NEW CROSS PUBLIC REALM STRATEGY

FINAL DRAFT

AECOM

MANCHESTER CITY COUNCIL

Revision Schedule

Date of issue	Details	Author	Authorised by
28.11.16	Draft issue, Sections 1-3 only	Jacqueline Whitworth-Allan	Simon Dowse
09.05.17	Final draft issue, all sections	Jacqueline Whitworth-Allan	Simon Dowse
30.05.17	Minor client amends, all sections	Jane Ash	Simon Dowse
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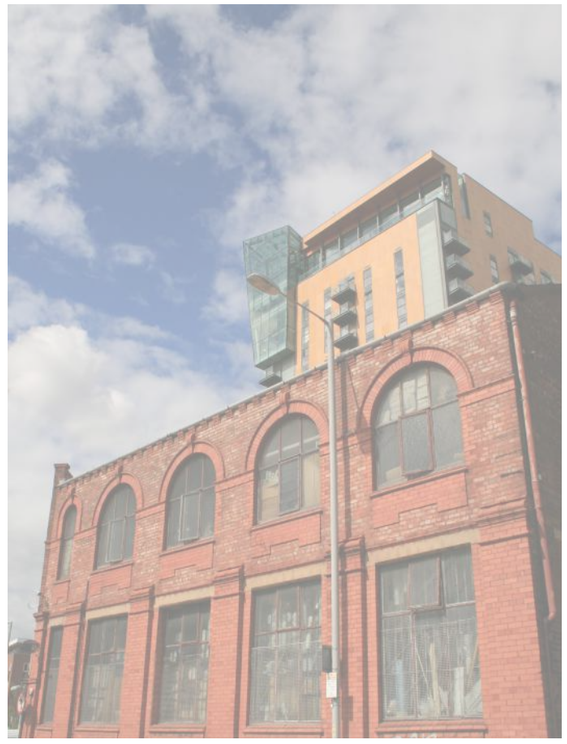
12.07.17	Minor amendments to text positioning	Isabelle de Garston	Jane Ash
14.07.17	Amendments to Addendum: Delivery Strategy	Isabelle de Garston	Jane Ash

Limitations



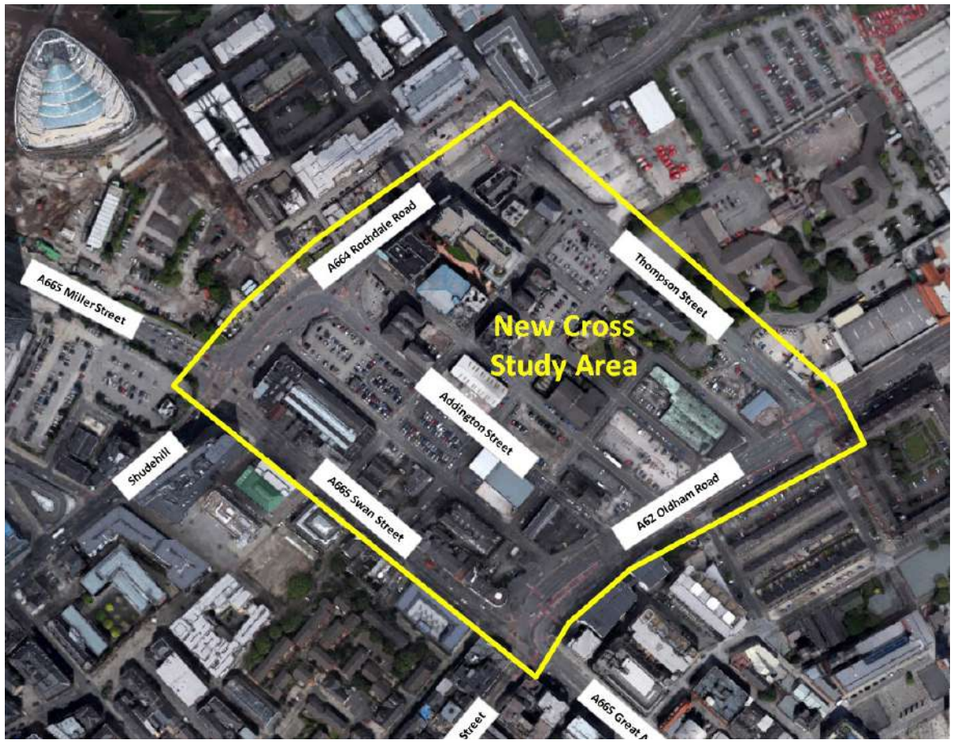


Figure 1 Study area

Purpose of the Report

This Public Realm Strategy has been prepared on behalf of Manchester City Council (MCC) in order to articulate a vision for the public realm within the New Cross study area which will enable the creation of a vibrant residential-led neighbourhood. In order to determine this vision, the following themes will be analysed in detail with a view to establishing a set of design principles and priorities which can be applied as and when funding becomes available:

- The definition of the streetscape and a potential hierarchy of streets;
- Pedestrian connectivity and movement;
- The setting of Listed Buildings;
- The function of new public open space;
- Traffic and movement;
- Car parking;
- Material specifications; and
- Soft landscaping, including tree planting and the creation of environmental buffers to mitigate views of and noise from traffic.

This strategy will complement and build upon the Neighbourhood Development Framework (NDF) document produced in July 2015. The NDF sets out the key objectives to guide the future development of New Cross, ensuring that opportunities for residential and commercial development are maximised and that development is brought forward in an appropriate manner, to create a new high quality, vibrant and distinctive development and supporting public realm.

This study has been devised as four consecutive sections, as listed below:

- Part One Analysis
- Part Two Development of a Vision
- Part Three Site Proposals
- Part Four Cost Reporting & Delivery Strategy

Study Area

The study area is located to the north eastern edge of Manchester City Centre, and is characterised by a compact street-grid of roads running northeast – southwest and northwest – southeast, bordered by major arterial vehicular routes of A62 Oldham Road, A664 Rochdale Road and A665 Swan Street and secondary routes comprising Thompson Street. This is shown in Figure 1.

The study area lies immediately adjacent to the regeneration priority areas of Northern Quarter, NOMA and Ancoats. As the boundary of the City Centre naturally extends outwards, the area has become a priority for establishing a series of development and urban design principles, based on a comprehensive masterplanning review of the area. At present, the area is characterised by several surface-level car parks on undeveloped land, primarily providing commuter-parking at this edge-of-city centre location.

Stakeholder Consultation

Key personnel from MCC from Strategic Development, Highways, Planning, Lighting and Street Cleansing have been consulted throughout the period of appointment. Feedback from meetings and workshops has been incorporated into the ideas underpinning the Public Realm Strategy.

PART ONE ANALYSIS

Context for Analysis Work

The NDF identifies the key issues that a public realm strategy should aim to address. These include:

1. The incorporation of mitigation measures to address issues of traffic noise and visual impact arising from the proximity of the Inner Relief Road.
2. The reinstatement on the historic grid pattern, a key heritage feature of the area, and the subsequent repair of the urban grain to create a sense of place and establish strong connections to adjoining districts.
3. The establishment of a clear hierarchy of routes, facilitated by best practice guidance. The following typologies have been generated:

- Road — Increased pavement width, no on-street parking, defined edges;
- Street A Vehicular access — Standard paving widths, no on-street parking, defined edges, 2 lane carriageway;
- Street B Pedestrian priority — Shared surface, on-street parking, less defined edges, single lane carriageway; and
- Street C Pedestrian only — No vehicles, public realm/amenity space, increased number of trees and street furniture.

4. The production of a highway management strategy to provide a suitable basis for achieving a more permeable street hierarchy for vehicles.
5. The creation of enhanced walking routes along key pedestrian lines to effectively connect the study area with surrounding neighbourhoods and establish a network of public realm spaces. It is considered that this should include improvements to the pedestrian environment along major roads such as Oldham Road and Rochdale Road and pedestrian crossing facilities.
6. The consideration of well-designed public amenity spaces, which should provide a community focus and high amenity value for residents, employees and visitors. The location of this space should add value to the wider public realm and street hierarchy.
7. To specifically improve the interface of the study area with the City Centre, along Swan Street, looking at widening the footpath and integrating tree planting in order to make the most of the south-facing environment.
8. The enhancement of Grade listed buildings and non-designated heritage assets within the study area with appropriately designed public realm requirements.
9. The integration of a new cycle route through the study area, along Cable Street, and the provision of cycle parking within the public realm.
10. The removal of superfluous street signage and clutter to improve the visual appearance of the study area.
11. The introduction of tree planting to improve the pedestrian environment, mitigate negative impacts emanating from the presence of vehicle traffic.

Baseline Information and Analysis

Baseline data was collated for the study area including a review of relevant documents such as the Manchester Streetscape Manual, Manual for Streets, relevant British Standards and utility information. A site survey was undertaken to establish the condition of the streetscape and review of traffic movements. This information has enabled an informed analysis to be undertaken as detailed in the following section.

Desktop Analysis: Manchester Streetscape Manual

Manchester City Council has devised a Manchester Streetscape Manual (MSM) to supplement and update the Manual for Streets (MfS) design guidance document. Volume 1 informs the design and management of new lightly trafficked residential streets. It challenges the existing movement focus of streets, assigning a higher priority to pedestrians and emphasisig the importance of streets as 'places.'

Overleaf is a summary of the key chapters of the document, relevant to the study area:

'Manchester has adopted a different approach to MfS in the way street space is allocated, with home zones and shared-surface streets replaced by the concept of Pedestrian Priority Streets.'

Manchester Streetscape Manual (Vol 1 - New Residential Streets), June 2009, p.16

6.0 Street user's needs

Pedestrians

The needs of all pedestrians and disabled people should be considered before all other modes. It is imperative that the influence of motorised traffic is reduced and that the pedestrian environment is made as pleasant and as convenient as possible.

Streets should be designed to reduce traffic speeds, with both pedestrian movement and place function of the street taking precedence over the movement of the motor vehicle.

Creating a more functional pedestrian network with well-defined and easy-to-follow routes can encourage more people to walk and, through increased usage, can help provide a better environment, reduce crime and the fear of crime.

Cyclists

The underpinning principle, within MfS, is that cyclists should be accommodated on the carriageway. New residential streets should be designed to encourage lower traffic speeds and that there should be no requirement, in most cases, for dedicated cycle lanes on the street.

Service vehicles

Where local amenities are proposed, loading facilities for servicing should be provided.

Since the refuse collection vehicle is often the largest vehicle to regularly use a street, the size and manoeuvring of this vehicle will often govern the geometry of the street.

7.0 Street geometry

Pedestrian Priority Streets

The ethos of these streets is that they refocus the importance of place and ensure the needs of all pedestrians are considered first.

The footway should be free from obstructions (min. 2 metres) and bounded by a kerb upstand, providing a guidance feature for visually impaired and other pedestrians to safely negotiate the street. The standard kerb upstand is 80mm.

Alternative surfacing materials and street trees can be used to break down large areas of bitmac, underpinning the 'place' function of streets.

The following elements are required:

- Street layouts should discourage speeds greater than 10mph. This should be enforced by well-designed features causing horizontal deflection;
- Gateway features should mark the limits of the area and inform drivers that they should give priority to other street users.

Traffic calming

Designers should use traffic-calming features to reduce speeds; they should be integrated with the design of the street and enhance the streetscene.

Turning areas

MfS and Guide to Development in Manchester promote connected street networks, providing direct and convenient links for pedestrians and cyclists. This will largely eliminate the need for drivers to undertake three-point turns.

8.0 Parking

Car parking

Car Parking: What Works Where (2006, English Partnerships) outlines three types of parking and in Manchester each one is likely to serve best in a particular situation:

- On-plot - generally used for lower density developments;
- Off-plot - generally used for higher density developments; and
- On-street - for short stay, visitor and unallocated parking.

So that parking does not dominate the appearance of any development, a combination of on-plot and off-plot, together with some limited on-street is regarded as the best approach.

9.0 Traffic signs and marking

MfS recommends the avoidance of clutter, while also considering the use of non-statutory signs to convey a sense of place. All the principles raised apply, with the reduction of clutter on the pavement and the use of existing poles and columns for signs especially encouraged in Manchester. Sign supports should also not conflict with pedestrian movement on footways.

10.0 Paving, street furniture and lighting

Paving materials

Paving materials and their layout and arrangement can enrich the streetscene and can be particularly effective at thresholds to new developments and at street corners, where the public realm is most visible.

Manchester City Council has a recognised selection of paving materials and a limited area of the street network of new residential developments surfaced in these paving materials will be considered for adoption:

- Imprinted asphalt / coloured asphalt;
- Concrete block paving;
- Granite aggregate sett paving;
- Tumbled concrete sett paving.

The selection and arrangement of these materials should respond to the local context, particularly the design of the adjacent building form and boundary details.

Conservation areas and listed buildings

Conservation areas and listed buildings have special status in planning terms for their distinctive character and architectural quality.

The following treatment will be expected within the streetscene:

- Footway: Yorkstone (Scoutmoor or Greenmoor Rustic);
- Kerb: SIlver grey granite, fine picked finish.

Street furniture

Street furniture should be designed as a family of elements and grouped and positioned along the same alignment and out of the main pedestrian circulation routes.

Any street furniture should enhance the streetscene, so the avoidance of randomly placed furniture is paramount.

Street lighting

The requirements for street lighting are specified within the Manchester City Council Development Standard Specification Street Lighting Works (currently being updated).

On new residential streets, standard columns (heights: 5, 6 or 8 metres) with a galvanised finish are, in most instances, installed at the back of the footway.

Planting

Street trees planted within the footway, should be included within new residential streets, subject to compliance with the requirements listed below:

- Semi-mature trees of a min. girth size of 20-25cms will be preferred;
- Trees should be rootballed or containerised;
- To enable natural surveillance of the street, trees should have a 2m clear stem height;
- Species should be appropriate for location, contribute to character and be appropriate to the width of street and scale of built form.

Trees should not cause an obstruction to pedestrians and under DFA2, there would be a clear distance of 1.8m.

New Cross 'will accommodate a range and mix of residential accommodation in a **high quality** and **well managed** environment that will ensure the emergence of **vibrant new neighbourhoods of choice**'

New Cross Neighbourhood Development Framework, July 2015, p.53.

Site Survey and Analysis

The purpose of the site analysis work is:

- To better understand what the study area comprises, its condition and the factors affecting how it operates, in order to generate a series of potential masterplan proposals which will align it to its intended long term vision;
- To highlight a baseline on which the cost consultant can quantify costings for identified masterplan proposals; and
- To provide an evidence base or toolkit to the client, subject to a development pipeline and requiring an adaptable approach.

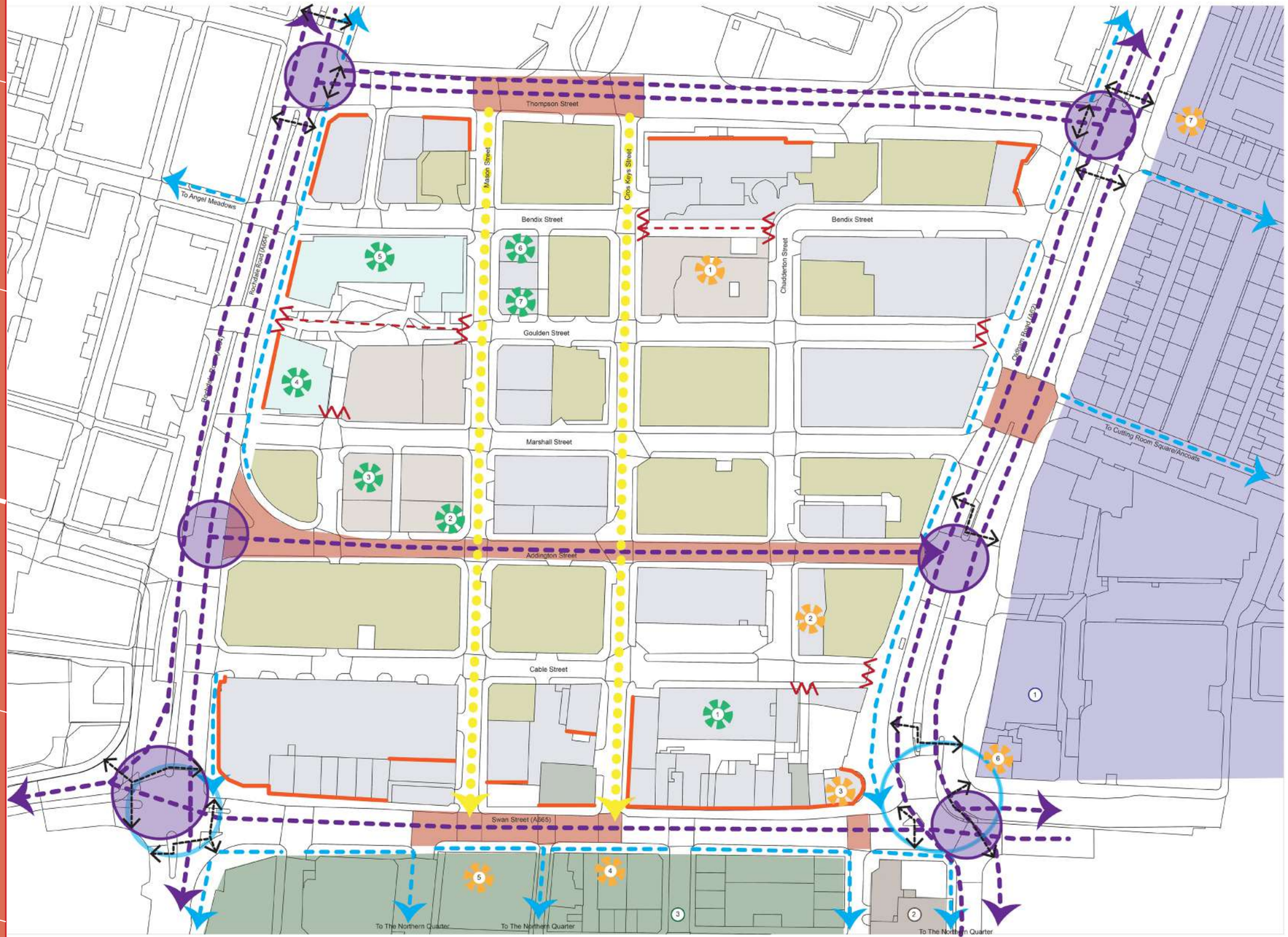
A substantial amount of analysis work is evident within the NDF. An overview of this Site Analysis work is illustrated in Figure 2, and includes:

- Key vehicular and pedestrian routes;
- Key vehicular and pedestrian nodes, which occur at the intersections of those routes;
- The location of existing pedestrian crossing points;
- Key views and vistas along Cross Keys Street;
- Barriers to pedestrian and vehicular movement;
- The location of active frontages;
- Existing land use;
- Listed buildings;
- Non-designated built assets; and
- The location of Conservation Areas in the vicinity of the study area.

Further site survey and analysis has been undertaken throughout August and September 2016 by Landscape Architects, Civil Engineers and Transport Engineers to update the analysis and develop the palette of materials to enable costings to be ultimately produced.

The analysis diagram in Figure 2 includes a number of updates following the commencement of the site analysis work undertaken as part of this commission. These include:

- Highlighting Mason Street as having a key view and vista towards the Mackie Mayor building located on Swan Street;
- The inclusion of a barrier to pedestrian movement at the junction of Swan Street and Tib Street which is considered to be a popular desire line; and
- Illustrating a key pedestrian route connecting the study area to the Northern Quarter along Eagle Street.



KEY:

- KEY VEHICULAR ROUTES
- KEY PEDESTRIAN ROUTES
- KEY VEHICULAR NODES
- KEY PEDESTRIAN NODES
- EXISITING PEDESTRIAN CROSSING
- KEY VIEWS/VISTAS
- BARRIERS TO PEDESTRIAN MOVEMENT
- BARRIERS TO VEHICULAR MOVEMENT
- ACTIVE FRONTAGE

EXISITING LAND USE/FUNCTIONS:

- RESIDENTIAL
- FOOD/DRINK
- INDUSTRIAL/COMMERCIAL
- CARPARK SURFACE
- PREVIOUSLY DEVELOPED/ VACANT LAND

LISTED BUILDINGS

1. FORMER POLICE & AMBULANCE STATION
2. 8 CABLES STREET
3. FORMER MIDLANDS BANK
4. 29 SWAN STREET
5. MACKIE MAYOR
6. THE CROWN AND KETTLE PUB
7. VICTORIA SQUARE

NON-DESIGNATED BUILT ASSETS

1. SWAN BUILDING
2. JOHN SWIFT BUILDING
3. 53 HATTER STREET
4. SKYLINE CENTRAL
5. 49 GOULDEN STREET
6. 58 MASON STREET
7. 36 MASON STREET

CONSERVATION AREAS

1. ANCOATS CONSERVATION AREA
2. STEVENSON SQUARE CONSERVATION AREA
3. SMITHFIELD CONSERVATION AREA

Figure 2 Site analysis diagram

Site Furniture

A key issue observed within the NDF is the removal of superfluous street signage and clutter to improve the visual appearance of the study area. In order to better understand how site furniture currently impacts the study area and the potential for removal, an audit was undertaken to identify the different types of site furniture, their quantity and location. This is visualised in Figure 3.

Locational signage

Highway lighting column

Steel fencing

Mesh fencing and traffic management signs

These features include:

- Traffic lights: These are located at the entrance to and egress onto the IRR on Addington Street, and on the A roads that enclose the study area. Their positions are critical to traffic management and there is no opportunity for removal.

- Existing highway lighting columns: The street lighting within the area is standard highway lighting columns with fittings. These are to be upgraded to LED luminaires as part of a city centre wide replacement strategy.

- Traffic management signage: Due to the presence of one-way vehicular routes immediately adjacent to the Inner Relief Road (IRR) on Addington Street and Swan Street, there is a high volume of traffic management signage. These comprise no entry signs and one way direction signs. There would be potential for removal if traffic management no longer required them.

- Traffic way finding signage: These signs provide road users with way finding information and are generally located along main vehicular routes. They are large and often supported by two posts and obstruct pedestrian flow.

- Parking signage:

  A. There are 29 signs relating to the marketing and operation of car park areas within the area.
  B. There are 9 signs relating to the study area operating as a Controlled Parking Zone.
  C. On street parking is allocated on streets throughout the study area. Signage indicates the terms of the parking and is located adjacent to parking bays. This signage would be required adjacent to retained/future parking bays. There are 29 signs in total.

- Bollard: Vehicular access onto A62 Oldham Road from Goulden Street and Cable Street is prevented, and poor quality concrete bollards provide a physical barrier to access. The pedestrianised footway to the north-east of the former Ambulance station also has bollards at both ends to prevent vehicular access. The perimeter of an area of surface car parking on Goulden Street has small concrete post bollards and a missing rail at its perimeter. Small concrete posts are also installed along the A664 Rochdale Road boundary to a surface area car park on Marshall Street. These would no longer be required as the surface car parking areas become developed.

- Timber fencing: Timber post and rail fencing is located at the perimeter of some surface car parking in the study area. These would no longer be required as the plots become developed.

- Steel fencing/barrier: There are commercial properties located throughout the study area, although predominantly along main peripheral routes. Each property defends and secures its footprint through a range of metal fencing types (weldmesh fencing, vertical bar, post and wire) . A section of footway along A664 Rochdale Road is also secured by a standard highway barrier.

- Signage hoarding: There is a proliferation of large scale advertising hoardings located throughout the area, which reflects the amount of undeveloped land.

- Litter bins: The only bins present within the study area are located on the peripheral, main routes of A62 Oldham Street and A665 Swan Street. They are a standard MCC branded bin.

KEY:

- TRAFFIC LIGHTS
- STANDARD HIGHWAY LIGHTING COLUMNS
- TRAFFIC MANAGEMENT SIGNAGE
- TRAFFIC WAY FINDING SIGNAGE
- PARKING SIGNAGE A: CAR PARK SIGNAGE
- PARKING SIGNAGE B: CONTROLLED PARKING ZONE
- PARKING SIGNAGE C: RESTRICTIONS WITHIN BAYS
- BOLLARD
- TIMBER FENCING
- STEEL FENCING / BARRIER
- SIGNAGE HOARDING
- BIN

Figure 3 Site furniture audit diagram

Street Width

The existing streets have been measured from back of footpath to back of footpath in order to determine the existing street hierarchy, based on dimensional values. There is no aspiration to realign the existing kerbline as part of the masterplan proposals, due to the greater desire to retain the historic grid layout. Therefore, an analysis of the existing street width will provide an evidential basis for what is achievable as part of a proposed street hierarchy.

Pedestrian-only footpath

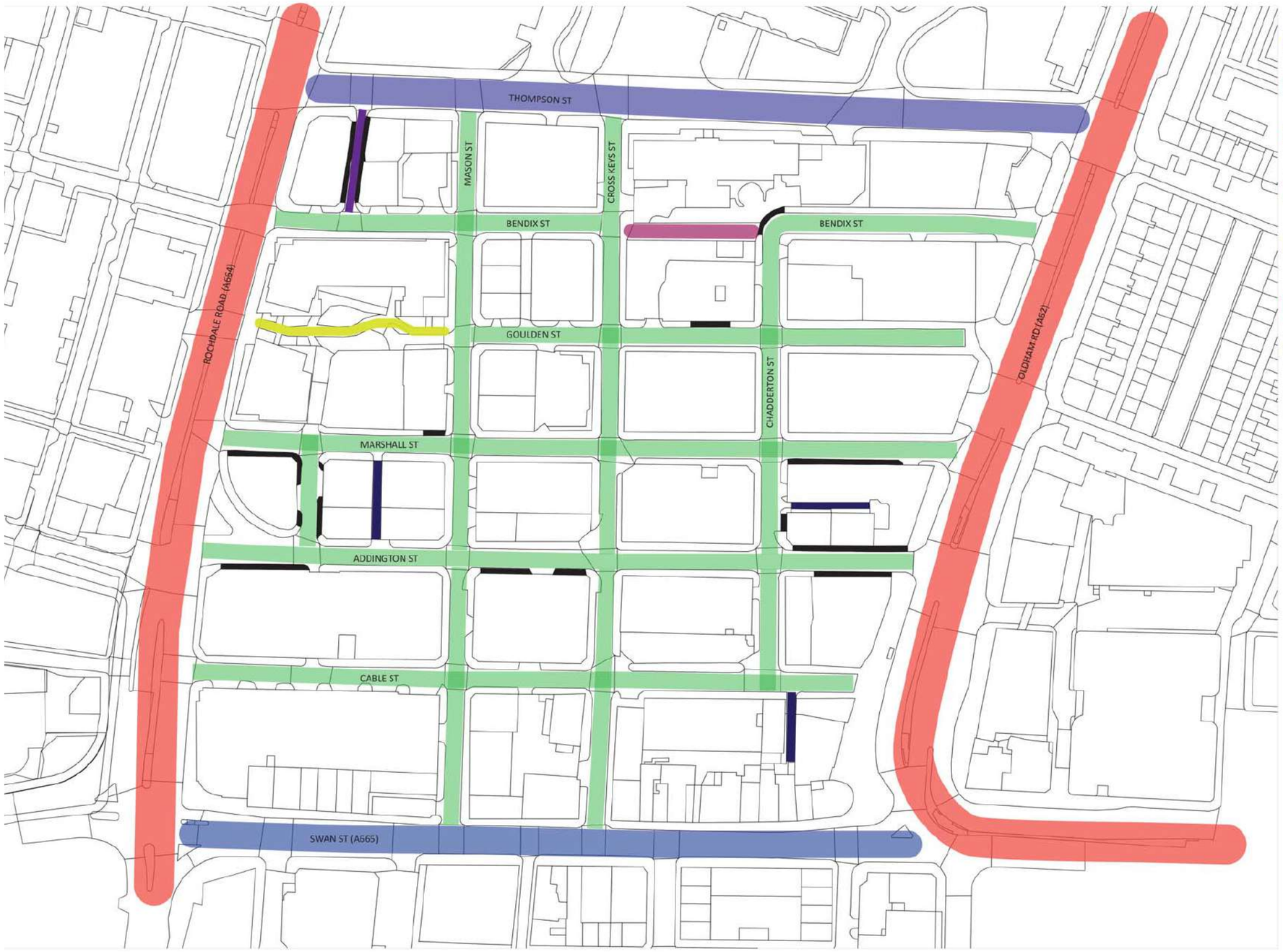
Standard street (Mason Street)

Dual carriageway (A62 Oldham Road)

Alley

There are seven street types, and these are highlighted in Figure 4:

- Enclosed footpath: This type can be characterised by a singular meandering pedestrian footpath through the Skyline development.
- Pedestrian Only footpath: A short section of Bendix Street adjacent to the ambulance station has been pedestrianised whilst at the same time reducing the width of the route and increasing the footprint of the development plot to the north-east to the detriment of the historic grid layout. It is generally 5.9 – 6.4m wide.
- Narrow Street: This uncommon street type has a minimum road carriageway width of 2.9m to allow two-way traffic. Footpaths on both sides of the carriageway are a minimum of 1.4m.
- Standard Street: The majority of the streets within the study area fall into this type. The distance from back of footpath to back of footpath is between 10.7 and 12.25m. The maximum road carriageway width is 7m and the minimum of 4.5m occurs where build outs have been installed adjacent to the IRR on Addington Street. This width of carriageway enables on-street parking on one side of the route, except Addington Street where unobstructed two lane traffic is required. Footpath widths vary from between 1.4m to 3.5m. MfS advises that a 1.8m unobstructed width of footpath, whilst MSM increases this to 2.0m. Street widths below 2.0m have been highlighted on the drawing. Future adjacent development plots should aim to increase the width of footpaths in these areas to the minimum standard.
- Wide Street: The wider carriageways of 10.7 to 11.8m are located on Thompson Street and A665 Swan Street. On-street parking is currently available on Thompson Street only.
- Dual Carriageway: A664 Rochdale Road and A62 Oldham Road are four lane dual carriageways. On-street parking is not available on these routes.
- Alley: There are numerous alleys throughout the study area located in close proximity to existing brick built development. These routes are 3.5 to 3.7m wide without footpath access. They are particularly interesting spaces from a heritage viewpoint, as the cobbled stone surface and granite kerbs reflect the materials that would have once been characteristic of the whole study area.



KEY:

ENCLOSED FOOTPATH
MEANDERING ROUTE, ACCESSIBLE DURING DAYLIGHT HOURS.

PEDESTRIAN ONLY FOOTPATH
5.9 - 6.4M WIDTH.

NARROW STREET
5.8 - 5.9M WIDTH, CARRIAGEWAY WIDTH 2.9 - 3.2M WIDTH
NO PARKING. KERBS.

STANDARD STREET
10.7 - 12.25M WIDTH, CARRIAGEWAY WIDTH 4.5 - 7M WIDTH
ON-STREET PARKING (EXCEPT ADDINGTON ST). KERBS.

WIDE STREET
18.6 - 19.1M WIDTH, CARRIAGEWAY WIDTH 10.7 - 11.8M WIDTH.
ON-STREET PARKING (THOMPSON ST ONLY). KERBS.

DUAL CARRIAGEWAY
NO PARKING. KERBS.

ALLEY
3.5 - 3.75M WIDE ALLEY FOR BUILDING ACCESS AND
DELIVERIES. COBBLED STONE SURFACE WITH GRANITE KERBS.

EXISTING FOOTPATHS FALLING BENEATH THE
MINIMUM FOOTPATH WIDTH STANDARD OF 2.0M
AS ESTABLISHED WITHIN THE MANCHESTER
STREETSCAPE MANUAL

TO BE READ IN CONJUNCTION WITH
STREET WIDTH CHARACTER SHEET

Figure 4 Street width diagram

Footpath condition survey

All of the footways and carriageways within the study area are adopted by Manchester City Council (MCC). The predominant surface material is hot rolled ashpalt (HRA), with precast concrete kerbs to define the carriageway. Other footpath materials within the study area are concrete flag paving, concrete tactile paving and areas of poured concrete.

A detailed visual inspection (DVI) of the footways and carriageways has been undertaken in order to understand the quality and condition of the existing surface, identify whether it is in need of remediation or repair, and the level of repair required to bring it up to a standard commensurate with a new vibrant residential neighbourhood.

The DVI is a walked survey, and is typically targeted at lengths already identified as defective and potentially in need of treatment. The defects collected for DVI are generally defined to a closer level of detail than other visual surveys. DVI is used when more detailed information is required to propose and validate treatment decisions. DVI can also be used on a cyclical basis for parts of the network where a more detailed routine visual assessment is required or where driven surveys are not possible. This type of inspection is commonly used by the local authorities to assess the condition of their road network.

The following process was undertaken:

1. Identify and record individual distress types;
2. Estimate and record the severity, frequency and extent of distress;
3. Investigate the nature of distress propagation and pavement failure;
4. Investigate the characteristics of the surrounding environment; and
5. Collect photographic evidence of distress propagation.

The observed defects were systematically recorded according to their type, severity, frequency and extents. They were then classified according to their failure mechanism. Photographic evidence of the distress surveyed on site was captured and referenced in the appropriate field books. The field photographs should provide sufficient appreciation of the pavement conditions observed on site. Photographic evidence was used in the analysis to support the findings and illustrate the visual condition of the pavement.

The details of this report are provided in full in Appendix 3.1, with the key findings described as follows:

HRA surfacing

The condition of pavements varied across the surveyed area depending on the volume of traffic and road geometry. Throughout the study area, utility reinstatements (i.e. channel strips and localised patching) has been a major factor accelerating pavement deterioration and creating uncomfortable ride conditions. Although, generally, reinstatements have been carried out to a satisfactory quality, the density and extent of reinstatements in the carriageway have significantly changed the original road profile and ride quality. The pedestrian walkways in particular have been affected by utility reinstatement works.

The visual survey verified that roadways surrounding car parks, with the exception to the aforementioned localised cracking and spalling along utility reinstatements, were in acceptable condition. The majority of defects on flexible pavements were observed in the wearing course, such as minor raveling, potholing, settlement, spalling surrounding utilities, reinstatements and construction joint spalling. Structural defects (such as cracking, settlement and rutting) related to pavement foundation or base layers were observed surrounding drainage gullies.

Ponding of rainwater and wet patching suggested that problems with drainage could also exacerbate the durability of pavements. The survey identified a number of fully blocked roadside gullies that could benefit from clearing and rodding.

Concrete paving

The public realm to the Skyline development along Rochdale Road is surfaced with concrete paving, in line with the MSM. Its visual aesthetic provides no sense of place or connectivity to the built vernacular of the study area. Although it has been laid recently, it is in poor condition with damage and cracking to some areas.

The public realm along Cable Street has small sections of pavement to enable ease of access into an existing business. These small sections of pavement have been infilled with poured concrete.

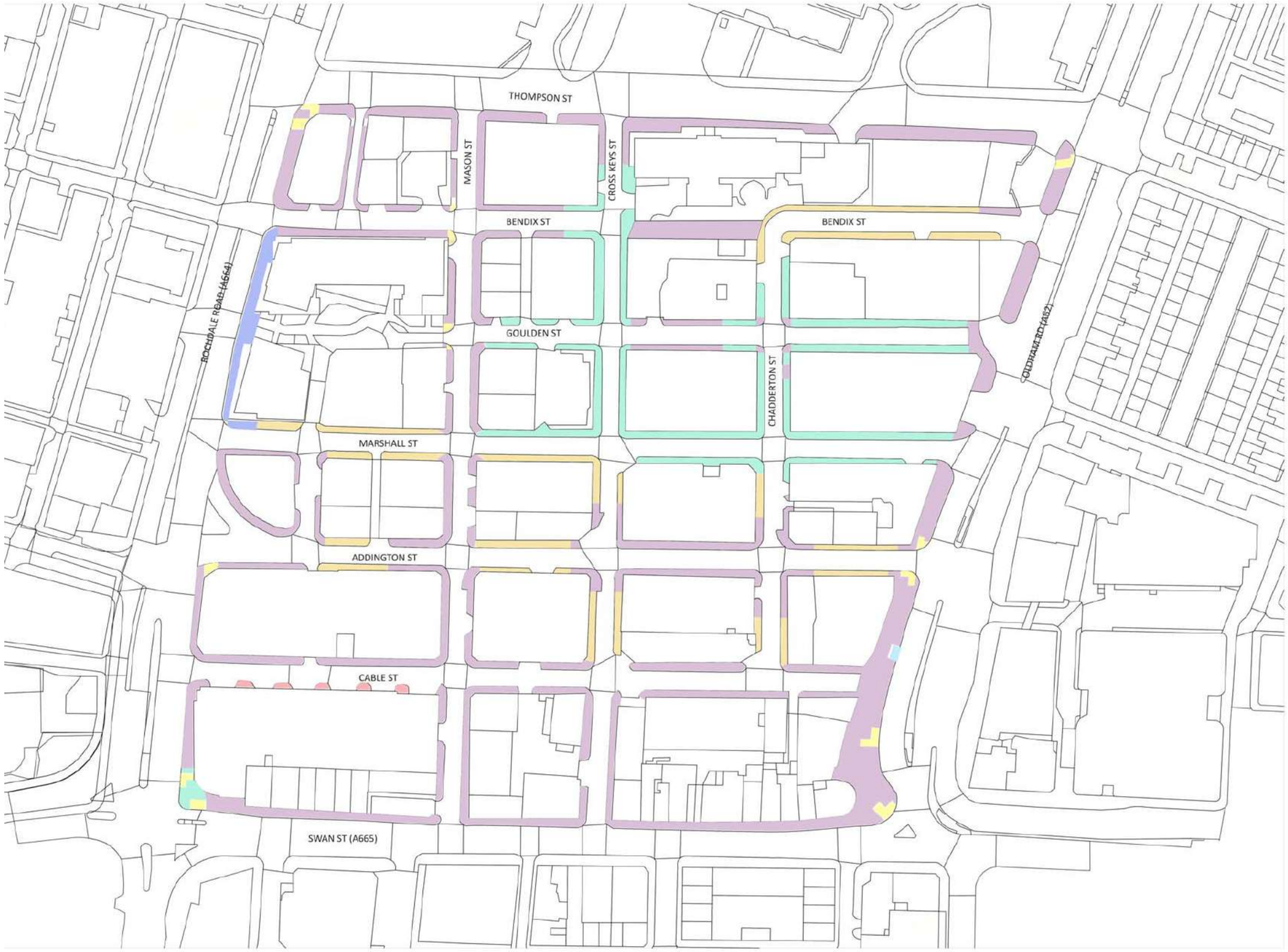
Concrete tactile paving

The tactile paving demarcating controlled crossing points on major peripheral roads are generally in good condition. There is a general absence of tactile paving at uncontrolled junctions within the study area. Where there is concrete blister paving - associated with new residential developments such as the Skyline - it is in poor conditions due to vehicular overrun.

Concrete kerbs

Kerb heights generally do not conform to Manchester City Council standards between 80-125mm upstand within the MSM, likely due to vehicular overrun at junctions and layers of resurfacing of the carriageway. There is widespread damage to kerbs at locations adjacent to on-plot car parking areas and at junctions due to vehicular overrun.

Photographs illustrating the types and condition of footpath condition are provided on p.18 and 19.



KEY:

POOR QUALITY TARMAC SURFACE
FIRST PRIORITY: FULL REMEDIATION

AVERAGE QUALITY TARMAC
SECOND PRIORITY: SURFACE REMEDIATION

RECENTLY RESURFACED TARMAC SURFACE
THIRD PRIORITY: MINOR REMEDIATION

CONCRETE TACTILE PAVING
CONTROLLED CROSSINGS GOOD QUALITY
UNCONTROLLED CROSSINGS SUBJECT TO CRACKING & GENERALLY ABSENT. REQUIRES INLCUSION.

POOR AESTHETIC TO CONCRETE PAVING
SOURCE AN ALTERNATIVE HIGHER QUALITY PRODUCT FOR USE WITH NEW DEVELOPMENT OUTSIDE OF SETTING OF LISTED BUILDING

POURED CONCRETE
REALIGNMENT OF KERBLINE AND FULL FOOTPATH RECONSTRUCTION TO TIE IN WITH ADJACENT TARMAC SURFACE - TO BE UNDERTAKEN AS PLOT IS DEVELOPED.

BUS STOP PAVING
TO BE RETAINED AS EXISTING

TO BE READ IN CONJUNCTION WITH PAVEMENT CONDITION SURVEY AND EVALUATION REPORT

Figure 5 Footpath condition survey diagram

THOMPSON STREET


MASON STREET


ROCHDALE ROAD


ADDINGTON STREET

Poor quality tarmac surface

First priority for remediation

- Widespread trenching of services evident;
- Crazing due to water ingress;
- Different specifications of surface course aggregates and colours;
- Sunken and cracked kerbs;
- Visible concrete around base of sign posts;
- Weeds present at interface with plot/ building edge.


MARSHALL STREET

HATTER STREET

Average quality tarmac surface

Second priority for remediation

- Some areas of tarmac infill evident;
- Some remnants of cellar threshold stonework present in footway;
- Uneven surface and areas for water in-gress/crazing starting to form;
- Sunken and cracked kerbs;
- Weeds present at interface with plot/ building edge/manhole covers.

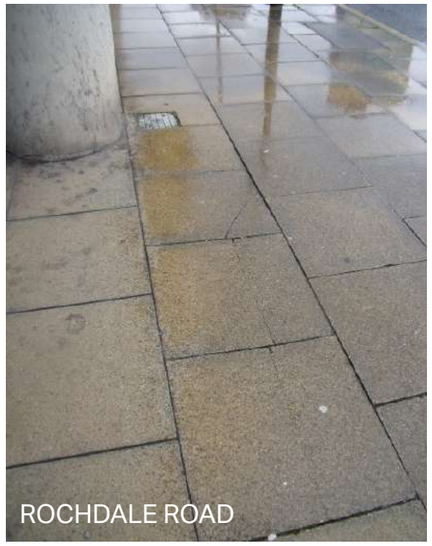

CROSS KEYS STREET


GOULDEN STREET

Recently resurfaced tarmac surface

Third priority for remediation

- Sunken and cracked kerbs;
- Wavy edge to tarmac surface at junction with kerbline;
- Weeds present at interface with plot/ building edge.


ROCHDALE ROAD


MASON STREET


CABLE STREET

Poor aesthetic quality of concrete paving

- No sense of place to the concrete paving to Skyline development frontage onto Rochdale Road;
- Damage/cracking to concrete paving in some areas;
- Poured concrete infill to pavement areas along Cable Street out of sync with needs of residential neighbourhood.


ROCHDALE ROAD


MASON STREET


ROCHDALE ROAD

Concrete tactile paving

- Tactile paving at controlled crossing points on major peripheral roads in good condition.
- Cracking of concrete tactile paving at uncontrolled crossing point associated with Skyline development due to vehicular overrun.


CABLE STREET

Concrete kerbs

- Kerb heights generally do not conform to Manchester City Council standards between 80-125mm upstand within the Manchester Streetscape Manual due to years of highway resurfacing.
- Widespread damage to concrete at locations adjacent to on-plot car parking areas due to vehicular overrun.
- Kerb heights at junctions have naturally dropped due to vehicular overrun.

Scope of resurfacing works

The Pavement and Condition Survey and Evaluation (Appendix 3.1) indicates a minimum standard of asphalt reconstruction and resurfacing in relation to the existing carriageways and pedestrian footways. This is illustrated in Figure 6.

It is considered, however, that the full study area should be resurfaced in order to ensure longevity and also provide a consistent visual surface.

The specification and quality of the resurfacing works should be agreed with MCC and be of an adoptable standard.

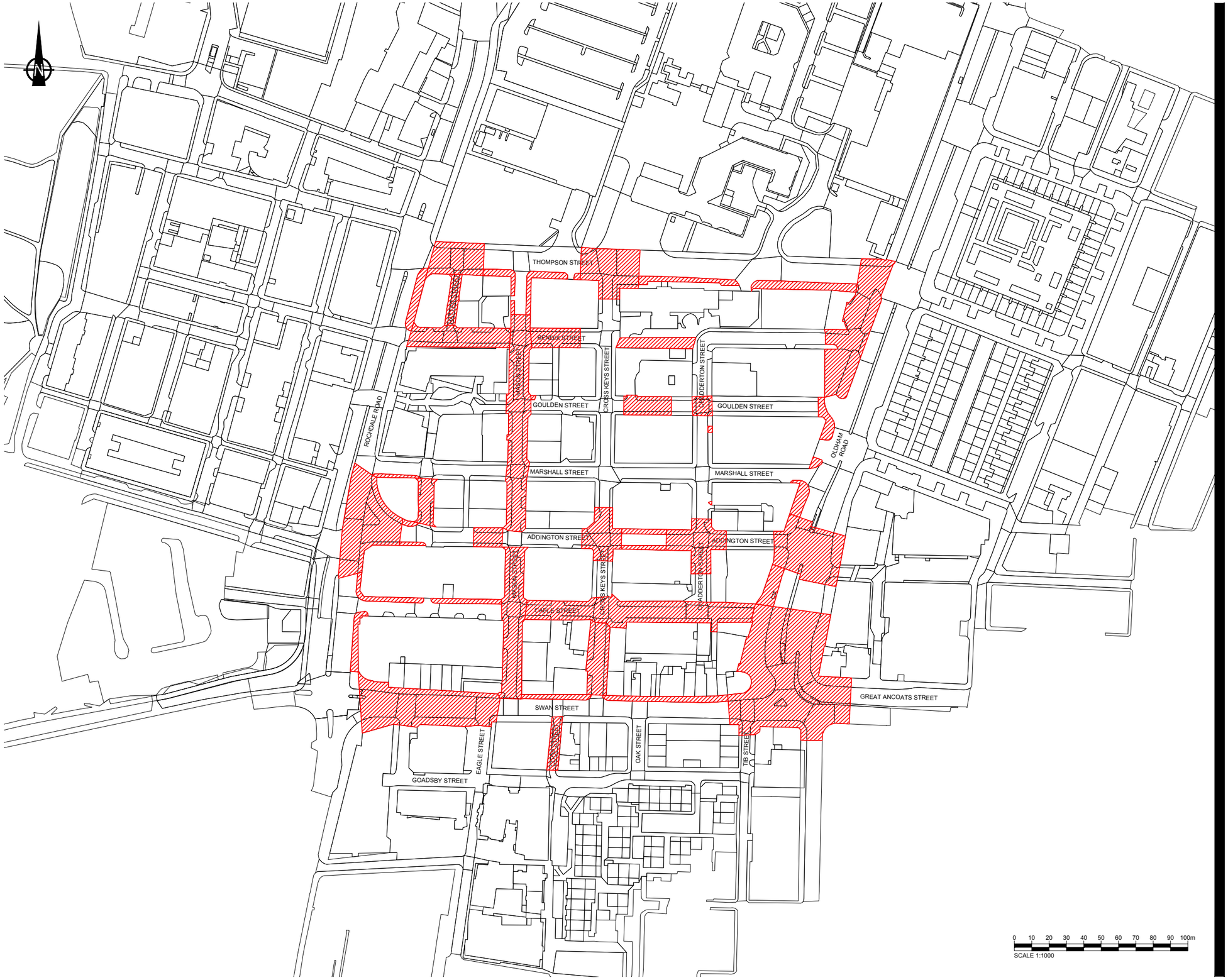


Figure 6 Minimum standard of asphalt repair in relation to the existing carriageways and pedestrian footways.

AECOM

PROJECT

New Cross
Public Realm

CLIENT

Manchester
City Council

CONSULTANT

AECOM Manchester
Bridgewater House, Whitworth Street,
Manchester, M1 6LT
0161 907 3500 tel 0161 907 3599 fax
www.aecom.com

NOTES

1. THE PURPOSE OF THIS DRAWING IS TO HIGHLIGHT THE AREAS OF CARRIAGEWAY AND PEDESTRIAN WALKWAYS THAT ARE RECOMMENDED FOR REPAIRS OR REINSTATEMENT.
2. THIS DRAWING IS TO BE USED FOR INFORMATIVE PURPOSES ONLY.
3. THE ESTIMATED COMBINED AREA OF PAVEMENT (CARRIAGEWAY AND PEDESTRIAN) IS APPROXIMATELY 15,000 SQ.M. THIS ONLY APPLIES IF PAVEMENT IS REPAIRED IN FULL SECTIONS AND UTILITY REINSTATEMENTS RE-PROFILED. PLEASE NOTE THAT THIS IS ONLY AN ESTIMATE BASED ON COARSE VISUAL INSPECTION.

KEY

PROPOSED PAVEMENT FOR REINSTATEMENT OR REPAIR

ISSUE/REVISION

R1	07.10.16	FOR INFORMATION
I/R	DATE	DESCRIPTION

PROJECT NUMBER

60514442

SHEET TITLE

New Cross Public Realm Strategy
Pavement Condition Survey and Evaluation

SHEET NUMBER

60514442-SK-001 R1

Tree capacity

The NDF cites a preference for improving the townscape character and mitigating the presence of heavily trafficked routes by installing an environmental buffer. However, the ability to incorporate tree planting within the study area is dependent upon whether there is sufficient space within the existing footway to introduce trees and maintain unobstructed pedestrian access, and the location of existing utilities.

It is important to note that there are no existing street trees or public amenity spaces in general within the study area. Both of these components would be an integral part of any high density residential development as good urban design.

Three types of footways have been identified in relation to trees and these are illustrated on Figure 7:

- Footpaths less than 2.5m wide: These footpaths are considered unsuitable for tree planting due to insufficient space to maintain unobstructed pedestrian access.

- Footpath width of 2.5m and greater: These footpaths are considered suitable for tree planting. Locating a tree stem approximately 0.7m from the edge of the kerb would allow an unobstructed width of 1.8m for pedestrians to continue using the remainder of the footpath.

- Footpath width of 3.0m and greater: These footpaths are considered optimum locations for tree planting. Locating a tree stem approximately 1.0m from the edge of the kerb would allow an unobstructed width of 2.0m for pedestrians to continue using the remainder of the footpath. This is aligned with MSM's guidelines on pedestrian access.

However, location of street trees would be determined by the location of both overhead and underground utilities.

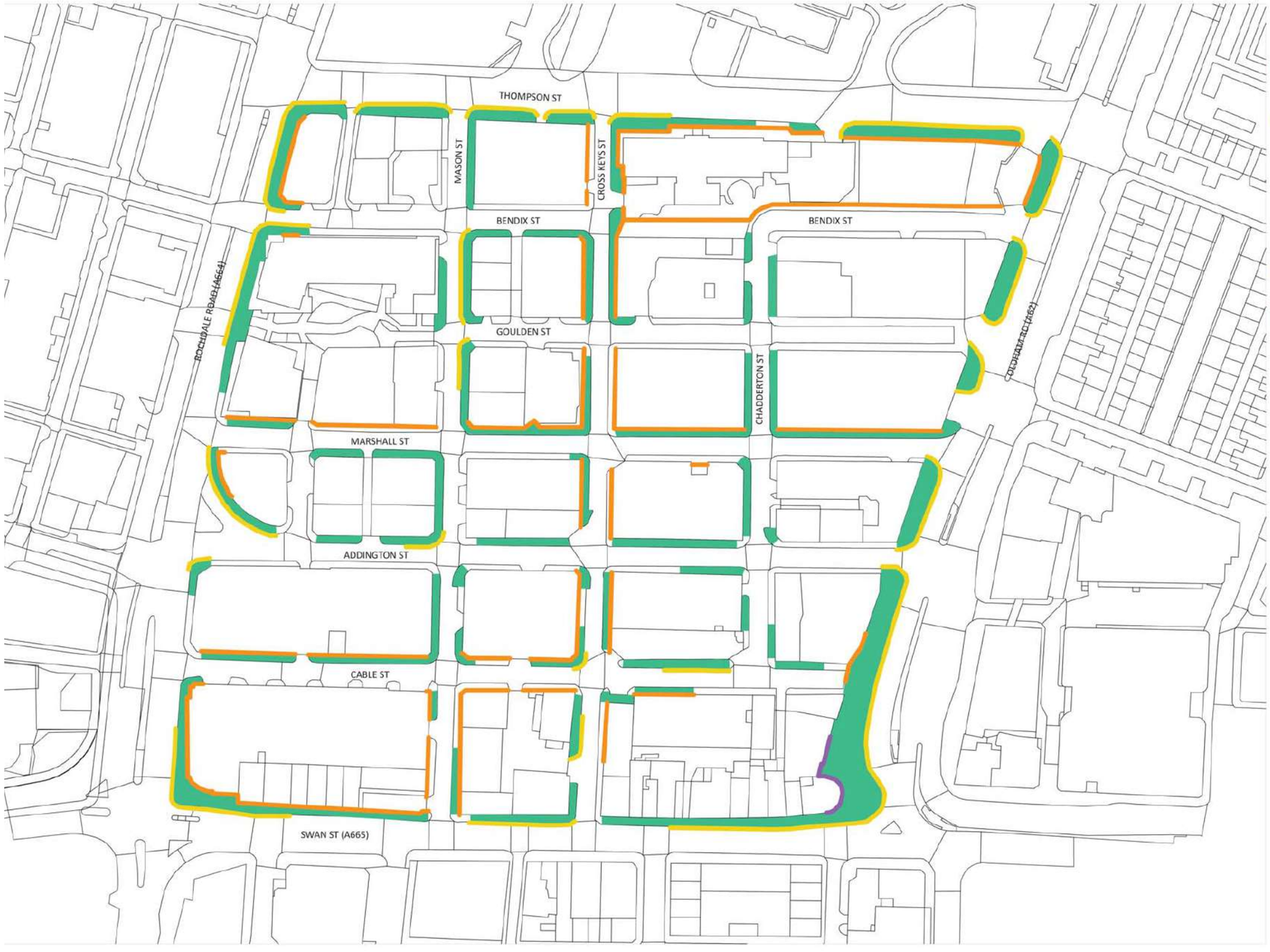
Utilities

The location of the following utilities has been identified by the relevant energy and communications provider:

- Gas;
- Electricity;
- Water; and
- Various telecommunications.

Surface and foul water sewers are located beneath the carriageway, apart from at the junction of A665 Swan Street and A62 Oldham Road and in the vicinity of the former Midland Bank building where the sewer passes underneath the footway. Low and high voltage electricity cables are indicated in surveys to be located beneath the footways and carriageways throughout the study area. High voltage cables are illustrated on the Tree Capacity and Constraints drawing as these pose the greatest danger in terms of public safety. These footpaths and the adjacent carriageway should be underground scanned to determine the exact location of electrical utilities.

Telecommunications, such as BT, are located beneath the footway throughout the study area. There is extensive evidence of trenching within the footpaths for this reason. It might be necessary to relocate these services to the rear of the footpath, away from any proposed tree planting.



KEY:

FOOTPATH WIDTH OF 2.5M AND GREATER
FOOTPATHS OF GREATER WIDTH THAN 2.5M, ENSURING 1.8M UNOBSTRUCTED WIDTH AROUND TREE PIT

FOOTPATH WIDTH OF 3M AND GREATER
FOOTPATHS OF GREATER WIDTH THAT 3M, PROVIDING AN OPTIMUM LOCATION FOR STREET TREE PLANTING

FOOTPATH WIDTH OF LESS THAN 2.5M
FOOTPATH WIDTH NOT SUITABLE FOR TREE PLANTING

UTILITIES IN FOOTWAYS:

ELECTRICITY (HV)

FOUL / SURFACE WATER

- AREAS INDICTAED ON PLAN REQUIRE LASER SCANNING TO DETERMINE ACTUAL LOCATION OF UTILITIES
- BT CABLING LOCATED WITHIN MAJORITY OF FOOTWAYS

Figure 7 Tree Capacity and Constraints diagram

Traffic and Transport Assessment

Public Transport Interchanges

The study area is very well-served by public transport services connecting the location with education, retail, health, leisure and employment sources throughout the city and regional area, with heavy and light rail, hubs located at Manchester Victoria and Manchester Piccadilly stations to the west and south of New Cross respectively as shown in Figure 8.

Figure 8 City Centre Public Transport Hubs

Heavy rail services (shown in red) are available at Manchester Piccadilly and Manchester Victoria, connecting Manchester with regional and national destinations.

Metrolink operate light rail services (shown in Gold) connect the city centre to destinations including but not limited to Altrincham, Ashton-under-Lyme, Bury, Droylesden, Eccles, Oldham, Rochdale; and Salford Quays.

Metrolink also operates services to Manchester Airport from Cornbrook Interchange to the southwest of Manchester city centre. Following completion of the 'Second City Crossing' these services have been extended to serve the city centre stops.

Bus and taxi interchange is also available at these locations with bus and light rail interchange available at Shudehill Interchange and Piccadilly Gardens to the southwest and south of New Cross as shown in Figure 8, providing interchange between light rail and bus services throughout the Manchester area. Further connectivity with bus services is available at bus stops located along the A62 Oldham Road and A664 Rochdale Road corridors adjacent to the New Cross area.

All of the identified interchanges are located within walking-distance of New Cross. It is assumed that pedestrian demand between these interchanges, plus employment, leisure and retail uses available within the city centre, will replace the existing car-based pedestrian commuting demand as the area is built out primarily with residential development.

Existing Traffic Management

In order to evaluate how vehicular and pedestrian permeability can be improved, and by consequence, whether existing signage clutter can be reduced or removed, there is a need to underpin why the existing traffic management exists and whether there is reasonable justification to propose alternatives based on the changing character and use of the study area.

The principles of the existing traffic management are:

- Two lane, one way traffic along the IRR (Addington Atreet) with traffic lights at junction with Oldham street.
- One way vehicular movement on streets immediately perpendicular to the IRR (Swan Street and Addington Street) to reduce traffic flow and control vehicular movement yet provide access to existing businesses.
- Two way vehicular movement is enabled on Cable Street and throughout the northern section of the study area due to distance from the IRR (Addington Street) and the stopping up of routes through onto Oldham Road.
- Reducing east to west vehicular access into the study area by stopping up streets and introducing a one way system.
- Limiting vehicular egress onto Oldham Road, chanelling movement along the IRR (Addington Street) and Bendix Street.
- Five vehicular entrances into the study area from Rochdale Road.

Existing On-street Parking

There are currently 20 limited-stay parking bays providing approximately 97 on-street parking spaces within the study area, of which approximately four spaces are designated for disabled parking (along Cable Street).

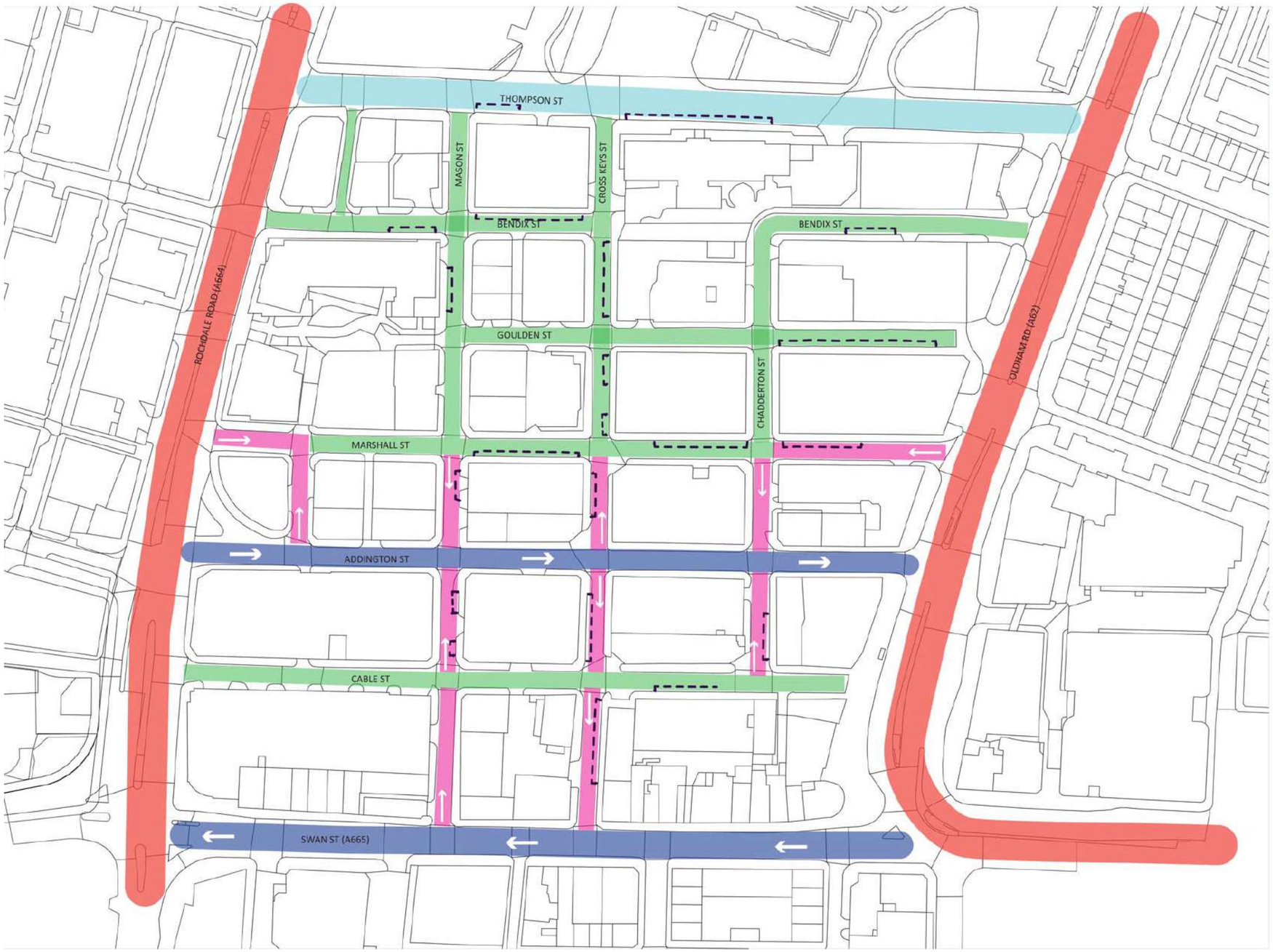


Figure 9 Existing traffic management diagram

A high number of bays are located on Cross Keys Street and Marshall Street. Streets immediately perpendicular to the IRR (Addington Street) commonly have on-street parking bays, in order to minimise vehicular movement through the study area.

Currently the on-street parking restrictions comprise time limited (2 hour) free bays and single yellow lines (weekdays and Saturday morning).

Inner Relief Road (IRR)

The IRR currently passes through New Cross in a clockwise direction, along Addington Street and along the southwestern boundary in the anti-clockwise direction along the A665 Swan Street (Figure 10). The IRR connects all of the radial routes entering the city centre and is subject to high traffic demand. Due to its distributor-road nature and location within New Cross, the IRR has been identified as effectively separating the area from the Northern Quarter and the City Centre.

Figure 10 Inner Relief Road

Adopting measures to address these severance issues is considered fundamental to the extension of the City Centre outwards to include New Cross and creating a more attractive environment for non-car users through the reduction in traffic demand, improved highway safety and improved air quality. The NDF has reviewed work previously commissioned by the Homes and Communities Agency looking at five options to relocate the IRR in order to address severance issues.

In consultation with MCC, it has been assumed the IRR traffic will continue to be routed via Addington Street and Swan Street with measures focussed upon addressing the safety and environmental issues identified within the NDF which include:

- Major road through a residential neighbourhood;
- Proximity of junctions along Oldham Road;
- Large volume of traffic through neighbourhood;
- "Standing" traffic in residential zone;
- Poor air quality & environment;
- Poor existing pedestrian crossing points;
- New super crossings required across major roads; and
- Inefficient development plot at the corner of Addington St / Rochdale Road.

IRR Traffic Demand

Four key corridors pass along three sides of the New Cross area, with the IRR running clockwise along Addington Street within New Cross and anti-clockwise along Swan Street in addition to the A62 Oldham Road and A665 Rochdale Road.

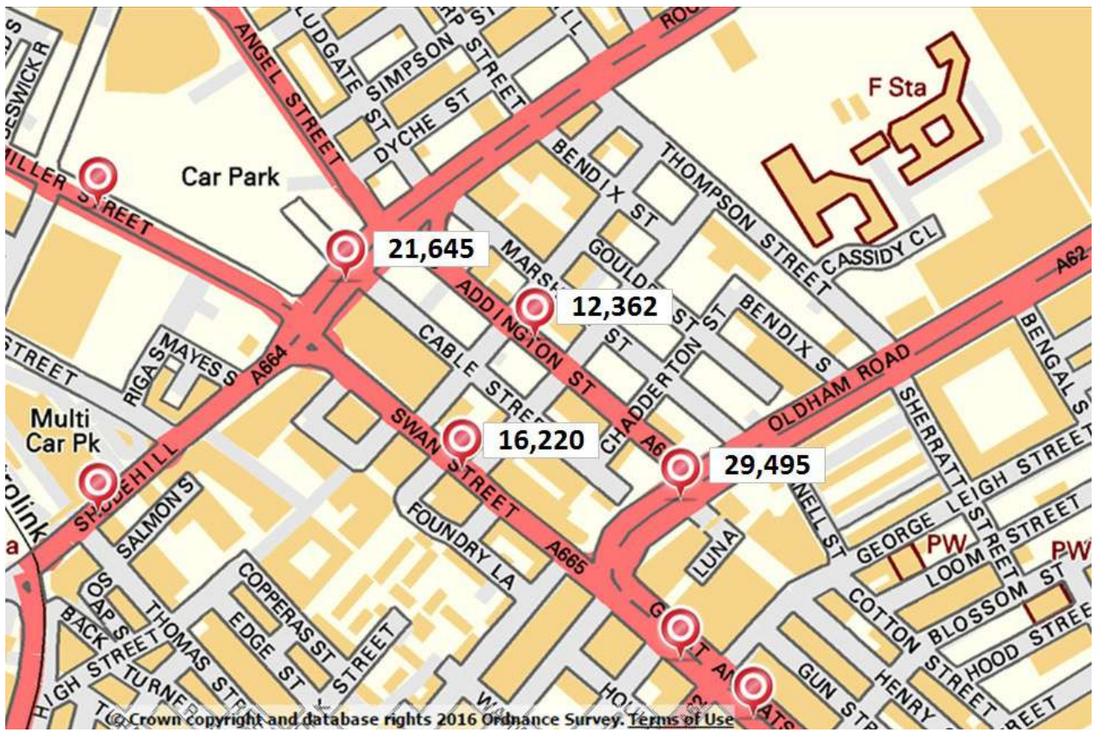


Figure 11 2015 DfT AADT New Cross IRR Traffic (all Motor Vehicles) Flows

Annual Average Daily Traffic (AADT) demand flows along each of these routes are recorded by the Department for Transport (DfT) and available from http://www.dft.gov.uk/traffic-counts/cp.php?la=Manchester AADT traffic volumes recorded for 2015 (the last complete year at the time of writing) are depicted in Figure 11.

Swan Street, with its associated high traffic demand, has been identified within the NDF as effectively severing New Cross from the city centre and restricting pedestrian movement between the Northern Quarter and New Cross.

Accidents

Analysis of five years of accident data collected between June 2011 and May 2016, indicates there have been a total of 51 reportable injury accidents resulting in 61 casualties in the New Cross area, particularly along Swan Street, Oldham Road and Rochdale Road as depicted in Figure 12.

It is noted that 23 out of 61 reported casualties (38%) were pedestrians, the single largest proportion of road users. The accident data indicates the bulk of pedestrian accidents occur along Swan Street. Three pedestrian accidents occurred on Oldham Road, two at the Oldham Road/Great Ancoats junction, five along Swan Street, including one serious accident and four slight-injury accidents at the Swan Street/Rochdale Road junction, (see Appendix A for STATS 19 accident data).

A range of causal factors are recorded, however the bulk of accidents involved pedestrians crossing into traffic and between stationary vehicles.

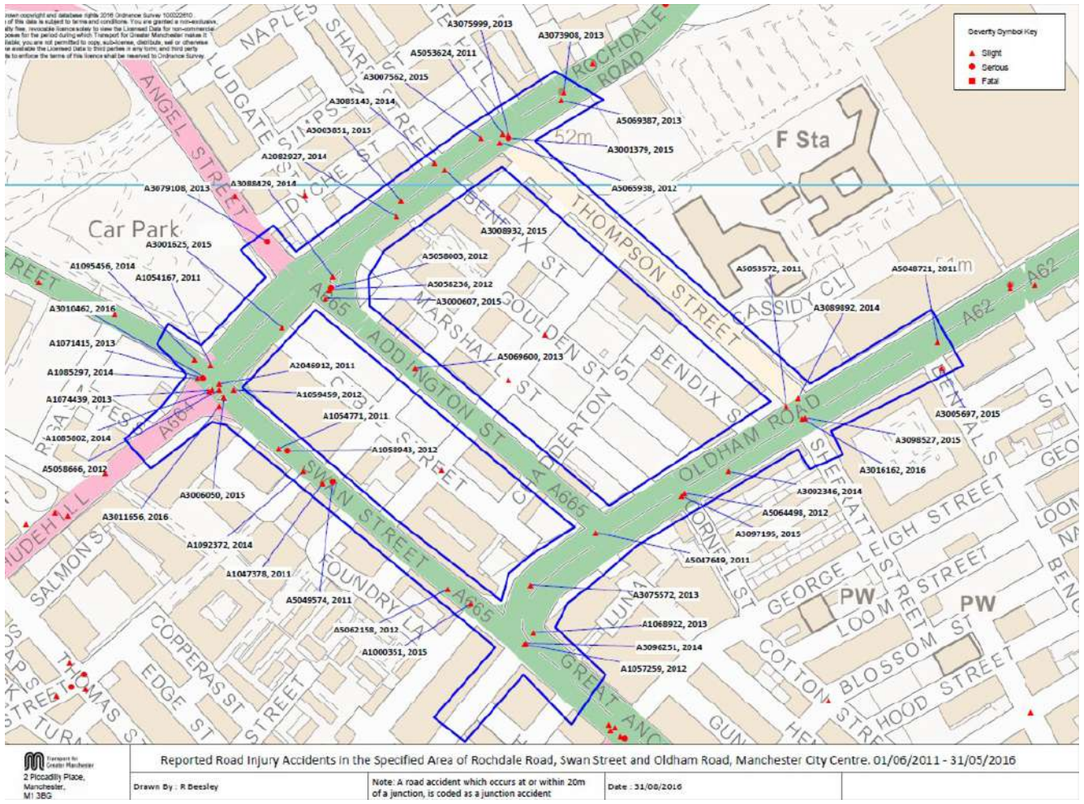


Figure 12 New Cross Accident Locations

Figure 13 Pedestrian desire lines along Tib Street

Pedestrian Safety Measures

It is noted that there are no pedestrian crossings located along Swan Street, except at the Oldham Road and Rochdale Road junctions, despite the pedestrian desire-lines between the parking areas and public transport interchanges and employment/retail/leisure locations within the city centre. On-site observations indicate pedestrian desire-lines across Swan Street at the Tib Street junction using a removed pedestrian crossing as shown in Figure 13.

It can also be seen in Figure 13 that the crossing point still retains some marker studs within the Swan Street carriageway and is within a short distance (approximately 22.0m) of the Oldham Road/Swan Street junction pedestrian crossing.

A junction improvement scheme is proposed at the Great Ancoats/Swan Street junction as part of the Great Ancoats Street Improvements scheme. It is noted that the revised junction layout maintains the existing Swan Street crossing point.

Given the identification of a pedestrian desire line between Oldham Road and Tib Street across Swan Street, the relocation of the Swan Street pedestrian crossing from its present location to the site of the removed crossing should be considered as part of the proposed improvements at this junction.

On-site observation indicated a second pedestrian desire line along High Street/Eagle Street and across Swan Street between the Arndale Centre/Shudehill Interchange and the New Cross area. This desire line (see Figure 14), crosses Swan Street at the Eagle Street junction, where accident data shown in Figure 12 indicates three accidents on Swan Street involving pedestrians in the vicinity of Eagle Street/Mason Street.

It is reasonable to assume demand along this desire line will increase as the New Cross area is built-out with residential development. Taking the number of pedestrian accidents in the vicinity of Eagle Street/Mason Street into account, consideration should be given toward the provision of a PUFFIN or TOUCAN pedestrian crossing in the vicinity of the Eagle Street/Mason Street junctions.

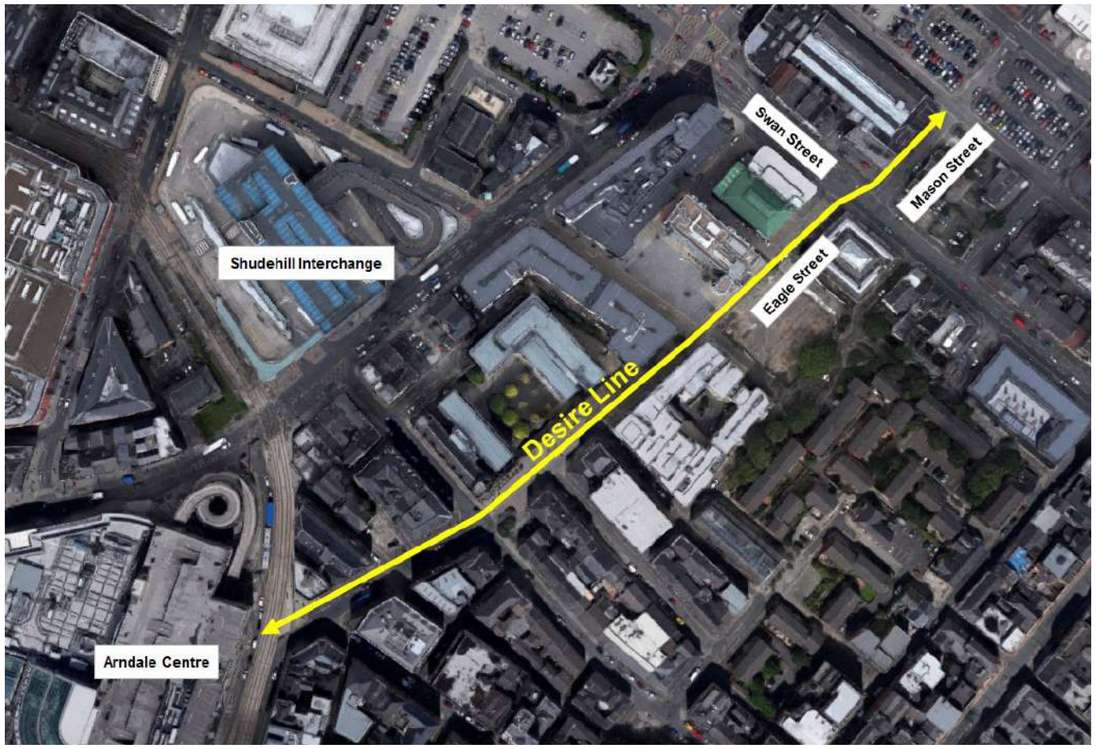


Figure 14 Arndale – New Cross Indicative Pedestrian Desire line

Junction Analysis

The NDF document carried out a qualitative assessment of junction operational capacity at the Oldham Road/Swan Street/Addington Street/Thompson Street and Rochdale Road/Swan Street/Addington Street/Thompson Street junctions.

An outline analysis of junction operational performance has been carried out in order to determine whether capacity is available within the existing junctions to accommodate additional development traffic.

The analysis uses traffic signal and junction geometric data supplied by Transport for Greater Manchester (TfGM), and 2016 forecast morning and evening peak hour traffic flows, taken from North East Quarter (NEQ) Great Ancoats Study modelling. These traffic flows have been used to identify, as part of the Great Ancoats study, a preferred junction improvement option for the Oldham Road/Great Ancoats/Swan Street junction. The analysis undertaken in this document assumes the Oldham Road/Great Ancoats junction improvements have been implemented (as shown in the junction improvements derived from the City Centre Transport Strategy Refresh (11/03/2015), reference number 102710 (SYSTRA) and as part of the Great Ancoats improvements scheme and that no foreseeable further junction improvements will be carried out.

The analysis is intended to provide an indicative outline understanding of the operational capacities of the five remaining principle junctions surrounding the New Cross area. Junction operational capacity has been analysed using the industry-standard LINSIG software, used to analyse signalised junction operational capacity results are expressed as:

- Mean Maximum Queue (MMQ) – The MMQ represents the maximum queue within a typical junction signal cycle averaged over all the cycles within the modelled time period. When a lane is oversaturated the maximum queue within each cycle will grow progressively over the modelled time period. This means that the MMQ will be approximately half the final queue at the end of the modelled time period;

- Degree of Saturation – The Degree of Saturation of the lane is defined as the ratio of traffic flow to lane capacity for each lane modelled. Values of up to 90% indicate the approach arm is operating within its theoretical capacity; and

- Practical Reserve Capacity (PRC) - The PRC is related to the degree of saturation of a traffic signal junction. A positive PRC indicates that a junction has spare capacity and may be able to accept more traffic. A negative PRC indicates that the junction is over capacity and is suffering from traffic congestion.

Each of the junctions, with the exception of the Oldham Road/Great Ancoats/Swan Street junction, have been modelled to ascertain their existing indicative capacity following implementation of the Great Ancoats improvements. The Oldham Road/Great Ancoats Street junction has not been modelled as this is subject to a separate detailed study as part of the Great Ancoats improvements scheme.

Tables 1 and 2 summarise the indicative junction operational performance for each of the Thompson Street junctions during the morning and evening peak hours.

The outline summary analysis results listed in Table 1 indicate the Rochdale Road/Thompson Street junction may operate in excess of its maximum capacity on all approach arms during the morning peak hour but below its desirable capacity during the evening peak hour, prior to any additional development occurring in the New Cross area.

Table 1 Rochdale Road/Thompson Street Junction Operational Performance

Approach Arm	AM Peak		PM Peak	
	DoS (%)	MMQ	DoS (%)	MMQ
Rochdale Road NE Arm	102	34	33	3
Rochdale Road SW Arm	112	11	83	14
Thompson Street	124	80	83	10
PRC %	-38.2		7.9	

The indicative outline analysis summarised in Table 2 indicates the Oldham Street/Thompson Street junction may operate slightly in excess of its desirable capacity during the morning peak hour and in excess of its maximum capacity during the evening peak hour. The summary analysis does not include additional development traffic that may be attributable to the New Cross area.

Table 2 Oldham Road/Thompson Street Junction Operational Performance

Approach Arm	AM Peak		PM Peak	
	DoS (%)	MMQ	DoS (%)	MMQ
Oldham Road NE Arm	94	18	112	32
Oldham Road SW Arm	93	19	116	106
Thompson Street	67	4	34	2
PRC %	-4.4		-28.9	

New Cross developers will be required to undertake junction analysis of the Thompson Street junctions within the Transport Assessments submitted within planning submissions, in accordance with statutory planning requirements. Consideration should be given towards mitigating the impact of the development traffic, taking the indicative analysis results into account.

Table 3 and Table 4 summarise the outline indicative operational performance of the Rochdale Road/Addington Street and Oldham Road/Addington Street junction with and without the provision of a pedestrian crossing along Addington Street.

The indicative analysis results summarised in Table 3 indicate the Rochdale Road/Addington Street junction may operate below its desirable capacity both with and without an additional pedestrian crossing being provided along Addington Street. The summary results also indicate the provision of an additional crossing may not significantly impact upon junction operational performance.

Table 3 Rochdale Road/Addington Street Junction Operational Performance

Approach Arm	Without Pedestrian Crossing				With Pedestrian Crossing			
	AM Peak		PM Peak		AM Peak		PM Peak	
	DoS (%)	MMQ	DoS (%)	MMQ	DoS (%)	MMQ	DoS (%)	MMQ
Rochdale Rd NE	85	13	74	6	85	13	74	6
Rochdale Rd SW	73	4	81	8	73	4	81	8
Addington Street	-	-	-	-	40	0	55	1
Angel Street	86	16	89	23	86	16	89	23
PRC %	4.5		0.7		4.5		0.7	

However, as with the Thompson Street junction analysis, the Rochdale Road/Addington Street junction analysis does not take additional New Cross development traffic into account. Consequently developers will be required to undertake detailed operational analysis of this junction as part of Transport Assessments submitted within planning submissions, in accordance with statutory planning requirements.

Table 4 summarises the indicative operational performance of the Oldham Road/Addington Street junction.

The outline analysis results summarised in Table 4 indicate the Oldham Road/Addington Street junction is forecast to operate slightly in excess of its desirable capacity during the morning peak hour without the additional pedestrian crossing across Addington Street. The summary results also indicate the provision of the additional pedestrian crossing may not significantly impact upon the Oldham Road/Addington street junction operational performance.

Table 4 Oldham Road/Addington Street Junction Operational Performance

Approach Arm	Without Pedestrian Crossing				With Pedestrian Crossing			
	AM Peak		PM Peak		AM Peak		PM Peak	
	DoS (%)	MMQ	DoS (%)	MMQ	DoS (%)	MMQ	DoS (%)	MMQ
Oldham Rd NE	74	16	44	7	74	16	44	7
Oldham Rd SW	35	6	92	22	35	6	94	24
Addington St	77	9	94	17	74	9	94	17
PRC %	17.5		-4.2		21.6		-4.6	

As with the Thompson Street junction analysis, additional New Cross development traffic has not been taken into account. Consequently developers will again be required to undertake detailed junction analysis of the Addington Street junctions within Transport Assessments submitted as part of planning submissions.

Table 5 summarises the outline indicative junction operational performance of the Rochdale Road/ Swan Street junction both without and with the provision of an additional pedestrian crossing across Swan Street.

Table 5 Rochdale Road/Swan Street Junction Operational Performance

Approach Arm	Without Pedestrian Crossing				With Pedestrian Crossing			
	AM Peak		PM Peak		AM Peak		PM Peak	
	DoS (%)	MMQ	DoS (%)	MMQ	DoS (%)	MMQ	DoS (%)	MMQ
Rochdale Rd NE	114	59	84	9	114	59	84	9
Rochdale Rd SW	115	44	86	14	115	44	86	14
Swan Street	114	83	89	19	114	83	87	18
Ped Crossing	-	-	-	-	34	4	26.4	2.7
PRC %	-28		1.1		-28		4	

The results summarised in Table 5 indicate the junction is forecast to operate significantly in excess of its maximum capacity during the morning peak hour on all approach arms without the provision of an additional pedestrian crossing across Swan Street. However, the summary analysis results also indicate the provision of the additional pedestrian crossing would not significantly impact upon junction operational performance. As with the previous junction assessments, additional New Cross development traffic has not been taken into account. Consequently, developers will be required to undertake detailed junction assessments within Transport Assessments, taking development traffic into account as part of planning submissions, in accordance with statutory planning requirements. Given the existing junction performance, consideration should be given toward mitigating the impact of development traffic on each of the Swan Street junctions.

Developers of individual and combined plots within New Cross will be required to undertake detailed analysis of the impacts that may be associated with peak hour traffic generated by their respective developments. The analysis as a minimum should include the Swan Street, Addington Street and Thompson Street junctions along Oldham Road and Rochdale Road, taking forecast traffic demand generated by other committed development in the vicinity into account. Any analysis should be undertaken in consultation with MCC (Highways) and TfGM.

Servicing access

The following existing developments have been reviewed to understand their existing servicing access location:

- Skyline development, Rochdale Road (access on Mason Street).

The following developments with planning consent have been reviewed in order to determine the proposed servicing access location:

- Residential development, Oldham Road (access on Chadderton Street);
- Marriot hotel development, Cable Street (access on Mason Street).

PART TWO

DEVELOPMENT OF A VISION

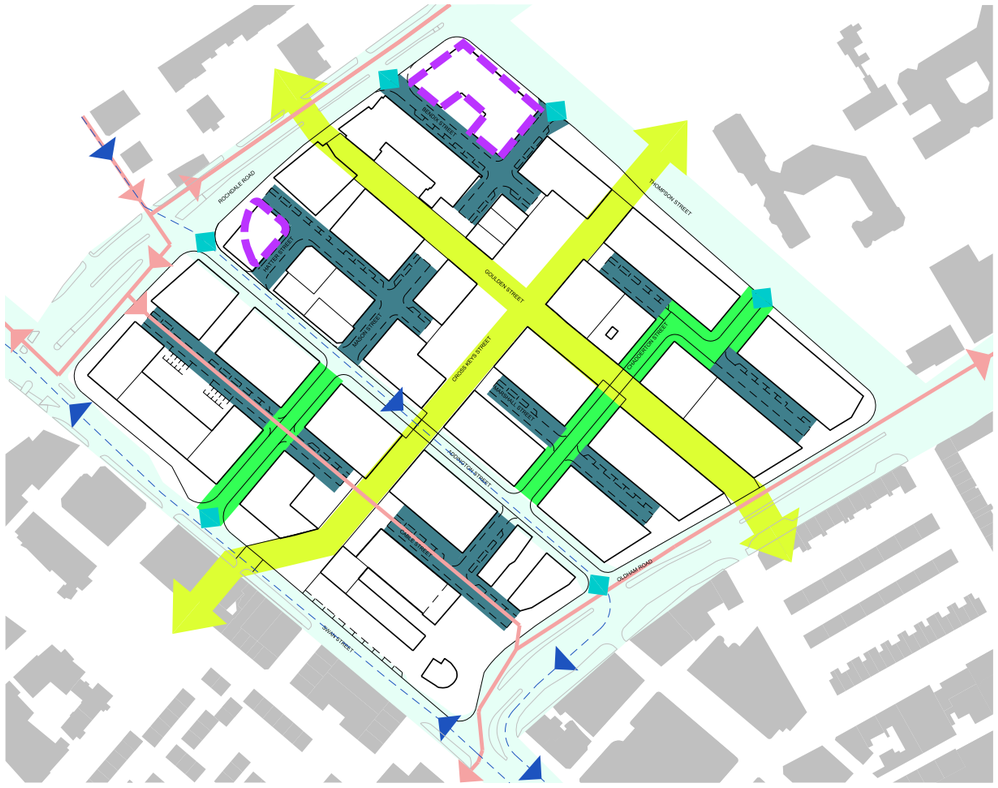


Figure 15 Illustrative masterplan, presented within New Cross NDF, July 2015

Illustrative Masterplan

Key Principles

The NDF establishes an illustrative masterplan for the study area.

The principles of the illustrative masterplan, shown in Figure 15, can be summarised according to the following points:

- The retention of the IRR on Addington Street and Swan Street;
- Creating a legible environment through the adoption of a street hierarchy; incorporating four street types: vehicle priority routes, shared surface solutions, on street parking and pedestrian only environments (Cross Keys Street and Goulden Street);
- The study area was imagined as a series of quadrant areas with one or two points of vehicular access and egress, in order to reduce vehicular movement;
- The proposed approach to street hierarchy creates an opportunity for on-street chevron type parking, where parking is not provided within the development plot;
- The creation of high quality amenity space and public realm to provide a community focus;
- Improvements to the pedestrian environment and incorporation of tree planting, including to pedestrian crossing facilities along Swan Street, Oldham Road and Rochdale Road;
- Improvements to the Swan Street interface, imagined as a re-positioning back from the existing development line to enable public realm improvements;
- The inclusion of Cable Street into the Manchester City Centre cycling network.

Key Departures

Whilst it is important to understand that the masterplan is an illustration of a particular approach, it is fundamental to address whether the proposals identified are viable within the New Cross study area.

In order to achieve this, and in addition to the site analysis work presented in Part One, swept path analysis of the quadrant areas has been undertaken using a range of standard vehicles (car, refuse collection vehicle, fire engine). It was found that all vehicles entering the quadrants would be unable to change direction to leave the quadrant without the presence of a turning head. Furthermore, it is considered that the creation of turning heads would have a detrimental impact on the historic grid layout. The existing grid layout enables the ideal scenario of a permeable and legible pedestrian environment. Changes to this, via the stopping up of vehicular routes, risks creating barriers which reduce the perception of movement and permeability.

The proposals for shared surfacing are to be replaced by the concept of Pedestrian Priority Streets. The MSM asserts that a clear demarcation is required between the carriageway and footway and that the design of Pedestrian Priority Streets should focus on enhancing the visual appearance, and convey to motorists that they should yield to pedestrians. The strategy will look to futureproof the concept presented within the NDF of a pedestrianised zone along Cross Keys Street, and provide options for pedestrianisation once the area becomes fully developed.

The strategy also assumes that the building line along Swan Street will remain in its current location due to the complexity of co-ordinating development across a variety of plots with individual owners. Developers in this location will be encouraged to embrace the principles underpinning this vision, of improving the townscape environment and providing relief from the visual presence of traffic.

Moving forward

The primary purpose of the public realm study is to determine how the ideas generated by the NDF can be manifested within the public realm in a flexible and managed way. This section identifies the impact of the site and desktop analysis on the illustrative masterplan, updating the above principles with key recommendations for the public realm and its components, to pursue the vision of creating a vibrant residential-led neighbourhood.

‘The needs of all pedestrians and disabled people should be considered before all other modes. It is imperative that the influence of **motorised traffic** is **reduced** and that **the pedestrian environment** is made as **pleasant** and as **convenient** as possible.’

Manchester Streetscape Manual (Volume 1 New Residential Streets), p.10.

Traffic and Transport Proposals

Proposed Street Hierarchy

The analysis work highlights that the existing routes within the study area do not currently operate within a complex hierarchy. They generally have the same dimensions of scale, a shared character and are used by pedestrians and vehicle users in similar ways.

The key exceptions are the IRR on Addington Street which has a different character due to the volume of traffic, and the peripheral routes which are much wider.

For these reasons, the following street typologies are proposed as illustrated in Figure 16:

- Pedestrian Priority Streets;
- Pedestrian Only Routes;
- Two Lane Traffic Priority Street; and
- Wide Traffic Priority Streets.

Proposed Traffic Management

We have established through the analysis of the existing traffic management network that the positioning of the IRR on Addington Street and Swan Street has necessitated the one-way system on sections of Mason Street, Cross Keys Street and Chadderton Street that is currently in place. The retention of the IRR in its current location indicates that these traffic management principles should be retained as their purpose is to reduce traffic flow and control vehicular movement for the benefit of the wider study area, i.e. prevention of rat running.

It is intended to bring the New Cross area forward as a residential neighbourhood, and assumed that in common with other similar areas in and around Manchester city centre, pedestrian and cycle movement would be favoured over vehicular movement, with the exception of servicing access. In that respect, the implementation of a 20mph speed limit is recommended. All entrances will therefore require 20mph speed limit signs on both sides of the road to indicate the change in speed to road users. There is no need to repeat the signs throughout the study area.

Aside from the IRR and peripheral A roads, high levels of vehicular movement have not been evidenced within the study area. It is also assumed that as residential development is pushed forward, parking would be limited to short stay and residential parking. Therefore, there is currently no identified need to reduce the movement of traffic by increasing the number of one-way routes throughout the wider study area. Furthermore, the wholesale introduction of a one-way system would require a net increase in traffic management signage throughout the area which would have a detrimental effect on the appearance of the public realm.

The proposed Traffic Management plan in Figure 17 depicts that all parts of the existing street grid, with the exception of Hatter Street, would be accessible to traffic. An area of Cross Keys Street and Goulden Street would have the potential to become a pedestrian zone, similar to the zone already implemented on Canal Street, with vehicle access restricted to between 07:30 – 12:00 and permit holders (residents) continuing to be permitted from 12:00 – 19:00, for example. This location has been selected as it aligns with the proposed locations of high quality amenity space and a potential pedestrian thoroughfare bookended by developments.

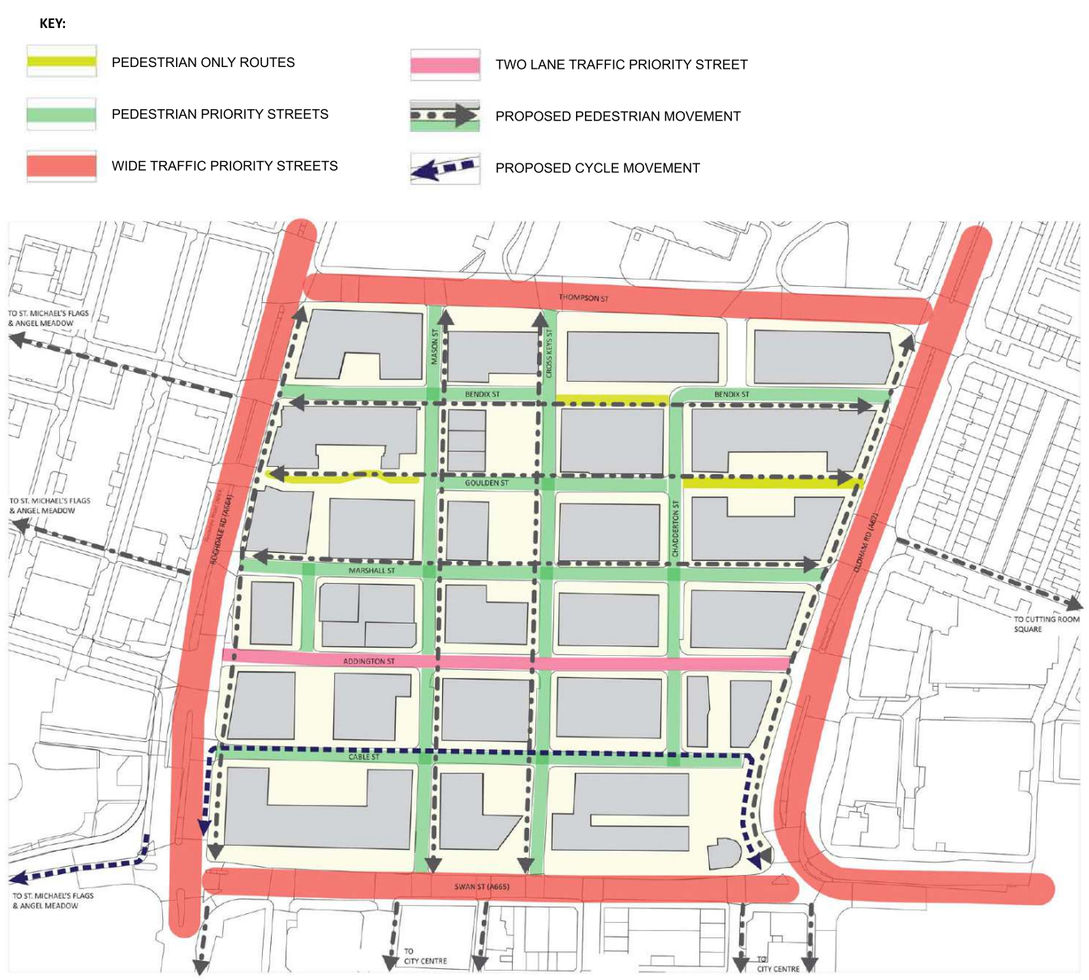
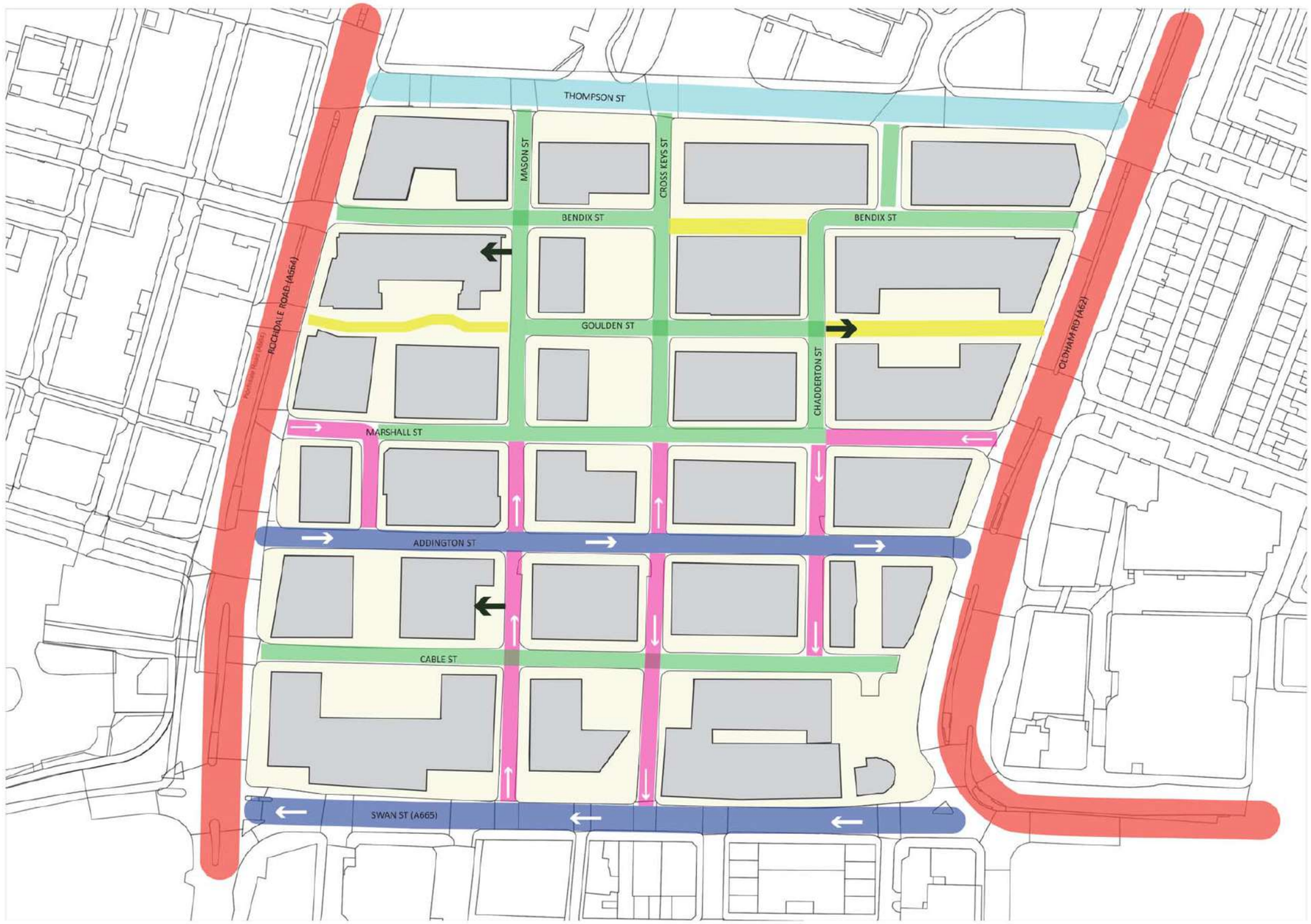


Figure 16 Proposed Street Hierarchy

Hatter Street could be closed to traffic but remain open to pedestrians and cyclists, with the remaining street grid open for 'Access Only'. An area-wide Traffic Regulation Order would be required to create the pedestrian zones and 'Access Only' street hierarchy in addition to creation/revision of one way and two way traffic operation.

The suggested traffic management plan has not been subject to detailed analysis similar to that conducted for the adjacent Ancoats area. Consequently, consideration should be given toward conducting a detailed assessment of the area to determine the optimum traffic management plan for the New Cross area, taking developer feedback and market research plus the wider strategic impacts associated with the IRR into account.



KEY:

- TWO WAY, FOUR LANE ROAD
- TWO WAY, TWO LANE ROAD
- ONE WAY, TWO LANE ROAD (IRR)
- ONE WAY, ONE LANE ROAD, WITH EXISTING ON-STREET PARKING
- TWO WAY, TWO LANE WITH CENTRAL RESERVATION
- PEDESTRIAN ONLY ROUTES
- SERVICING ACCESS POINTS FOR EXISTING DEVELOPMENTS TO BE RETAINED AND KNOWN APPROVED DEVELIPMENTS, NOV 2016

INSET

Potential future pedestrian zone with restricted vehicular access

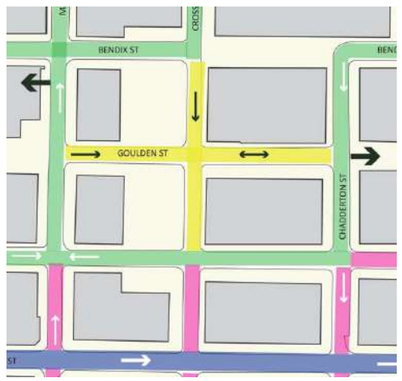


Figure 17 Proposed Traffic Management Plan

Changes over time

If a reduction in vehicular movement is considered necessary once plots become developed, adopting a one-way system throughout would restrict vehicular access to essential user access only (residents and servicing) and would be advised. It is considered, however, that Thompson Street and short sections of Marshall Street, Goulden Street and Mason Street would need to remain open to two way traffic.

Any future analysis of traffic flows within the area would need to take the then current traffic flow patterns and highway demand into account in addition to assessing the impact of any development associated traffic on the existing highway network. These impacts can only be determined in conjunction with detailed development proposals taking into account but not limited to:

- Existing traffic demand;
- Existing junction operational capacity;
- Development traffic trip generation and distribution;
- Development parking provision;
- Development servicing requirements (frequency, time of day, vehicle types and servicing location);
- Highway accessibility; and
- Developed area character (residential/commercial area, public space, pedestrian corridor, etc).

Servicing

Servicing access is a key consideration for all developments. Developers will typically consult with the waste authority with regard to the size and location of waste storage facilities and their accessibility by refuse collection vehicles. Consideration should be given toward the provision of waste storage facilities located adjacent to the rear of the adopted highway in order to facilitate servicing access and reduce the need to manoeuvre vehicles into and out of servicing yard areas, increasing dwell-times and potentially obstructing/delaying other road-users. Should back-of footway locations be proposed as part of developments, consideration should be given toward ensuring waste storage facilities are provided with secure doors that do not open across the footway, potentially obstructing pedestrians during servicing activities.

Servicing Vehicle Access

Servicing vehicles would need to access all developments within the area and such access is assumed to occur primarily in the morning. In common with the wider city centre, servicing vehicle access could be restricted to specific hours in order to miss the morning traffic peak hours. Servicing vehicle access could follow the suggested traffic management plan, which enforces the morning access times.

Turning Heads

There is one section of carriageway where turning heads may be required on the Cable Street cul-de-sacs in order to allow larger (servicing) vehicles to access and leave properties in forward gear. This is illustrated in Figure 18. Developers should consider the provision of a turning head to allow servicing vehicles to turn within the available road width without overrunning the kerblines and pedestrian footways. Such facilities could comprise:

- Provision of a formal turning head of sufficient dimensions as to allow a refuse collection vehicle to turn within the highway width. This may require relocation of footways within the build-lines of developments so as to avoid conflicts between manoeuvring vehicles and pedestrians; or

- Allowing servicing vehicles to reverse short distances (up to 20 metres) in order to exit the cul-de-sac. Consideration should be given to requiring the use of a Banksman to assist vehicle drivers in these circumstances.

On-Street Parking

It is desirable to maintain the existing parking provision provided by the on-street parking bays, which serve to reduce traffic speeds due to the restricting of the available street-width. However, it is recommended that priority should be given to enhancing the pedestrian environment, through implementation of a 20mph speed limit, widened footways and other horizontal traffic calming measures in accordance with the MSM, in locations where on-street parking provision may be removed in favour of the provision of off-street.

Chevron paving is not considered appropriate through the study area due to the insufficient width of the existing carriageway.

Figure 18 identifies the optimum locations for on-street parking, taking into account the following considerations:

- The location of Listed buildings and Built assets, so as not to detract from the appearance of the built form or its setting;
- The location of proposed and potential active frontages (extracted from the NDF);
- The optimum locations for spill-out spaces associated with the proposed active frontages and whether the existing street widths enable sufficient distance from parking bays to not detract customers from engaging in al-fresco dining;
- The potential to add value to streets with tree planting; and
- Adding variety into the street scene by assimilating parking bays across the study area, as oppose to concentrated around particular areas.

The locations indicated in Figure 18 are a guide, and ideally parking bays should be staggered so as not to dominate the streetscape.

It is envisaged that the location of on-street parking will require amendment and could potentially comprise a combination of pay and display bays (perhaps with a resident permit option), loading bays, disabled bays and taxi ranks. Hours of operation and length of stay are important considerations and would need to be discussed with MCC Parking Services.

Any parking that may be provided must be in accordance with the Manchester City Council, Manchester Core Strategy 2012 to 2027, Appendix B Parking Standards and Manchester City Council's adopted Residential Quality Design Guidance 2016, and may be limited in the number of spaces provided so as to maximise the land area for development uses.

Figure 18 Proposed on-street parking strategy

Signage Proposals

Careful consideration of highway and traffic measures can make a real contribution not only to the way in which the area functions but also the way it looks.

MfS recommends the avoidance of clutter, whilst also considering the use of non-statutory signs to convey a sense of place. MCC promotes the reduction of clutter and encourages the use of existing poles and columns.

Any signs should be designed appropriately and their location within the street scene should seek to minimise visual and physical clutter.

Traffic Regulation Orders and Signing

The majority of signs are in place to give effect to a TRO (Traffic Regulation Order). Therefore, careful TRO consideration is needed to manage the requirement for signs.

Currently the area operates within a Controlled Parking Zone. For the controlled parking zone a baseline single yellow line restriction is in operation across the area ('No Waiting' Mon-Fri 8am-6pm and Sat 8am-12.30pm). It is not necessary to sign the single yellow lines but individual parking bays must still be signed (such as limited waiting bays and pay and display bays).

An alternative approach is to sign bays individually with double yellow lines covering the remaining area. Signs are no longer needed for double yellow lines and bays of 30m or less only require one sign. This could also help to manage the amount of kerbside space occupied by parked vehicles which can detract from the area.

Signs are also needed to give effect to a one way order (at the beginning and end of the movement restriction) and where possible the signs should be co-located with street lighting columns. This will require close collaboration with Amey who manage the PFI lighting contract on behalf of MCC.

Signs are also needed to give effect to a 20mph speed limit and a decision would need to be taken whether a speed limit is required.

The following recommendations are suggested in reference to the existing signage:

- Traffic management signage: There is no identified opportunity to reduce the number of traffic management signs as the one-way restrictions are to remain in place. Reduction in the number of poles should be considered, through attaching multiple signs on one pole.

- Traffic way finding signage: Location signs should be relocated so as to not obstruct the pedestrian flow.

- Parking signage:

  A. Parking signs relating to the marketing and operation of car park areas within the area would be removed as the area became developed.

  B. Signs relating to the operation of a Controlled Parking Zone could potentially be removed if the area ceases to be a controlled zone, i.e. replacing the existing single yellow lines with double yellow lines.

  C. On street parking signs would be required as long as there are on-street parking requirements. Bays of 30m or less only require one sign. By refining the location of bays, signage can be reduced to approximately 19 signs throughout the study area. There is potential to co-locate four of these signs, thereby, reducing column numbers to 15.

- Signage hoarding: The large scale advertising hoardings would be removed as the area becomes built out.

Exact siting of signage should be determined by seperate detailed review.

Pedestrian Priority Streets

Whilst it is not considered necessary to reduce the volume of traffic accessing the study area, the ethos of the streets is that they refocus the importance of place and ensure the needs of all pedestrians are considered first.

Amending the street geometry at gateways into the study area will inform vehicle users to give priority to other street users. Well-designed features cause horizontal deflection and encourage low speeds, which benefit other vehicle users, pedestrians and cyclists and ultimately will create a safe environment for a community.

Tight radii at junctions are also recommended in order to reduce traffic speeds and improve pedestrian permeability.

Pedestrian crossing points

Improving pedestrian access between the study area from the City Centre core is paramount to changing the perception of New Cross as a neighbourhood of choice and improving pedestrian safety. Potential locations for these are presented in Figure 19.

There is an identified need for a pedestrian crossing point at the Swan Street interface with Tib Street. Consideration should also be given toward the provision of a PUFFIN or TOUCAN pedestrian crossing in the vicinity of the Eagle Street/Mason Street junctions to better connect the study area with the Northern Quarter.

Along Oldham Road, an option for consideration is the relocation of the existing pedestrian crossing close to Addington Street northwards along Oldham Road to tie into Goulden Street. However, this is not considered a priority as the existing crossing is located in proximity to the Addington Street junction.

The IRR on Addington Street is a physical barrier to pedestrian movement and flow. To resolve this issue, it is considered fundamental to include a PUFFIN or TOUCAN pedestrian crossing in the vicinity of the Mason Street/Cross Keys Street junctions to better connect the two parts of the study area.

Wayfinding

Consideration should be given to the provision of way-finding signage to the study area as the location is built-out, to better connect the location with the wider city centre and key locations including, but not limited to Spinningfields, Piccadilly Gardens, Market Street and Manchester Piccadilly station.

It is also important to connect the location with local public realm spaces, such as Angel Meadows and Cutting Room Square. In this way, a network of public realm spaces can be imagined and accessed by the local community.

The waymarking should be based on a material and design that is appropriate to the character of the area and forms part of an agreed palette of materials.

Cyclists

A dedicated on-road cycling provision should be provided along Cable Street, in line with the illustrative masterplan.

It is accepted that cyclists will continue to use vehicular routes through the study area. Due to the grid street pattern of the study area, it is highly likely that users will have clear sight lines along shared routes which will prevent conflict or collision. Clusters of cycle stands should be located on wider peripheral routes, and grouped with other site furniture, to encourage the use of cycling as a mode of transport.

Public Realm Proposals

The public realm proposals are envisaged as the following projects:

- Upgrades to the carriageway and footway surface material, to ensure all footways and carriageways are subject to asphalt resurfacing;
- The introduction of PUFFIN or TOUCAN controlled pedestrian crossing points along Swan Street (A665), Addington Street (IRR) and Oldham Road (A62) in order to improve pedestrian permeability;
- The introduction of an additional pedestrian crossing point on Thompson Street to coincide with the development of NDF Zones B and C;
- Improvements to the street geometry at gateways into the study area in the form of tightening the radii and incorporation of tree planting and tactile paving;
- Amendments to the street geometry at junctions within the study area in the form of tightening radii;
- The introduction of tree planting, with tree pits, along key peripheral routes and Addington Street (IRR) at a minimum in order to soften the urban environment, provide an environmental buffer and to screen the visual presence of stationary and transient vehicles;
- The creation of public amenity spaces designed to provide the prospective residential community with access to green space, play facilities and high quality seating areas.

These are illustrated in Figure 19.

KEY:

LISTED BUILDINGS
- USE OF HIGH QUALITY MATERIALS IN THE SETTING OF LISTED BUILDINGS;
- IMMEDIATE SETTING NOT CONSIDERED APPROPRIATE LOCATIONS FOR ON-STREET PARKING DUE TO VISUAL DETRACTION.

NON-DESIGNATED BUILT ASSETS
- BUILDINGS LIKELY TO BE RETAINED AS PART OF MASTERPLAN
- IMMEDIATE SETTING NOT CONSIDERED APPROPRIATE LOCATIONS FOR ON-STREET PARKING DUE TO VISUAL DETRACTION.

PROPOSED DEVELOPMENT WITH CONSENT

CROSSING POINTS
PROPOSED CROSSING POINTS TO IMPROVE PEDESTRIAN CONNECTIONS WITH CITY CENTRE AND IMPROVE FLOW ACROSS THE IRR

POTENTIALFUTURE CROSSING POINTS
PROPOSED CROSSING POINTS TO IMPROVE PEDESTRIAN CONNECTIONS TO AREA TO NORTH

POTENTIAL SPILL OUT SPACES (SOUTH FACING)

POTENTIAL SPILL OUT SPACES (NORTH FACING)

LOCATIONS FOR TREE PLANTING
USE OF APPROPRIATE SPECIES ACCORDING TO LOCATION

LOCATIONS FOR UPGRADES AT GATEWAYS
KERB REALIGNMENT AND INTRODUCTION OF PLANTING AND TACTILE PAVING

LOCATIONS FOR UPGRADES AT JUNCTIONS
KERB REALIGNMENT AND INTRODUCTION OF TACTILE PAVING

1 PUBLIC OPEN SPACES
A HIERARCHY OF PUBLIC OPEN SPACE TO IMPROVE AMENITY VALUE FOR RESIDENTS, PROVIDE A DESTINATION FOR VISITORS AND MITIGATE THE URBAN ENVIRONMENT

NEW CROSS
PUBLIC REALM IMPROVEMENTS

Figure 19 Proposed public realm improvements

Street Hierarchy

Imagining the public realm improvements as a set of proposals suited to each particular street location has numerous benefits. It will assist developers in understanding the scope of their prospective projects and provide a toolkit for MCC planners in their discussions with developers around planning conditions and Section 106 contributions.

The following public realm improvements are recommended corresponding to street locations within the study area:

A62 Oldham Road, A664 Rochdale Road and Thomspon Street:

- These streets are generally wide enough to incorporate tree planting in order to visually soften the pedestrian environment. Moreover, the need to mitigate environmental and visual impacts is greater on these heavily trafficked, peripheral routes (Figure 19).
- The street width has the capacity to accommodate a wider variety of trees, with larger canopies. The scale of the tree planting should mirror the scale of the route.
- Development plots along these routes are considered appropriate to have active frontages and proposed spill out spaces. Due to the volume of traffic and footfall along these routes, upgrades to these streets are more likely to reach a wider audience and have a greater ability to change perceptions of the study area.
- The introduction of a suite of site furniture (seating, bollards (if required), bins, cycle stands) is considered appropriate in these locations and should be grouped.

IRR (Addington Street):

- The introduction of tree planting is essential in order to mitigate pollution from the IRR, to screen the visual intensity of transient and stationary vehicles and to provide an environmental buffer for nearby prospective residential receptors.
- The street width limits the ability to accommodate a wide range of trees. Only trees with a narrow, fasitigiate form are considered appropriate in this location.
- The existing footpath widths are constrained on Addington Street, and often fall beneath the recommended 2.0m width advocated by MSM and 1.8m width proposed by MfS (Refer to Figure 4). Whilst there is no desire to relocate the kerb line, future adjacent development plots should aim to increase the width of footpaths in these areas to the minimum standard.
- The creation of a pedestrian crossing point at Cross Keys Street or Mason Street to enhance pedestrian permeability and connectivity, encourage a greater awareness of pedestrians and minimise the impact of the IRR on pedestrian movement.

IRR (Swan Street A665):

- The introduction of tree planting is essential in order to mitigate pollution from the IRR, to screen the visual intensity of transient and stationary vehicles and to provide an environmental buffer for nearby prospective residential receptors.

- Swan Street is not currently of a sufficient width to incorporate a wide variety of trees and active frontages with spill out spaces. However, as development moves forward, the plot which lies between Cross Keys Street and Mason Street offers an opportunity to relocate the building line and create a public realm of a greater width. In instances like this, the scale of the tree planting should mirror the scale of the route.

- The creation of a pedestrian crossing point in the vicinity of Cross Keys Street and Mason Street to enhance pedestrian permeability and connectivity, encourage a greater awareness of pedestrians and minimise the impact of the IRR on pedestrian movement.

- The introduction of a suite of site furniture (seating, bollards, litter bins, wayfinding cycle stands) is considered appropriate in these locations and should be grouped.

All other routes within the study area:

- The street width limits the ability to accommodate a wide range of trees. Only trees with a narrow, fasitigiate form are considered appropriate in these locations (Figure 20).

- Carefully sited on-street parking bays will add variety and interest into the street scene.

- The existing footpath widths are constrained in some sections of Marshall Street, Goulden Street and Bendix Street and fall beneath the recommended 2.0m width advocated by MSM and 1.8m width proposed by MfS (refer to Figure 4). Whilst there is no desire to relocate the kerb line, future adjacent development plots should aim to increase the width of footpaths in these areas to the minimum standard.

These principles are illustrated on Figures 21 - 24 overleaf.

Figure 20 The width of existing footpaths within the study area can reduce the potential for tree planting. However, peripheral routes are generally wide enough to incorporate active and passive spaces, as well as trees with a larger canopy size.

Figurre 21 Oldham Road (A62), looking north-eastwards

Key public realm principles for Oldham Road (A62), Rochdale Road (A664) and Thompson Street:

- Wide footpaths, incorporating active and passive spaces;
- Incorporation of tree planting, installing large scale trees;
- Priority for upgrades to footpath surface materials;
- Introduction of site furniture considered appropriate.

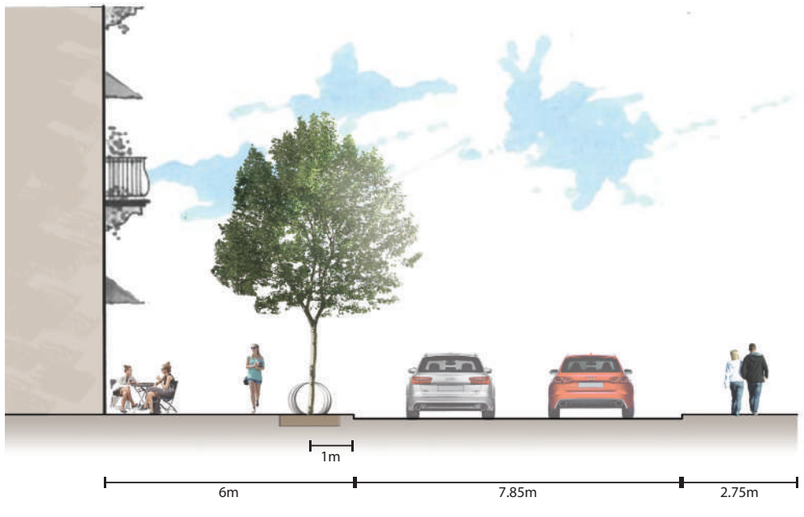


Figure 22 Addington Street (IRR)

Key public realm principles for Addington Street (IRR):

- Narrow footpaths, which should be widened to 2m as a minimum standard;
- Incorporation of tree planting, installing trees with a narrow and fastigiate canopy form;
- The incorporation of a signalled crossing point to enhance pedestrian permeability.

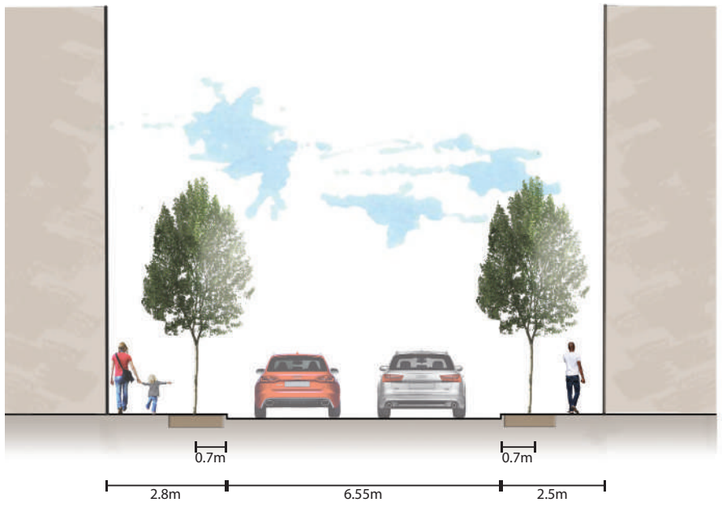
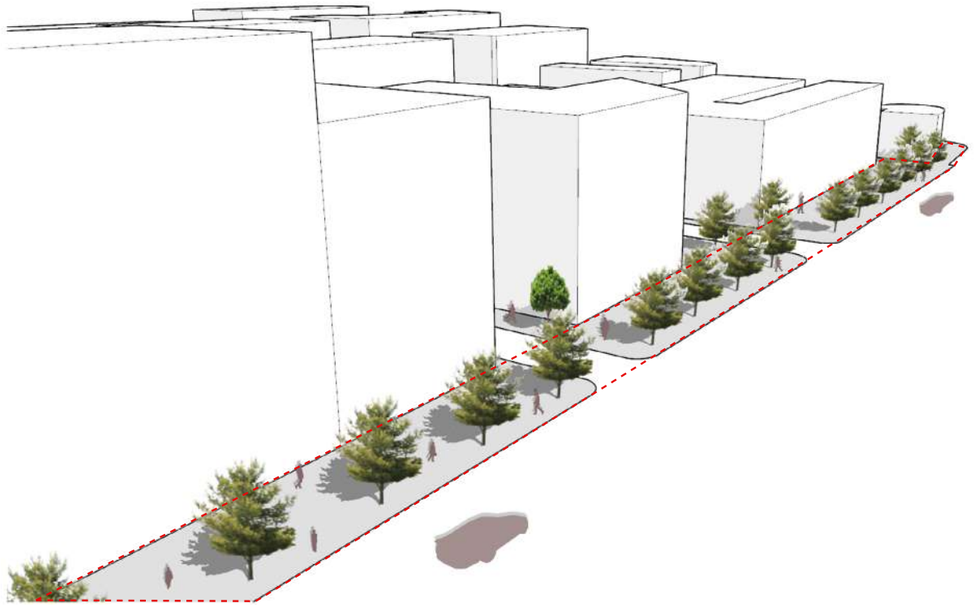


Figure 23 Swan Street, looking south-eastwards



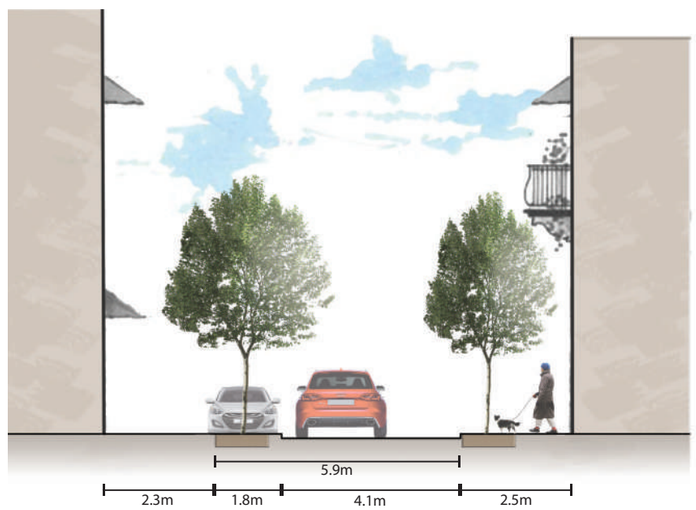
Key public realm principles for Swan Street (A665)

- Wide footpaths, incorporating active and passive spaces;
- Incorporation of tree planting, installing large scale trees, where space allows;
- Priority for upgrades to footpath surface materials;
- Introduction of site furniture considered appropriate.
- The incorporation of a signalled crossing point to enhance pedestrian permeability.

Figure 24 Cross Keys Street, looking north-eastwards

Key public realm principles for all remaining streets within the study area:

- Narrow footpaths, which should be widened to 2m as a minimum standard;
- Incorporation of tree planting, installing trees with a narrow and fastigiate canopy form;
- Introduction of high quality paving at gateway and junction locations to encourage pedestrian priority;
- Carefully sited on-street parking bays will add variety and interest into the street scene.



Public amenity space

Three areas have been identified in Figure 19 as being optimum locations for public amenity space. Each space is to have a different function which has been devised according to its location within the study area and the character of its setting.

Area 1: Hard landscape focus

The key principles for this amenity space are as follows:

- Gateway location for high quality public realm space, with the purpose of attracting visitors into the area and improving perception;
- Suitable location for hard landscaping, adjacent to an existing pedestrian network and vehicular route;
- The introduction of robust street furniture due to potential pedestrian footfall and urban environment;
- The use of tree planting and shrub planters to improve and soften the setting, provide a pleasant environment for community to rest in and also to function as an environmental buffer to visual intrusion from traffic;
- Potential green wall location, utilising the facades of adjacent buildings, which would visually strengthen the gateway and assist in improving air quality;
- Use of high quality materials to ensure it is in keeping with the setting of the adjacent Listed Building.

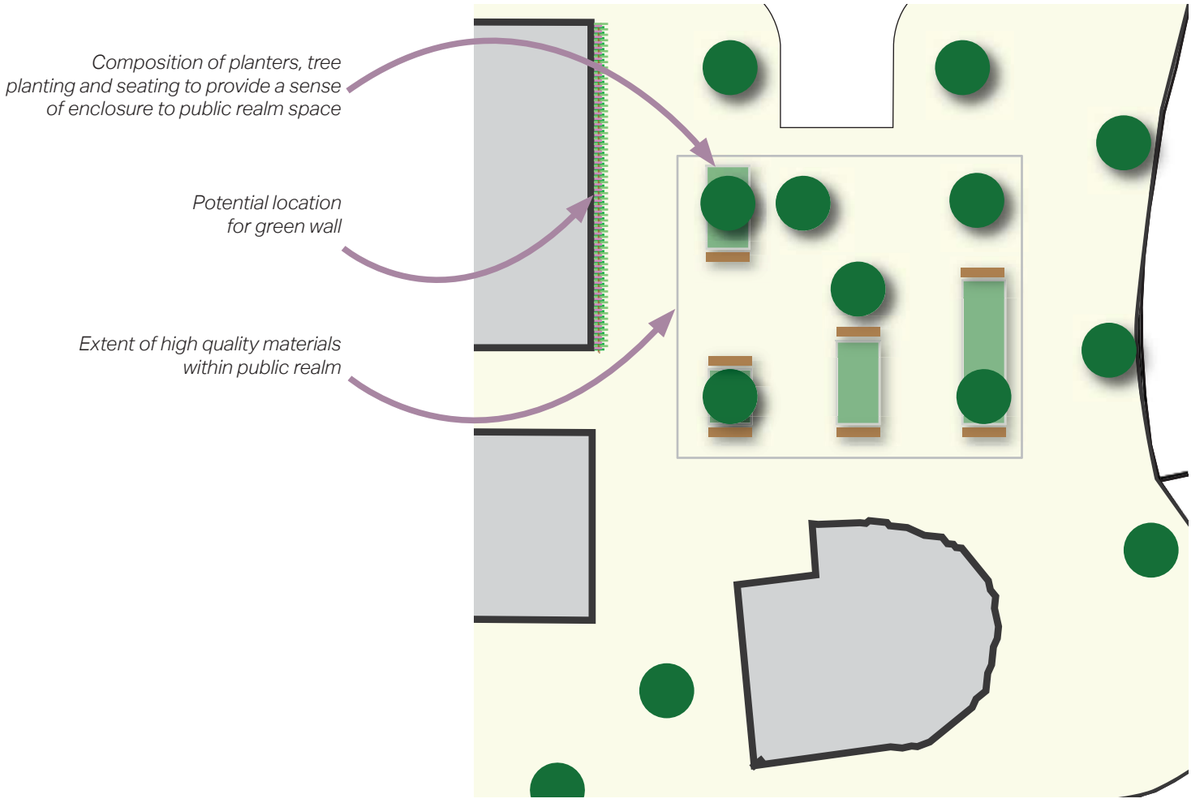
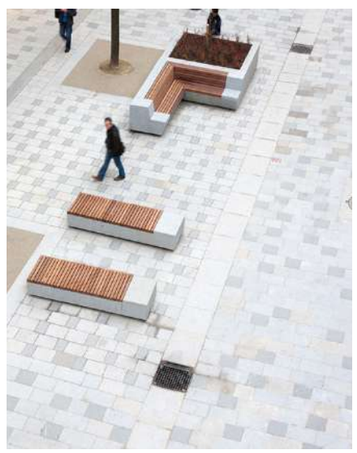


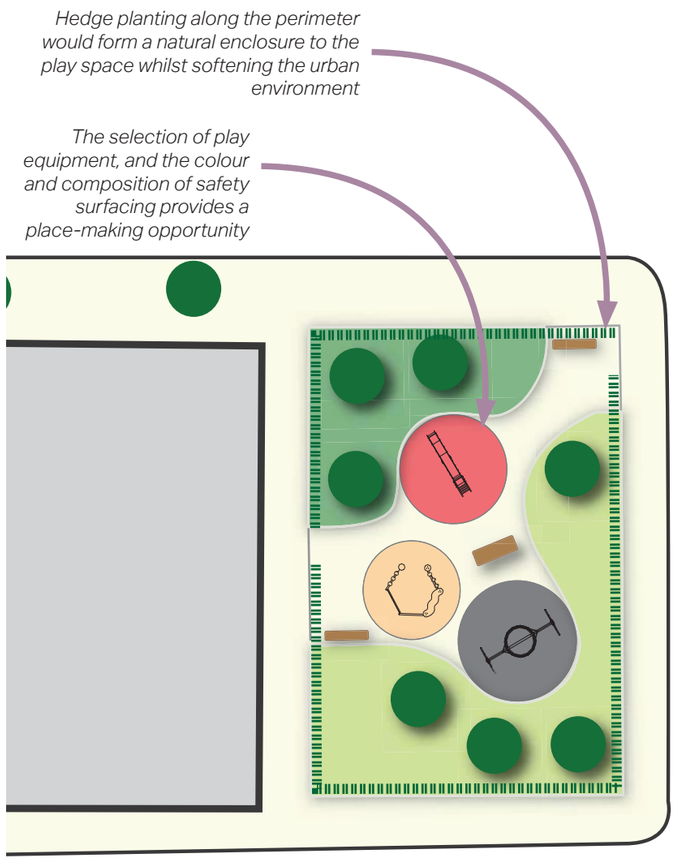
Figure 25 Sketch plan illustrating an arrangement of tree planting, shrub planters and seating, with a potential green wall installed on an adjacent building



Area 2: Play area focus

The key principles for this amenity space are as follows:

- This location is ideally placed along key pedestrian routes, in a central location, to meet the needs of the growing local community and visitors alike;
- To provide play opportunities for a range of ages with additional space for seating and natural surveillance;
- Play equipment should be designed/themed for the urban environment; an industrial theme or use of a bright colour enables the creation of a strong sense of identity and destination point.
- Use of changing levels would provide security for the play area, separating users from vehicles and minimising the need for fencing;
- Robust play equipment required due to urban environment and potential for extensive usage.



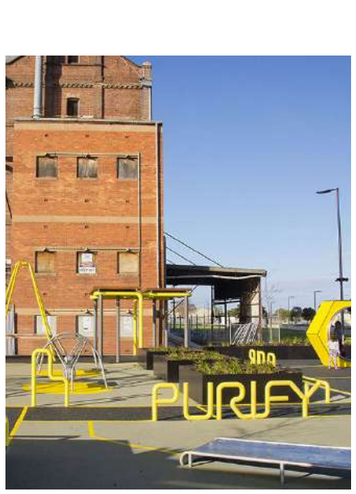


Figure 26 Sketch plan illustrating an arrangement of play equipment with safety surfacing, seating, tree planting and natural enclosure

Area 3: Green space focus

The key principles for this amenity space are as follows:

- This location is ideally placed along key pedestrian routes to meet the needs of the local community and visitors alike;
- The creation of an urban green space, with a preference for soft landscaping to create a multi-functional and flexible green space with hard landscaped footpath access to nearby pedestrian routes;
- Tree and shrub planting to provide shelter from the road and overlooking buildings and to create nodes for seating areas;
- Located adjacent to a Listed Building and non heritage built assets and the design would serve to enhance their setting;
- Use of high quality materials to ensure it is in-keeping with the setting of the adjacent Listed Building.

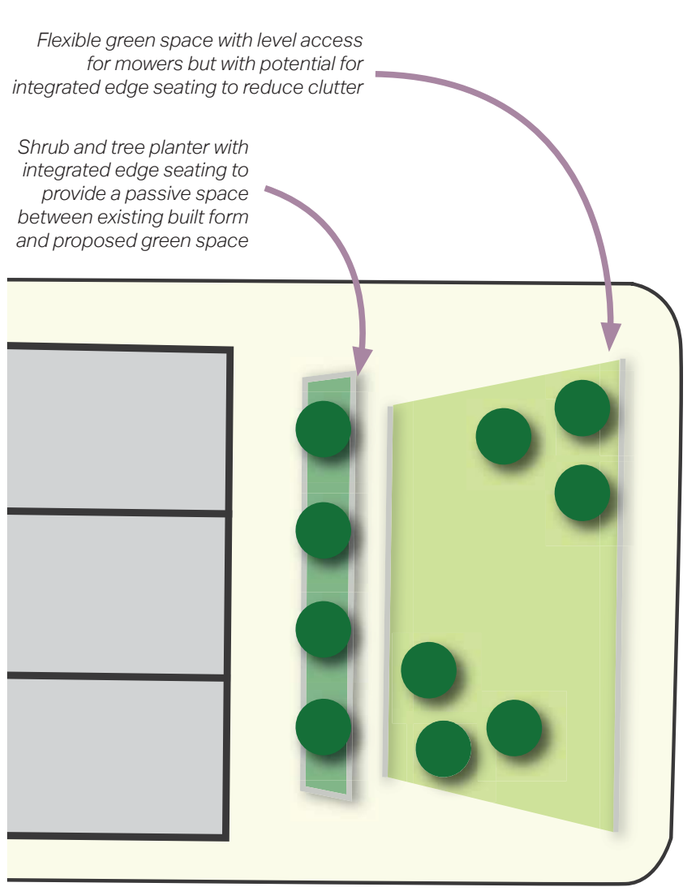


Figure 27 Sketch plan illustrating an arrangement of soft landscape features with mown amenity grass, shrub and tree planting.

Public Realm Materials

Palette of materials

It is inevitable that most of the existing footways and carriageways would require resurfacing in the near future, either to be commensurate with the quality of new development or in the interest of public safety. Minimum upgrades to asphalt material are outlined in Figure 6.

Existing pre-cast concrete kerbs are to be replaced throughout the study area as necessary and through the process of on-going visual inspection. Kerb alignment would be undertaken where amendments to the street geometry have been identified.

MCC has a recognised selection of paving materials, and a limited area of the street network of new residential development surfaced in these paving materials will be considered for adoption.

Through consultation, it has been agreed that asphalt is the approved footpath and carriageway surface material to be used within the study area. In addition, the following recommendations are considered appropriate for the New Cross study area:

- To use a higher specification concrete paving system, with an embedded fade-resistant granite aggregate, in order to invest an added layer of quality into the public realm which will help to create a sense of place. This is considered appropriate for use as a general paving trim and as surfacing to tree pits;
- Paving materials (textures, finishes, colour contrasts) should be designed to ensure they are fully consistent with the recommendations outlined in BS8300: Design of Buildings and their approaches to meet the needs of disabled people; and
- High quality tactile paving should be introduced at all uncontrolled and controlled crossing points, including all junctions with the study area.

Lighting

MCC is due to commence the replacement of all existing luminaires with LED units shortly. The LED project covers all existing units over the next three years and therefore, in the absence of any other proposals, the expectation is that this area will have standard units installed within that timeframe.

The current Development Standard Specification is in the process of revision. The options available for 'non-standard' units will be limited, though a number of variants are being developed. Any variance from the standard unit would require costs to be covered by the development / developer.

Lamps are currently replaced every two to four years depending upon type and units are cleaned / inspected within this regime. In addition all units are night inspected every four weeks and electrically tested every six years. The LED project will deliver savings on the lamp replacement, with units only being cleaned every six years, and remove the need for night inspections.

Architectural lighting to light the amenity public space or key buildings should be considered to improve the quality of the public realm.

Street Furniture

Street furniture should be designed as a family of elements and grouped and positioned along the same alignment, and out of the main pedestrian circulation route. The most appropriate street furniture follows a simple yet functional design, and is easily maintained along with the paving they are located within.

These following recommendations are suggested in reference to the existing street furniture:

- Bollard: Bollards located at the perimeter of surface car parking areas would be removed as plots become developed. MSM highlights that 'careful design of the street can minimise the need for bollards, so they should only be used as a last resort. Excessive use can result in street clutter (p.34). It is considered, therefore, that existing bollards located within the study area should be replaced with tree planting, and appropriately sited cycle stands or seating.

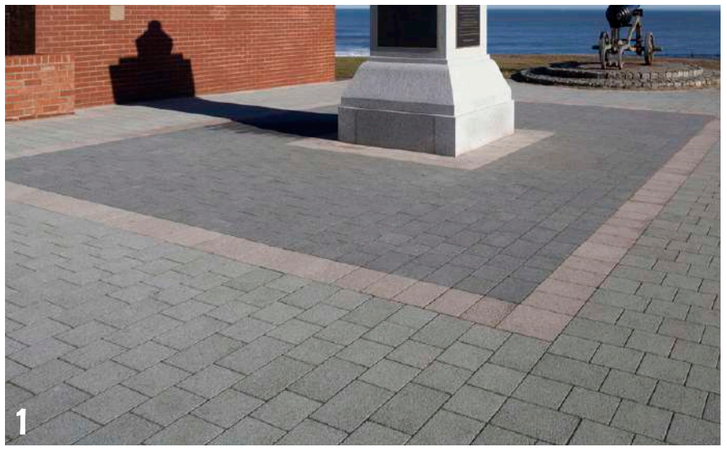
- Fencing: Timber post and rail fencing located at the perimeter of surface car parking areas would no longer be required as the plots become developed. The requirement for perimeter fencing associated with development should be designed out by the developer during the design development stage. All bin storage should be located within the curtilage of the built form.

- Litter bins: The preference in Manchester is for freestanding bins, as opposed to post mounted bins. Bins should be grouped with other street furniture to avoid clutter and should be visible in appropriate locations in order to encourage their use. Bins should have lids, with ashtrays, side openings and slam-lock doors, with a capacity of approximately 50 litres. The location of bins would need to be reviewed as the area was developed out.

Seating should be positioned along the main peripheral routes, i.e. A62 Oldham Road, A664 Rochdale Road and Thomspon Street, A665 Swan Street, as they would be subject to natural surveillance and located where the volume of foot traffic would necessitate its requirement. Within the study area, seating should be located as a feature of the public amenity spaces. Seating should be robust and a suitable design for an urban environment with potentially high usage.

Consideration should be given to the use of natural materials (hardwood timber) due to their visual enhancement of the urban environment and comfort they bring to users. Bespoke seating elements that are integrated into the public realm would also be appropriate.

Examples of the architectural vernacular, built form and legacy palette of materials



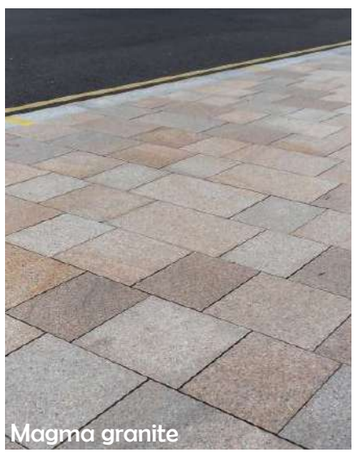
Proposed palette of materials for street scene

1. Concrete paving with granite aggregate for use for tree pit surfacing: graphite, rose and silver shown;

2. Hot rolled asphalt;

3. Concrete setts with granite aggregate for paving trim: silver and mid grey shown; and

4. Standard buff tactiles.



Palette of materials for potential use within public realm spaces

Soft landscape

Street trees will be promoted in all possible locations across the study area. Where street trees are not spatially feasible in footways, due to a lack of width or the presence of utilities, developers should be encouraged to include trees and soft landscaping within the curtilage of the development plot.

Tree planting should be used to delineate walking routes, frame views of key buildings and provide an environmental buffer and visual screen to mitigate views of transport.

The soft landscape should seek to maximise the contact that the residential community has with natural systems. Trees provide dappled shade to outdoor amenity areas and provide shelter. They also help reduce the effects of pollution and solar glare. Planting proposals should therefore aim to consist of a variety of tree, low maintenance shrub species in order to maximise biodiversity and ecological interest.

In accordance with the MSM, the selection of species should be appropriate for the width of the carriageway and footway, and the scale of the adjacent built form. The manual dictates that where trees are to be planted on one side of the carriageway, they should be located on the south-facing footway to provide shade during the leafing season for pedestrians and adjacent properties. 'Trees should not cause an obstruction to pedestrians and under Design for Access 2, there should be a clear distance of 1.8m without obstruction within the footway' (p.38).

There will be minimal use of dense planting and trees with dense canopies which can diminish opportunities for natural surveillance. The location of CCTV cameras should also be taken into account when siting street trees.

Future soft landscape proposals should include:

- The introduction of planting and grass areas that introduces natural systems and opportunities for contact with nature, as well as opportunities for sustainable urban drainage;
- Use of semi-mature trees of a minimum girth size of 20-25cms, with underground guying systems for new tree planting;
- Wildflower grass areas in order to increase biodiversity; and
- The use of plants and trees that create visual interest throughout the year, such as a vibrant autumn colour or attractive winter stems.

Tree planting species

There is a clear aspiration to use the public realm improvements as a valuable opportunity to add a range of high quality tree species to enhance the proposed development of New Cross. Over the previous decade, MCC has adopted an 'arboretum choice' for its city centre parks and encouraged other developers to do the same. This takes advantage of the 'heat island effect' in Manchester City Centre. Manchester has a naturally mild and damp climate; temperatures in the core city centre area very rarely drop below freezing with most years seeing almost no lying snow.

KEY:

SUITABLE LOCATIONS FOR TREE PLANTING
USE OF APPROPRIATE SPECIES ACCORDING TO LOCATION
SEMI-MATURE TREES
UNDERGROUND GUYING SUPPORT SYSTEM

PROPOSED GREEN SPACE

PROPOSED SHRUB PLANTING

PROPOSED PLAY SPACE

1 PUBLIC AMENITY SPACE 1:
HARD LANDSCAPE FOCUS

2 PUBLIC AMENITY SPACE 2:
PLAY AREA FOCUS

3 PUBLIC AMENITY SPACE 3:
GREEN SPACE FOCUS

NEW CROSS
SOFT LANDSCAPING PROPOSALS

Figure 28 Soft landscape proposals

Avenue planting

The following indicative tree species are to be used where the footpath width is constrained and minimal overhang within the curtilage of the carriageway is required:

- *Pyrus calleryana 'Chanticleer'* — Ornamental Pear '*Chanticleer'*
- *Carpinus betulus 'Frans Fontaine'* — Fastigiate Hornbeam '*Frans Fontaine'*
- *Malus 'Rudolph'* — Crab Apple 'Rudolph'

The following indicative tree species are to be used where the footpath width is generous and there is a desire to accommodate a larger tree species:

- *Acer campestre 'Elsrijk'* — Field Maple 'Elsrijk'
- *Tilia platyphyllos 'Rubra'* — Large Leaved Lime, Red Twigged Lime

Trees should be planted in groups of single species in order to generate a consistency of tree scale within the street scene.

Feature tree planting

The following indicative species are attractive, hardy, feature trees that should be accommodated within the public amenity spaces within the study area:

- *Fagus sylvatica Purpurea* — Copper Beech, Purple Beech
- *Acer platanoides 'Fairview'* — Norway Maple 'Fairview'
- *Liquidambar styraciflua 'Worplesdon'* — Sweet Gum 'Worplesdon'
- *Sorbus aria 'Lutescens'* — Whitebeam


Malus ‘Rudolph’


Pyrus calleryana ‘Chanticleer’


Carpinus betulus ‘Frans Fontaine’

Small scale, compact trees for avenue planting where footpath width is constrained


Acer campestre Elsrijk


Tilia platyphyllos ‘Rubra’

Medium to large scale trees suitable for avenue planting where footpath width is generous


Fagus sylvatica Purpurea


Acer platanoides ‘Fairview’


Liquidambar styraciflua ‘Worplesdon’


Sorbus aria ‘Lutescens’

Feature trees suited to the urban environment

PART THREE

SITE PROPOSALS

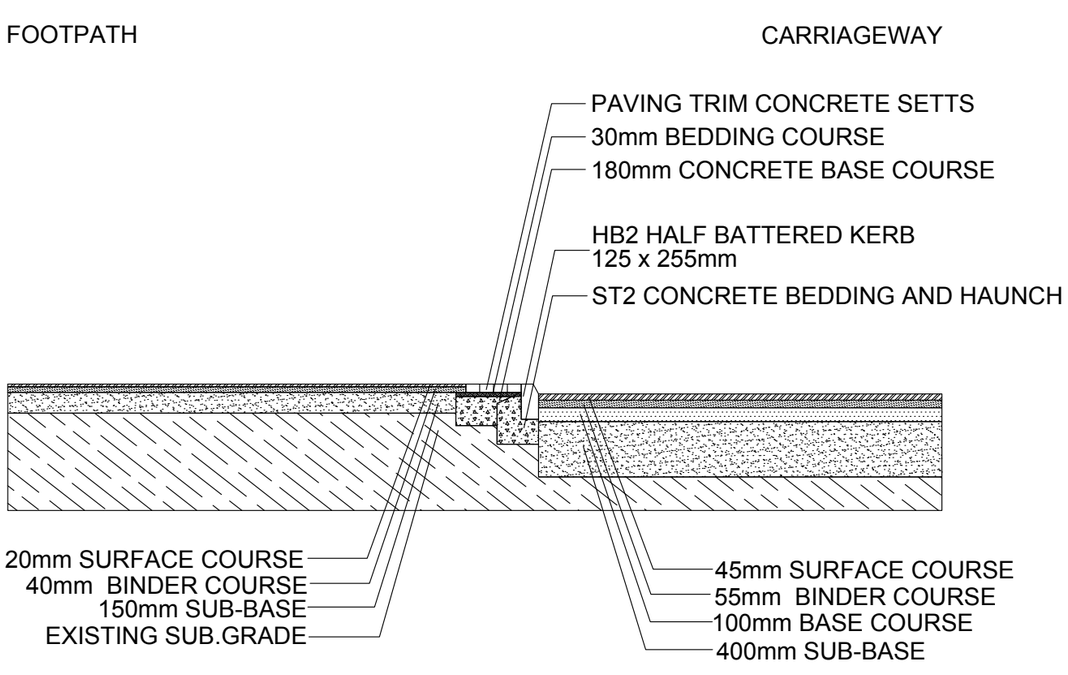


Figure 29 Footpath and Carriageway cross section

Introduction

In order to convey the recommendations pertaining to the built environment made in Part Two, Part Three includes a series of design drawings which provide more detailed information in relation to the following:

- Masterplan, identifying palette of materials;
- Gateway detail and visuals;
- Tree pit detail and visuals;
- Junction detail; and
- Public realm and building swatch.

The masterplan, shown in Figure 30 highlights the preference for asphalt surfacing on footpaths and carriageways. The asphalt specification should be agreed with MCC but as a minimum should be no less than:

Footpaths:

- Granular sub-base: Type 1 sub-base to SHW clause 803.
  Thickness: minimum 150mm.
- Binder course: 14mm nominal aggregate size dense macadam (AC 20 Dense bin 190/220 rec)
  Thickness: 40mm.
- Surface course: 6mm nominal aggregate size dense 190/220 surface course (AC 6 close surf).
  Thickness: 20mm.

Paving trim:

- Granular sub-base: Type 1 sub-base to SHW clause 803.
  Thickness: minimum 225mm.
- Base: Unreinforced C32/40 Concrete.
  Thickness: 180mm.
- Bedding course: High strength proprietary bedding mortar, minimum strength 35N/sq.mm
  Thickness: 30mm.

Carriageway:

- Granular sub-base: Type 1 sub-base to SHW clause 803.
  Thickness: minimum 400mm (assuming CBR>5% at formation level).
- Base course: 32mm nominal aggregate size dense macadam to SHW Clause 906 and BS 4987-1 (AC 32 Dense bin 100/150 rec).
  Thickness: 100mm.
- Binder course: 20mm nominal aggregate size dense macadam to SHW Clause 906 and BS 4987-1 (AC 20 Dense bin 100/150 rec).
  Thickness: 55mm.
- Surface course: Hot Rolled Asphalt (HRA 30/14F surf 40/60 des).
  Thickness: 45mm.
  Coated Chippings to Clause 915. Minimum PSV 63, Maximum AAV 14. Colour: grey/green.

Refer to Cross Section detail, Figure 29.

KEY:

- PROPOSED ASPHALT FOOTPATHS WITH TRIM SURFACED IN CONCRETE WITH GRANITE SETTS
- PROPOSED ASPHALT CARRIAGEWAYS
- PROPOSED TREE PLANTING WITH TREE PITS SURFACED IN CONCRETE WITH GRANITE PAVING
- EXISTING PEDESTRIAN CROSSINGS
- PROPOSED PEDESTRIAN CROSSINGS
- PROPOSED IN-LINE PARKING BAYS
- PROPOSED ON-ROAD CYCLE LANE
- 1 PUBLIC AMENITY SPACE 1: HARD LANDSCAPE PUBLIC REALM
- 2 PUBLIC AMENITY SPACE 2: PLAY AREA
- 3 PUBLIC AMENITY SPACE 3: GREEN SPACE AREA

NEW CROSS
MASTERPLAN

Figure 30 Masterplan

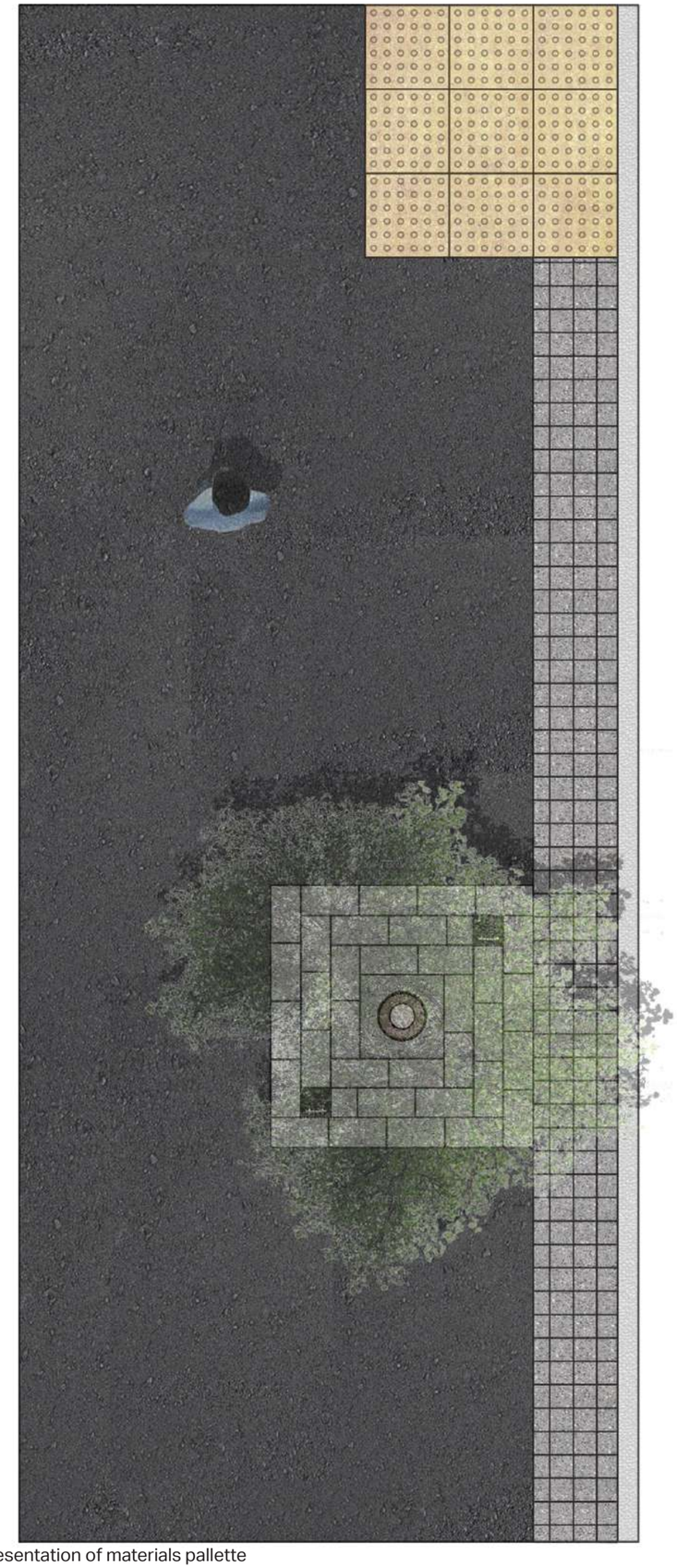


Figure 31 Visual representation of materials pallette

The visual representations in Figures 32, 33 and 34 illustrate the application of the agreed palette of materials for the New Cross study area.

Study Area: proposed palette of materials

In addition to the asphalt surfacing outlined in Figure 30, the palette of materials to be incorporated throughout the study area include:

- Proposed asphalt footpaths are to be edged with a 400mm wide paving trim of concrete modular paving in mid-grey (100 x 100 x 80mm), representative example - Tobermore 'Fusion';
- The kerb alignment at all junctions is to be re-laid with new standard concrete kerbs, to a minimum radii of 1m, to ensure that pedestrian permeability is improved; and
- Buff tactile paving 1200 x 1200mm, in accordance with DfA2.

Study Area: tree pit detailing

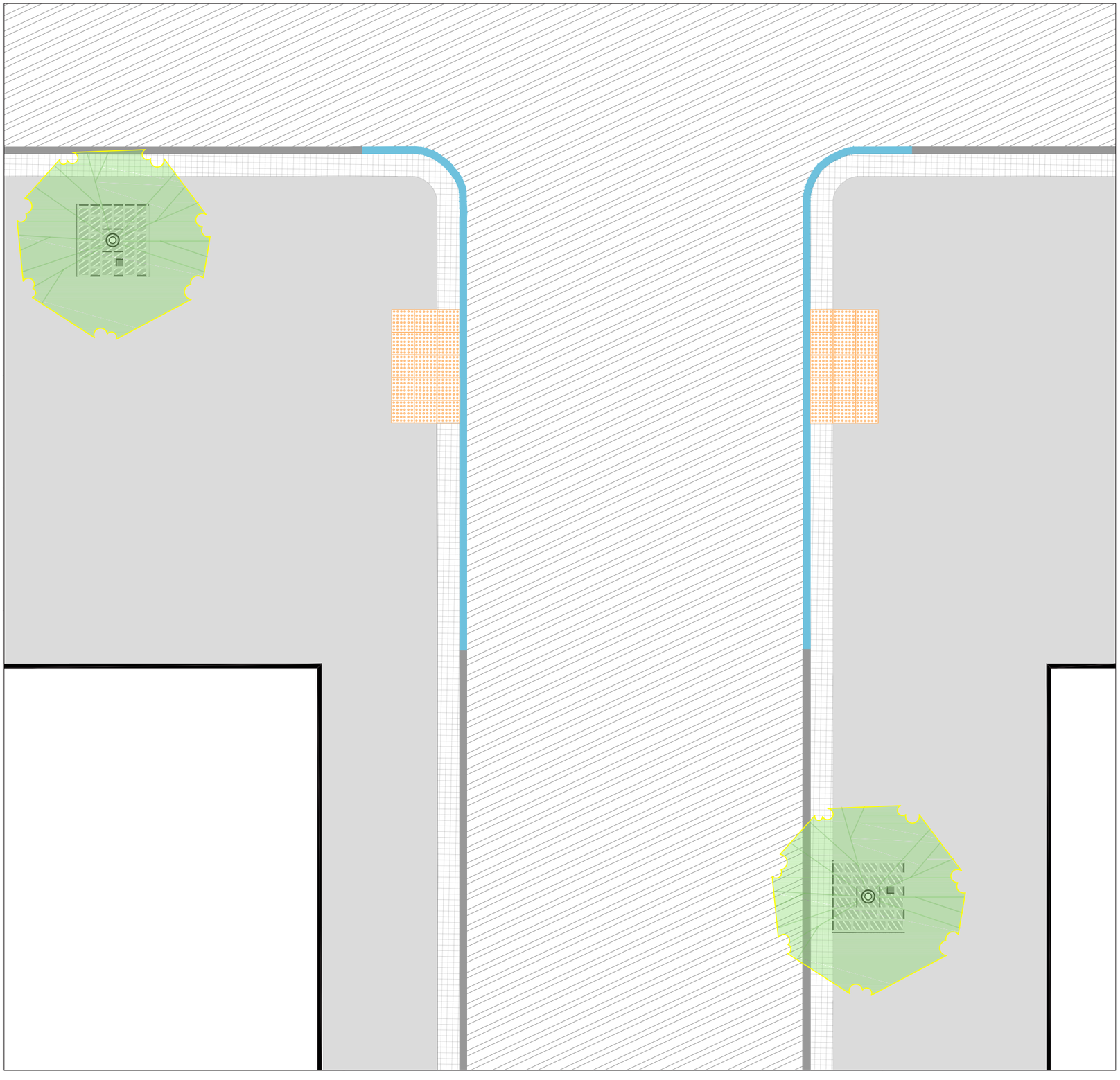
Figure 34 highlights a tree pit detail which embodies the principles of good tree pit design, and includes:

- Irrigation and aeration system;
- Geonet laid over stratacells; and
- Underground guying.

Proposed trees are to be 20-25cm girth and selected from the species outlined in Part Two.

Tree pits are to be 1200 x 1200 x 1200mm.

The surface to the tree pit should be formed through a 1200 x 1200mm aluminium recessed tree grill, paved with concrete modular paving in mid-grey (200 x 100 x 60mm), representative example - Tobermore 'Fusion'. Where footpath widths are narrow, the tree pit should lie immediately adjacent to the paving trim. Where footpath widths are more generous, such as on the primary peripheral routes, tree pits should be aligned appropriately to the scale of the street scene.



KEY:

PROPOSED ASPHALT SURFACING,
FOOTWAY SPECIFICATION

PROPOSED ASPHALT SURFACING,
CARRIAGEWAY SPECIFICATION

PROPOSED STANDARD CONCRETE KERB
125 x 914 x 255mm, 1.0m EXTERNAL RADIUS

PROPOSED BUFF TACTILE PAVING, 400 x 400 x 50mm,
IN ACCORDANCE WITH DFA2

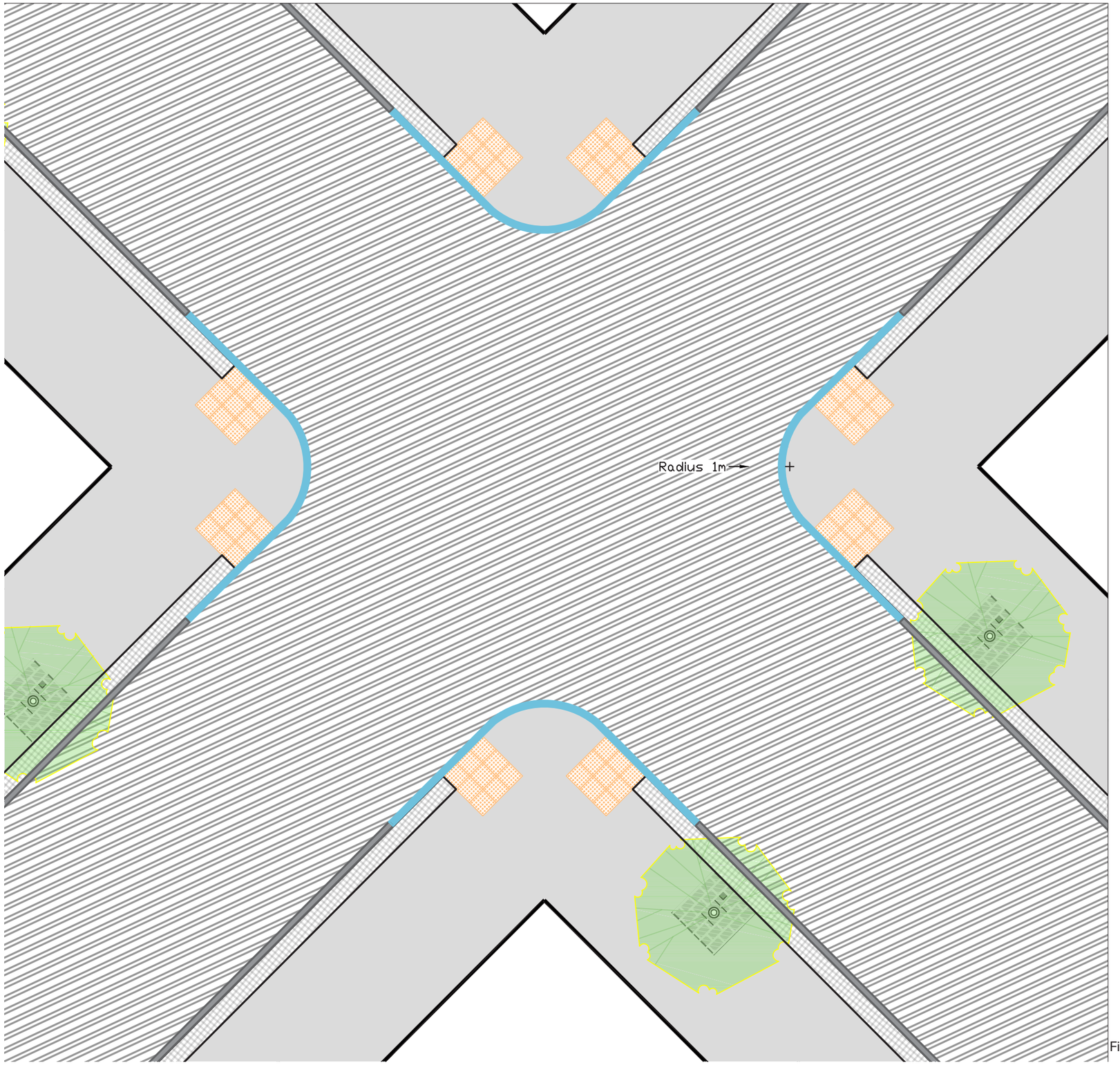
PROPOSED FUSION CONCRETE MODULAR PAVING
TRIM MID-GREY, 100 x 100 x 80mm

EXISTING STANDARD CONCRETE KERB

PROPOSED RECESSED TREE PIT, SURFACED WITH FUSION
CONCRETE MODULAR PAVING, MID-GREY, 200 x 100 x 60mm

PROPOSED SEMI-MATURE TREE PLANTING
20-25cm GIRTH

Figure 32 Gateway detailing (not to scale)



KEY:

PROPOSED ASPHALT SURFACING,
FOOTWAY SPECIFICATION

PROPOSED ASPHALT SURFACING,
CARRIAGEWAY SPECIFICATION

PROPOSED STANDARD CONCRETE KERB
125 x 914 x 255mm, 1.0m EXTERNAL RADIUS

PROPOSED BUFF TACTILE PAVING, 400 x 400 x 50mm
IN ACCORDANCE WITH DFA2

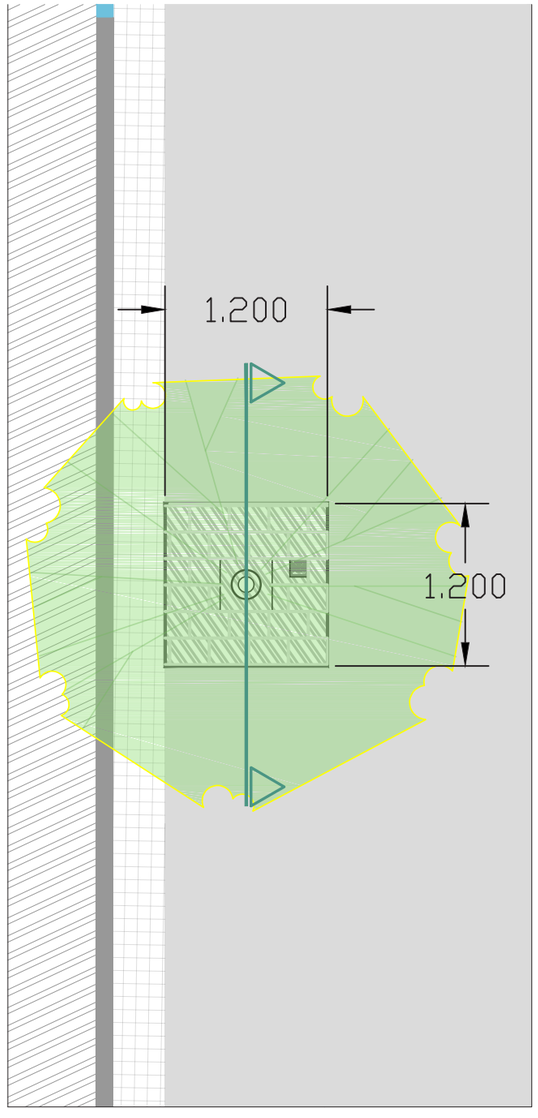
PROPOSED PAVING TRIM. FUSION CONCRETE
MODULAR PAVING, MID-GREY, 100 x 100 x 80mm

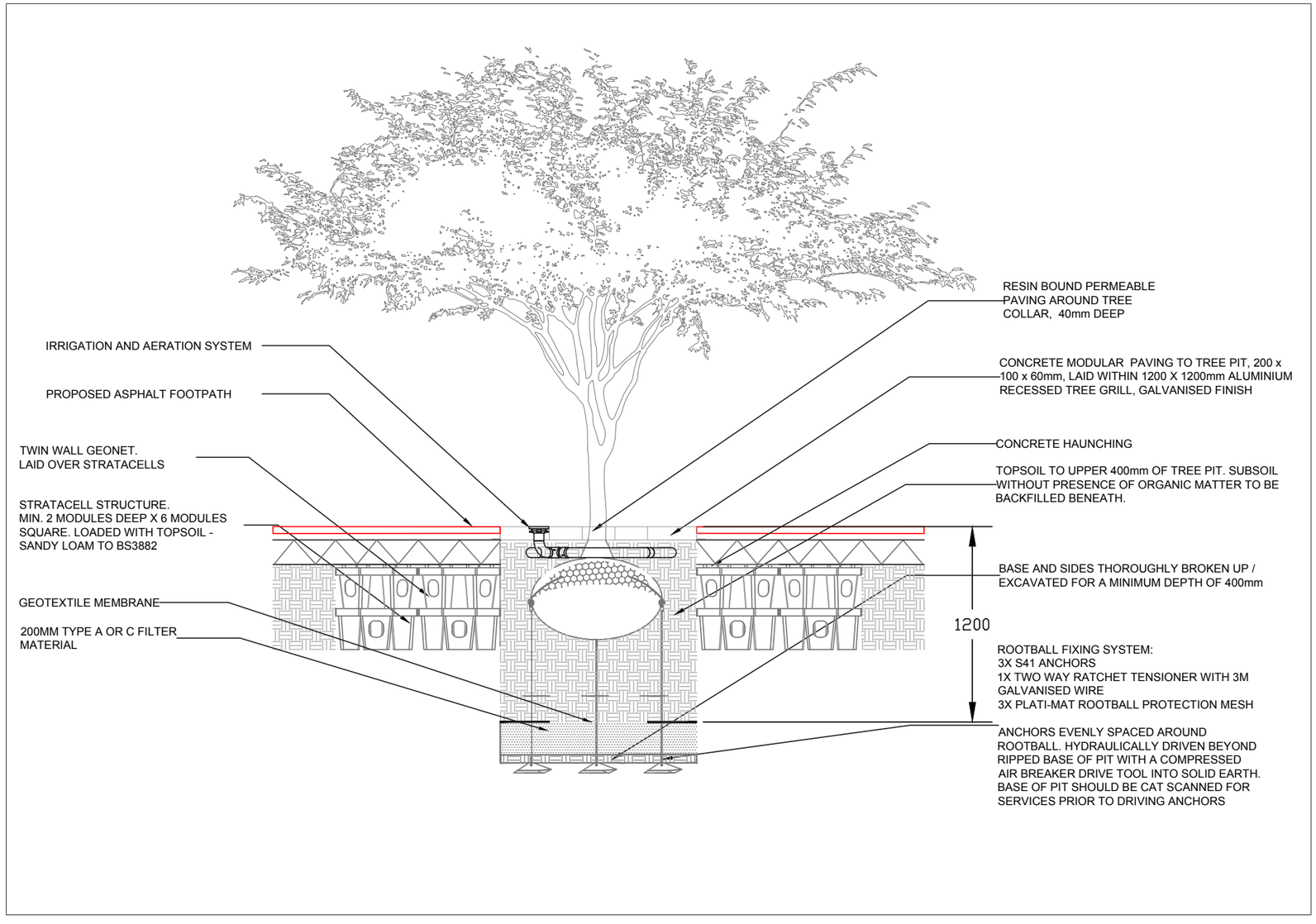
EXISTING STANDARD CONCRETE KERB

PROPOSED RECESSED TREE PIT, SURFACED WITH FUSION
CONCRETE MODULAR PAVING, MID-GREY, 200 x 100 x 60mm

PROPOSED SEMI-MATURE TREE PLANTING
20-25cm GIRTH

Figure 33 Junction detailing (not to scale)





KEY:

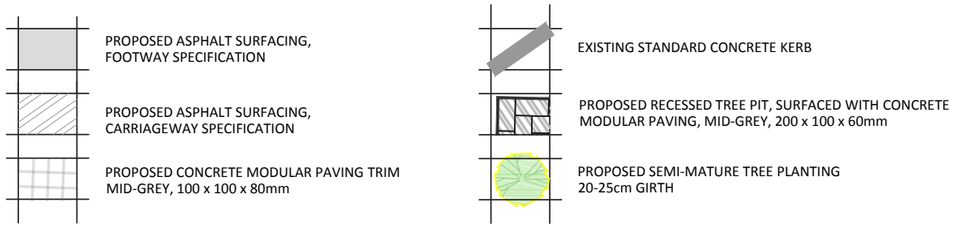


Figure 34 'Representative' tree pit design (not to scale)

Public Realm and Building plot swatch

The plan swatch illustrated in Figure 36 depicts the over-arching principles of the Public Realm Strategy. These are:

1. Enhancement of the setting of Listed Buildings (former ambulance station):

- Potential active frontages to Cross Keys Street with potential spill out space located on Bendix Street, due to insufficient pavement widths along other perimeter footpaths;

2. Introduction of enhanced crossing points at junctions within study area:

- Inclusion of tactile paving at uncontrolled crossing points in line with the Department for Environment, Transport and the Regions Guidance on the use of tactile paving surfaces;
- Tightening of corner radii of kerbs (minimum of 1m corner) at junctions to facilitate direct pedestrian routes. This enables a straight edged interface with tactile paving. Kerblines should be dropped to enable easy crossing by pedestrians; and
- Upgrades to carriageway and footpath surfacing throughout the study area;

3. The creation of a public amenity space:

- This location is ideally placed along key pedestrian routes to meet the needs of the local community and visitors alike;
- The creation of an urban green space, with a preference for soft landscaping to create a multi-functional and flexible green space with hard landscaped footpath access to nearby pedestrian routes;
- Tree and shrub planting to provide shelter from the road and overlooking buildings and to create nodes for seating areas;
- Located adjacent to a Listed Building and non heritage built assets and the design serves to enhance their setting;
- Use of an uplift in paving materials, from the standard asphalt, to ensure it is in-keeping with the setting of the Listed Building; and
- Introduction of a range of tree species of varying scales to soften the urban environment.

4. The introduction of tree planting to enhance the visual appeal of the study area:

- Tree planting should be used to delineate walking routes, frame views of key buildings and provide an environmental buffer and visual screen to mitigate views of transport.
- Trees should also provide dappled shade to outdoor amenity areas and provide shelter.
- Tree planting should be incorporated within spill out spaces within the public realm in order to maximise the value of the outdoor space.

5. The introduction of street furniture that is:

- Appropriately sited along key routes or adjacent to public open space;
- Of a design that is robust and suited to its urban location; and
- Integrated within other elements, such as planters.

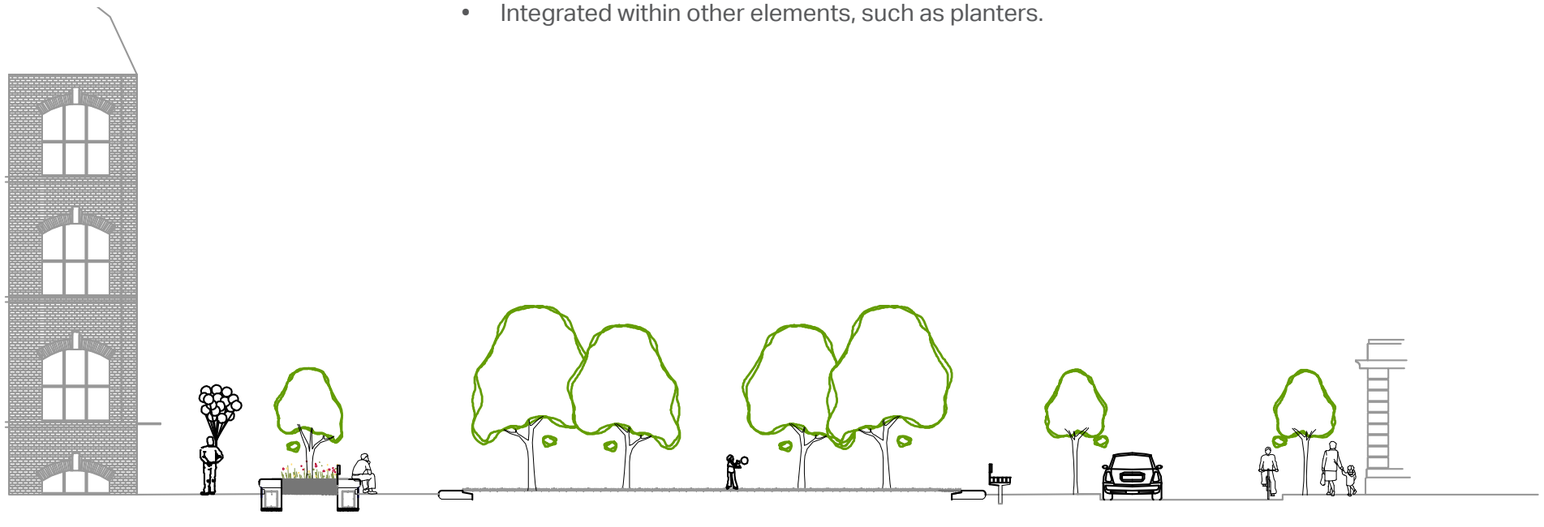
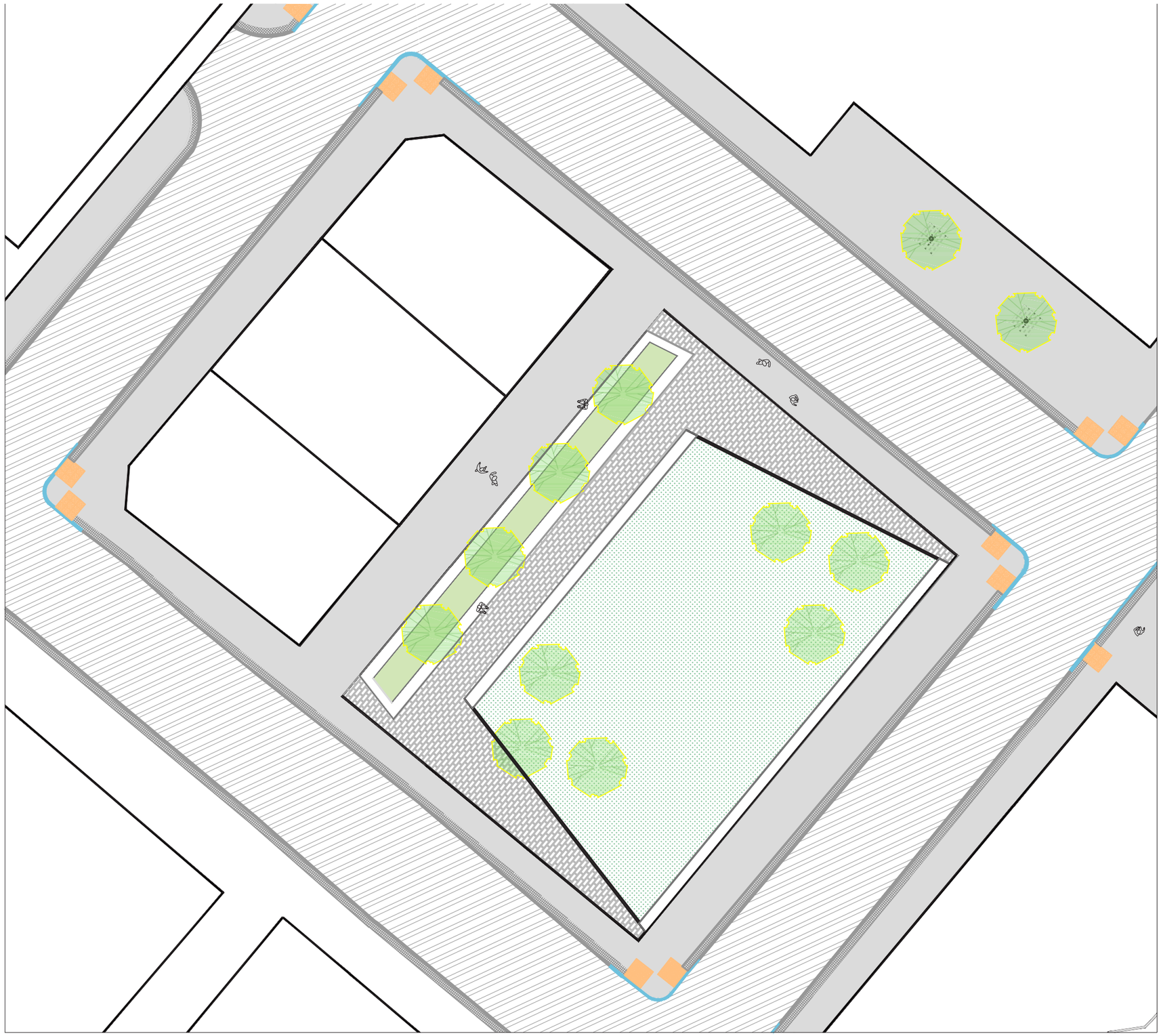


Figure 35 Cross section, showing how the public realm would interface with existing built development.



KEY:

- PROPOSED BUILDING
- PROPOSED ASPHALT SURFACING, FOOTWAY SPECIFICATION
- PROPOSED ASPHALT SURFACING, CARRIAGEWAY SPECIFICATION
- PROPOSED STANDARD CONCRETE KERB 125 x 914 x 255mm, 1.0m EXTERNAL RADIUS
- PROPOSED BUFF TACTILE PAVING, 400 x 400 x 50mm IN ACCORDANCE WITH DFA2
- PROPOSED NATURAL STONE PAVING TO PUBLIC REALM SPACE
- PROPOSED PAVING TRIM. CONCRETE MODULAR PAVING, MID-GREY, 100 x 100 x 80mm
- EXISTING STANDARD CONCRETE KERB
- PROPOSED RECESSED TREE PIT, SURFACED WITH CONCRETE MODULAR PAVING, MID-GREY, 200 x 100 x 60mm
- PROPOSED SEMI-MATURE TREE PLANTING 20-25cm GIRTH
- PROPOSED SHRUB PLANTING
- PROPOSED GRASS SEEDING

Figure 36 Typical detail showing swatch of public realm and building plot (not to scale)

AECOM Infrastructure & Environment Ltd
Bridgewater House
Whitworth Street
Manchester
M1 6LT
+44 (0)161 907 3500
www.aecom.com

ADDENDUM
DELIVERY STRATEGY

Development Context

The regeneration of New Cross Zone A will be predominantly market-led, with an emphasis on individual developments providing necessary upgrades and enhancements to public realm, that will facilitate a high performing; accessible and sustainable residential neighbourhood.

The Neighbourhood Development Framework (NDF) for New Cross was adopted in 2015 as a material consideration for MCC in determining future planning applications. The NDF sets out MCC's intention to utilise all reasonable resources and mechanisms to secure appropriate financial contributions from developers to support the delivery of public realm and infrastructure improvements; in conjunction with development activity.

Seeking and securing appropriate developer contributions will require a clear strategic direction for public realm in Zone A. The Public Realm strategy is required to clearly articulate a vision for the public realm, along with a suite of projects and interventions that will be central to the delivery of a sustainable development.

The Delivery Strategy will ensure that upgrades to the public realm can be appropriately funded and that all works can be correctly sequenced, to ensure that required improvements keep pace with development activity and are prioritised as part of a coordinated programme of delivery.

Delivery mechanisms

A number of delivery mechanisms have been considered as part of the public realm strategy to:

- provide a framework within which public realm improvements can be programmed and prioritised, to keep pace with development activity;
- ensure that contributions from developers can be fully maximised within the confines of existing policy and legislation (local and national); and
- respond to the constraints and practicalities of delivery e.g. to ensure that economies of scale are realised and that standards of construction are maintained.

1. Public realm works - secured via planning conditions

New Cross Zone A is characterised by a series of defined development cells, set within a grid-pattern network of pedestrian and vehicular highway that is characterful of its industrial past. Where a development proposal necessitates improvements to the public realm, the MCC will seek to secure required upgrades by way of planning conditions - in accordance with s70 of the Town and Country Planning Act 1990 and Paragraph 206 of the National Planning Policy Framework (NPPF) - to ensure that enhancements in public realm provision keep pace and are sequenced with development activity.

2. Public realm works - secured via planning conditions (items requiring risk management)

A number of public realm upgrades, deemed necessary to promote the sustainable development of New Cross Zone A, may require a level of risk management to ensure that quality and standards of delivery are maintained. In these instances, when seeking to impose conditions, MCC will specify materials specification and design standards prior to discharge of these conditions.

3. Public realm works - study area-wide projects

The public realm strategy proposes a number of study area-wide improvements, which are central to the delivery of a successful and sustainable development in New Cross Zone A. Such improvements represent standalone projects that will require a level of central coordination and commissioning to ensure cost effective and successful delivery. Where a development necessitates upgrades to the public realm in this regard, MCC will require a financial contribution from the developer by way of a s106 agreement to support the delivery of a particular project, with such contributions sought in accordance with Regulations 122 / 123 of the Community Infrastructure Levy Regulations 2010. The suite of projects relevant to the Study Area, along with representative costings, are detailed on p.67 – 69 along with a programme of sequencing and delivery.

4. Public realm works - pre development activity

The public realm strategy proposes interventions that are required to take place as a pre-development activity to facilitate improvements across the area. The prioritisation and early programming of these activities remain critical to successful delivery and will need to be funded accordingly.

PUBLIC REALM WORKS - SECURED VIA PLANNING CONDITIONS

- Asphalt surfacing to footpaths around immediate development plot.
- Minor amendments and realignments to concrete kerbs around immediate development plot, taking into account tightening of junction radii and installation of drop kerbs.
- Introduction of tactile paving around immediate development plot.

PUBLIC REALM WORKS - SECURED VIA PLANNING CONDITIONS - ITEMS REQUIRING RISK MANAGEMENT

- Laying of concrete / stone paving.

  RISKS: Variables in material, bond, mortar colour. Variables in quality of contractor and interpretation of specification.
- Tree planting and installation of tree pits.

  RISKS: Inconsistent tree form and health. Interpretation of tree pit design. Services would need to be scanned across study area.

  MANAGEMENT OF RISK:
- Detailed material specification/ detailed design drawings should be developed.

PUBLIC REALM WORKS - STUDY AREA WIDE PROJECTS

- PROJECT A
  Asphalt surfacing to carriageway. Major kerb realignment. Carriageway junction resurfacing.
- PROJECT B
  Controlled crossing points.
- PROJECT C
  Signage and wayfinding.
- PROJECT E
  Public amenity spaces.
- PROJECT F
  Street furniture.

PUBLIC REALM WORKS – PRE DEVELOPMENT ACTIVITY

- PROJECT D
  Area-wide TRO and traffic signs.

Sequencing of works

The development of the New Cross study area is anticipated to be delivered over a 10 – 20 year period, subject to market conditions.

The sequencing of works should prioritise those elements or projects which are deemed necessary to early phases of development in New Cross and provide a coordinated programme of delivery that keeps pace with development activity. The work programme should also aim to mitigate foreseeable negative impacts from the construction of adjoining areas.

Early works

It is essential that those projects, which will improve accessibility to the study area, should be undertaken early in the wider project lifecycle. These include:

- Project D Area-wide TRO and traffic signs; and
- Project B Controlled crossing points

In order to facilitate these works, an area wide TRO application will need to be processed. The existing TRO requires revision due to the following elements:

- Removal of Controlled Zone Parking signage at entrances to study area;
- Changes to line markings, from single yellow lines to double yellow lines; and
- Relocation of parking bays and signage.

Individual development plots

As outlined under 'Delivery Mechanisms', where upgrades to the public realm are deemed necessary to the delivery of the development, MCC will seek to secure such works by way of planning conditions in accordance with paragraph 206 of the NPPF. Such improvements include, but are not limited to:

- Amendments to the kerb line around each development plot. This includes replacement of defect kerbs; laying a new kerb radii (minimum 1m) at corners and installing drop kerbs.
- Laying the footpath surfacing around each development plot, to the specification identified in Part Three of the Public Realm Strategy document. Tactile paving should be installed at all uncontrolled crossing points.
- Tree planting within the curtilage of the development plot to the specification identified in Part Three. It will be the responsibility of each developer, therefore, to undertake a geophysical survey to determine an accurate location of underground utilities prior to installation of tree pits.

Carriageway works - Project A

Improvements to the carriageway surfacing should be undertaken when it is considered that the surface layer will not be damaged by construction activities and traffic associated with the development of plots. Quantities of scale indicate that it would be more cost effective to complete the resurfacing works in one undertaking. However, minor carriageway repair may be required in the interim, considering the current condition and the foreseeable wear and tear from construction activity.

Public amenity spaces - Project E

The public amenity spaces will be an important and attractive facility for the people who will live and work in the New Cross area and remain central to the creation of a vibrant, successful residential neighbourhood where people choose to live, work and raise families.

It is feasible that the construction of these spaces may impact negatively on the surface quality of adjacent carriageways and footways. Ideally, these spaces should be programmed to be completed prior to carriageway resurfacing works and footpath improvements in the immediate vicinity.

Signage and wayfinding - Project C

The installation of signage and wayfinding is considered to be minor works with potentially minimal impact. However, this is dependent on the type of footpath surfacing into which the signpost is being installed. Stone footpath surfacing can be lifted and re-laid to enable the installation. Asphalt would require an area to be cut out and resurfaced leaving a visible join. Ideally these works would be undertaken before or as plots are being developed out.

Street Furniture - Project F

The installation of street furniture along key peripheral routes is considered to be minor works with potentially minimal impact. Stone footpath surfacing can be lifted and re-laid to enable the installation. It is unlikely that these works would impact negatively on the surface quality of carriageways or footways alike.

PROJECT NAME	SEQUENCING WITHIN PROJECT LIFE CYCLE		
	EARLY	MID	LATE
TRO Application			
PROJECT A: Carriageway improvements			
PROJECT B: Controlled crossing points			
PROJECT C: Signage and wayfinding			
PROJECT D: Traffic signs			
PROJECT E: Public amenity spaces			
PROJECT F: Street furniture			

Cost plan

Representative cost estimates have been devised in relation to upgrades in public realm to be secured by way of planning conditions and improvements to be delivered as part of site-wide projects.

A cost summary is provided below, with representative costs based on strategy proposals to provide high level guidance as a basis for consultations with landowners and developers.

Inflation has not been included in costs. Costs are relevant as of Qtr 4 2016; refer to BCIS index. There will be a requirement for costs to be adjusted for inflation for the lifetime of the strategy.

Projects	**Costs**
Footpath improvements	£1,740,782
Tree planting	£606,558
Project A: Carriageway improvements	£1,265,243
Project B: Controlled crossing points	£240,168
Project C: Signage and wayfinding	£37,125
Project D: Area-wide TRO and traffic signs	£169,000
Project E: Public amenity spaces 1: Hard landscape focus	£139,844
Project E: Public amenity spaces 2: Play area focus	£245,746
Project E: Public amenity spaces 3: Green space focus	£177,752
Project F: Street furniture	£61,000
	£4,683,218

AECOM Infrastructure & Environment Ltd
Bridgewater House
Whitworth Street
Manchester
M1 6LT
+44 (0)161 907 3500
www.aecom.com