -2% | 15% |
| Tong Rd | | 1% | 1% | 0% | 20% | 1% | 0% | -43% | 0% | 1% | 0% | 7% |
| M62 Jn 27-28 | | 0% | 0% | -1% | 0% | 0% | -1% | 7% | 0% | 0% | -1% | 1% |
| M62 Jn 28-29 | | 0% | 0% | -1% | 1% | 0% | -1% | 0% | 0% | 0% | -1% | 1% |

Note: Model flow validation is variable across these routes and the results must be taken as indicative only.

Table C6 – Modelled changes in traffic volumes – city centre cordons 2022

| Two way flow changes from DM 2022 | | | | | | | | | | | | |
|-----------------------------------|--|---------|-----------|--------|--------|---------------|--------|--------|--------|---------|--------|--------|
| | | | Compliant | | | Non compliant | | | | Total | | |
| Summary | | AADT | Cars | LGV | OGV | Cars | LGV | OGV | PSV | Cars | LGV | OGV |
| Cordon on approaches to IRR | | | | | | | | | | | | |
| DM 2022 | | 657,496 | 448,937 | 49,096 | 15,392 | 105,894 | 23,631 | 4,222 | 10,324 | 554,831 | 72,727 | 19,614 |
| ORR CAZ B + CCP 2022 | | 664,035 | 453,118 | 49,977 | 18,969 | 106,865 | 24,065 | 691 | 10,350 | 559,983 | 74,042 | 19,660 |
| IRR Cordon Changes | | 6,539 | 4,181 | 881 | 3,577 | 971 | 434 | -3,531 | 26 | 5,152 | 1,315 | 46 |
| Percentage change | | 1.0% | 0.9% | 1.8% | 23.2% | 0.9% | 1.8% | -83.6% | 0.3% | 0.9% | 1.8% | 0.2% |
| Cordon within IRR | | | | | | | | | | | | |
| DM 2022 | | 333,261 | 229,666 | 22,338 | 5,460 | 54,005 | 10,760 | 1,499 | 9,533 | 283,671 | 33,098 | 6,959 |
| ORR CAZ B + CCP 2022 | | 303,302 | 208,918 | 19,822 | 5,984 | 49,229 | 9,545 | 255 | 9,549 | 258,147 | 29,367 | 6,239 |
| Within IRR Changes | | -29,959 | -20,748 | -2,516 | 524 | -4,776 | -1,215 | -1,244 | 16 | -25,524 | -3,731 | -720 |
| Percentage change | | -9.0% | -9.0% | -11.3% | 9.6% | -8.8% | -11.3% | -83.0% | 0.2% | -9.0% | -11.3% | -10.3% |

Table C7 – Modelled changes in traffic volumes – IRR

| 2022 estimated AADT with ORR CAZ B and CCP | | | | | | | | | | | | | |
|--|-------------|-------|-----------|------|------|---------------|------|------|------|-------|-------|------|--|
| Road | | | Compliant | | | Non compliant | | | | | Total | | |
| | Anode Bnode | AADT | Cars | LGV | OGV | Cars | LGV | OGV | PSV | Cars | LGV | OGV | |
| IRR Lovell Park Br | | 55848 | 39304 | 4173 | 1054 | 9266 | 2009 | 42 | 0 | 48570 | 6182 | 1096 | |
| IRR Woodhouse tunnel | | 81995 | 57506 | 6384 | 1410 | 13567 | 3073 | 55 | 0 | 71073 | 9457 | 1465 | |
| IRR Wellington Br | | 99086 | 68392 | 7711 | 1951 | 16134 | 3713 | 69 | 1116 | 84526 | 11424 | 2020 | |
| A643 Ingram | | 79861 | 54368 | 6838 | 2426 | 12829 | 3292 | 108 | 0 | 67197 | 10130 | 2534 | |
| M621 Jn 2 - 2a | | 86067 | 57479 | 7104 | 4164 | 13562 | 3420 | 109 | 229 | 71041 | 10524 | 4273 | |
| M621 Jn 2a - 3 | | 94989 | 63239 | 8067 | 4523 | 14919 | 3884 | 128 | 229 | 78158 | 11951 | 4651 | |
| M621 Jn 3 - 4 | | 70120 | 45968 | 6495 | 3587 | 10842 | 3127 | 101 | 0 | 56810 | 9622 | 3688 | |
| John Smeaton Viaduct | | 38236 | 25749 | 3242 | 1568 | 6064 | 1560 | 53 | 0 | 31813 | 4802 | 1621 | |
| IRR East Street | | 38383 | 27343 | 2581 | 651 | 6436 | 1243 | 27 | 102 | 33779 | 3824 | 678 | |
| B6154 Wellington Rd | | 18620 | 12597 | 1350 | 276 | 2973 | 650 | 11 | 763 | 15570 | 2000 | 287 | |
| Change from 2022 DM | | | | | | | | | | | | | |
| Road | | | Compliant | | | Non compliant | | | | | Total | | |
| | Anode Bnode | AADT | Cars | LGV | OGV | Cars | LGV | OGV | PSV | Cars | LGV | OGV | |
| IRR Lovell Park Br | | 5889 | 4236 | 467 | 247 | 910 | 208 | -179 | 0 | 5146 | 675 | 68 | |
| IRR Woodhouse tunnel | | 7051 | 5128 | 485 | 313 | 1151 | 220 | -246 | 0 | 6279 | 705 | 67 | |
| IRR Wellington Br | | 9912 | 7176 | 636 | 443 | 1698 | 299 | -344 | 4 | 8874 | 935 | 99 | |
| A643 Ingram | | 21560 | 15187 | 1573 | 764 | 3615 | 768 | -347 | 0 | 18802 | 2341 | 417 | |
| M621 Jn 2 - 2a | | 9727 | 6548 | 874 | 1034 | 1587 | 433 | -749 | 0 | 8135 | 1307 | 285 | |
| M621 Jn 2a - 3 | | 2722 | 2046 | 119 | 837 | 532 | 70 | -882 | 0 | 2578 | 189 | -45 | |
| M621 Jn 3 - 4 | | -5343 | -3230 | -780 | 388 | -611 | -334 | -776 | 0 | -3841 | -1114 | -388 | |
| John Smeaton Viaduct | | 2697 | 1502 | 547 | 318 | 364 | 255 | -289 | 0 | 1866 | 802 | 29 | |
| IRR East Street | | 5064 | 3285 | 628 | 202 | 752 | 293 | -96 | 0 | 4037 | 921 | 106 | |
| B6154 Wellington Rd | | 4861 | 3569 | 261 | 101 | 841 | 126 | -37 | 0 | 4410 | 387 | 64 | |
| Percentage change from 2022 DM | | | | | | | | | | | | | |
| Road | | | Compliant | | | Non compliant | | | | | Total | | |
| | Anode Bnode | AADT | Cars | LGV | OGV | Cars | LGV | OGV | PSV | Cars | LGV | OGV | |
| IRR Lovell Park Br | | 12% | 12% | 13% | 31% | 11% | 12% | -81% | 0% | 12% | 12% | 7% | |
| IRR Woodhouse tunnel | | 9% | 10% | 8% | 29% | 9% | 8% | -82% | 0% | 10% | 8% | 5% | |
| IRR Wellington Br | | 11% | 12% | 9% | 29% | 12% | 9% | -83% | 0% | 12% | 9% | 5% | |
| A643 Ingram | | 37% | 39% | 30% | 46% | 39% | 30% | -76% | 0% | 39% | 30% | 20% | |
| M621 Jn 2 - 2a | | 13% | 13% | 14% | 33% | 13% | 14% | -87% | 0% | 13% | 14% | 7% | |
| M621 Jn 2a - 3 | | 3% | 3% | 1% | 23% | 4% | 2% | -87% | 0% | 3% | 2% | -1% | |
| M621 Jn 3 - 4 | | -7% | -7% | -11% | 12% | -5% | -10% | -88% | 0% | -6% | -10% | -10% | |
| John Smeaton Viaduct | | 8% | 6% | 20% | 25% | 6% | 20% | -85% | 0% | 6% | 20% | 2% | |
| IRR East Street | | 15% | 14% | 32% | 45% | 13% | 31% | -78% | 0% | 14% | 32% | 19% | |
| B6154 Wellington Rd | | 35% | 40% | 24% | 58% | 39% | 24% | -77% | 0% | 40% | 24% | 29% | |

Note: Model flow validation is variable across these routes and the results must be taken as indicative only.