



Transport for
Greater Manchester

Salford Bolton Network Improvements

Major Scheme Business Case Executive Summary

February 2016

1 Executive Summary

1.1 Introduction

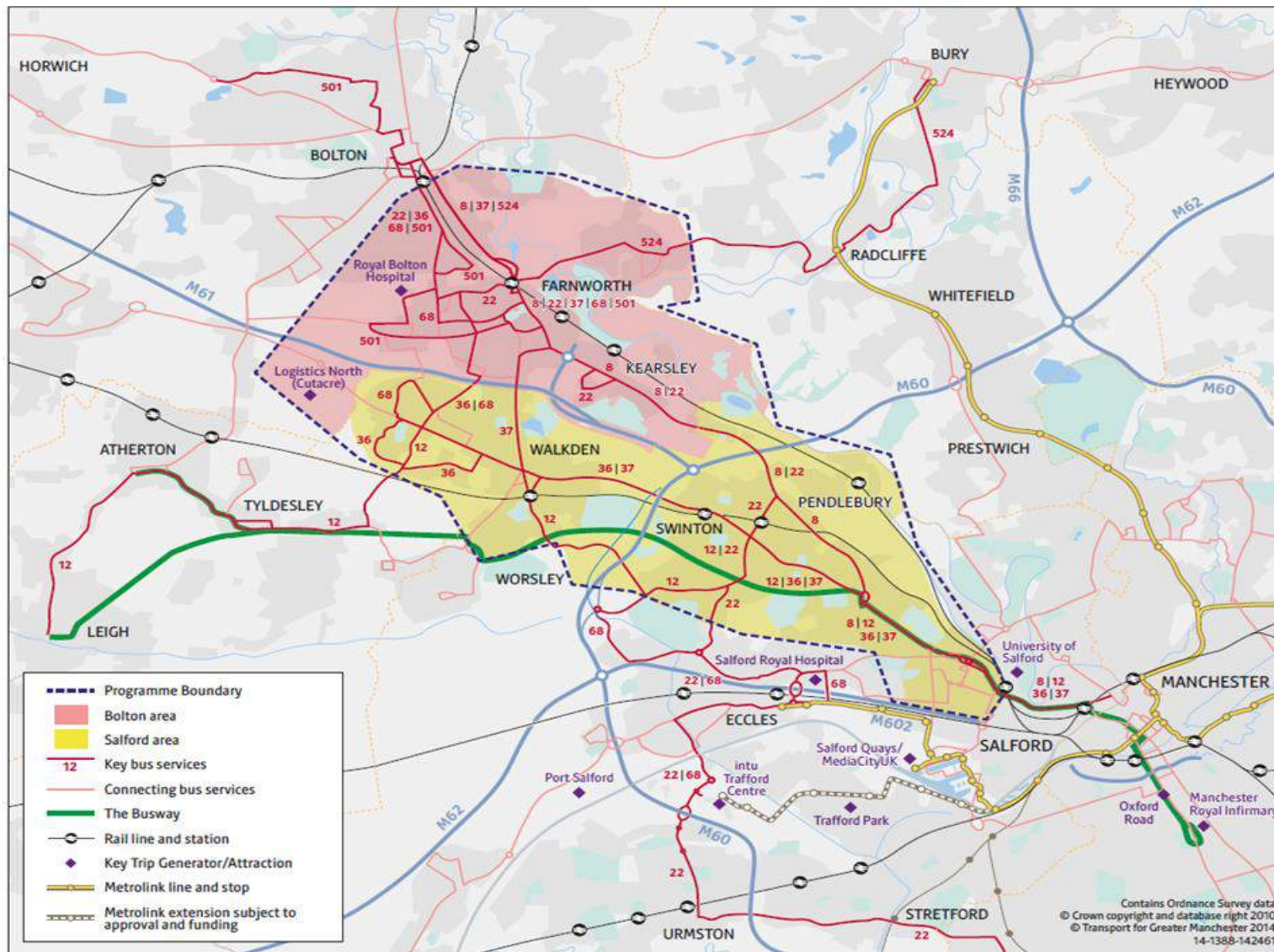
- 1.1.1 The Salford Bolton Network Improvements (SBNI) major scheme is promoted by Transport for Greater Manchester (TfGM), with support from TfGM's delivery partners, Bolton Council (BC) and Salford City Council (SCC). It will provide a comprehensive package of capital infrastructure improvements for pedestrians, cyclists, bus and rail passengers, and general traffic, focused around a local transport and District Centre network that serves over 100,000 residents in Bolton and Salford and will benefit over 12 million bus passengers per year.
- 1.1.2 The SBNI programme is one of twelve major transport schemes being delivered through Growth Deal funding. It comprises of a series of discrete Delivery Packages which will collectively provide corridor-wide, multi-modal, local transport infrastructure interventions to connect communities, make the network more efficient and reduce unpredictable delays.
- 1.1.3 The scheme is currently at Conditional Approval stage with a package of interventions that have been developed to concept design phase through consultation with key stakeholders, liaison with local authorities, Member and bus operator workshops, and have been prioritised against a set of key criteria. Following Conditional Approval further design development will take place along with extensive public consultation in order to secure the necessary local authority approvals, seek Full funding Approval and commence delivery of the interventions.
- 1.1.4 The scheme will be delivered as a programme, managed by TfGM and delivered jointly by TfGM, Bolton Council and Salford City Council. There will be a Delivery Agreement between TfGM and Salford City Council who will be the contracting authority for the Salford section of the programme and a Delivery Agreement between TfGM and Bolton Council for the Bolton section. The scheme will be



delivered as a series of Delivery Packages, across two programme phases, as presented in this document.

1.1.5 A location plan showing the SBNI area is illustrated in **Figure 1.1 overleaf**.

Figure 1.1 – SBNI location plan



1.2 The Challenge and Objectives

1.2.1 The SBNI programme is focused on a strategically important urban corridor, which is located between the two major centres of Bolton Town Centre and Greater Manchester's Regional Centre (the commercial core of Manchester/Salford). With areas of high level deprivation and areas with unsustainable levels of car ownership there is a need to stimulate economic performance whilst improving access to sustainable public transport.

1.2.2 The SBNI area's economic vitality is hampered by a number of challenging transport related constraints including:

- District Centres with uninviting, non- user friendly transport facilities;
- Peak-time congestion (including M60/M61/M62 motorway related problems);
- Poor punctuality and reliability of the local bus network;
- Infrequent local rail service patterns; and
- Poor public transport connections (e.g. slow, infrequent, inconvenient and unpredictable journey times and interchange arrangements) to important places of employment, education, health and leisure such as Bolton Town Centre, Bolton College and University, Salford University, Salford Quays, the Trafford Centre and the Regional Centre of Manchester, including the Oxford Road Corridor.

1.2.3 Most crucially, there is a risk that due to poor areas of accessibility the area will not benefit from the strong employment growth projections for the Regional Centre and other strategically important employment growth points, such as MediaCity UK, Port Salford and Logistics North, creating worse problems for air quality, congestion and carbon emissions, as jobs at these locations are fulfilled by people living further away.

1.2.4 Whilst much needed improvements to the capacity and quality of the rail network would also help tackle these issues and provide for strategic connectivity to

employment opportunities further afield, these improvements cannot be delivered within the timescales of the SBNI programme, and have therefore been ruled out of scope. Furthermore, rail-based improvements will only realise the highest benefit for the corridor if the complementary highways measures brought forward by this scheme are implemented to support local traffic and bus movements.

1.2.5 In particular, without a punctual and reliable supporting bus network, the District Centres in the area will continue to lose trade to other centres which are currently easier to access by rail and car.

1.2.6 Therefore, the SBNI scheme objectives are to:

- Support the economic vitality of the District Centres of Farnworth, Walkden, Swinton and Pendleton;
- To substantially improve the punctuality, regularity and reliability of bus services operating through the defined study area;
- Strengthen links within and links in and out of the area to high employment / health / education and leisure locations (with emphasis on employment); and
- Promote active, healthy lifestyles and making active sustainable travel safer and easier to use and an attractive alternative to the private car.

1.3 Scheme Background

1.3.1 The SBNI programme has evolved from the 'Route 8 Bus Rapid Transit (BRT)' major scheme which was one of the twelve future transport schemes prioritised by the Greater Manchester Combined Authority (GMCA), at their meeting on the 26th July 2013, for submission to the Department for Transport (DfT) for funding during the period 2015/16 to 2018/19. Funding for the scheme was subsequently approved as part of the Government's 'Growth Deal' announcement on 7th July 2014, which confirmed Greater Manchester's capital funding allocation for the period 2016/17 to 2020/21.

- 1.3.2 The 'Route 8 BRT' related to the legacy Transport Innovation Fund (TIF) scheme developed in 2006/07. During TIF, the option for a BRT scheme (i.e. complete physical segregation of a bus route) for Route 8 was considered as the preferred option. However, since TIF, further work in developing Quality Bus Partnerships, Quality Partnership Schemes (QPS) and the delivery of the Bus Priority Package and Better Bus Area Fund programmes has updated the Delivery Partners' views on what can be achieved in partnership with bus operators with the delivery of on-highways bus priority measures. In addition, planned improvements to the capacity of the Bolton-Manchester railway line due to the Northern Hub, and in particular the substantial network benefits derived from the electrification of the Manchester-Liverpool, Manchester-Preston and Bolton-Wigan railway lines, could reduce the strategic need for a BRT scheme.
- 1.3.3 With the diminishing requirement for a BRT scheme along 'Route 8' SBNI has subsequently been prioritised to address the transport related constraints earlier. In recognition that a step change in overall network performance across the area is required to more fully support the economic objectives of addressing deprivation in the area's communities (such as Pendleton, Great Lever, Walkden, Swinton, Little Hulton and Farnworth), the scope of the SBNI interventions has also increased from the route of the number 8 bus and has evolved to include bus priority measures for a number of connecting/feeder/orbital services, including the 22, 36, 501, 524 and 68.
- 1.3.4 In doing so, the scheme will make a positive contribution to sustainable economic growth through the delivery of a package of transport network interventions in the Bolton – Farnworth/Walkden – Swinton – Salford corridor; focussed on connecting communities and towns within the study area together with providing easy and reliable access to employment, health, education and leisure opportunities by sustainable transport modes.
- 1.3.5 The initial concept design phase for the scheme yielded 70 interventions which have subsequently been prioritised through a series of high level option appraisals to ensure the scope of the programme fulfils the scheme objectives. The result of this

option appraisal has led to a defined scope of 36 interventions which are detailed in the next section.

1.3.6 The SBNI scheme is being brought forward as a strategic priority to complement surrounding major transport investment priorities including:

- The Greater Manchester Bus Priority Package, which will provide fast, regular transport links between Leigh, Tyldesley, Ellenbrook, Salford, Manchester city centre and the Oxford Road Corridor;
- The new bus and rail interchange in Bolton (expected opening 2016); and
- The proposed Northern Hub and Electrification Infrastructure, including new platforms at Salford Central Station and improved service patterns on the Bolton to Manchester line expected by 2018.

1.3.7 It will also contribute to the delivery of a number of Key Business Priorities (KBP) as set out in the TfGM Business Plan 2015/16, including:

- **KBP1** Promoting Safety
- **KBP2** Focussing on Customers and Stakeholders
- **KBP5** Attracting Investment into Greater Manchester

1.4 The Scheme

1.4.1 The SBNI scheme will deliver multi-modal local transport infrastructure improvements targeted at ensuring the SBNI strategic objectives above are met. By making the network more efficient and reducing unpredictable delays, the scheme will encourage operators to implement bus network improvements for example through the provision of improved bus services.

1.4.2 The scheme positively contributes to TfGM's vision of "Driving the growth of a healthy and sustainable Greater Manchester through the delivery of a reliable,

integrated transport network” through the identification of a sustainable package of transport network interventions in the SBNI area; focussed on connecting communities, District Centres and towns within the study area together and providing easy and reliable access to employment, health, education and leisure opportunities by sustainable transport modes.

1.4.3 The SBNI scheme consists of 11 Delivery Packages (6 in Bolton and 5 in Salford) which consist of scheme specific measures subsequently referred to in this Business Case as interventions. These Delivery Packages are made up of a total of 36 interventions which have been assessed on a technical and Value for Money basis following a series of Options Appraisals in the earlier stages of the programme. Each Delivery Package consists of a number of geographically linked interventions which provide a variety of transport user, road user, cyclist and pedestrian benefits. Phase 1 Delivery Packages are expected to commence construction during the period June 2016 to September 2016, whilst Phase 2 Delivery Packages are expected to commence construction during the period August 2016 to April 2018. The Delivery Packages, scheme intervention names and their delivery phasing are summarised in Table 1.1 below:

Table 1.1 SBNI Delivery Packages and Phasing

Delivery Package Number	Intervention	Intervention Description	Delivery Phase
-------------------------	--------------	--------------------------	----------------

Bolton Delivery Packages

Bolton DP1	A5.1 Raikes Lane Junction	Junction re-design / re-model traffic signal junctions	1
Bolton DP2	A6.1 Manchester Road / Green Lane	Junction improvements / MOVA	1
	A6.2 Manchester Road / Loxham Street / Smiths Road	Junction re-design / re-model traffic signal junctions	
	A6.3 Moses Gate / Edgerton St MOVA	Junction Improvements	
Bolton DP3	B3.2 Long Causeway traffic management measures	TROs / traffic management measures	1
	B3.3 Bolton Rd/Manchester Rd traffic management measures	TROs / traffic management measures	
	B3.4 Manchester Road / Higher Market Street / Long Causeway Junction	Re-design of traffic signal junction	
Bolton DP4a	B2.1 Farnworth Bus station	Re-design of bus stop provision	1

Bolton DP4b	B3.1 Traffic Management and public transport measures on Higher Market Street	Bus stop improvements TROs / traffic management measures	1
	B2.2 King St / Higher Market St Junction	Modifications to junction layout	2
	B2.3 Bus stops on Higher Market Street	Re-design of bus stop provision	2
Bolton DP6	C2.1 Manchester Rd-M60 C2.2 Manchester Rd / Stoneclough Rd Junction	Bus priority measures Junction improvements	2
Bolton DP7	G1 Bus Stop and Shelter Upgrades	Bus stop upgrades	2

Salford Delivery Packages

Salford DP1	D1.2 Madam's Wood Road	Traffic management measures	1
	D1.3 Manchester Road East / Hilton Lane	Junction alterations	
	D3.1 Walkden Rail Station	Alterations to urban realm/bus stop relocation	
	D3.2 Birch Rd / Old Clough Lane	Traffic management measures	
	F1.1 Junction Eccles Old Road / Langworthy Rd	Junction alterations	
	F1.2 Junction Seedley Rd / Langworthy Rd	Junction alterations	
	F1.3 Bus stop upgrade Fitzwarren Street	Bus stop upgrade	
Salford DP2	D2.1 Manchester Road Bolton Rd junction improvements	Junction re-design	2
	D2.2 Walkden Centre (Stocks Hotel Stop) improvements	Bus stop upgrade	
	E2.2 Swinton Town Centre - A6 Civic centre & public realm	Bus stop upgrades, public realm upgrades	
Salford DP2	E2.3 A6 bus priority to Swinton Westbound	Bus priority / Cycle priority measures	
Salford DP3	E4.1 Bus Gate & Lane A666 (North M60)	Bus priority measures	2
	E4.2 M60 to Station Road	Bus priority measures	
	E4.3 Upgrade Junction: A666 / Station Road	Junction upgrade	
	E5.1 Route upgrade A666 Bolton Road / roundabout	Bus priority measures	
	E5.2 Junction improvement Agecroft Road	Lane alterations, junction upgrade	
	E6.1 Improve 'Heights' roundabout	Roundabout exit / entry point reorganisation, bus priority measure reorganisation	
	E6.2 Bolton Rd Parking	Parking arrangement re-organisation	
	F1.4 A6 to Belvedere Road Bus Priority Measures	Bus priority measures	
	F1.5 Crossing Crescent Station (A6)	Super crossing installation	
Salford DP4	F2.1 Rossall Way Gyratory, A6 Roundabout	Bus priority measures, public realm re-organisation	2
Salford DP5	G2 Bus Stop and Shelter Upgrades	Bus stop upgrades	2

- 1.4.4 **Appendix A** contains concept designs for the Bolton interventions which, subject to consultation and approvals, will be delivered in Phase 1 of the programme. As the programme proceeds beyond Conditional Approval further design development will take place along with extensive public consultation in order to secure necessary local authority approvals, seek Full funding Approval and commence delivery of the interventions.
- 1.4.5 The intended outcomes of the programme will include shorter journey times and reduced variability leading to better and more sustainable access to jobs and local District Centres. The proposed pedestrian crossings, cycle infrastructure and public realm improvements will provide safer walking and cycling routes into District Centres making them more accessible and attractive as a result encouraging more people to visit these centres and increase local trade. The programme also encompasses facility improvements targeted at providing an enhanced experience for public transport users such as bus station upgrades. This is in addition to upgraded bus stop waiting areas that provide better shelter and safety for users which will improve customer experience and increase patronage.
- 1.4.6 Whilst SBNI's primary focus is to improve the quality of sustainable modes of transport across the Bolton – Farnworth/Walkden – Swinton – Salford corridor the programme of interventions will also provide improvement for private car users through improved junction performance and more efficient use of highway space which it is intended will lead to decreased congestion.
- 1.4.7 Whilst the Delivery Packages would provide local benefits if delivered on their own, it is only when delivered as a coordinated and comprehensive package of measures, that the full benefits of the SBNI are realised. This is particularly true in terms of achieving the step change needed to improve punctuality and journey time reliability of buses in the area (which is required to achieve mode shift and District Centre growth targets). Nonetheless, in forming two phases for the programme delivery, we have been able to demonstrate that a sufficient level of 'step change' will be enabled by 'Phase 1' to justify the acceleration of 'Phase 1' approvals ahead of 'Phase 2'.

- 1.4.8 The scheme will provide improved public transport access and connectivity to growth areas not accessible by rail and will improve (non-rail) local accessibility and connectivity to the District Centres.
- 1.4.9 The scheme will also help the bus network better serve locations that are currently identified as areas with high levels of deprivation. As such the scheme is focussed on corridor connectivity and accessibility improvements which cannot be delivered by rail and is focussed on delivering benefits to the existing and potential bus users in the corridor. When combined with future potential investment in rail, the SBNI scheme will create the necessary new baseline conditions for achieving strategic target reductions in private car ownership and sustainable mode choice.
- 1.4.10 The programme will have a number of interdependencies and interfaces with other external programmes. Examples include the master plan for Farnworth town centre, Pendleton Precinct, local housing developments, the Key Route Network, delivery of the Northern Hub and Electrification of the Preston – Manchester line and the Highways England M60 Managed Motorway scheme. The programme team will establish appropriate communication and control measures with the relevant organisations to ensure that these interdependencies and interfaces are managed and the impacts on the SBNI programme are minimised.

1.5 Value for Money summary

- 1.5.1 Since the original funding submission TfGM, Bolton Council and Salford City Council have undertaken work to review the SBNI to deliver improved Value for Money (VfM). Cooperative working during the development of scheme concept proposals has produced a set of Delivery Packages which support the SBNI objectives.
- 1.5.2 The transport modelling and appraisal approach has been applied proportionately at the Conditional Approval Business Case stage, to estimate the highway and public transport journey time savings. The scheme's benefit-cost (BCR) ratio will be revised for the Full Approval business case submission. For this, a locally validated highway

model will be developed to understand the highway re-routing effect and its impact on the overall highway journey time savings.

1.5.3 The scheme appraisal work undertaken has been based on the DfT's Transport Analysis Guidance (WebTAG), TfGM's Investment Appraisal Guidance and includes a range of sensitivity tests.

1.5.4 The scheme's key monetised benefits include: i)- journey time savings to public transport and other highway users; ii)- health benefits to cyclists and public transport users; iii)- public realm benefits; iv)- improved air quality benefits; and v)- reduction in noise and accident benefits.

1.5.5 Some key benefits can't be quantified therefore qualitative assessment is carried out for regeneration benefits, improving journey quality and security for pedestrians and public transport users, and enhancing users' access to services.

1.5.6 The SBNI scheme offers high Value for Money at the Conditional Approval business case stage based on its monetised and qualitative benefits, as well as the robustness of the appraisal. A summary of VfM can be seen from Table 1.2 below.

Table 1.2 – Value for Money Summary (Phase 1 & 2 schemes combined) – Conditional Approval Business Case Stage

2010 prices and values	£000's
Present Value of Benefits (PVB)	£242,835
Present Value of Costs (PVC)	£37,160
Net Present Value (NPV)	£205,675
Qualitative Benefits	Moderate beneficial – Regeneration; Journey Quality; Security; Journey Time Reliability; and Access to Services benefits.
Overall VfM	6.38 BCR

1.6 Programme Delivery

1.6.1 Project Teams and Governance

1.6.2 Due to an increasing range and scale of projects and programmes being managed by TfGM two methodologies were developed to ensure consistent delivery approaches. The first covers the management of projects (PMP) and the second covers programme management (ProgMP). These have been incorporated in the Growth Deal Majors Capital Programme Guidance. The purpose of these procedures is to ensure that TfGM's projects are managed effectively and efficiently and are delivered to a consistent standard, on budget and on time using a single corporate management methodology. This embedded project and programme management approach brings reliability, vigour and visibility. Bolton Council and Salford City Council Delivery Policies will manage the day to day activities on the programme using their own Project Management Procedures.

1.6.3 A key requirement for the funding is the implementation of TfGM's Project Management Procedures (PMP) in order to provide increased assurance and control over how SBNI and other Growth Deal projects are delivered. This assurance is achieved through the application of a scheme independent scrutiny and assurance process, a major component of which is the Gateway approval process.

1.6.4 As set out in the Assurance Framework agreed with DfT, following Scheme Prioritisation there are two Gateways to approval based upon the DfT's Transport Business Case process, namely:

- Conditional Approval, which confirms the GMCA's intention to fund the scheme at the specified budget, conditional on successful completion of a full Business Case process, which would include gaining of all powers/consents and obtaining a tender;
- Full Funding Approval, which grants final funding approval to promoters with appropriate contracts and agreed on-going monitoring in place.

1.6.5 TfGM will fulfil the role of programme management. There will be a Delivery Agreement between TfGM and Salford City Council who will be the contracting authority for the Salford section of the programme and a Delivery Agreement between TfGM and Bolton Council who will manage the construction of the Bolton section of the programme.

1.6.6 The GMCA Growth Deal funding is time limited and is available from March 2015 to March 2021.

1.6.7 Stakeholders and Communication

1.6.8 TfGM will manage the strategic level communications for the programme whilst Bolton Council and Urban Vision (on behalf of Salford City Council) will manage the day to day project level communications.

1.6.9 The diverse nature and wide area of coverage of the programme of interventions mean that the SBNI will be of interest to a wide range of stakeholders within the area which the programme of interventions covers.

1.6.10 High level consultation has taken place between key stakeholders in Bolton Council, Salford City Council, TfGM and Bus Operators to progress the scheme to Conditional Business Case approval.

1.6.11 As the scheme progresses beyond Conditional Approval the interventions will be further developed in conjunction with key stakeholders and the wider local community through programme and key intervention level public consultation. This will ensure the programme of interventions is inclusive and takes into account local objectives formed by the needs of stakeholders and residents across Bolton and Salford as well as meeting the wider strategic programme objectives. For Salford the detailed proposals will then be considered for approval by the City Council. For Bolton the detailed proposals will be notified to the Executive Cabinet Member for Environmental Services. Lessons learned from previous Bus Priority schemes undertaken by TfGM will be utilised in order to ensure that effective stakeholder engagement and consultation is carried out.

- 1.6.12 A stakeholder engagement and consultation plan will be developed to show the methods of consultation to be used for the programme of works and how the consultation will be spread over the intervention areas. The plan will identify any issues, minimise conflicts and generate solutions which will take into account the aspirations of stakeholders whilst protecting the objectives of the programme.

1.7 Risk Management

- 1.7.1 TfGM will work closely with the delivery partners to establish the benefits of risk management and its application to their business activities. This will ensure there is a joined-up and consistent approach to risk management applied across the programme. Successful delivery of the programme objectives will depend on all parties adhering to the risk management process and procedures.
- 1.7.2 Appropriate and effective reporting arrangements reinforce and support risk management and allow up-to-date and accurate performance information to be passed to risk owners and senior managers. In line with TfGM's governance procedures, the Risk Manager provides the risk reports to the Programme Manager for inclusion in the monthly Programme Board reports. The risk reports will be based upon the latest information from the District review meetings. No changes to risk management sections in the Board reports should be made without the approval of the responsible risk manager.
- 1.7.3 Risk management will be a key focus on the agenda for project progress meetings with the Districts and there will be a requirement for the Districts to report on risks relating to each intervention so that TfGM have an understanding of the risk exposure across the programme. Delivery Agreements which will be created in partnership with the Districts will detail the required risk management processes, including management of the allocated risk budget and escalation procedures, which will be enforced throughout the programme.
- 1.7.4 As the Districts will be managing construction works on site, risks relating specifically to Health & Safety matters will primarily be a District responsibility and this will be reflected by their role as Principal Designer (PD) under the Construction & Design

Management 2015 regulations. However in line with the TfGM Safety Management System (SMS) any TfGM representative involved with the project will place safety first from project inception through to completion. Health & Safety risks are those physical risks relating to fire, security, buildings and plant, accident prevention and personal safety.

1.8 Funding

- 1.8.1 The total funding allocation from Growth Deal for SBNI is £39.7m. As with any scheme proposal included within the package should the scheme scope, benefits, cost or funding approach differ moving forward then this will be reviewed at Full Approval stage.
- 1.8.2 The GMCA Growth Deal funding is time limited and is available from March 2015 to March 2021. A draft outline schedule has been produced in order to ensure the SBNI Programme of interventions can be delivered within this timeframe.
- 1.8.3 The scheme costs for SBNI are based upon the cost estimates provided by the District Partners as part of the scheme identification and prioritisation process, these costs have been validated to ensure they represent an accurate estimate of the anticipated scheme costs.
- 1.8.4 In addition to the QRA budget, SBNI has a contingency allowance. The level of contingency associated with SBNI will be held at programme level (e.g. Growth Deal). As the schemes progress and true costs are realised any funds within the contingency which are not required to deliver the main schemes will be used to bring schemes held in reserve back into scope. The contingency allowance equates to approximately 20% of the total funding allocation for SBNI which is considered to be an appropriate provision based on the lessons learnt from other (similar) projects.

1.9 Procurement & Contract Management

- 1.9.1 In parallel with the design development process, TfGM will develop a Sourcing Strategy Document (SSD) using its Strategic Sourcing Process (SSP). This strategy will

take account of risk and best value in the context of meeting the needs of the programme.

1.9.2 The development and governance of the SSD will follow the TfGM procurement procedures and policies to ensure it:

- delivers best whole life VfM;
- complies with all relevant legislation;
- is open and transparent and providing all necessary safeguards against fraud and corruption;
- is properly documented providing clear audit trails;
- ensures active and widespread involvement with TfGM making it as easy as possible to engage; and
- ensures that TfGM Procurement supports the organisation to achieve its Sustainability, Environmental and Diversity Policies.

1.9.3 To undertake the necessary Business Case and design development work on each package, multi-disciplinary design will be undertaken to progress the packages. This will also enable a traditional procurement method, where the design process is separate from construction, to be progressed if required subject to time constraints and the risk applicable to each package. The consideration and recommendation of the traditional or design and build procurement method will be detailed as part of the SSD following consideration of time constraints and risk for each scheme.

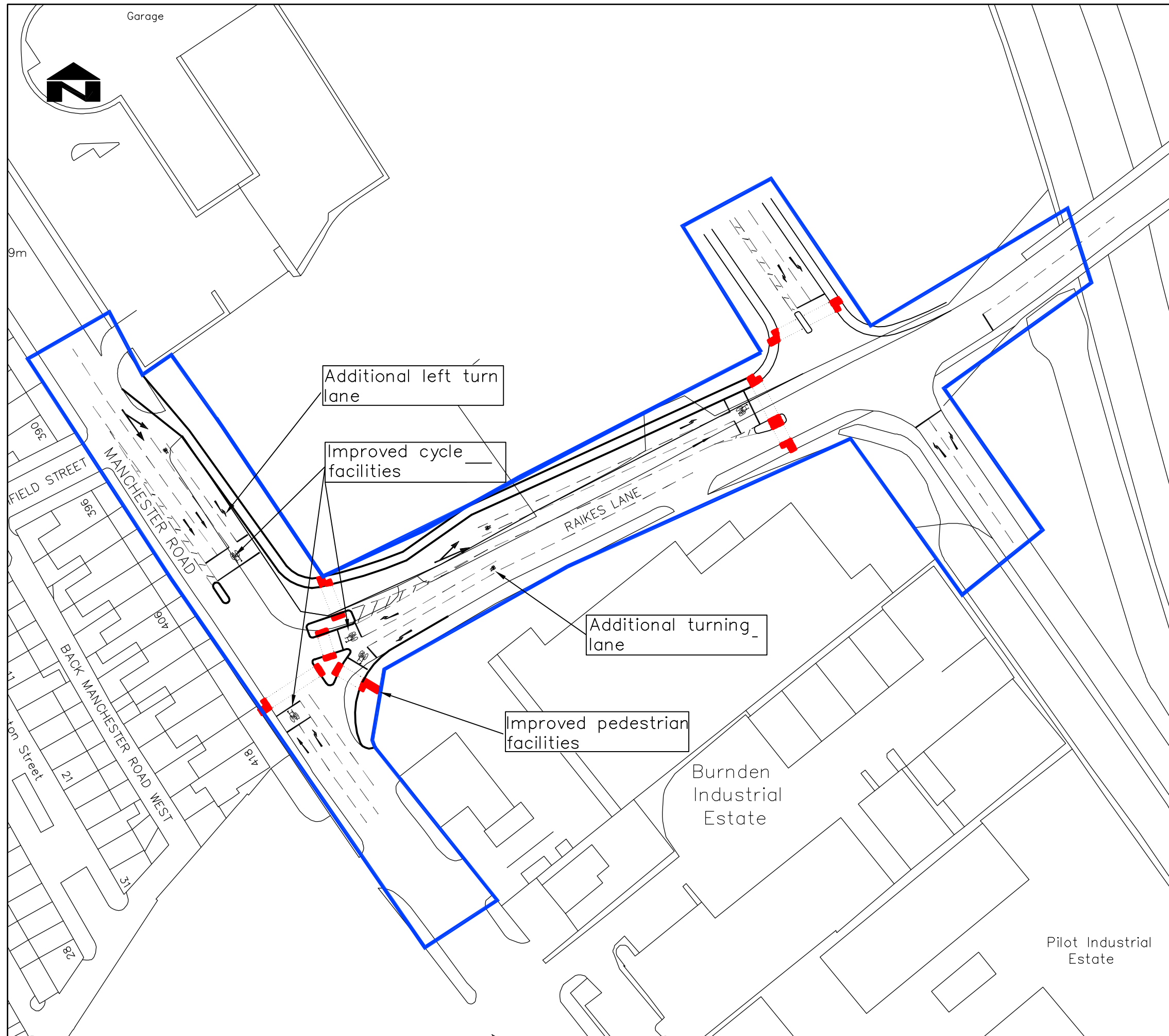
1.9.4 The Bolton work packages will be delivered using the Bolton Highways framework. The Salford work packages will be delivered using a combination of Bolton Highways framework, Salford Highways framework, direct allocation to Urban Vision Highway Services and delivery through the open market.

1.9.5 Separate appointments would be made in relation to Cost Consultant and potentially, health and safety advice for each scheme. These appointees will be key client advisors who will work for the client providing relevant input to the design process whilst managing the design team output to ensure that it meets TfGM requirements in terms of design safety/quality and is in accordance with the available budgetary provision.

- 1.9.6 Following the recent changes to the CDM regulations, a Principle Designer will be nominated by each District to support and guide the project team to ensure that we meet our health and safety obligations by complying with the appropriate legislation and industry best practice(s).

Appendix A

Bolton Phase 1 Interventions



DESIGNED AND PRODUCED BY THE HIGHWAYS AND
ENGINEERING SECTION OF THE ENVIRONMENTAL
SERVICES DEPARTMENT OF BOLTON COUNCIL

ISSUED , November 2014

© BOLTON COUNCIL 2014

THIS MAP IS BASED ON ORDNANCE SURVEY MATERIAL WITH THE
PERMISSION OF ORDNANCE SURVEY ON BEHALF OF HER MAJESTY'S
STATIONERY OFFICE. © CROWN COPYRIGHT. UNAUTHORIZED
REPRODUCTION INFRINGES CROWN COPYRIGHT AND MAY LEAD TO
PROSECUTION OR CIVIL PROCEEDINGS. 100019389/ 2014

Rev.	Amendments	By	Date	Chkd.
------	------------	----	------	-------



HIGHWAYS AND
ENGINEERING
DIVISION

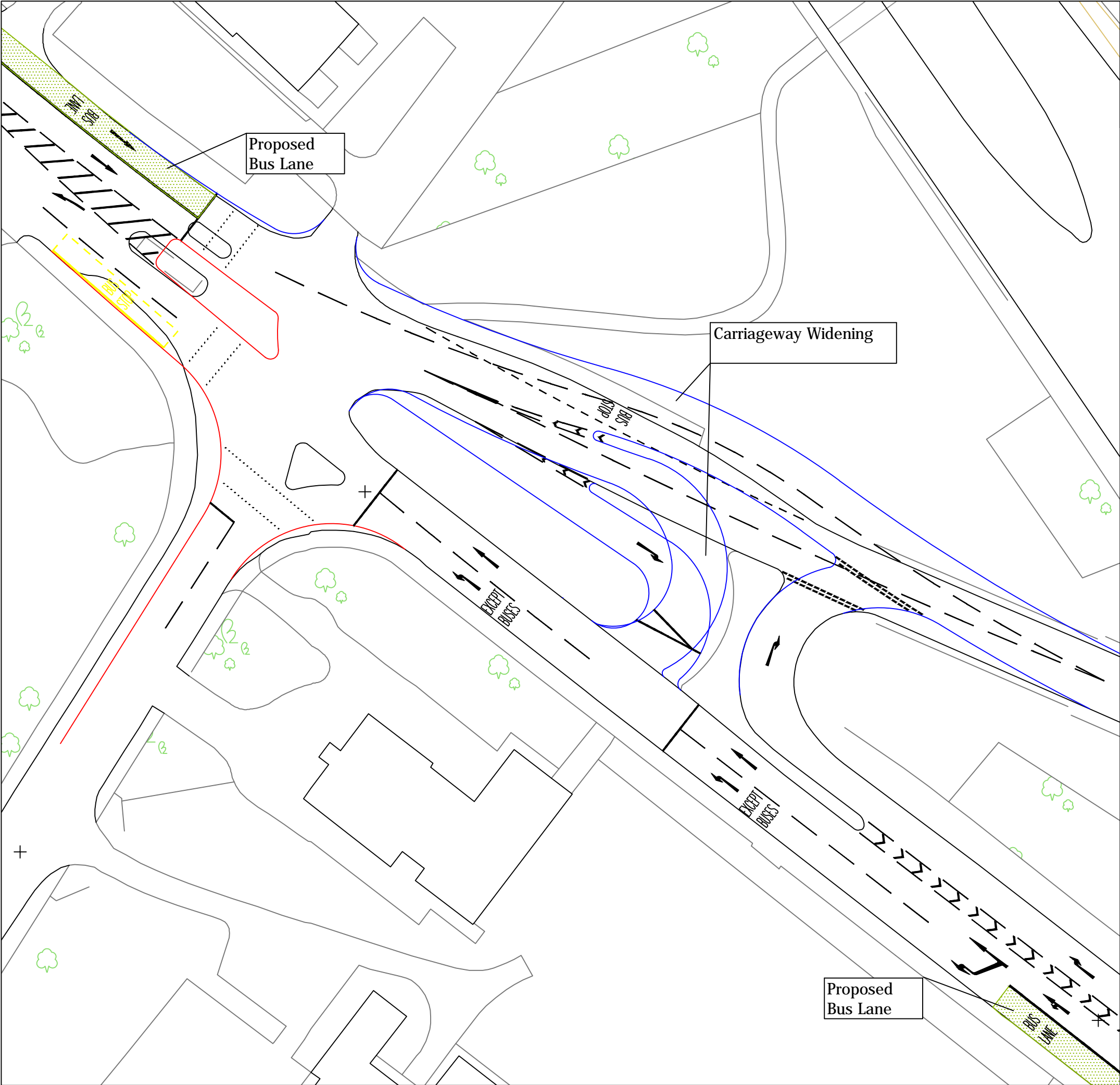
'KEEPING PEOPLE MOVING SAFELY'

ENVIRONMENTAL SERVICES DEPARTMENT

Director: Malcolm J. Cox MBA, BSc, C.Eng, MICE

BSQBN
Manchester Road-Raikes Lane
Package M2
Intervention M45

Status For info		
Date	February 2015	Drawn-by NJS
Scale	NTS	Checked by
		Independent check
Drawing Size	A3	CAD ref. N:/Highways/933050/45
Drawing No.	933050_M2_M45	Revision



© Crown copyright and database rights 2014 Ordnance Survey 0100022610.
Use of this data is subject to terms and conditions: You are granted a non-exclusive, royalty free, revocable licence solely to view the Licensed Data for non-commercial purposes for the period during which Transport for Greater Manchester makes it available; you are not permitted to copy, sub-license, distribute, sell or otherwise make available the Licensed Data to third parties in any form; and third party rights to enforce the terms of this licence shall be reserved to Ordnance Survey

REV	DESCRIPTION	BY	CHK	APP	DATE
-----	-------------	----	-----	-----	------

Transport for Greater Manchester

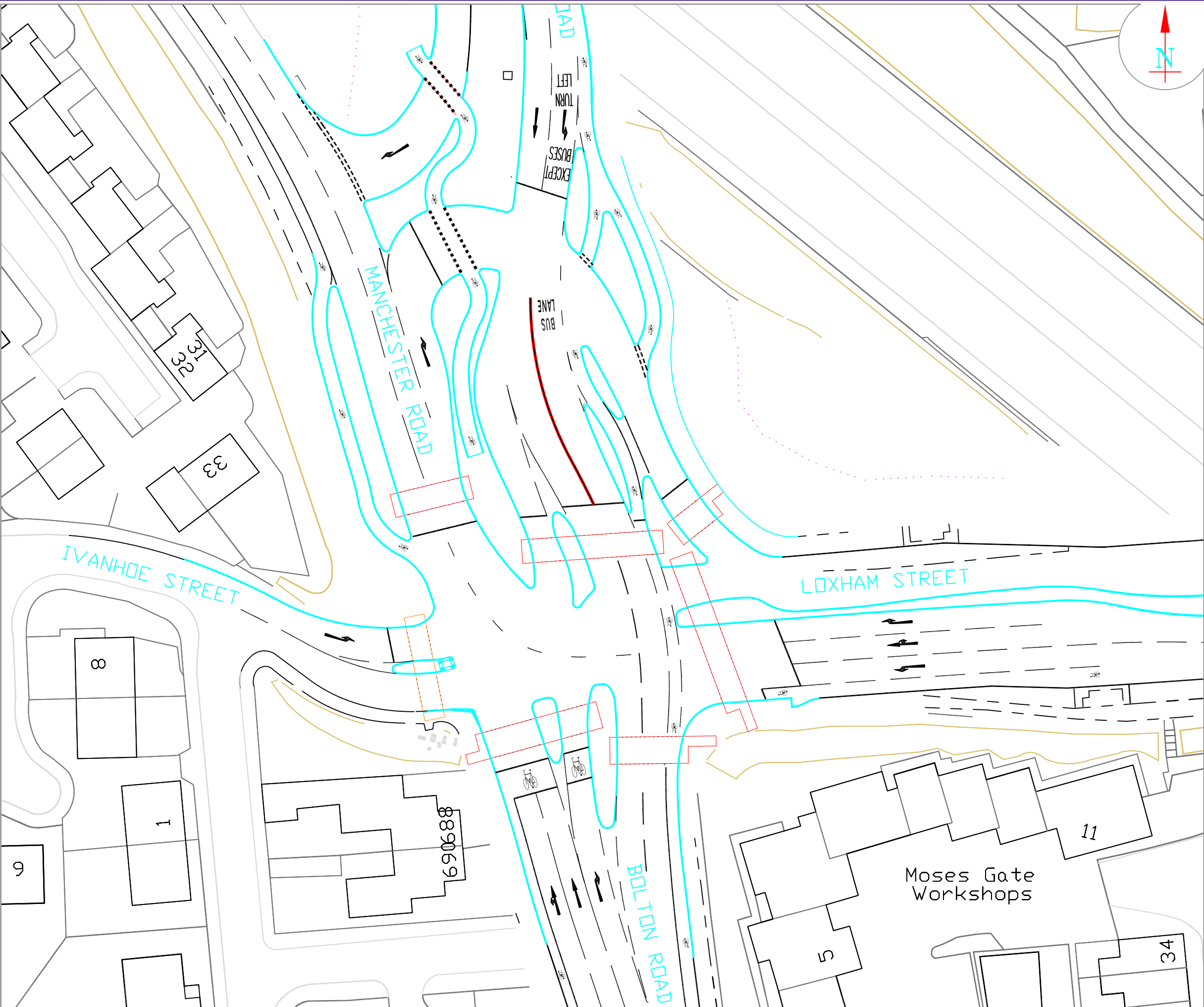
EXECUTIVE PARK
AVALON WAY
ANSTEY
LEICESTER
LE7 7GR
TEL: +44 (0)116 234 8000
FAX: +44 (0)116 234 8001
e-mail: leicester@wyg.com



Project:
Bolton Salford Quality Bus Network

Drawing Title:
Green Lane - Junction Improvement
Widening, Introduction of Bus Lane
Package: M3 (M60)

Scale @ 1:500	A3	Drawn AC	Date 6.1.15	Checked	Date	Approved	Date
Project No. A088970	Office 35	Type 18	Drawing No. SK23	Revision -			



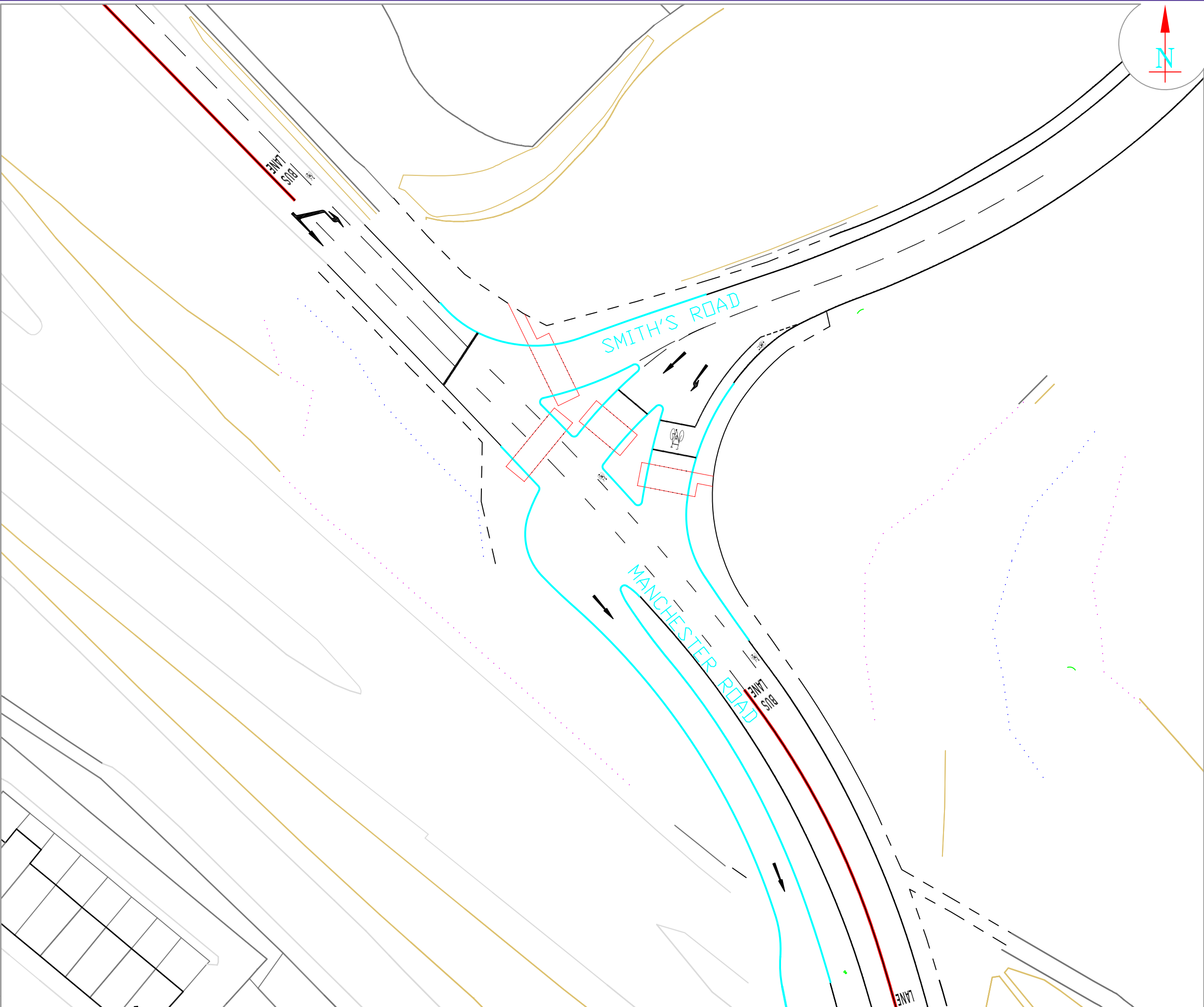
Staging Diagrams			
1			2
3			4

Scheme Reference A.6.2
1) New south bound bus lane on Manchester Rd
2) New full toucan facilities to benefit pedestrians and cyclists
3) New cycles lanes including segregated areas and Bus Stop bypass

REVISIONS		DATE	BY	APP
<div><div>SCALE</div><div>1:500</div><div><div><div>0.0</div><div>5</div><div>10</div><div>15</div><div>20</div><div>25</div><div>30</div></div><div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div></div></div></div>				



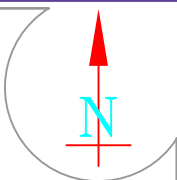
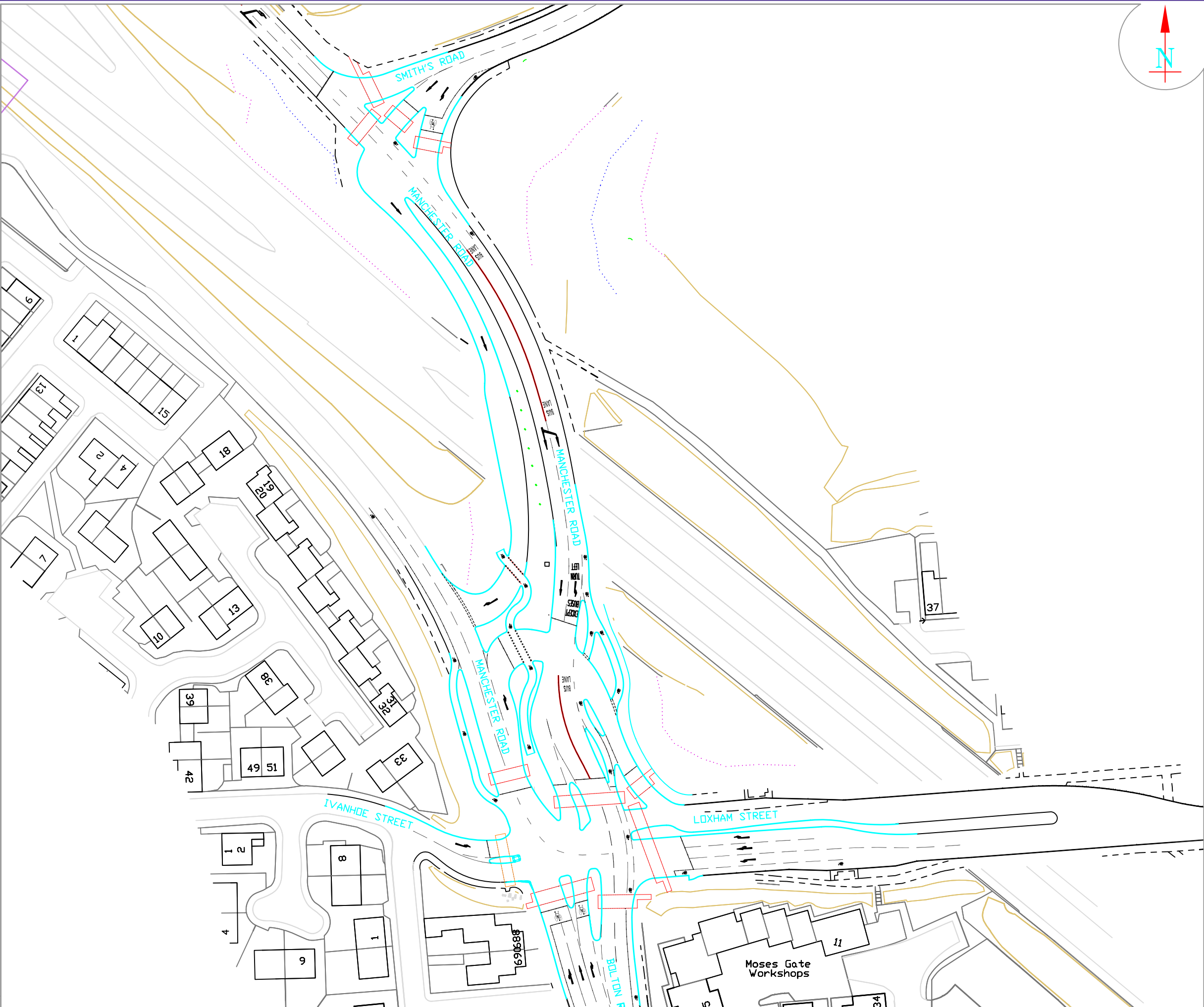
Transport for Greater Manchester
Urban Traffic Control Unit
Tel: 0161-247 3150
Fax: 0161-228 1530
email: gmuto@tfgm.com



Staging Diagrams			
1			2
3			4

- Scheme Reference A.6.2**
- 1) New south bound bus lane on Manchester Rd
 - 2) New full toucan facilities to benefit pedestrians and cyclists
 - 3) New cycles lanes including segregated areas and Bus Stop bypass

REVISIONS		DATE	BY	APP
<div>SCALE 1:500</div> <div><div><div>0.0</div><div>5</div><div>10</div><div>15</div><div>20</div><div>25</div><div>30</div></div><div><div></div><div></div><div></div><div></div><div></div><div></div><div></div></div><div>metres</div></div>				
Manchester Road / Smith's Rd Bolton (New)				
SUBDISTRICT				
OS_REF		STATUS	Draft	
DATE	11-02-15	DWG CHCKD BY	-	
DRAWN BY	RB	SITE CHCKD BY	-	
FILENAME	DevSig705_BSQBN_110215.dwg			
XREFS	Mcrrd WYG r2007.dwg Master OS.dwg			REV
DWG No.	A3 / 01 / Smith's / 02			-



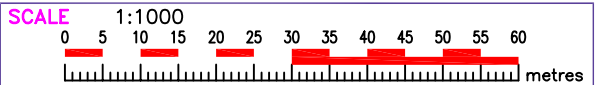
Staging Diagrams

1	2
3	4

Scheme Reference A.6.2

- 1) New south bound bus lane on Manchester Rd
- 2) New full toucan facilities to benefit pedestrians and cyclists
- 3) New cycles lanes including segregated areas and Bus Stop bypass

REVISIONS	DATE	BY	APP
-----------	------	----	-----

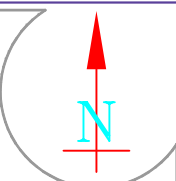
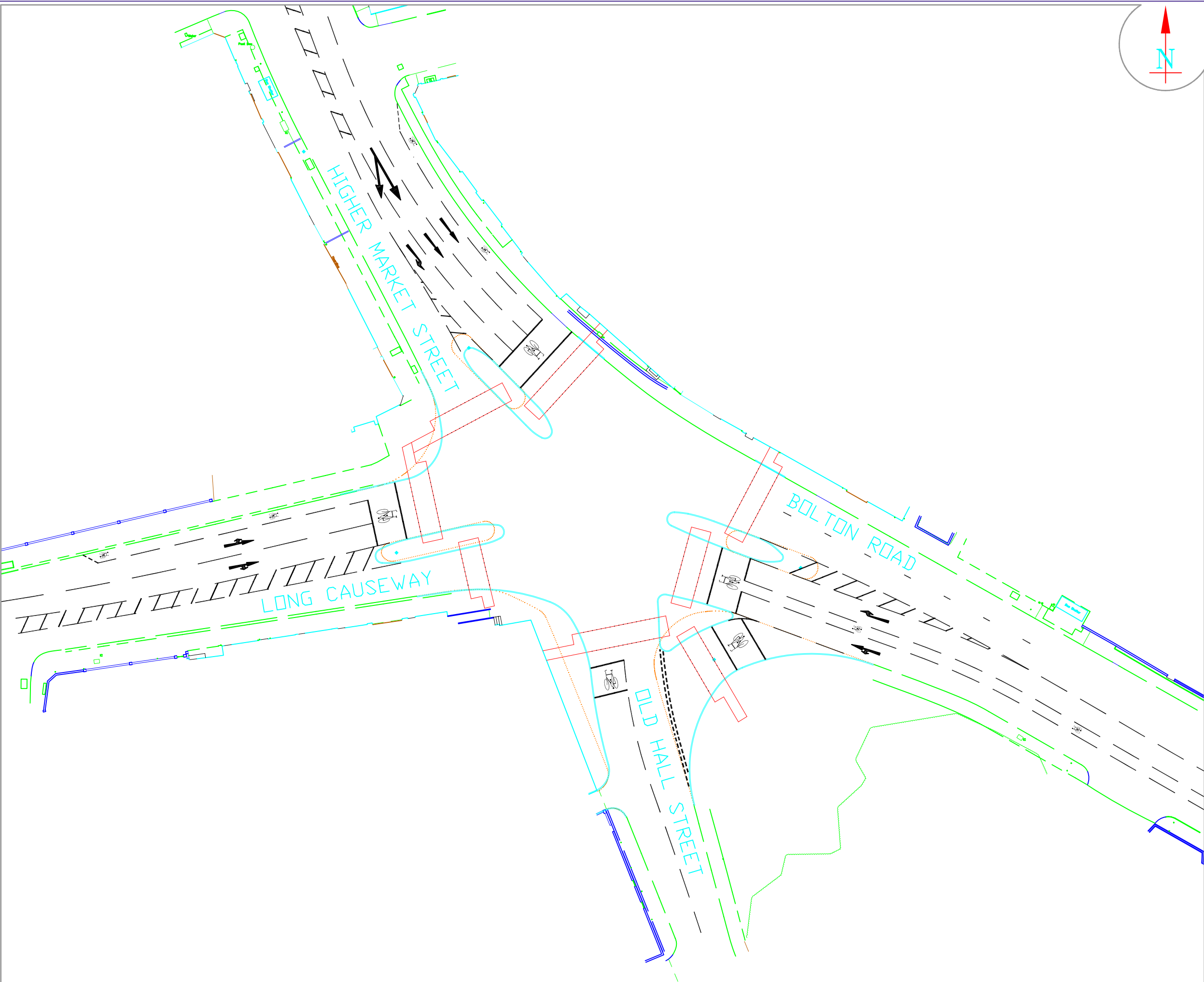


Manchester Road / Loxham St
Bolton (x705)

SUBDISTRICT			
OS_REF		STATUS	Draft
DATE	11-02-15	DWG CHCKD BY	-
DRAWN BY	RB	SITE CHCKD BY	-
FILENAME	DevSig705_BSQBN_110215.dwg		
XREFS	McrRd WYG r2007.dwg Master OS.dwg		REV
DWG No.	A3 / 01 / 705 / 01		-



Transport for Greater Manchester
Urban Traffic Control Unit
Tel: 0161-247 3150
Fax: 0161-228 1530
email: gmutc@tfgm.com

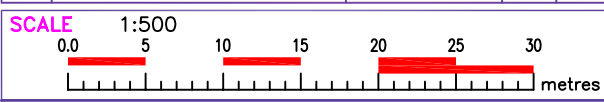


Staging Diagrams

1	2
3	4
5	6

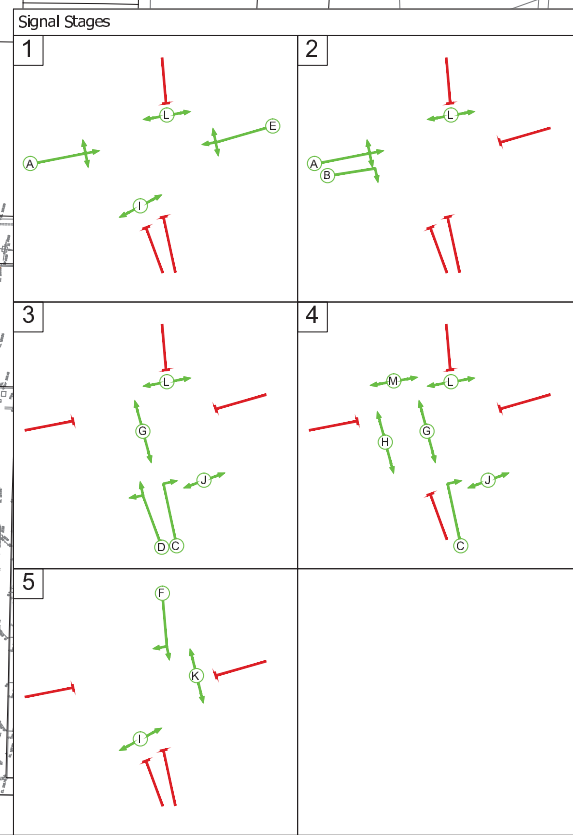
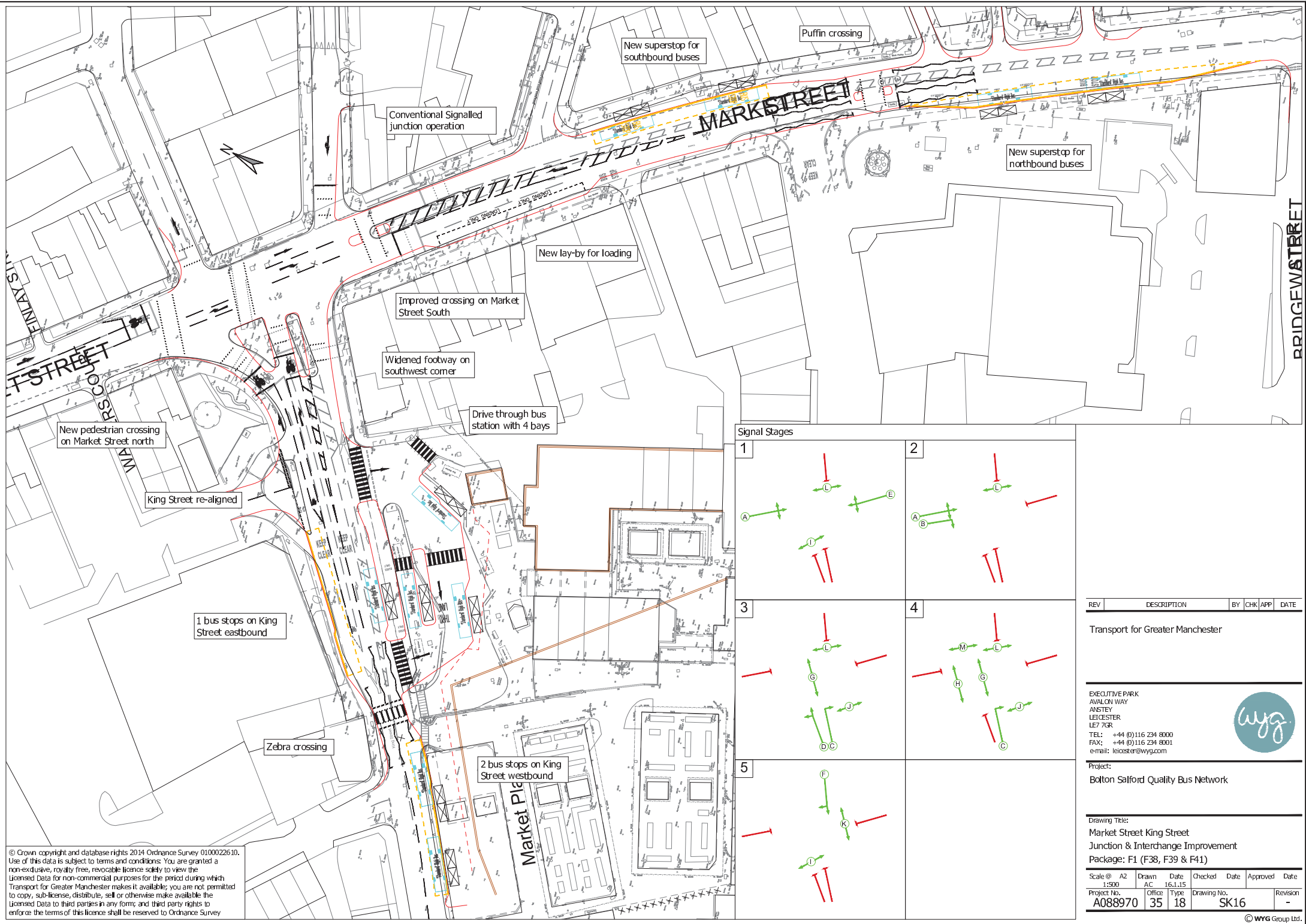
- Scheme Reference B.3.2**
- 1) Triangular island on Bolton Road removes need for full pedestrian stage
 - 2) Optimised crossings
 - 3) Crossings upgraded to current standards

REVISIONS	DATE	BY	APP
-----------	------	----	-----



Bolton Rd / Long Causeway
Bolton (606)

SUBDISTRICT			
OS_REF		STATUS	Proposed
DATE	11/02/15	DWG CHCKD BY	-
DRAWN BY	RT	SITE CHCKD BY	-
FILENAME			
XREFS			REV
DWG No.	A3 / 01 / 606 / 002		-



REV	DESCRIPTION	BY	CHK	APP	DATE
-----	-------------	----	-----	-----	------

Transport for Greater Manchester

EXECUTIVE PARK
AVALON WAY
AISTEY
LEICESTER
LE7 7GR
TEL: +44 (0)116 234 8000
FAX: +44 (0)116 234 8001
e-mail: leicester@wyg.com



Project:
Bolton Salford Quality Bus Network

Drawing Title:
Market Street King Street
Junction & Interchange Improvement
Package: F1 (F38, F39 & F41)

Scale @	A2	Drawn	Date	Checked	Date	Approved	Date
1:500		AC	16.1.15				
Project No.	Office	Type	Drawing No.	Revision			
A088970	35	18	SK16	-			

© Crown copyright and database rights 2014 Ordnance Survey 0100022610.
Use of this data is subject to terms and conditions: You are granted a non-exclusive, royalty free, revocable licence solely to view the Licensed Data for non-commercial purposes for the period during which Transport for Greater Manchester makes it available; you are not permitted to copy, sub-license, distribute, sell or otherwise make available the Licensed Data to third parties in any form; and third party rights to enforce the terms of this licence shall be reserved to Ordnance Survey