

A38 Derby Junctions

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Volume 6

6.3 Environmental Statement Appendices

Appendix 12.1: A38 Walking, Cycling and Horse Riding Assessment

Regulation 5(2)(a)

Planning Act 2008

Infrastructure Planning (Applications: Prescribed
Forms and Procedure) Regulations 2009

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Infrastructure Planning

Planning Act 2008

The Infrastructure Planning (Applications: Prescribed Forms and Procedure) Regulations 2009

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6.3 Environmental Statement Appendices Appendix 12.1: A38 Walking, Cycling and Horse Riding Assessment

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A38 Derby Junctions

A38 Walking, Cycling & Horse-Riding Assessment Report

**Report Number: HE514503-ACM-GEN-A38_SW_PR_ZZ-RP-CH-0001 P01 S0
July 2018**

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1 SCHEME DESCRIPTION AND BACKGROUND

1.1 Background

1.1.1 The scheme is a highway improvement scheme that will have a permanent impact on the trunk road and local highway networks, therefore the HD 42/17 Walking, Cycling & Horse-Riding Assessment and Review (WCHAR) applies. In accordance with the guidance shown in Table 2/8 of HD 42/17, the scale of the scheme has been assessed to qualify as a 'large' scheme for the purposes of this report.

This scheme originally was subject to a NMU Context Report (**Appendix A**) that covered the options stage of the proposed highway scheme. HD 42/17 WCHAR replaces the process set out in HD 42/05 Non-Motorised User Audit and the subsequent Interim Advice Note 143/11 Supplementary Advice and Requirements for the Provision for Non-Motorised Users and Accessibility during planning, design, construction and handover of Improvement Schemes. Therefore the WCHAR Assessment (this report) will cover the preferred option, which will be followed by WCHAR reviews at the preliminary and detailed design stages.

1.1.2 The A38 is the strategic route from Birmingham to Derby and through to the M1 at Junction 28. It carries a high volume of north-south strategic traffic. Where the A38 passes through Derby, substantial volumes of traffic making local journeys intersect, join and leave the A38 intensifying traffic conflicts resulting in congestion and delays at the three at-grade roundabout junctions to the west and north of Derby City Centre. The three junctions are:

- A38 / A61 Little Eaton roundabout
- A38 / A52 Markeaton roundabout
- A38 / A5111 Kingsway roundabout

1.2 Proposed Highway Scheme

1.2.1 Following on from the Road Base Study undertaken during 2001 and 2002 by Faber Maunsell on behalf of the Highways Agency, now Highways England (HE). The study considered options for dealing with a variety of issues associated with the three junctions on the A38. Some of the issues identified includes congestion and safety at the junctions with a variety of short and long term options raised. A public consultation was held in July 2002 and a Study Final Report was issued in October 2002. This report recommended that the long term improvements for the three junctions; A38 / A5111 Kingsway, A38 / A52 Markeaton and A38 / A61 Little Eaton should include changing them to grade separated junctions.

The proposed scheme comprises changing the three at-grade roundabout junctions into three grade separated junctions (scheme layouts are shown in **Appendix B**), the changes can be summarise as follows:

Little Eaton – Dwg No. HE514503-ACM-GEN-Z1 ZZ ZZ ZZ-DR-CH-0006 P01.1

- A38 realigned vertically to pass above proposed roundabout junction,
- A38 realigned horizontally to the south and east of the existing junction,
- National speed limit applied to the A38, with an advisory speed of 50mph on the approach and throughout the junction,
- Existing bridges over the railway and over the farmers access to be modified and widened,
- Existing on / off access with the A38 and Ford Lane (west) to be closed
- Proposed main site compound to be at the back of the Mobile Home Park, accessed via Ford Lane (east),
- Drainage attenuation pond to be situated south of the roundabout on the east side of the A61.

Markeaton – Dwg No. HE514503-ACM-GEN-Z1 ZZ ZZ ZZ-DR-CH-0003 P01.1

- A38 realigned vertically to pass beneath the proposed junction in an underpass,
- A38 realigned horizontally slightly east of the existing junction,
- Speed limit throughout the junction to increase from 40mph to 50mph, terminating just north of the Kedleston Road slip roads reverting back to the national speed limit (70mph),
- Proposed roundabout junction to be fully signalised,
- Additional lane added between Markeaton and Kingsway junctions, northbound and southbound,
- Existing footbridge to be replaced and repositioned,
- Existing entrance into Markeaton Park to be closed, with the existing exit entrance upgraded to a signalised entry / exit junction,
- Existing south access to the petrol station and McDonalds to be closed with north access to be modified to a signalised junction,
- Enfield Road entry and exit access' with the A38 being closed and remodelled as a turning head for the existing properties

Kingsway – Dwg No. HE514503-ACM-GEN-Z1 ZZ ZZ ZZ-DR-CH-0002 P01.1

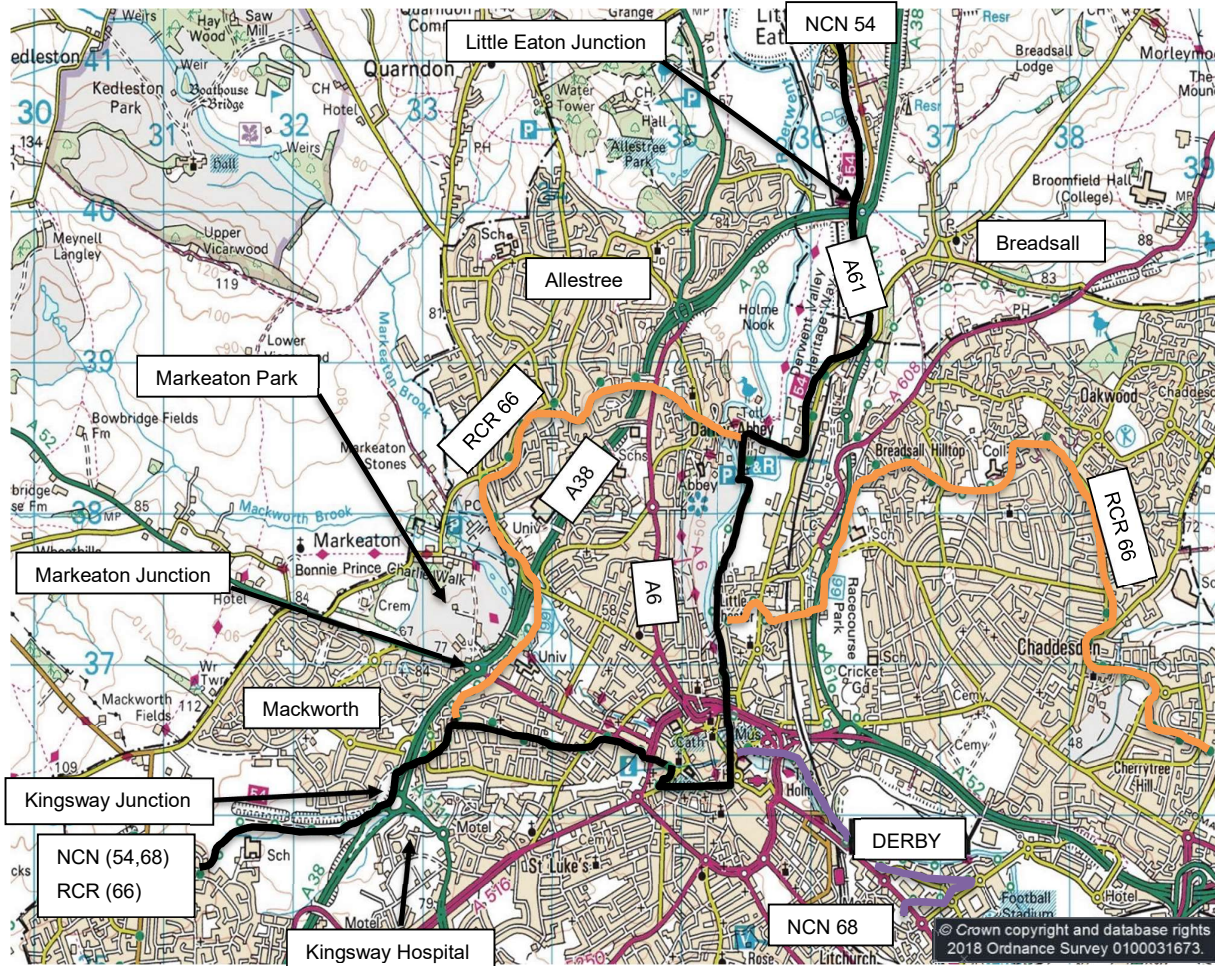
- A38 realigned vertically to pass under the proposed junction,
- A38 realigned horizontally that passes centrally through the existing gyratory roundabout,
- Speed limit change through the junction increasing from 40mph to 50mph, with a change to national speed limit (70mph) to the south,
- Standard dumb-bell junction over the A38 allowing all movements,




-
- Proposed shared footway/cycleway route along the south of the dumb-bell junction connecting to numerous cycle routes,
 - Additional lane added between Kingsway and Markeaton junctions, northbound and southbound,
 - Existing on/off junctions at Brackensdale Avenue (northbound) and Raleigh Street (southbound) with the A38 to be closed,
 - New link road to be provided at Kingsway Park Close.

1.3 Study Area

- 1.3.1 Figure 1 shows the approximate study area and survey area for this Assessment Report. The assessment area has been set by the Lead Assessor and covers a length of the A38 between just north of Little Eaton roundabout, Markeaton roundabout to the southwest of Kingsway roundabout.
- 1.3.2 The suburbs of Mickleover, Mackworth, Allestree, Breadsall and the conurbation of Derby are also included in the study area as potential contributors to key trip generators across the A38 junctions. The survey area boundary includes all the Public Rights of Way (PROW), access rights and trip generators within the area that would be affected by the scheme.

Figure 1: Assessment Report Study Area and Survey Area



	Regional Cycle Route 66 (RCR 66)
	National Cycle Network 68 (NCN 68)
	National Cycle Network 54 (NCN 54). NCN 68 and RCR 66 join NCN 54 as shown.

2 WALKING, CYCLING & HORSE-RIDING ASSESSMENT

This Chapter summarises the findings of the assessment as set out in Chapter 4 of HD 42/17. The findings under each topic area are summarised in an individual section and any potential opportunities for improvements are noted in each section and then summarised in Chapter 3.

2.1 Review of walking, cycling & horse-riding policies and strategies

2.1.1 The following national and local policies and guidance have been reviewed as part of this Assessment:

Derbyshire Local Transport Plan, LTP (2011)

2.1.2 The Derbyshire County Council Local Transport Plan (LTP) contains a long term transport priorities over the next 15 years. The development of the scheme can support the priorities outlined below:

- Well maintained roads and rights of way,
- Efficient transport network management,
- Improving local accessibility and achieving healthier travel habits,
- Better safety and security,
- A considered approach to new infrastructure.

2.1.3 The LTP contains key priority strategies for improving walking, cycling, horse-riding and District Integrated Transport strategies. Also included in the LTP is the Derbyshire Rights of Way Improvement Plan.

Rights of Way Improvement Plan for Derbyshire, RoWIP, Statement of Action (2013 – 2017)

2.1.4 The Derbyshire RoWIP contains three key themes and five aims outlined below:

The three key themes are:-

- Seek to preserve Derbyshire's heritage, landscape and wildlife,
- Promote the sustainable use of the present and future network, encouraging healthier and more sustainable travel choices,
- Encourage and create routes that support the local economy and boost tourism.

The five aims are:-

- Ensure that the public right of way network is open and available for use,
- Provide an up-to-date and widely available Definitive Map and Statement,
- Provide a more connected, safe and accessible network suitable for all users,
- Improve the promotion, understanding and use of the network,
- Encourage greater community involvement in managing local rights of way.

2.1.5 These objectives stated above will need to be considered during the scheme development.

Derby Local Transport Plan, LTP3 (2011)

2.1.6 The Derby City Council Local Transport Plan 3 (LTP3) sets out the long term transport strategy for the transport system in and around Derby up to 2026. In the report, Derby's Transport Vision sets out to provide effective and sustainable transport networks for local travel in Derby. To achieve Derby's Transport Vision, Derby has indicated five transport goals:-

- To support growth and economic competitiveness, by delivering reliable and efficient transport networks,
- To contribute to tackling climate change by developing and promoting low-carbon travel choices,
- To contribute to better safety, security and health for all people in Derby by improving road safety, improving security on transport networks and promoting active travel,
- To provide and promote greater choice and equality of opportunity for all through the delivery and promotion of accessible walking, cycling and public transport networks, whilst maintaining appropriate access for car users,
- To improve the quality of life for all people living, working in or visiting Derby by promoting investment in transport that enhances the urban and natural environment and sense of place.

2.1.7 Derby City Council LTP3 and Derbyshire County Council LTP both have similar values and strategies to increase and improve facilities for more efficient and sustainable modes of active travel and public transport.

A38 Derby Junctions, Scheme Assessment Report (SAR), October 2016

2.1.8 Aecom's SAR report provides a summary of the Technical Appraisal Report (TAR) that was produced in 2009, which outlines what Highways England has previously explored for developing this scheme. The SAR report mentions the need for the scheme to meet national government policy for NMU's and to conform to the DMRB, which is discussed below.

2.1.9 The scheme's main objective comprises of grade-separating the three remaining at-grade junctions along the A38 between the M6 toll and the M1, to provide the following benefits:

- To reduce delays and increase reliability of journeys on the strategic corridor
- To improve the safety for all road users
- Assist in bringing forward development and regeneration opportunities in the surrounding area and immediately adjacent to the scheme.

2.1.10 The SAR also shares scheme-specific objectives that are split into five categories – economy, environment, society, public accounts and scheme specific objectives.

NMUs are referenced frequently in the SAR and feature under the society and scheme-specific objectives as:

- To reduce severance by maintaining or providing appropriate facilities for crossing, and travelling along the route for NMU's,
- To improve safety for residents in the vicinity of the junctions,
- To facilitate integration with other transport modes where applicable
- To ensure a consistent high standard of signing relating to the junctions.

2.1.11 The scheme is being developed to address traffic issues in the area, however the scheme will have an impact on NMU's that will require careful consideration.

Cycling and walking investment strategy, April 2017

2.1.12 The Department for Transport (DFT) set out the Cycling and walking investment strategy in the vision of making cycling and walking the natural choices for shorter journeys, or as part of a longer journey.

2.1.13 This approach means that NMU facilities should be included within the scheme design by maintaining existing connections, upgrading the facilities to the relevant standards and making them more attractive routes to use. This scheme will be designed in accordance to DMRB standards.

DMRB

2.1.14 This scheme should be designed in accordance with TA 91/05 (DMRB 5.2.4) Provision for Non-Motorised Users and TA 90/05 (DMRB 6.3.5) The Geometric Design of Pedestrian, Cycle and Equestrian Routes together with other relevant documentation.

2.2 Collision Data

2.2.1 Personal injury collision data has been provided for the entire length of the A38 between the co-ordinates below:

- Northern end: Easting = 436852, Northing 342102
- Southern end: Easting = 431846, Northing 334790

The data covers the five years between 1st January 2011 and 31st December 2015 sourced from the Department for Transport. During this time there were 181 slight injury collisions, 20 serious injury collisions and 1 fatal collision. 5 of the recorded collisions involved pedestrians and 14 collisions involved cyclists. Damage-only collision data was not available at the time of the assessment.

Analysis of the data has revealed that a high number of collisions occurred at or within 20m of a junction 128 (63.4%). Out of the 128 collisions 92 (71.9%) occurred at a roundabout junction. 11 out of the 14 (78.6%) collisions involving pedal cyclists occurred at or on the approach to a roundabout along the A38.

It is not clear where along the A38 the pedestrian collisions occurred but 60% of the collisions happened, crossing on a pedestrian crossing facility.

2.3 Public transport services and interchange information

2.3.1 Three bus services operate throughout the scheme, Little Eaton, Markeaton and Kingsway junctions. The three bus operators are Trentbarton, Arriva and Notts & Derby.

2.3.2 The bus services can be separated into the three junctions:-

Little Eaton Roundabout

2.3.3 The majority of the bus services operating through this junction are run by Trentbarton. Amberline route travels between Derby and Hucknall via Alfreton Road. This service runs every day of the week with an hourly service Monday to Saturday changing to a two hourly service on a Sunday that has limited stops.

2.3.4 The Comet line operates between Derby and Chesterfield via A38. This service has no stops within the scheme extents however it runs through Little Eaton roundabout. The route runs a half hour service Monday to Saturday and an hourly service on a Sunday.

2.3.5 Route 7.1 runs between Derby and Belper via Alfreton Road on an hourly service Monday to Saturday.

2.3.6 Routes 9.1 and 9.3 run very similar services that follow the same route through the scheme extents. This service runs between Derby and Mansfield via A38 travelling through Little Eaton roundabout. The combined service generally runs every 15mins during peak times changing to a half hour service off peak Monday to Saturday. Sunday service runs hourly.

2.3.7 Trentbarton also operate the 6.X service between Derby and Belper via A38. Only the return journey from Belper travels along the A38 through Little Eaton junction with no stops on this section of the route. The service generally runs hourly Monday to Saturday.

2.3.8 Notts & Derby operate the 302 school bus service serving between Spondon and Saint Benedict Catholic Voluntary Academy (SBCVA) via Breadsall. This service runs once each way a day Monday to Friday for the morning and afternoon school run.

Markeaton Roundabout

- 2.3.9 Trentbarton operates the Swift service line between Derby and Uttoxeter via Ashbourne. The service runs hourly Monday to Saturday with a two hourly service on Sundays.
- 2.3.10 Route 9 service is operated by Arriva operating between Derby and Radbourne Lane via Markeaton Park. This service generally runs every 20 mins Monday to Saturday and 30 mins on Sunday.
- 2.3.11 The rest of the bus services operating through and around Markeaton roundabout are run by Notts & Derby Bus Company. Uni-bus route 4 runs between Kedleston Road Campus and Markeaton Street Campus via Markeaton Park and Ride. The service runs generally every 15mins during term time and every 20mins out of term time Monday to Friday. The service doesn't run on weekends.
- 2.3.12 Uni-bus route 5 serves between Kedleston Road Campus and Markeaton Park and Ride via the City Centre. This service runs Monday to Friday every 30mins. No service provided Saturday and Sunday.
- 2.3.13 Uni-bus route 6 operates between Kedleston Road and Derby Station via the City Centre. This service runs every 12mins Monday to Friday only.
- 2.3.14 Uni-bus route 7 runs between Kedleston Road Campus and back again via Pybus Street Top. This service runs Monday to Friday every 20mins.
- 2.3.15 School route 403 runs once each way for the morning and afternoon school runs on school days between Hilton and SBVCA via Mickleover.
- 2.3.16 Notts & Derby also operates the X52 service between Nottingham and Alton Towers via Ashbourne. The service operates Monday to Friday between 26th March until 3rd September except for a few dates in April and May. The service re-opens for Alton Towers Scarefest period which runs from 19th September to 31st October on Monday – Friday. This service runs once a day each way that it operates.

Kingsway Roundabout

- 2.3.17 Arriva Bus Company operates the 8 service between Derby and Mackworth Circular via Kingsway Bridge. The service runs every day of the week and is generally every 12mins Monday to Saturday and every 20mins on a Sunday.

General

- 2.3.18 There is a train station located in Derby, approximately 2.5km east of the scheme. The station has good connections with bus services stopping at the station from various locations around Derby and its suburbs. There are local cycle networks linking into the station that link into National Cycle Network (NCN) 6, 54 and 68 and Regional Cycle Route (RCR) 66.

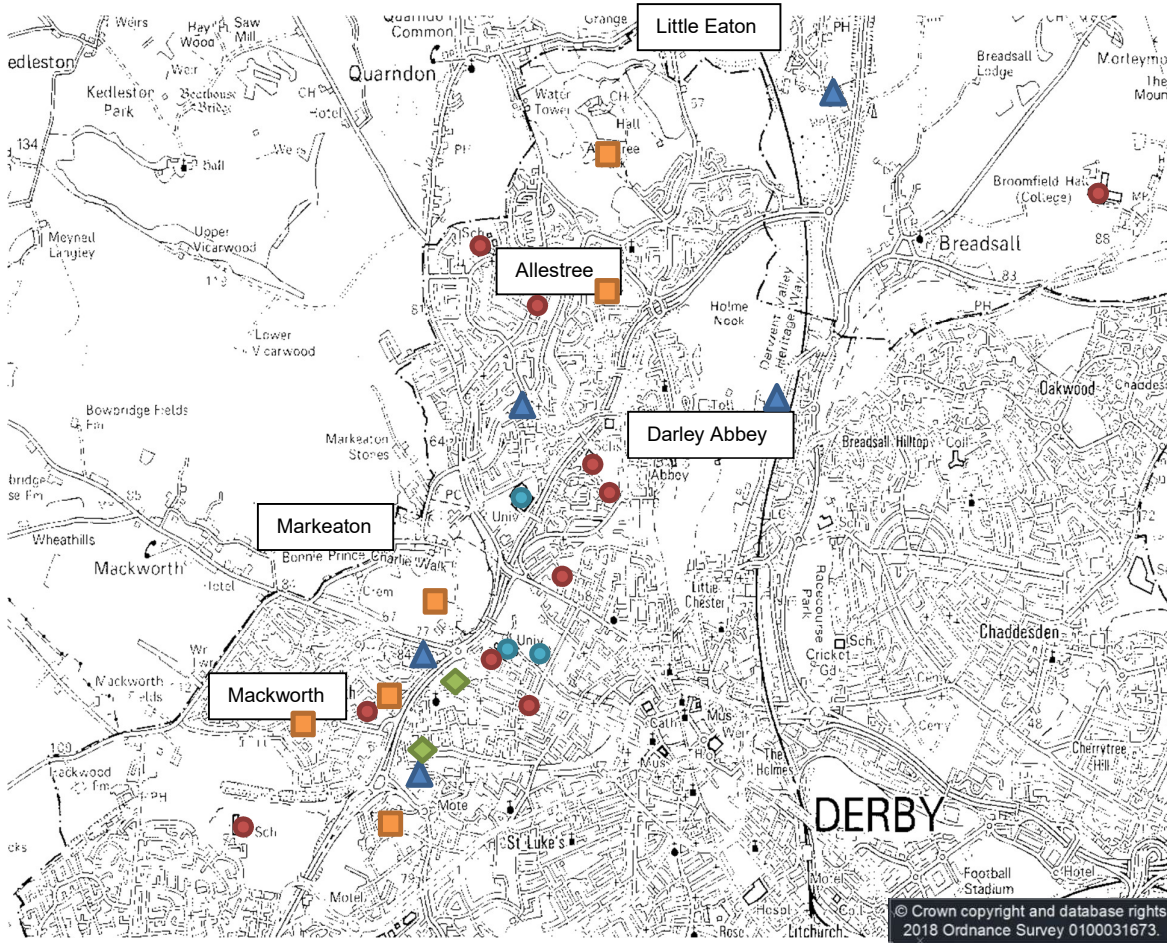
2.4 Trip Generators






2.4.1 Some locations throughout the scheme are likely to generate and attract trips by NMU's. The below table outlines the key attractions in the area shown in Figure 2.

Table 2-1 Key Trip Generators

Trip Attractor	Location
Retail	Derby Garden Centre, Little Eaton
	Meteor Retail Park, Derby
	Park Farm Shopping Centre, Derby
	McDonalds and Petrol Station, Markeaton Park
	Kingsway Retail Park, Kingsway
Leisure / Health	Markeaton Park, Markeaton Park
	Allestree Cricket Club, Allestree
	Greenwich Gardens – Sanctuary Extra Care, Mackworth
	Knightsbridge Recreational Ground, Derby
	Kingsway Hospital, Kingsway
	Allestree Park Golf Course, Allestree
Education	Schools in Darley Abbey
	Royal School for the Deaf, Derby
	Schools in Derby
	Brackensdale Primary School, Kingsway
	University of Derby – Kedleston Road Campus, Markeaton Street Campus and Britannia Mill Campus
Employers / Business Park	Derbyshire Army Cadet Force, Kingsway Detachment
	Kingsway Industrial Park, Kingsway

Figure 2 – Key Trip Generators and Amenities



	Retail
	Leisure / Health
	Schools
	University
	Employers / Business Park

Future trip generators

2.4.2 There is a major development planned south of Kingsway Hospital, consisting of Housing development, offices, retail units and business units. The land-use for this development needs to consider linking into existing NMU networks to improve the connectivity in the area especially the good local cycle network in the vicinity.

2.5 Site Visit

2.5.1 The daytime site visits were undertaken by Adam Thorpe (Lead Assessor) and Scott Harris (Assessor) on 19th & 20th June 2018 between 10:00 and 17:00 and the night time visit was undertaken by Adam Thorpe (Lead Assessor) and David Hooton (Assessor) on 3rd July 2018 between 22:30 and 03:30. The site visit took the form of walking along all available pedestrian and cycling facilities within the extents of the scheme which included visiting NCN 54 and 68 and RCR 66 during the site visit. The level of use and condition/suitability of each route during the site visit were recorded and potential improvements, repairs and connections were noted. The weather during the day time visits was dry with clear skies with the temperature between 20 and 25 degrees Celcius. The weather during the night time site visit was again dry with clear sky with the temperature between 10 and 15 degrees Celcius. The road and path surfaces were all noted to be dry.

2.5.2 Photographs were taken during the site visit and are contained in **Appendix C**.

2.5.3 The primary findings of the site visit were:

Little Eaton Junction

Refer to Dwg.HE514503-ACM-ENM-A38-SW-PR-ZZ-DR-CH-0001 for existing PROW around Little Eaton Junction in **Appendix D**

- The NCN 54 from Little Eaton to Little Eaton roundabout via Alfreton Road was used frequently during the day with a mix of groups and single riders using the route heading towards Derby.
- Along this section there was a number of cyclists riding along Alfreton Road joining NCN 54 at the entrance into Starbucks Coffee, instead of using the crossing facility provided.



Figure 3: Uncontrolled crossing point, Alfreton Road

- During the hours of darkness this section of the NCN 54 is unlit, however some sections gain borrowed light from the carriageway. No users were seen using NCN 54 during darkness

however due to the late time to achieve darkness it is understandable that there was no users.

- Where NCN 54 passes by Starbucks Coffee there is a short section that narrows and follows along a steep drop with no barrier to protect users falling down the embankment.
- The NCN 54 carries on south of Little Eaton roundabout on the western side of the A61 Alfreton Road. Along this section the NCN 54 has an approximate width of 2m with some sections below 1.5m. During the site visit, on a few occasions when a cyclist was approaching, we had to leave the shared path and move onto the grass verge to allow the cyclist to continue. There is not enough width along the path for two cyclists to pass each other safely.



Figure 4: NCN 54 along the A61, Alfreton Road

- The footpath Breadsall FP 3 runs from Breadsall Village and finishes south east of the roundabout. On site, where the Breadsall FP 3 finishes, is another footpath with direction signs guiding users down the A61 along the back of the safety barriers to its end point. At the end of the safety barriers on the east side of the A61 it appears that the footpath crosses over the A61 (see Figure 5), connecting onto NCN 54 along the west side of the A61.



Figure 5: Footpath crossing.

- Breadsall FP 1, 2, 3 and 4 on the eastside of the railway line have no visible line of path, showing a lack of use along these footpaths. However Breadsall FP 6 and 4 west of the railway seemed to be well used but no users were seen during both site visits.
- During the daylight visit there was a lot of walkers and dog walkers using the track next to Breadsall FP 7. The original Breadsall FP 7 looks to go through the existing fields but the land user grows turf on these fields and the owner seems to have dissuaded users to follow the actual line of the path to prevent damage to the growing turf. However the track adjacent is well used and follows the line parallel to Breadsall FP 7.



Figure 6: Existing line of Breadsall FP 7

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- It is difficult to cross the A61 to reach Breadsall FP 1 at the crossing point with Breadsall FP 4 due to high traffic volumes and speeds. Also the central median between both footpaths is a steep graded grass verge in between the dual carriageways.
 - Breadsall FP 23 doesn't look used and the stairs leading from Abbey Hill down to Ford Lane was overgrown with brambles and nettles.
 - There is a shared cycleway/footway that runs along A38, Abbey Hill that was well used on the daytime site visit by pedestrians and cyclists from the housing estate east of Ford Lane.

Markeaton Junction

Refer to Dwg.HE514503-ACM-ENM-A38-SW-PR-ZZ-DR-CH-0002 for existing PROW around Markeaton Junction in **Appendix D**

- RCR 66 links Kedleston Road University Campus to the Markeaton Campus via Kedleston Road. Several cyclists were seen using RCR 66 to travel between the two campuses. During the night visit we found an Ebike left stranded along the railings close to the pedestrian bridge over the A38.
- There were no users on RCR 66 during the night visit. The route gains a lot of borrowed light along Kedleston Road section of the route, but when the route turns to go alongside the A38 on slip, the borrowed light fades away. Walking this section of RCR 66 during darkness was only possible using a torch.
- RCR 66 crosses the east arm of Markeaton roundabout using a two stage zebra crossing. It can be hazardous using this crossing due to its close proximity to the east exit arm (approximately 5m) and approximately 2m from the entry arm. During rush hour vehicles stop on the crossing blocking right of way and sometimes don't stop to allow users to cross.
- There was a lot of pedestrian movement traveling around Markeaton roundabout using controlled and uncontrolled crossing points.
- Throughout Markeaton Park there was lots of pedestrians and cyclists using the paths together without incident, during darkness hours it should be noted that there is no lighting through the park.
- NCN 54, 68 and RCR 66 merge together on Windmill Hill Lane directed down Thurcroft Close. A couple of cyclists were seen using this route during daytime.



Figure 7: Direction sign at Windmill Hill Lane

Kingsway Junction

Refer to Dwg.HE514503-ACM-ENM-A38-SW-PR-ZZ-DR-CH-0003 for existing PROW around Kingsway Junction in **Appendix D**

- Where the cycle routes cross Raleigh Street the route goes through the splitter island to carry on to Kingsway. This section is in rather poor condition and not well received by the cyclists we saw in this area. All of them rode around the splitter island on the road to carry on RCR 66.
- The crossing on Lyttelton Street for the cycle routes doesn't line up correctly creating an un-safe crossing point.
- At the Lyttelton junction with Greenwich Drive South it isn't clear which way the cycle routes go. The signage is on the wrong side of the road and covered by vegetation.
- Along the A38 are some unused bus stops that have a footway leading to them. These present unsafe crossing points, with minimal visibility due to vegetation and high traffic flows, across the A38



Figure 8: Crossing on the A38 to disused bus stop

2.6 Consultation with key stakeholders

Consultation information to be added here once the event has been undertaken by the Design Team

2.7 Existing pedestrian, cyclist and equestrian facilities within the local area

2.7.1 The following pedestrian, cyclist and equestrian facilities within the scheme extents have been identified:

Pedestrian Facilities

2.7.2 The following pedestrian provision exist around Little Eaton roundabout:

Refer to Dwg.HE514503-ACM-ENM-A38-SW-PR-ZZ-DR-CH-0001 in **Appendix D**.

There is eight public footpaths in close proximity to Little Eaton junction. Footpath Breadsall FP 3 route runs from Rectory Lane, Breadsall westwards towards the junction terminating at the safety barriers. At this point a public footway fingerpost sign directs users alongside the new bypass lane. Where, at the end of the safety barriers is an informal crossing point to cross over the A61. There is no public footpath signage at the end of the barriers but a visible desire line was found at this point, whilst this section of footpath is not recognised on the Derbyshire County Council (DCC) mapping portal.

Breadsall FP 1 and 4 cross the A61 close to where the watercourse crosses underneath the A61 south of the junction, again no crossing facilities are provided. West of the junction are two footpaths Breadsall FP 23 that connects to Little Eaton FP 17 to the north and also connects to Breadsall FP 7 via the shared route on the A38 that continues to Darley Abbey. These footpaths form part of the Derwent Valley Heritage Way.

There is a short section of footway approximately 2.5m wide opposite Starbucks Coffee. This footway serves the bus stop at this location. An uncontrolled crossing point links this short section to the shared footway/cycleway on the western side of Alfreton Road. It also serves for road cyclists to leave the carriageway, dismount and cross onto NCN 54 to navigate the roundabout safely using the Toucan crossing over the west arm of Little Eaton roundabout.

2.7.3 The following pedestrian provisions exist around Markeaton roundabout:

Refer to Dwg.HE514503-ACM-ENM-A38-SW-PR-ZZ-DR-CH-0002 in **Appendix D**.

The south arm of Markeaton junction is a pedestrian only signal controlled crossing. The north arm is a shared use signal controlled crossing, an uncontrolled pedestrian crossing on the west arm and a shared use zebra crossing on the east arm. The western, southern and eastern arms of the roundabout have pedestrian facilities on both sides of the carriageway.

There are various shared use routes through Markeaton Park to reach different destinations. As well as serving the facilities in the park the routes also provide a passage to Kedleston Road and cross over the A38 to connect to RCR 66 or Markeaton / Britannia Mill University campuses further east.

2.7.4 The following pedestrian provisions exist in the vicinity of Kingsway roundabout:

Refer to Dwg.HE514503-ACM-ENM-A38-SW-PR-ZZ-DR-CH-0003 in **Appendix D**.

There is an existing uncontrolled pedestrian crossing facility between Thurcroft Close and Greenwich Drive (N) utilising the central median.

To the east of Kingsway on the A5111 is a four arm roundabout that feeds into Kingsway Hospital and Kingsway Retail Park. From this roundabout to the old entrance for Kingsway Hospital is a pedestrian facility on the south side of the A5111, just before reaching Cherry Tree Close is an uncontrolled crossing point over the A5111 to the northern side via the large splitter island.

Cyclist Facilities

2.7.5 The following cyclist provisions exist around Little Eaton:

Refer to Dwg.HE514503-ACM-ENM-A38-SW-PR-ZZ-DR-CH-0001 in **Appendix D**.

At Little Eaton junction, NCN 54 begins north of the Little Eaton junction and follows the B 6179 and the A61, negotiating the A38 roundabout via a controlled crossing facility across the west arm of the roundabout. This section of NCN 54 is a shared pedestrian / cyclist route.

There is also a designated two-way shared pedestrian and cyclist route travelling westwards from the junction on the northern side of the A38. Cyclists have to re-join the carriageway at Ford Lane while pedestrians continue on the footway that runs to the end of the bridge that crosses over the River Derwent. At this point the pedestrian facilities end.

2.7.6 The following cyclist provisions exist around Markeaton:

Refer to Dwg.HE514503-ACM-ENM-A38-SW-PR-ZZ-DR-CH-0002 in **Appendix D**.

RCR 66 runs along Kedleston Road as a segregated route travelling south east past University of Derby, over Kedleston Road Junction turning south changing into a shared route following the southbound slip road and A38 to Markeaton roundabout. The segregated section runs along the south side of Kedleston Road with users having to negotiate two signal controlled crossing points at the top of the A38 off slip and uncontrolled crossing facilities at the top of the entry slip for the A38.

There is also a short section of on-road cycle lane leading to a non-standard advanced stop line when approaching the traffic lights at the junction with Kedleston Road and the A38 exit slip in both directions.

RCR 66 travels along the eastern side of the A38, feeding local networks towards the Markeaton and Britannia Mill University Campuses. RCR 66 eventually joins Markeaton roundabout crossing over at the east arm via a zebra crossings. After traversing Markeaton the RCR 66 carries on following the A38 until it joins Windmill Hill Lane. At the junction with Windmill Hill Lane and Thurcroft Close RCR 66 and NCN 54 and 68 connect together and runs south down Thurcroft Close towards Lyttelton Street (see 2.7.7 below).

There are several routes for pedestrians and cyclists within Markeaton Park, providing access to facilities in the park as well as to Kedleston Road and over the existing footbridge that crosses the A38 serving RCR 66 and local cycle routes into Markeaton Street.

2.7.7 The following cyclist provisions exist in the vicinity of Kingsway:

Refer to Dwg.HE514503-ACM-ENM-A38-SW-PR-ZZ-DR-CH-0003 in **Appendix D**.

NCN 54 and 68 along with RCR 66 continues from Thurcroft Close, crossing Raleigh Street using existing uncontrolled pedestrian facilities via the splitter island, leading onto Kingsway service road. The cycle routes carry on along Lyttelton Street crossing over from the northern side to the south side just to the west of Kingsway Park Close, carrying on west to the junction of Brackensdale Avenue and Greenwich Drive South. All three routes continue south on Greenwich Drive South before following the disused railway to the west of Kingsway junction.

There is a local cycle network that follows the A38 on the east side starting from the junction of Lyttelton Street with Kingsway Park Close, serving both Kingsway Retail Park and carries on east on the A5111.

Equestrian Facilities

Refer to Dwg.HE514503-ACM-ENM-A38-SW-PR-ZZ-DR-CH-0001 in **Appendix D**.

2.7.8 There is an existing bridleway near Little Eaton Junction that runs between Breadsall and Little Eaton on Breadsall BW 18 and Little Eaton BW 29 that runs through the underbridge beneath the A38.

2.7.9 There are no other equestrian facilities within the scheme extents.

2.8 Existing pedestrian, cyclist and equestrian facilities beyond scheme extents and links to County / strategic networks

2.8.1 The following pedestrian, cyclist and equestrian facilities outside the immediate scheme extents, but within the study area, have been identified:

Pedestrian Facilities

- 2.8.2 There is an extensive public footpath network in and around the Little Eaton Roundabout. These consist of Breadsall FP 6 that connects into Breadsall FP 4 and onto the A61 south of Little Eaton roundabout. Little Eaton FP 17 to Little Eaton via Ford Lane that connects to Breadsall FP 23, and four other public footpaths that serve within Breadsall; these are Breadsall FP 2, 9, 14 and 24.
- 2.8.3 At Markeaton Park there is a public footpath that travels westwards towards Mackworth, Mackworth FP 8.

Cyclist Facilities

- 2.8.4 There is a comprehensive cycling network within Derby and the surrounding suburbs with a mix of National Cycle Networks, Regional Cycle Routes and local cycle routes. These cross the project road at various locations.
- 2.8.5 The Great Northern Greenway gets split into two parts when it reaches Derby. The north east section, NCN 672 connects Ilkeston to Derby via RCR 66 and local cycle routes. The second part starts west of the two suburbs Mackworth and Mickleover, with NCN 54 and 68 forming the Great Northern Greenway travelling in a south west direction towards Etwall

Equestrian Facilities

- 2.8.6 The only bridleway within the study is mentioned in paragraph 2.7.8 above.
- 2.8.7 The following equestrian centres have been identified within 5miles of the Derby junction extents:
- Derby College Equestrian Centre, Morley
 - Springwood Riding Club, Morley
 - Landown Equestrian, Findern
 - Barleyfields Equestrian Centre, Etwall

Pedestrian, cyclist and equestrian survey data

- 2.8.8 A survey of the number of pedestrians, cyclists and equestrians in the vicinity of the scheme was undertaken on a weekday and weekend in June 2018 by Road Data Services. This is useful to understand the current usage levels which would influence the design of potential mitigation measures. **NMU survey locations can be found in Appendix D.**

Table 2-2 Walking, cycling and horse-riding user survey data

Location	Weekday			Weekend		
	Ped.	Cycle	Total	Ped.	Cycle	Total
Site 1 – Little Eaton BW 29	14	3	17	15	2	17
Site 2 – B6179 (NCN54)	52	186 (NCN 54) 119 (B6179)	357	74	71 (NCN 54) 34 (B6179)	179
Site 3 – Breadsall FP 3,2	0	0	0	1	0	1
Site 4 – unclassified FP	0	0	0	1	0	1
Site 5 – Traversing Little Eaton Junction	26	186	212	22	52	74
Location	Weekday			Weekend		
	Ped.	Cycle	Total	Ped.	Cycle	Total
Site 6 – Shared path A38, Breadsall FP 23	30	68	98	54	38	92
Site 7 – Breadsall FP 7	15	1	16	35	0	35
Site 8 – Ford Lane	20	67	87	34	39	73
Site 9 – Breadsall FP 1, 4 and NCN 54	27 (NCN 54)	185 (NCN 54)	212	20 (NCN 54)	53 (NCN 54)	73
Site 10 – Breadsall FP 6, link to Croft Lane, NCN54	31	187 (NCN 54)	217	23	51 (NCN 54)	74
Site 11 - Broadway	176	70	246	173	46	219
Site 12 – RCR 66, A38 exit slip	483	135	618	446	66	512
Site 13 – RCR 66, A38 entry slip	635	204	839	484	82	566
Site 14 – Kedleston Rd J/W Broadway	714	181	895	524	72	596
Site 15 – Markeaton Street	362	107	469	382	81	463

Site 16 – Footbridge over A38	362	118	480	251	80	331
Site 17 – Markeaton Junction	833	206	1039	731	186	917
Site 18 – Enfield Road	216	39	255	208	40	248
Site 19 – Uncontrolled crossing of A38	177	66	243	116	32	148
Site 20 – Lyttelton Road, NCN 54, 68 and RCR 66	970	117	1087	557	128	685
Site 21 – NCN 54, 68 and RCR 66	103	94	197	91	66	157
Site 22 – Shared path Kingsway	834	233	1067	588	121	709

2.8.9 The following is a summary of the main points from the data:

- There was no evidence of equestrian use recorded at the survey sites
- There was little evidence of high usage of PROW by NMUs in the area.
- NCN 54 was heavily used by pedestrians and cyclists throughout the scheme, particularly in and around Little Eaton junction.
- Route from Little Eaton to Derby is popular with cyclists during the week between am peak times (07:00 – 09:30) and pm peak times (15:00 – 18:30). This indicates that the use is more likely to be commuting than recreational.
- Kedleston Road junction with the A38 has a heavy footfall of pedestrian and cyclist activity running throughout it. RCR 66 runs across the junction being the popular link for the University Campuses Kedleston, Markeaton Street and Britannia Mill.
- Markeaton junction has a higher pedestrian flow than cyclists throughout the week, suggesting a recreational route. This could be due to the surrounding residential development accessing McDonald's, the filling station with a shop and access into Markeaton Park.
- There is a high pedestrian and cyclist flow along Lyttelton Street and the surrounding infrastructure. This is due to it being the main link to Derby for the Mackworth Estate and for Brackensdale Primary School. The flows stay high at the weekend as the main link to the Kingsway Retail Park joins at Lyttelton Street.
- Overall the pedestrian and cyclist facilities along the scheme are frequently used during the weekdays and at the weekend.

2.9 Consultation with local user groups and wider public

Consultation information to be added here once the event has been undertaken by the Design Team

3 USER OPPORTUNITIES

The opportunities highlighted below are considered to be relevant and associated with the highway scheme and should be considered by the wider stakeholder design teams throughout the progression of the scheme design. In addition, any further opportunities that may arise through the ongoing development of the design phase(s), due consideration should be given these.

3.1 General

3.1.1 **Opportunity 1:** Improvements identified as part of the WCHAR process could be delivered in conjunction with key stakeholders, particularly where their objectives would be met by the opportunities identified below.

3.2 Strategic opportunities

3.2.1 **Opportunity 2:** Improve the signage across the scheme. Currently the NMU signage throughout the scheme is good at major intersections but very poor in-between these. An increase of repeater signs and definitive start and end of routes to be established with the necessary tactile paving and road markings.

3.2.2 **Opportunity 3:** Providing shared use footway/cycleway facilities along Ford lane from the junction with the A38 to Lambourn Drive. Due to the closing of the A38 J/W Ford Lane this section of road will become a safer route for pedestrians and cyclists to use, whilst connecting the large estate west of Little Eaton roundabout to NCN 54.

3.2.3 **Opportunity 4:** Providing a shared use footway/cycleway facilities along the A38 between Markeaton Roundabout and Brackensdale Avenue via Greenwich Drive North. This will then connect to NCN 54 & 68 and RCR 66 on Greenwich Drive South.

3.2.4 **Opportunity 5:** Improve the lighting throughout the scheme for pedestrians and cyclists. During the night time site visit it was noted that most of the cycle routes and footways were either unlit or had borrowed light from the carriageway.

3.3 Pedestrian specific opportunities

3.3.1 **Opportunity 6:** Where Breadsall FP 3 ends just before Little Eaton roundabout an un-named footpath that used to cross the east arm of the roundabout now diverts south down the A61 along the back of the safety barriers. Where the safety barriers end the footpath then crosses the A61 to connect to NCN 54, there is no signage to follow. Instead of having multiple crossing points along the A61 this footpath should be diverted to join onto Breadsall FP 1 and cross over at this point to join Breadsall FP 4.

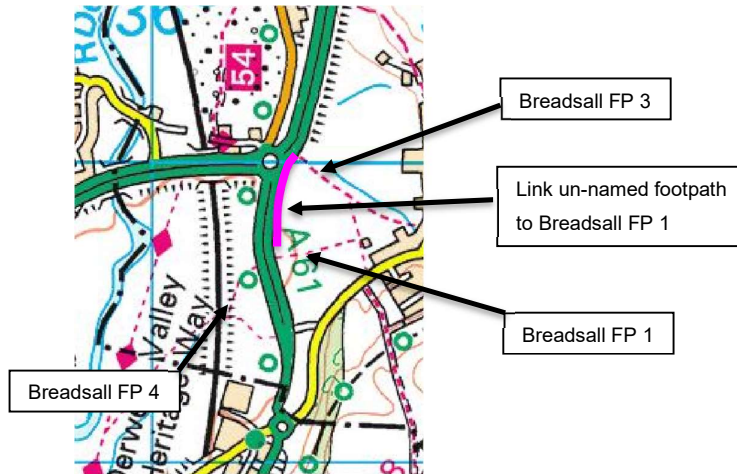


Figure 9: Opportunity 6

- 3.3.2 **Opportunity 7:** The crossing point for Breadsall FP 1 and 4 across the A61 to be upgraded by replacing a section of the grassed central median with hard surfacing. Advanced signage warning vehicles of pedestrians crossing should be installed.
- 3.3.3 **Opportunity 8:** Where Breadsall FP 7 meets the A38 a steel safety barrier crosses the entry way of the footpath, which has been accommodated with a stile to traverse the safety barrier. However this has created a tripping hazard that leads directly to steep descending steps. A section of the safety barrier can be removed in front of the entrance to Breadsall FP 7 for a trip free entry way while still being protected from the traffic on the A38 due to the first line of safety barriers in front of this one.



Figure 10: Beginning of Breadsall FP 7

- 3.3.4 **Opportunity 9:** Improve the crossing point at the B6179 junction with entry into Starbuck Coffee by installing tactile paving and resetting the kerb to be flush with the carriageway.
- 3.3.5 **Opportunity 10:** Potential to install a signal controlled crossing where Breadsall FP 6 meets with the A61. There are pedestrian and cycle movements at this location due to the vicinity of the bus stops, link to Breadsall Village and NCN 54.
- 3.3.6 **Opportunity 11:** Currently on Kedleston Road where the footway is segregated from the cycleway opposite the entrance to the University, the pedestrian section runs through a long section of trees lined either side of the path. There is no lighting at this point and the footway is in complete darkness feeling unsafe. It would be recommended to introduce some low level lighting while being sympathetic to the area.
- 3.3.7 **Opportunity 12:** There is an uncontrolled crossing over the A38 linking Thurcroft Close to Greenwich Drive North. This crossing was put in place to serve the bus stops situated on the A38 that are now no longer used, however when the bus stops were made redundant the crossing remained open. This has now become a route for users and children to reach Brackensdale Primary School, even though the crossing is highly dangerous with vehicles reaching high speeds at this point on the A38. It is recommended that this crossing is to be stopped up and returned to grass verge to dissuade users. Re-directing users to Lyttelton Street to travel through the underpass to reach the required destinations could be an alternative route.
- 3.3.8 **Opportunity 13:** There are two bus stops just north of the Kingsway junction that are no longer in use, with the footways leading up to them still available for people to use. Both of the footways are in close proximity to cycle networks and could lead to users travelling up these footways instead of carrying on the cycle routes. The entrances of these footways need to be blocked off to deter people from accidentally using them and accessing the A38.

3.4 Cyclist specific opportunities

- 3.4.1 **Opportunity 14:** The NMU survey recorded that cyclists frequently use the B6179 travelling from Little Eaton and, whilst on the site visit, it was noted that not one cyclist used the crossing facility provided to re-join the carriageway. It is because the facility provided, whilst being wide enough for a shared path, is in the area of a bus stop, so that when a bus is using this stop the entrance is blocked for cyclists. It is recommended to bring the cyclists off the carriageway earlier before reaching the bus stop and sending them around the back of the bus stop without having to dismount but still using the existing uncontrolled crossing point.
- 3.4.2 **Opportunity 15:** The section of NCN 54 between Starbucks Coffee and Ford Lane has a steep fall on the west side of the shared route. Also the NCN 54 narrows slightly at this point making an uncomfortable experience if two cyclists were passing at the same time. It is recommended that wooden post and rail fencing be placed to stop the potential of a cyclist falling down the steep embankment.

-
- 3.4.3 **Opportunity 16:** In the vicinity of Little Eaton roundabout where cyclists are permitted to cycle, the posts on the safety barriers need protection placing on the exposed edges as this could cause injury and damage, especially where there are pinch points. Also white lining needs to be put in place as a guide to move the cyclists away from these exposed posts.
- 3.4.4 **Opportunity 17:** The NCN 54 south of Little Eaton roundabout which runs along the A61 west side, is below the minimum design width for a shared use path. At some sections the path measured between 1.5m and 2m at its maximum. Whilst on the site visit every time a cyclist went by we had to step aside on to the verge to allow the cyclist to pass. The whole section south of the roundabout should be widened to 3m with a 500mm safety strip separating cyclists from the main traffic due to the speed of the road.
- 3.4.5 **Opportunity 18:** Just north of the link between A61 and Croft Lane is a cycle entry that is situated in the middle of an active bus stop. This cycle entry point needs moving away from the bus stop and locating in a safe position.
- 3.4.6 **Opportunity 19:** Along the NCN 54 wherever the route meets a bus stop and there is sufficient space available, the cycle route should be diverted behind the bus shelter to avoid confrontation with waiting passengers.
- 3.4.7 **Opportunity 20:** There is an opportunity to provide low level lighting, appropriate to the location, during the hours of darkness along the shared footway/cycleway that follows the A38 between Kedleston Road and Markeaton roundabout. The route on the east side of the A38 is RCR 66 and is heavily used to cross between the University campuses. Neither route gains much borrowed light from the carriageway.
- 3.4.8 **Opportunity 21:** Improve the standard of RCR 66 when RCR 66 reaches the A38 entry slip and follows the A38 south, the width of the shared route is between 2 and 2.5m. There is sufficient width to bring this section up to standard with a 3m shared route to where RCR 66 connects Queensway service road.
- 3.4.9 **Opportunity 22:** The closure of Raleigh Street junction with the A38 will provide an opportunity to provide a shared footway/cycleway to run along Thurcroft Close through Raleigh Street connecting onto Kingsway. This will improve the safety of cyclists by providing a route segregated from motorised traffic.
- 3.4.10 **Opportunity 23:** With NCN 54, 68 and RCR 66 converging at the crossing point at Lytton Street there is an opportunity to upgrade the crossing. With the new link to the A38 Kingsway junction running through Kingsway Park Close resulting higher traffic volumes running through the junction, a three-way traffic signal junction might be more appropriate to get NMU's to move through this area safely.

3.4.11 **Opportunity 24:** At the junction of Brackensdale Avenue and Greenwich Drive South the crossing point becomes confusing for the cyclist. There is a continuous white line with give way markings that indicate that NCN 54, 68 and RCR 66 continue to travel up Brackensdale Avenue, with no clear signage available to direct the routes down Greenwich Drive South. The crossing point at this junction needs clear, visible signage and the white line and give way markings removing, with a dropped crossing for cyclists to enter on to Greenwich Drive South being placed further into Greenwich Drive South providing a safer entry and exit onto the road instead of being directly at the mouth of the junction.

4 WALKING, CYCLING & HORSE-RIDING ASSESSMENT TEAM STATEMENT

As Lead Assessor, I confirm that this Walking, Cycling & Horse-Riding Assessment Report has been compiled in accordance with DMRB HD 42/17 and thus contains the appropriate information for the wider design team. The Walking, Cycling & Horse-Riding Assessment was undertaken by the following Assessment and Review Team:

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Assisted with the assessment

Walking, Cycling & Horse-Riding Assessor

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Senior Engineer

AECOM Infrastructure & Environment UK Limited

Date:

Assisted with the assessment

As design team leader I confirm that the assessment has been undertaken at the appropriate stage of the scheme development and that the wider design team has been involved in the process.

I confirm that in my professional opinion the appointed Lead Assessor has the appropriate experience for the role making reference to the expected competencies contained in HD 42/17.

Design team leader

Andy Wilson, BEng CEng MICE

Signed:

Associate

AECOM Infrastructure & Environment UK Limited

Date:

Appendix A **NMU Context Report**

Appendix contents to range below (as appropriate)

A38 Derby Junctions

Non-Motorised User Context Report

Report Number: 47071319-URS-06-RP-RD-001-2A
January 2015

A38 Derby Junctions Non-Motorised User Context Report

47071319-URS-06-RP-RD-001-2A
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1. INTRODUCTION & SCHEME DESCRIPTION

1.1 Background

The A38 is the strategic route from Birmingham to Derby and through to the M1 at Junction 28. It carries substantial volumes of north-south long distance traffic. Where the A38 passes through Derby, significant volumes of traffic making local journeys cross or join and leave the A38 which disrupts, and is disrupted by, the strategic traffic resulting in congestion and delay at the three at-grade roundabout junctions, to the west and north of Derby City Centre. The three junctions are:

- A38/A5111 Kingsway roundabout
- A38/A52 Markeaton roundabout
- A38/A61 Little Eaton roundabout

Figure 1.1 below is a location plan showing the position of the junctions.

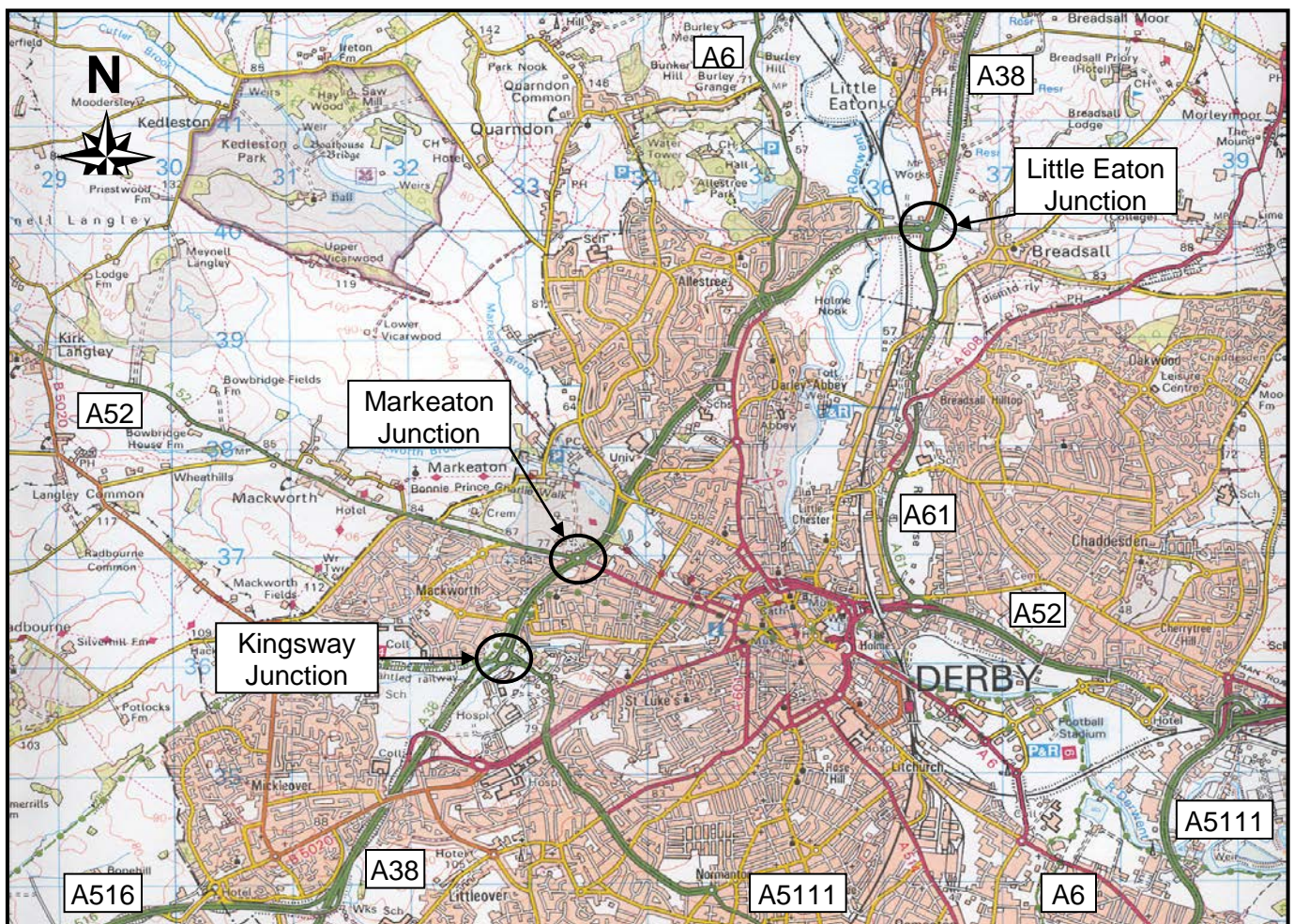


Figure 1.1: Location Plan

1.2 Road Based Study

During 2001 and 2002 consultants Faber Maunsell undertook a Road Based Study for the Highways Agency to consider options for dealing with congestion and safety, environmental impacts, economic, accessibility and integration problems associated with the three roundabout junctions on the A38 Trunk Road route through Derby.

A public consultation on various short (interim) and long-term options was held in July 2002 and the Study Final Report was issued in October 2002. This report recommended that the long-term improvements should involve grade separation of each of the three junctions at the A38/A5111 Kingsway, A38/A52 Markeaton and the A38/A61 Little Eaton roundabouts.

1.3 Historic Improvements

Interim Improvements 2002 to 2004

During 2004/05, short term interim improvements were implemented as Local Network Management Schemes (LNMS), undertaken by the Area 7 Maintaining Agent Contractor, to improve the operation of the three roundabout junctions. These interim improvements at the three junctions consisted of:

- | | |
|---------------------|---|
| Kingsway | Widening of the A5111 Kingsway (northbound) approach to the roundabout. Installation of traffic signals where the A38 northbound entry intersects with the circulating flow at the southern corner of the roundabout. All lane markings were rationalised to equalise lane usage. |
| Markeaton | Widening of the two A38 entries onto the roundabout from two to three lanes. The two roundabout exits to the A38 were also widened locally from two-lanes to three-lanes wide. Traffic signal controlled Toucans were installed to assist pedestrians crossing the A38 both to the north and to the south of the Markeaton roundabout. An additional flare lane was added to the A52 approach from the west. |
| Little Eaton | Traffic signal control was added to three of the five entries. These were at the A38 southbound entry, the A38 eastbound (to northbound) entry, and the A61 Alfreton Road entry. The B6179 entry and the Ford Lane access were improved by localised widening, but remained priority controlled entries. The traffic signal control only operated in the afternoon and evening peak periods; this was because the heavy right-turn flow in the morning peak could not be accommodated within the circulating carriageway. Alternative methods of traffic signal control to resolve this shortcoming in the morning provided no capacity advantages over the standard priority controlled at-grade roundabout. |

A38 Pinch Point Schemes 2011 to 2014

Between 2011 and 2013, the recognition of an existing capacity shortfall at the A38 Derby Junctions led to the investigation of low cost improvements which could be implemented under the Government's "Pinch Point" fund. This fund is aimed at addressing bottlenecks on the local highway network, which are perceived to be

impeding economic growth. The Pinch Point funding is intended for those schemes that can be delivered quickly and with immediate impact.

Two Pinch Point schemes were identified by the HA's Area 7 MAC to tackle the traffic delay problems at Markeaton and Little Eaton roundabouts.

Paradoxically, the implementation of these Pinch Point schemes will impact on the transport benefits that could be realised through the eventual grade separation of the three A38 Derby Junctions. This is because the Pinch Point schemes partly relieve the existing delays, thus making the future year reference case (against which the grade separation scheme would be judged) less congested than otherwise would be the case. Because of the perceived delay to the delivery of the Grade Separation scheme, these Pinch Point schemes were considered to deliver short-term benefits and to be good value for money.

The two Pinch Point schemes comprise:

Markeaton Localised widening of the A38 southbound approach to four lanes along with the downstream circulatory and partial signalisation of the roundabout. Relocation of the controlled pedestrian crossing points, northbound and southbound approaches, in conjunction with the signalisation of these approach arms. The A52 eastbound exit from the roundabout marked as two lane exit merging to one lane.

Little Eaton Localised widening to three lanes on the A38 northbound and A61 approaches, widening on the north circulatory to four lanes, widening of the A61 exit realignment of the B6179 approach and conversion to full time signalisation. Relocation of the exiting controlled toucan crossing on the A38 western arm in conjunction with the full signalisation of the roundabout.

The Kingsway Junction was not included in either of the Pinch Point proposals. Downstream of the Kingsway Roundabout, the traffic flows are constrained by the northbound A38 (T) capacity at Markeaton Roundabout. Thus it was perceived that any time delay savings gained at the Kingsway Junction would be eroded through longer queues at the Markeaton roundabout.

The Markeaton and Little Eaton Pinch Point schemes are shown in Appendix A. They have been assessed in a Scheme Option Testing report of August 2011 prepared by consultants Halcrow. The introduction to this report makes clear that the Pinch Point schemes are not a replacement for the Grade Separation Scheme:

“A number of new developments have been committed within the immediate area which will affect the operation of the existing highway network. These developments will further impact on an already congested network and affect journey times and reliability. A major scheme, to grade separate these junctions, has been deferred and the purpose of this study is to identify a cost efficient, smaller scale interim solution.”

1.4 A38 Derby Junctions Scheme Description

The proposed scheme layouts for the three junctions associated with the A38 Derby Junctions scheme are shown in Appendix B, and can be summarised as follows:

Kingsway

(Ref Drawing HA514503-URS-06-DR-GD-25.010-0D)

- A38 realigned along a horizontal alignment that passes centrally through the existing gyratory roundabout.
- A38 realigned vertically to pass beneath the proposed junction
- Speed limit increased from 40mph to 50mph through the junction, with national speed limit (70mph) to the south.
- Conventional dumb-bell junction permitting all movements.
- Existing A38 carriageways retained as junction slip roads.
- An additional lane for weaving between the Kingsway and Markeaton junctions, northbound and southbound.
- Junction layout allows for future access to be provided for a dedicated express busway to the proposed park and ride facility at Mackworth.

Markeaton

(Ref Drawing HA514503-URS-06-DR-GD-25.011-0D)

- A38 realigned along a horizontal alignment slightly further to the east than the existing.
- A38 realigned vertically to pass beneath the proposed junction
- Speed limit increased from 40mph to 50mph through and to each side of the junction, terminating just north of the Kedleston Road slip roads.
- Partly signalised roundabout provided for A52/slip road junctions.
- An additional lane for weaving between the Kingsway and Markeaton junctions and between the Markeaton and Kedleston Road junctions, northbound and southbound.
- Third traffic lane southbound and third maintenance lane northbound on the A38 through the junction.

Little Eaton

(Ref Drawing HA514503-URS-06-DR-GD-25.012-0D)

- A38 realigned along a horizontal alignment to the south and east of the existing junction
- Design speed of 50mph applied to provide a more compact junction with a smaller footprint and to reduce cost. .
- River Derwent Bridge not affected by proposals.
- Ford Lane (west) junction closed to vehicular traffic to comply with new HA standards and for safety reasons.
- Ford Lane (east) access onto existing roundabout closed and a new access road provided from B6179 to serve the Mobile Home Park, Fourways and for access to the remaining Ford Lane.

1.5 Purpose of the Report

This document provides a Non-Motorised User (NMU) Context Report in line with the NMU Audit process, as required by HD 42/05, and is to be used as a design tool during scheme development to assist the Project Team in ensuring that the needs of all road users are met in the scheme design. The information contained within this report should be used in conjunction with the following documents:

A38 Derby Junctions: Pedestrian Survey
(Doc No D0KHXCC/TP/04 v1) Oct. 2003

Traffic Forecasting Report
(Doc No D114946/TP/003 v5) Feb 2009

Summary Environmental Assessment Report
(Doc No D114946/ENV/005 v7) Apr 2009

The above documents were produced prior to the scheme being put on-hold in 2009; the above reports will be updated as part of the current Package Order. This report should be read in conjunction with the most up to date reports available.

1.6 Non-Motorised User (NMU)

For the purposes of this report Non-Motorised Users (NMUs) have been categorised under the headings shown in Table 1.10 below. Descriptions are drawn from DMRB Volume 5, Section 2, Part 4 (Provision for Non-Motorised Users), Chapter 2, NMU Requirements. Average journey speeds are given as defined in DMRB Volume 11, Section 3, Part 8 (Pedestrians, Cyclists, Equestrians and Community Effects), Chapter 3, Predicting Changes in Journey Lengths.

1.7 Equestrians

Although the impact of the A38 Derby Junctions scheme on equestrians has been considered as part of this report it should be noted that the scheme extents are predominantly urban in nature. There are very limited existing equestrian facilities within the extents of the scheme and the introduction of additional equestrian facilities, on the whole, is not proposed as part of the scheme.

Category of NMU	Description	Average Journey Speed
Pedestrians	Walking is undertaken by a range of users with a wide range of abilities. Walking is typically used: for gaining access to a variety of facilities within a range of approximately 2 miles; as a leisure activity over longer distances; and in combination with public transport for commuting.	5km/hr; 3km/hr for the aged and children
Cyclists	Cycling is undertaken by a range of users with a wide range of abilities. Cycling is typically used: for gaining access to a variety of facilities within a range of approximately 5 miles; as a leisure activity over longer distances; and in combination with other forms of transport for commuting.	20km/hr
Equestrians	Horse riding and carriage driving are undertaken by a range of users, mainly for recreational purposes. Typical journeys involve a circuit of approximately 10 miles.	10km/hr
Disabled People	The term covers people having a range of physical, sensory or mental impairments (approximately 14% of the population in the UK). Under the Disability Discrimination Act 1995, Design Organisations should ensure that where possible, accessibility for disabled people is equal to that of other NMUs.	3km/hr

Table 1.10 : Non-Motorised User Category Descriptions

1.8 Disabled Users

The term 'disabled people' covers a wide range of people with physical, sensory or mental impairment, with different needs and abilities. There are various forms of disability. The below descriptions are drawn from DMRB Volume 5, Section 2, Part 4 (Provision for Non-Motorised Users):

- **Mobility Impaired** – includes people who use wheelchairs and those who can walk but only with difficulty, often using some form of aid such as a stick or walking frame.
- **Visually Impaired** – can be sub-divided into blind and partially sighted people.
- **Hearing Impaired** – can be subdivided into those who are profoundly deaf and those with impaired hearing, ranging from severe to mild deafness.
- **People with reaching, stretching and dexterity problems** – these are frequently the result of arthritis, muscular dystrophy or complaints of the nervous system.
- **People with learning disability** – difficulty in understanding complicated information or using complex machines.

Approximately 14% of the population have physical, sensory or mental impairments that cause mobility difficulties but these disabilities do not necessary preclude them from being cyclists or equestrians. Many people, particularly older people, have more than one impairment. Able-bodied people also encounter temporary mobility impairment, for example when pushing a baby's buggy, carrying shopping or luggage

and escorting children. Under the Disability Discrimination Act 1995, Design Organisations should ensure that where possible, accessibility for disabled people is equal to that of other NMUs. Particular attention is drawn in the Act to disabled people's access to bus stops.

1.9 General Design Principles

Facilities for NMUs should offer positive provision that reduces delay, diversion and danger. Five core principles common to NMU routes have been identified in draft LTN 1/04, as follows:

- **Convenient:** NMU facilities should allow people to go where they want, and new facilities should usually offer an advantage in terms of directness and/or reduced delay compared with previous provision.
- **Accessible:** NMU routes should form a network linking trip origins and key destinations. The routes should be continuous and as direct as possible. There should be proper provision for crossing busy roads and other barriers.
- **Safe:** Not only must facilities be safe, but for the wellbeing of users, they must be perceived to be safe.
- **Comfortable:** Facilities should meet appropriate design standards, and cater for all types of user.
- **Attractive:** Aesthetics, noise reduction and integration with surrounding areas are important. NMU facilities should be attractive and interesting to help encourage their use.

2. EXISTING CONDITIONS

2.1 General

The A38 runs roughly northeast from Birmingham to the M1 at Junction 28 and forms part of the Derby Ring Road as it passes to the west and north of the City of Derby. On the section of A38 around Derby there are 8 junctions, 3 of which consist of at-grade roundabouts. Figure 1.1 above shows the location of the three at-grade junctions; Kingsway, Markeaton and Little Eaton roundabouts. Running southwest to northeast the junctions are:

- Kingsway** A three-arm roundabout arranged as a triangle layout, which provides a connection between the A38 and A5111 Kingsway. The A5111 Kingsway was originally a trunk road, which was de-trunked following the construction and opening of the A50(T) Derby Southern Bypass dual carriageway in 1997. The roundabout has partial signalisation on the northbound approach and associated signalisation of the circulatory.
- Markeaton** A four-arm roundabout that provides a connection between A38 and A52 Ashbourne Road. To the west of the junction the A52 provides a Principal route to Ashbourne. To the east of the junction, the A52 provides a key radial route into Derby and its City Centre for trips from the West. The roundabout has partial signalisation on the northbound, southbound and eastbound approaches with associated signalisation of the circulatory.
- Little Eaton** A five-arm roundabout that provides a connection between the A38, the A61 Alfreton Road (leading to A61 Frank Whittle Road) and the B6179 Alfreton Road (leading to Little Eaton). A small fifth arm provides access to land adjacent to the eastern part of the railway-severed Ford Lane. The roundabout has partial signalisation on the northern, southern and western approach arms with associated signalisation of the circulatory.

Over the length of the A38 that is covered by the three at-grade junctions described above there are four other junctions that provide connections onto and off the A38.

These are:

- Mackworth Junction** Four connector roads, with low standard geometry and taper lengths, that link between Brackensdale Avenue and the A38. Brackensdale Avenue itself passes under the A38 through two separate bridge structures. The Mackworth Connector Roads are attached to the 40 mph speed limited section of the A38 between the Kingsway and Markeaton junctions.
- Brackensdale Avenue** A simple northbound and southbound left off/left on junction location north of Brackensdale Avenue underbridge structure and Kingsway. Both left off/left on facilities provide access to the adjacent residential areas and the A38.

Kedleston Road	Two south-facing slip roads connect between Kedleston Road and the 40 mph speed limited length of the A38 immediately to the north of Markeaton junction. It is not possible to access the A38 North from the Kedleston Road junction, which movement is accommodated by routes through residential areas, namely Broadway and the A6 Duffield Road.
Palm Court Junction	A two-bridge roundabout layout over the top of the A38 connects the A6 Duffield Road to the A38 strategic route. The A6 was originally a trunk road but was de-trunked in 2002. The A6 remains as a Primary route on the main northern radial from Derby City and providing a link between Derby and the numerous communities and settlements located along the Derwent Valley. At this point, vehicle speeds on the A38 dual carriageway operate at the national speed limit. The Palm Court Junction lies between the Markeaton and Little Eaton junctions.
Ford Lane	A single connection from the Abbey Hill residential area to A38 northbound, which is located immediately in advance of the Little Eaton junction. Some southbound vehicles on the A6 also use Ford Lane in order to access the A61 Frank Whittle Road into Derby.

2.2 Junction Description: A38/A5111 Kingsway Roundabout

The three arms of the Kingsway Junction roundabout comprise the A38 dual carriageways to the north and south of the junction and the A5111 single carriageway to the east.

To the north-west there is the Mackworth housing estate and to the north east there are light industrial units in front of further housing. The area to the south-west is open grassland and to the south east the space between the A38 and the A5111 is occupied by the site of the former Manor and Kingsway Hospitals.

To the north-east of Kingsway, accessed off the A5111 via a three arm roundabout, there is the Kingsway Retail Park.

Approaching the junction from the north, the A38 crosses over Brackensdale Avenue/Lyttelton Street where there are existing left off/on junctions on each side of the A38. This section of the A38 is subject to a 40mph speed restriction which becomes derestricted to the south of the existing roundabout.

To the east, the A5111 carriageways are separated by a large splitter island and are subject to a 40mph speed limit. The A5111 forms part of the Derby Ring Road.

Interim improvements were carried out to the Kingsway Junction in 2004/05 involving re-lining along with traffic signal control on the A38 northbound roundabout entry.

The centre of the large roundabout and land between the two A38 carriageways to the south of the roundabout are designated by Derby City as areas of High Natural History Value. The roundabout is transected by the line of an abandoned railway running east/west.

Bramble Brook also transects the roundabout, being culverted beneath the existing embankments and in open channel to the south and in the centre of the roundabout. To the east, the brook flows in culvert for a considerable distance along the south edge of the abandoned railway line.

2.3 Junction Description: A38/A52 Markeaton Roundabout

The 4 arms of the Markeaton Junction roundabout comprise the A38 dual carriageways to the north and south of the junction and the A52 single carriageways to the east and west. The A38 is subject to a 40mph speed limit through this junction.

Immediately adjacent to the junction to the north-west lies Markeaton Park and to the north-east a service road to the 15 properties on Queensway, which was the old line of the A38 until the early 1980s. A petrol station and fast food outlet lie immediately to the south-west and to the south east is an area of open land adjacent to the Territorial Army hall. Beyond these, lies residential housing to the southern quadrants and the Royal School for the Deaf in the north-east quadrant.

Interim improvements to the Markeaton roundabout were introduced in late 2004. These involved widening of the A38 approaches into and exits from the roundabout to produce short lengths of dual 3 lane carriageway.

There are on-going Pinch Point works being undertaken at this location, completion due late 2014. These works include localised widening of the A38(T) southbound approach to four lanes along with the downstream circulatory and signalisation of the roundabout junction. Relocation of the controlled pedestrian crossing points, northbound and southbound approaches, in conjunction with the signalisation of these approach arms. The A52 eastbound exit from the roundabout marked as two lane entry merging to one lane.

There are entry/exits to the residential housing, the fast food outlet and the petrol station off the A38 northbound carriageway to the south of Markeaton. There are additional entry/exits to the petrol station and fast food outlet off the A52 to the west of Markeaton. To the east there is an access off the A52 for the service road to the properties on Queensway and an access to Sutton Close further towards the city centre. There is an access to Markeaton Park immediately to the north of the roundabout on the A38 northbound carriageway. Immediately to the south of the roundabout there is a bus stop style lay-by.

Further to the north there is a footbridge over the A38 at Markeaton Park.

2.4 Junction Description: A38/A61 Little Eaton Roundabout

The Little Eaton Junction is situated to the north of the city. The 5 arms of the roundabout comprise the A38 dual carriageway to the north and west of the junction, the A61 dual carriageway into Derby City to the south, the B6179 into Little Eaton to the north and Ford Lane to the west. Ford Lane forms the only access to a Mobile Home Park and the residential property "Fourways". A garden centre occupies the space between the A38 and the B6179 to the north of the roundabout.

Little Eaton was recently the subject of a Pinch Point scheme completed in early September 2014 which resulted in the junction changing from part-time signalisation to full-time signalisation. Of the five arms only the A38 north, A38 south, A61 and the roundabout circulatory are signalised. Both the B6170 and Ford Lane arms remain uncontrolled as was the situation prior to the Pinch Point scheme.

The full-time signalisation incorporates a controlled crossing facility on the A38 south arm; prior to the Pinch Point scheme there was a controlled crossing facility on the A38 south arm that worked independently to the part-time roundabout signals.

Approaching the junction from the west, the A38 crosses over the River Derwent, a flood relief underbridge and then the Sheffield to Derby railway before descending to the roundabout. The northbound approach flares to three lanes at the control line and is signal controlled.

Between the river bridge and the flood relief underbridge there is a “left in, left out” junction that provides access to the western end of Ford Lane which also provides an access/egress to Allestree. This section of Ford Lane is separated from the eastern end of Ford Lane by the railway.

Approaching the junction from the north the final approach to the roundabout is a long sweeping right-hand bend with a downhill gradient. There is a dedicated left turn lane running from the southbound A38 to the A61. This dedicated lane is not subject to signal control and was an addition to the roundabout subsequent to its original construction to try to alleviate the congestion that was being experienced on the southbound carriageway.

The A61 that originates at this junction heads south and forms part of the Derby Ring Road. Traveling south, vehicles exit the roundabout in two lanes before merging to a single lane. Beyond the merge the dedicated left-turn lane from the A38 joins the A61 as a lane-gain. The A61 approaches the roundabout as two lanes flaring to three lanes on approach to the signal control line.

The speed limit on the A38 to the north and to the west of the existing roundabout junction with the A61/B6179, including the circulatory carriageway of the roundabout, is unrestricted at 70mph. The A61 is also unrestricted, at 70mph, for a short distance before it becomes single carriageway and a speed limit of 60mph applies. The B6179 is restricted to 40mph between the existing roundabout and the 30mph restriction through Little Eaton village.

3. EXISTING RIGHTS OF WAY/NMU ROUTES

3.1 Kingsway Junction

National Cycle Route NR54 and NR68 with the Regional Route 66 follow the route of the disused railway to the west of the Kingsway junction before running parallel to the A38 across open land and joining Greenwich Drive (S) and then Brackensdale Avenue where they go under the A38 and link with the local cycletrack that approaches from the south, the eastern side of the A38. Brackensdale Avenue underbridge provides the major link for all NMUs between the areas to the east and west of the A38 between Kingsway and Markeaton junctions.

At Brackensdale Avenue all the cycle routes proceed north, parallel to the east side of the A38, towards Markeaton Junction via a mixture of off-carriageway links, Raleigh Street and Thurcroft Close. At the junction of Thurcroft Close and Radbourne Street, National Cycle Route NR54 and NR68 proceed east along Radbourne Street and away from the A38. At this point Regional Route 66 continues parallel to the A38 towards Markeaton Roundabout.

There is an existing uncontrolled pedestrian crossing facility between Raleigh Street and Greenwich Drive (N) utilising the central median.

Between Brackensdale Avenue and Markeaton Junction the A38 runs through a residential area and the dedicated cycle routes referred to above connect with the network of local housing estate roads and footways. Refer to drawing in Appendix C.

To the east of Kingsway on the A5111 there is a three armed roundabout that gives access to Kingsway Retail Park. The southern side of the A5111 is furnished with a footway from the retail park roundabout to the exit from the former Kingsway Hospital site. At this point the footway continues into the former Kingsway Hospital site and an uncontrolled crossing facility is provided to cross to the northern side of the A5111, via the large splitter island.

The northern side of the A5111 is furnished with a cycletrack that is separated from the carriageway by a grass verge. This route runs parallel and remote from the A38 and connects with the local network at Brackensdale Avenue. Connecting into the cycletrack is a permissive route into Sainsbury's supermarket for both pedestrians and cyclists.

3.2 Markeaton Junction

The Regional Route 66 runs parallel to the east side of the A38 from Brackensdale Avenue to Markeaton Junction and continues along the east side of the A38 via Queensway service road and Markeaton Park, eventually joining Kedleston Road to the east of the A38 bridge structure. The southern, western and eastern arms of Markeaton Junction are furnished with pedestrian facilities on both sides of the carriageway and there is an uncontrolled pedestrian crossing on the A52 west arm, a zebra crossing on the A52 east arm, and signal controlled crossings on both the A38 arms of the junction.

There are various routes for pedestrians and cyclists within Markeaton Park to the north-west of Markeaton Junction and east of the A38; in particular a footpath runs parallel to the west side of the A38 from Markeaton Junction to connect with Kedleston Road. An existing footbridge north of Markeaton Junction provides pedestrian and cycle access over the A38 into Markeaton Park, and connects on the

east side of the A38 with regional cycle route 66 and a local pedestrian/cycle route heading east into Derby city centre. Refer to drawing in Appendix C.

3.3 Kedleston Road Junction

Regional Cycle Route 66 emerges onto Kedleston Road west of the A38 Structure and then continues west along the southern side of Kedleston Road towards Quarndon and away from Derby city centre. Kedleston Road is furnished with pedestrian footway on the northern side of the carriageway and a segregated cycle route on the southern side of the carriageway, a number of cycle and pedestrian routes access Kedleston Road from Markeaton Park to the west of the bridge structure and a signed cycle route accesses Kedleston Road in the vicinity of Broadway and crosses onto the southern side of Kedleston Road via an uncontrolled crossing facility.

The top of the entry slip to the A38 southbound is not signalised therefore all crossing facilities are uncontrolled between the various traffic islands. The top of the exit slip from the A38 northbound is signal controlled and cycle track users are crossed via two controlled crossing points.

3.4 Little Eaton Junction

At Little Eaton Junction, National Cycle Route NR54 runs along the B6179 and the A61, traversing the A38 roundabout via a controlled crossing facility across the western A38 arm of the roundabout. There is also a designated route for cyclists and pedestrians extending westwards from the A38 roundabout, along the northern edge of the A38 and then following a route along Ford Lane (West), eventually linking with Lambourn Drive through the housing estate to the west.

The Derwent Valley Heritage Way runs along the B6179 and then westwards from the A38 roundabout, along the northern verge of the A38 before descending down the side of the A38 to cross under the A38 through the flood relief underbridge and then continuing south.

Another three public footpaths cross the A38 close to the roundabout, two of which approach from the east and require users to cross either the A38 or A61 where no crossing facilities are provided.

An existing bridleway near Little Eaton Junction runs from Little Eaton to Breadsall and passes beneath the A38 through the underbridge at the Water Treatment Works at the northernmost end of the proposed works. Refer to drawing in Appendix C.

4. FLOWS

4.1 Existing Flows

The existing junction layouts create conflict between local motorised traffic crossing the A38 and non-motorised users. All three junctions historically suffer from long periods of congestion on weekdays, and also occasionally at weekends, throughout the year. Little Eaton Junction has recently been the subject of a Pinch Point scheme, completed September 2014.

At Kingsway Junction there is regular queuing during weekday a.m. and p.m. peak periods. Queues form on the A5111 westbound entry to the roundabout in the a.m. peak.

Markeaton Junction is the subject of on-going works for a Pinch Point scheme that is due for completion late November 2014. Prior to the commencement of the Pinch Point scheme queuing occurred regularly on the A38 arms of the Markeaton junction in the a.m. and p.m. peaks in both directions. The delays continue frequently into the inter peak periods and also during the lunchtime Saturday peak. There are also regular queues on the A52 eastbound entry to the roundabout in the a.m. peak hours and in the opposite direction on the A52 westbound entry to the roundabout in the p.m. peak hours. Although the proposed Pinch Point scheme is designed to reduce congestion at Markeaton it is envisaged that queuing will still occur during peak traffic periods.

As previously stated Little Eaton junction has recently been the subject of a Pinch Point scheme, completed September 2014. At this early stage, and due to on-going works at Markeaton, it is unclear what effect the scheme has had on regular traffic patterns through the junction. Prior to the works Little Eaton Junction was prone to regular queuing on the A38 approaches in both the a.m. and p.m. weekday peaks. Traffic on the A61 heading out of Derby also queued regularly in the p.m. peaks.

Prior to the Pinch Point schemes for motorised traffic the 2006 24 hour Average Annual Daily Traffic (AADT) using this section of the A38 was 44,800 south of the A5111 Kingsway Junction and 54,000 north of Little Eaton Junction with the highest flows recorded between the Kingsway and A52 Markeaton Junctions (58,400 AADT).

The percentage of heavy goods vehicles (HGVs) varies throughout the day and was highest in the inter-peak period (19%). The percentage is lower in the two peak periods (11% AM peak and 8% PM peak) but this is sufficiently high to exacerbate the peak period congestion and is a significant factor in the inter-peak period. The HGV directional split was roughly similar at all time periods.

The A38 Derby Junctions will be the subject of a further traffic survey following the completion of all works associated with the Markeaton Pinch Point project.

An NMU survey was carried out on Sunday 24th August 2014 over a 12 hour period from 07:00 hrs to 19:00 hrs, at a number of locations associated with and including the three junction sites to be grade separated as part of the scheme, the survey location points are marked on drawing FIGURE 1 & 2 in Appendix D. Additional NMU surveys, weekday surveys, are to be undertaken during November 2014, at the time of issuing this report the results of these surveys were not available.

Pertinent results from the August 2014 surveys are summarised as follows:

4.2 NMU Counts: Kingsway Junction

Site 19 - A38 Uncontrolled Crossing Point

NMU counts were undertaken at the uncontrolled crossing facility which crosses the A38 mainline, at-grade, some 600 metres north of Kingsway and 400 metres north of the Lyttelton Road underbridge structure. The crossing point connects Thurcroft Close and Greenwich Drive (N).

Count Site	Direction	Cyclist	Child	Adult	Elderly	Disabled	Visually Impaired	Pushchair	Total
Uncontrolled Crossing	N to S	4	0	35	0	0	0	1	40
Uncontrolled Crossing	S to N	5	0	12	0	0	0	0	17

Table 4.1 : NMU Counts Site 19

In total there were 57 movements across the A38 mainline at this point, of which 40 were southbound and 17 northbound, during the day. Most users, 47 movements of the 57, were classified as adult pedestrians: there were 9 cyclists and a single pedestrian with a pushchair, but no OAPs or disabled users.

Site 20 Lyttelton Road/Brackensdale Avenue

NMU counts were undertaken at the point Lyttelton Road/Brackensdale Avenue pass underneath the A38 mainline overbridge structure. The overbridge structure is located some 200 metres north of Kingsway Junction.

Count Site	Direction	Cyclist	Child	Adult	Elderly	Disabled	Visually Impaired	Pushchair	Total
Footway/ Cycletrack	E to W	54	12	196	0	12	0	14	288
Footway/ Cycletrack	W to E	29	12	212	0	11	0	14	278
Carriageway	E to W	25	-	-	-	-	-	-	25
Carriageway	W to E	26	-	-	-	-	-	-	26

Table 4.2 : NMU Counts Site 20

In total there were 617 movements through the A38 mainline overbridge structure at this point, of which 313 were westbound and 304 northbound, during the day. Most users, 408 movements of the 617, were classified as adult pedestrians: there were 134 cyclists, 24 children, 23 disabled and a 28 pedestrians with a pushchair, but no OAPs. Of the 134 cyclists, 83 were counted using the cycletracks and 51 using the carriageway.

Site 21 National Cycle Route NR68 & NR54 and Regional Cycle Route RR66

NMU counts were taken on the route of the NR68, NR54 and RR66 at a point to the west of Kingsway. The NMU count was undertaken at the point the western arm of the proposed double roundabout will cross the route before connecting into the existing road network, Greenwich Drive (S).

Count Site	Direction	Cyclist	Child	Adult	Elderly	Disabled	Visually Impaired	Pushchair	Total
Footway/ Cycletrack	N to S	45	4	56	1	0	0	2	108
Footway/ Cycletrack	S to N	34	3	48	1	0	0	2	88

Table 4.3 : NMU Counts Site 21

In total there were 196 movements along the cycle route at this point, of which 108 were southbound and 88 northbound, during the day. Of the 196 there were 104 adult pedestrians, 79 cyclists, 7 children, 2 OAPs and 4 pedestrians with a pushchair, but no disabled or visually impaired users.

Site 22 - A5111 Uncontrolled Crossing Points

NMU counts were undertaken at the two uncontrolled crossings points across the A5111 at a point south of Kingsway. The uncontrolled crossing points comprise a pedestrian facility and a separate redundant vehicle access that appears to be utilized by cyclists and pedestrians.

Count Site	Direction	Cyclist	Child	Adult	Elderly	Disabled	Visually Impaired	Pushchair	Total
Footway	N to S	0	0	7	1	0	0	0	8
Footway	S to N	0	0	13	0	0	0	0	13
Access	N to S	1	0	10	0	0	0	0	11
Access	S to N	0	0	6	0	0	0	0	6

Table 4.4 : NMU Counts Site 22

In total there were 38 movements across the A5111 at these points, of which 19 were southbound and 19 northbound, during the day. Of the 38 movements there were 36 adult pedestrians, 1 cyclist and 1 OAP. Of the 38 movements, 21 crossed using the pedestrian facility and 17 using the redundant vehicle access facility.

4.3 NMU Counts: Markeaton Roundabout

Site 15 - Markeaton Street/Markeaton Park

NMU counts were taken at the western end of Markeaton Street where the road ends and the local cycle route continues into Markeaton Park.

Count Site	Direction	Cyclist	Child	Adult	Elderly	Disabled	Visually Impaired	Pushchair	Total
Footway/ Cycletrack	E to W	42	6	120	4	2	0	5	179
Footway/ Cycletrack	W to E	33	7	96	3	1	0	5	145

Table 4.5 : NMU Counts Site 15

In total there were 324 movements along Markeaton Street at this point, of which 179 were westbound and 145 eastbound, during the day. Most users, 216 movements of the 324, were classified as adult pedestrians: there were 75 cyclists, 13 children, 7 OAPs, 3 Disabled and 10 pedestrians with a pushchair, but no visual impaired users.

Site 16- Markeaton Park Overbridge

NMU counts were taken at the overbridge structure located within Markeaton Park. The structure joins the park areas located to the east and west of the A38 mainline. The overbridge structure is located 400 meters north of Markeaton Roundabout.

Count Site	Direction	Cyclist	Child	Adult	Elderly	Disabled	Visually Impaired	Pushchair	Total
Footway/ Cycletrack	E to W	24	7	50	0	2	0	3	86
Footway/ Cycletrack	W to E	34	7	63	0	0	0	5	109

Table 4.6 : NMU Counts Site 16

In total there were 195 movements across the A38 NMU overbridge structure at this point, of which 109 were eastbound and 86 westbound, during the day. Most users, 113 movements of the 195, were classified as adult pedestrians: there were 58 cyclists, 14 children, two disabled and 8 pedestrians with a pushchair, but no OAPs or visually impaired users.

Site 17 - Markeaton Crossings (All arms)

NMU counts were taken at the crossing facilities on all arms of roundabout junction. The northern and southern arms are signal controlled crossings, the eastern arm is a zebra crossing and the western arm is an uncontrolled crossing point.

Count Site	Direction	Cyclist	Child	Adult	Elderly	Disabled	Visually Impaired	Pushchair	Total
Controlled Crossing A38(N)	E to W	11	13	109	0	1	0	6	140
Controlled Crossing A38(N)	W to E	11	16	105	0	2	0	5	139
Controlled Crossing A38(S)	E to W	23	6	81	0	0	0	6	116
Controlled Crossing A38(S)	W to E	18	17	118	0	0	0	5	158
Controlled Crossing A52(E)	N to S	37	4	60	0	0	0	8	109
Controlled Crossing A52(E)	S to N	16	3	73	0	0	0	3	95
Uncontrolled Crossing A52(W)	N to S	5	14	85	0	1	0	3	108
Uncontrolled Crossing A52(W)	S to N	3	0	55	0	0	0	3	61

Table 4.7 : NMU Counts Site 17

This was the most heavily used junction to be surveyed; there were, in all, 926 movements across the arms of this roundabout. 13.4% of users were cyclists. The two signal controlled crossings on the A38 were well used with a total of 553 movements being recorded across these roads, with an almost even split between the northern and southern crossing points. There is at present an uncontrolled crossing on this A52 west arm of the junction and a controlled (zebra) crossing on the A52 eastern arm, 169 movements and 204 movements respectively. This junction attracts a notably larger proportion of children (8%) and pedestrian with pushchairs (4%) compared with the other junctions. The fine weather over the bank holiday at the

time of the survey may have increased the number of visits to Markeaton Park.

Site Markeaton Junction – On-carriageway cycle movements

On-carriageway cycle movement counts were taken at Markeaton Junction.

Count Site	Direction	Cyclist
A52(E) Ashbourne Rd	E to W	12
A52(W) Ashbourne Rd	W to E	8

Table 4.8 : On-carriageway Cycle Movements Markeaton Junction

During the day of the survey there were no cycle movements associated with the A38 mainline carriageway to either side of Markeaton Junction.

4.4 NMU Counts: A38/Kedleston Road

Site 13 - A38 SB On-Slip from Kedleston Road

NMU counts were taken at the un-controlled crossing point across the top of the southbound A38 on-slip from Kedleston Road. Kedleston Road is located 750 metres north of Markeaton.

Count Site	Direction	Cyclist	Child	Adult	Elderly	Disabled	Visually Impaired	Pushchair	Total
Footway/ Cycletrack	E to W	64	3	58	0	0	0	3	128
Footway/ Cycletrack	W to E	47	7	69	2	1	0	3	129

Table 4.9 : NMU Counts Site 13

In total there were 257 movements across the A38 southbound slip road at this point, of which 128 were westbound and 129 eastbound, during the day. Most users, 127 movements of the 257, were classified as adult pedestrians: there were 111 cyclists, 10 children, 2 OAPs, 1 Disabled and 6 pedestrians with a pushchair, but no visual impaired users.

Site 12 - A38 NB Off-Slip from Kedleston Road

NMU counts were taken at the controlled crossing point across the top of the A38 northbound off-slip onto Kedleston Road. Kedleston Road is located 750 meters north of Markeaton.

Count Site	Direction	Cyclist	Child	Adult	Elderly	Disabled	Visually Impaired	Pushchair	Total
Footway/ Cycletrack	E to W	66	0	72	0	0	0	3	141
Footway/ Cycletrack	W to E	48	9	86	2	1	0	4	150

Table 4.10 : NMU Counts Site 12

In total there were 291 movements across the A38 northbound off-slip road at this point, of which 141 were westbound and 150 eastbound, during the day. Most users, 158 movements of the 291, were classified as adult pedestrians: there were 114 cyclists, 9 children, 2 OAPs, 1 Disabled and 7 pedestrians with a pushchair, but no visual impaired users.

4.5 NMU Counts: Little Eaton Roundabout

Site 1 - Bridleway No.29 (North of Little Eaton)

NMU counts were taken on the bridleway running east-west at a point 650 metres north of Little Eaton Roundabout. The route passes under the A38 mainline by means of an equestrian subway.

Count Site	Direction	Cyclist	Child	Adult	Elderly	Disabled	Visually Impaired	Pushchair	Total
Bridleway	E to W	7	0	3	0	0	0	0	10
Bridleway	W to E	4	0	13	0	0	0	0	17

Table 4.11 : NMU Counts Site 1

In total there were 27 movements along the route at this point, of which 10 were westbound and 17 eastbound, during the day. Of the 27 movements, 26 were classified as adult pedestrians and 11 were cyclists.

Site 2 - Alfreton Road, Little Eaton

NMU counts were taken on Alfreton Road at a point just north of Little Eaton Junction. At this point Alfreton Road is furnished with a shared cycletrack running along the western side of the carriageway.

Count Site	Direction	Cyclist	Child	Adult	Elderly	Disabled	Visually Impaired	Pushchair	Total
Footway/ Cycletrack	N to S	73	3	51	2	0	0	2	131
Footway/ Cycletrack	S to N	60	7	75	0	0	0	3	145
Carriageway	N to S	42	-	-	-	-	-	-	42
Carriageway	S to N	32	-	-	-	-	-	-	32

Table 4.12 : NMU Counts Site 2

In total there were 350 movements along Alfreton Road at this point, of which 173 were southbound and 177 northbound, during the day. Most users, 207 movements of the 350, were classified as cyclists: there were 126 adult pedestrians, 10 children, 2 OAPs and 5 pedestrians with a pushchair, but no disabled or visual impaired users. Of the 207 cyclists, 133 were counted on the cycletrack and 74 on the carriageway.

Site 4 – Public footpath crossing A38 (N)

NMU counts were taken at the point users cross the A38 (N) uncontrolled, at grade, between public footpath FP No.3 and the B6170 at a point just north of Little Eaton.

Count Site	Direction	Cyclist	Child	Adult	Elderly	Disabled	Visually Impaired	Pushchair	Total
Uncontrolled Crossing	E to W	0	0	0	0	0	0	0	0
Uncontrolled Crossing	W to E	0	2	0	0	0	0	0	2

Table 4.13 : NMU Counts Site 4

Only 2 users were counted at this point: 2 child pedestrians crossing eastbound.

Site 5 – Signal controlled crossing A38 (W)

NMU counts were taken at the point users cross the A38 (S) via a controlled (toucan) crossing point, north to south and vice versa. The crossing point is located just west of Little Eaton.

Count Site	Direction	Cyclist	Child	Adult	Elderly	Disabled	Visually Impaired	Pushchair	Total
Controlled Crossing	N to S	62	0	26	0	1	0	0	89
Controlled Crossing	S to N	43	0	27	0	1	0	0	71

Table 4.14 : NMU Counts Site 5

In total there were 160 movements across the A38 (W) via the controlled crossing at this point, of which 89 were southbound and 71 northbound, during the day. Most users, 105 movements of the 160, were classified as cyclists: there were 53 adult pedestrians and two disabled users. , Of the 105 cyclists, 62 were southbound and 43 northbound which may indicate that cyclists travelling southbound are doing so on carriageway and circulating around Little Eaton Junction.

Site 6 – A38 (W) Cycletrack East of Little Eaton

NMU counts were taken on the cycletrack that runs on the northern side of the A38(W) at a point west of Little Eaton Junction, east to west and vice versa.

Count Site	Direction	Cyclist	Child	Adult	Elderly	Disabled	Visually Impaired	Pushchair	Total
Footpath/ Cycletrack	E to W	29	0	29	0	0	0	0	58
Footpath/ Cycletrack	W to E	26	0	37	0	0	0	0	63

Table 4.15 : NMU Counts Site 6

There were in total 121 movements along the route at this point, of which 58 were westbound and 63 eastbound, during the day. Of the 121 movements, 55 were classified as adult pedestrians and 66 were cyclists.

Site 8 - Ford Lane Junction

NMU counts were taken on Ford Lane at the point it joins A38(W) west of Little Eaton Junction. Ford lane has a shared cycletrack on the eastern side at this point.

Count Site	Direction	Cyclist	Child	Adult	Elderly	Disabled	Visually Impaired	Pushchair	Total
Footpath/ Cycletrack	N to E	25	0	26	0	0	0	0	51
Footpath/ Cycletrack	E to N	28	0	24	0	0	0	0	52

Table 4.16 : NMU Counts Site 8

In total there were 103 movements along the route at this point, of which 51 were eastbound and 52 northbound, during the day. Of the 103 movements, 50 were classified as adult pedestrians and 53 were cyclists.

Site 9 – Cycletrack A61 South of Little Eaton Junction

NMU counts were taken on the A61 at a point west of Little Eaton Junction. At this point the A61 has a shared cycletrack on the western side of the carriageway.

Count Site	Direction	Cyclist	Child	Adult	Elderly	Disabled	Visually Impaired	Pushchair	Total
Footpath/ Cycletrack	N to S	66	0	29	0	1	0	0	96
Footpath/ Cycletrack	S to N	45	0	29	0	1	0	0	75
Carriageway	N to S	22	-	-	-	-	-	-	22
Carriageway	S to N	7	-	-	-	-	-	-	7

Table 4.17 : NMU Counts Site 9

In total there were 200 movements along the A61 at this point, of which 118 were southbound and 82 northbound, during the day. Of the 200 movements 140 were classified as cyclists, 58 adult pedestrians and 2 disabled. Of the 140 cyclists, 111 were counted on the cycletrack and 29 on the carriageway.

Site Little Eaton Junction – On-carriageway cycle movements

On-carriageway cycle movement counts were taken at Little Eaton Junction.

Count Site	Direction	Cyclist
B6179(N) Alfreton Road	N to S	18
A38(W) Abbey Hill	W to N	3
A38(W) Abbey Hill	W to S	3
A61(S) Alfreton Road	N to W	1
A61(S) Alfreton Road	S to N	6
A38(NE)	NW to N	1
A38(NE)	NW to S	1

Table 4.18 : On-carriageway Cycle Movements Little Eaton Junction

During the day of the survey there were no cycle movements associated with the A38 mainline carriageway northbound to the north of Little Eaton Junction.

Site 7 – On-carriageway cycle movements between Ford Lane and Little Eaton Roundabout

Counts were taken for cycle movement on the A38 carriageway between Ford Lane and Little Eaton Roundabout.

Count Site	Direction	Cyclist
A38 Westbound	E to W	28
A38 Eastbound	W to E	25

Table 4.18 : On-carriageway Cycle Movements between Ford Lane and Little Eaton Roundabout, NMU Count Site 7

4.6 ‘With Scheme’ Flows

The A38 Derby Junctions scheme is to be the subject of an updated Traffic Forecasting Report. The production of this updated report has been delayed due to the on-going Pinch Point scheme works at Markeaton. Traffic counts for the updated Traffic Forecasting Report are not programmed until 2015.

The A38 Derby Junctions scheme was the subject of Traffic Forecasting Report in 2009, the findings of this report are summarised as follows:

The Traffic Forecasting Report (Doc No D114946/TP/003 v5 Feb 2009) assumed that the A38 Derby Junctions Scheme would open in 2016, and also has forecast motorised vehicle traffic (MV) flows for 15 years after the Opening Year, namely 2031. The forecast MV flows from the report for the A38 route are summarised as follows.

The predicted 2016 24 hour Average Annual Daily Traffic (AADT) MV flow with the proposed scheme in place using this section of the A38 is 67,000 south of the A5111 Kingsway Junction and 82,000 north of Little Eaton with the highest MV flows predicted between the Markeaton junction and the Kedleston Road junction at 98,410

AAADT. The predicted average percentage of heavy goods vehicles (HGVs) is fairly consistent along this section of the A38 at approximately 10%.

The predicted 2031 24 hour AADT MV flow with the proposed scheme in place using this section of the A38 is 74,000 south of the A5111 Kingsway Junction and 89,000 north of Little Eaton with the highest flows predicted between the Markeaton junction and the Kedleston Road junction at 108,520 AADT. The predicted average percentage of heavy goods vehicles (HGVs) is fairly consistent along this section of the A38 at approximately 13%.

The average two-way MV flow on the A38 is predicted to increase by 33.5% with the A38 junctions improvements, compared to a 'Do Minimum' scenario. A large part of this forecast increase is due to reassignments from local roads and induced traffic.

5. STRATEGIC OBJECTIVES

5.1 Derby City Council

It is the policy of the local planning authorities to seek provision of facilities for pedestrians, cyclists and horse riders throughout the Derby City and Erewash District areas.

In particular the Derby Local Transport Plan (LTP3) 2011-2026 states 6 transport goals of which the following are relevant to NMU facilities:

- **Goal 2** To contribute to tackling climate change by developing and promoting low-carbon travel choices
- **Goal 3** To contribute to better safety, security and health for all people in Derby by improving road safety, improving security on transport networks and promoting active travel
- **Goal 4** To provide and promote greater choice and equality of opportunity for all through the delivery and promotion of accessible walking, cycling and public transport networks, whilst maintaining appropriate access for car users

The City of Derby Local Plan Review – Adopted Plan includes Policies T6, T7, T14 and T15, which between them cover protection of Public Rights of Way, provision and protection of routes for pedestrians, cyclists and horse riders, and promotion of sustainable modes of transport. Policy T15 identifies a route alongside the line of the former railway land between Mackworth and Mickleover with connections to Onslow Road, Murray Park Community School and Windmill Hill Walk. Policy T15 identifies a proposed strategic cycle and pedestrian route which would run from the Kingsway Junction alongside the western boundary of the A38 heading to Mickleover. Drawings indicating the extent of the identified routes can be found in Appendix E.

5.2 Client Scheme Requirements

The Client Scheme Requirements for the Scheme are:

Overall Objectives

- To reduce congestion and increase reliability of journey times in urban areas and inter-regional roads in order to improve economic competitiveness, the environment and quality of life.
- To facilitate regional development and growth in Derby City and its surrounding areas and increase capacity of the strategic road network to absorb growth.
- An overall objective is to provide a scheme that is affordable and delivery high value for money.

Environment

- To investigate use of environmentally friendly lighting
- To minimise impact on the surrounding environment
- To mitigate or cause no adverse impact on air quality or noise
- To protect any watercourses from pollution during construction and afterwards
- To minimise impacts on both the natural and built environment, including designated landscape/biodiversity features.

- To investigate and encourage the use of environmental friendly operations and products throughout the project life cycle.

Safety

- To improve safety for all road users and contribute to the Government's current safety strategy targets
- To manage the safety for road works in accordance with the requirements of GD04/12 – Standard for the Safety Risk Assessment on the Strategic Road Network and the Health & Safety at Work etc 1974 Act to be So Far As Is Reasonably Practicable (SFAIRP).
- To improve safety for residents in vicinity of Scheme
- To ensure there is consistently high standard of signage along the route
- To facilitate integration with other transport modes where applicable.

Economy

- To increase the journey time reliability on the current traffic flow
- To reduce congestion
- To achieve optimal whole life cost taking into account future maintenance and operation & disruption

Accessibility

- To create safe and accessible routes for NMU along and across the A38
- To ensure access to public transport is step free, safe (i.e. well lit) and easier (i.e. shorter distance from user objectives than existing)

Integration

- To support regional transport strategies
- To support the Local Transport Plan
- To deliver the Scheme in a way this supports the Government's transport policy objectives
- To assess the performance of each option against the DfT's value for money criteria
- To seek continuous improvement throughout the options and development phases in terms of delivering value for money and performance against the objectives in the Appraisal Summary

Other

- To facilitate the development of new housing along the western fringe of Derby

6. TRIP GENERATORS

6.1 Kingsway Junction

Within the vicinity of Kingsway Junction the surrounding land use is predominantly residential to both the east and west of the junction. Both these areas of residential housing will act as trip generators with a certain level of movement between the areas located on either side of the A38 mainline.

Movements for pedestrians and cyclists will be predominantly influenced by the need for trips to and from the city centre either for leisure, shopping or employment. There are also more specific local destinations such as the local primary and secondary schools, particularly Brackensdale Infant and Junior School located on Walthamstow Road to the west of the A38. In addition to the local schools there is the Royal School for the Deaf, Derby College (at Mackworth) and the University of Derby, Markeaton Park and A52 campuses.

To the north-east of Kingsway Junction, north of the A5111, is Kingsway Retail Park. Kingsway Retail Park is a medium size shopping park with a good selection of national retail outlets, Sainsbury's supermarket and a chain family pub. There are good existing pedestrian and cycle links to the supermarket and the retail park as a whole and this location will attract high numbers of pedestrian and cycle movements for leisure, shopping and employment.

To the east of Kingsway Junction there are two small/medium sized industrial parks/employment areas. The closest and smallest being located off Kingsway Park Close and the larger located off Slack Lane, to the west of the A516 (Uttoxeter Road).

There are a number of local bus services that cross the A38 along Brackensdale Avenue, Bus 28 & 29, some pedestrian trips within the area are likely to be associated with bus stops on or near the A38 on Brackensdale Avenue.

In addition, the presence of the National Cycle Route NR54 & NR68 and Regional Cycle Route 66 will attract local trips by both pedestrians and cyclists accessing the routes both leisure and commuting and longer distance leisure journeys following the general North-South direction of the A38 route on this section, particularly cyclists.

6.2 Markeaton Junction

Within the vicinity of Markeaton Junction the surrounding land use is predominantly residential to the south-east and south-west. To the north-west land use is predominantly park land, Markeaton Park, and to the north-east park land and residential. To the east of Markeaton Junction, land use along the A52 is a mixture of both residential and retail. To the west the A52 passes through a residential area into open country side.

NMU movements within the vicinity of Markeaton Junction will be predominantly influenced by access to Markeaton Park, the close proximity of Derby University Buildings (east and west of the A38), and the fast food restaurant located just off Markeaton Junction. There is also the Royal School for the Deaf and local shopping areas located on the A52 east of Markeaton Junction. Movements for pedestrians and cyclists will also be influenced by the need for trips to and from the city centre either for leisure, shopping or employment.

There are a number of local bus services that cross the A38 along the A52, Bus 28, 29, SW1 & DRT, there is also a Park & Ride facility at Markeaton Park served by Bus 5. Some pedestrian trips are likely to be associated with bus stops on or near Markeaton Junction.

The close proximity of open countryside west of Markeaton Junction will potential increase the number of pedestrians and cyclists using Markeaton Junction when undertaking the east-west movement between the city and countryside to the west of Derby. In addition the presence of Regional Cycle Route 66 could attract pedestrians and cyclists, particularly cyclists, on longer distance leisure journeys following the regional route to gain access to the National Cycle Routes NR54 & NR68 or gaining access to Markeaton Park.

There is an existing footbridge over the A38 mainline connecting the two areas of Markeaton Park to the east and west side of the A38. It is expected that this facility will generate both pedestrian and cycle trips as it provides a safe crossing point that does not require users to negotiate the A38 at-grade.

The A52, just to the east of Markeaton Junction, is fronted by a nursery & clinic, alms houses, a sheltered housing complex (bungalows) and the Royal School for the Deaf. These facilities may increase the presence of vulnerable road users at Markeaton Junction.

6.3 Kedleston Road

At Kedleston Road the predominant pedestrian and cycle trip generators will be the Derby University campus located to the west of the A38 and Markeaton Park located to the east and west of the A38, south of Kedleston Road.

In additional movements by pedestrians and cyclists will be influenced by the need for trips to and from the city centre either for leisure, shopping or employment. There are also more specific local destinations such as local shopping areas.

6.4 Little Eaton Junction

At Little Eaton Junction, the A38 together with the railway and the River Derwent valley separates the communities of Breadsall to the east and Allestree to the west. Little Eaton lies to the north of the existing roundabout between the A38 and the railway. The A61 runs south from the existing roundabout, forming part of the Derby Ring Road around the east side of Derby. The A38 lies in an urban fringe area through open and agricultural land interspersed with specific features such as the garden centre located to the north of the existing roundabout, and the Starbucks coffee shop and mobile home park located to the north-west of the existing roundabout.

NMU trips will be predominantly by cyclists, trips related to the NR54, or pedestrians, following Derwent Valley Heritage Way and the public footpath network within the vicinity. There is expected to be a high number of trips associated with accessing Derby city centre and the employment areas on the east side of Derby. The pedestrian and cycle trips will principally follow a north – south route along the National Cycle Route NR54 or Derwent Valley Heritage Way.

7. RELEVANT DEVELOPMENT PROPOSALS

There are a number of proposed development schemes, as described below that, if implemented, could affect NMU trips and desire lines:

7.1 Manor and Kingsway Hospitals site

38 hectares of land at the former Manor and Kingsway Hospitals just south of the Kingsway Junction and adjacent to the A5111 has been identified as a major mixed use regeneration site. The development could include a business park, 700 dwellings, a park and ride interchange and extension to the existing healthcare use on the site. The proposals include measures to promote walking and cycling including a link across the A38 to the proposed Bramble Brook cycle route. (reference City of Derby Local Plan Policy R4)

7.2 University Campus site , Mickleover

The University Campus site off Western Road, Mickleover approximately 1km southwest of the Kingsway Junction has been identified for residential development of 400 dwellings with supporting facilities (reference City of Derby Local Plan Policy H4). The scheme proposals incorporate a link to the proposed cycleway-walkway along Bramble Brook and the western boundary of the A38 to the Kingsway Junction (reference City of Derby Local Plan Policy T15 (5))

7.3 Radbourne Lane site, Mackworth

A new housing development site has been identified at Radbourne Lane, Mackworth for 700 houses (reference Amber Valley Borough Council Local Plan Policy H1d), this development would include additional footpath/cycleway links to and from the site. The site is approximately 2km west of the Kingsway Junction.

7.4 Rykneld Road, Littleover

Another major development is proposed at Rykneld Road, Littleover which is approximately 4km south west of the Kingsway Junction. The proposed development is significant, consisting of 33 hectares of land for residential development for 980 dwellings with an area of B1 business use, expansion of the existing Heatherton Neighbourhood Centre and a new primary school (reference City of Derby Local Plan Policy H9). However the distance and relative position of this development to the proposed junction improvements suggests that it would have a small potential influence on NMU trips affecting the A38 scheme.

Derby City also published a Preferred Growth Strategy (October 2012). This document stated that:

“...further strategic allocations on the western side of Derby (have not been identified) following advice from the Highways Agency that such development would not be appropriate in advance of the three long standing proposals for junction improvements on the A38. Whilst intermediate works have recently been announced by the Government, it is considered that the full schemes should be implemented before further strategic growth is contemplated in this location. Land promoted to the west of Mickleover will also be difficult to serve by public transport indicating that it will be more dependent on the private car compared to other choices.”

“There are concerns over the implications for queuing and delays on the A38 of significant development on the western side of the City. Further development to the west of the A38 is likely to raise concerns over the exacerbation of existing congestion issues, particularly as there is no guarantee of the ‘grade separation’ scheme for the three A38 junctions being implemented at this time. This does not necessarily rule out individual sites such as this one, but has contributed to a Strategy that focuses growth to the south.”

In terms of specific sites, the Preferred Growth Strategy included the following information:

7.5 Markeaton Stones, Mackworth (AV16)

This greenfield site lies to the west of Allestree. The whole of the site is within the setting of the grade 1 listed Kedleston Hall Historic Park and Garden as defined in the existing Local Plan. The southern sections of the site also lie adjacent to the Mackworth Village and Markeaton conservation areas, together with the grade 1 listed Church of All Saints. In addition, the existing transport infrastructure has very little capacity to accommodate any further development without significant improvements to adjoining highways and the junction of the A52 and A38 in particular.

7.6 Radbourne Lane, Mackworth (AV17)

This greenfield site lies to the west of Mackworth. Most of the site is within the setting of the grade 1 listed Kedleston Hall Historic Park and Garden as defined in the existing Local Plan. The northern section of the site also lies adjacent to the Mackworth Village conservation area, including the grade 1 listed Church of All Saints. In addition, the existing transport infrastructure has very little capacity to accommodate any further development without significant improvements to adjoining highways and the junction of the A52 and A38 in particular.

7.7 Newhouse Farm (DUALP2)

This would represent a major western extension to Mickleover. Whilst a wide range of services and facilities are available within the District Centre, it is unlikely that direct or easy access to these could be achieved by foot, public transport or car. Early transport modelling has shown that it is unlikely this site could be well served by public transport. This work also shows that a possible Park and Ride scheme would be unlikely to be effective in switching journeys from car to other modes of transport. Furthermore, the Highways Agency have expressed concerns about additional development to the west of Derby in advance of being able to implement grade separated improvements to key junctions on the A38.

7.8 Hackwood Farm (DUALP1)

This site would be an extension to a larger site which lies within the City of Derby. It does not relate well to existing facilities and services and it would be likely to be difficult to secure access by public transport. This site would also represent an intrusion into sensitive countryside. The Highways Agency have expressed concerns about additional development to the west of Derby in advance of being able to implement grade separated improvements to key junctions on the A38.

The draft Core Strategy and its supporting documents make clear that A38 Grade Separation scheme is needed to address both existing congestion and potential future growth in Derby. Although not adopted, it is noted that these conclusions are drawn from recent modelling work.

8. DESIRE LINES

8.1 Kingsway Junction

There are strong desire lines for pedestrians and cyclists to use the National Cycle Route NR54, which is likely to be reinforced if the proposed cycleway/footway to the proposed development at Mickleover is implemented. Development of the Manor & Kingsway Hospital site has the potential to create a desire line across the A5111 to the existing Sainsbury /Retail Park and beyond to the city centre. In addition there is a potential desire line that arises from the proposed development across the A38 to connect with National Cycle Route NR54 and the proposed cycleway/footway to the proposed development at Mickleover. A strong desire line runs along Brackensdale Avenue for NMUs passing under the A38 between the west side of Mackworth and the city centre and partly towards the Sainsbury/Retail Park area and also for longer distance cycle trips on the NR54. NMU activity will be concentrated at Brackensdale Avenue as it is the only local road across the A38 between Kingsway and Markeaton Junctions.

Following the completion of the A38 Derby Junctions scheme there will be a new route between the A5111 and the area to the west of the A38 via the proposed dumb-bell junction. This new route may create a new desire line between areas to the east and west of the A38, particularly for cyclists.

8.2 Markeaton Junction

There are strong desire lines across this junction for pedestrians and cyclists travelling along the A52 to/from the city centre and Markeaton Park, and also for pedestrians and cyclists following the general north-south route of the A38 using the regional cycle route 66 on the east side of the A38 and also the footway through Markeaton Park parallel with the west side of the A38. These routes take users to Kedleston Road and to the University of Derby campus. A desire line exists on the existing footbridge north of Markeaton Junction which provides access over the A38 into Markeaton Park, and connects on the east side of the A38 with regional cycle route 66 and a local pedestrian/cycle route heading east into Derby city centre.

There is an uncontrolled pedestrian crossing of the A38 approximately 500m south of Markeaton Junction which runs from Greenwich Drive North to Thurcroft Close, but there is no data currently available to show how well used this crossing is. It can be anticipated that a moderate desire line for local pedestrian and cycle trips and from the west side of Mackworth to the city centre may exist at this crossing. The current proposals for the scheme assume that this uncontrolled crossing would be closed, as the A38 would have two additional lanes at this point exacerbating the safety concerns of the uncontrolled crossing. Further surveys and assessment are required to determine the impact that this closure would have on users and whether measures are required to mitigate this impact.

8.3 Kedleston Road

The main desire lines at Kedleston Road appear to be the east-west movements between the city & Derby University and movements to the south to gain access to Markeaton Park and the Derby University campus located off the A52.

8.4 Little Eaton Junction

The principal desire line at Little Eaton Junction is a north-south route across the junction, connecting Little Eaton, further north along the Derwent valley and destinations in the Peak District, with routes into Derby city centre and the retail employment areas along the A61 east ring road corridor. A lesser desire line also exists for NMUs travelling between Allestree and Breadsall.

9. ACCIDENT DATA

The number of recorded traffic accidents between 2008 and 2012 at each of the junctions is summarised in Table 9.1 below:

Junction	Number of recorded traffic accidents (inc NMU) (2008-2012)	Number of fatal injuries	Number of serious injuries	Number of accidents with NMU involvement
Kingsway	29	0	3	0
Markeaton	40	0	0	3
Little Eaton	44	0	4	1

Table 9.1: Summary of Accident Data at the Junctions (2008-2012)

10. VIEWS OF USER GROUPS

10.1 Historic Consultation 2001 & 2002

During 2001 and 2002 workshops were held with a Wider Reference Group (WRG) as part of the Road Based Study. The WRG included representatives from Amber Valley Borough Council, Derby City Council, Derbyshire County Council, Erewash Borough Council, British Horse Society, Cyclists Touring Club, Derby Cycling Group, the Pedestrians Association, and the Ramblers Association. Sustrans did not attend the WRG, however see comments on Little Eaton Junction in 10.2 below. Specific comments on NMU provision from the WRG workshops are summarised below:

Kingsway Junction

The junction was felt to be unfriendly for cyclists, as was the area around the junction in general, as although there are cycle routes in the area, they are disjointed. The stretch of the A38 between Kingsway and Markeaton Junctions was felt to be a deterrent to pedestrians and cyclists due to the pollution expelled by the congested traffic, or, if it is running freely, its speed and noise. Pedestrian facilities around the Kingsway Junction and along the A38 up to Markeaton junction were felt to be inadequate.

Markeaton Junction

The number of access points at the junction to Markeaton Park, the petrol station and restaurant result in a need for improvements to the pedestrian access as the current provision was viewed as inadequate. It was felt that this junction was stressful for pedestrians due to the volume of traffic and because the layout was not very "pedestrian friendly". The pedestrian crossings over Ashbourne Road were not considered to be safe.

Little Eaton Junction

Some views were expressed that the toucan crossing on the A38 near to the roundabout (A38 west arm) was a hazard due to the speed of the approaching traffic.

10.2 Little Eaton supplementary public consultation in 2003

Sustrans commented that, in their view, the key requirements for cyclists and pedestrians at the Little Eaton Junction are:

1. A safe, direct, continuous passage from the A61 footway/cycle track to the B6179 footway/cycle track.
2. A safe, direct, continuous passage from the B6179 footway/cycle track alongside the A38 to Ford Lane and then into Allestree.
3. The underpass of the A38 on the bridleway between Little Eaton and Breadsall village to remain open.
4. Room to be left under the river bridge on the A38 for the extension of Derby's riverside path from Haslams Lane to Ford Lane.
5. Ideally a toucan crossing of the A61 in the vicinity of the proposed junction to connect Breadsall village to the west side A61 footway/cycle track.

Sustrans also advised that for maintaining the continuity of a cycle/pedestrian route through a junction, they prefer traffic lights, or possibly a well-designed underpass. They did not like to see the typical at-grade, unassisted, roundabout cycle/pedestrian facility installed at high speed junctions as in their view these do not provide sufficient protection.

10.3 Up-dated Consultation 2014

In October 2014 letters were issued to local users groups and the local highway authorities inviting their views on existing barriers to NMU usage and comments relating to the proposed schemes as presented. At the time of issuing this report replies had been received from Derbyshire County Council and Derby City Council.

10.4 Derbyshire County Council Comments

Derbyshire County Council noted that the only site within the county area is the A38/A61 Little Eaton Junction, with Public Footpaths Breadsall Fp 23, Breadsall Fp 7, Breadsall Fp 3 and Little Eaton Fp 17 being located within the vicinity of this area. Derbyshire County Council has a single recorded problem received from users of these routes. This single recorded problem relates to the obstruction of Breadsall Public Footpath 7 by barriers in the verge of the carriageway.

Derbyshire County Council has also provided details of proposed Greenway to be promoted by the County Council. The proposed Greenway will approach Ford Lane from the north, running adjacent and to the east of the railway line, proceed along Ford Lane, between the railway line and the B6179, and then continue in a northbound direction along the B6179.

10.5 Derby City Council Comments

Kingsway Roundabout

The City Council's Rights of Way Improvement Plan 2014-17 identifies a pedestrian and cycle improvement from Brisbane Road, Mickleover to Mackworth Park running parallel to Bramble Brook. They would require this proposal to be taken into consideration as part of the junction improvement.

All routes identified at this particular junction cater for pedestrians, cyclists and disabled people.

Equestrians are catered for on the Mickleover to Egginton Greenway, link to Horse Ride Derbyshire leaflet below.

National Cycle Network Regional Route 66 currently runs on the east side of the A38 on a shared use off road facility between Markeaton Roundabout and Raleigh Street. The route is narrow in places and it is recommended that it is upgraded and widened as part of the proposals. It would be desirable for this route to extend across the bridge over Brackensdale Avenue to link to the Kingsway shared use pedestrian and cycle path near the proposed new roundabout to remove conflicts crossing Brackensdale Avenue.

The proposals sever the current route of NCN 54 and 68 and Regional Route 66 where the new underpass links to Greenwich Drive South. Appropriate crossings and accommodation works to support this route will be required.

There will be a strong desire for pedestrians and cyclists travelling to and from Mackworth, Kingsway Retail Park and the Royal Derby Hospital via the new road underpass. Appropriate shared use cyclepaths and crossings will be necessary to safely support these trips.

There is opportunity to develop a new shared use cycle link from the Kingsway roundabout running parallel with the new A38 south bound on slip to the new Kingsway residential development and the Royal Derby Hospital. This should integrate with the new development and could provide a traffic free route to the Royal Derby Hospital.

The proposals remove the uncontrolled crossing linking Thurcroft Close and Greenwich Drive North. Care is needed to redirect pedestrians to safer crossing facilities.

There is potential to develop a new shared use cycle link on the eastern side of the A38 from Greenwich Drive South to Markeaton Roundabout. This would improve accessibility in the neighbourhood and provide routes to safer crossing points.

The proposals are likely to increase traffic flows and conflicts on Greenwich Drive South. Carriageway, footway and crossing facility improvements may be required.

Markeaton Roundabout

It is desirable to upgrade the proposed pedestrian footbridge across the A38 to permit use by cycles to improve access to Markeaton Park. This should include widening and parapet improvements. Consideration should be given to orientating the bridge (or path) to tie in with existing shared use cycle routes linking to Markeaton Street and on the east side of the A38 and access to Markeaton Park.

The existing shared use cyclepath on the east side of the A38 should be upgraded between the A52 and Kedleston Road to support accessibility improvements in the neighborhood.

To assist accessibility to the University, Markeaton Park and Mackworth the existing footway on the eastern side of the A38 should be upgraded to shared cycle use between Markeaton Roundabout and Kedleston Road.

Appropriate safe crossing points across the A52 and the A38 slip roads should be provided at the new roundabout and routes provided on both sides of the A52.

The proposals may increase traffic movements into and out to the existing petrol filling station. Further improvements may be necessary to pedestrians.

Little Eaton Roundabout

This junction is largely outside the city boundary but it does provide access to and from the City.

There is a need to link into the public right of way beneath the A38 just south of the railway line. Funding had been agreed through Derby City Council's Our City Our River project to provide a continuous cycle route along the line of the River Derwent through the UNESCO World Heritage Site north to Matlock and beyond. The first phase of this route starting in 15/16 will be from Derby City Centre to the A38. Links to the existing shared use cycle routes on Alfreton Road North and south of the

junction and Ford lane should be retained including suitable safe crossing facilities. This proposed route is shown within the recently adopted Rights of Way Improvement Plan for the City of Derby 2014 – 2017. Appendix C, Plan 8 covers this junction. See previous link.

Proposed junction improvement scheme may also impact on long distance footpath (walking route only) Derwent Valley Heritage Way.

There have been complaints regarding the lack of crossing facilities from Breadsall Village to the west side of Alfreton Road. Can opportunity be taken to consider upgrading any crossings as part of the junction improvement.

Additional comments

Outside of the existing and proposed routes identified in the Rights of Way Improvement Plan for the City of Derby 2014 – 2017, existing adopted highway footpaths should be maintained within the scheme, where feasible, to continue the current level of facilities for pedestrians, cyclists and disabled people.

11. CONFLICT POINTS

NMU movements across the A38 route corridor are restricted by the existing junction layouts and dual carriageway. These restrictions would be consolidated by the proposed grade separation of the junctions and introduction of additional lanes. The below tables identify existing conflict points and potential future conflict points:

11.1 Kingsway

Location	NMU Conflict Description	
	Before	After
A5111 at Kingsway Hospital site exit.	Uncontrolled pedestrian point across A5111.	Feasibility scheme drawings indicate this area will be affected by works. Possible removal of the existing central median resulting in the carriageway having to be crossed in a single movement if crossing point is retained.
A5111 at Kingsway Hospital site exit.	Unused vehicle access and verge crossing possible used by cyclists to access/egress the A5111.	Feasibility scheme drawings indicate this area will be affected by works. Possible removal of the existing central median resulting in the carriageway having to be crossed in a single movement if access point is retained.
Jcn NR54, NR68 & R66 with Greenwich Drive (S).	Cyclists accessing/egressing the various routes are required to cross the footway running adjacent Greenwich Drive (S) and either join or leave the carriageway by means of a cycletrack give-way facility.	Conflict will remain and become more acute due to the proposed Kingsway junction layout increasing vehicle movements along Greenwich Drive (S).
Jcn Greenwich Drive (S) with Brackensdale Avenue	Cyclists following cycle routes negotiate the junction on carriageway from south. Possibility that northbound users could be on footway.	Conflict will remain and become more acute due to the proposed Kingsway Junction layout increasing vehicle turn movements at the junction of Greenwich Drive (S) and Brackensdale Avenue.
Brackensdale Ave at A38 overbridge structure	Pedestrians crossing carriageway at bus stop facilities.	Conflict will remain. Possible increase in vehicle movements at this location due to proposed Kingsway Junction layout and the closing of the left off /left on facilities to the north of Brackensdale Avenue.
Brackensdale Ave at A38 overbridge structure	Cyclists using the southern footway through the structure.	Conflict will remain.
Jcn of the southern & northern cycle routes with Lyttelton Street.	Interaction of pedestrians and cyclists at this location, various routes and facilities.	Conflict will remain.

Jcn of the southern & northern cycle routes with Lyttelton Street.	Cyclists are required to enter/leave Lyttelton Street via cycletrack give-way facilities.	Conflict will remain. Possible increase in vehicle movements at this location due to proposed Kingsway junction layout and the closing of the left off /left on facilities to the north of Brackensdale Avenue.
Jcn of the southern & northern cycle routes with Lyttelton Street.	Cyclists following NR54, NR68 & R66 are required to cross Lyttelton Street via a staggered crossing facility.	Conflict will remain. Possible increase in vehicle movements at this location due to proposed Kingsway junction layout and the closing of the left off /left on facilities to the north of Brackensdale Avenue.
Jcn of the southern & northern cycle routes with Lyttelton Street.	Pedestrians wishing to cross Lyttelton Street are not provided with facilities.	Conflict will remain. Possible increase in vehicle movements at this location due to proposed Kingsway junction layout and the closing of the left off /left on facilities to the north of Brackensdale Avenue.
Jcn Lyttelton Street and Kingsway Park Close	Pedestrian crossing point but no dropped kerbs.	Conflict will remain.
Raleigh Street	Cyclists proceed on carriageway along Raleigh Street.	Conflict will remain.
Jcn A38 northbound / Brackensdale Avenue	Cyclists entering the mainline or proceeding along the A38 across the diverge/merge areas.	Conflict will be reduced as left off/left on facilities are to be removed as part of the scheme. Cyclists will not be able to join/leave the A38 mainline at this location.
Jcn Raleigh Street with A38 mainline,	Cyclists following NR54, NR68 & R66 cross the A38 southbound on & off slips by means of two-way uncontrolled cycle track crossings.	Conflict will be reduced. Side road junction to be removed as part of the scheme. Additional accommodation works will be required to the local highway network
	No crossing provision for pedestrians following the route of NR54, NR68 & R66.	Conflict will be reduced. Side-road junction to be removed as part of the scheme. Additional accommodation works will be required to the local highway network
	Cyclists entering the mainline or proceeding across the diverge/merge areas.	Conflict will be reduced as left off/left on facilities are to be removed as part of the scheme. Cyclists will not be able to join/leave the A38 mainline at this location.
Thurcroft Close	Cyclists proceed on carriageway along Thurcroft Close.	Conflict will remain. Additional accommodation works may be required to the local highway network.

Thurcroft Close to Greenwich Drive (N)	Uncontrolled pedestrian crossing facility across the A38 mainline via the verged central median.	It is expected that this facility will be removed as part of the scheme, potential for conflicts to remain if desire to cross is high.
Jcn Thurcroft Close and Radbourne Street	Cyclists following cycle routes negotiate the junction on carriageway, NR54 & NR68 turning right and R66 turning left.	Conflict will remain.
Jcn Thurcroft Close and Radbourne Street	No crossing provision for pedestrians at junction.	Conflict will remain.
	Cyclists accessing/egressing cycle route R66 are required to cross the footway running adjacent Windmill Hill Lane and join/leave the carriageway by means of a cycletrack give-way facility.	It is not clear if the route of R66 will be retained as part of the scheme. If it is the conflict will remain.
New Kingsway dumb-bell junction.		The proposed junction provides a link onto the local road network to the west of the A38. There is an increased risk of conflicts if NMU use this route to access the areas to the east and west of the A38. This route will be particularly attractive to cyclists.
New Kingsway dumb-bell junction.		The proposed junction provides a link onto the local road network to the west of the A38. The existing and proposed NMU routes will have to cross the new link road. There is potential for this route to attract high volumes of vehicles wishing to access the local residential areas.

Table 11.1 : Kingsway Junction Conflict Points

11.2 Markeaton

Location	NMU Conflict Description	
	Before	After
A38 mainline western footway between Greenwich Drive (N) and Markeaton Rbt.	Footpath crosses minor side roads and access roads, that junction with the A38 mainline, by means of uncontrolled crossing points.	Conflict will be removed as side road junctions to be removed as part of the scheme and footway to be removed.
A52 (E) Arm.	Zebra crossing facility across A52 carriageway. Appears that cyclists following R66 are expected to use this facility also.	Conflict will remain but no details regarding crossing facility to be provided as part of the scheme.
A52 (W) Arm.	Un-controlled crossing facility across A52 carriageway.	Conflict will remain but no details regarding crossing facility to be provided as part of the scheme.
A38 (S) Arm.	Controlled staggered pedestrian crossing facility.	Conflict will remain crossing the slip roads but not the A38 mainline. No details are available at present regarding crossing facility to be provided as part of the scheme.
A38 (N) Arm.	Controlled staggered pedestrian crossing facility.	Conflict will remain crossing the slip roads but not the A38 mainline. No details are available at present regarding crossing facility to be provided as part of the scheme.
Queensway Service Rd	Cyclists join and proceed on carriageway along Queensway Service Road.	Queensway Service Road is to be removed as part of the scheme. No details regarding the proposed diversion route for pedestrians and cyclists and R66.
A52 (W)	Footways adjacent the carriageway crossing various minor junction/accesses.	Conflicts will remain but scheme design will have major impacts on the existing highway layout.
Markeaton Park	Cyclists using the access and egress points.	Conflicts will remain but scheme design will have major impacts on the existing highway layout/unclear how/where Markeaton Park will accessed from.
Markeaton Park Footbridge	Conflicts between pedestrians and cyclists using the facility.	Conflicts will remain if footbridge or replacement footbridge is provided. If overbridge facility is removed as part of the scheme there will be increased conflicts at the alternative facilities, Markeaton & Kedleston Road.

Table 11.2 : Markeaton Junction Conflict Points

11.3 Kedleston Road

Location	NMU Conflict Description	
	Before	After
A38 southbound on-slip.	Uncontrolled crossing points across the slip road. Includes R66.	Conflict will remain. Potential increase in movements if Markeaton park footbridge is removed.
A38 northbound off-slip.	Controlled crossing points across the slip road. Includes National Cycle Route NR54.	Conflict will remain. Potential increase in movements if Markeaton Park footbridge is removed.
A38 northbound and southbound merge and diverge areas.	Cyclists entering the mainline or proceeding across the diverge/merge areas.	Conflict will remain/increase due to the proposed road layout between Kedleston Road and Markeaton.

Table 11.3 : Kedleston Road Junction Conflict Points

11.4 Little Eaton

Location	NMU Conflict Description	
	Before	After
A38 (N)	Un-controlled crossing point for pedestrians using F/P to the east of the A38. Includes left-turn by-pass lane.	Conflicts will remain but scheme design will have major impacts on the existing highway layout. Pedestrians will not be required to cross A38 mainline but crossing of A38 north facing slip-roads will be required.
A38 (W)	Controlled crossing point across the A38 mainline.	Conflicts will remain but scheme design will have major impacts on the existing highway layout. Pedestrians and cyclists will not be required to cross A38 mainline but crossing of A38 south facing slip-roads will be required.
A38 (W) northern cycletrack	Conflicts between users where footpaths emerge onto cycletrack and on narrow section across structure.	Conflicts will remain but
Ford Lane (W)	Points where cyclists join/leave the carriageway.	Side road junction to be removed as part of the scheme. Additional accommodation works will be required to the local highway network.
Ford Lane (E)	NR54 and footway cross Ford Lane (E) as an uncontrolled crossing point.	Conflict will be removed but scheme design will have major impacts on the existing highway layout.
Alfreton Road B6179	Cycle facility to facilitate movements to/from the carriageway and NR54.	Conflict will be removed but scheme design will have major impacts on the existing highway layout.
Alfreton Road A61	Uncontrolled crossing points across the A61 for F/P and cycletrack facility from Breadsall Road.	Conflict will remain.

Table 11.4 : Little Eaton Junction Conflict Points

11.5 Construction Period

The construction phase would have a significant impact on the pedestrian and cycle routes, albeit in the short term. The existing network of cycle routes, footways and footpaths would be temporarily severed, and temporary closures and diversions would be required.

12. SCHEME OBJECTIVES

12.1 General Objectives

A general objective for the scheme is to create safe routes for NMUs along and across the A38 within the constraints of the scope of the grade separation of the three junctions. Key objectives to achieve this are:

- Preserve the existing rights of way network where possible.
- Maintain essential NMU links and limit severance.
- Minimise additional journey lengths for NMU route diversions.
- Minimise temporary closures of NMU routes during the construction phase.

Review the identified conflict points in Section 11 and consider these locations during the design process in a view to remove or reduce the risk of conflicts where feasible.

Discuss with Derbyshire County Council and Derby City Council their proposals for new and improved NMU routes within the vicinity of the scheme and consider these proposals during the design process.

Review all requests received from Derbyshire County Council and Derby City Council and where appropriate incorporate these into the proposed design.

12.2 Specific Objectives

The following specific issues are recommended for investigation and consideration during the scheme development:

Kingsway to Markeaton Junctions

- Maintaining continuity of National Cycle Route NR54 & NR 68 and Regional Cycle Route 66 at the Kingsway junction.
- Provision for NMU movements across the A38 at the Kingsway junction to allow a link between Greenwich Drive South and the A5111. This would also enable connections between National Cycle Route NR54 and the local NMU routes, and allow for the proposed development of the Manor and Kingsway Hospital site.
- Impact of the A38 scheme on the detailed layout of the NMU routes at Brackensdale Avenue to maintain continuity of National Cycle Route NR54 and regional route 66.
- Assessment of the uncontrolled crossing of the A38 from Greenwich Drive North to Thurcroft Close.
- Assessment of a route for diversion of regional cycle route 66 along the east side of the A38 between Brackensdale Avenue to Markeaton junction and onwards to Kedleston Road.
- Incorporation of NMU routes across the Markeaton junction to cater for NMU movements along the A52, regional cycle route 66 and to Markeaton Park.
- Assessment of an outline design for the replacement footbridge at Markeaton Park.

Little Eaton Junction

- Assessment of a scheme for integration of National Cycle Route NR54 across the proposed junction.
- Assessment of an NMU route along the north side of the A38 between the proposed junction and the Ford Lane (west) junction with the A38, to include connections to Breadsall Footpath FP23, and Derwent Valley Heritage Way/Breadsall Footpath FP7
- Assessment of the diversion of Breadsall Footpath FP3 to connect to the A61 and the crossing over the A61 to connect with National Cycle Route NR54.
- Assessment of the uncontrolled crossing points along the A61 south of Little Eaton Junction.

APPENDIX A

Proposed Pinch Point Scheme Layout Drawings

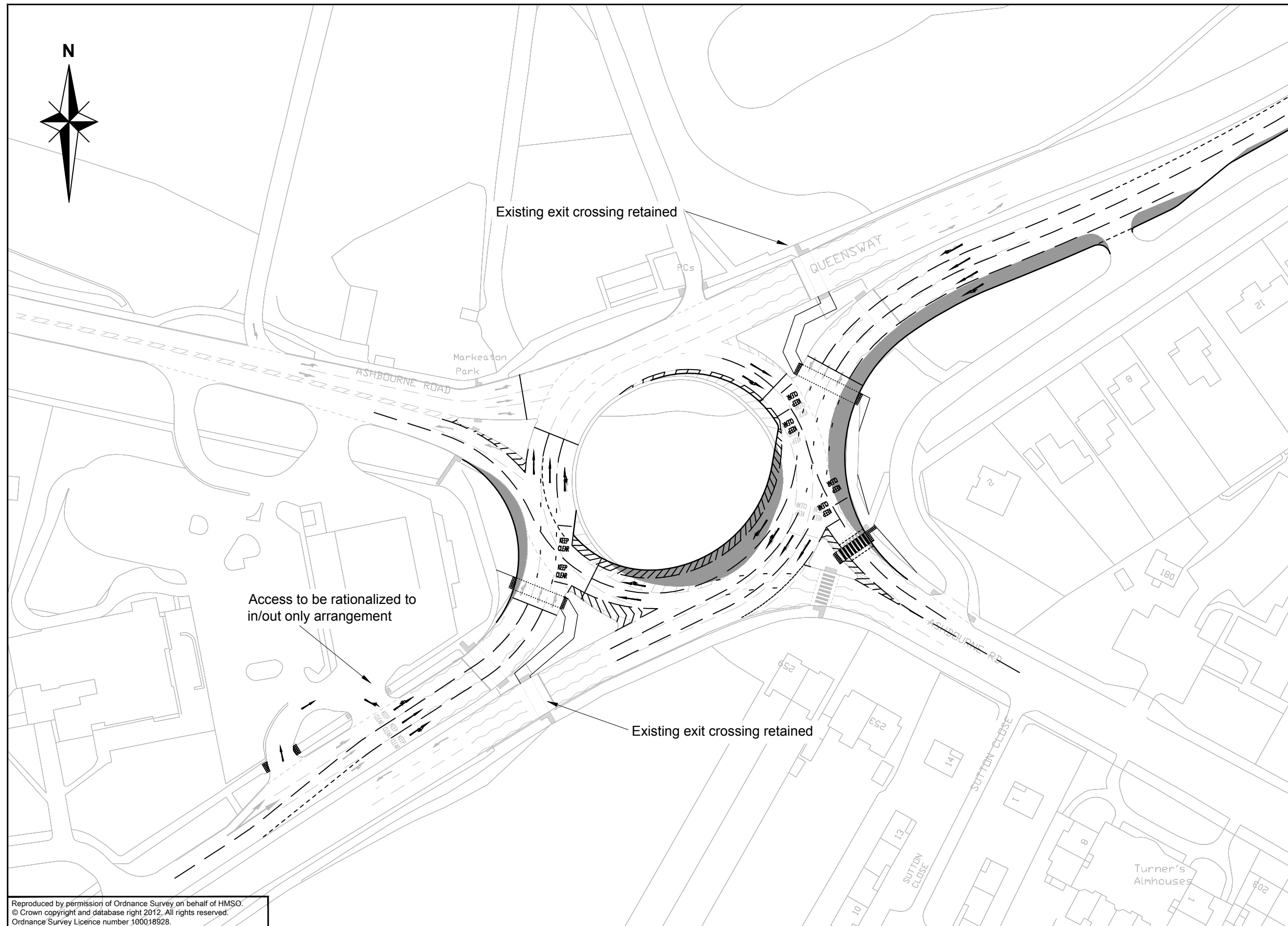
Markeaton Junction (Drawing No. SK/430359/M/08 Rev.B)
Little Eaton Junction (Drawing No. SK/430359/L/07 Rev. -)

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KEY:

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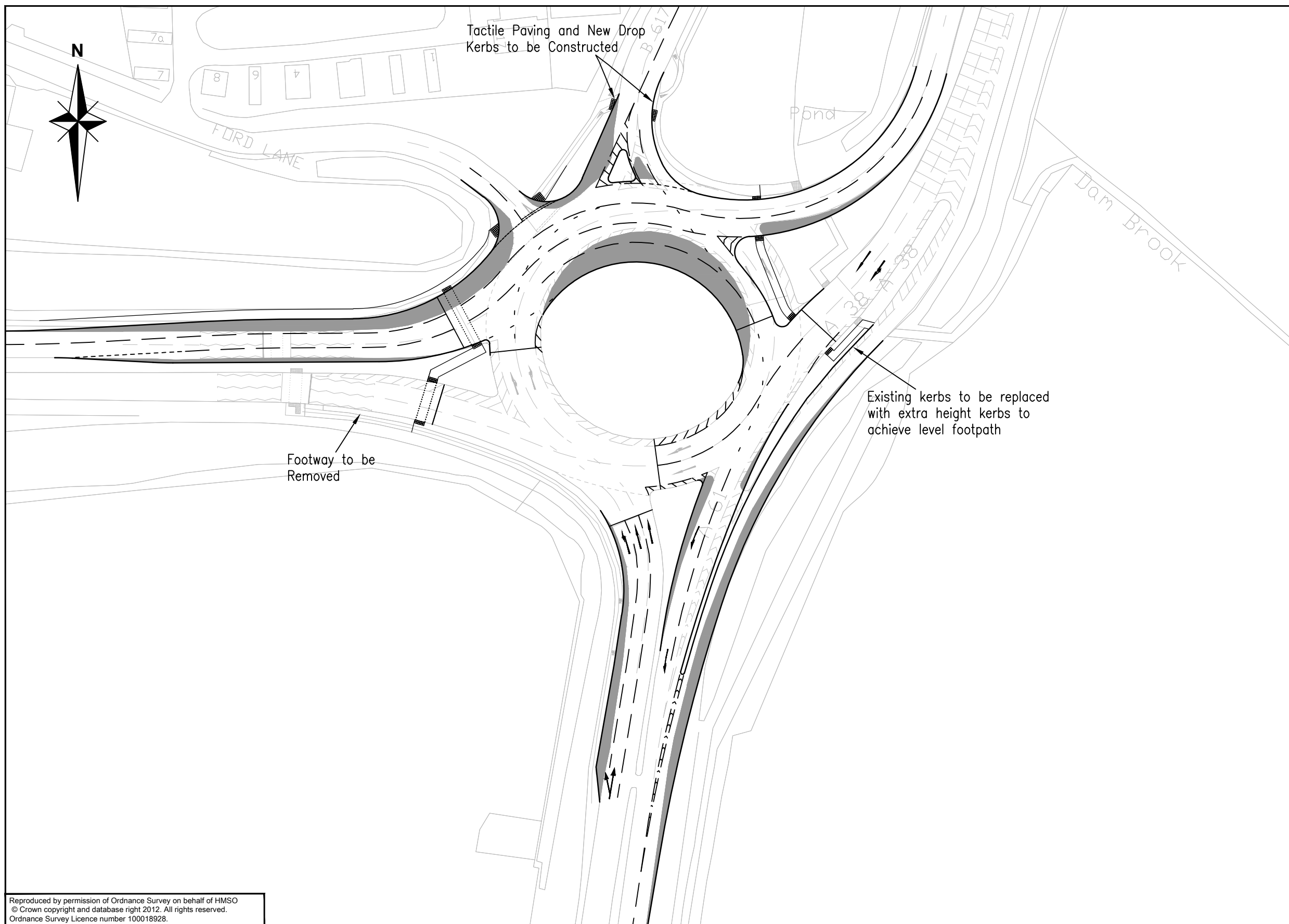
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Derby Junctions Economy Study

Drawing
**Markeaton Roundabout
Proposed Layout
Option 8**

Drawn by: M ROXBURGH	Date: JUN 2011
Checked by: J. ASHTON	Date: MAR 2012
Approved by: J. ASHTON	Date: MAR 2012
Drawing No. SK/430359/M/08	Revision B
Drawing Scale: 1:1000 @A3	

DO NOT SCALE FROM DRAWING Sheet size A3

Frame 02-12



KEY:

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NOTES:

1. EXISTING GIVE WAY MARKINGS ON BOTH A38(T) AND A61 APPROACHES TO BE REMOVED.
2. SIGNALS TO BE CONVERTED TO FULL TIME OPERATION.

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**Little Eaton Roundabout
Proposed Layout
Option 7**

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Checked by: J. ASHTON	Date: MAR 2012
Approved by: J. ASHTON	Date: MAR 2012
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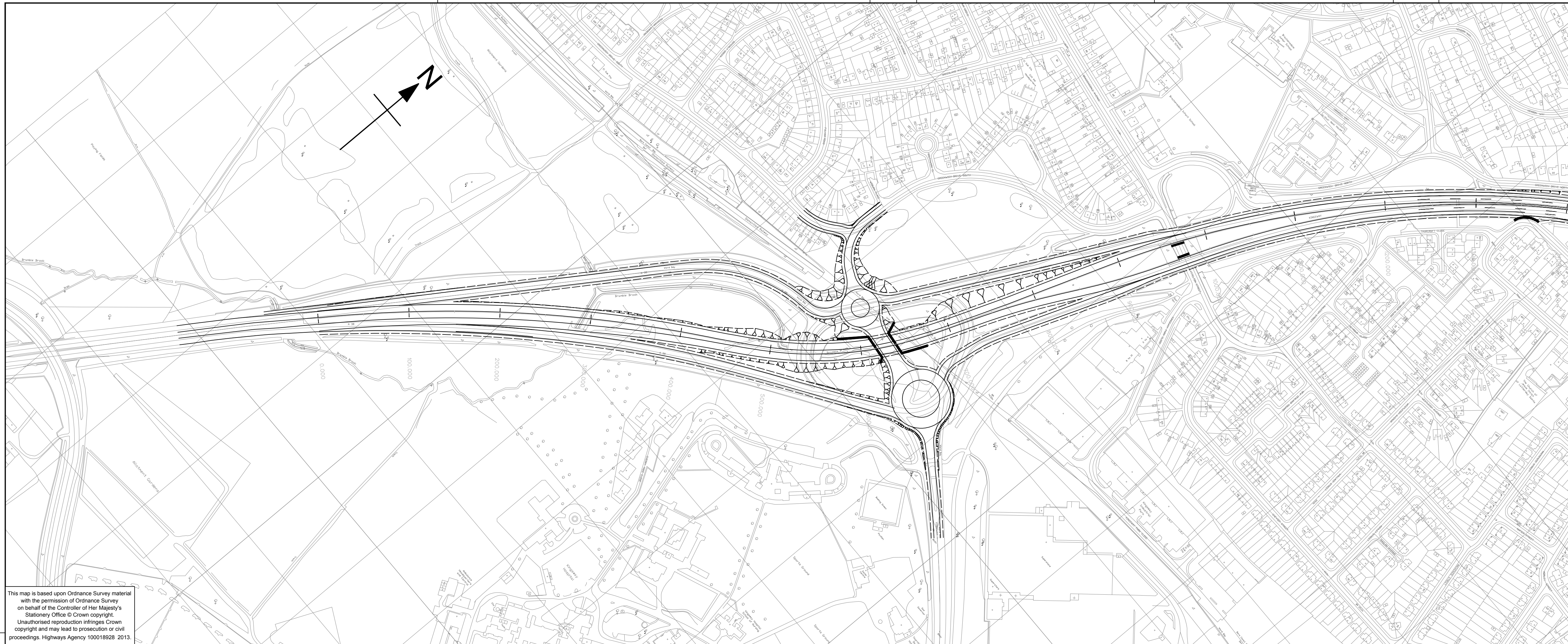
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APPENDIX B

Proposed Scheme Layout Drawings

Kingsway Junction (Drawing No. HA514503-URS-06-DR-GD-25.010-0D)
Markeaton Junction (Drawing No. HA514503-URS-06-DR-GD-25.011-0D)
Little Eaton Junction (Drawing No. HA514503-URS-06-DR-GD-25.012-0D)

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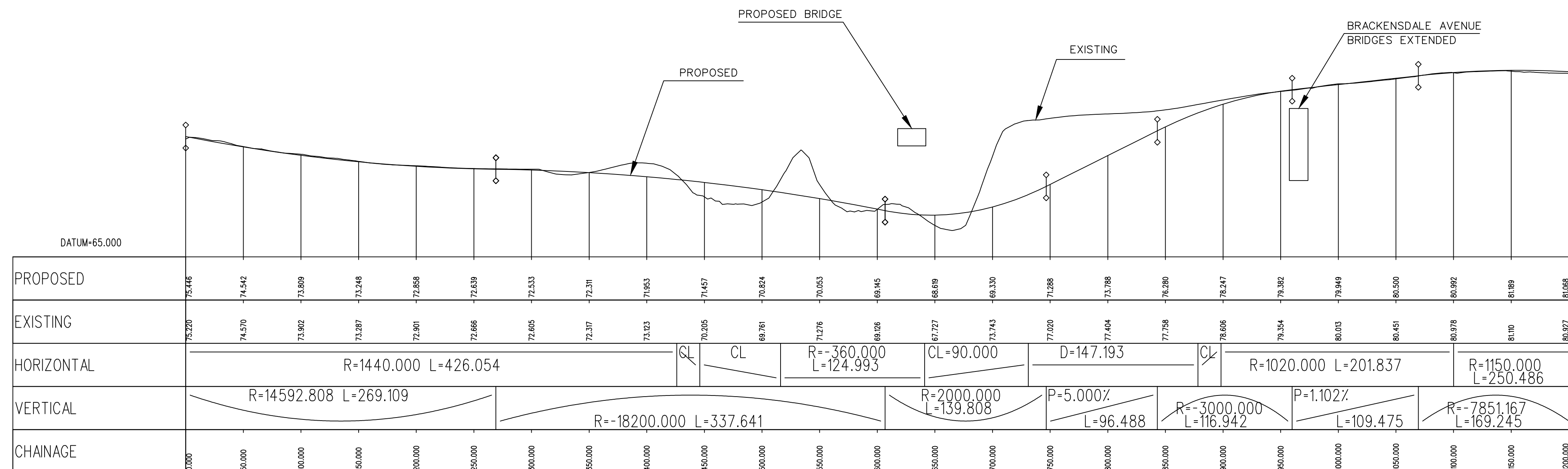
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Job Title
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Drawing Title
**KINGSWAY JUNCTION
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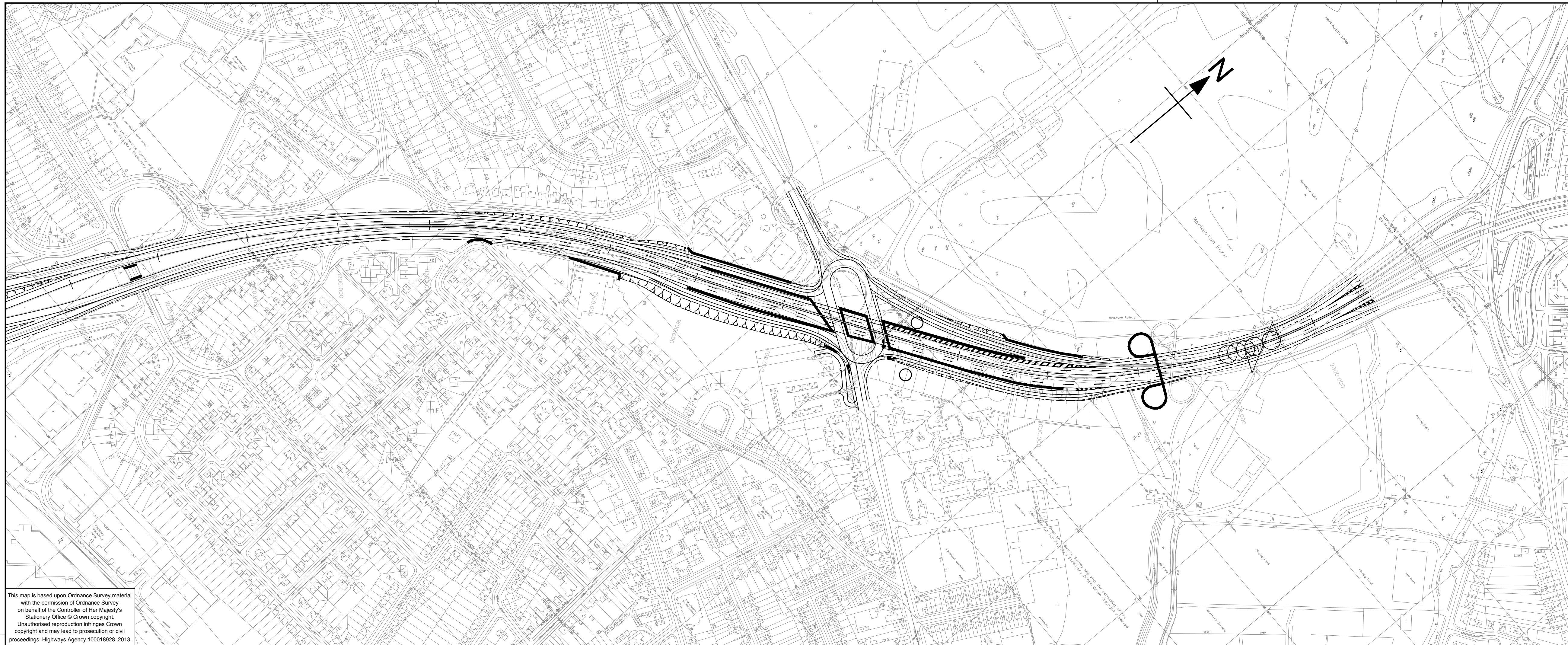
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 File Name: A38 Derby Junctions - A38 MAINLINE - A38change v1 sections DB11a

Attached Xrefs: A38 BASEMAP | A38 MAINLINE | A38change v1 sections DB11a



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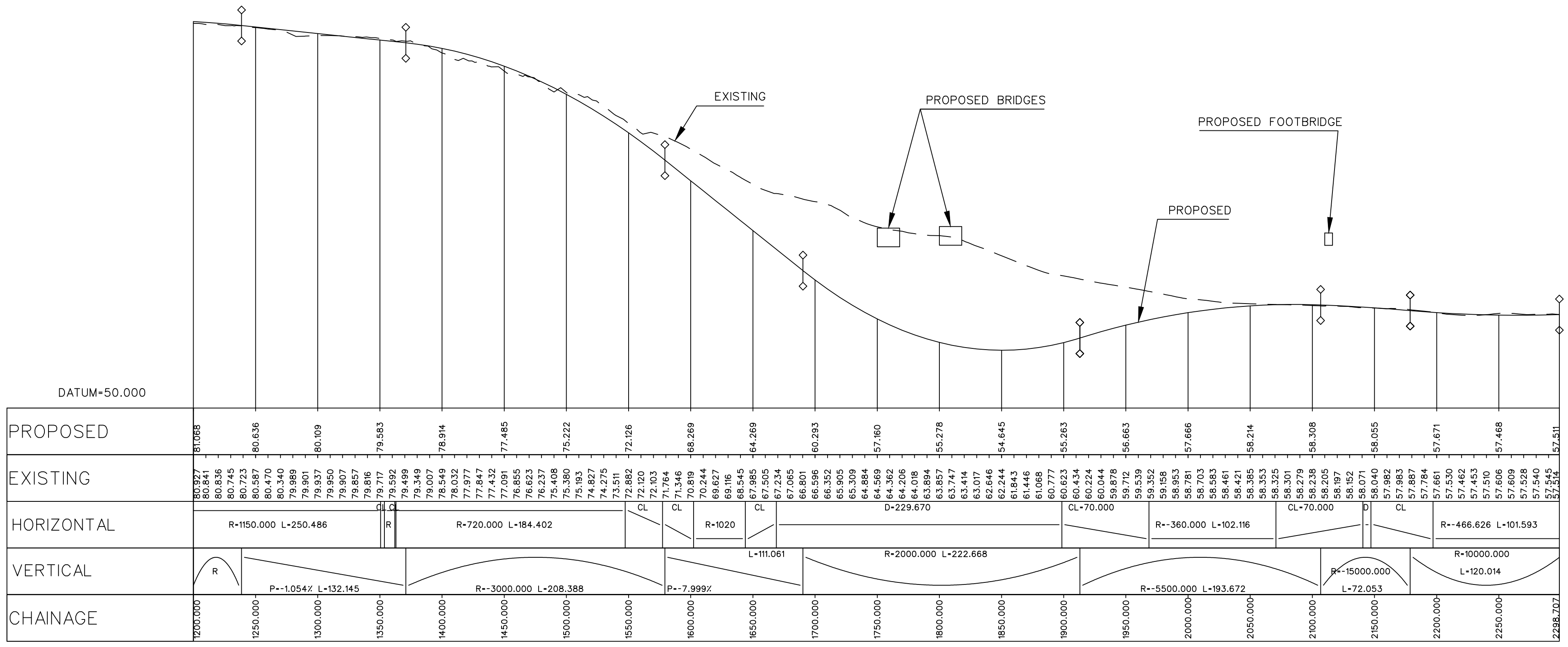
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**MARKEATON JUNCTION
PLAN AND SECTION**

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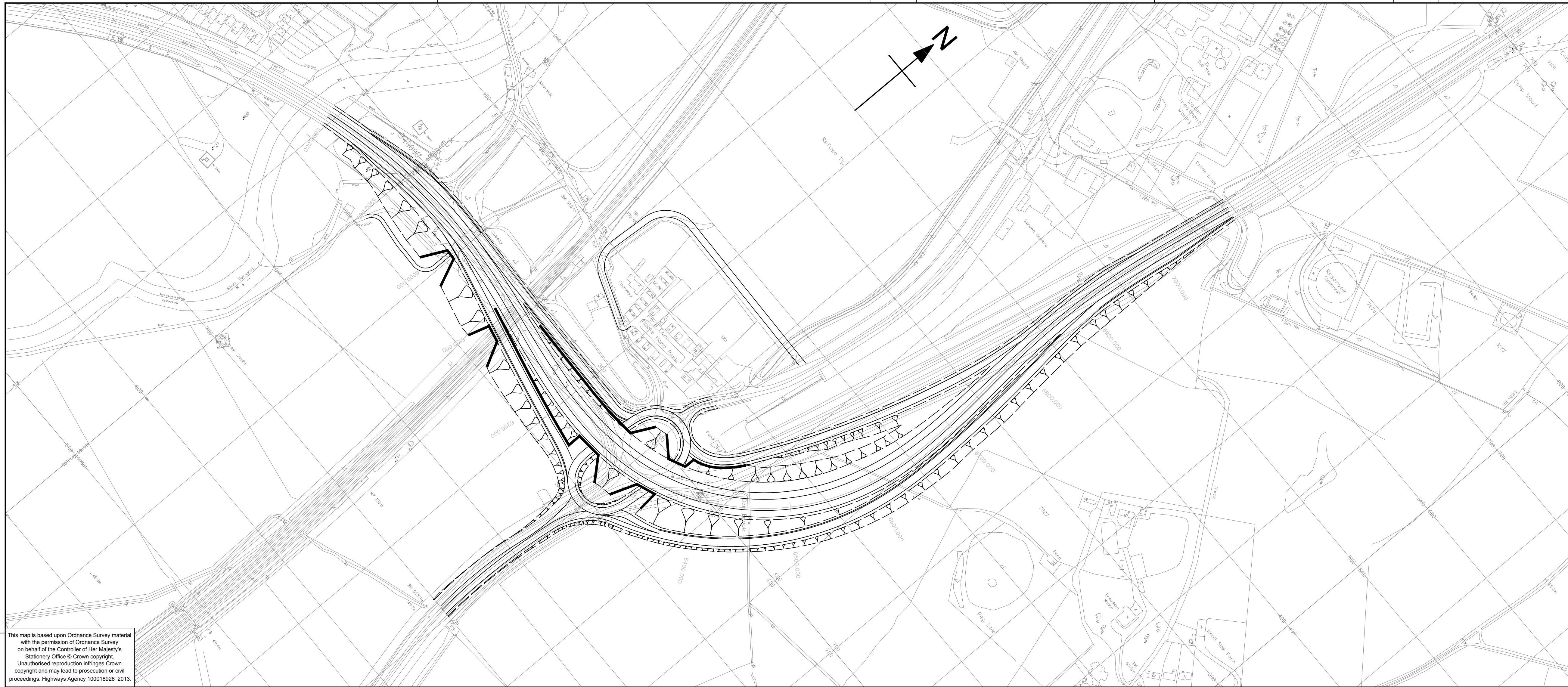
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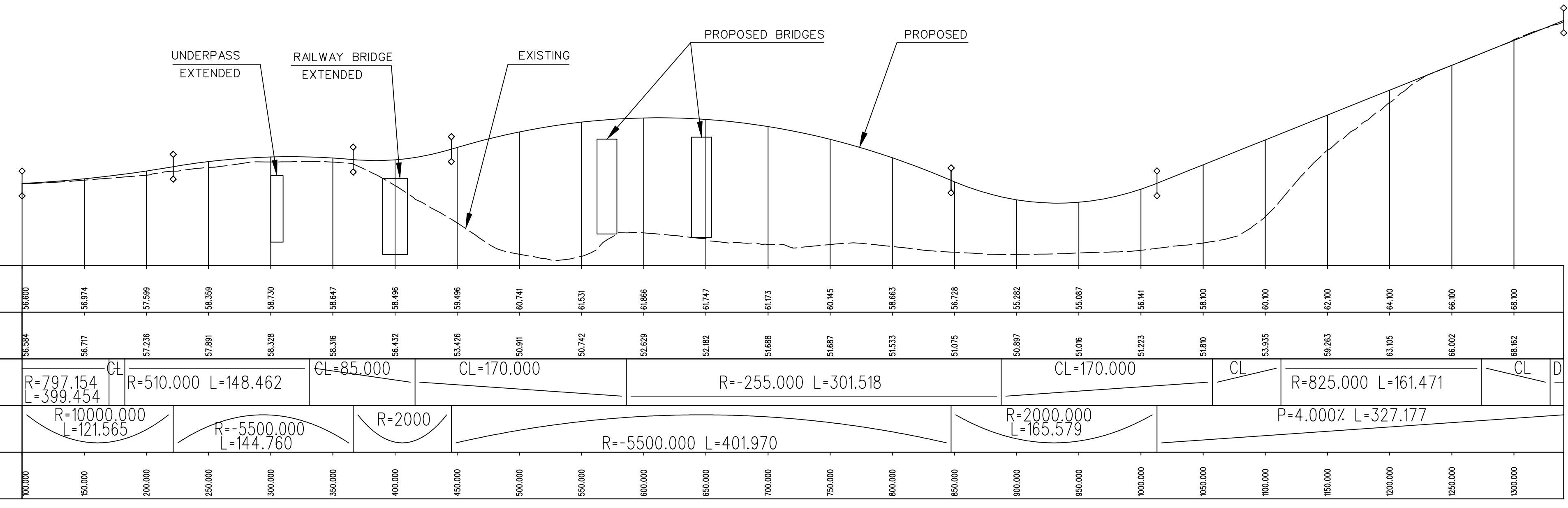
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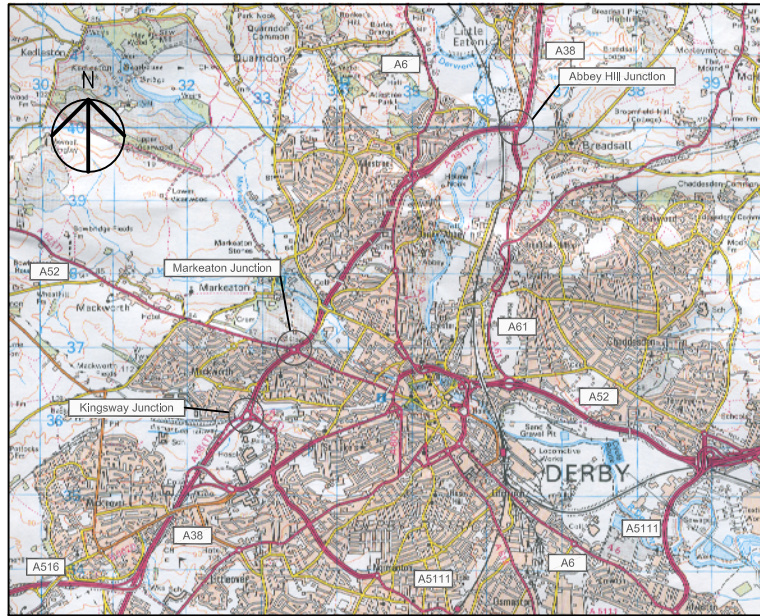
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APPENDIX C

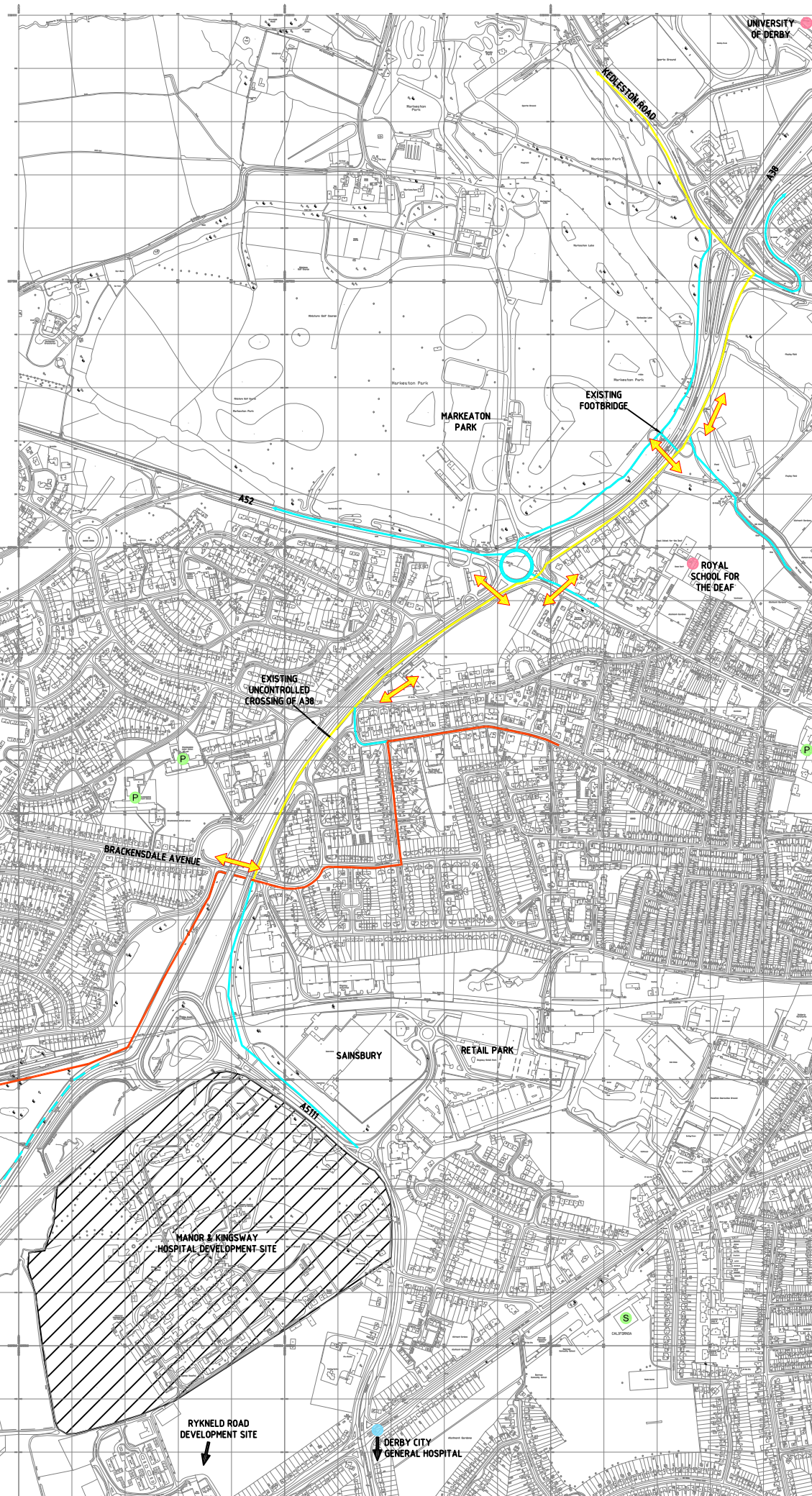
NMU Context Plans

NMU Context Plan (Drawing No. FIGURE 1 – NMU Context Plan)
NMU Context Plan (Drawing No. FIGURE 2 – NMU Context Plan)

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LOCATION PLAN
NTS



CONSTRUCTION RISKS	MAINTENANCE / CLEANING RISK	DEMOLITION RISKS
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SAFETY, HEALTH AND ENVIRONMENTAL INFORMATION BOX

NOTES

- KEY**
- FOOTPATH & FOOTWAY/CYCLEWAY
 - NATIONAL CYCLE ROUTE NRS4
 - STRATEGIC OR REGIONAL CYCLE ROUTE
 - PROPOSED REGIONAL FOOTPATH/CYCLEWAY
 - HOSPITAL
 - PRIMARY SCHOOL
 - SECONDARY SCHOOL
 - COLLEGE/UNIVERSITY/OTHER SCHOOL
 - DESIRE LINE

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Revision Details	By	Check	Date	Suffix
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Purpose of Issue

FOR INFORMATION



Client
HIGHWAYS AGENCY

Project Title
A38 DERBY JUNCTION IMPROVEMENTS

Drawing Title
KINGSWAY & MARKEATON NMU CONTEXT PLAN

Designed	Drawn	Checked	Approved	Date
-	URS	-	-	-

Project No
URS Internal Project No. Subality

Scale @ A1
1:50000

Zone / Mileage

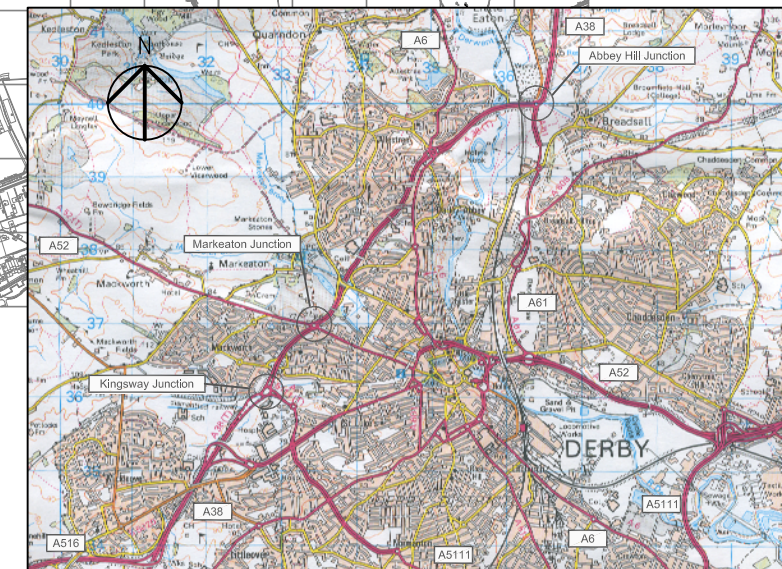
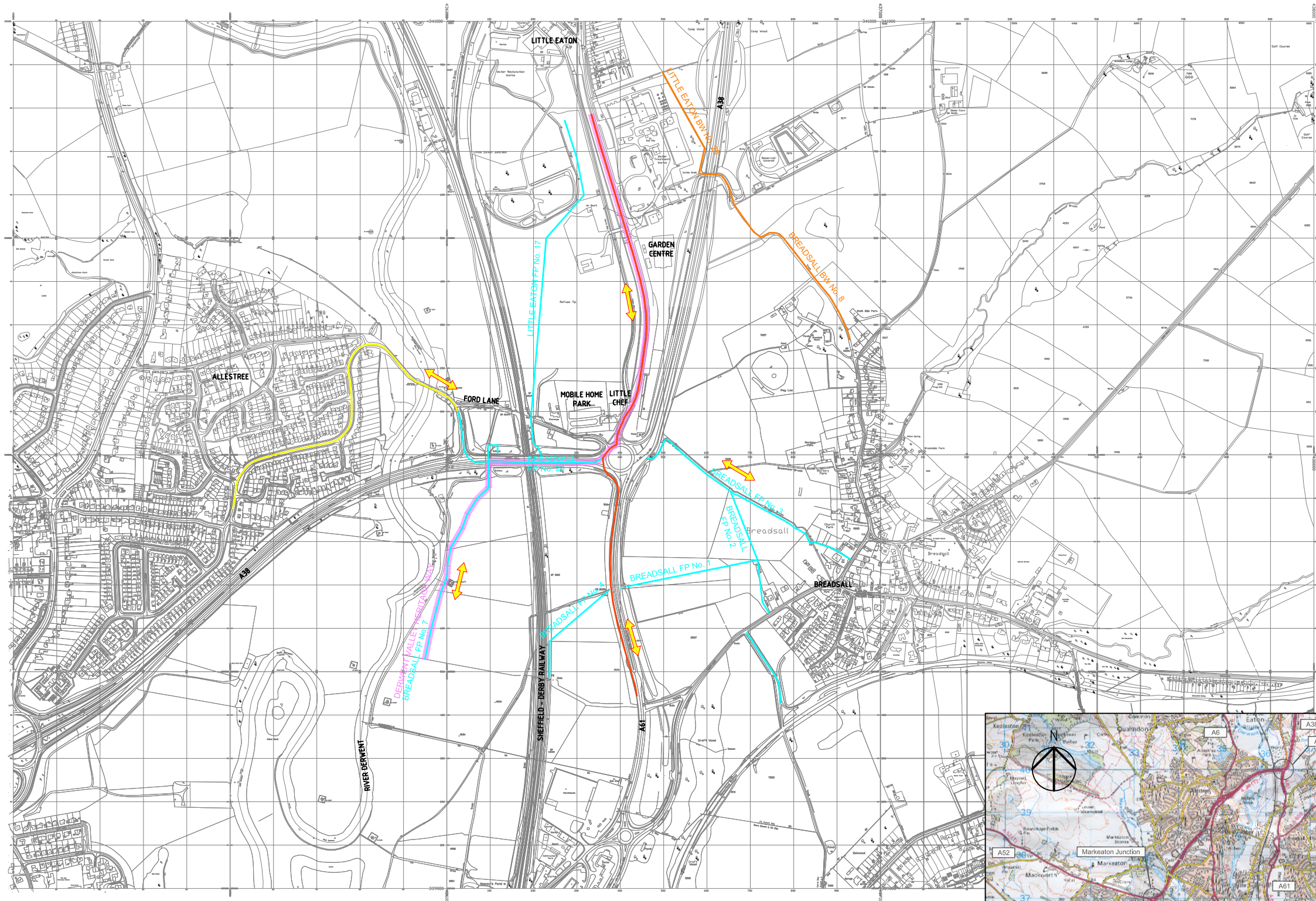
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Drawing Number
FIGURE 2 - NMU Context Plan

Rev
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LOCATION PLAN
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CONSTRUCTION RISKS	MAINTENANCE / CLEANING RISK	DEMOLITION RISKS
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NOTES

KEY

- BRIDLEWAY
- FOOTPATH & FOOTWAY/CYCLEWAY
- NATIONAL CYCLE ROUTE NR54
- STRATEGIC OR REGIONAL CYCLE ROUTE
- - - DERWENT VALLEY HERITAGE WAY
- ↔ DESIRE LINE

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Revision Details	By	Date	Scale
	Check		

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Drawing Title
LITTLE EATON NMU CONTEXT PLAN

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Drawing Number
FIGURE 1 - NMU Context Plan

Rev
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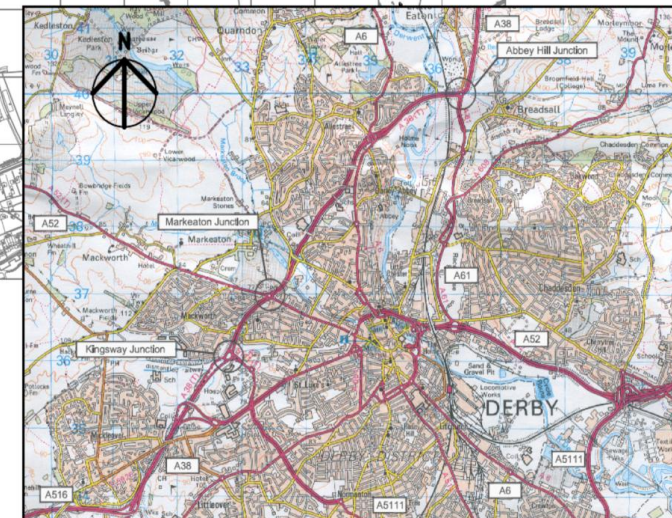
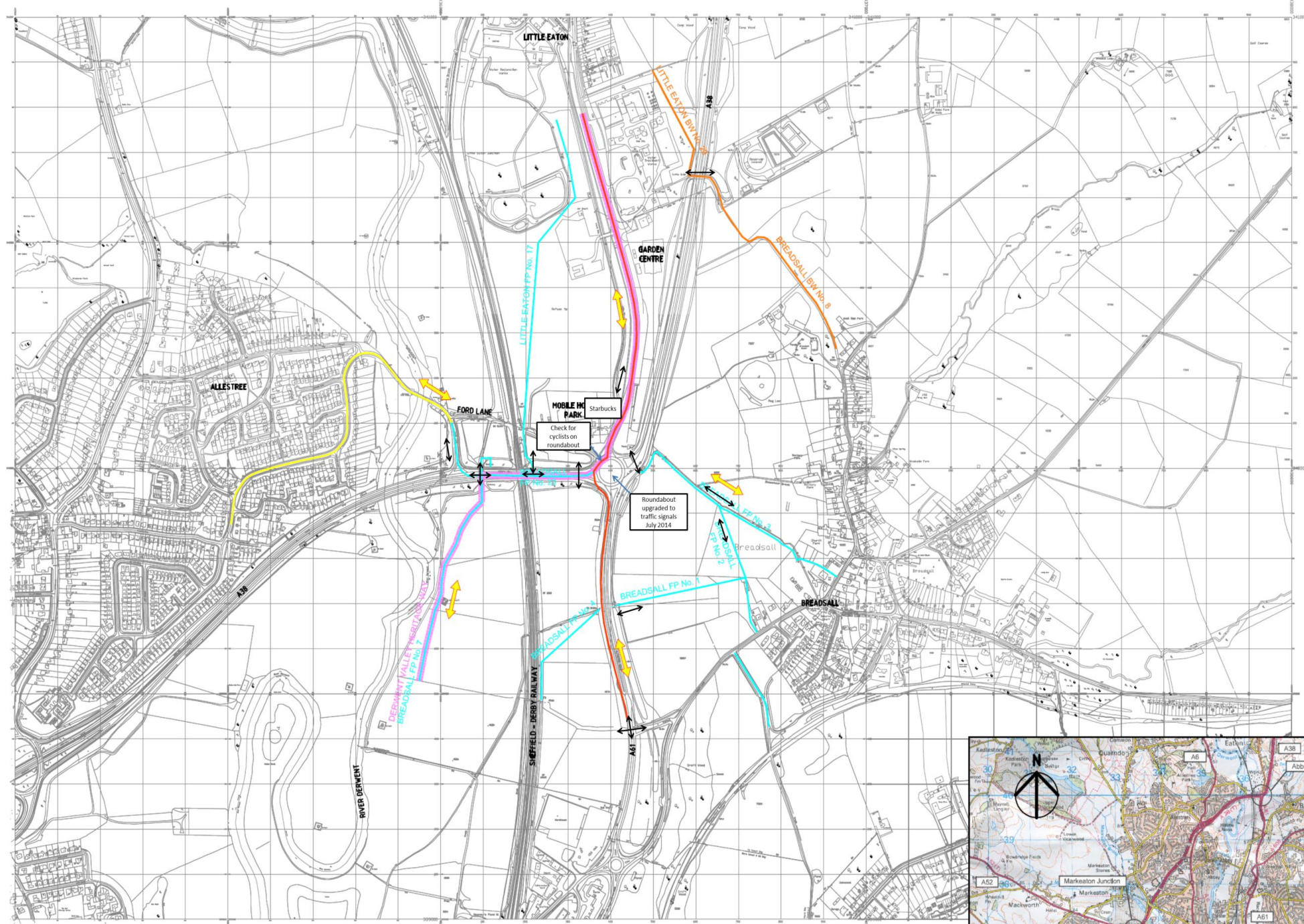
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APPENDIX D

NMU Survey Locations

NMU Survey Location Plan (Drawing No. FIGURE 1)
NMU Survey Location Plan (Drawing No. FIGURE 2)

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LOCATION PLAN
NTS

CONSTRUCTION RISKS	MAINTENANCE / CLEANING RISKS	DEMOLITION RISKS
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NOTES

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- FOOTPATH & FOOTWAY / CYCLEWAY
- NATIONAL CYCLE ROUTE NRS4
- STRATEGIC OR REGIONAL CYCLE ROUTE
- DERWENT VALLEY HERITAGE WAY
- DESIRE LINE
- ↔ NMU survey point

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Revised Details	By	Check	Date	Drawn
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Purpose of Issue: **FOR INFORMATION**



Project Title: **A38 DERBY JUNCTION IMPROVEMENTS**

Drawing Title: **NMU CONTEXT PLAN LITTLE EATON**

Designed	Drawn	Checked	Approved	Date
	URS			

URS Internal Project No. _____
Project No. _____
Scale @ A1 1:5000
Zone / Midge _____

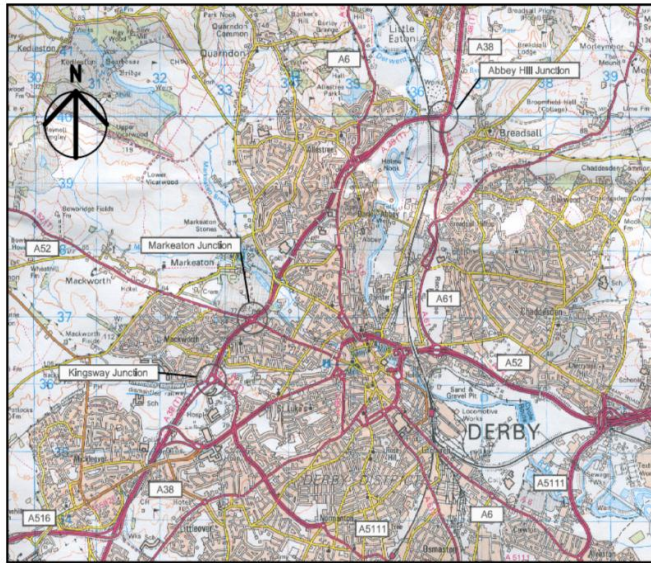
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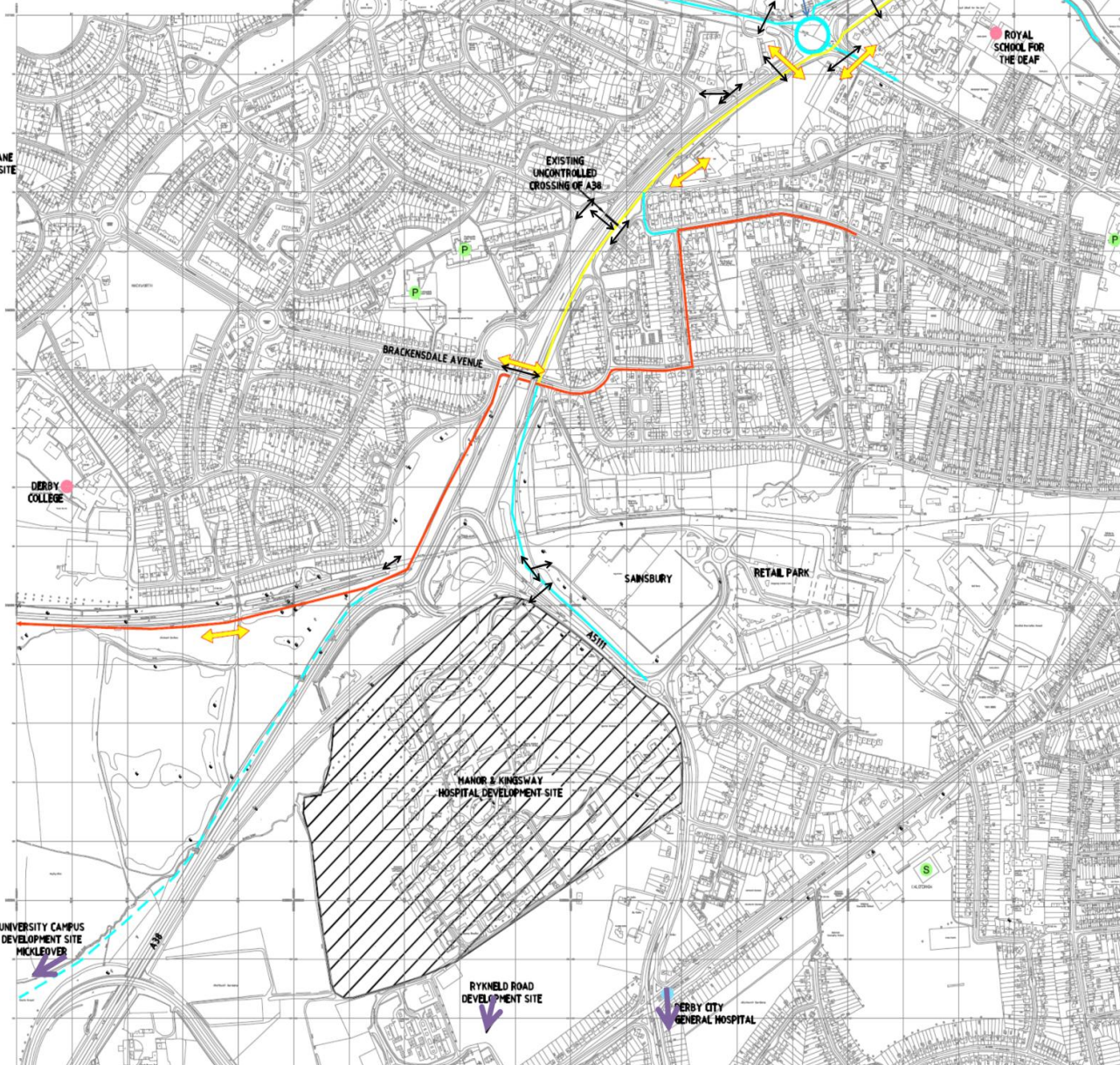


Drawing Number: FIGURE 1	Rev: 0
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LOCATION PLAN
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 - DESIRE LINE
 - NMU survey point

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Project Title: **A38 DERBY JUNCTION IMPROVEMENTS**

Drawing Title: **KINGSWAY & MARKEATON NMU CONTEXT PLAN**

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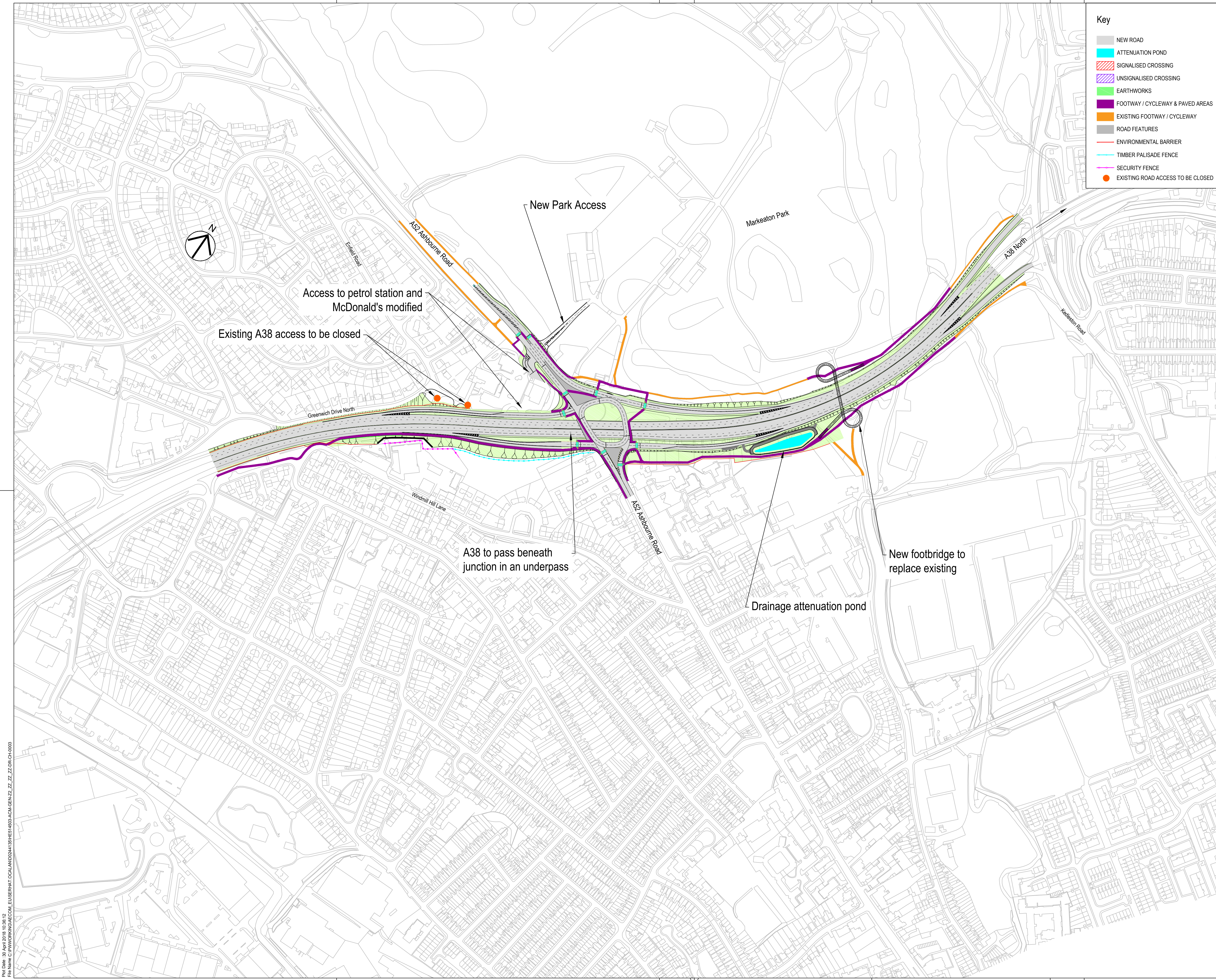
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Appendix B **Scheme Layout Drawings**



Key

- NEW ROAD
- ATTENUATION POND
- SIGNALISED CROSSING
- UNSIGNALISED CROSSING
- EARTHWORKS
- FOOTWAY / CYCLEWAY & PAVED AREAS
- EXISTING FOOTWAY / CYCLEWAY
- ROAD FEATURES
- ENVIRONMENTAL BARRIER
- TIMBER PALISADE FENCE
- SECURITY FENCE
- EXISTING ROAD ACCESS TO BE CLOSED

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Revision Details	By	SO	Date
	Check		Suffix

Purpose of issue

INITIAL STATUS OR WIP

Client
Highways England
Major Project:
Piccadilly Gate
Store Street
Manchester
M1 2WD

Working on behalf of
highways england

Project Title

**A38
DERBY JUNCTIONS**

Drawing Title

**MARKEATON JUNCTION
CONSULTATION BROCHURE
DRAWING**

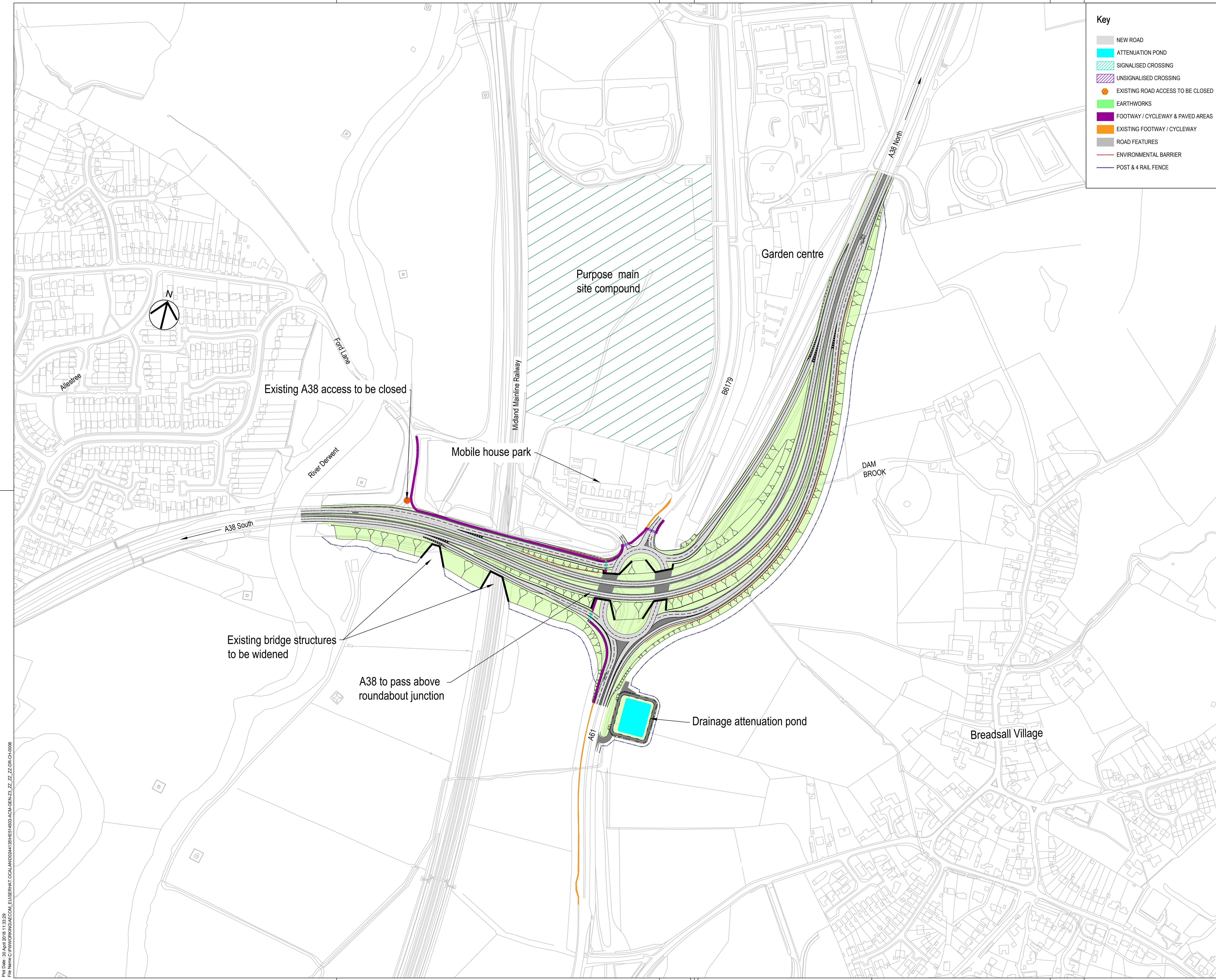
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SO	---	---	---	---
Internal Project No.	Suitability			
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1:1000	A38/A52 Markeaton			

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Drawing Number	Highways England PIN	I Originator	I Volume	Rev
HE514503 -ACM	-GEN-			P01.1
Z2_ZZ_ZZ_ZZ	-DR-CH-0003			
Location	I Type	I Role	I Number	



Key

- NEW ROAD
- ATTENUATION POND
- SIGNALISED CROSSING
- UNSIGNALISED CROSSING
- EXISTING ROAD ACCESS TO BE CLOSED
- EARTHWORKS
- FOOTWAY / CYCLEWAY & PAVED AREAS
- EXISTING FOOTWAY / CYCLEWAY
- ROAD FEATURES
- ENVIRONMENTAL BARRIER
- POST & 4 RAIL FENCE

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Revision Details	By	Check	Date

Purpose of issue
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Major Projects
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Store Street
Manchester
M1 2WD

Working on behalf of
highways england

Project Title
A38 DERBY JUNCTIONS

Drawing Title
LITTLE EATON JUNCTION CONSULTATION BROCHURE DRAWING

Designed	Drawn	Checked	Approved	Date
SO	---	---	---	---
Internal Project No.	Suitability			
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Scale @ A1	Zone			
1:1000	A38/A61 Little Eaton			

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Appendix C **Site Photographs**



1: Looking South on B6179



2: NCN 54



3: Looking North on the NCN 54 across access into Starbucks



4: Un-controlled crossing point across B6179



5: NCN 54 looking North with steep embankment



6: NCN 54 looking South with steep embankment



7: Un-named footpath crossing over A61 South of Little Eaton Roundabout



8: Crossing point over the A61 for Breadsall footpath 1+4



9: Bus stop along the NCN 54 cycleway



10: Start of cycle path in the vicinity of the bus stop



11: Entrance onto Breadsall footpath



12: Crossing point over the A61



13: NCN 54 along Westside of A61 looking North



14: NCN 54 along Westside of A61 looking South



15: Direction of Breadsall footpath 7 over farmer fields



16: Existing underpass under A38 following Breadsall footpath 7



17: Existing underpass under A38 following Breadsall footpath 7



18: Breadsall footpath 7 leading to A38



19: Breadsall footpath 7 leading to A38



20: Safety barrier across the entrance of Breadsall footpath 7



21: RCR 66 along Kedleston campus entrance



22: Entrance into Markeaton Park via Kedleston Road



23: Signal controlled crossing on the bridge over the A38. RCR 66



24: RCR 66 Follows Kedleston Road over A38



25: RCR 66 Un-controlled crossing across A38 entry slip



26: RCR 66 trailing along A38 Eastside



27: Local cycle networks join onto RCR 66



28: Bus services at Markeaton Park and ride



29: Un-controlled crossing over the A38



30: NCN 54 + 68 joins onto Windmill Hill Lane



31: Thurcroft Close junction with Radbourne Street where NCN 54 + 68 meet and join



32: Thurcroft Close



33: End of Thurcroft Close



34: Direction signs on Lyttelton Street



35: Crossing point over Lyttelton Street for NCN 54, 68 + RCR 66



36: Brackensdale Avenue junction with Greenwich Drive South



37: Poor sign visibility for NCN 54, 68 + RCR 66

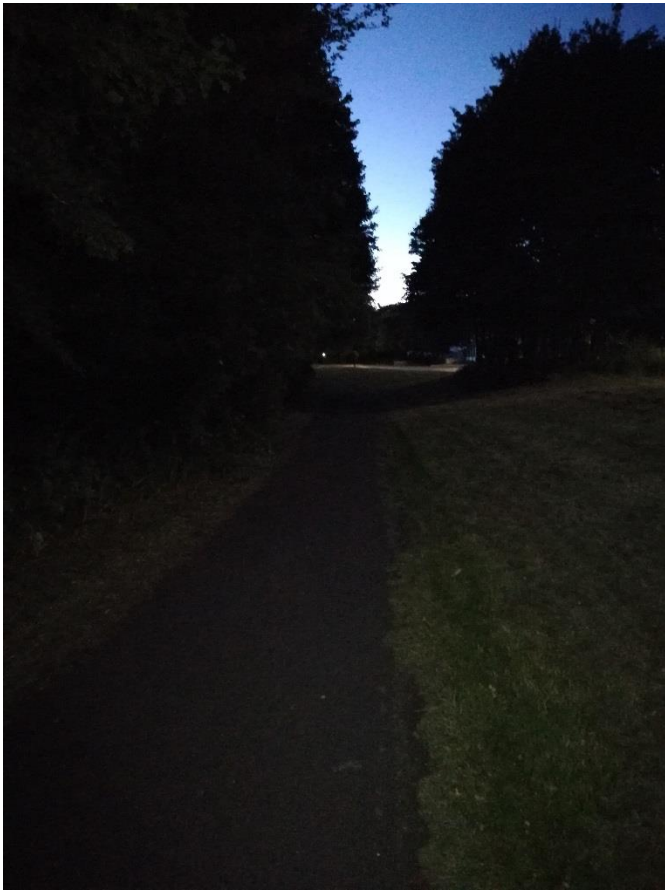


38: NCN 54, 68 + RCR 66 leaves Greenwich Drive South

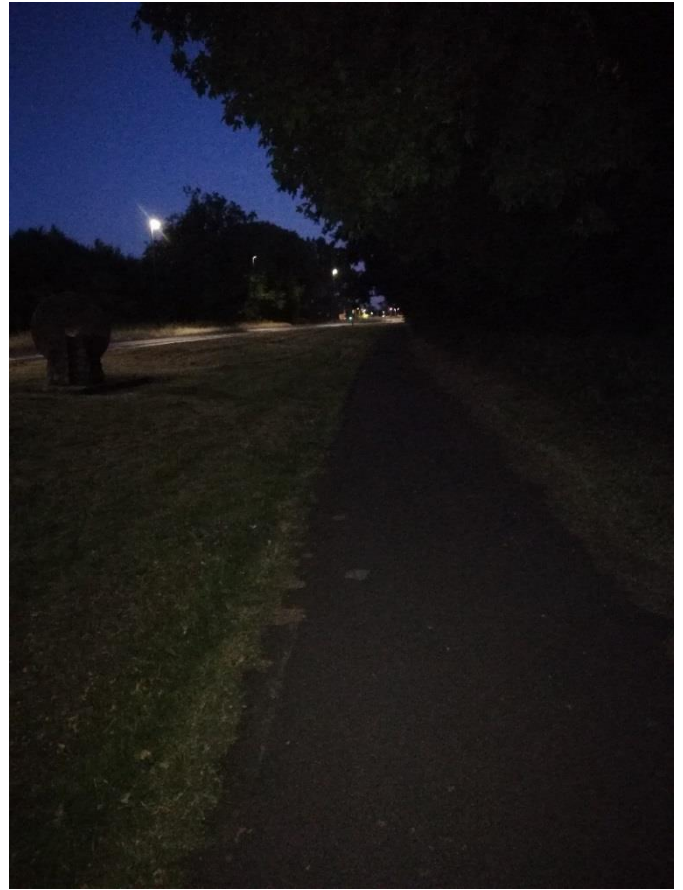


39: NCN 54, 68 + RCR 66 leaves Greenwich Drive South

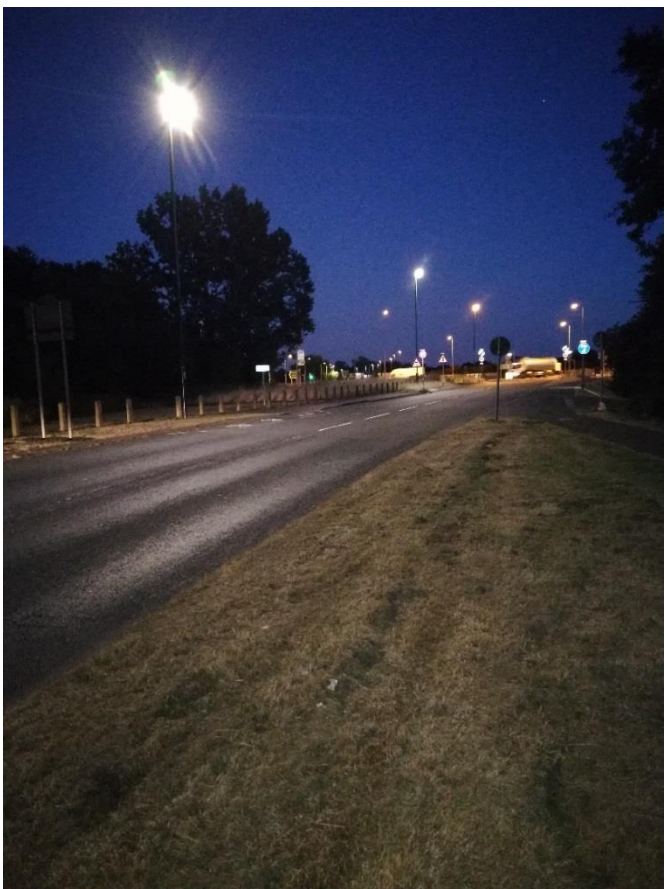
A38 night



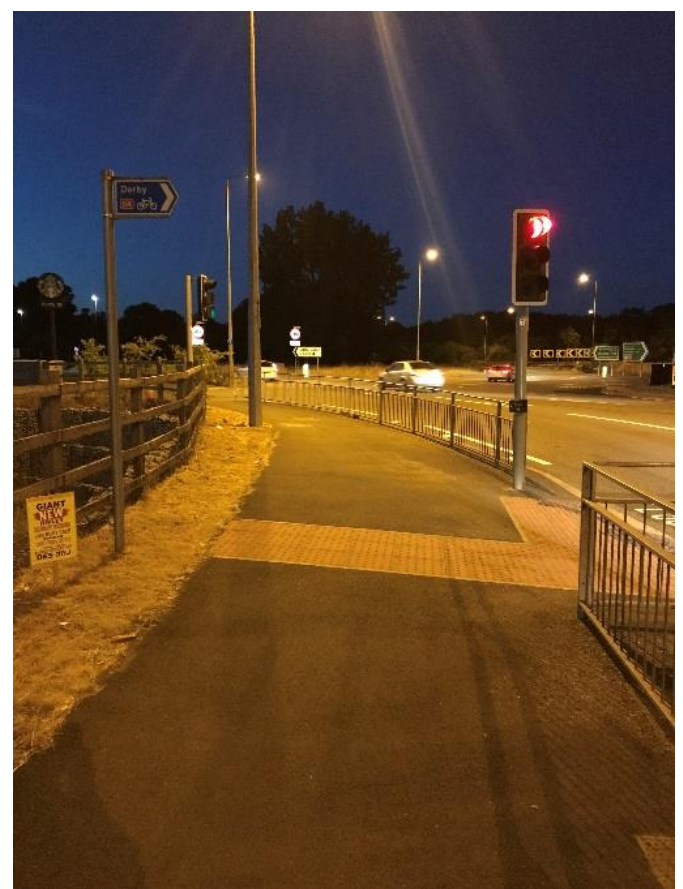
1: NCN 54 Northbound on the B6179



2: NCN 54 Southbound on the B6179



3: B6179 Approaching Little Eaton Roundabout



4: NCN 54 traversing little Eaton roundabout

A38 night



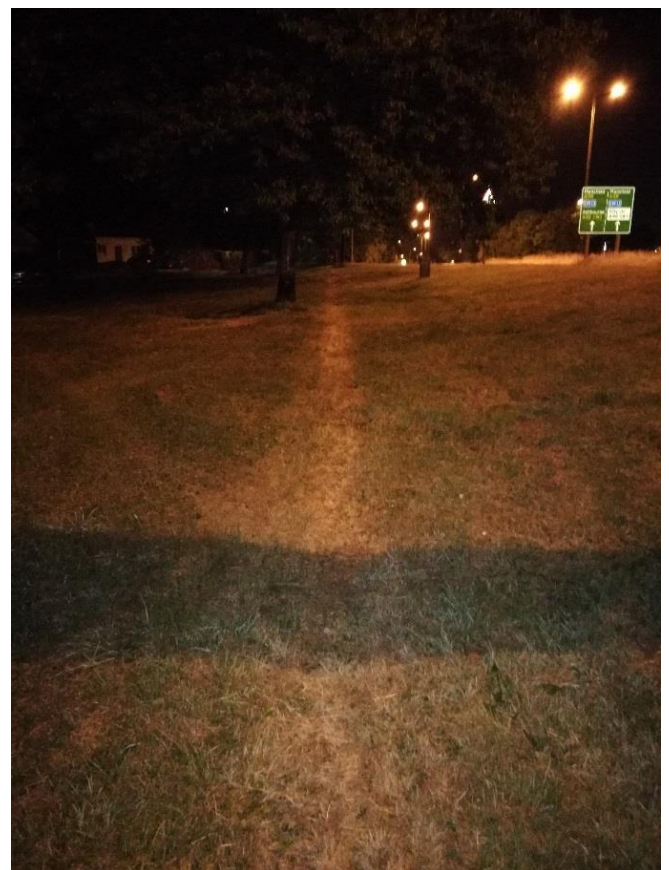
5: Local cycle network traveling West along the A38 towards Fords Lane



6: RCR 66 opposite entrance to Kedleston Campus

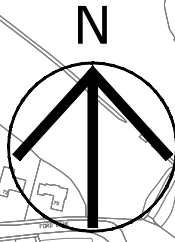


7: RCR 66 Following East side of A28 Leaving Markeaton roundabout



8: Desire line visible at Greenwich Drive north

Appendix D **Existing PROW and NMU Survey Locations**



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




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KEY

-  EXISTING FOOTPATH
-  EXISTING BRIDLEWAY
-  NATIONAL CYCLE NETWORK 54
-  LOCAL CYCLEWAY
-  SURVEY STATION

First Issue	AT	GS	28/03/19	P01
Revision Details	By	Check	Date	Suffix

FOR STAGE APPROVAL

Client
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The Cube
199 Wharfside Street
Birmingham
B1 1RN



A38 DERBY JUNCTIONS

**EXISTING PROW'S AND SURVEY LOCATIONS
LITTLE EATON JUNCTION**

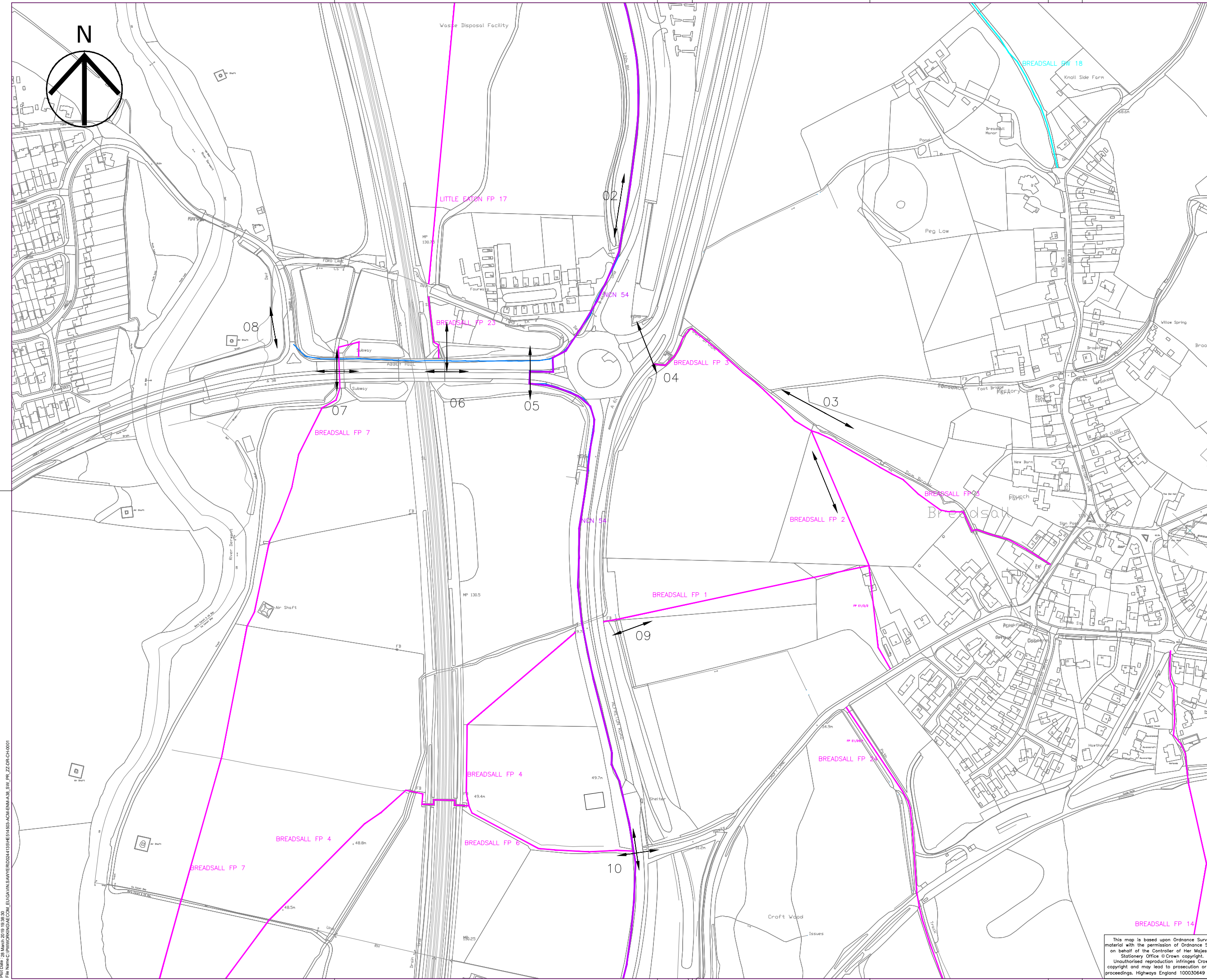
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AT	AT	AT	GS	28/03/19
Internal Project No.	Subsidiary			
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Scale @ A1	Zone			
1:2000	Whole Scheme			

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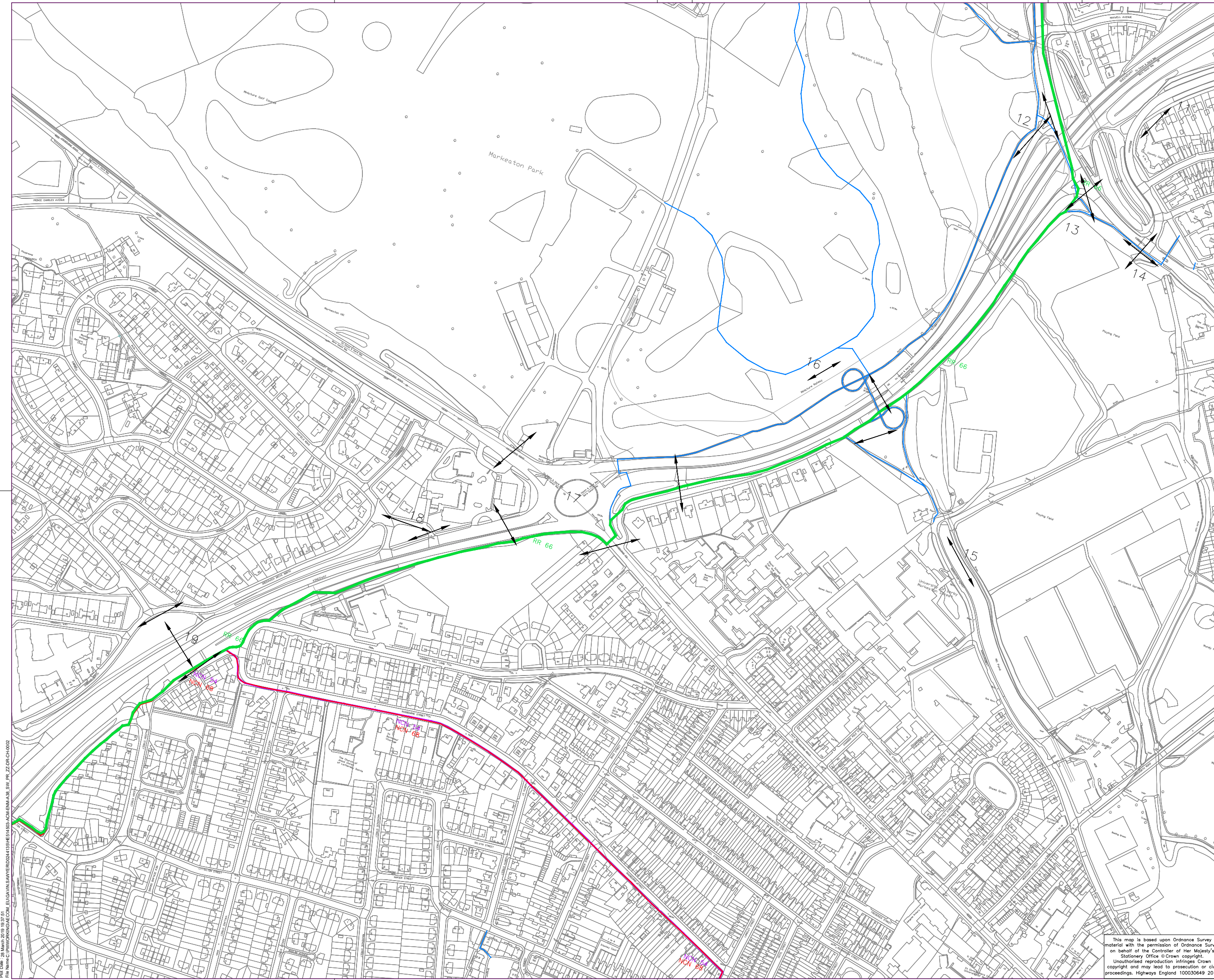
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HE514503 -ACM	-ENM-			P01
A38_SW_PR_ZZ	-DR-CH-0001			
Location	1 Type	1 Role	1 Number	



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KEY

- NATIONAL CYCLE NETWORK 68
- REGIONAL CYCLE ROUTE 66
- NATIONAL CYCLE NETWORK 54
- LOCAL CYCLEWAY
- SURVEY STATION

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First Issue	AT	28/03/19	P01
Revision Details	GS	Date	Suffix
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	Check		

PURPOSE OF ISSUE

FOR STAGE APPROVAL

Client: Highways England
The Cube
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Birmingham
B1 1RN

Project Title: **A38 DERBY JUNCTIONS**

Drawing Title: **EXISTING PROW'S AND SURVEY LOCATIONS MARKEATON JUNCTION**

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AT	AT	AT	GS	28/03/19

Internal Project No: 60533462
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Subsidiary: S4
Zone: Whole Scheme

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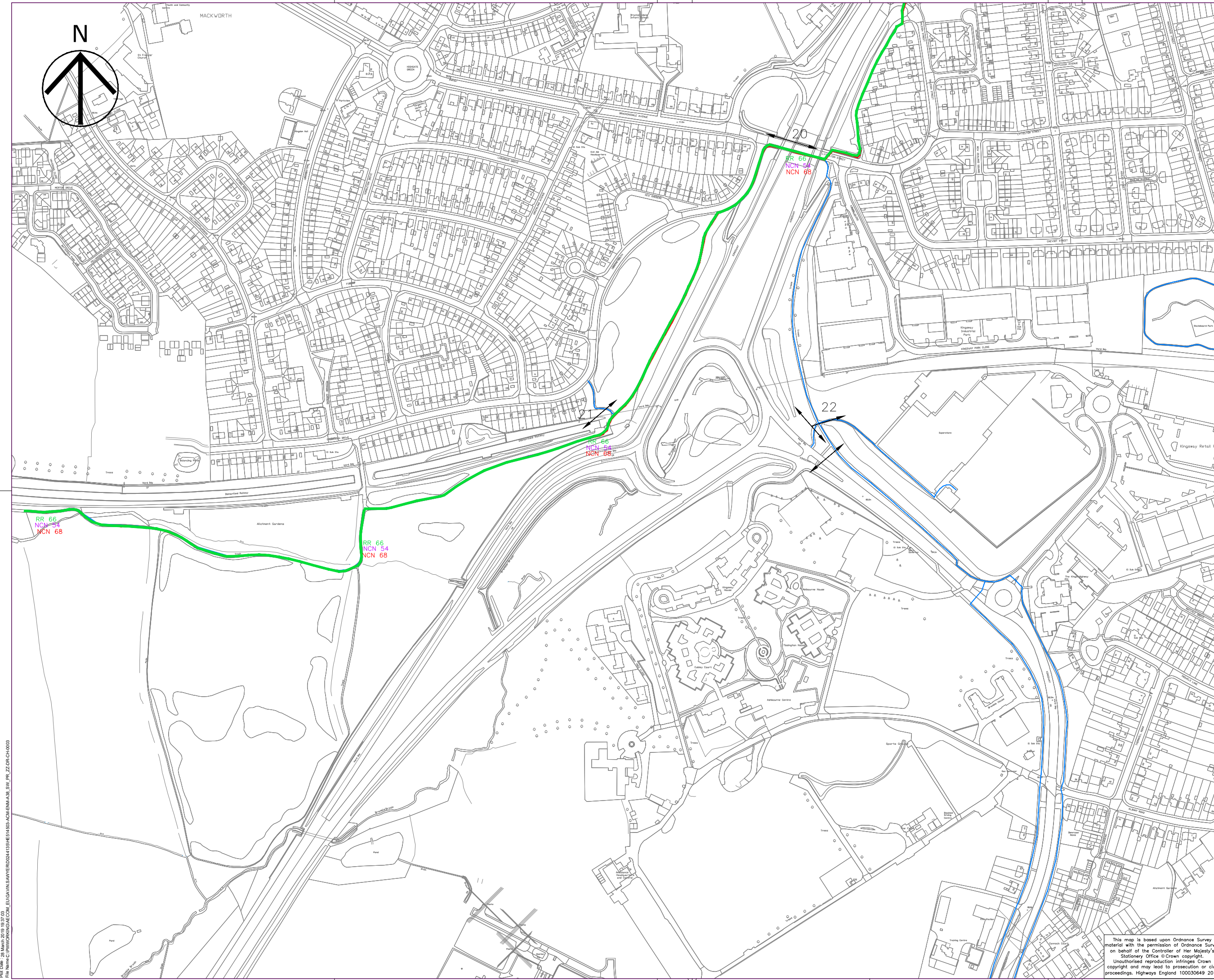
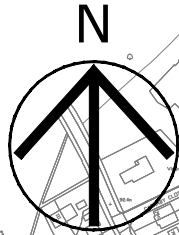
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Originator: I
Volume: I
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Role: I
Number: I

P01

PG Date: 28 March 2019 16:37:51
 File Name: C:\P\WORK\AECOM_EU\GAVIN SAWYER\024131\HE514503-ACM-ENM-A38_SW_PR_ZZ-DR-CH-0002



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KEY

	NATIONAL CYCLE NETWORK 68
	REGIONAL CYCLE ROUTE 66
	NATIONAL CYCLE NETWORK 54
	LOCAL CYCLEWAY
	SURVEY STATION

First Issue	AT	GS	28/03/19	P01
Revision Details	By	Check	Date	Suffix

FOR STAGE APPROVAL

Client
Highways England
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199 Wharfedale Street
Birmingham
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Project Title
A38 DERBY JUNCTIONS

EXISTING PROW'S AND SURVEY LOCATIONS KINGSWAY JUNCTION

Designed	Drawn	Checked	Approved	Date
AT	AT	AT	GS	28/03/19
Internal Project No.	Subsidiary			
60533462	S4			
Scale @ A1	Zone			
1:2000	Whole Scheme			

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A38_SW_PR_ZZ		-ENM-		
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		1 Type	1 Role	1 Number

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