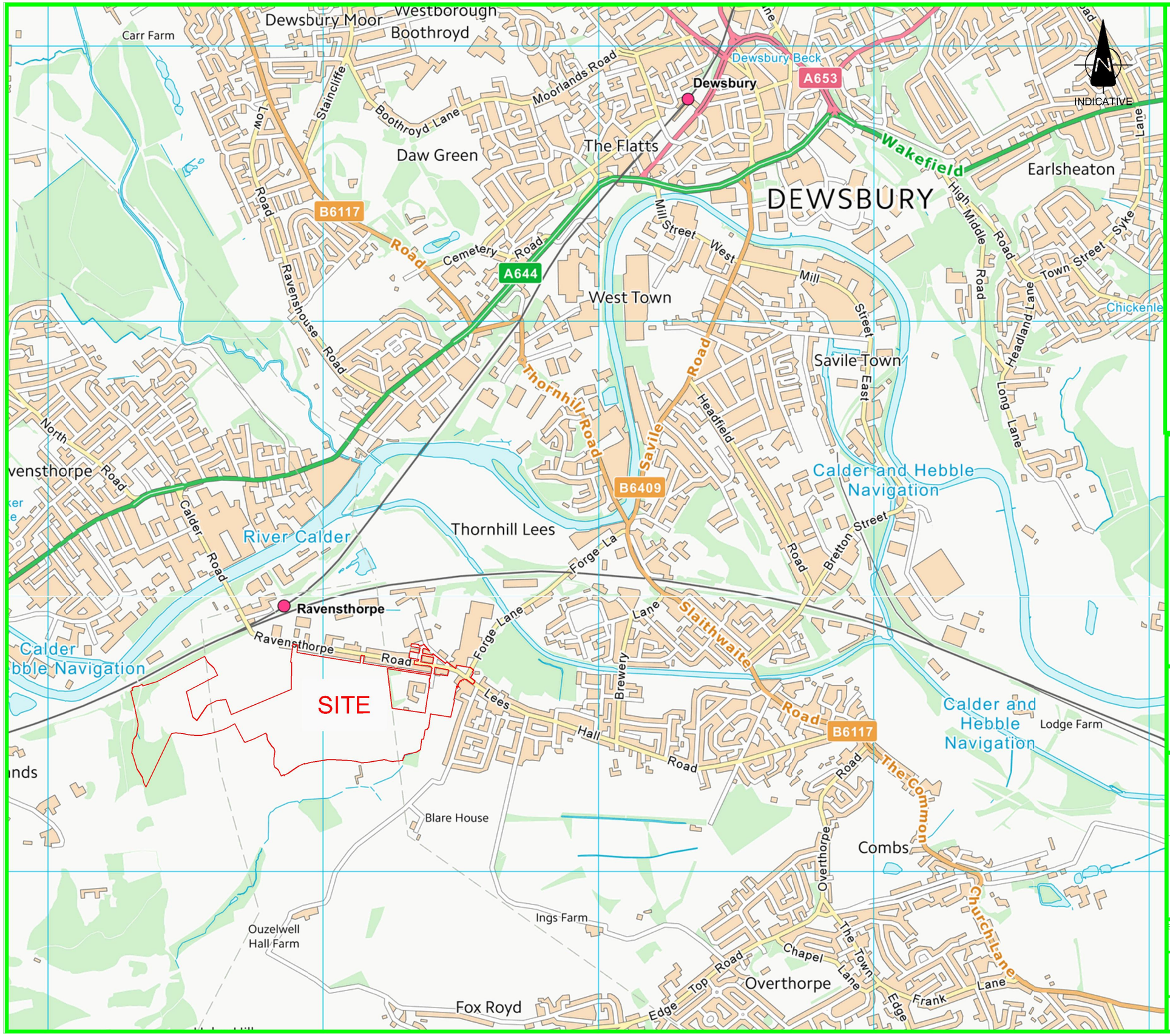
APPENDIX A



Tel : 01924 684 000 Email : info@devplanning.co.uk
http://www.devplanning.co.uk

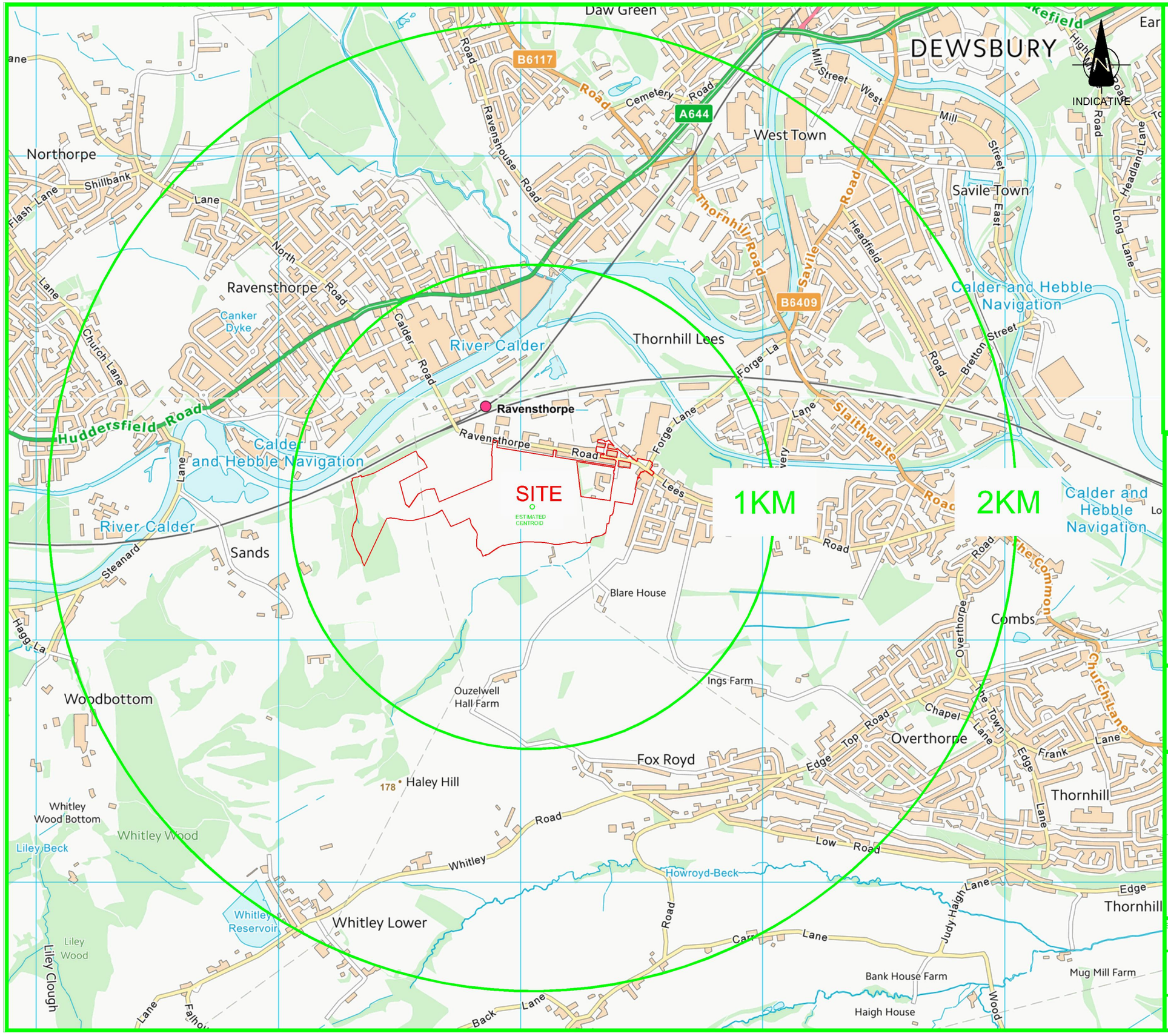
CLIENT: KMBC

PROJECT: DEWSBURY RIVERSIDE

TITLE: SITE LOCATION PLAN

SCALE @ A3:	APPROVED:	DATE:
NTS	DRS	03/09/2021

PROJECT No:	DRAWING No:	REV:
2020213	FIG 2.1	-



Tel : 01924 684 000 Email : info@devplanning.co.uk
http://www.devplanning.co.uk

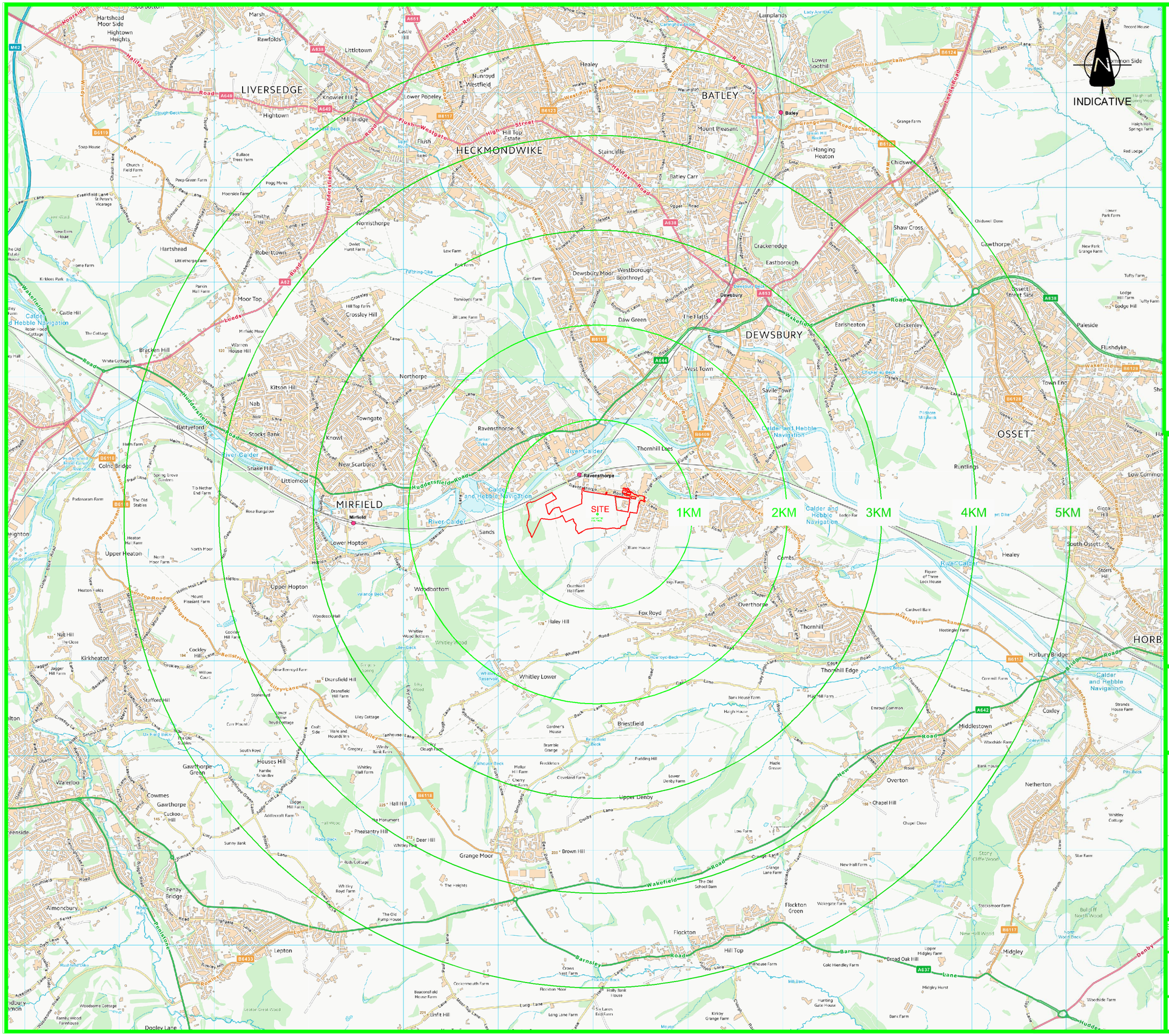
CLIENT: KMBC

PROJECT: DEWSBURY RIVERSIDE

TITLE: WALKING ISOCHRONES 1KM AND 2KM

SCALE @ A3:	APPROVED:	DATE:
NTS	DRS	03/09/2021

PROJECT No:	DRAWING No:	REV:
2020213	FIG 6.1	-



Tel : 01924 684 000 Email : info@devplanning.co.uk
http://www.devplanning.co.uk

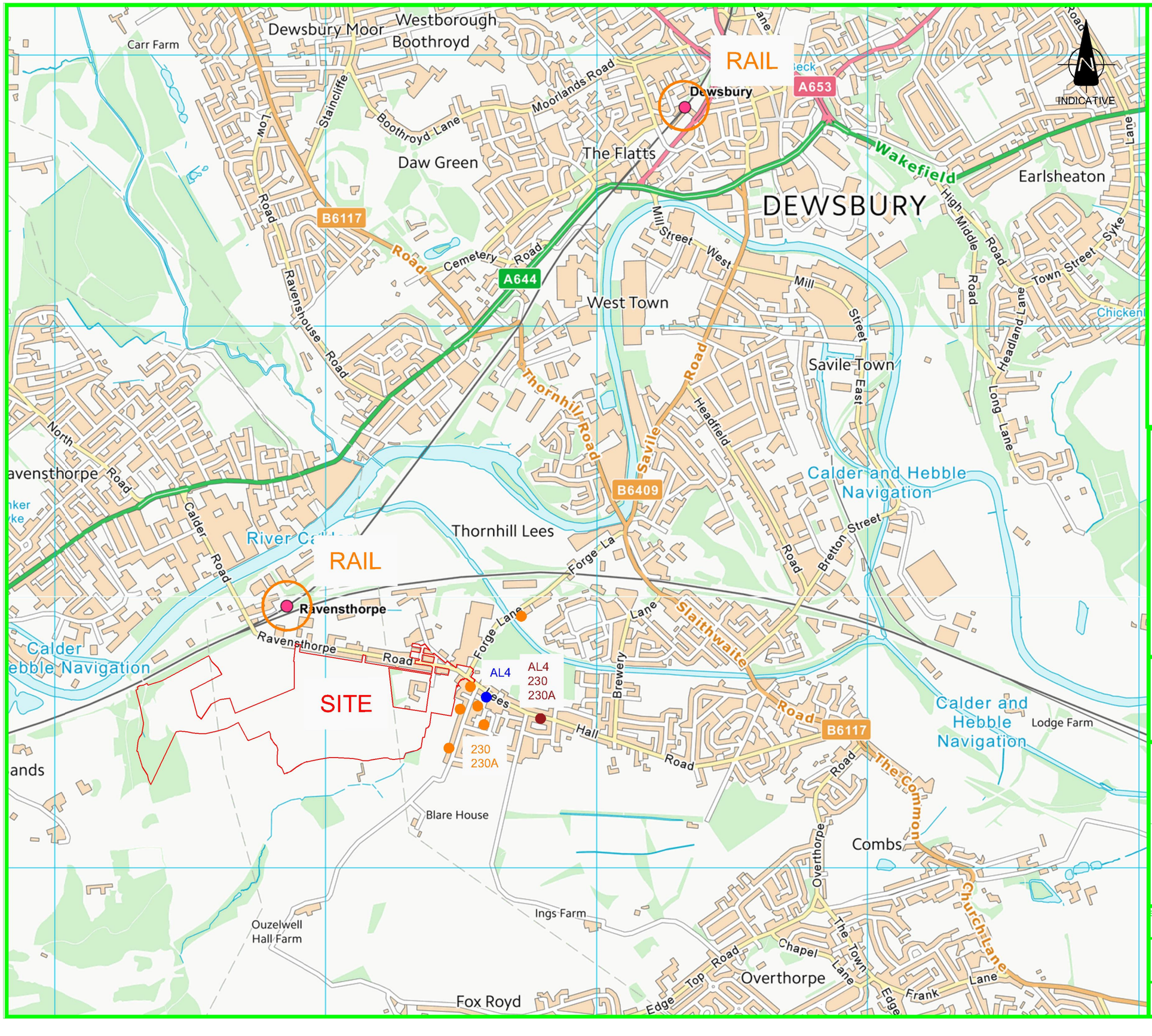
CLIENT:
KMBC

PROJECT:
DEWSBURY RIVERSIDE

TITLE:
CYCLING ISOCHRONES
1KM, 2KM, 3KM, 4KM and 5KM

SCALE @ A3:	APPROVED:	DATE:
NTS	DRS	03/09/2021

PROJECT No:	DRAWING No:	REV:
2020213	FIG 6.2	-



Tel : 01924 684 000 Email : info@devplanning.co.uk
http://www.devplanning.co.uk

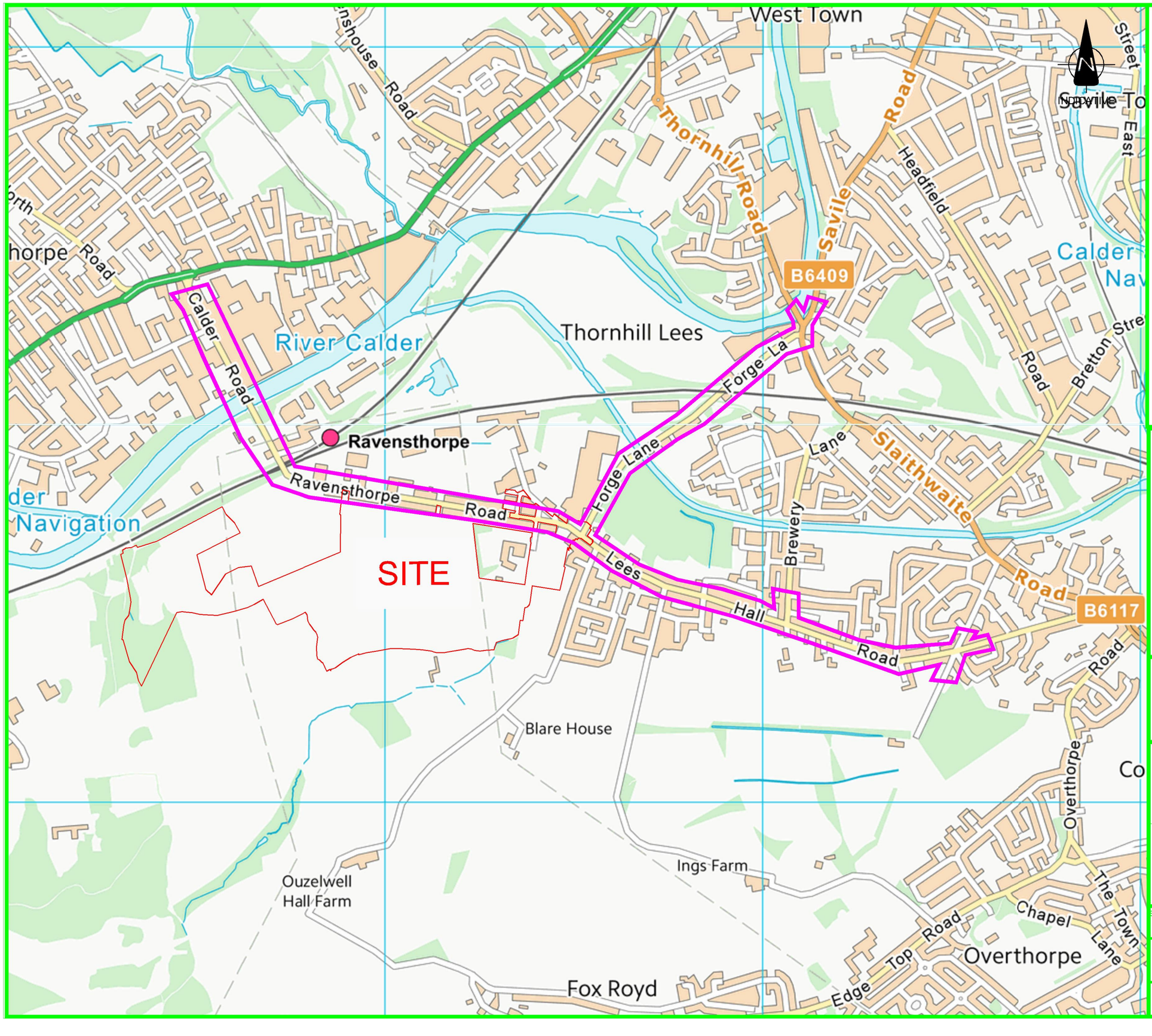
CLIENT: KMBC

PROJECT: DEWSBURY RIVERSIDE

TITLE: PUBLIC TRANSPORT FACILITIES PLAN

SCALE @ A3:	APPROVED:	DATE:
NTS	DRS	03/09/2021

PROJECT No:	DRAWING No:	REV:
2020213	FIG 6.3	-



Tel : 01924 684 000 Email : info@devplanning.co.uk
http://www.devplanning.co.uk

CLIENT: KMBC

PROJECT: DEWSBURY RIVERSIDE

TITLE: ACCIDENT STUDY AREA

SCALE @ A3:	APPROVED:	DATE:
NTS	DRS	03/09/2021

PROJECT No:	DRAWING No:	REV:
2020213	FIG 9.1	-

APPENDIX B

Mirfield – Dewsbury – Leeds Transport Scheme Public Consultation 2020

Consultation Analysis Report

Elaine Kelly
Consultation and Engagement Team
West Yorkshire Combined Authority

October 2020

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Contents

Executive Summary

Kirklees Council and Leeds City Council, in partnership with the West Yorkshire Combined Authority, are developing an initial scheme for the A644 and A653 routes between Mirfield – Dewsbury – Leeds, that aims to improve travel opportunities, reliability and the local environment.

The scheme, Mirfield – Dewsbury – Leeds Transport Scheme (M2D2L), will help to promote access to jobs, education and services, and improvements in public health and includes new cycle tracks, new pedestrian crossings and footway improvements, bus lanes and bus super-stops (upgraded bus stops), junction upgrades, and other highway space adjustments.

Between 22 July and 25 September 2020, a public consultation was held to hear views and opinions from members of the public, businesses and organisations, and interested stakeholders. We requested opinions and feedback on the proposals to:

- Improve walking and cycling facilities
- Enhance bus lanes and facilities to improve bus reliability
- Upgrade junctions to improve congestion
- Improve landscaping
- Improve air quality

The roads in question are key transport routes through areas of north Kirklees and south Leeds that are the focus of significant planned housing and economic growth over the next 10-15 years. Proposals for several major development sites are being worked up and will be brought forward / built at different speeds. It is important to recognise that the proposals being consulted on now for the Mirfield-Dewsbury-Leeds (Phase 1) project represent one stage of a longer-term programme of transport investment into the area.

The results from this consultation will help inform which aspects of these proposals will form the £13 million scheme, which is to be funded with £12.5 million through the West Yorkshire plus Transport Fund and £500,000 of Section 106 funding. Subject to consultation feedback, the list of design options will be reviewed and shortlisted and work on the final scheme could start in early 2022. Future proposals (subject to funding) along the corridor will consider improvements at other sections of the route.

Consultation Activity

The consultation was promoted via mailings to approximately 13,000 households and businesses along the spine of the route.

Press releases were issued to local and regional newspapers. Websites and social media channels of Kirklees Council, Leeds City Council and the West Yorkshire Combined Authority were used to promote the consultation, alongside posters and real time information displays at bus shelters along the route.
An online survey was hosted on a unique website www.yourvoice.westyorks-ca.gov.uk/m2d2l designed and built by the West Yorkshire Combined Authority on

their ‘YourVoice’ digital hosting website. The website gave the background to the scheme, together with detailed plans of each section of the scheme and a comprehensive list of frequently asked questions (FAQs). During the engagement period, members of the public were invited to complete the online survey which asked for extent of agreement with options presented and invited comments. Information could also be made available in alternative formats on request via Metroline, including paper copy, large print other languages and braille, with Freepost available for return of paper surveys. A Question & Answer (Q&A) tool was available on the website and a dedicated email address was open for questions and comments yourvoice@westyorks-ca.gov.uk.

Public drop-in events had been planned to enable members of the public to view large scale plans and to ask questions directly of officers. Unfortunately, due to the Covid-19 pandemic these events were unable to be held; officers requested, and were granted, approval from their respective authorities to cancel plans for the events. As a means of enabling members of the public to still have those conversations directly, particularly for those who could not, or did not want to engage via the internet, a series of webinars were scheduled. From 7 – 18 September project officers were available to discuss the scheme with members of the public, either over the telephone or by Zoom or Teams in a webinar style event.

These sessions were promoted via a leaflet drop to households in postcode areas with an initial lower survey response rate. Leaflets were also delivered to faith and community settings within these postcode areas, and posters were displayed at all bus shelters along the entire route. The leaflets and posters gave reminders of the consultation and invited members of the public to book a discussion by either phoning the Metroline number or by emailing the YourVoice email address. Two members of the public joined a webinar.

Lead and ward councillors were emailed with details of the consultation and asked to share with their constituents once launched. Officers from Kirklees Council and Leeds Council also emailed stakeholders and interested parties and held early discussion with several key stakeholder groups as part of ongoing stakeholder engagement.

Understanding the results

It is worth noting that responses are self-selecting; only people who chose to give their views have had them recorded. Typically, in public consultations, responses tend to come from those who are more likely to be impacted by any proposals and more motivated to express their views. The responses must therefore be seen as representative of those who wanted their views heard rather than representative of the population as a whole.

Closed survey responses have been analysed to provide quantitative results. Survey results are presented as percentages. (Where figures in this report do not add up to 100%, this is the result of computer rounding or multiple responses). Open survey questions with submissions that were free text responses were analysed using a qualitative data analysis approach. Text comments have been coded thematically to

organise the data for systematic analysis. It is important to note that where open text comments have been analysed using qualitative methods, these aim to accurately capture and assess the range of points put forward. The survey analysis has been presented in sections, relating to demographic information and opinions on the scheme, and based on responses received.

Next steps

The full cost of the series of design options that are presented in this consultation exercise extends significantly beyond the current scheme budget. Therefore, once the public consultation period has concluded, officers from Kirklees Council and Leeds City Council will look to shortlist design options for delivery within the M2D2L Phase 1 project through the analysis of public consultation responses, together with the value for money assessment and deliverability of each option.

Options that are not prioritised in this Phase 1 shortlist but are considered to have merit and public support may form part of future phases of M2D2L or other opportunities, subject to funding or by alternative investment streams.

Consultation results – headlines

During the ten weeks' engagement period, 7182 visits were made to the engagement website www.yourvoice.westyorks-ca.gov.uk/m2d2l. Details of the Your Voice website engagement analytics can be found on page 17.

A total of 363 online surveys were completed by participants. Survey headlines are shown below, and full details of the survey analytics can be found commencing on page 19.

In the optional section 'About you', respondents were invited to answer a series of questions about their demographic information. The headlines are shown below.

- When asked which gender they identified with, 61% of respondents said 'male', 31% said 'female', 2% said 'other' and 6% preferred not to say
- When asked for their age category, 43% of respondents said they are aged between 45-64 years, 31% are aged between 24-44 years, 13% are aged 65 years or above, 5% are under 24 years and 8% preferred not to say
- When asked if their day to day activities were limited by a health problem or disability, which has lasted, or is expected to last at least 12 months, 80% of respondents said 'no', 9% said 'yes, limited a little', 4% said 'yes, limited a lot' and 7% preferred not to say
- When asked about their ethnic origin, 73% of respondents said they are 'White British', 5% said 'Asian / Asian British', 3% said 'White Other', 2% said 'Mixed / Multiple Ethnic groups', 2% said 'Other', 1% said 'Black / Black British' and 14% preferred not to say
- When asked for the first half of their postcodes, 46% gave WF postcodes in Kirklees and 6% gave HD postcodes in Kirklees, 35% gave LS postcodes (Leeds), 11% gave WF postcodes (Wakefield) and 1% gave BD postcodes (Cleckheaton). I person gave a YO postcode (Selby)

For consultation purposes, the package of proposed options was divided into six geographical sections as follows:

Section A. Mirfield – Ravensthorpe A644
Section B. Ravensthorpe – Dewsbury A644
Section C. Dewsbury town centre and Ring Road
Section D. Shaw Cross (Challenge Way junction)
Section E. White Rose – Tingley A653
Section F. Tingley – Dewsbury Road A653

- For each of the proposed options included in sections A-F, a greater percentage of respondents were in agreement with the proposals (agreed and strongly agreed) than in disagreement (disagreed and strongly disagreed)
- In Section A, when asked about options for car parking restrictions in the proposed mandatory cycle lanes, 76% of respondents said they would support car parking restrictions 24 hours per day (24/7), whilst the remaining 24% of respondents said they would prefer car parking restrictions at peak travel times only
- When asked about hours of operation for the proposed new bus lanes in Section B and Section F, in both sections a greater percentage of respondents said they would support shorter hours of operation for the bus lanes (60% and 53% respectively). For both sections B and F, lower percentages of respondents said they would support bus lanes in operation 24/7 (24 hours per day) (40% and 47% respectively)
- In Section E, when asked if the proposals would encourage them to walk and/or cycle more in the area, 54% of respondents said yes, 33% said no, 12% were neutral and 1% don't know
- In Section F, when asked about the potential extension to the eastbound bus lane between White Rose and the Tommy Wass junction, 55% of respondents said they would support this extension of the bus lane and 45% said they would not support the extension
- In Sections C and F, when asked if the proposals would encourage them to walk and/or cycle more in the area, a greater percentage of respondents said yes they would be encouraged to walk or cycle more in the area (47% and 46% respectively) and a lower percentage said no they wouldn't (36% and 40% respectively)
- However, when the same question was asked in Section A, a greater percentage of respondents (43%) said the proposals would not encourage them to walk or cycle more in the area and a lower percentage (38%) said they would be encouraged to walk or cycle more in the area. This is despite respondents being more in agreement, than disagreement, with all the proposals in Section A
- Some participants chose to add comments within their survey responses for each of the Sections A-E. These comments have been coded for summary purposes. The coding aims to accurately capture and assess the range of points put forward. The coded summary tables can be viewed at the end of each section, with the full list of verbatim comments included in Appendix One

- 30 questions were asked using the online Your Voice Question and Answer (Q&A) tool. These questions were responded to by officers from Kirklees Council and Leeds City Council and for information, can be viewed on the Your Voice website www.yourvoice.westyorks-ca.gov.uk (Where personal details would have been visible to the public, responses have been sent privately in accordance with data protection principles)
- Six emails containing constructive comments and/or suggestions were received via the Combined Authority's Your Voice dedicated email address yourvoice@westyorks-ca.gov.uk and responded to by officers from Kirklees Council and Leeds City Council. Details of email communications received and responses from officers can be found In Appendix Two
- In addition, six emails were received via Kirklees Council and Leeds City Council, from stakeholders or interested parties. These emails contained concerns around safety of pedestrians and cyclists, suggestions to improve infrastructure for active travel, and suggestions for how to action missed opportunities to improve green infrastructure. Officers have either responded in full or where more detailed consideration of the email content is required, acknowledgements have been sent and full responses will be forwarded in due course. Emails and responses (where already provided) can be viewed in Appendix Three
- No postal surveys or letters were received in relation to this scheme
- Two members of the public requested telephone discussions to ask further questions on the scheme and officers from Kirklees Council facilitated separate webinar style discussions with the two individuals concerned

Overview

The Scheme

Between 22 July and 25 September 2020, a public consultation was held on proposals within the Mirfield to Dewsbury to Leeds (M2D2L) Transport Scheme. The consultation invited members of the public, businesses and organisations, and interested stakeholders to comment and give their opinion on the proposals and design plans.

Background

Kirklees Council and Leeds City Council, in partnership with the West Yorkshire Combined Authority, are developing an initial scheme for the A644 and A653 routes between Mirfield – Dewsbury – Leeds, that aims to improve travel opportunities, reliability and the local environment.

The scheme will help to promote access to jobs, education and services, and improvements in public health and includes new cycle tracks, new pedestrian crossings and footway improvements, bus lanes and bus super-stops (upgraded bus stops), junction upgrades, and other highway space adjustments.

Scheme objectives

The objectives for this scheme are to:

- Better manage congestion on the M2D2L corridor within the Leeds City Region – Strategic Economic Plan (LCRSEP) period
- Enhance public transport operations and infrastructure along the M2D2L corridor
- Facilitate and support the growth in employment, housing and economy along the M2D2L corridor within current LCRSEP and Kirklees and Leeds Local Plan periods
- Improve the quality of the local environment and public realm to help support regeneration in Dewsbury Town Centre in line with Dewsbury Development Framework
- Reduce adverse impacts of transport on the environment and public health (enhancing active travel opportunities)

The roads in question are key transport routes, through areas of north Kirklees and south Leeds, that are the focus of significant planned housing and economic growth over the next 10-15 years. Proposals for several major development sites are being worked up and will be brought forward / built at different speeds. It is important to recognise that the proposals being consulted on now for the Mirfield-Dewsbury-Leeds (Phase 1) project represent one stage of a longer-term programme of transport investment into the area that will include:

- Alterations to road junctions to provide access to new development sites, often in phases
- Investment into the Transpennine rail network and stations, for example, through the Transpennine Route upgrade

- Upgrades at Mirfield, Ravensthorpe and Dewsbury stations and on the railway lines
- Transforming Cities Fund (TCF) projects, particularly in and around Dewsbury (projects for Dewsbury Bus Station and Halifax Rd-Bradford Rd-Ring Road Junction will be publicly consulted on in summer 2021 as part of the TCF programme). For more information click here (External link - opens in a new tab)
- Future phases of the Mirfield-Dewsbury-Leeds scheme, subject to new funding
- Exploration and assessment of strategic highway scheme options in North Kirklees to relieve pressure on existing roads and communities, and to support growth

Scheme proposals

During the ten-week consultation, between 22 July and 25 September, we requested opinions and feedback on the proposals to:

- Improve walking and cycling facilities
- Enhance bus lanes and facilities to improve bus reliability
- Upgrade junctions to improve congestion
- Improve landscaping
- Improve air quality

Consultation Activity

The public consultation for Mirfield-Dewsbury-Leeds was originally planned to commence in Spring 2020, however the onset of COVID-19 and its impact on residents and businesses prompted Kirklees and Leeds Councils, together with the West Yorkshire Combined Authority, to decide to postpone the consultation to a more suitable period. The length of the consultation period and the means of communication were also reviewed, to make sure the maximum number of people as possible could be informed and have the chance to respond.

The consultation period was extended over 10 weeks to take account of Covid-19 and the school summer holidays, although it was anticipated many people would not be travelling abroad in summer 2020.

Engagement Website and Survey

For the purpose of the public engagement exercise a unique website was created http://www.yourvoice.westyorks-ca.gov.uk/m2d2l and populated with the scheme plans and information necessary for public participation. The website was designed, built, and hosted by the West Yorkshire Combined Authority on their 'Your Voice' engagement website www.yourvoice.westyorks-ca.gov.uk.

- A consultation survey was hosted on the website that asked for extent of agreement with the plans and invited any comments. Feedback on the plans and completed responses to the survey were collected on the dedicated YourVoice website, where people were also given the opportunity to sign up to be kept informed about the development of the project

- Details of the website analytics can be found on page 17. Detailed analysis of the survey responses can be found commencing on page 19. Some participants chose to add comments within their survey responses for each of the Sections A-E. These comments have been coded for summary purposes. The coding aims to accurately capture and assess the range of points put forward. The summary tables can be viewed at the end of each section, with the full list of verbatim comments included in Appendix One

Communication Channels

Questions and Answer (Q&A) online tool

Visitors to the Your Voice website were also given the opportunity to ask a question using the online Q&A tool. This tool allows visitors to pose questions for the project team to respond to and was supported by an extensive list of Frequently Asked Questions (FAQs) that provided additional information and context about the scheme, its funding and the development process.

Any questions received are open and accessible to all visitors of the scheme, remain on the site and together with responses from officers, are consolidated into the FAQs for future engagement activities. Each question is answered individually by officers from the project team and the responses are published publicly as a record on the website, unless a private response is deemed appropriate for data protection purposes. In line with GDPR guidance, personal data contained within any enquiry received is never published.

Emails and letters

Throughout the consultation period, members of the public were offered the opportunity to ask questions or seek more information via a dedicated email address hosted by the Combined Authority yourvoice:westyorks-ca.gov.uk, or in writing via the freepost address provided. Members of the project team provided responses to enquiries. These communication channels were available to complement the online survey on the YourVoice engagement website, and so that groups or representatives could submit consolidated comments or feedback.

Consultation materials

For the website, large copy plans were designed, which clearly showed detailed plans of the improvement proposals along the route. These plans were made available on a dedicated page, and available for download, on the YourVoice platform alongside information about the scheme. Both the plans and the survey could also be made available in alternative formats on request via Metroline, including large print, other languages and braille. Pre-printed 'Freepost' envelopes were also available for free of charge returns.

Consultation promotion

The consultation was promoted via the Your Voice website and on the Kirklees and Leeds City Council websites. Social media posts to Twitter and FaceBook were planned by each partner throughout the consultation.
@WestYorkshireCA @KirkleesCouncil @LeedsCC_help
@TheCombinedAuthority @liveinkirklees @Leedscouncil @ConnectingLeeds

The consultation was also publicised on the Metro Facebook page and in 'Metro Messenger' (the Metro transport newsletter) including a link to the scheme where people could find out more and take part in the public engagement. Real Time Information displays at all bus shelters along the route promoted the consultation.

A press release was issued to, and published by, major newspapers in towns along the route, including Yorkshire Post newspapers, Huddersfield Examiner and Dewsbury Reporter. As an example, see the Huddersfield Examiner Live release here.

To complement the public engagement exercise, leaflets and posters advertising the consultation and signposting to the online survey and information, were distributed within the local community and placed at bus shelters along the route.

Initial Mailing to households and businesses

In anticipation that public drop-in events would not be able to take place, the project team arranged an initial mailing to approximately 13,000 households and businesses along the spine of the route and some 250 metres back from the highway. This mailing gave details of how to engage with the consultation and encouraged people to share with family, friends and neighbours.

Further mailing

During the consultation period, postcode analysis of survey responses highlighted some areas with lower-than-average response rates (Ravensthorpe and Beeston in particular). A further leaflet mailing was arranged and delivered to households in these low response postcode areas and to places of worship along the route. For those who could not, or did not want to engage via the internet, this updated leaflet promoted the option to phone the Metroline number or email the YourVoice email address to discuss the proposals with an officer from Kirklees or Leeds and to request paper copies of plans and/or the survey to be mailed out to them. This opportunity was also promoted via laminated posters at all bus shelters along the entire route and on the Your Voice website and via social media.

Webinar events

Public drop-in events had been planned to enable members of the public to view large scale plans and to ask questions directly of officers. Unfortunately, due to the Covid-19 pandemic these events were unable to be held; officers requested, and were granted, approval from their respective authorities to cancel plans for the events. As a means of enabling members of the public to still have those conversations directly, particularly for those who could not, or did not want, to engage via the internet, a series of webinars were scheduled. From 7 – 18 September project officers were available to discuss the scheme with members of the public, either over the telephone or by Zoom or Teams in a webinar style event.

Stakeholder engagement

Lead councillors were fully briefed on the scheme and councillors in affected wards were emailed to advise them of the consultation prior to launch to enable them to view scheme details in advance. Councillors were encouraged to share our content on social media with their followers and to email or contact

constituents and any local groups or businesses who may be interested once the consultation materials launched.

Kirklees Council and Leeds City Council officers emailed details of the consultation to their respective stakeholder contact lists and other interested parties, including:

- Ward and lead councillors
- Emergency services
- Bus operators (including Arriva, First and Yorkshire Tiger)
- Statutory undertakers and utility companies
- Accessibility and disability groups
- Active travel groups
- Community groups and centres
- Places of worship
- Ecology organisations (e.g. RSPB)

Early discussions were held with several key groups, including Highways England and White Rose Centre in Leeds. A separate briefing session was also held with Leeds Citizens group at the request of some Local Members.

Future Engagement
As standard, visitors to the YourVoice engagement webpage are offered the opportunity to sign-up to be contacted with updates about the scheme; visitors can also register to be kept informed about all engagement activities, and specific topics and districts of interest.

Next steps
The full cost of the series of design options that are presented in this consultation exercise extends significantly beyond the current scheme budget. Therefore, once the public consultation period has concluded, officers from Kirklees Council and Leeds City Council will look to shortlist design options for delivery within the M2D2L Phase 1 project through the analysis of public consultation responses, together with the value for money assessment and deliverability of each option. Options that are not prioritised in this Phase 1 shortlist but are considered to have merit and public support may form part of future phases of M2D2L or other opportunities, subject to funding or by alternative investment streams.

Analysis
The results of the consultation survey can be viewed commencing on page 19. The data which has been collected is presented anonymously for full consideration by officers involved in developing the scheme. Any comments used as illustrative quotes within this report have been copied verbatim from their source. No changes were made to the information received so as not to inadvertently misinterpret or misidentify the intention of the respondent.

Closed survey responses have been analysed to provide quantitative results. Survey results are presented as percentages. (Where figures in this report do not add up to 100%, this is the result of computer rounding or multiple responses).

Open survey questions with submissions that were free text responses were analysed using a qualitative data analysis approach. Text comments have been coded thematically to organise the data for systematic analysis. It is important to note that where open text comments have been analysed using qualitative methods, these aim to accurately capture and assess the range of points put forward.

The survey analysis has been presented in sections relating to demographic information, and opinions on the scheme proposals, and is based on responses received.

Consultation results

Headlines

During the ten weeks' engagement period, 7182 visits were made to the engagement website www.yourvoice.westyorks-ca.gov.uk/m2d2l. Details of the Your Voice website engagement analytics can be found on page 17.

A total of 363 online surveys were completed by participants. Survey headlines are shown below and full details of the survey analytics can be found commencing on page 19.

In the optional section 'About you', respondents were invited to answer a series of questions about their demographic information. The headlines are shown below.

- When asked which gender they identified with, 61% of respondents said 'male', 31% said 'female', 2% said 'other' and 6% preferred not to say
- When asked for their age category, 43% of respondents said they were aged between 45-64 years, 31% were aged between 24-44 years, 13% were aged 65 years or above, 5% were under 24 years and 8% preferred not to say
- When asked if their day to day activities were limited by a health problem or disability, which has lasted, or is expected to last at least 12 months, 80% of respondents said 'no', 9% said 'yes, limited a little', 4% said 'yes, limited a lot' and 7% preferred not to say
- When asked about their ethnic origin, 73% of respondents said they are 'White British', 5% said 'Asian / Asian British', 3% said 'White Other', 2% said 'Mixed / Multiple Ethnic groups', 2% said 'Other', 1% said 'Black / Black British' and 14% preferred not to say
- When asked for the first half of their postcodes, 46% have WF postcodes in Kirklees and 6% have HD postcodes in Kirklees, 35% have LS postcodes (Leeds), 11% have WF postcodes (Wakefield) and 1% have BD postcodes (Cleckheaton). I person lives in YO postcode (Selby)

For consultation purposes, the package of proposed options was divided into six geographical sections as follows:

Section A. Mirfield – Ravensthorpe A644
Section B. Ravensthorpe – Dewsbury A644
Section C. Dewsbury town centre and Ring Road
Section D. Shaw Cross (Challenge Way junction)
Section E. White Rose – Tingley A653
Section F. Tingley – Dewsbury Road A653

- In Section A. Mirfield – Ravensthorpe, for each of the proposals a greater percentage of respondents were in agreement (agreed and strongly agreed) than in disagreement (disagreed and strongly disagreed)
- In Section A, when asked about options for car parking restrictions in the proposed mandatory cycle lanes, 76% of respondents said they would

support car parking restrictions 24 hours per day (24/7), whilst the remaining 24% of respondents said they would prefer car parking restrictions at peak travel times only

- In Section A, when asked if the proposals would encourage them to walk and/or cycle more in the area, 43% of respondents said no, 38% said yes, 13% were neutral and 6% don't know
- In Section B. Ravensthorpe - Dewsbury, for each of the proposals a greater percentage of respondents were in agreement (agreed and strongly agreed) than in disagreement (disagreed and strongly disagreed)
- In Section B, when asked about hours of operation for the proposed new bus lanes, 60% of respondents said they would prefer shorter hours of operation, whilst the remaining 40% of respondents said they would support bus lanes being in operation 24/7
- In Section C. Dewsbury town centre and Ring Road, for each of the proposals a greater percentage of respondents were in agreement (agreed and strongly agreed) than in disagreement (disagreed and strongly disagreed)
- In Section C, when asked if the proposals would encourage them to walk and/or cycle more in the area, 47% of respondents said yes, 36% said no, 9% were neutral and 8% don't know
- In Section D. Shaw Cross (Leeds Road / Challenge Way junction), for each of the proposals a greater percentage of respondents were in agreement (agreed and strongly agreed) than in disagreement (disagreed and strongly disagreed)
- In Section E. Tingley – White Rose, for each of the proposals a greater percentage of respondents were in agreement (agreed and strongly agreed) than in disagreement (disagreed and strongly disagreed)
- In Section E, when asked if the proposals would encourage them to walk and/or cycle more in the area, 54% of respondents said yes, 33% said no, 12% were neutral and 1% don't know
- In Section F. White Rose – Dewsbury Road, for each of the proposals a greater percentage of respondents were in agreement (agreed and strongly agreed) than in disagreement (disagreed and strongly disagreed)
- In Section F, when asked if the proposals would encourage them to walk and/or cycle more in the area, 46% of respondents said yes, 40% said no, 11% were neutral and 3% don't know
- In Section F, when asked about the proposed 24/7 hours of operation for the proposed new bus lanes, 53% of respondents said they would prefer shorter hours of operation, whilst 47% of respondents said they would support bus lanes being in operation 24/7
- In Section F, when asked about the potential extension to the eastbound bus lane between White Rose and the Tommy Wass junction, 55% of respondents said they would support this extension of the bus lane and 45% said they would not support the extension
- Some participants chose to add comments within their survey responses for each of the Sections A-E. These comments have been coded for summary purposes. The coding aims to accurately capture and assess the

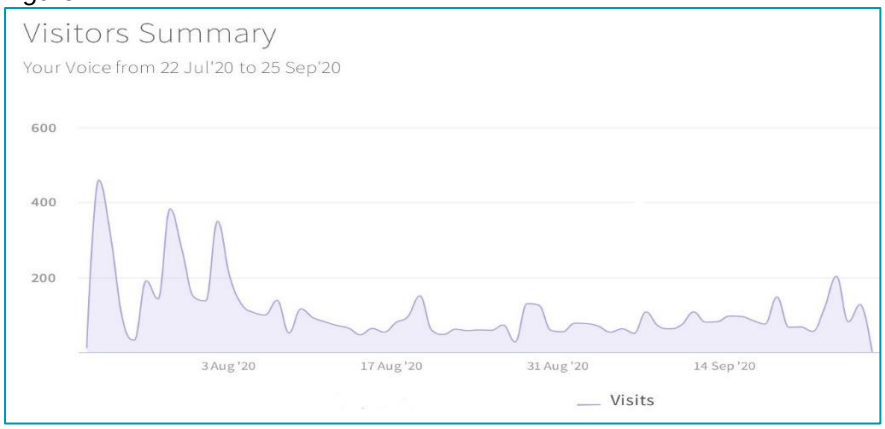
range of points put forward rather than to quantify the number of times specific themes or comments were mentioned. The summary tables can be viewed at the end of each section.

- 30 questions were asked using the online Your Voice Question and Answer (Q&A) tool. These questions were responded to by officers from Kirklees Council and Leeds City Council and can be viewed on the Your Voice website www.yourvoice.westyorks-ca.gov.uk (Where personal details would have been visible to the public, responses have been sent privately in accordance with data protection principles).
- Six emails containing constructive comments and/or suggestions were received via the Combined Authority's Your Voice dedicated email address yourvoice@westyorks-ca.gov.uk and responded to by officers from Kirklees Council and Leeds City Council. Details of email communications received and responses from officers can be found In Appendix Two
- In addition, six emails were received from stakeholders or interested parties, containing concerns around safety of cyclists, suggestions to improve infrastructure for active travel and suggestions for how to action missed opportunities to improve green infrastructure. Officers have either responded in full or where more detailed consideration of the email content is required, acknowledgements have been sent and full responses will be forwarded in due course. Emails and responses (where already provided) can be viewed in Appendix Three
- No postal surveys or letters were received in relation to this scheme
- Two members of the public requested and attended webinar discussions to ask further questions on the scheme with officers from Kirklees Council

Your Voice engagement analytics

The engagement webpage www.yourvoice.westyorks-ca.gov.uk/m2d2l was visited 7182 times during the engagement period 22 July – 25 September 2020. The graph below in Figure 1 shows the highest number of visits per day was on consultation launch day, 22 September, with 459 visits. Visit numbers were highest during the first week, then fell to a constant of at least 50 visits per day (with the exception of only four days across the period).

Figure 1



Visitors to Your Voice are divided into three categories: 'Engaged', 'Informed' and 'Aware'. An 'aware' participant is one who has made at least one visit to the website page but has not clicked to access any additional information/page or participated in an exercise/activity. 5634 aware participants accessed at least one page of the engagement project site.

An 'informed' participant has taken the 'next step' from being aware and clicked on something, that may have been to access an image or a document. We now consider the visitor to be also an informed participant of the project or site, because a click suggests interest in the project. 901 (16%) visitors to the site were informed - the majority having visited multiple project pages, with 858 downloading one or more of the design plans and 70 visiting the FAQ list page.

363 participants (6%) became 'engaged' in the project by completing the online survey, and 33 submitted questions using the online Q&A tool.

The table in Figure 2 below details the activities undertaken by participants.

Figure 2 **A single participant can make multiple visits and undertake multiple activities*

Participant Activity*	Number of participants
Visits to multiple project pages	858
Downloads of documents and/or plans	858
Visits to the FAQs page	70
Contributed via the Q&A tool	30
Completion of survey (Engaged)	363

Traffic to the engagement site came from several different sources. The highest proportion of visits came via social media (4785), followed by a direct site visit (1731). Promotional activity contributed to raising awareness, including press releases, social media posts and tweets, emails to stakeholders, RTI at bus shelters, posters and leaflet mailings. A comprehensive social media content and activity plan was drawn up by all three partners and it is clear from the figures below that this plan represented a successful social media campaign. The table below in Figure 3 details where traffic originated from and describes the sources.

Figure 3

Site access routes	Number of visits
Social media (including Facebook, Twitter, LinkedIn, Instagram)	4785
Direct (by typing the web address Url directly into the address bar on browser to access site) N.B. this category also includes site access via links within emails that were sent out	1731
Search engine (including Google, Bing)	290
Email (site access via direct email campaigns using external email tools)	171
Referral (re-directed to the site)	150
.GOV sites (referrals from government websites)	55

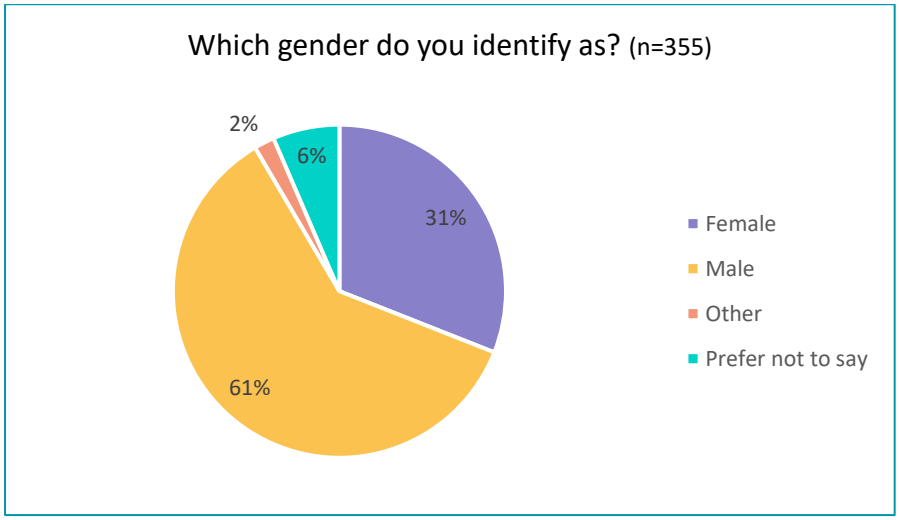
Analysis of survey responses

Members of the public were invited to complete a survey hosted on the Your Voice website. Respondents were asked to complete all relevant sections of the survey which asked their views on the proposal options for the Mirfield-Dewsbury-Leeds Transport Scheme. For ease of consultation, the scheme was divided into six geographical areas with opinions being sought on the options within each section. An optional section containing demographic questions was also included.

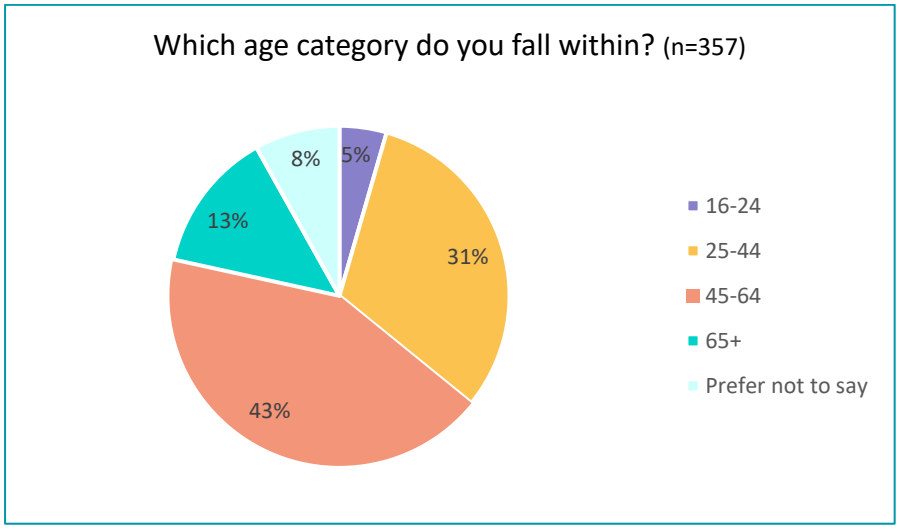
A total of 363 online surveys were completed. The following section includes charts and graphs representing quantitative analysis of the data received in 363 survey responses. Comments received as open text responses have been coded by subject matter and summarised at the end of each section.

OPTIONAL SECTION: ABOUT YOU

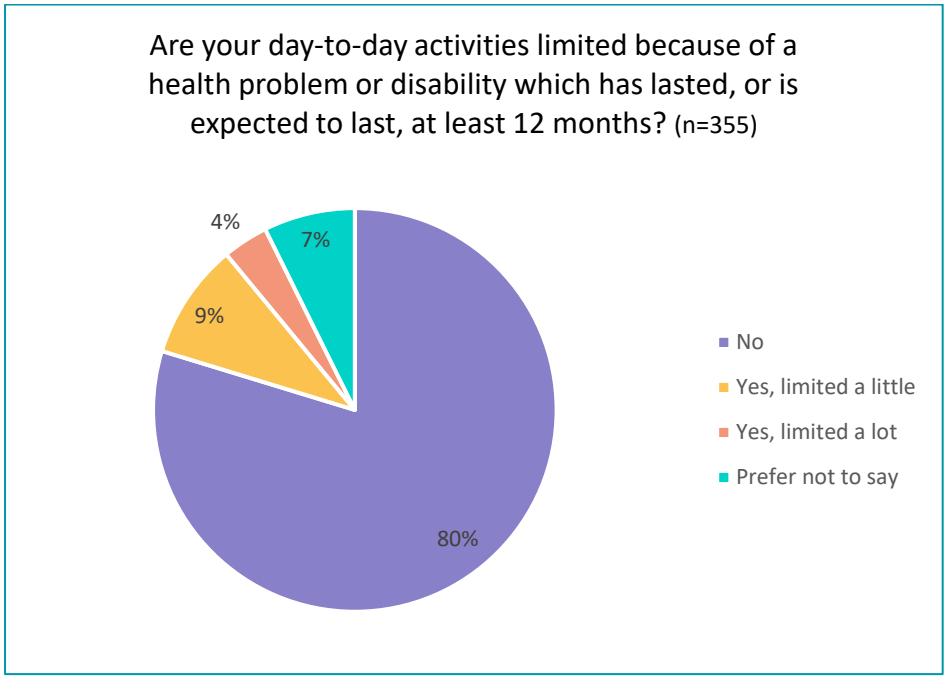
Which gender do you identify as?



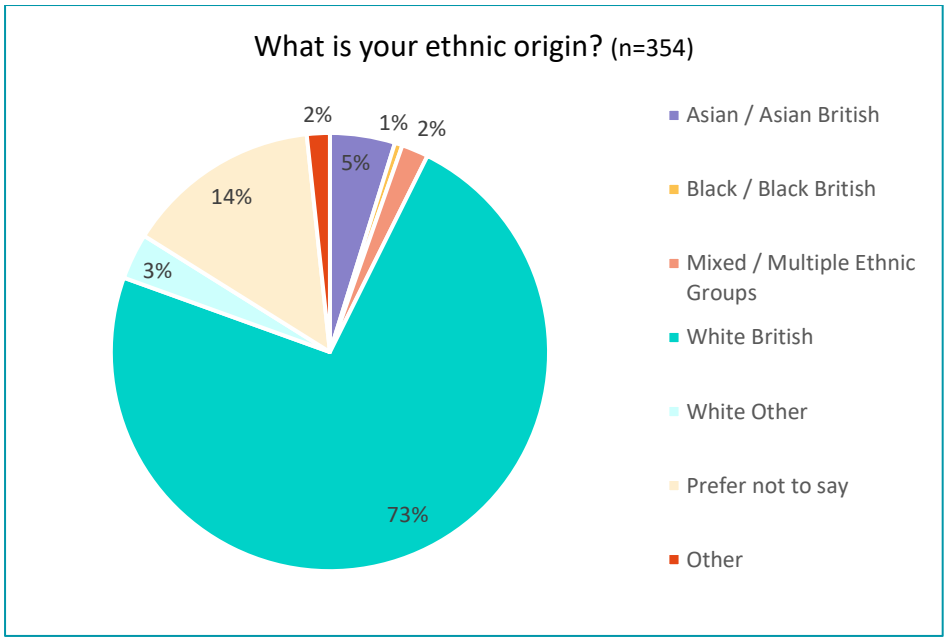
Which age category do you fall within?



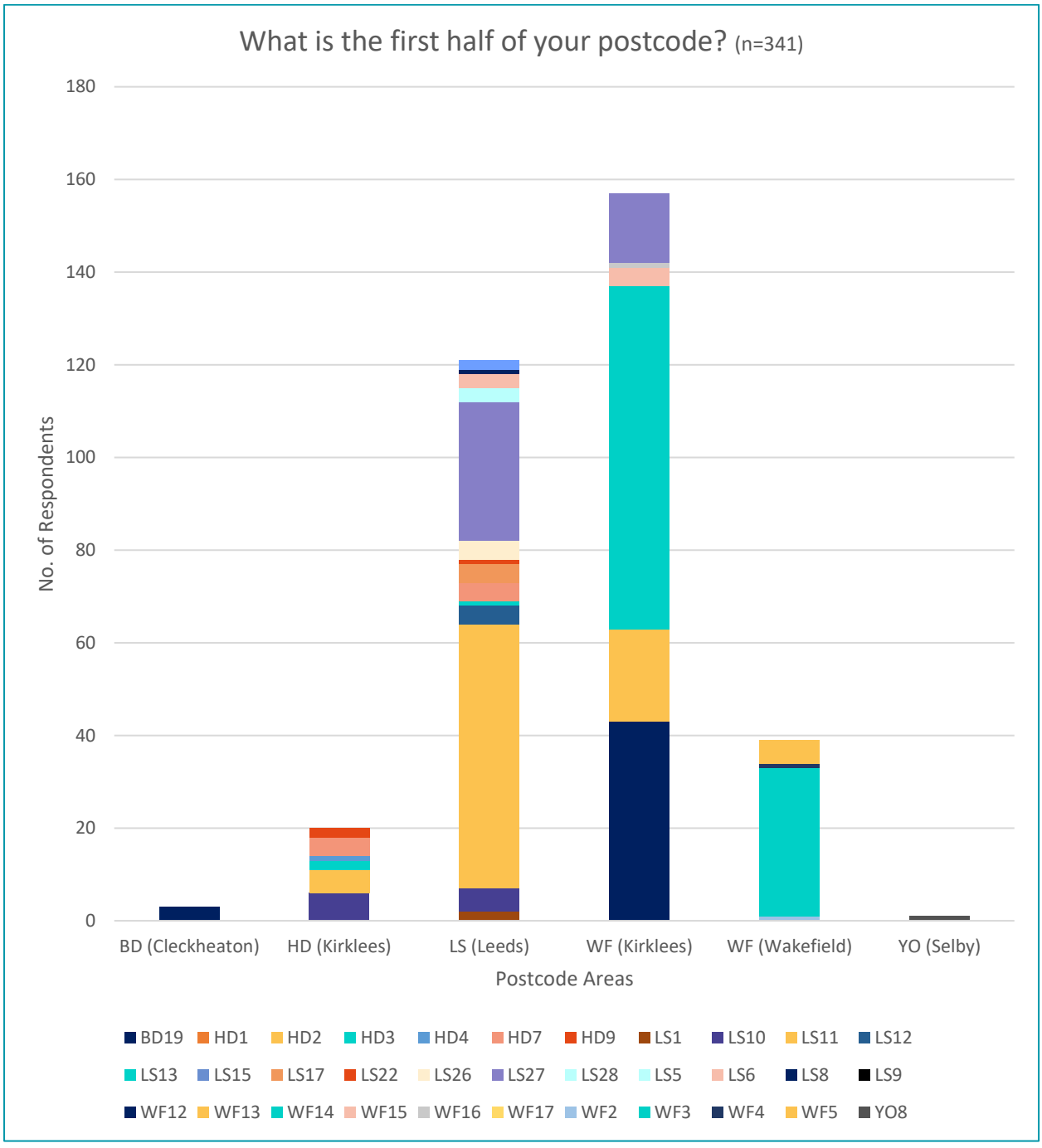
Are your day-to-day activities limited because of a health problem or disability which has lasted, or is expected to last, at least 12 months?



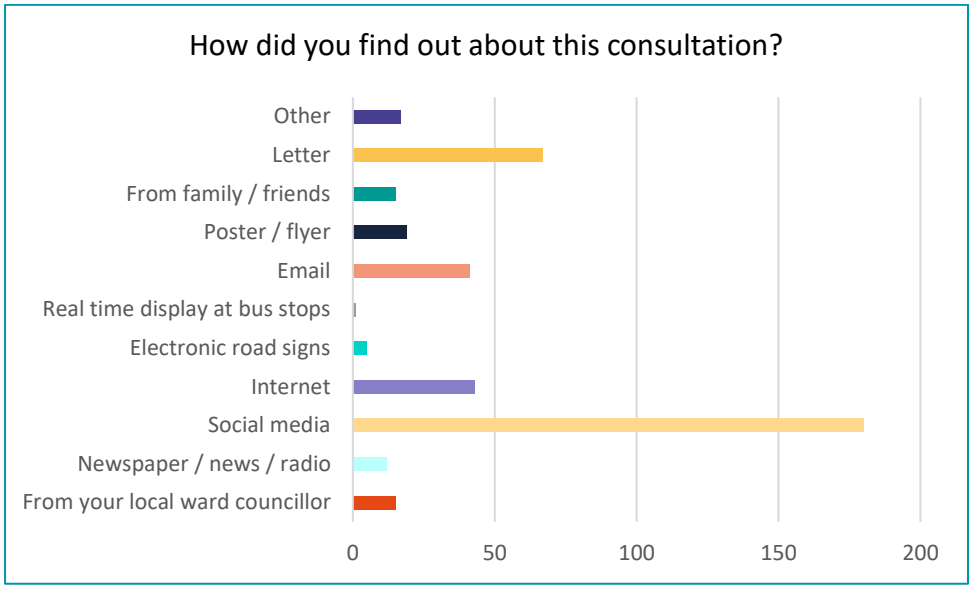
What is your ethnic origin?



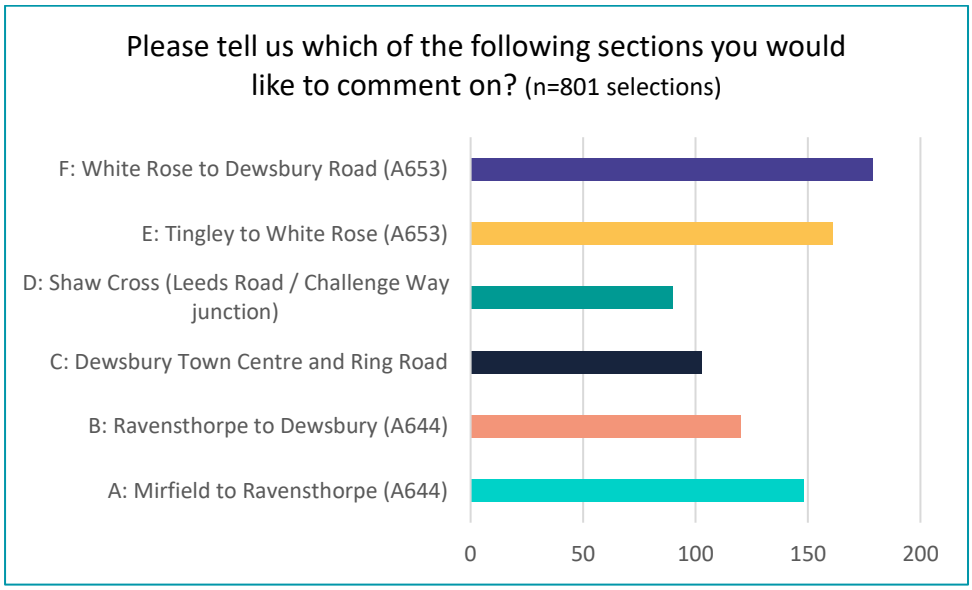
What is the first half of your postcode?



How did you find out about this consultation?



Please tell us which of the following sections you would like to comment on?



SECTION A: VIEWS ON MIRFIELD - RAVENSTHORPE (A644)

This section covers the route on Huddersfield Road (A644) from Mirfield to Ravensthorpe, which is around one and a half miles long. A range of possible measures for this section were considered to best achieve the scheme objectives and help to resolve local transport issues. Due to limited available road space, scheme proposals are constrained without having to take land or demolish buildings, which the scheme seeks to avoid. A primary focus of the scheme has therefore been

to make localised alterations to the main road and its junctions to provide safer routes for walking, better access to bus stops, and for cycling.

Main Issues

- A644 Huddersfield Road is not currently an attractive route for walking and cycling
- Ravensthorpe Gyratory is particularly difficult to traverse for those on a bicycle
- The Station Road/Huddersfield Road junction is inefficient, causing significant delays to general traffic, buses and pedestrians

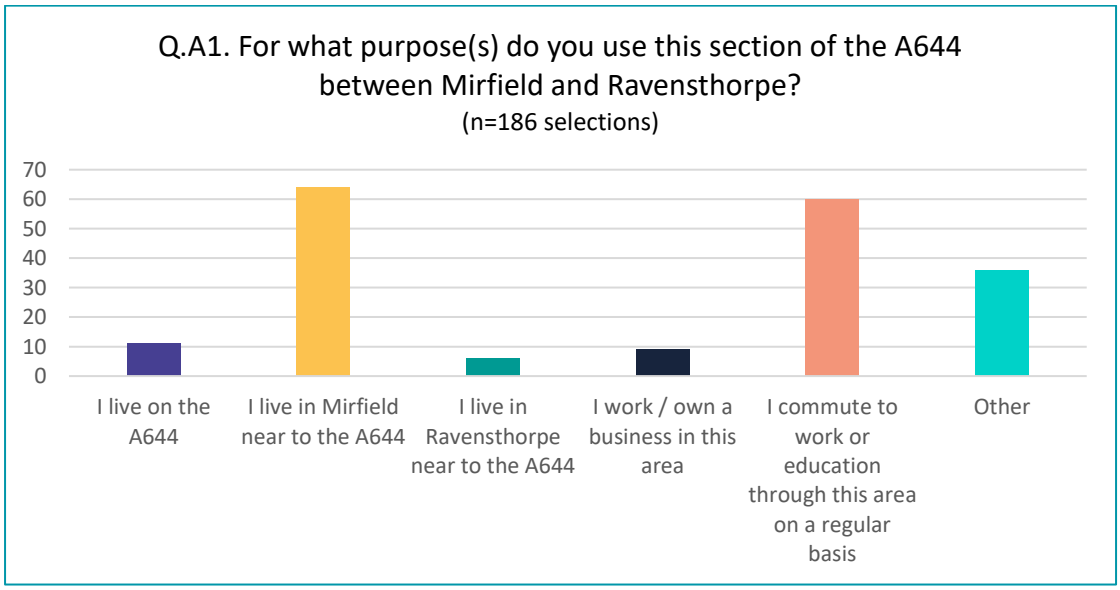
Opportunities

- Modify pavements, side-roads and crossing points, including measures for people with visual impairments
- Provide new cycle lanes and crossing facilities where space allows along the route
- Remodel the traffic signals and layout at Station Road/Huddersfield Road Junction

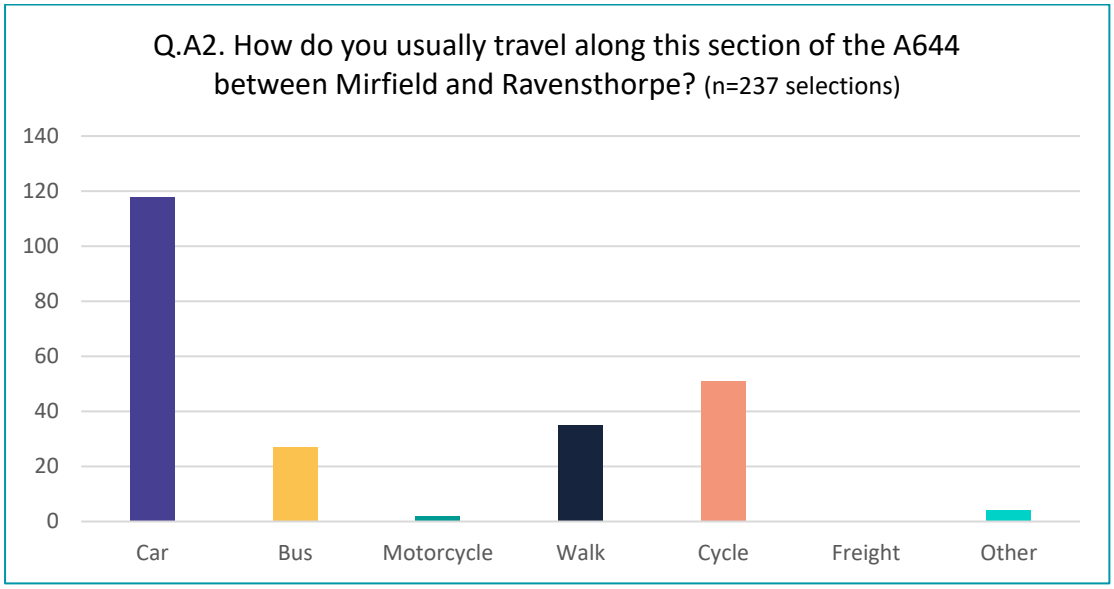
Benefits

- Reduced delays for all road users at the Station Road/Huddersfield Road Junction
- Increased safety and journey quality for pedestrians and cyclists
- Safer walking access to bus stops, making it easier to travel by bus

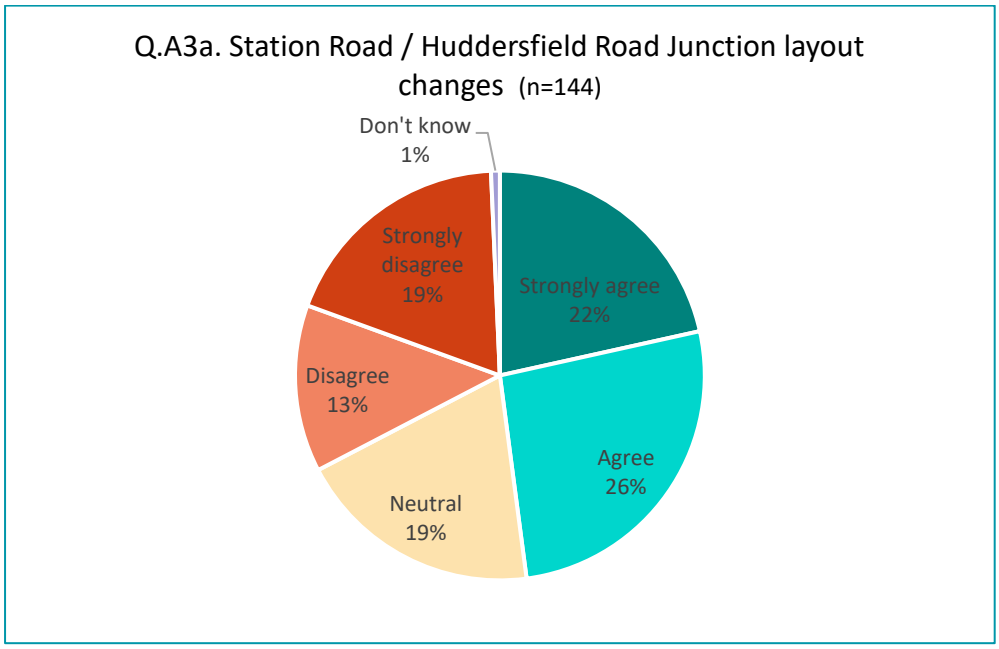
Q.A1. For what purpose(s) do you use this section of the A644 between Mirfield and Ravensthorpe? (Please tick all that apply)



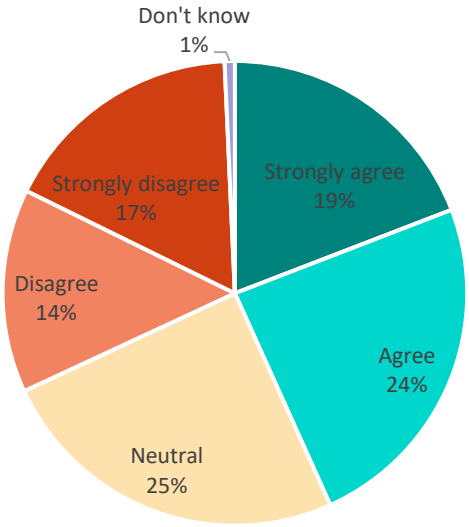
Q.A2. How do you usually travel along this section of the A644 between Mirfield and Ravensthorpe? (Please tick all that apply)



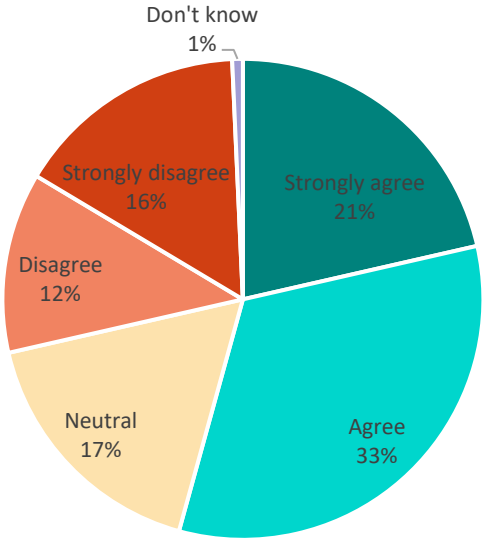
Q.A3. As part of the scheme it is proposed to improve pedestrian and cycle safety. Please tell us your level of agreement for the following proposals to achieve this on the route between Mirfield and Ravensthorpe using the A644?



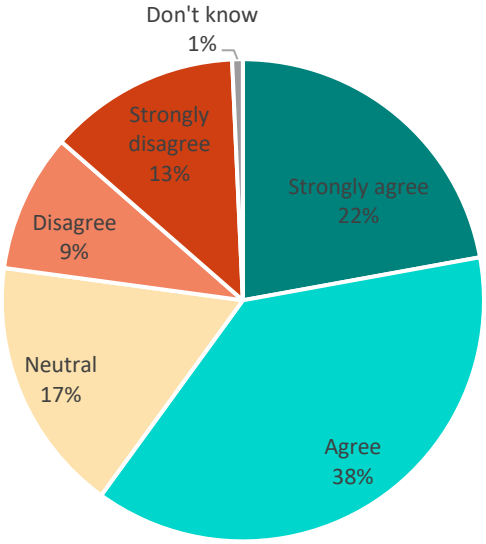
Q.A3b. Side road entry narrowings and crossing features in Mirfield (n=141)



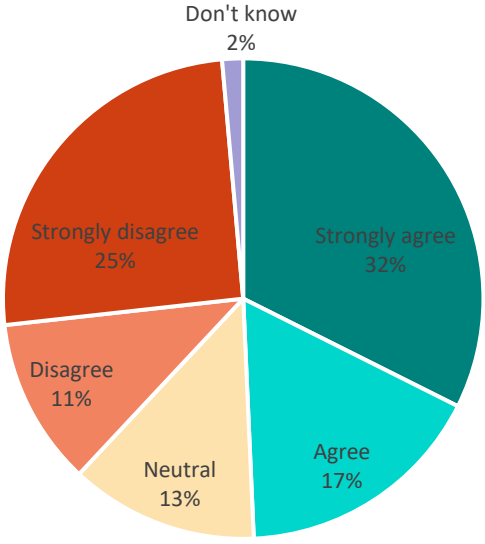
Q.A3c. New pedestrian crossings between Mirfield and Ravensthorpe (n=140)



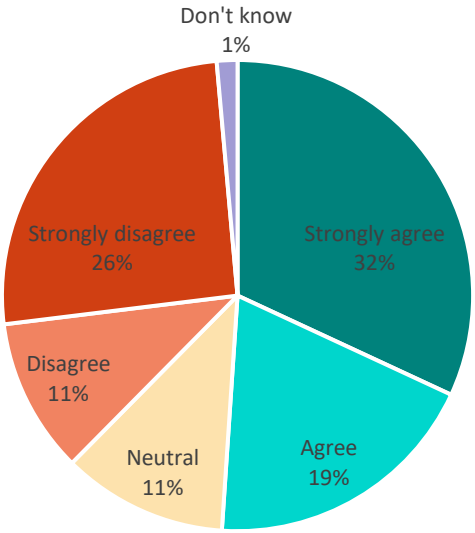
Q.A3d. Upgraded pedestrian crossings between Mirfield and Ravensthorpe (n=140)



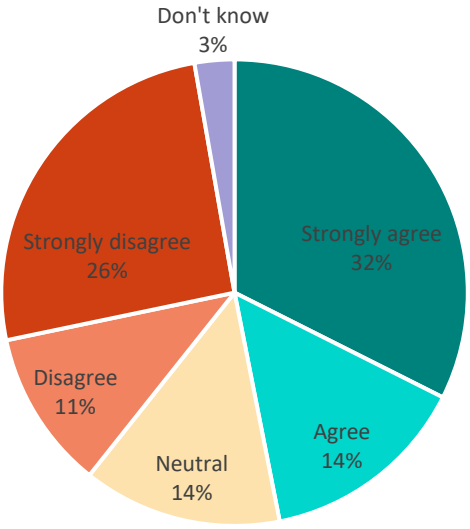
Q.A3e. New eastbound mandatory cycle lane on Huddersfield Road between Knowl Road and Church Lane (n=142)

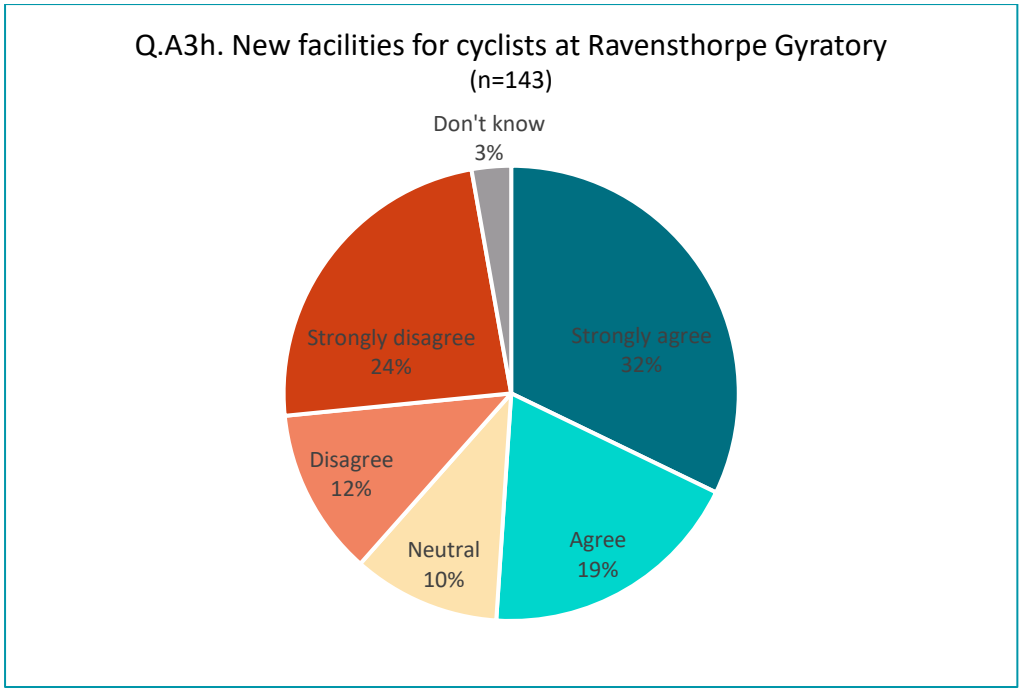


Q.A3f. New westbound mandatory cycle lane on Huddersfield Road between Parker Lane and Church Lane
(n=141)

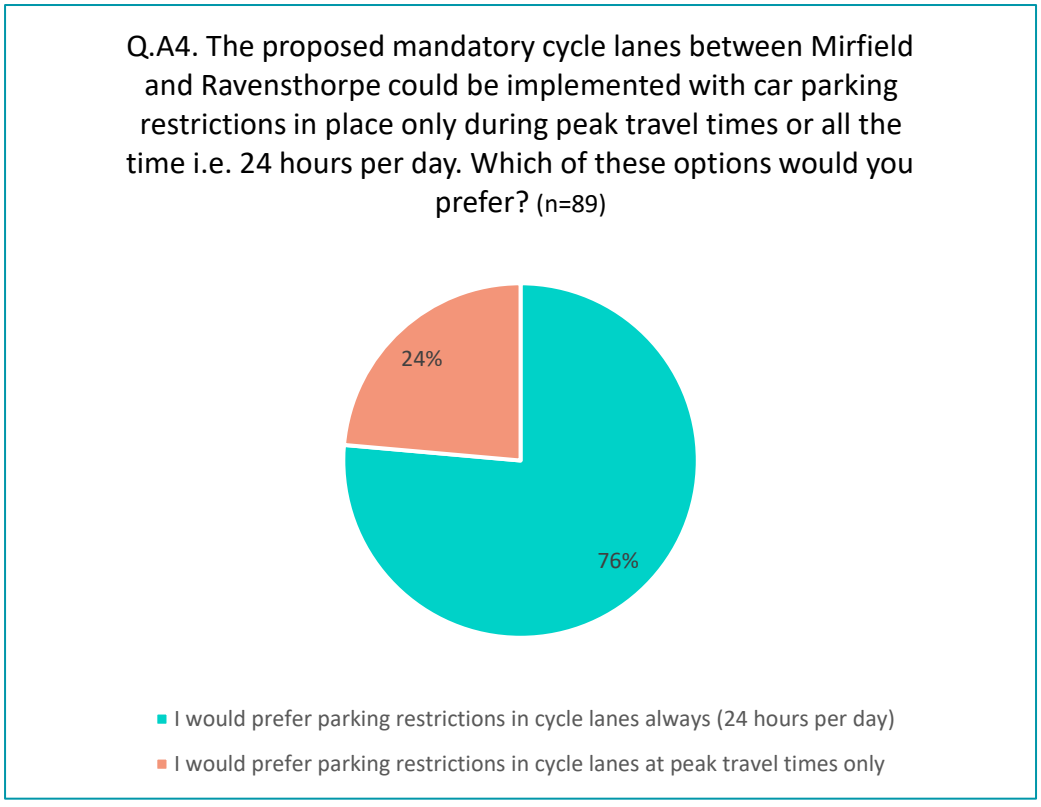


Q.A3g. New mandatory cycle lanes on Huddersfield Road (both directions) between Walker Street and George Street
(n=145)

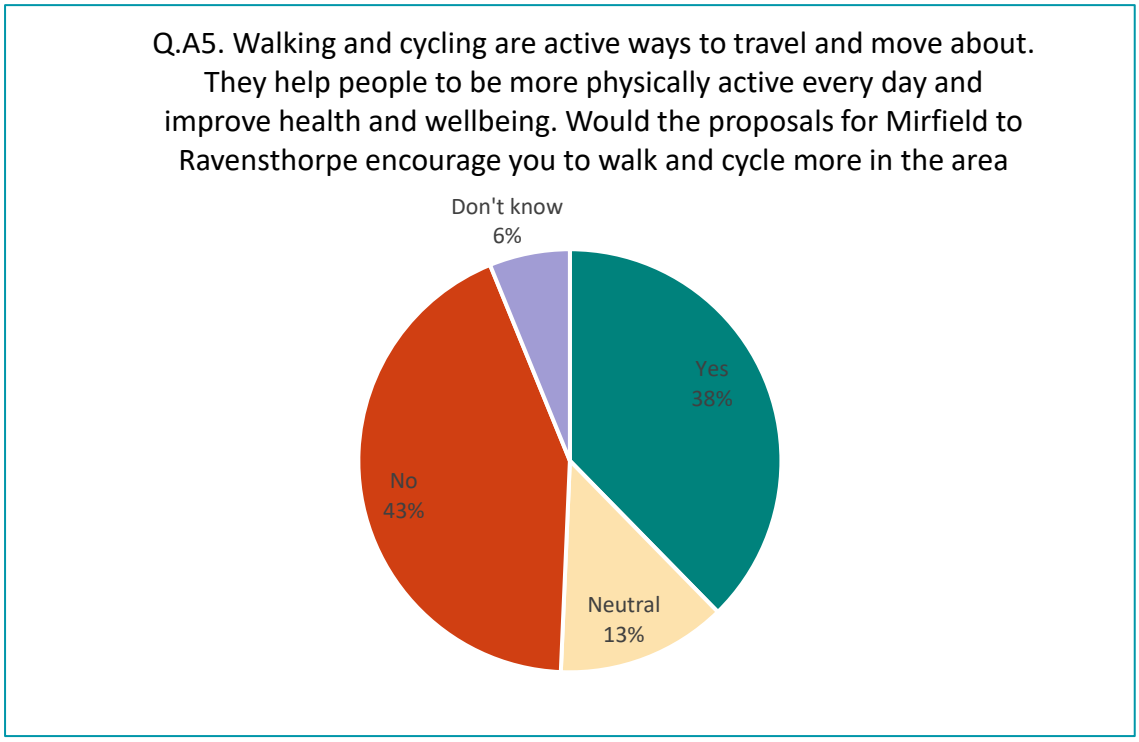




Q.A4. The proposed mandatory cycle lanes between Mirfield and Ravensthorpe could be implemented with car parking restrictions in place only during peak travel times or all the time i.e. 24 hours per day. Which of these options would you prefer?



Q.A5. Walking and cycling are active ways to travel and move about. They help people to be more physically active every day and improve health and wellbeing. Would the proposals for Mirfield to Ravensthorpe encourage you to walk and cycle more in the area?



Q.A6. Please use this space to provide us with any additional comments on the section of the A644 between Mirfield and Ravensthorpe.

Section A. Mirfield - Ravensthorpe	
A1. Ings Grove Park	
Theme	No.
Proposed new pedestrian crossing is not needed due to sufficient existing crossings	2
Suggestion for reduction in speed limit between Doctor Lane and Church Lane	1
Concern for pedestrian safety - queuing traffic at Doctor Lane junction due to existing kerb build out	1
A2. To Station Road	
Theme	No.
Concern that moving the bus stop from the current Vale pull in to outside the Library will cause congestion as cars will not be able to overtake parked buses due to queue of right-hand turning traffic	9
Support proposed no entry to Queen Street	1
Object to proposed no entry to Queen St as will cause more traffic on Fenton St	1
Proposals will worsen existing congestion problems on this stretch	2
Proposed new bus stop is on narrowest part of pavement with no room for bus shelter	1

Concern that re-aligning the pavements will not help – crossing Newgate - the time to cross should be longer	1
Concern that plans for Huddersfield Rd/Station Rd will not improve traffic flow	1
Another design should be developed for the junction of Station Road to give cycles more priority - the route to the station should be a route promoted for multi modal travel	2
Concern for cycle safety - ASL with motor traffic turning across it makes the junction more dangerous for cyclists	1
Concern that mandatory cycle lane will be useless as parking restrictions will not be enforced	2
General - suggest changes to the entrance to Tesco car park as motorists disobey the left turn sign and frequently cut across the traffic to access Station Road and Huddersfield Road	1
General -The car parking bays outside Ramsdens butchers need to be moved as they inhibit vehicles exiting Tesco car park	1
General - The Traffic Light pedestrian crossing opposite the Co-op in Mirfield does not synchronise properly and constantly the warning red light for pedestrians goes out	1
A3. To Knowl Road	
Theme	No.
Support for the revised lanes westbound at the Huddersfield Rd/ Station Rd junction - should be helpful	1
Concern the revised lanes eastbound at the Huddersfield Rd/ Station Rd junction may cause delays to straight-through traffic by cars waiting to turn into Station Rd	1
There is no cycle lane in Mirfield when traveling Westbound between Parker Lane and Fenton Street	1
Concern for cycle safety - turning right from Station Road it's some distance until the mandatory cycle lane after Knoll Road	1
A4. & A5. Knowl Road to Mirfield Cricket Club	
Theme	No.
Concern in Section A4 and A5 the mandatory cycle lane, starting at Knowl Rd to Mirfield cricket club East bound, removes a considerable amount of parking space - will have a detrimental impact elsewhere, especially at school drop off/pick up times	3
Support for the full-time segregated cycle lane	1
Suggest permanent double yellow lines on both sides of this road	1
Concern for pedestrian safety - Parker Lane should be made 1 way in the direction of Crowlees Road and the narrow, dangerous junction built up either side for pedestrians	1
The access to Mirfield Cricket Club and the Park should be modified to allow better vehicular access and exit Parker lane	1
Reduction of pedestrian walkways size between Parker Lane/Knowl Road and Church Lane will increase the risk to pedestrians	1
A6. & A7. Parker Lane to Parkfield Crescent	
Theme	No.
Support for cycle lane	1
Concern in Section A7 proposes narrowing the cycle lane at pinch points – but this exactly where cyclists are more vulnerable	1
Concern that the traffic islands are a danger for cyclists	1

Concern about reducing the size of the pedestrian island by Parker Lane as this was enlarged by Kirklees after a fatality and recommendations made by the West Yorkshire Coroner	1
Support for removal of trees	1
Object to the removal of trees on Huddersfield Road and no mention of any replacements	1
Concern over the removal of the grass verge on Park Bottom	1
General – not related	1
A8. & A9. Parkfield Crescent to Church Lane	
Theme	No.
Concern that making Parkfield Crescent one way will not improve traffic issues	2
Concern over reducing footpath – overhanging trees leave less manoeuvre room	1
Suggestion that instead of creating new cycle lanes, it would be far better to improve the Calder Valley Greenway as cyclists could be taken away from traffic/pollution and could continue to connect with the Spen Valley Greenway	5
The proposals should include segregated cycling facilities between the Greenway (all the way from Huddersfield) to allow access to the Spen Valley Cycleway	2
Cycling infrastructure – Support the Sustrans proposal to re-open the tunnel under the Huddersfield Road / Church Lane junction and continuing the Greenway across the canal to the Train Station in Mirfield	2
Support for the conversion of advisory cycle lanes to mandatory ones, however concern that the hours of operation feels like it would be a regression	1
Support for decent width cycle lanes	1
General – overhaul canal towpath	
A10. Church Lane to Marina	
Theme	No.
Concern that proposals will have to change to incorporate road width increasing as planning permission has been granted for a Petrol station on the site of the Public House opposite Steanard Lane - this represents a major road safety issue	3
Concern that people will not understand or will ignore cycle symbol in the lanes	1
A11. & A12. Low Mill Lane	
Theme	No.
Fir Avenue should be removed (easy access for residents via Fir Parade) This would mean less junctions off Huddersfield Road which can lead to reduced traffic congestion	1
Walker Road should be linked onto Low Mill Lane and block off the exit onto Huddersfield Road. This would mean less junctions off Huddersfield Road which can lead to reduced traffic congestion	1
A13. & A14. The Bull's Head to George Street	
Theme	No.
Concern for cycle safety – this must be a dedicated, segregated cycle lane as residents currently park their vehicles on this section of Huddersfield road - it is a road safety issue for cyclists	1
Concern for cycle safety - A14 Jessamine St. - the cycle lane ends at the junction and cyclists are immediately faced with a buildout – this will make it harder for cyclists to move into the main traffic lane to pass the buildout safely	1
Concern for cycle safety – suggest extending the green surface diagonally to the corner of the buildout mentioned above, to highlight to motorists that cyclists will need to join their lane	1

A15. & A16. School Street to St Saviours Church	
Theme	No.
No comments	
A17. & A18. Ravensthorpe Gyratory	
Theme	No.
Concern - ineffective cycling proposals - the cycle lane does not continue all the way to the Gyratory at Ravensthorpe - half a cycle route will not encourage cyclists to use the route	1
More thought needed for cyclists travelling to/from North Road	1
The gyratory improvements may make things worse for cyclists needing to turn right and some of the advanced stop lines appear unnecessary/more thought needed to make gyratory safe for cyclists to traverse	2
The Gyratory does not aid traffic flow/creates horrendous bottleneck/hold-ups and needs reviewing - in peak times the queue starts at Parker Lane in Mirfield.	7
Concern the plans for additional crossings, bus stops or road narrowing will only add to the journey times through Ravensthorpe - already a substantial bottle neck	2
Concern that proposal for any narrowing of road will cause further gridlock and increased journey times – as road is now only just wide enough for 2 lanes of traffic following previous road narrowing – and bus stopping / right turning traffic will cause further congestion	4
Concern over hazard from parked cars outside businesses in Ravensthorpe and narrow lanes - danger to cyclists, pedestrians and cars coming out of side roads	6
Make sure traffic lights are in sync	2
Entry/exit to the retail park causes unnecessary delays	1
Parking restrictions need enforcing along the route but particularly Ravensthorpe	4
Make sure the bus shelters in Ravensthorpe centre aren't sticking out because this causes danger for cars or any other vehicles over-taking and for cyclists	1
General - Traffic flow along Huddersfield Road through Ravensthorpe is almost always slow due to the number of people accessing takeaways and the access to Bradbury street	1
Section A. Traffic congestion	
Theme	No.
Concern over accuracy of research and survey data on traffic, cycling flows and complaints from walkers, to support proposals viewed as disruptive in Section A	1
Concern over accuracy of assumptions for cycling growth suggesting the weighting of these proposals biased against traffic when this is already a major issue	1
This scheme will provide no benefit to the majority of road users	1
Concern the proposals do not address traffic congestion (especially through Ravensthorpe) / will make it worse	9
Proposals are welcome but need to be combined with measures to reduce traffic to have any benefit	1
Concern that constant traffic congestion on this route negatively affects local economy	1
Concern that delays will increase when developments referred to in the proposals go ahead	4
The best way to improve cycle safety and improve traffic flows is to build a relief road (as Wakefield) if Kirklees are serious about addressing road safety,	2

improving local traffic flow, and providing capacity for the future - it needs building into plans now not afterwards	
Concern that until a proper link road to bypass these bottleneck points is built the problem is not going away	5
Suggestion - need a dual carriageway	1
Constant slow moving traffic congestion on this route negatively affects pollution and so health and well being	4
In the future hydrogen and electric vehicles will replace the combustion engine and be carbon neutral	1
Buses stop in some locations and hold up traffic flows due to bus laybys being built out in to the carriageway	1
There are too many small traffic islands that serve no purpose but to contain queues of traffic and make it awkward for emergency vehicles to pass	1
Traffic needs less traffic signals throughout the whole stretch	
Section A. Cycling safety	
Theme	No.
Concern that Mirfield is to be given so many dedicated cycling lanes which then peter out in Ravensthorpe	1
Changes to cycle lanes won't encourage more people to cycle on this route as still too dangerous and too narrow (heavy traffic and huge lorries using route as short cut between M1 & M62 need to be removed)	11
These newly planned pedestrian crossings should be "Parallel Crossings" (Tiger) giving separate space for pedestrians and cyclists including cycling access	1
Restrictions needed on HGVs using route to bypass M62	2
These proposals do not meet the standards required in the Government's recent document "Gear Change" and therefore should not be funded	2
Route is too dangerous / stressful for cycling (road is too narrow / volume of traffic/HGVs)	7
Widening cycle lanes will narrow the road	2
Proposals will make route less safe for cyclists (narrower roads so motorists take risks to overtake)	2
Average speed cameras in the area would be a benefit to cyclist safety	1
Proposals for cycle lanes do not go far enough/not radical enough/sticking plaster approach - only tackles/provided where the roads are straight and wide and then the provision evaporates where protection is really required, when the road narrows, there is a junction or the road curves	6
On this route risk assessments need to be carried out at each point to determine where dangers really are, and then take action to reduce these dangers to an acceptable level	1
Cycle lanes should be continuous and on both sides of road throughout	5
Cyclists have designated lanes/pathways in some areas but choose to ignore them and ride in normal traffic flow as it is easier to negotiate around parked vehicles/junctions.	1
Concern that the current cycle lane in this section is treated as parking – so making it operational in peak travel only, will mean it continues to be ignored	1
Cycle lanes on this route need to be kept clear of parked cars - where lanes disappear for parking space cyclists are being forced back into traffic which wouldn't give a consistent approach and wouldn't encourage children to cycle	8

Cycle lanes on this route need to be swept clear of debris - dangerous for cyclists (especially Ravensthorpe)	2
Poor road surface for cyclists (potholes and grates) (especially in Ravensthorpe)	5
No issues cycling through Mirfield, but cycling through Ravensthorpe is one of the most dangerous sections of road	1
Mandatory cycle lanes should be wide enough 1. is a 3m carriageway wide enough for wide wagons to overtake a cyclist and leave appropriate space? 2. and wide enough to allow overtaking of other cyclist so that cyclists of all abilities can use them?	3
Improvements to pedestrian crossings are welcomed, however crossing islands still create pinch points that are scary for people on bicycles	1
Increasing the width of cycle lanes is unlikely to improve cyclists' safety on this stretch of road without removing the bollards in the middle of the road	1
New proposals for advanced cycle stops fall down because the cyclist is still mixing with heavy traffic	1
Resurface cycle lanes to the edges of the road to avoid uneven surfaces	1
Raised tables should be used at all side roads to make priority of cyclists and pedestrians crossing more obvious. Any proposals to include tactile paving or such tiles on cycle facilities should be scrapped. Such tiles reduce tyre-ground grip and are likely to lead to accidents	1
The making of cycle lanes mandatory with operational hours doesn't make sense; they should either be mandatory or not, as if they have operational hours how would that be policed/enforced?	1
Mandatory cycle lanes are only acceptable in low traffic areas otherwise they should be wide and protected busy routes as A644 - this is an A road so cycle lanes should be segregated on entire route (e.g. with kerb) to protect cyclists	12
The local transport note LTN 1/20 on cycle infrastructure design makes clear that on-road cycle lanes would exclude most users and do not provide appropriate protection on such busy highways like the A644 and A653. Only segregated cycle infrastructure is appropriate for a route like this. There is virtually no segregation for cycles within the Mirfield and Dewsbury sections of this scheme, therefore the proposals are wholly inadequate and should not proceed in their current form.	1
Segregated infrastructure would be more expensive. However the Leeds sections of the route use segregated tracks, so Kirklees residents must be offered the same standard of improvements	1
Need a scheme of proper cycleways	1
Build cycleways away from main arterial roads	5
A radical decision needed to make a safe, pleasant and continuous route for cyclists and a pleasant practical environment for pedestrians. If this is not deemed to be 100% possible (because there can be no half measures) then alternatives must be sought. For example, "Quietway Cycle Routes" could be constructed in and around Mirfield giving access to the commercial centre without cyclists having to use the A644. We are, at this moment, awaiting the improved NCN 66 route to be realised	1
No provision for safe cycle storage in the plans	2
Route used by low number of cyclists so does not justify expense of proposals	4
The improvements proposed to this section seem fine/very good/are welcomed	5
I encourage any mandatory lanes where possible	2

Very keen to see improvements to cycling paths - with more cycle paths, less confident cyclists could become more regular and more confident	1
This section of the route is already pretty safe for cyclists	1
Section A. Pedestrian safety	
Theme	No.
Walkers appear well catered for (especially due to previous road narrowings)	2
This route used by low number of pedestrians – plans will not encourage more	2
Adding more pedestrian crossings will only cause more disruption to traffic flow on main road	1
Improvements to pedestrian crossings are welcomed, however crossing islands still create pinch points that are scary for people on bicycles	1
It is already dangerous to walk through Mirfield	1
Concern for pedestrians on shared pavements with cycles	1
Section A. Mirfield car parking	
Theme	No.
There is a lack of main road parking outside shops in Mirfield (unlike in Ravensthorpe where cars park outside shops)	1
Mandatory cycle lanes will add to existing parking problems in Mirfield centre	4
Mandatory cycle lanes will lose only all-day parking outside Mirfield showground and make side roads more dangerous for all especially at local schools drop-off/pick-up times	2
Parking in town is much needed to support the local communities	1
Section A. Accessibility	
Theme	No.
Do not forget disabled population who cannot use public transport/cycles	1
Concern about proposals - If these parking ideas go ahead what about those with disabilities who need to park on the road as close as possible to shops etc	1
This road certainly needs improving but it seems to promote cycling which not everyone is able to do	1
Concern that tactile paving, or such tiles, pose problems for those with mobility issues, such as those with walking impairments needing sticks or crutches – so should be avoided in the plans	1
Section A. Public transport	
Theme	No.
Proposals for better public transport e.g. how about a tramlink from Huddersfield to Leeds (at affordable prices) - as in Manchester	2
Mirfield commuters tend to prefer the train - except the station is inaccessible and the trains don’t have enough carriages. Fix this, and the cars going to Dewsbury, White Rose & Leeds would dramatically reduce	1
Concern that the proposed bus lanes will not make a difference as buses are too expensive so not well used and don't go from where you live to work (as more people work out of town, not on bus routes)	2
Prefer money to be spent on improved railway services, new local stations, better broadband, electric car charging and other greener forms of transport. Messing with existing roads is a complete waste of money and buses are not the answer	1
Need an express bus service from Kirklees to Leeds	1
Suggest all bus shelters with covers, digital timetables and benches	1

SECTION B: VIEWS ON RAVENSTHORPE - DEWSBURY (A644)

This section of the route is around one mile in length, between Ravensthorpe Gyratory and the Webster Hill Junction on Dewsbury Ring Road. A range of possible measures in this section were considered to best achieve the scheme objectives considering the varying limitations in road space along the section. A review of existing traffic conditions has shown that slow speeds and stop/start traffic results from the multitude of competing functions along the main road, such as turning traffic and buses waiting at bus stops. The proposals put forward aim to reduce delays and minimise the impact to on-street parking.

Main Issues

- Slow speeds and unreliable journey times for buses and general traffic
- Sub-standard or the wrong type of pedestrian crossings in certain locations

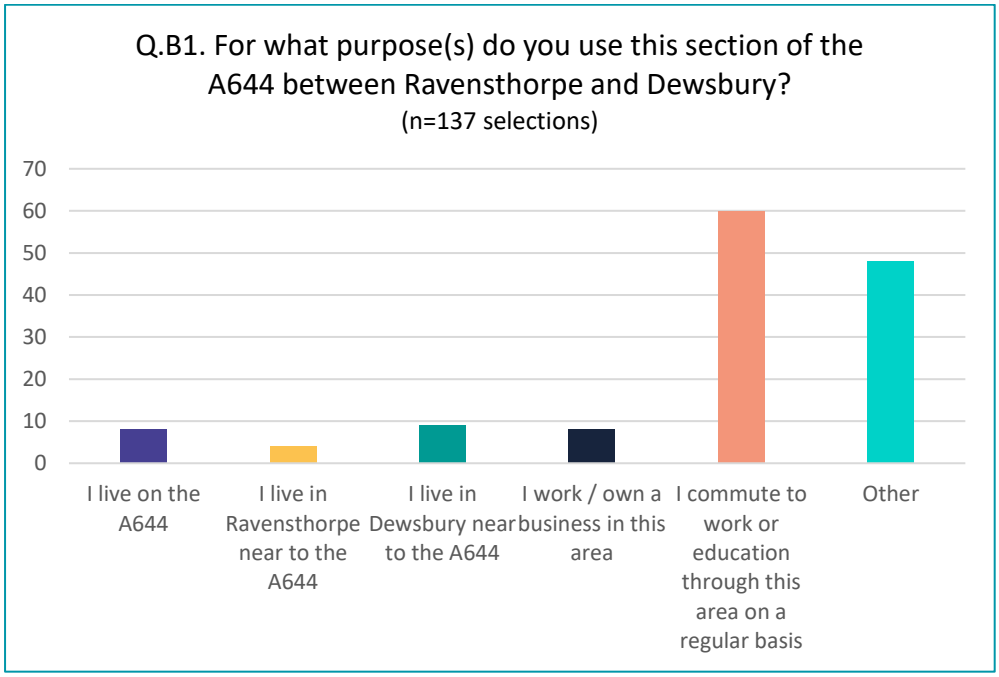
Opportunities

- Introduce a westbound bus lane between Thornville Street and Ravensthorpe
- Introduce an eastbound bus lane between Thornhill Road and Dewsbury
- Install new and upgraded pedestrian crossings along the section

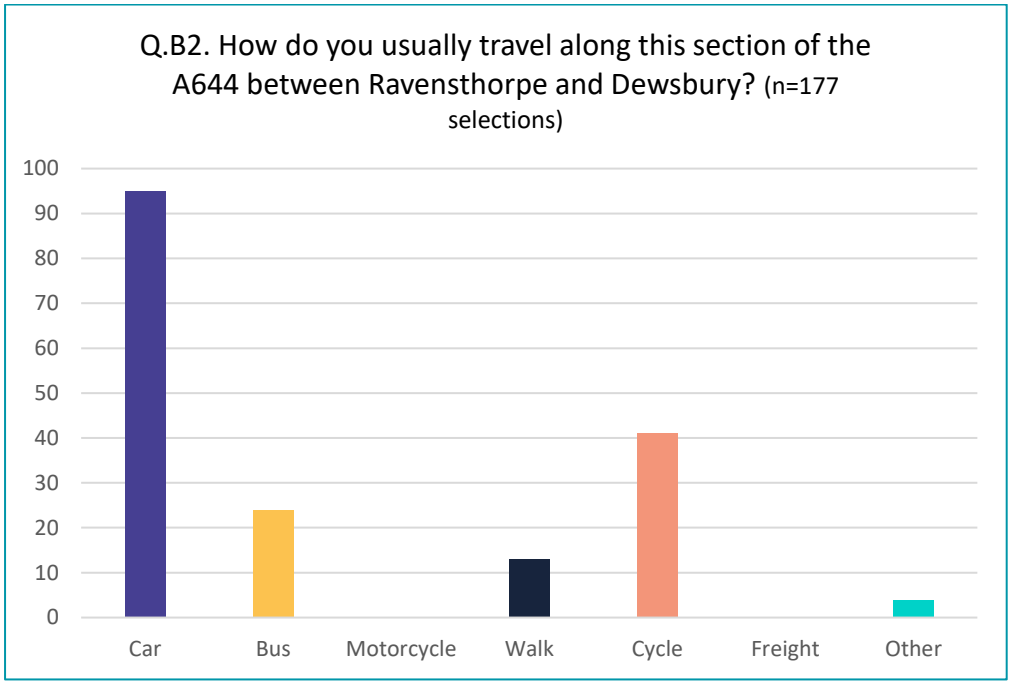
Benefits

- Smoother traffic flows including reduced bus and car conflicts
- Improved safety and journey quality for pedestrians along the route
- Better reliability for bus passengers

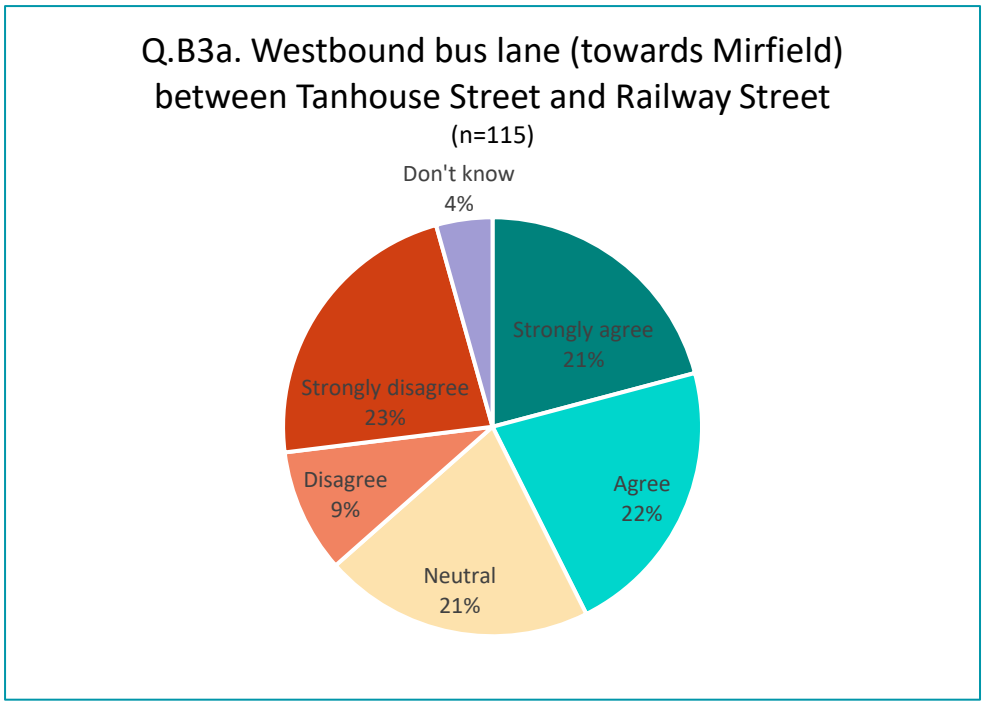
Q.B1. For what purpose(s) do you use this section of the A644 between Ravensthorpe and Dewsbury?



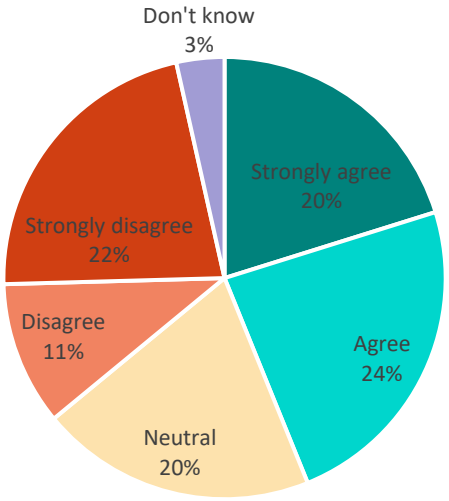
Q.B2. How do you usually travel along this section of the A644 between Ravensthorpe and Dewsbury?



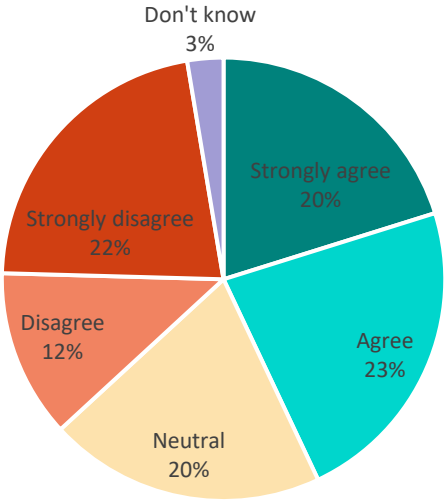
Q.B3. As part of the scheme it is proposed to improve bus reliability. How strongly do you agree or disagree that each of the following proposals will help achieve this aim on the section of the A644 between Ravensthorpe and Dewsbury?



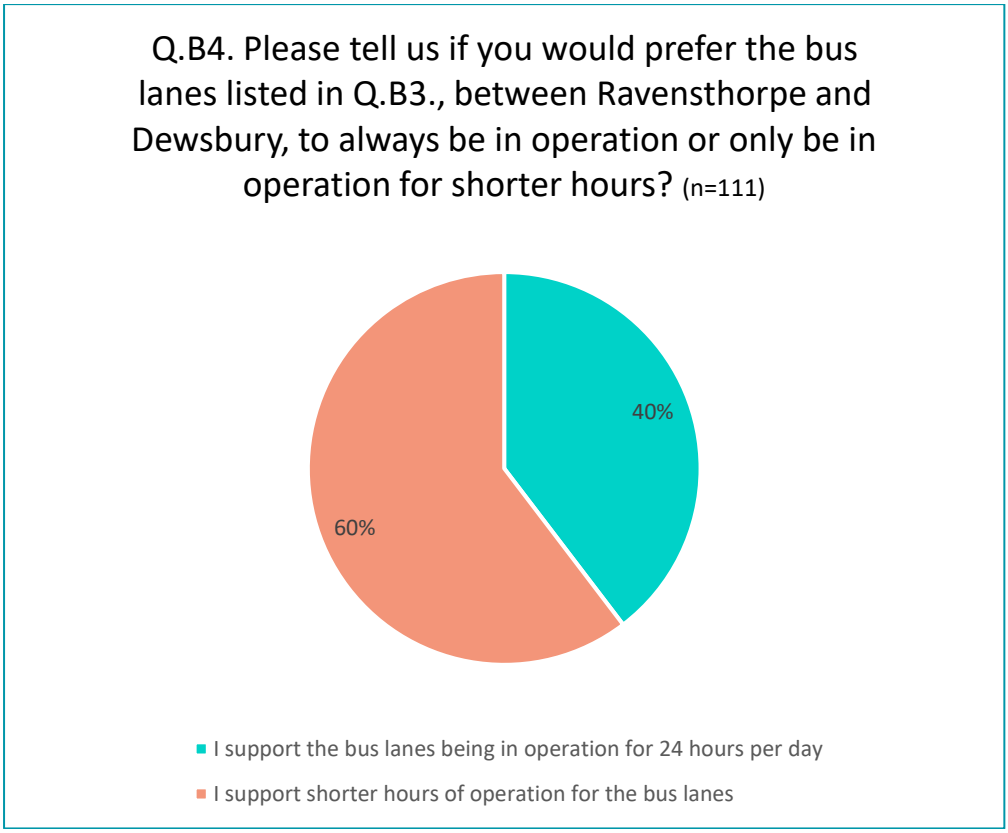
Q.B3b.Westbound bus lane (towards Mirfield) between Stoney Bank Street and Thornville Street
(n=114)



Q.B3c. Eastbound bus lane (towards Dewsbury) between Stoney Bank Street and Thornville Street
(n=114)



Q.B4. To maximise benefits for buses, the bus lanes listed above (in Q.B3.) between Ravensthorpe and Dewsbury are proposed to be always operational (24 hours per day). Please tell us if you would prefer the bus lanes to always be in operation or only be in operation for shorter hours?



Q.B5. Please use this space to provide us with any additional comments on the section of the A644 between Ravensthorpe and Dewsbury?

Section B. Ravensthorpe to Dewsbury	
Scheme overview	
Theme	**No.**
Welcome Improvements but need to be combined with traffic reduction measures (particularly heavy lorries)	**1**
There are no walking or accessibility issues	**1**
Scheme will encourage more people to become active	**1**
Cycle lanes are a good idea providing they don't make the journey longer	**1**
General support for bus lanes	**1**
Will improve reliability of buses	**3**
Reduce traffic delays when buses pull in – cars can keep going	**2**
At peak times only	**3**
Provision for cycling and walking along the route need to be improved	**1**
Cycle lanes need to be segregated for safety	**1**
Cycle lanes should be marked with double yellow lines 24/7	**1**
Improve traffic flows to sustain transit times on buses	**1**
Bus stops need to be into the side and not jutting out	**1**

All bus stops should have a shelter, bench and digital timetable	**1**
Reduce freight using this road as a rat-run to M1 and M62	**1**
Traffic lights need to be in sync	**1**
Speed limit needs to be appropriate for a dual carriageway	**1**
Install working speed cameras for safety	**1**
Implement double yellow lanes to prevent parked cars partially blocking the road	**1**
Heavy traffic flows cause problems on route and the roads cannot cope	**21**
There are too many bottlenecks on the route	**6**
Road has many right turnings which hold up traffic	**4**
Route is polluted	**2**
Inconsistent approach to encourage active travel - with only bus lanes from Dewsbury to Ravensthorpe and only cycle lanes Mirfield to Ravensthorpe	**1**
Lack of cycling infrastructure – particularly in Ravensthorpe	**6**
Roads do not have the capacity for cycle lanes	**1**
Residents will still need to park their vehicles so will block bus lanes	**1**
Bus lanes will only work if parking is prohibited	**2**
Bus delays will only be relocated to end of bus lanes when buses must re-join traffic queues	**1**
It is not clear if bus lanes are also cycle lanes	**1**
Bus lanes will put buses and cycles together – this is daunting for cyclists	**1**
To improve safety for cyclists they should be allowed to use the bus lane	**2**
Bus lanes will need to be wide enough so buses can overtake cyclists maintaining space of 1.5m	**1**
Bus lanes unlikely to be observed by car users	**2**
Motorists will be penalised with fines if they enter a bus lane with fines	**1**
Bus lanes will not encourage step change in use	**1**
Buses do not carry large volumes of passengers so bus lanes will delay many for benefit of few	**1**
There is no space for bus lanes due to volume of standing traffic and very narrow road	**8**
Only a limited number of buses so bus lanes are empty most of the time	**2**
Bus lanes will not affect main cause of hold ups - Ravensthorpe Gyratory & bus lanes will make tailbacks worse. Gyratory needs a rethink	**4**
Bus lanes: will not affect the other main cause of hold ups on this section: traffic lights at Webster Hill – bus lanes will make this worse	**1**
Bus lanes reduce space for cars so will make this road even busier for all other users and worsen existing bottleneck / delay problems	**16**
Resultant traffic jams from bus lanes create more pollution	**3**
More measures to limit car use might work better than bus lanes	**1**
Prioritise spend on essential road maintenance improvements (potholes) before bus lanes	**1**
Do not support bus lanes	**3**
cycling provision does not comply with government guidance on appropriate protection from motor traffic on highways – lack of segregated cycle lanes	**1**
Capital investment should be spent on a relief road, removing through traffic (inter-town and routes to motorways) so local road use is safer	**1**
Money would be better spent on a by-pass for Ravensthorpe	**2**
Congestion is only peak time/not constant so money would be better spent on improving jobs	**1**

Planned new residential developments will have negative impact on these proposals so revisit plans now, not afterwards	**2**
B1. & B2. Tanhouse Street to Railway Street	
Theme	**No.**
Better provision needed for cyclists using Spen Valley Greenway and transitioning to/from A644 to Ravenswharf Road (Railway Street) and on towards Calder Valley Greenway, and specifically including improvements to existing pedestrian crossing near this access point	5
Traffic is slowed by pedestrian and cycle crossing used to access Spen Valley Greenway from Huddersfield Road	**1**
B3. & B4. Railway Street to The Shepherds Boy	
Theme	**No.**
This section of road is forever backed up, crawling traffic, cars pulling in/out of the left-hand side parking at takeaways and busy shops	1
Overtaking vehicles put cyclists in danger at narrowing of road for pedestrian refuge at Ravensfield Road	1
Westbound queuing traffic (tailback from Ravensthorpe Gyratory) take rat-runs into local residential streets (Broad Street / Thornville's onto Scout Hill Rd & Ravesnwharf Road) then fight to regain entry to main road queuing traffic	4
B5. & B6. The Shepherds Boy to Pinfold Hill	
Theme	**No.**
Westbound queuing traffic (tailback from Ravensthorpe Gyratory) use clearer right turn only lane for Temple Road then cut back to inside lane / ignore the no overtaking sign past St Paulinus Church then cut back in traffic flow	3
Congestion is not strictly limited to rush hour so prefer the bus lane to be 24/7	1
Will improve traffic flow as these are extra lanes to the existing ones	1
Existing pedestrian crossing with traffic lights would be easier and safer to cross with 3-way traffic lights on the junction	1
A cycle lane could easily be accommodated on the pavement from Temple Rd eastbound into Webster Hill	2
Pinch point for cyclists at the junction of Temple road and A644 where cars will squeeze past cyclists between the traffic islands	1
Need to establish how often bus-bunching occurs, when more than one bus needs to stop at the two affected bus stops, causing congestion when buses need to pull out into traffic lane to overtake the bus at stop	1
Eastbound bus lane between Thornhill Road and Pinfold Hill would reduce capacity for other road vehicles causing tailbacks, which other buses would be stuck in if traffic queue extends back past Thornhill Road	1

SECTION C: VIEWS ON DEWSBURY TOWN CENTRE & RING ROAD

This section concerns Dewsbury Town Centre. Several walking and cycling options have been considered that help to support the aims of the Dewsbury Blueprint, which is a 10-year plan for the regeneration of Dewsbury. The proposals help to develop the local walking and cycling network to a high standard and improve links between the rail and bus stations and key areas in the town centre. Further transport schemes in Dewsbury Town Centre, including a project to improve the bus station, will be consulted on in summer 2021 as part of the Kirklees 'Transforming Cities Fund' programme.

Main Issues

- Sub-standard pavements that are particularly difficult for people with disabilities
- Lack of dedicated and joined-up cycling facilities
- Unattractive environment limiting economic growth potential

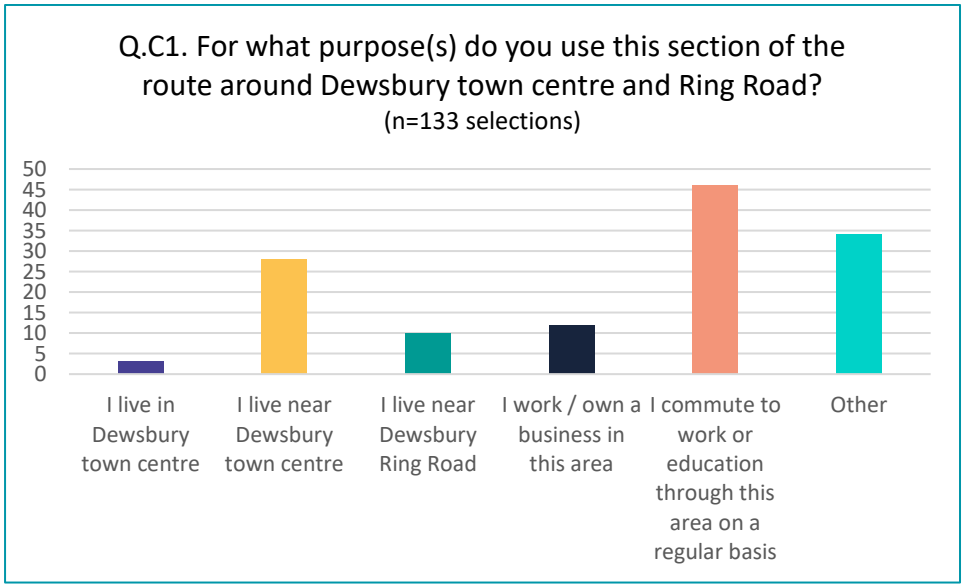
Opportunities

- Widen the pavement in Bond Street as the key link to/from the Rail Station
- Revisions to existing pedestrian crossings to make them more suitable for users
- Introduce new cycle lanes and tracks to provide key links
- Install new pedestrian and cycle crossings to allow continuous routes

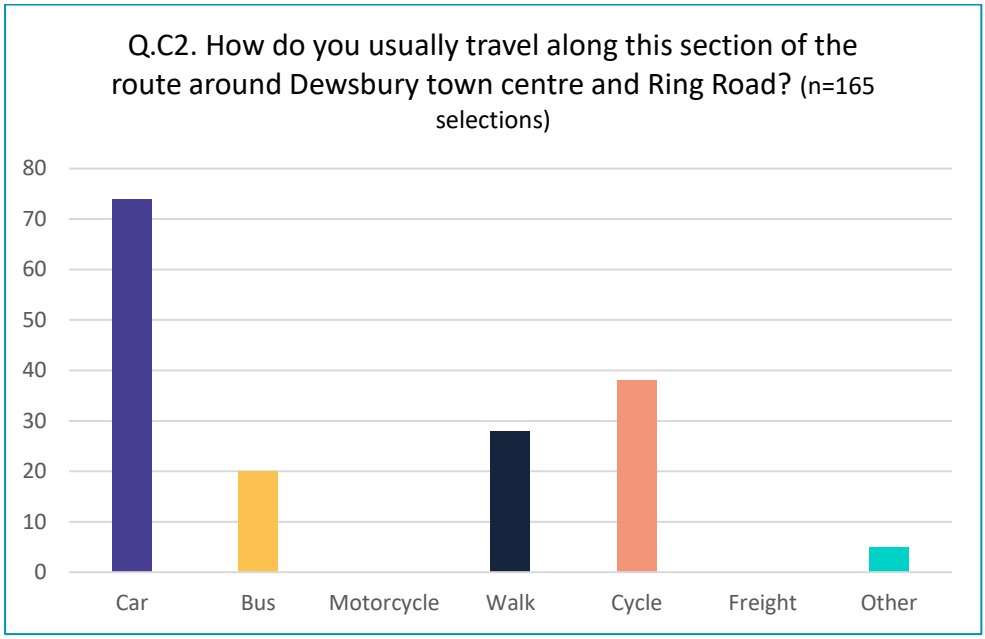
Benefits

- Make Dewsbury Town Centre accessible for all possible users
- Increased safety for pedestrians and cyclists
- Better connectivity including at Ring Road junctions

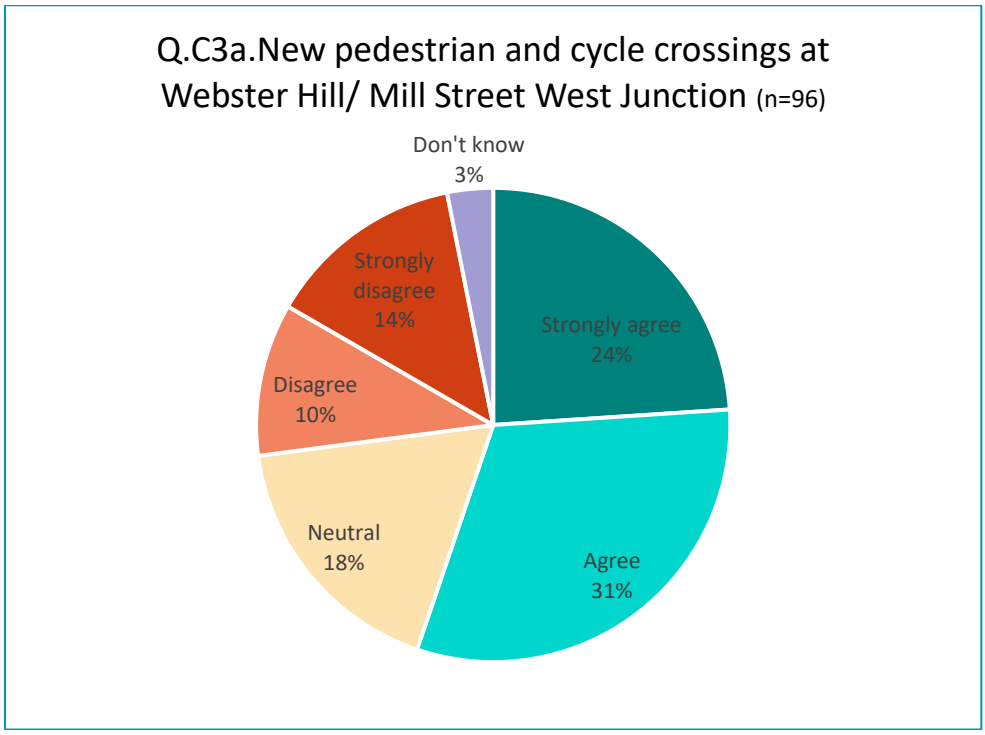
Q.C1. For what purpose(s) do you use this section of the route around Dewsbury town centre and Ring Road? (Please tick all that apply)



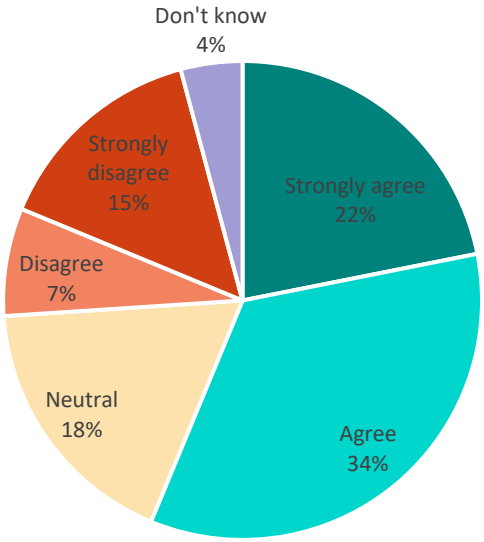
Q.C2. How do you usually travel along this section of the route around Dewsbury town centre and Ring Road? (Please tick all that apply)



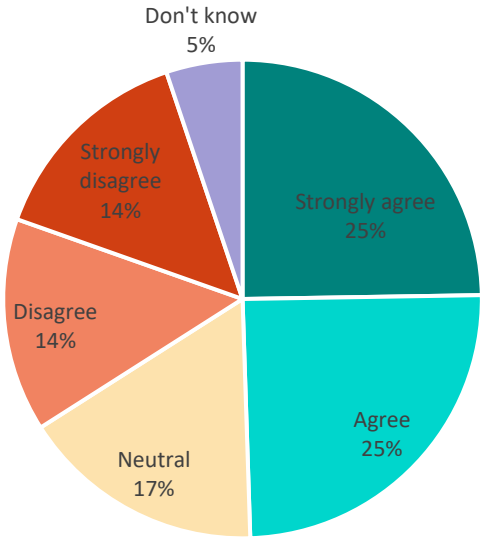
Q.C3 (a-m). As part of the scheme it is proposed to improve pedestrian and cycle safety. How strongly do you agree or disagree that each of the following proposals will help achieve this aim on the route around Dewsbury town centre and Ring Road?



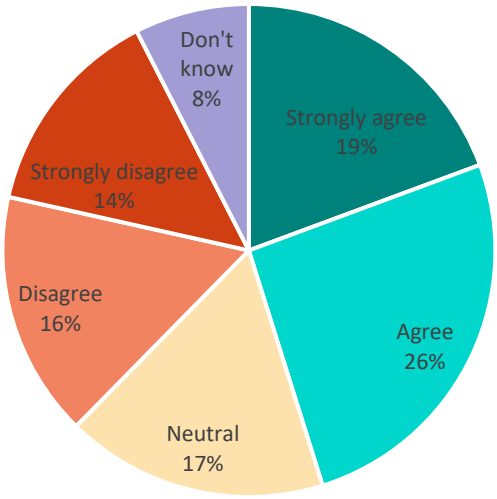
Q.C3b. New zebra crossing on South Street near Southgate (n=96)



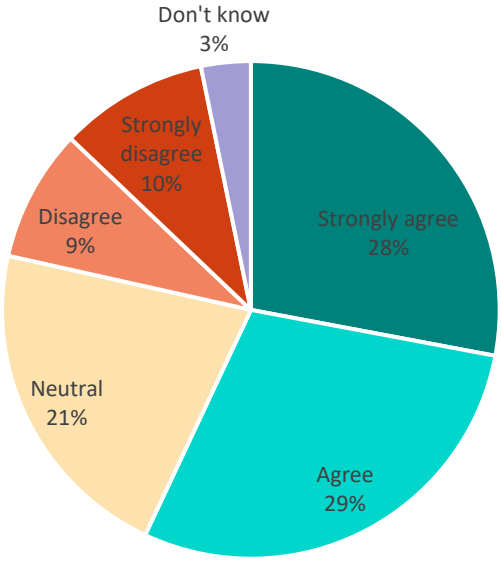
Q.C3c. New contraflow cycle lane on Southgate (n=97)



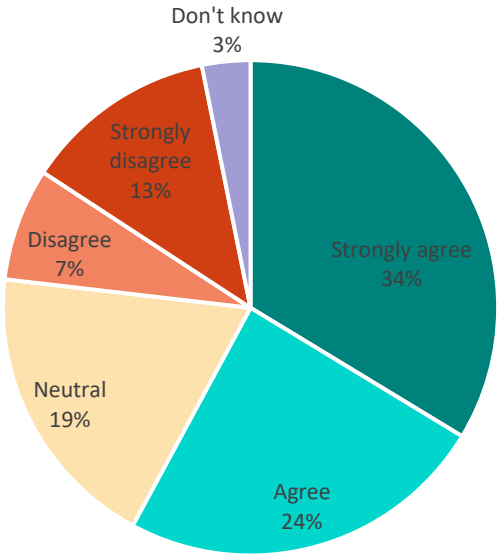
Q.C3d. Conversion of signal crossing to zebra on Church Street (n=93)



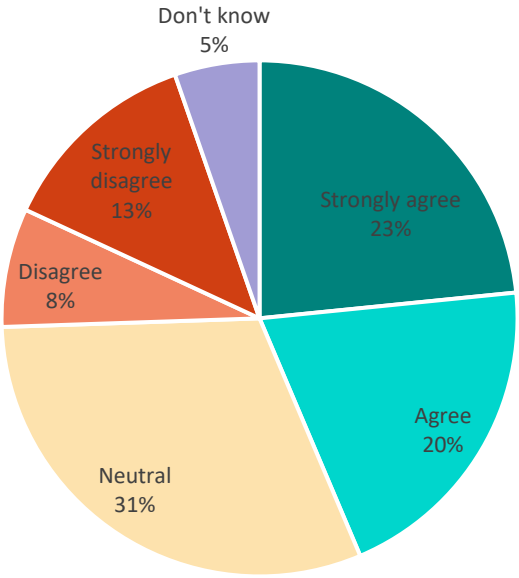
Q.C3e. New continuous footways at side roads on Church Street (n=93)



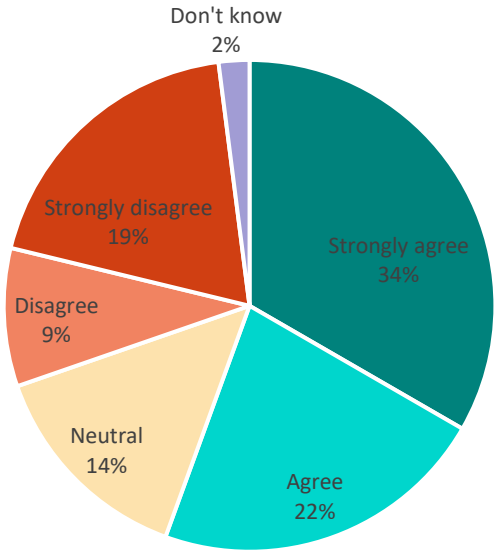
Q.C3f. New street planting and trees in Church Street (n=95)



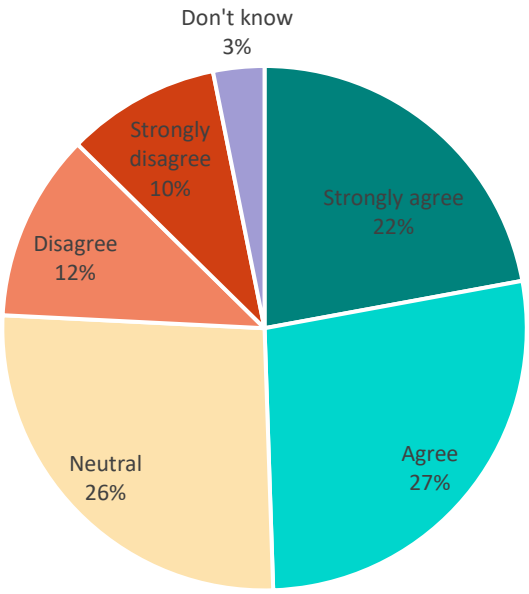
Q.C3g. New raised traffic table in Railway Street (n=94)



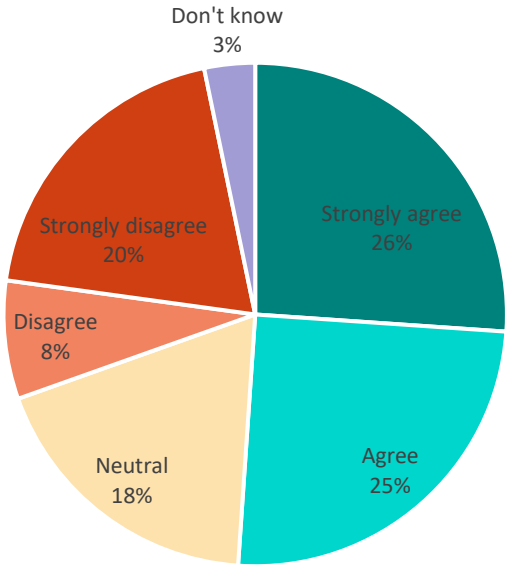
Q.C3h. New two-way cycle track in Longcauseway with a new one-way for general traffic (n=99)



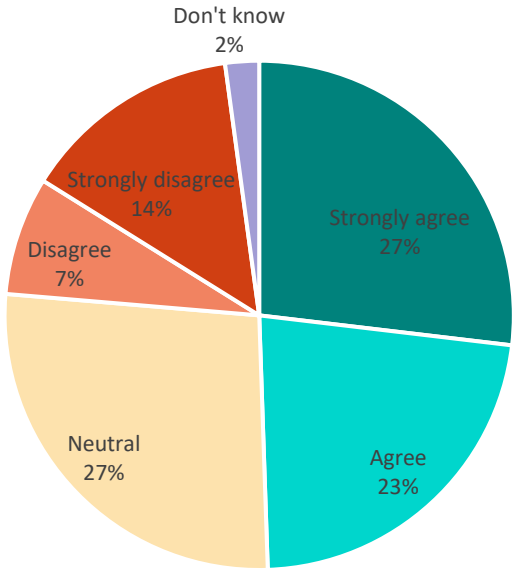
Q.3Ci. Removal of one island at Leeds Road, reducing the number of crossing stages (n=95)



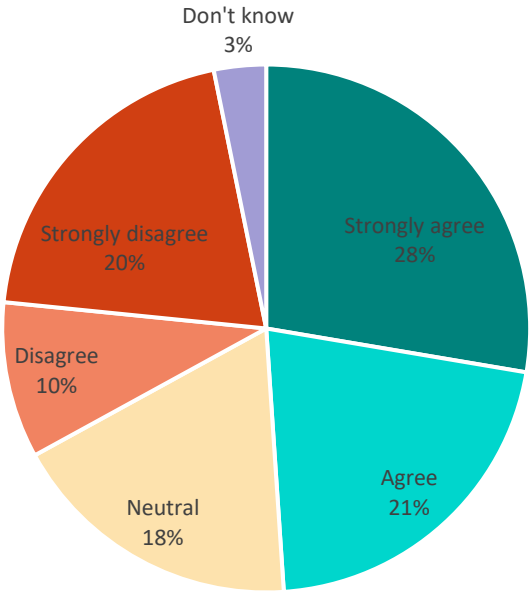
Q.C3j. New contraflow cycle lane on Wellington Street (n=92)



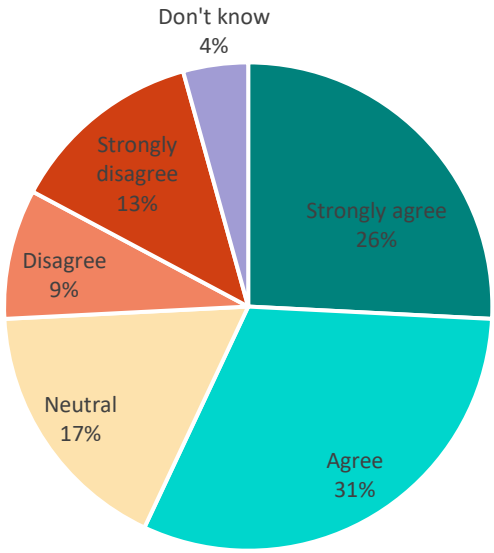
Q.C3k. New zebra crossing on Daisy Hill near Wellington Street (n=93)



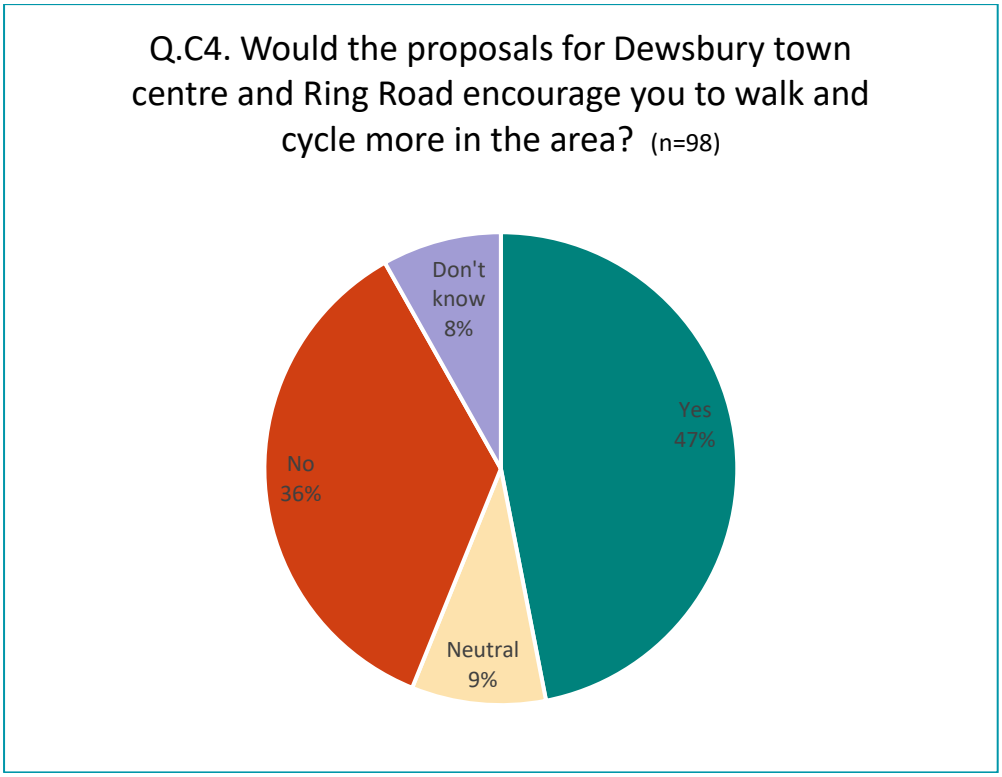
Q.C3l. New widened pavement on Bond Street, requiring the removal of street parking (n=94)



Q.C3m. New street parking spaces on Grove Street and localised footway widening (n=93)



Q4. Walking and cycling are active ways to travel and move about. They help people to be more physically active every day and improve health and wellbeing. Would the proposals for Dewsbury town centre and Ring Road encourage you to walk and cycle more in the area?



Q.C5. Please use this space to provide us with any additional comments on the route around Dewsbury town centre and Ring Road.

Section C. Dewsbury town centre and Ring Road	
C1. Dewsbury town centre – Webster Hill	
Theme	**No.**
Positive feedback on cycle facilities in C1	2
Safety concerns about crossing the Mill Street West to join/exit the NCN66	9
The proposals in C1 should focus on either a cycle stop line or cycle crossing, not both	1
Signal control not needed on Old Westgate	1
Cycle lanes need to be physically defined to prevent cars from parking on them	1
The cycle facilities in the area should be more integrated	1
The C4 map should mention the other cycle routes in that area	1
C2. Dewsbury town centre – Southgate	
Theme	**No.**
Positive feedback on proposals in C2	1
The cycle lanes/routes in the area should be better linked	1
C3. Dewsbury town centre – Church Street	
Theme	**No.**
Positive comments on the proposals/supportive of the proposals	2

The contraflow cycle lane needs to be better marked to avoid potential accidents with vehicles turning from the side roads	1
The proposed zebra crossing should be made wider	1
The zebra crossing might increase the risk of accidences	1
C4. Dewsbury town centre – Southgate	
Theme	**No.**
The proposed cycle path is not needed in this area	1
One-way road will increase the traffic in the area	1
Map C4 should mention the other cycle routes in the area	1
Concerns about how the bi-directional cycleway connects with the NCN route	2
C5. Dewsbury town centre – Leeds Road junction	
Theme	**No.**
Positive about the proposals	1
The proposals should include ways to connect the junction with other cycle/shared paths in the area	1
C6. Dewsbury town centre – Wellington Street	
Theme	**No.**
Supportive of the proposals	1
The proposed cycle lane should be positioned on other side of Wellington street	2
Concerns about the safety of cyclists turning from Daisy Hill to Wellington Street junction	1
Considerations should be given to the width of the cycle lane	1
Concerns about the cycle lane being positioned next to parked cars	1
The cycle lanes/routes in the area should be more integrated	2
C7. Dewsbury town centre – Grove Street	
Theme	**No.**
Supportive of proposals in C7	1
C8. Dewsbury town centre – Bond Street	
Theme	**No.**
Supportive of proposals in C8	1
Concerns about the loss of parking space and its impact on people with disabilities	1
Section C. General cycle safety	
Theme	**No.**
Better cycle lane signage	1
Cyclist should have right of way	1
Safety concerns about cycling on ring road	4
Dewsbury road traffic stops people from cycling due to safety concerns	3
Consistency is needed across the region regarding colours used for cycling facilities/lanes	1
Safety concerns about cycling on main roads into Dewsbury	2
Concerns about cycling on busy roads alongside buses and lorries	1
The cycle lanes/routes in the area should be more joined up	2
Weather conditions might prevent people to cycle to work	1
Section C. General pedestrian safety	
Theme	**No.**
Supportive of improving pedestrian crossings	1

Synchronised traffic lights to reduce waiting time for pedestrians	1
Planting of trees would not benefit pedestrians and might damage the pavements	1
Suggestion to replace pedestrian crossings with tiger crossings	1
The area needs safer walkways to the bus station and town centre	1
Pelican crossings are safer alternative to zebra ones	1
Section C. General comments	
Theme	**No.**
Proposals are not relevant to my situation	2
Supportive of the proposals	2
Do not support the proposals	4
Miscellaneous	8
Prevent cars parking on cycle lanes	1
Creating more bus lanes will increase traffic	1
Better bus services and integrated plans could help reduce local traffic	2
Suggestions to improve traffic/access to town centre/creating new cycle routes **that are not related** to the proposals	8
Cycle lanes should be separate from main roads and pedestrians	3
Having more local services would encourage more people to walk than use a car	1
Concerns about the impact of reducing parking spaces on town centre	3
Concerns about the impact of reducing car access in town centre on local businesses	2
Any changes and proposals regarding access to town centre should account for the need of disable people and their carers who cannot walk or cycle	3
Antisocial behaviour in the area prevents people to walk and cycle due to safety concerns	1
Reducing vehicle access in town centre could encourage more walking/ cycling	3
The cycle paths/routes in the area need to be better linked	2

SECTION D: VIEWS ON SHAW CROSS (LEEDS ROAD / CHALLENGE WAY JUNCTION)

In this section, the road width between Dewsbury and Shaw Cross is narrow and this limits the types of schemes that can be considered to enhance various travel options. This scheme section therefore focuses on changes to the main Leeds Road/ Challenge Way Junction to reduce traffic and pedestrian delays and to help to create additional road capacity to cater for the growth in travel demand arising from developments.

Main Issues

- Vehicular delays and queues at the Leeds Road/ Challenge Way junction
- Junction is difficult for pedestrians due to multiple crossing stages
- Planned developments in North Kirklees will increase travel demand

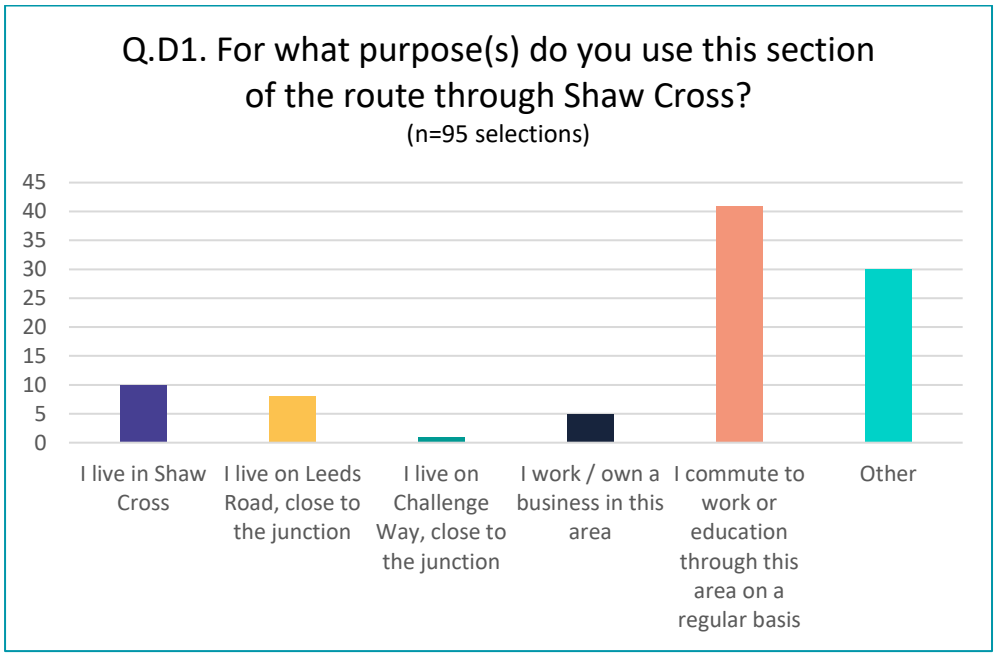
Opportunities

- Additional traffic lanes between Challenge Way and John Ormsby Way
- Removal of some ‘low-demand’ vehicle turns at the Junction
- Consolidation of pedestrian crossing stages

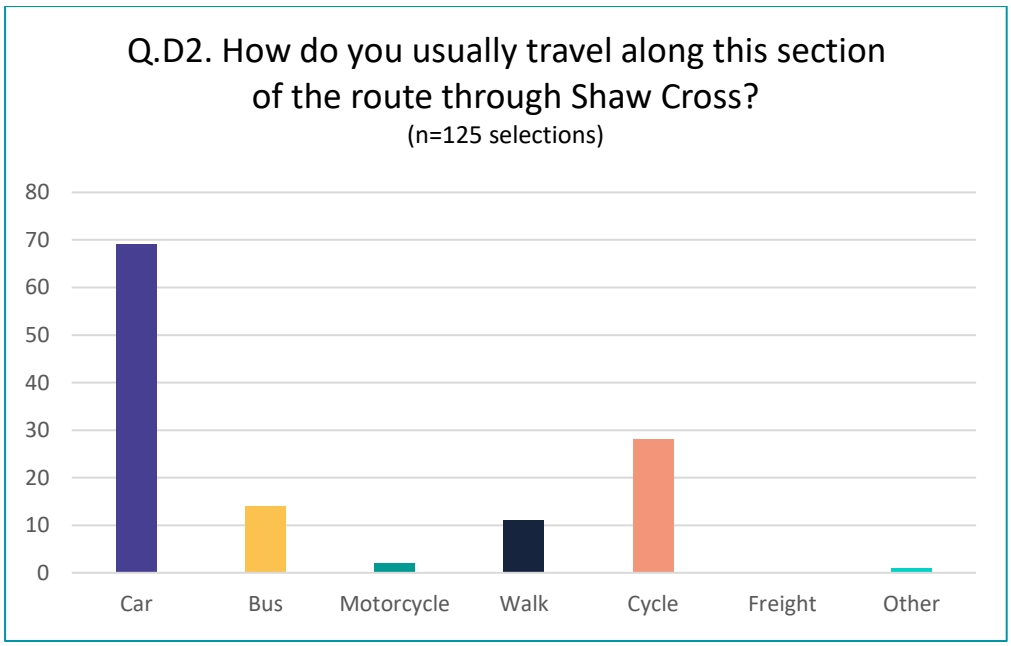
Benefits

- Reduced traffic queues on the approaches to the Junction
- Road network enabled for development and economic growth in the area

Q.D1. For what purpose(s) do you use this section of the route through Shaw Cross at the Leeds Road/Challenge Way junction? (Please tick all that apply)

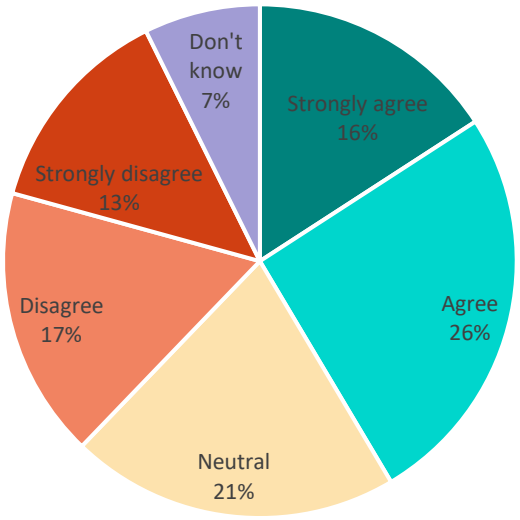


Q.D2. How do you usually travel along this section of the route through Shaw Cross at the Leeds Road/Challenge Way junction? (Please tick all that apply)

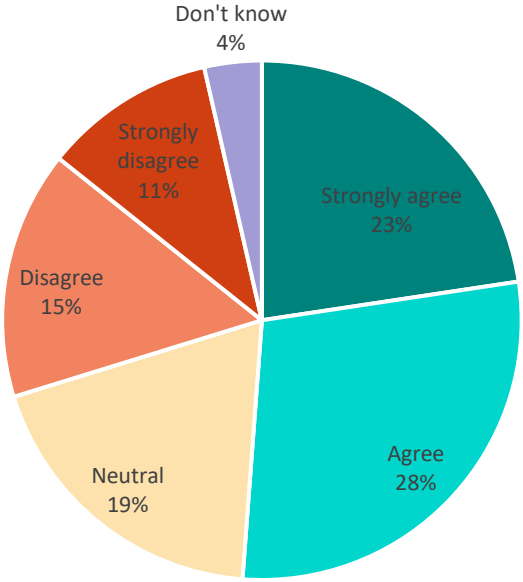


Q.D3(a-d). As part of the scheme, it is proposed to reduce congestion and provide extra capacity for growth related to new developments. How strongly do you agree or disagree that each of the following proposals with help achieve this aim on the section of the route through Shaw Cross at the Leeds Road/Challenge Way junction?

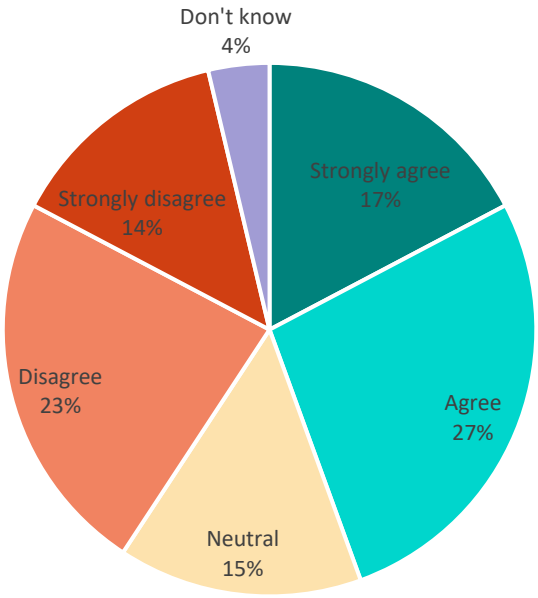
Q.D3a. Extra straight-ahead lane John Ormsby Way to Challenge Way **(n=82)**



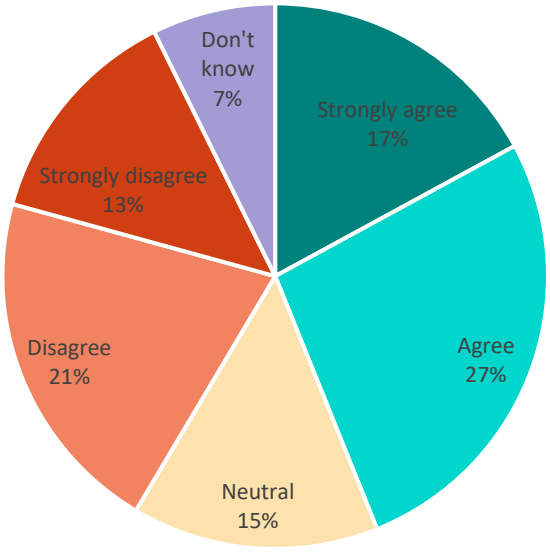
Q.D3b. Removal of low demand turns to create better capacity for main flows (n=84)



Q.D3c. Dual use of right turn lane in Challenge Way for straight-ahead flow (n=81)



Q.D3d. Two-lane exit on Challenge Way (n=82)



Q.D4. Please use this space to provide us with any additional comments on the route through Shaw Cross at the Leeds Road/Challenge Way junction.

Section D. Shaw Cross (Leeds Road / Challenge Way junction)	
Scheme overview	
Theme	**No.**
The proposals for this junction and any plans for improvement need to consider the needs of pedestrians	3
The proposals for this junction need to include provisions for cyclists that make cycling in this junction safer and connect it with cycling routes in the area	12
The road surface of Challenge Way and at the junction needs improvements	1
Suggestions to replace the traffic lights in the junction with a roundabout	2
Suggestions to have synchronised traffic lights on A644 to help with the traffic on Leeds Road	3
Miscellaneous	5
Segregated cycle paths needed to stop cars from parking on the cycle path and provide more protection for cyclists	4
Safety concerns for cyclists at Shaw Cross junction	2
The road works resulted from these changes will increase local traffic	2
Suggestions to prevent dangerous driving in the area - adding more speed cameras and/or adding additional 30mph signs	4
Exit from Shell impacts on traffic level	2
Suggestion for puffin crossing to be fitted on Challenge way	1
The focus should be on encouraging other modes of transport rather than improving facilities for vehicles	1
Reducing traffic will increase capacity and more people will be inclined to drive	2
HGV vehicles' access on Owl Lane should be restricted to prevent road damage and air and noise pollution	1
To improve traffic in Challenge Way Junction the congestion around Owl Lane junction needs to be addressed as well	4
The planned development in the area will increase the traffic on Leeds road even if the proposals are implemented	3
Suggestions for traffic improvements in the area/junction not directly related to the proposals	3
Suggestions on how to improve provisions for active travel and encourage it	4
Congestion created by traffic turning right from John Ormsby onto Hight street needs to be addressed to allow greater traffic flow in the Challenge Way Junction	3
In agreement with the proposal to stop the right turn into Leeds Road	2
Proposals are unlikely to improve traffic in the area around the junction as roads narrow from 2 lanes into one after junction, creating bottlenecks further along	4
Bus stop on John Ormsby blocks one lane and creates traffic jam	2
The proposal will cause more traffic	2
Suggestion to replace the proposed Give way sign on the new left turn slip road from John Ormsby Vc Way into Leeds Road to avoid congestion created by the traffic turning right to High Street	1
Suggestion to develop a slip road from Challenge Way turning left onto Leeds Rd	1
Consideration should be given to other facilities in the area that impact on traffic, such as proposed McDonald's at the junction or the Infant school on Leeds Rd	2
Two exit lanes on to Challenge Way are not long enough, refusal to widen the road at both sides is a missed opportunity	1

SECTION E: VIEWS ON TINGLEY TO WHITE ROSE (A653)

The route between Tingley and White Rose is the key route between south Leeds, Tingley, Morley and the M62 and M621 motorways. The route has high traffic volumes and regularly suffers from congestion which increases journey times. Buses are often caught up in the congestion which decreases reliability and punctuality.

The route also currently offers limited alternatives for people to walk and cycle with narrow facilities and limited crossing locations of side roads making it difficult for people to use the route. The proposals developed include provision of 3m wide shared use path between Tingley and White Rose and new bus lanes on the approach to Tingley Interchange. The shared-use pedestrian and cycle path has been identified through our 'Suggest a Scheme' consultation, in response to the Covid-19 pandemic to help make our streets better for walking and cycling, and forms part of our longer term aspiration for this corridor.

Issues

- Congestion on the approaches to Tingley Interchange delay bus journey times
- Current route is undesirable to both people walking and cycling
- Poor pedestrian crossing facilities

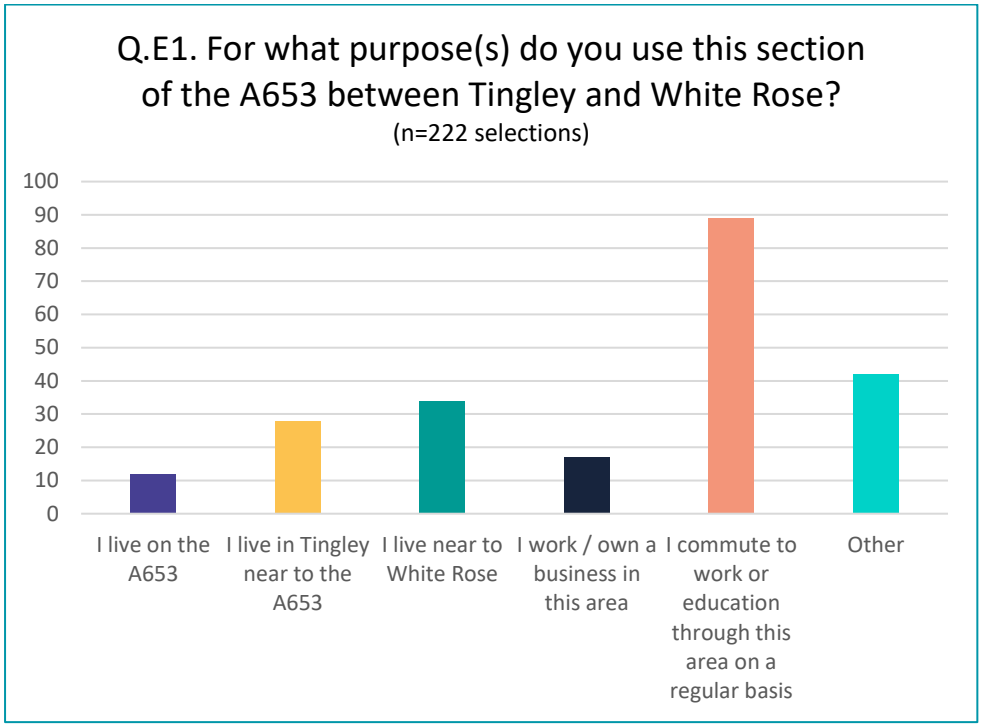
Opportunity

- Upgrade of existing path to 3m wide shared-use pedestrian and cycle path between Capitol park and White Rose Business Park
- Creation of new bus lanes on the A653 Dewsbury Road approaches to Tingley Interchange. This will include widening of the existing carriageway
- Improve landscaping along the route making it more desirable and increase biodiversity

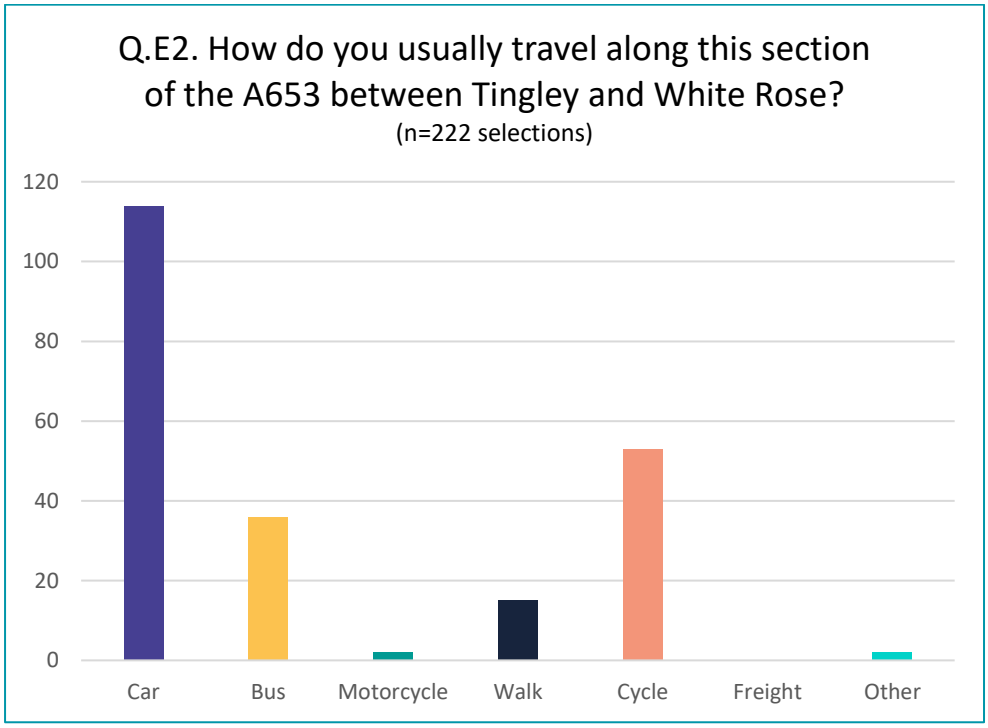
Benefits

- Make walking and cycling a convenient and direct choice for people traveling along this route
- Provide safe segregated facilities which connected into a wider network serving key destinations including Leeds City Centre
- Improvement in bus journey times

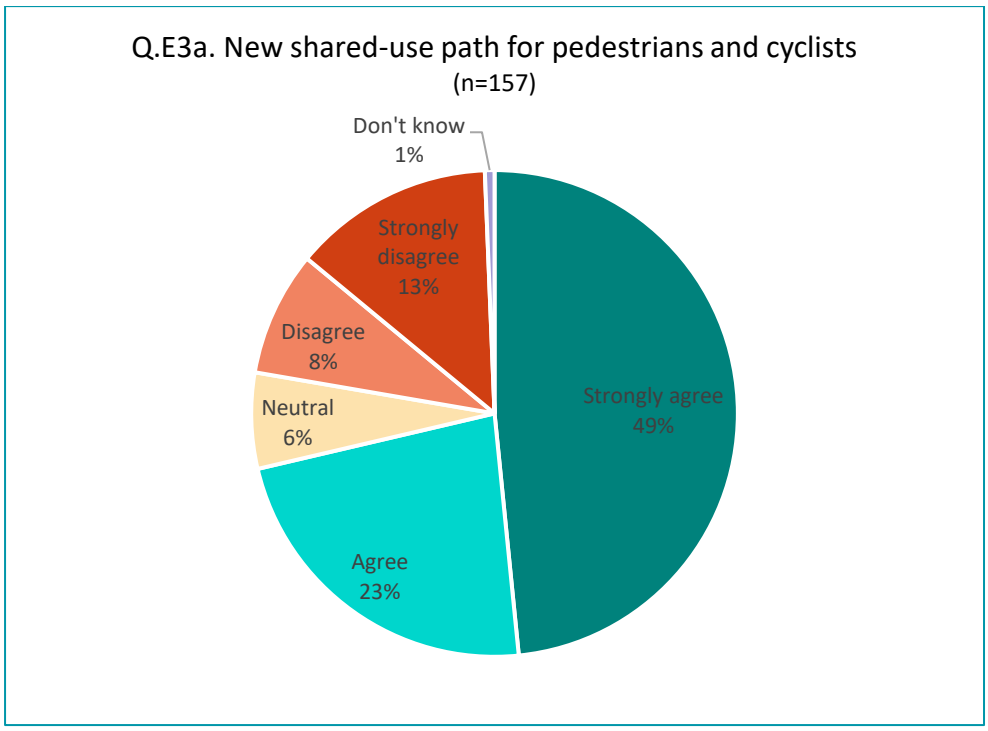
Q.E1. For what purpose(s) do you use this section of the A653 from Tingley to White Rose? (Please tick all that apply)

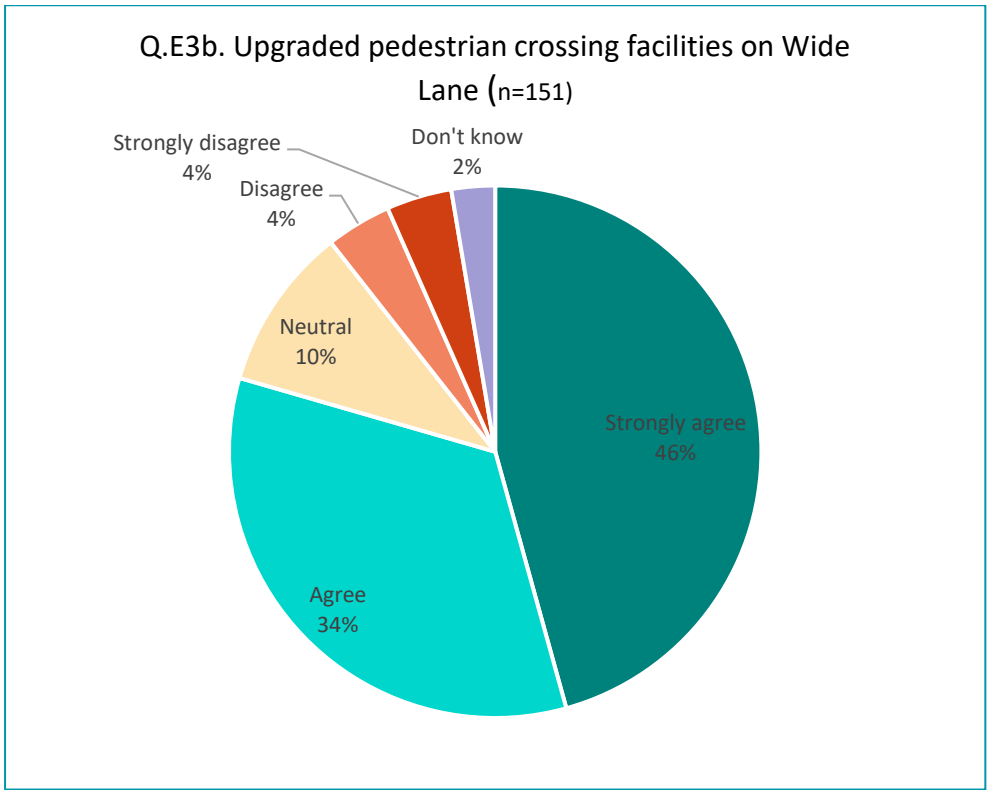


Q.E2. How do you usually travel along this section of the A653 between Tingley and White Rose? (Please tick all that apply)

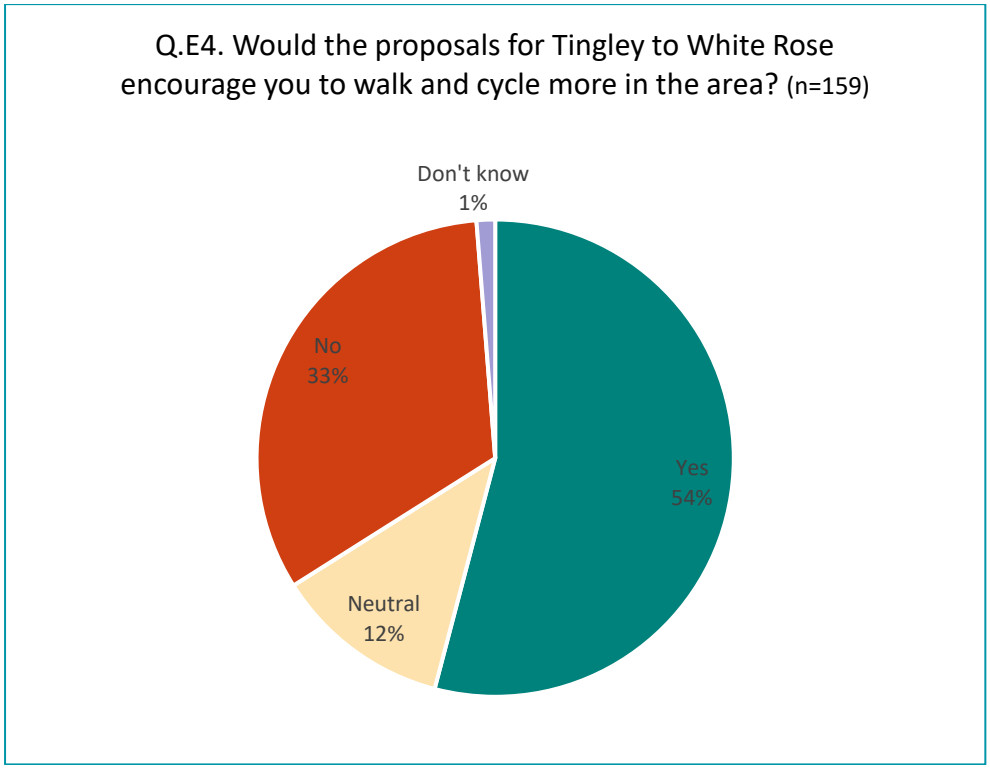


Q.E3 (a-b). As part of the scheme, it is proposed to improve pedestrian and cycle safety. How strongly do you agree or disagree that each of the following proposals will achieve this aim on the section of the A653 between Tingley and White Rose?

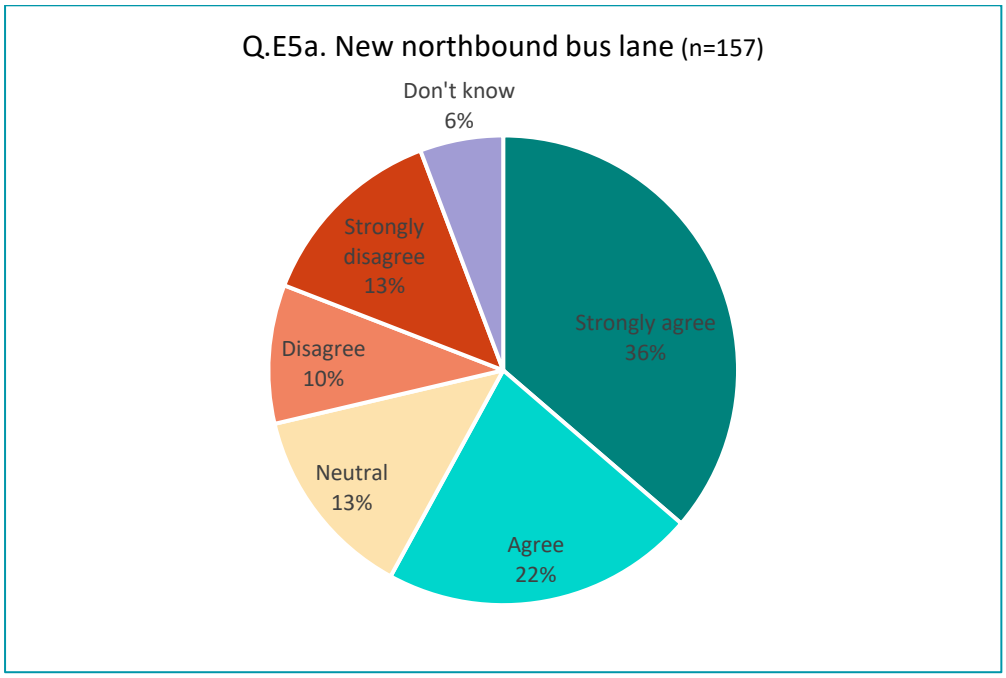


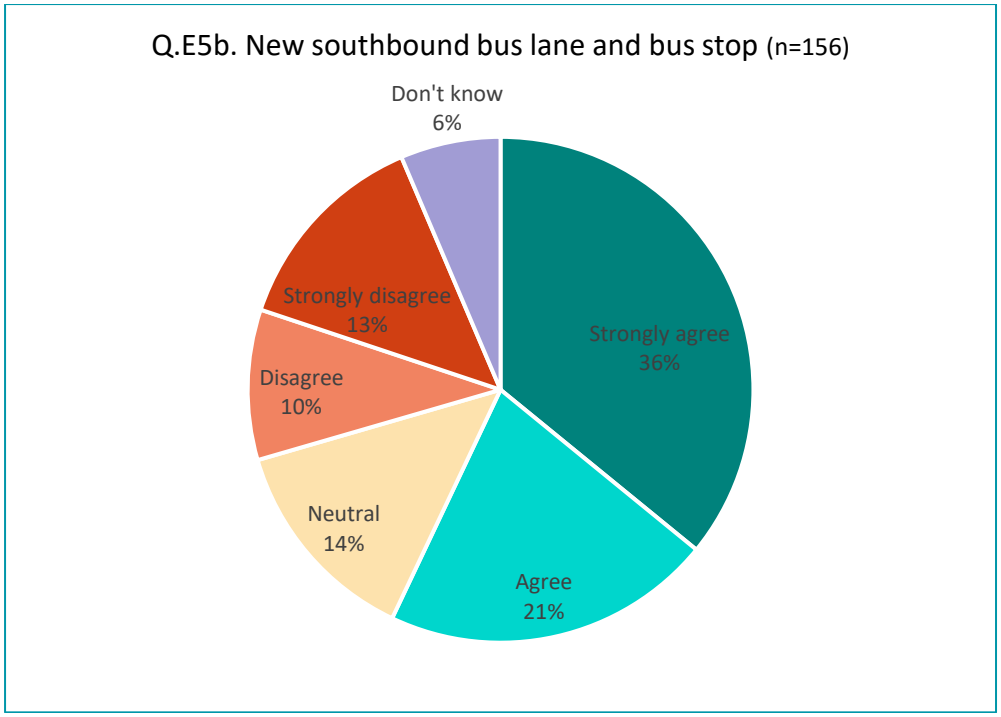


Q.E4. Walking and cycling are active ways to travel and move about. They help people to be more physically active every day and improve health and wellbeing. Would the proposals for Tingley to White Rose encourage you to walk and cycle more in the area?



Q.E5 (a-b). As part of the scheme it is proposed to improve bus journey time reliability. How strongly do you agree or disagree that each of the proposals below will help achieve this aim on the section of the A653 between Tingley and White Rose?





Q. E6. Please use this space to provide us with any additional comments on the section of the A653 between Tingley and White Rose.

Section E. Tingley to White Rose	
Scheme overview	
Theme	**No.**
The traffic flows fine between White Rose and Tingley	1
Speed of traffic is a danger to all	10
Buses have no problems as car drivers have to give way to them	1
Not value for money investing in bus lanes when service is terrible	1
The pollution in that area is a disgrace	1
Current cycle lane is neglected and not fit for purpose – shared with pedestrians and dual direction for cyclists	4
Parked cars are a hazard in cycle lanes on Dewsbury Rd	1
Traffic islands are a safety challenge for cyclists and pedestrians	1
Highways England supports the scheme to potentially reduce the existing burden of vehicle trips along the corridor to reduce congestion and improve air quality.	1
A dedicated shared cycle path appreciated and makes travelling this section an option	7
Welcome shared use path around bus stops to avoid conflict between pedestrians and cyclists	1
Happy the A653 shared use path will be widened	9
Happy the A653 shared use path will be widened - however, estimated pedestrian and cycle numbers may require minimum width upgrade to 4.5m as recommended in LTN 1/20 (Table 6.3).	1

Increase in pathway width is welcomed – but a bigger verge than 1.5m for cycling is needed to be appealing	1
Agree crossings should be set back from the roundabouts but concerned about visibility if greenery not kept trimmed back	1
Bus lanes a huge help to improve traffic	4
Bus lanes go some way towards protecting cyclists by creating a larger 'safe' zone to ride in	2
Bus lane should be all along the route due to all the congestion – this scheme is way overdue	2
Only support proposal of bus lanes if doesn't compromise the current two lanes of dual carriageway (Room for 3 lanes in each direction (1 bus lane) using space currently in central reservation and reduced speed limit 50mph)	3
Agree bus lanes but only for peak direction flow (i.e. a.m. northbound, p.m. southbound)	1
This could be a brilliant scheme but it needs more ambition than current plans	1
Better cycle/pedestrian routes could be planned away from the main traffic routes on A654	1
The redundant railway course between Tingley and Beeston provides potential for a level, designated route for cyclists & pedestrians well away from traffic pollution	1
Would cycle more if there were a connection between this new route and Batley	1
The road lanes are almost 4m wide with a 4m wide median – reallocate some road space for dedicated 2m wide cycle lanes in each direction	1
Support proposal but there is room for a dedicated, segregated cycle and footpath here alongside, but separate from, the main road from Tingley roundabout to White Rose	3
Remove the dead space 1.5 m buffer and create a kerb from the road to a cycle lane and then a kerb from cycle lane to the pedestrian path. Look to European cities like Hamburg or Copenhagen for good example of cycle paths.	1
Shared path needs to be well designed so vegetation does not quickly cover path	1
Any changes to walking / cycling lanes with enforced speed controls would improve safety – speed cameras at traffic lights	1
The speed limit should be reduced across the whole route – this will encourage more people to use route for cycling or walking.	5
Better lighting needed for pedestrian/cyclist safety	2
Multiple-occupancy lane instead of bus lanes	1
Improve the poor road surface	1
This scheme is individual/unconnected proposals.	1
No need for bus lanes - problem is heavily congested roads every day – would be better putting a bypass in that connects the motorway	1
It should be clear that there are areas where bus passengers can stand at bus stops without impeding the cycle lane.	1
Use available land for cycle and pedestrian lanes but don't reduce dual carriageway size	1
Dangerous for cyclists on 70mph carriageway due to lack of segregated cycle lanes	9
A dedicated cycle lane is required with physical barrier separation from traffic	4
This scheme needs segregated cycling / pedestrian lanes if cyclists are to move from the road to the path safely	5

Where do cyclists go at either end of the scheme?	1
Additional homes planned for Churwell will add to congestion at bottom of Churwell Hill/ continuation of flow of traffic past White Rose	1
None of these proposals would encourage modal shift from car to active and sustainable modes. More needs to be done	3
The money for this scheme would be better spent resurfacing the roads to a higher standard than they have been recently	1
Dewsbury Road dual carriageway caters for high volume traffic transit so cutting down vehicular routes will just cause further congestion	5
Government has just issued guidance to reject shared use paths as they are a poor option for both intended users and should not be in any new projects. Shared paths will never be safe – and cyclists are more likely to stay on the road	16
Few pedestrians or cyclists using the path so any cyclists could use existing path to increase safety	1
Do not put a bus lane in – it won't be used	2
Bus lanes here would not speed things up – will only cause more congestion and pollution	11
Prefer schemes which move car traffic more efficiently - people will not move from cars to buses or cycles in great numbers, and new housing developments will increase car numbers	1
Bus lanes will encourage drivers/HGVs to use side streets, causing congestion for residents and making unsafe for pedestrians and children	1
Not enough buses use to justify this expenditure	1
General comments - unrelated	4
E1. White Rose roundabout to petrol station	
Theme	No.
Tommy Wass to White Rose is too dangerous for cycling	1
Should be a metro/light rail system at White Rose in middle of carriageway/central grass verge	1
Reinstate northbound/southbound bus routings on White Rose service roads – this would take many bus movements off congested main roads, and eliminate the difficult exit for southbound buses using the north gate	1
A bus gate off Dewsbury Rd would enable internal White Rose bus stops to be serviced	1
Traffic lights on all entrances to White Rose would assist with traffic and pedestrian crossings	1
A northbound bus lane from Starbucks, Millshaw Rd to White Rose - buses often get stuck here	1
The entry slip road from Dewsbury Road onto the dual carriageway just prior to the white rose roundabout is dangerous because backward vision onto the dual carriageway is poor and floods when wet	1
Provide a good quality cycle & pedestrian crossing which would also allow pedestrians to access stranded bus stop 45011336	1
Traffic that bottlenecks on Dewsbury Road to Tingley is from A6110 joining Dewsbury Road –regulation of that feeding in would enhance journey times between White Rose and Tingley	1
Dewsbury Rd movement needs grade separation inbound and outbound near the petrol station –or cycle lane on west side will not be used as difficult to cross carriageway from/to Tommy Wass	1

At White Rose roundabout crossing to offside lane to negotiate roundabout then crossing again to pick up cycle path on nearside lane is not a safe manoeuvre. Staying in nearside lane round the roundabout involves crossing two separate lanes leaving and two lanes joining roundabout. Cyclists will be particularly vulnerable here	1
This shared use path is not joined up with existing north-east bound Dewsbury Road cycle lane east of White Rose towards Beeston & Middleton. So to move northbound turning into A653 from dual carriageway, either need to turn right across two traffic lanes or cyclists expected to travel further north, use pedestrian crossing which doubles as a poor quality cycle crossing then take much longer, steeper, narrower, and more congested Ring Road towards Beeston	5
The crossing in front of petrol station/coffee shop on A653 will be major hazard as entrance is wide and cars are driven at high speeds - diagram shows a continual crossing with no setback - what is planned to increase sight lines and slow speed of cars entering/exiting over shared space path?	2
E1 Width of the shared use path needs confirming – currently too narrow	1
E2. Petrol Station to north of Wide Lane	
Theme	**No.**
Provide segregated cycle paths on east & west side of A653 allowing good connections with Dewsbury Road and with a quality traffic-controlled cycle/pedestrian crossing to Wide Lane which could also allow pedestrians from Morley to access bus stop 45011334. Moving northbound cyclists to the east of the A653, would free space on west side for segregated cycle/pedestrian path	4
Northbound bus lane (morning and evening peaks only) from Wide Lane down to the roundabout by White Rose - people would be more likely to use the bus if quicker at commuting times	1
E2 Priority across roundabout arm unclear – needs to be priority for cyclists / pedestrians and priority across side roads needed – crossing should be signalised - left filter lane develops for traffic travelling from Tingley to enter the retail park. Drivers look to their right to check traffic on roundabout and if clear accelerate away - users of the crossing may not be seen	3
The shared footpath/cycle way is well used by pedestrians who will not hear approaching cyclists - is there room to separate these pathway users?	1
A shared use path between Wide Lane and White Rose is not suitable, and a segregated cycle lane and separate pavement should be given here	1
E3. Wide Lane to Topcliffe Grange Farm	
Theme	**No.**
Section can safely be used as shared use path	1
It is difficult for buses to turn on to Wide Lane at the roundabout which needs to be improved	1
Unclear from plans what type of crossing proposed – currently no protection from vehicles exiting roundabout at speed - this must be signalised and with a short wait phase for users	2
Complicated junction with slip road northbound h making difficult crossing for cyclists at Wide Lane	1
The cycling route gives way at this junction	1
Near Wide Lane junction an escarpment track joins the road - well used by walkers and cyclists but there is a blind spot and southbound traffic are not expecting people to cross at this point	1

Now a takeaway and driv- through are in development, further safety mitigations needed	1
If extensive planting envisaged need maintenance to ensure shared use paths free of vegetation	1
1.5m buffer is not sufficient separation of shared use path and carriageway - national speed limit road needs 3.5m buffer LTN 1/20 (table 6.1)	3
Shared use two-way needs to be wider than 3m	1
E4. Capitol Park to M62	
Theme	**No.**
Dangerous when cyclists use road and not cycle lanes, especially at Tingley roundabout	1
The proposed segregated cycle path is good, but getting to the start from Dewsbury side is dangerous for cyclists at Tingley roundabout	1
On southbound bus lane approach to Capitol Park East junction - give buses priority on approach so not waiting for space to merge	1
Provide bus shelters at existing stops	1
Save crossing two busy roads if 202/203 use bus stop before Tingley roundabout	1
Council needs to work with Capitol Park developers to ensure safe, separated cycle lane access to the shared path on the A653	1
Use money to improve the road surfaces	1
Capitol park is another on-off junction - needs cycle priority over traffic entering from Tingley	2
Currently dangerous for pedestrians and cyclists – needs safety measures and path needs widening and to be well lit	6
The new bus lane Southbound only runs for a short stretch so will not improve congestion - consider using space to extend to White Rose	3
New southbound bus lane will only worsen tailbacks at Tingley Roundabout	1
E5. M62 to West Lea Park	
Theme	**No.**
Northbound bus lane is fine	1
E5 could a cycle and bus lane be incorporated?	1
Lengthen northbound left hand lane using access to former pub site to reduce congestion – would fit well with new bus lane and help reduce peak traffic conflict at Rein Rd/ Woodkirk school	1
No proposal to improve A653 cycle infrastructure south of Tingley roundabout - Existing cycle lanes are dangerous and not separated from the road	1
Existing northbound cycle crossings are difficult on west side of Tingley roundabout – consider using old road alignment to link more directly to roundabout round edge of former pub site	2
Difficult to access shared use path to White Rose from Shaw Cross area as no proposals for cycle paths northbound to Tingley roundabout	2
Need to provide a proper safe cycling space for children to cycle to/from schools such as Woodkirk post-covid to encourage active travel	1
New northbound bus lane forces existing queuing traffic to filter into one lane 300m to roundabout – at peak time queues existing two lanes queue past Lowry Road junction – plans need reviewing to ensure this will not increase traffic queue/time and worsen congestion and pollution	3
No plan for crossing dangerous A650 to Morley	1

SECTION F: VIEWS ON WHITE ROSE – DEWSBURY ROAD (A653)

Dewsbury Road is a key route in south Leeds for local communities to access centres of education, employment and leisure.

It is a popular bus route which serves up to 22 buses per hour in each direction during peak times. Currently, buses are regularly delayed, and journey times are longer than they need to be. Our plan is to make existing bus services from and to Middleton, the White Rose and Dewsbury quicker and more reliable. The proposals seek to reduce delays to buses improving their reliability and punctuality.

We previously consulted on Cycle Superhighway facilities on Dewsbury Road between Garnet Road and Beeston Ring Road with construction due to start in the summer.

We are proposing to extend segregated cycle facilities over 600m between Beeston Ring Road and the White Rose providing a direct traffic free route to local attractions.

Issues

- Dewsbury Road is a wide road, dominated by traffic and congestion
- The current road layout requires people cycling to mix with general traffic which is not safe, comfortable or attractive for most people
- Delay to bus journey times along the corridor

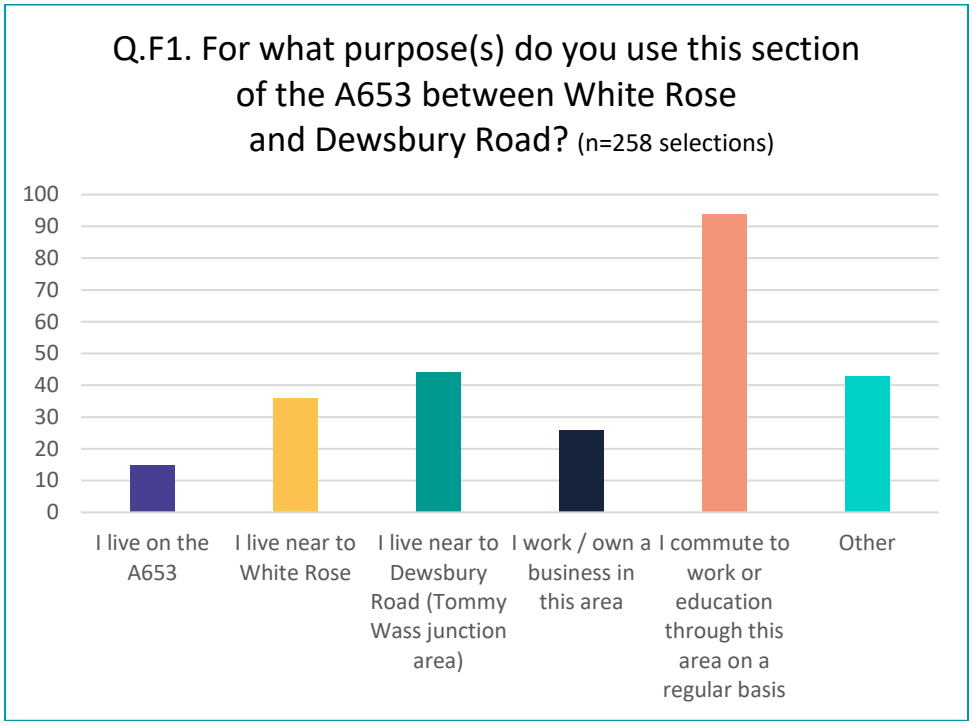
Opportunity

- Segregated one-way cycle tracks which connect with existing City Connect 3 proposals on Dewsbury Road
- Improvements to pedestrian crossing facilities and footways along the route including shared pedestrian and cycle crossings
- Conversion of the existing lane on Dewsbury Road into a bus lane
- There is further opportunity to extend the Eastbound bus lane to the railway bridge on the ring road. This would further improve bus journey times

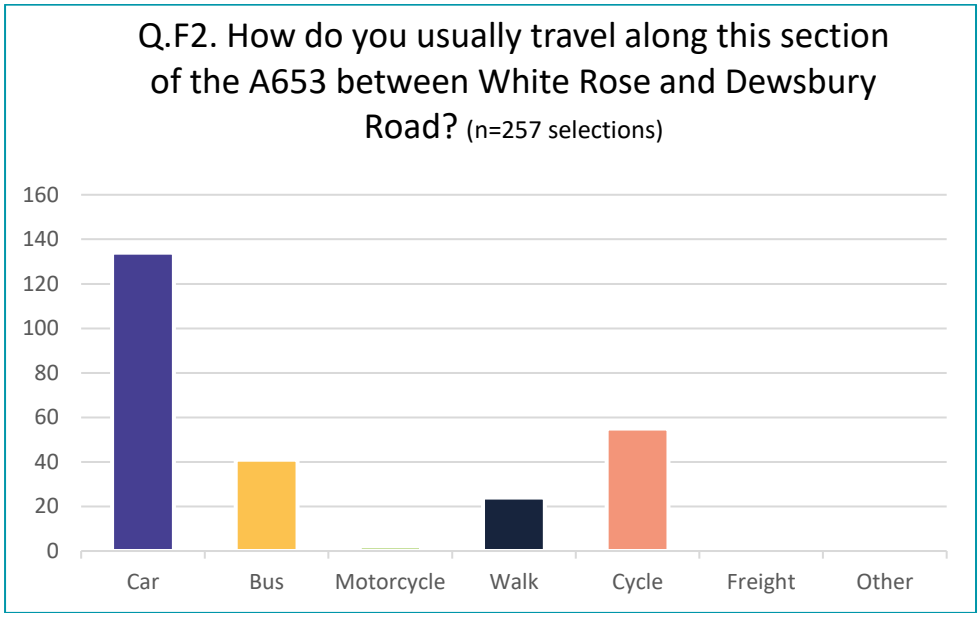
Benefits

- Makes travelling on foot and by cycle a convenient and direct choice for travelling along this route
- Expands segregated cycle network to key destinations
- Improves bus journey times

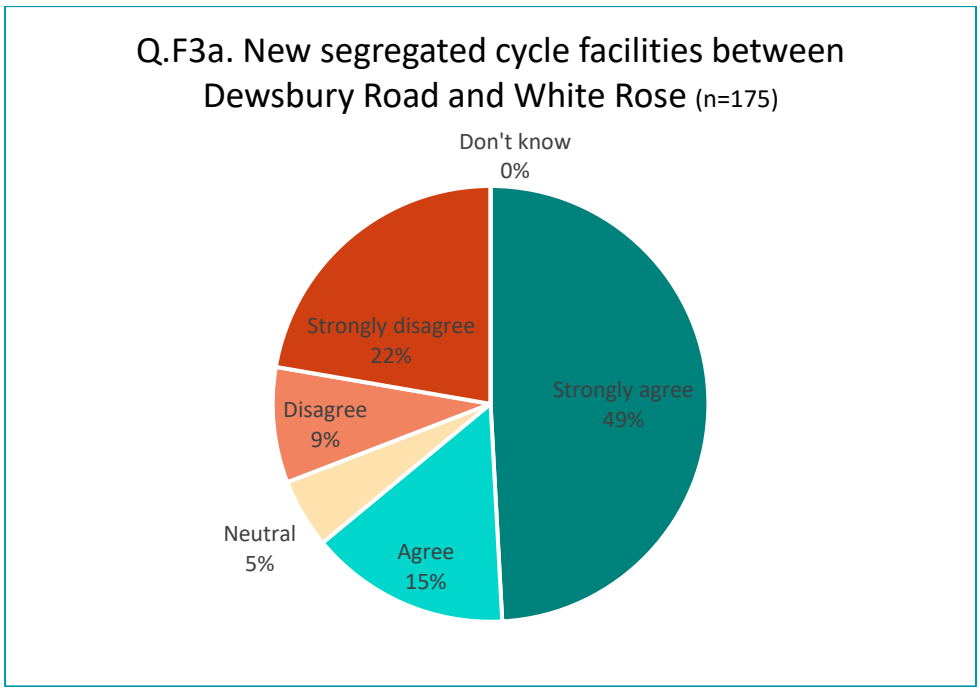
Q.F1. For what purpose(s) do you use this section of the A653 from Tingley to White Rose? (Please tick all that apply)

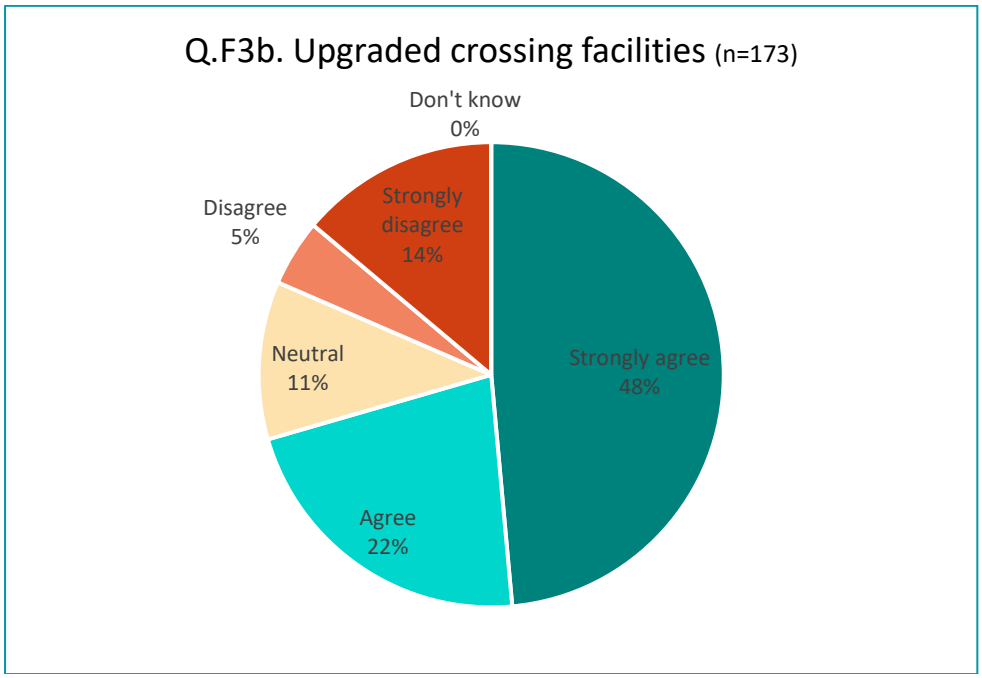


Q.F2. How do you usually travel along this section of the A653 between White Rose and Dewsbury Road? (Please tick all that apply)

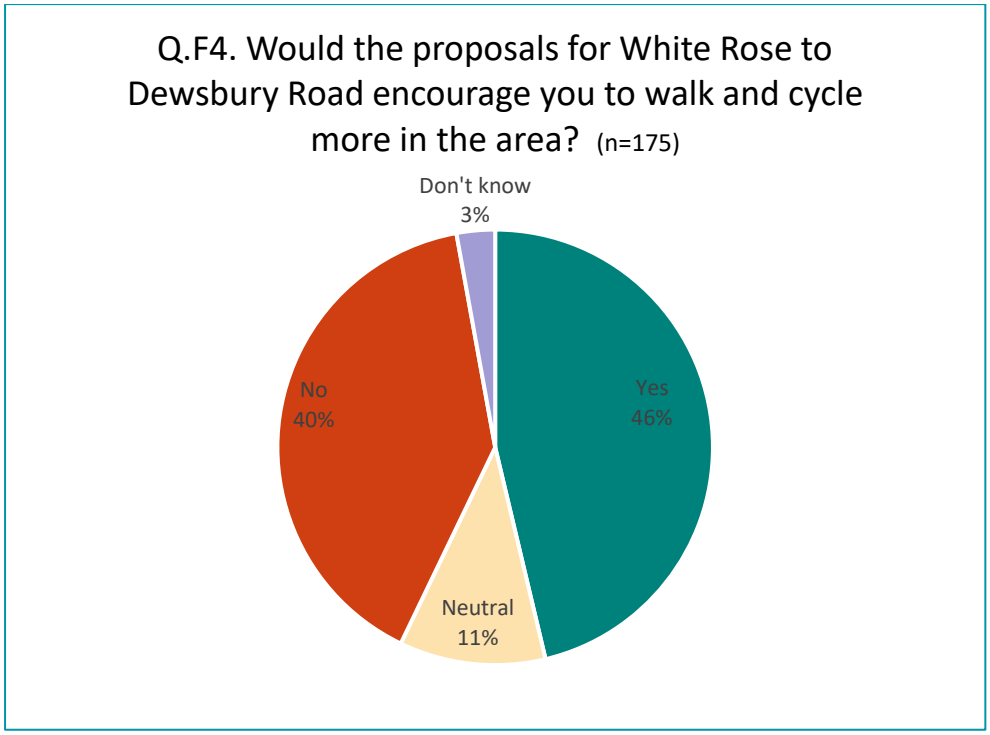


Q.F3 (a-b). As part of the scheme it is proposed to improve pedestrian and cycle safety. How strongly do you agree or disagree that each of the following proposals will help achieve this aim on the section of the A653 between White Rose and Dewsbury Road?

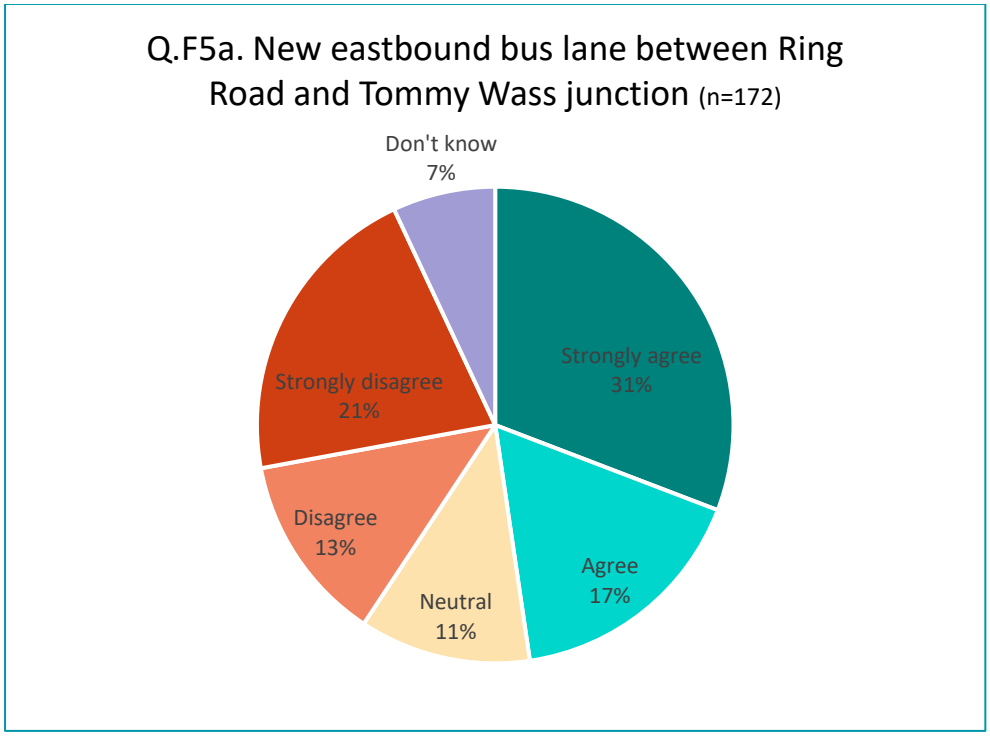


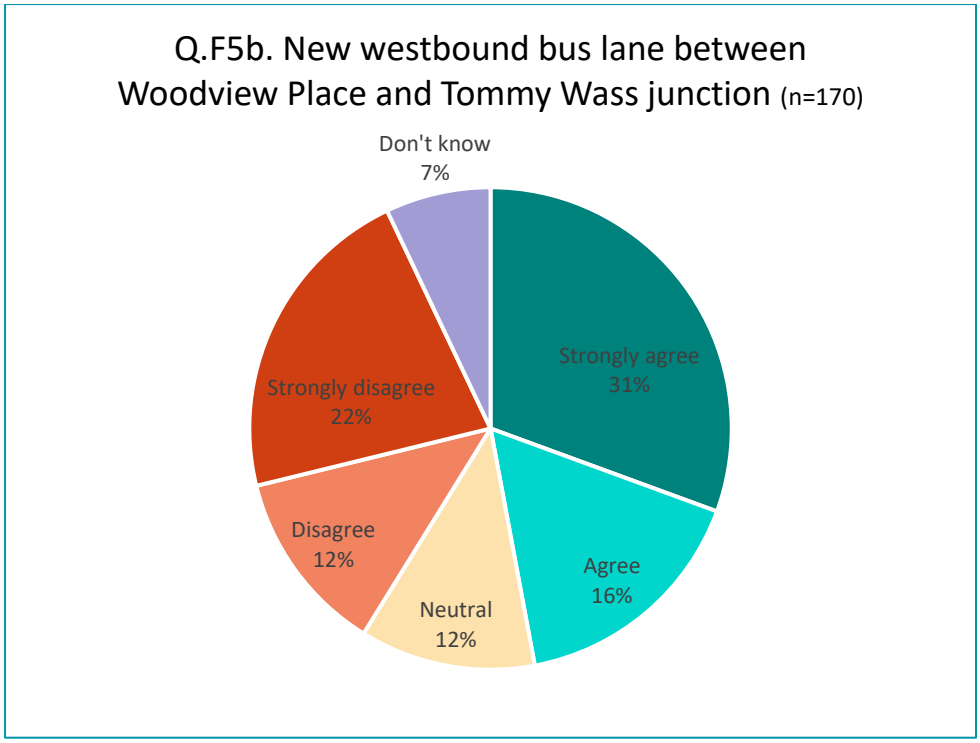


Q.F4. Walking and cycling are active ways to travel and move about. They help people to be more physically active every day and improve health and wellbeing. Would the proposals for White Rose to Dewsbury Road encourage you to walk and cycle more in the area?

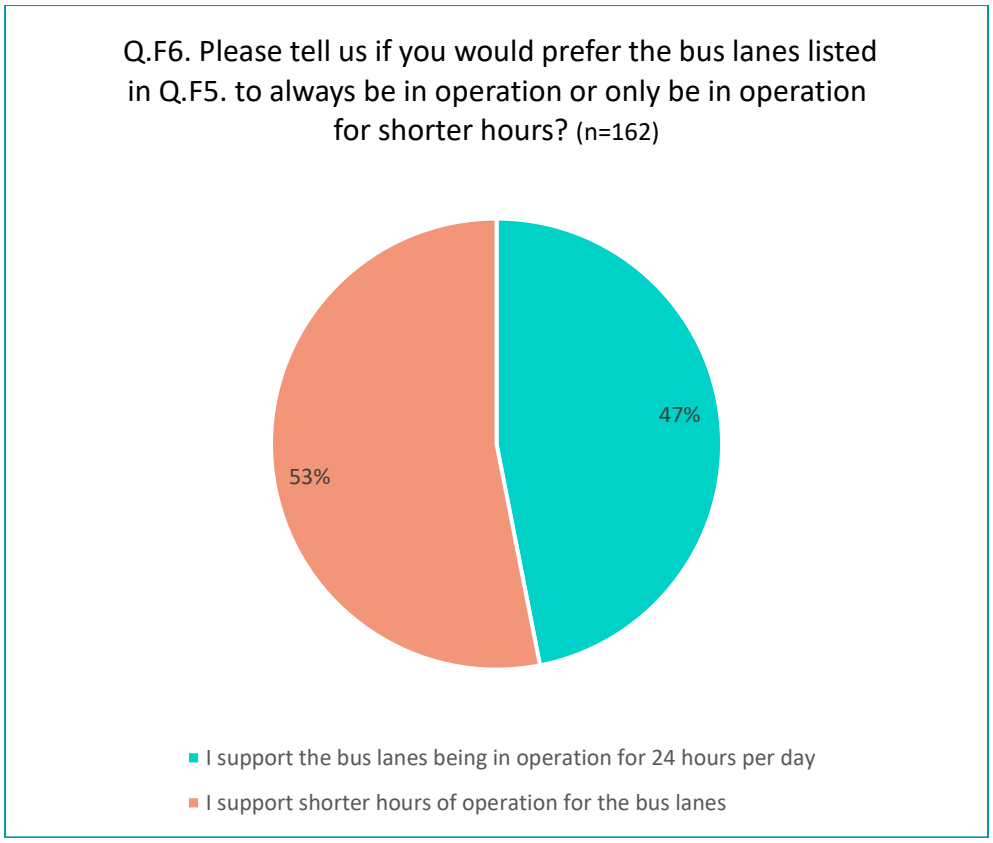


Q.F5 (a-b). As part of the scheme it is proposed to improve bus journey time reliability. How strongly do you agree or disagree that each of the following proposals will help achieve this aim between White Rose and Dewsbury Road?

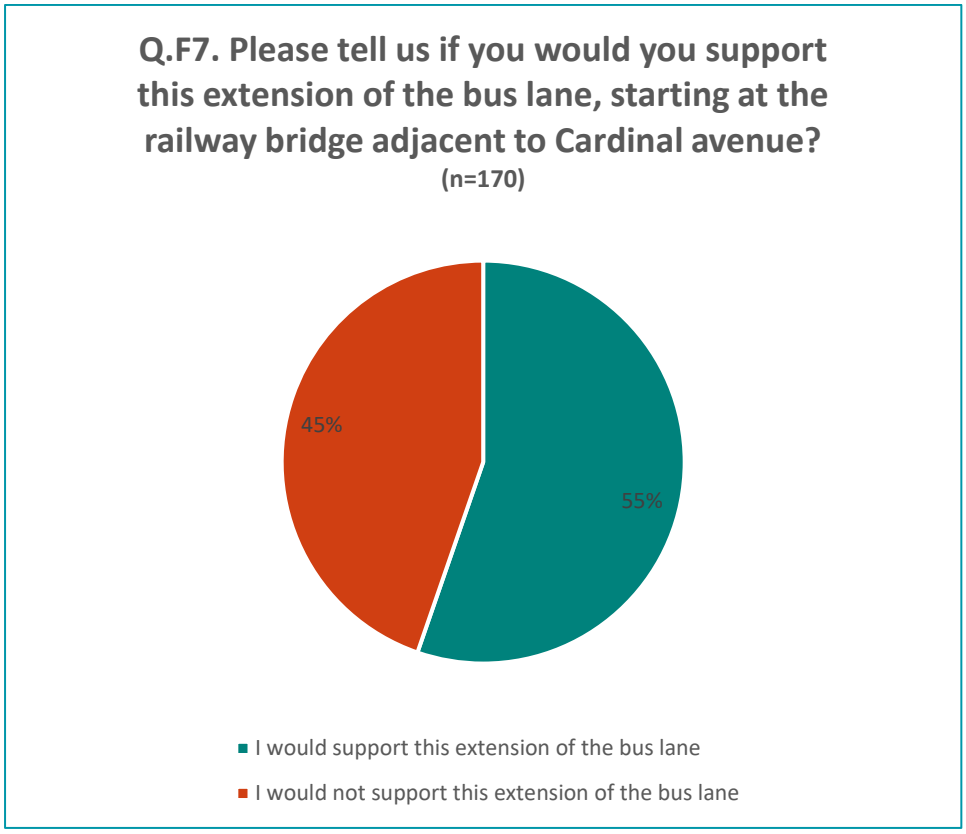




Q.F6. To maximise benefits for buses, the bus lanes listed above (in Q.F5.) between White Rose and Dewsbury Road are proposed to be always operational (24 hours per day). Please tell us if you would prefer the bus lane to always be in operation or only be in operation for shorter hours?



Q.F7. We are currently investigating an option to extend the eastbound bus lane between Ring Road and Tommy Wass junction. This would mean that the bus lane would start at the Railway bridge adjacent to Cardinal Avenue. We think this could further improve bus journey times. Please tell us if you would you support this extension of the bus lane?



Q.F8. Please use this space to provide us with any additional comments on the route between White Rose and Dewsbury Road.

Section F. White Rose – Dewsbury Road	
F1. White Rose – Ring Road	
Theme	**No.**
Request for cycle lane to continue on beyond the White Rose Roundabout so can be used to travel safely and conveniently to Elliot Hudson College, Millshaw Park Industrial Estate and the future White Rose Train Station	2
Safe cycle storage should be included in plans	1
Concern there is a missing cycle link between end of cycle track on E1 and start of cycle track F1 on Ring Road so cyclists will have to negotiate dangerous White Rose roundabout	1
Concern for safety as cycle lane runs through bus stop where passengers wait - can cycle lane go around bus stop?	1

Concerned that residents will not be able to park and amount of grass verge/pathways lost to create new lanes	1
Concern that plans will cause more congestion so traffic will rat run through side roads making it unsafe for residents	1
Objection against extension of bus lanes	4
F2. Approach to Tommy Wass junction	
Theme	No.
Support for cycle lane between Tommy Wass & White Rose	1
Cycle lane on Dewsbury Road should be two-way	1
Proposed signalised cycle crossing on Dewsbury Road is unnecessary	1
Could there be a single crossing point across the lanes between ring road and Dewsbury Rd	1
Concern no cycle link joining E1 and F2 – in both directions – cyclists need protection turning right to continue along Dewsbury Road to Leeds and southbound this is the main route (not to White Rose roundabout)	8
Concern that bus lane on the left will prevent cars getting around queuing traffic to go straight or left on junction approach from Ring Road and cause tailbacks to White Rose roundabout	2
There should be no right turn allowed from Dewsbury Road onto Ring Road (use White Rose roundabout instead)	1
Ring Road to Dewsbury Rd inbound movement – needs similar arrangement to west arm	1
Measures are needed at the parking laybys, such as in section F2, to prevent collisions between cyclists and vehicle doors	1
General comment - Congestion is caused by difficulty for traffic merging from Ring Rd and Dewsbury Rd on approach to junction and needing to cross lanes	1
F3. Tommy Wass junction	
Theme	No.
Tommy Wass junction is a badly designed bottleneck that needs massive improvement to signals and layout or these proposals will not work and will make life worse for anyone who lives or drives in area	10
Concern for safety of cyclists travelling through Tommy Wass junction - these proposals require complex, multi-stage movements and should be revisited	8
Concern that bus lane at Tommy Wass junction will compound a bad situation	3
Concern that in-bound bottleneck caused by Dewsbury Road traffic turning right to Middleton blocks city bound traffic – proposals will not help	1
Concern that outbound bottleneck caused by right turning traffic at Old Lane, so drivers use side streets as rat run – proposals will not help	1
Suggest a roundabout at Tommy Wass junction and close all central reservation gaps	1
Suggestion to extend city bound bus lane from Tommy Wass to junction with Parkside Lane	2
F4. Dewsbury Road westbound	
Theme	No.
Objection to bus lane – it will cause even more congestion and will be problem for all residents for any car travel	4
Support for segregated cycle lane on Dewsbury Road	3
Support for bus lane in Beeston	1

F5. Dewsbury Road (Westland Road junction)	
Theme	No.
Concerns about problems a westbound bus lane would cause – more congestion if traffic reduced to one lane, traffic will not be able to move lanes to avoid right turning traffic, residents parking will obstruct bus lane	8
Need to widen and improve central reservation to account for cars turning right	1
Reduce the amount of spaces in the central reservation area along the length of Dewsbury Rd	1
Stop parking on Dewsbury road to encourage better road use and cycling.	1
Reduced speed across the full length of Dewsbury Road to 30 mph	1
F6. Dewsbury Road (Cross Flatts)	
Theme	No.
Concern that Cross Flatts 'safer streets' project will introduce extra traffic to Dewsbury Rd requiring more right turns westbound into side streets – proposals for bus lane will prevent traffic moving to other lane to avoid right turning vehicles	1
F7. Dewsbury Road (Middleton Grove)	
Theme	No.
No comments	
F8. Dewsbury Road (to Parkside Lane)	
Theme	No.
Concerns about problems a westbound bus lane would cause – more congestion if traffic reduced to one lane, traffic will not be able to move lanes to avoid right turning traffic, lanes have already been narrowed here recently	9
Concern that buses will have to cut into the cycle lanes to pull in causing danger to cyclists and alighting passengers	2
If there are 2 lanes, both lanes should be wide enough to use if the other is blocked	1
Suggestion for better placed, indented bus stops between Tommy Wass and Tesco Express	1
Concern for cyclist safety - Will the cycle lane be risen?	1
Section F. General comments	
Theme	No.
General comment - lots of local traffic because residents do not benefit from possible improvements to Arriva bus service to Dewsbury and beyond	1
General comment - Better links should be made with Beeston Active Travel Neighbourhood	1
General comment - Dewsbury Road does not need to be a major dual carriageway road due to the proximity of the M621 allowing traffic to use the dedicated highway to access Leeds City Centre rather than Dewsbury Road	1

Appendix One

Full list of verbatim open-text comments received for each section, in response to question: 'Please use this space to provide any additional comments on this section...'

[Redacted]: Any information that could potentially identify an individual has been redacted from the content of this report to retain anonymity, and best practice data handling in line with our privacy statement. Redacted information includes names, addresses and contact information or other information that could be used to identify an individual. Where this information is relevant or necessary for a timely response to have been provided (emails), this information has been given freely, however redacted for the purposes of this report only. Any defamatory or abusive comments have also been redacted. Please note that these comments have been copied verbatim from their source and have not been altered, updated or amended.

Section A
Please use this space to provide us with any additional comments on the section of the A644 between Mirfield and Ravensthorpe.
I WOULD NOT BE WILLING TO TAKE MY LIFE INTO MY HANDS BY CYCLING ALONG THIS STRETCH OF ROAD. WALKERS APPEAR WELL CATERED FOR. RAVENSTHORPE HAS MAIN ROAD PARKING OUTSIDE ALL THE SHOPS ON HUDDERSFIELD ROAD; BUT MIRFIELD HAS NONE. THIS IS DISCRIMINATORY. THE GYRATORY DOES ABSOLUTELY NOTHING TO AID TRAFFIC FLOW & THE WHOLE SET-UP NEEDS LOOKING AT AGAIN. THERE IS NEVER A TIME WHEN THERE ARE NO QUEUES IN THIS AREA
The proposals are worth than nothing for cyclists. The cycle lanes are discontinuous and completely absent for long stretches. Please focus money and attention on providing long continuous stretches of cycle way. Cyclists are either happy mixing with traffic or not: For cyclists happy mixing with traffic providing intermittent cycle lanes are useless because you're better off maintaining primary position in the carriageway. For the majority of people who are not happy mixing with traffic when cycling the intermittent cycle lanes will provide no benefit. I can only urge you to spend this money on one scheme of proper cycleways rather than nots of useless half hearted schemes.
I see maybe one cyclist a week travelling daily

Cycle lanes must be clear 24 hrs a day. Cycle lanes must also be swept clear of road debris regularly as currently the A644 Mirfield to Dewsbury is littered with debris by the kerb (litter - broken glass - foliage) and this is a significant hindrance to the regular cyclist
Build cycle ways away from main arterial roads, pedestrians have more than enough walking area's after all the previous years road narrowing.
What about Batley why do we miss out all the time...can you give us something please???
Nobody walks on these pavements, not because they are not good but because people in Ravensthorpe and Mirfield drive everywhere. The main problem of this road is for car users and lorries/ comercial vehicles. The conjestion on this road affects the local economy negatively and in addition, the conjestion leads to high levels of pollution in Ravensthorpe. Cleam air will improve health and wellbeing. Traffic that flows helps health and wellbeing as it reduces stress. There is already a cycle way going through Ravensthorpe and there are plans to improve this into Mirfield and beyond. There are many facilities for health and wellbeing in Mirfield. These changes will not benefit the health and wellbeing of many as the paths and cycle lanes will not be used that much more.
The mandatory cycle lanes will cause problems in Mirfield town centre.outside the show ground is the only place for all day parking in Mirfield. The side roads will become more dangerous for children arriving and leaving Crowlees school as it is pushed into less safe areas. As this stretch is used for that. There is no way to cycle a 4 year old to school and manage to cycle back with 2 bikes. There has been no thought into how people are using the other roads the corridor has been looked at in isolation and the consequences of where the traffic will go. You maybe encouraging cycling but have not got provision for storing them safely. This is an I'll thought through plan. Blocking the road with a bus stop outside the library is also ridiculous as the buses use the lay-by to keep to time and stay for extended periods of time where will this now occur. Stopping the flow of traffic across a junction when the bus stops is dangerous as well.
The improvements to this section seem fine and I encourage any mandatory lanes where possible but to be honest with you this section of the route is already pretty safe for cyclists.
People won't be encouraged to cycle until you get the huge lorries and heavy traffic off the roads, and with thousands of extra houses being built, this isn't going to happen. Mandatory cycle lanes will be a waste of space on this already packed road. I travel from Mirfield to Pinderfields hospital for work. There is no practical alternative to driving (I wish there was!) and the traffic is horrific. The current cycle lane by the showground is used for car parking particularly at Crowlees school start and finish times. Parking options are already more limited since Castle hall school changed their finish time to the same time, with people arriving up to an hour before school finishes to ensure they can get a parking spot! This already pushes more people to park on Huddersfield road. Removing this parking will prove extremely detrimental to the safety of the local residents and school children walking in this area.

It is very poor that in 2020 the proposals are not for completely segregated cycling facilities between the Greenway (that comes all the way from Huddersfield) to allow access to the Spen Valley Cycleway. The excellent Greenways that are accessible to anyone of any cycling or walking ability are badly let down by this couple of miles. This is an A road the cycle lanes should be segregated anyway but when they form part of this Greenway it is even more important that they are. Some specific points: There isn't even a cycle lane just some paint on the road when traveling Westbound between Parker Lane and Fenton Street. The cycle lanes end and start short of the entrance to the Greenway at Church Lane. Raised tabes should be used at all side roads to make priority of cyclists and pedestrians crossing more obvious. Turning right from station road (having started on an up hill) you have to go quite a distance around car parking spaces and past a couple of side roads before you get to the mandatory cycle lane after Knoll road. Lots of this feels like the usual make the already safer bits a bit safer but just ignore the harder but more dangerous parts.
I already cycle regularly in the area and try to avoid the main road through Ravensthorpe as the road surface is poor and a lot of motor vehicles do not seem to understand the highway code or even how to be decent human beings - pulling out of side roads in front of you, cutting you up, stopping and or turning with no indication, driving too close to other road users, using the road as a race track etc..... The best thing that could happen regards cycling is the Sustrans proposal to re-open the tunnel under the Huddersfield Road / Church Lane junction and continuing the Greenway across the canal to the Train Station in Mirfield. As the main Huddersfield Road through Ravensthorpe is already a substantial bottle neck for all road users, any additional crossings, bus stops or road narrowing will only add to the journey times through the area. The amount of gridlock / increased journey times have only been made worse by the road narrowing through Ravensthorpe that took place some years ago. Because the road is now only just wide enough for 2 lanes of traffic anybusesthatpull up or any vehicles wanting to turn into side road across the flow of traffic now holds up / stops the entire flow of traffic behind it -before the previous "improvements" it was possible to get past the buses / turning vehicles.
The lanes are too narrow when cars are parked outside the businesses in Ravensthorpe. If there was no parking along the a644 outside these businesses, cars coming out the side roads would not be out at risk of accidents etc. Cyclists and walkers would be safer.
A complete waste of money. If you want to separate cyclists then build them their own track away from the road. Although I cycle I wouldn’t dream of cycling between Mirfield and Dewsbury because it’s to dangerous and your plan will not improve the situation
DO NOT FORGET DISABLED POPULATION WHO CANNOT USE PUBLIC TRANSPORT/CYCLES
Why is there a plan to make Parkfield Crescent one way? [Redacted] I can see no reason why that could possibly improve the traffic issues in this area? The pedestrian crossing at the junction with huddersfield road works well why would you want to out in others which would only cause disruption to traffic flowing through the area?
Parking restrictions need implementing and enforcing particularly through Ravensthorpe. Antisocial behaviour and aggressive driving needs actioning as you do not feel safe walking or cycling through there even in broad daylight.
The Ravensthorpe roundabout and entry/exit to the retail park needs a rethink. It causes unnecessary delays

I think that unless you protect the mandatory cycle lanes with a curb there will be accidents. This raises the question is the scheme Intended to protect and encourage cycling or just another revenue raiser by fining motorists who put a wheel in the cycle lane even if that is to avoid an accident? The scheme has to be fair to both motorists and cyclists while protecting both. Also I see nothing on this map that will stop the long question of traffic and it is these bottlenecks that cause so much pollution. Until a proper link road to bypass these bottleneck points is built the problem is not going away. So don't fool yourselves.
Most of the proposals look very good, but I'm concerned about the junction with Jessamine Street (A14). The cycle lane ends at the junction and cyclists are immediately faced with a buildout – this will make it harder for cyclists to move into the main traffic lane to pass the buildout safely. How about extending the green surface diagonally to the corner of the buildout, to highlight to motorists that cyclists will need to join their lane?
The road surface is of poor quality creating a rough grippy surface and pot holes, making it dangerous to cycle on with out changing course. Mandatory cycle lanes should only be implemented if they are kept free of street furniture, pedestrians, rubbish, motor vehicles stationary/parked or moving. If mandatory they should be wide enough to allow safe overtaking of cyclists as I would hope it would be utilised by cyclists of all capabilities.
More thought needs to be given to remodelling Ravensthorpe gyratory to make it more safe for cyclists to traverse. The proposals put forward are to weak. Thought also needs to be given to cycle traffic travelling to/from North Road and also Station Road.
How can I really comment when I do not know what on earth you are talking about. A by-pass would be the answer if feasible. In my opinion you are not going to achieve anything. Would it not be better to spend the money on Dewsbury Town Centre and bring a derelict Borough that was to its former glory.
I would love to feel safe cycling from Mirfield to Dewsbury but these proposals just don't cut it for me. We already have cycle lanes on one side of the road from Mirfield through to Church Lane and they are useless because cars park in them and block off access for cyclists. In addition there is no physical separation between the road and the cycle lane making cyclists vulnerable. The new proposals for advanced cycle stops also fall down because the cyclist is still mixing with heavy traffic. The overall scheme seems to be a sticking plaster giving cyclists a little bit more room in a system designed with motor traffic as the priority. A bit of green paint on the road won't encourage me to risk my life on a bike in heavy traffic. You need to be much more radical in your approach and focus your attention on providing dedicated cycling facilities that are physically separated from motor traffic. It would also be good to have some proposals for better public transport e.g. how about a tramlink from Huddersfield to Leeds (at affordable prices) - they've had them in Manchester for years.
At present there is about a one mile gap in the Calder Valley Greenway in Mirfield. Could proposals be considered to close this gap without using the A644, or minimising its use. At the moment there is almost complete off-road cycling between Lower Hopton and Huddersfield, and between Church Lane, Mirfield and Dewsbury.

Reduction of pedestrian walkways size between Parker lane/knowl road and church lane will increase the risk to pedestrians. Whilst the will be a mandatory cycle lane between the walkway and main carriageway, the traffic is heavy throughout the day with cars and HGVs. The current walkways provide some comfort and safety as a result of their width and a reduction in this does not seem a benefit to those walking. In addition, the driving and behaviour of many drivers along that stretch can be erratic and in excess of speed restrictions, as such I would be concerned that drivers would not adhere to the cycle lane restrictions. I would also like to highlight the excessive speed of drivers using church lane, particularly in evenings and would strongly recommend the implementation of speed cameras/traffic calming in this area to further enhance pedestrian and cyclist safety. Especially given church lane is the opening to the Greenway.
Would not walk from mirfield to Ravensthorpe,due to gangs of people sat on benches drinking. Also would not feel safe.
I am a regular walker, runner and cyclist. None of the changes will entice me to use this road more. As a driver the road is already gridlocked at peak times and these proposals will make traffic worse for little if any gain for the cycling minority
It's so hard to comment on this because I don't know how the improvements would work. Changing a junction... changing it how?? Improving a crossing... how? Adding a crossing... where exactly?
Road is too narrow as it is,parts of this scheme will only delay traffic more,the queues will only get longer from Mir field to ravensthorpe therefore more pollution from standing traffic

I am a regular cyclist and walker in this area. Proposed no entry Queen Street I agree. There should also be changes to the entrance to what is Tesco car park as motorists disobey the left turn sign and frequently cut across the traffic to access Station Road and Huddersfield Road. This is dangerous to other road users and pedestrians. The car parking bays outside Ramsdens butchers need to be moved as they cause vehicles exiting Tesco car park no end of problem as they restrict the turning angle as vehicles and in particular commercial vehicles attempt to join Huddersfield Road. Knowl road to Parker lane. A cycle lane is required but there is an issue with both resident parking and school drop off and pick up. I agree a full time segregated cycle lane is required. There also needs to be permanent double yellow lines on both sides of this road as it is used by the idle car users that do not avail of the car parking available in the park. There is also an argument that the access to Mirfield Cricket Club and the Park should be modified to allow better vehicular access and exit Parker lane. This should be made 1 way in the direction of Crowlees Road and the junction built up either side for pedestrians. The junction is far too narrow for pedestrians accessing Parker lane. The footpath is too narrow for the first 50metres for people pushing pushchairs up Parker Lane. This is also very dangerous for children walking to school, as there is no clear line of sight as the road bends and high residential walls block their view. When vehicles pass on Parker Lane they are so close to pedestrians due to the narrow road pedestrians are often seen turning sideways as some bizarre defence to overhanging car or commercial vehicle mirrors. Blake Hall to Church lane. I agree a cycle lane would be beneficial as would the removal of some of the trees. It would also be useful to remind the owners of adjacent properties that they should also prune their trees that overhang the pavement. The traffic islands are a disaster for cyclists. They are neither too wide to allow for vehicles to overtake or too narrow to stop drivers even attempting an overtake manoeuvre. Church Lane junction with Huddersfield Road. This needs more thought. The access entrance to the Greenway needs to be moved further back into the Greenway and moving slightly up Church Lane. This is because for pedestrians and cyclists the entrance space is too small. If you are exiting the Greenway there is a poor line of sight up Church lane and for the Traffic turning up Church lane they are accelerating toward cyclists. The footpath on the corner of Church lane and Huddersfield Road on the garage side is appalling. It is too narrow it is at a strange angle. The wall needs moving back into the Greenway. Also the footpath opposite the entrance to Church Lane on Huddersfield Road is far too narrow. It is single file for pedestrians and once again when commercial vehicles are moving on Huddersfield Road their mirrors overhang the pavement. Junction Steanard Lane. You must be aware that planning permission has been granted for a Petrol station on the site of the Public House opposite Steanard Lane. Therefore your drawings will need to change as this represents a major road safety issue. A13 Residents currently park their vehicles on this section of Huddersfield road it is a road safety issue for cyclists. Therefore this must be a dedicated segregated cycle lane. Traffic flow along Huddersfield Road through Ravensthorpe is almost always slow due to the number of people accessing takeaways and the access to Bradbury street.
this is a very busy road although I've nothing against cycling, even with cycle lanes in place motorists will not abide by them anyway which will pose a great danger to cyclists

Section A4 and A5 knowl road to Mirfield cricket club East bound, any restrictions in parking in this area will have a detrimental impact on other town centre areas. This section is heavily used during peak times for school drop off. If parking is not allowed parents will park elsewhere putting pressure on other areas. Ideally we need a joined up plan of school intake from a local catchment.
Need to have protected, continuous cycle provision along Huddersfield Road, not just some paint on the floor. Section A2 (ASL With motor traffic turning across it) makes the junction more dangerous, as cyclists would be better taking up the entire lane rather than risk left turning traffic wiping them out. Section A7 proposes narrowing the cycle lane at pinch points. Just what are you thinking? These are exactly the type of places where cyclists are most vulnerable from motorists "squeezing through". It's almost as though you've never ridden a bike along this stretch of road at rush hour. Section A10 proposes putting cycle symbol in the lanes. May as well save your money, as nobody knows what the hell this means.
i live in heclmondwike and go about 4 milesround evrerty day via hartsehd to get toward huddersfield, me any my fellow cyclists *hate* ravensthorpe and coming out of mirfield towards it, the cycle lane is always full of cards, and in ravensthorpe the road is very narrow. calder valley greenway is always full of glass, gangs of youths who have stopped me more than once which made me vow to never use that way again.
If cycle ways are to be introduced, they must be dedicated o4 they will be pointless but this area is very congested and god only knows wher the cars will park.
Not much different from existing. Like a design from ten years ago. You are years behind Greater Manchester Combined Authority actions on cycling and pedestrian provision. A cycle lane between two lanes of traffic stopped years ago as asl without feeder lane..
I cycle on the A644 and feel unsafe having to move out of the cycle path to avoid parked cars. There are also hazardous potholes and grates. I would feel safer with a physical barrier between the cycle lane and road.
Mandatory lanes are just paint and as such will be ignored by many motorists who park in the current cycle lanes - This design does not fit the character of the road and current standards for cycle facilities. Some form of segregation is necessary. The gyrator improvements may make things worse for cyclists needing to turn right and some of the advanced stop lines appear unnecessary.
You have missed the fundamental problem with this stretch of road - it is used as a short cut between the M1 and the M62. Get the lorries off this road (unless they are local) and things will be better for cyclists and walkers
The dual carridgeway sections between Ravensthorpe and Dewsbury are not needed; the flow of car traffic is from a single lane in Ravensthorpe; giving that traffic twice the space into Dewsbury is not required; the traffic isn't going half the speed; hence the space requiring doesn't need to be twice the volume.
I cannot see how these proposals will reduce the very serious traffic congestion through Ravensthorpe.

I think the current road is to narrow and having a dedicated cycle lane would not work due to the volume of traffic. At peak times this may also be a danger to cyclists. An alternative route for cyclists and pedestrians only would be advantageous however this many not be cost effective.
Too much through traffic including large number of hgvs travel this route to bypass m62. Restrictions need to made here to free up traffic and this would make mirfield much safer. It is dangerous to walk through mirfield as it is.
Fir Avenue should be removed (easy access for residents via Fir Parade) and Walker Road should be linked onto Low Mill Lane and block off the exit onto Huddersfield Road. This would mean less junctions off Huddersfield Road which can lead to reduced traffic congestion. Given the low amounts of traffic using these roads, you would save money as you wouldn't need tactile paving.
The roads are heavily congested with cars and lorries making cycling stressful.
If these parking ideas go ahead what about those who have to park on the road as we do as my wife is disabled and we need to park as close as possible
Ravensthorpe is a terrible place to walk to for a female of any age! Stop wasting money on cycle lanes! A bypass is needed, not more congestion in and around Mirfield. Just look at the state London is in with cycle lanes and roads blocked off!
I would rather you go fill in all the potholes in kirklees than waste money on this crap!
This road is very busy and often conjested. Proposals do nothing to improve traffic flow and will make the problem worse. This will make the road less safe for cyclists.
Nothing can change the way I travel as I need to be in a van working for the council I just don’t want to be sat in traffic for half and hour you need to improve that before adding more cycle lanes
There is no need for a cycle lane as the greenway offers a safer option for cyclists.
Making the cycle lanes wider will narrow the roads,lots of people ride bikes on pavement and I don't see this stopping,many times I have had a near miss coming out of my garden gate,I like many have to park my car on the road outside my house as there in no other place to park it. A traffic problem is also taking place,the old Swan pub opposite Stenard lane on the A644 has permission to build a Petrol station and shops,this will cause traffic delays and a dangerous junction ,your plans do not address this,no matter what happens on the A644 the size of the road will not alter unless you start to demolish buildings and road widen.
You need to make sure the traffic flows, especially at traffic lights and at Ravensthorpe Gyratory, its extremely stressful and also we think there shouldn't be parked cars as it's a hazard on the main road as we cannot see if something is coming at us.
There needs to be a dual carriageway

I welcome the proposed improvements but they need to be combined with measures to reduce traffic on this route to have any significant benefit. The route is already heavily congested and a reduction in heavy lorries is necessary for to improve travel times and increase safety for cyclists.
My opinion doesnt fit the agenda so is most likely to be ignored. Mirfield commuters tend to prefer the train - except the station is inaccessible and the trains dont have enough carriages. Fix this, and the cars going to Dewsbury, White Rose & Leeds would dramtically reduce. Apart from a very few very active leisure cyclists, these will become empty lanes of folly, slowing car traffic, reducing parking in town where it is much needed to support the local communities (if cant park in them). The buses are half empty as they are too expensive, and don't go from where you live to work (as more people work out of town, not on bus routes) - so bus lanes arent going to affect this. Another part of road taken whoch will make car traffic even slower and more polluting as it stands there. One of those schemes that helps do-gooders tick a box that shows they are doing something to 'help' - and will blame the public when it becomes an expensive white elephant when its not used.
if any changes are to be made to this road it will be disastrous for the hold ups. This road is bad enough commuting without roadworks in place.
This survey shows a distinct lack of understanding of the current conditions. People need you to do something to improve the traffic flow. In rush hour it can take 45 mins to transit Dewsbury-Mirfield which is ridiculous.
Map A1: The existing kerb buildout at the Doctor Lane/Huddersfield Rd. junction often causes delays up Doctor Lane, and therefore the Nab Lane bus route, when the left turning majority is held up by a right turning minority. This also causes problems for Mirfield Health Centre users. It benefits nobody - pedestrians crossing the bottom of Doctor Lane are still disturbed by queuing traffic. Map A2: The revised lanes eastbound at the Huddersfield Rd/ Station Rd junction may cause delays to straight through traffic by traffic waiting to turn into Station Rd. Station road is surprisingly well used! Map A3: The revised lanes westbound at the Huddersfield Rd/ Station Rd junction should be helpful. Station road is surprisingly well used!
I cycle regularly from home in Mirfield to work in Leeds and back, at rush hour. There are no issues cycling through Mirfield, but cycling through Ravensthorpe is one of the most dangerous sections of road I use. I like the idea of a mandatory cycle lane because the current dotted line painted under parked cars is not that helpful. However, I have some concerns. Firstly the parking must be strongly policed with cameras or alternative, because there is not much alternative parking and Ravensthorpe is an area where not all traffic rules are followed by everyone. Also, I am concerned that there is not enough width. Many wide wagons use this road, is a 3m carriageway wide enough for them to overtake a cyclist and leave appropriate space? Finally, you are not proposing to continue the cycle lane all the way to the Gyratory, I don't see how half a cycle route will encourage anybody who does cycle already to start using this route.
Cycle paths on the road are good and welcome but more greenway tracks, away from cars/vans/lorries would be much more encouraging for new cyclists. Maybe overhauling canal towpaths could be something to do simultaneously?

any improvements in road safety for cyclists and pedestrians can only be a good thing !
Walking and Cycling will never replace vehicle transport. In the future hydrogen and electric vehicles will replace the combustion engine and be carbon neutral. Walking and cycling will be an activity done by the fit and able for recreation purposes and many people will work from home. For fun and safety pavements and cycle lanes need to be segregated from all other road users by a considerable distance to allow road traffic to move at speed without coursing danger. For example old disused railway lines, towpaths, river walks, bridal paths should be used not paths adjacent to 30 and 40 mph roads. The use of buses has been declining for more than a decade and the vast majority of people would rather use other options which are faster, more reliable, safer, cleaner and more direct. I would prefer this money was spent on improved railway services, new local stations, better broadband, electric car charging and other greener forms of transport. Messing around with existing roads is a complete wast of money and buses are not the answer. What you are planing should have been done in the 1960's, 70's and 80's it's pointless now. Please review your transport spending for this century not the last one
I drive and walk on this section of road several times each week so have user knowledge. It is my opinion that the tiny numbers of cyclists I see in relation to the numbers of cars and commercial vehicles does not just the expense of the proposals. The cycle lanes are not even fully continuous throughout and on both sides of the road throughout. The safety of cyclists is best ensured by not having them in direct contact with vehicles on restricted width roads. The route carries a high volume of local traffic plus traffic passing through the area and to/from and between motorways. Delays are an unacceptable part of everyday life, more so when there are motorway problems in the vicinity. This will increase when developments referred to in the proposals go ahead. The best way to improve cycle safety and improve traffic flows is to build a relief road. Wakefield built an eastern relief road in recent times. If Kirklees is serious about addressing road safety, improving local traffic flow and providing capacity for the future then they need to bite the bullet and address the problem that way rather than making minor adjustments but keeping all the present traffic, cyclists and future growth on the same existing route between the narrow Victorian built houses and shops.
This road certainly needs improving but it seems to promote cycling which I cannot do as a senior citizen with osteoporosis
This section of roadway, together with the section through Ravensthorpe is a nightmare for motorists due to congestion. None of the proposals do anything to address this issue and by narrowing lanes this will only increase the problem. When the country is in such a poor financial situation I find it appalling that you are willing to spend over £12.5 million on a scheme that will provide no benefit to the majority of road users. The residents of Ravensthorpe do not cycle.This money would be better spent on finding a route for a bypass around Ravensthorpe and Mirfield.

1) The proposed moving of the bus stop in the centre of Mirfield to outside the library? I do not understand the logic on how this would improve anything. One of your aims is 'The Station Road/Huddersfield Road junction is inefficient, causing significant delays to general traffic, buses and pedestrians'. How would buses stopping in the middle of the road instead of in a layby (i.e. the current bus stop) achieve this? Currently buses can stop in the layby to catch up on their time and pick up passengers, who have a shelter to stand in, with no hindrance to pedestrians, cyclists or traffic. If the bus stop is moved to outside the library pedestrians (especially those with pushchairs or people in disabled vehicles) will struggle to get past the unsheltered bus queue as the pavement is only narrow. So you will have people stepping into the road. Traffic will have to wait behind the bus, possibly across the junction, and it will only take a few queuing cars or a couple of lorries and the filter lane is rendered useless. No possibility of overtaking the parked bus as traffic is also heavy in the other direction, and there is a bus stop for travellers in the opposite direction just across the road. Its a big accident waiting to happen!!! I would be interested to see the detailed logic around this proposal. 2) The proposed making of Parkfield Crescent one-way. Again what is the reasoning for this, and what are the benefits? If indeed it does happen, it would be a lot better to swap the one-way direction so the entry onto the A644 is at the junction furthest away from Mirfield. As a driver (one of the many great unwashed!!) it is easier and safer to turn right onto the main road from the bottom junction, as you have a far clearer view of oncoming traffic. The junction at the side of the park has traffic coming along the A644 from Mirfield, but also traffic feeding on to it from Blake Hall Drive and Parker Lane. This is especially heavy and school drop off and pick up times.
Gyratory in Ravensthorpe needs to be improved.
The current cycle lane in this section is treated as parking. Making it operational in peak travel only will mean it continues to be ignored.
This section of road has a very high number of vehicles using this each day. The road is currently unable to flow adequately due to traffic volumes and pointless kerb build outs. Busses stop in some locations and hold up traffic flows due to bus laybys being built out in to the carriageway. There are too many small traffic islands that serve no purpose but to contain queues of traffic and make it awkward for emergency vehicles to pass. Cylcists have designated lanes/pathways in some areas but choose to ignore them and ride in normal traffic flow as it is easier to negotiate around parked vehicles and junctions. The stretch of road has been "improved" over the years and now is at a point where it is getting too narrow for the type and number of vehicles using it. This is due to constant kerb realignment schemes and inadequate parking areas. Major construction is required to provide an alternative route to eliviate congestion, provide better links and improve the air quality. Slower moving traffic increases air polution and this section of carriageway runs very slow at best very rarely reaching an average of 20mph between Dewsbury an Mirfield. Any road works that are required on this stretch of road causes major congestion as more temp lights are needed to control vehicles. These temp lights are often ignored by ignorant drivers which increases the congestion as they block up the carriageway. Traffic needs better flow and less traffic signals throughout the whole stretch.
Strongly in favour of measures to make cycling safer

proposals for Huddersfield Rd/Station Rd junction sighted as a prime objective appear to do absolutely nothing to improve traffic flow, the relocated bus stop will make traffic flow and pedestrian safety worse. Huddersfield Rd is already not wide enough to accommodate the very heavy traffic, buses and cyclists, the mandatory cycle lane will be useless as parking restrictions will not as now be enforced. The much safer solution for cycling this route was supposed to be using the sustrans route between Mirfield and Dewsbury that was never completed, it would be better to concentrate on that.
Adding cycle lanes will only increase the traffic problems along these routes. Drivers will take more risks overtaking cyclists as the roads will be narrower. The driving standards are horrendous in these areas as it is. Average speed cameras in the area, like around Nottingham city centre, would be a benefit.
From a cyclists point of view, the provision of cycle lanes is disjointed. These plans seem to be in the same format as in the past when cycle lanes are only provided where the roads are straight and wide and then the provision evaporates where protection is really required, when the road narrows, there is a junction or the road curves. To really have effective provision to encourage cycling in the area, risk assessments need to be carried out at each point to determine where the dangers really are, and then take action to reduce these dangers to an acceptable level. Unfortunately much of the proposed work seems to me, to be missing the real point of the need for cycle lanes and would only contribute to the cumulative mileage of cycle lanes in Kirklees,
Resurface cycle lanes, when roads have previously been resurfaced with loose stone, it is not resurfaced to edges of road causing uneven unsafe surfaces.
Providing safer roads would encourage more people to walk and/or cycle.
From Kirklees to Leeds add a tram or better/faster express buses. The train lines can be unreliable at the best of times.
Proposed pedestrian crossing near to Church Lane, Mirfield is far too close to both the junction of Church Lane and residential buildings. There is already a back up of traffic heading into Ravensthorpe at peak times and I believe this would further aggravate the traffic situation. Also too close to side roads leading onto Huddersfield Road.
In picture A9, it would be far better to improve the Calder Valley Greenway (which is always overgrown in summer especially in Ravensthorpe) as cyclists could be taken away from traffic/pollution at the bottom of Church Lane and then come out at Scout Hill or continue on to Dewsbury via the greenway. Why create a new cycle lane when you have a very popular existing one that just needs regular maintenance as it is always busy and you can then go up towards Heckmondwike or along towards Dewsbury? You could lighting along here too for evening use/commuting to and from dewsbury or mirfield. In picture A2, the relocation of the bus stop in Mirfield to in front of the library may cause traffic problems as traffic attempts to turn left from Station Road or traffic tries to overtake the stationary buses. Its current location at least allows buses to pull off the main road into a layby and traffic can flow past it. In pictures A17 & A18, the main problem with all the traffic that passes both east and west through Ravensthorpe is getting through the gyratory. My commute always takes forever whilst we're waiting both morning and evening for traffic to get through the gyratory so please could this be improved by removing/improving the layout to allow traffic to pass along the main road more freely.

It would also encourage people to exercise through this area if it was more aesthetically pleasing , kept cleaner and tidier and if locals helped to reduce littering and if fines for littering were imposed more stringently
Really like the idea for new zebra crossing at the bottom of Church Lane. I also like the conversion of advisory cycle lanes to mandatory ones, however hours of operation feels like it would be a bit of a regression. It's also nice to see decent width cycle lanes; I feel if they were more continuous they may see higher usage but I realise this isn't necessarily possible
Crossing Newgate as a pedestrian is very difficult now, am not sure just re-aligning the pavements will help. The time to cross should be longer The Traffic Light pedestrian crossing opposite the Co-op in Mirfield does not synchronise properly and constantly the warning red light for pedestrians goes out.
It's a [REDACTED]
1. The proposed new westbound bus stop outside Mirfield library does not appear to have a bay like the current one. Surely this will lead to traffic getting stuck behind a buses at this stop, potentially blocking the junction Huddersfield Rd / Station Rd junction. Am i missing something? 2. Re changes to Station Rd / Huddersfield Rd junction. There is no mention of the entry and exit from Tesco. It is quite common for cars to illegally turn right. Has this been considered? 3. Proposed controlled crossing over Huddersfield Rd between Park Grove and Church Lane. Would such a crossing be better outside Elams Garage? This would be nearer to the new garage / shops on the site of the old Swan pub. It could also be used if the Greenway was subsequently extended (i understand Sustrans are looking at this) and reopening the tunnel under Huddersfield Rd was not possible. 4. Mandatory cycle lanes - a large number of cars park on the current advisory cycle lanes. Where are these cars going to be parked in future? People are not going to stop using cars; the problem will simply be displaced somewhere else.
I'm struggling to see from these plans - they are inconsistent with the survey - where the mandatory cycle lanes are? The plans describe advisory cycle lanes which are not worth installing as they will not make this road safer for people travelling by bike. I don't think the proposals are strong enough and considering the route involved and level of traffic and speeds would expect to see a segregated route throughout Mirfield, and along to Dewsbury and Leeds
The entry to the Calder Valley Greenway (shown in Map A9) concerns me. Travelling east, it is very difficult to safely turn into from the main road if there is traffic on the side road as one needs to pass in front of the waiting (one hopes!) traffic at the junction before turning (in effect the wrong way up a road for a few metres) or to wait in the middle of the side road for traffic to emerge before going on to the Greenway. Some redesign of the junction is needed.
Would it be possible to have road markings of “Keep Clear” for driveway access near the pedestrian crossings, section A9 specifically. Also, there are plenty of trees and overhanging shrubs all the way along Huddersfield Road from John Cottons to Church Lane, if the footpath is being reduced this will mean pedestrians have less room to manoeuvre, and the overgrown shrubs are restrictive for pedestrians in certain areas. Can homeowners be made to trim overhanging shrubs?

The current road surface is atrocious in its number of pot holes and the amount of cars parked in the cycle lanes. The area where retail premises are located (Ravensthorpe) is particularly dangerous due to poor driving standards.
Fundamentally there is too much traffic, especially at peak times and when the motorways are closed. It is a combination of local traffic, inter town traffic and routes to motorways. The road is constrained by buildings built when horses and carts were the mode of transport, i.e. around 120 years ago. Through traffic needs to be taken from the existing road to make it safer for local road users (pedestrians, cyclists and cars) and improve air quality. Wakefield is able to find the money for relief roads to address these problems. Plans are in place to increase housing in the area which will make matters worse. A relief road should be included in the plans, not afterwards or potential routes may be compromised. I would rather capital investment be made on a relief road than tinkering with the existing. It will have to be done so make the plans now or it will constrain future development.
I am not interested in cycling but do like walking but huddersfield road is a grim road to walk on, dust, noisy and full of run down buildings
The speed of traffic is major problem on the A644 through Mirfield. Despite a number of crossings, traffic lights and cycles lanes, motorists do not observe the speed limits and I would welcome greater patrols by Highways/Police to manage the speed. I also think a reduction in speed limit from Doctor Lane thoruhg to Church lane would be benfecial. Along that stretch of A644 are shops, schools, recreational facilities where I strongly believe pedestarians are at risk from the volume and speed of traffic on the road.
The cycle lane that is already in place allows cars to be parked there making it difficult for cyclists to pass when traffic is busy. The cycle lane in Ravensthorpe is of no use whatsoever as cars are always parked in it and because the road is so narrow you are Cars pass you too close.
Cycles are the only things to get any road space with your plans. Buses get a little and walkers where there are shared pavement with cycles the walkers will get run down. Cycles very rarely have bells and move at upto 20 miles an hour whereas walkers only do 2/3 mph.
I cycle around this area as well as the more central Huddersfield area very often. I am very keen to see improvements to cycling paths. I am a confident and strong cyclist but even I find roads worrying at times, when they don't have a cycle path. I believe that with more cycle paths, less confident cyclists could become more regular and more confident. I used to use busses and taxis a lot but now I cycle everywhere. I am happier and healthier for it.
Feels like it is aimed for car users currently & this could help to address the balance for other road users too.

These proposals do not meet the standards required in the Government's recent document "Gear Change" and therefore should not be funded. Unless cycle tracks are continuous and not just 'where it is possible' cycling of people cycling will not increase and motor vehicle use will remain high. Mandatory cycle lanes are only acceptable in low traffic areas otherwise they should be wide and protected. These newly planned pedestrian crossings should be "Parallel Crossings" (Tiger) giving separate space for pedestrians and cyclists including cycling access. The starting premise of this scheme is misguided. One cannot encourage more active travel by making a few improvements for cyclists and pedestrians. A radical decision has to be made from the start to make a safe, pleasant and continuous route for cyclists and a pleasant practical environment for pedestrians. If this is not deemed to be 100% possible (because there can be no half measures) then alternatives must be sought. For example, "Quietway Cycle Routes" could be constructed in and around Mirfield giving access to the commercial centre without cyclists having to use the A644. We are, at this moment, awaiting the improved NCN 66 route to be realised.
I do not believe there is a high demand from cyclists to use the road to commute to Dewsbury/Mirfield. Excellentand well used facilities already exist for leisure cycling along the Greenway.
What surveys have been carried out on traffic and cycling flows and how many complaints or problems have been identified for walkers to suggest the necessity for some of the major disruptive changes for Section A? What assumptions have been made for cycling growth to compare with what I perceive to be present usage of 500 plus traffic movements per single cyclist. This makes these the weighting of these proposals biased against traffic when this is already a major issue. The proposals only enhance the problems of traffic queues which presently exist back from Station Road to Parker Lane and back from Newgate to Station Road due the latter being due to the failure after many requests for the co-ordination of the lights at Station Road and Newgate to enable a through flow of traffic. New signalled pedestrian crossings at Doctor Lane and Huddersfield Road near Church Lane would result in there being 5 sets of traffic lights between Church Lane and Doctor Lane a distance of only 0.8 miles. Neither of these new crossings are necessary as there are traffic islands which can be used as refuges one at Doctor Lane and two on Park Bottom and less than 100yards away from Doctor Lane there is a pelican crossing. The number of people seeking to cross at the points of the proposed crossings will be minimal. To put a signalled crossing at the bottom of Church Lane will create a major traffic hazard. The Church Lane/Huddersfield Road junction is near a bend with limited visibility, there is limited road width for the lane for traffic turning right from Hudderfield Road particularly when heavy goods vehicles are coming in the opposite direction and there is limited number of spaces for vehicles queuing. If traffic having turned then has to queue at the crossing it will prevent further cars turning and create chaos at a bad junction. All these restrictions through Mirfield will result in Church Lane becoming a rat run when it is already a race track for vehicles which have been held up through the poor traffic management in Ravensthorpe Why is Mirfield to be given so many dedicated cycling lanes which then peter out in Ravensthorpe. The removal of the grass verge on Park Bottom which is planted with a great display of bulbs does nothing for the landscaping in the area and goes against all the hard work of Mirfield in Bloom to present this area in a better light. The mandatory cycle lane starting at Knowle Road takes out a considerable amount of parking used particularly by people taking or collecting children who are at Crowlees School. Where will these cars the go and what disruption will that cause for other motorists or residents? Ask the Council about the shambles they

created for residents of Crowlees Road when the Council had offices in Knowle Park and the time they had to spend to then create a residents parking scheme to alleviate the problems. Moving the bus stop from the current Vale pull in to outside the Library is a nonsense. This is directly opposite the second lane for vehicles turning right down Station Road which have to wait for the filter light when traffic stops in the other direction. This means there is no way that a parked bus can be overtaken unless the second lane is done away with but this would mean any car at the front turning right would block all traffic until the filter light came on. A parked bus will also cause backups across the Station Road junction causing traffic being unable to exit from Station Road when the lights at this junction already only provide a limited time for exit. There is no mention of the bus stop on the opposite side of the road although slightly further back than the proposed stop outside the Libarary. This will create a chicane effect if two buses stop at the same time stopping any traffic passing either way. Has anyone involved in this planning tried following buses through Ravensthorpe which cause huge queues as they stop. Passengers have to get on and pay and this results in more than a momentary stop and with traffic volumes the queues soon escalate. The creation of a one way system for Parkfield Way solves a problem which does not exist but is certain to annoy the residents. What are advanced cycle stop lines are they intended to give cyclists priority and thereby slow down the movement of vehicles. If not what do they mean? When the plan gets to A10 it shows a public house opposite Steanard Lane. This no longer exists and the planners in their wisdom have granted permission for a filling station. This is going to cause further problems for vehicles leaving the premises and turning right towards Mirfield and across the exit from Steanard Lane but no account has been taken of this by the planners or these proposals. My impression of the whole scheme is that someone has found a way of sourcing funds for “a scheme” and have spent their time seeking to find any way possible to spend it. It seems like another HS2 which once started has a life of its own to waste public money. It certainly does nothing for the benefit of residents or businesses in Mirfield nor of their ability to be able to move round the area and they will have to suffer the significant disruption caused by many of these unnecessary proposals. Not a good site I have ticked the privacy policy on the next page but the click link does not download so I cannot read it.
This section is about staying safe in all aspects of road safety especially pedestrians who cycle and walker’s
This is a waste of money, can you share the user research that has been done for this proposal. The scheme for the standingley bypass between Bradford and Leeds has been a huge failure
The traffic flow between Mirfield, and Ravensthorpe during peak times is horrendous. The gyratory needs a complete re think to improve the traffic flow. Even at off peak times there are often long queues as far back as fir cottage. In peak times the, queue starts at Parker Lane in Mirfield.

Whilst creating wider mandatory cycle lanes is an improvement on what exists for comfort they don't improve the safety of a cyclist, or the comfort. The cycle lanes would need upgrading to cycle tracks with some physical segregation and any route as busy and fast as the A644, or major changes made to remove traffic from the area. There is a risk and sections where lanes disappear for parking space that cyclists are being forced back into traffic which wouldn't give a consistent approach and wouldn't encourage children to cycle. Continuous footways would be a major improvement for both pedestrians and cyclists and couple with the proposed tightening of the corner radii and physically separate cycle tracks could make this a more pleasant place to cycle. Improvements to pedestrian crossings are welcomed, however crossing islands still create pinch points that are scary for people on bicycles. Another design should be developed for the junction of Station Road to avoid the murder strip, maybe have cars join a cycle priority lane as the route to the station should be a route promoted to bicycles for multi modal trips.
There needs to be public bike racks for peole to use, all bus shelters with covers, digital timetables and benches, cycle lanes need to be protected
The proposals for a new crossing by Ings Grove Park don't make any sense as there is already a pelican crossing 10 yards away from this site. The making of cycle lanes mandatory with operational hours doesn't make sense, they should either be mandatory or not as if they have operational hours how would that be policed/enforced. Reducing the size of the pedestrian island by Parker Lane doesn't make any sense as this was enlarged by Kirklees after a fatality and recommendations made by the West Yorkshire Coroner. Making Parkfield Crescent one way out seems inappropriate when it's such a large estate. Object to the removal of trees on Huddersfield Road and no mention of any replacements. The new proposed controlled crossing on Huddersfield Road by Church Lane seems in a daft place as it's on a bend and on a brow of the hill. The proposed zebra crossing on Church Lane seems to be in a daft place which could lead to traffic turning from Huddersfield Road into Church Lane and literally be on top of it before knowing it. By the site of the former Swan Pub opposite Stenard Lane there are no plans for road width increasing even though only a few weeks ago an applicant for the site had to pay section 106 money to Kirklees to increase road width. Object to the no entry of Queen Street as there is a vets up there and this will only lead to more traffic up Fenton Street. Object to the removal of the bus stops and bus layby at The Vale near Trinity Methodist Church. The bus stops have always been here and buses can pull into the layby if early. Object to the new proposed bus stop outside the library. This is a ridiculous area to place a bus stop, the pavement is probably the narrowest within the Town Centre, won't be able to accommodate proper bus shelters, will block the footpath for pedestrians, will cause traffic issues as buses would stop in between the main lights and the pelican crossing with no way of traffic getting past a bus and would also lead to traffic blocking Station road junction queueing between two sets of lights.

What is the point largely of Section A - Mirfield to Ravensthorpe on Huddersfield Road, especially from Church LAne to Huddersfield Road through Ravensthorpe when it would be better for all users if the cycle route was mainly focused upon the existing Calder Valley Greenway route , starting from Church Lane in Mirfield and passing through Ravensthorpe, through Dewsbury Country Park onto Spen Valley Greenway which can then link on to Dewsbury Town Centre that way. As reducing the size of the main road would just create more traffic Jams. It is also important to note that there are already cycle lanes on Huddersfield in various parts, but especially in the Ravensthorpe area, it is often clogged with parked cars, causing the cyclist to go into the main road, clogging up the traffic behind, especially with aggressive motorists. These cycle lanes would be utterly pointless without any enforcement, as you will only end up paying for painting and building facilities which cannot or ineffective to use especially with the amount of parked cars and lack of law enforcement.
Any proposals to include tactile paving or such tiles on cycle facilities should be scrapped. Such tiles reduce tyre- ground grip and are likely to lead to accidents. they also pose problems for those with mobility issues, such as those with walking impairments needing sticks or crutches. Avoid them - it does nobody any favours.
This is an extremely busy stretch of road due to get even busier with all the new housing developments planned for the area, any changes to the road which would slow flow of traffic are a terrible idea. Cycling in our area is not something many people care about or something many will do. The area is too hilly for people to want tp cycle.
Moving the bus lane just after the traffic lights outside the library would cause more congested on the main road, the current layout moves into a bus lane so traffic can keep flowing
Increasing the width of cycle lanes is unlikely to improve cyclists' safety on this stretch of road without removing the bollards in the middle of the road. We were recently accused of coming close to knocking a cyclist off her bike with our caravan - we had moved slightly left to get past the bollards, whilst she came out of the cycle lane.
Make sure the bus shelters in Ravensthorpe centre arent sticking out because this causes danger for cars or any other vehicles over taking and cyclists, also make sure traffic lights are in sync.
The cycling provision is very poor quality. Perhaps the designers should have taken advice from actual cyclists! Adding a few intermittent cycle lanes would not encourage me to cycle on a busy road.

As [REDACTED] I object to the scheme because the cycling provision does not comply with government guidance on appropriate protection from motor traffic on highways. The whole M2D2L route is extremely busy with large traffic flows that are forecast to grow even further over the coming years as thousands of new homes are built. The local transport note LTN 1/20 on cycle infrastructure design makes clear that on-road cycle lanes would exclude most users and do not provide appropriate protection on such busy highways like the A644 and A653. Only segregated cycle infrastructure is appropriate for a route like this. There is virtually no segregation for cycles within the Mirfield and Dewsbury sections of this scheme, therefore the proposals are wholly inadequate and should not proceed in their current form. I understand that segregated infrastructure would be more expensive. However the Leeds sections of the route use segregated tracks, so Kirklees residents must be offered the same standard of improvements. We pay our taxes too and should not be treated as an afterthought by WYCA, that is how it will look to Kirklees residents at the moment!
The cycle lanes are broken up a bit (ie they start and stop), but as far as I understand this is because of things like the road being narrow at points. Still, having more cycle lanes would definitely help encourage people to cycle more, and would benefit me. That said, I wouldn't want having mandatory cycle lanes to negatively affect residents and businesses in terms of car parking, so I think there should be some sort of balance between the two concerns.
Find a way to take the lorry's off the road. Especially between 08.00 and09.30

Section B.
Please use this space to provide us with any additional comments on the section of the A644 between Ravensthorpe and Dewsbury.
24 hour bus lanes are a waste of time. The amount of buses that use them, doesn't benefit from their use. It will encourage drivers undertaking cars travelling at the speed limit.
A bus lane here will have no effect on the main cause of the hold ups, namely Ravensthorpe gyratory and the lights at Webster hill.
Again, road needs improving as traffic is very heavy
although I've nothing against bus lanes but these penalise regular motorists with fines who already pay substantial overheads like ins, rd tax, MOT, etc & in addition they also get penalised to driving in BUS lanes
Always congested.
Are the bus lanes wide enough for a bus to overtake a cyclist maintaining a space of 1.5m? If not then some revision has to be made.

Are these bus lanes also cycle lanes? It is not clear? This section of the route is the most dangerous by far with no alternative for cyclists. The mandatory cycle lanes provided earlier on in the route just seem to stop with no real interventions in Ravensthorpe to provide a safer cycling environment.
[REDACTED] I object to the scheme because the cycling provision does not comply with government guidance on appropriate protection from motor traffic on highways. The whole M2D2L route is extremely busy with large traffic flows that are forecast to grow even further over the coming years as thousands of new homes are built. The local transport note LTN 1/20 on cycle infrastructure design makes clear that on-road cycle lanes would exclude most users and do not provide appropriate protection on such busy highways like the A644 and A653. Only segregated cycle infrastructure is appropriate for a route like this. There is virtually no segregation for cycles within the Mirfield and Dewsbury sections of this scheme, therefore the proposals are wholly inadequate and should not proceed in their current form. I understand that segregated infrastructure would be more expensive. However the Leeds sections of the route use segregated tracks, so Kirklees residents must be offered the same standard of improvements. We pay our taxes too and should not be treated as an afterthought by WYCA, that is how it will look to Kirklees residents at the moment!
As it is, this road gets quite busy. Putting a bus lane will make this road even busier for anything other than a bus if it takes away space that would have otherwise have been available for cars.
As there is already a bottleneck problem from Mirfield through Ravensthorpe and into Dewsbury on the A644, I feel that having a dedicated bus lane will only add problems to this scenario. There is at present, too much traffic going through these towns and unfortunately the roads cannot accommodate all the traffic they have now so adding a bus lane will in my opinion only worsen the problem.
At the moment there's too much traffic on that stretch of road it's very slow .
Batley matters
because if those who have to park on the road like us would end up blocking it unless you get in touch with kirklees Council to see if we can have drives put it
Bike lanes are a good idea. No use if it makes the journey further
Bike lanes need to be segregated for safety, all bus stops should have a shelter, bench and digital timetable, cycle lanes should be marked with double yellow lines to stop parking 24 7
Bus lanes are a waste of road space, traffic jams cause more pollution, there would be less jams with two lanes open.
Bus lanes are a waste of time. All they do is cause more congestion
bus lanes at peak times only
Bus lAnes only work if parking is stopped along these routes. Provision fit cycling & walking needs to be improved.

Bus lanes rarely aid cyclists. Where required their use at peak times is something I prefer. that may need monitoring. More measure to limit car use may work better.
Bus lanes unlikely to be observed anyway
Buses and cycles put together is a bit daunting and slightly counter intuitive. Biggest road vehicles sharing road space with the smallest.
Buses are always late in this section anything to improve them being time in this section is going to help
Currently this section I would NOT cycle along as it is extremely busy and the roads are narrow with drivers who dont particularly accommodate cyclists. If I cycle to Dewsbury I use the cycle way next to the river BUT I am not happy to do this alone due to its seclusion and see it as a high risk to access it as a lone female. Is there a way that cycle traffic could be directed along the parallel residential streets in that area?
Dedicated bus lanes in this area would only increase congestion by reducing the overhall carriageway available to all. The carriageway is not suitable to install dedicated bus lanes. If bus lanes were to be shoe horned in the locals who use this section of road would more that likely ignore them and drive along them causing more frustration for ordinary road users.
Dedicated short bus lanes on the A644 will only add to the make traffic flow problem, especially at peak times, when traffic is queuing from Webster Hill in Dewsbury
Definitely en outrage more people to become active.
Ditto....won't help any step change in usage
Do not see the value in these bus lanes, will just cause more congestion because the road is not wide enough.
Fill in the potholes and upgrade the roads currently in Dewsbury, then go waste money on this!
Fundamentally there is too much traffic, especially at peak times and when the motorways are closed. It is a combination of local traffic, inter town traffic and routes to motorways. The road is constrained by buildings built when horses and carts were the mode of transport, i.e. around 120 years ago. Through traffic needs to be taken from the existing road to make it safer for local road users (pedestrians, cyclists and cars) and improve air quality. Wakefield is able to find the money for relief roads to address these problems. Plans are in place to increase housing in the area which will make matters worse. A relief road should be included in the plans, not afterwards or potential routes may be compromised. I would rather capital investment be made on a relief road than tinkering with the existing. It will have to be done so make the plans now or it will constrain future development.
Get rid of the bus lanes
Huddersfield Rd through Ravensthorpe is an awful road to drive on. The are loads of turnings and because the road is so narrow turning vehicles hold up traffic on what is already a busy road. These proposals will make it even worse, just for five buses an hour.

I do not support any more bus lanes in west Yorkshire
I do not support bus lanes. When I see busses on the route they do not carry large volumes of passengers. The majority of people travel by car so to provide bus lanes will delay the many for the benefit of the few which is unfair. Cars and commercial vehicles are already severely delayed. To introduce bus lanes would make matters much worse for the majority of persons who travel along the road - i.e. in cars an commercial vehicles.
I don’t know where you plan to put the bus lane cos it’s normally just full of traffic at a stand still
I don’t support bus lanes they are empty most of the time
I support in general the use of bus lanes. It seems odd to me that Dewsbury to Ravensthorpe has Bus Lanes, but Ravensthorpe to Mirfield is cycle lanes. If this is being promoted as an active travel corridor wouldn't it best to have a consistent approach? There's no mention here particularly of the cycle entrance to the Spen Valley Greenway at Scout Hill which would be an area where more cycle infrastructure could be added.
I would advise some further investigations are done before removing the bus stop laybys on the eastbound bus lane. Investigations need to be done to establish how often bus bunching occurs and how often buses stop at the 2 affected bus stops. In many cases, if a bus stops in the bus stop, a bus behind then has to try and change into the 'normal' lane and then move back to the bus lane or the bus behind gets delayed until the bus ahead has picked up/dropped off and has got moving again. I see that nothing is planned in the current bus stop laybys so I would ask for some more consideration to be put into this.
I would cycle in the area but consider it unsafe at present and this scheme does little to address my concerns. The Spen Valley Greenway is excellent and I would have wanted to see more effort being made to make use of the road-width in Ravensthorpe to provide safe cyclign facilities.

I/My family have lived on this road for almost 24 years and can see that improvements to the A644 are long overdue but believe adding bus lanes will not only avoiding solving the actual problems, it will make the congestion substantially worse. I live on the route close to Dewsbury town centre and have noticed the effects every change has had on the route from the creation of Thornhill Road to the implementation of the Ravensthorpe Gyratory, whilst some are helpful others have made the situation worse. I travel both eastbound and westbound regularly and at different times of the day seeing clearly the issues that are caused. Westbound I believe the biggest cause of the congestion is the gyratory at Ravensthorpe, traffic along the A644 is stopped regularly to allow traffic from Calder Road and North Road to join the A644, half of this traffic then has to use the small turning areas to go back on themselves – causing more congestion; even a give-way would be more useful. The traffic from the gyratory regularly backs up to at least the junction of A644 and Thornhill Road preventing traffic from joining from Thornhill Road and slowing the Westbound traffic when it does. Once on the A644 Westbound a high number of cars turn left onto Broad Street continuing on to Scout Hill Road and then Ravenswharf Road using this area as a cut-through to miss out the congested traffic on the A644 between Ravenswharf Road and Broad Street – this will only increase with the addition of a bus lane. Traffic is then stop-start all the way to the gyratory. On top of this traffic coming Westbound from the Town Centre will see the congestion in the left hand lane of the A644 and join the clearer right hand lane (for traffic turning on to Temple Road) then once they have passed the junction with Thornhill Road, will indicate left to pull in to the traffic on the A644 (despite no overtaking signs) holding up traffic in both lanes until they are let in. Whilst these issues may sound small as a collective they are what, over years has made congestion worse. The focus should be getting the A644 main road traffic moving more freely and it is in my opinion that addressing these issues will relieve congestion – reducing pollution, bus reliability and driver satisfaction. RE: Cycle/Walking route I believe walking along the route is easy and there are no issues with accessibility however there is a concern when coming to cycle routes. In a recent ‘upgrade’ the plan from Kirklees was to add parking bays outside where I live, reducing the huge pathway and increasing the road space – this would have allowed for a cycle route. A high number of cyclists use the paths on the A644 and I and others have often been almost knocked over by them while walking, however whilst a cycle route is what this route needs the roads simply do not have capacity as it is and adding to them will not improve the situation.

In picture B4, cars moving west constantly have to wait to get through the gyratory, queueing all the way back to St Paulinus church. Lots of cars take a rat run into Broad St, exiting via Ravenswharf Rd onto Huddersfield Rd near Scout Hill which causes a huge amount of frustration for those queueing along the Huddersfield Rd. Could this be made into a one way system to prevent this? In picture B5, a cycle lane could easily be accommodated on the pavement from Temple Rd, moving east past St Paulinus church which would remove the cyclists from the traffic and this could continue until the road drops down into Webster Hill.
In recent years there is a lot of congestion on the A644 towards Mirfield after Temple Road which makes cycling slow and unsafe. A dedicated bus lane will certainly help this and make the road more usable. Note that this congestion is not strictly limited to rush hour which is why I would prefer the buslane to be 24/7, making the bus lane usable by cars would bring even more traffic onto this stretch of road I typically join this route via Temple Road to avoid the ring road and climb out of Dewsbury and this junction can be difficult to use, there is a pedestrian crossing with traffic lights here, but it actually feels like having 3 way lights on the junction would be better (you can get out more easily when people are using the crossing)
Introducing a bus lane on the section of dual carriageway between Thornhill Road and Pinfold Hill would reduce capacity for other road vehicles such as cars and lorries, causing tailbacks along the A644 into Dewsbury. If the tailbacks extend back past Thornhill Road then buses would become stuck in ordinary traffic between bus lanes en route to Dewsbury. This would also create longer traffic queues on Cemetery Road trying to join the A644. In this section of the plan road congestion would become worse, which would be bad for the local environment. The Westbound bus lanes would improve traffic flow as these are extra lanes to the existing ones in this direction.
It feels like there is inconsistency in provision across the corridor, and there is low provision for travelling by bike before this, then it is all about the bus in the next section and not for cycling and walking, I don't see how this will support improvements along the entire route if it's patchy
It may help with a bus lane as cars are held up by buses stopping regularly to pick up passengers and vehicles are unable to manoeuvre around causing long traffic queues at peak times. Bus stops need to be into the side more not coming out into the road
It was proposed a by-pass missing Ravensthorpe years ago. It would be money better spent on this idea and looking after the roads we have got. It seems to me there would be more congestion at peak times.
Love the bias in Question 11 - do you chose something horrebdous or mildly horrendous - needs an option to say I DO NOT support this at all. But guess this will get forgotten about about the shiny presentation that shows 100% of people support some kind of bus lane hours.
Making sure the traffic lights are in sync and flow properly and the speed limit is high enough for the dual carriageway.
Making sure traffic lights are in sync and also making sure cars arent sticking out towards the road so advice is to put double yellow lines.
More people will use public transport if it’s reliable at peak times

needs speed cameras that work
No bus lanes on these sections of road as traffic will be at a standstill even more of the time creating even more pollution.
Pinch point for cyclists at the junction of temple road and the A644 again cars will squeeze past cyclists between the traffic islands. Other pinch point is at the gyratory in Ravensthorpe when heading towards Dewsbury
Public transport will be used less in the future
road already gridlocked. Government advice is to avoid public transport. This will lead to far more traffic delays, frustration and bad driving
The buses on a commute stopping and starting are a pain. It would be great if cars could overtake them. If bicycles can also use it then it might take cars off the street a bit. That would encourage me to cycle as I would be too worried about the dangers on the road otherwise.
The proposed improvements are welcome but need to be combined with traffic reduction measures (particularly heavy lorries) to have any significant benefit.
The queues back from Ravensthorpe back to Dewsbury are HORRENDOUS during anything approaching peak times. They are caused by The Gyratory that bans Dewsbury bound traffic from turning left into North Rd causing them to double back for a few yards joining the Mirfield bound traffic, slowing it down. It is exacerbated by traffic ignoring the no overtaking sign past St Paulinus Church and up to St Paulinus school who then dive into the flow of traffic putting the rest of the queue one step back. It is made even worse when such cars then turn left by The Thornvilles as a rat run behind the old fire station to emerge and fight for a slot by the Greenway bridge. If the proposal is to TAKE AWAY one line of traffic to allow busses free reign then that will make things worse. If there is any possibility of road widening then it should be to allow more free flow of the traffic, not less. If there is available the chance to improve junctions then the bottom of Temple Rd needs to prevent overtaking, lane switching and rat running behind The Thornvilles. The Gyratory needs completely rethinking at North Rd. WHY can you not turn left from Mirfield towards Ravensthorpe Infants?
The road has been narrowed so much this slows traffic down. You would have to widen the road again to put in a bus lane so that cars could travel when the bus stops.
The scheme should improve the crossing near Spend's Valley greenway which is poorly aligned for cyclists and takes a long time to change to green for users.
The Traffic is always horrible on Huddersfield Road,I travel on buses and I would always get late, to where I had to be. My house is on Huddersfield Road, the area is very very busy, noisy and over polluted. The idea of this road plan will be extremely beneficial for people living in Ravensthorpe, as well as other local area’s residents.
there are going to be severe traffic congestion when this takes place as it is horrendously busy every day

There have been many schemes on this route but none have been successful.There is only a problem from Mirfield to Dewsbury between 8 am and 9.15 am and 3.30 pm and 6.30 pm.All this is due to congestion much like parking problems around schools at drop off and pick up times.This money would be better spent on improving jobs as these traffic problems are not constant.
There is already a lot of road traffic and the road is narrow. Turning traffic is the issue here.
There is currently only two buses which pass outr development at Spring Place Court, Mirfield. These buses are generally on time.
There is no provision for cyclists on this section.
This is a very tough piece of road to cycle on. I appreciate there is an off-road parallel cycle route by the river, but it is not safe in the dark. If cyclists have to use the main carriageway there will be no space to overtake cars because it is too narrow, so it is imperative that cyclists are allowed to use the bus lane too.
This is not addressing the main problem. Too much through traffic on this route. A bypass needs building to connect m1 and m62
This road gets very busy, especially during peak times of schools and work commutes, with already frequent traffic jams. Some bus lanes are flawed, especially when there is a bus stop on the opposite side of the road, as although theoretically buses should only stop and pickup passengers for a short time, many drivers often pullover for quite a while for reasons of catching up with timetable if early, taking a break, or if a lot of passengers are boarding or any issues with bus, would result in both sides of the road being obstructed by either a bus or a bus lane, making it hard for other traffic, especially heavier bigger traffic such as lorries, which commonly use this main A road, harder to pass causing congestion and delays and traffic jams, as it would at many times be only operational for 1-way traffic, than continuous 2-way traffic for other vehicles.
This road is already congested a bus lane will make this problem worse. Fix the gyratory, Asian wedding complex and the rat run incorporating Broad St, Stoney Bank St, Scout hill rd & Ravenswarf Rd. This section of road was the reason I moved out of Kirklees to Wakefield as it could take over an hour to get from Dewsbury to Mirfield.
this section of road is currently the tru definition of RAT RACE it's forever backed up, crawling traffic, cars pulling in/out of the left had side parking up at takewaways and busy shops all the way through towards scout hill
Very congested don’t understand how you will fit all this in as well as cycleways.
We do not require a bus lane. Traffic on Huddersfield road is horrendous as it is, the additional bus lane will make things worse.

Westbound bus lane gives provision for segregation of cycle traffic from main vehicular traffic, but no provision for cyclists eastbound. Also, eastbound cyclists heading for Dewsbury town centre or beyond will mostly make use of the Calder Valley Greenway (NCN 66). The proposals therefore need to include better provision for cyclists transitioning from the A644 to Ravenswharf Road (incorrectly labelled as Railway Street in your Section B document). There is also not even an acknowledgement that the Spen Valley Greenway joins the A644 at this point. The existing pedestrian crossing here needs improvement to allow for cycle traffic to/from the Spen Valley Greenway across the A644 to Ravenswharf Road and onto the Calder Valley Greenway.
Where is the space for these bus lanes. The planners are deluding themselves if they believe this will improve travel times and thereby reduced pollution. Do the planners actually use these roads at peak times?
Why is there no cycle consideration on this section of road? The section B2. The issue here is there is a pedestrian refuge approximately at Ravensfield Road on a hill that narrows the road. Cyclists are put in danger as other vehicles try to overtake. The other issue that slows traffic down is the pedestrian and cycle crossing that is used by people crossing Huddersfield Road to access the Greenway. There needs to be some thought put in to try and create a suitable ramp that joins the Greenway from Ravenswharf Road
Why maintain parking when space is at a premium? Places where the bus lanes disappear are just going to relocate bus delays and not tackle the problem
Would prefer bus lanes to be operational during rush hours only
You cannot magically create space on an already crowded road by marking half of it off to less than 10% of current usage, buses still have to join the much greater traffic queue in order to reach the bus lane. Once the massive residential development between Mirfield and Thornhill starts to impact on traffic these proposals will be used as a case study in how to completely gridlock an area. The world over increased road capacity and better mass public transit has had to happen to increase economic prosperity, here we have diminishing road space along this route and diminishing it further will I am sure be consider a folly by future generations and lead to greater economic deprivation in North Kirklees. Further building the pavement out into the road at the end of the mandatory cycle lane appears to be rather dangerous particularly at such a busy point where parking enforcement is already lacking.
You have missed the fundamental problem with this stretch of road - it is used by freight as a rat run between the M1 and the M62. Cut that down and you will make it safer and more pleasant for both walkers and cyclists
You need to improve traffic flows so that transit times on buses during rush hour are sustainable.

Q.C5.
Please use this space to provide us with any additional comments on the section of the route around Dewsbury town centre and Ring Road.
- Junction cycle facilities C1 seems good and much-needed. - C2 & C6 seem fine, they make sense for going uphill from the bus station to train station. - C3 seems ok as no roads are being blocked, just making it easier for pedestrians to cross. - C4, I don't really think the cycle path is required here, it's not that long a road to connect up to the greenway past the lorry car park. And making it a one-way road will just make the rest of Railway Street busier. Reducing the speed will probably affect car users (ie the raised traffic table). That said, from discussions with the proposal project managers, it sounded like there were plans for further cycle paths in future here. And whilst I haven't had issues with lorries when cycling on this road, that may be due to when I go on the bike. And I do get that there's a balance between different road users. But making the road a one-way would inconvenience drivers. - C5 seems fine, there doesn't seem much in these proposals. The TCF cycle path (mentioned but not in this proposal) sounds very interesting. - C7 seems fine to me. - C8 seems fine to me, it makes sense.
A few specific matters in Section C: Webster Hill/Mill Street West - the Calder Valley Greenway entrance is not safely linked to all surrounding routes. Railway Street/Longcauseway - there is a very small gap between the proposed new cycle track and the shared use path along the side of the sports centre, please connect these into a continuous traffic free route. Bond Street - A lot of parking is lost and the impact on drivers with disabilities in particular. Please try to add more replacement parking e.g. on Grove Street if that could be made one-way. The Leeds Road/Dewsbury Ring Road junction improvement scheme would be improved by connecting with the existing shared use path on Wakefield Road, and with the path behind the Town Hall to enable direct access to the town centre.
Actually these proposals are not relevant to me. I either drive or cycle through Dewsbury on route from home to Leeds and back. I'm disappointed that there are no elements of this scheme that help my cycling route through Dewsbury.
Again, no acknowledgement of the existence of Calder Valley Greenway, nor provision for its connection at Mill Street West. Yes, the proposed cycle crossing improvements across Webster Hill / Aldams Road are a step forward, but work should be undertaken at the same time for cycle traffic coming to/from the Greenway. Not all cycle traffic from the Greenway will want to traverse the ring road towards the town centre. Thought needs to be given to cycle traffic exiting the Greenway and wishing to travel either along Mill Street West, or straight on along the ring road (e.g. if the cyclist was intending to use the Earlsheaton tunnel route to travel towards Ossett).
Any improvements will help support a healthier lifestyle.
as before
Batley matters
Being able to ride safer to Batley and the Greenway from Morley would be great

Build a dual carriageway between Huddersfield and Dewsbury
C1 What is going on here? The Greenway emerges and how do you cross Mill St West? or how do you turn Right and join Mill St West. The straight across route is onto a shared Footpath how do you get there? Go and spend some time at the junction and watch what people do and have a rethink it needs something but I am not sure this improves anything.
Change all bus stops to sheltered ones with benches and digital time tables, stop parking in cycle lanes and segregated where possible
Concerned about the reduction of parking in the centre and the adverse effect on an already struggling town centre. The loss of road space will be an issue reducing footfall in and around the centre
Cycle lanes routes better sign posted for cyclist new to area and passing through. The cyclist to be given right off away.
Cycling to Dewsbury from my home in Tingley is intimidating and dangerous. The town centre proposals won't change that. They conveniently ignore the long hill on the A653 from the ring road. This is where cyclists need help, though granted it will be a challenge to the council's civil engineers to achieve this. The proposals ignore Dewsbury's key location on cycle route networks. On map C1 there is no reference to the cycle route going west from the river bridge on Mill Street East which links to national cycle routes to Huddersfield and Bradford. Map C4 makes no mention of the network of cycle routes, including the national cycle route to Ossett, that go south from Railway Street. Unlike from Tingley these are attractive cycle routes to and from the town centre and their use should be encouraged, yet on reaching the town centre the fight with traffic at junctions resumes. Cycle access to the town centre could be further improved by bringing forward the cycle route from Batley along the closed railway line coupled with much needed environmental enhancement along this corridor.
Dewsbury is a dump of town that has no reason to visit - making it easier to walk or cycle there is a pointless act. Most people who go to dewsbury are passing by to get somewhere else, usually the motorway, which isnt good for walking or cycling.
Dewsbury town centre has suffered for years due to vehicles being directed out and around the town centre. By reducing the amount of vehciles even further will only serve to harm the town centre even further. better vehicle access is need if the town is to be regenerated.
Fundamentally there is too much traffic. If a relief road is built taking traffic around Mirfield, Ravensthorpe and Dewsbury it will obviate the need for the planned changes as the reduced traffic volumes, particularly from inter town and motorway bound traffic, will reduce the local intensity, thereby making it safer for pedestrians and cyclists. The majority of road users, perhaps 98% plus, use motor vehicles. With all the investment you are targeting you will not change peoples habits substantially. The young and fit may cycle some of the time, but once they have a family, and then become older, they are not going to return to cycling for going to the supermarket shop or social group outings. Those of us who have lived our lives in the area are very frustrated to see little investment in the roads infrastructure to improve traffic flows. Please do what the majority would like done, rather then the minority and the hope of encouraging a few more to cycle.

Get rid of the lorries on the ring road - then local residents might be encouraged to be more physically active. The pollution is unpleasant, the lorries bring nothing to the town and just use the ring road as part of the short cut between motorways, cutting off the corner between the M1 at Junction 40 and the M62 at Junction 25/Cooper Bridge Roundabout.
Having had experience of almost becoming a lorry sandwich whilst cycling on the ring road I now rarely venture there on my bike. Access to the greenway needs some improving as it involves balancing in the middle of the road in a very vulnerable narrow lane at a major junction. if there is a way to separate cyclists from vehicular traffic then that would be beneficial (like in Holland).
I cycle through Dewsbury to go on to Leeds. There is nothing in those proposals to help with safety along the busy ring roads around the town. There are no safe ways to get from the A644 to Leeds Road
I disagree with the Webster Hill/ Mill Street West Junction proposals because the cycle lanes seem a bit daft. You have advance stop line and crossings. There should be one or the other, not both.
I find the present system adequate for my needs. As a senior citizen with osteoporosis I do not walk much or cycle at all
I live in Leeds and [REDACTED] I regularly cycle to Pinderfields but never do so to Dewsbury because of the traffic. New cycle lanes, particularly where protected from traffic, would be a really positive step and I would look into cycling regularly if this were installed. Keep up the good work!
I really don't think this scheme consideration for disabled motorists/blue badge holders like my mum with a lot of health conditions as well who I got fined to collect from a bus stop not even obstructing buses wasn't even there for 1 min & got a fine sent, can I please say if the KMC start penalising motorist they will not support schemes like this as they very unreasonably penalise people like me
I regularly walk within Dewsbury and do not feel the need to spend vast sums of money to assist me or others I don't see many cyclists on the roads within the town so I do not think the expense of providing specific access for them is justified. The monies would be better directed to a relief road to take through traffic out of the town. The reduced traffic in and around the town would make it safer for pedestrians, cyclists and other motorists. Wakefield recently built an eastern relief road and I consider that we should have one for Dewsbury, Ravensthorpe and Mirfield.
I still think there's needs to be more segregated routes but if traffic is being reduced in the centre of Dewsbury this will help. I'm very supportive of improving crosses for pedestrians
If you take away designated parking people will park in dangerous places.
I'm sure the populous of Dewsbury will be raring to ride into Leeds at the earliest opportunity! Pretty ludicrous proposals and an abhorrent waste of money given the current financial climate.

In C3, I am concerned about the unmarked contraflow cycle lane, particularly where it crosses side roads where drivers emerging may be less likely to look to their right to check for approaching cyclists. Having a marked cycle lane with green surfacing would highlight to drivers that cyclists could legally be going the "wrong" way along the road ... at the very least, this should be used at entry points to the road if it can't be installed all the way along. In C6, I am very concerned about the unsegregated wrong-side contraflow cycle lane, and particularly the junction with Daisy Hill. That junction provides no safe route for cyclists to access the cycle lane from Daisy Hill without coming into conflict with traffic turning left out of Wellington Street. There needs to be an island to separate traffic coming down Wellington Street from cyclists entering it. The diagram doesn't specify the width of the cycle lane, but with cyclists penned in between parked cars on one side and a pavement on the other, while climbing a steep hill that might make it difficult for some cyclists to maintain a straight line, consideration needs to be given to the width of the lane and whether a physical kerb is needed to prevent parked cars from encroaching onto what already looks like an inadequately narrow space. You also need to consider the risk of a passenger opening a car door as a cyclist is approaching – while this is always a risk any time that cyclists are passing parked cars, on a normal road there is the option to take a wider line past parked cars whereas here the kerb line of the pavement would prevent that and put cyclists right in the door zone. Would it make more sense for the cycle lane to be on the "normal" side of the road, and have vehicles entering Wellington Street give way at the top of the hill where cyclists cross to the "wrong" side outside the old union building to access the crossing?
It is not easy to go by bike as I live off sugar lane when I leave my house I either go up or downhill,if where I live was flat I would use a bike more often
it is not safe to.travel other than a car in this area. There are too many boy racers around dewsbury who speed take drugs and into crime. Dewsbury is a no go area now. Also it is heavily congested every day so these changes will not improve things
Make the traffic lights sync and make it so pedestrians dont have to wait long for them to cross the road.
Making Longcauseway one-way for general traffic would force traffic that normally uses this route onto the A644 therefore making the A644 worse rather than improving it.
Map C1: Left turn from Old Westgate into Aldams Rd. I can't see why signal control would be better than a "Give Way" or "Stop" sign and markings.
Measures at Mill St junction do not cater adequately for cycle traffic in all directions. I broadly support points highlighted by Kirklees Cycling Campaign in its submission.
More bus lane will cause more traffic problems
More bus service's connecting Dewsbury town centre to the railway station and a safer walkways to the bus stn and town centre.
More parking spaces in the Town Centre to encourage more people to use the town centre
None of these proposals help the elderly and infirm get about the town center,

On these plans, advance stop boxes for cycles are shown in green whereas in Leeds these are generally red. Should these be consistent throughout the country (and certainly throughout West Yorkshire). The same colour should be used for cycle lanes as well so that if drivers see green or blue they think 'cycles', keeping red for bus or bus/cycle lanes.
Over-pedestrianising the town-centre by having a continuous footway on CHurch Street will be devastating for the town centre, as many people wanting to shop or visit the town centre especially by taxi or car or loading and unloading or deliveries or collections will be limited as the town centre will have limited access to people shopping via the use of private vehicles and taxis. This policy may work for cities, but for smaller towns such as Dewsbury it would not as many shopping via car would not bother to park elsewhere and walk to pickup or buy a small purchase and rather pay more on fuel for convenience of going to a more accessible shop such as a newsagent or an out of town shopping centre or retail parks - look at the impact of Huddersfield bus gates policy, don't hurt small business.
Planting of trees does not help pedestrians, yes it may look nicer but what does it gain for the pedestrian? I think it is a waste of money and resources as in time the trees may grow too big and lead to uneven pavements.
Reducing the number of cars in Dewsbury town centre would make it much easier to walk everywhere.
Ref C1. Cars constantly park on the cycleway connecting the riverside route to Mill Street West which is only marked by paint. To join the new Webster Hill crossing from the riverside and join the Old Westgate cycle route towards the station the cycleway must have priority and be physically defined. There will inevitably be loss of car parking.
stop just ticking boxes and get real
The Dewsbury ring road needs to be easier and safer to navigate by bicycle. Dewsbury is dominated by motor traffic, making it unsafe to cycle. Too many people use their cars. It should be easier and more convenient to cycle, than to use a car, thus creating a modal shift. The main roads into Dewsbury also need to be bicycle friendly. Cycling on the A638 towards Wakefield is dangerous and I have been verbally assaulted by some drivers On many occasions.
The proposals are sensible with the exception of changing the crossing to a zebra crossing on Church Street. This is a heavily-used crossing and a zebra would increase the level of risk to pedestrians.
The measures all look useful. However as someone who typically cycles around Dewsbury while getting to Leeds I'm not sure they would alter my current route (usually I bypass the centre of Dewsbury and go via Batley, Carlinghow and Churwell). The A653 out of Dewsbury towards Leeds is narrow and scary, and similarly the entry of the A644 into Dewsbury is pretty horrible on a bike, especially in the dark. I support all these changes for the benefit of people who live and work in Dewsbury, but there are other things that would potentially make more of a difference to my cycle commute (perhaps these are not feasible)

These are very short sections of cycle paths. Non of them link with any other cycle route and they are all on roads where any traffic is moving slowly anyway. For someone to use them on a bike they would have to brave the much faster roads to get to Dewsbury in the first place and so I think the money would be better spent having continuous cycle routes to get to Dewsbury.
There is too much traffic cycle will not reduce the traffic as it is not practical to cycle everywhere for work purposes or shopping due to limited space on cycles when carrying equipment for work or shopping. These plans will only be beneficial to few cyclists not the majority of residents. Not allowing new housing developments in an already over crowded area (Dewsbury/Shaw Cross) would be of more benefit to a larger number of residents. Also investing in Dewsbury town centre to make it more attractive to business and residents would be of greater benefit. Eg lower business rates, incentives, cleaner streets, better facilities etc
Some of these measures are improvements, but many could be improved further. Many of the pedestrian crossings could be upgraded to Parallel 'Tiger' crossings to accommodate cyclists yet keeping them separate from pedestrians. The two way protected cycle track at Long-causeway creates a problem for the cyclist with the linking of the NCN route at Sands Lane. It would better sited on the eastern side of the road. If the designer of this section had ridden this route on a bike (as required in Gear Change) it would not have been necessary to point this out. The crossing of Mill St West on NCN66 has long been a problem for cyclists and pedestrians alike. However there is a potential route for cyclists and walkers who wish to access Sands Lane without going into Dewsbury. This is by using the wide 'flood platform' running under Mill St West and Wilton St. Ramps to access this could be made to the west of Mill St West and at Sands Lane. It is accepted that this would not be possible at the time of flooding but these occasions would be rare. Another important factor that is omitted from these plans is the planning and construction of cycling routes into Dewsbury town centre from the planned housing developments in Ravensthorpe and areas to the south of Dewsbury. Planners need to know from Highways that this is a real opportunity to reduce car dependency and encourage more people to from these areas to get to the the town centre by bike. It is ideal territory. It is flat and the journey is only of around 2 miles or less. If a bridge or two were constructed new residents could have a direct and pleasant bike ride into Dewsbury without using the car and children could have access to schools by using travel travel. It is imperative that Kirklees Highways and Planning work together and start devising these routes BEFORE land is handed over to developers and a golden environmental opportunity is lost. (As has been the case with so many previous new housing developments). We do not want to hear from Planning in 5 years time that "Highways never told us".

Spen Valley Greenway crosses over Mill Street West where it gets to Dewsbury onto a shared-use path before heading towards Long Causeway. There should be a toucan crossing here to continue on this route and the plan currently shows nothing in that direction, alternatively a route onto the floodway could be used to connect the the SVG with the Ossett Greenway. The new zebra on Church St could be made wider, if now a continuous footway with priority to pedestrians, this is a town centre after all. The 2-way cycle track at Longcauseway is on the wrong side of the road for traffic heading to and from the greenway at the roundabout, priority should also been changed at the junction of Link Road to continue across to the sports centre as opposed to the traffic from Link Road heading into a car park! The access to the contra-flow cycle lane on Wellington Street needs protection to stop turning cars cutting across it onto Daisy Hill and blocking access or colliding with a person on a bicycle. Physical separation should be considered here due to both the fact that the contraflow is on the wrong side of the road (but right for access to the rail station) and also to create a buffer zone to avoid dooring from the parking bays. More new cobbled roads would be a welcome addition for both the streetscape and to slow cars down in the town centre.
The changed priorities on Crackenedge Lane from the old Dewsbury Central Station to Barclays are dangerous. More traffic is being put through the town in order to exit the town. Traffic is queuing by the market because of the two sets of traffic lights, resulting in higher levels of pollutant being pumped into the air. It makes the road more difficult to cross. There is no way I would cycle through Dewsbury, it is far too dangerous. Priority has been given to cars and not cyclists and pedestrians. Stop cars, other than blue badge holders altogether. The town is so small that there is no need to drive into the town centre if you are able bodied. You won't need to put crossings in if you don't allow cars through. If you do continue to let cars through, follow Chris Boardman's (Manchester CC) example, and paint them on every junction to give pedestrians the right of way. The Ring Road needs a separate cycle provision, not some daft line that no-one takes any notice of. Though lockdown, I used my bike, now I'm too scared to as I have to share the space with lorries, buses and speeding motorists.
There doesn't seem to be much value in various small bits of infrastructure without a continuous route formed.
Traffic lights in synx
These proposals do nothing to make journeys around or through Dewsbury any easier by bicycle. They are not joined up, and do not offer an alternative to using the road that is any more convenient than using the road. There's a half-hearted proposal to join up the greenway with the town centre, but you may as well not bother, as cyclists are still left trying to turn across traffic that's either stopped or accelerating through the junction. Honestly, did you get the work experience person to draw up these plans?
These proposals seem very unambitious for cyclists. Piecemeal cycle facilities not linked and very little segregation. Specifically for section C1 on Mill Street West why not stop north bound traffic further south on the bridge... This would enable continuous route to cross the road for cyclists using the Riverside cycle way. Also why no cycle crossing lanes in all 4 directions. Why are cycle lanes in c2 and c6 not connected by a cycle lane and why no segregation? Wouldn't c6 lane be better in left side of road away from parked cars?

This isn't a great idea I don't think enough thought has gone Ito this Dewsbury traffic and pedestrian flows are complex and the present pilot is farcical, looks to have been designed by an idiot who doesn't live locally.
What user research has been carried out for this project? If the standingley bypass between Leeds and Bradford is anything to go by this will be a huge waste of money!
Why is the reduction of lanes on the ring road not listed on this consultation? When driving, turning right at the bottom of Leeds Road is one of the few places in this area where traffic flows well and I always turn that way when travelling to Mirfield or Thornhill. In my experience cyclists do not mix well with cars, pedestrians or horse riding, and should be kept entirely separate. As far as I can see, the main impact of these proposals is to make motoring in North Kirklees even more hellish than it already is. If you want to reduce traffic, where are your integrated plans for increasing and improving bus services, and also providing more local services such as post offices, GP surgeries and baby clinics for people to walk to, rather than centralised services that require a car for access?
Why would anyone choose to cycle next to cars, buses and lorries travelling at 30, 40 and 50 mph? It's dangerous, zebra crossings are not satisfactory, they are a cheap alternative to the safer pelican crossing. 1 in 5 people will never cycle to work regardless of how many cycle lanes you build, cycling in the winter is not practical and more than 90% of cyclist put the bike in the shed for the winter!
Your project [REDACTED] until all the potholes in Dewsbury are filled and roads have been upgraded!

Q.D4.

Please use this space to provide us with any additional comments on the route through Shaw Cross at the Leeds Road/Challenge Way junction.

1. Proposed slip lane from John Ormsby Way to Leeds Road, appears to show Give Way rather than Lights control. This increases the hazard risk for traffic going from John Ormsby Way to turn right into High Street. There is very little road distance (ie from the Slip Lane to High Street) to allow a safe manoeuvre across the Leeds Road traffic. Consider having a green filter light to allow traffic to leave the slip lane and safely join Leeds Road. 2. The two ahead lanes proposed through the junction will not help because the 2 lanes go back to 1 (causing a hazard) after the lights. This will just move the congestion point to after the lights.
A footbridge over this junction for walkers who come from Hanging Heaton / Shaw cross schools who need to get to either side. This would mean the pedestrian lights on challenge way could be removed to allow traffic to flow more feely
A slip road could potentially have been added from Challenge Way turning left onto Leeds road. This could potentially help reduce congestion. Also, these proposals don't do anything to make the junction friendlier to cyclists.

According to the plans the increased capacity on John Ormsby VC way is hampered by placing of the bus stop in the live lane. I believe. A bus lay-by would be a more effective way. This would stop delays and back up of traffic at the Leeds Road junction. By removing the left turn off Leeds Road onto John Ormsby VC Way and visa versa will just ensure that all traffic will then be pushed along old Owl Lane section which is narrow and further narrowed by two live lane bus stops in opposite directions. Buses stoping in either direction also stop the traffic as there is no space for cars or trucks to pass safely stationary buses. I believe removing the left turn into John Ormsby VC Way is a poor solution. However, by using the available land there, and making a slip road and bus lay-by on johnOrmsby VC way would contribute more in freeing up the traffic flow. In addition, the proposed developments on Owl Lane and Leeds Road will greatly increase the traffic along all these sections of road taking away available live lanes for the majority of traffic and making lanes for the minority of cycle users and buses, will only lead to further congestion, pollution and delays of majority of general traffic
Again the road surface of Challenge Way and the junction at Shaw Cross is atrocious.
As with the other sections of the A644 further improvements to reduce congestion would be to synchronise traffic lights along the route so that if traffic is driving to the speed limit then every traffic light should be on green for traffic on the A644. At the moment traffic on this section of the A644 is slowed down by each set of traffic lights waiting for them to turn to green.
Batley matters
Currently this road is not suitable for 11 year old my daughter to cycle to school along. This needs sorting. Many people are driving rather than walking and cycling because they do not feel safe.
Cycle path is used as car parking facility on the stretch between The Babes and Shaw Cross and feels unsafe. In the Kirkstall road there are physical posts to segregate traffic which act as a physical barrier and would prevent car parking on the road in between properties
Cycling to Dewsbury from my home in Tingley is intimidating and dangerous, especially at Shaw Cross. Plan D conveniently misses the short narrow length of A653 north of Owl Lane where cyclists heading for Dewsbury conflict with traffic turning left into Owl Lane. The section of A653 between sections C and D is also conveniently omitted. Parked cars along this stretch are a constant hazard for cyclists.
I don’t understand the impact this will have on the proposed Mac Donald’s at this junction and the impact it will have as I expect it to be busy. 5his doesn’t address the narrowing of Leeds road outside the infants school. The plan doesn’t address the congestion at the Wakefield end of Owl Lane which needs to be included in the plan.
if you do any improvements in this area the traffic will be terrible. The daily commute is bad enough without extra roadworks.
Improve bus stops by changing them all to sheltered ones with benches and digital time tables, segregated bike lanes with strictly no parking

In addition to your proposals would there be funding available to put extra 30mph signs between this junction and,say, Bennett Lane or even a speed camera. I know Leeds Road is a 30mph built up residential area but for some reason there are numerous incidents 24hrs per day of vehicles assuming that the 30mph area leading up to this junction from both Leeds and Owl Lane directions suddenly stops as soon as they are through the junction, and therefore attempt to break the land speed record as loudly as possible!!! This is lorries, cars and motorbikes! If you wish to see the evidence for yourself may I suggest a subtle survey from a parked car/van for half an hour on Leeds Road approaching your junction from the direction of Dewsbury, when you will definitely notice the law breaking speeds that vehicles are managing to reach. If a speed camera was installed, the funds achieved would easily pay for the rest of your improvements. Thank you.
It would help traffic flow if the exit from the Shell garage onto Leeds Road was closed. I can see no reason why vehicles can not exit on to High Street. It would also be helpful if the pedestrian crossing on Challenge Way only operated if someone presses the button and does not stop traffic when no one is crossing. A couple of speed cameras on Leeds Road would also be welcome as would some enforcement of the double yellow lines in front of the Co-Op store.
it's just often very busy with traffic. I feel like the high yield option is to get people to use other means of transport rather than making more lanes - if driving remains easy and encouraged, more people will drive
Kirklees seems to have this opinion that getting more capacity will help reduce traffic but in reality what has been proved again and again is that more capacity just means more cars and the same traffic issues as always through induced demand and the Downs-Thompson Paradox. There is a cycle route up Challenge way that isn't mentioned and has no priority, and also a cycle route along Leeds Road but nothing for bicycles at this junction.
Leave as it is, spend the money on social care or education
Make the left turn onto owl Lane restricted to cars and buses only. Heavy HGV use has destroyed the road and the mentality of residents. The noise pollution and fumes are horrendous.
Need to separate cyclists from traffuc
No provision for cyclist? No consideration on How pedestrians would use this junction? Just more capacity for more cars.
Not sure if this is a proposal or not. It seems like you are asking for advice on how to re-paint the road?

Planned developments in North Kirklees will increase travel demand Road network enabled for development and economic growth in the area Both statements are taken from the introduction to section D which comprises one single element, the works at the Challenge Way junction. This work will have the most significant effect on East/West traffic but will do nothing for traffic flowing North/South. The biggest planned development will lead to vastly increased traffic levels on the A653, which is the North/South route. A traffic light controlled junction is proposed to give access to the main part of the proposed site including the industrial section. There are no plans to do anything with the A653 until a bus lane appears at Tingley. Traffic can back up for over a kilometre to access Tingley roundabout at peak times. If the proposed development is approved and nothing is done to improve the A653 other than tinkering with junctions queueing back to the new access junction is a distinct possibility. Equally the junction improvement does nothing to ease traffic flow along Owl Lane which even without further development in the area is prone to long delays. The proposals outlined in this consultation document are to be welcomed and will, hopefully, bring about some improvement. However the traffic conditions in this area will only get worse as additional developments are approved and built out unless the road network is fully enabled for development and economic growth prior to the developments taking place. I before E – infrastructure before expansion.
The bus stop on John Ormbsy Way going towards Ossett will take up the left hand lane. This will be a hazard for the 2 lanes of traffic that will have to go to 1 lane. I can not see that the short distance of 2 lanes is going to make it any better as it all has to go back to 1 lane. The filter lane coming from John Ormbsy Way to Leeds road would be too close for traffic turning right onto High Street, Hanging Heaton
The main issue here is the level of traffic flowing along Leeds road itself, not challenge way
The plan is too poor to be able to make a meaningful comment. It doesn't appear to help cyclists or pedestrians at all.
Repaint the junction at Leeds Road / Challenge way. Use the American model of arc-ing past each other, and put a proper filter light on it. Stop right turns from John Ormsby to Leeds Road - there's no need, use Owl lane. Put a crossing in from the garage across Leeds Road to John Ormsby. Widen the pavement where the demolished garage was, it's far to narrow to walk on, especially with a pushchair. Put in a dedicated cycle provision, maybe something like the dutch roundabout in Cambridge to give pedestrians and cyclists priority. Maybe use one of the rarely used pavements as a cycle path, though the vegetation would need to be dealt with on Owl Lane, we struggle to walk past in single file. I would cycle to Ossett to use their supermarkets but the cars fly down Owl Lane and there have been numerous accidents near the entrance to Amberwood Chase. It's just not safe enough.

Section D - I am particularly concerned that the Shaw Cross junction improvement lacks any cycle provision when there is an existing cycle route that terminates here. The shared use cycle facility from Challenge Way should be extended in all directions. Particularly straight across onto John Ormsby and Owl Lane as there are two other cycle routes that will meet down this road and ought to be connected up. The first route from Amberwood Chase which includes a 'greenway' connection towards Earlsheaton and the second route would be the proposed spine road towards Leeds with cycle tracks, which is part of a planning application currently under consideration on Owl Lane. A gap in provision between Shaw Cross junction and these cycle routes can be avoided and I am sure that planning obligations could be sought to provide this cycle connection, which I have previously mentioned to planning officers. Continuing the cycle facility across Shaw Cross junction through to Amberwood Chase should therefore be included within this scheme. There are options that could be considered to better provide for active travel between Dewsbury Town Centre and Shaw Cross e.g. a 'quietway' alternative route could be developed. The best way for this to go would be Crackenedge Lane - Commonside - High Street. This has the easiest gradients for bicycles to reach Shaw Cross and through traffic could be discouraged from this minor route anyway (can make it a 20mph zone throughout with traffic calming). As [REDACTED] I object to the scheme because the cycling provision does not comply with government guidance on appropriate protection from motor traffic on highways. The whole M2D2L route is extremely busy with large traffic flows that are forecast to grow even further over the coming years as thousands of new homes are built. The local transport note LTN 1/20 on cycle infrastructure design makes clear that on-road cycle lanes would exclude most users and do not provide appropriate protection on such busy highways like the A644 and A653. Only segregated cycle infrastructure is appropriate for a route like this. There is virtually no segregation for cycles within the Mirfield and Dewsbury sections of this scheme, therefore the proposals are wholly inadequate and should not proceed in their current form. I understand that segregated infrastructure would be more expensive. However the Leeds sections of the route use segregated tracks, so Kirklees residents must be offered the same standard of improvements. We pay our taxes too and should not be treated as an afterthought by WYCA, that is how it will look to Kirklees residents at the moment!
See previous answers
The proposals are unlikely to make any difference to me. One observation is that as a cyclist I find this junction quite tough, so it is disappointing that there are no proposals to assist cyclists here. I pass straight through on Leeds road and the section by Owl Lane in front of the school is tricky in both directions. Also, making the cycle path down the dual carriageway to Tingley mandatory to avoid overtaking parked cars in front of 50mph traffic could help.
This can get very busy with traffics. Reducing cars and increasing cycling would be much better for the environment.
There is no provision for cycling.
This feels like there's going to be travel by sustainable modes until you get here then it is all about the car, with no provision for genuinely supporting people to travel by bike or on foot

Stopping right turning into Leeds Road from John Ormsby Way I strongly agree with - this will help cut accidents. 1) The two exit lanes on to Challenge Way (as it is already) is not long enough, refusal to widen the road where there is obvious space (at both sides) is a missed opportunity and I can see tears as driver vie for road space on Challenge Way. 2) The petrol station exits here are a problem, always thought 3 is excessive and are used for 'rat-running' quite alot 3) The greater traffic flow is in the left hand lane of John Ormsby Way turning left and the biggest problem for this junction is the traffic flow up John Ormsby Way left into Leeds Road then immediate right into High Street (the bus route), this frequently blocks the whole junction by preventing traffic progressing through towards Dewsbury and is also one of the factors leading to the many accidents at this junction as drivers (including buses) frequently then jump the light in front of right-turners who have limited time at green - this proposal does nothing at all to address this. This junction was rip for extending and using the free space available, sadly apart from the limiting low demand turns, another opportunity missed and another place where there is to be extensive residential development leading to increased traffic flow.
The proposals will only create further bottlenecks on Challenge Way and John Ormsby Way, you can already see this in action coming from a dual carriageway Leeds road to single carriageway at Shaw Cross.
The rat run from dewsbury road a653 to the stadium is a hazard. The traffic calming bumps are seen by many as a slalom course to be taken at speed. Most people using this rat run do so to save time by bypassing the lights at shaw cross boys club and try to save more time by speeding
The traffic lights need to flow, especially at peak times, there should be a round a bout there instead of traffic lights, also the pedestrians have to wait on about 4 sets of traffic lights before they can get to Owl lane which is appalling when your about to miss a bus, pedestrians should always have right of way.
This plan is flawed and does only half a job,it does not improve the whole of the Shaw cross traffic area.as it misses out a major bottleneck on the owl lane leeds road area by northern domestics.neither does it improve heavy hgv flow serving Shaw cross industrial estate.as usual kirklees have given the planning to somebody who does not even know where Shaw cross is!.if there has to be change do a proper job.this plan also does not improve infrastructure or provide better pavements or cycleways
This will be very busy due to the increased building of houses in an already crowded area
This will cause even more congestion. You need to do something about speeding motorists throughout this route. Make Leeds Road single carriage way throughout.
Timing of the Traffic light on Leeds Rd/John Ormsby Way/Challenge way need to favour Leeds Rd going ahead traffic for longer
Vehicles from Leeds turning right into Challenge Way need warning that there is still oncoming traffic from Dewsbury travelling in Leeds direction despite the directional traffic lights signally that they may turn right

What are the possibilities of up grading Grange road to relive Leeds bound traffic from Challenge way? As it is there is only a small filter at the present junction for Leeds bound traffic. If Grange road was to be used for Leeds traffic it would reduce the load and queues at the main junction, as does Owl lane on the opposite side.
Where is the provision for cyclists?
Will cause more traffic problems
You have failed to take into account the main reasons for congestion in this area. The left turn onto owl lane from Leeds is one of the biggest congestion points on this road net work and the subsequent right turn onto Leeds road from owl lane. This area should be considered as a whole and a round about used rather than traffic lights. The current system works fine apart from the entry onto J Ormsby from challenge. You should re absolute this whole area. This will not improve traffic flow as a whole unless you take into account the afore mentioned junction of owl lane and Leeds road.
you have just re-done the whole junction ... got money to waste... Christ's sake
You should make it into a round a bout instead, a lot more traffic calming.

Section E.
Please use this space to provide us with any additional comments on the section of the A653 between Tingley and White Rose.
1 - When the White Rose centre was first opened, northbound buses going into and out used to enter via the south 'gate', go round the White Rose service roads, and exit via the north 'gate'. Similarly southbound buses used to take the reverse route. I believe these routeings should be reinstated.This would take many bus movements in the area off the already congested main roads, and eliminate the difficult exit for southbound buses using the north 'gate. 2 - As a regular pedestrian but non-cyclist, I am never in favour of what you refer to as a 'shared-use path for pedestrians and cyclists' as all my experience of these is that they are more dangerous for pedestrians than full segregation. 3 - Tailbacks at Tingley Roundabout are already bad enough, a 'new southbound bus lane' would only make them worse. Northbound would be fine though.

1. Due to the gradient, the straightness of the route and the lack of obstacles, this is a high speed cycling area and thus is not suitable for shared use paths - it needs to have segregated cycling/pedestrian if cyclists are to move from the road to the path without increasing danger to both themselves and pedestrians. 2. This shared use path doesn't seem to be joined up with the existing north-east bound Dewsbury Road cycle lane east of the White Rose centre heading to Beeston & Middleton. It looks like cyclists are expected to travel further north, use the pedestrian crossing which doubles up as a poor quality cycle crossing to the North and then take the much narrower and congested Ring Road towards Beeston instead. Why not provide a good quality cycle & pedestrian crossing which would also allow pedestrians to access the currently stranded to all except the bravest bus stop 45011336? A much better suggestion would be to provide segregated cycle paths on both the east & west side of the A653 allowing good connections with Dewsbury Road with a quality traffic-controlled cycle/pedestrian crossing to Wide Lane which could also allow pedestrians from Morley to access bus stop 45011334 which currently requires to cross several lanes of 70mph traffic to reach. By moving northbound cyclists to the east of the A653, space would be freed on the west side for segregated cycle & pedestrian paths.
A cycle lane on each side of the A653 would be great, I would cycle to work more often. Currently on the hill between White Rose & Tingley there is either the road (too dangerous to cycle as it's a dual carriageway, cars often reach 70mph here), or a single footpath which can be difficult to use when constantly stopping and giving way to pedestrians.
A separate pavement for pedestrians would be useful on the section between Wide Lane and White Rose rather than shared use. This part of the road is used by many walking to and from the Wide Lane and Middleton Lane area of Morley and the White Rose for shopping, eating and walking to and from work for workers at the White Rose who live in this area of Morley. I do not think a shared use path for the section of road between Wide Lane and White Rose would be suitable, and a segregated cycle lane should be given here. I agree that the section between Tingley and Wide Lane can safely be a shared use path.
A shared cycle and pedestrian path is good, however considering the gradient of the road, it will be hard for cyclists to maintain a safe pace around pedestrians.. The most ideal option would be to have a path that has a side each for pedestrians and cyclists. I can imagine this path would be quite popular for keen cyclists as well as those taking up active commuting as the other main routes into town involve some hairy crossings of lanes in the ring road - for instance if you want to come into town from Morley via Churwell Hill.
As a regular cyclist, the traffic on the A653 tingley section is a real detergent to travelling by bike. A dedicated shared path as suggested would make travelling this section an option,whereas at present I would be reluctant to do so.
Batley matters
Better cycle lanes on this stretch of road would be very much appreciated. The journey from show cross to tingley is ok due to the cycle lanes however the current road from Tingley to White Rose/ Dewsbury Road is 60mph with no cycle lane and therefore treacherous for cyclists, especially novices

Buses have no problems as car drivers have to give way to them.
Current cycling facilities in this area are poor on a dangerous stretch of road. A dedicated cycle lane is required.
Currently it is too dangerous to walk or cycle in this area !! of Tingley. Hundreds of children cross the road (Secondary & primary) during school terms which is dangerous for them. The reason being that the road is used as a race track and there is no enforcement of the speed regulations. The last time there was an accident the barriers that were damaged were never replaced. This should be looked at immediately I suggest using speed cameras at traffic lights. Any changes to walking / cycling lanes with speed controls would be a big improvement.
cyclists already use the path ... why would'nt you are you stupid
Definitely needs a dedicated cycle path separated from traffic. Especially northbound, it's incredibly dangerous with traffic driving past at 70mph barely 2ft away from you
Do not put a bus lane there. It is unnecessary, as it won't be used.
DOnt think creating bus lanes here would speed things up, if anything would slow down car traffic at rush hour. People need to be able to overtake slower cars
E5 could a cycle and bus lane be incorporated? The M62 roundabout is a nightmare for cyclists what can be done without using endless crossings. Capitol park another on off junction whilst motorised vehicles are given priority, who are we trying to change the behaviour of? Dewsbury road dedicated shared path, this needs to be well designed so that the vegetation does not quickly eat up half of the tarmac.
For cyclist travelling longer distances to get to Leeds we would still have to traverse the roundabout with the M62 Junction, so it is unlikely I would use this route compared to say the A643 through Churwell, even though that route suffers from congestion etc
I have a job in Wakefield and another job in Leeds. I live [REDACTED] and I often need to cycle down Dewsbury Road. Each time I do this I feel a sense of relief after having to use the dual carriageway and (the worst part), is having to turn right crossing two lanes of dual carriageway traffic,59 get onto the Dewsbury Road. It's awful to do. I really hope that this scheme can help with this move from the A653 northbound turning onto the Dewsbury Road.
I live in Holbeck and work in Tingley. I would like to cycle to work but the lack of proper cycling lanes means that I do not feel safe to do so as the road is very busy. I currently cycle to work only on Saturdays and not Monday to Friday as the traffic is lighter. To cycle to work Monday to Friday would mean cycling at dusk/dark which is something I would not do on this road.

I AM NOT SURE THAT BUS LANES ARE OF AS MUCH BENIFIT AS MADE OUT. I WOULD PREFER TO SEE SCHEMES WHICH MOVE CAR TRAFFIC MORE EFFECIENTLY THROUGH AREAS. I FEEL THIS WOULD ACTUALLY REDUCE CONJESTION AND IMPROVE AIR QUALITY. I HAVE SEEN AREAS WHERE PRIORITY IS GIVEN TO BUSES AND CYCLES WHICH CREATE TRAFFIC JAMS AND PROLONG THE TIME OF AIR POLLUTION. PEOPLE WILL NOT MOVE FROM CARS TO BUSES OR CYLCES IN GREAT NUMBERS. THE CARS WILL REMAIN AS THEY ARE OR INCREASE WHEN MORE HOUSES ARE BUILT IN THE AREAS THAT ARE FOR DEVELOPEMENT. CLEANER CARS AND MORE EFFECIENT MOVEMENT OF THEM IS A BETTER WAY
I use the A653 on daily basis as i live and work within locality. It is busy throughout the day regardless of rush hours and made even worse on match day so proposing a bus lane will make things even worse. It is very heavily congested at preset, putting in place a bus lane and turning from two lanes to single lane will cause even further congestion. This will make turn into a nightmare to use for anyone wishing or needing to use the A653, al ready with the changes made last year has caused people to use our smaller side streets where we live congestling smaller roads that are not fit for heavy goods vehicles etc and making it unsafe for pedestrians including our children who play and use these roads we live on
First of all it's a dual carriageway and I have no doubt that the improvements will use some of the existing carriageway in order to complete the works. Dewsbury Road is a very busy Road catering for high volume traffic transit so cutting down vehicular routes will just cause further congestion. From Tingley roundabout all the way to the white rose centre there are very few pedestrians using the past or cyclists for that matter so any cyclists could use the path already in existence to increase their safety from what after all is traffic travelling at speeds up to 70mph. Further down Dewsbury Road in Beeston Leeds City Council placed a cycle lane in place which is looked at as a bit of a joke by locals as you would be lucky to see a dozen use it in the full day, similarly islands were placed in the road creating a huge bottleneck for traffic especially at peak times, cars are not going to go away and doing works like this create standing traffic making a joke of these cleaner air claims. As for dedicated bus lanes, why ?, as stated it's a dual carriageway and I use it all the time both outbound and inbound and there is no problem with the existing traffic negotiating the buses travelling the route, put in a bus lane and it will do nothing but create congestion for the high volume of vehicles using the road, though it would increase the councils coffers with all the fines that would doubtless occur. In short leave that section alone no works are required apart from improving the actual road surface which is suffering because of the amount of traffic. There is one area that could do with looking at and that's the entry slip road from Dewsbury Road onto the dual carriageway just prior to the white rose roundabout at the Sainsbury's end, there are quite a few accidents at that junction mainly because backward vision onto the dual carriageway is very poor and in wet weather it floods.

Having a shared-use path that cyclists can use would be really useful for me. Better would be having dedicated cycle paths (still separate from the road), but a shared-use path would still be good. I want to cycle commute to/from Leeds, but have been wary of doing so due to lack of cycle infrastructure. This proposal would definitely help me to cycle commute. However, this proposal does nothing to improve the cycle infrastructure on Dewsbury Road before Tingley roundabout (ie South of the roundabout). Whilst there are cycle lanes on both sides of the dual carriageway, they aren't separated from the road. This means that at peak times, you get lots of fast moving cars, lorries and buses going very close past you. I have tried cycling here at such a time and found this really hard to deal with, I kept worrying that someone would hit me, and even if they didn't, vehicles didn't leave me much space. Having a lorry going past you at 40 mph is not pleasant. It would be really helpful if future proposals worked to address this issue, this is definitely a safety issue. I'd also encourage people working on these proposals to try cycling here at peak times to get an understanding of what I'm saying. The bus lanes seem fine to me.
Highways England owns and maintains the strategic road network in the vicinity of the scheme, on behalf of the Secretary or State for Transport. We have actively engaged with project officers regarding the scheme, which proposes changes to the signalisation and priority of vehicles on the Local Highway Network (under the control of the local authority). It furthermore seeks to improve and create non-motorised user access along the same local authority highway corridor, endorsing sustainable transport and alternatives to single car occupancy along the route. Highways England supports the Council's plan for the scheme to potentially reduce the existing burden of vehicle trips along the corridor in an effort to reduce congestion and improve air quality. As the scheme progresses, we will be working alongside the project team at the Council to support their exploratory work, and help validate the existing traffic impact in and around Junction 28 of the M62.
I am a regular user of this route in its current condition - this could be a brilliant scheme but it needs more ambition than currently shown by the plans. Detailed comments are below: E1 Width of the shared use path needs confirming - currently too narrow Dewsbury Rd movement needs consideration in both directions inbound and out near the petrol station - grade separation here is needed or the cycle lane on the west side will not be used as if you are going from/to Tommy Wass you can't easily cross the dual carriageway. E2 Priority across roundabout arm unclear - needs to be priority for cyclists/peds Priority across side roads needed E3 3m is not suitable for shared use two-way - this needs to be wider Wide Lane - needs priority for cyclists/pedestrians as very difficult to cross without - not clear what this crossing is going to be from the plans? Existing crossing is a good alignment but has no protection from vehicles exiting roundabout at speed who often don't signal. E4 Capitol Park crossing - this is a convoluted arrangement at present, it needs straight across crossing and priority over vehicles entering from Tingley. Nothing proposed for Tingley roundabout itself which is poor at the moment with little priority for cyclists - without this the scheme is pointless. No mention on the plans on how cyclists are supposed to carry on down Dewsbury Rd (away from Leeds) when on the west side of Tingley roundabout - currently very awkward using the existing crossings. Could the old road alignment be used to form a more direct route - through the White Bear pub site?
I have to get the bus to work along here and I think bus lanes would be a huge help particularly at rush hour and around White Rose.

I live in Batley and would cycle more if there were a connection to this new route
I see the creation of the cycle path as a particular benefit because at the moment that section of road is particularly inhospitable to cyclists. The traffic flow is usually not too bad and whilst the bus lane will naturally improve bus journey times I don't think that the benefits of that are as great.
I sometimes catch the bus up to work on capitol park tingley it would be great if the 202 203 would stop at the bus stop before tingley rounderbout it would save me crossing two busy road's
I think bus lanes will stagnate traffic and add to pollution. Segregated cycle lanes are needed. The traffic between White Rose and Tingley isn't too bad, it flows. Dewsbury Road around Tommy Wass is the pinch point. Safe cycling around the Tommy Wass area to White Rose is too dangerous.
I think there should be traffic lights on all entrances to the white rose to assist with traffic and pedestrian crossings. I think also the speed should be reduced to a a maximum of 30 or 40 across the whole route. Reducing the speed will encourage more people to use the route for cycling or walking. I feel nervous walking currently from m62 to white rose due to the speed of cars. I also would like safety to be considered by encouraging better lighting.
I would add a bus lane all along the route due to all the congestion this scheme is way overdue.
I would not be in favour of cutting road usage for cars
I would only support the proposal of a bus lane (north/south) providing it doesn't compromise the dual carriageway which is essential given the volume of traffic using this stretch of road. I believe there is ample room to have 3 lanes in each direction (1 bus lane) if space currently in between the central reservation is utilised with a possibility of a reduced speed limit to 50.
I would put a northbound bus lane in (probably for morning and evening peaks only) from Wide Lane down to the roundabout by the White Rose Centre. This would give a big advantage to bus journey times over cars. Far too many people drive to the White Rose Centre and the nearby business parks - if public transport were much quicker at commuting times, people would be more likely to use the bus. The bus services would need to be improved considerably to assist this.
I'd like to cycle but current traffic levels and driving behaviour make me feel at risk - it just isn't safe to cycle here.
I'm not going to use a bus, walk or cycle to work ever. I cycle and walk regularly for pleasure. My next company car will be hybrid or electric. I can't use any other form of transport for work
I'd be much likelier to use the bus if there were a bus lane on this route

In my experience as a bus user from Leeds to Ossett Mon-Fri, a lot of the traffic that bottlenecks on Dewsbury Road to Tingley Interchange is coming along A6110 and joining onto Dewsbury Road. If possible some sort of regulation of that feeding in would also enhance the journey times saving
In my view the needs of he many outweigh the needs of the minority .... Section E5 shows the proposed introduction of a bus lane between The "Old" Dewsbury Rd/Lowry Road Junction and the Tingley Roundabout (heading towards Leeds) .... currently at peak times the existing two lanes of traffic on the "New" Dewsbury Road queue from the Tingley roundabout back to the Lowry Road junction, and then from Lowry Road back to Rein Road and further (this is obviously why there are Yellow Box road markings at these three junctions) .... furthermore traffic also queues on Lowry Road itself (20 cars +) and on the Old Dewsbury Road (because of dropping children off in the Scarborough Street area for Woodkirk Academy) ... the majority of cars queing in the side roads are turning towards Leeds. If the proposed Bus lane is introduced then all the current traffic would have to filter into one Lane at the point just after the Lowry Road junction for the approx 300 mtrs untill just before the Tingley Roundabout.... I suspect that for non Bus Lane Traffic the queue time and length of queue will double ... Can you confirm that this will not happen and that that this already busy and congested area will not be made worse with resultant increases in both noise and particulate pollution?
It is difficult for buses to turn on to Wide Lane at the roundabout which needs to be improved.
it needs a cycle route
It would be good to see a busgate introduced off Dewsbury Road into White Rose so the buses could serve the internal bus stops (like those near sainsburys) without the time penalty
Its a dual carriage way . It keeps the traffic moving. Don't ruin it with cycle lanes and bus lanes
It's quite difficult to cross the road safely when cycling up to Tingley from the White Rose. I hope that either the crossing over to the shared path will be improved or that the bus lane will clearly be marked as shared with cyclists.
Its the sheer volume of traffic during rush hour, and the additional homes planned for churwell is only going to add to the volume at the bottom of churwell hill/ continuation of flow if traffic past the white rose which is already severely congested.better cycle/pedestrian routes could be better planned away from the main traffic routes on a654. Doesn't seem be a joined up approach when it comes to town planning and giving way to hundreds of homes on current farmland. Without the additional transport, education, doctors infrastructure needed to facilitate this crazy move.
Measures are needed to reduce traffic by improving public transport and cycle only routes
More bus lanes etc will cause more traffic delays and more problems
My experience of traffic on this route is more often than not fairy reasonable and therefore don't see their being a great benefit to the bus lanes, however I don't travel that way at rush hour anymore and don't have any data to back up my thoughts.

None of these proposals would encourage modal shift from car to active and sustainable modes. More needs to be done: such as removing general traffic lanes to accommodate bus lanes and providing full segregated cycling facilities. Both of these could be accommodated along the full length, encouraging modal shift. Mandatory cycle lanes are not safe on this road - especially where the speed limit is 70mph. Also, please look at implementing a northbound bus lane from the Starbucks along Millshaw Road until the White Rose Junction, buses often get stuck here.
Not enough buses travel down this road to justify this expenditure
Not impressed with the access to the improved shared use route to/from Dewsbury Road (NB - Dewsbury Road is preferable to the Ring Road when riding to/from Tingley - it's shorter, and a gentler climb). Riding towards Tingley, I've been known to be stuck on the current "crossing" at the roundabout south of the petrol station for 15-20 minutes ... just waiting for a break in the rush hour traffic into Leeds. Similar frustration riding from Tingley towards Leeds. It appears there's no improvement planned for accessing Dewsbury Road?
On map E5, it would be better to encourage cyclists to use the old Dewsbury Road with a link to Tingley roundabout round the edge of the vacant former White Bear pub site. A simple way to reduce traffic congestion approaching from the Shaw Cross direction would be to lengthen the left hand lane - for traffic going towards Morley and the M62 west. This traffic is held up at busy times by having to compete for the busier middle lane. There is nothing in the way, only the blocked off access to the former pub site. This would almost double the number of vehicles that could use this lane. By making easier access for this traffic, its use of Rein Road would be reduced, thereby also reducing conflict with Woodkirk school children at the morning peak and reducing tailbacks at the A6029/A650 junction. This would tie in well with the proposed bus lane. The bus lane is OK but starts too close to the Lowry Road junction which traffic competing for the one remaining lane would be likely to obstruct. On E5, the existing path on the hill down towards Wide Lane is woefully narrow for cycling, especially as many cyclists would be going fast. I hope the path will be a suitable width. Are there no proposals for cyclists at Tingley roundabout itself? There’s certainly scope for improvement.
Only if bus lanes would be completely new in addition to the two current lanes
Please please don't build shared use cycleways... They are a total waste of money. For cyclists it means constantly slowing down to avoid meandering pedestrians. Please only provide segregated Cycle Superhighways with priority across junctions..
Please reduce speed limit on road to encourage cycling/walking. Please create a physical barrier between cars and cyclists/pedestrians. Consider a multiple-ocupancy lane instead of bus lanes
Preferably designated cycle only lanes that are free from obstruction and well lit 24 hours a day. Running both directions Tingley to white rose and vice versa. Where designated cycle lanes are not possible reduce the speed limit on the dual carriageway to a maximum of 40mph preferably less.

Shared cycle and pedestrian lanes don't seem to be an ideal solution for either group. Either pedestrians impede cyclists because they don't understand that cyclists may wish to cycle quickly,or quick cyclists scare pedestrians. Could there be a separate lane for cyclists and pedestrians. Otherwise cyclists are likely to travel on the road anyway. Also, it should be clear that there are areas where bus passengers can stand at bus stops without impeding the cycle lane. As a cyclist, I often avoid cycle lanes because bus stops and bus passengers regularly block the cycle lanes.
Shared cycling and walking lanes can never be safe. This is becoming am increasing problem for walkers on public rights of way and is causing resentment. The speed some cyclists travel at will lead to fatalities. I do agree that roads need to be made more safe for cyclists but walkers should not be expected to share their footpaths with vehicles. Near the junction of Dewsbury Rd and Wide Lane a track from the escarpment joins the road at right angles. It is well used by walkers and cyclists but there seems to be a blind spot. Traffic travelling south appear not to expect people to cross at this point.
Shared pedestrian and cycle paths rarely work, cyclists are likely to use the road if pedestrians are not segregated. a segregated cycle path and pedestrian path would be much better and safer. I suggest you remove the 1.5 m buffer which is dead space in reality and create a kerb from the road to a cycle lane and then a kerb from the cycle lane to the pedestrian path. Look to European cities like Hamburg or Copenhagen for good example of cycle paths.
Southbound congestion is normally due to the weight of traffic at Tingley roundabout during peak times. It's not clear how this proposal will help with that other than allowing buses to get to the point of congestion more quickly. Northbound congestion is at peak times when the weight of traffic using the road means that there are queues caused by the congestion all along the A653 & Ring Road down to the M621 roundabout, and the pinch point at the Tommy Wass due to the design of the junction there. Again it's difficult to see how the provision of these bus lanes will help with that other than allowing buses to arrive at the congestion points more quickly. Is there a real benefit in that ?
Speed limit is 70mph, cars travel very fast and this is dangerous for cyclists at the moment as they are cycling on-carriageway
Strongly against shared pedestrian/cycleways. In road safety terms, these amount to an effective discouragement of walking. Agree that bus lanes will have advantages, but only needed for the peak direction flow (ie, am northbound, pm southbound. But please don't pretend that this is an overall strategy. It is merely a handful of individual and unconnected proposals. Local benefit? - possibly. Strategy? - in your dreams.
The bus lane southbound on the approach to the junction with the Capitol Park East to give buses priority on approach, so they are not waiting for a space to verge into the next lane when approaching Tingley Roundabout.

Section E1.How does the cycle track shown on diagram E1 link with the cycle path shown on diagram F1? The White rose roundabout is fast and always busy. Crossing to the offside lane to negotiate the roundabout then crossing again to pick up the cycle path on the nearside lane is not a safe manoeuvre. Staying in the nearside lane all round the roundabout involves crossing two separate lanes leaving and two lanes joining the roundabout. Cyclists will be particularly vulnerable here. Section E2. The pedestrian/cycle crossing at the retail park has the potential for accidents. A left filter lane develops for traffic travelling from Tingley to enter the retail park. Drivers look to their right to check traffic on the roundabout and if clear accelerate away. It is possible that users of the crossing will not be seen. The shared footpath/cycle way is well used by pedestrians. Not all cyclists equip their cycle with a bell or other means of warning of approach. On a busy noisy road side an approaching pedal cycle will not be heard by pedestrians. They are at the bottom of the road user's hierarchy and seem to be considered fair game by some cyclists (in the same way that cyclists are treated by some motorised road users). Is there not enough room to separate these road users along this stretch of the A653? Is it possible to also put a cycle lane on the southbound side that could link with the southbound lane at section F2? There is sufficient space at this point to do so especially as a pedestrian footway would not be needed. Section E3. The Wide Lane A653 junction is complicated by the slip road arrangement for traffic using Wide Lane to head towards Leeds. This may impact on cyclists in particular as they attempt to cross Wide Lane. Are additional mitigations needed now that a takeaway and drive through establishment is in the process of development? What is meant by the term Landscaped Buffer? Is it just grass as shown in the illustration or is more extensive planting envisaged? Who will be responsible for maintaining these landscaped buffers? Indeed who will be responsible for ensuring the widths of the shared use paths are not significantly reduced by encroaching vegetation as is the case on many of these sections at present. Section E4. Where does the bus lane shown in this section actually start? Has consideration been given to extending the bus lane provision along sections E2 and E3 southbound? It is not unusual at peak times for both drive lanes to be full for the whole length of these sections. Indeed on bad days these jams can extend to Shaw Cross and beyond. It would significantly help journey times if a bus lane was constructed from the retail park roundabout shown in diagram E2. Are there any plans to provide bus shelters at the stops that exist on this stretch? Section E5. Detailed comments on this section have been provided directly to Finlay Campbell and will not be repeated here.
Shared space cycle and walking paths should not be put in on new projects - they are the worst kind of infrastructure for each way for people to travel actively
Shared use paths for pedestrians and cyclists are not adequate infrastructure. The government has just issued guidance to reject their use as they are a poor option for both intended users. The road lanes are almost 4m wide with a 4m wide median. Could some of the road space not be reallocated for dedicated 2m wide cycle lanes in each direction. Also the route gives way at Wide Lane. Why? The motorists don't have to give way so why should cyclists?
Should be a separate lane for bikes and pedestrians,

The amount of space on this road is huge. I would have preferred a segregated cycle lane running the entire length from Tingley roundabout to White Rose. If it is to be a shared path you need to also make navigating Tingley roundabout easier as well. You currently take your life into your own hands if you cycle it. The path needs to widened on the actual roundabout itself. The path also needs to be well lit to encourage people to use it in the winter/when it's dark. I also believe the road from the roundabout to the white rose should be a max 50mph road as cars currently use it as a race track. Install speed cameras to ensure it is adhered to.
The bus service is terrible, why invest millions in schemes when both bus companies knock regularly and wouldn't know a timetable [REDACTED]
The busses will get stuck behind traffic congestion caused by this
The current bike path down to the white rose is narrow and poorly maintained. Crossing at the roundabouts feel dangerous due to the speed of the traffic. Separate bike paths separate to the road is essential to encourage large numbers of people to cycle to Leeds. The current bike lane on Dewsbury Road through Tingley does not feel safe as regularly traffic move into the bike lane.
The current cycle lane, of which there is only one narrow path on one side of the carriageway, is regularly covered in detritus that ensure the risk of punctures is heavily increased. The good thing is that there is a low amount of pedestrian traffic on this stretch, unlike other shared use paths. I. E Dewsbury Road in Beeston. The divided shared use path. Is incorrectly constructed. Passengers alighting from a bus step out into the cycle lane of the path. There are regularly taxis and personal vehicles parked in the the cycle lane section of the path.
The current path is not anough for many to consider cycling in the area so this increase in width is welcomed. I'd like there to be a bigger verge than 1.5m for cycling to be appealing. I agree that the crossings should be set back from the roundabouts but I am concerned about visibility if the trees and bushed and not kept trimmed back.
The current path is very narrow and in poor condition. Widening the path will allow people to pass safely, either walking or cycling.
The cycle lane from Tingley to the white rose centre is very uneaven forcing cyclists to use the main road which is very dangerous. I would welcome an improved cycle path
The cycle lane needs to be separate from traffic and pedestrians. Shared use us no good for cyclists or pedestrians
The footpaths on the dual carriageway between tingley roundabout and the white rose are in desperate need of improvement and widening. I walk them often and they are not fit for purpose.

The new bus lane Southbound only runs for a short stretch - if congestion southbound tails back past the Wide Lane roundabout, as it often does, the new tiny stretch of bus lane wouldn't make any difference - if you're going to do it, why on earth are you not doing it all the way back to White Rose Centre? There road, verges and central reservation are SO wide, there's plenty of room for a bus lane all the way. This half-baked effort will make no different as buses have to be almost at Tingley roundabout before the bus lane even starts.
The pollution in that area is a disgrace to the human species the grass is black with smog, the fauna and flora is not fairing well in this area and the whole system needs looking into
The proposed segregated cycle path is good, but getting to the start of the path from the Dewsbury side is dangerous as the roundabout is extremely dangerous for cyclists. Traffic moves too quickly on the roundabout and to cross the various exits is frightening.
The redundant railway course between Tingley and Beeston provides potential for a level, designated route for cyclists & pedestrians well away from traffic pollution. This would serve the junction of Wide Lane (for Morley) and Dewsbury Road (for Beeston) very well. Has this been *properly* considered? I notice the comments on consultation that this idea has been rejected because it would require land acquisition, and that the route is longer and doesn't connect to Morley. However, the definite advantages of this route are: (1) a flat route connecting Beeston, Morley Wide Lane and Tingley. It runs close to the Wide Lane south junction and actually could connect very well for Morley (contrary to planning comments made in response) and for Beeston. (2) a safer and low pollution route that is designated and well away from traffic and junctions. Less risk of accidents for cyclists. (3) the route is slightly longer (taking a curved route) however would be actually quicker on a bicycle (particularly when heading southbound) because it avoids the sustained incline along the A653. (4) presumably this land is redundant & overgrown. Bringing the railway level back into use as a countryside cycleway & path would encourage enjoyable active travel in a safe, sustainable and environmentally friendly way. It would also raise interest in biodiversity & could be 'sold' as a leisure facility for South Leeds, not just a transport corridor i.e. people would use this for more than necessity. I'm not sure the same could be said for a cycle/ pedestrian path up the side of the A653. I would encourage you to re-consider the clear and long-lasting benefits of this idea that has been suggested by many local people already.
The section between white rose and the wide land roundabout is awful for cycling would be great to make this a much safer and more pleasant route.
The traffic congestion is terrible now on all the surrounding roads, what will it be like when you go ahead with this plan? Have you even thought about that, condensing two lanes into one, really? You need to think of all road users whether it be car, bus, lorry or bike. Double yellow lines are required on most of the main roads as the parking is diabolical. The money would be better spent resurfacing the roads to a high standard and not using cowboy tradespeople to complete the work, which will need doing again in 6 months

There is enough space to have completely separate cycle lane and pedestrian lane, why do half a job with a combined path which will cause conflict between cyclist and pedestrians resulting in many cyclists still using the main carriageway. The road down is quite steep so many cyclists have the potential to go at fairly high speed which again will make them choose the main carriageway to minimise collision risk.
There is no need for bus lanes the problem is the road is heavily congested every day so it would be better putting a bypass in place that connects the motorway
There is plenty of room on the Tingley to Whiterose carriageway for both vehicles,pedestrians and cars the other side requires and footpath cycle way no need for bus lanes or hatched cycle ways as congestion is minimal.
There is room for a dedicated cycle and footpath alongside but separate from the main road from Tingley roundabout to the White Rose shopping area. An additional bus lane either way may speed up bus times but only from White rose to Tingley roundabout at the expense of increased traffic congestion. Dewsbury road in Beeston is a bottle neck during the rush hour as is junction one on the ring road. Both back up to the Beeston/Millshaw roundabout regularly. if there is an accident anywhere in Leeds during the rush hour traffic will back up to Tingley roundabout.
There is significant space available at these locations to give dedicated bus lanes that do not interfere With road traffic it does not deal with the issues of cycle lanes from owl lane to this junction. This review should include all considerations for cars cycle and walking. The current provided cycles lanes on Leeds road are blocked with cars. Segregated cycle lanes need implementing on this entire route.
This is a dangerous road for cyclists and I have contacted Leeds City Council previously about the need for a shared cycle path. A sensible approach. However there are two areas which appear not to have been appropriately considered; 1. In E1 from the shared use path to Dewsbury Road - there is no way of crossing to the cycle lane on Dewsbury Road except to 'chance it' with fast-moving traffic and 2. In E5 the crossing across the A650 towards Morley. Both are extremely dangerous and no improvements shown.
This is a fast and dangerous route for both cyclists and pedestrians, particularly in Winter. Anything that can be done to mitigate that for those types of users would be welcome
This is an important route for me into the city center. I commute by bike. This section has always felt dangerous so improvements for cycling and walking will be awesome.
This road is a main route into Leeds from the M62 & Dewsbury and is a two lane dual carriageway that has both lane's into and out of Leeds full of traffic most times of the day, bus lanes will make matters far worse not better.

This scheme will create far more problems than it will solve driving in peak times will be a absolute nightmare you will create a huge backlog of traffic upto the tingley roundabout, it will be absolute misery for commuters going both in and out of the city. This scheme will not encourage extra bus user or cyclist to use the route, Leeds has allowed a monopoly to develop with few bus companies operating they are amongst the most expensive in the country. This scheme is ill conceived, but will no doubt be used to justify a congestion charge in the years to come, by deliberately slowing traffic up and creating log jams.
Tingley to White Rose is and should be a dual carriageway. There is too much traffic on this stretch to cut to single lane traffic. The upheaval caused by the works themselves would be a nightmare for the commuters who have already had to deal with tailbacks due to resurfacing on M62, and the new central reservation type bit on Dewsbury Road on the White Rose to Leeds stretch. Any incidents on M62 or M621 has a knock on effect and to cut this down to single lane would be really bad for commuters. There is already a cycle lane but very rare it's used, plus for foot passengers, as it's not a populated area, it's not used for pedestrians either!
Traffic islands are a particular challenge for cyclists and pedestrians both in terms of safety and distance required to get from A to B. I welcome any measures to address this problem. The speed of motor traffic on this section can make the route intimidating for cyclists and bus lanes go at least a little way towards protecting cyclists by creating a larger 'safe' zone for them to ride in.
Use land to provide the bus lane and cycle way. Do not reduce the dual carriageway for vehicles.
Very poor cycle lane which is a shared path and dual direction for cyclists
Where do cyclists go at either end of this scheme? Also, shared use paths, but still enough space for two lanes of traffic? Have you been on a bike on a shared used path? Downhill, into Leeds? I'd manage 50kmph easy, so having to avoid dog walkers would be enough of deterrent to keep me in the road.
Would reduce the number of cars in this area.
Yes add a cycle lane closer to path as traffics and cars that go past and lower the speed limit please it's nerve racking walking down there not knowing so close to road maybe expand the path too
You should make it so the traffic lights flow again especially on tingley round a bout, pedestrians shouldn't have to wait for traffic and there should me a metro, light rail system at White rose on Dewsbury road in the middle of the carriageway where at the moment is the grass verge.

We are happy that the shared use path alongside the A653 will increase to a width of 3m which will allow safe passing of slower path users as well as bi-directional movements. Estimated pedestrian and cycle numbers may require the minimum with to be upgraded to 4.5m as recommended in LTN 1/20 (Table 6.3). Additionally, we welcome that the shared use path is taken around the bus stops to avoid conflict between pedestrians and cyclists. We have concerns that the separation of the shared use path and carriageway with only a 1.5m buffer along the side of the A653 is not sufficient for a national speed limit road and we ask that you look at creating a 3.5m buffer as recommended in LTN 1/20 (table 6.1). Can we have some more detail on the types of crossing design being considered for the roundabouts at the retail park (Section E2) and Wide Lane (E3)? Due to the volume of motor traffic at these locations, these must be signalised and with a short wait phase for users, so as not to encourage risky crossing manoeuvres. (Section E1) We have concerns that the crossing in front of the petrol station on the A653 will be a major hazard on this route as the entrance is wide and cars are driven at high speeds on the carriageway. The diagram shows a continual crossing with no setback. We would like to know what the council is considering to slow motor traffic speeds, increase sight lines and slow the speed of cars entering and exiting over the shared space path. What measures are being taken to make sure that drivers entering and exiting the petrol station/coffee shop are aware that cyclists and pedestrians will be travelling in both directions? Capitol Park is a large future employer in the area. We ask that the council works with the developers to introduce safe, separated cycle lane access to the shared path on the A653. Currently cyclists travelling up Topcliffe Lane have to share a narrow pavement with pedestrians or the carriageway. As this development will have a large number of lorries, if road width is not sufficient to separate cycles from motor vehicles, then could an alternative route be laid from the A653 for cyclists and pedestrians?
You need to provide a safe cycling space (not the daft line that people park over) for children to use to cycle to and from school post-covid. There is not going to be enough space on the public bus to safely distance, but there is no way that I would allow my child to cycle the mere 2.8 miles from our home to Woodkirk on the A653. Cars and lorries regularly speed down the A653 over the speed limit. Cars park in the 'cycle lane' and on the pavement, pushing cyclists in to the main carriageway. Look at ways to help children, who are the commuters of the future, to get into the habit of active travel. The pathways between Tingley and the White Rose are already used, unofficially, as dual purpose, why not do the same from Shaw Cross to Tingley? We can't get access the dual use path to the White Rose, because we have to dice with death to get from Hanging Heaton to Tingley.

Section F.

Please use this space to provide us with any additional comments on the route between White Rose and Dewsbury Road.

A bus lane on Dewsbury road between the woodviews and Tommy Wass will cause terrible traffic problems and hold ups for everybody except the busses. For instance anybody wanting to turn right up the many access roads will be stopping traffic behind them When this is made in to one lane you will be making the road during rush hr in to one giant line of traffic down to Leeds. Also will the cycle lane be risen? will the busses pull in over the cycle lane or will passenger getting on or off have to cross the two way cycle lane? There will be accidents like the lower end of Dewsbury road where they are having to cut in to the cycle lane so the busses can pull in. Very bad idea with no thoughts for the residents.
A bus lane would further congestion the existing traffic. I cant see how bus lanes would improve the situation.
A cycle lane all the way to Leeds would be beneficial to myself and others. I do not feel safe cycling in Dewsbury road at the moment as there is too much traffic
Again as a frequent bus user in this area, I think the provision of dedicated bus lanes would help buses to move faster along the road, which would make up for some of the extra time that the buses take compared to cars in this area, which would hopefully encourage more people to take the bus. It would also make journeys more reliable which would make it easier to be sure that your bus would run to time. I think this would encourage people to take the bus.
Another waste of council tax payers money and will just slow down traffic in and out of the city centre, and it is another attempt by the council who are actively looking at bringing the bus companies back under its control thus forcing people onto the bus service and thus making money and reducing the carbon emissions and keeping its promises for a to have a greener city by 2030 Labour "Snowflakes" at it again
Anything that you can do to improve cycling safety and curb car use (and speeds) in this area will be welcome. I strongly support these proposals.
As a cyclist it is dangerous travelling down Dewsbury Road and crossing the dual carriageway and across the fly over towards Leeds.
As previously stated Dewsbury road is already heavily congested at rush hour. Bus lanes would only exacerbate the situation, as it is buses and stationary vehicles in the left hand lane cause tail backs during the rush hour. Perhaps a better solution would be to double yellow line the entire length of Dewsbury road from Parkside lane to Tommy Wass on both sides and enforce it.
Batley matters
Better crossing points are needed. The area isn't very pedestrian friendly at the moment.

Bus lanes need to be operational 24h to remove confusion. Looking at areas in London with part time bus lanes, they just end up with cars parked in them, meaning buses have to move into the general flow of traffic and causing chaos, and parked cars are poorly enforced. It's best to be 24h and remove the chance of this happening
Creating more congestion for cars (causing even more pollution) is not a good idea especially when the bus service cannot deal with the demand. I do not support these proposals at all
Bus lanes will be a big help, but only needed for peak hour flow direction. As there seems to be no scope for road widening here, the proposed bus lanes will take over one of the existing two traffic lanes in each direction, and will thus effectively halve the capacity for general traffic. That would not just be ill-advised - to travellers with no practical option other than car use, and to freight users, it would be tantamount to a declaration of war. And, obviously, comments in previous section about local benefit rather than strategy also apply here.
completely lost the plot
Currently dominated by speeding motor vehicles who use and view the road space as an extension of the motorway network. Hostile to every other category of road user.
By putting a bus lane in Dewsbury road you will restrict it to one driving lane. This will cause issues when traffic is waiting to turn right across the road as vehicles do not pull fully into the central box and block part of the right lane. With know access to the left lane this will cause blockages. You either needs to make better boxes for turning, or prevent right turns and make facilities to perform u turns. Traffic often queues to turn right into Middleton in the section mentioned in Q34. Putting a bus lane on the left will prevent cars getting around the queuing traffic to go straight or left. The cycle lane from the Tommy Wass follows the ring road, this is a long way round to get to the cycle superhighway. Cyclists will not use it and instead continue to follow the shorter route along Dewsbury road. The cycle lane should continue shopping this route. It would also reduce the amount of roundabouts cyclists have to navigate.
Cycle lanes across Leeds should be improved, segregated lanes are much better than shared due to poor driver awareness. Multiple health and well-being benefits could be achieved is people felt safer to cycle
Dewsbury Rd is enough of a bottle neck without adding to the mess like happened further down towards Leeds where bus lanes were removed and his cause more congestion than ever before and have added to pollution near schools.
Do not put a bus lane there. There is no enough buses for its continual use. It would be a waste of road and would lead to increased commute times.
For cyclists going off the ring Road to dewsbury road is very dangerous and it would be good to make this a much safer journey.

Basically to accommodate a bus lane and cycle ways the traffic from the Motorway will merge with traffic from the Ring Road into one lane!! At present this junction at evening rush hour is clogged solid with two lanes of traffic trying to cross over. This will cause tail backs of traffic back to the white rose roundabout and beyond. The problem is that traffic from the ring road wants to turn right at the tommy waas junction to go up to Middleton, whereas Traffic from the motorway wants to proceed down Dewsbury road to the city centre or turn left onto Old Lane to gain access to Beeston Village centre area. Why not look to create a safe route for cyclist from the White Rose to the town centre through quiet urban roads and converting off road footpaths in to Bridleways? A route could easily be found from the white Rose centre starting with turning left into the Thirlmeres, then across an existing closed to traffic railway bridge then along cardinal road to a footpath that leads to the ASDA shop on Old lane . Then via various quiet streets in the Grovehalls and Firths to CrossFlatts Park, Through the park onto Greenmount Street, then onto Bismark Street, then Disraeli Terrace to join the main cycle ways to the city centre near the New Bewerley Community School.
Dewsbury road is awful to cycle on. The quality of the road surface is appalling. You have to almost be in the second lane to avoid some of the potholes and drain holes covering the first lane. Which of course car drivers do not like at all. This survey popped up on my twitter and I thought great, they're actually doing something, but its clear from "600m" of cycle "paths" that all this is a box ticking exercise which will actually do nothing for people cycling this route or using this road by bicycle. Very dissapointing to see that even though the west yorkshire combined authority got 100% of its funding recently for cycling/walking yet it can't seem to actually plan anything reasonable with it.
How is the movement southbound on Dewsbury Road made? This is the main movement for outbound journeys - rather than going to White Rose rbt Crossing of Dewsbury Rd with 3m wide crossing needs priority for cyclists Unclear as to stage arrangements at Tommy Wass for travelling inbound to Leeds - looks to add a lot of delay? Could there be a single crossing point across the lanes between ring road and Dewsbury Rd Ring Road to Dewsbury Rd inbound movement - needs similar arrangement to west arm
I am most happy with the proposed cycle lane as this would allow me to reach the White Rose centre by bike, which will be much faster than the bus.
I cycle to work nearly every day from Tommy Wass to capital Park and back it can be very dangerous so I ride on the path when I can but I would rather ride in a cycle lane.
I do not believe that the further expansion of bus lanes is of any value the the broader road using population, and is a complete and utter waste of taxpayers money.

I do not support a bus lane being made on dewsbury road as there will not be enough space for vehicles to travel which can cause accidenrs. Also dewsbury road is usually busy especially at rush hour time. Rush hour time already makes our jounrye long and with this bus lane being made, it will make it more difficult and longer to get home and if needed to travel anywhere else. This will cause a problem to all put oives. We are already dealing with Covid, we dont want this to change the way we live and travel too. Please take this into co soderation for all residents who have vehicles
I don't know if this is the right page for this, but as a question above mentions Woodview Place to Tommy Wass, I assume it is. This proposed westbound bus lane will cause chaos. 1) residents park on the footpath all along this stretch, and even if this is retained, these cars will be crossing or parked very close to the bus lane regularly, if not obstructing it. 2) Congestion tails back from Tommy Wass to Westland Road on a regular basis now, with traffic able to use two lanes - if this is reduced to ONE lane (plus a bus lane), that volume of other traffic will queue back to the fire station junction and beyond, lengthening bus and car journey times excessively. If you think the new bus lane will persuade enough people to leave their cars and use the bus to offset this, you're way off the mark. and 3) numerous cars use the gaps in the central reservation on this stretch to turn right and there is insufficient space. Regularly, vans and cars turning right into, for example, Barkly Road are unable (or unwilling) to accurately position themselves in the small gap, thus partly blocking the current lane 2 - at the moment this doesn't matter as traffic can move into lane 1 to get past - but that won't happen if lane 1 becomes a bus lane. Instead the already delayed traffic, crawling along in one lane, will be held up even more as everyone will have to sit and wait for traffic to turn right. At the very least you need to widen and improve the central reservation to account for this, but preferably just ditch the whole ridiculous bus lane idea, or find a way to add it as an extra, new lane. Pie in the sky idea - install a much-needed roundabout at the Tommy Wass (there's plenty of room), close all the central reservation gaps and allow turning traffic to use the roundabout. This whole part of the scheme is AWFUL and will make OVERALL congestion worse. Speeding up bus journey times won't persuade more people to get out of cars and onto buses - sort out an Oyster style tap in and out system across rail and all bus companies, and find a way to make it FAR cheaper, then people might think about it.
I have lived here nearly twenty years and in my observations cyclists do not use designated cycle lanes and use the road. Cycling down the middle of the roundabout at Tingley causing confusion and chaos as well as putting their lives at risk. Don't waste money and just improve the road surfaces which will benefit all. Thanks
I like these plans. They are bold and show a commitment to buses and cycling in the area. Joining up all the different sections of cycle routes around the city will enable many more journeys to be undertaken by bike. Once people realise that they can make the whole of their journeys by bicycle on segregated routes, then cycling can become a significant mode of transport in Leeds.
I like these proposals. Could these be extended along the full length of Dewsbury Road to the city centre, specifically to Bridgewater Place?

I live along the proposed bus lane on Dewsbury Road, if this proposal is to go ahead it will cause a great inconvenience to the residents who live along the proposed bus lane. It takes long enough as it is during the rush hours & when football is being played at Elland Road, to get to our houses, & if this bus lane is to go ahead it would make coming & going from home a great inconvenience & danger for the residents who all have a vehicles. So for these reasons I would not support a bus lane running outside our houses.
I live in Holbeck and work in Tingley. I would like to cycle to work but the lack of proper cycling lanes means that I do not feel safe to do so as the road is very busy. I currently cycle to work only on Saturdays and not Monday to Friday as the traffic is lighter. To cycle to work Monday to Friday would mean cycling at dusk/dark which is something I would not do on this road.
I live on the ring road between white rose and Tommy Wass. I am concerned that parking for residents will become near impossible once cycle lane is completed. After looking at the plans I am unclear how much of the grass verges/pathways will be lost to widen the road to allow for a cycle lane and potentially extension of the bus lane. I would very much appreciate if you could clarify? My email address is [Redacted]
I strongly appose to the plans of extending the bus lane between these junctions as the layout changes last year has already cause massive congestion issues at the moment and this will make it even worse. We live and work within this vicinity and is a complete shambolic road changes made already. No one who i work and live around agreed with the last changes made and will agree to the new proposed changes. It is already heavily congested and polluted by road users which under new proposals will mean even further congestion..ie sitting in traffic causing road users to come off and use side roads making unsafe for anyone living in the area.
I think it will be very important to see how cyclists and walkers can come off this new bike path into mainstream traffic and continue into town. Very often the end of bike lanes give you dangerous options. Again, a shared bike/walk path is often very hard for cyclists, ideally this path has sections for both pedestrians and cyclists.
I think the benefits of the bus lanes to buses above do not outweigh the negative impact to other road users and the corresponding extra queuing and emissions that it would bring.

As stated previously the junction onto the dual carriageway from Dewsbury Road outward bound needs serious improvements, backward vision for entering traffic is very bad and in heavy rain it floods making all traffic use the second lane, numerous accidents have occurred at this location. Cycle lanes are a waste of time and money, can I suggest a study is made regarding the number of cyclists to justify the cost as this will show it's not needed. Pedestrian safety should be considered with better traffic light crossings over the dual carriageway near to Sainsbury's and the White Rise complex as those existing have no controls and local people do walk down from the Beeston area and crossing is very difficult especially at peak times. Bus lane location, well the Tommy Wass junction needs a massive improvement first as whoever designed the existing one was a complete idiot, city bound traffic backs up to the railway bridge at times because of traffic leaving Dewsbury Road and turning right to travel to travel up the hill to Middleton completely blocks one lane stopping traffic heading down towards the city. With this in mind what is a bus lane going to achieve apart from limiting further road space causing more congestion, all this increases poor air quality simply because the Tommy Wass junction is a huge badly designed bottleneck that getting worse all the time. Sort out the Tommy Wass junction, look at increasing pedestrian access to the White Rosa centre and the adjacent business parks, if you do put a bus lane in at the location mentioned it's just going to make it worse at the Tommy Wass. I can understand a lot of the works proposed at the Kirklees end of this project but on the stretch from Tingley to Dewsbury Road and visa versa, no spend the money where it's needed not on that stretch it would be a huge waste.
I was born in Beeston, and at 33 years old I'm happy it's finally having a bus lane - it's been much needed for years as more and more car users have started using it, it hopefully will discourage the "cut through" users who also clog up the roads in trying to avoid the Churwell Hill traffic
I would support bus lanes open when busses are operating. Buses do not run 24 hrs. I do not support reducing car usage
I'm not going to use a bus, walk or cycle to work ever. I cycle and walk regularly for pleasure. My next company car will be hybrid or electric. I can't use any other form of transport for work
I'd be much likelier to use the bus on this route if there were a 24-hour bus lane
I'd like to see a link created to the new White Rose Station so I can use it to access the area partly by train and part by cycle, to visit Leeds Urban Bike Park. There seems to be cycling lanes all the way up top the bus stop but then the cycle lanes go through the bus stop. This seems unsafe to mix people riding bikes and people waiting for buses, especially on a busy route like this. Can more effort be made to take the cycle lane around the back of the bus stop. Will safe cycle storage be added outside the shops and local facilities, these should be on the consulation now so that local people can point point out where they are needed during consulation and not afterwards when approproate spaces may be being used for something else.

If creating a bus lane ensure the existing carriageways are retained as this will only create further congestion for car users.
If there is a bus lane on these named areas it would only make congestion horrendous. Dewsbury Road would be down to a single lane The council has already done this lower down Dewsbury Road just below the Fire Station and it has made this area 10 times worse NOT BETTER. At one point the traffic becomes gridlocked if a bus stops to pick up passengers at their allocated stops. Also if a bus is stopped awaiting the lights to change in the left hand lane, cars are unable to pass them in the 2nd lane due to there being a narrowing of the road. There are 2 lanes on this road so 2 lanes should be accessible.
Implement a westbound bus lane from Tommy Wass to the junction with Parkside Lane, giving buses a priority to bypass congestion along the majority of Dewsbury Road. Dewsbury Road does not need to be a major dual carriageway road due to the proximity of the M621 allowing traffic to use the dedicated highway to access Leeds City Centre rather than Dewsbury Road. This would also reduce the speed of the existing traffic that currently use Dewsbury Road which is located in a residential area, thus improving safety.
In the 'F2' area, The cycle lane should be two way on the south of 'Ring Road'. I think this would be safer and reduce the overall costs. The right turn off Ring Road onto Dewsbury Road should be scrapped (anyone using this junction can just as easily go to White road and turn left. Finally, I think that the proposed signalised cycle crossing on Dewsbury Road is unnecessary. For the rest of Dewsbury Road I would advise trying to reduce the amount of spaces in the central reservation area. The gaps make the area a lot more cluttered due to the amount of 'keep left' signs needed. Having a more continuous central island would make the area look a lot nicer.
It is a busy road during daytimes adding a bus lane will increase congestion in the area and cause more pollution for people inb the area from cars idling and stop starts because of the congestion. Buses do not have an issue on this area as traffic flows ok and is quite only busy around 4pm till 5pm
It is a main artery into Leeds coming from dewsbury and beyond by restricting the traffic into one lane you are throttling the local traffic flow and out of area traffic. These plans combined with the plans for Cross Flatts Active Travel area is ludicrous and quite frankly insulting, we are also being told about the CAZ plans for Leeds and you want to introduce lane restrictions on a area which is going to have slower moving traffic causing more pollution. How does this even make sense.
It's good to finally see some quality proposals for cycling infrastructure and as a resident of Kirklees it would good to see similar ambition in the district I live in rather than getting quality infrastructure once we get into Leeds district. I think however some of the crossings could be stronger when connecting to the Dewsbury Road scheme that is being delivered by Leeds
IT'S main artery TO Leeds and by creating a bus lane IT'S gonna become a single lane causing congestion and pollution and more traffic

Journey times for cars should also be considered. People don't always have a choice other than to take the car to ensure they get to work on time/can take/collect children from childcare etc. Consider electric vehicles to be able to use bus lanes also. Please ensure the proposed works DO NOT further impact commuting times into the city as it is already horrendous along dewsbury road. Consider doing works at night or between 9-3pm to avoid rush hours.
Junction design proposal at Old Lane/Ring Road with Dewsbury Road appears to expect cyclists using the proposed Cycle Super Highway to behave as pedestrians when crossing Old Lane / Ring Road. I believe that this crossing design should give greater prominence to the continuation of the cycle route through the junction. layout and and timing of traffic lights should be designed to allow a smooth progression for cyclists in advance and alongside the vehicular traffic with special attention paid to the design of left turning lanes and road markings to protect cyclists from other vehicles crossing their paths.
More bus lanes cause even more congestion problems in the area and will cause more pollution
Need a way to cycle from the bottom of Churwell hill to the Tommy Wass. No proper cycle lane and no cycle friendly crossings at present.
Need to provide option to cycle entire length of Dewsbury Road otherwise long diversion . Great to see segregated facilities
[REDACTED] I do not support any of your [REDACTED] ideas [REDACTED]
There is no ned to have a bus lane 224hr or otherwise. A bus lane will cause even worse traffic tail backs.
There are too many bus / cycle lanes with nobody using them!
No More bus lanes, these are well known to increase congestion and pollution not cut it.
Q34 is irrelevant for me
Really good to see this difficult stretch of road being made safer for cycling
Reason being use these roads four five times a day there are already long queues with two lanes never mind cutting them down to one for buses and cycles just for the cycles to not even use the cycle lane which they already do at the bottone of drwsbury road cycle lane on each side yet the will be on the main roads slowing cars down match days especially will take a good half hour to forty mins from the top of dewsbury road tommy wass to the bottom near woodview place already enough traffic feel sorry for poor taxi drivers getting stuck and with all the no entries in beeston at the moment costing me more in taxi fares i strongly disagree with this for a few buses an hour to get through faster whilst thousands of us will have to suffer
Restricted timings for bus lanes may not work for the new working hours people are likely to be utilising, supporting extended 'busy' times to reduce peak demand on public transport. Peak demand is likely to be lower but over an extended period of time making it difficult to use restricted hours for bus lanes.

Section F1 How does the cycle track shown on diagram E1 link with the cycle path shown on this diagram? The White rose roundabout is fast and always busy. Crossing to the offside lane to negotiate the roundabout then crossing again to pick up the cycle path on the nearside lane is not a safe manoeuvre. Staying in the nearside lane all round the roundabout involves crossing two separate lanes leaving and two lanes joining the roundabout. Cyclists will be particularly vulnerable here. Section F2 consideration should be given to extending the cycle lane outbound from Leeds from the Ring Road/Dewsbury Road junction to join the Section E routes. In this direction a cycle lane could be constructed on the existing grass verge to effectively separate cyclists from motor vehicles on a long uphill drag for cyclists. There is no need for a pedestrian footway on this side of the road. Section F3 are cyclists expected to cross the road at the Tommy Wass cross roads and use a two cycle track for the journey towards Leeds? I suspect that many will use the running lane to Leeds or use the pedestrian footway instead. Sections F4, 5&6 when the bus lane and cycle lane are constructed ono the Dewsbury bound side will there be only one running lane available for other vehicles? This section can be particularly busy during the evening rush hour. The bus lane would need to operate during the evening rush to achieve its objectives leading to even greater delays for other road users. The section through Beeston is always busy both on the road and on the footways. Space to expand the single carriageway is severely limited because of building development along the full stretch of the road. Pedestrian usage could militate against shared use with cyclists as collision risk would be high. These proposals may be intended to bring about a step change in attitudes to local travel but I do not relish the pain involved during the process of that change. Many, if not most, motorists will be loath to abandon their cars and until alternative methods of propulsion become generally viable there is likely to be a significant increase in atmospheric pollution to the detriment of those who live or have to move along the affected corridors.
See previous comment, pedestrians in particular children need to be taught who to cross a road safely and not to wear earphones as they cannot hear the traffic especially electric cars
Would it be possible to also improve the cycle provision on the stretch of Dewsbury Road that "cuts the corner", down by Stanks Hall Barn? And improve the crossing at the bottom for people on foot and on bikes? Please? I know it only cuts maybe 1/4 mile off a bike journey between Cross Flatts and Tingley, but the uphill climb is a good bit gentler ;-).
WITH so many cars and various bus companies using similar routes it makes sense to upgrade these sections of road
Shared cycle and pedestrian lanes don't seem to be an ideal solution for either group. Either pedestrians impede cyclists because they don't understand that cyclists may wish to cycle quickly,or quick cyclists scare pedestrians. Could there be a separate lane for cyclists and pedestrians. Otherwise cyclists are likely to travel on the road anyway. Also, it should be clear that there are areas where bus passengers can stand at bus stops without impeding the cycle lane. As a cyclist, I often avoid cycle lanes because bus stops and bus passengers regularly block the cycle lanes.

That's a bit more like it. Just think about how you're going to keep the cycle lanes from either being used as an extended footpath or as parking. Some bollards? Maybe a kerb between the pedestrian and cycle spaces? I still wonder where cyclists go at either end of this scheme... Heading towards Leeds, you're just thrown back out into the traffic. Out of all of the parts, I think this is the best proposal, but it doesn't join up with anything else.
The addition of segregated one-way cycle tracks to this part of Dewsbury Road is something we welcome, as this will provide better connections into the surrounding streets than a bidirectional path. This plan will tie in well with the upcoming active travel scheme in Beeston. We would urge the council to carry on beyond the White Rose Roundabout so that the cycle lanes can be used to travel safely and conveniently to Elliot Hudson College, Millshaw Park Industrial Estate and the future White Rose Train Station. Section F3 shows that the connection to City Connect 3 when travelling east along Dewsbury Road is shared use across the Tommy Wass junction, starting with a parallel crossing that meets a shared space island of CS3. The proposals at this junction are wholly unsatisfactory and require complex, multi-stage movements. This junction should be looked at again, with the focus being on directness and simplicity for all users, and less on capacity for motor vehicles. We feel that efforts should be made to better link with the upcoming Beeston Active Travel Neighbourhood will possibly be made permanent by the time this scheme starts construction in 2022. The planned indirectness and distance of the route between these schemes will tempt cyclists to chance a dangerous crossing of Old Lane on the carriageway. We understand that this is a recent issue which has arisen after these plans were created but nevertheless, it is possible to design out these future issues by incorporating a crossing on the North Side of the Tommy Wass junction to connect up with CS3 and the Beeston Low Traffic Neighbourhood. Could we get an assurance that measures are being taken at the parking laybys, such as in section F2, to prevent collisions between cyclists and vehicle doors?
The biggest impacting area for punctuality and journey time between Leeds and Dewsbury is in Leeds itself. The 202/203 gets delayed in peak times whilst travelling between the bus station and Neville street. Bus firms have long advocated use of sovereign street as an alternative but the council won't do this due to the occasional use of sovereign street for football buses. Clearly on those days the current route could be used. No stops would be missed out as the stop outside Deloitte could be used in lieu of the stop on Neville street. This would make a huge difference.
The challenge on Dewsbury road is traffic parking on the road making a dual carriage way reduce down to one lane. This needs to be stopped to encourage better road use and cycling. Reduced speed across the full length to 30 would be better as well.
The cycle route has the same issues at bus stops as other lanes you've installed. The cyclists are abandoned and dumped into the queue of people waiting at the bus stop. This needs to change to ensure safety for pedestrians and cyclists.
The only normal traffic jams are because of the lights at Tommy Wass (unavoidable even for a bus lane) or road works/accidents. Except at Christmas when people are waiting to get to White Rose. A bus lane on the leeds side of Dewsbury road will have a very negative impact on air quality and congestion in the area

The main problem on this section of road is the Tommy Wass junction. Until you improve that and increase traffic flow, especially at peak times, all other proposals are pointless.
The majority of the traffic on this section of road is local traffic, including from the western end of Middleton/Parkwood estate area, who do not benefit from a possible improvement of Arriva bus services to Dewsbury and beyond. This section of road already has major congestion issues at all times, not just peak, and introducing a bus lane will only add to the congestion and associated pollution. The proposed safer street project currently planned by Leeds City Council for the Cross Flatts area will introduce extra traffic to Dewsbury Road that would normally use Old Lane and Beeston Road to access areas to the North of Beeston. This includes having to make right turns from the westbound side of Dewsbury Road into various streets, which under the A653 proposals will block the only lane of Dewsbury Road available for general traffic. At present, the inside lane is available to avoid vehicles making this turn.
The problem with introducing bus lanes (which I broadly agree with) is that it has the potential to increase car congestion, leading to an adverse impact on air quality for residents and problems for individuals who need a car because they have mobility problems. This puts me firmly and cautiously on the fence (sorry).
The provision of the cycle lane is for 600m. The whole of the road network should give some provision, either by cycle lane painted on the road or by total segregation. It is the only way that people will be drawn from their cars and therefore reduce congestion and increase health. Short sections of cycle lane are not usable for anyone making a journey of reasonable length or you would have to constantly leave and then rejoin the main carriageway.
The road surface is atrocious in relation to the metalled surface but also there is a very dangerous section in trying to get across the two lanes towards the bridge. The current cycle lane is covered in detritus increasing the risk of punctures.
The route from Tommy wass down to white rose is currently 40mph with no cycle lane. Improvements here linking with a route to morley would remove a huge barrier to cycling to the city center.
The scheme is totally unacceptable. It already is bad with present [REDACTED] . It will make journey times a hell of a lot longer and create more traffic jams
The whole Tommy Wass junction is currently a bottle neck and poorly laid out, dedicated bus lanes will further compound the current congestion.
There are issues with traffic for buses on Dewsbury Road towards Leeds after Tunstall Road.
This section is already free flowing for buses and will get congested with this change
This whole scheme looks great. Bang on! You should be proud.

There is a desperate need for a bus lane in the tommy wass area. There are always huge traffic jams in that area so buses get severely delayed. I would also say there is a need for better placed bus stops and the ones already on Dewsbury Road between tommy wass and the Tesco express are in places where they impede traffic. If they could be indented into the pavement it would allow traffic to move more freely stopping pile ups.
There needs to be more secure public bike racks to lock bikes up when visiting shops along Drewsbury road, all the bus stops should have shelters and seating along with digital time tables to encourage more people to use, there should be more bus stops along the routes to again encourage people to use them and make buses more accessible for those that do not want to or can not walk far to the bus stop, segregation of bike lanes is so important to improve safety and encourage new users to use
There were “improvements” on Dewsbury Road last year. It seemed like if a bus stopped near Hunslett Hall Road the traffic tailed back. Not sure if the carriageway was narrowed so that traffic had to wait. Some days the tailbacks were on Jack Lane heading towards Hunslet where I work. That happened more frequently until lockdown reduced volume of traffic.
These proposals seem pretty sensible to me. The cycle paths, in conjunction with those in section E and CityConnect 3, would be really useful for me, I'd hopefully be able to use them to cycle commute to/from Leeds.
This has been identified as a congested route and this congestion will be compounded by these proposals. Removing a lane of traffic from a congested route is not a good idea to ease congestion and it will increase travel times considerably
This is a particularly bad area for traffic congestion and massively impacts travel time on bus journeys at peak hours I think bus lanes in this area would be a significant improvement.
This is a very busy section . Alter the junction with the Middleton turn off Do not cause more chaos with bus lanes and cycle lanes.
This scheme does not address the real issue for people travelling on this section of Dewsbury road in either direction. Inbound the biggest bottleneck is the reduction in lanes and their width at Trentham Street along with a road blocking bus stop, a problem made significantly worse by recent changes. Outbound the issue is the reduction in lanes caused by right turning traffic at old lane. This causes tail backs and means that the bottom of the grovehalls and Barkly Road are used as a rat run Wrong scheme, wrong place
This scheme seems hell bent on creating as much congestion as possible on a busy stretch of road, you will not encourage bus use when the service providers are amongst the most expensive in the country. Q33 is a bit of a loaded question is it not ? I do not agree with a bus lane full stop.

This scheme will clog up traffic and create a bottleneck up to the white rose center, it will be a absolute nightmare getting to the Tingley round about, a total waste of money that will create more problems than it solves, creating full time bus lanes and putting other road traffic into one lane is a idiotic idea.
This will increase traffic and make journey times longer. Also the football will be a major issue on match days with potential gridlocks occurring. Presently football traffic flow is managed smoothly but with the introduction of a bus lane this will become a nightmare.
Total waste of money on bus lanes
What happens between E and F? There must be protection for cyclists going towards Leeds turning right to continue along Dewsbury Road rather than straight on along the ring road/Millshaw Road.
When the frequent bus services use the near side lane of dual carriageway then cars overtake and exclusively use the outer lane anyway - converting to a bus lane would not change much in this regard
When travelling from Tingley it is incredibly difficult to turn right after the garage/Starbucks to Dewsbury road on the bike.
While I agree that cycle lanes are a good idea, massively reducing the available road space in an area which is already ridiculously congested is a proposal I just cannot fathom. The area is pretty much constantly filled with traffic, and the argument that these people will just use the bus instead is just not true. All that will happen is the area will be effectively gridlocked for multiple hours each day. Unless there are wholesale changes at the Tommy Wass junction to the signals and the layout, this will make everyone's life worse who lives or drives in the area. Not only this, but alongside the recently postponed proposal to eliminate 'rat runs" in this area. This basically forces all traffic onto Dewbury Road, if this goes ahead I cannot imagine the effect on the area. Hundreds of idling cars sat in traffic during rush hours/school runs, and God for I'd there is an accident somewhere near or a Leeds match on you might as well not bother. I personally cannot use public transport to get to work, and I enjoy running and cycling in the area. These proposals will have a significantly negative affect on my quality of life, extending the time it takes for me to commute and also worsening the air quality in the area. Also, if this supposed "clean air zone" actually happens, which does NOT include South Leeds, this will again force large polluting vehicle down this road in order to avoid charges, further exacerbating everything I have mentioned above. Please, please do not go ahead with section F of this proposal. Thank you.
Who in their right mind would want a bus lane operating 24hrs a day when buses stop at 11.30. Money grabbing scheme to rip off drivers. Criminal almost. Why only 2 options on q33. This is a blatant fiddle so you can say people support a bus lane. Third option should be no bus lane. Typical bent "consultation" by blinkered councils once again doing what they want not what tha people want. Have you ever counted how many people cycle up dewsbury rd???. Next to no one and as for pedestrian improvement, 10ft wide pavement and 9 crossings and the ridiculous narrowing of the road, which causes terrible congestion, is scandalous. You need to actually provide video evidence of all these cyclists and pedestrians that are struggling to cycle up a considerably deceiving incline.

Appendix Two

Emails received via Your Voice and responses provided

Email One

I have reviewed the proposed scheme and generally in favour of it, as it will bring clear benefits for non-car modes of travel. However, I note that one of the aims of the scheme is the upgrading functions to improve congestion, and one of the scheme objectives is better manage congestion of the M-D-L route. I am assuming that this has been justified by the use of junction modelling data however I cannot see the Transport Assessment or junction modelling data online. I would be grateful for any assistance which you can provide

Response

Localised junction modelling has been undertaken to support the development of a number of junctions schemes at this stage. You are correct in stating that one of the objectives for the scheme is:
"To better manage congestion on the M2D2L corridor within the Leeds City Region – Strategic Economic Plan period". Each different option that has been put forward in the consultation helps to meet a number, but not always all, of the overall scheme objectives.

Summary model outputs are outlined below. The figures are expressed as "Passenger Car Unit Hours per hour (PCU hrs/hr)". This is a standard form of data in Transport Planning to detail delay at the junction being modelled. If the figure is lower, delay is lower, and vice-versa. It should be noted that there are some limitations and assumptions in using a local junction model.

Station Road / Huddersfield Road, Mirfield Junction
The Station Road/Huddersfield Road junction in Mirfield has been modelled to understand the impacts of different layout options and has influenced the selection of the option that is shown in the consultation designs in Section A. The results of which can be seen below: These results indicate that the proposed layout should substantially reduce peak period delays for general traffic and buses.
Ravensthorpe Gyratory/

Onsite observations and subsequent junction modelling have confirmed that the signalised junctions at the Gyratory (North Road and Calder Road with Huddersfield Road) are actually operating efficiently and with capacity. The queues or slow on the approaches to the Gyratory are more likely due to mix and extent of typical urban traffic manoeuvres (parking, buses in stops, turning vehicles, pedestrian crossings). These issues are difficult to address without compromising local residents and businesses' amenity, however, minor changes to reduce conflicts have been looked at.

For Ravensthorpe Gyratory, the existing 'degree of saturation' at the signals was considered prior to looking at the need for possible improvements at the Gyratory itself. The degree of saturation is shown below in the peak periods.

Whilst no traffic measures (other than improvements to existing cycle lanes) are proposed at the Gyratory junction itself, the council is looking at other schemes related to new development sites and alternative highways alignments that may help to reduce the impact of longer term growth in traffic on Ravensthorpe.
Leeds Road / Dewsbury Ring Road Junction

The Leeds Road/ Dewsbury Ring Road proposed scheme focusses on making more space and direct routes for pedestrians and cyclists, and providing facilities to assist mobility and users with visual impairments. In gaining these benefits, there is a minor increase to delay to general traffic in the AM peak shown in the model outputs below.

Shaw Cross Junction (Challenge Way / Leeds Road / John Ormsby V C Way)
The Shaw Cross junction has been modelled to understand the refine a solution, as shown in the proposals in Section D. The results of the local junction modelling for the Proposed Layout compared to the Existing are shown below, showing a substantial delay reduction in the Proposed. Note that in both Layouts, future year forecast flows have been used.

Station Road / Huddersfield Road, Mirfield Junction		
Layout	**AM (PCU hrs/hr)**	**PM (PCU hrs/hr)**
Existing	42.49	52.96
Proposed	11.05	11.98
Ravensthorpe Gyratory		
Layout	**AM (%)**	**PM (%)**
Existing	72	65
Leeds Road / Dewsbury Ring Road Junction		
Layout	**AM (PCU hrs/hr)**	**PM (PCU hrs/hr)**
Existing	52.88	23.82
Proposed	58.71	23.8
Shaw Cross Junction (Challenge Way / Leeds Road / John Ormsby V C Way)		
Layout	**AM (PCU hrs/hr)**	
Existing (future flows)	510.29	
Proposed (future flows)	242.24	

Email Two

While the above consultation is taking place, I would like the current road layout in the map section labelled E1 to be considered for change. I regularly cycle from my home in LS27 8UL to Leeds, and the present road layout means that cyclists must cross the busy A653 dual carriageway to access Dewsbury Road northbound into Beeston/Leeds. Each time I cycle into Leeds (Sometimes five times a week), I always breathe a sigh of relief when I've managed to turn right across those two busy lanes to meet up with the existing cycle lane which leads to the railway bridge and on to the Tommy Wass. I fear that with increased traffic flow to access Elland

Road in the coming months, this crossing of the dual carriageway will be made more difficult, if not impossible for cyclists. At busy periods I'd rather take the car into Leeds rather than cross this horrible junction by cycle. A possible solution could be a ramped bridge at this point for cyclists and pedestrians to safely cross the dual carriageway. I do hope that your team will look into improving the current arrangement as at the moment the journey by bicycle from the south side of the White Rose centre into Leeds is awful to undertake. If anyone from West Yorkshire Combined Authority isn't afraid of danger and would care to come for a bike ride with me, I'd be happy to show them at any time.

Response

Thank you for taking the time to look at the proposals and for raising feedback.
It is really good to hear that you already cycle in Leeds, and these proposals as you are aware aim to improve cycle connectivity in south Leeds.
Your comments on the dual carriageway junction onto Dewsbury Road will be fed back into the design review which will be undertaken after the public consultation has finished.

Email Three

I am writing as a resident of Kirklees and a daily commuter into Ravensthorpe from Batley for work. My mother is [REDACTED] …a resident there. This email shall provide some insight into the traffic conditions from the both of us along section B of the M2D2L project.
Unfortunately, as you may know the current traffic conditions of that stretch of the road linking Dewsbury and Ravensthorpe is close to a nightmare. The travel time can take anything from 20 minutes up during rush hour and worse if there are other traffic issues like roadworks or incidents on the road (compare that to a travel time of a few minutes on a night). Such a situation has led to many customers not bringing their custom to Ravensthorpe from the neighbouring areas. It also increases pollution in the air quality as well as increased travel costs for car users. We hope the current project may be able to solve the congestion issue and ease the traffic flow and bottleneck. The issue is more a problem from Dewsbury into Ravensthorpe as opposed to the other way.
Below are a few suggestions to look into: As the road is spacious enough, we suggest to allow a designated left turning at certain junctions to allow left goers to exit the junction sooner to ease the flow. Please see attached images. (Calder Rd and Thornhill Rd)

The other major traffic concern is the drivers turning into A644 from Ravenshouse Rd. There can be a major delay here due to a massive bottleneck. There needs to be a dedicated space for right turners into the A644 from Ravenshouse Road both on the road itself as well as on A644. Currently it can take as long as up to 10 minutes to turn into this road at rush hour (pre covid). (see Ravenshouse road attachment). I apologise to the quality of the depictions as I do not have the professional software at my disposal.

There needs to be a serious study and research along the whole route to solve the current situation. I really do hope the current project can modernise the route to fit in with the needs of the time.

Response
Thank you for taking the time to review the proposals and for sending in your comments and detailed suggestions.

This project, and options within it, has evaluated the scheme proposals against the current situation along each section of the route. Your suggestions relating to Section B are valuable and will be considered as part of the design review, and as part of developing and deciding on any scheme options to take forward.

Email Four (Related)
This is a further suggestion to the email above. Please see 2 new attachments.
The first is a suggestion to reduce congestion at the gyratory. Due to a no entry into North Road from Huddersfield Road (see pic) this congests the gyratory. I suggest operating a 3 way traffic lights system in the order of 1. Huddersfield Road light 2 North Road light and 3. Pedestrian crossing (activated only by pedestrian)
The other suggestion is residents in Ravensthorpe find difficulty turning right into Huddersfield Road all along this route due to a lack of road markings allowing space for right turners (see pic highlighting example of area on Cross Foundry Street/North Road junction). This cause traffic flow issues in minor roads.

Response
Thank you again for your email. These further suggestions will also be considered in project development.

Email Five
General comments
This route carries significant numbers of HGVs. On the single carriageway sections in particular, where the road is narrow, with frequent junctions and parked vehicles, cyclists feel intimidated. The route is only used by experienced cyclists who are used to traffic. New and novice cyclists are unlikely to risk cycling on this route. The proposed measures, comprising discontinuous and non segregated on road cycle lanes, will do nothing to encourage cyclists to use this route. Furthermore, traffic volumes are likely to increase, given major development on sites in this road corridor which are allocated for development in the Local Plan, notably at South Dewsbury and Chidswell. More cycling, and a related reduction in car usage, will only happen if on- road cycle lanes are segregated and continuous as required by Gear Change, the government's new walking and cycling plan, and if alternative, parallel routes are created utilising residential roads and off road opportunities. Additionally, residential areas and town centres should be subject to a 20mph speed limit, and measures implemented to prevent vehicle rat running through these areas. Specific Comments

A – Mirfield to Ravensthorpe
For many years there has been a missing link in the Calder Valley Greenway through Mirfield town centre, between Woodend Road and Church Lane. This should be implemented as soon as possible and in advance of highway works on the A644.
The canal towpath should be surfaced between Cooper Bridge and Ravensthorpe, Thornhill Lees and Dewsbury as a parallel, off road alternative to the A644. As far

as Shepley Marina this will involve surfacing and widening where possible of the existing towpath. East of the marina the path from Low Mill Lane alongside the Greenwood Cut and the river to Calder Road is overgrown and inaccessible; a new path should be constructed along this section. East of Calder Road the path is on the south side of the river; there are access ramps on each side to Calder Road. The south side path requires surfacing; from this path there is an opportunity to create a direct link to the Calder Greenway and town centre by constructing a new path from the Long Cut alongside the railway viaduct, incorporating a new river bridge to connect to the Calder Valley Greenway on the north side.

B-Ravensthorpe to Dewsbury – no specific comments.

C-Dewsbury town centre

A toucan crossing of Mill Street West opposite the Calder Valley Greenway is required, as is a link to Longcauseway and the Earlsheaton and Ossett Greenway utilising the wide and level concrete platform adjacent to the river, passing below Wilton Street.

The 2 way segregated cycle path on Longcauseway should be on the opposite side to that shown on the plan, in order to link safely and directly to Sands Lane and the Earlsheaton and Ossett Greenway. Longcauseway should have priority over the car park link road. The area between Sands lane and the river should be landscaped and managed to prevent vehicle access and parking.

On the ring road the proposed footway and bi-directional cycle path should be extended to Northgate

D-Challenge Way/Leeds Road

There is no acknowledgement in the text of the difficulties for cyclists at this junction. It needs to be made safe and cycle friendly to encourage cycling fro Batley to Shaw Cross Business Park, a major employment centre, and for cyclists travelling to Batley from south of Leeds road. Additionally, a safe and attractive route between Batley and Ossett can be created, using Grange Road, subject to surfacing, a cycle friendly crossing of Leeds road, then Chidswell Lane, and its on-street continuation in Wakefield to Ossett town centre. This route has the advantage of a grade separated crossing of theA638 Ossett bypass. Chidswell lane will require traffic calming or a point closure to prevent rat running.

Response

Please accept our apologies for the length of time taken in responding.

The contents of your email are being considered and a full response will follow in due course.

Email Six

With regards to the bottleneck at the Waincliffe side of the Tommy Wass junction (TWJ) slide F2 on the download. I would like you to consider the below idea to introduce a roundabout and simplify the traffic flow, Currently traffic on Dewsbury road travelling east to Leeds has to merge into the left hand lane with traffic on the

ring road which is often blocked back from the TWJ. Traffic from the Ring road east bound invariably wants to cross over to the right lane to turn right at the TWJ. Very often the LH lane will be empty but traffic approaching on Dewsbury road eastbound is prevented from progressing as traffic turning right at TWJ has backed up. Although the current road layout doesn't indicate traffic can do, what many actually do is where I have drawn the green east bound arrow is cut across that bit saving themselves a lot of time.

Response

Thank you for taking the time to look at the proposals and for providing such a detailed response. Your proposal is of interest and will be reviewed during the next phase of scheme development.

The section of the route you've highlighted has already been identified as a key element of the M2D2L scheme, which is still been considered by the design team. A brief review of your suggestion does highlight potential safety issues on the main east / west movements, with concerns that there is insufficient deflection on these approaches, which could create visibility challenges for motorists.

A number of improvement plans are still being reviewed at this particular junction, including the potential to signalise, although detailed option selections criteria has identified the current proposed junction provides the maximum scheme benefits, using available funding. The current proposed junction also compliments existing and proposed cycling and pedestrian improvement initiatives in this area.

We will however, ensure your ideas are considered during the next phase of scheme development.

Appendix Three

Emails received from stakeholders and responses provided

Email One: Yorkshire Wildlife Trust
We would like to thank you for consulting the Trust on the above proposals. Yorkshire Wildlife Trust works across the Yorkshire and Humber region managing more than 100 reserves and with a membership of over 44,000. Yorkshire Wildlife Trust is the second oldest of the 46 Wildlife Trusts which work in partnership to cover the whole of the UK. The Trust's principal vision is to work for a Yorkshire rich in wildlife, valued and enjoyed by people.

Having reviewed the proposed plans and proposals, we are encouraged to see the minimal land take in order to improve the route. We are also pleased to see that there is only a single tree considered necessary to remove to accommodate the proposals and support the implementation of features to encourage the use of public transport, pedestrians and cyclists.

However, we feel that there are opportunities which have been missed. Whilst Section C8 specifies '*Tree Planting To Create A Pleasant Environment*' and Sections E and F specify the proposals will '*improve landscaping along the route making it more desirable and increase biodiversity'*; no detail is shown on proposed plans and we feel this could be integrated wider into the scheme. Whilst we appreciate land take is limited, the planting of trees and grass verges should be incorporated at every opportunity to support the Leeds City Region climate change targets to become net zero carbon by 2038. Additional efforts such as installation of green/living walls could further help achieve these targets.

Improving green infrastructure networks through additional planting has a number of benefits, both ecological and aesthetic which should be further explored. In particular, green infrastructure can provide habitat for pollinators, birds, bats and other small mammals to name a few, providing vital foraging and resting habitat for a range of species. Biodiversity is in severe decline, with over 40% of priority habitats and 30% of priority species identified as declining in the UK in the most recent analysis. Strategies put in place nationally and internationally to halt this loss are yet to be achieved. We are not only in a climate but an ecological emergency.

In particular there has been a dramatic global loss of pollinations such as bees, bats and butterflies. These pollinators are a good example of how key biodiversity is for ecosystem function and natural services, with more than one of every three bites of food we eat or beverages we drink directly because of pollinators. Indirectly, pollinators ultimately play a role in the majority of what we eat and consume, are vital to creating and maintaining the habitats and ecosystems that many animals rely upon and facilitate the reproduction in 90% of the world's flowering plants.

The implementation of green infrastructure will aid to enhance and protect invertebrates, birds and small mammal populations locally and across the Leeds district supporting local, national and international objectives and policies (already incorporated into local policies (Leeds City Council Core Strategy Policy G9, Kirklees Council Local Plan LP30, Wakefield Metropolitan District Local Development Framework Policy CS 10), including the creation of a joined-up Nature Recovery Network and achieving biodiversity net gain as per NPPF and the upcoming Environment Bill. This should be further supported by ensuring appropriate management regimes are put in place to enhance the value of green infrastructure alongside road networks. For instance planting of native tree species and wild flower seed with a relaxed mowing regime will be likely to save money for the councils, whilst enhancing ecological connectivity, supporting local policies of all three authorities and national objectives.

Other benefits include:

Improved air quality – University of Lancaster found green infrastructure features such as living walls to be more effective than trees at reducing nitrogen dioxide in dense urban areas with high pollution levels. This is due to the nature of city landscapes with tall buildings trapping pollution at street level. Living walls can increase the deposition rate by as much as 40% of nitrogen dioxide and 60% for particulate matter as the cleaner air from above the street is introduced. This has clear benefits for the incorporation of living walls across the scheme and would support aims made by Leeds City Region to become carbon neutral by 2038. Nitrogen deposition is a major issue for urban or suburban nature conservation sites, as the increased nitrogen enriches the soil and leads to botanical changes, which leads to species such as nettles (*Urtica dioica*) and brambles (*Rubus fruticosus*) outcompeting other plant species. Long term studies nationally have shown the increase in abundance of nettles and brambles from nitrogen deposition are significant, therefore any further increases in nitrogen levels are likely to increase the negative impacts. Once impacts have occurred there are few ways to ameliorate this. The introduction of living walls, using innovate design and a variety of species will aid the mitigation of air quality impacts of the scheme, resulting in wider benefits for the local area and nature conservation sites.

Reduction of dust –living walls are more and more commonly being used to mitigate impacts of construction works in urban areas (such as reusable living hoarding). They have been proven to reduce the amount of dust produced during works and we feel could also offer a number of benefits for both construction and operation of the proposals.

Reducing the urban heat island effect – heat islands occur on the surface and in the atmosphere. On a hot day, the sun heats dry, exposed urban surfaces, such as roofs and pavement, to temperatures 27-50^{o}C hotter than the air, while shaded or moist surfaces – often in more rural surroundings – remain close to air temperatures. Adding green infrastructure to the urban environment mimics conditions presented in rural surroundings, mitigating the urban heat island effect and making cities more temperate in summer months.

Reduction of noise pollution – green infrastructure can reduce noise levels in buildings and plants are regularly used to reduce noise on motorways and within urban environments. Living walls reduce noise levels by reflecting, refracting as well as absorbing acoustic energy. This further leads to health and well-being impacts for those who work or visit the area and we feel is a must to ensure the scheme leaves a positive influence on its visitors.

Drainage management –incorporating green infrastructure into the schemes design can aid drainage through slowing down rainwater runoff and thus provide protection from storm waters.

In accordance with BSI 8683, we would expect to see detailed design of green infrastructure, along with management, monitoring and responsibilities in perpetuity provided at early stages of the project design. This should be supported by appropriate ecological surveys and construction working method statements to protect and enhance existing features, in particular the River Calder. Consideration of reducing lighting along the route to protect sensitive areas such as tree lines, woodland pockets and adjacent waterbodies should also be considered. In particular for Sections A1, A4-6, A9-12, A17, B2, C1, E1, E4 and F6-7.

I trust these comments are helpful.

Response

Thank you for your email and comments which we are reading with interest, and we will get back to you shortly.

Email Two: Natural England

SUMMARY OF NATURAL ENGLAND'S ADVICE

NO OBJECTION

Based on the plans submitted, Natural England considers that the proposed development will not have significant adverse impacts on statutorily protected nature conservation sites or landscapes.

Response

Acknowledged.

Email Three: Northern Gas

No comment, procedural information only.

Email Four: Action for Yorkshire Transport

We are responding to this consultation for the areas that our members are familiar with. These comments and suggestions concern Sections A, B, C, D & F. While there are some useful proposals, there is also a great deal that could be improved and we hope our comments will provide you with some guidance.

Overall, we consider far too timid and fiddly an approach has been adopted. We have found a singular lack of ability to think and propose improvements across the Corridor rather solely than along the alignment of the main spine roads running the length of this Corridor. The result is ineffective and myopic proposals. The balance of proposals between cycling and pedestrian improvements is hopelessly in favour of the cyclist when most people walk more often in this area. The needs of pedestrians in terms of signage, maps, resting places and shelter, buddying, education, safety, short-cuts, and lighting are not demonstrated to be understood. There is also discordance between what is proposed in one Section and the next: for example Section A proposes lots of tactile paving at junctions and cycle lanes and cycle symbols, but Section B proposes no tactile paving nor cycle lanes, and Sections C & D have no tactile paving; only Section B proposes bus lanes when they would be appropriate elsewhere. Any proposals for pedestrianisation appeared to have escaped attention. Proposed cycle lanes do not appear to link up with one another to make a coherent cycle network. We found only one proposal to provide cycle parking: just where are all the users of the many proposed cycle lanes expected to leave their cycles securely? There is too much disjointed and incoherence apparent. Opportunities to stop up streets and to address major issues like the Ravensthorpe gyratory have not been proposed. The proposals for the Ravensthorpe gyratory are hopelessly inadequate. We could not find any sign of connections to the proposed improved rail station at Mirfield or to the re-located rail station at Ravensthorpe entering proposals.

We draw your attention to the DfT's *Cycle Infrastructure Design* (Local Transport Note 1/20) guidance which specifies a minimum width of 2m for a one-way cycle lane. The recent DfT document entitled "*Gear Change; A bold vision for cycling and walking*" says on its page 17 that "Cycles must be treated as vehicles, not as pedestrians. New cycle provision which involves sharing space with pedestrians, including at crossings, will no longer be funded." On its page 21 it says "Routes must join together; isolated stretches of good provision are of little value." We submit your proposals need a fundamental rethink in the light of this recent guidance. The consultation draft of Leeds City Council's Transport Supplementary Planning Document gives a minimum footway width of 2m and we suspect this will be adopted consistently across West Yorkshire.

We understand the objectives for this scheme are:

- To better manage congestion on the M2D2L corridor within the Leeds City Region – Strategic Economic Plan (LCRSEP) period
- To enhance public transport operations and infrastructure along the M2D2L corridor
- To facilitate and support the growth in employment, housing and economy along the M2D2L corridor within current SEP and Kirklees and Leeds Local Plan periods
- To improve the quality of the local environment and public realm to help support regeneration in Dewsbury Town Centre in line with Dewsbury Development Framework and
- To reduce adverse impacts of transport on the environment and public health (enhancing active travel opportunities).

Unfortunately, we found little evidence that these objectives would be achieved. We found very little evidence that the proposed measures would reduce road congestion as practically no traffic signal synchronisation, road junction removal or road widening is proposed, rather we find additional pedestrian crossings (which we support), additional cycle lanes (which we support) and bus lanes taken out of existing road space (which we support) which are likely to slow traffic down. The only enhancements to public transport infrastructure we could detect were two lengths of bus lanes proposed west of Dewsbury but no bus lanes elsewhere nor other bus priority measures like signal priority or bus-only gates. Stopped buses are said to create delays but we found no proposals for the provision of bus lay-byes, and indeed along the proposed bus lanes for the removal of bus lay-byes. In Sections A to C we did not detect any employment, housing or economic development that would be materially induced. Yes, the proposals may help to improve the local environment and public realm including in Dewsbury but very little extra green planting or green space creation is included in the proposals. The economic return to public realm expenditure is usually very low – 1-2%. Do you have evidence of higher levels of economic return? We are aware that there is poor air quality at the A644 Huddersfield Road just north of its Ravenswharfe Road junction, but we found no recognition of this fact nor proposals to alleviate it despite the stated objective. We believe the walking proposals are too trivial to result in active travel health benefits, but some such benefits may accrue from some of the cycle lane proposals. To promote cycling though a much more coherent package of investments in signage, maps, education, and cycle training would be required. Just infrastructure interventions alone are well known to be ineffective. Thus we consider the proposals do not go very far in meeting the stated objectives which need to be much more fully addressed by a revamp of this scheme.

More detailed comments are as follows.

Section A: All the tactile paving provisions need to be complemented by improvements to the walking routes leading to them from locations away from the main road. The advisory cycle lane should be a mandatory cycle lane along Huddersfield Road (A4 & A5). There is a need for cycle lanes both sides of the road (A6). Cycle lanes proposed need to be continuous, not stop-start along the main road (A6 – A12). Why is there a break in the cycle lane on the north side (A13)? The building out of the pavement to provide a parking area is not supported (A14). A cycle lane is needed and achievable by getting rid of parking provision on Huddersfield A644 main road on its north side; parking should be only on the side roads, not the A644 (A15 & A16). Why does the cycle lane stop east of the Ravensthorpe gyratory (A17 & A18)? Cycle lanes in this section are like streams over limestone country: they appear and disappear almost randomly!
Ravensthorpe Gyratory: this is the key junction along the route and has been identified as a problem and then nothing substantial proposed. The complex 1970s design of narrow carriageways going here and there needs replacing by one large signalised roundabout with large enough vehicle storage areas on the leads in to accommodate the peak flows and with bus priority and separate cycle and walking routes. North Road, the retail centre service road an both arms of the A644 Huddersfield Road need to be arms of one roundabout: we believe there is enough space present but where are the modelling results and the proposal?
In this Section A, Bradbury Street, Charles St, & Church St. should be stopped up at their A644 ends.

Section B: We support the introduction of a westbound bus lane between Thornville Street and Ravensthorpe and an eastbound bus lane between Thornhill Road and Dewsbury, but we think both could be improved and provided in both directions. The outbound bus lane proposed from Dewsbury (Thornville St to Ravensthorpe) is ONLY on south side when an inbound bus lane is also required (B3 & B4). The proposed bus lane breaks down near Stoney Bank Street. The bus lane proposed is far too intermittent on the south side (B1 & B2). A proposed bus lane starts up on the north side entering Dewsbury between Thornhill Road and just past Pinfold Hill when it needs to start far further to the west. As stopped buses delay other traffic in this section, the obvious measure is to provide lay-byes at bus stops yet these are not proposed. We do not understand why there is no outbound bus lane along Aldams Lane/Webster Hill, nor inbound along Webster Road?

Cycle lanes and tactile paving are inexplicitly absent in this Section: why? The cycle lanes in Sections A & C need linking to those proposed but currently absent in Section B.

Tanhouse Street and Commercial Street should be stopped off at their main road ends (B1 &B2).

Section C: To comprehend fully the proposals in this Section we needed to be informed of all the proposals in the 'Transforming Cities Fund' programme for Dewsbury, but, alas, we are informed of only those concerning the area covered by the C5 section.
We consider bus lanes need to be provided on the lanes down Webster Hill and up Aldams Road that lead into and out of the bus station. We support the improvements to pedestrian movement but not the mixing of cycling with pedestrians at Old Westgate crossing which is contrary to DfT guidance. We agree with the need for all traffic signals to be brought under the same control (C1).

We query how the uphill one-way counterflow advisory cycle lane proposed links to any other cycle lanes proposed? We draw to your attention the undesirable outcome that owing to the positioning of the zebra crossing, pedestrians from the bus station who are climbing the hill are guided onto the side of Southgate off of which there is a car park so pedestrian/vehicle conflicts will arise. This can be obviated by shifting the zebra crossing slightly (C2).

We support the blocking off of side roads to Church Street which is one-way south bound and an important pedestrian route from the bus station to Market Place. To control vehicular speeds, we suggest speed humps are required or the pavements widened. We applaud the proposal to provide cycle parking, the only example we found in Sections A to D (C3).

We support the 20mph speed limit proposed for Railway Street and the raised table to control its traffic speeds. We suggest the cycle way at southern end of Longcauseway should connect to Dewsbury-Ossett Greenway and be extended northwards to Vicarage Road and under the Ring Road to the northern part of Longcauseway, and also that it be made one way each side of Longcauseway rather than bi-directional. Instead of the proposed section of one-way road, we suggest

Longcauseway is blocked off completely just south of the currently chosen point thus avoiding the need for the proposed mini roundabout (C4).

Without signalised control at the Leeds Road Junction, it would be a major barrier to pedestrians. Measures are needed here, however, to encourage cycles to use the Leeds Road in or out of central Dewsbury, and are fugitive at present (C5).

We encourage you to rethink the proposals for Wellington Street. In general, we do not advocate contraflow cycle lanes unless measures are being taken to substantially eliminate traffic flows. The width of the pavement here should be retained and instead the road narrowed and the car parking removed. Pedestrian/cyclist conflicts are likely to occur at the north end and need removal. It is not clear how this proposed cycle lane links to others. We welcome the proposed zebra crossing on Daisy Hill. We advocate that on-street parking is removed at north end (C6).

The existing and proposed on-street parking should be removed, not retained and not supplemented on Grove Street. Cars need to be deterred. Consideration should be given to pedestrianizing this road or at least making it one-way. Pedestrianisation proposals overall are distinctly lacking and much of central Dewsbury would benefit (C7).

On Bond Street we endorse the widening of ‘footways’ (we take them to be pavements) and the removal of some on-street parking, but the parking at the east end should also be removed. We agree this a key link between the rail station and shops and the Market Place. It should be being proposed for pedestrianisation at least between Union Street and Wellington Street (C8).

Section D: The need here is surely to buy out the Shell petrol station (unlikely to be worth much at present) and use the land adjacent to the junction to build a roundabout and so remove delays to traffic. This could easily be funded separately by S109 from local proposed development in the area, and is a prime candidate for exclusion from this scheme. The north end of Owl Lane already provides a diversion round this junction. The proposed restrictions on turning movements will just increase vehicle-kms in the area.

Where is the provision for cycling and walking along this long section and into its hinterland?

Bus priority signalling at this junction and Tingley complex junction also seem to have escaped the attention they warrant, given the scheme objectives.

Section F:
We support the extension of cycle routes to provide links with other cycleways in the area connecting to form a network.
We have some concerns over the shared space on the cycle way at bus stops. What is the predicted use of the cycle way at these points please? Intensive use would make the use of and access to bus stops daunting to passengers. Will there be a calming feature deployed just before bus stops causing cyclists to slow down? Who has right of way on the shared space, the cyclists or the pedestrians? A similar

arrangement in Edinburgh has been recently criticised on safety grounds. The floating bus stops with mini zebra crossings indicated in other locations seem better. At Tommy Wass a pedestrian crossing on the White Rose bound side of the dual carriageway has been re-located and we suspect this is to bring it in line with the other section of crossing on the Leeds bound side. However, the existing crossings are not shown on the map and we are relying on Google street view. Can you confirm this alignment is the case please? In which case it would be an improvement and greater incentive to pedestrians to use the crossings.
We welcome the extra bus lanes proposed but wonder why, when travelling towards Leeds the bus lane does not continue after the Tommy Wass pub.
Diagram F2 shows proposed minimum footpaths as 1.8m wide. However, Leeds City Council's draft Transport Supplementary Planning Document gives a minimum footpath width of 2m. As footpaths in this area are likely to be well used, we think it is essential that they are wide enough to allow two people to walk side by side, for example a parent and child or an elderly person needing the support of someone else, and allow space for other people to pass. The recent need for social distancing emphasises the need for this space. The width of the proposed one-way cycle tracks is proposed as 2.2m. The Government's recently published Cycle Infrastructure Guidance) Local Transport Note 1/20) gives a minimum width of 2m for a one-way cycle lane. Therefore, we suggest both pedestrians and cyclists are allocated 2m each.

Response
Thank you for your email and comments on the above scheme, which we are reading with interest, and we will get back to you shortly.

Email Five: Leeds Civic Trust
The Leeds Civic Trust's Transport and Liveable Leeds Group has considered the proposals detailed in the consultation and wishes to make the following comments:

SECTION E – Tingley to White Rose

1. We support the proposals for bus lanes, associated bus gates and improved bus stops on the A653 on the approaches to the Tingley Interchange (Diagram E4 and E5). This is consistent with the wider intention to provide infrastructure in the city which supports faster and more reliable bus services.
2. We are also in support of improved infrastructure for cyclists on this corridor. However we would question whether a shared use cycle lane is the right way forward. Given the length of the shared use cycleway (approx. 1.5 miles) cyclists are likely to want to travel at speed and this could be intimidating and potentially dangerous for pedestrians. This is likely to be a particular issue with cyclists travelling northwards who are likely to be travelling at higher speeds with it being downhill. As there is no footpath on the east side of the A653 pedestrians do not have an alternative to the shared use cycleway. A shared use cycleway would also appear to be inconsistent with the government's recent White paper "Gear Change" which on p17 states "Cycles must be treated as vehicles, not as pedestrians. New cycle provision which involves sharing space with pedestrians…will no longer be funded." The ideal

would be a fully segregated bi-directional cycleway with the retention of a separate footpath with roadspace reallocated to achieve this.

3. The shared cycleway is also shown as continuing along the White Rose Centre (Diagram E1). Our comments are particularly relevant in this area where there are likely to be a larger number of pedestrians.
4. We note that a number of footpaths link onto the A653 in this area (Diagrams E2 and E3) and suggest that this needs to be taken into account in detailed design. We suggest that the Ramblers Association be consulted if they have not already been involved.
5. Diagram E3 indicates “shared use pedestrian and cycle path across site access” to the south of Wide Lane. There actually appears to be a layby in this area. Is it intended to retain this?

SECTION F – White Rose to Dewsbury Road

6. We support the proposals for bus lanes in this area particularly given the high frequency of buses along this route. This will mean less road space available for general traffic, however any through traffic currently using this road will have the A6110/M621 available as a more appropriate alternative route. We feel that it is more appropriate for Dewsbury Road to be redesigned to meet local needs.
7. We also support the extension of cycle routes to provide links with other cycleways in the area connecting to form a network.
8. Diagram F2 shows shared us bus stop areas on either side of Dewsbury Road near Waincliffe Drive. This will effectively involve people alighting from (and boarding) buses onto the cycle track. A similar arrangement in Edinburgh has recently been criticised as giving rise to safety concerns. This arrangement does not seem satisfactory for either pedestrians or cyclists. The floating bus stops with mini zebra crossings indicated in other locations seem far preferable.
9. Diagram F2 indicates proposed minimum footway widths as 1.8m. However Leeds City Council’s consultation draft Transport Supplementary Planning Document gives a minimum footway width of 2m. Footways in this location are likely to be well used. We feel it is essential that they are wide enough to allow two people to walk side by side (e.g. parent and child, an elderly person needing support) together also with need for people to pass. The importance of this has recently been highlighted by the need to provide for ‘social distancing’. The width of the proposed one-way cycle tracks is proposed as 2.2m. The government’s recently published Cycle Infrastructure Guidance (Local Transport Note 1/20) gives a minimum width of 2m for a one-way cycle lane. Therefore we suggest that the balance of space allocated to cycles and pedestrians be revisited.

Response

Thank you for your detailed and well informed response to the Mirfield to Dewsbury to Leeds (M2D2L) transport scheme.

Your specific safety concerns around shared use cycle lanes and the need to adopt the new cycling infrastructure design standards, outlined in the LTN 1/20 document, have been noted and will be included when discussing future design ideas.

We will ensure all your comments are reviewed at length and discussed with our development partners prior to the next phase of scheme development.

Email Six: Leeds Cycling Campaign

Preface
Leeds Cycling Campaign welcomes the plans to extend segregated cycle routes along Dewsbury Road to White Rose Shopping Centre and onto Tingley. The current situation for cyclists to travel from Morley to Leeds via a dual carriageway is unacceptable and we welcome that this is now being addressed. We would like to ensure that the proposals for this scheme cater for all cyclists, regardless of type of cycle, age or level of experience, and that conflicts with pedestrians are designed out of the scheme. Our response will mainly be concerned with Sections E and F which are within Leeds.
We want this route to be seen not only as a link between Morley, Tingley, White Rose and Leeds but as a way for locals to access the new train station, to do their grocery shopping and to travel for leisure.

Included in this response there are a number of questions which we would like to have addressed by the scheme designers. Some of these questions are about details which the consultation document is not able to show at the supplied scale. There are several things we wanted to address within the early stages of the design, such as cycle parking and maintenance plans, including whether a road sweeper could travel down the cycle paths, and links to current and future developments such as at Capitol Park.

Section E. Tingley to White Rose
We are happy that the shared use path alongside the A653 will increase to a width of 3m which will allow safe passing of slower path users as well as bi-directional movements. Estimated pedestrian and cycle numbers may require the minimum with to be upgraded to 4.5m as recommended in LTN 1/20 (Table 6.3). Additionally, we welcome that the shared use path is taken around the bus stops to avoid conflict between pedestrians and cyclists. We have concerns that the separation of the shared use path and carriageway with only a 1.5m buffer along the side of the A653 is not sufficient for a national speed limit road and we ask that you look at creating a 3.5m buffer as recommended in LTN 1/20 (table 6.1).

Can we have some more detail on the types of crossing design being considered for the roundabouts at the retail park (Section E2) and Wide Lane (E3)? Due to the volume of motor traffic at these locations, these must be signalised and with a short wait phase for users, so as not to encourage risky crossing manoeuvres.

We have concerns that the crossing in front of the petrol station on the A653 will be a major hazard on this route as the entrance is wide and cars are driven at high speeds on the carriageway. The diagram shows a continual crossing with no setback. We would like to know what the council is considering to slow motor traffic

speeds, increase sight lines and slow the speed of cars entering and exiting over the shared space path. What measures are being taken to make sure that drivers entering and exiting the petrol station/coffee shop are aware that cyclists and pedestrians will be travelling in both directions?

Capitol Park is a large future employer in the area. We ask that the council works with the developers to introduce safe, separated cycle lane access to the shared path on the A653. Currently cyclists travelling up Topcliffe Lane have to share a narrow pavement with pedestrians or the carriageway. As this development will have a large number of lorries, if road width is not sufficient to separate cycles from motor vehicles, then could an alternative route be laid from the A653 for cyclists and pedestrians?

Outside of this scheme we would ask that travel from this route to the Urban Bike park and surrounding estates be considered. Currently, the eastern arm of the A653 is a hazard and safe crossings should be provided to link with the bridleway.

Section F

The addition of segregated one-way cycle tracks to this part of Dewsbury Road is something we welcome, as this will provide better connections into the surrounding streets than a bidirectional path. This plan will tie in well with the upcoming active travel scheme in Beeston. We would urge the council to carry on beyond the White Rose Roundabout so that the cycle lanes can be used to travel safely and conveniently to Elliot Hudson College, Millshaw Park Industrial Estate and the future White Rose Train Station.

Section F3 shows that the connection to City Connect 3 when travelling east along Dewsbury Road is shared use across the Tommy Wass junction, starting with a parallel crossing that meets a shared space island of CS3. The proposals at this junction are wholly unsatisfactory and require complex, multi-stage movements. This junction should be looked at again, with the focus being on directness and simplicity for all users, and less on capacity for motor vehicles.

We feel that efforts should be made to better link with the upcoming Beeston Active Travel Neighbourhood as this will possibly be made permanent by the time this scheme starts construction in 2022. The planned indirectness and distance of the route between these schemes will tempt cyclists to chance a dangerous crossing of Old Lane on the carriageway. We understand that this is a recent issue which has arisen after these plans were created but nevertheless, it is possible to design out these future issues by incorporating a crossing on the North Side of the Tommy Wass junction to connect up with CS3 and the Beeston Low Traffic Neighbourhood.

Could we get an assurance that measures are being taken at the parking laybys, such as in section F2, to prevent collisions between cyclists and vehicle doors?

Cycle Parking

There are no spaces allocated on the consultation documents for where cycle parking is intended to go, we understand that the consultation is at an early stage and would like to take the opportunity to suggest a number of locations which should

feature Sheffield Stands as a minimum. Our suggested locations are: Shops on Dewsbury Road. Church on Dewsbury Road?
As more people start to choose cycling as a method of travel, non-standard cycles such as cargo bikes and trikes are becoming more and more popular. We would like to know that provisions are being made to accommodate non-standard cycles where possible?

Response
Thank you for your detailed and well informed response to the Mirfield to Dewsbury to Leeds (M2D2L) transport scheme.

Your specific safety concerns around shared use cycle lanes and the need to adopt the new cycling infrastructure design standards, outlined in the LTN 1/20 document, have been noted and will be included when discussing future design ideas.

We will ensure all your comments are reviewed at length and discussed with our development partners prior to the next phase of scheme development.

We have also taken the decision to include this as an agenda point at our next Leeds Cycle Forum Sub-Group meeting, due to be held on Wednesday 7th October at 17:00 and to which you are already invited, where we can discuss the proposals in more detail.

End of report

FAQs

Department for Transport Cycle Infrastructure Design (LTN 1/20)

- How will the new government guidelines from Department for Transport (Cycle Infrastructure Design LTN 1/20) affect these proposals?

Funding and delivery of the scheme

- Who is paying for the scheme?
- Who is responsible for delivering the scheme?
- What are the main objectives of this scheme?
- Will the project provide road improvements to integrate the proposed major housing and employment sites in Kirklees and Leeds?
- Does this scheme have relationships with other highways or regeneration projects?

Bus users, cyclists and pedestrians

- What is a bus super-stop?
- How will the scheme affect buses on the A644, in Dewsbury Town Centre and A653?
- Will there be any new bus stops? And will these be outside my house/business?
- Will any bus stops be taken away?
- How will the scheme affect cyclists on A644, in Dewsbury Town Centre and A653?
- How will this scheme benefit pedestrians?
- At what times will new bus lanes operate?

Impact on those living nearby

- Will the scheme impact on local parking for residents and businesses?
- Does the scheme require any land take/ is my property at risk?

- What will happen to trees located along the route?
- Will any work on site be carried out during the day, and what will you do to minimise any impact on businesses/residents?
- Will any roadworks be carried out at night and what will you do to minimise any impact on residents?
- Will I be compensated if the works on site, or the finished scheme disturbs my business/property, or decreases its value?
- When will work start on site?

The decision-making process

- What has been done so far?
- What is the decision-making process?
- Why are certain stretches of the route and junctions on the route prioritised?
- Are the relevant decision documents in the public domain?

Having your say and staying informed

- How can members of the public have their say on the proposals?
- How will we ensure the consultation will be accessible to people who do not have access to the internet?
- Who can take part? Can I tell other people to take part?
- How will local residents and businesses be kept informed on the progress of the scheme?

Department for Transport Cycle Infrastructure Design (LTN 1/20)

How will the new government guidelines from Department for Transport (Cycle Infrastructure Design LTN 1/20) affect these proposals?

The plans detailed in this consultation were produced ahead of the publication of the Department for Transport Cycle Infrastructure Design (LTN 1/20). We are currently reviewing the detail of the new guidance to how this may impact this scheme.

It is not envisaged that the elements of the scheme detailed as part of this consultation will change, however there may be a requirement for minor design alterations to the proposals in line with this new guidance.

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Funding and delivery of the scheme

Who is paying for the scheme?

This scheme is being funded through the West Yorkshire plus Transport Fund (WY+TF), as part of the Leeds City Region Growth Deal, which is a £1 billion-plus deal between Leeds City Region Enterprise Partnership (LEP) and Government to help transform the City Region economy. It also forms a significant element of the funding make-up of the West Yorkshire-plus Transport Fund. The scheme is not funded by Council Tax, nor will its funding allocation impact other Council funding streams. The total cost of this phase of the scheme would be £13 million with 12.5 million through the West Yorkshire plus Transport Fund and £500,000 from Leeds City Council Section 106 funding (developer contributions).

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Who is responsible for delivering the scheme?

Kirklees Council and Leeds City Council are responsible for delivering the scheme. Kirklees Council and Leeds City Council are working in partnership with the West Yorkshire Combined Authority. The Combined Authority works with Local Authorities and businesses across West Yorkshire and York to create economic growth through infrastructure projects such as this.

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What are the main objectives of this scheme?

The objectives of the scheme are:

- To better manage congestion on the Mirfield to Dewsbury to Leeds route within the Leeds City Region Strategic Economic Plan period (SEP)
- To enhance public transport operations and infrastructure along the Mirfield to Dewsbury to Leeds route
- To facilitate and support the growth in employment, housing and economy along the Mirfield to Dewsbury to Leeds route within current SEP and Kirklees and Leeds Local Plan periods
- To improve the quality of the local environment and public realm to help support regeneration in Dewsbury Town Centre in line with the Dewsbury Development Framework
- To reduce adverse impacts of transport on the environment and public health (particularly through promoting active travel modes)

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Will the project provide road improvements to integrate the proposed major housing and employment sites in Kirklees and Leeds?

The scheme aims to reduce delays at certain junctions where possible. However, the scheme's primary focus is to provide a better range of sustainable transport choices thereby reducing the overall impact of new journeys on the road network arising from new development.

Other junctions along the corridor will be improved by funds provided by developers or by government funding streams that help to facilitate major developments.

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Does this scheme have relationships with other highways or regeneration projects?

The scheme has close relationships with the following other schemes:

- Dewsbury Riverside Housing Development site
- Dewsbury Town Centre walking and cycling ‘Transforming Cities Fund’ package
- Chidswell Housing & Employment Development site
- Capitol Park Employment Development site
- White Rose railway station proposal
- Transpennine Route Upgrade rail infrastructure programme
- The A62/A644 Link Road ‘Cooper Bridge’ scheme, to the west on the A644

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Bus users, cyclists and pedestrians

What is a bus super-stop?

A bus ‘super-stop’ is an upgraded bus stop with sheltered waiting facilities, real time bus information and CCTV provision.

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How will the scheme affect buses on the A644, in Dewsbury Town Centre and A653?

Some scheme options aim to provide better bus reliability in the Mirfield and Ravensthorpe area, bus priority at the Tommy Wass junction and bus lanes in the Tingley and White Rose area.

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Will there be any new bus stops? And will these be outside my house/business?

As part of the proposals at the Station Road / Huddersfield Road junction in Mirfield, the bus stop in the town centre on the Huddersfield-bound direction would be relocated to the other side of the junction.

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Will any bus stops be taken away?

There would be the removal of two existing bus stops as part of the scheme. These are to the west of Ravensthorpe Gyratory, where there is a nearby alternative stop, and on Ravensthorpe Gyratory, where the current stop is not used. We are also considering slightly relocating bus stops in other parts of the route to enable the introduction of other scheme measures.

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How will the scheme affect cyclists on A644, in Dewsbury Town Centre and A653?

Parts of the scheme aim to provide cycle facilities in the Mirfield and Ravensthorpe areas, around Dewsbury Town Centre, and between Capitol Park and Tommy Wass in Leeds.

As part of our scheme consultation we will engage with local cycle groups. As the scheme is still in its early stages, we would like to hear your thoughts on this to help us develop the plans.

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How will this scheme benefit pedestrians?

New and upgraded pedestrian and pedestrian/ cycle crossings will be provided throughout the route. This scheme aims to provide betterment to pedestrian safety and amenity through measures such as new crossings, narrowing of side road junctions, tactile paving to help people with visual impairments, and footway widening in certain locations.

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At what times will new bus lanes operate?

In Leeds we are yet to make a decision on this, but it will be in line with bus lane proposals elsewhere in the city. In Kirklees, we are consulting on the options of 24 hour bus lane operation and peak hour operation.

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Impact on those living nearby

Will the scheme impact on local parking for residents and businesses?

Certain design options within the scheme may impact on local parking on the highway along certain stretches of Mirfield and Ravensthorpe, and along A653 Dewsbury Road, due to the implementation of bus and cycle lanes. Some of the designs could be progressed with different timing arrangements when parking is permitted, for example, in the off-peak.

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Does the scheme require any land take/ is my property at risk?

It is currently envisaged that the scheme will only require minimal land outside of the current highway extent at the Challenge Way / Leeds Road / John Ormsby V C Way Junction. No other current designs require any land take.

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What will happen to trees located along the route?

In the unfortunate event we must remove a tree we will replace it with another tree in a suitable location as close as possible. The current policy in Leeds District is to replace each tree removed with three new trees and Kirklees Council will determine their approach on a project by project basis in consultation.

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Will any work on site be carried out during the day, and what will you do to minimise any impact on businesses/residents?

The phasing of roadworks on the public highway still needs to be planned. Nearer the time of construction, local residents and businesses will be provided with more detail about what will happen and where, but overall disruption will be kept to a minimum.

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Will any roadworks be carried out at night and what will you do to minimise any impact on residents?

The detail of the roadworks and timings of this will be determined closer to the time of construction. Roadworks would only be carried out at night in limited circumstances to meet traffic operational requirements and residents would be informed well in advance.

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Will I be compensated if the works on site, or the finished scheme disturbs my business/property, or decreases its value?

In certain circumstances, compensation can be paid for loss of amenity and value of property through Part 1 of the Land Compensation Act 1973. Claims through this Act are valid after 12 months of the opening of the scheme. Compensation is payable if it can be demonstrated that the highway works have negatively affected the value of land and buildings.

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When will work start on site?

The scheme is currently under development and is going through design review and consultation stages, with a preferred scheme to be identified by Outline Business Case stage. There are several stages of business case approval from the Combined Authority to fulfil local assurance requirements prior to construction. Due to the size and complexity of the proposed works the improvements may be introduced in phases. The current projection for a start on construction of the scheme is in early spring 2022.

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The decision-making process

What has been done so far?

Funding for the early phase of the scheme was secured through The Combined Authority to allow Kirklees and Leeds City Councils to start developing and promoting the scheme. This has allowed us to undertake initial studies and business case development, optioneering and outline designing. This project is still at an early stage of development.

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What is the decision-making process?

This consultation will help inform which proposals form the proposed £13 million scheme, which is to be funded with £12.5 million through the West Yorkshire plus Transport Fund and £500,000 of Section 106 funding. There will be a further review following traffic modelling, design reviews and analysis of public consultation results to form a final shortlist of measures within the current scheme budget. Decisions about the scheme will be checked through the Assurance Process of the West Yorkshire Combined Authority. At each stage, recommendations on the scheme are made by an officer-based appraisal team to the relevant committee(s) of elected members.

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Why are certain stretches of the route and junctions on the route prioritised?

The cost of delivering the full aspirations for this corridor amount to much more than the current funding allocation. A first sifting stage, that has considered the policy fit and deliverability of different design options, has taken place and has enabled options to be prioritised along this whole route. This consultation will help inform which proposals form the proposed £13 million scheme, which is to be funded with £12.5 million through the West Yorkshire plus Transport Fund and £500,000 of Section 106 funding. There will be a further review following traffic modelling, design reviews and analysis of public consultation results to form a final shortlist of measures within the current scheme budget. Work on the final scheme could start in early 2022. Future proposals (subject to funding) along the corridor will consider improvements at other sections of the route.

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Are the relevant decision documents in the public domain?

The decision documents are published both on Kirklees Council and Leeds City Council websites and The Combined Authority's website.

For Kirklees see: www.kirklees.gov.uk/beta/transport-roads-and-parking/mirfield-to-dewsbury-to-leeds.aspx *[external link - opens in new window]*

For the CA see: www.westyorks-ca.gov.uk/projects/west-yorkshire-plus-transport-fund/a653-leeds-to-dewsbury-corridor/ *[external link - opens in new window]*

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Having your say and staying informed

How can members of the public have their say on the proposals?

The consultation period will take place from 22 July until 25 September 2020. Members of the public can have their say via www.yourvoice.westyorks-ca.gov.uk/M2D2L or attend one of the drop-in sessions (subject to social distancing measures in force at the time) in September 2020, where officers will be available to answer any questions. We are keen to hear from local residents, businesses and other road users.

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How will we ensure the consultation will be accessible to people who do not have access to the internet?

Leaflets, posters and electronic messaging boards are being provided in the area around the scheme and real time information screens at bus shelters will display information. Anyone who cannot access the survey online and needs to request an alternative format should contact MetroLine on 0113 245 7676.

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Who can take part? Can I tell other people to take part?

We welcome the opinions and feedback of all members of the public. Whether you travel by public transport, walk, drive, or cycle, are a resident, business owner, or just travel through the area, your views, opinions and insight are valuable to us to shape the project. Please share the link www.yourvoice.westyorks-ca.gov.uk/M2D2L with anyone you think would be interested in taking part. If you intend to submit a joint response on behalf of a group/organisation, please share the link with your colleagues/members so they can provide an individual response, should they wish to do so.

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How will local residents and businesses be kept informed on the progress of the scheme?

You can register to follow the project and have your say in any future consultations at www.yourvoice.westyorks-ca.gov.uk/M2D2L. Updates on project progress will also be provided via the Combined Authority's and local councils' webpages and via press articles. You can also contact your Local Ward Councillors. We will publish a report on the consultation response on this website.

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Mirfield to Dewsbury to Leeds

Transport Scheme Consultation

Developed and supported by:

West Yorkshire Combined Authority

Leeds City Region Enterprise Partnership

Kirklees Council

Leeds City Council

Northern Powerhouse

Connecting Leeds
TRANSFORMING TRAVEL

Mirfield to Dewsbury to Leeds

Transport Scheme Consultation

The Mirfield-Dewsbury-Leeds (M2D2L) route runs through the heart of West Yorkshire and serves a direct catchment of around 600,000 residents as well as several existing and planned major employment, retail and housing sites. In partnership, Kirklees Council, Leeds City Council and the West Yorkshire Combined Authority have put forward an initial scheme for the routes (A644 and A653) that aims to improve travel opportunities, reliability and the local environment, which in turn will help to promote access to jobs, education and services, and improvements in public health. The scheme includes new cycle tracks, new pedestrian crossings and footway improvements, bus lanes and bus super-stops, junction upgrades, and other highway space adjustments.

The objectives for this scheme are:

- To better manage congestion on the M2D2L corridor within the Leeds City Region – Strategic Economic Plan (LCR-SEP) period
- To enhance public transport operations and infrastructure along the M2D2L corridor
- To facilitate and support the growth in employment, housing and economy along the M2D2L corridor within current SEP and Kirklees and Leeds Local Plan periods
- To improve the quality of the local environment and public realm to help support regeneration in Dewsbury Town Centre in line with Dewsbury Development Framework and
- To reduce adverse impacts of transport on the environment and public health (enhancing active travel opportunities)

The route travels through areas of north Kirklees and south Leeds that are the focus of significant planned housing and economic growth over the next 10-15 years. Proposals for a number of major development sites are being worked-up and will be brought forward / built at different speeds. It is important to recognise that the proposals being consulted on now for the Mirfield-Dewsbury-Leeds (Phase 1) project represent one stage of a longer-term programme of transport investment into the area that will include:

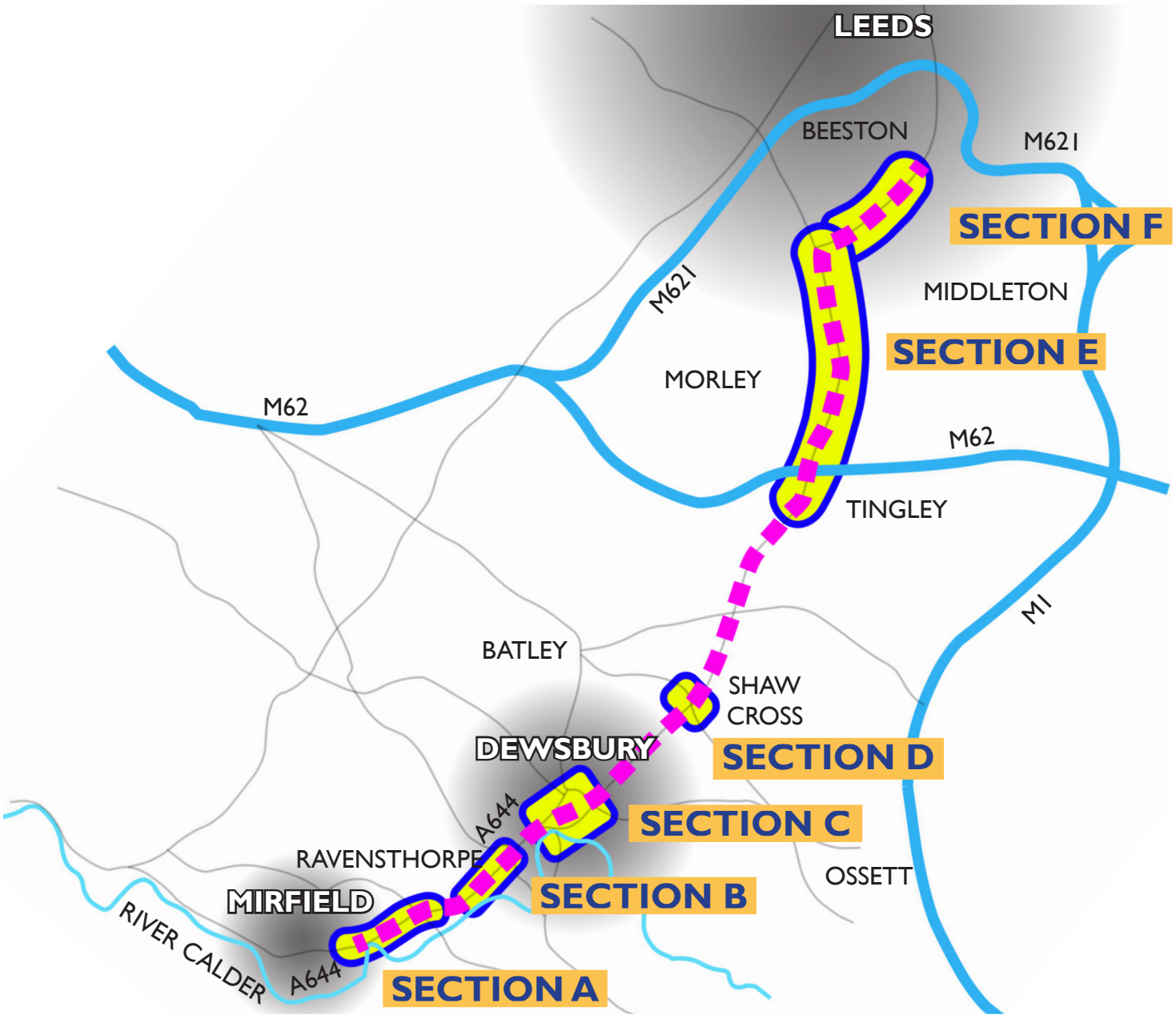
- Alterations to road junctions to provide access to new development sites, often in phases
- Investment into the Transpennine rail network and stations, for example, through the Transpennine Route Upgrade at Mirfield, Ravensthorpe and Dewsbury stations and on the railway lines. https://www.networkrail.co.uk/running-the-railway/railway-upgrade-plan/key-projects/transpennine-route-upgrade/
- Transforming Cities Fund projects, particularly in and around Dewsbury (projects for Dewsbury Bus Station and Halifax Rd-Bradford Rd-Ring Road Junction will be publically consulted on in winter 2020/spring 2021 as part of this programme)
- Future phases of the Mirfield-Dewsbury-Leeds scheme, subject to new funding
- Exploration and assessment of strategic highway scheme options in North Kirklees to relieve pressure on existing roads and communities, and to facilitate growth

Mirfield to Dewsbury to Leeds

Transport Scheme Consultation

We would like to invite you to provide feedback on our proposals for the Mirfield-Dewsbury-Leeds Route via an online survey (www.yourvoice.westyorks-ca.gov.uk/M2D2L). Before you complete the survey, it is recommended that you view the plans for each section. The scheme has been divided into six sections of design options, based on geography running west to north-east, as follows:

- **SECTION A: Mirfield to Ravensthorpe on the A644**
- **SECTION B: Ravensthorpe to Dewsbury on the A644**
- **SECTION C: Dewsbury Town Centre including the Ring Road**
- **SECTION D: Shaw Cross (Leeds Rd/Challenge Way Junction)**
- **SECTION E: Tingley to White Rose on the A653**
- **SECTION F: White Rose to Dewsbury Road**



KEY:

M2D2L ROUTE TRANSPORT SCHEME

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West Yorkshire Combined Authority | Leeds City Region Enterprise Partnership | Kirklees Council | Leeds City Council | Northern Powerhouse | Connecting Leeds – Transforming Travel

Mirfield to Dewsbury to Leeds

Transport Scheme Consultation

The options prioritised within the six sections have been prioritised as part of the work to date. Future proposals along the corridor (subject to funding) will consider other improvements along different sections along the route such as Dewsbury to Shaw Cross and Shaw Cross to Tingley.

Within the Documents tab on this page, each of these sections is displayed and described on a separate section summary board. Plans of individual design options within each section are then set out together with descriptions of each design option. This is followed by a set of consultation questions, including general and design-focussed questions, for the full scheme.

The public consultation exercise for the scheme includes an online consultation – which can be accessed below and will run from 22nd July to 25th September. A series of public 'drop-in' events at local venues are planned for September, subject to the updated rules on social distancing at the time. Members of the public who require the information in different formats can submit a request using the contact details below.

The public consultation for Mirfield-Dewsbury-Leeds was originally planned to commence in Spring 2020, however the onset of COVID-19 and its impact on residents and businesses prompted Kirklees and Leeds Councils, together with the West Yorkshire Combined Authority, to decide to postpone the consultation to a more suitable period. This was as well as reviewing the means of communication, to make sure the maximum number of people possible can be informed and have the chance to respond.

Next Steps

The full cost of the series of design options that are presented in this consultation exercise extends significantly beyond the current scheme budget. Therefore, once the public consultation period has concluded, officers from Kirklees Council and Leeds City Council will look to shortlist design options for delivery within the M2D2L Phase 1 project through the analysis of public consultation responses, together with the value for money assessment and deliverability of each option. Options that are not prioritised in this Phase 1 shortlist but are considered to have merit and public support may form part of future phases of M2D2L or other opportunities, subject to funding or by alternative investment streams.

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Section A

Mirfield to Ravensthorpe

This section covers the route on Huddersfield Road (A644) from Mirfield to Ravensthorpe, which is around one and a half miles long. A range of possible measures for this section were considered to best achieve the scheme objectives and help to resolve local transport issues. Due to limited available road space, scheme proposals are constrained without having to take land or demolish buildings, which the scheme seeks to avoid. A primary focus of the scheme has therefore been to make localised alterations to the main road and its junctions to provide safer routes for walking, better access to bus stops, and for cycling.

Main Issues

- A644 Huddersfield Road is not currently an attractive route for walking and cycling
- Ravensthorpe Gyratory is particularly difficult to traverse for those on a bicycle
- The Station Road/Huddersfield Road junction is inefficient, causing significant delays to general traffic, buses and pedestrians

Opportunities

- Modify pavements, side-roads and crossing points, including measures for people with visual impairments
- Provide new cycle lanes and crossing facilities where space allows along the route
- Remodel the traffic signals and layout at Station Road/Huddersfield Road Junction

Benefits

- Reduced delays for all road users at the Station Road/Huddersfield Road Junction
- Increased safety and journey quality for pedestrians and cyclists
- Safer walking access to bus stops, making it easier to travel by bus

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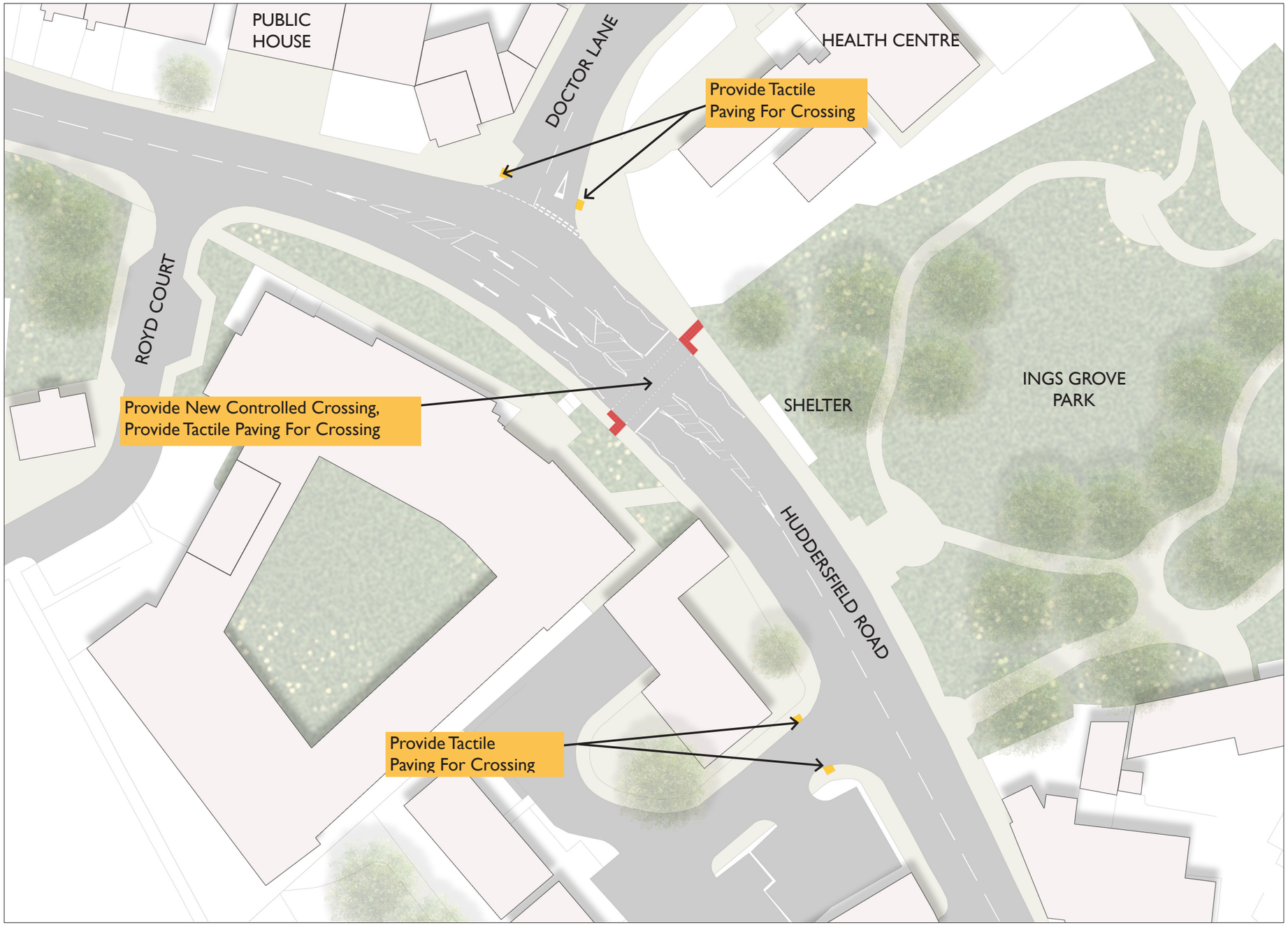
Section A

A1

Mirfield to Ravensthorpe - Ings Grove Park



Key

- Proposed Crossing
- Proposed Signaled Crossing
- Proposed Bus Lane
- Proposed Cycle Lane
- Highway
- Pedestrian Areas
- Grass Areas
- Building
- Existing Trees

A1

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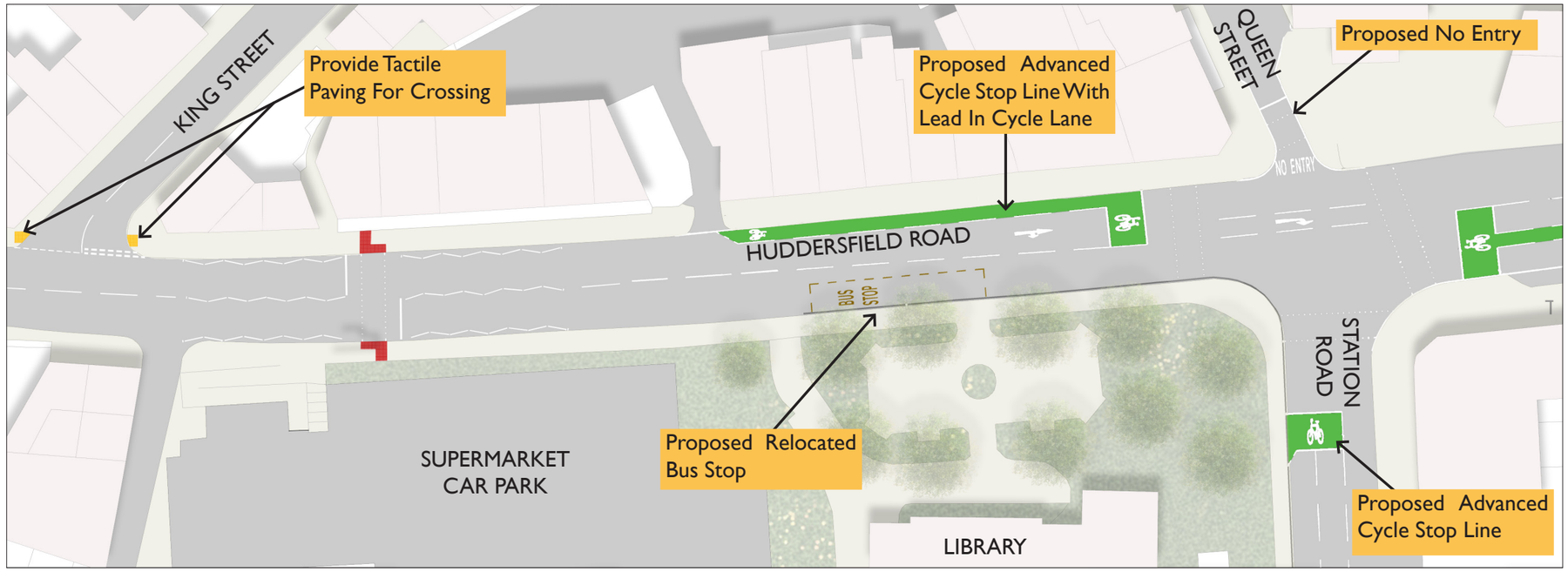
Section A

A2 & A3

Mirfield to Ravensthorpe - to Knowl Road

A2



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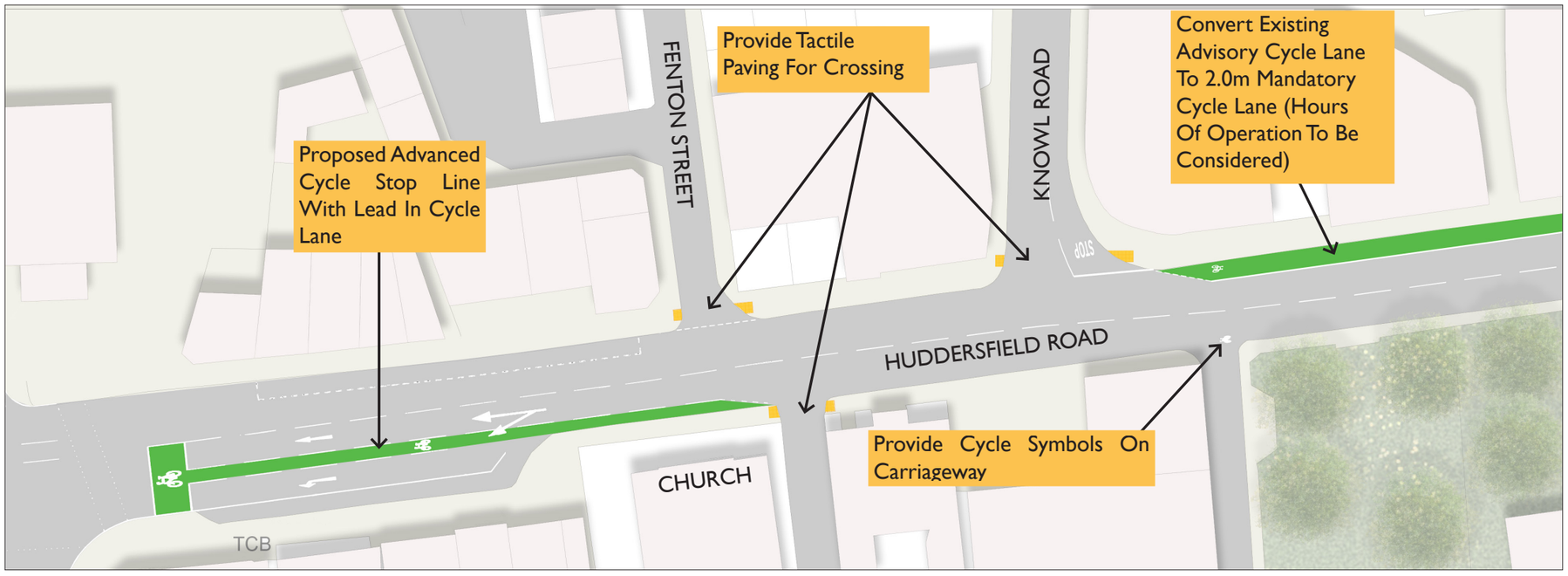

Key

- Proposed Crossing
- Proposed Signaled Crossing
- Proposed Bus Lane
- Proposed Cycle Lane
- Highway
- Pedestrian Areas
- Grass Areas
- Building
- Existing Trees

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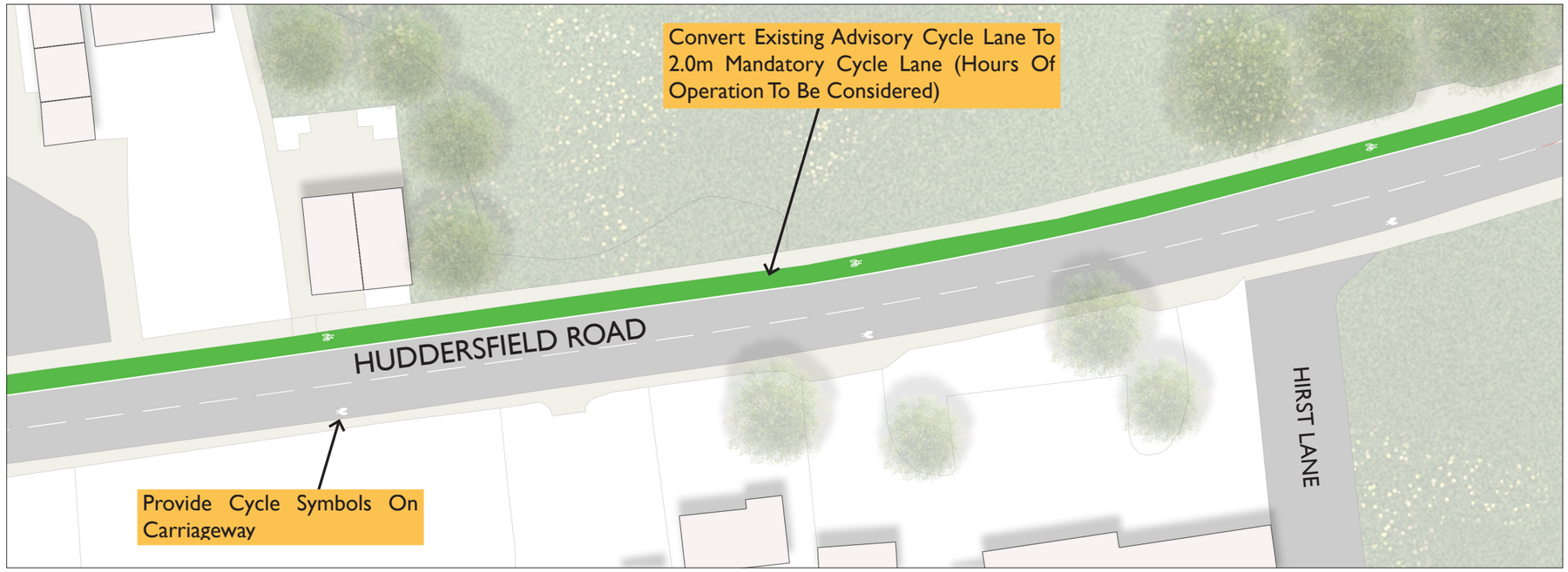
Section A

A4 & A5

Mirfield to Ravensthorpe - Knowl Road to Mirfield Cricket Club

A4



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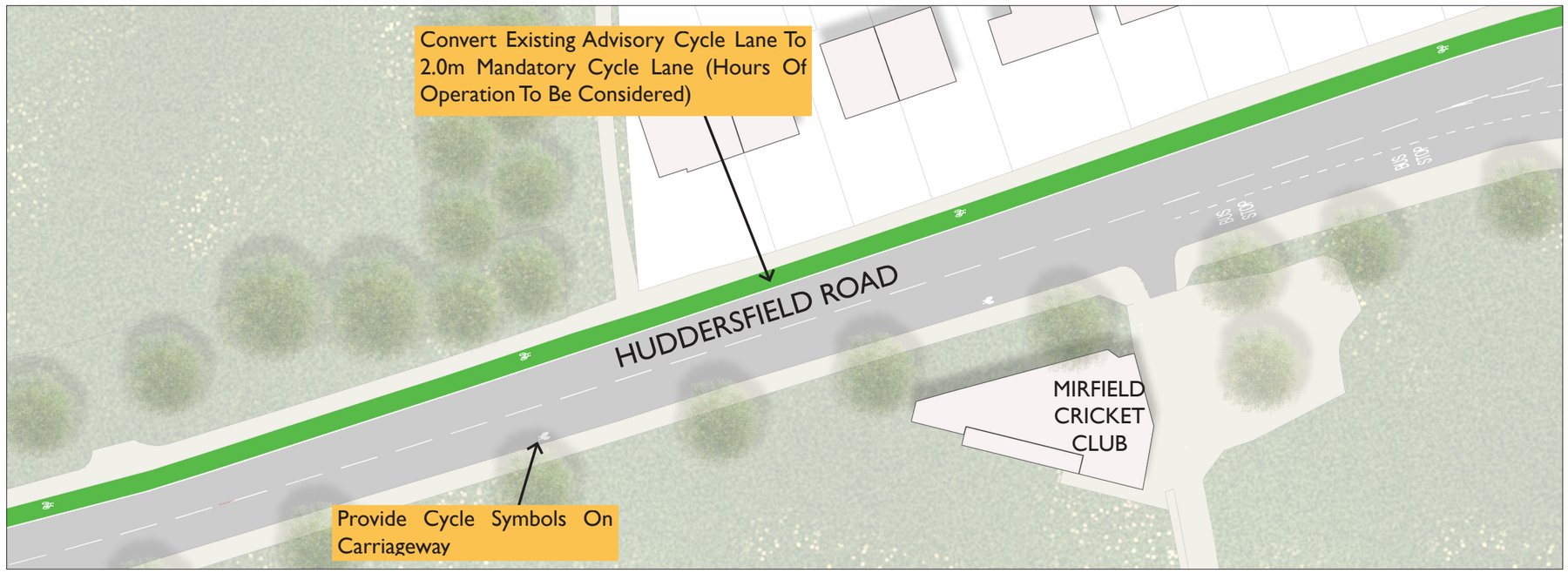

Key

- Proposed Crossing
- Proposed Signaled Crossing
- Proposed Bus Lane
- Proposed Cycle Lane
- Highway
- Pedestrian Areas
- Grass Areas
- Building
- Existing Trees

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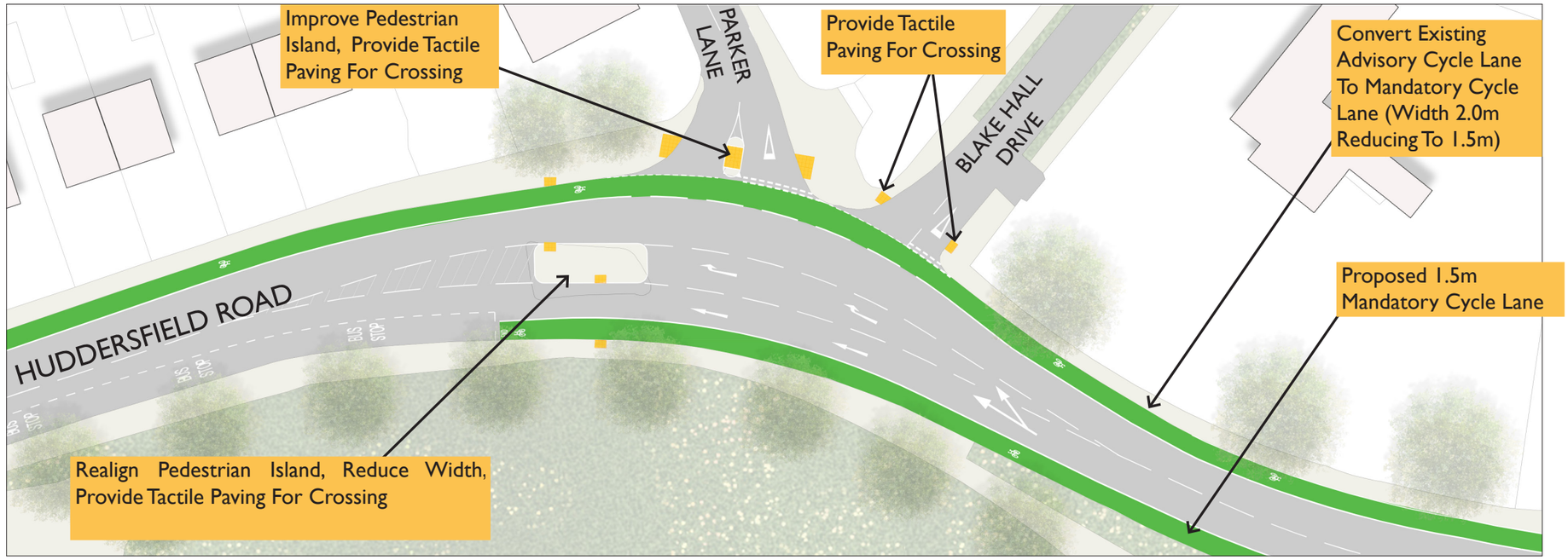
Section A

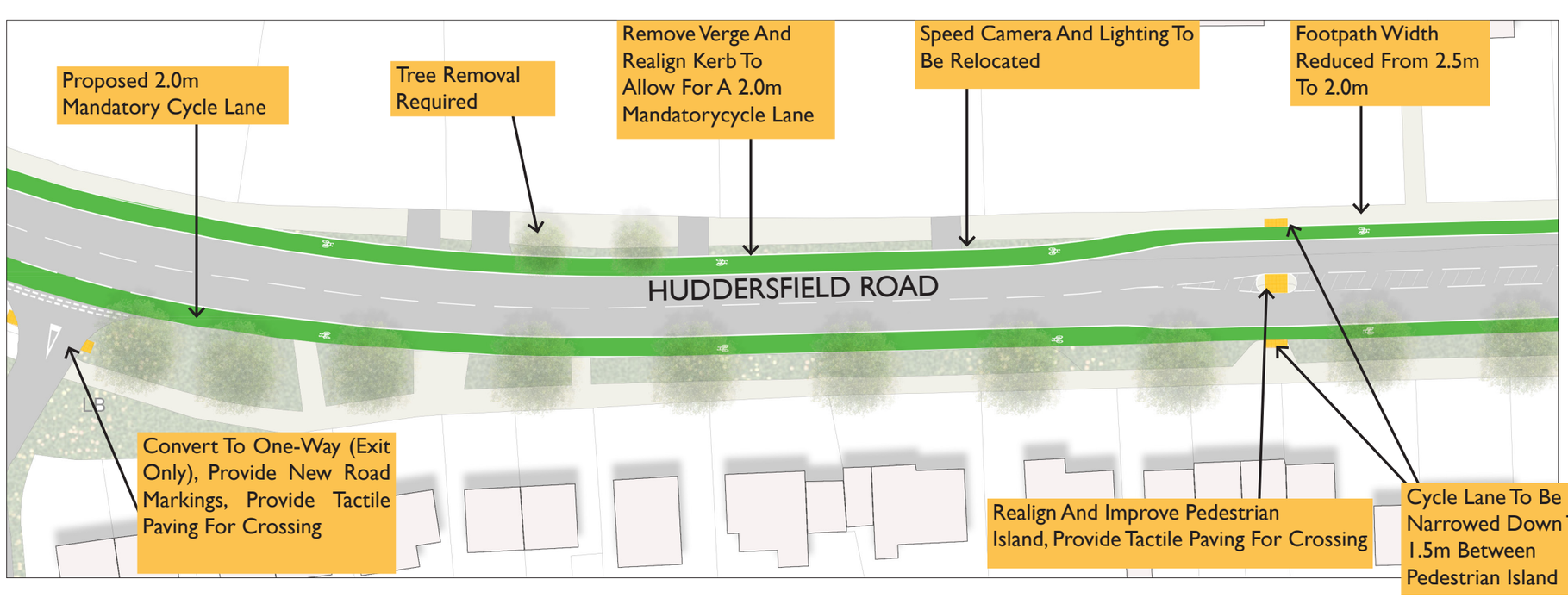
A6 & A7

Mirfield to Ravensthorpe - Parker Lane to Parkfield Crescent

A6



A7



Key

- Proposed Crossing
- Proposed Signaled Crossing
- Proposed Bus Lane
- Proposed Cycle Lane
- Highway
- Pedestrian Areas
- Grass Areas
- Building
- Existing Trees

N

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Leeds City Council

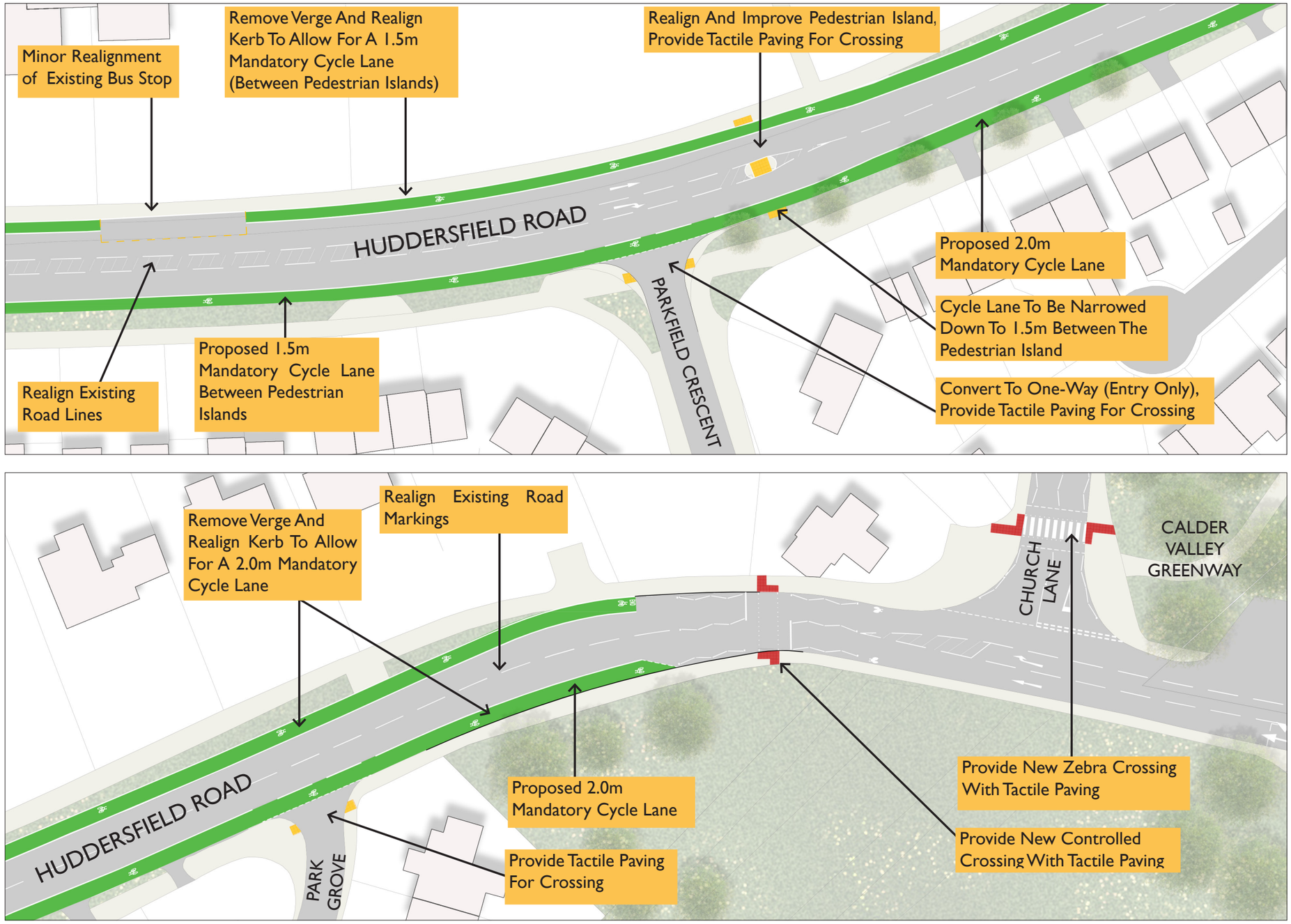
Northern Powerhouse

Connecting Leeds — Transforming Travel

Section A

A8 & A9

Mirfield to Ravensthorpe - Parkfield Crescent to Church Lane



Key

- Proposed Crossing
- Proposed Signaled Crossing
- Proposed Bus Lane
- Proposed Cycle Lane
- Highway
- Pedestrian Areas
- Grass Areas
- Building
- Existing Trees

Developed and supported by:

West Yorkshire Combined Authority

Leeds City Region Enterprise Partnership

Kirklees Council

Leeds City Council

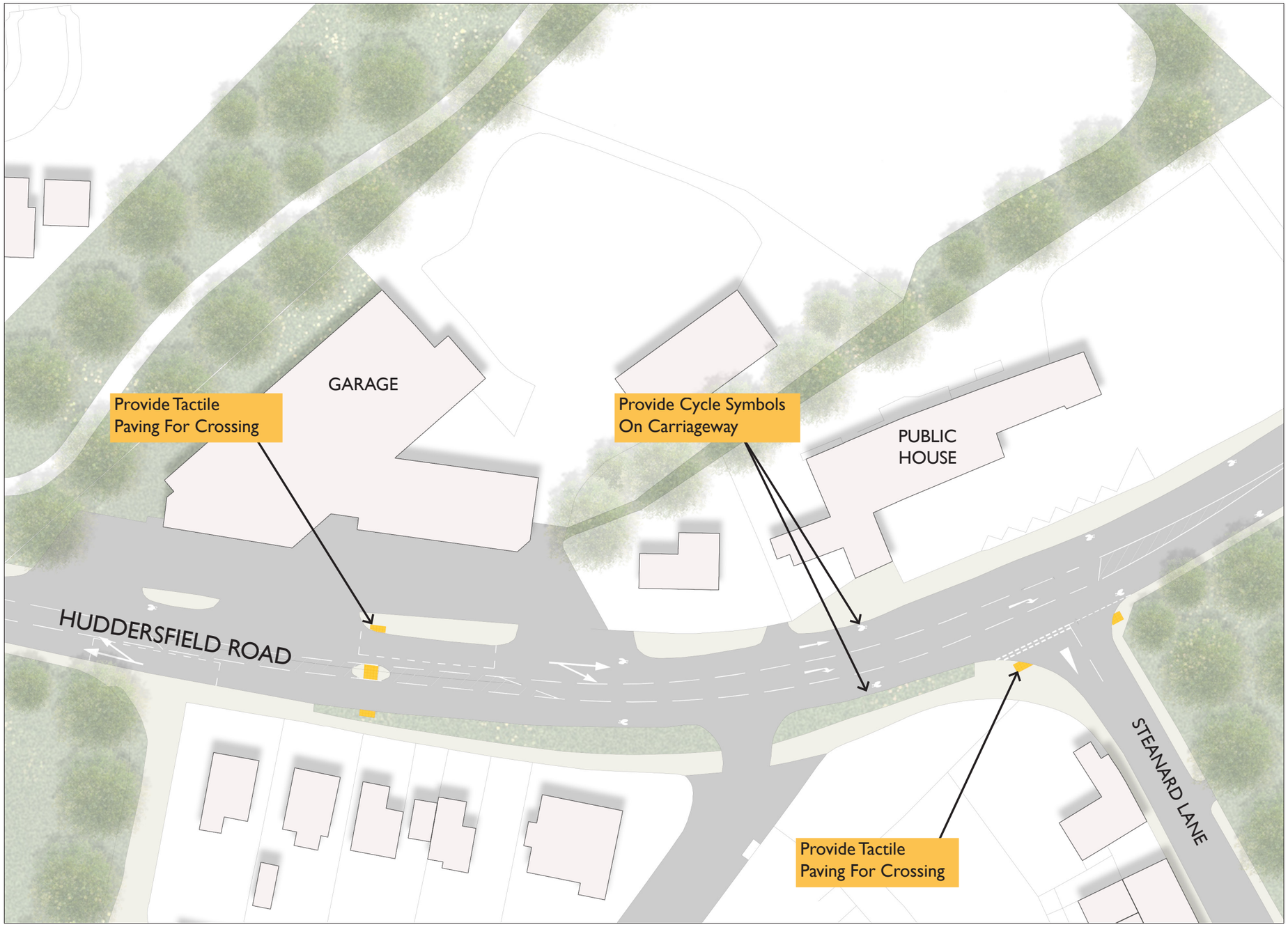
Northern Powerhouse

Connecting Leeds — Transforming Travel

Section A

A10

Mirfield to Ravensthorpe - Church Lane to Marina



Key

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- Proposed Signaled Crossing
- Proposed Bus Lane
- Proposed Cycle Lane
- Highway
- Pedestrian Areas
- Grass Areas
- Building
- Existing Trees

N

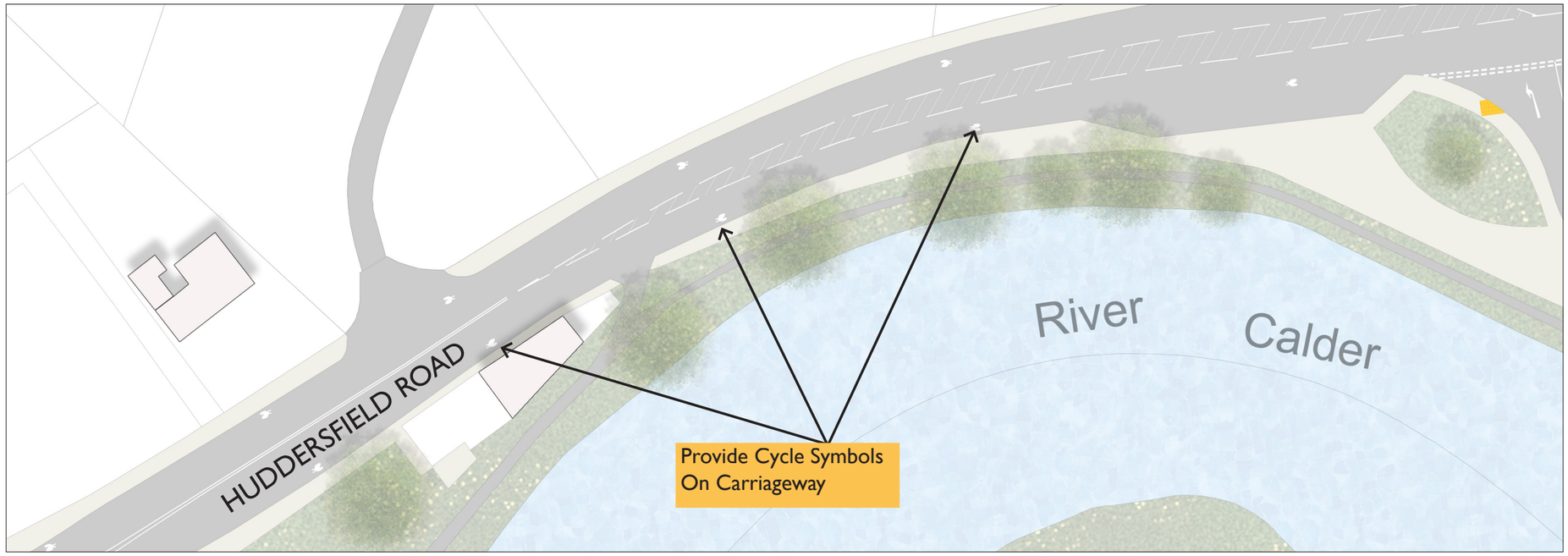
A10

Section A

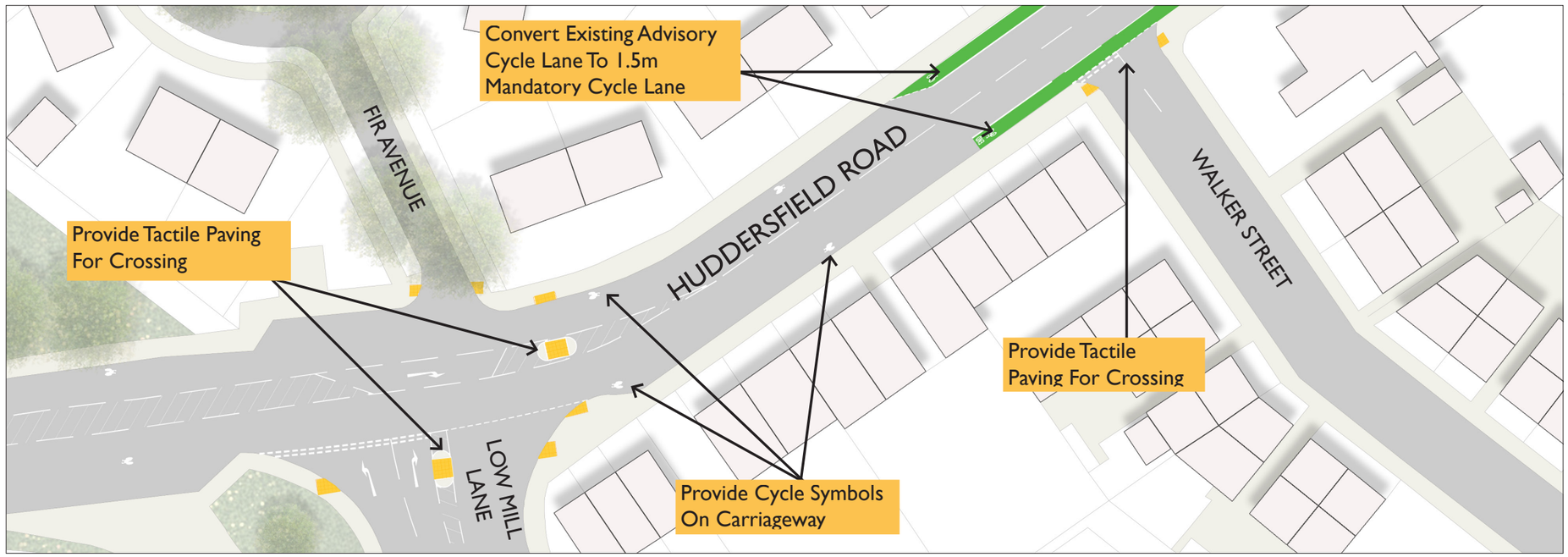
A11 & A12

Mirfield to Ravensthorpe - Low Mill Lane

A11



A12



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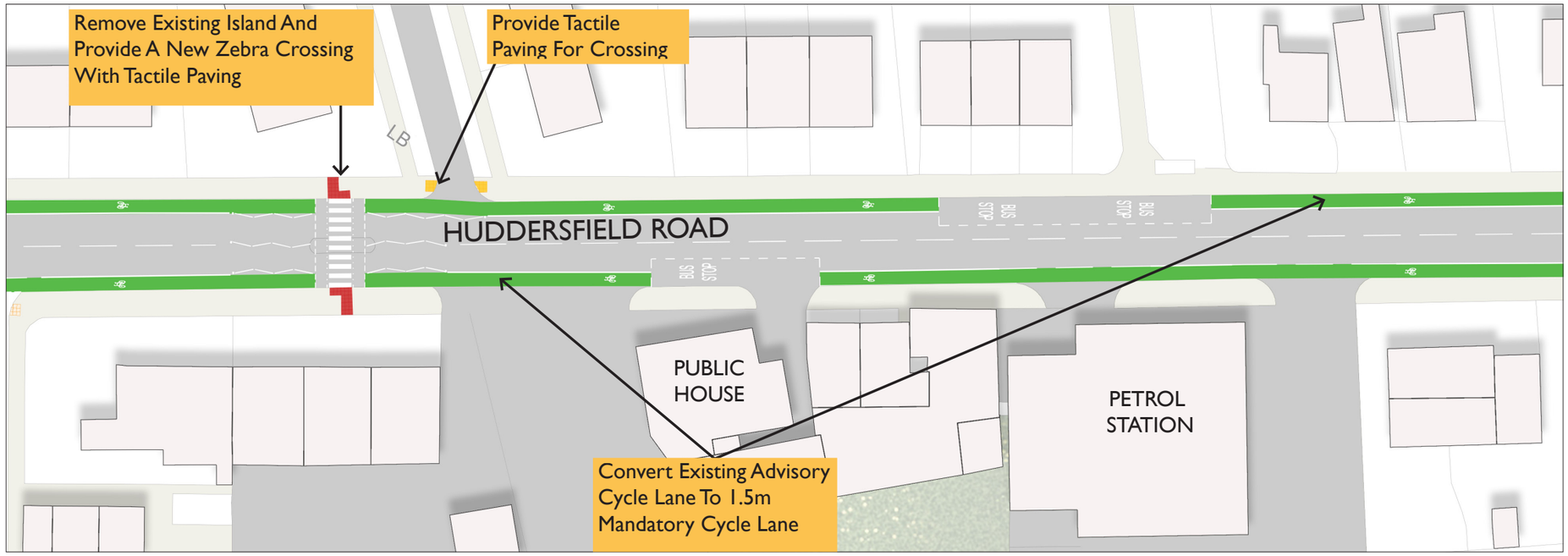
Connecting Leeds
TRANSFORMING TRAVEL

Section A

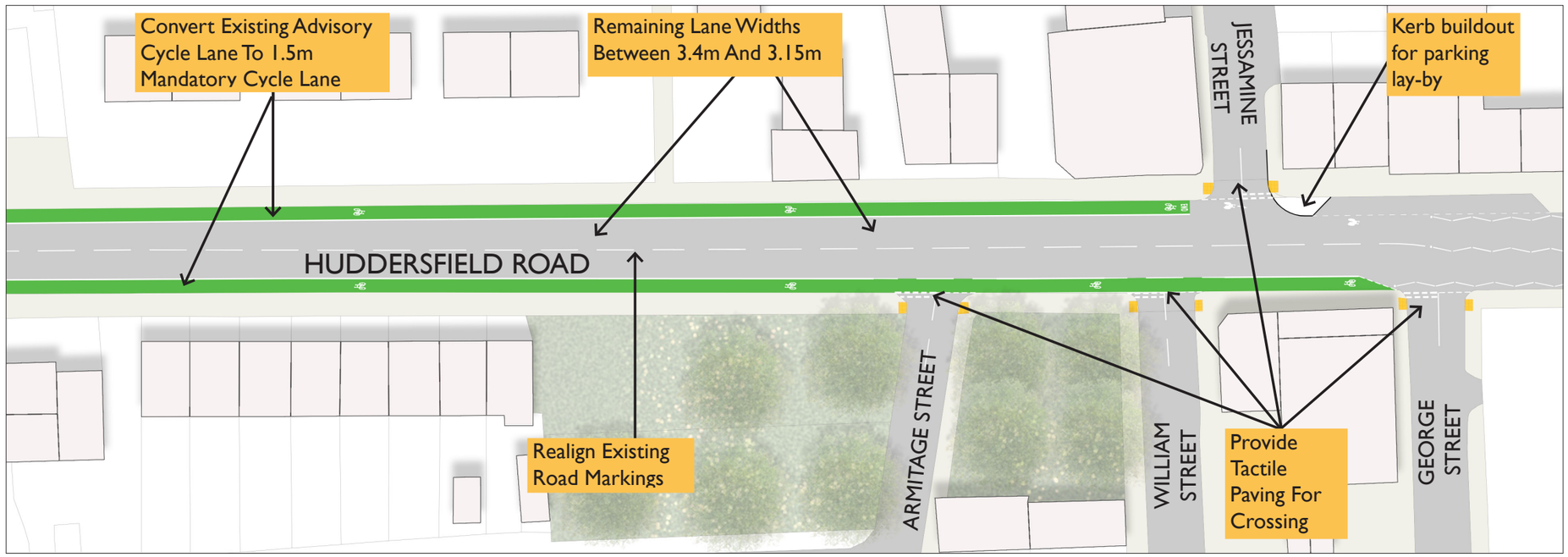
A13 & A14

Mirfield to Ravensthorpe - The Bulls Head to George Street

A13



A14



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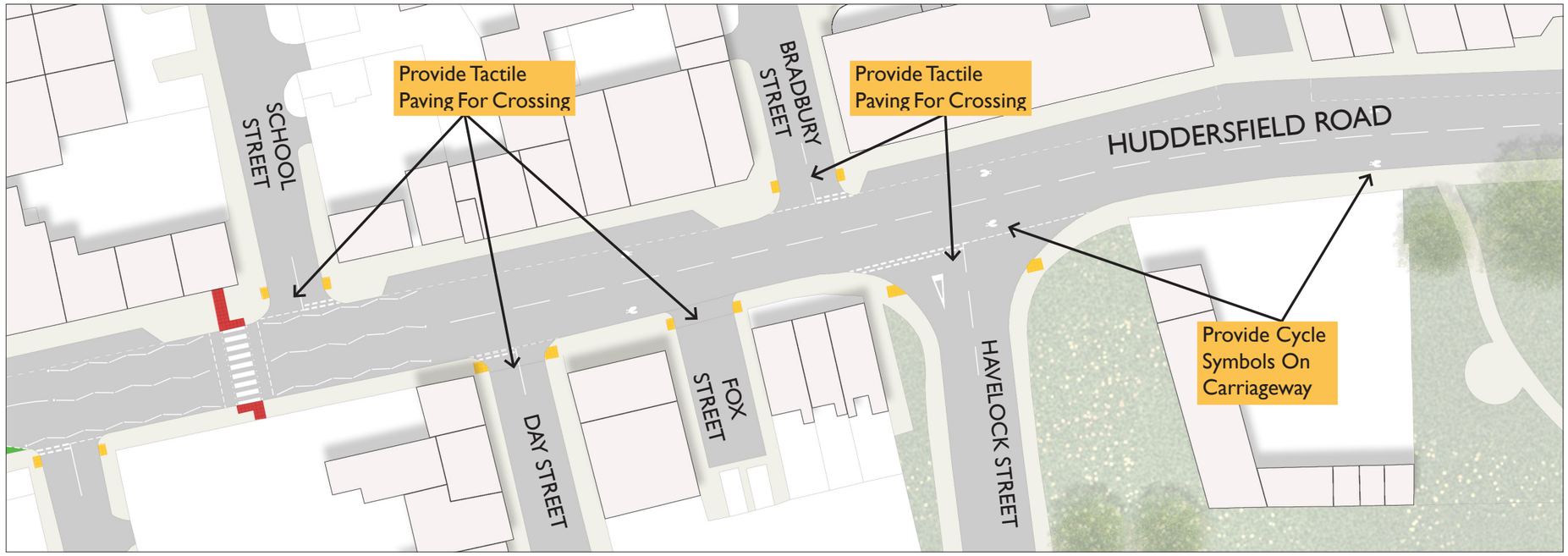
Connecting Leeds — Transforming Travel

Section A

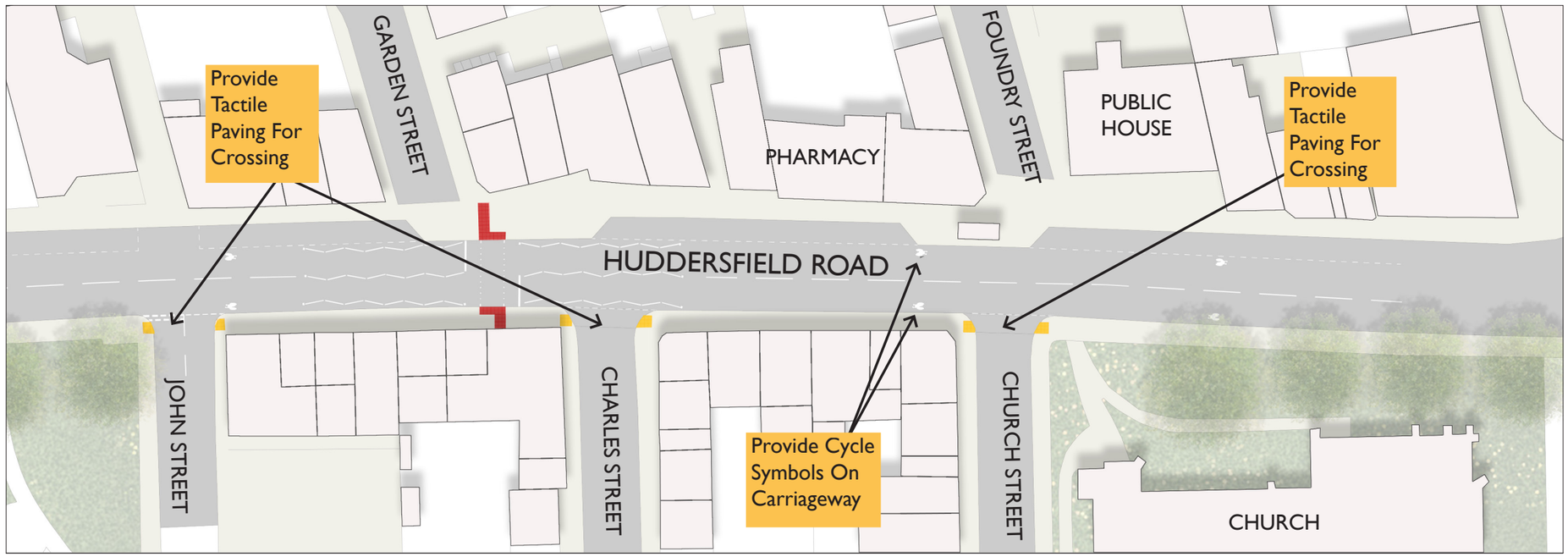
A15 & A16

Mirfield to Ravensthorpe - School Street to St Saviours Church

A15



A16



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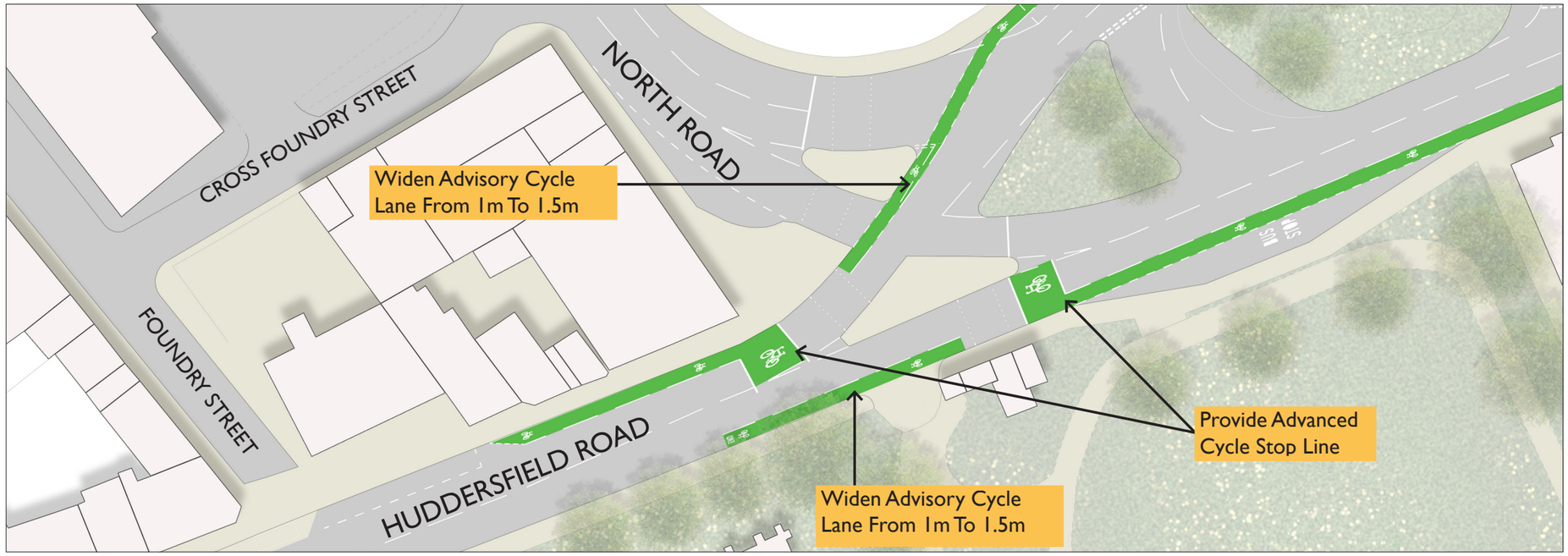
Connecting Leeds — Transforming Travel

Section A

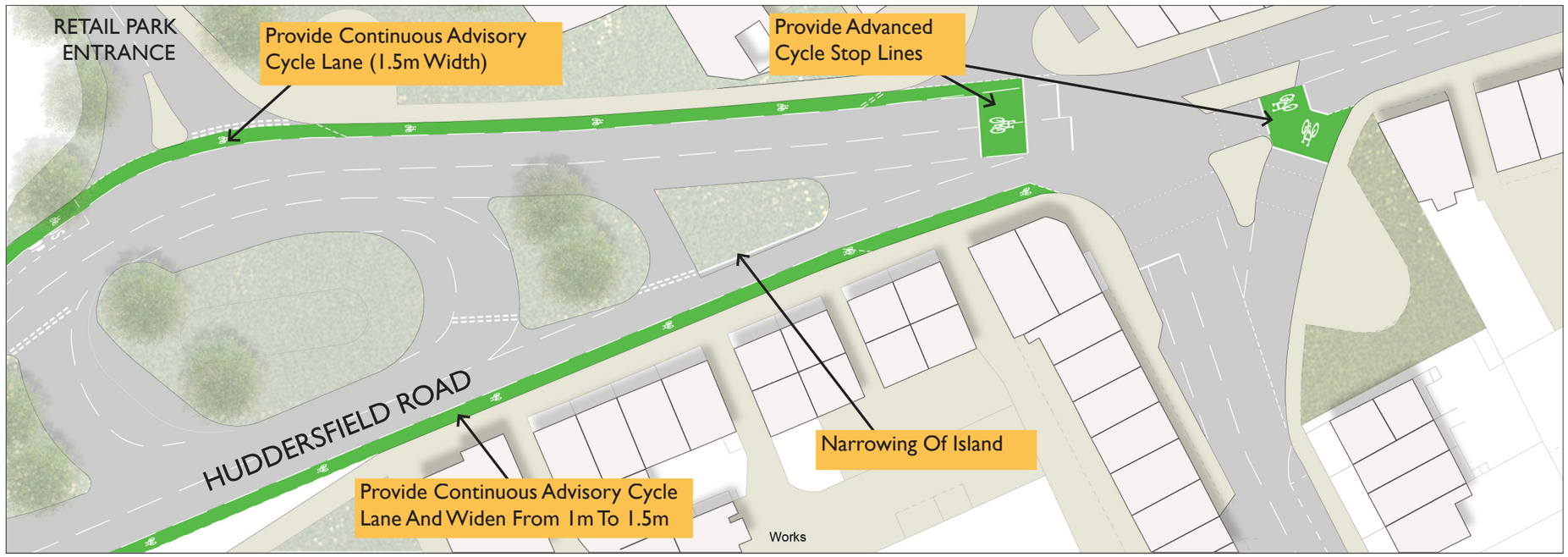
A17 & A18

Ravensthorpe Gyratory

A17



A18



Key

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APPENDIX C

230/230A Grange Moor to Dewsbury

via Whitley - Valid from Saturday, September 4, 2021 to Thursday, November 25, 2021

Monday to Friday - Grange Moor Liley Ln Jubilee Way

	230	230	230	230 [1]	230 [2]	230A	230A		230A		230	230	230
Dewsbury Bus Station stand 2	0625	0725	0827	0927	0927	1024	1124		24		1424	1524	1624
Thornhill Lees Headfield Road Headfield View	--	--	--	--	--	1029	1129	Then at these mins	29	past each hour until	1429	--	--
Thornhill Lees Ouzelwell Rd Ouzelwell Crescent	0632	0732	0834	0934	0934	1034	1134		34		1434	1536	1633
Thornhill Black Horse Inn	0646	0746	0846	0946	0946	1048	1148		48		1448	1548	1645
Whitley (Dewsbury) The Woolpack Inn	0650	0750	0851	0951	0951	1052	1152		52		1452	1552	1649
Grange Moor Liley Ln Jubilee Way	0658	0758	0858	0958	0958	1058	1158		58		1458	1558	1655

[1] Term Time Only [2] Only During School Holidays

Monday to Friday - Dewsbury Bus Station stand 2

	230	230	230A	230A		230A		230	230	230	230	230	230
Grange Moor Liley Ln Jubilee Way	0659	0819	0904	1004		04		1304	1404	1504	1604	1708	1808
Whitley (Dewsbury) The Woolpack Inn	0704	0824	0910	1010	Then at these mins	10	past each hour until	1310	1410	1510	1609	1713	1815
Thornhill Black Horse Inn	0708	0828	0914	1014		14		1314	1414	1514	1614	1718	1819
Thornhill Lees Ouzelwell Rd Ouzelwell Crescent	0720	0840	0926	1026		26		1326	1426	1526	1626	1727	1828
Thornhill Lees Headfield Road Headfield View	--	--	0932	1032		32		1332	--	--	--	--	--
Dewsbury Bus Station stand 2	0730	0850	0940	1040		40		1340	1435	1535	1635	1736	1840

Saturday - Grange Moor Liley Ln Jubilee Way

	230	230	230	230A	230A		230A		230A	230A
Dewsbury Bus Station stand 2	0726	0826	0926	1024	1124		24		1424	1524
Thornhill Lees Headfield Road Headfield View	--	--	--	1029	1129	Then at these mins	29	past each hour until	1429	1529
Thornhill Lees Ouzelwell Rd Ouzelwell Crescent	0734	0834	0934	1034	1134		34		1434	1534
Thornhill Black Horse Inn	0746	0846	0946	1046	1146		46		1446	1546
Whitley (Dewsbury) The Woolpack Inn	0751	0851	0951	1051	1151		51		1451	1551
Grange Moor Liley Ln Jubilee Way	0758	0858	0958	1058	1158		58		1458	1558

Saturday - Dewsbury Bus Station stand 2

	230	230A	230A	230A	230A	230A	230	230	230	230
Grange Moor Liley Ln Jubilee Way	0804	0904	1004	1104	1204	1304	1404	1504	1604	1808
Whitley (Dewsbury) The Woolpack Inn	0809	0909	1009	1110	1210	1310	1410	1510	1610	1814
Thornhill Black Horse Inn	0814	0914	1014	1114	1214	1314	1414	1514	1614	1818
Thornhill Lees Ouzelwell Rd Ouzelwell Crescent	0824	0924	1024	1125	1225	1325	1425	1525	1625	1829
Thornhill Lees Headfield Road Headfield View	--	0928	1028	1131	1231	1331	--	--	--	--
Dewsbury Bus Station stand 2	0832	0936	1036	1139	1239	1339	1434	1534	1634	1838

A LYLES & SON TIMETABLES

Service AL3 - Chickenley		Monday to Friday (Term time only)	
Soothill Lane - Post Office		0757	1606
Soothill Lane - Manor Farm Drive		0801	1602
Soothill Lane - Babes in Wood		0803	1600
Leeds Road - Chidswell Lane		0806	1557
Shaw Cross - Ormsby Way		0808	1555
Leeds Road - Whistler		0810	1550
Bywell Road - Canterbury Road		0812	1548
Pricess Lane		0815	1545
Chickenly - Crown Hotel		0817	1543
Ossett lane		0820	1540
Earlsheaton - Spangled Bull		0822	1538
St Paulinus School		0830	1520
St John Fisher School		0835	1530

Service AL4 - Thornhill

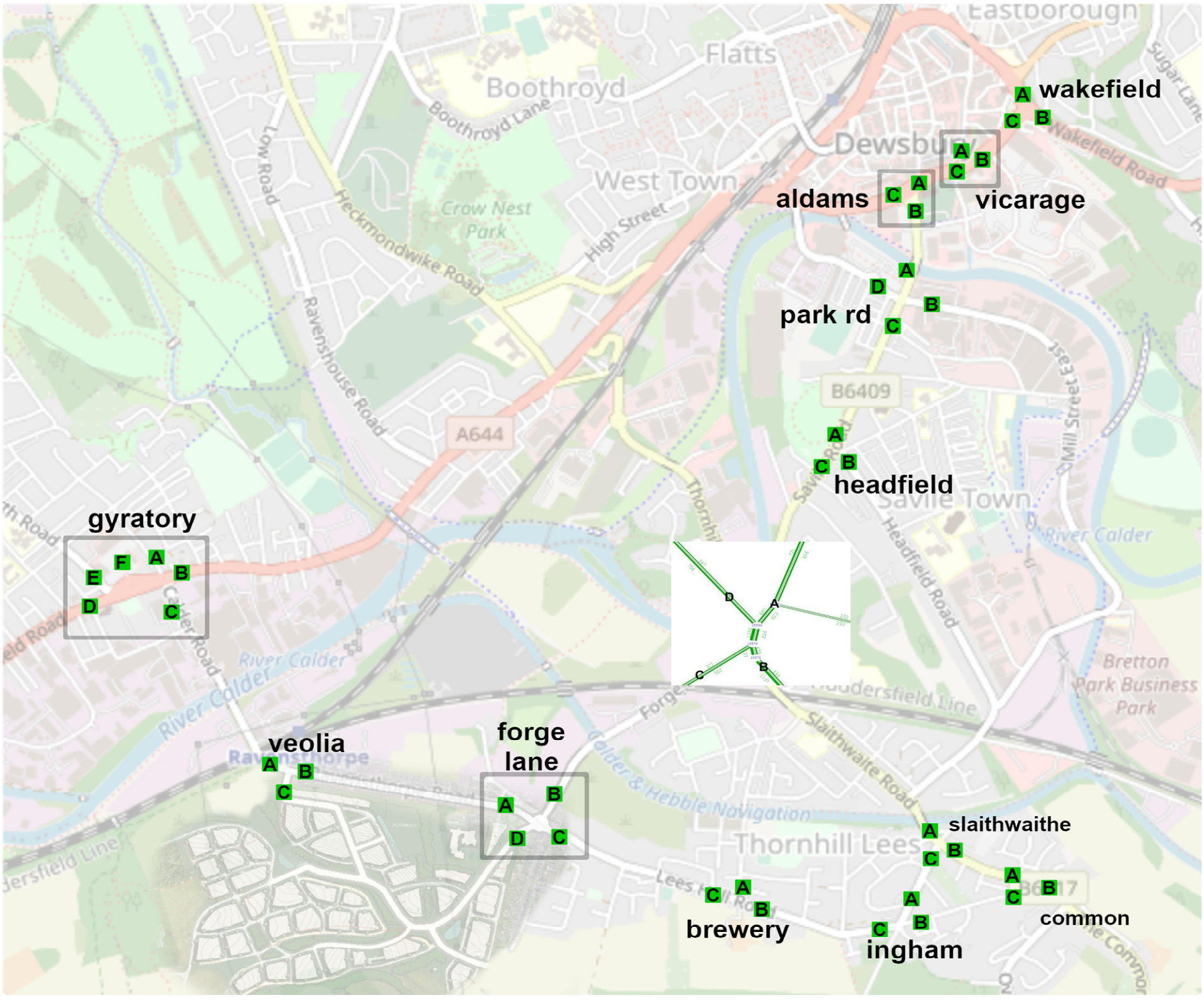
Commonside	0800	1615
Slaithwaite Road - Brewery Lane	0810	1540
Slaithwaite Road - Nelson	0812	1542
The Common	0815	1545
The Combs	0816	1546
Rectory Park	0817	1547
Partridge Crescent	0818	1548
Valley Drive	0820	1550
Chapel Lane	0823	1553
Overthorpe Road - Hill Top Garage	0825	1555
Lees Hall Road	0830	1600
Forge Lane	0835	1605
St Paulinus School	0840	1520
St John Fisher School	0845	1530

APPENDIX D

Info

Date	06/07/2021
Project	Dewsbury Riverside SATURN Modelling
Contents	SATURN turning flos for affected Dewsbury Riverside affected Junctions (+30 2 way flows)
Version	1
Client	Kirklees Council
Project Folder	\\LEEDSFILE\Division-D\2018\Modelling & Appraisal\108446 Dewsbury Riverside SATURN modelling\Work\Forecasting\Model Testing

Tabs	Description
locations	Junctions where greater than 30 2 way flows are observed (between no Dewsbury and with Dewsbury Riverside development)
summary	demand flows at each of the affected junctions with ratio of development to no Development (%)
demand 2023 am	demand flow matrices at each affected Junction at 2023 AM
demand 2030 am	demand flow matrices at each affected Junction at 2023 AM
demand 2023 pm	demand flow matrices at each affected Junction at 2023 PM
demand 2030 pm	demand flow matrices at each affected Junction at 2023 PM


wakefield
A
C
B
aldams
C
A
B
vicarage
A
B
C
park rd
A
D
B
C
headfield
A
C
B
gyratory
F
A
E
B
D
C
veolia
A
B
C
forge
lane
B
A
D
C
slaithwaithe
A
B
C
brewery
C
A
B
ingham
A
C
B
common
A
B
C
D
A
C
B
Boothroyd
Flatts
Dewsbury
West Town
Eastborough
Thornhill Lees
Savile Town
Boothroyd Lane
Low Road
Heckmondwike Road
Crow Nest Park
High Street
Ravenshouse Road
A644
B6409
Wakefield Road
Mill Street East
Sugar Lane
Calder Road
River Calder
Ravensthorpe
Forge
Calder & Hebble Navigation
Huddersfield Line
Slaithwaite Road
Bretton Park Business Park

summary

Junction	2023am		2030am		2023pm		2030pm	
	No Riverside	plus Riverside	No Riverside	plus Riverside	No Riverside	plus Riverside	No Riverside	plus Riverside
Gyratory	2424	2467	2825	2824	2058	2080	2480	2585
Forge Lane	1353	1534	1590	1747	1219	1468	1510	1763
Thornhill	1855	1921	1946	2024	1889	1961	2068	2067
Aldams	2422	2522	2818	2836	2542	2558	2777	2809
Vicarage	2518	2610	2945	2970	2733	2750	3057	3082
Veolia	926	935	1089	1114	900	921	1120	1176
Park Rd	1862	1968	1972	2024	1632	1695	1748	1763
Headfield	1640	1695	1879	1892	1656	1754	1764	1790
Brewery	729	713	794	769	600	647	820	896
Ingham	433	445	558	570	364	428	486	567
Slaithewaithe	1600	1584	1871	1865	1804	1808	1932	1909
Common	1610	1608	1758	1798	1872	1886	2099	2097

Ratio Development to No Development (%)				
Gyratory	102	100	101	104
Forge Lane	113	110	120	117
Thornhill	104	104	104	100
Aldams	104	101	101	101
Vicarage	104	101	101	101
Veolia	101	102	102	105
Park Rd	106	103	104	101
Headfield	103	101	106	101
Brewery	98	97	108	109
Ingham	103	102	118	117
Slaithewaithe	99	100	100	99
Common	100	102	101	100

demand 2023am

No Riverside

Gyratory	A	B	C	D	E	F	Total	Two-way
A	0	0	0	0	0	0	0	0
B	0	0	50	629	120	6	805	1947
C	0	28	0	50	186	10	274	457
D	0	790	0	0	1	20	811	1547
E	0	321	129	52	4	11	517	833
F	0	3	4	5	5	0	17	64
Total	0	1142	183	736	316	47	2424	

Forge Lane	A	B	C	Total	Two-Way
A	0	193	77	270	1213
B	570	0	12	582	903
C	373	128	0	501	590
Total	943	321	89	1353	

Thornhill	A	B	C	D	Total	Two-way
A	0	156	359	110	625	1312
B	410	0	103	625	1138	1592
C	194	106	0	21	321	904
D	83	192	121	0	396	1152
Total	687	454	583	756	2480	

Aldams	A	B	C	Total	Two-way
A	0	737	393	1130	2381
B	677	0	7	684	1455
C	574	34	0	608	1008
Total	1251	771	400	2422	

Vicarage	A	B	C	Total	Two-way
A	0	19	14	33	328
B	94	0	1133	1227	2303
C	201	1057	0	1258	2405
Total	295	1076	1147	2518	

Veolia	A	B
A	0	270
B	656	0
C		
		926

Park Rd	A	B	C	D	Total	Two-way
A	0	235	446	26	707	1552
B	152	0	24	164	340	811
C	678	10	0	270	958	1751
D	15	226	323	0	564	1024
Total	845	471	793	460	2569	

Headfield	A	B	C	Total	Two-way
A	0	107	531	638	1413
B	156	0	125	281	490
C	619	102	0	721	1377
Total	775	209	656	1640	

Brewery	A	B	C	Total	Two-way
A	0	75	107	182	430
B	215	0	253	468	589
C	33	46	0	79	439
Total	248	121	360	729	

Ingham	A	B	C	Total	Two-way
A	0	0	86	86	222
B	31	0	211	242	242
C	105	0	0	105	402
Total	136	0	297	433	

Slaithewaithe	A	B	C	Total	Two-way
A	0	261	92	353	1554
B	1093	0	3	1096	1400
C	108	43	0	151	246
Total	1201	304	95	1600	

Common	A	B	C	Total	Two-way
A	0	304	0	304	1399
B	1095	0	211	1306	1610
C	0	0	0	0	211
Total	1095	304	211	1610	

with Riverside (500 Homes)

Gyratory	A	B	C	D	E	F	Total	Two-way	Difference	350 Units	
A	0	0	0	0	0	0	0	0	0	0	
B	0	0	53	638	112	6	809	1969	22	15	
C	0	29	0	57	202	10	298	483	26	18	
D	0	797	0	0	1	20	818	1570	23	16	
E	0	330	128	52	4	11	525	848	15	11	
F	0	4	4	5	4	0	17	64	0	0	
Total	0	1160	185	752	323	47	2467	% impact	86	1.8%	60 1.2%

Forge Lane	A	B	C	D	Total	Two-way
A	0	163	93	0	256	1181
B	595	0	24	41	660	1074
C	329	126	0	15	470	609
D	1	125	22	0	148	204
Total	925	414	139	56	1534	

Thornhill	A	B	C	D	Total	Two-way	Difference		350 Units	
A	0	147	377	118	642	1374	62		43	
B	358	0	145	602	1105	1524	-68		-48	
C	294	87	0	32	413	1073	169		118	
D	80	185	138	0	403	1155	3		2	
Total	732	419	660	752	2563		3.3%	166	116	2.3%

Aldams	A	B	C	Total	Two-way	Difference		350 Units	
A	0	736	414	1150	2475	94		66	
B	685	0	6	691	1468	13		9	
C	640	41	0	681	1101	93		65	
Total	1325	777	420	2522	% impact	4.1%	200	140	2.9%

Vicarage	A	B	C	Total	Two-way	Difference		350 Units	
A	0	19	8	27	366	38		27	
B	98	0	1160	1258	2361	58		41	
C	241	1084	0	1325	2493	88		62	
Total	339	1103	1168	2610	% impact	3.7%	184	129	2.6%

Veolia	A	B	C	Total	Two-way
A	0	254	8	262	934
B	635	0	0	635	890
C	37	1	0	38	46
	672	255	8	935	

Park Rd	A	B	C	D	Total	Two-way	Difference		350 Units	
A	0	234	456	9	699	1561	9		6	
B	177	0	24	205	406	881	70		49	
C	671	4	0	327	1002	1791	40		28	
D	14	237	309	0	560	1101	77		54	
Total	862	475	789	541	2667	Impact	3.8%	196	137	2.7%

Headfield	A	B	C	Total	Two-way	Difference		350 Units	
A	0	96	545	641	1460	47		33	
B	158	0	130	288	489	-1		-1	
C	661	105	0	766	1441	64		45	
Total	819	201	675	1695	% impact	3.4%	110	77	2.3%

Brewery	A	B	C	Total	Two-way	Difference		350 Units	
A	0	69	106	175	450	20		14	
B	168	0	214	382	500	-89		-62	
C	107	49	0	156	476	37		26	
Total	275	118	320	713	% impact	-2.2%	-32	-22	-1.5%

Ingham	A	B	C	Total	Two-way	Difference		350 Units	
A	0	0	45	45	230	8		6	
B	33	0	215	248	248	6		4	
C	152	0	0	152	412	10		7	
Total	185	0	260	445	% impact	2.8%	24	17	1.9%

Slaithewaithe	A	B	C	Total	Two-way	Difference		350 Units	
A	0	242	50	292	1526	-28		-20	
B	1092	0	3	1095	1392	-8		-6	
C	142	55	0	197	250	4		3	
Total	1234	297	53	1584	% impact	-1.0%	-32	-22	-0.7%

Common	A	B	C	Total	Two-way	Difference		350 Units	
A	0	296	0	296	1391	-8		-6	
B	1095	0	217	1312	1608	-2		-1	
C	0	0	0	0	217	6		4	
Total	1095	296	217	1608	% impact	-0.1%	-4	-3	-0.1%

demand 2030am

No Riverside

Gyratory	A	B	C	D	E	F	Total	Two-way
A	0	0	0	0	0	0	0	0
B	0	0	48	661	118	6	833	2076
C	0	12	0	207	192	11	422	693
D	0	806	0	0	1	18	825	1765
E	0	422	219	66	5	16	728	1048
F	0	3	4	6	4	0	17	68
Total	0	1243	271	940	320	51	2825	

Forge Lane	A	B	C	Total	Two-way
A	0	260	136	396	1438
B	656	0	14	670	1068
C	386	138	0	524	674
Total	1042	398	150	1590	

Thornhill	A	B	C	D	Total	Two-way
A	0	157	387	173	717	1483
B	367	0	110	594	1071	1495
C	271	91	0	36	398	1068
D	128	176	173	0	477	1280
Total	766	424	670	803	2663	

Aldams	A	B	C	Total	Two-way
A	0	783	537	1320	2758
B	714	0	0	714	1552
C	724	55	0	779	1316
Total	1438	838	537	2813	

Vicarage	A	B	C	Total	Two-way
A	0	19	14	33	392
B	97	0	1332	1429	2669
C	262	1221	0	1483	2829
Total	359	1240	1346	2945	

Veolia	A	B
A	0	370
B	719	0
C		
		1089

Park Rd	A	B	C	D	Total	Two-way
A	0	244	507	16	767	1492
B	150	0	25	196	371	886
C	564	15	0	355	934	1866
D	11	256	400	0	667	1234
Total	725	515	932	567	2739	

Headfield	A	B	C	Total	Two-way
A	0	246	537	783	1562
B	151	0	183	334	714
C	628	134	0	762	1482
Total	779	380	720	1879	

Brewery	A	B	C	Total	Two-way
A	0	84	113	197	442
B	200	0	260	460	636
C	45	92	0	137	510
Total	245	176	373	794	

Ingham	A	B	C	Total	Two-way
A	0	0	124	124	361
B	34	0	197	231	231
C	203	0	0	203	524
Total	237	0	321	558	

Slaithewaithe	A	B	C	Total	Two-way
A	0	420	132	552	1795
B	1064	0	3	1067	1560
C	179	73	0	252	387
Total	1243	493	135	1871	

Common	A	B	C	Total	Two-way
A	0	492	0	492	1559
B	1067	0	199	1266	1758
C	0	0	0	0	199
Total	1067	492	199	1758	

with Riverside (500 Homes)

Gyratory	A	B	C	D	E	F	Total	Two-way	Difference		350 Units	
A	0	0	0	0	0	0	0	0	0		0	
B	0	0	53	666	115	6	840	2092	16		11	
C	0	12	0	181	195	11	399	676	-17		-12	
D	0	806	0	0	1	18	825	1748	-17		-12	
E	0	431	220	70	5	17	743	1063	15		11	
F	0	3	4	6	4	0	17	69	1		1	
	0	1252	277	923	320	52	2824	% impact	-2	0.0%	-1	0.0%

Forge Lane	A	B	C	D	Total	Two-way
A	0	271	145	0	416	1421
B	703	0	27	41	771	1255
C	301	113	0	15	429	631
D	1	100	30	0	131	187
Total	1005	484	202	56	1747	

Thornhill	A	B	C	D	Total	Two-way	Difference		350 Units	
A	0	153	399	172	724	1474	-9		-6	
B	284	0	180	587	1051	1459	-36		-25	
C	335	90	0	60	485	1256	188		132	
D	131	165	192	0	488	1307	27		19	
Total	750	408	771	819	2748	% impact	3.2%	170	119	2.2%

Aldams	A	B	C	Total	Two-way	Difference		350 Units	
A	0	784	541	1325	2780	22		15	
B	720	0	0	720	1560	8		6	
C	735	56	0	791	1332	16		11	
Total	1455	840	541	2836	% impact	0.8%	46	32	0.6%

Vicarage	A	B	C	Total	Two-way	Difference		350 Units	
A	0	17	11	28	393	1		1	
B	102	0	1340	1442	2696	27		19	
C	263	1237	0	1500	2851	22		15	
Total	365	1254	1351	2970	% impact	0.8%	50	35	0.6%

Veolia	A	B	C	Total	Two-way
A	0	370	9	379	1092
B	678	0	0	678	1070
C	35	22	0	57	66
	713	392	9		

Park Rd	A	B	C	D	Total	Two-way	Difference		350 Units	
A	0	244	508	16	768	1506	14		10	
B	168	0	24	216	408	929	43		30	
C	559	16	0	368	943	1876	10		7	
D	11	261	401	0	673	1273	39		27	
Total	738	521	933	600	2792	Impact	1.9%	106	74	1.4%

Headfield	A	B	C	Total	Two-way	Difference		350 Units	
A	0	241	546	787	1569	7		5	
B	169	0	181	350	733	19		13	
C	613	142	0	755	1482	0		0	
Total	782	383	727	1892	% impact	0.7%	26	18	0.5%

Brewery	A	B	C	Total	Two-way	Difference		350 Units	
A	0	99	102	201	493	51		36	
B	141	0	186	327	516	-120		-84	
C	151	90	0	241	529	19		13	
Total	292	189	288	769	% impact	-3.1%	-50	-35	-2.2%

Ingham	A	B	C	Total	Two-way	Difference		350 Units	
A	0	0	55	55	371	10		7	
B	37	0	199	236	236	5		4	
C	279	0	0	279	533	9		6	
Total	316	0	254	570	% impact	2.2%	24	17	1.5%

Slaithewaithe	A	B	C	Total	Two-way	Difference		350 Units	
A	0	435	60	495	1742	-53		-37	
B	1039	0	3	1042	1597	37		26	
C	208	120	0	328	391	4		3	
Total	1247	555	63	1865	% impact	-0.3%	-12	-8	-0.2%

Common	A	B	C	Total	Two-way	Difference		350 Units	
A	0	554	0	554	1595	36		25	
B	1041	0	203	1244	1798	40		28	
C	0	0	0	0	203	4		3	
Total	1041	554	203	1798	% impact	2.3%	80	56	1.6%

demand 2023pm

No Riverside

Gyratory	A	B	C	D	E	F	Total	Two-way
A	0	0	0	0	0	0	0	0
B	0	0	74	610	154	4	842	1681
C	0	28	0	0	192	9	229	451
D	0	705	0	0	1	4	710	1336
E	0	97	142	2	0	1	242	595
F	0	9	6	14	6	0	35	53
Total	0	839	222	626	353	18	2058	

Forge Lane	A	B	C	Total	Two-way
A	0	320	215	535	1150
B	407	0	24	431	796
C	208	45	0	253	492
Total	615	365	239	1219	

Thornhill	A	B	C	D	Total	Two-way
A	0	235	203	98	536	1161
B	307	0	204	435	946	1729
C	271	40	0	53	364	795
D	47	508	24	0	579	1165
Total	625	783	431	586	2425	

Aldams	A	B	C	Total	Two-way
A	0	719	552	1271	2462
B	661	0	26	687	1460
C	530	54	0	584	1162
Total	1191	773	578	2542	

Vicarage	A	B	C	Total	Two-way
A	0	51	26	77	359
B	89	0	1269	1358	2514
C	193	1105	0	1298	2593
Total	282	1156	1295	2733	

Veolia	A	B
A	0	337
B	563	0
C		
		1800

Park Rd	A	B	C	D	Total	Two-way
A	0	227	463	47	737	1448
B	232	0	14	164	410	851
C	457	22	0	250	729	1485
D	22	192	279	0	493	954
Total	711	441	756	461	2369	

Headfield	A	B	C	Total	Two-way
A	0	321	399	720	1351
B	115	0	207	322	741
C	516	98	0	614	1220
Total	631	419	606	1656	

Brewery	A	B	C	Total	Two-way
A	0	90	88	178	388
B	105	0	118	223	407
C	105	94	0	199	405
Total	210	184	206	600	

Ingham	A	B	C	Total	Two-way
A	0	0	36	36	225
B	20	0	139	159	159
C	169	0	0	169	344
Total	189	0	175	364	

Slaithewaithe	A	B	C	Total	Two-way
A	0	952	44	996	1661
B	611	0	6	617	1706
C	54	137	0	191	241
Total	665	1089	50	1804	

Common	A	B	C	Total	Two-way
A	0	1089	0	1089	1706
B	617	0	166	783	1872
C	0	0	0	0	166
Total	617	1089	166	1872	

with Riverside (500 Homes)

Gyratory	A	B	C	D	E	F	Total	Two-way	Difference	350 Units	
A	0	0	0	0	0	0	0	0	0	0	
B	0	0	76	613	157	4	850	1691	10	7	
C	0	28	0	0	187	9	224	465	14	10	
D	0	707	0	0	1	4	712	1341	5	4	
E	0	97	158	2	0	1	258	609	14	10	
F	0	9	7	14	6	0	36	54	1	1	
Total	0	841	241	629	351	18	2080	% impact	44	1.1%	31	0.7%

Forge Lane	A	B	C	D	Total	Two-way
A	0	318	218	2	538	1128
B	376	0	51	112	539	992
C	214	71	0	20	305	596
D	0	64	22	0	86	220
Total	590	453	291	134	1468	

Thornhill	A	B	C	D	Total	Two-way	Difference	350 Units
A	0	204	243	107	554	1228	67	47
B	285	0	212	421	918	1620	-109	-76
C	339	41	0	73	453	991	196	137
D	50	457	83	0	590	1191	26	18
Total	674	702	538	601	2515	% impact	3.7%	180	126	2.6%

Aldams	A	B	C	Total	Two-way	Difference	350 Units
A	0	719	555	1274	2479	17	12
B	666	0	26	692	1464	4	3
C	539	53	0	592	1173	11	8
Total	1205	772	581	2558	% impact	0.6%	32	22	0.4%

Vicarage	A	B	C	Total	Two-way	Difference	350 Units
A	0	50	27	77	369	10	7
B	92	0	1272	1364	2523	9	6
C	200	1109	0	1309	2608	15	11
Total	292	1159	1299	2750	% impact	0.6%	34	24	0.4%

Veolia	A	B	C	Total	Two-way
A	0	338	28	366	920
B	538	0	1	539	877
C	16	0	0	16	45
	554	338	29	921	

Park Rd	A	B	C	D	Total	Two-way	Difference	350 Units
A	0	230	467	39	736	1475	27	19
B	231	0	15	165	411	852	1	1
C	486	22	0	262	770	1555	70	49
D	22	189	303	0	514	980	26	18
Total	739	441	785	466	2431	Impact	2.6%	124	87	1.8%

Headfield	A	B	C	Total	Two-way	Difference	350 Units
A	0	350	404	754	1431	80	56
B	115	0	221	336	788	47	33
C	562	102	0	664	1289	69	48
Total	677	452	625	1754	% impact	5.9%	196	137	4.1%

Brewery	A	B	C	Total	Two-way	Difference	350 Units
A	0	78	92	170	382	-6	-4
B	105	0	150	255	448	41	29
C	107	115	0	222	464	59	41
Total	212	193	242	647	% impact	7.8%	94	66	5.5%

Ingham	A	B	C	Total	Two-way	Difference	350 Units
A	0	0	52	52	261	36	25
B	19	0	167	186	186	27	19
C	190	0	0	190	409	65	46
Total	209	0	219	428	% impact	17.6%	128	90	12.3%

Slaithewaithe	A	B	C	Total	Two-way	Difference	350 Units
A	0	933	60	993	1645	-16	-11
B	597	0	6	603	1693	-13	-9
C	55	157	0	212	278	37	26
Total	652	1090	66	1808	% impact	0.2%	8	6	0.2%

Common	A	B	C	Total	Two-way	Difference	350 Units
A	0	1089	0	1089	1692	-14	-10
B	603	0	194	797	1886	14	10
C	0	0	0	0	194	28	20
Total	603	1089	194	1886	% impact	0.7%	28	20	0.5%

demand 2030pm

No Riverside

Gyratory	A	B	C	D	E	F	Total	Two-way
A	0	0	0	0	0	0	0	0
B	0	0	75	691	106	4	876	1837
C	0	27	0	108	219	9	363	714
D	0	746	0	0	1	4	751	1571
E	0	178	269	3	0	1	451	781
F	0	10	7	18	4	0	39	57
Total	0	961	351	820	330	18	2480	

Forge Lane	A	B	C	Total	Two-way
A	0	383	333	716	1433
B	435	0	27	462	895
C	282	50	0	332	692
Total	717	433	360	1510	

Thornhill	A	B	C	D	Total	Two-way
A	0	249	202	147	598	1262
B	300	0	220	449	969	1814
C	276	57	0	99	432	894
D	88	539	40	0	667	1362
Total	664	845	462	695	2666	

Aldams	A	B	C	Total	Two-way
A	0	704	576	1280	2702
B	871	0	0	871	1650
C	551	75	0	626	1202
Total	1422	779	576	2777	

Vicarage	A	B	C	Total	Two-way
A	0	53	30	83	506
B	134	0	1278	1412	2738
C	289	1273	0	1562	2870
Total	423	1326	1308	3057	

Veolia	A	B
A	0	484
B	636	0
C		
		1120

Park Rd	A	B	C	D	Total	Two-way
A	0	243	429	83	755	1424
B	213	0	2	210	425	894
C	389	28	0	313	730	1489
D	67	198	328	0	593	1199
Total	669	469	759	606	2503	

Headfield	A	B	C	Total	Two-way
A	0	348	385	733	1378
B	118	0	269	387	852
C	527	117	0	644	1298
Total	645	465	654	1764	

Brewery	A	B	C	Total	Two-way
A	0	111	101	212	455
B	114	0	175	289	590
C	129	190	0	319	595
Total	243	301	276	820	

Ingham	A	B	C	Total	Two-way
A	0	0	23	23	287
B	21	0	199	220	220
C	243	0	0	243	465
Total	264	0	222	486	

Slaithewaithe	A	B	C	Total	Two-way
A	0	1029	32	1061	1687
B	598	0	7	605	1872
C	28	238	0	266	305
Total	626	1267	39	1932	

Common	A	B	C	Total	Two-way
A	0	1266	0	1266	1871
B	605	0	228	833	2099
C	0	0	0	0	228
Total	605	1266	228	2099	

with Riverside (500 Homes)

Gyratory	A	B	C	D	E	F	Total	Two-way	Difference		350 Units		
A	0	0	0	0	0	0	0	0	0		0		
B	0	0	98	698	104	4	904	1902	65		46		
C	0	36	0	134	209	9	388	786	72		50		25
D	0	752	0	0	1	4	757	1611	40		28		
E	0	199	292	3	0	1	495	812	31		22		
F	0	11	8	19	3	0	41	59	2		1		
Total	0	998	398	854	317	18	2585	% impact	210	4.2%	147	3.0%	

Forge Lane	A	B	C	D	Total	Two-way
A	0	369	357	2	728	1426
B	408	0	49	105	562	1070
C	289	78	0	20	387	817
D	1	61	24	0	86	213
Total	698	508	430	127	1763	

Thornhill	A	B	C	D	Total	Two-way	Difference		350 Units		
A	0	227	252	128	607	1290	28		20		
B	281	0	227	402	910	1693	-121		-85		
C	333	57	0	117	507	1068	174		122		
D	69	499	82	0	650	1297	-65		-46		
Total	683	783	561	647	2674	% impact	0.3%	16	11	0.2%	

Aldams	A	B	C	Total	Two-way	Difference		350 Units	
A	0	714	580	1294	2734	32		22	
B	779	0	0	779	1568	-82		-57	
C	661	75	0	736	1316	114		80	
Total	1440	789	580	2809	% impact	1.2%	64	45	0.8%

Vicarage	A	B	C	Total	Two-way	Difference		350 Units	
A	0	53	30	83	499	-7		-5	
B	131	0	1292	1423	2767	29		20	
C	285	1291	0	1576	2898	28		20	
Total	416	1344	1322	3082	% impact	0.8%	50	35	0.6%

Veolia	A	B	C	Total	Two-way
A	0	498	37	535	1176
B	622	0	0	622	1120
C	19	0	0	19	56
	641	498	37	1176	

Park Rd	A	B	C	D	Total	Two-way	Difference		350 Units	
A	0	242	453	71	766	1461	37		26	
B	230	0	3	196	429	905	11		8	
C	428	23	0	307	758	1542	53		37	
D	37	211	328	0	576	1150	-49		-34	
Total	695	476	784	574	2529	Impact	1.0%	52	36	0.7%

Headfield	A	B	C	Total	Two-way	Difference		350 Units	
A	0	341	414	755	1415	37		26	
B	107	0	261	368	823	-29		-20	
C	553	114	0	667	1342	44		31	
Total	660	455	675	1790	% impact	1.5%	52	36	1.0%

Brewery	A	B	C	Total	Two-way	Difference		350 Units	
A	0	105	105	210	453	-2		-1	
B	112	0	213	325	660	70		49	
C	131	230	0	361	679	84		59	
Total	243	335	318	896	% impact	9.3%	152	106	6.5%

Ingham	A	B	C	Total	Two-way	Difference		350 Units	
A	0	0	35	35	337	50		35	
B	20	0	230	250	250	30		21	
C	282	0	0	282	547	82		57	
Total	302	0	265	567	% impact	16.7%	162	113	11.7%

Slaithewaithe	A	B	C	Total	Two-way	Difference		350 Units	
A	0	1004	43	1047	1626	-61		-43	
B	551	0	7	558	1838	-34		-24	
C	28	276	0	304	354	49		34	
Total	579	1280	50	1909	% impact	-1.2%	-46	-32	-0.8%

Common	A	B	C	Total	Two-way	Difference		350 Units	
A	0	1281	0	1281	1838	-33		-23	
B	557	0	259	816	2097	-2		-1	
C	0	0	0	0	259	31		22	
Total	557	1281	259	2097	% impact	-0.1%	-4	-3	-0.1%

summary

	Junction	2043am		2043pm	
		No Riverside	plus Riverside	No Riverside	plus Riverside
1	Forge Lane	1834	2002	1676	1559
2	Western Gateway		1534		1560
3	Thornhill	2012	2280	2139	2284
4	Mill Lane	1716	2638	1528	2304

	Ratio Development to No Development (%)		
1	Forge Lane	109	93
2	Western Gateway	-	-
3	Thornhill	113	107
4	Mill Lane	154	151

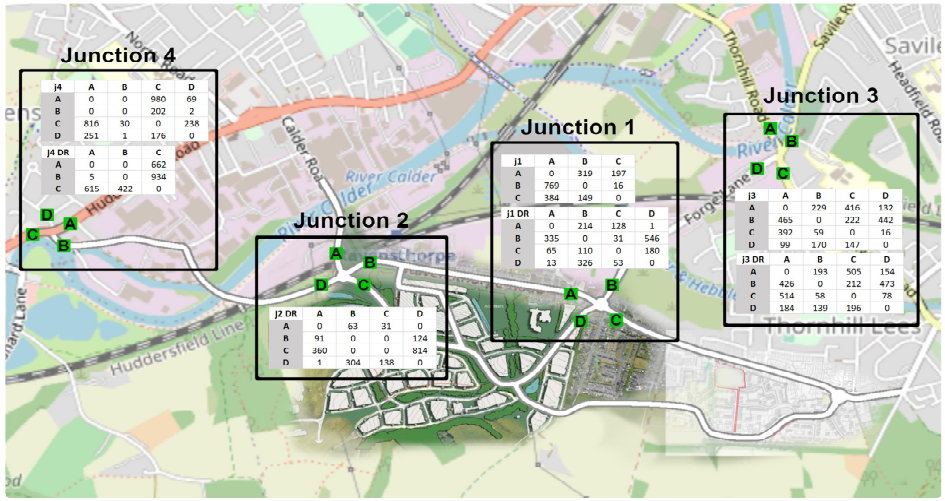
demand 2048am - rpt

No Riverside

Forge Lane	j1	A	B	C		
	A	0	319	197		
	B	769	0	16		
	C	384	149	0	1834	
Western Gateway						
Thornhill Road	j3	A	B	C	D	
	A	0	229	416	132	
	B	465	0	222	442	
	C	392	59	0	16	
	D	99	170	147	0	2012
Mill Lane / A644	j4	A	B	C	D	
	A	0	0	980	69	
	B	0	0	202	2	
	C	816	30	0	238	
	D	251	1	176	0	1716

with Riverside

j1 DR	A	B	C	D	
A	0	214	128	1	
B	335	0	31	546	
C	65	110	0	180	
D	13	326	53	0	2002
j2 DR	A	B	C	D	
A	0	63	31	0	
B	91	0	0	124	
C	360	0	0	814	
D	1	304	138	0	1832
j3 DR	A	B	C	D	
A	0	193	505	154	
B	426	0	212	473	
C	514	58	0	78	
D	184	139	196	0	2280
j4 DR	A	B	C		
A	0	0	662		
B	5	0	934		
C	615	422	0	2638	



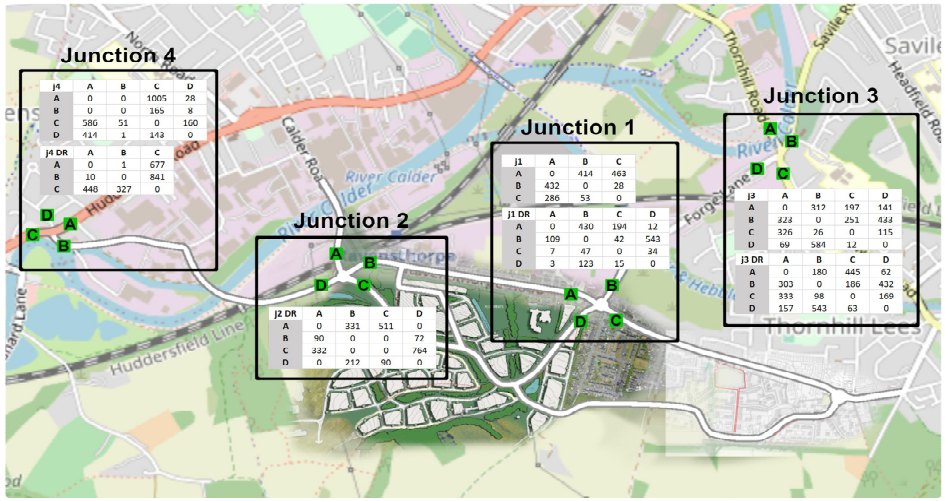
demand 2048pm - rpt

No Riverside

Forge Lane	j1	A	B	C		
	A	0	414	463		
	B	432	0	28		
	C	286	53	0	1676	
Western Gateway						
Thornhill Road	j3	A	B	C	D	
	A	0	312	197	141	
	B	323	0	251	433	
	C	326	26	0	115	
	D	69	584	12	0	2139
Mill Lane / A644	j4	A	B	C	D	
	A	0	0	1005	28	
	B	0	0	165	8	
	C	586	51	0	160	
	D	414	1	143	0	1528

with Riverside

j1 DR	A	B	C	D	
A	0	430	194	12	
B	109	0	42	543	
C	7	47	0	34	
D	3	123	15	0	1559
j2 DR	A	B	C	D	
A	0	331	511	0	
B	90	0	0	72	
C	332	0	0	764	
D	0	212	90	0	1560
j3 DR	A	B	C	D	
A	0	180	445	62	
B	303	0	186	432	
C	333	98	0	169	
D	157	543	63	0	2284
j4 DR	A	B	C		
A	0	1	677		
B	10	0	841		
C	448	327	0	2304	



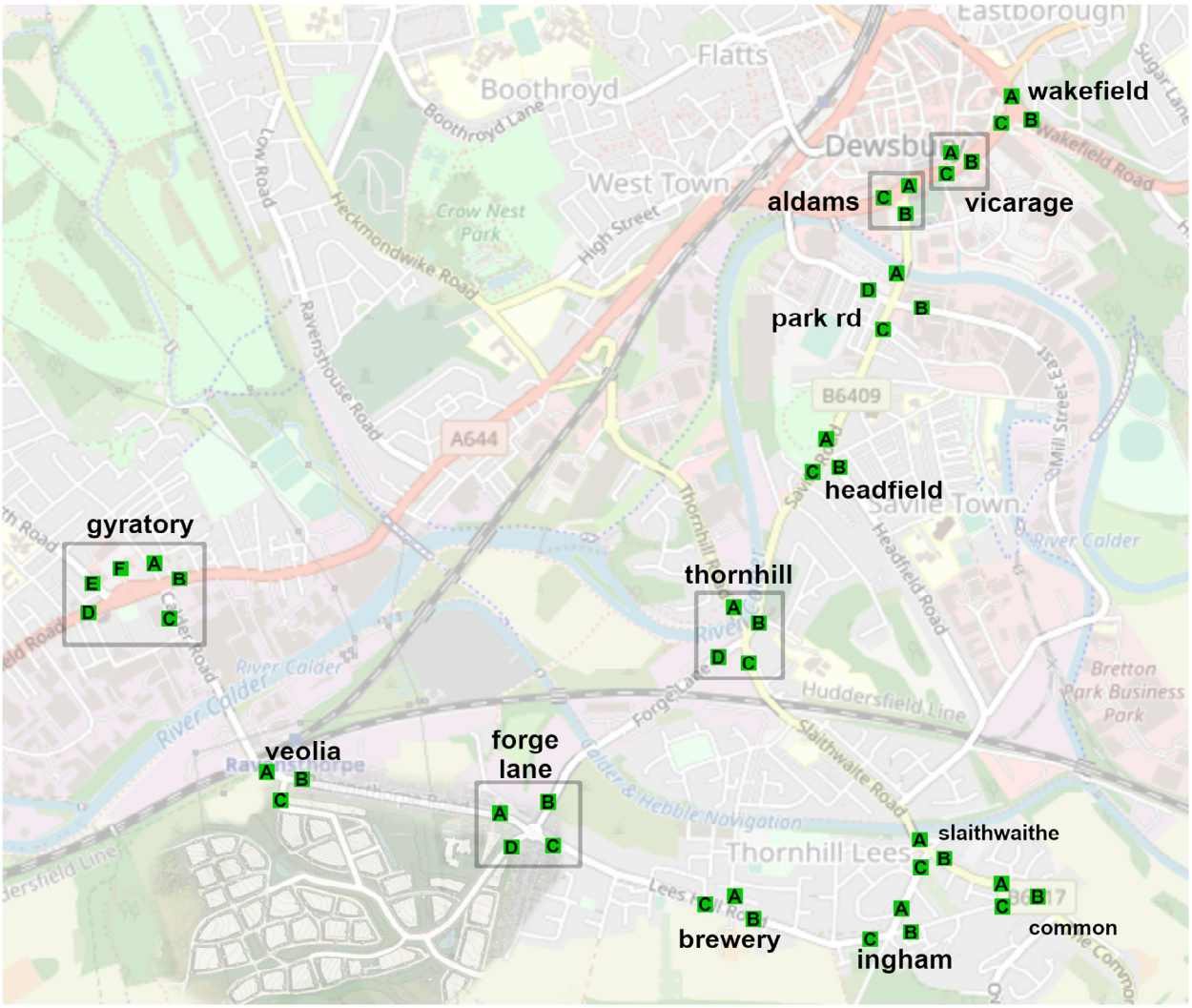
plot flow comparison

j1 DR	A	B	C	D		plot
A	0	214	128	1	343	344
B	335	0	31	546	912	913
C	65	110	0	180	355	353
D	13	326	53	0	392	386
	413	650	212	727	2002	
plot	413	643	213	726		

APPENDIX E

Date	06/07/2021
Project	Dewsbury Riverside SATURN Modelling
Contents	SATURN turning flos for affected Dewsbury Riverside affected Junctions (+30 2 way flows)
Version	1
Client	Kirklees Council
Project Folder	\\LEEDSFILE\Division-D\2018\Modelling & Appraisal\108446 Dewsbury Riverside SATURN modelling\Work\Forecasting\Model Testing

Tabs	Description
locations	Junctions where greater than 30 2 way flows are observed (between no Dewsbury and with Dewsbury Riverside development)
summary	demand flows at each of the affected junctions with ratio of development to no Development (%)
demand 2023 am	demand flow matrices at each affected Junction at 2023 AM
demand 2030 am	demand flow matrices at each affected Junction at 2023 AM
demand 2023 pm	demand flow matrices at each affected Junction at 2023 PM
demand 2030 pm	demand flow matrices at each affected Junction at 2023 PM


wakefield
vicarage
aldams
park rd
headfield
thornhill
gyratory
veolia
forge lane
slaithwaithe
brewery
ingham
common
Flatts
Boothroyd
West Town
Dewsbury
Eastborough
Savile Town
Thornhill Lees
Crow Nest Park
Bretton Park Business Park
A644
B6409
River Calder
Huddersfield Line
Calder & Hebble Navigation
Boothroyd Lane
Low Road
Heckmondwike Road
Ravensthorpe Road
High Street
Wakefield Road
Mill Street East
Headfield Road
Slaithwaite Road
Forge Lane
Calder Road

summary

Junction	2023am		2030am		2023pm		2030pm	
	No Riverside	plus Riverside	No Riverside	plus Riverside	No Riverside	plus Riverside	No Riverside	plus Riverside
Gyratory	2424	2467	2825	2824	2058	2080	2480	2585
Forge Lane	1353	1534	1590	1747	1219	1468	1510	1763
Thornhill	1855	1921	1946	2024	1889	1961	2068	2067
Aldams	2422	2522	2818	2836	2542	2558	2777	2809
Vicarage	2518	2610	2945	2970	2733	2750	3057	3082
Veolia	926	935	1089	1114	900	921	1120	1176
Park Rd	1862	1968	1972	2024	1632	1695	1748	1763
Headfield	1640	1695	1879	1892	1656	1754	1764	1790
Brewery	729	713	794	769	600	647	820	896
Ingham	433	445	558	570	364	428	486	567
Slaithewaithe	1600	1584	1871	1865	1804	1808	1932	1909
Common	1610	1608	1758	1798	1872	1886	2099	2097

Ratio Development to No Development (%)			
Gyratory	102	100	101	104
Forge Lane	113	110	120	117
Thornhill	104	104	104	100
Aldams	104	101	101	101
Vicarage	104	101	101	101
Veolia	101	102	102	105
Park Rd	106	103	104	101
Headfield	103	101	106	101
Brewery	98	97	108	109
Ingham	103	102	118	117
Slaithewaithe	99	100	100	99
Common	100	102	101	100

demand 2023am

No Riverside

Gyratory	A	B	C	D	E	F	
A	0	0	0	0	0	0	
B	0	0	50	629	120	6	
C	0	28	0	50	186	10	
D	0	790	0	0	1	20	
E	0	321	129	52	4	11	
F	0	3	4	5	5	0	2424

Forge Lane	A	B	C				
A	0	193	77				
B	570	0	12				
C	373	128	0	1353			

Thornhill	A	B	C	D			
A	0	156	359	110			
B	410	0	103	625			
C	194	106	0	21			
D	83	192	121	0	2480		

Aldams	A	B	C				
A	0	737	393				
B	677	0	7				
C	574	34	0	2422			

Vicarage	A	B	C				
A	0	19	14				
B	94	0	1133				
C	201	1057	0	2518			

Veolia	A	B					
A	0	270					
B	656	0					
C				926			

Park Rd	A	B	C	D			
A	0	235	446	26			
B	152	0	24	164			
C	678	10	0	270			
D	15	226	323	0	2569		

Headfield	A	B	C				
A	0	107	531				
B	156	0	125				
C	619	102	0	1640			

Brewery	A	B	C				
A	0	75	107				
B	215	0	253				
C	33	46	0	729			

Ingham	A	B	C				
A	0	0	86				
B	31	0	211				
C	105	0	0	433			

Slaithewaithe	A	B	C				
A	0	261	92				
B	1093	0	3				
C	108	43	0	1600			

Common	A	B	C				
A	0	304	0				
B	1095	0	211				
C	0	0	0	1610			

with Riverside (500 Homes)

Gyratory	A	B	C	D	E	F	
A	0	0	0	0	0	0	
B	0	0	53	638	112	6	
C	0	29	0	57	202	10	
D	0	797	0	0	1	20	
E	0	330	128	52	4	11	
F	0	4	4	5	4	0	2467

Forge Lane	A	B	C	D			
A	0	163	93	0			
B	595	0	24	41			
C	329	126	0	15			
D	1	125	22	0	1534		

Thornhill	A	B	C	D			
A	0	147	377	118			
B	358	0	145	602			
C	294	87	0	32			
D	80	185	138	0	2563		

Aldams	A	B	C				
A	0	736	414				
B	685	0	6				
C	640	41	0	2522			

Vicarage	A	B	C				
A	0	19	8				
B	98	0	1160				
C	241	1084	0	2610			

Veolia	A	B	C				
A	0	254	8				
B	635	0	0				
C	37	1	0	935			

Park Rd	A	B	C	D			
A	0	234	456	9			
B	177	0	24	205			
C	671	4	0	327			
D	14	237	309	0	2667		

Headfield	A	B	C				
A	0	96	545				
B	158	0	130				
C	661	105	0	1695			

Brewery	A	B	C				
A	0	69	106				
B	168	0	214				
C	107	49	0	713			

Ingham	A	B	C				
A	0	0	45				
B	33	0	215				
C	152	0	0	445			

Slaithewaithe	A	B	C				
A	0	242	50				
B	1092	0	3				
C	142	55	0	1584			

Common	A	B	C				
A	0	296	0				
B	1095	0	217				
C	0	0	0	1608			

demand 2030am

No Riverside

Gyratory	A	B	C	D	E	F	
A	0	0	0	0	0	0	
B	0	0	48	661	118	6	
C	0	12	0	207	192	11	
D	0	806	0	0	1	18	
E	0	422	219	66	5	16	
F	0	3	4	6	4	0	2825

Forge Lane	A	B	C				
A	0	260	136				
B	656	0	14				
C	386	138	0	1590			

Thornhill	A	B	C	D			
A	0	157	387	173			
B	367	0	110	594			
C	271	91	0	36			
D	128	176	173	0	2663		

Aldams	A	B	C				
A	0	783	537				
B	714	0	0				
C	724	55	0	2813			

Vicarage	A	B	C				
A	0	19	14				
B	97	0	1332				
C	262	1221	0	2945			

Veolia	A	B					
A	0	370					
B	719	0					
C				1089			

Park Rd	A	B	C	D			
A	0	244	507	16			
B	150	0	25	196			
C	564	15	0	355			
D	11	256	400	0	2739		

Headfield	A	B	C				
A	0	246	537				
B	151	0	183				
C	628	134	0	1879			

Brewery	A	B	C				
A	0	84	113				
B	200	0	260				
C	45	92	0	794			

Ingham	A	B	C				
A	0	0	124				
B	34	0	197				
C	203	0	0	558			

Slaithewaithe	A	B	C				
A	0	420	132				
B	1064	0	3				
C	179	73	0	1871			

Common	A	B	C				
A	0	492	0				
B	1067	0	199				
C	0	0	0	1758			

with Riverside (500 Homes)

Gyratory	A	B	C	D	E	F	
A	0	0	0	0	0	0	
B	0	0	53	666	115	6	
C	0	12	0	181	195	11	
D	0	806	0	0	1	18	
E	0	431	220	70	5	17	
F	0	3	4	6	4	0	2824

Forge Lane	A	B	C	D			
A	0	271	145	0			
B	703	0	27	41			
C	301	113	0	15			
D	1	100	30	0	1747		

Thornhill	A	B	C	D			
A	0	153	399	172			
B	284	0	180	587			
C	335	90	0	60			
D	131	165	192	0	2748		

Aldams	A	B	C				
A	0	784	541				
B	720	0	0				
C	735	56	0	2836			

Vicarage	A	B	C				
A	0	17	11				
B	102	0	1340				
C	263	1237	0	2970			

Veolia	A	B	C				
A	0	370	9				
B	678	0	0				
C	35	22	0	1114			

Park Rd	A	B	C	D			
A	0	244	508	16			
B	168	0	24	216			
C	559	16	0	368			
D	11	261	401	0	2792		

Headfield	A	B	C				
A	0	241	546				
B	169	0	181				
C	613	142	0	1892			

Brewery	A	B	C				
A	0	99	102				
B	141	0	186				
C	151	90	0	769			

Ingham	A	B	C				
A	0	0	55				
B	37	0	199				
C	279	0	0	570			

Slaithewaithe	A	B	C				
A	0	435	60				
B	1039	0	3				
C	208	120	0	1865			

Common	A	B	C				
A	0	554	0				
B	1041	0	203				
C	0	0	0	1798			

demand 2023pm

No Riverside

Gyratory	A	B	C	D	E	F	
A	0	0	0	0	0	0	
B	0	0	74	610	154	4	
C	0	28	0	0	192	9	
D	0	705	0	0	1	4	
E	0	97	142	2	0	1	
F	0	9	6	14	6	0	2058

Forge Lane	A	B	C			
A	0	320	215			
B	407	0	24			
C	208	45	0	1219		

Thornhill	A	B	C	D	
A	0	235	203	98	
B	307	0	204	435	
C	271	40	0	53	
D	47	508	24	0	2425

Aldams	A	B	C		
A	0	719	552		
B	661	0	26		
C	530	54	0	2542	

Vicarage	A	B	C		
A	0	51	26		
B	89	0	1269		
C	193	1105	0	2733	

Veolia	A	B			
A	0	337			
B	563	0			
C				900	

Park Rd	A	B	C	D	
A	0	227	463	47	
B	232	0	14	164	
C	457	22	0	250	
D	22	192	279	0	2369

Headfield	A	B	C		
A	0	321	399		
B	115	0	207		
C	516	98	0	1656	

Brewery	A	B	C	
A	0	90	88	
B	105	0	118	
C	105	94	0	600

Ingham	A	B	C	
A	0	0	36	
B	20	0	139	
C	169	0	0	364

Slaithewaithe	A	B	C	
A	0	952	44	
B	611	0	6	
C	54	137	0	1804

Common	A	B	C	
A	0	1089	0	
B	617	0	166	
C	0	0	0	1872

with Riverside (500 Homes)

Gyratory	A	B	C	D	E	F	
A	0	0	0	0	0	0	
B	0	0	76	613	157	4	
C	0	28	0	0	187	9	
D	0	707	0	0	1	4	
E	0	97	158	2	0	1	
F	0	9	7	14	6	0	2080

Forge Lane	A	B	C	D	
A	0	318	218	2	
B	376	0	51	112	
C	214	71	0	20	
D	0	64	22	0	1468

Thornhill	A	B	C	D	
A	0	204	243	107	
B	285	0	212	421	
C	339	41	0	73	
D	50	457	83	0	2515

Aldams	A	B	C	
A	0	719	555	
B	666	0	26	
C	539	53	0	2558

Vicarage	A	B	C	
A	0	50	27	
B	92	0	1272	
C	200	1109	0	2750

Veolia	A	B	C	
A	0	338	28	
B	538	0	1	
C	16	0	0	921

Park Rd	A	B	C	D	
A	0	230	467	39	
B	231	0	15	165	
C	486	22	0	262	
D	22	189	303	0	2431

Headfield	A	B	C	
A	0	350	404	
B	115	0	221	
C	562	102	0	1754

Brewery	A	B	C	
A	0	78	92	
B	105	0	150	
C	107	115	0	647

Ingham	A	B	C	
A	0	0	52	
B	19	0	167	
C	190	0	0	428

Slaithewaithe	A	B	C	
A	0	933	60	
B	597	0	6	
C	55	157	0	1808

Common	A	B	C	
A	0	1089	0	
B	603	0	194	
C	0	0	0	1886

demand 2030pm

No Riverside

Gyratory	A	B	C	D	E	F	
A	0	0	0	0	0	0	
B	0	0	75	691	106	4	
C	0	27	0	108	219	9	
D	0	746	0	0	1	4	
E	0	178	269	3	0	1	
F	0	10	7	18	4	0	2480

Forge Lane	A	B	C	
A	0	383	333	
B	435	0	27	
C	282	50	0	1510

Thornhill	A	B	C	D	
A	0	249	202	147	
B	300	0	220	449	
C	276	57	0	99	
D	88	539	40	0	2666

Aldams	A	B	C	
A	0	704	576	
B	871	0	0	
C	551	75	0	2777

Vicarage	A	B	C	
A	0	53	30	
B	134	0	1278	
C	289	1273	0	3057

Veolia	A	B		
A	0	484		
B	636	0		
C				1120

Park Rd	A	B	C	D	
A	0	243	429	83	
B	213	0	2	210	
C	389	28	0	313	
D	67	198	328	0	2503

Headfield	A	B	C	
A	0	348	385	
B	118	0	269	
C	527	117	0	1764

Brewery	A	B	C	
A	0	111	101	
B	114	0	175	
C	129	190	0	820

Ingham	A	B	C	
A	0	0	23	
B	21	0	199	
C	243	0	0	486

Slaithewaithe	A	B	C	
A	0	1029	32	
B	598	0	7	
C	28	238	0	1932

Common	A	B	C	
A	0	1266	0	
B	605	0	228	
C	0	0	0	2099

with Riverside (500 Homes)

Gyratory	A	B	C	D	E	F	
A	0	0	0	0	0	0	
B	0	0	98	698	104	4	
C	0	36	0	134	209	9	
D	0	752	0	0	1	4	
E	0	199	292	3	0	1	
F	0	11	8	19	3	0	2585

Forge Lane	A	B	C	D	
A	0	369	357	2	
B	408	0	49	105	
C	289	78	0	20	
D	1	61	24	0	1763

Thornhill	A	B	C	D	
A	0	227	252	128	
B	281	0	227	402	
C	333	57	0	117	
D	69	499	82	0	2674

Aldams	A	B	C	
A	0	714	580	
B	779	0	0	
C	661	75	0	2809

Vicarage	A	B	C	
A	0	53	30	
B	131	0	1292	
C	285	1291	0	3082

Veolia	A	B	C	
A	0	498	37	
B	622	0	0	
C	19	0	0	1176

Park Rd	A	B	C	D	
A	0	242	453	71	
B	230	0	3	196	
C	428	23	0	307	
D	37	211	328	0	2529

Headfield	A	B	C	
A	0	341	414	
B	107	0	261	
C	553	114	0	1790

Brewery	A	B	C	
A	0	105	105	
B	112	0	213	
C	131	230	0	896

Ingham	A	B	C	
A	0	0	35	
B	20	0	230	
C	282	0	0	567

Slaithewaithe	A	B	C	
A	0	1004	43	
B	551	0	7	
C	28	276	0	1909

Common	A	B	C	
A	0	1281	0	
B	557	0	259	
C	0	0	0	2097

APPENDIX F

Junctions 10

PICADY 10 - Priority Intersection Module

Version: 10.0.1.1519

For sales and distribution information, program advice and maintenance, contact TRL Software:
+44 (0)1344 379777 software@trl.co.uk trlsoftware.com

Filename: 210831 Ravensthorpe Road Initial Access (T Junction).j10
Path: C:\Users\DavidSagstad\Dropbox\Working Back Up\Projects\2020213 Dewsbury Riverside\Analysis\Junction Assessment
Report generation date: 31/08/2021 12:39:14

Summary of junction performance

	AM						PM					
	Set ID	Queue (PCU)	Delay (s)	RFC	LOS	Network Residual Capacity	Set ID	Queue (PCU)	Delay (s)	RFC	LOS	Network Residual Capacity
	2023 With Dev											
Stream B-AC	D1	0.1	8.38	0.09	A	132 %	D2	0.0	7.38	0.03	A	166 %
Stream C-AB		0.0	6.00	0.03	A	[Stream B-AC]		0.2	5.67	0.09	A	[Stream C-AB]
	2030 With Dev											
Stream B-AC	D3	0.2	11.88	0.17	B	63 %	D4	0.0	7.81	0.04	A	103 %
Stream C-AB		0.0	5.49	0.03	A	[Stream B-AC]		0.4	5.22	0.14	A	[Stream C-AB]
	2030 With Dev Test 150 Units											
Stream B-AC							D5	0.1	9.61	0.08	A	98 %
Stream C-AB								0.2	5.76	0.09	A	[Stream B-AC]

There are warnings associated with one or more model runs - see the 'Data Errors and Warnings' tables for each Analysis or Demand Set.

Values shown are the highest values encountered over all time segments. Delay is the maximum value of average delay per arriving vehicle. Network Residual Capacity indicates the amount by which network flow could be increased before a user-definable threshold (see Analysis Options) is met.

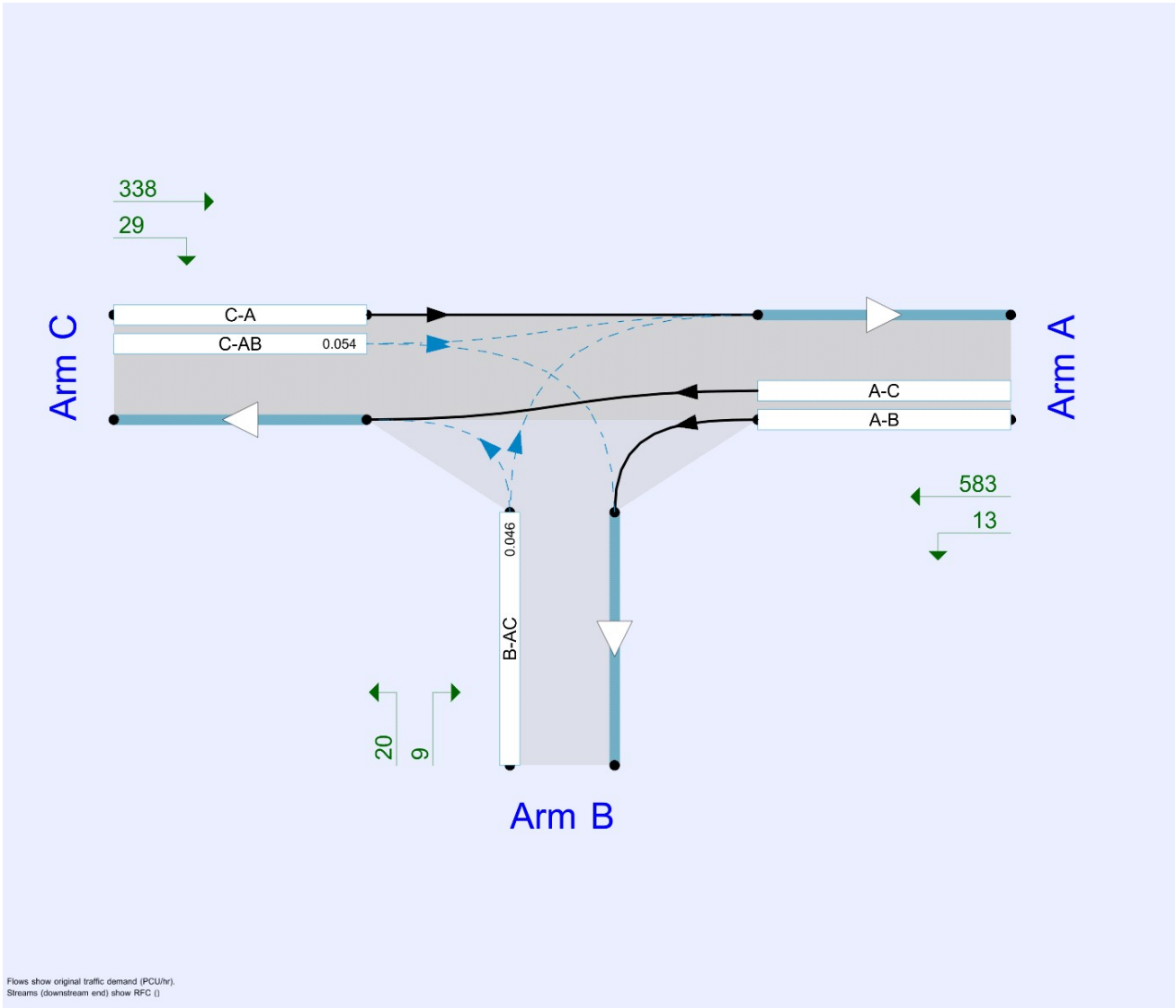
File summary

File Description

Title	
Location	
Site number	
Date	31/08/2021
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	AzureAD\DavidSagstad
Description	

Units

Distance units	Speed units	Traffic units input	Traffic units results	Flow units	Average delay units	Total delay units	Rate of delay units
m	kph	PCU	PCU	perHour	s	-Min	perMin



The junction diagram reflects the last run of Junctions.

Analysis Options

Vehicle length (m)	Calculate Queue Percentiles	Calculate detailed queueing delay	Show lane queues in feet / metres	Show all PICADY stream intercepts	Calculate residual capacity	Residual capacity criteria type	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)	Use iterations with HCM roundabouts	Max number of iterations for roundabouts
5.75					✓	Delay	0.85	36.00	20.00		500

Demand Set Summary

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D1	2023 With Dev	AM	ONE HOUR	00:00	01:30	15	✓
D2	2023 With Dev	PM	ONE HOUR	00:00	01:30	15	✓
D3	2030 With Dev	AM	ONE HOUR	00:00	01:30	15	✓
D4	2030 With Dev	PM	ONE HOUR	00:00	01:30	15	✓
D5	2030 With Dev Test 150 Units	PM	ONE HOUR	00:00	01:30	15	✓

Analysis Set Details

ID	Include in report	Network flow scaling factor (%)	Network capacity scaling factor (%)
A1	✓	100.000	100.000

2023 With Dev, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way	Two-way	Two-way		0.42	A

Junction Network

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold	Network delay (s)	Network LOS
Left	Normal/unknown	132	Stream B-AC	0.42	A

Arms

Arms

Arm	Name	Description	Arm type
A	Ravensthorpe Road E		Major
B	Development Access (Ravensthorpe Road S)		Minor
C	Ravenstorpe Road W		Major

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Has right-turn storage	Visibility for right turn (m)	Blocks?	Blocking queue (PCU)
C	6.00			0.0	✓	0.00

Geometries for Arm C are measured opposite Arm B. Geometries for Arm A (if relevant) are measured opposite Arm D.

Minor Arm Geometry

Arm	Minor arm type	Lane width (m)	Visibility to left (m)	Visibility to right (m)
B	One lane	3.35	29	16

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
B-A	512	0.093	0.236	0.148	0.337
B-C	656	0.101	0.254	-	-
C-B	574	0.222	0.222	-	-

The slopes and intercepts shown above include custom intercept adjustments only.

Streams may be combined, in which case capacity will be adjusted.

Values are shown for the first time segment only; they may differ for subsequent time segments.

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D1	2023 With Dev	AM	ONE HOUR	00:00	01:30	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A		ONE HOUR	✓	635	100.000
B		ONE HOUR	✓	38	100.000
C		ONE HOUR	✓	262	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A	B	C
From	A	0	0	635
	B	1	0	37
	C	254	8	0

Proportions

		To		
		A	B	C
From	A	0.00	0.00	1.00
	B	0.03	0.00	0.97
	C	0.97	0.03	0.00

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A	B	C
From	A	0	0	0
	B	0	0	0
	C	0	0	0

Average PCU Per Veh

		To		
		A	B	C
From	A	1.000	1.000	1.000
	B	1.000	1.000	1.000
	C	1.000	1.000	1.000

Detailed Demand Data

Demand for each time segment

Time Segment	Arm	Demand (PCU/hr)	Demand in PCU (PCU/hr)
00:00-00:15	A	478	478
	B	29	29
	C	197	197
00:15-00:30	A	571	571
	B	34	34
	C	236	236
00:30-00:45	A	699	699
	B	42	42
	C	288	288
00:45-01:00	A	699	699
	B	42	42
	C	288	288
01:00-01:15	A	571	571
	B	34	34
	C	236	236
01:15-01:30	A	478	478
	B	29	29
	C	197	197

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-AC	0.09	8.38	0.1	A	35	52
C-AB	0.03	6.00	0.0	A	12	18
C-A					228	343
A-B					0	0
A-C					583	874

Main Results for each time segment

00:00 - 00:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	29	7	528	0.054	28	0.0	0.1	7.195	A
C-AB	9	2	609	0.014	9	0.0	0.0	5.995	A
C-A	188	47			188				
A-B	0	0			0				
A-C	478	120			478				

00:15 - 00:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	34	9	504	0.068	34	0.1	0.1	7.653	A
C-AB	11	3	619	0.018	11	0.0	0.0	5.927	A
C-A	224	56			224				
A-B	0	0			0				
A-C	571	143			571				

00:30 - 00:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	42	10	471	0.089	42	0.1	0.1	8.379	A
C-AB	16	4	633	0.025	16	0.0	0.0	5.830	A
C-A	273	68			273				
A-B	0	0			0				
A-C	699	175			699				

00:45 - 01:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	42	10	471	0.089	42	0.1	0.1	8.382	A
C-AB	16	4	633	0.025	16	0.0	0.0	5.833	A
C-A	273	68			273				
A-B	0	0			0				
A-C	699	175			699				

01:00 - 01:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	34	9	504	0.068	34	0.1	0.1	7.659	A
C-AB	11	3	619	0.018	11	0.0	0.0	5.930	A
C-A	224	56			224				
A-B	0	0			0				
A-C	571	143			571				

01:15 - 01:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	29	7	528	0.054	29	0.1	0.1	7.206	A
C-AB	9	2	609	0.014	9	0.0	0.0	5.998	A
C-A	188	47			188				
A-B	0	0			0				
A-C	478	120			478				

2023 With Dev, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way	Two-way	Two-way		0.45	A

Junction Network

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold	Network delay (s)	Network LOS
Left	Normal/unknown	166	Stream C-AB	0.45	A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D2	2023 With Dev	PM	ONE HOUR	00:00	01:30	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A		ONE HOUR	✓	539	100.000
B		ONE HOUR	✓	16	100.000
C		ONE HOUR	✓	366	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A	B	C
From	A	0	1	538
	B	0	0	16
	C	338	28	0

Proportions

		To		
		A	B	C
From	A	0.00	0.00	1.00
	B	0.00	0.00	1.00
	C	0.92	0.08	0.00

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A	B	C
From	A	0	0	0
	B	0	0	0
	C	0	0	0

Average PCU Per Veh

		To		
		A	B	C
From	A	1.000	1.000	1.000
	B	1.000	1.000	1.000
	C	1.000	1.000	1.000

Detailed Demand Data

Demand for each time segment

Time Segment	Arm	Demand (PCU/hr)	Demand in PCU (PCU/hr)
00:00-00:15	A	406	406
	B	12	12
	C	276	276
00:15-00:30	A	485	485
	B	14	14
	C	329	329
00:30-00:45	A	593	593
	B	18	18
	C	403	403
00:45-01:00	A	593	593
	B	18	18
	C	403	403
01:00-01:15	A	485	485
	B	14	14
	C	329	329
01:15-01:30	A	406	406
	B	12	12
	C	276	276

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-AC	0.03	7.38	0.0	A	15	22
C-AB	0.09	5.67	0.2	A	48	72
C-A					288	432
A-B					0.92	1
A-C					494	741

Main Results for each time segment

00:00 - 00:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	12	3	553	0.022	12	0.0	0.0	6.652	A
C-AB	34	8	670	0.051	34	0.0	0.1	5.659	A
C-A	242	60			242				
A-B	0.75	0.19			0.75				
A-C	405	101			405				

00:15 - 00:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	14	4	533	0.027	14	0.0	0.0	6.938	A
C-AB	45	11	691	0.065	45	0.1	0.1	5.569	A
C-A	284	71			284				
A-B	0.90	0.22			0.90				
A-C	484	121			484				

00:30 - 00:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	18	4	506	0.035	18	0.0	0.0	7.377	A
C-AB	64	16	723	0.088	64	0.1	0.2	5.464	A
C-A	339	85			339				
A-B	1	0.28			1				
A-C	592	148			592				

00:45 - 01:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	18	4	506	0.035	18	0.0	0.0	7.377	A
C-AB	64	16	723	0.088	64	0.2	0.2	5.466	A
C-A	339	85			339				
A-B	1	0.28			1				
A-C	592	148			592				

01:00 - 01:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	14	4	533	0.027	14	0.0	0.0	6.942	A
C-AB	45	11	692	0.065	45	0.2	0.1	5.577	A
C-A	284	71			284				
A-B	0.90	0.22			0.90				
A-C	484	121			484				

01:15 - 01:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	12	3	553	0.022	12	0.0	0.0	6.652	A
C-AB	34	9	670	0.051	34	0.1	0.1	5.667	A
C-A	241	60			241				
A-B	0.75	0.19			0.75				
A-C	405	101			405				

2030 With Dev, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way	Two-way	Two-way		0.70	A

Junction Network

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold	Network delay (s)	Network LOS
Left	Normal/unknown	63	Stream B-AC	0.70	A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D3	2030 With Dev	AM	ONE HOUR	00:00	01:30	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A		ONE HOUR	✓	678	100.000
B		ONE HOUR	✓	57	100.000
C		ONE HOUR	✓	379	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A	B	C
From	A	0	0	678
	B	22	0	35
	C	370	9	0

Proportions

		To		
		A	B	C
From	A	0.00	0.00	1.00
	B	0.39	0.00	0.61
	C	0.98	0.02	0.00

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A	B	C
From	A	0	0	0
	B	0	0	0
	C	0	0	0

Average PCU Per Veh

		To		
		A	B	C
From	A	1.000	1.000	1.000
	B	1.000	1.000	1.000
	C	1.000	1.000	1.000

Detailed Demand Data

Demand for each time segment

Time Segment	Arm	Demand (PCU/hr)	Demand in PCU (PCU/hr)
00:00-00:15	A	510	510
	B	43	43
	C	285	285
00:15-00:30	A	610	610
	B	51	51
	C	341	341
00:30-00:45	A	746	746
	B	63	63
	C	417	417
00:45-01:00	A	746	746
	B	63	63
	C	417	417
01:00-01:15	A	610	610
	B	51	51
	C	341	341
01:15-01:30	A	510	510
	B	43	43
	C	285	285

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-AC	0.17	11.88	0.2	B	52	78
C-AB	0.03	5.49	0.0	A	17	25
C-A					331	497
A-B					0	0
A-C					622	933

Main Results for each time segment

00:00 - 00:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	43	11	440	0.098	42	0.0	0.1	9.056	A
C-AB	12	3	668	0.017	12	0.0	0.0	5.486	A
C-A	274	68			274				
A-B	0	0			0				
A-C	510	128			510				

00:15 - 00:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	51	13	409	0.125	51	0.1	0.1	10.051	B
C-AB	16	4	690	0.023	16	0.0	0.0	5.337	A
C-A	325	81			325				
A-B	0	0			0				
A-C	610	152			610				

00:30 - 00:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	63	16	366	0.172	63	0.1	0.2	11.859	B
C-AB	23	6	723	0.032	23	0.0	0.0	5.140	A
C-A	395	99			395				
A-B	0	0			0				
A-C	746	187			746				

00:45 - 01:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	63	16	366	0.172	63	0.2	0.2	11.878	B
C-AB	23	6	723	0.032	23	0.0	0.0	5.140	A
C-A	394	99			394				
A-B	0	0			0				
A-C	746	187			746				

01:00 - 01:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	51	13	409	0.125	51	0.2	0.1	10.075	B
C-AB	16	4	690	0.023	16	0.0	0.0	5.340	A
C-A	325	81			325				
A-B	0	0			0				
A-C	610	152			610				

01:15 - 01:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	43	11	440	0.098	43	0.1	0.1	9.083	A
C-AB	12	3	668	0.017	12	0.0	0.0	5.486	A
C-A	274	68			274				
A-B	0	0			0				
A-C	510	128			510				

2030 With Dev, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way	Two-way	Two-way		0.53	A

Junction Network

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold	Network delay (s)	Network LOS
Left	Normal/unknown	103	Stream C-AB	0.53	A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D4	2030 With Dev	PM	ONE HOUR	00:00	01:30	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A		ONE HOUR	✓	622	100.000
B		ONE HOUR	✓	19	100.000
C		ONE HOUR	✓	535	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A	B	C
From	A	0	0	622
	B	0	0	19
	C	498	37	0

Proportions

		To		
		A	B	C
From	A	0.00	0.00	1.00
	B	0.00	0.00	1.00
	C	0.93	0.07	0.00

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A	B	C
From	A	0	0	0
	B	0	0	0
	C	0	0	0

Average PCU Per Veh

		To		
		A	B	C
From	A	1.000	1.000	1.000
	B	1.000	1.000	1.000
	C	1.000	1.000	1.000

Detailed Demand Data

Demand for each time segment

Time Segment	Arm	Demand (PCU/hr)	Demand in PCU (PCU/hr)
00:00-00:15	A	468	468
	B	14	14
	C	403	403
00:15-00:30	A	559	559
	B	17	17
	C	481	481
00:30-00:45	A	685	685
	B	21	21
	C	589	589
00:45-01:00	A	685	685
	B	21	21
	C	589	589
01:00-01:15	A	559	559
	B	17	17
	C	481	481
01:15-01:30	A	468	468
	B	14	14
	C	403	403

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-AC	0.04	7.81	0.0	A	17	26
C-AB	0.14	5.22	0.4	A	84	126
C-A					407	611
A-B					0	0
A-C					571	856

Main Results for each time segment

00:00 - 00:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	14	4	537	0.027	14	0.0	0.0	6.881	A
C-AB	56	14	747	0.075	55	0.0	0.1	5.205	A
C-A	347	87			347				
A-B	0	0			0				
A-C	468	117			468				

00:15 - 00:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	17	4	514	0.033	17	0.0	0.0	7.242	A
C-AB	78	19	786	0.099	77	0.1	0.2	5.087	A
C-A	403	101			403				
A-B	0	0			0				
A-C	559	140			559				

00:30 - 00:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	21	5	482	0.043	21	0.0	0.0	7.805	A
C-AB	118	29	842	0.140	117	0.2	0.4	4.974	A
C-A	471	118			471				
A-B	0	0			0				
A-C	685	171			685				

00:45 - 01:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	21	5	482	0.043	21	0.0	0.0	7.805	A
C-AB	118	29	842	0.140	118	0.4	0.4	4.982	A
C-A	471	118			471				
A-B	0	0			0				
A-C	685	171			685				

01:00 - 01:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	17	4	514	0.033	17	0.0	0.0	7.247	A
C-AB	78	20	786	0.099	79	0.4	0.2	5.099	A
C-A	403	101			403				
A-B	0	0			0				
A-C	559	140			559				

01:15 - 01:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	14	4	537	0.027	14	0.0	0.0	6.887	A
C-AB	56	14	747	0.075	57	0.2	0.1	5.219	A
C-A	346	87			346				
A-B	0	0			0				
A-C	468	117			468				

2030 With Dev Test 150 Units, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way	Two-way	Two-way		0.60	A

Junction Network

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold	Network delay (s)	Network LOS
Left	Normal/unknown	98	Stream B-AC	0.60	A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D5	2030 With Dev Test 150 Units	PM	ONE HOUR	00:00	01:30	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A		ONE HOUR	✓	596	100.000
B		ONE HOUR	✓	29	100.000
C		ONE HOUR	✓	367	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A	B	C
From	A	0	13	583
	B	9	0	20
	C	338	29	0

Proportions

		To		
		A	B	C
From	A	0.00	0.02	0.98
	B	0.31	0.00	0.69
	C	0.92	0.08	0.00

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A	B	C
From	A	0	0	0
	B	0	0	0
	C	0	0	0

Average PCU Per Veh

		To		
		A	B	C
From	A	1.000	1.000	1.000
	B	1.000	1.000	1.000
	C	1.000	1.000	1.000

Detailed Demand Data

Demand for each time segment

Time Segment	Arm	Demand (PCU/hr)	Demand in PCU (PCU/hr)
00:00-00:15	A	449	449
	B	22	22
	C	276	276
00:15-00:30	A	536	536
	B	26	26
	C	330	330
00:30-00:45	A	656	656
	B	32	32
	C	404	404
00:45-01:00	A	656	656
	B	32	32
	C	404	404
01:00-01:15	A	536	536
	B	26	26
	C	330	330
01:15-01:30	A	449	449
	B	22	22
	C	276	276

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-AC	0.08	9.61	0.1	A	27	40
C-AB	0.09	5.76	0.2	A	50	75
C-A					287	430
A-B					12	18
A-C					535	802

Main Results for each time segment

00:00 - 00:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	22	5	471	0.046	22	0.0	0.0	8.012	A
C-AB	35	9	662	0.054	35	0.0	0.1	5.746	A
C-A	241	60			241				
A-B	10	2			10				
A-C	439	110			439				

00:15 - 00:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	26	7	444	0.059	26	0.0	0.1	8.611	A
C-AB	47	12	682	0.069	47	0.1	0.1	5.673	A
C-A	283	71			283				
A-B	12	3			12				
A-C	524	131			524				

00:30 - 00:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	32	8	406	0.079	32	0.1	0.1	9.609	A
C-AB	67	17	712	0.094	67	0.1	0.2	5.587	A
C-A	337	84			337				
A-B	14	4			14				
A-C	642	160			642				

00:45 - 01:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	32	8	406	0.079	32	0.1	0.1	9.614	A
C-AB	67	17	712	0.095	67	0.2	0.2	5.589	A
C-A	337	84			337				
A-B	14	4			14				
A-C	642	160			642				

01:00 - 01:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	26	7	444	0.059	26	0.1	0.1	8.619	A
C-AB	47	12	682	0.069	48	0.2	0.1	5.678	A
C-A	283	71			283				
A-B	12	3			12				
A-C	524	131			524				

01:15 - 01:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	22	5	471	0.046	22	0.1	0.0	8.023	A
C-AB	36	9	662	0.054	36	0.1	0.1	5.756	A
C-A	241	60			241				
A-B	10	2			10				
A-C	439	110			439				

APPENDIX G

Junctions 10

ARCADY 10 - Roundabout Module

Filename: 210716 Forge Lane Central Gateway.j10
Path: C:\Users\DavidSagstad\Dropbox\Working Back Up\Projects\2020213 Dewsbury Riverside\Analysis\Junction Assessment
Report generation date: 16/07/2021 16:26:39

Summary of junction performance

	AM						PM					
	Set ID	Queue (PCU)	Delay (s)	RFC	LOS	Network Residual Capacity	Set ID	Queue (PCU)	Delay (s)	RFC	LOS	Network Residual Capacity
	2023 With Dev											
Arm 1	D1	0.4	4.74	0.27	A	19 % [Arm 3]	D2	1.1	6.92	0.53	A	62 % [Arm 1]
Arm 2		1.4	7.01	0.59	A			1.0	6.37	0.51	A	
Arm 3		1.9	13.33	0.66	B			0.6	6.69	0.38	A	
Arm 4		0.4	8.13	0.27	A			0.1	4.77	0.11	A	
	2030 With Dev											
Arm 1	D3	0.8	5.98	0.43	A	17 % [Arm 3]	D4	2.6	11.70	0.72	B	24 % [Arm 1]
Arm 2		2.4	10.19	0.71	B			1.4	8.01	0.58	A	
Arm 3		1.8	14.34	0.65	B			1.0	8.31	0.50	A	
Arm 4		0.3	8.58	0.26	A			0.1	5.27	0.12	A	
	2048 Full Local Plan											
Arm 1	D5	0.7	6.78	0.42	A	7 % [Arm 2]	D6	1.7	9.11	0.64	A	35 % [Arm 2]
Arm 2		5.6	20.54	0.86	C			1.8	8.82	0.65	A	
Arm 3		1.6	15.03	0.62	C			0.1	5.34	0.13	A	
Arm 4		0.9	7.19	0.46	A			0.2	3.57	0.13	A	

There are warnings associated with one or more model runs - see the 'Data Errors and Warnings' tables for each Analysis or Demand Set.

Values shown are the highest values encountered over all time segments. Delay is the maximum value of average delay per arriving vehicle. Network Residual Capacity indicates the amount by which network flow could be increased before a user-definable threshold (see Analysis Options) is met.

File summary

File Description

Title	
Location	
Site number	
Date	16/07/2021
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	AzureAD\DavidSagstad
Description	

Units

Distance units	Speed units	Traffic units input	Traffic units results	Flow units	Average delay units	Total delay units	Rate of delay units
m	kph	PCU	PCU	perHour	s	-Min	perMin

Analysis Options

Vehicle length (m)	Calculate Queue Percentiles	Calculate detailed queueing delay	Show lane queues in feet / metres	Show all PICADY stream intercepts	Calculate residual capacity	Residual capacity criteria type	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)	Use iterations with HCM roundabouts	Max number of iterations for roundabouts
5.75					✓	Delay	0.85	36.00	20.00		500

Demand Set Summary

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D1	2023 With Dev	AM	ONE HOUR	08:00	09:30	15	✓
D2	2023 With Dev	PM	ONE HOUR	17:00	18:30	15	✓
D3	2030 With Dev	AM	ONE HOUR	08:00	09:30	15	✓
D4	2030 With Dev	PM	ONE HOUR	17:00	18:30	15	✓
D5	2048 Full Local Plan	AM	ONE HOUR	08:00	09:30	15	✓
D6	2048 Full Local Plan	PM	ONE HOUR	17:00	18:30	15	✓

Analysis Set Details

ID	Include in report	Network flow scaling factor (%)	Network capacity scaling factor (%)
A1	✓	100.000	100.000

2023 With Dev, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout		1, 2, 3, 4	8.68	A

Junction Network

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold	Network delay (s)	Network LOS
Left	Normal/unknown	19	Arm 3	8.68	A

Arms

Arms

Arm	Name	Description	No give-way line
1	Ravensthorpe Road		
2	Forge Lane		
3	Lees Hall Road		
4	Site Access/ Link Road		

Roundabout Geometry

Arm	V - Approach road half-width (m)	E - Entry width (m)	I' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Entry only	Exit only
1	3.70	4.00	2.0	20.5	36.0	24.0		
2	3.65	7.30	2.0	16.0	36.0	16.0		
3	3.20	4.60	4.0	20.0	36.0	31.0		
4	3.50	5.60	2.5	15.0	36.0	18.0		

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Final slope	Final intercept (PCU/hr)
1	0.557	1209
2	0.583	1314
3	0.541	1166
4	0.570	1264

The slope and intercept shown above include any corrections and adjustments.

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D1	2023 With Dev	AM	ONE HOUR	08:00	09:30	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1		ONE HOUR	✓	256	100.000
2		ONE HOUR	✓	660	100.000
3		ONE HOUR	✓	470	100.000
4		ONE HOUR	✓	148	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		1	2	3	4
From	1	0	163	93	0
	2	595	0	24	41
	3	329	126	0	15
	4	1	125	22	0

Proportions

		To			
		1	2	3	4
From	1	0.00	0.64	0.36	0.00
	2	0.90	0.00	0.04	0.06
	3	0.70	0.27	0.00	0.03
	4	0.01	0.84	0.15	0.00

Vehicle Mix

Heavy Vehicle Percentages

		To			
		1	2	3	4
From	1	0	0	0	0
	2	0	0	0	0
	3	0	0	0	0
	4	0	0	0	0

Average PCU Per Veh

		To			
		1	2	3	4
From	1	1.000	1.000	1.000	1.000
	2	1.000	1.000	1.000	1.000
	3	1.000	1.000	1.000	1.000
	4	1.000	1.000	1.000	1.000

Detailed Demand Data

Demand for each time segment

Time Segment	Arm	Demand (PCU/hr)	Demand in PCU (PCU/hr)
08:00-08:15	1	193	193
	2	497	497
	3	354	354
	4	111	111
08:15-08:30	1	230	230
	2	593	593
	3	423	423
	4	133	133
08:30-08:45	1	282	282
	2	727	727
	3	517	517
	4	163	163
08:45-09:00	1	282	282
	2	727	727
	3	517	517
	4	163	163
09:00-09:15	1	230	230
	2	593	593
	3	423	423
	4	133	133
09:15-09:30	1	193	193
	2	497	497
	3	354	354
	4	111	111

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
1	0.27	4.74	0.4	A	235	352
2	0.59	7.01	1.4	A	606	908
3	0.66	13.33	1.9	B	431	647
4	0.27	8.13	0.4	A	136	204

Main Results for each time segment

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	193	48	204	1095	0.176	192	692	0.0	0.2	3.984	A
2	497	124	86	1263	0.393	494	310	0.0	0.6	4.666	A
3	354	88	476	908	0.390	351	104	0.0	0.6	6.439	A
4	111	28	786	817	0.136	111	42	0.0	0.2	5.095	A

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	230	58	245	1072	0.215	230	830	0.2	0.3	4.273	A
2	593	148	103	1254	0.473	592	371	0.6	0.9	5.437	A
3	423	106	571	857	0.493	421	125	0.6	1.0	8.238	A
4	133	33	942	728	0.183	133	50	0.2	0.2	6.047	A

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	282	70	299	1042	0.271	281	1014	0.3	0.4	4.732	A
2	727	182	126	1240	0.586	725	454	0.9	1.4	6.956	A
3	517	129	698	788	0.657	514	153	1.0	1.8	12.971	B
4	163	41	1151	609	0.268	162	61	0.2	0.4	8.056	A

08:45 - 09:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	282	70	301	1041	0.271	282	1018	0.4	0.4	4.741	A
2	727	182	127	1240	0.586	727	456	1.4	1.4	7.013	A
3	517	129	700	787	0.658	517	153	1.8	1.9	13.330	B
4	163	41	1156	606	0.269	163	62	0.4	0.4	8.127	A

09:00 - 09:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	230	58	247	1071	0.215	231	836	0.4	0.3	4.286	A
2	593	148	104	1253	0.473	595	374	1.4	0.9	5.488	A
3	423	106	574	855	0.494	426	125	1.9	1.0	8.454	A
4	133	33	949	724	0.184	134	51	0.4	0.2	6.106	A

09:15 - 09:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	193	48	206	1094	0.176	193	698	0.3	0.2	3.999	A
2	497	124	87	1263	0.393	498	312	0.9	0.7	4.710	A
3	354	88	480	906	0.390	355	105	1.0	0.6	6.552	A
4	111	28	793	813	0.137	112	42	0.2	0.2	5.136	A

2023 With Dev, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout		1, 2, 3, 4	6.55	A

Junction Network

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold	Network delay (s)	Network LOS
Left	Normal/unknown	62	Arm 1	6.55	A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D2	2023 With Dev	PM	ONE HOUR	17:00	18:30	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1		ONE HOUR	✓	538	100.000
2		ONE HOUR	✓	539	100.000
3		ONE HOUR	✓	305	100.000
4		ONE HOUR	✓	86	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		1	2	3	4
From	1	0	318	218	2
	2	376	0	51	112
	3	214	71	0	20
	4	0	64	22	0

Proportions

		To			
		1	2	3	4
From	1	0.00	0.59	0.41	0.00
	2	0.70	0.00	0.09	0.21
	3	0.70	0.23	0.00	0.07
	4	0.00	0.74	0.26	0.00

Vehicle Mix

Heavy Vehicle Percentages

		To			
		1	2	3	4
From	1	0	0	0	0
	2	0	0	0	0
	3	0	0	0	0
	4	0	0	0	0

Average PCU Per Veh

		To			
		1	2	3	4
From	1	1.000	1.000	1.000	1.000
	2	1.000	1.000	1.000	1.000
	3	1.000	1.000	1.000	1.000
	4	1.000	1.000	1.000	1.000

Detailed Demand Data

Demand for each time segment

Time Segment	Arm	Demand (PCU/hr)	Demand in PCU (PCU/hr)
17:00-17:15	1	405	405
	2	406	406
	3	230	230
	4	65	65
17:15-17:30	1	484	484
	2	485	485
	3	274	274
	4	77	77
17:30-17:45	1	592	592
	2	593	593
	3	336	336
	4	95	95
17:45-18:00	1	592	592
	2	593	593
	3	336	336
	4	95	95
18:00-18:15	1	484	484
	2	485	485
	3	274	274
	4	77	77
18:15-18:30	1	405	405
	2	406	406
	3	230	230
	4	65	65

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
1	0.53	6.92	1.1	A	494	741
2	0.51	6.37	1.0	A	495	742
3	0.38	6.69	0.6	A	280	420
4	0.11	4.77	0.1	A	79	118

Main Results for each time segment

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	405	101	118	1143	0.354	403	442	0.0	0.5	4.851	A
2	406	101	181	1208	0.336	404	339	0.0	0.5	4.465	A
3	230	57	367	967	0.237	228	218	0.0	0.3	4.865	A
4	65	16	495	982	0.066	64	100	0.0	0.1	3.921	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	484	121	141	1130	0.428	483	530	0.5	0.7	5.556	A
2	485	121	217	1187	0.408	484	407	0.5	0.7	5.113	A
3	274	69	440	928	0.296	274	261	0.3	0.4	5.501	A
4	77	19	593	926	0.083	77	120	0.1	0.1	4.239	A

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	592	148	173	1112	0.533	591	648	0.7	1.1	6.881	A
2	593	148	266	1159	0.512	592	498	0.7	1.0	6.337	A
3	336	84	538	875	0.384	335	320	0.4	0.6	6.663	A
4	95	24	726	851	0.111	95	147	0.1	0.1	4.761	A

17:45 - 18:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	592	148	173	1112	0.533	592	650	1.1	1.1	6.924	A
2	593	148	266	1158	0.512	593	499	1.0	1.0	6.371	A
3	336	84	539	874	0.384	336	320	0.6	0.6	6.689	A
4	95	24	728	850	0.111	95	148	0.1	0.1	4.767	A

18:00 - 18:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	484	121	141	1130	0.428	485	532	1.1	0.8	5.597	A
2	485	121	218	1187	0.408	486	408	1.0	0.7	5.148	A
3	274	69	442	927	0.296	275	262	0.6	0.4	5.529	A
4	77	19	596	925	0.084	77	121	0.1	0.1	4.250	A

18:15 - 18:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	405	101	118	1143	0.354	406	445	0.8	0.6	4.891	A
2	406	101	183	1207	0.336	407	342	0.7	0.5	4.501	A
3	230	57	370	966	0.238	230	220	0.4	0.3	4.895	A
4	65	16	499	980	0.066	65	101	0.1	0.1	3.934	A

2030 With Dev, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout		1, 2, 3, 4	10.09	B

Junction Network

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold	Network delay (s)	Network LOS
Left	Normal/unknown	17	Arm 3	10.09	B

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D3	2030 With Dev	AM	ONE HOUR	08:00	09:30	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1		ONE HOUR	✓	416	100.000
2		ONE HOUR	✓	771	100.000
3		ONE HOUR	✓	429	100.000
4		ONE HOUR	✓	131	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		1	2	3	4
From	1	0	271	145	0
	2	703	0	27	41
	3	301	113	0	15
	4	1	100	30	0

Proportions

		To			
		1	2	3	4
From	1	0.00	0.65	0.35	0.00
	2	0.91	0.00	0.04	0.05
	3	0.70	0.26	0.00	0.03
	4	0.01	0.76	0.23	0.00

Vehicle Mix

Heavy Vehicle Percentages

		To			
		1	2	3	4
From	1	0	0	0	0
	2	0	0	0	0
	3	0	0	0	0
	4	0	0	0	0

Average PCU Per Veh

		To			
		1	2	3	4
From	1	1.000	1.000	1.000	1.000
	2	1.000	1.000	1.000	1.000
	3	1.000	1.000	1.000	1.000
	4	1.000	1.000	1.000	1.000

Detailed Demand Data

Demand for each time segment

Time Segment	Arm	Demand (PCU/hr)	Demand in PCU (PCU/hr)
08:00-08:15	1	313	313
	2	580	580
	3	323	323
	4	99	99
08:15-08:30	1	374	374
	2	693	693
	3	386	386
	4	118	118
08:30-08:45	1	458	458
	2	849	849
	3	472	472
	4	144	144
08:45-09:00	1	458	458
	2	849	849
	3	472	472
	4	144	144
09:00-09:15	1	374	374
	2	693	693
	3	386	386
	4	118	118
09:15-09:30	1	313	313
	2	580	580
	3	323	323
	4	99	99

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
1	0.43	5.98	0.8	A	382	573
2	0.71	10.19	2.4	B	707	1061
3	0.65	14.34	1.8	B	394	590
4	0.26	8.58	0.3	A	120	180

Main Results for each time segment

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	313	78	182	1107	0.283	312	752	0.0	0.4	4.518	A
2	580	145	131	1237	0.469	577	362	0.0	0.9	5.424	A
3	323	81	557	865	0.374	321	151	0.0	0.6	6.592	A
4	99	25	835	788	0.125	98	42	0.0	0.1	5.210	A

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	374	93	218	1087	0.344	373	901	0.4	0.5	5.041	A
2	693	173	157	1222	0.567	691	434	0.9	1.3	6.761	A
3	386	96	667	805	0.479	384	181	0.6	0.9	8.539	A
4	118	29	1001	694	0.170	118	50	0.1	0.2	6.243	A

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	458	115	266	1060	0.432	457	1100	0.5	0.8	5.960	A
2	849	212	192	1202	0.706	845	531	1.3	2.3	9.971	A
3	472	118	815	725	0.652	469	222	0.9	1.8	13.871	B
4	144	36	1223	568	0.254	144	61	0.2	0.3	8.477	A

08:45 - 09:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	458	115	267	1059	0.432	458	1106	0.8	0.8	5.984	A
2	849	212	193	1201	0.707	849	533	2.3	2.4	10.193	B
3	472	118	819	723	0.654	472	222	1.8	1.8	14.342	B
4	144	36	1230	564	0.256	144	62	0.3	0.3	8.577	A

09:00 - 09:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	374	93	220	1086	0.344	375	910	0.8	0.5	5.070	A
2	693	173	158	1222	0.567	697	437	2.4	1.3	6.918	A
3	386	96	673	802	0.481	389	182	1.8	0.9	8.800	A
4	118	29	1011	688	0.171	118	51	0.3	0.2	6.324	A

09:15 - 09:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	313	78	184	1106	0.283	314	759	0.5	0.4	4.546	A
2	580	145	132	1237	0.469	582	365	1.3	0.9	5.514	A
3	323	81	562	862	0.375	324	152	0.9	0.6	6.716	A
4	99	25	844	784	0.126	99	42	0.2	0.1	5.260	A

2030 With Dev, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout		1, 2, 3, 4	9.46	A

Junction Network

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold	Network delay (s)	Network LOS
Left	Normal/unknown	24	Arm 1	9.46	A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D4	2030 With Dev	PM	ONE HOUR	17:00	18:30	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1		ONE HOUR	✓	728	100.000
2		ONE HOUR	✓	562	100.000
3		ONE HOUR	✓	387	100.000
4		ONE HOUR	✓	86	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		1	2	3	4
From	1	0	369	357	2
	2	408	0	49	105
	3	289	78	0	20
	4	1	61	24	0

Proportions

		To			
		1	2	3	4
From	1	0.00	0.51	0.49	0.00
	2	0.73	0.00	0.09	0.19
	3	0.75	0.20	0.00	0.05
	4	0.01	0.71	0.28	0.00

Vehicle Mix

Heavy Vehicle Percentages

		To			
		1	2	3	4
From	1	0	0	0	0
	2	0	0	0	0
	3	0	0	0	0
	4	0	0	0	0

Average PCU Per Veh

		To			
		1	2	3	4
From	1	1.000	1.000	1.000	1.000
	2	1.000	1.000	1.000	1.000
	3	1.000	1.000	1.000	1.000
	4	1.000	1.000	1.000	1.000

Detailed Demand Data

Demand for each time segment

Time Segment	Arm	Demand (PCU/hr)	Demand in PCU (PCU/hr)
17:00-17:15	1	548	548
	2	423	423
	3	291	291
	4	65	65
17:15-17:30	1	654	654
	2	505	505
	3	348	348
	4	77	77
17:30-17:45	1	802	802
	2	619	619
	3	426	426
	4	95	95
17:45-18:00	1	802	802
	2	619	619
	3	426	426
	4	95	95
18:00-18:15	1	654	654
	2	505	505
	3	348	348
	4	77	77
18:15-18:30	1	548	548
	2	423	423
	3	291	291
	4	65	65

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
1	0.72	11.70	2.6	B	668	1002
2	0.58	8.01	1.4	A	516	774
3	0.50	8.31	1.0	A	355	533
4	0.12	5.27	0.1	A	79	118

Main Results for each time segment

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	548	137	122	1141	0.481	544	523	0.0	0.9	6.004	A
2	423	106	286	1147	0.369	421	380	0.0	0.6	4.943	A
3	291	73	386	957	0.304	290	322	0.0	0.4	5.379	A
4	65	16	580	934	0.069	64	95	0.0	0.1	4.140	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	654	164	146	1127	0.581	653	626	0.9	1.4	7.560	A
2	505	126	343	1114	0.454	504	456	0.6	0.8	5.898	A
3	348	87	462	916	0.380	347	386	0.4	0.6	6.324	A
4	77	19	695	868	0.089	77	114	0.1	0.1	4.551	A

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	802	200	179	1109	0.723	797	766	1.4	2.5	11.378	B
2	619	155	419	1069	0.579	617	557	0.8	1.3	7.918	A
3	426	107	565	860	0.495	425	471	0.6	1.0	8.240	A
4	95	24	850	780	0.121	95	139	0.1	0.1	5.251	A

17:45 - 18:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	802	200	179	1109	0.723	801	768	2.5	2.6	11.696	B
2	619	155	422	1068	0.579	619	559	1.3	1.4	8.011	A
3	426	107	567	859	0.496	426	473	1.0	1.0	8.314	A
4	95	24	853	778	0.122	95	140	0.1	0.1	5.265	A

18:00 - 18:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	654	164	147	1127	0.581	659	630	2.6	1.4	7.771	A
2	505	126	347	1112	0.454	507	459	1.4	0.8	5.976	A
3	348	87	465	914	0.381	349	389	1.0	0.6	6.388	A
4	77	19	700	866	0.089	77	115	0.1	0.1	4.567	A

18:15 - 18:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	548	137	123	1140	0.481	550	527	1.4	0.9	6.122	A
2	423	106	289	1145	0.370	424	384	0.8	0.6	5.001	A
3	291	73	389	955	0.305	292	325	0.6	0.4	5.434	A
4	65	16	585	931	0.070	65	96	0.1	0.1	4.155	A

2048 Full Local Plan, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout		1, 2, 3, 4	14.65	B

Junction Network

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold	Network delay (s)	Network LOS
Left	Normal/unknown	7	Arm 2	14.65	B

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D5	2048 Full Local Plan	AM	ONE HOUR	08:00	09:30	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1		ONE HOUR	✓	343	100.000
2		ONE HOUR	✓	932	100.000
3		ONE HOUR	✓	355	100.000
4		ONE HOUR	✓	392	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		1	2	3	4
From	1	0	214	128	1
	2	355	0	31	546
	3	65	110	0	180
	4	13	326	53	0

Proportions

		To			
		1	2	3	4
From	1	0.00	0.62	0.37	0.00
	2	0.38	0.00	0.03	0.59
	3	0.18	0.31	0.00	0.51
	4	0.03	0.83	0.14	0.00

Vehicle Mix

Heavy Vehicle Percentages

		To			
		1	2	3	4
From	1	0	0	0	0
	2	0	0	0	0
	3	0	0	0	0
	4	0	0	0	0

Average PCU Per Veh

		To			
		1	2	3	4
From	1	1.000	1.000	1.000	1.000
	2	1.000	1.000	1.000	1.000
	3	1.000	1.000	1.000	1.000
	4	1.000	1.000	1.000	1.000

Detailed Demand Data

Demand for each time segment

Time Segment	Arm	Demand (PCU/hr)	Demand in PCU (PCU/hr)
08:00-08:15	1	258	258
	2	702	702
	3	267	267
	4	295	295
08:15-08:30	1	308	308
	2	838	838
	3	319	319
	4	352	352
08:30-08:45	1	378	378
	2	1026	1026
	3	391	391
	4	432	432
08:45-09:00	1	378	378
	2	1026	1026
	3	391	391
	4	432	432
09:00-09:15	1	308	308
	2	838	838
	3	319	319
	4	352	352
09:15-09:30	1	258	258
	2	702	702
	3	267	267
	4	295	295

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
1	0.42	6.78	0.7	A	315	472
2	0.86	20.54	5.6	C	855	1283
3	0.62	15.03	1.6	C	326	489
4	0.46	7.19	0.9	A	360	540

Main Results for each time segment

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	258	65	366	1005	0.257	257	324	0.0	0.3	4.806	A
2	702	175	136	1234	0.568	696	487	0.0	1.3	6.631	A
3	267	67	674	801	0.334	265	159	0.0	0.5	6.695	A
4	295	74	396	1039	0.284	294	543	0.0	0.4	4.822	A

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	308	77	439	964	0.320	308	388	0.3	0.5	5.483	A
2	838	209	163	1218	0.688	834	583	1.3	2.1	9.292	A
3	319	80	808	729	0.438	318	190	0.5	0.8	8.740	A
4	352	88	475	994	0.355	352	651	0.4	0.5	5.602	A

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	378	94	536	910	0.415	377	471	0.5	0.7	6.742	A
2	1026	257	200	1197	0.857	1014	713	2.1	5.3	18.453	C
3	391	98	981	635	0.615	388	232	0.8	1.5	14.378	B
4	432	108	577	935	0.461	430	792	0.5	0.8	7.110	A

08:45 - 09:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	378	94	538	909	0.416	378	476	0.7	0.7	6.780	A
2	1026	257	200	1197	0.857	1025	716	5.3	5.6	20.536	C
3	391	98	992	629	0.621	391	233	1.5	1.6	15.034	C
4	432	108	583	932	0.463	432	800	0.8	0.9	7.189	A

09:00 - 09:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	308	77	442	962	0.320	309	395	0.7	0.5	5.519	A
2	838	209	164	1218	0.688	851	587	5.6	2.3	10.143	B
3	319	80	824	720	0.443	322	192	1.6	0.8	9.119	A
4	352	88	483	989	0.356	354	663	0.9	0.6	5.674	A

09:15 - 09:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	258	65	369	1003	0.258	259	328	0.5	0.3	4.840	A
2	702	175	137	1234	0.569	705	491	2.3	1.3	6.863	A
3	267	67	683	796	0.336	268	160	0.8	0.5	6.836	A
4	295	74	401	1036	0.285	296	550	0.6	0.4	4.869	A

2048 Full Local Plan, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout		1, 2, 3, 4	8.27	A

Junction Network

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold	Network delay (s)	Network LOS
Left	Normal/unknown	35	Arm 2	8.27	A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D6	2048 Full Local Plan	PM	ONE HOUR	17:00	18:30	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1		ONE HOUR	✓	636	100.000
2		ONE HOUR	✓	694	100.000
3		ONE HOUR	✓	88	100.000
4		ONE HOUR	✓	141	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		1	2	3	4
From	1	0	430	194	12
	2	109	0	42	543
	3	7	47	0	34
	4	3	123	15	0

Proportions

		To			
		1	2	3	4
From	1	0.00	0.68	0.31	0.02
	2	0.16	0.00	0.06	0.78
	3	0.08	0.53	0.00	0.39
	4	0.02	0.87	0.11	0.00

Vehicle Mix

Heavy Vehicle Percentages

		To			
		1	2	3	4
From	1	0	0	0	0
	2	0	0	0	0
	3	0	0	0	0
	4	0	0	0	0

Average PCU Per Veh

		To			
		1	2	3	4
From	1	1.000	1.000	1.000	1.000
	2	1.000	1.000	1.000	1.000
	3	1.000	1.000	1.000	1.000
	4	1.000	1.000	1.000	1.000

Detailed Demand Data

Demand for each time segment

Time Segment	Arm	Demand (PCU/hr)	Demand in PCU (PCU/hr)
17:00-17:15	1	479	479
	2	522	522
	3	66	66
	4	106	106
17:15-17:30	1	572	572
	2	624	624
	3	79	79
	4	127	127
17:30-17:45	1	700	700
	2	764	764
	3	97	97
	4	155	155
17:45-18:00	1	700	700
	2	764	764
	3	97	97
	4	155	155
18:00-18:15	1	572	572
	2	624	624
	3	79	79
	4	127	127
18:15-18:30	1	479	479
	2	522	522
	3	66	66
	4	106	106

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
1	0.64	9.11	1.7	A	584	875
2	0.65	8.82	1.8	A	637	955
3	0.13	5.34	0.1	A	81	121
4	0.13	3.57	0.2	A	129	194

Main Results for each time segment

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	479	120	139	1131	0.423	476	89	0.0	0.7	5.469	A
2	522	131	165	1217	0.429	520	449	0.0	0.7	5.138	A
3	66	17	497	897	0.074	66	188	0.0	0.1	4.332	A
4	106	27	122	1195	0.089	106	441	0.0	0.1	3.306	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	572	143	166	1116	0.512	571	107	0.7	1.0	6.586	A
2	624	156	198	1198	0.521	623	538	0.7	1.1	6.241	A
3	79	20	596	843	0.094	79	225	0.1	0.1	4.709	A
4	127	32	146	1181	0.107	127	528	0.1	0.1	3.414	A

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	700	175	203	1095	0.639	697	131	1.0	1.7	8.989	A
2	764	191	242	1172	0.652	761	659	1.1	1.8	8.689	A
3	97	24	728	772	0.126	97	275	0.1	0.1	5.331	A
4	155	39	179	1162	0.134	155	646	0.1	0.2	3.573	A

17:45 - 18:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	700	175	204	1095	0.639	700	131	1.7	1.7	9.111	A
2	764	191	243	1172	0.652	764	661	1.8	1.8	8.821	A
3	97	24	731	770	0.126	97	276	0.1	0.1	5.345	A
4	155	39	179	1162	0.134	155	648	0.2	0.2	3.574	A

18:00 - 18:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	572	143	167	1116	0.512	574	107	1.7	1.1	6.686	A
2	624	156	200	1197	0.521	627	541	1.8	1.1	6.341	A
3	79	20	600	841	0.094	79	227	0.1	0.1	4.725	A
4	127	32	147	1180	0.107	127	532	0.2	0.1	3.419	A

18:15 - 18:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	479	120	139	1131	0.423	480	90	1.1	0.7	5.542	A
2	522	131	167	1216	0.430	524	453	1.1	0.8	5.209	A
3	66	17	501	895	0.074	66	189	0.1	0.1	4.348	A
4	106	27	123	1194	0.089	106	445	0.1	0.1	3.308	A

APPENDIX H

Junctions 10

ARCADY 10 - Roundabout Module

Filename: 210831 Brewery.j10
Path: C:\Users\DavidSagstad\Dropbox\Working Back Up\Projects\2020213 Dewsbury Riverside\Analysis\Junction Assessment
Report generation date: 31/08/2021 13:04:27

Summary of junction performance

	AM						PM					
	Set ID	Queue (PCU)	Delay (s)	RFC	LOS	Network Residual Capacity	Set ID	Queue (PCU)	Delay (s)	RFC	LOS	Network Residual Capacity
	2023 Base											
Arm 1	D1	0.3	4.52	0.20	A	66 %	D2	0.3	4.69	0.21	A	194 %
Arm 2		1.1	7.46	0.52	A	[Arm 2]		0.3	4.72	0.24	A	[Arm 3]
Arm 3		0.1	5.05	0.11	A			0.3	5.50	0.25	A	
	2030 Base											
Arm 1	D3	0.3	4.78	0.22	A	67 %	D4	0.3	5.31	0.26	A	99 %
Arm 2		1.0	7.39	0.51	A	[Arm 2]		0.5	5.26	0.32	A	[Arm 3]
Arm 3		0.2	5.46	0.19	A			0.7	6.97	0.40	A	
	2023 Base Plus Dev											
Arm 1	D5	0.2	4.49	0.19	A	98 %	D6	0.2	4.68	0.20	A	170 %
Arm 2		0.7	6.23	0.42	A	[Arm 2]		0.4	4.95	0.28	A	[Arm 3]
Arm 3		0.3	5.46	0.21	A			0.4	5.72	0.28	A	
	2030 Base Plus Dev											
Arm 1	D7	0.3	4.80	0.23	A	127 %	D8	0.4	5.49	0.26	A	80 %
Arm 2		0.6	5.61	0.36	A	[Arm 2]		0.6	5.61	0.36	A	[Arm 3]
Arm 3		0.5	6.16	0.31	A			0.8	7.64	0.46	A	

There are warnings associated with one or more model runs - see the 'Data Errors and Warnings' tables for each Analysis or Demand Set.

Values shown are the highest values encountered over all time segments. Delay is the maximum value of average delay per arriving vehicle. Network Residual Capacity indicates the amount by which network flow could be increased before a user-definable threshold (see Analysis Options) is met.

File summary

File Description

Title	
Location	
Site number	
Date	31/08/2021
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	AzureAD\DavidSagstad
Description	

Units

Distance units	Speed units	Traffic units input	Traffic units results	Flow units	Average delay units	Total delay units	Rate of delay units
m	kph	PCU	PCU	perHour	s	-Min	perMin

Analysis Options

Mini-roundabout model	Vehicle length (m)	Calculate Queue Percentiles	Calculate detailed queueing delay	Show lane queues in feet / metres	Show all PICADY stream intercepts	Calculate residual capacity	Residual capacity criteria type	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)	Use iterations with HCM roundabouts	Max number of iterations for roundabouts
JUNCTIONS 9	5.75					✓	Delay	0.85	36.00	20.00		500

Demand Set Summary

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D1	2023 Base	AM	ONE HOUR	08:00	09:30	15	✓
D2	2023 Base	PM	ONE HOUR	17:00	18:30	15	✓
D3	2030 Base	AM	ONE HOUR	08:00	09:30	15	✓
D4	2030 Base	PM	ONE HOUR	17:00	18:30	15	✓
D5	2023 Base Plus Dev	AM	ONE HOUR	08:00	09:30	15	✓
D6	2023 Base Plus Dev	PM	ONE HOUR	17:00	18:30	15	✓
D7	2030 Base Plus Dev	AM	ONE HOUR	08:00	09:30	15	✓
D8	2030 Base Plus Dev	PM	ONE HOUR	17:00	18:30	15	✓

Analysis Set Details

ID	Include in report	Network flow scaling factor (%)	Network capacity scaling factor (%)
A1	✓	100.000	100.000

2023 Base, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Mini-roundabout		Mini-roundabout appears to have unbalanced flows and may behave like a priority junction; treat results with caution. See User Guide for details.[Arms 1 and 2 have 89% of the total flow for the roundabout for one or more time segments]

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Mini-roundabout		1, 2, 3	6.46	A

Junction Network

Driving side	Lighting	Road surface	In London	Network residual capacity (%)	First arm reaching threshold	Network delay (s)	Network LOS
Left	Normal/unknown	Normal/unknown		66	Arm 2	6.46	A

Arms

Arms

Arm	Name	Description
1	Brewery Lane	
2	Lees Hall Road E	
3	Lees Hall Road W	

Mini Roundabout Geometry

Arm	Approach road half-width (m)	Minimum approach road half-width (m)	Entry width (m)	Effective flare length (m)	Distance to next arm (m)	Entry corner kerb line distance (m)	Gradient over 50m (%)	Kerbed central island
1	3.70	3.70	4.90	15.0	9.70	6.10	0.0	✓
2	3.40	3.40	3.70	1.0	15.40	15.40	0.0	
3	3.50	3.50	3.50	0.0	7.00	3.20	0.0	

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Final slope	Final intercept (PCU/hr)
1	0.542	1024
2	0.642	1073
3	0.609	944

The slope and intercept shown above include any corrections and adjustments.

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D1	2023 Base	AM	ONE HOUR	08:00	09:30	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1		ONE HOUR	✓	182	100.000
2		ONE HOUR	✓	468	100.000
3		ONE HOUR	✓	79	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		1	2	3
From	1	0	75	107
	2	215	0	253
	3	33	46	0

Proportions

		To		
		1	2	3
From	1	0.00	0.41	0.59
	2	0.46	0.00	0.54
	3	0.42	0.58	0.00

Vehicle Mix

Heavy Vehicle Percentages

		To		
		1	2	3
From	1	1	0	0
	2	0	0	0
	3	0	0	0

Average PCU Per Veh

		To		
		1	2	3
From	1	1.010	1.000	1.000
	2	1.000	1.000	1.000
	3	1.000	1.000	1.000

Detailed Demand Data

Demand for each time segment

Time Segment	Arm	Demand (PCU/hr)	Demand in PCU (PCU/hr)
08:00-08:15	1	137	137
	2	352	352
	3	59	59
08:15-08:30	1	164	164
	2	421	421
	3	71	71
08:30-08:45	1	200	200
	2	515	515
	3	87	87
08:45-09:00	1	200	200
	2	515	515
	3	87	87
09:00-09:15	1	164	164
	2	421	421
	3	71	71
09:15-09:30	1	137	137
	2	352	352
	3	59	59

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
1	0.20	4.52	0.3	A	167	251
2	0.52	7.46	1.1	A	429	644
3	0.11	5.05	0.1	A	72	109

Main Results for each time segment

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	137	34	34	1006	0.136	136	186	0.0	0.2	4.138	A
2	352	88	80	1022	0.345	350	91	0.0	0.5	5.344	A
3	59	15	161	846	0.070	59	270	0.0	0.1	4.576	A

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	164	41	41	1002	0.163	163	223	0.2	0.2	4.293	A
2	421	105	96	1012	0.416	420	109	0.5	0.7	6.076	A
3	71	18	193	826	0.086	71	323	0.1	0.1	4.766	A

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	200	50	51	997	0.201	200	272	0.2	0.3	4.516	A
2	515	129	118	998	0.516	514	133	0.7	1.1	7.417	A
3	87	22	236	800	0.109	87	395	0.1	0.1	5.048	A

08:45 - 09:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	200	50	51	997	0.201	200	273	0.3	0.3	4.518	A
2	515	129	118	998	0.516	515	133	1.1	1.1	7.460	A
3	87	22	237	800	0.109	87	396	0.1	0.1	5.051	A

09:00 - 09:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	164	41	41	1002	0.163	164	224	0.3	0.2	4.297	A
2	421	105	96	1012	0.416	422	109	1.1	0.7	6.120	A
3	71	18	194	826	0.086	71	324	0.1	0.1	4.771	A

09:15 - 09:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	137	34	35	1006	0.136	137	187	0.2	0.2	4.145	A
2	352	88	81	1022	0.345	353	91	0.7	0.5	5.392	A
3	59	15	162	845	0.070	60	272	0.1	0.1	4.583	A

2023 Base, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Mini-roundabout		1, 2, 3	4.97	A

Junction Network

Driving side	Lighting	Road surface	In London	Network residual capacity (%)	First arm reaching threshold	Network delay (s)	Network LOS
Left	Normal/unknown	Normal/unknown		194	Arm 3	4.97	A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D2	2023 Base	PM	ONE HOUR	17:00	18:30	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1		ONE HOUR	✓	182	100.000
2		ONE HOUR	✓	223	100.000
3		ONE HOUR	✓	199	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		1	2	3
From	1	0	90	92
	2	105	0	118
	3	105	94	0

Proportions

		To		
		1	2	3
From	1	0.00	0.49	0.51
	2	0.47	0.00	0.53
	3	0.53	0.47	0.00

Vehicle Mix

Heavy Vehicle Percentages

		To		
		1	2	3
From	1	1	0	0
	2	0	0	0
	3	0	0	0

Average PCU Per Veh

		To		
		1	2	3
From	1	1.010	1.000	1.000
	2	1.000	1.000	1.000
	3	1.000	1.000	1.000

Detailed Demand Data

Demand for each time segment

Time Segment	Arm	Demand (PCU/hr)	Demand in PCU (PCU/hr)
17:00-17:15	1	137	137
	2	168	168
	3	150	150
17:15-17:30	1	164	164
	2	200	200
	3	179	179
17:30-17:45	1	200	200
	2	246	246
	3	219	219
17:45-18:00	1	200	200
	2	246	246
	3	219	219
18:00-18:15	1	164	164
	2	200	200
	3	179	179
18:15-18:30	1	137	137
	2	168	168
	3	150	150

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
1	0.21	4.69	0.3	A	167	251
2	0.24	4.72	0.3	A	205	307
3	0.25	5.50	0.3	A	183	274

Main Results for each time segment

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	137	34	70	986	0.139	136	157	0.0	0.2	4.233	A
2	168	42	69	1029	0.163	167	138	0.0	0.2	4.173	A
3	150	37	79	896	0.167	149	157	0.0	0.2	4.815	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	164	41	84	979	0.167	163	189	0.2	0.2	4.416	A
2	200	50	83	1020	0.196	200	165	0.2	0.2	4.388	A
3	179	45	94	886	0.202	179	189	0.2	0.3	5.086	A

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	200	50	103	968	0.207	200	231	0.2	0.3	4.685	A
2	246	61	101	1008	0.243	245	202	0.2	0.3	4.714	A
3	219	55	115	873	0.251	219	231	0.3	0.3	5.496	A

17:45 - 18:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	200	50	103	968	0.207	200	231	0.3	0.3	4.687	A
2	246	61	101	1008	0.243	246	203	0.3	0.3	4.718	A
3	219	55	116	873	0.251	219	231	0.3	0.3	5.501	A

18:00 - 18:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	164	41	85	979	0.167	164	189	0.3	0.2	4.419	A
2	200	50	83	1020	0.197	201	166	0.3	0.2	4.396	A
3	179	45	95	886	0.202	179	189	0.3	0.3	5.095	A

18:15 - 18:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	137	34	71	986	0.139	137	158	0.2	0.2	4.243	A
2	168	42	69	1029	0.163	168	139	0.2	0.2	4.182	A
3	150	37	79	896	0.167	150	158	0.3	0.2	4.829	A

2030 Base, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Mini-roundabout		Mini-roundabout appears to have unbalanced flows and may behave like a priority junction; treat results with caution. See User Guide for details.[Arms 1 and 2 have 82% of the total flow for the roundabout for one or more time segments]

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Mini-roundabout		1, 2, 3	6.41	A

Junction Network

Driving side	Lighting	Road surface	In London	Network residual capacity (%)	First arm reaching threshold	Network delay (s)	Network LOS
Left	Normal/unknown	Normal/unknown		67	Arm 2	6.41	A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D3	2030 Base	AM	ONE HOUR	08:00	09:30	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1		ONE HOUR	✓	197	100.000
2		ONE HOUR	✓	460	100.000
3		ONE HOUR	✓	137	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		1	2	3
From	1	0	84	113
	2	200	0	260
	3	45	92	0

Proportions

		To		
		1	2	3
From	1	0.00	0.43	0.57
	2	0.43	0.00	0.57
	3	0.33	0.67	0.00

Vehicle Mix

Heavy Vehicle Percentages

		To		
		1	2	3
From	1	1	0	0
	2	0	0	0
	3	0	0	0

Average PCU Per Veh

		To		
		1	2	3
From	1	1.010	1.000	1.000
	2	1.000	1.000	1.000
	3	1.000	1.000	1.000

Detailed Demand Data

Demand for each time segment

Time Segment	Arm	Demand (PCU/hr)	Demand in PCU (PCU/hr)
08:00-08:15	1	148	148
	2	346	346
	3	103	103
08:15-08:30	1	177	177
	2	414	414
	3	123	123
08:30-08:45	1	217	217
	2	506	506
	3	151	151
08:45-09:00	1	217	217
	2	506	506
	3	151	151
09:00-09:15	1	177	177
	2	414	414
	3	123	123
09:15-09:30	1	148	148
	2	346	346
	3	103	103

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
1	0.22	4.78	0.3	A	181	271
2	0.51	7.39	1.0	A	422	633
3	0.19	5.46	0.2	A	126	189

Main Results for each time segment

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	148	37	69	987	0.150	148	183	0.0	0.2	4.285	A
2	346	87	85	1019	0.340	344	132	0.0	0.5	5.319	A
3	103	26	150	853	0.121	103	279	0.0	0.1	4.797	A

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	177	44	83	980	0.181	177	220	0.2	0.2	4.483	A
2	414	103	101	1008	0.410	413	158	0.5	0.7	6.038	A
3	123	31	179	834	0.148	123	335	0.1	0.2	5.058	A

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	217	54	101	970	0.224	217	269	0.2	0.3	4.780	A
2	506	127	124	994	0.510	505	194	0.7	1.0	7.348	A
3	151	38	220	810	0.186	151	410	0.2	0.2	5.458	A

08:45 - 09:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	217	54	101	970	0.224	217	270	0.3	0.3	4.782	A
2	506	127	124	994	0.510	506	194	1.0	1.0	7.390	A
3	151	38	220	810	0.186	151	411	0.2	0.2	5.463	A

09:00 - 09:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	177	44	83	980	0.181	177	221	0.3	0.2	4.490	A
2	414	103	102	1008	0.410	415	158	1.0	0.7	6.083	A
3	123	31	180	834	0.148	123	336	0.2	0.2	5.067	A

09:15 - 09:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	148	37	69	987	0.150	148	185	0.2	0.2	4.296	A
2	346	87	85	1019	0.340	347	133	0.7	0.5	5.367	A
3	103	26	151	852	0.121	103	281	0.2	0.1	4.809	A

2030 Base, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Mini-roundabout		1, 2, 3	5.94	A

Junction Network

Driving side	Lighting	Road surface	In London	Network residual capacity (%)	First arm reaching threshold	Network delay (s)	Network LOS
Left	Normal/unknown	Normal/unknown		99	Arm 3	5.94	A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D4	2030 Base	PM	ONE HOUR	17:00	18:30	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1		ONE HOUR	✓	212	100.000
2		ONE HOUR	✓	289	100.000
3		ONE HOUR	✓	319	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		1	2	3
From	1	0	111	101
	2	114	0	175
	3	129	190	0

Proportions

		To		
		1	2	3
From	1	0.00	0.52	0.48
	2	0.39	0.00	0.61
	3	0.40	0.60	0.00

Vehicle Mix

Heavy Vehicle Percentages

		To		
		1	2	3
From	1	1	0	0
	2	0	0	0
	3	0	0	0

Average PCU Per Veh

		To		
		1	2	3
From	1	1.010	1.000	1.000
	2	1.000	1.000	1.000
	3	1.000	1.000	1.000

Detailed Demand Data

Demand for each time segment

Time Segment	Arm	Demand (PCU/hr)	Demand in PCU (PCU/hr)
17:00-17:15	1	160	160
	2	218	218
	3	240	240
17:15-17:30	1	191	191
	2	260	260
	3	287	287
17:30-17:45	1	233	233
	2	318	318
	3	351	351
17:45-18:00	1	233	233
	2	318	318
	3	351	351
18:00-18:15	1	191	191
	2	260	260
	3	287	287
18:15-18:30	1	160	160
	2	218	218
	3	240	240

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
1	0.26	5.31	0.3	A	195	292
2	0.32	5.26	0.5	A	265	398
3	0.40	6.97	0.7	A	293	439

Main Results for each time segment

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	160	40	142	947	0.168	159	182	0.0	0.2	4.560	A
2	218	54	76	1025	0.212	217	225	0.0	0.3	4.448	A
3	240	60	85	892	0.269	239	207	0.0	0.4	5.500	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	191	48	171	932	0.205	190	218	0.2	0.3	4.853	A
2	260	65	91	1015	0.256	260	270	0.3	0.3	4.760	A
3	287	72	102	881	0.325	286	248	0.4	0.5	6.046	A

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	233	58	209	911	0.256	233	267	0.3	0.3	5.306	A
2	318	80	111	1002	0.318	318	331	0.3	0.5	5.256	A
3	351	88	125	867	0.405	350	303	0.5	0.7	6.953	A

17:45 - 18:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	233	58	209	911	0.256	233	268	0.3	0.3	5.312	A
2	318	80	111	1002	0.318	318	331	0.5	0.5	5.263	A
3	351	88	126	867	0.405	351	304	0.7	0.7	6.974	A

18:00 - 18:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	191	48	171	932	0.205	191	219	0.3	0.3	4.862	A
2	260	65	91	1015	0.256	260	271	0.5	0.3	4.774	A
3	287	72	103	881	0.325	288	249	0.7	0.5	6.070	A

18:15 - 18:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	160	40	143	947	0.169	160	183	0.3	0.2	4.577	A
2	218	54	76	1025	0.212	218	227	0.3	0.3	4.464	A
3	240	60	86	891	0.269	241	208	0.5	0.4	5.534	A

2023 Base Plus Dev, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Mini-roundabout		1, 2, 3	5.63	A

Junction Network

Driving side	Lighting	Road surface	In London	Network residual capacity (%)	First arm reaching threshold	Network delay (s)	Network LOS
Left	Normal/unknown	Normal/unknown		98	Arm 2	5.63	A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D5	2023 Base Plus Dev	AM	ONE HOUR	08:00	09:30	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1		ONE HOUR	✓	175	100.000
2		ONE HOUR	✓	382	100.000
3		ONE HOUR	✓	156	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		1	2	3
From	1	0	69	106
	2	168	0	214
	3	107	49	0

Proportions

		To		
		1	2	3
From	1	0.00	0.39	0.61
	2	0.44	0.00	0.56
	3	0.69	0.31	0.00

Vehicle Mix

Heavy Vehicle Percentages

		To		
		1	2	3
From	1	1	0	0
	2	0	0	0
	3	0	0	0

Average PCU Per Veh

		To		
		1	2	3
From	1	1.010	1.000	1.000
	2	1.000	1.000	1.000
	3	1.000	1.000	1.000

Detailed Demand Data

Demand for each time segment

Time Segment	Arm	Demand (PCU/hr)	Demand in PCU (PCU/hr)
08:00-08:15	1	132	132
	2	288	288
	3	117	117
08:15-08:30	1	157	157
	2	343	343
	3	140	140
08:30-08:45	1	193	193
	2	421	421
	3	172	172
08:45-09:00	1	193	193
	2	421	421
	3	172	172
09:00-09:15	1	157	157
	2	343	343
	3	140	140
09:15-09:30	1	132	132
	2	288	288
	3	117	117

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
1	0.19	4.49	0.2	A	161	241
2	0.42	6.23	0.7	A	351	526
3	0.21	5.46	0.3	A	143	215

Main Results for each time segment

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	132	33	37	1005	0.131	131	206	0.0	0.2	4.119	A
2	288	72	79	1022	0.281	286	88	0.0	0.4	4.879	A
3	117	29	126	867	0.135	117	240	0.0	0.2	4.793	A

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	157	39	44	1001	0.157	157	247	0.2	0.2	4.268	A
2	343	86	95	1012	0.339	343	106	0.4	0.5	5.375	A
3	140	35	151	852	0.165	140	287	0.2	0.2	5.056	A

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	193	48	54	995	0.194	192	302	0.2	0.2	4.483	A
2	421	105	117	999	0.421	420	130	0.5	0.7	6.210	A
3	172	43	185	831	0.207	172	352	0.2	0.3	5.456	A

08:45 - 09:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	193	48	54	995	0.194	193	303	0.2	0.2	4.485	A
2	421	105	117	998	0.421	421	130	0.7	0.7	6.228	A
3	172	43	185	831	0.207	172	352	0.3	0.3	5.459	A

09:00 - 09:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	157	39	44	1001	0.157	158	248	0.2	0.2	4.271	A
2	343	86	95	1012	0.339	344	106	0.7	0.5	5.398	A
3	140	35	151	852	0.165	140	288	0.3	0.2	5.065	A

09:15 - 09:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	132	33	37	1004	0.131	132	207	0.2	0.2	4.126	A
2	288	72	80	1022	0.281	288	89	0.5	0.4	4.909	A
3	117	29	127	867	0.136	118	241	0.2	0.2	4.808	A

2023 Base Plus Dev, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Mini-roundabout		1, 2, 3	5.14	A

Junction Network

Driving side	Lighting	Road surface	In London	Network residual capacity (%)	First arm reaching threshold	Network delay (s)	Network LOS
Left	Normal/unknown	Normal/unknown		170	Arm 3	5.14	A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D6	2023 Base Plus Dev	PM	ONE HOUR	17:00	18:30	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1		ONE HOUR	✓	170	100.000
2		ONE HOUR	✓	255	100.000
3		ONE HOUR	✓	222	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		1	2	3
From	1	0	78	92
	2	105	0	150
	3	107	115	0

Proportions

		To		
		1	2	3
From	1	0.00	0.46	0.54
	2	0.41	0.00	0.59
	3	0.48	0.52	0.00

Vehicle Mix

Heavy Vehicle Percentages

		To		
		1	2	3
From	1	1	0	0
	2	0	0	0
	3	0	0	0

Average PCU Per Veh

		To		
		1	2	3
From	1	1.010	1.000	1.000
	2	1.000	1.000	1.000
	3	1.000	1.000	1.000

Detailed Demand Data

Demand for each time segment

Time Segment	Arm	Demand (PCU/hr)	Demand in PCU (PCU/hr)
17:00-17:15	1	128	128
	2	192	192
	3	167	167
17:15-17:30	1	153	153
	2	229	229
	3	200	200
17:30-17:45	1	187	187
	2	281	281
	3	244	244
17:45-18:00	1	187	187
	2	281	281
	3	244	244
18:00-18:15	1	153	153
	2	229	229
	3	200	200
18:15-18:30	1	128	128
	2	192	192
	3	167	167

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
1	0.20	4.68	0.2	A	156	234
2	0.28	4.95	0.4	A	234	351
3	0.28	5.72	0.4	A	204	306

Main Results for each time segment

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	128	32	86	978	0.131	127	159	0.0	0.1	4.231	A
2	192	48	69	1029	0.187	191	145	0.0	0.2	4.291	A
3	167	42	79	896	0.187	166	181	0.0	0.2	4.928	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	153	38	103	968	0.158	153	190	0.1	0.2	4.413	A
2	229	57	83	1020	0.225	229	173	0.2	0.3	4.548	A
3	200	50	94	886	0.225	199	217	0.2	0.3	5.239	A

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	187	47	126	956	0.196	187	233	0.2	0.2	4.680	A
2	281	70	101	1008	0.278	280	212	0.3	0.4	4.942	A
3	244	61	115	873	0.280	244	266	0.3	0.4	5.715	A

17:45 - 18:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	187	47	127	956	0.196	187	233	0.2	0.2	4.683	A
2	281	70	101	1008	0.278	281	212	0.4	0.4	4.947	A
3	244	61	116	873	0.280	244	266	0.4	0.4	5.723	A

18:00 - 18:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	153	38	104	968	0.158	153	191	0.2	0.2	4.416	A
2	229	57	83	1020	0.225	230	174	0.4	0.3	4.555	A
3	200	50	95	886	0.225	200	218	0.4	0.3	5.250	A

18:15 - 18:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	128	32	87	977	0.131	128	160	0.2	0.2	4.239	A
2	192	48	69	1029	0.187	192	145	0.3	0.2	4.303	A
3	167	42	79	896	0.187	167	182	0.3	0.2	4.945	A

2030 Base Plus Dev, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Mini-roundabout		1, 2, 3	5.57	A

Junction Network

Driving side	Lighting	Road surface	In London	Network residual capacity (%)	First arm reaching threshold	Network delay (s)	Network LOS
Left	Normal/unknown	Normal/unknown		127	Arm 2	5.57	A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D7	2030 Base Plus Dev	AM	ONE HOUR	08:00	09:30	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1		ONE HOUR	✓	201	100.000
2		ONE HOUR	✓	327	100.000
3		ONE HOUR	✓	241	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		1	2	3
From	1	0	99	102
	2	141	0	186
	3	151	90	0

Proportions

		To		
		1	2	3
From	1	0.00	0.49	0.51
	2	0.43	0.00	0.57
	3	0.63	0.37	0.00

Vehicle Mix

Heavy Vehicle Percentages

		To		
		1	2	3
From	1	1	0	0
	2	0	0	0
	3	0	0	0

Average PCU Per Veh

		To		
		1	2	3
From	1	1.010	1.000	1.000
	2	1.000	1.000	1.000
	3	1.000	1.000	1.000

Detailed Demand Data

Demand for each time segment

Time Segment	Arm	Demand (PCU/hr)	Demand in PCU (PCU/hr)
08:00-08:15	1	151	151
	2	246	246
	3	181	181
08:15-08:30	1	181	181
	2	294	294
	3	217	217
08:30-08:45	1	221	221
	2	360	360
	3	265	265
08:45-09:00	1	221	221
	2	360	360
	3	265	265
09:00-09:15	1	181	181
	2	294	294
	3	217	217
09:15-09:30	1	151	151
	2	246	246
	3	181	181

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
1	0.23	4.80	0.3	A	184	277
2	0.36	5.61	0.6	A	300	450
3	0.31	6.16	0.5	A	221	332

Main Results for each time segment

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	151	38	67	988	0.153	151	219	0.0	0.2	4.296	A
2	246	62	76	1024	0.240	245	142	0.0	0.3	4.611	A
3	181	45	106	879	0.206	180	216	0.0	0.3	5.142	A

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	181	45	81	981	0.184	181	262	0.2	0.2	4.498	A
2	294	73	92	1015	0.290	294	170	0.3	0.4	4.991	A
3	217	54	127	867	0.250	216	259	0.3	0.3	5.533	A

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	221	55	99	971	0.228	221	321	0.2	0.3	4.800	A
2	360	90	112	1001	0.360	359	208	0.4	0.6	5.603	A
3	265	66	155	849	0.312	265	317	0.3	0.4	6.153	A

08:45 - 09:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	221	55	99	971	0.228	221	321	0.3	0.3	4.803	A
2	360	90	112	1001	0.360	360	208	0.6	0.6	5.613	A
3	265	66	155	849	0.312	265	317	0.4	0.5	6.164	A

09:00 - 09:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	181	45	81	980	0.184	181	263	0.3	0.2	4.503	A
2	294	73	92	1014	0.290	295	170	0.6	0.4	5.004	A
3	217	54	127	866	0.250	217	259	0.5	0.3	5.547	A

09:15 - 09:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	151	38	68	988	0.153	152	220	0.2	0.2	4.306	A
2	246	62	77	1024	0.240	247	142	0.4	0.3	4.632	A
3	181	45	106	879	0.206	182	217	0.3	0.3	5.166	A

2030 Base Plus Dev, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Mini-roundabout		1, 2, 3	6.40	A

Junction Network

Driving side	Lighting	Road surface	In London	Network residual capacity (%)	First arm reaching threshold	Network delay (s)	Network LOS
Left	Normal/unknown	Normal/unknown		80	Arm 3	6.40	A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D8	2030 Base Plus Dev	PM	ONE HOUR	17:00	18:30	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1		ONE HOUR	✓	210	100.000
2		ONE HOUR	✓	325	100.000
3		ONE HOUR	✓	361	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		1	2	3
From	1	0	105	105
	2	112	0	213
	3	131	230	0

Proportions

		To		
		1	2	3
From	1	0.00	0.50	0.50
	2	0.34	0.00	0.66
	3	0.36	0.64	0.00

Vehicle Mix

Heavy Vehicle Percentages

		To		
		1	2	3
From	1	1	0	0
	2	0	0	0
	3	0	0	0

Average PCU Per Veh

		To		
		1	2	3
From	1	1.010	1.000	1.000
	2	1.000	1.000	1.000
	3	1.000	1.000	1.000

Detailed Demand Data

Demand for each time segment

Time Segment	Arm	Demand (PCU/hr)	Demand in PCU (PCU/hr)
17:00-17:15	1	158	158
	2	245	245
	3	272	272
17:15-17:30	1	189	189
	2	292	292
	3	325	325
17:30-17:45	1	231	231
	2	358	358
	3	397	397
17:45-18:00	1	231	231
	2	358	358
	3	397	397
18:00-18:15	1	189	189
	2	292	292
	3	325	325
18:15-18:30	1	158	158
	2	245	245
	3	272	272

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
1	0.26	5.49	0.4	A	193	289
2	0.36	5.61	0.6	A	298	447
3	0.46	7.64	0.8	A	331	497

Main Results for each time segment

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	158	40	172	931	0.170	157	182	0.0	0.2	4.647	A
2	245	61	79	1023	0.239	243	251	0.0	0.3	4.610	A
3	272	68	84	893	0.304	270	238	0.0	0.4	5.765	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	189	47	206	913	0.207	189	218	0.2	0.3	4.971	A
2	292	73	94	1013	0.288	292	301	0.3	0.4	4.990	A
3	325	81	101	883	0.368	324	286	0.4	0.6	6.438	A

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	231	58	253	887	0.261	231	267	0.3	0.3	5.480	A
2	358	89	115	999	0.358	357	368	0.4	0.6	5.602	A
3	397	99	123	869	0.457	396	350	0.6	0.8	7.604	A

17:45 - 18:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	231	58	253	887	0.261	231	268	0.3	0.4	5.487	A
2	358	89	116	999	0.358	358	369	0.6	0.6	5.612	A
3	397	99	123	869	0.458	397	350	0.8	0.8	7.639	A

18:00 - 18:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	189	47	207	912	0.207	189	219	0.4	0.3	4.984	A
2	292	73	95	1013	0.289	293	302	0.6	0.4	5.006	A
3	325	81	101	882	0.368	326	286	0.8	0.6	6.476	A

18:15 - 18:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	158	40	174	930	0.170	158	183	0.3	0.2	4.665	A
2	245	61	79	1023	0.239	245	253	0.4	0.3	4.633	A
3	272	68	84	892	0.305	272	240	0.6	0.4	5.811	A

APPENDIX I

Junctions 10

PICADY 10 - Priority Intersection Module

Filename: 210831 Ingham.j10
Path: C:\Users\DavidSagstad\Dropbox\Working Back Up\Projects\2020213 Dewsbury Riverside\Analysis\Junction Assessment
Report generation date: 31/08/2021 13:19:12

Summary of junction performance

	AM						PM					
	Set ID	Queue (PCU)	Delay (s)	RFC	LOS	Network Residual Capacity	Set ID	Queue (PCU)	Delay (s)	RFC	LOS	Network Residual Capacity
	2023 Base											
Stream B-AC	D1	1.0	13.73	0.50	B	56 %	D2	0.5	9.89	0.32	A	141 %
Stream C-AB		0.0	0.00	0.00	A	[Stream B-AC]		0.0	0.00	0.00	A	[Stream B-AC]
	2030 Base											
Stream B-AC	D3	1.0	13.95	0.50	B	55 %	D4	0.8	11.83	0.44	B	81 %
Stream C-AB		0.0	0.00	0.00	A	[Stream B-AC]		0.0	0.00	0.00	A	[Stream B-AC]
	2023 Base With Dev											
Stream B-AC	D5	1.0	13.68	0.51	B	57 %	D6	0.6	10.76	0.38	B	106 %
Stream C-AB		0.0	0.00	0.00	A	[Stream B-AC]		0.0	0.00	0.00	A	[Stream B-AC]
	2030 Base With Dev											
Stream B-AC	D7	1.0	13.62	0.50	B	58 %	D8	1.0	13.28	0.50	B	60 %
Stream C-AB		0.0	0.00	0.00	A	[Stream B-AC]		0.0	0.00	0.00	A	[Stream B-AC]

Values shown are the highest values encountered over all time segments. Delay is the maximum value of average delay per arriving vehicle. Network Residual Capacity indicates the amount by which network flow could be increased before a user-definable threshold (see Analysis Options) is met.

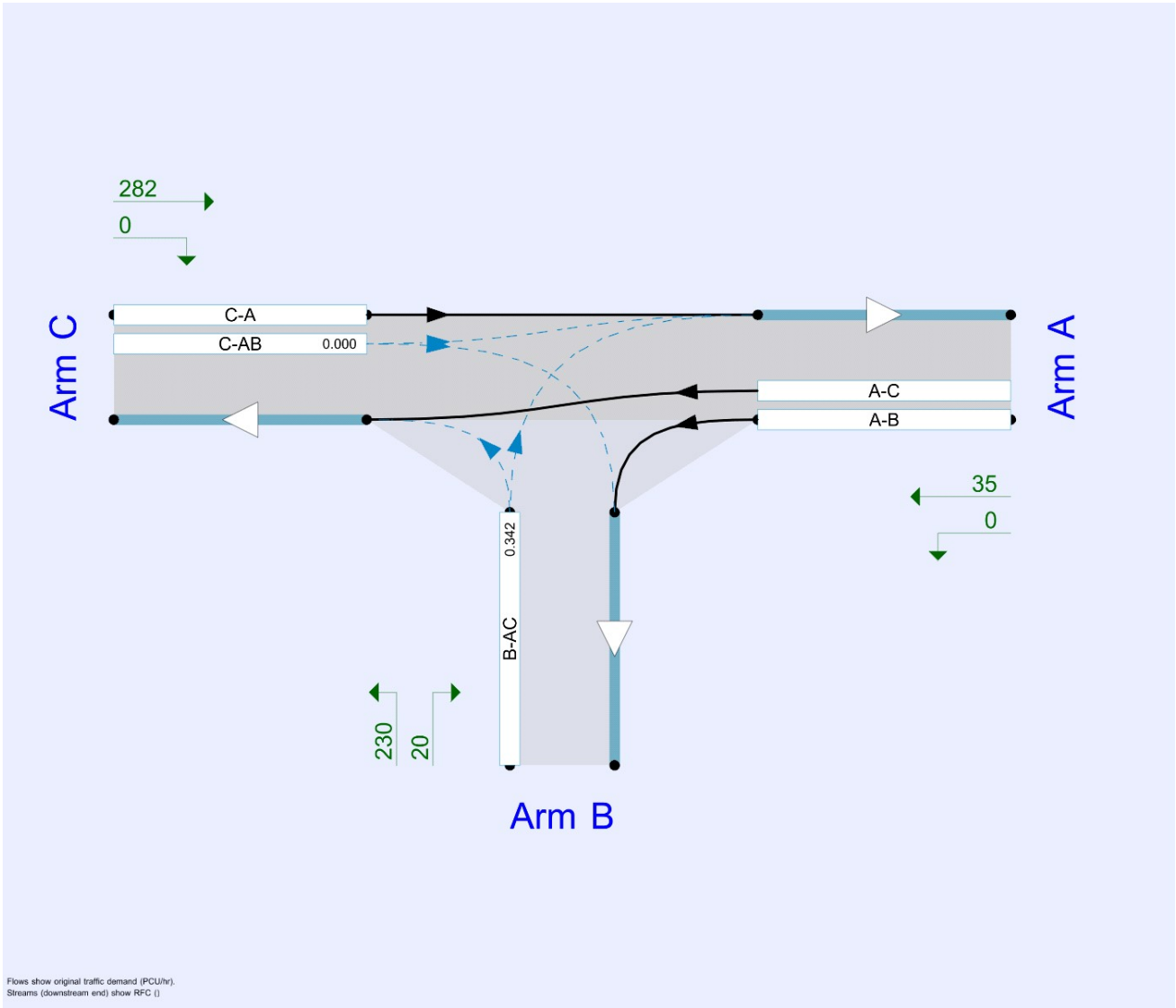
File summary

File Description

Title	
Location	
Site number	
Date	31/08/2021
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	AzureAD\DavidSagstad
Description	

Units

Distance units	Speed units	Traffic units input	Traffic units results	Flow units	Average delay units	Total delay units	Rate of delay units
m	kph	PCU	PCU	perHour	s	-Min	perMin



The junction diagram reflects the last run of Junctions.

Analysis Options

Vehicle length (m)	Calculate Queue Percentiles	Calculate detailed queueing delay	Show lane queues in feet / metres	Show all PICADY stream intercepts	Calculate residual capacity	Residual capacity criteria type	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)	Use iterations with HCM roundabouts	Max number of iterations for roundabouts
5.75					✓	Delay	0.85	36.00	20.00		500

Demand Set Summary

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D1	2023 Base	AM	ONE HOUR	08:00	09:30	15	✓
D2	2023 Base	PM	ONE HOUR	17:00	18:30	15	✓
D3	2030 Base	AM	ONE HOUR	08:00	09:30	15	✓
D4	2030 Base	PM	ONE HOUR	17:00	18:30	15	✓
D5	2023 Base With Dev	AM	ONE HOUR	08:00	09:30	15	✓
D6	2023 Base With Dev	PM	ONE HOUR	17:00	18:30	15	✓
D7	2030 Base With Dev	AM	ONE HOUR	08:00	09:30	15	✓
D8	2030 Base With Dev	PM	ONE HOUR	17:00	18:30	15	✓

Analysis Set Details

ID	Include in report	Network flow scaling factor (%)	Network capacity scaling factor (%)
A1	✓	100.000	100.000

2023 Base, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way	Two-way	Two-way		7.68	A

Junction Network

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold	Network delay (s)	Network LOS
Left	Normal/unknown	56	Stream B-AC	7.68	A

Arms

Arms

Arm	Name	Description	Arm type
A	Ingham Road N		Major
B	Lees Hall Road (E - Minor)		Minor
C	Lees Hall Road (W - Major)		Major

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Has right-turn storage	Visibility for right turn (m)	Blocks?	Blocking queue (PCU)
C	6.00			0.0	✓	0.00

Geometries for Arm C are measured opposite Arm B. Geometries for Arm A (if relevant) are measured opposite Arm D.

Minor Arm Geometry

Arm	Minor arm type	Lane width (m)	Visibility to left (m)	Visibility to right (m)
B	One lane	2.20	0	0

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
B-A	440	0.080	0.202	0.127	0.289
B-C	574	0.088	0.222	-	-
C-B	574	0.222	0.222	-	-

The slopes and intercepts shown above include custom intercept adjustments only.

Streams may be combined, in which case capacity will be adjusted.

Values are shown for the first time segment only; they may differ for subsequent time segments.

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D1	2023 Base	AM	ONE HOUR	08:00	09:30	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A		ONE HOUR	✓	86	100.000
B		ONE HOUR	✓	242	100.000
C		ONE HOUR	✓	105	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A	B	C
From	A	0	0	86
	B	31	0	211
	C	105	0	0

Proportions

		To		
		A	B	C
From	A	0.00	0.00	1.00
	B	0.13	0.00	0.87
	C	1.00	0.00	0.00

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A	B	C
From	A	1	0	0
	B	0	0	0
	C	0	0	0

Average PCU Per Veh

		To		
		A	B	C
From	A	1.010	1.000	1.000
	B	1.000	1.000	1.000
	C	1.000	1.000	1.000

Detailed Demand Data

Demand for each time segment

Time Segment	Arm	Demand (PCU/hr)	Demand in PCU (PCU/hr)
08:00-08:15	A	65	65
	B	182	182
	C	79	79
08:15-08:30	A	77	77
	B	218	218
	C	94	94
08:30-08:45	A	95	95
	B	266	266
	C	116	116
08:45-09:00	A	95	95
	B	266	266
	C	116	116
09:00-09:15	A	77	77
	B	218	218
	C	94	94
09:15-09:30	A	65	65
	B	182	182
	C	79	79

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-AC	0.50	13.73	1.0	B	222	333
C-AB	0.00	0.00	0.0	A	0	0
C-A					96	145
A-B					0	0
A-C					79	118

Main Results for each time segment

08:00 - 08:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	182	46	536	0.340	180	0.0	0.5	10.062	B
C-AB	0	0	560	0.000	0	0.0	0.0	0.000	A
C-A	79	20			79				
A-B	0	0			0				
A-C	65	16			65				

08:15 - 08:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	218	54	533	0.408	217	0.5	0.7	11.371	B
C-AB	0	0	557	0.000	0	0.0	0.0	0.000	A
C-A	94	24			94				
A-B	0	0			0				
A-C	77	19			77				

08:30 - 08:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	266	67	528	0.504	265	0.7	1.0	13.613	B
C-AB	0	0	553	0.000	0	0.0	0.0	0.000	A
C-A	116	29			116				
A-B	0	0			0				
A-C	95	24			95				

08:45 - 09:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	266	67	528	0.504	266	1.0	1.0	13.734	B
C-AB	0	0	553	0.000	0	0.0	0.0	0.000	A
C-A	116	29			116				
A-B	0	0			0				
A-C	95	24			95				

09:00 - 09:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	218	54	533	0.408	219	1.0	0.7	11.509	B
C-AB	0	0	557	0.000	0	0.0	0.0	0.000	A
C-A	94	24			94				
A-B	0	0			0				
A-C	77	19			77				

09:15 - 09:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	182	46	536	0.340	183	0.7	0.5	10.219	B
C-AB	0	0	560	0.000	0	0.0	0.0	0.000	A
C-A	79	20			79				
A-B	0	0			0				
A-C	65	16			65				

2023 Base, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way	Two-way	Two-way		4.32	A

Junction Network

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold	Network delay (s)	Network LOS
Left	Normal/unknown	141	Stream B-AC	4.32	A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D2	2023 Base	PM	ONE HOUR	17:00	18:30	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A		ONE HOUR	✓	36	100.000
B		ONE HOUR	✓	159	100.000
C		ONE HOUR	✓	169	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A	B	C
From	A	0	0	36
	B	20	0	139
	C	169	0	0

Proportions

		To		
		A	B	C
From	A	0.00	0.00	1.00
	B	0.13	0.00	0.87
	C	1.00	0.00	0.00

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A	B	C
From	A	1	0	0
	B	0	0	0
	C	0	0	0

Average PCU Per Veh

		To		
		A	B	C
From	A	1.010	1.000	1.000
	B	1.000	1.000	1.000
	C	1.000	1.000	1.000

Detailed Demand Data

Demand for each time segment

Time Segment	Arm	Demand (PCU/hr)	Demand in PCU (PCU/hr)
17:00-17:15	A	27	27
	B	120	120
	C	127	127
17:15-17:30	A	32	32
	B	143	143
	C	152	152
17:30-17:45	A	40	40
	B	175	175
	C	186	186
17:45-18:00	A	40	40
	B	175	175
	C	186	186
18:00-18:15	A	32	32
	B	143	143
	C	152	152
18:15-18:30	A	27	27
	B	120	120
	C	127	127

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-AC	0.32	9.89	0.5	A	146	219
C-AB	0.00	0.00	0.0	A	0	0
C-A					155	233
A-B					0	0
A-C					33	50

Main Results for each time segment

17:00 - 17:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	120	30	543	0.220	119	0.0	0.3	8.453	A
C-AB	0	0	568	0.000	0	0.0	0.0	0.000	A
C-A	127	32			127				
A-B	0	0			0				
A-C	27	7			27				

17:15 - 17:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	143	36	542	0.264	143	0.3	0.4	9.024	A
C-AB	0	0	567	0.000	0	0.0	0.0	0.000	A
C-A	152	38			152				
A-B	0	0			0				
A-C	32	8			32				

17:30 - 17:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	175	44	539	0.325	175	0.4	0.5	9.866	A
C-AB	0	0	565	0.000	0	0.0	0.0	0.000	A
C-A	186	47			186				
A-B	0	0			0				
A-C	40	10			40				

17:45 - 18:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	175	44	539	0.325	175	0.5	0.5	9.891	A
C-AB	0	0	565	0.000	0	0.0	0.0	0.000	A
C-A	186	47			186				
A-B	0	0			0				
A-C	40	10			40				

18:00 - 18:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	143	36	542	0.264	143	0.5	0.4	9.053	A
C-AB	0	0	567	0.000	0	0.0	0.0	0.000	A
C-A	152	38			152				
A-B	0	0			0				
A-C	32	8			32				

18:15 - 18:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	120	30	543	0.220	120	0.4	0.3	8.509	A
C-AB	0	0	568	0.000	0	0.0	0.0	0.000	A
C-A	127	32			127				
A-B	0	0			0				
A-C	27	7			27				

2030 Base, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way	Two-way	Two-way		5.78	A

Junction Network

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold	Network delay (s)	Network LOS
Left	Normal/unknown	55	Stream B-AC	5.78	A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D3	2030 Base	AM	ONE HOUR	08:00	09:30	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A		ONE HOUR	✓	124	100.000
B		ONE HOUR	✓	231	100.000
C		ONE HOUR	✓	203	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A	B	C
From	A	0	0	124
	B	34	0	197
	C	203	0	0

Proportions

		To		
		A	B	C
From	A	0.00	0.00	1.00
	B	0.15	0.00	0.85
	C	1.00	0.00	0.00

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A	B	C
From	A	1	0	0
	B	0	0	0
	C	0	0	0

Average PCU Per Veh

		To		
		A	B	C
From	A	1.010	1.000	1.000
	B	1.000	1.000	1.000
	C	1.000	1.000	1.000

Detailed Demand Data

Demand for each time segment

Time Segment	Arm	Demand (PCU/hr)	Demand in PCU (PCU/hr)
08:00-08:15	A	93	93
	B	174	174
	C	153	153
08:15-08:30	A	111	111
	B	208	208
	C	182	182
08:30-08:45	A	137	137
	B	254	254
	C	224	224
08:45-09:00	A	137	137
	B	254	254
	C	224	224
09:00-09:15	A	111	111
	B	208	208
	C	182	182
09:15-09:30	A	93	93
	B	174	174
	C	153	153

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-AC	0.50	13.95	1.0	B	212	318
C-AB	0.00	0.00	0.0	A	0	0
C-A					186	279
A-B					0	0
A-C					114	171

Main Results for each time segment

08:00 - 08:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	174	43	524	0.332	172	0.0	0.5	10.172	B
C-AB	0	0	553	0.000	0	0.0	0.0	0.000	A
C-A	153	38			153				
A-B	0	0			0				
A-C	93	23			93				

08:15 - 08:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	208	52	519	0.400	207	0.5	0.7	11.511	B
C-AB	0	0	549	0.000	0	0.0	0.0	0.000	A
C-A	182	46			182				
A-B	0	0			0				
A-C	111	28			111				

08:30 - 08:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	254	64	512	0.497	253	0.7	1.0	13.830	B
C-AB	0	0	544	0.000	0	0.0	0.0	0.000	A
C-A	224	56			224				
A-B	0	0			0				
A-C	137	34			137				

08:45 - 09:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	254	64	512	0.497	254	1.0	1.0	13.952	B
C-AB	0	0	544	0.000	0	0.0	0.0	0.000	A
C-A	224	56			224				
A-B	0	0			0				
A-C	137	34			137				

09:00 - 09:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	208	52	519	0.400	209	1.0	0.7	11.651	B
C-AB	0	0	549	0.000	0	0.0	0.0	0.000	A
C-A	182	46			182				
A-B	0	0			0				
A-C	111	28			111				

09:15 - 09:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	174	43	524	0.332	175	0.7	0.5	10.324	B
C-AB	0	0	553	0.000	0	0.0	0.0	0.000	A
C-A	153	38			153				
A-B	0	0			0				
A-C	93	23			93				

2030 Base, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way	Two-way	Two-way		5.35	A

Junction Network

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold	Network delay (s)	Network LOS
Left	Normal/unknown	81	Stream B-AC	5.35	A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D4	2030 Base	PM	ONE HOUR	17:00	18:30	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A		ONE HOUR	✓	23	100.000
B		ONE HOUR	✓	220	100.000
C		ONE HOUR	✓	243	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A	B	C
From	A	0	0	23
	B	21	0	199
	C	243	0	0

Proportions

		To		
		A	B	C
From	A	0.00	0.00	1.00
	B	0.10	0.00	0.90
	C	1.00	0.00	0.00

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A	B	C
From	A	1	0	0
	B	0	0	0
	C	0	0	0

Average PCU Per Veh

		To		
		A	B	C
From	A	1.010	1.000	1.000
	B	1.000	1.000	1.000
	C	1.000	1.000	1.000

Detailed Demand Data

Demand for each time segment

Time Segment	Arm	Demand (PCU/hr)	Demand in PCU (PCU/hr)
17:00-17:15	A	17	17
	B	166	166
	C	183	183
17:15-17:30	A	21	21
	B	198	198
	C	218	218
17:30-17:45	A	25	25
	B	242	242
	C	268	268
17:45-18:00	A	25	25
	B	242	242
	C	268	268
18:00-18:15	A	21	21
	B	198	198
	C	218	218
18:15-18:30	A	17	17
	B	166	166
	C	183	183

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-AC	0.44	11.83	0.8	B	202	303
C-AB	0.00	0.00	0.0	A	0	0
C-A					223	334
A-B					0	0
A-C					21	32

Main Results for each time segment

17:00 - 17:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	166	41	550	0.301	164	0.0	0.4	9.282	A
C-AB	0	0	570	0.000	0	0.0	0.0	0.000	A
C-A	183	46			183				
A-B	0	0			0				
A-C	17	4			17				

17:15 - 17:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	198	49	549	0.361	197	0.4	0.6	10.231	B
C-AB	0	0	569	0.000	0	0.0	0.0	0.000	A
C-A	218	55			218				
A-B	0	0			0				
A-C	21	5			21				

17:30 - 17:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	242	61	546	0.443	241	0.6	0.8	11.763	B
C-AB	0	0	568	0.000	0	0.0	0.0	0.000	A
C-A	268	67			268				
A-B	0	0			0				
A-C	25	6			25				

17:45 - 18:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	242	61	546	0.443	242	0.8	0.8	11.827	B
C-AB	0	0	568	0.000	0	0.0	0.0	0.000	A
C-A	268	67			268				
A-B	0	0			0				
A-C	25	6			25				

18:00 - 18:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	198	49	549	0.361	199	0.8	0.6	10.312	B
C-AB	0	0	569	0.000	0	0.0	0.0	0.000	A
C-A	218	55			218				
A-B	0	0			0				
A-C	21	5			21				

18:15 - 18:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	166	41	550	0.301	166	0.6	0.4	9.391	A
C-AB	0	0	570	0.000	0	0.0	0.0	0.000	A
C-A	183	46			183				
A-B	0	0			0				
A-C	17	4			17				

2023 Base With Dev, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way	Two-way	Two-way		7.63	A

Junction Network

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold	Network delay (s)	Network LOS
Left	Normal/unknown	57	Stream B-AC	7.63	A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D5	2023 Base With Dev	AM	ONE HOUR	08:00	09:30	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A		ONE HOUR	✓	45	100.000
B		ONE HOUR	✓	248	100.000
C		ONE HOUR	✓	152	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A	B	C
From	A	0	0	45
	B	33	0	215
	C	152	0	0

Proportions

		To		
		A	B	C
From	A	0.00	0.00	1.00
	B	0.13	0.00	0.87
	C	1.00	0.00	0.00

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A	B	C
From	A	1	0	0
	B	0	0	0
	C	0	0	0

Average PCU Per Veh

		To		
		A	B	C
From	A	1.010	1.000	1.000
	B	1.000	1.000	1.000
	C	1.000	1.000	1.000

Detailed Demand Data

Demand for each time segment

Time Segment	Arm	Demand (PCU/hr)	Demand in PCU (PCU/hr)
08:00-08:15	A	34	34
	B	187	187
	C	114	114
08:15-08:30	A	40	40
	B	223	223
	C	137	137
08:30-08:45	A	50	50
	B	273	273
	C	167	167
08:45-09:00	A	50	50
	B	273	273
	C	167	167
09:00-09:15	A	40	40
	B	223	223
	C	137	137
09:15-09:30	A	34	34
	B	187	187
	C	114	114

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-AC	0.51	13.68	1.0	B	228	341
C-AB	0.00	0.00	0.0	A	0	0
C-A					139	209
A-B					0	0
A-C					41	62

Main Results for each time segment

08:00 - 08:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	187	47	541	0.345	185	0.0	0.5	10.048	B
C-AB	0	0	566	0.000	0	0.0	0.0	0.000	A
C-A	114	29			114				
A-B	0	0			0				
A-C	34	8			34				

08:15 - 08:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	223	56	539	0.414	222	0.5	0.7	11.345	B
C-AB	0	0	565	0.000	0	0.0	0.0	0.000	A
C-A	137	34			137				
A-B	0	0			0				
A-C	40	10			40				

08:30 - 08:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	273	68	536	0.510	272	0.7	1.0	13.560	B
C-AB	0	0	563	0.000	0	0.0	0.0	0.000	A
C-A	167	42			167				
A-B	0	0			0				
A-C	50	12			50				

08:45 - 09:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	273	68	536	0.510	273	1.0	1.0	13.683	B
C-AB	0	0	563	0.000	0	0.0	0.0	0.000	A
C-A	167	42			167				
A-B	0	0			0				
A-C	50	12			50				

09:00 - 09:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	223	56	539	0.414	224	1.0	0.7	11.484	B
C-AB	0	0	565	0.000	0	0.0	0.0	0.000	A
C-A	137	34			137				
A-B	0	0			0				
A-C	40	10			40				

09:15 - 09:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	187	47	541	0.345	187	0.7	0.5	10.206	B
C-AB	0	0	566	0.000	0	0.0	0.0	0.000	A
C-A	114	29			114				
A-B	0	0			0				
A-C	34	8			34				

2023 Base With Dev, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way	Two-way	Two-way		4.68	A

Junction Network

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold	Network delay (s)	Network LOS
Left	Normal/unknown	106	Stream B-AC	4.68	A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D6	2023 Base With Dev	PM	ONE HOUR	17:00	18:30	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A		ONE HOUR	✓	52	100.000
B		ONE HOUR	✓	186	100.000
C		ONE HOUR	✓	190	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A	B	C
From	A	0	0	52
	B	19	0	167
	C	190	0	0

Proportions

		To		
		A	B	C
From	A	0.00	0.00	1.00
	B	0.10	0.00	0.90
	C	1.00	0.00	0.00

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A	B	C
From	A	1	0	0
	B	0	0	0
	C	0	0	0

Average PCU Per Veh

		To		
		A	B	C
From	A	1.010	1.000	1.000
	B	1.000	1.000	1.000
	C	1.000	1.000	1.000

Detailed Demand Data

Demand for each time segment

Time Segment	Arm	Demand (PCU/hr)	Demand in PCU (PCU/hr)
17:00-17:15	A	39	39
	B	140	140
	C	143	143
17:15-17:30	A	47	47
	B	167	167
	C	171	171
17:30-17:45	A	57	57
	B	205	205
	C	209	209
17:45-18:00	A	57	57
	B	205	205
	C	209	209
18:00-18:15	A	47	47
	B	167	167
	C	171	171
18:15-18:30	A	39	39
	B	140	140
	C	143	143

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-AC	0.38	10.76	0.6	B	171	256
C-AB	0.00	0.00	0.0	A	0	0
C-A					174	262
A-B					0	0
A-C					48	72

Main Results for each time segment

17:00 - 17:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	140	35	545	0.257	139	0.0	0.3	8.835	A
C-AB	0	0	565	0.000	0	0.0	0.0	0.000	A
C-A	143	36			143				
A-B	0	0			0				
A-C	39	10			39				

17:15 - 17:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	167	42	543	0.308	167	0.3	0.4	9.571	A
C-AB	0	0	564	0.000	0	0.0	0.0	0.000	A
C-A	171	43			171				
A-B	0	0			0				
A-C	47	12			47				

17:30 - 17:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	205	51	539	0.380	204	0.4	0.6	10.719	B
C-AB	0	0	561	0.000	0	0.0	0.0	0.000	A
C-A	209	52			209				
A-B	0	0			0				
A-C	57	14			57				

17:45 - 18:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	205	51	539	0.380	205	0.6	0.6	10.759	B
C-AB	0	0	561	0.000	0	0.0	0.0	0.000	A
C-A	209	52			209				
A-B	0	0			0				
A-C	57	14			57				

18:00 - 18:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	167	42	543	0.308	168	0.6	0.5	9.625	A
C-AB	0	0	564	0.000	0	0.0	0.0	0.000	A
C-A	171	43			171				
A-B	0	0			0				
A-C	47	12			47				

18:15 - 18:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	140	35	545	0.257	140	0.5	0.4	8.913	A
C-AB	0	0	565	0.000	0	0.0	0.0	0.000	A
C-A	143	36			143				
A-B	0	0			0				
A-C	39	10			39				

2030 Base With Dev, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way	Two-way	Two-way		5.64	A

Junction Network

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold	Network delay (s)	Network LOS
Left	Normal/unknown	58	Stream B-AC	5.64	A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D7	2030 Base With Dev	AM	ONE HOUR	08:00	09:30	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A		ONE HOUR	✓	55	100.000
B		ONE HOUR	✓	236	100.000
C		ONE HOUR	✓	279	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A	B	C
From	A	0	0	55
	B	37	0	199
	C	279	0	0

Proportions

		To		
		A	B	C
From	A	0.00	0.00	1.00
	B	0.16	0.00	0.84
	C	1.00	0.00	0.00

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A	B	C
From	A	1	0	0
	B	0	0	0
	C	0	0	0

Average PCU Per Veh

		To		
		A	B	C
From	A	1.010	1.000	1.000
	B	1.000	1.000	1.000
	C	1.000	1.000	1.000

Detailed Demand Data

Demand for each time segment

Time Segment	Arm	Demand (PCU/hr)	Demand in PCU (PCU/hr)
08:00-08:15	A	41	41
	B	178	178
	C	210	210
08:15-08:30	A	49	49
	B	212	212
	C	251	251
08:30-08:45	A	61	61
	B	260	260
	C	307	307
08:45-09:00	A	61	61
	B	260	260
	C	307	307
09:00-09:15	A	49	49
	B	212	212
	C	251	251
09:15-09:30	A	41	41
	B	178	178
	C	210	210

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-AC	0.50	13.62	1.0	B	217	325
C-AB	0.00	0.00	0.0	A	0	0
C-A					256	384
A-B					0	0
A-C					50	76

Main Results for each time segment

08:00 - 08:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	178	44	532	0.334	176	0.0	0.5	10.058	B
C-AB	0	0	565	0.000	0	0.0	0.0	0.000	A
C-A	210	53			210				
A-B	0	0			0				
A-C	41	10			41				

08:15 - 08:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	212	53	529	0.401	212	0.5	0.7	11.332	B
C-AB	0	0	563	0.000	0	0.0	0.0	0.000	A
C-A	251	63			251				
A-B	0	0			0				
A-C	49	12			49				

08:30 - 08:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	260	65	524	0.496	259	0.7	1.0	13.500	B
C-AB	0	0	560	0.000	0	0.0	0.0	0.000	A
C-A	307	77			307				
A-B	0	0			0				
A-C	61	15			61				

08:45 - 09:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	260	65	524	0.496	260	1.0	1.0	13.617	B
C-AB	0	0	560	0.000	0	0.0	0.0	0.000	A
C-A	307	77			307				
A-B	0	0			0				
A-C	61	15			61				

09:00 - 09:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	212	53	529	0.401	213	1.0	0.7	11.461	B
C-AB	0	0	563	0.000	0	0.0	0.0	0.000	A
C-A	251	63			251				
A-B	0	0			0				
A-C	49	12			49				

09:15 - 09:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	178	44	532	0.334	178	0.7	0.5	10.210	B
C-AB	0	0	565	0.000	0	0.0	0.0	0.000	A
C-A	210	53			210				
A-B	0	0			0				
A-C	41	10			41				

2030 Base With Dev, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way	Two-way	Two-way		5.86	A

Junction Network

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold	Network delay (s)	Network LOS
Left	Normal/unknown	60	Stream B-AC	5.86	A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D8	2030 Base With Dev	PM	ONE HOUR	17:00	18:30	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A		ONE HOUR	✓	35	100.000
B		ONE HOUR	✓	250	100.000
C		ONE HOUR	✓	282	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A	B	C
From	A	0	0	35
	B	20	0	230
	C	282	0	0

Proportions

		To		
		A	B	C
From	A	0.00	0.00	1.00
	B	0.08	0.00	0.92
	C	1.00	0.00	0.00

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A	B	C
From	A	1	0	0
	B	0	0	0
	C	0	0	0

Average PCU Per Veh

		To		
		A	B	C
From	A	1.010	1.000	1.000
	B	1.000	1.000	1.000
	C	1.000	1.000	1.000

Detailed Demand Data

Demand for each time segment

Time Segment	Arm	Demand (PCU/hr)	Demand in PCU (PCU/hr)
17:00-17:15	A	26	26
	B	188	188
	C	212	212
17:15-17:30	A	31	31
	B	225	225
	C	254	254
17:30-17:45	A	39	39
	B	275	275
	C	310	310
17:45-18:00	A	39	39
	B	275	275
	C	310	310
18:00-18:15	A	31	31
	B	225	225
	C	254	254
18:15-18:30	A	26	26
	B	188	188
	C	212	212

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-AC	0.50	13.28	1.0	B	229	344
C-AB	0.00	0.00	0.0	A	0	0
C-A					259	388
A-B					0	0
A-C					32	48

Main Results for each time segment

17:00 - 17:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	188	47	551	0.342	186	0.0	0.5	9.822	A
C-AB	0	0	568	0.000	0	0.0	0.0	0.000	A
C-A	212	53			212				
A-B	0	0			0				
A-C	26	7			26				

17:15 - 17:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	225	56	549	0.410	224	0.5	0.7	11.061	B
C-AB	0	0	567	0.000	0	0.0	0.0	0.000	A
C-A	254	63			254				
A-B	0	0			0				
A-C	31	8			31				

17:30 - 17:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	275	69	546	0.504	274	0.7	1.0	13.168	B
C-AB	0	0	565	0.000	0	0.0	0.0	0.000	A
C-A	310	78			310				
A-B	0	0			0				
A-C	39	10			39				

17:45 - 18:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	275	69	546	0.504	275	1.0	1.0	13.282	B
C-AB	0	0	565	0.000	0	0.0	0.0	0.000	A
C-A	310	78			310				
A-B	0	0			0				
A-C	39	10			39				

18:00 - 18:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	225	56	549	0.410	226	1.0	0.7	11.193	B
C-AB	0	0	567	0.000	0	0.0	0.0	0.000	A
C-A	254	63			254				
A-B	0	0			0				
A-C	31	8			31				

18:15 - 18:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	188	47	551	0.342	189	0.7	0.5	9.972	A
C-AB	0	0	568	0.000	0	0.0	0.0	0.000	A
C-A	212	53			212				
A-B	0	0			0				
A-C	26	7			26				

APPENDIX J

Junctions 10

ARCADY 10 - Roundabout Module

Filename: 210831 Thornhill.j10
Path: C:\Users\DavidSagstad\Dropbox\Working Back Up\Projects\2020213 Dewsbury Riverside\Analysis\Junction Assessment
Report generation date: 31/08/2021 15:29:03

Summary of junction performance

	AM						PM					
	Set ID	Queue (PCU)	Delay (s)	RFC	LOS	Network Residual Capacity	Set ID	Queue (PCU)	Delay (s)	RFC	LOS	Network Residual Capacity
	2023 Base											
Junction 1 - Arm 1	D1	1.2	6.87	0.54	A	-25 % [Junction 2 - Arm 2]	D3	1.2	7.50	0.55	A	-25 % [Junction 1 - Arm 3]
Junction 1 - Arm 2		3.1	10.82	0.76	B			3.9	13.22	0.80	B	
Junction 1 - Arm 3		3.9	36.76	0.80	E			135.2	1008.41	1.47	F	
Junction 2 - Arm 1		345.2	1259.08	1.25	F			12.5	45.97	0.95	E	
Junction 2 - Arm 2		25.1	292.32	1.02	F			40.3	344.68	1.23	F	
Junction 2 - Arm 3		1.1	4.85	0.53	A			1.2	4.80	0.54	A	
	2023 Base Plus Dev											
Junction 1 - Arm 1	D2	1.3	7.23	0.56	A	-28 % [Junction 2 - Arm 2]	D4	1.3	7.68	0.57	A	-27 % [Junction 1 - Arm 3]
Junction 1 - Arm 2		3.3	11.42	0.77	B			3.8	13.02	0.80	B	
Junction 1 - Arm 3		5.4	49.62	0.85	E			157.0	1222.40	1.52	F	
Junction 2 - Arm 1		331.6	1242.33	1.25	F			16.2	60.40	0.97	F	
Junction 2 - Arm 2		95.1	907.73	1.17	F			76.7	631.76	1.41	F	
Junction 2 - Arm 3		1.1	4.80	0.53	A			1.2	4.79	0.54	A	
	2030 Base											
Junction 1 - Arm 1	D5	1.8	8.88	0.64	A	-27 % [Junction 2 - Arm 2]	D7	1.6	8.65	0.61	A	-30 % [Junction 1 - Arm 3]
Junction 1 - Arm 2		3.6	12.61	0.79	B			4.4	14.90	0.82	B	
Junction 1 - Arm 3		24.9	194.38	1.00	F			210.2	1541.84	1.61	F	
Junction 2 - Arm 1		321.1	1242.42	1.25	F			16.7	58.87	0.97	F	
Junction 2 - Arm 2		74.9	721.30	1.13	F			80.6	696.54	1.46	F	
Junction 2 - Arm 3		1.3	5.11	0.56	A			1.2	4.91	0.55	A	
	2030 Base Plus Dev											
Junction 1 - Arm 1	D6	1.8	9.24	0.65	A	-29 % [Junction 2 - Arm 2]	D8	1.6	8.88	0.62	A	-30 % [Junction 1 - Arm 3]
Junction 1 - Arm 2		3.3	11.70	0.77	B			3.7	12.92	0.80	B	
Junction 1 - Arm 3		22.2	170.28	0.99	F			207.0	1561.68	1.61	F	
Junction 2 - Arm 1		323.7	1285.21	1.26	F			14.6	55.43	0.96	F	
Junction 2 - Arm 2		129.8	1082.38	1.21	F			109.6	830.85	1.51	F	
Junction 2 - Arm 3		1.3	5.20	0.57	A			1.3	5.12	0.57	A	

There are warnings associated with one or more model runs - see the 'Data Errors and Warnings' tables for each Analysis or Demand Set.

Values shown are the highest values encountered over all time segments. Delay is the maximum value of average delay per arriving vehicle. Network Residual Capacity indicates the amount by which network flow could be increased before a user-definable threshold (see Analysis Options) is met.

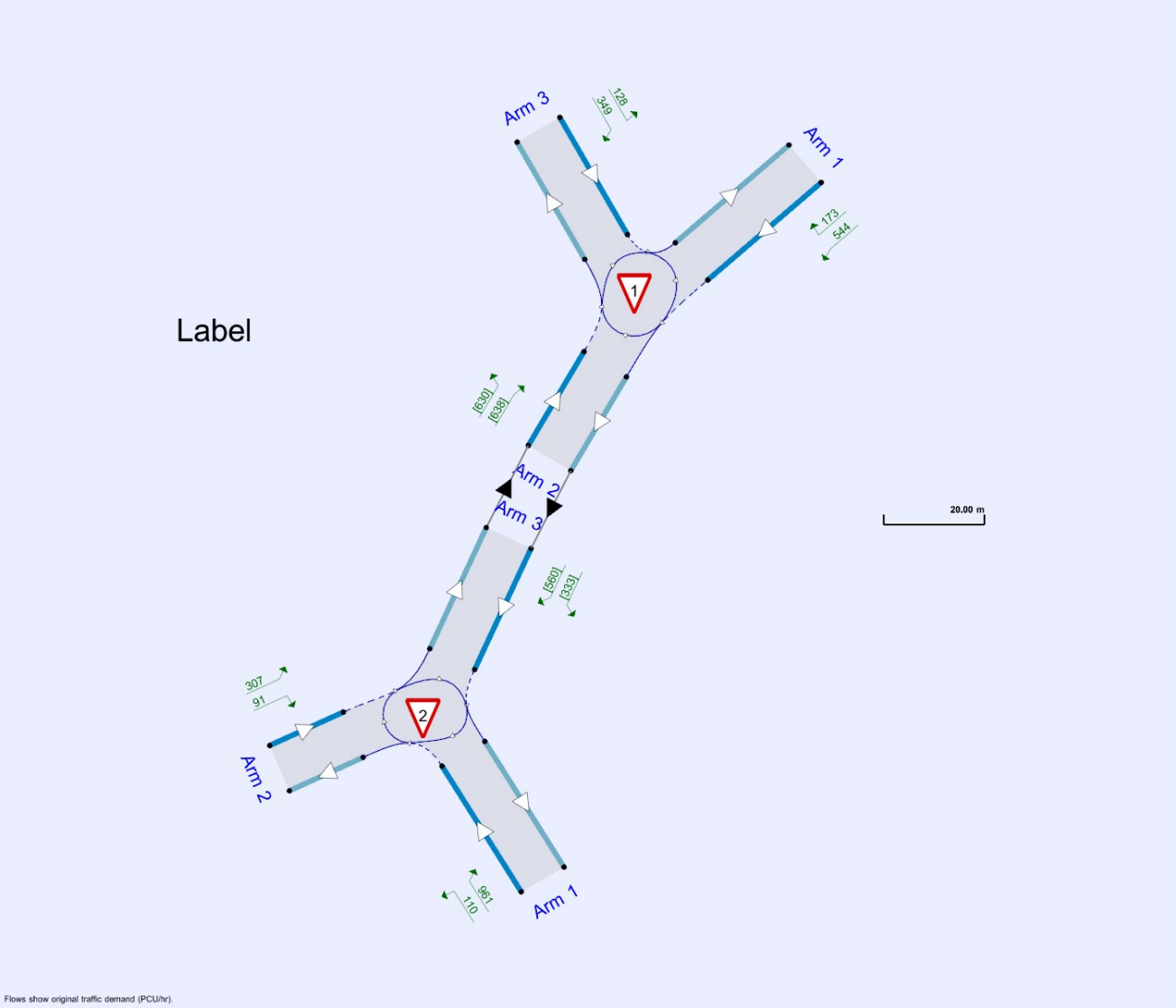
File summary

File Description

Title	
Location	
Site number	
Date	31/08/2021
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	AzureAD\DavidSagstad
Description	

Units

Distance units	Speed units	Traffic units input	Traffic units results	Flow units	Average delay units	Total delay units	Rate of delay units
m	kph	PCU	PCU	perHour	s	-Min	perMin



The junction diagram reflects the last run of Junctions.

Analysis Options

Mini-roundabout model	Vehicle length (m)	Calculate Queue Percentiles	Calculate detailed queueing delay	Show lane queues in feet / metres	Show all PICADY stream intercepts	Calculate residual capacity	Residual capacity criteria type	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)	Use iterations with HCM roundabouts	Max number of iterations for roundabouts
JUNCTIONS 9	5.75					✓	Delay	0.85	36.00	20.00		500

Demand Set Summary

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time period length (min)	Time segment length (min)	Run automatically
D1	2023 Base	AM	FLAT	08:00	09:30	90	15	✓
D2	2023 Base Plus Dev	AM	FLAT	08:00	09:30	90	15	✓
D3	2023 Base	PM	ONE HOUR	17:00	18:30		15	✓
D4	2023 Base Plus Dev	PM	ONE HOUR	17:00	18:30		15	✓
D5	2030 Base	AM	FLAT	08:00	09:30	90	15	✓
D6	2030 Base Plus Dev	AM	FLAT	08:00	09:30	90	15	✓
D7	2030 Base	PM	ONE HOUR	17:00	18:30		15	✓
D8	2030 Base Plus Dev	PM	ONE HOUR	17:00	18:30		15	✓

Analysis Set Details

ID	Include in report	Network flow scaling factor (%)	Network capacity scaling factor (%)
A1	✓	100.000	100.000

2023 Base, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Mini-roundabout	Junction 1	Mini-roundabout appears to have unbalanced flows and may behave like a priority junction; treat results with caution. See User Guide for details.[Arms 1 and 2 have 82% of the total flow for the roundabout for one or more time segments]
Warning	Mini-roundabout	Junction 2	Mini-roundabout appears to have unbalanced flows and may behave like a priority junction; treat results with caution. See User Guide for details.[Arms 1 and 3 have 85% of the total flow for the roundabout for one or more time segments]
Warning	Linked Roundabout	Junction 1 - Arm 2	If the distance between linked junctions is small, results should be treated with caution. The linked junctions will be modelled as separate junctions, but the real behaviour may be that of a complex system with interactions that cannot be modelled.
Warning	Linked Roundabout	Junction 2 - Arm 3	If the distance between linked junctions is small, results should be treated with caution. The linked junctions will be modelled as separate junctions, but the real behaviour may be that of a complex system with interactions that cannot be modelled.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Mini-roundabout		1, 2, 3	14.62	B
2	untitled	Mini-roundabout		1, 2, 3	670.09	F

Junction Network

Driving side	Lighting	Road surface	In London	Network residual capacity (%)	First arm reaching threshold	Network delay (s)	Network LOS
Left	Normal/unknown	Normal/unknown		-25	Junction 2 - Arm 2	360.03	F

Arms

Arms

Junction	Arm	Name	Description
1	1	untitled	
	2	untitled	
	3	untitled	
2	1	untitled	
	2	untitled	
	3	untitled	

Mini Roundabout Geometry

Junction	Arm	Approach road half-width (m)	Minimum approach road half-width (m)	Entry width (m)	Effective flare length (m)	Distance to next arm (m)	Entry corner kerb line distance (m)	Gradient over 50m (%)	Kerbed central island
1	1	3.60	3.00	4.20	2.0	20.00	20.00	0.0	
	2	7.60	7.60	8.00	2.0	10.00	7.00	0.0	✓
	3	3.00	3.00	6.00	3.6	13.60	9.60	0.0	
2	1	4.50	4.50	6.40	10.0	12.00	8.00	0.0	
	2	3.80	3.80	4.60	2.0	12.40	8.40	0.0	
	3	7.00	7.00	7.00	0.0	19.00	19.00	0.0	

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Junction	Arm	Final slope	Final intercept (PCU/hr)
1	1	0.910	1434
	2	0.664	1440
	3	0.623	804
2	1	0.693	1242
	2	0.635	841
	3	0.926	1666

The slope and intercept shown above include any corrections and adjustments.

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time period length (min)	Time segment length (min)	Run automatically
D1	2023 Base	AM	FLAT	08:00	09:30	90	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Linked Arm Data

Junction	Arm	Feeding Junction	Feeding Arm	Link Type	Flow source	Uniform flow (PCU/hr)	Flow multiplier (%)	Internal storage space (PCU)
1	2	2	3	Simple (vertical queueing)	Normal	0	100.00	
2	3	1	2	Simple (vertical queueing)	Normal	0	100.00	

Demand overview (Traffic)

Junction	Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1	1		FLAT	✓	625	100.000
	2	✓				
	3		FLAT	✓	396	100.000
2	1		FLAT	✓	1138	100.000
	2		FLAT	✓	321	100.000
	3	✓				

Origin-Destination Data

Junction 1

Demand (PCU/hr)

		To		
		1	2	3
From	1	0	515	110
	2	604	0	646
	3	83	313	0

Proportions

		To		
		1	2	3
From	1	0.00	0.82	0.18
	2	0.48	0.00	0.52
	3	0.21	0.79	0.00

Junction 2

Demand (PCU/hr)

		To		
		1	2	3
From	1	0	103	1035
	2	106	0	215
	3	348	480	0

Proportions

		To		
		1	2	3
From	1	0.00	0.09	0.91
	2	0.33	0.00	0.67
	3	0.42	0.58	0.00

Vehicle Mix

Junction 1

Heavy Vehicle Percentages

		To		
		1	2	3
From	1	1	0	0
	2	0	0	0
	3	0	0	0

Average PCU Per Veh

		To		
		1	2	3
From	1	1.010	1.000	1.000
	2	1.000	1.000	1.000
	3	1.000	1.000	1.000

Junction 2

Heavy Vehicle Percentages

		To		
		1	2	3
From	1	1	0	0
	2	0	0	0
	3	0	0	0

Average PCU Per Veh

		To		
		1	2	3
From	1	1.010	1.000	1.000
	2	1.000	1.000	1.000
	3	1.000	1.000	1.000

Detailed Demand Data

Demand for each time segment

Time Segment	Junction	Arm	Demand (PCU/hr)	Demand in PCU (PCU/hr)
08:00-08:15	1	1	625	625
		2	1250	1250
		3	396	396
	2	1	1138	1138
		2	321	321
		3	828	828
08:15-08:30	1	1	625	625
		2	1250	1250
		3	396	396
	2	1	1138	1138
		2	321	321
		3	828	828
08:30-08:45	1	1	625	625
		2	1250	1250
		3	396	396
	2	1	1138	1138
		2	321	321
		3	828	828
08:45-09:00	1	1	625	625
		2	1250	1250
		3	396	396
	2	1	1138	1138
		2	321	321
		3	828	828
09:00-09:15	1	1	625	625
		2	1250	1250
		3	396	396
	2	1	1138	1138
		2	321	321
		3	828	828
09:15-09:30	1	1	625	625
		2	1250	1250
		3	396	396
	2	1	1138	1138
		2	321	321
		3	828	828

Results

Results Summary for whole modelled period

Junction	Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
1	1	0.54	6.87	1.2	A	625	938
	2	0.76	10.82	3.1	B	1029	1544
	3	0.80	36.76	3.9	E	396	594
2	1	1.25	1259.08	345.2	F	1138	1707
	2	1.02	292.32	25.1	F	321	482
	3	0.53	4.85	1.1	A	825	1238

Main Results for each time segment

08:00 - 08:15

Junction	Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	1	625	156	303	1158	0.540	620	564	0.0	1.2	6.640	A
	2	1012	253	109	1368	0.740	1001	814	0.0	2.7	9.549	A
	3	396	99	484	503	0.787	383	626	0.0	3.2	27.689	D
2	1	1138	285	469	916	1.242	901	435	0.0	59.2	126.859	F
	2	321	80	820	321	1.001	287	551	0.0	8.5	77.268	F
	3	814	204	95	1578	0.516	810	1012	0.0	1.1	4.662	A

08:15 - 08:30

Junction	Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	1	625	156	312	1150	0.543	625	580	1.2	1.2	6.851	A
	2	1030	257	110	1367	0.753	1029	827	2.7	3.0	10.595	B
	3	396	99	497	495	0.801	394	642	3.2	3.6	34.835	D
2	1	1138	285	479	910	1.251	909	447	59.2	116.4	356.135	F
	2	321	80	827	316	1.016	303	561	8.5	13.0	149.707	F
	3	827	207	100	1573	0.526	826	1030	1.1	1.1	4.820	A

08:30 - 08:45

Junction	Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	1	625	156	313	1149	0.544	625	582	1.2	1.2	6.864	A
	2	1032	258	110	1367	0.755	1032	827	3.0	3.0	10.717	B
	3	396	99	499	494	0.802	395	643	3.6	3.8	35.922	E
2	1	1138	285	480	909	1.251	909	449	116.4	173.6	580.989	F
	2	321	80	827	316	1.016	307	562	13.0	16.6	193.228	F
	3	827	207	101	1572	0.526	827	1032	1.1	1.1	4.835	A

08:45 - 09:00

Junction	Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	1	625	156	313	1149	0.544	625	582	1.2	1.2	6.866	A
	2	1034	258	110	1367	0.756	1033	828	3.0	3.0	10.768	B
	3	396	99	499	493	0.803	396	644	3.8	3.8	36.358	E
2	1	1138	285	480	909	1.252	909	450	173.6	230.8	806.751	F
	2	321	80	827	316	1.016	309	562	16.6	19.7	229.646	F
	3	828	207	102	1571	0.527	828	1034	1.1	1.1	4.841	A

09:00 - 09:15

Junction	Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	1	625	156	313	1149	0.544	625	583	1.2	1.2	6.868	A
	2	1034	259	110	1367	0.756	1034	828	3.0	3.1	10.797	B
	3	396	99	500	493	0.803	396	644	3.8	3.9	36.599	E
2	1	1138	285	480	909	1.252	909	450	230.8	288.0	1032.834	F
	2	321	80	827	316	1.016	310	562	19.7	22.5	262.241	F
	3	828	207	102	1571	0.527	828	1034	1.1	1.1	4.844	A

09:15 - 09:30

Junction	Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	1	625	156	313	1149	0.544	625	583	1.2	1.2	6.868	A
	2	1035	259	110	1367	0.757	1035	828	3.1	3.1	10.819	B
	3	396	99	500	493	0.803	396	645	3.9	3.9	36.755	E
2	1	1138	285	480	909	1.252	909	450	288.0	345.2	1259.082	F
	2	321	80	827	316	1.016	311	562	22.5	25.1	292.316	F
	3	828	207	103	1571	0.527	828	1035	1.1	1.1	4.846	A

2023 Base Plus Dev, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Mini-roundabout	Junction 1	Mini-roundabout appears to have unbalanced flows and may behave like a priority junction; treat results with caution. See User Guide for details.[Arms 1 and 2 have 82% of the total flow for the roundabout for one or more time segments]
Warning	Mini-roundabout	Junction 2	Mini-roundabout appears to have unbalanced flows and may behave like a priority junction; treat results with caution. See User Guide for details.[Arms 1 and 3 have 82% of the total flow for the roundabout for one or more time segments]
Warning	Linked Roundabout	Junction 1 - Arm 2	If the distance between linked junctions is small, results should be treated with caution. The linked junctions will be modelled as separate junctions, but the real behaviour may be that of a complex system with interactions that cannot be modelled.
Warning	Linked Roundabout	Junction 2 - Arm 3	If the distance between linked junctions is small, results should be treated with caution. The linked junctions will be modelled as separate junctions, but the real behaviour may be that of a complex system with interactions that cannot be modelled.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Mini-roundabout		1, 2, 3	17.50	C
2	untitled	Mini-roundabout		1, 2, 3	741.80	F

Junction Network

Driving side	Lighting	Road surface	In London	Network residual capacity (%)	First arm reaching threshold	Network delay (s)	Network LOS
Left	Normal/unknown	Normal/unknown		-28	Junction 2 - Arm 2	401.83	F

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time period length (min)	Time segment length (min)	Run automatically
D2	2023 Base Plus Dev	AM	FLAT	08:00	09:30	90	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Linked Arm Data

Junction	Arm	Feeding Junction	Feeding Arm	Link Type	Flow source	Uniform flow (PCU/hr)	Flow multiplier (%)	Internal storage space (PCU)
1	2	2	3	Simple (vertical queueing)	Normal	0	100.00	
2	3	1	2	Simple (vertical queueing)	Normal	0	100.00	

Demand overview (Traffic)

Junction	Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1	1		FLAT	✓	642	100.000
	2	✓				
	3		FLAT	✓	403	100.000
2	1		FLAT	✓	1105	100.000
	2		FLAT	✓	413	100.000
	3	✓				

Origin-Destination Data

Junction 1

Demand (PCU/hr)

From \ To	1	2	3
1	0	524	118
2	652	0	634
3	80	323	0

Proportions

From \ To	1	2	3
1	0.00	0.82	0.18
2	0.51	0.00	0.49
3	0.20	0.80	0.00

Junction 2

Demand (PCU/hr)

From \ To	1	2	3
1	0	145	960
2	87	0	326
3	332	515	0

Proportions

From \ To	1	2	3
1	0.00	0.13	0.87
2	0.21	0.00	0.79
3	0.39	0.61	0.00

Vehicle Mix

Junction 1

Heavy Vehicle Percentages

From \ To	1	2	3
1	1	0	0
2	0	0	0
3	0	0	0

Average PCU Per Veh

From \ To	1	2	3
1	1.010	1.000	1.000
2	1.000	1.000	1.000
3	1.000	1.000	1.000

Junction 2

Heavy Vehicle Percentages

From \ To	1	2	3
1	1	0	0
2	0	0	0
3	0	0	0

Average PCU Per Veh

From \ To	1	2	3
1	1.010	1.000	1.000
2	1.000	1.000	1.000
3	1.000	1.000	1.000

Detailed Demand Data

Demand for each time segment

Time Segment	Junction	Arm	Demand (PCU/hr)	Demand in PCU (PCU/hr)
08:00-08:15	1	1	642	642
		2	1286	1286
		3	403	403
	2	1	1105	1105
		2	413	413
		3	847	847
08:15-08:30	1	1	642	642
		2	1286	1286
		3	403	403
	2	1	1105	1105
		2	413	413
		3	847	847
08:30-08:45	1	1	642	642
		2	1286	1286
		3	403	403
	2	1	1105	1105
		2	413	413
		3	847	847
08:45-09:00	1	1	642	642
		2	1286	1286
		3	403	403
	2	1	1105	1105
		2	413	413
		3	847	847
09:00-09:15	1	1	642	642
		2	1286	1286
		3	403	403
	2	1	1105	1105
		2	413	413
		3	847	847
09:15-09:30	1	1	642	642
		2	1286	1286
		3	403	403
	2	1	1105	1105
		2	413	413
		3	847	847

Results

Results Summary for whole modelled period

Junction	Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
1	1	0.56	7.23	1.3	A	642	963
	2	0.77	11.42	3.3	B	1044	1566
	3	0.85	49.62	5.4	E	403	605
2	1	1.25	1242.33	331.6	F	1105	1658
	2	1.17	907.73	95.1	F	413	620
	3	0.53	4.80	1.1	A	843	1265

Main Results for each time segment

08:00 - 08:15

Junction	Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	1	642	161	310	1152	0.557	637	593	0.0	1.2	6.909	A
	2	1030	258	117	1363	0.756	1018	830	0.0	3.0	10.139	B
	3	403	101	516	483	0.835	387	619	0.0	4.0	33.456	D
2	1	1105	276	502	894	1.236	878	395	0.0	56.7	125.051	F
	2	413	103	763	357	1.158	338	617	0.0	18.7	119.623	F
	3	830	208	71	1600	0.519	826	1030	0.0	1.1	4.627	A

08:15 - 08:30

Junction	Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	1	642	161	321	1142	0.562	642	609	1.2	1.3	7.197	A
	2	1046	261	118	1362	0.768	1045	845	3.0	3.2	11.292	B
	3	403	101	530	474	0.850	400	633	4.0	4.7	45.519	E
2	1	1105	276	513	886	1.247	885	405	56.7	111.6	350.812	F
	2	413	103	769	353	1.171	350	630	18.7	34.3	293.267	F
	3	845	211	74	1597	0.529	844	1046	1.1	1.1	4.780	A

08:30 - 08:45

Junction	Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	1	642	161	322	1141	0.563	642	610	1.3	1.3	7.217	A
	2	1047	262	118	1362	0.768	1046	846	3.2	3.2	11.381	B
	3	403	101	531	474	0.850	402	634	4.7	5.0	47.839	E
2	1	1105	276	514	885	1.248	885	406	111.6	166.5	572.640	F
	2	413	103	769	353	1.171	352	631	34.3	49.7	447.598	F
	3	846	212	74	1597	0.530	846	1047	1.1	1.1	4.793	A

08:45 - 09:00

Junction	Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	1	642	161	323	1140	0.563	642	611	1.3	1.3	7.223	A
	2	1047	262	118	1362	0.769	1047	846	3.2	3.3	11.406	B
	3	403	101	531	474	0.851	402	634	5.0	5.2	48.785	E
2	1	1105	276	515	885	1.248	885	406	166.5	221.5	795.552	F
	2	413	103	769	353	1.170	352	631	49.7	64.8	601.099	F
	3	846	212	74	1597	0.530	846	1047	1.1	1.1	4.796	A

09:00 - 09:15

Junction	Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	1	642	161	323	1140	0.563	642	611	1.3	1.3	7.225	A
	2	1047	262	118	1362	0.769	1047	847	3.3	3.3	11.418	B
	3	403	101	531	474	0.851	403	634	5.2	5.3	49.299	E
2	1	1105	276	515	885	1.249	885	406	221.5	276.5	1018.836	F
	2	413	103	769	353	1.170	352	631	64.8	80.0	754.436	F
	3	847	212	74	1597	0.530	847	1047	1.1	1.1	4.798	A

09:15 - 09:30

Junction	Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	1	642	161	323	1140	0.563	642	611	1.3	1.3	7.227	A
	2	1047	262	118	1362	0.769	1047	847	3.3	3.3	11.423	B
	3	403	101	531	474	0.851	403	634	5.3	5.4	49.620	E
2	1	1105	276	515	885	1.249	885	406	276.5	331.6	1242.329	F
	2	413	103	769	353	1.170	353	631	80.0	95.1	907.730	F
	3	847	212	74	1597	0.530	847	1047	1.1	1.1	4.798	A

2023 Base, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Mini-roundabout	Junction 2	Mini-roundabout appears to have unbalanced flows and may behave like a priority junction; treat results with caution. See User Guide for details.[Arms 1 and 3 have 84% of the total flow for the roundabout for one or more time segments]
Warning	Linked Roundabout	Junction 1 - Arm 2	If the distance between linked junctions is small, results should be treated with caution. The linked junctions will be modelled as separate junctions, but the real behaviour may be that of a complex system with interactions that cannot be modelled.
Warning	Linked Roundabout	Junction 2 - Arm 3	If the distance between linked junctions is small, results should be treated with caution. The linked junctions will be modelled as separate junctions, but the real behaviour may be that of a complex system with interactions that cannot be modelled.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Mini-roundabout		1, 2, 3	276.25	F
2	untitled	Mini-roundabout		1, 2, 3	78.75	F

Junction Network

Driving side	Lighting	Road surface	In London	Network residual capacity (%)	First arm reaching threshold	Network delay (s)	Network LOS
Left	Normal/unknown	Normal/unknown		-25	Junction 1 - Arm 3	177.03	F

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D3	2023 Base	PM	ONE HOUR	17:00	18:30	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Linked Arm Data

Junction	Arm	Feeding Junction	Feeding Arm	Link Type	Flow source	Uniform flow (PCU/hr)	Flow multiplier (%)	Internal storage space (PCU)
1	2	2	3	Simple (vertical queueing)	Normal	0	100.00	
2	3	1	2	Simple (vertical queueing)	Normal	0	100.00	

Demand overview (Traffic)

Junction	Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1	1		ONE HOUR	✓	536	100.000
	2	✓				
	3		ONE HOUR	✓	579	100.000
2	1		ONE HOUR	✓	946	100.000
	2		ONE HOUR	✓	364	100.000
	3	✓				

Origin-Destination Data

Junction 1

Demand (PCU/hr)

From \ To	1	2	3
1	0	438	98
2	578	0	488
3	47	532	0

Proportions

From \ To	1	2	3
1	0.00	0.82	0.18
2	0.54	0.00	0.46
3	0.08	0.92	0.00

Junction 2

Demand (PCU/hr)

From \ To	1	2	3
1	0	204	742
2	40	0	324
3	743	227	0

Proportions

From \ To	1	2	3
1	0.00	0.22	0.78
2	0.11	0.00	0.89
3	0.77	0.23	0.00

Vehicle Mix

Junction 1

Heavy Vehicle Percentages

From \ To	1	2	3
1	1	0	0
2	0	0	0
3	0	0	0

Average PCU Per Veh

From \ To	1	2	3
1	1.010	1.000	1.000
2	1.000	1.000	1.000
3	1.000	1.000	1.000

Junction 2

Heavy Vehicle Percentages

From \ To	1	2	3
1	1	0	0
2	0	0	0
3	0	0	0

Average PCU Per Veh

From \ To	1	2	3
1	1.010	1.000	1.000
2	1.000	1.000	1.000
3	1.000	1.000	1.000

Detailed Demand Data

Demand for each time segment

Time Segment	Junction	Arm	Demand (PCU/hr)	Demand in PCU (PCU/hr)
17:00-17:15	1	1	404	404
		2	803	803
		3	436	436
	2	1	712	712
		2	274	274
		3	730	730
17:15-17:30	1	1	482	482
		2	958	958
		3	521	521
	2	1	850	850
		2	327	327
		3	872	872
17:30-17:45	1	1	590	590
		2	1174	1174
		3	637	637
	2	1	1042	1042
		2	401	401
		3	1068	1068
17:45-18:00	1	1	590	590
		2	1174	1174
		3	637	637
	2	1	1042	1042
		2	401	401
		3	1068	1068
18:00-18:15	1	1	482	482
		2	958	958
		3	521	521
	2	1	850	850
		2	327	327
		3	872	872
18:15-18:30	1	1	404	404
		2	803	803
		3	436	436
	2	1	712	712
		2	274	274
		3	730	730

Results

Results Summary for whole modelled period

Junction	Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
1	1	0.55	7.50	1.2	A	492	738
	2	0.80	13.22	3.9	B	976	1465
	3	1.47	1008.41	135.2	F	531	797
2	1	0.95	45.97	12.5	E	868	1302
	2	1.23	344.68	40.3	F	334	501
	3	0.54	4.80	1.2	A	816	1225

Main Results for each time segment

17:00 - 17:15

Junction	Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	1	404	101	387	1081	0.373	401	461	0.0	0.6	5.274	A
	2	793	198	73	1392	0.570	788	715	0.0	1.3	5.911	A
	3	436	109	427	538	0.810	421	434	0.0	3.6	28.123	D
2	1	712	178	167	1126	0.632	705	575	0.0	1.7	8.430	A
	2	274	69	553	490	0.560	269	319	0.0	1.2	15.999	C
	3	715	179	30	1638	0.436	712	793	0.0	0.8	3.874	A

17:15 - 17:30

Junction	Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	1	482	120	429	1044	0.462	481	550	0.6	0.8	6.384	A
	2	947	237	88	1382	0.686	944	822	1.3	2.1	8.162	A
	3	521	130	512	485	1.072	467	520	3.6	17.1	101.077	F
2	1	850	213	192	1109	0.767	845	664	1.7	3.1	13.353	B
	2	327	82	663	420	0.779	320	374	1.2	3.0	33.704	D
	3	822	205	35	1633	0.503	821	947	0.8	1.0	4.424	A

17:30 - 17:45

Junction	Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	1	590	148	403	1067	0.553	589	621	0.8	1.2	7.501	A
	2	1085	271	108	1369	0.793	1080	884	2.1	3.6	12.185	B
	3	637	159	585	440	1.450	439	602	17.1	66.8	362.353	F
2	1	1042	260	207	1098	0.948	1012	713	3.1	10.4	33.799	D
	2	401	100	794	337	1.190	327	425	3.0	21.3	159.468	F
	3	884	221	36	1632	0.542	883	1085	1.0	1.2	4.803	A

17:45 - 18:00

Junction	Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	1	590	148	398	1072	0.551	590	631	1.2	1.2	7.475	A
	2	1100	275	108	1369	0.804	1099	880	3.6	3.9	13.224	B
	3	637	159	596	433	1.471	433	611	66.8	117.9	764.941	F
2	1	1042	260	206	1099	0.948	1033	710	10.4	12.5	45.971	E
	2	401	100	810	326	1.228	325	429	21.3	40.3	344.682	F
	3	880	220	36	1633	0.539	880	1100	1.2	1.2	4.784	A

18:00 - 18:15

Junction	Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	1	482	120	415	1057	0.456	483	603	1.2	0.8	6.297	A
	2	1042	261	88	1382	0.754	1045	809	3.9	3.2	10.802	B
	3	521	130	567	451	1.153	451	567	117.9	135.2	1008.410	F
2	1	850	213	190	1110	0.766	886	663	12.5	3.5	18.268	C
	2	327	82	695	400	0.819	390	381	40.3	24.6	297.873	F
	3	809	202	43	1626	0.498	810	1042	1.2	1.0	4.417	A

18:15 - 18:30

Junction	Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	1	404	101	458	1017	0.397	404	526	0.8	0.7	5.877	A
	2	890	223	74	1391	0.640	896	788	3.2	1.8	7.347	A
	3	436	109	486	502	0.869	498	484	135.2	119.7	921.712	F
2	1	712	178	184	1114	0.639	719	644	3.5	1.8	9.264	A
	2	274	69	564	483	0.567	367	339	24.6	1.4	56.124	F
	3	788	197	40	1628	0.484	788	890	1.0	0.9	4.285	A

2023 Base Plus Dev, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Linked Roundabout	Junction 1 - Arm 2	If the distance between linked junctions is small, results should be treated with caution. The linked junctions will be modelled as separate junctions, but the real behaviour may be that of a complex system with interactions that cannot be modelled.
Warning	Linked Roundabout	Junction 2 - Arm 3	If the distance between linked junctions is small, results should be treated with caution. The linked junctions will be modelled as separate junctions, but the real behaviour may be that of a complex system with interactions that cannot be modelled.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Mini-roundabout		1, 2, 3	330.89	F
2	untitled	Mini-roundabout		1, 2, 3	153.35	F

Junction Network

Driving side	Lighting	Road surface	In London	Network residual capacity (%)	First arm reaching threshold	Network delay (s)	Network LOS
Left	Normal/unknown	Normal/unknown		-27	Junction 1 - Arm 3	241.73	F

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D4	2023 Base Plus Dev	PM	ONE HOUR	17:00	18:30	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Linked Arm Data

Junction	Arm	Feeding Junction	Feeding Arm	Link Type	Flow source	Uniform flow (PCU/hr)	Flow multiplier (%)	Internal storage space (PCU)
1	2	2	3	Simple (vertical queueing)	Normal	0	100.00	
2	3	1	2	Simple (vertical queueing)	Normal	0	100.00	

Demand overview (Traffic)

Junction	Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1	1		ONE HOUR	✓	554	100.000
	2	✓				
	3		ONE HOUR	✓	590	100.000
2	1		ONE HOUR	✓	918	100.000
	2		ONE HOUR	✓	453	100.000
	3	✓				

Origin-Destination Data

Junction 1

Demand (PCU/hr)

		To		
		1	2	3
From	1	0	447	107
	2	624	0	494
	3	50	540	0

Proportions

		To		
		1	2	3
From	1	0.00	0.81	0.19
	2	0.56	0.00	0.44
	3	0.08	0.92	0.00

Junction 2

Demand (PCU/hr)

		To		
		1	2	3
From	1	0	212	706
	2	41	0	412
	3	661	326	0

Proportions

		To		
		1	2	3
From	1	0.00	0.23	0.77
	2	0.09	0.00	0.91
	3	0.67	0.33	0.00

Vehicle Mix

Junction 1

Heavy Vehicle Percentages

		To		
		1	2	3
From	1	1	0	0
	2	0	0	0
	3	0	0	0

Average PCU Per Veh

		To		
		1	2	3
From	1	1.010	1.000	1.000
	2	1.000	1.000	1.000
	3	1.000	1.000	1.000

Junction 2

Heavy Vehicle Percentages

		To		
		1	2	3
From	1	1	0	0
	2	0	0	0
	3	0	0	0

Average PCU Per Veh

		To		
		1	2	3
From	1	1.010	1.000	1.000
	2	1.000	1.000	1.000
	3	1.000	1.000	1.000

Detailed Demand Data

Demand for each time segment

Time Segment	Junction	Arm	Demand (PCU/hr)	Demand in PCU (PCU/hr)
17:00-17:15	1	1	417	417
		2	842	842
		3	444	444
	2	1	691	691
		2	341	341
		3	743	743
17:15-17:30	1	1	498	498
		2	1005	1005
		3	530	530
	2	1	825	825
		2	407	407
		3	887	887
17:30-17:45	1	1	610	610
		2	1231	1231
		3	650	650
	2	1	1011	1011
		2	499	499
		3	1087	1087
17:45-18:00	1	1	610	610
		2	1231	1231
		3	650	650
	2	1	1011	1011
		2	499	499
		3	1087	1087
18:00-18:15	1	1	498	498
		2	1005	1005
		3	530	530
	2	1	825	825
		2	407	407
		3	887	887
18:15-18:30	1	1	417	417
		2	842	842
		3	444	444
	2	1	691	691
		2	341	341
		3	743	743

Results

Results Summary for whole modelled period

Junction	Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
1	1	0.57	7.68	1.3	A	508	763
	2	0.80	13.02	3.8	B	1002	1502
	3	1.52	1222.40	157.0	F	541	812
2	1	0.97	60.40	16.2	F	842	1264
	2	1.41	631.76	76.7	F	416	624
	3	0.54	4.79	1.2	A	812	1217

Main Results for each time segment

17:00 - 17:15

Junction	Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	1	417	104	390	1079	0.386	415	496	0.0	0.6	5.398	A
	2	829	207	80	1387	0.598	823	724	0.0	1.5	6.324	A
	3	444	111	460	518	0.857	426	444	0.0	4.6	34.214	D
2	1	691	173	238	1077	0.642	684	513	0.0	1.7	9.019	A
	2	341	85	526	507	0.673	333	396	0.0	1.9	19.962	C
	3	724	181	30	1638	0.442	721	829	0.0	0.8	3.914	A

17:15 - 17:30

Junction	Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	1	498	125	415	1056	0.471	497	585	0.6	0.9	6.423	A
	2	983	246	96	1377	0.714	979	816	1.5	2.4	8.977	A
	3	530	133	547	464	1.144	453	529	4.6	23.9	135.694	F
2	1	825	206	269	1055	0.782	819	581	1.7	3.3	14.829	B
	2	407	102	630	441	0.923	389	458	1.9	6.5	55.455	F
	3	816	204	35	1633	0.500	815	983	0.8	1.0	4.395	A

17:30 - 17:45

Junction	Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	1	610	152	394	1075	0.567	608	636	0.9	1.3	7.681	A
	2	1078	270	117	1362	0.792	1074	885	2.4	3.6	12.262	B
	3	650	162	599	431	1.507	430	592	23.9	78.7	446.778	F
2	1	1011	253	292	1039	0.972	974	625	3.3	12.6	40.833	E
	2	499	125	749	366	1.364	363	517	6.5	40.6	257.666	F
	3	885	221	33	1635	0.541	884	1078	1.0	1.2	4.786	A

17:45 - 18:00

Junction	Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	1	610	152	390	1079	0.565	610	643	1.3	1.3	7.676	A
	2	1088	272	118	1362	0.799	1087	882	3.6	3.8	13.024	B
	3	650	162	607	426	1.524	426	598	78.7	134.6	896.742	F
2	1	1011	253	291	1040	0.972	996	623	12.6	16.2	60.404	F
	2	499	125	766	354	1.407	354	521	40.6	76.7	577.215	F
	3	882	221	32	1636	0.539	882	1088	1.2	1.2	4.775	A

18:00 - 18:15

Junction	Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	1	498	125	403	1067	0.467	500	621	1.3	0.9	6.367	A
	2	1043	261	97	1376	0.758	1046	806	3.8	3.3	10.982	B
	3	530	133	584	441	1.203	441	559	134.6	157.0	1189.066	F
2	1	825	206	267	1057	0.781	875	577	16.2	3.9	23.969	C
	2	407	102	673	414	0.984	408	469	76.7	76.6	631.757	F
	3	806	202	37	1632	0.494	807	1043	1.2	1.0	4.372	A

18:15 - 18:30

Junction	Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	1	417	104	419	1053	0.396	418	591	0.9	0.7	5.679	A
	2	986	247	81	1387	0.711	989	756	3.3	2.5	9.125	A
	3	444	111	552	460	0.965	458	518	157.0	153.7	1222.398	F
2	1	691	173	250	1069	0.647	699	551	3.9	1.9	9.942	A
	2	341	85	538	500	0.683	493	411	76.6	38.6	424.191	F
	3	756	189	45	1624	0.465	756	986	1.0	0.9	4.151	A

2030 Base, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Mini-roundabout	Junction 2	Mini-roundabout appears to have unbalanced flows and may behave like a priority junction; treat results with caution. See User Guide for details.[Arms 1 and 3 have 83% of the total flow for the roundabout for one or more time segments]
Warning	Linked Roundabout	Junction 1 - Arm 2	If the distance between linked junctions is small, results should be treated with caution. The linked junctions will be modelled as separate junctions, but the real behaviour may be that of a complex system with interactions that cannot be modelled.
Warning	Linked Roundabout	Junction 2 - Arm 3	If the distance between linked junctions is small, results should be treated with caution. The linked junctions will be modelled as separate junctions, but the real behaviour may be that of a complex system with interactions that cannot be modelled.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Mini-roundabout		1, 2, 3	50.27	F
2	untitled	Mini-roundabout		1, 2, 3	690.60	F

Junction Network

Driving side	Lighting	Road surface	In London	Network residual capacity (%)	First arm reaching threshold	Network delay (s)	Network LOS
Left	Normal/unknown	Normal/unknown		-27	Junction 2 - Arm 2	378.65	F

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time period length (min)	Time segment length (min)	Run automatically
D5	2030 Base	AM	FLAT	08:00	09:30	90	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Linked Arm Data

Junction	Arm	Feeding Junction	Feeding Arm	Link Type	Flow source	Uniform flow (PCU/hr)	Flow multiplier (%)	Internal storage space (PCU)
1	2	2	3	Simple (vertical queueing)	Normal	0	100.00	
2	3	1	2	Simple (vertical queueing)	Normal	0	100.00	

Demand overview (Traffic)

Junction	Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1	1		FLAT	✓	717	100.000
	2	✓				
	3		FLAT	✓	477	100.000
2	1		FLAT	✓	1071	100.000
	2		FLAT	✓	398	100.000
	3	✓				

Origin-Destination Data

Junction 1

Demand (PCU/hr)

		To		
		1	2	3
From	1	0	544	173
	2	638	0	630
	3	128	349	0

Proportions

		To		
		1	2	3
From	1	0.00	0.76	0.24
	2	0.50	0.00	0.50
	3	0.27	0.73	0.00

Junction 2

Demand (PCU/hr)

		To		
		1	2	3
From	1	0	110	961
	2	91	0	307
	3	333	560	0

Proportions

		To		
		1	2	3
From	1	0.00	0.10	0.90
	2	0.23	0.00	0.77
	3	0.37	0.63	0.00

Vehicle Mix

Junction 1

Heavy Vehicle Percentages

		To		
		1	2	3
From	1	1	0	0
	2	0	0	0
	3	0	0	0

Average PCU Per Veh

		To		
		1	2	3
From	1	1.010	1.000	1.000
	2	1.000	1.000	1.000
	3	1.000	1.000	1.000

Junction 2

Heavy Vehicle Percentages

		To		
		1	2	3
From	1	1	0	0
	2	0	0	0
	3	0	0	0

Average PCU Per Veh

		To		
		1	2	3
From	1	1.010	1.000	1.000
	2	1.000	1.000	1.000
	3	1.000	1.000	1.000

Detailed Demand Data

Demand for each time segment

Time Segment	Junction	Arm	Demand (PCU/hr)	Demand in PCU (PCU/hr)
08:00-08:15	1	1	717	717
		2	1268	1268
		3	477	477
	2	1	1071	1071
		2	398	398
		3	893	893
08:15-08:30	1	1	717	717
		2	1268	1268
		3	477	477
	2	1	1071	1071
		2	398	398
		3	893	893
08:30-08:45	1	1	717	717
		2	1268	1268
		3	477	477
	2	1	1071	1071
		2	398	398
		3	893	893
08:45-09:00	1	1	717	717
		2	1268	1268
		3	477	477
	2	1	1071	1071
		2	398	398
		3	893	893
09:00-09:15	1	1	717	717
		2	1268	1268
		3	477	477
	2	1	1071	1071
		2	398	398
		3	893	893
09:15-09:30	1	1	717	717
		2	1268	1268
		3	477	477
	2	1	1071	1071
		2	398	398
		3	893	893

Results

Results Summary for whole modelled period

Junction	Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
1	1	0.64	8.88	1.8	A	717	1076
	2	0.79	12.61	3.6	B	1037	1556
	3	1.00	194.38	24.9	F	477	716
2	1	1.25	1242.42	321.1	F	1071	1607
	2	1.13	721.30	74.9	F	398	597
	3	0.56	5.11	1.3	A	880	1320

Main Results for each time segment

08:00 - 08:15

Junction	Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	1	717	179	322	1141	0.628	710	627	0.0	1.7	8.242	A
	2	1024	256	171	1327	0.772	1011	861	0.0	3.2	11.000	B
	3	477	119	509	488	0.978	440	674	0.0	9.3	56.504	F
2	1	1071	268	537	870	1.231	854	396	0.0	54.3	123.659	F
	2	398	100	766	355	1.123	334	625	0.0	16.1	107.865	F
	3	861	215	76	1595	0.540	856	1024	0.0	1.2	4.844	A

08:15 - 08:30

Junction	Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	1	717	179	336	1128	0.635	717	645	1.7	1.7	8.735	A
	2	1039	260	173	1325	0.784	1038	879	3.2	3.5	12.449	B
	3	477	119	522	479	0.996	459	689	9.3	13.8	106.929	F
2	1	1071	268	551	860	1.246	859	407	54.3	107.2	347.539	F
	2	398	100	771	352	1.132	348	640	16.1	28.6	252.291	F
	3	879	220	80	1592	0.552	879	1039	1.2	1.2	5.047	A

08:30 - 08:45

Junction	Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	1	717	179	339	1125	0.637	717	648	1.7	1.7	8.807	A
	2	1040	260	173	1325	0.785	1040	883	3.5	3.5	12.569	B
	3	477	119	523	478	0.997	463	690	13.8	17.3	135.439	F
2	1	1071	268	554	858	1.248	858	409	107.2	160.5	569.121	F
	2	398	100	770	352	1.130	351	642	28.6	40.4	372.728	F
	3	883	221	80	1591	0.555	883	1040	1.2	1.2	5.079	A

08:45 - 09:00

Junction	Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	1	717	179	341	1124	0.638	717	648	1.7	1.7	8.845	A
	2	1040	260	173	1325	0.785	1040	885	3.5	3.6	12.599	B
	3	477	119	523	478	0.997	466	690	17.3	20.2	157.999	F
2	1	1071	268	555	857	1.249	857	410	160.5	213.9	792.754	F
	2	398	100	769	353	1.129	352	643	40.4	52.0	490.101	F
	3	885	221	80	1591	0.556	885	1040	1.2	1.2	5.093	A

09:00 - 09:15

Junction	Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	1	717	179	342	1123	0.639	717	649	1.7	1.8	8.866	A
	2	1040	260	173	1325	0.785	1040	886	3.6	3.6	12.609	B
	3	477	119	523	478	0.997	467	690	20.2	22.7	177.282	F
2	1	1071	268	555	857	1.250	857	411	213.9	267.5	1017.221	F
	2	398	100	769	353	1.128	352	643	52.0	63.5	606.069	F
	3	886	221	81	1591	0.557	886	1040	1.2	1.2	5.102	A

09:15 - 09:30

Junction	Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	1	717	179	342	1122	0.639	717	649	1.8	1.8	8.883	A
	2	1040	260	173	1325	0.785	1040	886	3.6	3.6	12.614	B
	3	477	119	524	478	0.997	468	690	22.7	24.9	194.379	F
2	1	1071	268	556	857	1.250	857	411	267.5	321.1	1242.420	F
	2	398	100	769	353	1.127	353	644	63.5	74.9	721.303	F
	3	886	222	81	1591	0.557	886	1040	1.2	1.3	5.109	A

2030 Base Plus Dev, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Linked Roundabout	Junction 1 - Arm 2	If the distance between linked junctions is small, results should be treated with caution. The linked junctions will be modelled as separate junctions, but the real behaviour may be that of a complex system with interactions that cannot be modelled.
Warning	Linked Roundabout	Junction 2 - Arm 3	If the distance between linked junctions is small, results should be treated with caution. The linked junctions will be modelled as separate junctions, but the real behaviour may be that of a complex system with interactions that cannot be modelled.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Mini-roundabout		1, 2, 3	45.62	E
2	untitled	Mini-roundabout		1, 2, 3	772.79	F

Junction Network

Driving side	Lighting	Road surface	In London	Network residual capacity (%)	First arm reaching threshold	Network delay (s)	Network LOS
Left	Normal/unknown	Normal/unknown		-29	Junction 2 - Arm 2	425.16	F

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time period length (min)	Time segment length (min)	Run automatically
D6	2030 Base Plus Dev	AM	FLAT	08:00	09:30	90	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Linked Arm Data

Junction	Arm	Feeding Junction	Feeding Arm	Link Type	Flow source	Uniform flow (PCU/hr)	Flow multiplier (%)	Internal storage space (PCU)
1	2	2	3	Simple (vertical queueing)	Normal	0	100.00	
2	3	1	2	Simple (vertical queueing)	Normal	0	100.00	

Demand overview (Traffic)

Junction	Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1	1		FLAT	✓	724	100.000
	2	✓				
	3		FLAT	✓	488	100.000
2	1		FLAT	✓	1051	100.000
	2		FLAT	✓	485	100.000
	3	✓				

Origin-Destination Data

Junction 1

Demand (PCU/hr)

From \ To	1	2	3
1	0	552	172
2	619	0	647
3	131	357	0

Proportions

From \ To	1	2	3
1	0.00	0.76	0.24
2	0.49	0.00	0.51
3	0.27	0.73	0.00

Junction 2

Demand (PCU/hr)

From \ To	1	2	3
1	0	180	871
2	90	0	395
3	318	591	0

Proportions

From \ To	1	2	3
1	0.00	0.17	0.83
2	0.19	0.00	0.81
3	0.35	0.65	0.00

Vehicle Mix

Junction 1

Heavy Vehicle Percentages

From \ To	1	2	3
1	1	0	0
2	0	0	0
3	0	0	0

Average PCU Per Veh

From \ To	1	2	3
1	1.010	1.000	1.000
2	1.000	1.000	1.000
3	1.000	1.000	1.000

Junction 2

Heavy Vehicle Percentages

From \ To	1	2	3
1	1	0	0
2	0	0	0
3	0	0	0

Average PCU Per Veh

From \ To	1	2	3
1	1.010	1.000	1.000
2	1.000	1.000	1.000
3	1.000	1.000	1.000

Detailed Demand Data

Demand for each time segment

Time Segment	Junction	Arm	Demand (PCU/hr)	Demand in PCU (PCU/hr)
08:00-08:15	1	1	724	724
		2	1266	1266
		3	488	488
	2	1	1051	1051
		2	485	485
		3	909	909
08:15-08:30	1	1	724	724
		2	1266	1266
		3	488	488
	2	1	1051	1051
		2	485	485
		3	909	909
08:30-08:45	1	1	724	724
		2	1266	1266
		3	488	488
	2	1	1051	1051
		2	485	485
		3	909	909
08:45-09:00	1	1	724	724
		2	1266	1266
		3	488	488
	2	1	1051	1051
		2	485	485
		3	909	909
09:00-09:15	1	1	724	724
		2	1266	1266
		3	488	488
	2	1	1051	1051
		2	485	485
		3	909	909
09:15-09:30	1	1	724	724
		2	1266	1266
		3	488	488
	2	1	1051	1051
		2	485	485
		3	909	909

Results

Results Summary for whole modelled period

Junction	Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
1	1	0.65	9.24	1.8	A	724	1086
	2	0.77	11.70	3.3	B	1017	1525
	3	0.99	170.28	22.2	F	488	732
2	1	1.26	1285.21	323.7	F	1051	1577
	2	1.21	1082.38	129.8	F	485	728
	3	0.57	5.20	1.3	A	897	1346

Main Results for each time segment

08:00 - 08:15

Junction	Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	1	724	181	331	1133	0.639	717	607	0.0	1.7	8.520	A
	2	1006	251	170	1327	0.758	994	877	0.0	3.0	10.453	B
	3	488	122	486	502	0.973	452	678	0.0	9.1	54.340	F
2	1	1051	263	567	849	1.238	833	377	0.0	54.4	126.877	F
	2	485	121	691	402	1.205	387	710	0.0	24.6	131.867	F
	3	877	219	72	1599	0.549	872	1006	0.0	1.2	4.921	A

08:15 - 08:30

Junction	Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	1	724	181	345	1120	0.646	724	624	1.7	1.8	9.075	A
	2	1019	255	172	1326	0.768	1018	897	3.0	3.2	11.623	B
	3	488	122	498	494	0.987	472	692	9.1	13.2	100.212	F
2	1	1051	263	583	838	1.254	837	388	54.4	107.8	358.047	F
	2	485	121	694	400	1.211	399	726	24.6	46.1	336.716	F
	3	897	224	74	1597	0.561	896	1019	1.2	1.3	5.135	A

08:30 - 08:45

Junction	Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	1	724	181	348	1117	0.648	724	626	1.8	1.8	9.157	A
	2	1019	255	172	1326	0.768	1019	900	3.2	3.2	11.687	B
	3	488	122	498	494	0.988	476	693	13.2	16.1	124.212	F
2	1	1051	263	585	836	1.257	836	389	107.8	161.6	587.585	F
	2	485	121	693	401	1.209	401	728	46.1	67.2	524.142	F
	3	900	225	74	1597	0.564	900	1019	1.3	1.3	5.167	A

08:45 - 09:00

Junction	Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	1	724	181	350	1115	0.649	724	627	1.8	1.8	9.196	A
	2	1019	255	172	1326	0.768	1019	902	3.2	3.3	11.699	B
	3	488	122	498	494	0.988	479	693	16.1	18.5	142.379	F
2	1	1051	263	586	835	1.258	835	390	161.6	215.5	819.298	F
	2	485	121	692	401	1.208	401	730	67.2	88.2	710.617	F
	3	902	226	74	1597	0.565	902	1019	1.3	1.3	5.181	A

09:00 - 09:15

Junction	Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	1	724	181	351	1114	0.650	724	627	1.8	1.8	9.221	A
	2	1019	255	172	1326	0.768	1019	903	3.3	3.3	11.701	B
	3	488	122	498	494	0.988	480	693	18.5	20.5	157.372	F
2	1	1051	263	587	835	1.259	835	390	215.5	269.5	1051.882	F
	2	485	121	692	402	1.207	402	730	88.2	109.0	896.583	F
	3	903	226	75	1597	0.566	903	1019	1.3	1.3	5.190	A

09:15 - 09:30

Junction	Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	1	724	181	352	1114	0.650	724	627	1.8	1.8	9.236	A
	2	1019	255	172	1326	0.768	1019	904	3.3	3.3	11.703	B
	3	488	122	498	494	0.988	481	693	20.5	22.2	170.282	F
2	1	1051	263	588	835	1.259	835	391	269.5	323.7	1285.211	F
	2	485	121	692	402	1.207	402	731	109.0	129.8	1082.384	F
	3	904	226	75	1597	0.566	904	1019	1.3	1.3	5.196	A

2030 Base, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Mini-roundabout	Junction 2	Mini-roundabout appears to have unbalanced flows and may behave like a priority junction; treat results with caution. See User Guide for details.[Arms 1 and 3 have 82% of the total flow for the roundabout for one or more time segments]
Warning	Linked Roundabout	Junction 1 - Arm 2	If the distance between linked junctions is small, results should be treated with caution. The linked junctions will be modelled as separate junctions, but the real behaviour may be that of a complex system with interactions that cannot be modelled.
Warning	Linked Roundabout	Junction 2 - Arm 3	If the distance between linked junctions is small, results should be treated with caution. The linked junctions will be modelled as separate junctions, but the real behaviour may be that of a complex system with interactions that cannot be modelled.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Mini-roundabout		1, 2, 3	444.80	F
2	untitled	Mini-roundabout		1, 2, 3	157.68	F

Junction Network

Driving side	Lighting	Road surface	In London	Network residual capacity (%)	First arm reaching threshold	Network delay (s)	Network LOS
Left	Normal/unknown	Normal/unknown		-30	Junction 1 - Arm 3	303.16	F

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D7	2030 Base	PM	ONE HOUR	17:00	18:30	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Linked Arm Data

Junction	Arm	Feeding Junction	Feeding Arm	Link Type	Flow source	Uniform flow (PCU/hr)	Flow multiplier (%)	Internal storage space (PCU)
1	2	2	3	Simple (vertical queueing)	Normal	0	100.00	
2	3	1	2	Simple (vertical queueing)	Normal	0	100.00	

Demand overview (Traffic)

Junction	Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1	1		ONE HOUR	✓	598	100.000
	2	✓				
	3		ONE HOUR	✓	667	100.000
2	1		ONE HOUR	✓	969	100.000
	2		ONE HOUR	✓	432	100.000
	3	✓				

Origin-Destination Data

Junction 1

Demand (PCU/hr)

		To		
		1	2	3
From	1	0	451	147
	2	576	0	548
	3	88	579	0

Proportions

		To		
		1	2	3
From	1	0.00	0.75	0.25
	2	0.51	0.00	0.49
	3	0.13	0.87	0.00

Junction 2

Demand (PCU/hr)

		To		
		1	2	3
From	1	0	220	749
	2	57	0	375
	3	788	242	0

Proportions

		To		
		1	2	3
From	1	0.00	0.23	0.77
	2	0.13	0.00	0.87
	3	0.77	0.23	0.00

Vehicle Mix

Junction 1

Heavy Vehicle Percentages

		To		
		1	2	3
From	1	1	0	0
	2	0	0	0
	3	0	0	0

Average PCU Per Veh

		To		
		1	2	3
From	1	1.010	1.000	1.000
	2	1.000	1.000	1.000
	3	1.000	1.000	1.000

Junction 2

Heavy Vehicle Percentages

		To		
		1	2	3
From	1	1	0	0
	2	0	0	0
	3	0	0	0

Average PCU Per Veh

		To		
		1	2	3
From	1	1.010	1.000	1.000
	2	1.000	1.000	1.000
	3	1.000	1.000	1.000

Detailed Demand Data

Demand for each time segment

Time Segment	Junction	Arm	Demand (PCU/hr)	Demand in PCU (PCU/hr)
17:00-17:15	1	1	450	450
		2	846	846
		3	502	502
	2	1	730	730
		2	325	325
		3	775	775
17:15-17:30	1	1	538	538
		2	1010	1010
		3	600	600
	2	1	871	871
		2	388	388
		3	926	926
17:30-17:45	1	1	658	658
		2	1238	1238
		3	734	734
	2	1	1067	1067
		2	476	476
		3	1134	1134
17:45-18:00	1	1	658	658
		2	1238	1238
		3	734	734
	2	1	1067	1067
		2	476	476
		3	1134	1134
18:00-18:15	1	1	538	538
		2	1010	1010
		3	600	600
	2	1	871	871
		2	388	388
		3	926	926
18:15-18:30	1	1	450	450
		2	846	846
		3	502	502
	2	1	730	730
		2	325	325
		3	775	775

Results

Results Summary for whole modelled period

Junction	Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
1	1	0.61	8.65	1.6	A	549	823
	2	0.82	14.90	4.4	B	1005	1508
	3	1.61	1541.84	210.2	F	612	918
2	1	0.97	58.87	16.7	F	889	1334
	2	1.46	696.54	80.6	F	396	595
	3	0.55	4.91	1.2	A	823	1235

Main Results for each time segment

17:00 - 17:15

Junction	Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	1	450	113	411	1060	0.425	447	487	0.0	0.7	5.850	A
	2	834	209	110	1367	0.610	828	748	0.0	1.5	6.602	A
	3	502	126	424	540	0.930	474	514	0.0	7.1	43.716	E
2	1	730	182	175	1120	0.651	722	612	0.0	1.8	8.889	A
	2	325	81	558	487	0.669	318	339	0.0	1.9	20.518	C
	3	748	187	42	1627	0.460	745	834	0.0	0.8	4.067	A

17:15 - 17:30

Junction	Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	1	538	134	421	1051	0.512	536	568	0.7	1.0	6.979	A
	2	988	247	132	1353	0.731	984	825	1.5	2.6	9.652	A
	3	600	150	504	490	1.223	485	612	7.1	35.8	181.021	F
2	1	871	218	194	1107	0.787	865	680	1.8	3.4	14.438	B
	2	388	97	668	417	0.932	369	390	1.9	6.8	59.576	F
	3	825	206	49	1621	0.509	825	988	0.8	1.0	4.519	A

17:30 - 17:45

Junction	Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	1	658	165	399	1071	0.615	656	614	1.0	1.6	8.641	A
	2	1085	271	161	1333	0.814	1079	894	2.6	4.1	13.821	B
	3	734	184	553	460	1.597	460	687	35.8	104.5	565.694	F
2	1	1067	267	210	1096	0.973	1029	727	3.4	13.0	39.721	E
	2	476	119	795	336	1.415	334	443	6.8	42.2	289.570	F
	3	894	223	44	1625	0.550	893	1085	1.0	1.2	4.914	A

17:45 - 18:00

Junction	Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	1	658	165	395	1074	0.613	658	621	1.6	1.6	8.653	A
	2	1095	274	162	1333	0.821	1094	892	4.1	4.4	14.899	B
	3	734	184	560	455	1.613	455	695	104.5	174.3	1091.324	F
2	1	1067	267	209	1097	0.973	1052	725	13.0	16.7	58.874	F
	2	476	119	813	325	1.465	324	448	42.2	80.0	644.986	F
	3	892	223	43	1626	0.548	892	1095	1.2	1.2	4.901	A

18:00 - 18:15

Junction	Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	1	538	134	407	1063	0.506	540	600	1.6	1.0	6.900	A
	2	1048	262	133	1352	0.775	1051	814	4.4	3.6	12.089	B
	3	600	150	539	469	1.279	469	645	174.3	207.0	1449.363	F
2	1	871	218	191	1109	0.785	922	674	16.7	4.0	23.387	C
	2	388	97	713	389	1.000	386	401	80.0	80.6	696.543	F
	3	814	204	51	1619	0.503	815	1048	1.2	1.0	4.483	A

18:15 - 18:30

Junction	Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	1	450	113	425	1047	0.430	451	569	1.0	0.8	6.053	A
	2	981	245	111	1367	0.718	985	765	3.6	2.6	9.528	A
	3	502	126	505	490	1.025	490	591	207.0	210.2	1541.835	F
2	1	730	182	180	1117	0.653	738	648	4.0	1.9	9.685	A
	2	325	81	570	479	0.679	473	347	80.6	43.7	476.129	F
	3	765	191	62	1608	0.476	766	981	1.0	0.9	4.279	A

2030 Base Plus Dev, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Linked Roundabout	Junction 1 - Arm 2	If the distance between linked junctions is small, results should be treated with caution. The linked junctions will be modelled as separate junctions, but the real behaviour may be that of a complex system with interactions that cannot be modelled.
Warning	Linked Roundabout	Junction 2 - Arm 3	If the distance between linked junctions is small, results should be treated with caution. The linked junctions will be modelled as separate junctions, but the real behaviour may be that of a complex system with interactions that cannot be modelled.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Mini-roundabout		1, 2, 3	442.38	F
2	untitled	Mini-roundabout		1, 2, 3	203.42	F

Junction Network

Driving side	Lighting	Road surface	In London	Network residual capacity (%)	First arm reaching threshold	Network delay (s)	Network LOS
Left	Normal/unknown	Normal/unknown		-30	Junction 1 - Arm 3	322.80	F

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D8	2030 Base Plus Dev	PM	ONE HOUR	17:00	18:30	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Linked Arm Data

Junction	Arm	Feeding Junction	Feeding Arm	Link Type	Flow source	Uniform flow (PCU/hr)	Flow multiplier (%)	Internal storage space (PCU)
1	2	2	3	Simple (vertical queueing)	Normal	0	100.00	
2	3	1	2	Simple (vertical queueing)	Normal	0	100.00	

Demand overview (Traffic)

Junction	Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1	1		ONE HOUR	✓	607	100.000
	2	✓				
	3		ONE HOUR	✓	650	100.000
2	1		ONE HOUR	✓	910	100.000
	2		ONE HOUR	✓	507	100.000
	3	✓				

Origin-Destination Data

Junction 1

Demand (PCU/hr)

From \ To	1	2	3
1	0	479	128
2	614	0	519
3	69	581	0

Proportions

From \ To	1	2	3
1	0.00	0.79	0.21
2	0.54	0.00	0.46
3	0.11	0.89	0.00

Junction 2

Demand (PCU/hr)

From \ To	1	2	3
1	0	227	683
2	57	0	450
3	726	334	0

Proportions

From \ To	1	2	3
1	0.00	0.25	0.75
2	0.11	0.00	0.89
3	0.68	0.32	0.00

Vehicle Mix

Junction 1

Heavy Vehicle Percentages

From \ To	1	2	3
1	1	0	0
2	0	0	0
3	0	0	0

Average PCU Per Veh

From \ To	1	2	3
1	1.010	1.000	1.000
2	1.000	1.000	1.000
3	1.000	1.000	1.000

Junction 2

Heavy Vehicle Percentages

From \ To	1	2	3
1	1	0	0
2	0	0	0
3	0	0	0

Average PCU Per Veh

From \ To	1	2	3
1	1.010	1.000	1.000
2	1.000	1.000	1.000
3	1.000	1.000	1.000

Detailed Demand Data

Demand for each time segment

Time Segment	Junction	Arm	Demand (PCU/hr)	Demand in PCU (PCU/hr)
17:00-17:15	1	1	457	457
		2	853	853
		3	489	489
	2	1	685	685
		2	382	382
		3	798	798
17:15-17:30	1	1	546	546
		2	1019	1019
		3	584	584
	2	1	818	818
		2	456	456
		3	953	953
17:30-17:45	1	1	668	668
		2	1247	1247
		3	716	716
	2	1	1002	1002
		2	558	558
		3	1167	1167
17:45-18:00	1	1	668	668
		2	1247	1247
		3	716	716
	2	1	1002	1002
		2	558	558
		3	1167	1167
18:00-18:15	1	1	546	546
		2	1019	1019
		3	584	584
	2	1	818	818
		2	456	456
		3	953	953
18:15-18:30	1	1	457	457
		2	853	853
		3	489	489
	2	1	685	685
		2	382	382
		3	798	798

Results

Results Summary for whole modelled period

Junction	Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
1	1	0.62	8.88	1.6	A	557	835
	2	0.80	12.92	3.7	B	992	1488
	3	1.61	1561.68	207.0	F	596	895
2	1	0.96	55.43	14.6	F	835	1253
	2	1.51	830.85	109.6	F	465	698
	3	0.57	5.12	1.3	A	849	1273

Main Results for each time segment

17:00 - 17:15

Junction	Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	1	457	114	411	1060	0.431	454	500	0.0	0.7	5.918	A
	2	839	210	96	1377	0.609	833	770	0.0	1.5	6.557	A
	3	489	122	451	523	0.935	460	477	0.0	7.3	45.621	E
2	1	685	171	241	1074	0.638	678	566	0.0	1.7	8.940	A
	2	382	95	509	518	0.737	372	411	0.0	2.5	23.255	C
	3	770	192	42	1627	0.473	766	839	0.0	0.9	4.165	A

17:15 - 17:30

Junction	Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	1	546	136	419	1053	0.518	544	581	0.7	1.1	7.063	A
	2	985	246	115	1364	0.722	981	848	1.5	2.5	9.294	A
	3	584	146	531	473	1.235	468	564	7.3	36.3	189.260	F
2	1	818	205	267	1057	0.774	812	628	1.7	3.2	14.364	B
	2	456	114	610	454	1.004	423	470	2.5	10.8	77.431	F
	3	848	212	48	1622	0.523	847	985	0.9	1.1	4.644	A

17:30 - 17:45

Junction	Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	1	668	167	399	1070	0.624	666	621	1.1	1.6	8.854	A
	2	1062	266	140	1347	0.789	1058	925	2.5	3.5	12.268	B
	3	716	179	573	447	1.601	447	625	36.3	103.5	579.151	F
2	1	1002	250	291	1040	0.963	968	675	3.2	11.7	38.549	E
	2	558	140	727	380	1.470	378	533	10.8	55.8	339.573	F
	3	925	231	43	1626	0.569	924	1062	1.1	1.3	5.120	A

17:45 - 18:00

Junction	Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	1	668	167	396	1073	0.623	668	627	1.6	1.6	8.883	A
	2	1071	268	141	1347	0.795	1070	923	3.5	3.7	12.923	B
	3	716	179	580	443	1.615	443	631	103.5	171.7	1105.981	F
2	1	1002	250	291	1040	0.963	990	674	11.7	14.6	55.434	F
	2	558	140	743	369	1.512	369	538	55.8	103.1	735.885	F
	3	923	231	41	1627	0.567	923	1071	1.3	1.3	5.114	A

18:00 - 18:15

Junction	Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	1	546	136	408	1063	0.514	548	607	1.6	1.1	7.027	A
	2	1028	257	116	1364	0.754	1030	840	3.7	3.2	10.895	B
	3	584	146	558	456	1.280	456	588	171.7	203.6	1465.681	F
2	1	818	205	265	1058	0.773	862	624	14.6	3.7	21.701	C
	2	456	114	647	430	1.059	430	480	103.1	109.6	830.852	F
	3	840	210	48	1621	0.518	841	1028	1.3	1.1	4.623	A

18:15 - 18:30

Junction	Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	1	457	114	425	1047	0.437	458	577	1.1	0.8	6.127	A
	2	969	242	97	1376	0.704	972	787	3.2	2.5	8.980	A
	3	489	122	527	476	1.028	476	542	203.6	207.0	1561.680	F
2	1	685	171	248	1070	0.640	692	596	3.7	1.8	9.720	A
	2	382	95	520	511	0.747	506	421	109.6	78.5	670.274	F
	3	787	197	57	1613	0.488	787	969	1.1	1.0	4.364	A