

Wilmslow Road Cycleway Monitoring Report

Post Implementation Review April 2016 to October 2016

Highways
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Checking and Approvals:

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Name

Kim Dorrington, (Interim) Director of Highways

7th Feb 2017



Executive Summary

Introduction

Wilmslow Road is a busy highway corridor, carrying over 10,000 cars, 1,800 buses and 1,400 cyclists per day on average during 2015. As Manchester continues to grow, the corridor will be required to carry increasing numbers of people to employment, retail and leisure destinations. This can only be achieved, by creating a more sustainable urban mobility culture, through highway infrastructure improvements aimed at higher density modes of transport like buses, cycling and walking.

The Wilmslow Road Cycleway has been designed to provide a transformational improvement in the quality of cycling infrastructure on the most heavily cycled corridor in the City.

The design of the cycleway sought to cater not only for cyclists but also to take into account the requirements of all road users, businesses and residents. Extensive consultation was carried out during the pre-design and design phases with the aim of achieving a sensible balance in road space allocation. However where road space is limited, compromises between the requirements of the different road users have been made, as the highway remains the one environment which is shared by us all.

This report sets out the findings of a six-month monitoring review carried out from April 2016 when the scheme was completed. This monitoring included collection and analysis of a variety of traffic data, a review of an independent road safety audit, comments and surveys of users.

Report Findings

A summary of the key findings is provided below:

- **Number of cyclists:** the number of cyclists has more than doubled when counted in October 2016 compared to data from March 2015. Even accounting for unseasonably warm weather in October 2016, levels of cycling on Wilmslow Road were still 50-80% higher than would have been expected before the cycleway was installed.
- **Journey Times and Speeds:** analysis of Bluetooth data indicates that whilst journey times increased during the construction phase, post-completion journey times and speeds are now approaching pre-construction levels. The impact of the on-going works to improve bus and cycling infrastructure on Oxford Road has impacted journey times but may also be reducing traffic flows on the Wilmslow Road corridor by diverting traffic onto adjoining corridors into the City Centre.
- **Road Collisions:** analysis of Greater Manchester Police road collisions shows:
 - As the number of cyclists has almost doubled on the corridor, the number of collisions might be expected to increase, which has not happened. Further monitoring over a longer period is required to confirm these findings.
 - Road collisions involving pedal cycles, where they are taking place, are more limited to where vehicles are turning into and out of side roads, with the severity of the incidents also reducing.
 - No road collisions involving pedal cyclists and pedestrians have been recorded by Greater Manchester Police;
 - Road collisions along the corridor involving non-cyclists remain at a similar level to 2015.

- **CCTV footage:** shows that the majority of cyclists are utilising the new cycling infrastructure as designed. There is evidence of respectful interactions where pedestrians wait to cross the cycle lane or are waiting for buses, but there remains concern over conflict between cyclists and pedestrians who find themselves in the cycle lane.
- **Perception Survey:** a user intercept survey was carried out, which has indicated that:
 - Cyclists responded very positively to the introduction of segregated cycle lanes. Kerb segregated cycle lanes and early green traffic signals were the most positively received cycling infrastructure features introduced.
 - Bus user responses overall were neutral.
 - Motorists and pedestrians largely responded negatively towards the scheme. Over 40% of pedestrians and motorists, who responded to the survey, stated that the kerb segregation, cycle lanes behind parking bays and bus stops were either poor or very poor.
- **Issues raised by third parties:** Retailer and traders groups, particularly in Rusholme, have raised concerns in respect of pedestrian safety when crossing the segregated cycle lanes and at the bus stop by-passes. Concerns have also been raised by bus operators over reduced carriageway widths and junctions with a single lane approach.

Recommendations

The review has also highlighted a number of recommendations which include:

- **Further Measures:** A number of specific improvements have been identified for implementation along Wilmslow Road informed by a Road Safety Audit to address identified post-construction safety concerns, plus from feedback received from bus operators and other users of the corridor relating to safety. These measures include:
 - Reducing the width of central islands at specific pinch points to make passing easier, particularly for buses (e.g. Rusholme).
 - Resurfacing the cycle lane where carriageway conditions are poor.
 - Improving the clarity of shared and segregated footway in some locations to improve pedestrian-cyclist awareness.
 - Installing 'share with care' and warning signs to promote safe pedestrian-cyclist awareness.

It is intended that these measures will be implemented in Spring 2017.

- **Further Monitoring:** is required over a longer period of time to gain a more accurate picture of usage and assess the infrastructure as it becomes more familiar and accepted.
- **Education Programme and Safety Awareness:** safety education for all road users should be carried out, including targeted campaigns for future schemes, particularly where changes to district centres are proposed. It is recommended that a component of the budget for each scheme is allocated to this.
- **Design Guidance:** is being reviewed by TfGM and the Greater Manchester Authorities. It is recommended that this review takes account of the findings of this report. In particular, the minimum carriageway and footway widths that were adhered to on some of the busier stretches of Wilmslow Road have led to some carriageway pinch-points and pedestrians stepping into

and walking in cycle lanes. For future schemes, it is recommended that narrower minimum cycleway widths are considered in these circumstances in order to provide the best overall balance for all road users.

- **Materials:** it is recommended that a single, standard green be adopted for all cycle lane provision to ensure consistency across all schemes.
- **Light Segregation:** such as plastic fixtures bolted down to the road, require review in terms of the longevity of products where there is risk of damage due to buses, illegal parking and HGVs.
- **Back to Back Kerb Segregation:** is considered for wider use in future cycle infrastructure schemes, where there is no kerbside parking or loading requirements, as it provides a high level of segregation with low maintenance requirements and allows for more carriageway space to be retained, compared to other types of segregation.
- **Junction and Road Capacity:** it is recommended that on major road corridors the introduction of segregated cycle lanes should ensure operational junction and road capacity remains neutral. In future, more consideration should be given to measuring capacity in terms of 'total people movement', including public transport, cycling and walking, rather than simply considering vehicle movements.
- **Side Roads:** It is recommended that future designs include tightening of radii at junctions with side roads, in order to slow vehicles turning onto and from the main carriageway, helping to improve safety for cyclists and pedestrians.

Summary

By delivering a significant increase in cycling levels on Wilmslow Road, the introduction of segregated cycle lanes on the Wilmslow Road corridor has achieved one of the scheme's primary objectives to increase the proportion of trips made by pedal cycle. As the works on Oxford Road will be completed in April 2017 and the full route into the City Centre becomes available to cyclists, it is anticipated that there will be further increases in the number of residents cycling along the entire corridor. These cycling increases, combined with the Bus Priority Package, will help to make the Wilmslow Road / Oxford Road Corridor a high-density commuter route capable of offering a real choice in terms of mode of transport.

Whilst the scheme is viewed positively by cyclists, there have been changes for all road users, affecting perceptions of safety, journey times and vehicle speed. Changes in road and footway layout have affected motorised vehicles and pedestrians, requiring adjustments to how the highway is used and interactions between road users within the re-engineered environment. There are signs that the scheme is becoming more widely accepted, despite concerns remaining from different groups of road users. There are also early indications of a reduction in the casualty rate (measured as the number of casualties relative to the number of cyclists using the route). Although longer term (3 and 5 year) monitoring is required and there is a planned package of mitigation works required to address some safety issues identified through this initial period of review, a number of recommendations can be made to be taken forward into future cycle infrastructure schemes to improve the quality for all user groups.

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1.0 Wilmslow Road Cycleway Project Overview

1.1 Introduction

- 1.1.1 **Wilmslow Road/Oxford Road** is the busiest cycling and bus corridor in Manchester, passing through the south Manchester district centres of Didsbury, Withington, Fallowfield and Rusholme, which are home to many businesses and local residents but also the majority of the 70,000 students who reside in Manchester whilst attending university.
- 1.1.2 The Wilmslow Road Cycleway completed in April 2016 connects with the Oxford Road Bus Priority project to form a continuous, largely segregated cycle route from the City Centre to Didsbury in the south. The Wilmslow Road Cycleway has been designed to provide transformational change in the quality of cycling infrastructure on a road corridor that is the most heavily used route by cyclists in the city. The route has also historically had the highest number of cycle casualties within Manchester.
- 1.1.3 The project has been funded by the Department for Transport's Cycle City Ambition Grant (CCAG). This Grant is part of the first tranche of a £20 million, 12 year Greater Manchester's Cycle City programme of investment in cycling infrastructure.
- 1.1.4 The design of the Wilmslow Road Cycleway has sought to cater not only for the needs of cyclists but also to take into account the requirements of pedestrians, buses and bus users, general traffic, emergency services and service access.
- 1.1.5 As the project has introduced major alterations to the road layout, there has been a "settling in" period during which pedestrians, drivers and riders will be getting familiarized with the new road layout.
- 1.1.6 The first phase of the Cycleway, delivered through the Cycle City Ambition Grant (CCAG) is over 3.5 miles in length runs along Wilmslow Road from Didsbury to Whitworth Park, Rusholme.
- 1.1.7 The second phase of the Cycleway, Oxford Road Bus Priority project is due for completion during spring 2017, adding a further 1.5 miles to complete the cycleway from Whitworth Park through the Universities on Oxford Road into the City Centre.
- 1.1.8 The scope of this report assesses only the first phase, the Wilmslow Road part, of the Cycleway from Didsbury (School Lane/Barlow Moor Road junction) to Whitworth Park, Rusholme (Moss Lane East junction) and covers this "settling in" period from completion of the Wilmslow Road Cycleway in April 2016 to October/November 2016.

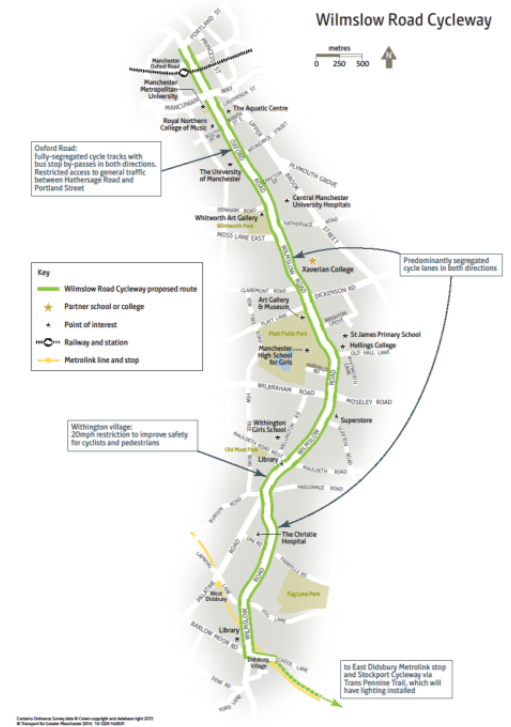


Image 1: Wilmslow Road Cycleway Route Plan (refer to Appendix 1 for larger version)

1.2 Background

- 1.2.1 Velocity 2025 is the vision of a city fit for the future: a healthy, safe, sustainable city that people want to live and work in.
- 1.2.2 Greater Manchester Authorities want to see the proportion of trips by bike increase to 10% of all journeys over the next 9 years (12 years from 2013).
- 1.2.3 Velocity 2025 is an ambitious strategy aimed at encouraging cyclists of all ages to improve modal shift to a form of transport which is one of the most sustainable forms of travel on the planet. Compared with motorised vehicles, cycling causes less pollution and promotes health, requires less space for parking and on urban roads can support higher numbers of passenger flows per metre of road width than other forms of transport.
- 1.2.4 The project aims to:
- Increase cycle usage;
 - Reduce CO₂ emissions;
 - Improve health;
 - Reduce the number of road collisions relative to the number of pedal cyclists using the route;
 - Create safer and easier to use cycle facilities;
 - Widen the age range and encourage new cyclists;
- 1.2.5 The Wilmslow Road and Oxford Road cycleway will deliver a key section within a new network of strategic, integrated cycle routes across Greater Manchester to connect employment centres, educational and leisure facilities.



Our vision is of a city fit for the future: a healthy, safe, sustainable city that people want to live and work in.

1.3 Project Deliverables & Improvements

1.3.1 Prior to the commencement of the project, the cycling infrastructure along Wilmslow Road predominantly consisted of signs and road markings with limited separation of cycles from vehicles which resulted in some of the following issues:

- overrunning or parking abuse within the cycle lanes;
- lack of any significant cycle facilities at signalised junctions often with pinch points resulting in cyclists waiting or being squeezed between or behind vehicles;
- lack of continuity of cycle markings and coloured surfacing;
- cyclists competing with buses in bus lanes;
- poor carriageway conditions adjacent to the footway as a result of drainage and pot hole issues;
- significant conflicts between cyclists and buses around bus stops with cyclists having to wait between buses or manoeuvring into the centre of the carriageway to overtake; and
- conflicts between cyclists and turning vehicles at signalised junctions and side roads.

1.3.2 In response to these identified issues, the project has delivered a series of infrastructure improvements which aim to reduce conflicts between cyclists and other road users by providing a largely segregated cycleway.

1.4 Purpose of this Report

1.4.1 This report is a review of the 6-8 month period post completion of the Wilmslow Road cycleway. The period of review is from April to October/November 2016 with the following tasks carried out:

- 1.4.2
- Collection and analysis of the following data:
 - a. Single day before and post completion counts of Cyclists;
 - b. Before, during construction and post completion journey times and journey speed;
 - c. Review of CCTV data within Rusholme and Fallowfield District Centres;
 - d. Perception survey questionnaire seeking views on the cycleway carried out by



Photo 1: Photo showing new cycle lane in Rusholme



Photo 2: Photo showing new cycling facilities on Wilmslow Road before Fallowfield

- A review of road collisions before, during and post completion reported to Greater Manchester Police;
- A review of reported collisions between cyclists and pedestrians in 2 months post completion within Rusholme District Centre reported to the Neighbourhood Office;
- Comments and reports received from Local Councillors; Bus Operators; Didsbury Civic Society, Neighbourhood Teams and Rusholme Traders; and
- An overview of Wilmslow Road cycleway Stage 3 Road Safety Audit (with response).

1.4.3 The conclusions and report findings are to assist with informing future decision making for the implementation of segregated cycle ways along busy urban road corridors within Manchester.

2.0 Project Review of Quantitative Data

During the monitoring period construction works have continued on Oxford Road through the University District adding to journey times as all traffic including buses, vehicles and cyclists have at various stages had their routes diverted or been impacted with traffic management to facilitate the works. The number of Cross City buses which connect North and South Manchester has also increased along the corridor.

2.1 Cycle Counts

2.1.1 Data was counted at four sites along the Wilmslow Road Corridor on 4th March 2015 to provide the 'before' data and on 5th October 2016 to provide the 'after' data, during University Term Time. Of the four count sites, two sites were located in Rusholme, one in Fallowfield and one in Didsbury.

2.1.2 Enumerators were instructed to record all pedal cyclists riding or walking with their cycle whether on the carriageway or footway by direction of travel regardless of side of road. Separate entries were made for on carriageway or on footway. Numbers were recorded in 15 minute intervals from 06:00-21:00. Notes were made of unusual events and the weather was recorded as indicated in Table 1.

2.1.3 Table 1: Weather Recorded during the count of cyclists on Wilmslow Road

	06.00-08.00	08.00-13.00	13.00-18.00	18.00-20.00
04 March 2015	Rain, cold	Dry, cloudy, windy, cold	Dry, sunny, cold	Dry, cold
05 October 2016	Dry, cloudy with sunny spells, warm	Dry, cloudy with sunny spells, warm	Dry, cloudy with sunny spells, warm	Dry, cloudy with sunny spells, warm

2.1.4 Based on an eighteen month review Chart 1 indicates that the number of cyclists on Wilmslow Road has dramatically increased since the completion of the Wilmslow Road cycle corridor in April 2016, with the number of cyclists approximately doubling.

In Rusholme levels rose from **1395 cyclists per day in March 2015 to 2895 per day in October 2016.**

Over 100 cyclists were recorded in one 15 minute period between 8.30 and 8.45 am at Platt Fields Park.

2.1.5

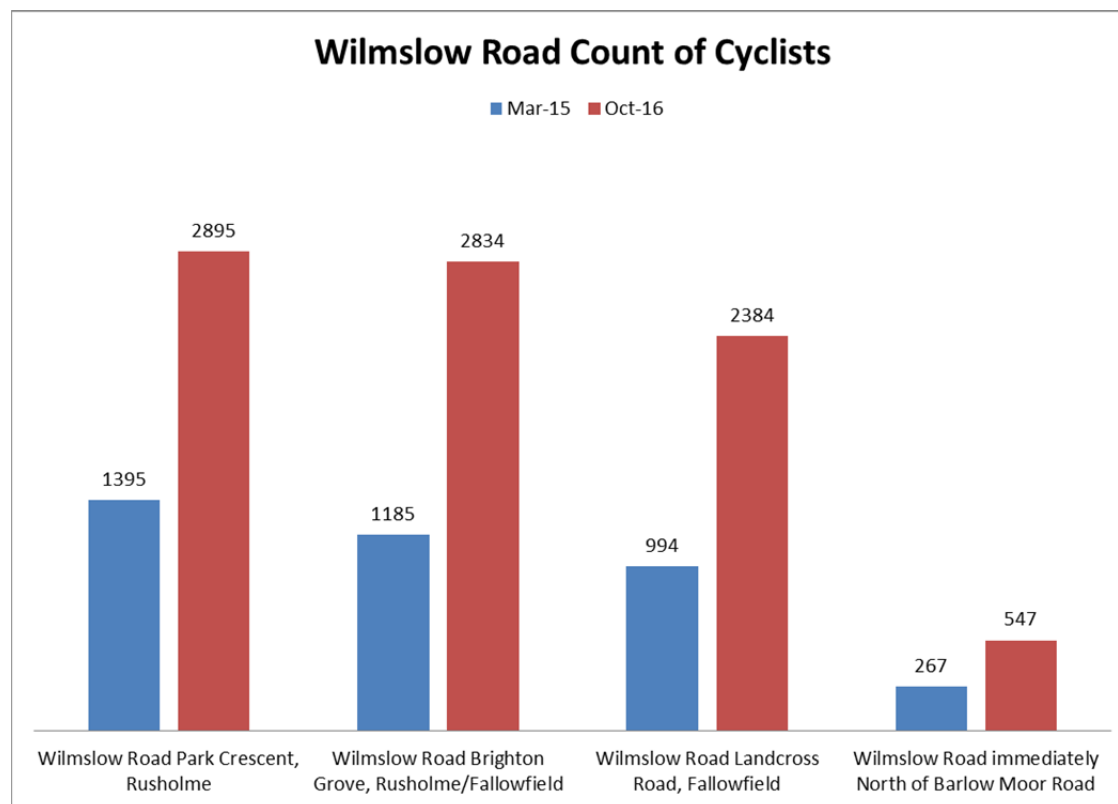


Chart 1: Number of Cyclists recorded between 6am and 9pm on day of survey in March 2015 compared with October 2016



Photo 3: Photo courtesy of TfGM showing number of cyclists Rusholme Northbound AM Peak October 2016

2.1.6

“The Surveyors couldn’t believe how busy it was with cyclists,” R. Davies – Transport Analyst TfGM “we were overwhelmed by the data entry!”

2.1.7

Typically traffic counts are conducted at the same time every year, to provide a year on year comparison, although cycling levels in March and October, based on evidence from previous cycle counts, tends to be very similar.

October 2016, however was unseasonably warm. As a result the data has also been analysed to include seasonal adjustment based on data counts from automatic cycle counters across Greater Manchester. These counters indicated that cycling levels were 40% higher in October 2016 than March 2015. This indicates that there is the potential

for 30% of the increase in the number of cyclists counted on Wilmslow Road in October 2016 can be attributed to seasonal variability (i.e. the warm weather).

2.1.8

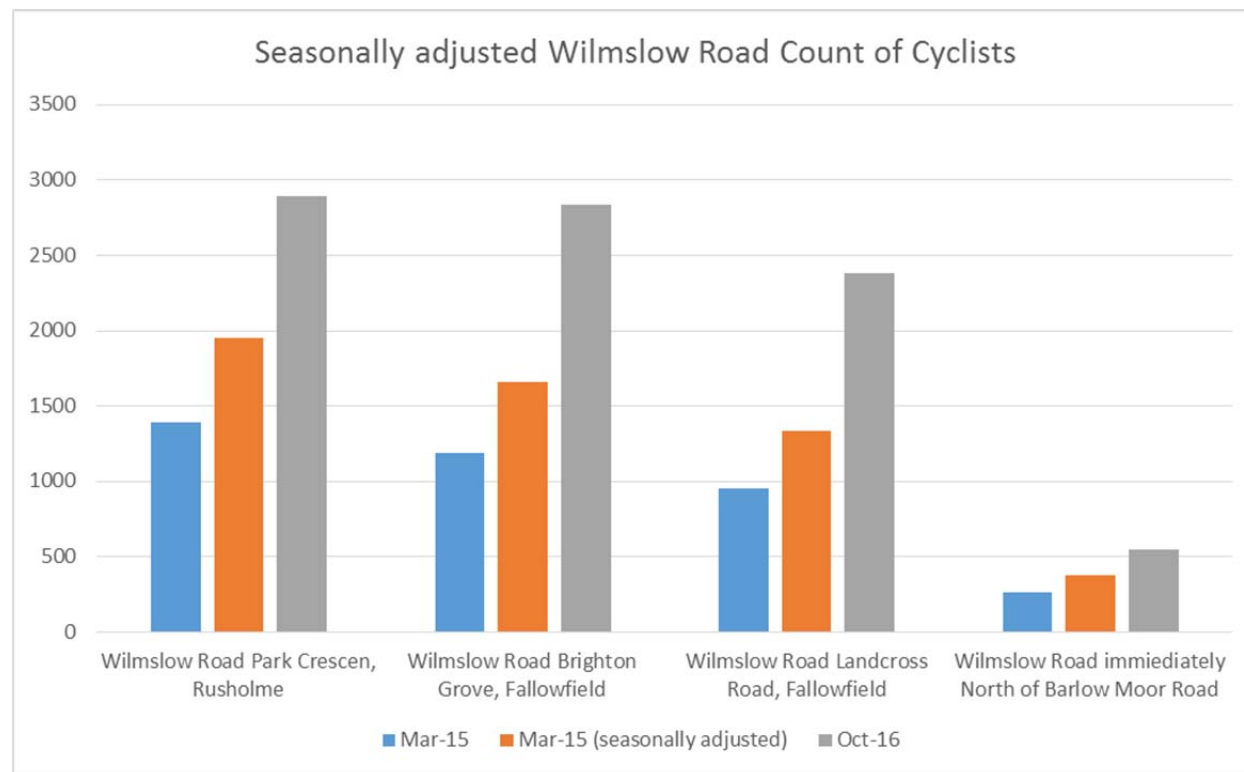


Chart 2: Wilmslow Road Count of Cyclists March 2015, Seasonally Adjusted March 2015 & October 2016

2.1.9

Chart 2 compares the before and after counts against the calculated seasonally adjusted after count. The seasonally adjusted count still suggests that, even accounting for the weather, levels of cycling on Wilmslow Road are still 50-80% higher than before the Cycleway scheme was installed.

2.1.10

Besides the unseasonably warm weather in October 2016, the return of the university student population, as well as the new cycling infrastructure may also have encouraged more people to cycle.

2.1.11

Based on data from a combination of surveys, automated and manual traffic counts, TfGM estimates 4-5% of trips on Wilmslow Road were by pedal cycles prior to the cycleway being completed. It is not possible, at this stage, to estimate the current modal share for cycling on the corridor due to a lack comparable data on other travel modes and the on-



Photo 4: Photo courtesy of TfGM showing number of cyclists travelling northbound through Rusholme October 2016

going construction of the Oxford Road section. Based on the cycle count data, however the percentage share of trips made by cyclists, when compared to other transport modes, is expected to have substantially increased.

2.1.12 Further data analysis of transport modal share and the increase in cyclists may be possible, as traffic counts are repeated or estimated by TfGM and reported to the Department for Transport in March every year (the count point is located on Wilmslow Road between Platt Lane and Dickenson Road).

2.1.13 Table 2 follows a typical traffic flow profile, with the count indicating the am peak period going northbound into the City Centre and southbound away from the City Centre during the pm peak period, having the highest number of cyclists.

The overall number of cyclists reduces south of Fallowfield, with increasing distance from the city centre.

The Didsbury count, unlike the other count sites in Fallowfield and Rusholme, recorded slightly more cyclists going southbound in the pm peak. This could be an indication of:

- Cyclists taking alternative routes or modes of transport in the am peak from Didsbury when journey time reliability is considered to be a higher priority,
- An increase in the number of localised journeys outside of the City Centre;
- A convergence of 'radial journeys' at Didsbury with cyclists wanting to access the Trans Pennine Trail (National Cycle Route 62) which runs through Didsbury.

2.1.14 Table 2: Count of Cyclists recorded per time period and direction of travel

Road	Dir. To	Period				Grand Total
		06:00-10:00	10:00-16:00	16:00-19:00	19:00-21:00	
B5117 Wilmslow Road	N	716	543	187	91	1537
Rusholme	S	58	596	528	176	1358
A6010 Wilmslow Road	N	754	519	179	76	1528
Rusholme	S	36	558	546	166	1306
A6010 Wilmslow Road	N	626	431	181	53	1291
Fallowfield	S	40	383	514	156	1093
B5093 Wilmslow Road	N	97	62	83	23	265
Didsbury	S	64	76	113	29	282
		2391	3168	2331	770	8660



Photo 5: 2010 Wilmslow Road opposite Owen's Park before the introduction of bus and cycling improvements



Photo 6: 2016 Wilmslow Road opposite Owen's Park

- 2.1.15 An assessment of gender and age profile is provided in Table 3. The count data indicates that almost all cyclists (99%) were adults with a gender split of 72% male: 28% female.

2.1.16

Table 3: Age and Gender Profile of Cyclists Recorded in Quantitative Count

Age Group		Total	Gender		Total
Child	Age Group Total	41	Male	Gender Total	6215
Adult	Age Group Total	8712	Female	Gender Total	2445
	Overall Total	8660		Overall Total	8660

2.2 Traffic Journey Times and Speeds

- 2.2.0.1 Traffic journey times and speed were analysed from mobile Bluetooth data supplied by TfGM from June 2014 to November 2016. This data is obtained from traffic signal mounted Bluetooth monitoring beacons. The collected Bluetooth digital addresses are compared at the start and end beacons to determine journey times and movements. The beacons are located at five locations on the cycleway corridor as indicated in Table 4.

2.2.0.2

Table 4: Location of Bluetooth Beacons & Zones

Zone ID	Ward Boundaries	Node A Junction	Node B Junction
1	Moss Side/Ardwick	Oxford Rd/Hathersage Rd	Wilmslow Rd/Moss Ln East
2	Rusholme	Wilmslow Rd/Moss Ln East	Wilmslow Rd/Dickenson Rd/Platt Ln
3	Fallowfield/Rusholme	Wilmslow Rd/Dickenson Rd/Platt Lane	Wilmslow Rd/Moseley Rd/Wilbraham Rd
4	Fallowfield/Withington/Old Moat	Wilmslow Rd/Moseley Rd/Wilbraham Rd	Wilmslow Rd/Palatine Rd/Burton Rd
5	Withington/Didsbury East/Didsbury West	Wilmslow Rd/Palatine Rd/Burton Rd	Wilmslow Rd/Barlow Moor Road/School Lane



Photo 7: Wilmslow Road Fallowfield Egerton Road Junction looking Northbound Before Construction



Photo 8: Wilmslow Road Fallowfield Egerton Road Junction looking southbound after construction showing early start signal for cyclists

- 2.2.0.3 The data for average journey times has been analysed on a monthly basis, before, during and after the construction period. The analysis has been focused on average journey times for the busiest times and directions:
- AM peak (07:30 - 09:30) in the northbound direction;
 - PM peak (16:30 - 18:30) in the southbound direction.
- 2.2.0.4 The overall cycleway construction commenced in April 2015 and was completed at the end of March 2016. Works within Rusholme District Centre commenced in September 2015 and completed at the end of March 2016.
- 2.2.0.5 When reviewing the data, the following limitations are required to be taken into consideration:
- The data is taken from vehicles/mobile phones with Bluetooth technology in transit passing temporary traffic sensors at the node ends. The data has also been restricted to Monday – Friday as this is the busiest travel period. From the data provided it is not possible to identify the mode of transport.
 - Data for some weeks is missing for some zones. In these cases, the data has been interpolated by analysing the journey time from the most recent week where data is available;
 - In the data analysis the monthly journey time data has been averaged;
 - Journey time reliability is based on described qualitative assessment only. Quantitative assessment of journey time reliability using standard deviation is possible however requires more theoretical analysis and testing. Whilst journey times could be deemed to be reliable if predictable from day to day, or year to year (if as on Wilmslow Road journey times improve in the summer). Journey times do always vary within the day due to factors such as road works, weather conditions, road traffic incidents etc.
 - Zone 1 (Hathersage Rd/Moss Ln East) has been excluded from the analysis as the zone is within the Oxford Road Bus Priority corridor project.
- 2.2.0.6 Chart 3 to 7 analyse journey times for each of the Zones 2 to 5.

2.2.1 Traffic Journey Times through Rusholme

2.2.1.1 Chart 3 shows average monthly journey times (for all modes of travel) through Rusholme before, during and after cycleway construction.

2.2.1.2 During the AM peak, northbound average journey times more than doubled towards the end of the construction period, but have now fallen to be very close the pre-construction journey times. The slight increase in journey times in November 2016 could be due to traffic levels increasing at the end of summertime and/or traffic changes from the on-going Cross City bus priority improvements works to the Oxford Road Corridor from Moss Lane East into the City Centre.

2.2.1.3

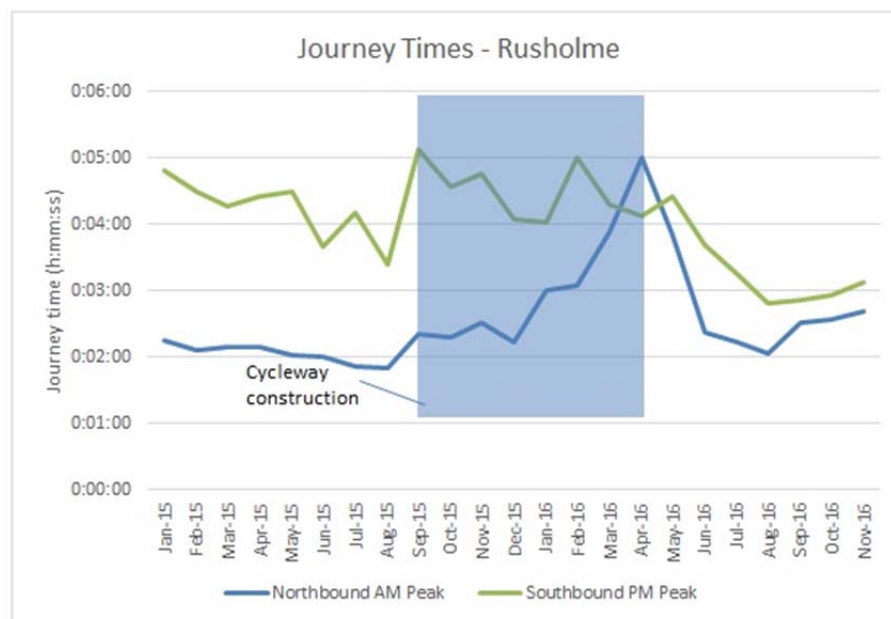


Chart 3: Monthly Average Journey Times Northbound AM Peak and Southbound PM Peak through Rusholme (Wilmslow Rd/Moss Ln East junction <-> Wilmslow Rd/Platt Ln junction)



Photo 9: Before Cycleway Construction



Photo 10: Cycle lane Rusholme Post Completion

2.2.1.4 Southbound journey times for the PM peak have fallen below their pre-construction levels. This reduction in journey time was initially during the summer holiday period (July-Aug) and has continued into the autumn. The impact of the bus priority changes on Oxford Road may also be influencing journey choice along the corridor. Motorised traffic except for buses, taxis and permit holders has been restricted from Oxford Road from September 2016 onwards between the hours of 6am – 9pm daily.

2.2.1.6 Northbound journey time reliability during the AM Peak prior to construction work appears to be consistent. PM Peak journey times, through Rusholme, however remain as variable

post-construction as they were before the cycle scheme was implemented. Post-construction journey time reliability may also have been impacted by the effects of the traffic management along the route due to the construction of the Oxford Road project. Monitoring following the completion of the full corridor scheme will enable a better assessment.

2.2.2 Traffic Journey Times between Rusholme and Fallowfield

2.2.2.1 Chart 4 shows journey times between Fallowfield and Rusholme before, during and after construction following a similar trend to journey times through Rusholme as previously discussed in section 2.2.1.

2.2.2.2

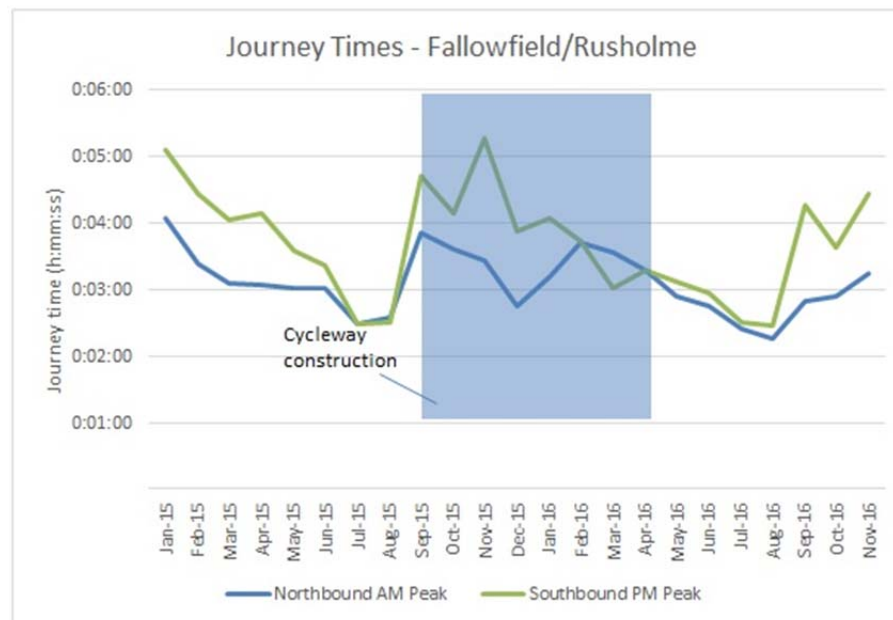


Chart 4: Monthly Average Journey Times
Northbound AM Peak and
Southbound PM Peak
between Rusholme and Fallowfield
(Wilmslow Rd/Platt Ln junction
(Rusholme) <->
Wilmslow Rd/Platt Ln junction
(Fallowfield))



Photo 10: Fallowfield cycle lane Before Project Construction
AM Peak Northbound

2.2.2.3 Average journey times between Fallowfield and Rusholme have reduced to close to pre-construction times for all peak journeys.

During the AM peak journey times are slightly shorter than pre-construction. This part of the cycleway takes cyclists heading northbound from Fallowfield to Rusholme off the carriageway and onto a segregated footway adjacent to Platt Fields park, enabling cyclists to avoid the bus lane in the AM Peak.

As part of the Oxford Road Bus Priority Scheme, city centre bound traffic has also been

diverted with temporary signage onto Moseley Road in Fallowfield. This will have reduced traffic volumes, thereby improving northbound travel journey times.

2.2.2.4 The rise in the PM Peak southbound journey times in September 2016 reflects the increase in post summer holiday traffic due to students returning and the end of the school summer holidays. This part of the route is heavily influenced by increased traffic to Manchester High School for Girls, Manchester Grammar School and Owen's Park.

2.2.2.5 Post-completion journey time reliability does also seem to be following annual journey time patterns indicated during Jan 2015-Aug 2015 with the same reduction in journey times being repeated during 2016.

2.2.3 Traffic Journey Times between Fallowfield and Withington Village

2.2.3.1 Chart 5 below indicates that average journey times between Fallowfield and Withington before, during and after cycleway construction.

2.2.3.2

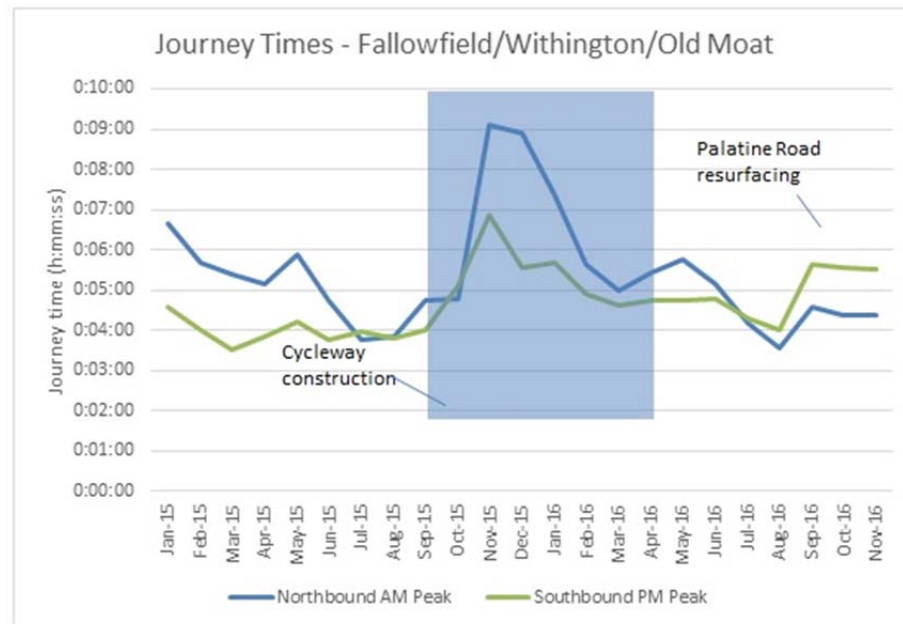


Chart 5: Monthly Average Journey Times Northbound AM Peak Southbound PM Peak between Fallowfield and Withington (Wilmslow Rd/Moseley Rd/Wilbraham Rd junction (Fallowfield) <-> Wilmslow Rd/Palatine Rd/Burton Rd junction (Withington))

2.2.3.3 Average northbound AM peak journey times are indicating a return to times similar to pre-construction journey times.

2.2.3.2 In the PM peak, journey times increased in September/October 2016 coinciding with the carriageway resurfacing of Palatine Road which was taking place during that period.



Photo 11: Wilmslow Road Northbound from Withington to Fallowfield at the junction of Mauldeth Road with Wilmslow Road

2.2.4 Traffic Journey Times between Withington and Didsbury Village

2.2.4.1 Chart 6 below shows monthly average journey times between Withington and Didsbury before, during and after construction of the cycleway.

2.2.4.2 Although the northbound AM peak monthly average journey time has reduced post-construction, the average journey time is still slightly above pre-construction journey times.

2.2.4.3

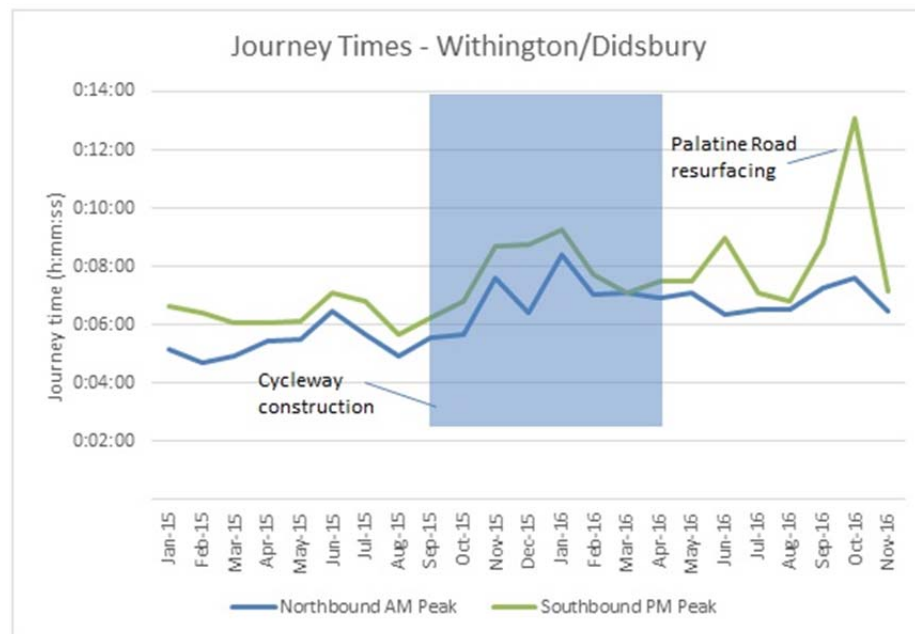


Chart 6: Monthly Average Journey Times
Northbound AM Peak
Southbound PM Peak
Between Withington and Didsbury
(Wilmslow Rd/Palatine Rd/Burton Rd junction <-> Wilmslow Rd/School Ln/Barlow Moor Rd junction))

2.2.4.4 The introduction of the new 'all green' pedestrian phase at the Wilmslow Rd/Palatine Rd/Burton Rd junction with pedestrian crossing facilities provided on all arms may have contributed towards this northbound journey time increase. Adjustment to the signal timings in the AM Peak may improve journey times in response to this increase.

2.2.4.5 The southbound PM peak average journey times have also been less reliable when compared to pre-construction average monthly journey times with average journey times varying in time.

Palatine Road was closed for carriageway resurfacing in October 2016, with traffic diverted on to Wilmslow Road; southbound PM peak journey times increased dramatically. After the carriageway surfacing works were complete, November 2016



Photo 12: Post-completion Wilmslow Road Northbound from Didsbury to Withington on the approach to Fog Lane junction



Photo 13: Wilmslow Road Northbound traffic from Didsbury to Withington on the approach to Fog Lane junction before construction

shows a resulting substantial fall in average journey times in the PM Peak. The substantial delays in October 2016 due to the resurfacing work potentially would have caused a number of motorists to change their route entirely.

- 2.2.4.6 The parking and cycle lanes between Withington Village and Christie Hospital, within this analysis zone, have been highlighted by bus operators as causing localised narrowing of the carriageway. Buses and other large vehicles occasionally have to wait for other vehicles to pass, if the parking encroaches into the carriageway lanes. This may also explain the reason why the journey times remain slightly longer than pre-construction.
- 2.2.4.7 This area of Wilmslow Road corridor was subject to a great deal of discussion with local traders and Christie Hospital about the continued provision of parking for customers and patients/visitors. The implemented design has accommodated these requirements although at minimum dimensions for the cycle lanes, parking bays and carriageway. The minimum dimensions do have the benefit of reducing driving speeds in a busy area close to the shops and Hospital; however the design is a compromise for all transport modes, which would be difficult to resolve without adversely affecting the needs of one user at the expense of another.
- 2.2.4.6 Journey time reliability based on Chart 6 however does appear to be improving for the AM Peak, but more longer term analysis is required to see if the PM peak journey times starts to return towards pre cycleway construction annual journey time patterns.



Photo 14: Post-construction cycle lane opposite Christie Hospital

2.2.5 Overview of Average Journey Times

2.2.5.1

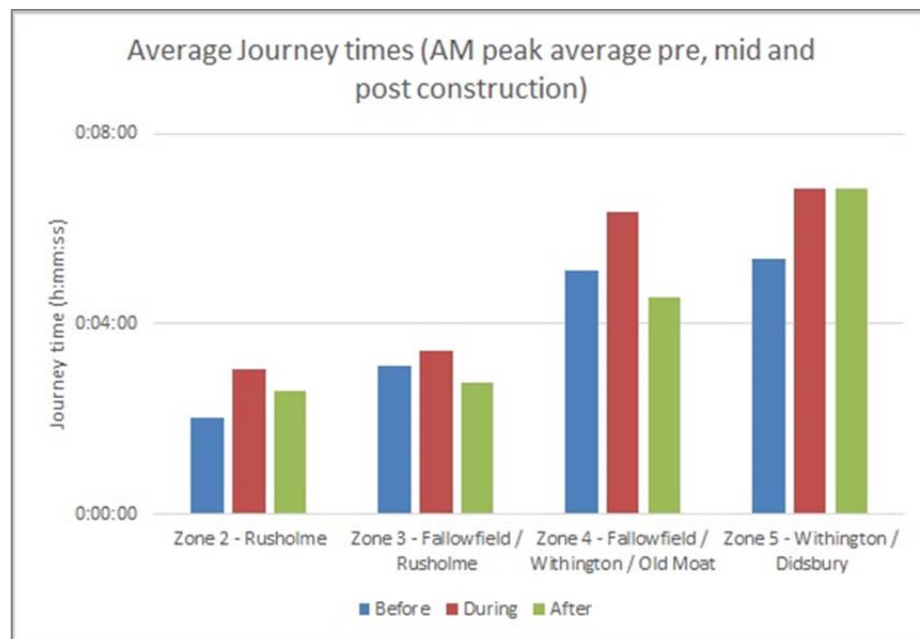


Chart 7: Overall Average AM Peak Journey Times

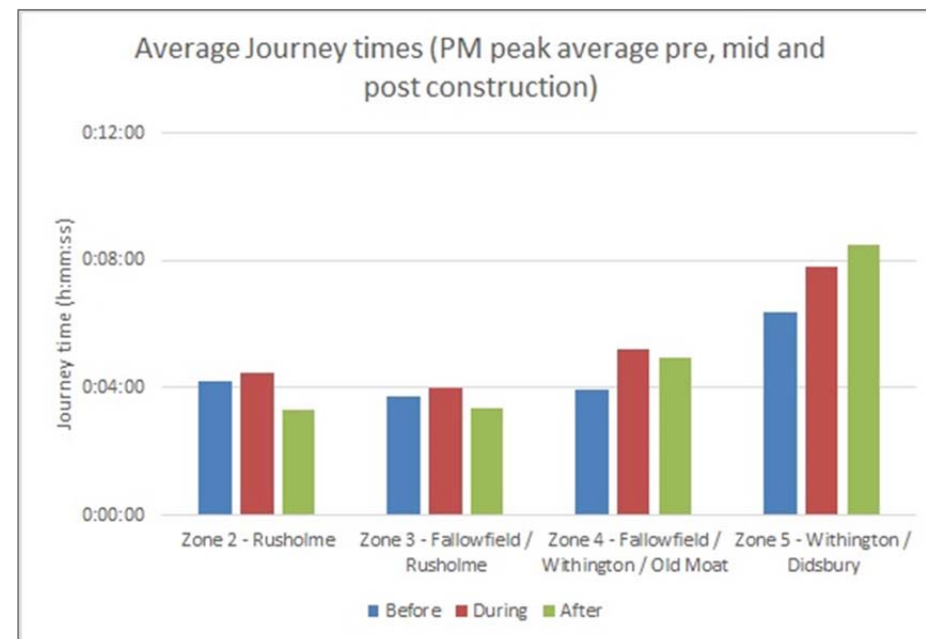


Chart 8: Overall Average PM Peak Journey Times

2.2.5.2 Chart 7 and Chart 8 show the average journey times for the AM and PM peak hours, respectively for each of zones 2 - 5.

The averages are taken over the following periods:

- Before construction (January 2015 - August 2015);
- During construction (September 2015 - April 2016);
- After construction (May 2016 - November 2016);

2.2.5.3 The overall general trend is that average journey times increased during construction across all zones, but have generally fallen again since completion. Some zones actually have slightly lower average journey times for the post-construction period than pre-construction journey times. The notable exception to this trend is zone 5 (Withington/Didsbury), where journey times have been elevated post-construction.

2.2.5.4 However, the more detailed data analysis (Chart 6) suggests that the post-construction average journey times have been effected by the Palatine Road resurfacing which took place during October 2016. During this work traffic lanes on Palatine Road were closed

with the majority of traffic being diverted onto Wilmslow Road. Following the resurfacing works on Palatine Road, journey times have again decreased for this part of the cycleway.

2.2.6 Traffic Journey Speeds

2.2.6.1 The Bluetooth mobile phone/vehicle data supplied by TfGM from June 2014 to November 2016 also provided details of traffic journey speeds. Analysis of the data indicated that the average speed of traffic along the corridor within the zones:

- declined during construction (September 2015 – April 2016);
- increased during the post-completion period (April 2016 – November 2016) towards the speeds recorded before the cycleway was constructed;
- journey speeds remain as variable as the journey times recorded before the scheme was implemented.

Refer to Appendix 2 for details for details of analysed maximum, minimum and average speeds recorded.

2.2.6.2 Stagecoach and First Bus have also reported delays to their services on the Wilmslow Road bus corridor since the implementation of the cycling improvements. Stagecoach has provided data comparing average speeds of their vehicles in May 2015 and May 2016 (a month following completion of the cycleway). The analysis indicated that average speeds have decreased:

- From over 19mph to 11mph from Withington Village to Fallowfield;
- From over 25mph to over 17mph from Fallowfield to Platt Fields Park; and
- From over 20mph to over 7mph through Rusholme.

GIS information provided by Stagecoach indicates a general reduction in the average speed of Service 143 Mon-Fri Inbound AM Peak and Service 142 Mon-Fri Outbound PM Peak.

2.2.6.3 However, the data provided by the bus operators also indicated a reduction in speeds over sections of the route, which have not been subject to any introduction of cycling infrastructure, which indicates there are other influencing factors, for example an increase in the number of buses along the corridor.

2.2.6.4 Additionally, the significant reduction in speed through Rusholme is most likely to be influenced by the on-going work on the Oxford Road section of the route. Data post-



Photo 15: Photo looking northbound just past the junction with Dickenson Road in Rusholme

completion has only been provided for May 2016 during which time Oxford Road between Hathersage Road and Moss Lane East was subject to lane closures due to carriageway resurfacing.

2.3 Road Collision Data

2.3.0.1 Wilmslow Road was identified as one of the cycling routes with the highest cycling casualties within Greater Manchester with Rusholme and Fallowfield District Centres having the highest numbers of reported incidents.

2.3.0.2 The introduction of segregated cycle lanes aimed to not only significantly increase the number of cyclists using the route but to also improve the safety on the route, by introducing physical segregation between vulnerable road users (cyclists) and motorised vehicles, in order to reduce the incidence and severity of recorded road collisions.

2.3.0.3 All highway improvement projects are required to improve road safety for all road users. The Wilmslow Road cycleway commissioned independent road safety audits at stage 1 (preliminary design) and stage 3 (completion of construction) to ensure road safety was at the forefront of design consideration.

2.3.1 All Reported Road Collisions (Jan 2011 to October 2016)

2.3.1.1 Table 5 below provides an overview of the number of casualties per vehicle type on Wilmslow Road corridor.

2.3.1.2 Overall, on Wilmslow Road corridor, the number of casualties has been declining in number and severity with pedal cyclists and car occupants remaining the groups most vulnerable to injury.

2.3.1.2

Table 5: Casualty Severity by Road User Type for all road collisions on Wilmslow Road Corridor (Rusholme<->Didsbury) 2011 to October 2016) reported to GMP and analysed within Greater Manchester Accident Investigation (GMAXI) System

Number of Casualties		Year					
Vehicle Type	Severity	2011	2012	2013	2014	2015	2016*
Pedal cycle	Fatal				1		
Pedal cycle	Serious	3		3	5	1	2
Pedal cycle	Slight	29	9	14	11	1	9
Motor cycle <=50cc	Slight	1		1			
Motor cycle 51-125cc	Serious				1		
Motor cycle 51-125cc	Slight		1		2	2	
Motor cycle 126-500cc	Serious						1
Motor cycle >500cc	Serious	1					
Motor cycle >500cc	Slight		1				
Goods vehicle under 3.5t	Serious		1				
Goods vehicle under 3.5t	Slight	1	1		1		
Goods vehicle 3.5-7.5t	Slight	1		3			
Bus or coach	Slight	17	1	2	5	2	1
Taxi/Private hire car	Serious	1					
Taxi/Private hire car	Slight	4	3		5	1	
Car	Serious	3	1	1			
Car	Slight	21	21	28	14	10	2
*2016 dataset excludes Nov & Dec 2016							

2.3.1.4

There is no evidence from the data analysed that the casualty rate according to vehicle type, has increased since the cycleway was completed in April 2016, although data at the time analysis excluded November and December 2016). Longer term data analysis 36 and 60 months after completion will provide more certainty.

2.3.1.5

Further analysis of more vulnerable road users (pedal cyclists and pedestrians) is provided below.

2.3.2 Reported Incidents Involving Pedal Cycles (Jan 2011 to October 2016)

2.3.2.1

Table 6: Road Collisions Involving Pedal Cycles on Wilmslow Road Corridor (Rusholme<->Didsbury) 2011 to October 2016 reported to GMP analysed from Greater Manchester Accident Investigation (GMAXI) system

Month	2011	2012	2013	2014	2015	Average Last 3 Years	5 Years	2016	% Change Last 3 Years	5 Years
January	1	0	1	0	0	0.33	0.40	1	200.00	150.00
February	3	0	2	2	0	1.33	1.40	0	-100.00	-100.00
March	5	1	1	2	0	1.00	1.80	0	-100.00	-100.00
April	1	1	0	1	1	0.67	0.80	1	50.00	25.00
May	3	0	1	2	0	1.00	1.20	2	100.00	66.67
June	1	2	1	2	0	1.00	1.20	2	100.00	66.67
July	4	0	3	1	0	1.33	1.60	0	-100.00	-100.00
August	2	2	1	2	0	1.00	1.40	0	-100.00	-100.00
September	3	2	2	1	0	1.00	1.60	5	400.00	212.50
October	4	0	1	3	1	1.67	1.80	0	-100.00	-100.00
November	3	0	1	1	0	0.67	1.00	0	-100.00	-100.00
December	2	1	3	0	0	1.00	1.20	0	-100.00	-100.00
Total	32	9	17	17	2	12.00	15.40	11	-8.33	-28.57

Construction Period

Dataset unavailable for
Nov & Dec 2016

() indicates no significant change



Photo 16: Photo showing Rusholme prior to cycleway construction

2.3.2.2 The data shows that there was little overall significant change in the number of road collisions involving pedal cycles on Wilmslow Road from January 2011 until October 2016. The number of road collisions in September 2016 involving pedal cycles does show an increase in 'slight' casualties which may be linked to the student population returning to the city and getting familiar with the new road layout and cycling infrastructure. The change requires on-going monitoring over a longer time period of 3 to 5 years post scheme completion, which is standard for all highway improvement projects.

2.3.2.3 The data for 2015 is also lower than previous years as many cyclists may have taken alternative routes during the construction of the scheme. (During construction the road carriageway widths were reduced, limiting the road space available for cycling.)

Weather can have an influence on the number of cyclists; "As temperatures rise, more cyclists tend to use the roads." (RoSPA, 2015). As 2015, in comparison with 2013 and 2014 was not as warm (especially during months where cycling is popular), the number of collisions involving pedal cyclists may also be reflective of a decrease in cyclists due to the weather.

2.3.2.4

Table 7: Casualty Severity of Road Collisions Involving Pedal Cycles on Wilmslow Road Corridor (Rusholme<->Didsbury) 2011 to October 2016) reported to GMP and analysed within Greater Manchester Accident Investigation (GMAXI) System

Severity	2011	2012	2013	2014	2015	Average Last 3 Years	5 Years	2016	% Change Last 3 Years	5 Years
Accidents										
Fatal	0	0	0	1	0	0.33	0.20	0	-100.00)	-100.00)
Serious	3	0	3	5	1	3.00	2.40	2	-33.33)	-16.67)
Slight	29	9	14	11	1	8.67	12.80	9	3.85)	-29.69)
Total Accidents	32	9	17	17	2	12.00	15.40	11	-8.33)	-28.57)
Casualties										
Fatal	0	0	0	1	0	0.33	0.20	0	-100.00)	-100.00)
Serious	3	0	3	5	1	3.00	2.40	2	-33.33)	-16.67)
Slight	29	9	14	11	1	8.67	12.80	9	3.85)	-29.69)
Total Casualties	32	9	17	17	2	12.00	15.40	11	-8.33)	-28.57)
Severity Index	0.094	0.000	0.176	0.353	0.500	0.278	0.169	0.182	-34.55)	7.69)

() indicates no significant change

analysis excludes dataset for
Nov & Dec 2016
data includes
April 2015 - March 2016
construction period

$$\text{Severity Index} = \frac{\text{Number of fatal and serious casualties}}{\text{Total number of casualties}}$$

$$\text{e.g. Severity Index 2016} = \frac{2}{11} = 0.182$$



Photo 17: Photo showing Rusholme after construction of cycleway

2.3.2.6

The cycle count carried out during October 2016 highlight that the number of cyclists on the route has doubled since implementation of the segregated cycleway. With an increase in the number of cyclists, the number of road collisions involving cyclists might also be expected to increase, which has not happened.

2.3.2.7

If the number of cyclists is considered then the data potentially indicates that the casualty rate (measured as the number of casualties relative to the number of cyclists using the route) has significantly reduced since the implementation of the scheme. However, this statement cannot be validated as the cyclist count data is not available for 2011-14 to provide a direct comparison. A minimum full 36 month post scheme completion period, of monitoring of road collision data, is also required.

2.3.2.8

Table 8 provides more detail of the types of road collisions involving pedal cycles which were recorded by Greater Manchester Police along the Wilmslow Road corridor from January 2011 until October 2016. Prior to the construction of the segregated cycleway

the following type of road collisions were most prevalent:

- Vehicles colliding with pedal cycles when turning right and left into side roads and at signalised junctions;
- Vehicles 'side swiping' pedal cycles when moving alongside, overtaking, starting off or parking;
- Vehicle doors of parked vehicles opening into the path of oncoming cyclists; and
- U-turn manoeuvres across the carriageway.

2.3.2.9

Table 8: Types of Road Collision involving Cyclists reported to GMP taking place on Wilmslow Road Corridor from Jan 2011-Oct 2016

Description of type of road collision	2011	2012	2013	2014	2015	2016*
Vehicle Right turn into side road/to park	7	2	1	3		3
Vehicle Left turn into side road/to park	4	1	2	4		3
Pedal cycle Right turn into side road	1		1			
Vehicle Right turn out of side road	1		2		1	2
Vehicle Left turn out of side road	1			1		1
Vehicle Right turn at signalised junction	3	2	3	1		1
Vehicle Left turn at signalised junction	3	1	1	1	1	
Side swipes where vehicles cutting in, undertaking, pulling out or being too close to pedal cycle during overtaking	5	2	4	4		1
Parked vehicle door openings by drivers or passengers	3	2	2	3		
Bus Stop pulls in/pulls out at bus stop			1			
Vehicle u-turns in carriageway	3					
Vehicle rear shunts pedal cycle	1					
Total	32	10	17	17	2	11
*analysis excludes data for Nov & Dec 2016						

2.3.2.10

It is too soon following completion of the scheme to infer significant conclusions regarding types of collisions. However, some interesting initial trends can be noted from the above which warrant further investigations. Notably, it would appear that:

- The number of incidents involving side swipes and vehicle doors opening has appeared to have reduced following the scheme completions;
- The number of incidents at side roads remains comparable with previous years. However, as part of the cycleway improvements, the turning radii were reduced or tightened on the majority of minor side roads within the cycleway to reduce vehicle turning speed to attempt to reduce the severity of the road collisions taking place. The 2016 data indicates that where collisions have taken place on minor side

roads the injuries sustained have been slight when compared to previous years.

- 2.3.2.11 It is perhaps worth mentioning that side road incidents involving cyclists is a common occurrence throughout the UK, prompting British Cycling to launch a campaign 'Turning the Corner' to lobby for a change to the Highway Code ensuring priority rules are clearer for all road users when undertaking such turning movements.
- 2.3.2.12 In Appendix 3 there is more detailed analysis provided of the road collisions involving pedal cyclists since completion of the project in April 2016 (excluding November and December 2016).
- 2.3.2.13 Further road safety measures have also been identified through comments received from various user groups and an independent Road Safety Audit.
- 2.3.2.14 These measures include:
- Reducing the width of central islands at pinch points to make passing easier, particularly for buses (e.g. Rusholme).
 - Resurfacing the cycle lane where carriageway conditions are poor and within the scope of the project.
 - Improving the clarity of shared and segregated footway in some locations to improve pedestrian-cyclist awareness.
 - Installing 'share with care' and warning signs to promote safe pedestrian-cyclist awareness.

More detail is available within Appendix 8 of the report.

2.3.3 Reported Incidents Involving Pedestrians (Jan 2011 to October 2016)

- 2.3.3.1 From January 2011 until October 2016 there have been no road collisions between pedestrians and pedal cycles reported to Greater Manchester Police, with the majority of reported road collisions involving pedestrians on the Wilmslow Road corridor involving cars.

2.3.3.2

Table 9: Pedestrian Casualty Severity by Road User Type for all road collisions on Wilmslow Road Corridor (Rusholme<->Didsbury) 2011 to October 2016) reported to GMP and analysed within Greater Manchester Accident Investigation (GMAXI) System

Pedestrian Casualties		Years					
Severity	Vehicle Type	2011	2012	2013	2014	2015	2016*
Serious	Motor cycle 51-125cc				1		
Serious	Goods vehicle under 3.5t		1				
Slight	Goods vehicle 3.5-7.5t	1					
Slight	Bus or coach	4			1	2	1
Slight	Taxi/Private hire car	1	3				
Slight	Car	4	6	7	4	2	2
Serious	Car	3		1			
*2016 dataset excludes Nov & Dec 2016							

2.3.3.3

Despite the above analysis, local Traders within Rusholme have reported concern over pedestrian vulnerability to potential collision with cyclists after witnessing incidents and conflicts. Further investigation is required to assess why these incidents (as describe in section 3.2 of this report) have not been recorded by GMP especially if casualties have been taken to Hospital.

3.0 Project Review of Behavioural Data

3.1 Review of CCTV Footage

3.1.0.1

Behavioural data has been obtained by reviewing available recorded CCTV footage along the corridor from existing camera locations. The detailed observational analysis provides 'counts' of the number of interactions at each location (refer to Appendix 4 for more detail). The assessment and review of the available CCTV footage is:

- subjective and provides an indication of cyclist, motorist and pedestrian behaviour along the cycleway in June 2016 at specific times of day;
- limited to existing cameras located in Rusholme (Thurloe St, Dagenham Road and Dickenson Rd/Platt Lane Junction) and Fallowfield (Egerton Road Junction);
- analysed independently with behaviours described according to the each site;

3.1.0.2

The CCTV analysis showed that the majority of cyclists, motorists and pedestrians are using the new highway infrastructure to their benefit with more detailed findings

3.1.1 Junction of Egerton Road/Wilmslow Road, Fallowfield

- 3.1.1.1
 - The 'early start' for cyclists at the traffic signals is popular and well used, although it was noted that a couple of vehicles are moving off on the signal for cyclists. The larger advanced stop lines (ASLs) are also proving invaluable to enable cyclists to navigate this busy junction safely.
- 3.1.1.2
 - A few cyclists were seen on the shared footway areas adjacent to the junction which enable cyclists to access the toucan crossing. The toucan crossing enables cyclists to join or cross the road to access local shops, and to turn right down Egerton Road, which is a banned vehicular movement at the junction.
- 3.1.1.3
 - At the southbound bus stop cycle by-pass, adjacent to the Sainsbury's supermarket, pedestrians are waiting within the by-pass cycle lane with 'near-miss' incidents viewable on the camera footage. The CCTV viewer did not note whether any of the cyclists were travelling at speeds considered to be excessive given the number of pedestrians at the bus stops. From the numbers of cyclists utilising the by-pass compared to cyclists on the carriageway, it is evident that cyclists are also carefully choosing whether to utilise the by-pass or remain on the carriageway. The route choice could be being made with regard to the number of pedestrians in the vicinity of the bus stop, as well as if any buses are waiting to service the stop.

3.1.2 View from Dickenson Road/Platt Lane Junction, Rusholme of:

3.1.2.1 Shared northbound cycleway adjacent to Platt Fields Park

- 3.1.2.1.1
 - Approximately a quarter of the cyclists heading northbound are choosing not to use the shared footway/cycleway northbound adjacent to Platt Fields Park and cycling in the carriageway bus lane. The decision by cyclists to remain on the carriageway could be due to the bus lane usually being clear of buses and therefore perceived to be faster as it is straighter route with a more even surface. (Along this stretch of the cycleway there are a number of mature trees, items of street furniture and park entrances with tactile paving which need to be negotiated when cycling).
- 3.1.2.1.2
 - This part of the cycleway is also subject to leaf fall in the Autumn which masks kerb edges.
- 3.1.2.1.3
 - On the northbound shared cycle lane the occasional cyclist heading southbound was also observed, although further monitoring is required to see if these cyclists



Photo 18: Camera 123 Egerton Road Fallowfield looking northbound Cyclist in conflict with vehicle turning left and pedestrians within cycle lane



Photo 19: Camera 97 looking southbound adjacent to Platt Fields Park showing cyclist travelling in wrong direction on shared cycleway

are on the cycle lane seeking routes into Platt Fields Park towards Old Moat and Fallowfield.

3.1.2.2 The southbound cycleway with 'light' segregation looking towards Fallowfield

- 3.1.2.2.1 • The cycle lane with 'light' segregation going southbound from Platt Lane towards Fallowfield appears to work well as a 'demarcation line'; although the light segregation is not clearly visible to vehicles including the many buses on the route. There is evidence of conflict with buses and vehicles from the observed damage sustained to the 'orcas' and from the CCTV footage.

3.1.2.3 Dickenson Road Junction looking north towards Rusholme

- 3.1.2.3.1 • The longer 7.5m advanced stop line (ASL) is well used by cyclists and also enables cyclists to get ahead when turning right into Platt Lane.
- The segregation provides safe access into the ASL preventing conflict with parked vehicles and vehicles turning left into Dickenson Road.

3.1.2.4 View from Junction with Thurloe Street, Rusholme

- 3.1.2.4.1 • A few buses were recorded as being unable to overtake buses waiting at the bus stop adjacent to the job centre during both the am and pm CCTV review periods.
- The majority of cyclists heading northbound were recorded as using the bus stop cycle by-pass avoiding the bus stop and carriageway.
- A very few cyclists were considered to be cycling "at speed" when travelling southbound during the pm peak period at the same time when a few pedestrians were also recorded as walking within the southbound cycle lane.

3.2 Incidents involving Pedestrians and Cycles within Rusholme

- 3.2.1 At the end of the construction period as the safety barriers were being removed, there were a number of reports made via the Rusholme Neighbourhood Team. The reports were made by pedestrians and local traders and appear to be reflective of some of the behavioural issues identified during the review of the CCTV footage, predominantly around conflict between pedestrians and cyclists through the busy district centre, with



Photo 20: Camera 96 Looking Northbound across Dickenson Rd Junction showing cyclists putting the new 7.5m Advanced Stop Line to good use (irrespective of them all bar one being over the line)



Photo 21: Camera 55 by Thurloe Street showing cyclist heading southbound through Rusholme and northbound bus stop by-pass adjacent to the Job Centre

3.2.2 The reports are summarised in Table 10 with the definitions of the interactions being taken from the Oxford Road Trial Bus Stop Evaluation Report, 'trip' was added as this was the most common complaint to MCC from pedestrians in respect of footways irrespective of location. In terms of definitions (TfGM, 2016) used, the types of incidents have been described as:

- "minor" – cyclist or pedestrian has had to make minor adjustments to their speed or direction to avoid a possible collision;
- "major" – cyclist has had to brake heavily or pedestrian has had to move out of the way rapidly to avoid a possible collision; or,
- "contact" – when there has been a collision of some sort i.e. between cyclist/cyclist, pedestrian/pedestrian, pedestrian/other vehicle or cyclist/other vehicle.
- "trip" – when a pedestrian trips or falls onto cycleway without the involvement of a cyclist;

3.2.3 Table 10: Data Provided from Reports to the local Neighbourhood Team for Rusholme

Month	Time Period	Types of Incident reported to Rusholme Neighbourhood Office between Cyclists and Pedestrian			
		trip	minor	major	contact
Feb-16	Construction Period				1
Mar-16	Completion of Construction & Opening of Cycleway	1		1	4
Apr-16	Initial Cycleway Operational Period	4		2	7

3.2.4 Two of the incidents involving physical contact resulted in ambulance attendance and one incident was attended by the Police. Several reports included incidents of verbal abuse involving cyclists and pedestrians.

3.2.5 With the completion of the works, sections of the cycle lanes were opened in managed stages, as the protective barriers were removed during March 2016 with all cycle lanes fully opened in April 2016. However the above incidents suggest that traffic management at the time of opening is not enough and temporary signage with public awareness needs

- 3.2.6 Since completion, the local Neighbourhood Team have not received any more direct reports of incidents between cyclists and pedestrians. This does not mean that no further incidents have taken place, but perhaps awareness of the cycleway has increased.

4.0 **Summary of Route User Intercept Perception Survey**

- 4.1 A survey was carried out by Transport for Greater Manchester during October 2016 to obtain feedback on the implementation of the Wilmslow Road Cycleway. 2,555 questionnaires/flyers were distributed over a three day survey period with 366 (14%) people responding either by returning the paper questionnaire or completing the online survey.

- 4.2 The leaflets were distributed/interviews conducted at the following locations:

- Wilmslow Road - Moss Lane East/Rusholme Place junction (Rusholme);
- Wilmslow Road – Sherwood Street/Ladybarn Road junction (Fallowfield);
- Lapwing Lane/West Didsbury Metrolink (off Wilmslow Road);

- 4.3 The full after survey report is included at Appendix 6.

- 4.4 The respondents travel along Wilmslow Road on a regular basis for a variety of reasons (commute, leisure, shopping etc.).

- 4.5 Almost 50% of the respondents were cyclists, the majority of whom stated that they use the new facilities with only 3% replying that they continue to cycle in the road. 58% of the cyclists who responded used the route previously, 36% have changed their route to use the new infrastructure and 7% indicated that they have rerouted to avoid (all or part of) the cycleway. Almost half the cyclists who responded said that the cycleway had encouraged them to cycle more.

- 4.6 Of the respondents to the questionnaire who do not cycle, 63% of bus passengers, 48% of car drivers and 56% of pedestrians were continuing to travel on Wilmslow Road following the opening of the cycleway.

- 4.7 Cyclist respondents rated the following as excellent or good:

- Early green lights for cyclists excellent 56%; good 29%;
- Kerb segregated cycle lanes excellent 45%; good 37%;

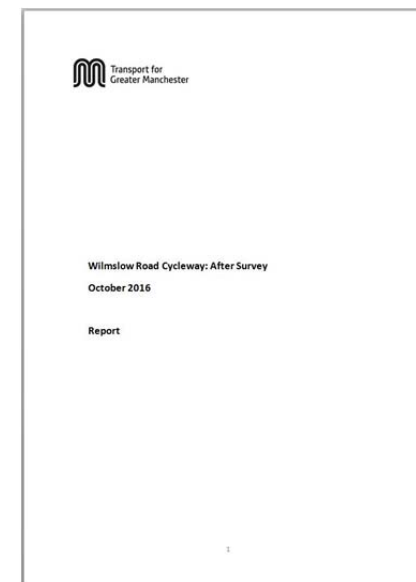


Image 2: Route User Perception Survey Report in Appendix 6



Photo 22: Photo courtesy of TfGM showing family cycling along Wilmslow Road between Fallowfield and Withington southbound

- Cycle lanes to the rear of bus stops excellent 36%; good 30%;
- Advanced cycle stop lines for cyclists excellent 35%; good 37%;
- Cycle lanes behind parking bays excellent 27%; good 35%;

- 4.8 Cyclists responded overwhelmingly positively to all of the physical features; kerb segregation and early green lights scoring the highest. Shared use pavements and shared pedestrian/cycle (Toucan) crossings ratings were the lowest.
- 4.9 Responses from bus users were more evenly balanced between respondents who perceived the improvements to be beneficial and those who thought the improvements do not assist their choice of travel. The bus priority improvements on the Oxford Road part of the corridor were being constructed during the survey which may have influenced the opinion of bus passengers. Bus passengers will see improvements to their journeys when the Oxford Road bus priority scheme is completed in Spring 2017.
- 4.10 Motorist and pedestrian responses to the improvements were the most negative and highlight the different requirements motorists and pedestrians have of the urban environment to cyclists. Over 40% of pedestrians and motorists stated that the kerb segregation, cycle lanes behind parking bays and bus stops were either poor or very poor.
- 4.11 Motorists when responding would be aware of the delays on the Wilmslow Road corridor during the construction of the cycleway, plus the changes to road layout and traffic regulations at the junction with Hathersage Road which require motorists, HGVs and motorbikes to leave the Oxford/Wilmslow Road corridor and enter the city centre via Upper Brook Street. At the time the questionnaire was being distributed the southbound closure of Palatine Road was in operation to facilitate the resurfacing.
- 4.12 From the small number of respondents who stated their mode of travel as walking, the overall consensus from pedestrians was negative. The data suggests that the introduction of segregated cycle ways has not benefitted pedestrians although along the route pedestrian crossings were introduced and upgraded.

5.0 Issues Raised Post Completion

- 5.0.1 An overview of the issues, concerns and comments from Local Councillors, residents, neighbourhood groups, businesses and bus operators is included below. The individual responses received are within Appendix 7. The comments received provide an opinion



Photo 23: Photo showing early Green Start Signal at junction with Egerton Road

and overview of the perception of the Wilmslow Road cycle way post-completion;

- 5.0.2 The comments are addressed and responded to within the Report Recommendations (section 8.0).

5.1 Emergency Services and Statutory Authorities

- 5.1.1 A post-completion design review was held and comments were invited, but no comments or issues were received regarding the completed cycleway.

5.2 Bus Operators

- 5.2.1 The Transport for Greater Manchester Senior Bus Partnership including Stagecoach and First Manchester submitted a design issues log highlighting issues for buses at various locations on the Wilmslow Road corridor since the introduction of the cycling infrastructure. (This list has been reviewed and where intervention is required has been incorporated into a list of further measures summarised in Appendix 8).

- 5.2.2 Bus operators concerns relate to:

- Reduced carriageway widths creating pinch points, Rusholme District Centre was given as an example;
- Narrow parking bays, which again create pinch points should there be a large vehicle parked or examples of poor parking when the vehicle encroaches into the running lane, of particular concern was the area close to the Christie Hospital where this often results in single lane running.
- Single lane approaches to junctions with no room to pass a right turning vehicle if there is a driver waiting to turn right because of the kerb segregation on the left of the running lane. Fog Lane/Wilmslow Road and Mauldeth Road/Wilmslow Road are of particular concern.

- 5.2.3 A number of other points were made in relation to parking enforcement and construction 'snagging' issues which are outside of the scope of this report.

- 5.2.4 The bus operating companies have also expressed concern that they have been experiencing delays to services operating along Wilmslow Road. These concerns were reported and responded to in sections 2.2 and 2.3 of the report.

- 5.2.5 Both Stagecoach and First Bus have stated that they will continue to work with MCC and TfGM to help resolve any issues and welcome any further meetings or site visits to



Photo 24: Photo showing bus stop waiting area adjacent to new cycle lane in Rusholme



Photo 25:
Photo showing bus stop waiting area in Rusholme prior to construction of cycle way

5.3 **Comments on Social Media**

5.3.1 There are many comments, web pages and videos from cyclists and non-cyclists regarding the Wilmslow Road cycleway on social media. The content tends to be dependent on the transport mode choice of the person commenting, and has provided an on-going dialogue regarding the corridor during and post construction. Conflict with pedestrians and illegal/inconsiderate parking within cycle lanes are highlighted as on-going concerns.

Comment is predominantly from experienced cyclists and commuters, and it is more difficult to find viewpoints provided from those considering cycling or commuting by bicycle for the first time along the route.

However, for potential new cyclists there are also a number of web sites advertising regular guided cycle rides and led commuter cycles who list the Wilmslow Road corridor as part of their route.



Photo 26: Photo courtesy of TfGM showing cyclists heading northbound from Withington towards Fallowfield

5.4 **Interest, Research and Review by Other Authorities and Organisations**

5.4.1 As part of the review of the completed cycle route works along Wilmslow Road, TfGM have hosted site visits to the scheme for key officers from all the other CCAG cities namely Leeds/Bradford, Birmingham, Newcastle/Gateshead, Norwich, Bristol, Oxford and Cambridge, as well as officers from other participating Greater Manchester authorities. Other visits have taken place with officers from Nottingham and Transport for London and the Directors of both Sustrans and Cycling UK. In addition the route has been visited by the All Party Parliamentary Cycling Group.

Presentations about the route have also been made to transport planners from across the EU (resolve project), a paper has been submitted for Transport Practitioners Meeting in Nottingham – June 2017 and a paper is being prepared for the Cycle City Active City conference in Bradford in May 2017.

5.5 **Rusholme Neighbourhood Groups & Traders**

5.5.1 Initial concerns and issues raised during the construction of the cycleway through Rusholme have lessened since the completion of the cycleway. However concerns remain over pedestrians within the cycle lanes either crossing over to access parked

vehicles or walking within the cycle lane where the footway width is reduced.

5.6 Didsbury Civic Society

- 5.6.1 The Society provided a selection of viewpoints which are not representative of the society as a whole but provide an overview of different responses to the cycling improvements from individuals within the society's membership. The segregated cycle lanes overall have mixed 'approval' by society members, with concerns remaining about the segregated cycle lanes making it more difficult for pedestrians to cross (although it is recognised that alternatively this may encourage more pedestrians to use designated crossings) and that the narrower road widths seemed to be encouraging motorists to reduce their speed.

5.7 Comments from Local Councillors

- 5.7.1 Local Councillors from Rusholme, Fallowfield, Old Moat, Withington, Didsbury East and Didsbury West along the Wilmslow cycleway route were invited to provide comments as part of the monitoring and evaluation of the route. Councillor Paul and Councillor Leech responded (refer to Appendix 7 for more detail).
- 5.7.2 Councillor Paul provided extensive feedback on the successes and issues relating to the cycleway with recommendations for improvements and future cycle ways, which have been considered and included in a number of the recommendations as the outcome of this initial period of evaluation and monitoring.
- 5.7.3 Councillor Leech expressed concern over the consultation process as constituents were not aware of the scale of the infrastructure changes until work commenced. He also raised concern about reduction in road widths to accommodate cycle lanes widths and the operation of bus-stops where no by-passes are present.

6.0 Post completion Design Reviews

6.1 Road Safety Audit

6.1.1 A road safety audit is an overview and evaluation of a highway improvement project which is commissioned at different project stages to identify road safety issues and suggest remediation measures which will eliminate, reduce or mitigate any outstanding design issues. It is standard practice to undertake Road Safety Audits on major schemes.

6.1.2 Audits are carried out by an independent highway specialist who is trained and has experience in road collision investigation and road safety engineering.

6.1.3 The Stage 3 Wilmslow Road cycleway road safety audit was commissioned upon completion of the construction work. The audit lists elements along the route considered to be a safety concern and assesses them according to priority.

6.1.4 The response to the safety audit is contained within Appendix 8 of this report which also includes those issues raised by bus operators as a number of their concerns were also identified by the Auditors.

6.1.5 It should be noted that many of the issues identified by the Stage 3 Safety Audit were 'snagging' items and dealt with when the scheme received its final post-completion inspection.

6.1.6 The recommendations of the Road Safety Audit were:

- Improved warning signage for cyclists in areas where pedestrians cross cycle tracks;
- Areas of resurfacing to improve ride quality and drainage;
- Improved consistency of green coloured surfacing across side road crossings;
- Widening of carriageway widths at identified pinch points to safely accommodate larger vehicles;
- Completion of missing sections of cycle lane provision (see section 6.1.7);
- Increased and improved cycle markings and road markings; and
- Modifications to tactile paving to ensure compliance with DDA regulations.

6.1.7 A section of the cycleway through Withington District Centre did not include the addition of new cycling infrastructure. This was highlighted in the Road Safety Audit and also



Photo 27: Photo showing cycle lane approach to junction with Egerton Road Fallowfield

commented upon by Councillor Paul. The scheme intended to provide a shared surface through this very busy, but also extremely constrained section of the route. Existing footways within Withington are too narrow to safely accommodate shared pedestrian and cyclist use and there is inadequate space to introduce segregation within the carriageway. It was proposed to instead provide a distinctive surface texture or colour, with large 20mph roundels and cycling signage to encourage cyclists to take primary position to provide an alternative, safer and more pleasant environment for cycling.

- 6.1.8 Unfortunately, this ambition could not be realised as there was only sufficient funding to implement the most basic of improvements, through some improved signage and carriageway markings. Alternative funding is being sought in order to complete the scheme and fully address the findings of the Stage 3 Road Safety Audit.

6.2 Disability Design Reference Group Review

- 6.2.1 Breakthrough UK Disability Design Reference Group in partnership with Transport for Greater Manchester will be reviewing two changes to the road infrastructure introduced within Rusholme Village in January 2017:

- The northbound bus stop by-pass between Greater Western St and Moss Ln East; with the disabled parking bays adjacent to the bus-stop;
- The pedestrian road crossing near Walmer Street where the cycle lane goes behind the crossing;

The results of this review will be added to Appendix 9 and any additional recommendations resulting will be included in a finalised version of this report.

6.3 Review of Features Implemented

- 6.3.0.1 The Wilmslow Road Cycleway design followed the recommendations of the Greater Manchester (GM) Cycling Design Guidance version 2.1 published March 2014. The guidance was developed following discussion and a wide consultation process held by Transport for Greater Manchester.

Transport for Greater Manchester is in the process of carrying out a review of the Design Guidance during 2017, with a view to publishing a revised edition later in 2017. The Wilmslow Road post-implementation review will form an important input to the review of the Design Guidance and enable lessons to be learnt from Wilmslow Road so that these can benefit future cycling infrastructure schemes implemented across Greater

6.3.1 Segregated Cycle Lane Widths

6.3.1.1 UK national design guides for cycle lanes (Local Transport Note LTN 02/08) states:

- 1.2m absolute minimum for short distances; 1.5 metres for 30mph roads; 2 metres for 40mph.

The GM cycling guidance states:

- Cycle lanes without segregation: 1.5m absolute minimum for 100 metres only; with a 1.75m desirable minimum width; 2m target width.
- Cycle lanes with segregation: 1.5m absolute minimum width for 100 metres only; 2.0m desirable minimum width; 2.5m target width. These widths exclude the segregation island.

6.3.1.2 The intention of the wider GM desirable minimum cycle lane widths of 2.0m, in the guidance, is to ensure cyclists can overtake where the cycle lane is segregated from the carriageway.

6.3.1.3 Supplementary to these width standards, existing MCC street cleansing vehicles provided a further design constraint with a minimum segregated cycle lane width of 1.65m between kerbs (although the sweepers can be turned inwards for short lengths of narrower segregated cycle lanes).

6.3.1.4 The minimum GM standards and street cleansing constraints defined the segregated cycle lane widths, which in turn influenced the carriageway lane and footway widths. The carriageway and footway widths available, where a segregated cycle lane has been introduced, can be seen in some locations to be to the detriment of other road users, especially where space is already constrained.

6.3.1.5 Now that the segregated cycleway is operational it can also be observed that:

- the recommended absolute minimum widths have had to be used where adopted space is at a premium without to the detriment of the cyclists using them;
- the desirable minimum width of 2.0m wider cycle lane plus segregation island does not necessarily allow cyclists to overtake, if a slower moving cyclist is riding in the middle of the cycle lane;



Photo 28: Segregated Cycle Lane,
Footway & Parking, Rusholme

6.3.2 Carriageway and Footway Widths

- 6.3.2.1 The desirable minimum width of carriageway lanes along Wilmslow Road followed recommended GM guidance and was established at 3.25 metres with an absolute minimum width of 3.0 metres.
- 6.3.2.2 Now the scheme is operational and due to the volume of buses using the route, this absolute minimum width of 3.0m has been found to be too narrow. Bus operators have identified this as a particular concern.
- 6.3.2.3 Further works are being implemented to widen the carriageway at certain pinch points along the route.
- 6.3.2.4 A similar situation arose in relation to footway widths post completion. Guidance recommends a desirable minimum width of 2.0 metres with an absolute minimum of 1.8 metres. This absolute minimum width of 1.8 metres has been applied at very constrained locations in order to 'squeeze' in as much of the intended infrastructure in as possible whilst maintaining cycle lane widths, for example in parts of Rusholme District Centre.
- 6.3.2.5 Whilst applied with best intentions and working within the guidance available, this absolute footway minimum width is not necessarily applicable in areas of high footfall, particularly in an area like Rusholme where there is a lot of activity along the frontages of the businesses and where footways are already constrained.
- 6.3.2.6 Whilst direct complaints from traders in Rusholme have decreased since the cycle lanes have opened, it is evident from the CCTV footage and anecdotal evidence via social media that pedestrians are regularly spilling over and walking in the cycle lanes. The application of absolute minimum standards for footway widths and the introduction of segregated cycle lanes adjacent to footways behind parking bays therefore requires more consideration.
- 6.3.2.7 Additionally whilst this type of segregation was a fundamental aim of the scheme to remove the risk to cyclists of door openings, it has created an environment affecting a pedestrian's perspective of how to navigate Rusholme safely, especially where previously pedestrians may have been restricted from walking in the road by parked vehicles.
- 6.3.2.8 A cyclist's ability to stop over very short distances to accommodate pedestrian movements, has not necessarily reduced the concerns of pedestrians and serves to highlight the need to consider the minimum widths provided. Referring to the previous section of this report, the widths of cycle lanes provided through busy pedestrian areas should also be considered and how they could be a method of reducing cyclists' speed



Photo 29: Buses heading southbound through Rusholme past a traffic island which stops vehicles turning right into a side road

thereby improving the perception of pedestrian safety.

- 6.3.2.9 The specified minimum width for an on carriageway parking bay is 1.8m, however this will not accommodate larger vehicles such as delivery vans or SUV's (width 1.9m plus). This becomes an issue where the carriageway width is also at the absolute minimum as there is not adequate space available to accommodate the needs of all users. This issue has been highlighted by bus operators as a particular problem within Rusholme and between Withington District Centre and the Christie Hospital where large or badly parked vehicles encroach into the running lanes.

6.3.3 Use of Materials

- 6.3.3.1 Consistency in the selection of the green coloured cycle surfacing has been raised as an area of concern on the cycleway during the course of this review.
- 6.3.3.2 The Wilmslow Road cycleway obtained two different product types, one acting as a carriageway coating for use in areas of potential pedestrian conflict and one where the colour is bound into the carriageway surfacing to prevent surface wear as a result of heavy vehicle movements. As the products were sourced from different suppliers the colours do not match.
- 6.3.3.3 There are instances where the two different colours have been used at the same junction.
- 6.3.3.4 Additionally, when the route is considered overall with the completion of Oxford Road there will a further colours to consider.
The Oxford Road corridor project selected in consultation 'orange' surfacing to be installed to be installed on the cycle lanes within the bus stop by-passes. The 'orange' colour was selected through a peer review and consultation process to highlight the presence of cyclists to pedestrians on the cycle lanes to the rear of the bus stops. Oxford Road cycle lanes also have green chippings embedded within bitumen surfacing as opposed to bound green surfacing or green tint applied to the carriageways on the Wilmslow Road corridor.
- 6.3.3.5 As a result there is potential for the range of colours to cause confusion and send out conflicting messages to road users. For surfacing intended to provide a warning and highlight the presence of vulnerable road users, the more consistent the message the better.



Photo 30: Bound green surfacing across side road on southbound approach to Fallowfield



Photo 31: Surfacing colour tint applied to road wearing course in Rusholme

6.3.4 Segregation Type

6.3.4.1 From the count data and feedback from cyclists as part of the perception survey, the introduction of segregation has encouraged more cyclists to use the Wilmslow Road corridor.

6.3.4.2 On Wilmslow Road the segregation has provided a physical barrier which has substantially reduced the chances of interaction and conflict between motorists and cyclists. The perception of safety however remains an unknown factor and whether the segregation has encouraged cyclists/motorists to take more risks where there is no segregation at side roads and junctions requires more research and analysis.

6.3.4.3 The cycle segregation whilst improving safety for cyclists at junctions has reduced the space for vehicles to navigate around vehicles waiting to turn right within the junction. This has been highlighted as a particular concern by bus operators as causing congestions at the Fog Lane and Mauldeth Road junctions.

6.3.4.4 The type of segregation varies along the Wilmslow Road cycleway in response to different local conditions including:

- Road space available;
- Ensuring surface water drainage is not affected by the segregation;
- Whether the segregation island requires an illuminated bollard (first island after a junction only);
- Whether the segregation island is required to prevent vehicles driving onto or parking across the cycle lane;
- Whether there are parking bays adjacent to the segregation;
- Whether the segregation island requires a repeater bollard to act as a higher visual indicator to vehicles;
 - Existing kerbing materials in the locality;
 - The proximity of bus stops, junctions and side roads;
 - Existing access requirements to business premises and properties; and
 - Whether road sweeper vehicles need to be accommodated. (Outside of the city centre, a clear minimum width between kerbs of 1.65m is required).



Photo 32: Photo courtesy of TfGM showing segregation islands on Wilmslow Road

6.3.5 Light Segregation

- 6.3.5.1 Southbound from Rusholme to Fallowfield, light cycling segregation products (e.g. Orcas, Armadillos) were installed to review the performance of 'bolt down' cycle segregation products, as a much cheaper alternative to the construction of kerb segregation. Visible damage to the orcas in Fallowfield in front of the shops between Mauldeth Road and Egerton Road has meant that they are to be replaced with bollards as part of the further works resulting from the Stage 3 Safety Audit.
- 6.3.5.2 With less than a year of use, the lifespan of such products is therefore already clearly shown to be limited on routes with high vehicle flows as they are already becoming damaged.
- 6.3.5.3 Due to existing pressures on revenue maintenance budgets, it is unlikely that the bolt-down segregation products will be replaced if they remain in-situ long term, resulting in the cycle segregation gradually being removed over time, devaluing the scheme by eroding the safety benefits to road users.
- 6.3.5.4 However, these features have provided a level of delineation and segregation and therefore could be a useful feature in temporary or experimental situations and where there is a risk of vehicle over-run is minimal (e.g. parking).



Photo 33: Light segregation on Blackfriars Street, Salford implemented as part of the City of Salford's Cycling Ambition Improvements

6.3.6 Segregated islands with bollards

- 6.3.6.1 The inclusion of bollards on segregated islands was considered necessary in locations, such as Rusholme, where there was a known risk of parking or loading violations, with vehicles incorrectly parked or stopped for loading blocking the segregated cycle lanes.
- The bollards have worked and have prevented indiscriminate parking and loading where installed. In areas where there is high parking demand the bollards have also served as a form of protection from the opening of vehicle doors into the cycleway.
- 6.3.6.2 The white illuminated bollards used to highlight the start of the segregation after a junction or a break in the cycleway, have quickly discoloured with traffic grime. Highly reflective, coloured bands have been applied to some of the bollards improving their night-time visibility. At night the white bollards have proven to be a visible vertical measure highlighting the kerbed segregation islands to vehicle drivers. A highly visible vertical feature should be included in future schemes, but the type of vertical features should be



Photo 34: Northbound segregated cycle lane between Fallowfield and Withington

- 6.3.6.3 It should also be noted that the white illuminated bollards have not been used on the Oxford Road corridor scheme. Additionally, there has been a change in the Traffic Signs Regulation Guidance and Directions 2016 (TSRGD 2016) which no longer requires illumination of bollards on central islands however this is subject to risk assessment to see if reflective bollards can be used instead.

6.3.7 **Raised or Hybrid (Terrace) Cycle Lanes**

- 6.3.7.1 These have operated with success with no significant issues of cars parking on them, however this relies on the ability to enforce waiting and loading restriction if required and should be provided in parallel with appropriate parking provision to meet local demand. They have been particularly effective in areas where some form of segregation is required but where space is restricted.
- 6.3.7.2 If parking or loading infringements do become problematic in future, the marking of additional double yellow lines within the hybrid cycle lane can help prevent vehicles parking or loading. This has proved successful in deterring parking offences on the hybrid cycle lanes implemented on Wilmslow Road near Owens Park. Installation of bollards would be an alternative solution.

6.3.8 **Back to Back Kerb Segregation**

- 6.3.8.1 Oxford Road bus priority scheme has implemented back to back segregation kerbing to separate cycle lanes from vehicles where there is no parking/loading demand adjacent to the cycle lane.
- 6.3.8.2 Back to back kerbs require less road space as the resulting segregation feature is narrower, allowing more of the existing road space to be retained.
- 6.3.8.3 This type of kerb segregation has integral drainage which in the original design allowed for the lengths of the individual islands/segregation to be longer, as there is no need for surface water flow to be maintained to existing road side gullies. However, following comments received during the early phases of implementation the lengths of segregated islands were shortened to provide more frequent gaps for cyclists to join and leave the cycleway. Whilst reducing the longitudinal distance between gaps between segregated cycle islands does improve access for cyclists to leave and join the segregated cycle lanes, it does also negate the need for the integrated drainage within the kerbs, and requires further research in relation to road safety and usage.



Photo 35: Photo showing hybrid northbound cycle lane heading towards Withington after Fog Lane/Lapwing Lane junction



Photo 36: Photo showing back to back segregation on Oxford Road

- 6.3.8.4 A cost comparison of this type of segregation compared to the per metre average for Wilmslow Road is required, as this may also indicate that kerb segregation is a more cost effective option for future schemes.

6.3.9 Bus Stop By-Passes

- 6.3.9.1 The bus stop bypasses are being successfully used as a way of avoiding conflict between cyclists and the large number of buses on the road corridor. Cyclists responding via the Perception Survey highlighted these features as a good or excellent improvement.
- 6.3.9.2 However, conflict with pedestrians at bus-stops remains a concern especially as bus stops with cycle by-passes are essentially traffic islands between two flows of traffic.
- 6.3.9.3 TfGM commissioned a comprehensive study and review of the Oxford Road 'trial' southbound bus stop opposite Whitworth Park, in particular to inform the design of 12 further bypasses currently being constructed as part of the Oxford Road bus priority scheme. This report provides guidance which will be available for future bus stop by-pass designs.
- 6.3.9.4 This review came too late for the Wilmslow Road section of the route as the design was complete and construction already underway when the report was produced. However, the bus stop by-pass design on Wilmslow Road was subject to review by TfGM and Greater Manchester Police to ensure visibility and safety standards were met.
- 6.3.9.5 The recommendations within the report may help alleviate some of the on-going concerns of pedestrians highlighted during the course of this initial period of evaluation and monitoring which can be applied to future schemes.
- 6.3.9.6 The recommendations from the Oxford Road trial bus stop by-pass are as follows:
- Provision of a 'priority' boarding symbol at the bus stop for wheelchair users and those with pushchairs so that they can wait in the correct position for bus services and don't feel as though they will have to move along the platform once they have crossed cycleway.
 - Rumble strips on the cycleway on the approach to bus stop by-pass and in advance of any marked pedestrian crossing points, to highlight the potential presence of pedestrians to cyclists.
 - Provision of zebra crossing markings over the cycleway for pedestrians to access the bus-stop for those locations with high pedestrian footfall to encourage cyclists to give



Photo 37: Photo courtesy of TfGM showing Oxford Road bus stop cycle by-pass opposite Whitworth Park

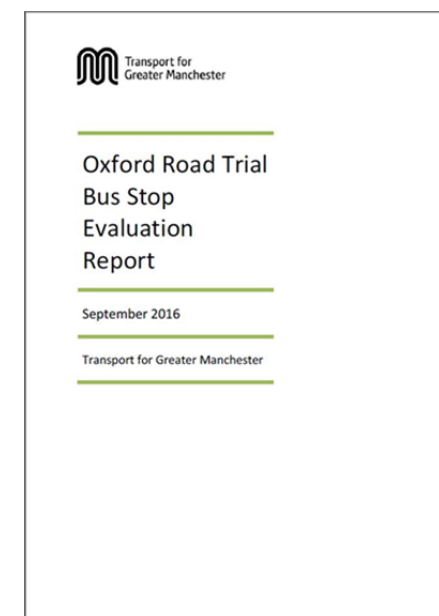


Image 3: Oxford Road Trial Bus Stop Evaluation Report in Appendix 5

way to pedestrians. TSRGD 2016 has relaxed the use of zebra crossing markings and they can be installed on cycle lanes without the need for accompanying belisha beacons.

- Triangular cyclist/pedestrian warning signs mounted on bollards adjacent to any crossing points to highlight the presence of possible road users.

6.3.10 Changes to Traffic Signs Regulations and General Directions (2016) (TSRGD)

- 6.3.10.1 The Regulations which govern signing and lining on our highways was reissued in 2016, during construction of the Wilmslow Road cycleway. The scheme was designed to the previous regulations.
- 6.3.10.2 There have been a number of relaxations in TSRGD 2016 which would provide more flexibility and options to better sign and line cycle routes in the future. Two of the other relaxations – zebra crossing markings without Belisha beacons and non-illumination of bollards on central islands, have already been discussed in this text.
- 6.3.10.3 Any future schemes would have to be designed to the new regulations and all opportunities must be fully explored and assessed for application on Manchester's network. The Sustrans document "TSRGD 2016: Cycling and Walking Changes (Draft)" (Sustrans, 2016) provides more details.

6.4 Review of Delivery and Implementation

- 6.4.0.1 Following the implementation of the cycleway a lessons learned workshop was held to assess and review how the scheme had been managed, implemented and delivered. This workshop raised questions and concerns, highlighting the risks, issues, impact, costs and scale of change that the cycleway created during its development on one of the key routes of the City's highway infrastructure.

All of the issues encountered during the delivery of the project have been reviewed by MCC and where appropriate measures put in place to prevent them from reoccurring; however there are a number of points which contributed to the project delivery that are relevant and should add to the debate regarding the success of the scheme.

6.4.1 Project Scope

- 6.4.1.1 A clear scope of works and project deliverables are required from the outset. Having now completed the Wilmslow Road project, which as mentioned elsewhere in this report was

'ground breaking' in terms of cycle infrastructure, MCC as project deliverers, TfGM as project sponsors and all other stakeholders now have first-hand experience of what segregated cycling infrastructure means in reality.

- 6.4.1.2 Future expectations should be based on the lessons learnt from Wilmslow Road and the recommendations made within this report, but also within the constraints of the available budget and programme deadlines.
- 6.4.1.3 There has to be an acceptance that fitting segregated cycle lanes into existing, heavily used and aging infrastructure, means it is difficult to satisfy all road users requirements over the entire length of a particular route. There will always have to be a degree of compromise whether that is a reduction in footway widths, narrowing of carriageways or non-continuous segregated features.
- 6.4.1.4 There should also be a recognition of the under investment in highways over previous years. Extensive carriageway resurfacing and reconstruction, drainage repairs and investigations require existing stretched maintenance budgets to be negotiated and secured, as the capital funding provided for new cycle lanes or cycling infrastructure does not incorporate these maintenance costs into their budgets.

6.4.2 Consideration of Road Users Hierarchy of Need

- 6.4.2.1 All road users should be considered holistically based on hierarchy of need, rather than a specific focus on delivering a scheme for cyclists.
- 6.4.2.2 Much of the negative feedback received to date has been from user groups other than cyclists, where other user groups requirements could not be fully accommodated or funded within the scope or the project, or that they were not aware of the full implications during the project development and consultation. The perception is that the focus was primarily a cycling infrastructure project, without the recognition of wider benefits to other users being articulated or presented.
- 6.4.2.3 Good, clear, inclusive and timely communication throughout the lifecycle of future cycling infrastructure projects is essential to improve understanding of the benefits amongst all road users and pedestrians.

6.4.3 Governance

- 6.4.3.1 Governance and decision making processes need to be agreed before the project is commissioned, and maintained throughout the life of any future projects.



Photo 38: Cycle lane on southbound approach to Rusholme before line marking application

- 6.4.3.2 Strong project governance to keep projects on track and drive them forwards is always required to manage 'scope creep' and manage the conflicting demands and requirements of the many interested parties in the development of major highway infrastructure project which impact on residents and businesses. Recognition and acknowledgement of this challenge when implementing untested and new cycling infrastructure needs to be shared by all parties involved in project delivery and commissioning.

7.0 Summary

- 7.0.1 The development of the Wilmslow Road Cycle Ambition Grant project has delivered a visible step change in cycling provision within Manchester. The development of the project has been in parallel with changing UK policy towards increasing and improving cycling provision within urban areas to encourage more sustainable forms of travel.
- 7.0.2 The project has contributed significantly to the on-going process of developing and creating Greater Manchester's network of major cycling routes to link centres of employment, education and leisure through Velocity 2025. The Wilmslow Road cycleway has contributed greatly to fulfilling one of the projects major objectives by substantially increasing the number of people cycling.
- 7.0.3 As can be expected with new types of highway infrastructure, the project has been received with a mixed reaction from road users, with cyclists viewing the delivered cycleway much more favourably than other road users.
- 7.0.4 The lessons learned from the delivery of this major highway infrastructure change can be applied to future potential schemes.
- 7.1 The key findings from this initial period of evaluation and monitoring can be summarised as follows:
- 7.1.1 **Number cyclists on the corridor:** the number of cyclists has more than doubled when counted in October 2016 compared to data from March 2015. Even accounting for unseasonably warm weather in October 2016, levels of cycling on Wilmslow Road were still 50-80% higher than would have been expected before the cycleway was installed.
- 7.1.2 **Journey Times and Speeds:** analysis of Bluetooth data indicates that whilst journey times increased during the construction phase, post-completion journey times and speeds are now approaching pre-construction levels. The impact of the on-going works to improve bus and cycling infrastructure on Oxford Road has impacted journey times but may also be reducing traffic flows on the Wilmslow Road corridor by diverting traffic onto adjoining corridors into the City Centre.
- 7.1.4 **Road collision** analysis of Greater Manchester Police road collision information shows:
- As the number of cyclists has almost doubled on the corridor, the number of collisions might be expected to increase, which has not happened. Further monitoring over a longer period is required to confirm these findings.
 - Road collisions involving pedal cycles, where they are taking place, are more

limited to where vehicles are turning into and out of side roads, with the severity of the incidents also reducing.

- No road collisions involving pedal cyclists and pedestrians have been recorded by Greater Manchester Police; although reports to the Neighbourhood Office increased immediately following the opening of the cycleway in March/April 2016.
- Road collisions along the corridor involving non-cyclists remain at a similar level to 2015.

7.1.5 **CCTV footage:** shows that the majority of cyclists are utilising the new cycling infrastructure as designed. There is evidence of respectful interactions where pedestrians wait to cross the cycle lane or are waiting for buses, but there remains concern over conflict between cyclists and pedestrians who find themselves in the cycle lane.

7.1.6 **Perception Survey:** although there was a limited response rate, the survey indicated that:

- Cyclists responded very positively to the introduction of segregated cycle lanes. Kerb segregated cycle lanes and early green traffic signals were the most positively received cycling infrastructure features introduced.
- Bus user responses overall were neutral.
- Motorists and pedestrians largely responded negatively towards the scheme. Over 40% of pedestrians and motorists, who responded, stated that the kerb segregation, cycle lanes behind parking bays and bus stops were either poor or very poor.

7.1.7 **Third Party Issues raised Post Completion:** Trader groups, particularly in Rusholme, have raised concerns in respect of pedestrian safety when crossing the segregated cycle lanes and at the bus stop by-passes. Concerns have also been raised by bus operators over reduced carriageway widths and junctions reduced to a single lane approach.

7.1.8 **Design reviews:** A number of recommendations came from the Stage 3 Road Safety Audit and a review of the implemented features which are highlighted in the following recommendations chapter. The outcome of the assessment by the Disability Design Reference Group (Breakthrough UK) was not available at the time of writing.

8.0 Recommendations

- 8.0.1 A number of recommendations can be made in response to the findings of this evaluation and monitoring report which are set out in the following sections. It is hoped that these recommendations will be taken forward to allow the Wilmslow Road Scheme to be progressed to completion and to inform future projects, currently on hold, proposed to be delivered as part of Velocity 2025.

8.1 Further monitoring

Further monitoring is required to gain a more accurate picture of usage over a longer period of time to assess the infrastructure as it becomes more familiar and accepted.

- 8.1.1 Two permanent cycle counters have been installed on Oxford Road which will count the number of cyclists travelling further north from the Wilmslow Road cycleway onto the Oxford Rd stretch of the cycleway to the University and City Centre. The Oxford Road section of the cycleway is due to complete in Spring 2017.
- 8.1.2 Transport for Greater Manchester will continue to annually monitor transport counts as required for travel planning purposes and provide road collision data updates every month.
- 8.1.3 The assessment of road collisions on Wilmslow Road will be reviewed at the end of the monitoring year, as well as the standard 3 or 5 years to assess whether the recorded number of casualties has declined since September 2016 in response to behavioural change by cyclists and motorists.

8.2 Further Measures

To undertake the further works planned to address the safety concerns of the completed scheme as highlighted in the Road Safety Audit Stage 3.

- 8.2.1 A number of specific improvements have been identified for implementation along Wilmslow Road informed by a Road Safety Audit to address post-construction safety concerns, plus from feedback received from bus operators and other users of the corridor relating to safety.

These measures include:

- Reducing the width of central islands at specific pinch points to make passing



Photo 39: Photo courtesy of TfGM showing permanent cycle counter on Oxford Road

easier, particularly for buses (e.g. Rusholme)

- Resurfacing the cycle lane where carriageway conditions are poor;
- Improving the clarity of shared and segregated footway in some locations to improve pedestrian-cyclist awareness;
- Installing 'share with care' and warning signs to promote safe pedestrian-cyclist awareness;

Details are within in Appendix 8.

8.3 Education Programme

On-going programmes of safety education for all road users and targeted campaigns for future schemes.

- 8.3.1 Safety education for all road users should be carried out, including targeted campaigns for future schemes, particularly where changes to district centres are proposed. It is recommended that a component of the budget for each scheme is allocated to this.

8.4 Design Guidance

Manchester City Council participate in the review of the Greater Manchester Cycle Design Guidance currently being carried out by TfGM to ensure that the review takes full account of all lessons learnt from the Wilmslow Road scheme.

- 8.4.1 It is clear from the data and evidence considered during the drafting of this Evaluation and Monitoring Report that a more balanced approach needs to be taken which considers the needs of all road users when implementing cycling infrastructure, as the perception is that only the needs of cyclists have been taken into account.
- 8.4.2 Additionally, as any future schemes will have to be designed to the latest Traffic and Signs Regulations and General Directions (2016), where a number of relaxations have been in respect of cycling features, it is also recommended that the design guidance is revised to take these changes into account. For example, alternative signs and markings that can be used, tactile paving and the requirement that bollards on central islands do not require illumination (subject to risk assessment). The Sustrans document "TSRGD 2016: Cycling and Walking Changes (Draft)" (Sustrans, 2016) would provide a basis for such a review.



Image 4: Indicative Sign warning cyclists to be aware of pedestrians in the cycle lane

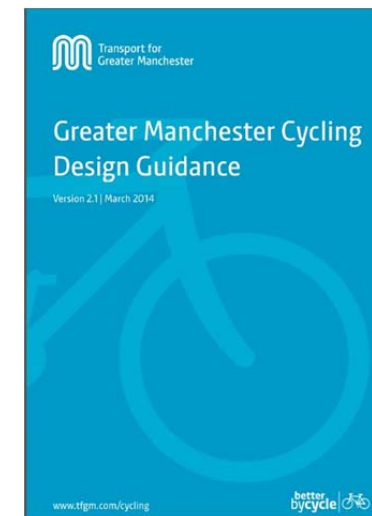


Image 5: Transport for Greater Manchester Cycling Design Guidance

8.4.4 Minimum widths is an area that should be given further consideration in light of the findings made during the first six months of operation for the Wilmslow Road corridor, which can be summarised as:

- The narrowing of the carriageway lanes to 3.0 metres is viewed as only being suitable for straight stretches of carriageway where there is no parking, which can further impinge on carriageway width, and no bus/low bus flows.
- The minimum width for parking bays should be 2.0m where the carriageway width is also at minimum standards. This will potentially impact on the number and location of parking bays that can be provided where segregated cycle lanes are to be implemented.
- Existing footway widths should be maintained where possible adjacent to segregated cycle lanes. If footways need to be narrowed then an absolute minimum of 2.0m should be maintained.

8.4.5 It is recommended that the minimum cycle lane width is reviewed and more evidence based guidance is provided for:

- The minimum widths to allow for overtaking with guidance provided of where this is required. If the necessary widths cannot be provided then guidance needs to be provided around the optimum longitudinal distance between overtaking spaces.
- The optimum width of a cycle lane to provide safe crossing points for pedestrians and to slow cyclists down, e.g. through district centres or other areas with high volumes of pedestrian footfall.

8.5 Materials

It is recommended that a single, standard green be adopted for all cycle lane provision to ensure consistency across all schemes.

8.5.1 A single colour used throughout sends out a more consistent message to all road users and it is hoped further improve safety.

8.5.2 Longer term a single consistent colour will help with maintenance and reinstatements to maintain the quality and integrity of the delineated areas.



Photo 40: Bound green integrated into wearing course surfacing across side road entry Withington



Photo 41: Green tint applied to surfacing in Rusholme

8.6 Bus Stop By-Passes

It is recommended that where space allows bus stop by-passes are introduced on future cycle infrastructure projects.

8.6.1 It is further recommended that the bus stop by-passes are implemented to a consistent single design in accordance with the recommendations made in TfGM's review of the trial bus stop at the Hathersage Road/Wilmslow Road junction:

The recommendations from the Oxford Road trial are as follows:

- Provision of a 'priority' boarding symbol at the bus stop for wheelchair users and those with pushchairs so that they can wait in the correct position for bus services and don't feel as though they will have to move along the platform once they have crossed cycleway.
- Rumble strips on the cycleway on the approach to bus stop by-pass and in advance of any marked pedestrian crossing points, to highlight the potential presence of pedestrians to cyclists.
- Provision of zebra crossing markings over the cycleway for pedestrians to access the bus-stop for those locations with high pedestrian footfall as means of encouraging cyclists to give way to pedestrians. TSRGD 2016 has relaxed the use of zebra crossing markings and they can be installed on cycle lanes without out the need for the accompanying belisha beacons.
- Triangular cyclist/pedestrian warning signs mounted on bollards adjacent to any crossing points to highlight the presence of possible road users.

8.6 Light Segregation

It is recommended that light segregation is reviewed in terms of the longevity of products where there is risk of damage due to buses; illegal parking and HGVs.

8.6.1 These features offer a level of delineation and segregation and therefore could be a useful feature in temporary or experimental situations only.



Photo 42: Bus stop by-pass near Old Hall Lane between Rusholme and Fallowfield



Photo 43: Damaged plastic light segregation orca in Fallowfield

8.7 Hybrid/Terraced Cycle Lanes

It is recommended that hybrid/terraced cycle lanes are considered where parking violation is unlikely

- 8.7.1 This type of segregation offers vertical segregation of cyclists without segregation islands where space available for segregated cycle lanes is restricted. This type of segregation however is subject to parking violation in shopping areas and should therefore only be considered where parking can be enforced or where parking on the carriageway is unlikely.

8.8 Back to Back Kerb Segregation

It is recommended that back to back kerb segregation is considered for wider use in future cycle infrastructure schemes.

- 8.8.1 It is recommended that this type of segregation be implemented more in the future as greater carriageway space is retained.
- 8.8.2 A cost comparison of this type of segregation compared to the per metre average for Wilmslow Road is required, as this may also indicate that back to back kerb segregation is a more cost effective option for future schemes.

8.9 Junction and Road Capacity

It is recommended that on major road corridors the introduction of segregated cycle lanes should ensure operational junction and road capacity remains neutral.

- 8.9.1 Changes in travel mode may, in future, introduce more consideration of capacity in terms of 'total people movement', which includes persons utilising public transport, cycling and walking. However with existing demands for 'on road' capacity remaining high, with roads and junctions on major corridors in Manchester often at peak capacity for the foreseeable time, capacity cannot be reduced through the introduction of cycle infrastructure.
- 8.9.2 Whilst journey times are showing as returning to pre-construction levels, there remains some concern over the capacity at junctions.
- 8.9.3 Where junctions are being modified as part of a cycling infrastructure scheme, it is recommended that MOVA or SCOOT be installed to improve the overall corridor journey time and improve speed reliability.
- 8.9.4 Additionally, more research is required to assess the distance required between the segregation and advanced stop lines at the approaches to signalised junctions with a



Photo 44: Oxford Street Back to Back Segregation Kerbing

single approach lane where right turns are permitted, to ensure the impact on junction operational capacity is minimised and that cyclist/pedestrian road safety at the junctions is also not affected.

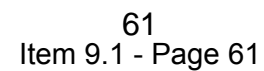
8.10 Side Roads

It is recommended that designs include tightening on radii on side roads.

- 8.10.1 Whilst the number of incidents occurring at side roads have remained comparable with pre-scheme figures, the severity of such incidents have decreased, possibly as a result of vehicles having to travel at slower speeds to negotiate the tighter radii introduced at the side roads crossed by the cycleway.

Appendix

Appendix 1: Wilmslow Road Cycleway Route Plan



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Appendix 2: Journey Speeds from Bluetooth Data

Table 11: Analysis of Average Journey Speed from Bluetooth Data

End-to-end average speed					AM Peak Speed (Mph)			PM Peak Speed (Mph)		
			Direction	Speed metric	Before	During	After	Before	During	After
			Northbound	Average	12.7	10.2	11.6	11.6	9.9	10.5
			Southbound	Average	12.6	10.5	10.9	10.6	8.7	9.6
Average speed on specific sections					AM Peak Speed (Mph)			PM Peak Speed (Mph)		
	Junctions	Area	Direction	Metric	Before	During	After	Before	During	After
From	Platt Lane / Dickenson Road	Rusholme	Northbound	Min	11.8	5.7	4.0	6.6	3.0	3.1
To	Moss Lane East	Rusholme	Northbound	Max	17.0	14.7	14.7	11.3	9.4	8.8
			Northbound	Average	14.0	10.7	10.8	8.9	7.3	6.8
From	Moseley / Wilbraham Road	Fallowfield	Northbound	Min	9.4	9.1	9.8	10.7	9.3	11.2
To	Platt Lane / Dickenson Road	Rusholme	Northbound	Max	17.8	16.1	18.3	16.2	14.8	17.3
			Northbound	Average	13.7	12.0	14.7	13.9	12.9	14.7
From	Burton Road / Palatine Road	Withington	Northbound	Min	6.7	4.6	7.2	8.6	4.8	7.8
To	Moseley / Wilbraham Road	Fallowfield	Northbound	Max	15.2	12.5	13.8	13.9	12.5	12.8
			Northbound	Average	10.2	8.0	10.7	11.8	9.3	10.3
From	Barlow Moor Road / School Lane	Didsbury	Northbound	Min	8.3	7.6	8.4	7.0	8.5	7.7
To	Burton Road / Palatine Road	Withington	Northbound	Max	15.4	13.1	13.6	14.9	12.2	13.2
			Northbound	Average	12.9	10.2	10.4	11.9	10.2	10.3
From	Moss Lane East	Rusholme	Southbound	Min	10.2	8.7	8.4	5.2	4.1	5.2
To	Platt Lane / Dickenson Road	Rusholme	Southbound	Max	14.4	12.9	12.1	9.3	8.2	9.1
			Southbound	Average	12.4	10.9	10.2	6.9	6.3	6.8
From	Platt Lane / Dickenson Road	Fallowfield	Southbound	Min	10.6	9.1	9.9	7.1	6.9	7.8
To	Moseley / Wilbraham Road	Rusholme	Southbound	Max	16.6	16.2	16.2	17.0	17.4	17.0
			Southbound	Average	13.9	11.5	13.0	12.1	10.2	13.0
From	Moseley / Wilbraham Road	Withington	Southbound	Min	7.7	8.4	9.3	9.7	6.2	7.2
To	Burton Road / Palatine Road	Fallowfield	Southbound	Max	17.6	12.2	14.5	14.8	12.1	12.4
			Southbound	Average	13.5	10.5	11.5	12.4	9.5	10.1
From	Burton Road / Palatine Road	Didsbury	Southbound	Min	7.7	5.5	5.8	8.7	5.4	4.3
To	Barlow Moor Road / School Lane	Withington	Southbound	Max	15.4	14.1	13.0	12.7	12.4	11.5
			Southbound	Average	10.9	8.7	8.9	10.7	9.0	8.6

A3

Appendix 3: Details of Road Collisions involving Pedal Cycles on Wilmslow Road corridor

Table 12: Analysis of Road Collisions involving Pedal Cycles (p/c) on Wilmslow Road Cycleway from April 2016 to mid-Oct 2016

Date	V1	V2	Severity	Movement of V1	Movement of V2	Location	Area		Light Conditions	Weather Conditions	Road Surface	Description	Contributory Factors	
28/09/2016	Car	p/c	Serious	Turning right	Going Ahead	Signalised Junction*	Fallowfield* ¹	Ladybarn Road*	Light	Fine	Dry	V1 turning right at signalised junction across path of V2	V1 Failed to Look;	V1 poor turn or manoeuvre
26/09/2016	Car	p/c	Slight	Turning left	Going Ahead	Side road	Rusholme	Dagenham Road	Light	Rain	Wet	V2 has right of way; V1 travelling in same direction turns left into path of V2 and collides	V1 Failed to Look;	
20/09/2016	Minibus	p/c	Slight	Turning left	Going Ahead	Signalised Junction*	Fallowfield* ¹	Ladybarn Road*	Light	Fine	Dry	V1 travelling in same direction turns left into path of V2 and collides	V1 Failed to Look;	V1 Failed to judge other person's
11/09/2016	Car	p/c	Slight	Turning right	Going Ahead	Side road	Rusholme	Walmer St	Light	Fine	Dry	V1 fails to see V2 and collides when turning right into side road	V1 Failed to Look;	V1 Failed to judge other person's path or speed
01/09/2016	Car	p/c	Slight	Turning right	Going Ahead	Side road	Rusholme	Grandale St	Light	Fine	Dry	V1 collides V2 with when turning right into side road. V1 fails to stop.	V1 poor turn or manoeuvre	V1 Failed to Look;
27/06/2016	Car	p/c	Slight	Turning left	Going Ahead	Side road after signalised junction	Fallowfield	Landcross Rd* ¹	Light	Fine	Wet	V1 waits behind group of cyclists after signalised junction to clear side road; fails to see cyclist travelling at same speed; collides when turning left	V1 Failed to Look;	V1 blind spot;
22/06/2016	LGV	p/c	Slight	Turning right	Going Ahead	Access to Forecourt	Rusholme	Great Western St	Light	Fine	Dry	V1 turning right exiting forecourt and collides when crossing path of V2	V1 Failed to Look;	not recorded
23/05/2016	Car	p/c	Slight	Going Ahead	Going Ahead	Carriageway	Withington ->Didsbury	South of Ferndene Rd	Light	Fine	Dry	V2 collides when V1 encroaches into mandatory cycle lane (denied by V1 driver)	not recorded	not recorded
11/05/2016	Car	p/c	Slight	Turning	Going Ahead	Side road	Fallowfield	Willow Bank	Light	Fine	Dry	V1 turning out of side road and collides when crossing path of V2	V1 Failed to Look;	V1 Failed to judge other person's path or speed
17/04/2016	Car	p/c	Slight	Turning	Going Ahead	Side road	Fallowfield	Old Hall Lane	Light	Fine	Dry	V1 turning out of side road and collides when crossing path of V2	not recorded	not recorded

*¹ existing signalised junction not upgraded as part of Wilmslow Road cycleway

NB one road collision took place in 2016 during construction period

A4.1

Table 13: Visual Behavioural Survey from CCTV adjacent to Bus By-passes (June 2016)

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A4.2

Table 14: Visual Behavioural Survey from CCTV adjacent to Signalised Junctions with Cycle Pre-signal(June 2016)

Location	Egerton Road Junction, Fallowfield	
	Looking Southbound from Egerton Road junction towards Withington overlooking junction	Looking Northbound at Egerton Road overlooking Bus Stop by-pass
Description		
CCTV Camera	173	123
Area	Fallowfield	Fallowfield
Date	Monday 6th June 8:30 to 9:30	Friday 3rd June 16:30 to 17:30
Behaviour		
Junction		
Junction: Cyclists		
Cyclist / side road conflict		3
Pre-signals allow cyclist to gain head start over traffic		15
Cyclist using shared space at junction to bypass signals or to access toucan		1
Cyclist using shared space at junction to park at cycle stand		2
Cyclist move off within pre-signal stage	6	
Cyclists travelling through signals	28	
Left turn into Egerton conflict with cyclist heading southbound.	0	
Junction: Vehicles		
Motorist set off at cycle pre-signal rather than full green.	2	0

A4.3

Table 15: Visual Behavioural Survey from CCTV of segregated cycle lane and shared use cycle lanes within Rusholme (June 2016)

Location	Dickenson Road, Rusholme		Thurloe Street, Rusholme		Dagenham Road, Rusholme
	Looking southbound showing shared space adjacent to Platt Fields Park plus southbound segregated cycleway	Dickenson Road looking north across the junction into Rusholme	Looking south along cycleway and at bus stop adjacent to job centre	Looking south along cycleway and at bus stop adjacent to job centre	Overview Cycleway & Junction with Gt Western Street
CCTV Camera	97	96	55	55	92
Area	Rusholme	Rusholme	Rusholme	Rusholme	Rusholme
Date	Monday 6th June 8:00 to 9:00	Friday 3rd June 16:30 to 17:30	Monday 6th June 8:00 to 9:00	Friday 3rd June 16:30 to 17:00	Friday 3rd June 17:30 to 18:30
Behaviour					
Cycleway					
Pedestrians					
Conflict between cyclist and pedestrian (near miss)	2	1			
Pedestrian in cycle track		2	0	2	4
Pedestrian in cycletrack adj to Platt Fields Park	1				
Pedestrians not giving way to cyclists					0
Cyclists					
Cyclist in carriageway (both directions)		4			
Cyclist on cycle track (both directions)		155			
Northbound cyclist within cycle track			187		
Northbound cyclist (incorrectly using facility)				2	
Northbound cyclist within carriageway			5		23
Southbound cyclists within cycle track			29		
Southbound cyclists (using facility in correct direction)				76	
Southbound cyclist (looking to be traveling too fast for situation)			1	3	
Cyclist using cycle track in wrong direction	2	8			7
Cyclists proceeds along wrong section of footway / cycleway adj to Platt Fields Park	19				
Cyclist on Cycle track adj to footway adj to Platt Fields Park	133				
Cyclist in carriageway bus lane adj to Platt Fields Park	68				
Vehicles					
Parking in-correctly outside of layby		3			
Side road / cycle track conflict		3			1
Drivers at side road waiting on cycle lane beyond stop line					5

A5 Appendix 5: Oxford Road Trial Bus Stop Evaluation Report



Oxford Road Trial Bus Stop Evaluation Report

September 2016

Transport for Greater Manchester

Table of contents

1. Executive Summary
2. Background to trial
3. Objectives in setting up the trial
4. Methodology and Terminology
5. Key Statistics from the video observations
6. Survey findings and key issues raised by stakeholders
7. Measures for discussion at the workshop
8. The Evaluation Workshop
9. Manchester City Council Recommendations
10. Appendix A: Feedback from stakeholders following site visits
11. Appendix B: Analysis of Video Evidence

1 Executive Summary

- 1.1 In 2015, as part of the Oxford Road Bus Priority Scheme, Transport for Greater Manchester (TfGM) committed to constructing a trial bus stop featuring a cycle bypass lane complete with pedestrian crossing facilities, which included a zebra-style facility. The design is the first of its kind for Greater Manchester and is intended to allow cyclists to safely pass behind Oxford Road's busy bus stops separated from the main carriageway. The design aimed to improve cycle safety by reducing the potential conflict between cyclists and buses and in doing so encourage more people to cycle along this key route.
- 1.2 The design of the trial stop was developed through a series of workshops with stakeholders and users groups and was based on stated preferences. The trial stop was constructed in August 2015 and is located immediately south of the Hathersage Road junction on Oxford Road.
- 1.3 The purpose of the trial was to allow stakeholders and user groups to evaluate the final design and to provide feedback that would enable the production of recommendations, intended to optimise the design prior to constructing the remainder of the bus stops and ensure that it was fit for purpose for all users.
- 1.4 The formal evaluation of the trial stop was carried out during September and October of 2015 and included surveys of the general public, the capture of video footage and stakeholder site visits. The evaluation culminated in a workshop on 16 November 2015 to which representatives of all the groups involved in the process were invited. It was from the workshop that a series of collective recommendations were produced and subsequently presented to the MCC design team for consideration. The recommendations, which were subsequently confirmed by the MCC design team and have now been incorporated into the final design, are as follows:
- 1.5 **Priority at pedestrian crossings:**
- Additional awareness-raising signage and lane markings for both pedestrians and cyclists, additional red lighting inset into the bypass lane, and rumble strips on approach to crossing points.
- 1.6 **Segregation between user groups:**
- Due to the associated dis-benefits, no additional guard-rail to physically separate pedestrians and cyclists was introduced to the design.

- Appropriate street furniture to be used to deter pedestrians from inadvertently walking into the carriageway after crossing onto the bus stop platform from the zebra crossing.

1.7 Cycle Speeds:

- The introduction of 'slow' markings, rumble strips on approach to crossing points and additional signage are to help reduce cycle speeds and raise awareness that cyclists are entering a pedestrian area.

1.8 The final design also features priority areas for wheelchair users and people with pushchairs. Educational and awareness raising tools and materials will also be developed to aid understanding of the Oxford Road bus stops to assist all users of the facilities.

1.9 In conclusion, the trial stop evaluation has enabled the development of a final design for the Oxford Road bus stop bypass facilities. The template, which has been the subject of extensive design discussion and evaluation, is to be replicated throughout the scheme area, to provide a continuity and consistency of approach to aid understanding and legibility for all users.

2 Background to the trial

2.1 The Oxford Road context

- 2.1.1 Oxford Road is one of Europe's busiest bus routes and provides access to a wide variety of facilities, including the CMFT hospital site, the University of Manchester, Manchester Metropolitan University and the Royal Northern College of Music. It also links directly with a number of key employment and residential areas.
- 2.1.2 The Oxford Road scheme is an integral part of TfGM's Bus Priority Package and represents a significant investment in Greater Manchester's bus network. The bus priority package aims to create direct public transport links between the employment, health, retail, leisure and education opportunities in the Regional Centre and along the Oxford Road corridor, to areas of deprivation and need in the north and west of Manchester.
- 2.1.3 The key component of the Oxford Road scheme is the introduction of a mile-long bus, hackney taxi and cycle only section from Hathersage Road to Grosvenor Street, which will operate daily from 6am to 9pm. During these periods access will be restricted to general traffic. North of Grosvenor Street there are proposed new sections of bus lane; running southbound from Charles Street; and northbound from Whitworth Street West. The access restrictions will be implemented in conjunction with a 20mph speed limit for all permitted vehicles. There will also be a significant investment in enhanced facilities for pedestrians and cyclists, including the introduction of 'Dutch-style' bus stops with cycle bypass lanes running to the rear of bus stops. Along Oxford Road, between the stops, cyclists will be segregated from the main carriageway by means of kerb separation.

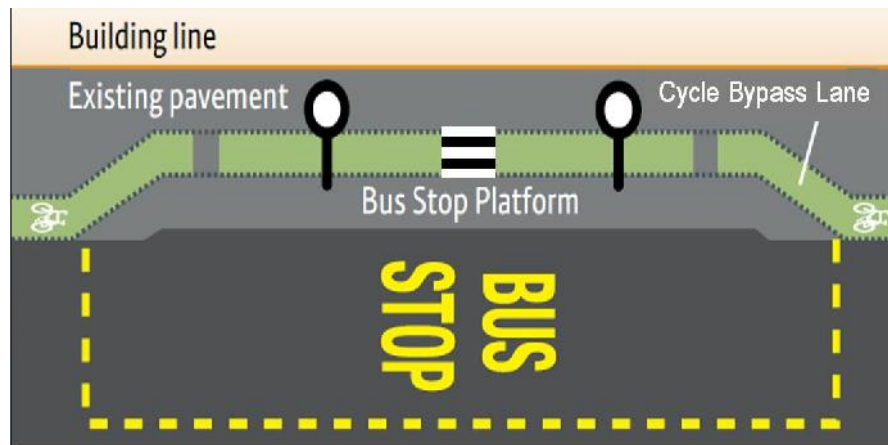
2.2 Oxford Road cycle bypass lane design

- 2.2.1 Cycle bypass lanes at bus stops with dedicated crossing points are a first for Greater Manchester and enable cyclists to pass behind the bus platform, where passengers will alight and wait. The bypass lane is intended to allow cyclists to safely pass busy bus stops, separate from the main carriageway, encouraging more cyclists to use this key route. Bus passengers will be able to cross the cycle bypass lane at designated crossing points.
- 2.2.2 The design of the cycle bypass lane was developed through a series of design workshops held during the early months of 2014. The workshops were held with a variety of representative user groups, including cycle, pedestrian and disability groups. In total 9 workshops were held, at which

attendees were asked to express their preferences regarding a number of design parameters, including widths, levels, materials and crossing points.

- 2.2.3 A schematic general arrangement of the bus stop bypass as developed through the design workshops is shown in Figure 2.1 below.

Figure 2.1: Layout of the trial bus stop bypass



- 2.2.4 The design includes; a 3m wide bus stop waiting platform which accommodates 2 bus stops with double shelters; a 2m wide cycle bypass lane which is set at 75mm below the height of the bus stop platform and footway; 2 pedestrian crossing points at which cyclists have priority and a central zebra-style crossing facility at which pedestrians have priority over cyclists. All the pedestrian crossing points are raised to be level with the footway and bus stop platform.
- 2.2.5 In total, there are 13 bus stops along Oxford Road proposed to have cycle bypass lanes, located between Moss Lane East and Portland Street. All 13 stops are intended to be of a consistent design, so as to facilitate ease of use and familiarity with the layout.
- 2.2.6 Following the development of this design, TfGM committed to constructing a trial site to enable users to test the preferred design and provide feedback and comments, prior to the full scheme being delivered. This provided the opportunity for any suitable design recommendations to be incorporated into the final scheme.
- 2.2.7 The trial site is the southbound bus stop on Oxford Road, immediately south of the Hathersage Road junction. This is at the southern end of the scheme and is located on a busy section of highway with high levels of road traffic as well as significant footfall due to the location of three small supermarkets immediately adjacent the stop and it being in close to the hospitals.

2.2.8 A photo of the Oxford Road trial bus stop bypass is shown in Figure 2.2. The photo shows a bus travelling along the main road. The bus stop waiting platform features two bus stop poles with their two accompanying shelters. At either end of the bus waiting areas are raised planting beds. These are intended to encourage bus passengers to enter and exit the waiting area by crossing the cycle path at the designated points. The photo shows the cycle path in orange, a pedestrian crossing point with tactile paving and the zebra crossing, which has black and white stripes and Belisha beacons.

Figure 2.2: Photo of trial bus stop



2.3 Structure of this report

2.3.1 This report will cover:

- the objectives of the trial (Section 3);
- the methods used to collect survey evidence from the general public, stakeholder feedback and video monitoring (Section 4);
- a summary of the key findings from the analysis of a week's video footage (Section 5);
- survey findings and stakeholder observations on key features on how the trial site operated (Section 6);
- a summary of measures suggested in survey feedback and stakeholder responses, which formed the basis for discussions at a stakeholder evaluation workshop on 16 November (Section 7);
- a summary of the collectively agreed recommendations from the evaluation workshop (Section 8); and,

- The final recommendations and design changes to be implemented along the Oxford Road Corridor (Section 9).
- 2.3.2 In order to draw together common issues and potential responses, the survey findings and main stakeholder observations have been integrated within a single part of this report (Section 6).
- 2.3.3 Appendix A supports the main body of the report and provides a summary of all the stakeholder responses received during the evaluation.
- 2.3.4 Appendix B supports the main body of the report and provides a summary of analysis from the video monitoring undertaken at the trial site.

3 Objectives in setting up the trial

3.1 The main objectives in carrying out the 'Dutch-style' bus stop and cycle bypass trial were:

- to evaluate and test on site the design of the Oxford Road cycle bypass lane and bus stop to capture how effectively it meets the needs of its different users;
- to identify areas of satisfaction and/or concern, as a means of developing design recommendations to improve the safety and accessibility of the Oxford Road cycle bypass lanes;
- to foster an inclusive and transparent approach to the design, development and implementation of the Oxford Road cycle bypass lanes at bus stops;
- to compile and provide a clear evidence base from the data collected during the trial, which supports the way forward agreed; and,
- to assist in the development of best practice for the design of bus stop bypass facilities and contribute to the national discussions on the subject.

4 Methodology and Terminology

4.1 Overview

4.1.1 Three strands of work were carried out in order to obtain feedback and monitoring evidence on the trial scheme. These took place over a three week period, from 28 September to 16 October 2015. These three strands of activity were:

- surveys of the general public carried out in the first week – bus passengers, other pedestrians, and cyclists using the bypass lane; (section 4.2)
- site visits with stakeholders from a range of organisations to obtain feedback, carried out in the second and third weeks; (section 4.3) and,
- analysis of video footage, recorded in the second week (section 4.4).

4.1.2 The approach taken to each of these aspects is discussed in the sections 4.2 to 4.4.

4.1.3 The evidence and feedback assembled was gathered soon after the trial stop had been constructed. As a result the findings relate to an early period of operation, before the different users had become fully familiar with the layout of the facility. Also there had been no awareness raising or promotional activity to encourage behavioural change and explain how the facility is to be used at this stage. These will be key activities upon completion of the full Oxford Road bus priority scheme.

4.2 Approach taken for surveys of the general public

4.2.1 Views were sought from three specific user groups: bus passengers; cyclists; and, pedestrians walking alongside.

4.2.2 Traffic counts, bus boarding and alighting counts and pedestrian counts were previously undertaken in March 2015. Statistics on the volume of cyclists, bus users and pedestrians were used to inform the choice of sample sizes for each group.

4.2.3 There was a requirement to collect feedback from pedestrians and bus users, and have ‘face-to-face’ interviews at and around the trial site. The TfGM data collection team were used to collect this data.

4.2.4 An A5 leaflet containing a link to an online self-completion questionnaire was handed out to cyclists passing the facility as they waited at the signalised junction just after the trial site. A unique serial number was used to identify the cyclist as having ridden past the trial stop.

4.2.5 A minimum of 200 completed surveys was sought for cyclist, bus passenger and pedestrian surveys.

4.2.6 The numbers of each group approached was:

- 802 bus passengers, of whom 487 took part (61%);
- 1,258 pedestrians, of whom 383 took part (30%); and,
- 2,211 cyclists, of whom 322 took part (15%).

4.3 **Method used to capture stakeholder feedback**

4.3.1 In order to obtain the views of stakeholder reference groups, a series of on-site evaluation meetings were held. The stakeholders who participated in the site visits were:

- Arriva;
- Central Manchester University Hospitals NHS Foundation Trust (CMFT);
- Contact Theatre;
- Four Greater Manchester Councillors; Rusholme Ward, Chorlton Park, Moss Side and Bolton
- First Bus;
- Greater Manchester Cycle Campaign (GMCC);
- Guide Dogs;
- Living Streets;
- Love Your Bike;
- Royal National Institute of Blind People (RNIB);
- Stagecoach Bus;
- TfGM's Disability Design Reference Group (DDRG);
- Transport Focus;
- University of Manchester (UoM); and,
- Visually Impaired Steering Group (VISG).

4.3.2 During the site visits, the Oxford Road project team, consisting of TfGM and Manchester City Council representatives, outlined the context and rationale of the bus priority package and the Oxford Road scheme in particular. Attendees were also given a summary of the trial bus stop design development process.

4.3.3 The stakeholders groups were encouraged to provide a written response to TfGM outlining their thoughts and comments on the trial facility, following their visit. They were given a copy of the general public questionnaire as a prompt to highlight some features that they could consider in their response.

4.4 **Approach taken to video analysis**

4.4.1 The video monitoring involved 24 hour coverage of the entire bus stop area for seven consecutive days. The video cameras were placed in locations where they were not immediately obvious, so that use of the trial site would not be affected by this monitoring activity. The footage was captured and the analysis undertaken by a company specialising in this activity, CTS Traffic and Transportation.

4.4.2 There were two forms of video analysis:

- 24 hour, 7 day counts of the main movements of cyclists, bus passengers and pedestrians in relation to the bypass lane; and,
- Detailed analysis of 19 hours of video footage taken at the trial bus stop.

4.4.3 The data that has been collated from the week's footage provides:

- number and speed of the cyclists along the cycle bypass lane;
- number and speed of cyclists along the road (i.e. those who do not use bypass lane) measured from entry to exit point;
- numbers of cyclists stopping at crossings;
- numbers of pedestrians crossing at first crossing point;
- numbers of pedestrians crossing between 1st crossing point and zebra crossing;
- numbers of pedestrians crossing using the zebra crossing;
- numbers of pedestrians crossing between zebra crossing and 3rd crossing point;
- numbers of pedestrians crossing at 3rd crossing point;
- number of bus passengers in the bus waiting area at 15 minute intervals; and,
- numbers of buses stopping, number of boarders and number of alighters.

- 4.4.4 Detailed analysis of 19 hours of video footage taken at the trial site focussed on the interaction between bus passengers, cyclists and pedestrians on and crossing the cycle path.
- 4.4.5 Table 4.1 lists the periods of video footage that were analysed in detail. A spread of periods across different days and a mix of busy and quiet periods were selected in order to provide observations for a range of circumstances.

Table 4.1: Survey hours for video footage analysis

Day	Start	End	Hours
Monday	0800	0900	1
Monday	1300	1400	1
Tuesday	1500	1900	4
Wednesday	1300	1400	1
Wednesday	1600	1700	1
Thursday	0800	0900	1
Thursday	1500	1800	3
Friday	1200	1300	1
Friday	1900	2100	2
Saturday	1400	1500	1
Saturday	2000	2100	1
Sunday	1400	1600	2

- 4.4.6 Observations in the 19 hour analysis period were made on:
- where pedestrians cross e.g. are they using the designated crossings or crossing in other areas;
 - are bus passengers spilling into the cycle lane while waiting for buses;
 - are people tripping over the level differences in the kerbs demarking the cycle lane;
 - are there any conflicts between cyclists and pedestrians;
 - are pedestrians looking before crossing the cycle path;
 - are pedestrians using the cycle lane as a pavement/walkway;
 - are cyclists using the pavement;
 - are vehicles or parked cars blocking entry or exit of the cycle lane;
 - are cyclist travelling at excess speed; and,
 - is there a high level of litter on lane.

4.4.7 In terms of definitions used, the term “conflicts” has been divided into:

- “minor” - cyclist or pedestrian has had to make minor adjustments to their speed or direction to avoid a possible collision;
- “major” - cyclist has had to brake heavily or pedestrian has had to move out of the way rapidly to avoid a possible collision; or,
- “contact” - when there has been a collision of some sort i.e. between cyclist/cyclist, pedestrian/pedestrian, cyclist/pedestrian, pedestrian/other vehicle or cyclist/other vehicle.

4.4.8 Examples of other “incidents” (which formed part of the monitoring) include occasions when: a cyclist or a pedestrian appears to have injured themselves without coming into contact with another person; an argument arising due to an interaction related to the scheme; or anti-social behaviour that disrupts the operation of the scheme. Footage was monitored for these types of incident, but no incidents of this type were observed in the 19 hours of video footage that were studied in detail (see Section 5).

5 Key Statistics from the video observations

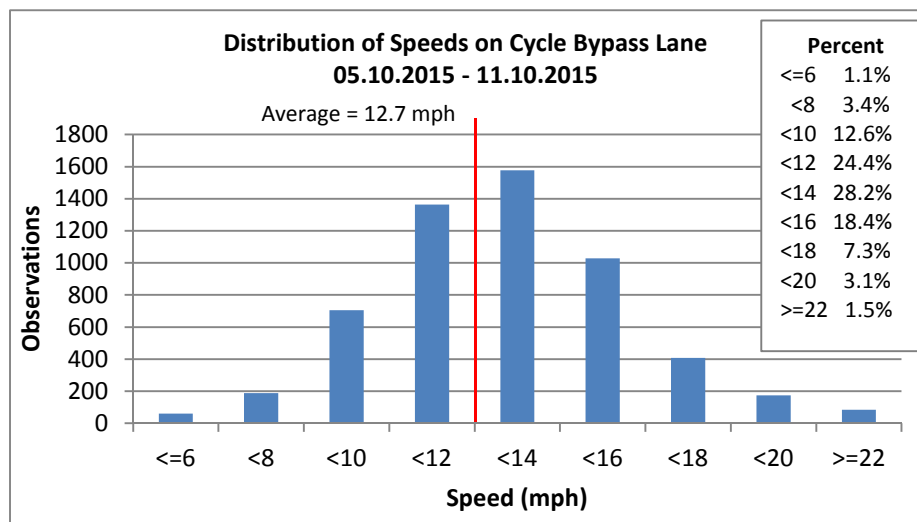
5.1 Overview

- 5.1.1 This section includes an overview of the analysis of the week's video footage and the more detailed recording of observations relating to the 19 hours of video monitoring.

5.2 Observations on cyclists

- 5.2.1 In total, 7,337 cyclists travelled on some part of the bypass lane over the seven days of the video survey. Of these 5,588 (76%) traversed the whole route. This equates to just over 33 per hour over the seven days, or roughly one every two minutes.
- 5.2.2 The busiest hour for cyclists over the seven days was Tuesday between 1700-1800 when 240 per hour, or 4 per minute or one every 15 seconds, were travelling on some part of the cycle path.
- 5.2.3 The average speed of travel throughout the survey period was approximately 13 mph. This means cyclists would travel the full length of the cycle path in approximately 15 seconds. Even in the busiest hour for cyclists, the same 13 mph average speed was recorded. Achievement of this speed even in the busiest hour for cyclists could be interpreted as the facility providing the capacity for high volumes of cyclists even in circumstances where there is a high level of interaction with pedestrians.
- 5.2.4 A minority of cyclists were travelling over 20 mph. For example during the busiest hour on the Tuesday, one cyclist averaged over 20 mph along the full length of the cycle path, travelling through in just over 8 seconds. As many as 24 cyclists (10%) in the busiest hour for cyclists reached speeds of over 20 mph along one of the sections between the crossings (zebra and southern-most crossing). Figure 5.1 shows the distribution of speeds on the cycle bypass lane.

Figure 5.1: Distribution of speeds on cycle bypass lane



5.2.5 While cyclists are only required to stop at the zebra crossing to give priority to pedestrians, a note was made of cyclists stopping at any of the three crossings. This only occurred 63 times throughout the week, 25 times at the first crossing (northern end), 27 times at the zebra crossing and 11 times at the third crossing (southern end).

5.2.6 A cyclist stop is counted when a bicycle has come to a complete stop for a crossing, so it's important to note that these numbers do not include other possible interactions, such as a cyclist slowing down to allow a person to cross. While the numbers indicate few cyclists giving way, the figures do not really account for the more fluid interactions of cyclist and pedestrians that appeared to arise where pedestrians crossed the bypass lane by means of 'gap-selection' between cyclists.

5.3 Pedestrian activity

5.3.1 Over the seven days 51,837 pedestrians crossed the cycle lane, equating to 309 per hour or 5 a minute.

5.3.2 The busiest hours for pedestrians crossing were Monday 1600-1700 and Monday 1700-1800 when 914 pedestrians crossed. This equates to 15 a minute or one every 4 seconds. If pedestrians were crossing evenly, a cyclist might encounter approximately 4 pedestrians crossing as they cycled through the bypass lane.

5.3.3 During the 1700-1800 time period on the Monday, 56% of pedestrians used the crossings, 21% of whom made use of the zebra crossing. This is slightly lower than the overall figure for seven days, which shows 60% of pedestrians using a crossing, 25% of whom were on the zebra crossing.

- 5.3.4 5,903 buses used the stop throughout the seven days accommodating 11,879 boarders and 24,179 alighters. Note that the combined bus boarding and alighting figures are significantly lower than the numbers of pedestrian movements reported above, indicating that there are a substantial amount of pedestrian movements above and beyond those made by bus passengers, e.g. walking through the bus waiting area or crossing the road at this point.
- 5.3.5 The busiest hour across the seven days was 1600-1700 on the Tuesday when there were 228 boarders and 521 alighters.
- 5.3.6 The highest number of bus passengers waiting at the stop at any one time (recorded at 15 minute intervals) was 30 on Wednesday at 1600.
- 5.3.7 The more detailed analysis found between 1% and 4% of pedestrians (depending on the time period analysed within the 19 hours) were definitely not looking when crossing the cycle path. This is not easy to determine accurately and the true number could be higher. Between 1% and 11%, were using the cycle path as a pavement (i.e. standing or walking along it), within the 19 hours, indicating an intermittent problem. For example, 34 bus passengers or pedestrians were using the cycle path as a pavement (i.e. standing on or walking along) on Wednesday between 1600 and 1700, and 335 bus passengers or pedestrians in total over the 19 hours of more detailed analysis.

5.4 Interactions between cyclists and pedestrians

- 5.4.1 34 cyclists were recorded travelling on the pavement during the 19 hours of more detailed analysis. From the video analysis, nine cyclists were felt to be cycling at speeds considered to be excessive given the number of pedestrians in the area.
- 5.4.2 Occasionally cyclists were noted as not observing the zebra crossing or were travelling in the wrong direction through the bypass lane.
- 5.4.3 The observations in this section indicate a very high level of activity in the area of the trial site and a potential for conflicts between cyclists and pedestrians. But in reality very few were observed in the review of 19 hours of video footage.
- 5.4.4 There were 35 minor conflicts (defined as cyclist or pedestrian had to make minor adjustments to their speed or direction to avoid a possible collision), 18 major conflicts (defined as cyclist had to brake heavily or pedestrian has had to move out of the way rapidly to avoid a possible collision) and no actual contacts observed over the 19 hour time period

(defined as there has been a collision of some sort between cyclist/pedestrian/vehicle).

- 5.4.5 These conflicts were observed in the context of 19-hour flows of 1,879 cyclists using all or part of the cycle path and 10,920 pedestrian movements across the cycle path. They therefore indicate that the interactions between cyclists and pedestrians were substantially incident free over this time period. Conflicts were more frequent at busy times.
- 5.4.6 As there were no contacts even at the busiest times, this would indicate that in general terms there is sufficient time and space for bus users, pedestrians and cyclists to interact with each other safely.
- 5.4.7 The 24 hour seven day video analysis also indicated there were no contacts between pedestrians and cyclists.
- 5.4.8 Incidents that were recorded in the 24/7 analysis related to drunken behaviour of pedestrians, someone slipping, vehicle parked on or blocking the path, motor cycles in the path and cyclists using the pavement.

6 Survey findings and key issues raised by stakeholders

6.1 Introduction

6.1.1 This section is structured around the findings from the surveys of the general public, with stakeholder perspectives on the issues raised included in the relevant section, shown in a grey box. A full summary of stakeholder perspectives is contained in Appendix A.

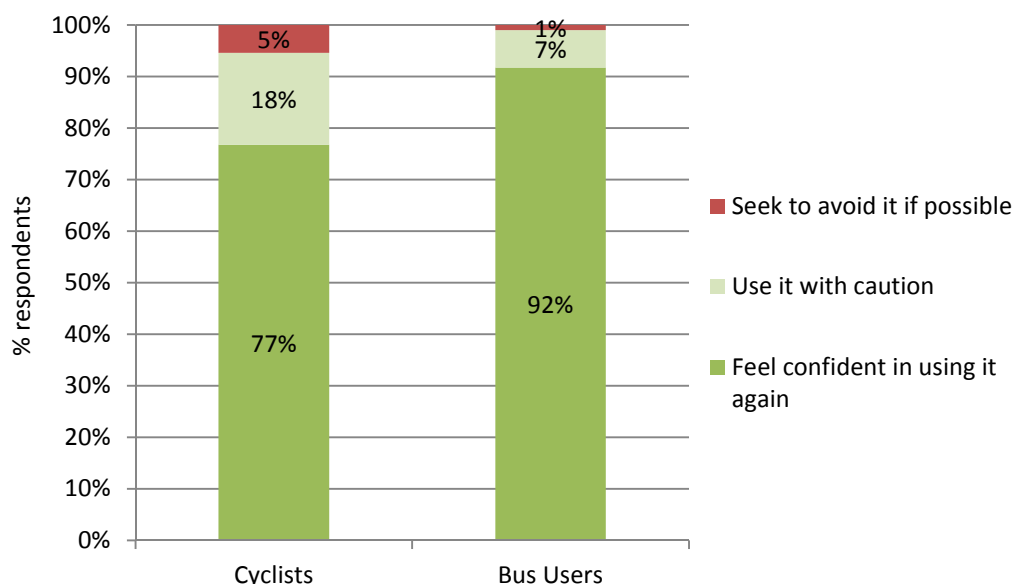
6.2 Overview of the ease of use of the facility

6.2.1 The view was positive in relation to the general design and layout of the trial facility, by all three of the surveyed groups – cyclists using the cycle path, bus passengers and other pedestrians.

6.2.2 Over 90% of bus users stated that they would be happy to use the stop again, with a similar percentage of pedestrians reporting no difficulties when using the pavements around the bus stop.

6.2.3 Figure 6.1 shows the cyclists returning survey responses. 77% stated that they would feel confident in using the cycle path again, with approximately 18% stating that they would use it with caution.

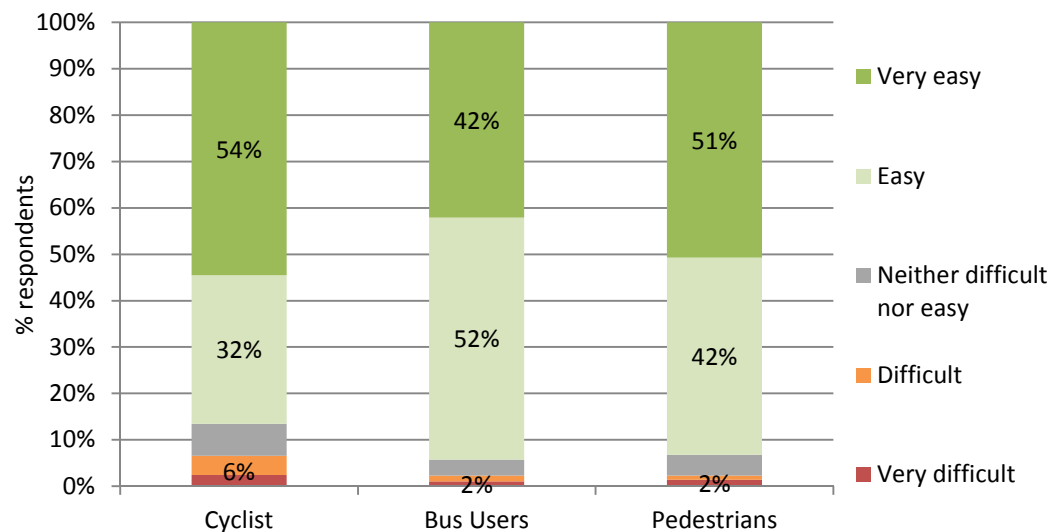
Figure 6.1: Q5 having used the bus stop and cycle bypass would you:



n Cyclist: 297, n Bus user: 438,

6.2.4 Figure 6.2 shows the ratings for each of the respondent groups, regarding how difficult or easy they found it to use the bus stop and cycle bypass.

Figure 6.2: Q2 How difficult or easy is this bus stop and cycle bypass to use



n Cyclist: 290, n Bus user: 485, n Pedestrian: 353.

- 6.2.5 6% of cyclists rated the bus stop and cycle bypass as difficult or very difficult to use compared to 2% percent of bus users and pedestrians. Although these percentages are small, the difference between ratings of cyclists and the bus users and pedestrians is distinct in statistical terms.
- 6.2.6 Of the nineteen cyclists (6%) who rated the bus stop and cycle bypass as difficult to use, eighteen cycled the route three or more times per week.
- 6.2.7 The improvement comments made by each of the three groups (cyclists, bus users and pedestrians), suggests that there is a recognised conflict issue between cyclists and bus users or pedestrians.
- 6.2.8 The major issue to emerge relates to a lack of clarity regarding which group has priority when crossing the cycle lane. Pedestrians crossed the cycle lane at any point, causing confusion regarding where priority lies at the designated crossing points.
- 6.2.9 Two cyclists reported having been in a collision with pedestrians, one reported having seen a collision and one pedestrian reported having been hit by a bicycle at the site (in relation to the 19 hours of video evidence summarised in Section 5, these reported collisions appear to have occurred at other time periods). A further ten cyclists reported having witnessed near misses.
- 6.2.10 A lack of clarity regarding priority is supported when reviewing satisfaction in relation to interaction between groups and the separation of groups.

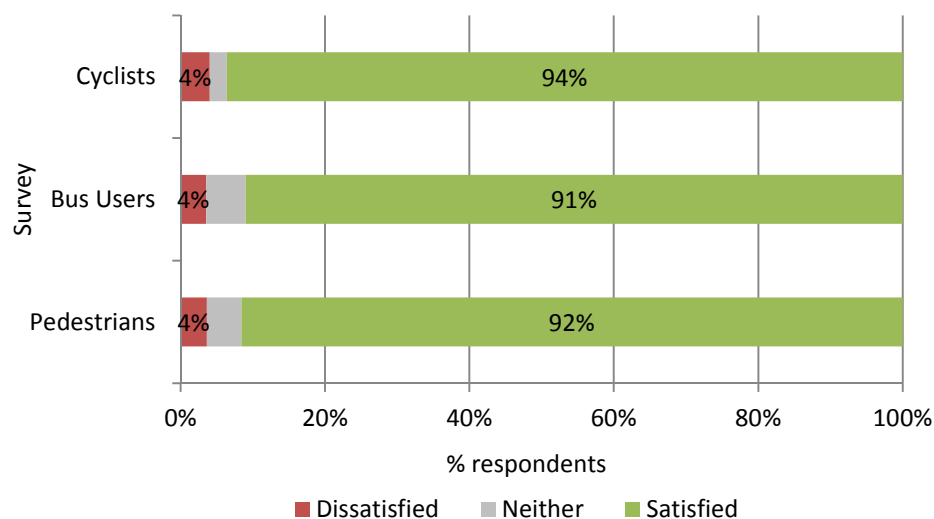
6.2.11 Across all groups there was satisfaction with clear markings denoting the cycle lane, but there were lower levels of cyclist satisfaction with the pedestrian crossing points being clearly marked. This may be as a consequence of bus users crossing the cycle lane at any point rather than at the designated crossing points.

6.2.12 In response to potential conflict issues, railings to separate the bus waiting area from the cycle bypass lane was suggested.

6.3 Whether the cycle path is clearly marked

6.3.1 There was a general consensus across the three groups that the cycle path was clearly marked, see figure 6.3.

Figure 6.3: Satisfaction with the cycle path being clearly marked



n Cyclist: 297, n Bus user: 477, n Pedestrian: 357

6.3.2 To prevent road traffic from stopping or parking in front of the entry to the cycle bypass lane improvements were suggested. These included – extending the bypass lane further along the road and the use of double yellow lines.

6.3.3 All groups mentioned the maintenance of the cycle bypass lane. It was noted that the bypass lane had already begun to accumulate litter.

Stakeholder Summary

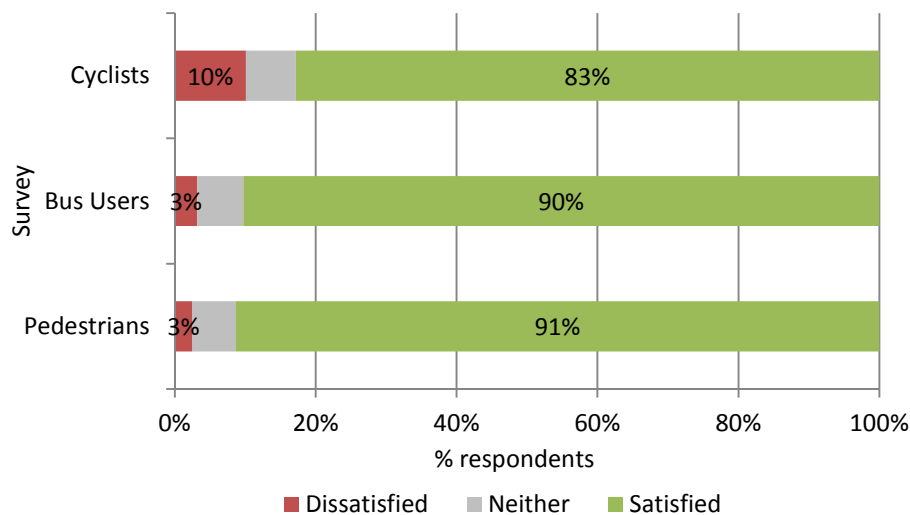
All of the following were viewed as positive attributes:

- That the cycle bypass lane was clearly marked and included 'user friendly' aspects;
- The high quality of the infrastructure;
- The use of green LED lights in the cycle lane was noted as a positive measure to improve visibility;
- Maintenance issues were raised as a concern.

6.4 Whether pedestrian crossing points are clearly marked

6.4.1 Both the bus users and pedestrians felt satisfied that the crossing points were clearly marked. This differed from the view held by cyclists. Figure 6.4 provides a summary of survey findings in relation to this issue.

Figure 6.4: Satisfaction with pedestrian crossing points being clearly marked



n Cyclist: 297, n Bus user: 472, n Pedestrian: 357

6.4.2 Some cyclists may believe that the pedestrian crossings were not clearly marked as they referred to pedestrians crossing the cycle lane at any point, reporting that they may not be clear enough for pedestrians to understand how to use them.

Stakeholder Summary

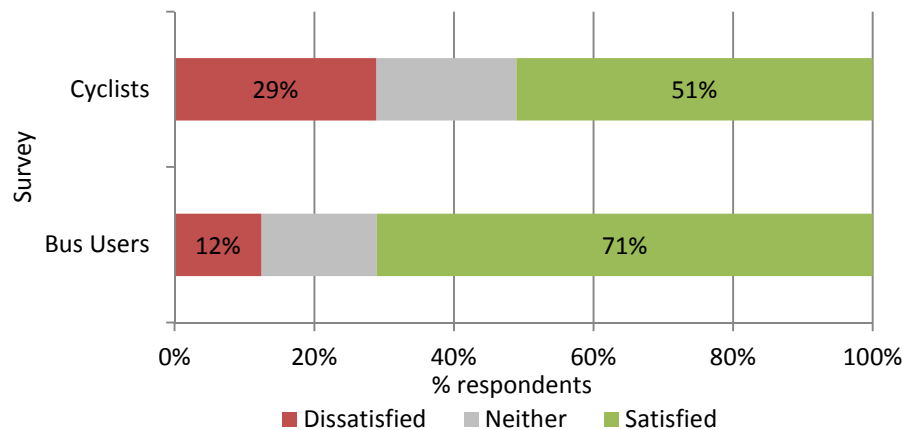
Stakeholders suggested:

- There were insufficient markings in the cycle lane to warn cyclists to slow down, and stop at the zebra crossing;
- Varying the colour of the LEDs at the zebra crossing, to raise cyclist's awareness of the zebra crossing point and the need to give way to pedestrians;
- Adding a signal controlled stop at the middle crossing point to assist the visually impaired when crossing the cycle bypass lane.

6.5 Issues about who has priority at crossing points

6.5.1 Priority at crossing points resulted in the highest level of bus user dissatisfaction across the range of aspects included in the surveys, figure 6.5. It also resulted in the highest level of dissatisfaction among cyclists - with almost one in three being dissatisfied with clarity regarding which group has priority at the different crossing points.

Figure 6.5: Satisfaction with it being clear who has priority at crossing points



n Cyclist: 294, n Bus user: 466

Stakeholder Summary

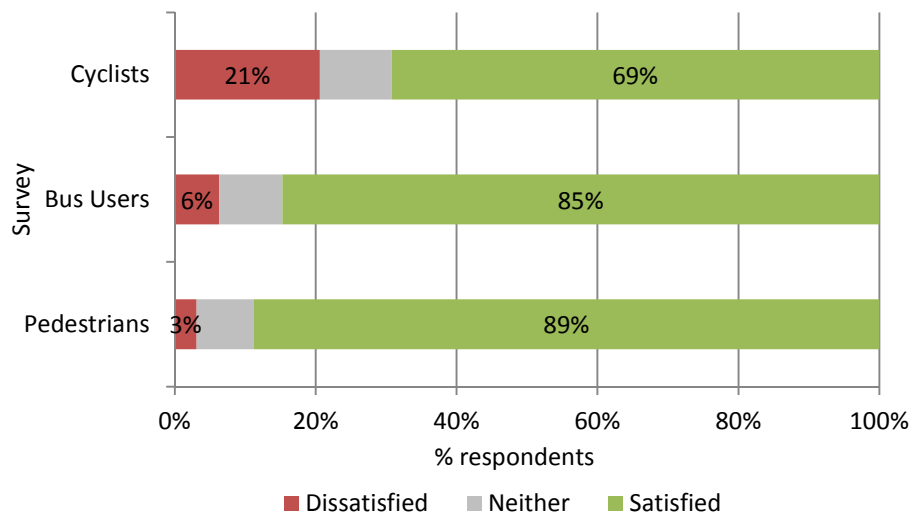
Stakeholders raised points including:

- Concerns regarding who has priority at the different crossing points;
- The ability of pedestrians to move freely across the cycle lane was praised;
- The speed of cyclists was a concern when discussing the issue of priority at crossing points.

6.6 Separation between cyclists, bus users and pedestrians

6.6.1 Both the pedestrians and bus users felt satisfied with the current separation method. Cyclists demonstrated a significantly higher level of dissatisfaction regarding the separation method used, compared to pedestrians and bus users, as Figure 6.6 shows.

Figure 6.6: Satisfaction with separation between cyclists, bus users and pedestrians



n Cyclist: 296, n Bus user: 459, n Pedestrian: 357

6.6.2 Two pedestrians in their comments felt that the facility was difficult to use, and had encountered difficulty crossing the path.

6.6.3 All 19 cycle respondents who rated the bus stop and cycle bypass as difficult to use, were dissatisfied with the separation aspect of the design. The majority of these respondents referenced the need for better separation between groups, with 5 noting near misses and 2 reporting collisions (these reported collisions do not appear to have occurred during the 19 hours of video monitoring, summarised in section 5).

Stakeholder Summary

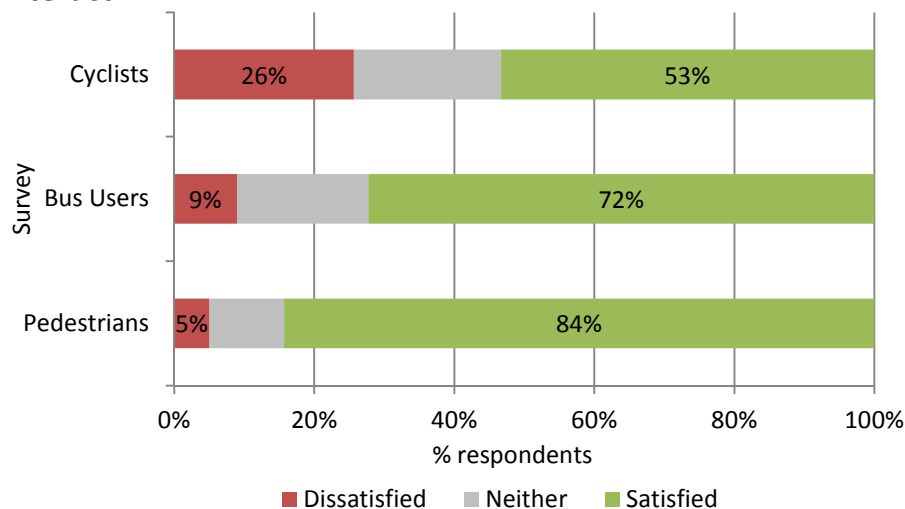
It was noted that:

- Pedestrians are likely to continue to follow their “desire lines” regardless of where crossings are positioned;
- Pedestrians being able to move freely about the space was noted positively;
- The guard-rail preventing bus users crossing in the blind spot to the rear of the bus shelters was noted positively;
- Adding more barriers to the cycle lanes may cause pressure points and generate more collisions with pedestrians.

6.7 Interactions between cyclists, bus users and pedestrians

6.7.1 How the groups interact further raised priority and separation issues, see Figure 6.7.

Figure 6.7: Satisfaction with how pedestrians, bus users and cyclists interact



n Cyclist: 296, n Bus user: 458, n Pedestrian: 357

6.7.2 Satisfaction with interaction was the second largest aspect of contention for cyclists, with 76 respondents (26%) stating dissatisfaction.

6.7.3 19 cycle respondents rated the bus stop and cycle bypass as difficult to use. All of these respondents were dissatisfied with how groups interact when using the facility.

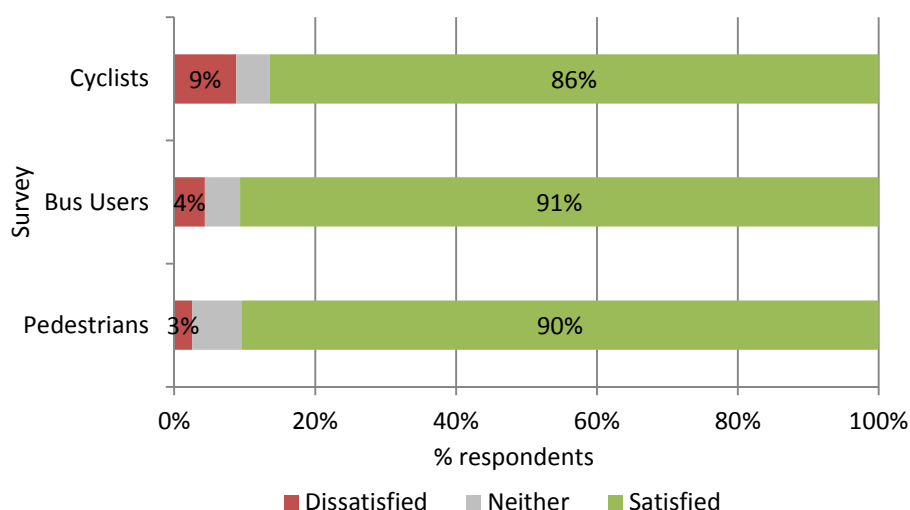
Stakeholder Summary

- Markings, rumble strips and clearly visible signs were suggested to address interaction issues;
- The speed of cyclists was noted as an area of concern;
- Cyclist groups raised the issue of insufficient Sheffield stands to lock bicycles to, resulting in cyclists standing in the bypass lane to lock their bikes to the railings on the bus stop platform.

6.8 Views on the cycle path passing behind the bus stop

6.8.1 The majority of users were satisfied with the introduction of a bypass lane that passed behind the bus stop, a small number of bus users and pedestrians (less than 4%) were dissatisfied with the arrangement, having noted that this raised the potential for conflict with safety as a concern, figure 6.8.

Figure 6.8: Satisfaction with the cycle path passing behind the bus stop



n Cyclist: 296, n Bus user: 460, n Pedestrian: 357

6.8.2 Of the 26 cyclists that were dissatisfied with the path passing behind the stop, 16 disagreed that the bypass lane improved cycle safety and felt that the lane put both cyclists and pedestrians at risk.

Stakeholder Summary

- Overall, the cycle bypass lane passing behind the bus stop was viewed positively;
- Safe access for visually impaired bus users was raised.

6.9 Issues concerning the width of the bus stop area

6.9.1 32 respondents (7%) of bus users were dissatisfied with the width of the waiting platform.

6.9.2 Of the 58 improvement comments made by the bus users, 19% referenced the width of the bus stop waiting platform as not being sufficient.

6.9.3 The width of the cycle bypass lane was also raised by 3 cyclists, with one cyclist suggesting that an additional 20cm on the current width would be enough.

Stakeholder Summary

- Stakeholders raised concerns in relation to the width of the bus stop platform, questioning whether it is wide enough to allow wheelchair users to board and alight buses safely;
- The adequacy of the width of the cycle bypass lane was also commented upon.

6.10 Issues requiring further consideration

6.10.1 The general design and layout of the trial facility was welcomed by the majority of each group surveyed and by most stakeholders. The demarcation of the cycle path appears to be clear to most groups.

6.10.2 The survey responses and stakeholder feedback did however highlight a number of issues that require further consideration.

6.10.3 These include:

- Who has priority - how to convey to cyclists and bus users/other pedestrians who has priority at the different cycle bypass lane crossing points;
- Separation and interaction issues - how to address separation and interaction issues between different groups of users; and,
- Speed of cyclists - how to deter cyclists travelling at high speeds through the cycle bypass lane.

6.10.4 Taking into account the feedback received from stakeholders, Section 7 outlines the measures agreed to address these issues.

7 Measures Proposed by Stakeholders

7.1.1 Table 7.1 provides an overview of all of the measures proposed by stakeholders and survey respondents in Section 6.

Table 7.1: Summary of measures for further discussion

Measure for discussion	Those suggesting the measure	Those with a different perspective	Section it relates to
Effective litter/ glass removal from cycle lane	Survey respondents, University of Manchester Sustainable Travel Planner, Love Your Bike	None	6.2 – Whether the cycle path is clearly marked
Prevention of buses and cars parking over the entrance/ exit of cycle path, e.g. by using double yellow lines	Survey respondents	None	6.2 – Whether the cycle path is clearly marked
Cycle lane markings or lighting to indicate that cyclists are to give way at zebra crossing	Survey respondents, the Visually Impaired Steering Group, members of the Disability Design Reference Group (DDRG), the Central Manchester University Hospitals Foundation Trust (CMFT), the Guide Dog Association	None	6.2 – Whether the cycle path is clearly marked
Measures to deter cycling at excessive speed	The Visually Impaired Steering Group, Living Streets, CMFT, the Guide Dogs Association	None	6.2 – Whether the cycle path is clearly marked 6.5 – Interactions between cyclists, bus users, pedestrians Also indicated in video analysis section (Section 5)

Measure for discussion	Those suggesting the measure	Those with a different perspective	Section it relates to
Signs to indicate who has priority at different crossing points and elsewhere on cycle path	Eight bus users referenced better signage. Arriva, the Visually Impaired Steering Group, members of the DDRG, Living Streets, The Guide Dog Association, CMFT	None	6.4 – Separation between cyclists, bus users, pedestrians 6.5 – Interactions between cyclists, bus users, pedestrians
More extensive use of guard rails or other barriers	Survey respondents, the Royal National Institute for Blind People (RNIB)	Living Streets, University of Manchester Bicycle Users Group	6.4 – Separation between cyclists, bus users, pedestrians 6.5 – Interactions between cyclists, bus users, pedestrians
Awareness raising and behavioural change	Love Your Bike, Transport Focus, RNIB, The Guide Dogs Association, University of Manchester Sustainable Travel Planner	None	6.4 – Separation between cyclists, bus users, pedestrians 6.5 – Interactions between cyclists, bus users, pedestrians
Signal controlled crossing instead of zebra crossing	RNIB, the Visually Impaired Steering Group, members of the DDRG	None	6.3 – Whether pedestrian crossing points are clearly marked
Increased width of cycle path, where space allows	Greater Manchester Cycling Campaign (GMCC)	None	6.7 – Issues concerning the width of the bus stop
Barriers which cannot be used for locking up bicycles	Contact Theatre, Transport Focus, University of Manchester Bicycle Users Group (UMBUG), University of Manchester Sustainable Travel Planner		6.5 – Interactions between cyclists, bus users, pedestrians

Measure for discussion	Those suggesting the measure	Those with a different perspective	Section it relates to
Sloped kerbing between footways and cycle lanes	GMCC	None	6.3 – Whether pedestrian crossing points are clearly marked
Adequate bicycle parking in close proximity to the cycle lane	Transport Focus, Love your Bike, UMBUG	None	6.5 – Interactions between cyclists, bus users, pedestrians
Increased width of the bus stop island	Living Streets, RNIB	None	6.9 - Issues concerning the width of the bus stop
Insufficient lip on the kerb	A member from DDRG	None	6.3 - Whether the cycle path is clearly marked
Bikes being locked to the guard rail	Transport Focus, UMBUG, Contact Theatre	None	6.5 – Interactions between cyclists, bus users, pedestrians

7.1.2 The measures and suggestions set out in Table 7.1 were discussed at an Evaluation Workshop, held in order to agree final recommendations following the trial bus stop evaluation.

8 The Evaluation Workshop

8.1 Overview

8.1.1 The trial bus stop Evaluation Workshop was held at TfGM's head office on Monday 16th November 2015 with 27 representatives in total, including 8 members of the TfGM/MCC project team and 19 external stakeholders.

8.1.2 The aim of the workshop was to provide an overview of the trial site evaluation, to present the key findings from the report and to provide an opportunity to discuss any concerns and potential design responses. The desired outcome from the facilitated workshop was an agreed set of recommendations which would be presented to Manchester City Council (MCC) for consideration and, if appropriate, implemented in the final scheme design.

8.1.3 All those stakeholders who attended an Evaluation Site Visit were invited to attend and participate in the Workshop. Representatives from the following organisations attended the workshop:

- Central Manchester University Hospitals NHS Foundation Trust (CMFT);
- Manchester Community Transport;
- Manchester Metropolitan University;
- Manchester City Council;
- TfGM;
- First Bus;
- Greater Manchester Cycle Campaign (GMCC);
- Guide Dogs;
- Living Streets;
- Royal National Institute of Blind People (RNIB);
- Stagecoach Bus;
- TfGM's Disability Design Reference Group (DDRG);
- Transport Focus;
- University of Manchester (UoM); and,
- Visually Impaired Steering Group (VISG).

8.2 Recommendations from the Oxford Road Trial Bus Stop Evaluation Workshop

8.2.1 Stakeholder discussions at the Evaluation Workshop centred on a number of key themes, which enabled the grouping of the agreed recommendations. These themes are set out below:

- Priority at pedestrian crossing points;
- Segregation between user groups;
- Inappropriate cycle speeds;
- Additional design aspects.

8.3 Priority at pedestrian crossing points

8.3.1 All workshop attendees agreed that there is a need for additional markings on the cycle bypass lane to promote understanding, encourage appropriate behaviours and safeguard users. In addition further signage is to be used which raises awareness and advises users of the priorities at the cycle bypass crossing points.

8.3.2 Agreed recommendations:

- ‘SLOW’ marking painted at the entrance to the cycle bypass lane;
- Rumble strips for cyclists on the approach to the crossing points, to both slow cyclists and provide an audible cue for pedestrians;
- A painted ‘Give Way’ line at the approach to the zebra crossing;
- A ‘Give Way’ sign at the approach to the zebra crossing;
- Red LED light’s within the bypass lane at the approach to the zebra crossing (to replace the existing green LED in this location);
- Additional signage to raise awareness that cyclists are entering a pedestrian area and raise awareness of the pedestrian crossing points; and,
- A full signal-controlled pedestrian crossing to be considered for the pair of bus stops adjacent to the CMFT hospital site.

8.4 Segregation between user groups

8.4.1 There was clear consensus amongst the workshop attendees that the segregation between the footway, cycle bypass lane and bus stop platform

was positive and effective. The recessed bypass lane improved awareness of the different areas for pedestrians, cyclists and bus users.

8.4.2 Concerns were raised that pedestrians and bus users could misinterpret the zebra crossing and believe it to apply to the main carriageway beyond the bus stop platform, potentially leading to extended crossing movements.

8.4.3 Agreed recommendations:

- Following a group discussion it was agreed that no further guardrail is required along the length of the bypass lane (on either side). It was agreed that additional guard-rail would reduce usable widths and potentially 'trap' pedestrians and bus users in the cycle bypass lane;
- A design for a physical barrier to be considered for the bus platform, adjacent the zebra crossing, to prevent pedestrians entering the road in error, without overly restricting the useable width for users of the bus stop platform.

8.5 Cycle speeds

8.5.1 All representatives agreed that the additional markings discussed in relation to increasing awareness around crossing priorities (set out in 8.3) were equally applicable to the issue of inappropriate cycle speeds and should be introduced to help address this concern.

8.5.2 Agreed recommendations:

- 'SLOW' marking painted at the entrance to the cycle bypass lane;
- Rumble strips for cyclists on the approach to crossing points, to both slow cyclists and provide an audible cue for pedestrians;
- Additional signage to raise awareness that cyclists are entering a pedestrian area and raise awareness of the pedestrian crossing points.

8.6 Additional design aspects comments

8.6.1 Workshop attendees discussed and suggested:

- The existing guardrails could be used to affix materials and signage promoting the scheme and safe cycling practices during the initial promotional campaign. This could also help to reduce the amount of cyclists locking their bikes to the guardrails;

- Use the promotional launch campaign to highlight that the faster cyclists are able to cycle on the road and are not required to use the bypass lane. It is anticipated that when the scheme is complete this is more likely to happen as the road will be bus and hackney carriage only and be subject to a 20mph speed limit;
- Create a marked priority area for wheelchairs and pushchairs to wait within the bus stop shelter;
- Additional bins to be located on the footway as well as (or instead of) the bus stop platform. This will reduce pedestrians unnecessarily crossing the cycle bypass lane;
- Increase cycle parking provision to reduce the quantity of cycles being locked to the guard-rail, and;
- To investigate and consider a disabled indicator panel which alerts drivers that there is a disabled person waiting at the bus stop.

9 Final Scheme Changes

- 9.1.1 The Manchester City Council (MCC) Design Team were asked to review the agreed workshop recommendations with a view to developing an updated general arrangement plan for the Oxford Road cycle bypass lanes, inclusive of those recommendations felt to be appropriate.
- 9.1.2 MCC focused their review on the four key themes agreed at the Evaluation Workshop - priority at pedestrian crossing points, segregation between user groups, inappropriate cycle speeds and the additional design aspects comments.
- 9.1.3 MCC's review concluded with the production of an updated general arrangement drawing which incorporated the majority of the recommended additions. This plan is entitled 'SK06 Trial Bus Stop Workshop Recommendations' and is available to view in conjunction with this report. The additional measures incorporated into the design are set out below.

9.2 Priority at pedestrian crossing points

- 9.2.1 With regard to priorities and awareness at pedestrian crossing points, the updated general arrangement now includes;
- Installation of bollard mounted signs at the zebra crossing point and additional signs attached to the guard-rail, stating 'Look for Cycles' and 'Give Way to Pedestrians' as appropriate;
 - Red LED lights at the give-way point on approach to the zebra crossing;
 - 'SLOW' marking painted at the entrance to the bypass lane;
 - Installation of rumble strips on the approach to pedestrian crossing points, and;
 - A painted 'Give Way' line at the approach to the zebra crossing.

9.3 Segregation between user groups

- 9.3.1 To address the concern that pedestrians may use the zebra crossing and proceed onto the main carriageway in error, it is proposed to relocate one of the waste bins to create a barrier between the bus platform tactile paving and the main carriageway, effectively blocking the desire line.

9.3.2 To minimise the potential for interactions the second waste bin will be relocated from the bus stop platform to the main footway to help reduce the amount of people stepping across the cycle bypass lane to use them.

9.3.3 As stated in 9.2.1, additional signage has been introduced to the general arrangement to raise awareness amongst users of the bus stop bypass facility and reinforce the segregation.

9.3.4 In accordance with the agreed recommendations no further guard-rail has been introduced into the revised design.

9.4 **Cycle speeds**

9.4.1 The layout changes referred to in section 9.2 are applicable to the issue of inappropriate cycle speeds and were agreed at the Evaluation Workshop as a suitable design response.

9.5 **Additional design aspects comments**

9.5.1 In response to the Evaluation Workshop discussions, it is confirmed that the Oxford Road Bus Priority scheme will increase the provision of cycle parking along the route, which should reduce the likelihood of cycles being locked to the guard-rail on the bus stop platforms.

9.5.2 A 'priority area' for pushchairs and wheelchairs will be provided within the bus shelters on the bus stop waiting platforms.

9.6 **Areas for Further Consideration**

9.6.1 The purpose of the trial stop evaluation was to develop an agreed template for the bus stop bypass facilities to be delivered through the Oxford Road bus priority scheme. The desired outcome was a general arrangement which would be replicated throughout the scheme area, to provide a continuity and consistency of approach to aid understanding and legibility for users.

9.6.2 The introduction of a fully signal-controlled pedestrian crossing for the cycle bypass lanes adjacent to the central Manchester hospital site was suggested during the evaluation process. As these would need to be bespoke designs, specific to the locality of the Manchester Royal Eye Hospital, they will be considered outside of this report.

- 9.6.3 Initial investigations suggest that non-standard signalling designs may need to be explored as the scale and massing of existing signalling equipment is designed with full-width vehicular carriageways in mind.
- 9.6.4 The suggestion of a disabled indicator panel, alerting drivers that a disabled person is waiting at the bus stop, was suggested during the course of the trial evaluation. Whilst no approved design solution or product is known of at this stage, TfGM are currently developing a system in partnership with Henshaws that uses coloured passes and hailers to alert bus drivers that a visually impaired passenger is at the stop and may require additional assistance.

10 Appendix A: Feedback from stakeholders following site visits

10.1 Overall perspectives

10.1.1 Overall the comments from stakeholders were positive. The colour demarcation of the different areas, the dedicated and segregated lane, and the “user-friendliness” of the new cycle lanes and bus stops were noted by the majority of stakeholders. The protection offered to cyclists, away from the danger of having to overtake buses, was also noted by multiple respondents.

10.1.2 Some areas for consideration were raised by stakeholders, which have been detailed below.

10.2 Whether the cycle path is clearly marked

10.2.1 One of the most common responses in the site-visit feedback revolved around how “user-friendly” the new cycle lane appeared. This was noted by multiple stakeholders, particularly when noting the bright colour change of the bypass lane.

10.2.2 Greater Manchester Cycling Campaign (GMCC) noted that the orange colour should be extended to all cycling facilities across Greater Manchester.

10.2.3 Love Your Bike commented on the high quality of the infrastructure at the trial stop, in contrast to the “poor facilities in the surrounding areas, which have an impact on the bypass bike route”. This was echoed by a representative from the University of Manchester.

10.3 Whether pedestrian crossing points are clearly marked

10.3.1 Transport Focus commented that the zebra crossing made the bus waiting platform seem very accessible, enabling it to be a dedicated space and not a walkway.

10.3.2 The kerb height and recessed cycle lane was noted as a positive design choice by The Guide Dogs Association.

10.3.3 GMCC raised the concern of vertical kerbs on the cycle lane. GMCC requested sloped kerbing, at an angle of thirty degrees, be considered in future for areas between footways and cycle lanes. For areas next to the general carriageway a forty-five degree angled kerb could be implemented.

10.3.4 Four of the six Visually Impaired Steering Group (VISG) members were very dissatisfied with the markings for the zebra crossings, and did not believe they were sufficient to cause cyclists to stop when a pedestrian attempts to cross. Zig zag markings on the cycle lane and a signal-controlled crossing were suggested by one stakeholder from the VISG as a suitable alternative.

10.3.5 The VISG also suggested having a pedestrian controlled crossing specifically at the hospital bus stop, to help those arriving and departing from the hospital via bus. It was commented that visually impaired members of the public cannot determine when a cyclist has stopped and the crossing is safe to use. The VISG suggested providing audio clues in the form of a signal controlled crossing, to highlight when the crossings are safe to use.

10.4 Issues about who has priority at crossing points

10.4.1 A member of the DDRG noted that lighting would be a useful addition, to light up cyclists who don't have lights on their bike and also to light up pedestrians waiting to cross at the zebra crossing.

10.4.2 The University of Manchester Student Union commented that the pathway in front of the Union is a very congested area, and may cause confusion amongst users. This was echoed by the University of Manchester Directorate, and the coordinator of the University of Manchester Bicycle Users' Group (UMBUG).

10.4.3 The Central Manchester University Hospitals Foundation Trust (CMFT) also noted concerns regarding who has priority at the different crossing points. The CMFT stated that it wasn't clear at any of the crossing points who had priority, and cyclists weren't slowing down enough to allow pedestrians to cross.

10.5 Separation between cyclists, bus users and pedestrians

10.5.1 A Local Councillor from the Moss Lane Ward noted the positive impact the separate lanes will have on her own cycle journey, by removing the need to interact with buses. Transport Focus concurred with this view, going on to state that the separation prevents any potential conflict between cyclists and those waiting, boarding and alighting buses.

10.5.2 The Royal National Institute of Blind People (RNIB) questioned whether barriers would be of use to prevent partially sighted pedestrians accidentally wandering into the cycle lanes. The RNIB noted they would need to be of reasonable length to be effective.

- 10.5.3 The coordinator of UMBUG stated that having guard rails would not be a preferable solution to preventing cyclist/pedestrian interaction, and could cause problems with pedestrians being trapped within the cycle lane. The risk of cyclists catching their handle bars on the barriers was also raised as a concern.
- 10.5.4 Representatives of the Contact Theatre noted that pedestrians are likely to continue wandering into, and crossing the bypass lane regardless to 'follow their own "desire path" rather than 'stick to pavements'. In contrast other stakeholders believed pedestrians would adjust when more cycle paths of this type had been implemented, and they had become accustomed to avoiding walking into them.
- 10.5.5 The ability of pedestrians to "move freely between the pavement and bus stop and the dedicated crossing spaces" was noted positively by Living Streets. Living Streets went on to praise the non-intrusive barriers by the bus stop, which did not block the potential "desire lines".
- 10.5.6 A wheelchair user from the DDRG noted that the barrier preventing people alighting from buses and walking directly across the cycle lane was a "great idea", highlighting how this covers the cyclists' blind spots effectively.
- 10.5.7 Love Your Bike commented that an awareness campaign would solve many of the "interaction issues" over time. At the time of their evaluation the Love Your Bike group witnessed mobility scooters and cashpoint queues using up space in the cycle lane.

10.6 Interactions between cyclists, bus users and pedestrians

- 10.6.1 Markings, rumble strips and clear, visible signs were highlighted as possible options for methods to slow cyclists down when entering the bypass lanes, by the VISG, Living Streets, the CMFT, and The Guide Dog Association.
- 10.6.2 Rumble strips would also serve to provide an audible cue to visually impaired pedestrians that a cyclist was approaching the bypass lane crossing points.
- 10.6.3 The CMFT also suggested installing LED lights "on the approach to any zebra crossings to act as a visual/psychological warning to cyclists that they need to give way to pedestrians (in addition to warning signs so that both day and night time frames are covered)."
- 10.6.4 Bus driver awareness training was raised as a crucial factor in the development and implementation of further bus stop bypasses on Oxford Road. The RNIB raised issues regarding observed driver behaviours at the bus stops, including stopping short of the pole which caused bus queuing

further down the stop. The RNIB went on to note that this is a common cause of concern for visually impaired people, and one that needs to be addressed for successful usage of the new bus stops. They suggested preventing the drivers from allowing passengers on or off until they've arrived at their designated stop.

- 10.6.5 The issue of bikes being padlocked to the guard rails was raised by the Contact Theatre and Transport Focus, stating that if the bikes were to topple for any reason they could create a hazard for other cyclists. The possibility of bicycles falling onto the bus platform, and hitting waiting bus users, was also raised as a concern relating to bikes being padlocked to the railings.
- 10.6.6 This issue was echoed by the coordinator of UMBUG, who stated that the railings should be altered so bicycles cannot be locked to them, and more Sheffield stands should be located in busier areas.
- 10.6.7 The locations of the new bypass lanes was called into question by the RNIB, who questioned whether an area that has a high number of visually/hearing impaired visitors is a sensible place to locate cycle paths with potentially hazardous crossings: "The Eye Hospital itself sees over 100,000 patients per year, many of whom will have recently suffered from sight loss and may be less confident when walking out and about".
- 10.6.8 The need for cyclists to recognise they are in a pedestrian zone was raised by multiple stakeholders. The speed at which cyclists were seen to be entering, journeying through, and exiting the cycle bypass lane was a cause for concern for some stakeholders.
- 10.6.9 A mobility impaired member of the DDRG pointed out that cyclists hadn't stopped at all when testing the zebra crossing and this could be remedied with writing on the road which highlights that the area is used by pedestrians. A member from the DDRG suggested implementing a speed limit on the cycle lane.
- 10.6.10 An Arriva representative suggested fitting a "Warning Pedestrians Crossing Ahead" sign at the entrance to the cycle lane, to sufficiently warn cyclists about the area they're entering.

10.7 Views on the cycle path passing behind the bus stop

- 10.7.1 The RNIB questioned the accessibility of the cycle path passing behind the bus stop for visually impaired users. Concerns regarding the uncontrolled zebra crossing, the lack of signs to encourage cyclists to slow down, and the need for safety barriers to protect vulnerable users, were all raised by the RNIB.

10.7.2 Three, out of the six, VISG members were dissatisfied that the cycle path passed behind the bus stop. One member of the VISG was very dissatisfied that the cycle lane passed behind the bus stop.

10.7.3 The majority of views regarding the location of the cycle bypass lane focused on how other users were accessing the space, and less on the principle of the cycle lane running behind the bus stop. The zebra crossing was recognised as a necessity, but concerns over whether or not cyclists would stop for pedestrians were raised.

10.8 Issues concerning the width of the bus stop area

10.8.1 The width of the new bus stop 'islands' was mentioned by Living Streets, in the context of wheelchairs users who need to gain momentum when using the boarding ramps onto buses. Living Streets believe that it must be wide enough to facilitate this activity effectively.

10.8.2 A wheelchair user from the DDRG also commented on the issue of wheelchair access at the bus stop, both in the waiting area and when trying to board a bus. Two wheelchair users from the DDRG went on to say there should be a dedicated waiting space for the elderly and disabled on the bus stop platform.

10.8.3 GMCC also noted the width of the bus stop (and the cycle lane) as an issue. GMCC stated that the cycle bypass lane and the bus stop should be 2m and 3m respectively, but they understand this bus stop is slightly narrower than what will be the norm at the others. GMCC went on to note that 2.5m is the "target width for this type of facility" in the Greater Manchester Cycling Design Guidance. GMCC also noted that the cycle lane should be wide enough to allow two cyclists to ride abreast without difficulty, and that a lane with an increased width would be safer overall, allowing cyclists to swerve if needed.

10.9 Overall areas of agreement

10.9.1 Stakeholders agreed that the colour contrast between the new cycle bypass lane and the pavement was a positive addition. Transport Focus highlighted how the colour clearly distinguishes the different uses across the highway, and creates a sense that the cycle lane is a different environment. This in turn would help raise awareness when walking close to these areas.

10.9.2 The majority of stakeholders were positive when discussing the segregation between buses, cyclists, and pedestrians that the design provides.

10.10 Areas for further consideration

10.10.1 The speed of cyclists using the cycle lane was questioned by multiple stakeholders, including Living Streets, a member of Arriva, the CMFT, the Disability Design Reference Group (DDRG), and GMCC, who mentioned the need of cyclists to be aware of crossing pedestrians and to make efforts to give way to them. An acute entry angle was noted as a way to slow cyclists down on their approach to the cycle lane.

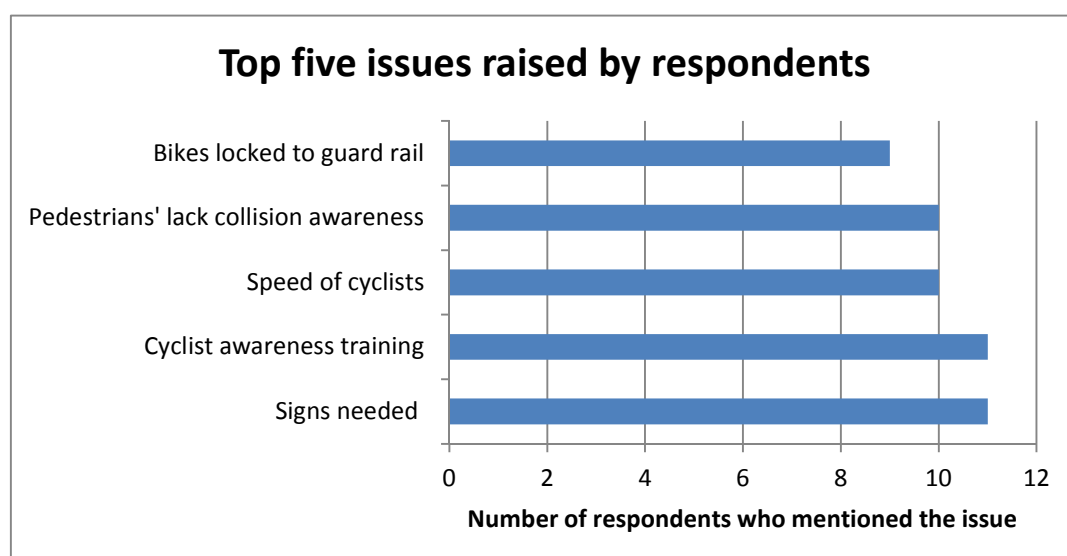
10.10.2 Signs were highlighted as a way to raise awareness as to who has priority. This was raised as a suitable approach by members from the DDRG, a member of Arriva, and the VISG.

10.10.3 The VISG and the RNIB both raised concerns about the cycle lane passing behind the bus stop, and the accessibility issues this raises for visually impaired users accessing the bus stop platform.

10.10.4 The University of Manchester Directorate, Student's Union, and coordinator of UMBUG all raised the issue of how busy the bus stop at the Student's Union usually is, and how this area will need special consideration to prevent collisions between users of the space.

10.10.5 The CMFT noted the importance of clear traffic management when constructing the cycle bypass lanes, to aid cyclists who are continuing to use the route.

10.10.6 A graph highlighting the top 5 issues raised is displayed below.



11 Appendix B: Analysis of Video Evidence

11.1 24/7 analysis of video footage

11.1.1 Tables 11.1 to 11.6 present the information on numbers and speeds of cyclist collected.

Table 11.1 Average Cycle Speed on cycle bypass lane (mph)						
Date & time period	00-07	07-10	10-16	16-19	19-24	All
Monday 05/10/2015	11.1	11.2	11.4	13.1	13.4	12.6
Tuesday 06/10/2015	12.5	13.1	13.5	13.4	13.8	13.4
Wednesday 07/10/2015	11.9	12.3	14.3	13.0	12.5	13.3
Thursday 08/10/2015	11.2	13.0	12.8	13.0	12.2	12.7
Friday 09/10/2015	11.6	12.0	12.3	12.0	10.5	11.8
Saturday 10/10/2015	13.5	13.9	12.0	11.8	11.8	12.2
Sunday 11/10/2015	12.4	11.1	11.2	12.0	12.3	11.9
All	12.3	12.5	12.7	12.8	12.5	12.7

11.1.2 The table shows average speeds by time period for cyclists who travelled the whole route. The average cycle speed over the whole week was 12.7 mph. Wednesday between 10:00 and 16:00 had the highest average speed (14.3 mph), Friday between 19:00 and midnight the lowest (10.5 mph). The time period between 16:00 and 19:00, the busiest time period, had the highest average speed over all days.

Table 11.2 Maximum Cycle Speeds on Cycle Bypass lane (mph)						
Date & time	00-07	07-10	10-16	16-19	19-24	All
Monday 05/10/2015	13.7	16.6	18.0	25.4	25.8	25.8
Tuesday 06/10/2015	19.9	18.7	24.1	25.8	23.5	25.8
Wednesday 07/10/2015	17.7	16.9	24.4	23.8	20.8	24.4
Thursday 08/10/2015	17.5	20.6	19.5	24.4	21.8	24.4
Friday 09/10/2015	17.2	17.0	18.4	18.5	16.0	18.5
Saturday 10/10/2015	18.0	17.3	18.7	19.1	19.5	19.5
Sunday 11/10/2015	20.4	16.7	20.2	18.5	18.9	20.4
All	20.4	20.6	24.4	25.8	25.8	25.8

11.1.3 The maximum speed that a cyclist travelled the full route was 25.8mph. Monday to Thursday had significantly higher maximum speeds than Friday and the weekend and these speeds mostly occurred after 16:00. The busiest time period (16:00 to 19:00) had maximum speeds well in excess of 20 mph from Monday through to Thursday.

Table 11.3 Cycle Count on cycle bypass lane (all)						
Date & time period	00-07	07-10	10-16	16-19	19-24	All
Monday 05/10/2015	19	36	404	567	299	1325
Tuesday 06/10/2015	41	55	402	580	281	1359
Wednesday 07/10/2015	25	36	406	430	215	1112
Thursday 08/10/2015	44	54	338	595	312	1343
Friday 09/10/2015	41	38	369	440	196	1084
Saturday 10/10/2015	64	26	184	160	153	587
Sunday 11/10/2015	65	20	160	136	146	527
All	299	265	2263	2908	1602	7337

11.1.4 In total, 7337 cyclists travelled on some part of the cycle route during the week. Monday, Tuesday and Thursday were equally busy and their busiest time period was 16:00 to 19:00 when there were on average more than 3 cyclists per minute travelling on some part of the lane.

Table 11.4 Cycle count on cycle bypass lane (full route)						
Date & time period	00-07	07-10	10-16	16-19	19-24	All
Monday 05/10/2015	16	27	265	424	204	936
Tuesday 06/10/2015	40	43	298	490	230	1101
Wednesday 07/10/2015	22	27	277	335	155	816
Thursday 08/10/2015	39	37	259	477	252	1064
Friday 09/10/2015	36	31	274	371	152	864
Saturday 10/10/2015	59	19	114	108	115	415
Sunday 11/10/2015	64	18	102	92	116	392
All	276	202	1589	2297	1224	5588

11.1.5 On average over the week, 76% of cyclists who used the cycle lane travelled the full route. The proportion was much higher between Midnight and 07:00 (92%) and lower between 10:00-16:00 (70%). Tuesday, Thursday and Friday all had approximately 80% using the full path whereas Monday and Saturday had 71%.

Table 11.5 Average Cycle Speed on road (mph)						
Date & time period	00-07	07-10	10-16	16-19	19-24	All
Monday 05/10/2015	15.5	20.8	21.1	20.6	20.5	20.3
Tuesday 06/10/2015	10.5	13.5	15.1	14.9	14.7	14.7
Wednesday 07/10/2015	9.3	18.9	19.8	18.8	17.4	17.9
Thursday 08/10/2015	12.7		15.5	15.8	14.7	15.4
Friday 09/10/2015	15.7	15.5	17.7	17.6	17.5	17.4
Saturday 10/10/2015	12.3	11.9	11.8	14.7	14.7	13.4
Sunday 11/10/2015	13.1	16.9	17.7	15.9	17.1	16.1
All	12.9	16.9	17.2	16.5	16.6	16.4

11.1.6 The average speeds of cyclist who used the road rather than the cycle lane was significantly higher at 16.4 mph.

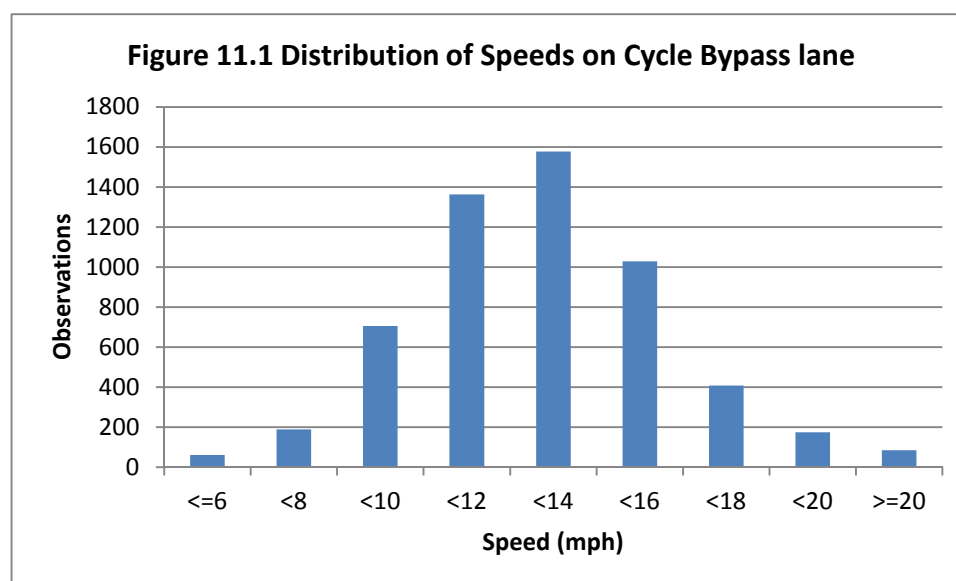
Table 11.6 Maximum Cycle Speed on road (mph)						
Date & time period	00-07	07-10	10-16	16-19	19-24	All
Monday 05/10/2015	18.6	23.2	25.9	25.9	25.9	25.9
Tuesday 06/10/2015	11.0	13.5	22.9	25.2	21.6	25.2
Wednesday 07/10/2015	17.4	20.1	25.9	25.6	25.2	25.9
Thursday 08/10/2015	13.9		24.5	24.5	20.6	24.5
Friday 09/10/2015	24.2	16.6	24.9	25.9	20.8	25.9
Saturday 10/10/2015	16.0	12.0	19.9	21.6	25.6	25.6
Sunday 11/10/2015	17.4	21.3	24.9	22.9	21.1	24.9
All	24.2	23.2	25.9	25.9	25.9	25.9

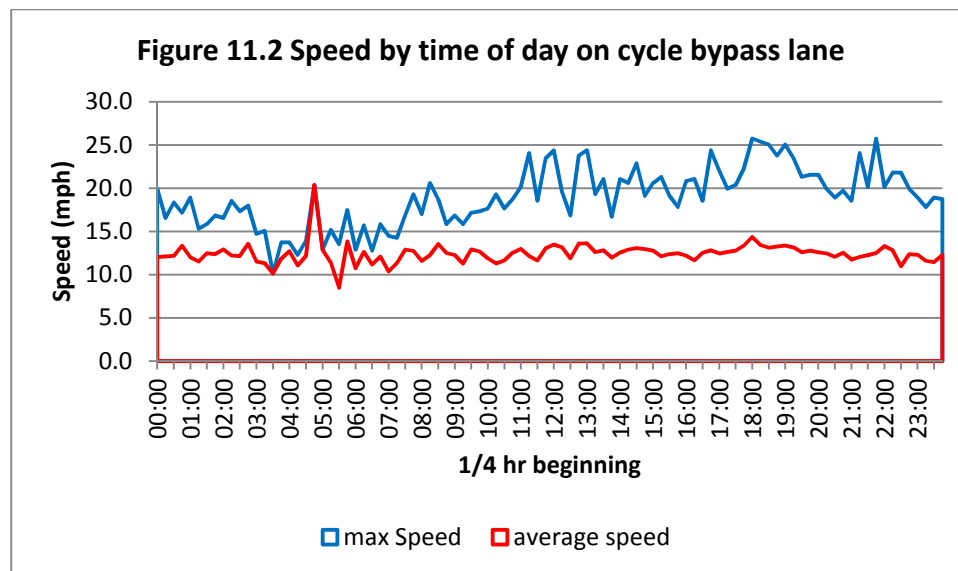
11.1.7 The maximum cycle speed on the road was only slightly faster than that on the cycle lane perhaps indicating that the fastest speeds on the cycle lane were wholly unconstrained.

Table 11.7 Cycle Count on road (mph)						
Date & time period	00-07	07-10	10-16	16-19	19-24	All
Monday 05/10/2015	6	3	18	32	20	79
Tuesday 06/10/2015	5	1	16	62	22	106
Wednesday 07/10/2015	4	2	16	15	27	64
Thursday 08/10/2015	2		21	68	36	127
Friday 09/10/2015	5	2	27	37	21	92
Saturday 10/10/2015	12	2	13	20	9	56
Sunday 11/10/2015	19	11	18	20	26	94
All	53	21	129	254	161	618

11.1.8 Only a small proportion of cyclists (8%) used the road as opposed to the cycle lane. The proportion was higher in the early morning and Sundays (18%).

11.1.9 Figures 11.1 and 11.2 show the distribution of speeds on the cycle bypass lane and the change in average and maximum speeds throughout the day respectively. Both only show cyclists who travelled the full route.





- 11.1.10 Figure 11.1 shows a normal distribution of speeds throughout the day. The number travelling 6mph or under roughly corresponds to the number that were recorded coming to a complete stop at a crossing. It is probable that the vast majority of those travelling under 10 mph adjusted their speed to accommodate pedestrians crossing. 1.5% were travelling at a speed that might be considered excessive (greater than or equal to 20mph). Perhaps counter intuitively the percentage was 2.2% at busier times (between 16:00 and 19:00 on a weekday).
- 11.1.11 Figure 11.2 shows little variation in the average speeds throughout the day aside from a spike in the early morning based on a small sample. Maximum speeds rise as volumes begin to rise after 11:00
- 11.1.12 Table 11.8 and 11.9 and Figures 11.3 and 11.4 show numbers of pedestrians crossing the cycle bypass lane by location and time day and location and day of the week respectively.

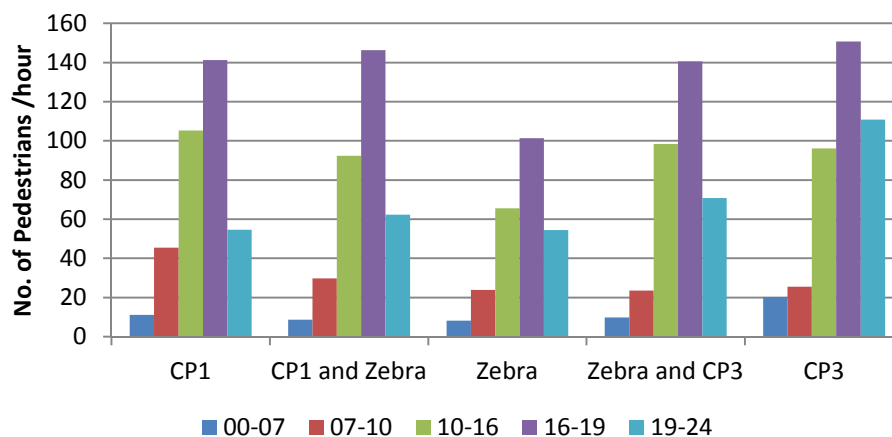
Table 11.8 Average Number of Pedestrians per hour crossing by Location and Time Period						
Time period & Location	CP1	CP1 and Zebra	Zebra	Zebra and CP3	CP3	All
00-07	11	9	8	10	20	58
07-10	45	30	24	24	26	148
10-16	105	92	66	98	96	458
16-19	141	146	101	141	151	680
19-24	55	62	55	71	111	353
All	64	61	46	63	75	309
% of all Pedestrians Crossing	21%	20%	15%	20%	24%	100%

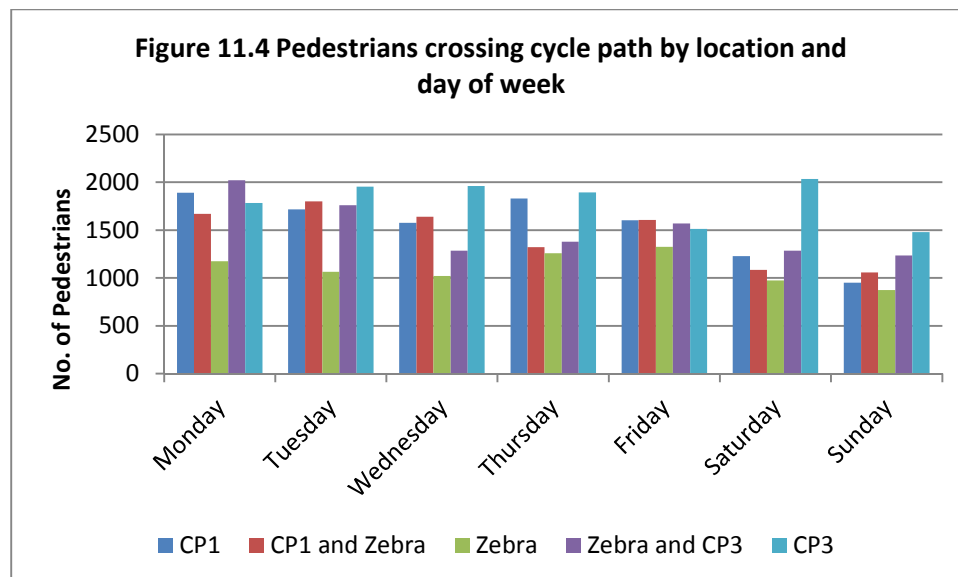
11.1.13 CP1 is the most north crossing point on the cycle bypass lane and CP2 is the most south crossing point on the bypass lane.

Table 11.9 Pedestrians crossing by Location and Day of Week

Day & Location	CP1	CP1 and Zebra	Zebra	Zebra and CP3	CP3	All
Monday 05/10/2015	1891	1671	1176	2023	1785	8546
Tuesday 06/10/2015	1716	1802	1064	1760	1953	8295
Wednesday 07/10/2015	1575	1641	1022	1286	1960	7484
Thursday 08/10/2015	1831	1323	1260	1379	1893	7686
Friday 09/10/2015	1604	1607	1324	1571	1512	7618
Saturday 10/10/2015	1229	1086	973	1287	2036	6611
Sunday 11/10/2015	950	1057	874	1236	1480	5597
All	10796	10187	7693	10542	12619	51837

Figure 11.3 Pedestrians per hour crossing cycle path by location and time of day





11.1.14 Mondays is the busiest day for pedestrians crossing the cycle lane and 16:00 – 19:00 the busiest time period.

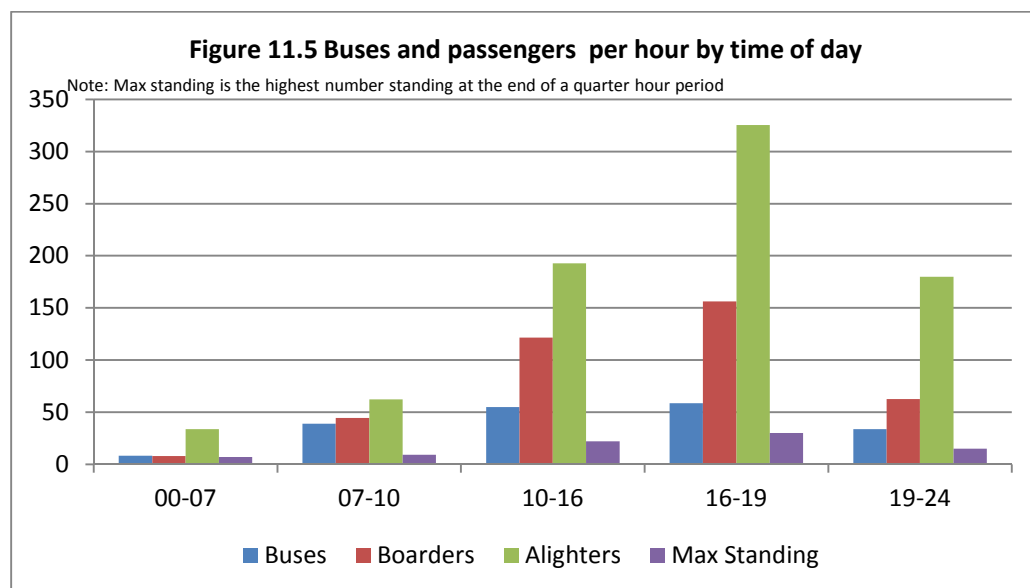
11.1.15 On average during the week 60% of pedestrians use a crossing to cross the cycle path. 15% of pedestrians use the zebra. There is little variation in usage of the zebra by time of day but higher proportions use the first crossing point (north) between 07:00 and 10:00 (31%) and the third crossing point (south) between midnight and 07:00 (35%) when pedestrian flows are lower.

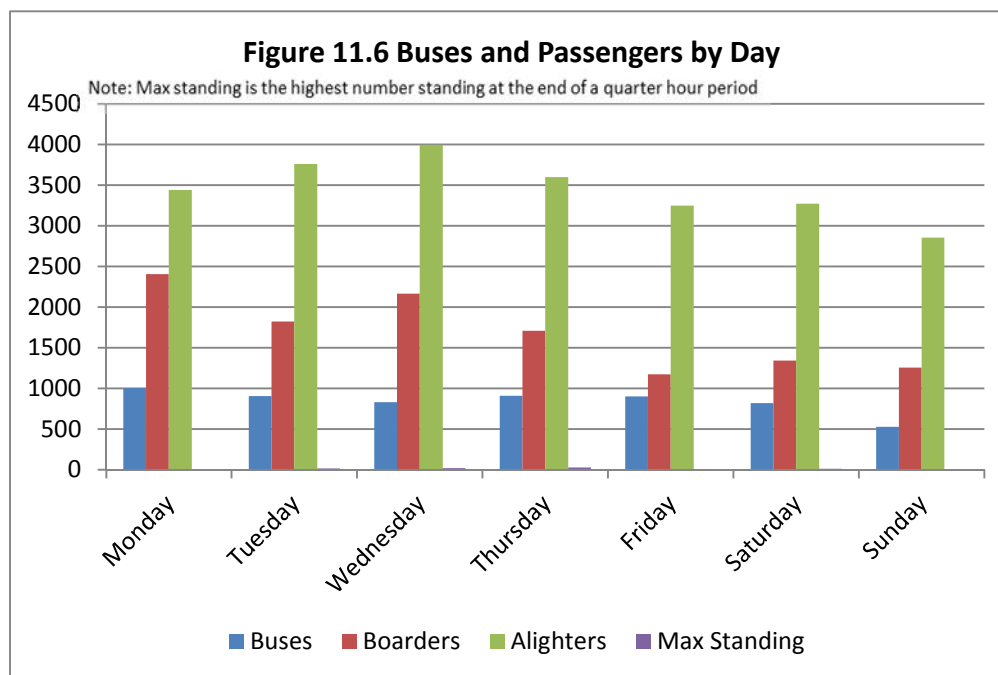
11.1.16 Likewise there is little variation in zebra usage by day of the week. There are a higher proportion of pedestrians using the other crossings on Wednesdays and Saturdays.

11.1.17 Table 11.9 and 11.10 and Figures 11.5 and 11.6 show buses and passengers by day and by day of the week respectively.

Table 11.10 Average Buses and Passengers per Hour by Time Period				
Time period & Location	Buses	Boarders	Alighters	Max Standing
00-07	8	8	34	7
07-10	39	44	62	9
10-16	55	121	193	22
16-19	58	156	326	30
19-24	34	63	180	15
All	35	71	144	30

Table 11.11 Average Buses and Passengers by Day				
Day & Location	Buses	Boarders	Alighters	Max Standing
Monday 05/10/2015	1006	2407	3441	11
Tuesday 06/10/2015	905	1824	3759	18
Wednesday 07/10/2015	832	2166	3996	22
Thursday 08/10/2015	912	1708	3600	30
Friday 09/10/2015	902	1175	3251	7
Saturday 10/10/2015	819	1342	3274	14
Sunday 11/10/2015	527	1257	2855	10
All	5903	11879	24176	30





11.1.18 Wednesdays are the busiest day for all bus passengers and bus alighters but there are more boarders on a Monday. 16:00 – 19:00 is by far the busiest time period for boarders, alighters and all passengers with almost 10 bus passengers per minute on average using the stop. This is also when most buses arrive and the highest count of people waiting at the stop was made.

11.1.19 The number of passengers using the stop is only 70% of pedestrians crossing the cycle lane. Reasons for this include people crossing the cycle lane and then the road and vice-versa, people using the bus platform as a short cut or easier route and people crossing but not boarding.

11.1.20 A count was made of cyclists completely stopping at crossings. 63 were recorded as doing so throughout the week; fewer than half of these being at the zebra crossing where they are required to do so if a pedestrian is waiting.

11.1.21 A cyclist stopping was recorded when a bicycle came to a complete stop for a crossing, so that these numbers do not include other possible interactions / avoidances / slow-downs etc. While the numbers indicate few cyclists giving way, the figures do not account for the more fluid interactions of cyclist and pedestrians that appeared to arise where pedestrians crossed the bypass lane by means of 'gap-selection'.

11.2 Detailed analysis of 19 hours of selected footage

11.2.1 Table 11.12 provides a period-by-period summary of the detailed video analysis of activity in the vicinity of the trial site. This covers a 19 hour time period. The paragraphs following the table provide commentary on the key statistics presented in the table and the specific and general comments made by the reviewer.

Table 11.12: Detailed Analysis of video footage

Day	Start	End	Hours	Pedestrians using designated crossings?		Are pedestrians looking before crossing?	Cyclists observing zebra crossing?	Bus passenger and/or Pedestrians using cycle lane as a pavement?	Are cyclists using the pavement?	Cyclists travelling with excess speed?	Conflicts by type		
				Yes	No	No	No	Yes	Yes	Yes	Minor	Major	Contact
Monday	08:00	09:00	1	145	93	2	0	10	8	1	0	0	0
Monday	13:00	14:00	1	291	313	26	0	21	2	0	8	2	0
Tuesday	15:00	19:00	4	1721	1420	98	0	61	10	0	22	5	0
Wednesday	13:00	14:00	1	433	296	32	2	35	2	3	0	0	0
Wednesday	16:00	17:00	1	405	296	15	2	34	0	0	0	1	0
Thursday	08:00	09:00	1	167	55	2	0	25	2	0	0	0	0
Thursday	15:00	18:00	3	1305	888	92	26	66	3	0	4	8	0
Friday	12:00	13:00	1	314	177	13	3	24	2	2	0	2	0
Friday	19:00	21:00	2	575	329	26	7	13	2	3	1	0	0
Saturday	14:00	15:00	1	273	149	5	0	16	0	0	0	0	0
Saturday	20:00	21:00	1	314	119	3	0	9	0	0	0	0	0
Sunday	14:00	16:00	2	503	339	16	3	21	3	0	0	0	0
Hours analysed			19	6446	4474	330	43	335	34	9	35	18	0

- 11.2.2 The proportion of crossings made using one of the three designated crossing points in the 19 hours (59%) was similar to that for the full week (60%). It was noticed that many pedestrians crossed diagonally across the lane following a desire lane using only part of the crossing.
- 11.2.3 The vast majority of cyclists did not need to come to a complete stop at the zebra crossing but 43 in the detailed analysis have been designated as failing to observe the zebra. A disproportionate number of cyclists (26) travelled during the evening peak on Thursday.
- 11.2.4 Further analysis of the camera covering the zebra in this time period confirms the findings and that, if pedestrians waiting within a couple of yards of the zebra were included, it would be higher. Cycles often come along the lane in convoys, perhaps due to patterns established on road and in one instance 6 cyclists did not stop while a pedestrian was waiting.
- 11.2.5 554 cyclists passed though, started at or left the lane at the zebra crossing. Taking the criteria that a cyclist should stop or at least slow down if a pedestrian is waiting or intending to cross within 2 yards of the zebra crossing, 498 cyclists were able to cycle through without adjusting their speed for the zebra as there were no pedestrians, 15 slowed or adjusted their speed to allow pedestrians to cross and 40 did not stop (although some may have slowed). There were three near collisions as a result of this although one involved a group of cyclists being photographed travelling down the bypass lane so could be considered atypical. It is also notable that almost 90% of cyclists in the busy time period passed through the zebra section of the lane with no hindrance.
- 11.2.6 It is difficult to distinguish whether it is bus passengers or pedestrians using the cycle lane as a footway or pavement but 335 bus passenger/pedestrians were identified as walking or standing in the cycle in the cycle lane during the detailed analysis of the video footage.
- 11.2.7 There were 34 cyclists who were noted as cycling on the pavement during the 19 hours of video footage analysis, though comments from the reviewers indicated this was sometimes due to the cycle path being obstructed.
- 11.2.8 Occasions on which cyclists were assessed as having travelled along the cycle path at excessive speed were rare, with nine having been considered to have been cycling above a safe speed level. "Excessive" speed is subjective and a study of the speeds in those hours where excessive speeds were recorded do not show speeds extraordinarily faster than at other times. Inappropriate speeds might be a better description though only one recording had a conflict (minor) associated with it.

11.2.9 Within the video footage, there were 53 instances that were considered to be conflict situations. Of these:

- No contacts were recorded;
- 18 were categorised as “major”, in which a cyclist had to brake or swerve rapidly or in which a pedestrian had to take rapid evasive action, such as jumping out of the way, to avoid a collision; and,
- 35 were noted as “minor”, in which either a cyclist and/or a pedestrian needed to adapt their movement to avoid a collision.

11.2.10 There were 330 instances in which someone was considered to have not looked before crossing the cycle path on foot. It should be noted that whether or not a pedestrian has looked before crossing is difficult to determine from video footage and therefore this figure will be to some extent an underestimate.

11.2.11 Three further questions that are also not shown in the table due to their relative rarity. These were when:

- One person tripped over the cycle path edge due to the difference in level from the surrounding area;
- There were two occasions on which the cycle path entry or exit point was blocked by a parked vehicle; and,
- There were no situations observed in which the level of litter on the cycle path was considered to have hampered a cyclist’s movement.

11.3 Summary of period-by-period analysis

11.3.1 This section complements the above statistical analysis by providing a commentary on each footage period’s events.

11.3.2 Monday 5th October 0800-0900: A van blocked the cycle path exit for a quarter of an hour and this caused cyclists to travel down the pavement and pedestrians to use the cycle path. Generally there was no conflict between cyclists and pedestrians on the cycle path but this appeared largely due to the low number of cyclists rather than observant pedestrian behaviour. There were as many pedestrians crossing elsewhere as using the designated crossing points.

11.3.3 Monday 5th October 1300-1400: The number of cyclists and pedestrians was higher. There were fewer cyclists using the pavement. The numbers of pedestrians not looking has also increased. The increased numbers led to quite a few minor and major conflicts as cyclists took action to avoid

pedestrians who were not looking or who were crossing away from the designated crossings or who were using the cycle path as a walkway. Cyclists are all observing the zebra crossing.

11.3.4 Tuesday 6th October 1500-1900: This was a very busy time period, particularly for cyclists. There was more evidence of cyclists behaving inappropriately in this time period i.e. not stopping at the zebra crossing, going round pedestrians, on the pavement and travelling the wrong way on the cycle path. This added to the conflicts as did a significant number of pedestrians not looking. However, pedestrian behaviour appeared to be better when it was dark rather than when there was good visibility. Pedestrians are crossing at the ends of the path and diagonally. Inappropriate use of the cycle path by pedestrians tends to escalate i.e. one starts then others follow.

11.3.5 Wednesday 7th October 1300–1400: Cyclists are generally looking out for pedestrians but some cyclists are travelling too fast and are not observant. Bus passengers are using the cycle path to wait for the bus. Pedestrians are spilling onto the cycle path when the pavement is busy. Pedestrians are crossing diagonally at the bends to shorten distance to crossing (i.e. they are travelling straight).

11.3.6 Wednesday 7th October 1600 – 1700: Pedestrians are still crossing diagonally at the bends, “short cutting” the cycle lane, particularly at busy periods. A cyclist almost knocks a pedestrian over due to a pedestrian walking out without looking from behind the bus stop. There is no overspill from bus stop in this time period but many pedestrians are walking up and down the cycle lane.

11.3.7 Thursday 8th October 0800–0900: Pedestrians are still walking up and down the cycle lane and a couple of cyclists are using the pavement, but generally pedestrians are being observant. Quite a few pedestrians are crossing the main road across the southern end of the cycle path.

11.3.8 Thursday 8th October 1500–1800: The apparent reason for pedestrians being on the cycle path is the busyness of the pavement. The path is blocked by a scooter, and a gang, for a while at the south end. Cyclists are mostly observant but a group didn’t observe the crossings and there was a minor confrontation between a cyclist and pedestrian. A wheelchair user struggled with the kerb while crossing from the other side of the main road. The individual sought to cross the cycle path away from the official crossing point at the southern end and blocked the cycle path for a while until they were given assistance. A car passenger left a car and almost collided with a cyclist on the cycle path. The evening time period

appears to be when more conflicts occur due to the increased numbers of bus passengers, pedestrians and cyclists.

- 11.3.9 Friday 9th October 1200-1300: Pedestrians are still “short cutting” the crossing and walking along the cycle lane. A major avoidance was required by a cyclist when a pedestrian with a trolley almost walks into a cyclist. Someone using an electric self-balancing electric scooter travels the wrong way along the cycle lane.
- 11.3.10 Friday 9th October 1900–2100: Quite a few cyclists not observing the zebra crossing and one travels the wrong way up the path causing others to take avoiding action.
- 11.3.11 Saturday 10th October 1400 -1500: There was generally good observance on all sides. However, a motor scooter used the whole length of the cycle lane.
- 11.3.12 Saturday 10th October 2000-2100: There are not many cyclists at this hour. Some pedestrian “short cutting” the crossing and walking up cycle lane.
- 11.3.13 Sunday 11th October 1400–1600: Some pedestrian “short cutting” the crossing and walking up cycle lane. A couple of joggers use the cycle lane and cyclists using the pavement.

11.4 Overall summary of the analysed periods

- 11.4.1 Some pedestrians were obviously unobservant at crossings and unaware of the cycle lane throughout the survey but the consequences of this were only noticeable when there were higher numbers of cyclists.
- 11.4.2 Bus passengers and other pedestrians are standing in the cycle lane and walking along it fairly consistently throughout the observed hours and there is not much evidence of a decrease in this over the course of the week. It is more apparent in busy periods - when conflicts occur.
- 11.4.3 There are isolated instances of conflicts, mainly due to pedestrian behaviour. These particularly occur in the evening peak when the number of cyclists travelling south is at its highest.
- 11.4.4 Occasionally cyclists are not observing the zebra crossing, using the pavement or travelling too fast. There is slight evidence that this was happening more towards the end of the week and later at night - aside from the time when the lane was blocked.

A6 Appendix 6: Route User Intercept Perception Survey



Wilmslow Road Cycleway: After Survey

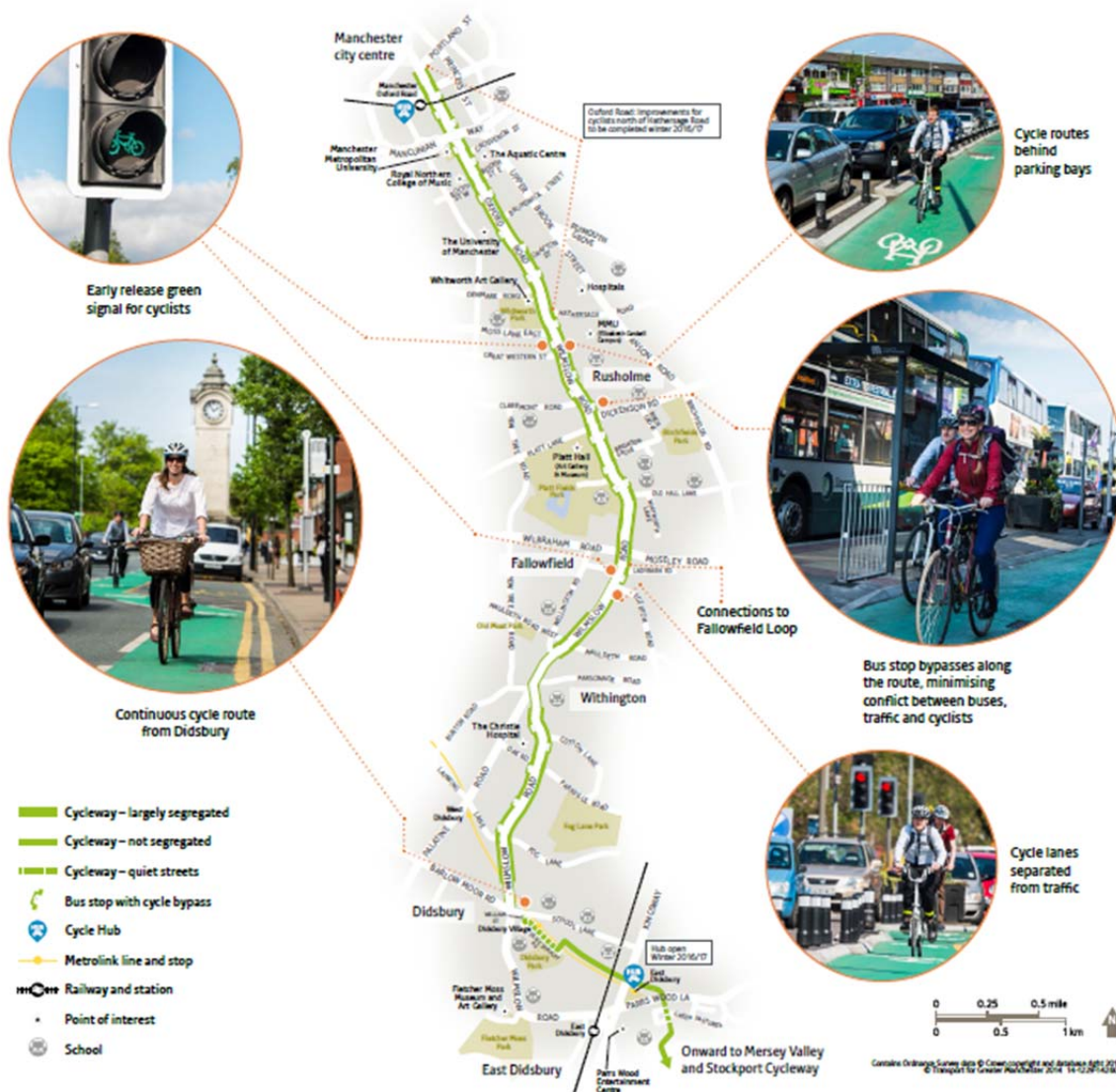
October 2016

Report

Survey Background

The Wilmslow Road cycleway is the flagship scheme in phase 1 of the Department for Transport funded Cycle City Ambition Grant, which forms part of Greater Manchester's aspiration to increase levels of cycling from 2% of trips to 10% of trips by 2025. It delivers largely segregated facilities, in both directions, over 5km of the Wilmslow Road corridor from the university area to Didsbury.

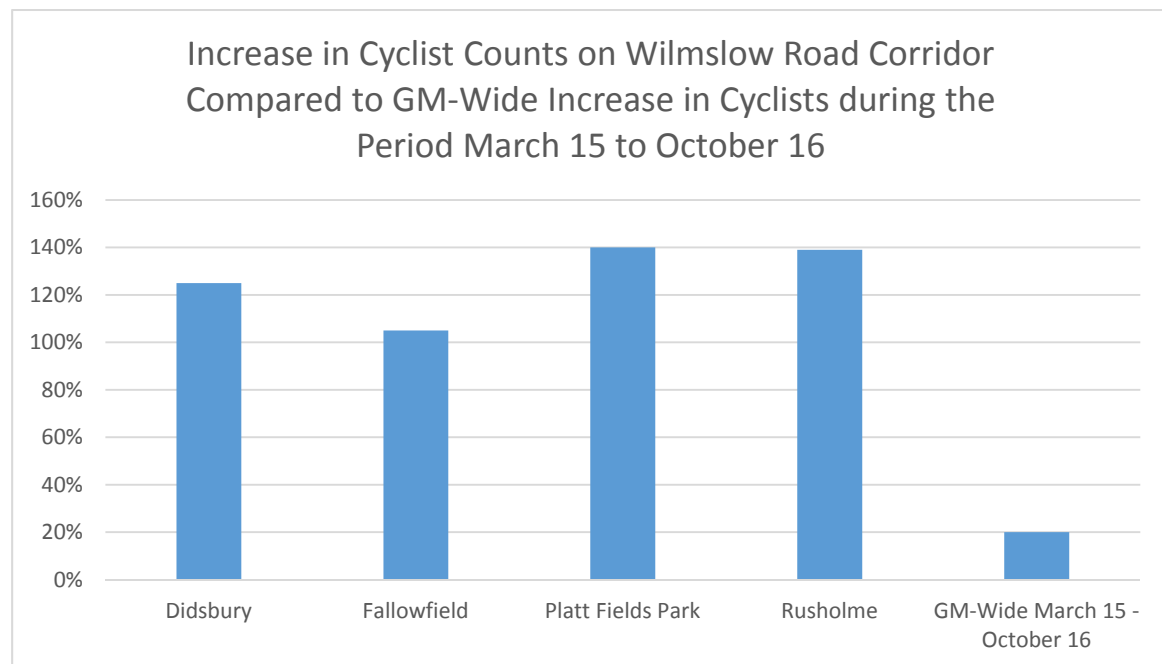
Wilmslow Road Route Map



At the time of the survey further works, as part of a bus priority package, were underway north of Hathersage Road on the Oxford road section of the corridor, when complete this will extend the cycleway 2km to the north and into the universities and city centre, making the completed cycleway 7km long. The survey was undertaken at this time, 6 months after opening, to give an early indication of its impacts, in order to inform the design of future cycling schemes.

Manual Count/Automatic Cyclist Count Data

A manual count of cyclists was undertaken at four points on Wilmslow Road (Park Crescent, Brighton Grove, Landcross Road and immediately north of Barlow Moor Road) on Wednesday 5th October 2016 between the hours of 6am and 9pm. Which showed a significant increase in cycle use on the Wilmslow Road corridor post the construction of the cycleway



This graph shows the increase in cyclist counts at sites across the Wilmslow Road Corridor as compared to the GM-Wide increase in cyclists (20%) during the period March 2015 to October 2016, taken from actual flow counts during March 2015 – October 2016 from 53 automatic cycle counters across Greater Manchester.

Introduction

This is a report of self-completion questionnaire survey data of route users of Wilmslow Road during October 2016. Either a paper questionnaire (see Appendix A) or a flyer (see below) with a survey link on it were distributed to route users at three points on Wilmslow Road (Moss Lane East/Oxford Place, Ladybarn Road/Sharwood St and Lapwing Lane/West Didsbury Metrolink). An incentive of £50 high street shopping vouchers was offered to respondents who completed the survey on paper or online.



The survey dates were Tuesday 18th, Thursday 20th and Saturday 22nd of October 2016. The survey times were during three 12-hour survey periods, two term time weekdays and a term time weekend day.

The surveys took place from 7am until 7pm on these days. The weather on these days was: Tuesday, scattered showers and sunshine; Thursday, scattered clouds and sunshine; and Saturday, scattered showers and cloud.

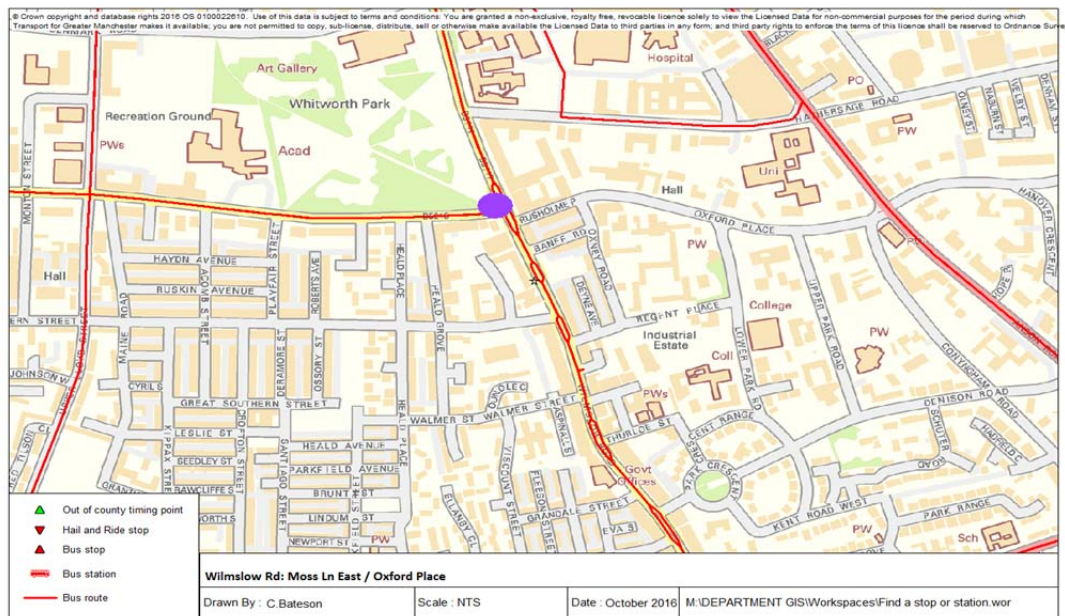
Methodology

Data Collectors were instructed to distribute flyers which contained details of the survey and a link to complete the survey online to all people using the junction at the site they were based at. A self-completion questionnaire along with free post envelope was distributed to all people who wished to take one. Data Collectors recorded the number of questionnaires/flyers handed out throughout the length of their duty along with the number of people who refused to take a questionnaire/flyer.

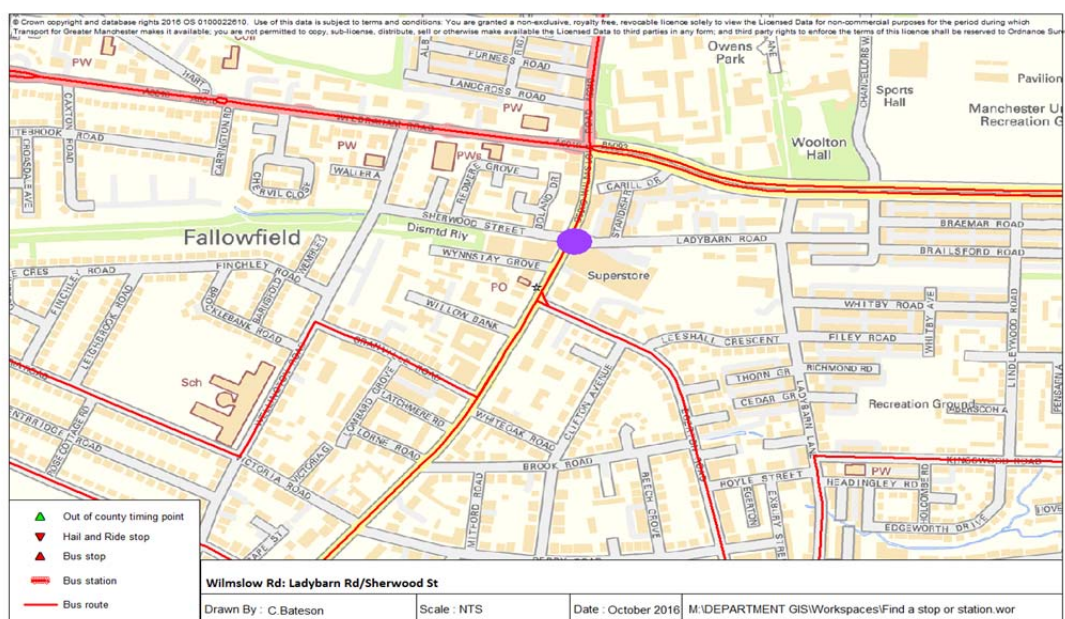
Survey Sites – Questionnaire/Flyer Distribution

The survey sites for questionnaire and flyer distribution were at three points on Wilmslow Road (Moss Lane East/Oxford Place, Ladybarn Road/Sharwood St and Lapwing Lane/West Didsbury Metrolink).

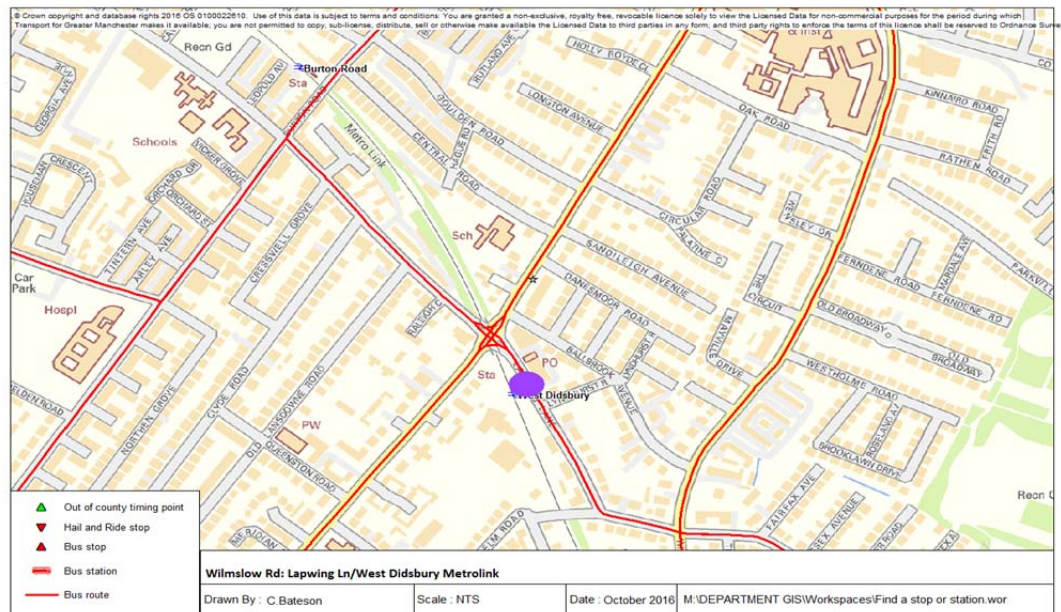
Wilmslow Road (Moss Lane East/Oxford Place)



Wilmslow Road (Ladybarn Road/Sharwood St)



Wilmslow Road Lapwing Lane/West Didsbury Metrolink



Comments collected during questionnaire distribution counts

The total number of route users who responded to the survey either online or by paper questionnaire was 366. 2,553 questionnaires/flyers were distributed over the three day survey period over the three survey sites giving a response rate of 14%. During this period a total of 1,233 route users declined to take a questionnaire or flyer. Many people declined to take a questionnaire or flyer as they had already received one on a previous survey day.

Location	Date	Comments
Moseley Road Junction	18/10/2016	Flyers handed to cyclists 07:00 - 10:30. From 10:30 onwards public walking. Raining by 11:00 - 14:30.
Moseley Road Junction	18/10/2016	Several cyclists complained of potholes in cycle path on the Manchester side of Wilmslow Road/Moseley Street junction. All but 2 refusals were from pedestrians. This may have been influenced by the fact that it was raining.
Moseley Road Junction	20/10/2016	Today's topic was bus stops with the road on one side and cycle path on the other. Passengers alighting from buses walk straight onto the cycle path. Road track accident involving cycle and car at Wilmslow Road/Ladybarn Road at 17:12.
Moseley Road Junction	20/10/2016	Refusals - already received flyer on Tuesday 18/10/2016.
West Didsbury Metrolink Station	18/10/2016	Palatine Road shut from 8am for resurfacing.
West Didsbury Metrolink Station	20/10/2016	21 of the refusals were from people who had received flyers on previous days.
Whitworth Park/Hathersage Road	18/10/2016	Rained from 14:00 - 16:00.
Whitworth Park/Hathersage Road	20/10/2016	A lot of people had flyers from previous duties.
Whitworth Park/Hathersage Road	20/10/2016	Most refusals were due to the cyclists already being in possession of a questionnaire.
Whitworth Park/Hathersage Road	22/10/2016	Cyclists unhappy being impeded by careless pedestrians.

Survey Data – All Respondents

The following sections of the report outline survey data from respondents aged 16 or over. Each respondent has consented to their data being processed by Transport for Greater Manchester and included in the following summary. Data are shown for cyclists, bus users, car drivers, pedestrians and all respondents.

Gender (345 respondents) – 66% male, 33% female, 1% prefer not to say

Age (364 respondents)

Age	Count	%
16-19	16	4%
20-29	107	29%
30-44	109	30%
45-59	92	25%
60-74	37	10%
75-84	3	1%
Grand Total	364	100%

Ethnicity (359 respondents): 60% White British, 18% Asian or Asian British, 5% White non-British, 3% Mixed/multiple ethnic groups, 1% Black African/Caribbean or Black British, 1% other ethnic group, 11% prefer not to say

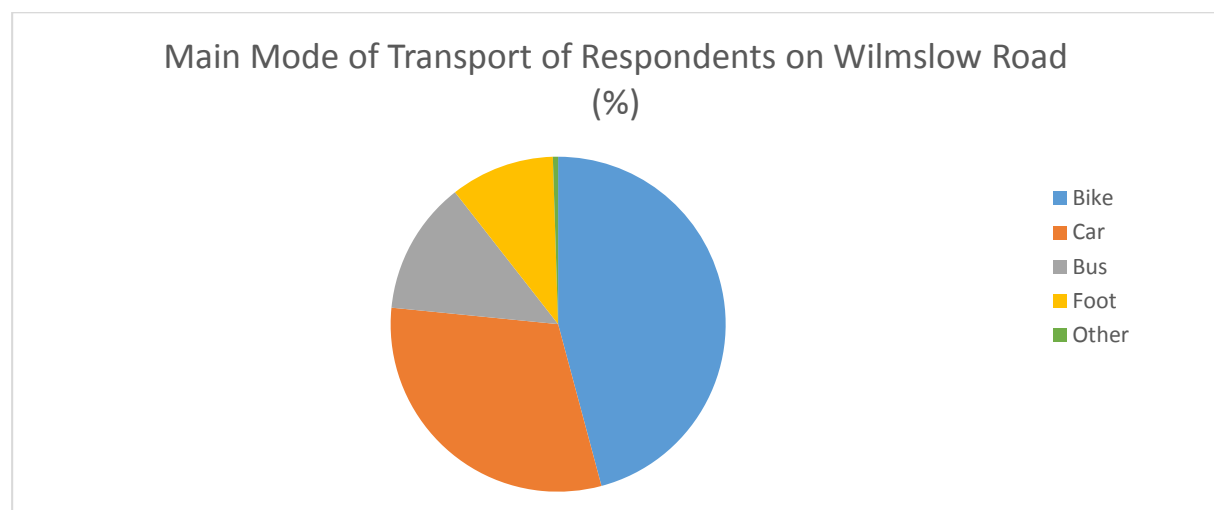
Health (359 respondents)

Respondents were asked if they had any long-term illness, health problem or disability that limited their daily activities or the work they do. 3% yes, limited a lot, 3% yes, limited a little, 87% no, 7% prefer not to say

Q1 - The three most popular uses for the route are: Route to City Centre (52%), Recreation/leisure/eating out (43%) and Shopping (39%)

Q2 - 90% of route users make this journey at least once a week

Q3 - Main mode of transport of respondents on Wilmslow Road



Please note that respondents who indicated their main mode of transport was either car, bus or foot will have been approached at the survey location as pedestrians.

Q14 - Overall, how many marks out of ten (being the highest rating) would you give the Cycleway (average score of all user groups)?

All Modes	Bike	Bus	Car	Foot
5.4	7.3	5.3	2.8	3.3

Q7 - If you don't cycle, please indicate your reasons why

Q7 - If you don't cycle, please indicate your reasons why	All Modes (n = 192)	Bus (n = 46)	Car (n = 110)	Foot (n = 36)
Prefer to drive	68	4	53	7
Roads are too dangerous	59	17	30	10
Rains too much/don't want to get wet	54	11	34	6
Don't have a bike	49	16	24	7
Prefer to use public transport	42	17	14	8
Prefer to walk	40	8	16	13
Don't want to get sweaty	32	5	21	3
Too far	22	-	20	1
Lack of safe cycle routes	20	3	14	2
Not fit enough	16	2	12	1
Nowhere to securely store my bike	14	1	7	4
Can't ride a bike	13	4	8	1
Put off by gear (hi vis, helmets, lycra etc)	11	1	8	1
Have a disability	8	2	4	2
Too hilly	1	-	1	-
Other	8	1	5	1

Q8 - If you don't cycle, have you changed any of your journeys because of the new segregated cycleway?

Q8 - If you don't cycle, have you changed any of your journeys because of the new segregated cycleway?	All Modes (n = 177)	Bus (n = 41)	Car (n = 104)	Foot (n = 32)
No, I use the same routes as before	96	26	50	18
Yes, I have re-routed to avoid the cycleway	89	15	54	14

Q9 - If you do cycle on Wilmslow Road, do you use the new segregated cycleway facilities?

Q9 - If you do cycle on Wilmslow Road, do you use the new segregated cycleway facilities?	All Modes (n = 174)	Bike (n = 160)	Bus (n = 4)	Car (n = 4)	Foot (n = 4)
Yes, I use the segregated cycleway	130	119	4	3	3
No, I cycle in the road	5	4	-	-	1
No, I cycle on the pavement	-	-	-	-	-
I use part of the segregated cycleway	39	37	-	1	-

Q10 - If you do cycle, have you changed your cycling routes because of the new segregated cycleway?

Q10 - If you do cycle, have you changed your cycling routes because of the new segregated cycleway?	All Modes (n = 174)	Bike (n = 160)	Bus (n = 4)	Car (n = 4)	Foot (n = 4)
No, I use the same routes as before	101	92	2	2	4
Yes, I have re-routed to use the cycleway	62	58	2	2	-
Yes, I have re-routed to avoid the cycleway	11	11	-	-	-

Survey Data – Main Mode: Bike (164 respondents)

The following section of the report outlines data collected during the three day survey period from respondents aged 16 or over for those respondents who indicated cycling as their main mode of transport on Wilmslow Road.

Gender (159 respondents) – 66% male, 33% female, 1% prefer not to say

Age (164 respondents)

Age	Count	%
16-19	11	7%
20-29	61	37%
30-44	41	25%
45-59	40	24%
60-74	10	6%
75-84	1	1%
Grand Total	164	100%

Ethnicity (163 respondents): 82% White British, 7% White non-British, 4% Mixed/multiple ethnic groups, 2% Asian or Asian British, 2% Black African/Caribbean or Black British, 1% other ethnic group, 3% prefer not to say

Health (161 respondents)

Respondents were asked if they had any long term illness, health problem or disability which limited their daily activities or the work they do. 2% yes, limited a lot, 2% yes, limited a little, 94% no, 2% prefer not to say.

Journey Purpose (164 respondents)

Respondents were asked for what purposes they use Wilmslow Road. Please note this is a multiple option question.

- 58% Route to City Centre (95 respondents)
- 53% Route to work (87)
- 40% Route to Fallowfield (66)
- 40% Route to university/college (66)
- 38% Recreation/leisure/eating out (62)
- 34% Route to Withington (56)
- 32% Route to West Didsbury (52)
- 31% I live here (51)
- 30% Route to Rusholme (50)
- 27% Shopping (44)
- 25% Personal services (bank, library etc) (41)
- 24% Visiting friends/family (40)
- 21% I work here (34%)
- 20% Route to somewhere else (32)
- 15% Health/medical (24)
- 1% Take children to/from school (1)
- 1% Other (2)

Q2 - How often do you travel on Wilmslow Road using each of the following modes of transport? (Mode = Bike)

Q2 - How often do you travel on Wilmslow Road using each of the following modes of transport?	5+ days per week	3-4 days per week	1-2 days per week	Monthly	Occasionally	Never	No response
On foot	9%	6%	16%	6%	24%	12%	27%
By bike	53%	27%	10%	4%	5%	-	1%
By bus	2%	4%	19%	12%	29%	9%	24%
By car	-	1%	7%	10%	21%	28%	33%
Other	-	-	-	-	1%	20%	79%

Q4 - Thinking about your main mode of transport, has the new segregated cycleway made your journey...? (Mode = Bike)

Q4 - Thinking about your main mode of transport, has the new segregated cycleway made your journey...?	Strongly agree	Agree	Neutral	Disagree	Strongly disagree	Don't Know	No response
Safer	38%	36%	13%	6%	4%	1%	1%
Faster	26%	29%	23%	12%	3%	1%	6%

Q5 - Do you agree or disagree that the new segregated cycleway has improved Wilmslow Road for... (Mode = Bike)

Q5 - Do you agree or disagree that the new segregated cycleway has improved Wilmslow Road for...	Strongly agree	Agree	Neutral	Disagree	Strongly disagree	Don't Know	No response
Cyclists	57%	26%	6%	6%	4%	1%	-
Pedestrians	10%	24%	37%	17%	4%	5%	2%
People with a disability	5%	14%	35%	8%	3%	31%	4%
Cars	10%	26%	24%	15%	8%	15%	2%
Buses	14%	36%	23%	9%	2%	13%	2%
Local businesses	9%	18%	34%	4%	1%	30%	4%
Local residents	16%	23%	27%	4%	2%	24%	3%

Q6 - Has the Wilmslow Road segregated cycleway encouraged you to cycle more? (Mode = Bike)

Q6 - Has the Wilmslow Road segregated cycleway encouraged you to cycle more?	Count	%
Cycle about the same	81	49%
Cycle a lot more	46	28%
Cycle a bit more	31	19%
Cycle a lot less	3	2%
Cycle a bit less	1	1%
Other	2	1%
Grand Total	164	100%

Q11 - Thinking about the new highway arrangement on Wilmslow Road, how would you rate the following features? (Mode = Bike)

Q11 - Thinking about the new highway arrangement on Wilmslow Road, how would you rate the following features?	Excellent	Good	Fair	Poor	Very poor	Don't know	No response
Early green lights for cyclists	56%	29%	5%	2%	1%	5%	1%
Kerb segregated cycle lanes	45%	37%	7%	6%	4%	2%	-
Cycle lanes around bus stops	36%	30%	14%	10%	5%	4%	-
Advanced stop boxes for cyclists	35%	37%	13%	2%	2%	9%	2%
Lower speed limits	34%	35%	16%	2%	1%	10%	2%
Painted cycle lanes	29%	37%	22%	6%	2%	1%	3%
Cycle lanes behind parking bays	27%	35%	16%	6%	4%	8%	4%
Shared ped/cycle crossings	13%	31%	31%	7%	5%	8%	5%
Narrower road	13%	24%	26%	14%	7%	13%	2%
Shared use pavements	8%	18%	27%	25%	14%	5%	2%
Parking	5%	16%	24%	12%	5%	35%	2%

Q13 - Thinking about Wilmslow Road specifically, do you agree or disagree with the following statements? (Mode = Bike)

Q13 - Thinking about Wilmslow Road specifically, do you agree or disagree with the following statements?	Strongly agree	Agree	Neutral	Disagree	Strongly disagree	No response
Building more cycleways should be a priority for Greater Manchester	67%	17%	8%	2%	2%	4%
The Cycleway is a good thing for Manchester	65%	21%	9%	2%	3%	1%
The Cycleway benefits me personally	50%	28%	11%	5%	5%	1%
The Cycleway has improved road safety	46%	29%	13%	6%	3%	2%
The Cycleway has improved the quality of life for local people	36%	28%	26%	3%	4%	2%
Pavements are wide enough	22%	44%	19%	12%	2%	2%
Cycle lanes are wide enough	19%	45%	10%	21%	4%	1%
The road is wide enough	17%	41%	28%	5%	6%	2%
There is enough car parking	15%	20%	46%	9%	5%	6%
It is easy to cross the road	14%	40%	29%	10%	2%	4%
Cyclists take care	12%	44%	21%	16%	4%	2%
Bus drivers take care	12%	37%	19%	18%	11%	3%
It is a pleasant place to go to	12%	35%	34%	13%	3%	3%
There is enough cycle parking	9%	24%	30%	29%	7%	1%
There are enough loading/unloading bays	9%	17%	59%	8%	4%	3%
Pedestrians take care	9%	17%	20%	32%	20%	2%
Motorists take care	4%	20%	24%	34%	15%	2%

Survey Data – Main Mode: Bus (46 respondents)

The following section of the report outlines data collected during the three day survey period from respondents aged 16 or over for those respondents who indicated bus as their main mode of transport on Wilmslow Road.

Gender (44 respondents) – 52% male, 45% female, 2% prefer not to say

Age (46 respondents)

Age	Count	%
16-19	2	4%
20-29	12	26%
30-44	14	30%
45-59	6	13%
60-74	11	24%
75-84	1	2%
Grand Total	46	100%

Ethnicity (45 respondents): 64% White British, 16% Asian or Asian British, 7% White Non-British, 4% Mixed/multiple ethnic groups, 9% prefer not to say

Health (46 respondents)

Respondents were asked if they had any long term illness, health problem or disability which limited their daily activities or the work they do. 7% yes, limited a lot, 2% yes, limited a little, 87% no, 4% prefer not to say.

Journey Purpose (46 respondents)

Respondents were asked for what purposes they use Wilmslow Road. Please note this is a multiple option question.

- 80% Route to City Centre (37 respondents)
- 46% Route to Fallowfield (21)
- 46% Shopping (21)
- 43% Recreation/leisure/eating out (20)
- 39% I live here (18)
- 37% Route to West Didsbury (17)
- 35% Route to Rusholme (16)
- 30% Route to work (14)
- 28% Personal services (bank, library etc) (13)
- 24% Route to university/college (11)
- 22% Route to Withington (10)
- 20% Route to somewhere else (9)
- 20% Health/medical (9)
- 15% Visiting friends/family (7)
- 15% I work here (7)
- 7% Other (3)

Q2 - How often do you travel on Wilmslow Road using each of the following modes of transport? (Mode = Bus)

Q2 - How often do you travel on Wilmslow Road using each of the following modes of transport?	5+ days per week	3-4 days per week	1-2 days per week	Monthly	Occasionally	Never	No response
On foot	15%	13%	22%	7%	20%	-	24%
By bike	-	2%	13%	2%	13%	33%	37%
By bus	43%	15%	26%	7%	-	-	9%
By car	9%	-	11%	13%	15%	24%	28%
Other	-	-	-	-	-	26%	74%

Q4 - Thinking about your main mode of transport, has the new segregated cycleway made your journey...? (Mode = Bus)

Q4 - Thinking about your main mode of transport, has the new segregated cycleway made your journey...?	Strongly agree	Agree	Neutral	Disagree	Strongly disagree	Don't Know	No response
Safer	11%	35%	20%	4%	26%	2%	2%
Faster	4%	22%	26%	13%	28%	-	7%

Q5 - Do you agree or disagree that the new segregated cycleway has improved Wilmslow Road for... (Mode = Bus)

Q5 - Do you agree or disagree that the new segregated cycleway has improved Wilmslow Road for...	Strongly agree	Agree	Neutral	Disagree	Strongly disagree	Don't Know	No response
Cyclists	39%	28%	7%	2%	15%	7%	2%
Pedestrians	17%	24%	17%	11%	28%	-	2%
People with a disability	13%	-	30%	2%	35%	17%	2%
Cars	15%	20%	11%	13%	28%	11%	2%
Buses	22%	26%	7%	11%	35%	-	<1%
Local businesses	9%	7%	24%	7%	30%	22%	2%
Local residents	7%	11%	28%	7%	28%	17%	2%

Q6 - Has the Wilmslow Road segregated cycleway encouraged you to cycle more? (Mode = Bus)

Q6 - Has the Wilmslow Road segregated cycleway encouraged you to cycle more?	Count	%
Didn't cycle before and still don't cycle	22	49%
I am considering cycling	8	18%
Cycle about the same	5	11%
Cycle a bit more	4	9%
Cycle a lot less	3	7%
Cycle a lot more	2	4%
Prefer not to say	1	2%
Grand Total	45	100%

Q11 - Thinking about the new highway arrangement on Wilmslow Road, how would you rate the following features? (Mode = Bus)

Q11 - Thinking about the new highway arrangement on Wilmslow Road, how would you rate the following features?	Excellent	Good	Fair	Poor	Very poor	Don't know	No response
Kerb segregated cycle lanes	22%	22%	4%	9%	26%	7%	11%
Advanced stop boxes for cyclists	22%	20%	15%	4%	13%	11%	15%
Early green lights for cyclists	17%	22%	13%	9%	11%	11%	17%
Painted cycle lanes	17%	20%	11%	13%	22%	7%	11%
Cycle lanes behind parking bays	15%	22%	11%	4%	26%	11%	11%
Cycle lanes around bus stops	15%	17%	11%	11%	33%	4%	9%
Lower speed limits	11%	20%	26%	4%	20%	7%	13%
Narrower road	2%	11%	17%	15%	35%	9%	11%
Parking	2%	4%	13%	20%	28%	17%	15%
Shared use pavements	-	13%	24%	15%	33%	4%	11%
Shared ped/cycle crossings	-	22%	17%	13%	26%	9%	13%

Q13 - Thinking about Wilmslow Road specifically, do you agree or disagree with the following statements? (Mode = Bus)

Q13 - Thinking about Wilmslow Road specifically, do you agree or disagree with the following statements?	Strongly agree	Agree	Neutral	Disagree	Strongly disagree	No response
The Cycleway is a good thing for Manchester	37%	22%	9%	4%	26%	2%
Building more cycleways should be a priority for Greater Manchester	33%	24%	11%	2%	26%	4%
The Cycleway has improved road safety	33%	17%	15%	13%	17%	4%
The Cycleway has improved the quality of life for local people	24%	17%	17%	7%	30%	4%
Pavements are wide enough	22%	33%	7%	13%	22%	4%
Cycle lanes are wide enough	17%	41%	24%	9%	2%	7%
The Cycleway benefits me personally	17%	20%	17%	15%	24%	7%
It is easy to cross the road	15%	13%	24%	15%	24%	9%
It is a pleasant place to go to	13%	20%	24%	9%	22%	13%
The road is wide enough	13%	17%	20%	15%	28%	7%
Bus drivers take care	9%	37%	20%	15%	7%	13%
Pedestrians take care	9%	17%	17%	41%	7%	9%
Cyclists take care	9%	15%	22%	17%	28%	9%
There is enough car parking	7%	11%	41%	11%	20%	11%
There are enough loading/unloading bays	7%	7%	52%	11%	13%	11%
There is enough cycle parking	2%	20%	46%	9%	7%	17%
Motorists take care	2%	13%	26%	33%	15%	11%

Survey Data – Main Mode: Car (110 respondents)

The following section of the report outlines data collected during the three day survey period from respondents aged 16 or over for those respondents who indicated car as their main mode of transport on Wilmslow Road.

Gender (99 respondents) – 68% male, 31% female, 1% prefer not to say

Age (109 respondents)

Age	Count	%
20-29	23	21%
30-44	43	39%
45-59	32	29%
60-74	11	10%
Grand Total	109	100%

Ethnicity (105 respondents): 46% Asian or Asian British, 31% White British, 2% Mixed/multiple ethnic groups, 2% White Non-British, 2% other ethnic group, 17% prefer not to say.

Health (106 respondents)

Respondents were asked if they had any long term illness, health problem or disability which limited their daily activities or the work they do. 4% yes, limited a lot, 5% yes, limited a little, 79% no, 12% prefer not to say.

Journey Purpose (110 respondents)

Respondents were asked for what purposes they use Wilmslow Road. Please note this is a multiple option question.

- 52% Shopping (57 respondents)
- 47% Recreation/leisure/eating out (52)
- 39% Route to Rusholme (43)
- 32% Route to City Centre (35)
- 26% Route to work (29)
- 24% Visiting friends/family (26)
- 22% Personal services (bank, library etc) (24)
- 20% Route to Fallowfield (22)
- 20% Route to West Didsbury (22)
- 20% Route to Withington (22)
- 17% I work here (19)
- 15% Route to somewhere else (17)
- 14% Health/medical (15)
- 13% I live here (14)
- 7% Take children to/from school (8)
- 6% Route to university/college (7)
- 5% Other (6)

Q2 - How often do you travel on Wilmslow Road using each of the following modes of transport? (Mode = Car)

Q2 - How often do you travel on Wilmslow Road using each of the following modes of transport?	5+ days per week	3-4 days per week	1-2 days per week	Monthly	Occasionally	Never	No response
On foot	10%	6%	15%	5%	10%	7%	45%
By bike	1%	2%	4%	1%	6%	24%	63%
By bus	3%	3%	5%	7%	10%	12%	60%
By car	46%	21%	18%	10%	1%	1%	3%
Other	3%	-	2%	3%	1%	11%	81%

Q4 - Thinking about your main mode of transport, has the new segregated cycleway made your journey...? (Mode = Car)

Q4 - Thinking about your main mode of transport, has the new segregated cycleway made your journey...?	Strongly agree	Agree	Neutral	Disagree	Strongly disagree	Don't Know	No response
Safer	4%	5%	5%	16%	65%	4%	2%
Faster	-	2%	7%	16%	65%	2%	8%

Q5 - Do you agree or disagree that the new segregated cycleway has improved Wilmslow Road for... (Mode = Car)

Q5 - Do you agree or disagree that the new segregated cycleway has improved Wilmslow Road for...	Strongly agree	Agree	Neutral	Disagree	Strongly disagree	Don't Know	No response
Cyclists	15%	24%	14%	9%	26%	6%	5%
Pedestrians	3%	4%	9%	25%	49%	4%	6%
People with a disability	2%	2%	10%	18%	54%	8%	6%
Cars	2%	2%	5%	16%	67%	3%	5%
Buses	1%	5%	11%	18%	49%	8%	7%
Local businesses	1%	3%	4%	15%	61%	11%	6%
Local residents	1%	4%	11%	15%	52%	11%	6%

Q6 - Has the Wilmslow Road segregated cycleway encouraged you to cycle more? (Mode = Car)

Q6 - Has the Wilmslow Road segregated cycleway encouraged you to cycle more?	Count	%
Didn't cycle before and still don't cycle	62	57%
Cycle a lot less	12	11%
Cycle about the same	7	6%
I am considering cycling	5	5%
Cycle a bit more	3	3%
Cycle a bit less	2	2%
Cycle a lot more	1	1%
Prefer not to say	13	12%
Other	3	3%
Grand Total	108	100%

Q11 - Thinking about the new highway arrangement on Wilmslow Road, how would you rate the following features? (Mode = Car)

Q11 - Thinking about the new highway arrangement on Wilmslow Road, how would you rate the following features?	Excellent	Good	Fair	Poor	Very poor	Don't know	No response
Kerb segregated cycle lanes	6%	8%	15%	16%	41%	5%	9%
Early green lights for cyclists	5%	8%	12%	17%	29%	14%	15%
Advanced stop boxes for cyclists	5%	7%	17%	11%	35%	11%	14%
Painted cycle lanes	3%	12%	21%	11%	34%	7%	13%
Lower speed limits	3%	8%	16%	16%	35%	9%	13%
Shared ped/cycle crossings	2%	5%	13%	19%	41%	6%	15%
Cycle lanes around bus stops	1%	9%	10%	18%	40%	11%	11%
Shared use pavements	1%	5%	8%	24%	44%	6%	12%
Narrower road	1%	2%	5%	15%	64%	5%	9%
Cycle lanes behind parking bays	-	9%	11%	14%	45%	11%	11%
Parking	-	1%	4%	15%	65%	7%	8%

Q13 - Thinking about Wilmslow Road specifically, do you agree or disagree with the following statements? (Mode = Car)

Q13 - Thinking about Wilmslow Road specifically, do you agree or disagree with the following statements?	Strongly agree	Agree	Neutral	Disagree	Strongly disagree	No response
Cycle lanes are wide enough	13%	34%	19%	7%	15%	12%
Building more cycleways should be a priority for Greater Manchester	7%	6%	12%	21%	45%	8%
There is enough cycle parking	6%	15%	35%	11%	17%	16%
Pavements are wide enough	5%	24%	10%	21%	32%	8%
Pedestrians take care	5%	15%	20%	23%	29%	9%
The Cycleway is a good thing for Manchester	5%	13%	15%	19%	40%	8%
The Cycleway has improved road safety	4%	8%	15%	21%	45%	8%
Motorists take care	3%	18%	25%	21%	23%	10%
The Cycleway has improved the quality of life for local people	3%	7%	14%	22%	46%	8%
It is a pleasant place to go to	2%	15%	16%	24%	35%	8%
Cyclists take care	2%	6%	15%	25%	43%	8%
There are enough loading/unloading bays	1%	12%	23%	22%	35%	8%
The Cycleway benefits me personally	1%	4%	17%	22%	45%	11%
Bus drivers take care	-	19%	24%	17%	29%	11%
It is easy to cross the road	-	15%	13%	28%	35%	8%
The road is wide enough	-	7%	5%	34%	45%	8%
There is enough car parking	-	2%	10%	23%	58%	7%

Survey Data – Main Mode: Foot (36 respondents)

The following section of the report outlines data collected during the three day survey period from respondents aged 16 or over for those respondents who indicated walking as their main mode of transport on Wilmslow Road. Please note a lower sample size than other modes for this group of respondents.

Gender (33 respondents) – 76% male, 24% female

Age (36 respondents)

Age	Count	%
16-19	3	8%
20-29	9	25%
30-44	9	25%
45-59	10	28%
60-74	4	11%
75-84	1	3%
Grand Total	36	100%

Ethnicity (36 respondents): 44% White British, 14% Asian or Asian British, 8% White Non-British, 6% Mixed/multiple ethnic groups, 3% other ethnic group, 25% prefer not to say

Health (36 respondents)

Respondents were asked if they had any long term illness, health problem or disability which limited their daily activities or the work they do. 3% yes, limited a lot, 6% yes, limited a little, 81% no, 11% prefer not to say.

Journey Purpose (36 respondents)

Respondents were asked for what purposes they use Wilmslow Road. Please note this is a multiple option question.

- 58% Route to City Centre (21 respondents)
- 50% Recreation/leisure/eating out (18)
- 47% Shopping (17)
- 39% I live here (14)
- 36% Route to West Didsbury (13)
- 33% Route to Withington (12)
- 31% Route to Fallowfield (11)
- 28% Route to work (10)
- 25% Route to Rusholme (9)
- 19% Personal services (bank, library etc) (7)
- 19% I work here (7)
- 19% Route to somewhere else (7)
- 19% Route to university/college (7)
- 17% Health/medical (6)
- 6% Visiting friends/family (2)
- 3% Take children to/from school (1)
- 3% Other (1)

Q2 - How often do you travel on Wilmslow Road using each of the following modes of transport? (Mode = Foot)

Q2 - How often do you travel on Wilmslow Road using each of the following modes of transport?	5+ days per week	3-4 days per week	1-2 days per week	Monthly	Occasionally	Never	No response
On foot	50%	14%	19%	6%	6%	-	6%
By bike	6%	-	11%	3%	8%	25%	47%
By bus	11%	11%	17%	17%	8%	8%	28%
By car	31%	-	25%	8%	8%	11%	17%
Other	-	3%	-	-	3%	11%	83%

Q4 - Thinking about your main mode of transport, has the new segregated cycleway made your journey...? (Mode = Foot)

Q4 - Thinking about your main mode of transport, has the new segregated cycleway made your journey...?	Strongly agree	Agree	Neutral	Disagree	Strongly disagree	Don't Know	No response
Safer	3%	14%	19%	17%	44%	3%	-
Faster	3%	3%	28%	11%	53%	3%	-

Q5 - Do you agree or disagree that the new segregated cycleway has improved Wilmslow Road for... (Mode = Foot)

Q5 - Do you agree or disagree that the new segregated cycleway has improved Wilmslow Road for...	Strongly agree	Agree	Neutral	Disagree	Strongly disagree	Don't Know	No response
Cyclists	25%	22%	14%	14%	14%	8%	3%
Pedestrians	3%	8%	14%	19%	50%	6%	-
People with a disability	-	11%	17%	17%	39%	17%	-
Cars	3%	3%	22%	8%	50%	14%	-
Buses	3%	8%	17%	11%	44%	17%	-
Local businesses	3%	8%	11%	6%	42%	25%	6%
Local residents	3%	17%	3%	17%	44%	17%	-

Q6 - Has the Wilmslow Road segregated cycleway encouraged you to cycle more? (Mode = Foot)

Q6 - Has the Wilmslow Road segregated cycleway encouraged you to cycle more?	Count	%
Didn't cycle before and still don't cycle	20	56%
Cycle about the same	7	19%
Cycle a lot less	5	14%
I am considering cycling	2	6%
Cycle a bit more	1	3%
Cycle a lot more	1	3%
Grand Total	36	100%

Q11 - Thinking about the new highway arrangement on Wilmslow Road, how would you rate the following features? (Mode = Foot)

Q11 - Thinking about the new highway arrangement on Wilmslow Road, how would you rate the following features?	Excellent	Good	Fair	Poor	Very poor	Don't know	No response
Kerb segregated cycle lanes	11%	17%	3%	19%	36%	8%	6%
Painted cycle lanes	8%	17%	19%	17%	22%	11%	6%
Cycle lanes behind parking bays	8%	17%	8%	6%	42%	8%	11%
Cycle lanes around bus stops	8%	14%	14%	11%	42%	3%	8%
Narrower road	8%	11%	3%	8%	58%	6%	6%
Lower speed limits	6%	22%	8%	17%	19%	17%	11%
Early green lights for cyclists	6%	17%	19%	17%	14%	19%	8%
Shared ped/cycle crossings	6%	8%	17%	14%	33%	14%	8%
Advanced stop boxes for cyclists	3%	14%	22%	17%	17%	19%	8%
Parking	3%	6%	-	17%	42%	22%	11%
Shared use pavements	-	6%	6%	28%	47%	8%	6%

Q13 - Thinking about Wilmslow Road specifically, do you agree or disagree with the following statements? (Mode = Foot)

Q13 - Thinking about Wilmslow Road specifically, do you agree or disagree with the following statements?	Strongly agree	Agree	Neutral	Disagree	Strongly disagree	No response
Cycle lanes are wide enough	25%	33%	19%	8%	11%	3%
Building more cycleways should be a priority for Greater Manchester	22%	8%	17%	6%	47%	-
The Cycleway is a good thing for Manchester	17%	17%	19%	19%	28%	-
Pedestrians take care	8%	28%	25%	22%	11%	6%
Bus drivers take care	8%	22%	31%	19%	17%	3%
There is enough cycle parking	8%	14%	39%	22%	17%	-
The Cycleway has improved road safety	8%	14%	25%	17%	36%	-
The Cycleway has improved the quality of life for local people	8%	8%	17%	22%	44%	-
The Cycleway benefits me personally	8%	6%	19%	11%	53%	3%
Motorists take care	6%	17%	44%	14%	19%	-
Pavements are wide enough	3%	39%	-	19%	39%	-
It is a pleasant place to go to	3%	22%	14%	31%	28%	3%
The road is wide enough	3%	19%	11%	25%	42%	-
There is enough car parking	3%	11%	22%	22%	42%	-
There are enough loading/unloading bays	-	11%	53%	17%	19%	-
It is easy to cross the road	-	31%	11%	22%	36%	-
Cyclists take care	-	14%	28%	28%	31%	-

Survey Data – All respondents

Journey Purpose (366 respondents) - All Respondents

Respondents were asked for what purposes they use Wilmslow Road. Please note this is a multiple option question.

- 52% Route to City Centre (191 respondents)
- 43% Recreation/leisure/eating out (158)
- 39% Shopping (144)
- 39% Route to work (143)
- 33% Route to Fallowfield (120)
- 33% Route to Rusholme (119)
- 29% Route to West Didsbury (105)
- 27% Route to Withington (100)
- 27% I live here (97)
- 25% Route to university/college (92)
- 23% Personal services (bank, library etc) (86)
- 21% Visiting friends/family (77)
- 19% I work here (68)
- 18% Route to somewhere else (67)
- 15% Health/medical (54)
- 3% Take children to/from school (10)
- 4% Other (14)

Q2 - How often do you travel on Wilmslow Road using each of the following modes of transport? (Mode = All Respondents)

Q2 - How often do you travel on Wilmslow Road using each of the following modes of transport?	5+ days per week	3-4 days per week	1-2 days per week	Monthly	Occasionally	Never	No response
On foot	15%	8%	17%	6%	17%	7%	30%
By bike	25%	13%	9%	2%	7%	14%	30%
By bus	9%	6%	15%	10%	17%	9%	34%
By car	18%	7%	13%	10%	13%	17%	22%
Other	1%	<1%	1%	1%	1%	17%	79%

Q4 - Thinking about your main mode of transport, has the new segregated cycleway made your journey...? (Mode = All Respondents)

Q4 - Thinking about your main mode of transport, has the new segregated cycleway made your journey...?	Strongly agree	Agree	Neutral	Disagree	Strongly disagree	Don't Know	No response
Safer	20%	23%	13%	10%	30%	2%	1%
Faster	13%	16%	19%	14%	31%	2%	6%

5 - Do you agree or disagree that the new segregated cycleway has improved Wilmslow Road for... (Mode = All Respondents)

Q5 - Do you agree or disagree that the new segregated cycleway has improved Wilmslow Road for...	Strongly agree	Agree	Neutral	Disagree	Strongly disagree	Don't Know	No response
Cyclists	38%	25%	9%	7%	14%	4%	2%
Pedestrians	8%	16%	23%	19%	26%	4%	4%
People with a disability	4%	8%	25%	11%	27%	21%	4%
Cars	7%	15%	16%	14%	34%	11%	3%
Buses	10%	22%	16%	12%	26%	11%	4%
Local businesses	5%	10%	21%	8%	28%	23%	5%
Local residents	9%	15%	20%	9%	26%	18%	4%

Q6 - Has the Wilmslow Road segregated cycleway encouraged you to cycle more? (Mode = All Respondents)

Q6 - Has the Wilmslow Road segregated cycleway encouraged you to cycle more?	Count	%
Didn't cycle before and still don't cycle	105	29%
Cycle about the same	102	28%
Cycle a lot more	51	14%
Cycle a bit more	39	11%
Cycle a lot less	24	7%
I am considering cycling	16	4%
Cycle a bit less	3	1%
Prefer not to say	17	5%
Other	6	2%
Grand Total	363	100%

Q11 - Thinking about the new highway arrangement on Wilmslow Road, how would you rate the following features? (Mode = All Respondents)

Q11 - Thinking about the new highway arrangement on Wilmslow Road, how would you rate the following features?	Excellent	Good	Fair	Poor	Very poor	Don't know	No response
Early green lights for cyclists	30%	20%	9%	9%	13%	10%	8%
Kerb segregated cycle lanes	26%	24%	8%	11%	22%	4%	5%
Advanced stop boxes for cyclists	20%	23%	15%	7%	16%	11%	8%
Cycle lanes around bus stops	19%	20%	12%	13%	24%	6%	5%
Lower speed limits	18%	23%	16%	8%	16%	10%	7%
Painted cycle lanes	17%	25%	20%	10%	17%	5%	7%
Cycle lanes behind parking bays	15%	23%	13%	8%	24%	10%	7%
Shared ped/cycle crossings	7%	19%	22%	12%	23%	8%	9%
Narrower road	7%	14%	16%	14%	34%	9%	5%
Shared use pavements	4%	12%	19%	23%	30%	6%	6%
Parking	3%	8%	14%	14%	31%	23%	6%

**Q13 – Thinking about Wilmslow Road specifically, do you agree or disagree with the following statements?
(Mode = All Respondents)**

Q13 – Thinking about Wilmslow Road specifically, do you agree or disagree with the following statements?	Strongly agree	Agree	Neutral	Disagree	Strongly disagree	No response
Building more cycleways should be a priority for Greater Manchester	39%	14%	11%	8%	24%	5%
The Cycleway is a good thing for Manchester	37%	18%	12%	10%	20%	3%
The Cycleway has improved road safety	27%	19%	15%	12%	22%	4%
The Cycleway benefits me personally	26%	17%	15%	12%	25%	5%
The Cycleway has improved the quality of life for local people	21%	18%	20%	11%	25%	4%
Cycle lanes are wide enough	17%	39%	16%	14%	8%	5%
Pavements are wide enough	15%	35%	13%	16%	18%	4%
The road is wide enough	10%	25%	18%	18%	25%	4%
It is easy to cross the road	8%	28%	22%	18%	19%	5%
It is a pleasant place to go to	8%	25%	25%	17%	19%	6%
There is enough car parking	8%	12%	32%	14%	27%	7%
Bus drivers take care	7%	30%	22%	17%	17%	7%
Cyclists take care	7%	25%	21%	20%	22%	5%
There is enough cycle parking	7%	19%	35%	19%	11%	8%
Pedestrians take care	7%	17%	21%	29%	20%	5%
There are enough loading/unloading bays	5%	13%	46%	13%	16%	5%
Motorists take care	4%	18%	27%	28%	18%	5%

Appendix A

Questionnaire – see attached PDF

Wilmslow Road Survey

Thank you for taking the time to complete this survey. It should take no longer than 10 minutes. If you would prefer to complete this survey online please use the following link: www.tfgm.com/wilmslowroadsurvey
This cycleway survey is being conducted by Transport for Greater Manchester (TfGM) and is designed to help us understand how you use this route. Everyone completing the survey will be entered into a prize draw with the chance to win £50 of Love2Shop high street vouchers. **Thank you for your help.**

Section 1. Cycleway Survey

1. For what purposes do you use Wilmslow Road? (Tick as many that apply)

- | | |
|--|--|
| <input type="checkbox"/> Route to City Centre | <input type="checkbox"/> Personal services (bank, library etc) |
| <input type="checkbox"/> Route to West Didsbury | <input type="checkbox"/> Recreation/leisure/eating out |
| <input type="checkbox"/> Route to Fallowfield | <input type="checkbox"/> Health/medical |
| <input type="checkbox"/> Route to Rusholme | <input type="checkbox"/> I live here |
| <input type="checkbox"/> Route to Withington | <input type="checkbox"/> I work here |
| <input type="checkbox"/> Route to work | <input type="checkbox"/> Take children to/from school |
| <input type="checkbox"/> Route to university/college | <input type="checkbox"/> Visiting friends/family |
| <input type="checkbox"/> Route to somewhere else | <input type="checkbox"/> Other |
| <input type="checkbox"/> Shopping | |

Other, please state

2. How often do you travel on Wilmslow Road using each of the following modes of transport?

	5+ days per week	3-4 days per week	1-2 days per week	Monthly	Occasionally	Never
On foot.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
By bike.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
By bus.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
By car.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Other.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Other, please state

3. Please indicate your main mode of transport on Wilmslow Road (Select one choice only)

- | | |
|-------------------------------|--------------------------------|
| <input type="checkbox"/> Foot | <input type="checkbox"/> Car |
| <input type="checkbox"/> Bike | <input type="checkbox"/> Other |
| <input type="checkbox"/> Bus | |

Other, please state

4. **Thinking about your main mode of transport, has the new segregated cycleway made your journey...?**

	<i>Strongly agree</i>	<i>Agree</i>	<i>Neutral</i>	<i>Disagree</i>	<i>Strongly disagree</i>	<i>Don't Know</i>
Safer?.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Faster?.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Please indicate why you feel this way for both journey safety and speed	<div style="border: 1px solid black; height: 60px; width: 100%;"></div>					

5. **Do you agree or disagree that the new segregated cycleway has improved Wilmslow Road for...**

	<i>Strongly agree</i>	<i>Agree</i>	<i>Neutral</i>	<i>Disagree</i>	<i>Strongly disagree</i>	<i>Don't Know</i>
Cyclists.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Pedestrians.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
People with a Disability.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Cars.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Buses.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Local businesses.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Local residents.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

6. **Has the Wilmslow Road segregated cycleway encouraged you to cycle more?** (Select one choice only)

<input type="checkbox"/> Cycle a lot more	<input type="checkbox"/> Didn't cycle before and still don't cycle
<input type="checkbox"/> Cycle a bit more	<input type="checkbox"/> I am considering cycling
<input type="checkbox"/> Cycle about the same	<input type="checkbox"/> Other
<input type="checkbox"/> Cycle a bit less	<input type="checkbox"/> Prefer not to say
<input type="checkbox"/> Cycle a lot less	

7. **If you don't cycle, please indicate your reasons why** (Tick as many that apply)

<input type="checkbox"/> Don't have a bike	<input type="checkbox"/> Rains too much/don't want to get wet
<input type="checkbox"/> Have a disability	<input type="checkbox"/> Put off by gear (hi vis, helmets, lycra etc)
<input type="checkbox"/> Can't ride a bike	<input type="checkbox"/> Don't want to get sweaty
<input type="checkbox"/> Lack of safe cycle routes	<input type="checkbox"/> Nowhere to securely store my bike
<input type="checkbox"/> Roads are too dangerous	<input type="checkbox"/> Prefer to walk
<input type="checkbox"/> Not fit enough	<input type="checkbox"/> Prefer to use public transport
<input type="checkbox"/> Too hilly	<input type="checkbox"/> Prefer to drive
<input type="checkbox"/> Too far	<input type="checkbox"/> Other
Other, please state	<div style="border: 1px solid black; height: 60px; width: 100%;"></div>

8. **If you don't cycle, have you changed any of your journeys because of the new segregated cycleway?** (Select one choice only)

<input type="checkbox"/> No, I use the same routes as before	<input type="checkbox"/> Yes, I have re-routed to avoid the cycleway
--	--

9. **If you do cycle on Wilmslow Road, do you use the new segregated cycleway facilities?** (Select one choice only)

☐ Yes, I use the segregated cycleway

☐ No, I cycle on the pavement

☐ No, I cycle in the road

☐ I use part of the segregated cycleway

If you use part of the segregated cycleway, which part do you use?

10. **If you do cycle, have you changed your cycling routes because of the new segregated cycleway?** (Select one choice only)

☐ No, I use the same routes as before

☐ Yes, I have re-routed to avoid the cycleway

☐ Yes, I have re-routed to use the cycleway

11. **Thinking about the new highway arrangement on Wilmslow Road, how would you rate the following features?**

	<i>Excellent</i>	<i>Good</i>	<i>Fair</i>	<i>Poor</i>	<i>Very Poor</i>	<i>Don't know</i>
Kerb segregated cycle lanes.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Cycle lanes behind parking bays.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Cycle lanes around bus stops	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Painted cycle lanes.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Shared use pavements.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Shared ped/cycle crossings.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Advanced stop boxes for cyclists.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Early green lights for cyclists....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Lower speed limits.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Narrower road.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Parking.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

12. **Do you have any other comments about this question?**

13. **Thinking about Wilmslow Road specifically, do you agree or disagree with the following statements?**

	<i>Strongly agree</i>	<i>Agree</i>	<i>Neutral</i>	<i>Disagree</i>	<i>Strongly disagree</i>
Pavements are wide enough....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Cycle lanes are wide enough...	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
The road is wide enough.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
There is enough car parking....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
There is enough cycle parking..	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
There are enough loading/unloading bays.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
It is easy to cross the road.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
It is a pleasant place to go to...	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Cyclists take care.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Pedestrians take care.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Motorists take care.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Bus drivers take care.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
The Cycleway benefits me personally.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
The Cycleway is a good thing for Manchester.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
The Cycleway has improved the quality of life for local people.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
The Cycleway has improved road safety.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Building more cycleways should be a priority for Greater Manchester.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

14. **Overall, how many marks out of ten would you give the Cycleway?**

15. **Do you have any other comments about this Cycleway?**

Section 2. About you**Information gathered within this section is for research purposes only and will not be used to identify you**

16. Are you? ☐ Male ☐ Female ☐ Prefer not to say

17. In which of these age categories do you fall? (Select one choice only)

☐ 16 - 19☐ 60 - 74☐ 20 - 29☐ 75 - 84☐ 30 - 44☐ 85+☐ 45 - 59

18. 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? (Select one choice only)

☐ Yes, limited a lot☐ No☐ Yes, limited a little☐ Prefer not to say

19. Which of the following groups do you consider you belong to? (Select one choice only)

☐ White British☐ Mixed/Multiple ethnic groups☐ White Non-British☐ Other ethnic group☐ Black African/Caribbean or Black British☐ Prefer not to say☐ Asian or Asian British**Further information**

Would you like to be entered into the prize draw for a chance to win one prize of £50 of high street shopping vouchers? If so please provide your name and telephone number. This information will be used to contact the winner and not for any other purpose.

Name:

Telephone
number:

Prize draw terms and conditions: Prize draw to be held on 01/12/16. Chances of winning do not depend on any answers given in this survey. Only those aged 16 or over may enter the prize draw. One prize of £50 of high street shopping vouchers is available. TfGM is the data controller for the purposes of the Data Protection Act 1998 and will manage the information you provide in a manner that conforms to the Act. Contact details will only be used for the purpose of contacting the winner of the prize draw. TfGM will not share your data with any third parties unless we are required or permitted to do so by law. If you have any queries about the survey please contact Joanne Beckinsall at TfGM on 0161 244 1677.

Thank you for completing this survey.

A7 Appendix 7: Comments Received

A7.1 Bus Operators

A7.1.0 First Manchester and Stagecoach have highlighted the following shared issues and concerns:

A7.1.1 • **Restricted Carriageway Width**

The cycle lanes have had a major impact on bus operations in the south of the city. There are numerous points throughout the route where overtaking buses has become impossible due to the restricted carriageway which is common place on large parts of Rusholme and Oxford Road. A good example would be the closest stop to Xavarian College, which has heavy passenger numbers and multiple buses attempting to observe the stand.

- *The overall reduction in carriageway widths along the majority of this scheme results in increased journeys time as the design does not allow any spare capacity for vehicles to pass where we have any incidents such as vehicle breakdowns, vehicles loading or vehicles encroaching on to the carriageway from parking bays.*

A7.1.2 • **Signalised Junctions with Single Lane Approaches**

Two of the junctions Mauldeth Road and Fog Lane which previously had no cycling facilities on the approach, now have wide single lane approaches to the junctions. This has resulted in buses being delayed by vehicles waiting to turn right at the junction, due to the lack of room for vehicles to pass on the left on the approach. This can cause queues which can build quickly.

A7.1.3 • **Parking**

There are pinch points around busy areas such as Withington Village and The Christie where cars attempt to park in small parking bays. If the car is a large vehicle or badly parked, it can reduce the road width of the traffic lanes for a cars length resulting in vehicles having to give way to each other to move around the parked vehicles.

The lack of enforcement, ensuring parking is legal and safe is a concern; First Bus and Stagecoach drivers still see instances of double parking in Rusholme and side streets being blocked by parked cars spilling out onto the main road. The pedestrian footways are narrow resulting in sections where pedestrians need to walk in the cycle lanes. Street sellers and shops putting signage and goods on the



Photo 45: Photo showing lack of space between bus and kerb adjacent to island within Rusholme



Photo 46: Rusholme Parking before Cycleway construction

- A7.1.4
- **Cyclists Choosing Not to Use Cycle Lanes**
Whilst First Group buses have had no serious incidents with cyclists, drivers have reported increased interaction. If a cyclist chooses not to use the cycle lanes there is limited space for cyclists to share the road with a bus. There have been some instances of verbal abuse towards bus drivers and complaints to the company for perceived dangerous driving.
- A7.1.5
- **Delivery Vehicle Loading**
The restaurants on the curry mile obviously require deliveries. Bus drivers have observed occasions when articulated lorries stop to unload on the main carriageway. When challenged their view is "it's only 5 minutes". This can cause knock on delays to quickly build. Previously there was sufficient room to pass within Rusholme, but now that is impossible if the parking is outside a loading bay, again this is a traffic regulation enforcement issue.
- A7.1.6
- **Carriageway Condition**
It's also worth noting that whilst the contractor completed the cycle lanes, the project did not include the resurfacing of the road in major parts, so whilst the cycle ways are open, First bus cannot really state that the works have finished.
Along the route there are a number of old road markings which are still visible and this leads to confusion amongst motorists.



Photo 47: Photo showing buses, parked vehicles and newly surfaced segregated cycle lane in Rusholme

A7.2 Rusholme Neighbourhood Groups & Traders

- A7.2.0 The comments below are provided as an overview and cannot be regarded to reflect the viewpoints of individual traders or group members as a whole:
- A7.2.1
- **Rusholme too busy**
Too much is going on in the 'Curry Mile' stretch of Wilmslow Road with buses, motor vehicles, cyclists and pedestrians are all jostling for space in a very narrow artery.
- A7.2.2
- **Footways too narrow**
Parts of the Rusholme District Centre have the second highest footfall outside of Manchester City Centre. The public footpaths and pavements are now very narrow and it is almost impossible not to step into the cycleway when trying to pass oncoming pedestrians or when negotiating a queue at the cashpoint.

- A7.2.3 • **Cyclists mixing with Pedestrians**
Concerns remain regarding the proximity of the cycleway to pedestrians, with the latter now much more vulnerable to collisions and/or being knocked over. There are many more minor incidents and 'near misses' taking place on a daily basis.
- A7.2.4 • **Education**
Suggest that an educational programme in the local schools and faith centres would be welcomed.
Signage to warn cyclists of pedestrians crossing the cycleway would also be welcomed by Rusholme Traders and businesses.
- A7.2.5 • **Visitors**
Many visitors to the Curry Mile are not local and there is also an annual influx of new students to our universities that are unfamiliar with the area. It is these cohorts that are, disproportionately, going to be involved in accidents with each other. Plans to provide road safety information for visitors and students should also be put in place to warn and educate them.
- A7.2.6 • **Parking Bays**
Congestion is a major contributor of accidents and collisions. Everybody acknowledges that removing the parking bays would help to provide a little more space for both pedestrians and cyclists, but it would have a devastating effect on the trade of some of the businesses - the grocers, eateries and dessert parlours all require 'on street' parking for their customers. Protecting the variety of businesses on the Curry Mile is important to attracting economic investment and customers.
The other alternative that has been suggested requires removing the parking bays to the inside of the cycleway to act as a barrier between speeding cyclists and pedestrians.
A redesign of this type would also protect cyclists near busy and dangerous junctions at Great Western Street, Thurloe Street, Grandale Street, Walmer Street and Park Crescent - where drivers are routinely blocking the cycleway as they attempt to join Wilmslow Road. More alarming still is the sight of vehicles turning into these junctions just as cyclists are speeding down the cycleway towards them - hidden by parked delivery vans and lorries. This scenario resulted in quite a serious accident on Grandale Street a few weeks ago where the cyclist had to be



Photo 48: Photo showing the size of the footway adjacent to the cycle lane in Rusholme

A7.2.7 • **Overall Impression**

The on-going conversation with the traders along the Curry Mile has provided an indication that the a lot of the traders are supportive of the cycleway and want to see it succeed, but, they cannot ignore the problems that are being witnessed outside their shops and the increasing toll of injuries to pedestrians.

It is believed that the original design brief never envisaged some of the issues that have arisen, which, is all the more reason to learn from what is happening so that we can help to make the cycleway a standard (& uncontroversial) part of our District Centre. We're not there, yet.

A7.3 Didsbury Civic Society

A7.3.0 *The comments below are a summary of a DCS meeting and from those individuals present and do not reflect the views of DCS members overall or any DCS policy.*

A7.3.1 • *The areas with segregation kerbs are more difficult for pedestrians to cross. It is acknowledged however that where there are no segregation kerbs, delivery vans and cars ignore the cycleway; Post office vans are frequently seen parked across the cycle lane near Ferndene Road.*

A7.3.2 • *Some objection to the scale and scope of cycleway. Too dominating for the road.*

A7.3.3 • *Not enough consultation; lacking consultation with cyclists.*

A7.3.4 • *Majority of cyclists do not use this route and the cycleway is not fully utilised. A local Councillor clarified that the route was also designed for short journeys and not just a cycleway route into Manchester City Centre.*

A7.3.5 • *The design could have widened pavements and created "shared" space between pedestrians and cyclists. Dislike the relationship of the cycleway to the bus stops.*

A7.3.6 • *Requires cultural change, education of cyclists and vehicle users (2 people) and behaviour change to get the cycleway to be used and respected by all road users.*

A7.3.7 • *Not a realistic review whilst still parts of the route are still to be finished off.*
• *Most days slows down traffic through Withington and Didsbury centres. Congestion is a result of too many buses*



Photo 49: Photo showing cycle lanes in Didsbury Village

- A7.3.8
- *One frequent road user between Didsbury and Withington had experienced no problems. One unforeseen consequence is that cars etc. now obey the 30 mph limit whereas on the previous wider road they were travelling faster.*
- A7.3.9
- *Overview and coordination required of bus, metro, cycleway to identify any overall improvements of connectivity.*
- A7.3.10
- *There is mixed approval. Some support it in principle but not practice, some wholeheartedly approve. There are fewer objections now than there was at the start.*

A7.4 Comments from Local Councillors

A7.4.0 Local Councillors from Rusholme, Fallowfield, Old Moat, Withington, Didsbury East and Didsbury West along the Wilmslow cycleway route were invited to provide comments as part of the monitoring and evaluation of the route. The following comments received and some previously raised issues are reported below:

A7.4.1 *Rusholme – Cllr Paul*

A7.4.1.1 *Acknowledged that the parked cars do form part of the protection for cyclists, but the approach to parking, loading and delivery bays within the District Centre still requires a more robust approach as the carriageway space is at such a premium.*

A7.4.1.2 *Recommended that an awareness and education programme is put in place ahead of the commissioning of the lanes and to support this with temporary signs at least until initial behaviour related conflicts have reduced (e.g. London example of correx signs along Embankment).*

A7.4.2 *Fallowfield – Cllr Paul*

A7.4.2.1 *Permissive cycling across corner at Egerton Road junction - there is no obvious clue for any road users apart from drop kerbs that crossing this corner is part of the design.*

A7.4.2.2 *- Junction at Sainsbury's with Sherwood Road, Ladybarn Road, Fallowfield Loop and superstore access – requires cyclist to cross lanes to access toucan crossing and has potential for misunderstanding and conflict. This junction should have been improved.*

A7.4.3 *Withington – Cllr Paul*

A7.4.3.1 *In original consultation it was agreed that while the central carriageway was two-way and carrying many buses it was unlikely to offer an opportunity for segregated cycling. If the carriageway was instead given a distinctive surface feel or colour, with large logos*



Photo 50: Rusholme Northbound Cycle lane



Photo 51: Bus stop by-pass and cycle lane by Friendship Inn, Fallowfield on approach to junction with Egerton Road

(diagram 1057) to encourage cyclists to take the lane, with large 20 roundels and no overtaking this would provide an alternative environment for cycling.

In fact Withington Village received limited, if not any improvements as cyclists who brave the road in traffic often take secondary position and are very close to both doors and parked cars, or sandwiched between vehicles. There is not enough room to overtake a cyclist even in that position unless the actual or notional centre line can be crossed. Recently the Cllr saw five cyclists on pavements here in less than 10 minutes (evening peak). The majority of work within the Village was to the junction of Wilmslow Road/Palatine Road/Burton Road where pedestrian crossing facilities were added to all junction arms with an all green signal stage.

Response to comment A7.4.3.1 Withington Village resurfacing was not possible to include within the available budget for CCAG1. The resurfacing and remarking of the route has been considered and costed. A separate bid for funding will be made to TfGM.

A7.4.4 Cycleway Design – Cllr Paul

A7.4.4.1 - *Separated lanes within footways should be at lower or same grade where there is heavy footfall, including bus by-passes. The lanes are not particularly different through Fallowfield District Centre when compared with Rusholme which are coloured either in material or coating.*

A7.4.4.2 - *Coloured Surfacing - there are at least four or five different surface colourings in lanes and bus by-passes along the route especially when Oxford Rd and beyond is considered.*

A7.4.4.3 - *Too much tactile paving although accepts that there are compliance standards to be met the amount and proximity could have reduced it.*

A7.4.4.4 - *Bus Stops without by-passes it would be worth exploring Danish type with small platform and lane through.*

A7.4.5 Didsbury – Cllr Leech

A7.4.5.1 *Concerns over the consultation process as constituents appeared unaware of the planned works at the time of construction.*

A7.4.5.2 *Raised concerns of local residents over the resulting widths of the road carriageway where the cycle lane minimum widths had been established to accommodate road sweepers within the segregated cycle lanes.*

A7.4.5.3 *The bus stops without cycle by-passes were also highlighted as a safety concern when*



Photo 52: Improvements to Junction of Wilmslow Road, Palatine Road and Burton Road, Withington



Photo 53: Northbound showing cycle lane Didsbury Village

- A7.4.5.4 *Issues about confusion resulting from poor removal of old line markings and workmanship defects were also reported.*

A8 Appendix 8: Road Safety Audit Review

A8.1 On all major highways schemes a road safety audit is carried out by experienced road safety engineers who have had no previous involvement with the project to give a robust assessment of any elements which it is considered could be a road safety issue. The road safety audit carried out for this scheme was at post completion (Stage 3), which includes review not only of the design itself but how the implemented highway layout is being used and what observations of users behaviour have been identified which may result in potential conflict if not address.

The road safety audit report has been review in detail by experienced design engineers, who have grouped the recommendations into areas where immediate actions can be taken, such as snagging required to complete the scheme satisfactorily by contractors and area where enforcement is required. The safety audit does not take account of wider potential highway improvement and is limited to reviewing the works which have been carried out as part of the completed works.

A8.2 Where the road safety recommendation requires further action, the various issues raised have been broken into three types in the tables below:

Red: Requiring urgent action;


Yellow: Work which are a lower priority but could take place or a defect which will be corrected;

(Green: Where a designers response to the item is considered appropriate to resolve the issue);

A8.3 Identified remediation measures to the road safety audit to be taken forward for construction will be subject to a separate approval process.

		Urgent action required					
		Works could take place and / or defect to be corrected					
		Identified during post-construction review					
Problem:	Location:	Summary:	Recommendation:	Designers Response:	Action	Who to action	NOTES
	Jcn Moorland Road / Opp 647 Wilmslow Road / Jcn Belfield Road			Kerb reinstatement on the northbound cycle lane here is recorded on the defect list for action	Contractor to repair defect	Contractor	
3.3	Between Norman Road and Platt Lane	Road carriageway condition poor causing vehicles to overrun cycle lane. Can reduce potential cyclist/bus conflict at this location by installing further segregated islands.	resurfacing of the area and refresh all road marking	Additional works identified.			Carriageway resurfacing outside scope of original project - referred to Highway Maintenance (Recommended segregation islands excluded as too close to bus stop and pedestrian crossing islands which would cause buses to weave to avoid segregation islands on left and pedestrian islands on right going southbound)
3.8	Various Locations -	Inconsistent use of green paint within cycle lanes may lead to confusion with cyclist and potentially increase the risk of cycle/vehicle collisions.		We are aware that some road markings have not been installed 100% as per the contract drawings, however these are not related to a TRO, therefore can have a degree of flexibility. We propose to add give ways to Redcourt Avenue cul-de-sac, Mayville Drive, telephone exchange access, Wesley Drive and access points from Old Broadway, access from Christies emergency access, shop access near Tatton Grove where the cycle track returns to carriageway to highlight these potential conflict points to cyclists in line with current guidance		Highways- draft plan required of where give ways are required	Identified within remedial measure (subject to approvals)
3.13	Junction of Redcourt Avenue and Mayville Drive.	Vehicles overrunning the cycle lane	Install give-way markings in advance of the cycle lane and provide a green coloured surface across the junctions.	Install give-way markings in advance of the cycle lane as recommended. Green has been requested to be added to on several areas of the route by TfGM and we have provided a cost to them for this and other areas.	Install give-way markings in advance of the cycle lane on side road and on cycle track (as per guidance). Green coloured surface across the junctions (subject to approvals).	Highways / TfGM - cycle team	Identified within remedial measure (subject to approvals)
3.16	Northbound bus stop outside number 574 Wilmslow Road.	Cycle facilities require further clarity to avoid potential conflict with pedestrians.	Works need to be undertaken at this location to improve the clarity and quality of the facilities provided for all road users. Tactile paving also needs to be provided to assist pedestrians across the access junction.	The surface condition over the access points has been made safe (no pot holes) by the contractor. Tactile paving has been provided over the cycle track at the bus stop, however no tactile has been provided over the car wash access. An enhancement sketch has been undertaken on drawing 208235H/E1/RSA3.16.	Sketch and cost have been produced.	Highways / Contractor	Identified within remedial measure (subject to approvals)

		Urgent action required					
		Works could take place and / or defect to be corrected					
		Identified during post-construction review					
Problem:	Location:	Summary:	Recommendation:	Designers Response:	Action	Who to action	NOTES
3.18	Pedestrian crossing to the north of The Christie Hospital entrance along Wilmslow Road	Controlled crossing tactile paving is still in place when it is no longer needed and may cause confusion for visually impaired pedestrians and potentially result in the risk of a pedestrian / cyclist collision.	Remove the redundant tactile paving and resurface the footway.	The redundant tactile paving is to be removed.	Recorded as defect. Contractor have requested additional order before these works will be done.	GM to discuss with Contractor. May be measured work. Crossing surfacing is poor and should be resurfaced (desirable)	Identified within remedial measure (subject to approvals)
3.36	Various Locations - Specifically noted: Wilmslow Road (northbound) between Old Hall Lane and Platt Lane	Insufficient width of cycle path and clearance to street furniture and trees may result in potentially pedal cyclists swerving to avoid the features resulting in loss of control collisions or collisions with pedestrians and other vehicles.	Provide adequate clearance between street furniture, trees and the cycle path/track OR Additional works are required to encourage cyclists to proceed at reduced speeds through these sections including providing reflectorized banding around the trees so that there are visible to cyclists, particularly during the hours of darkness.	The shared use footway has been designed for less confident cyclists who would feel unsafe using the pre-existing bus lane, as this can be used upto speeds of 30 mph and is narrow (3.1m). The mature trees here are deemed to be of significant importance and therefore are not proposed to be removed.	There is 1.5m clearance between the kerb line and the camera, therefore the footway could be widened into the tree pit (possibly making the tree pit longer in line with the kerb?) so that cyclists can proceed in front of the tree with pedestrians behind. Also slow markings should be installed. Reflective bollards could be installed in front of trees to give cyclists warning during hours of darkness and a reflective strip could be placed on camera. Also slow markings could be installed on cycle track. Option to raise footway and provide resin bound material around tree pits to increase usable width of footway. Enhancement scheme	Highways to undertake a full review of this area. CCTV images to be requested, as there is a camera present here.	To reduce pedestrian/cyclist conflict slow markings in the cyclelane and yellow and black warning sign will be installed identified within remedial measures (subject to approvals)
3.41	Wilmslow Road between Dickenson Lane and Moss Lane East (both directions)	There is restricted carriageway width due to the high volumes of buses / parked vehicles and central median islands.	Reassess the allocation of space provided to the different user groups.	All users were considered during the design process. Each user group has been provided with the minimum required widths to allow access through the area, i.e. footways 1.8m (as noted above), 1.65m cyclists, parking bays 1.8m, loading bays 2.7m and carriageway lanes of 3m. Although the route was vehicular tracked during the design process, inconsiderate parking on the approach and / or exit makes negotiations difficult for large vehicles. There are two identified pinch points within Rusholme which have been identified as requiring alteration. All other pinch points are deemed to be acceptable as the tight nature of the layout has the effect of reducing vehicle speeds and deterring inconsiderate parking.	Two pinch points within Rusholme to be altered	Highways	Identified within remedial measure (subject to approvals)

	Urgent action required						
	Works could take place and / or defect to be corrected						
	Identified during post-construction review						
Problem:	Location:	Summary:	Recommendation:	Designers Response:	Action	Who to action	NOTES
3.3	Jcn Wellington Road / Opp 425 Wilmslow Road / Opp 400 Wilmslow Road		Carriageway resurfacing- Green paint in the cyclelane at the junction and refresh existing markings.	Works identified	Area provided by SM. Price produced by GM.		Earlier cycle lane surfacing/markings which requires maintenance (outside scope of cycleway project). Identified within remedial measures (subject to approvals)
3.3	O/S 344 Wilmslow Road		Carriageway resurfacing including green paint at the junction and refresh existing markings	The road has been resurfaced where amendments have been made with no issues. The general traffic lane northbound has not been resurfaced and is considered to be an acceptable condition.			Earlier cycle lane surfacing/markings which requires maintenance (outside scope of cycleway project). Identified within remedial measures (subject to approvals)
3.3	O/S 304 Wilmslow Road / O/S 256 Wilmslow Road		Carriageway resurfacing- Green paint in the cyclelane at the junction and refresh existing markings.	Works identified		TFGM - cycle team	Earlier cycle lane surfacing/markings which requires maintenance (outside scope of original cycleway project). Identified within remedial measures (subject to approvals)
3.9	Bus stop opposite Belfield Road	Identified as a potential area of conflict between pedestrians and cyclists.	Remove the facilities to guide cyclists behind the bus stop.	There were missing road markings at the time of the audit to inform cyclists that they are able to preform this manoeuvre, including give way markings which have been installed. The design team would state that this facility would mainly be used when a bus is stationary at the stop, as they vast majority of cyclists would remain on carriageway when no buses are present. There is also low pedestrian footfall compared to other bus stops. This facility is considered safer for cyclists as they do not need to travel around the outside of a stationary bus potentially into fast moving traffic.	Proposed cycle markings have now been installed. Potentially erect a sign to state "cyclists consider pedestrians" or similar plus slow markings and / or install cycle symbols behind the bus shelter to indicate the route of cyclists to pedestrians, in particular bus passengers.	Highways - Desirable to install "share with care" type signs - please see image to right	 Removal of this facility would not be supported by cycle groups as this would place them into danger with potentially fast moving traffic.
3.15	Number 610 (Telephone Exchange), Wilmslow Road.	Turning traffic potentially leading to collisions with cyclists.	Introduce give-way markings on the cycle track such that cyclists must give-way to turning traffic. Introduce 'SLOW' markings on the cycle track in advance of the crossing.	As suggested Introduce give-way markings on the cycle track such that cyclists must give-way to turning traffic. Introduce 'SLOW' markings on the cycle track in advance of the crossing and bus stop.	Install road markings as suggested	Highways- SM to provide plan to GM. GM to price	Identified within remedial measure (subject to approvals)

	Urgent action required						
	Works could take place and / or defect to be corrected						
	Identified during post-construction review						
Problem:	Location:	Summary:	Recommendation:	Designers Response:	Action	Who to action	NOTES
3.17	Layby facility outside The Christie Hospital (northbound)	Vehicles parked adjacent to the layby are blocking the cycle lane which may cause cyclist / vehicle or pedestrian / cycle collisions.	Review the restrictions in place within the layby to encourage a regular turnover of vehicles.	The original intension here was to install 2 segregation islands to deter this activity and provide a safer bypass for cyclists. Due to delays with negotiations with Christies hospital here (resulting in the existing parking restriction having to remain the same as existing), further approvals are now required to install these islands. White lines have been installed here following the safety audit to highlight cycle route.	Install proposed islands in the future (subject to approvals)	GM to produce cost	Identified within remedial measure (subject to approvals)
3.19	Pedestrian crossing to the north of The Christie Hospital along Wilmslow Road	Pedestrian crossing has been relocated; however, the previous crossing studs are still located within the carriageway which may increase the risk of a vehicle / pedestrian collisions or potentially pedestrians tripping in the carriageway.	Remove the old crossing studs and install studs aligned with the new position of the pedestrian crossing.	This has been recorded as a defect for action	recorded as defect. Crossing surfing is poor and should be resurfaced (desirable)	Contractor	Identified within remedial measure (subject to approvals)
3.23	Wilmslow Road between Marriott Street and Arnfield Road and the pedestrian crossing (both directions)	Reduced width cycle track width past parking bays may lead to cyclist collisions with opening vehicle doors.	Provide a buffer area and/or bollards between the cycle lane and parking bay areas.	There is insufficient width to provide either the buffer zone in line with cycle guidance documents, which state a width of 700, should be provided and / or bollards and maintain the required 1.5m cycle lane. Possibility install a white line (advisory) 0.5m wide to encourage cyclist to manoeuvre away from parked vehicles.	There is insufficient width to provide either the buffer zone and / or bollards and maintain the required 1.5m cycle lane.	Highways	Additional bollards identified within remedial measure (subject to approvals)

	Urgent action required						
	Works could take place and / or defect to be corrected						
	Identified during post-construction review						
Problem:	Location:	Summary:	Recommendation:	Designers Response:	Action	Who to action	NOTES
3.26	Property number 470 to 440, Wilmslow Road.	Narrow carriageway leading to potential for cycle collisions.	It is acknowledged that widening the carriageway at this location would be problematic. Additional signage should be provided to warn drivers of the narrow carriageway and the presence of cyclists within traffic lanes. It was noted on the plans that there is a revision cloud around this section of the scheme and should be revisited by the design team.	The physical width through Withington District Centre (440 to 470) has not been amended by this scheme, however the speed limit has recently been reduced to 20 MPH. Cycle symbols through the village core have been recorded as a defect	Cycle symbol markings are to be installed in district centre to remind drivers about the presence of cyclists and encourage cyclists to adopt the primary position.	Contractor	Additional road markings identified with remedial measures (subject to approvals)
3.37	Wilmslow Road (northbound) between Old Hall Lane and Platt Lane	Pedestrian/cyclist conflicts at minor side road/access points.	Increase the width of the dropped kerb facilities to reduce the risk of conflicts between cyclists and pedestrians.	There is a location along this section which is recorded as a defect as the kerb has been installed too high (Old Hall Lane extent). The other locations have been maximised without causing drainage issues for the plateaus over the crossing points.	recorded as defect	Contractor	Identified and reported as a defect
	Junction of Copson Street		Carriageway resurfacing and refresh existing markings				Carriageway resurfacing due to maintenance condition and outside scope of original project. Issue report for maintenance repair.
	Wilmslow Road Opp 498		Carriageway resurfacing and refresh existing markings				Carriageway resurfacing due to maintenance condition and outside scope of original project. Issue report for maintenance repair.
	Wilmslow Road Opp 593		Existing sign plate and post to be relocated 450mm from the kerb face				Works outlined (subject to approvals)
	Wilmslow Road at the junction of Claremont road	Black and yellow warning sign proposed (PEDESTRIAN CROSSING - CYCLE LANE AHEAD)	install a sign to reduce the conflict between pedestrian and cyclist.				Works outlined (subject to approvals)
	Wilmslow Road - southbound cycle lane after Platt Lane junction	Bus stop by-pass	Requires additional cycle lane markings				Works outlined (subject to approvals)

A9 Appendix 9: Disability Design Review Report

Available March 2017

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Checked & Edited:	E White (Highways)	0161 219 2308
	M Stevenson (Highways)	0161 219 6215
Author:	L Robertson (Highways)	0161 219 6273
Contributors:	J Snape (Policy)	0161 600 8487
	D Stevens (TfGM)	0161 244 0898
	Highways Forecasting & Analytical Services (HFAS) TfGM	
Reviewers:	K Dorrington (Highways)	
	K. Gillham (Highways)	
	D Stevens (TfGM)	
	D Smith (TfGM)	
	D Wilkinson (TfGM)	