

Rochdale Station Square

Rochdale

Design and Access Statement



Disclaimer

The information in this document is based upon publicly available information and reflects prevailing conditions and the views of Broadway Malyan as of the date of the document, all of which are accordingly subject to change. In preparing this document, Broadway Malyan has relied upon and assumed, without independent verification the accuracy and completeness of the information presented and that upon which the document is based, including that available from public sources.

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Introduction

This Design & Access Statement has been prepared in support of a detailed Planning Application for the redevelopment of Station Square, Rochdale. The project intends to deliver an attractive and appealing publicly accessible scheme. The document contents are based on the CABE guidance ‘Design and access statements: How to write, read and use them’

In summary, the Statement:

- Assesses the context of the site & relevant planning policies.
- Identifies the opportunities and constraints that influence the principle of the proposal.
- Explains how the proposal responds to the opportunities and constraints and also how it relates to the amount, layout, scale, appearance and access of the scheme.



Site Location Plan

Rochdale Station



Design Team

Owner, Occupier



Landscape Architect – Broadway Malyan

BroadwayMalyan^{BM}

Consultant Project Management



Planning Consultant



Civil & Structural Engineer



Transport and Highways



Cost Consultant & Quality Survey



Site & Analysis

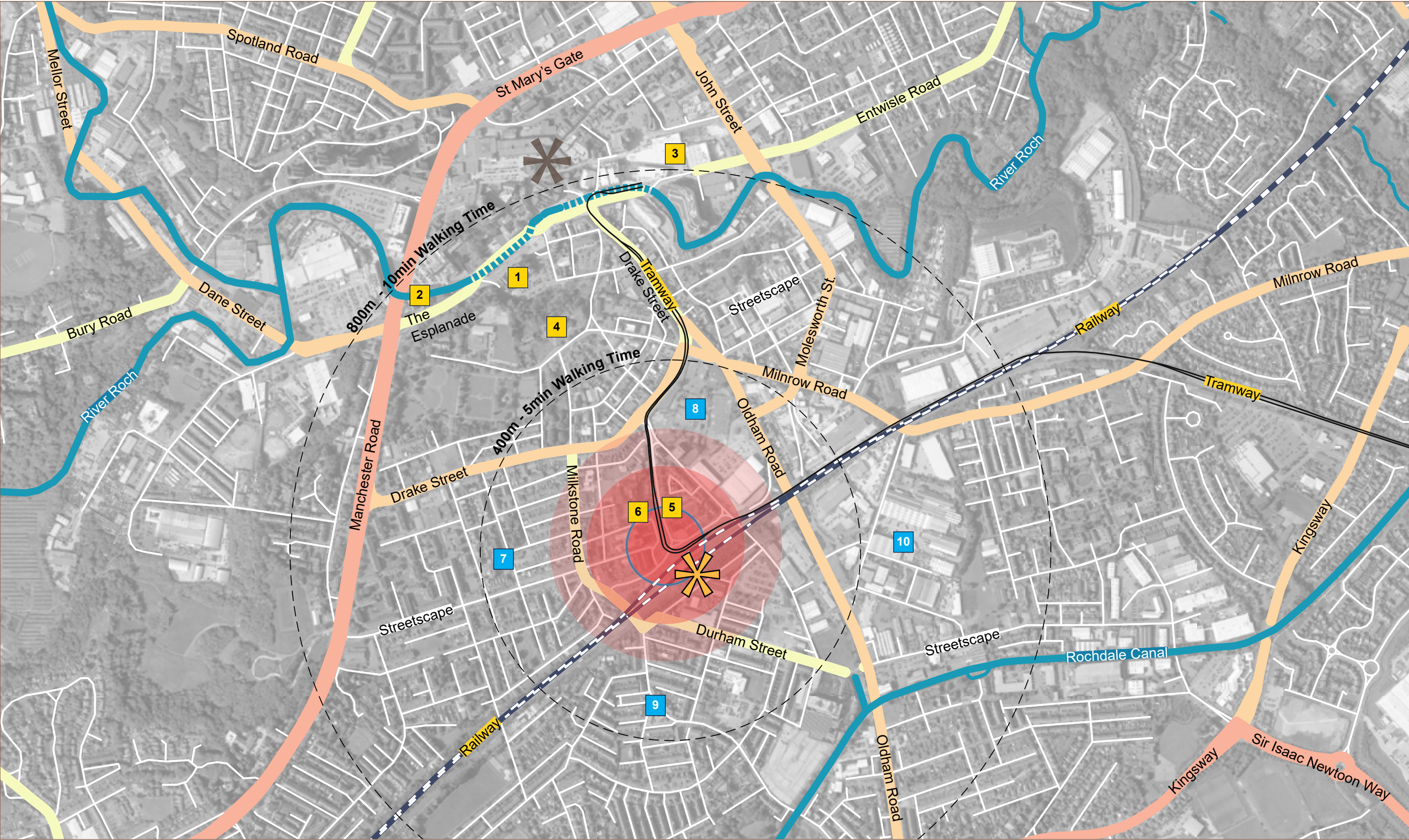
Before the design approach is considered, it is important to carry out a context and site analysis. This analysis should then inform the design concept to provide a bespoke solution.

Aspects that are considered include:

- Location, Orientation, neighbouring buildings, noise.
- Topography & levels.
- Historic Context.
- Building Uses, Vehicular & pedestrian routes, local transport links.
- Findings/recommendations are illustrated within the Constraints and Opportunities section of this report



Site & Analysis . Urban context



Key:

Community Square	Rochdale Station	Touchstones Rochdale	Saint Chad's the Town's Parish	Roman Catholic of St John the Batiste	Milkstone	Deeplish
Town Centre	Rochdale Town Hall	Rochdale Riverside Ph1	Greater Manchester Fire Service Museum	Retail Park Site	Scotts Industrial Park	

Site & Analysis . Historic Mapping



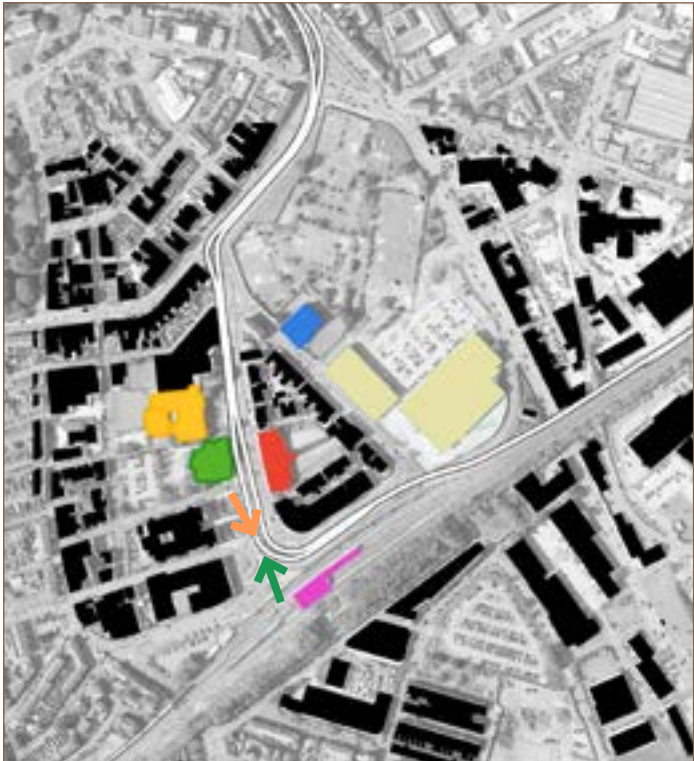
1888 - 1913



1949 - 1969



> 2000



> 2020

Map Year

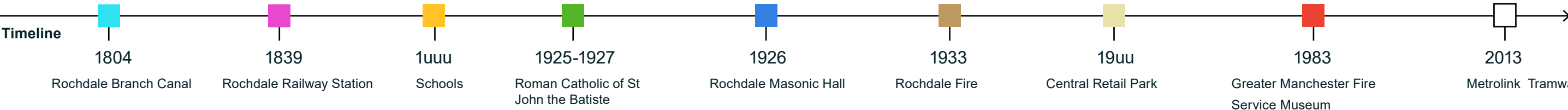
View
→



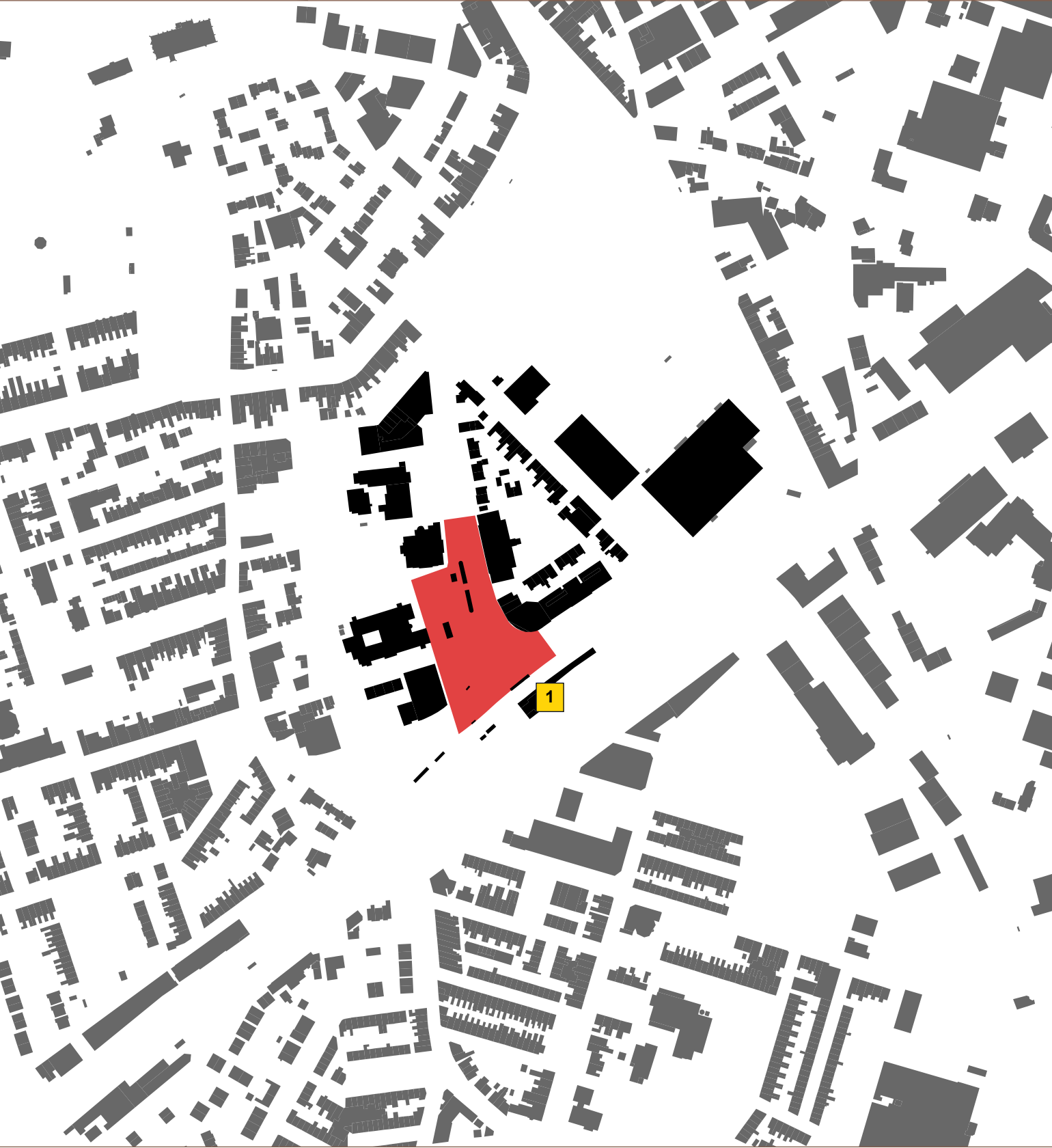
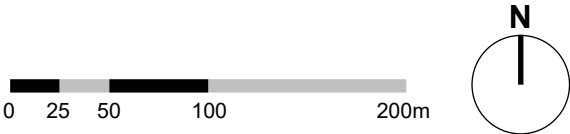
Halfpenny Bridge,
Rochdale Branch Canal



Parish Church
Schools



Site & Analysis . Urban Grain and Spatial Comparisons



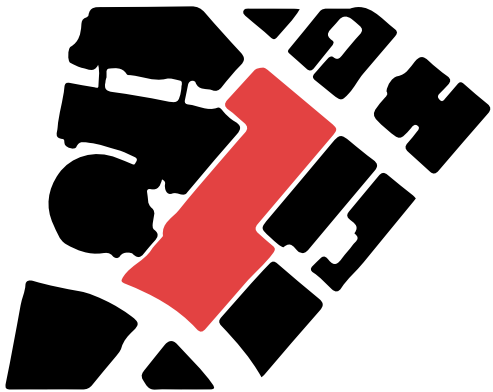
Key:

 Community Square 8270 m2

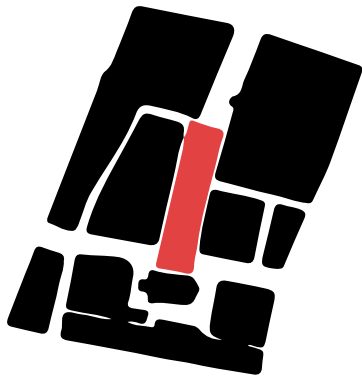
 Rochdale Station



Albert Square, Manchester 8415 m2



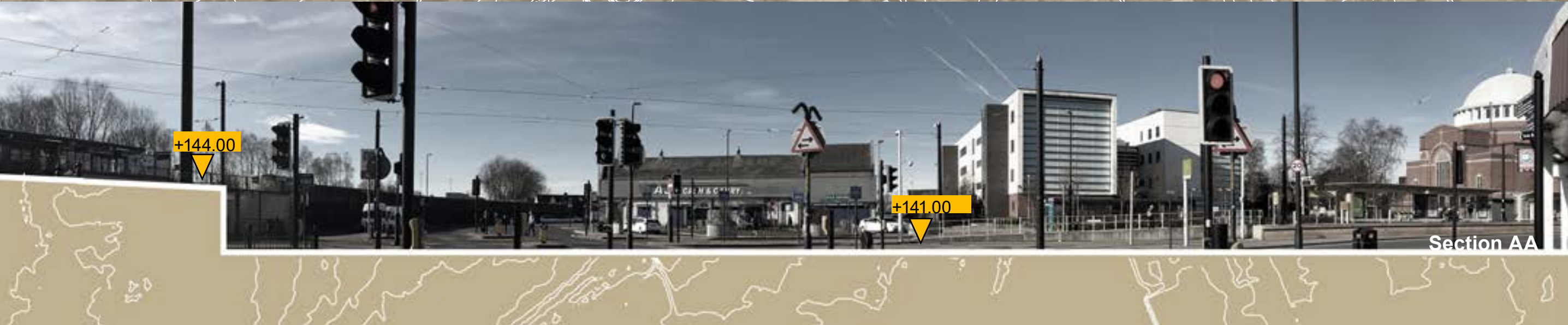
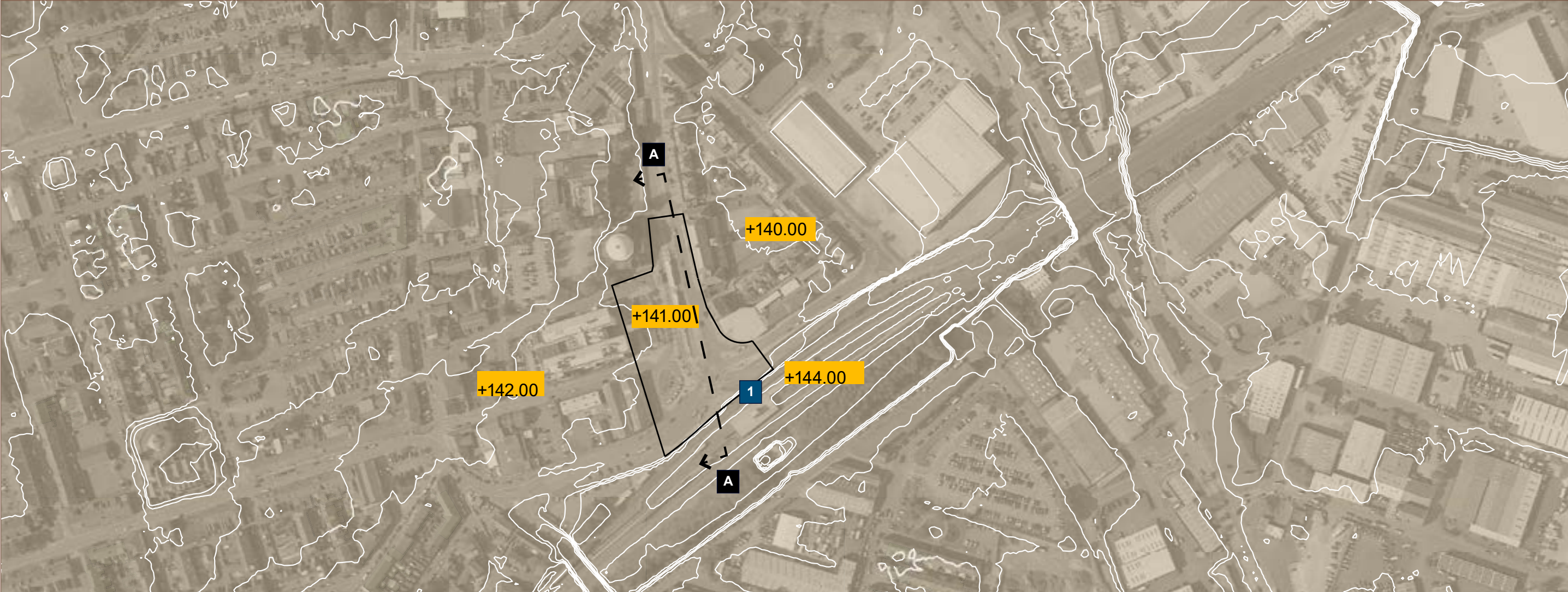
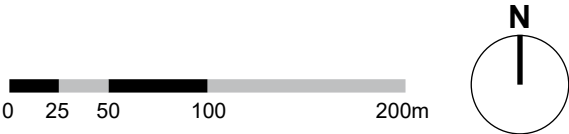
St. Peter's Square, Manchester 11,595 m2



St. Ann's Square, Manchester 2940 m2



Site & Analysis . Topography



Key:

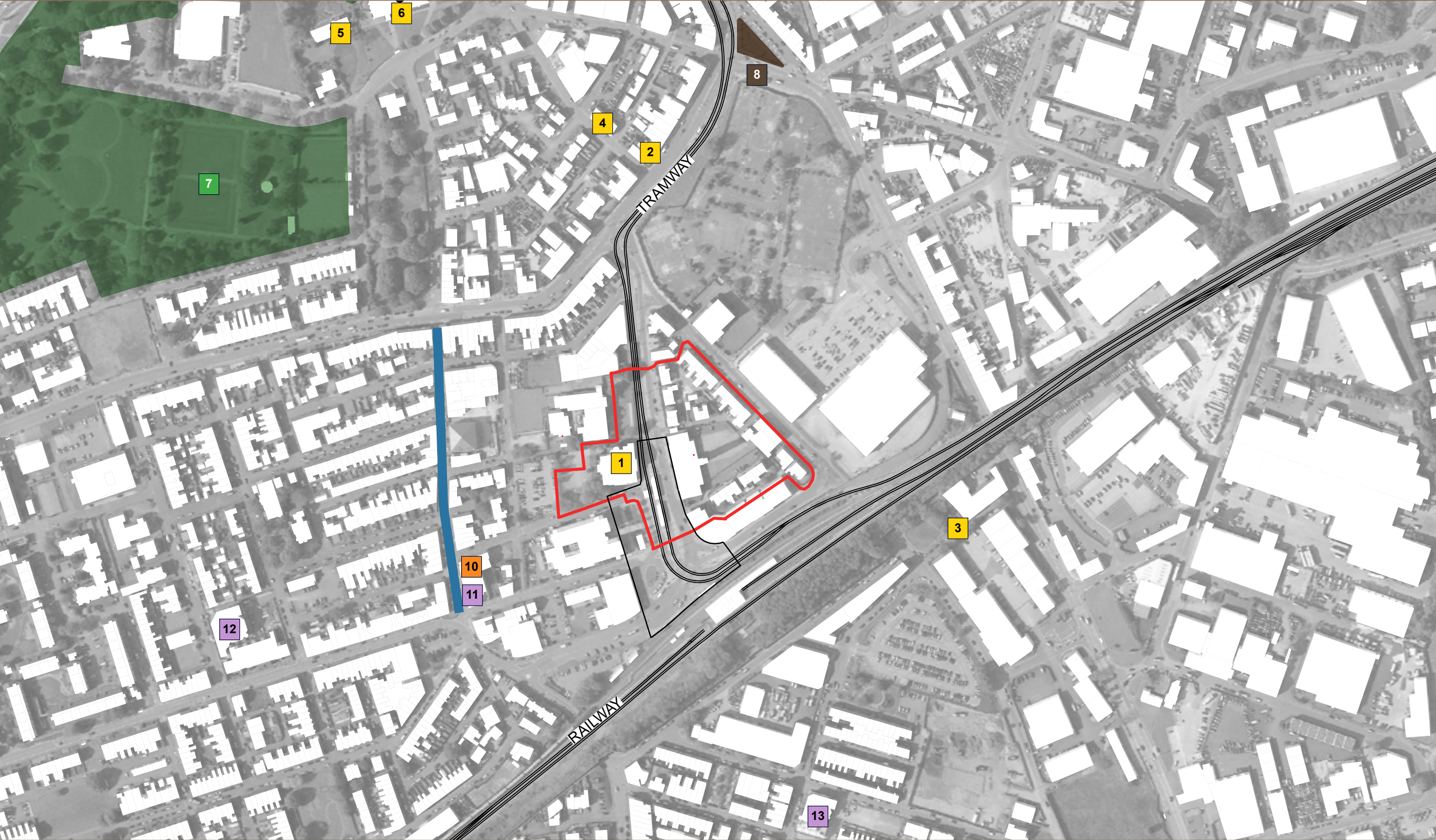
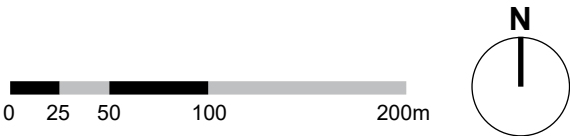
 Community Square

 1 Rochdale Station

 Contour Lines

 +141.00 Levels

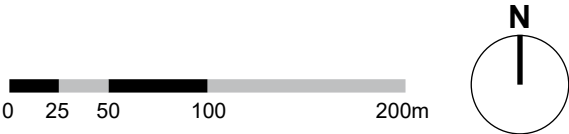
Site & Analysis . Culture and Heritage



Key:

 Community Square	 Listed Building - Roman Catholic of St John the Batiste	 Listed Building - Congregational Church	 Registered Parks&Gardens Broadfield	 Jamia Masjid Chishtia
 Maclure Road Conservation Area	 Listed Building -132, Drake Street	 Listed Building - Rochdale Museum The Old Vicarage	 Rochdale Council Land&Buildings Assets - Wet Rake Gardens	 Central Mosque Rochdale
 Local Food Culture (Milkstone Road)	 Listed Building - Rochdale Canal Branch Arm Halfpenny Bridge	 Listed Building - Church of Saint Chad	 The Curtain Theatre	 Neeli Mosque

Site & Analysis . Green Infrastructure



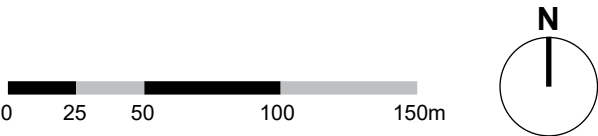
Key:

 Community Square

 Green Infrastructure

 1 Rochdale Station

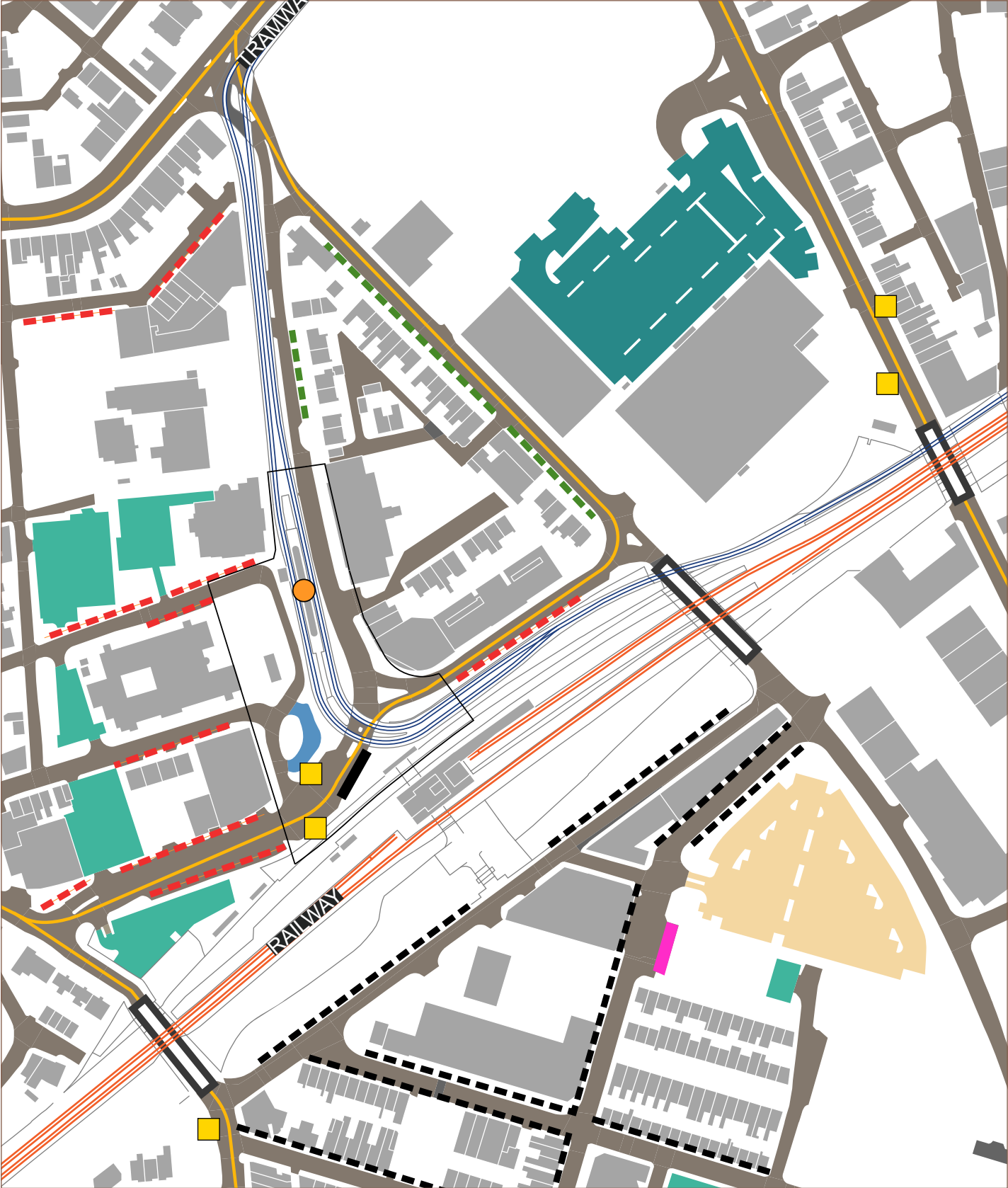
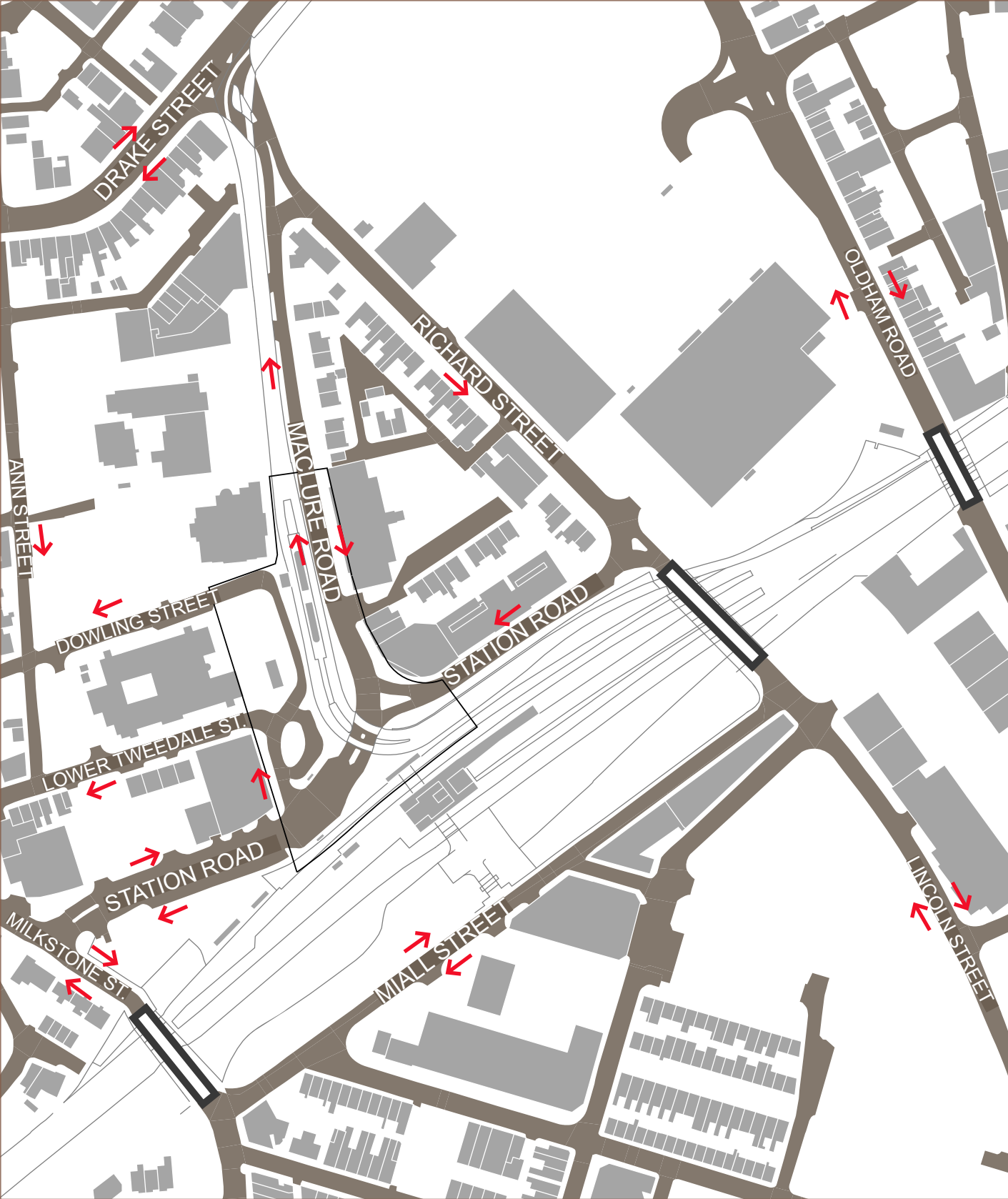
Site & Analysis . Adopted Public Highway Boundaries



Key:

-  Community Square
-  Adopted Public Highway Boundaries

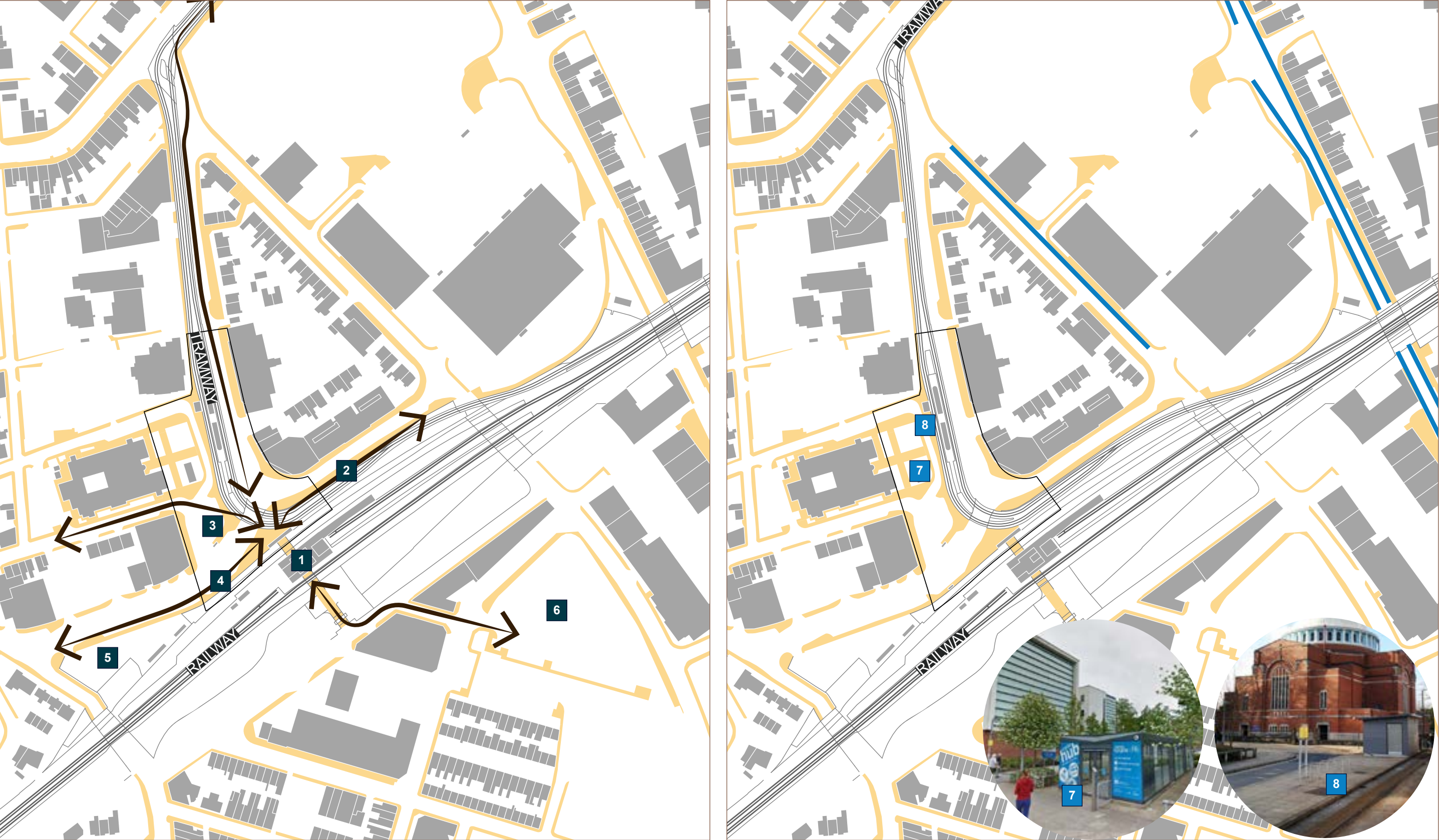
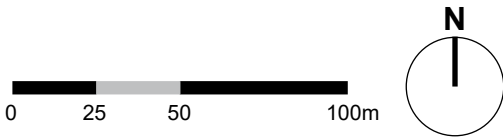
Site & Analysis . Vehicular Movement



Key:

	Community Square		Urban Fabric		Taxi Rank		Off Street Park - Public		Retail Car Parking		Free Parallel Parking
	Lanes and Directions		Road Underpasses		Bus Routes		Network Rail Loading Bay		Off Street Park - Private		Residential Parking
	Roadway		Tram Station		Bus Stops		Park and Ride		Limited Parking Time		

Site & Analysis . Pedestrian and Cycle Movement



Key:

Community Square	Sidewalk	Rochdale Railway	Taxi Rank	Car Parking	Cycle Lane	Cycle Rack
Urban Fabric	Key Pedestrian Movements	Drop off / Pick up	Bus Stops	Park and Ride	Cycle Hub	

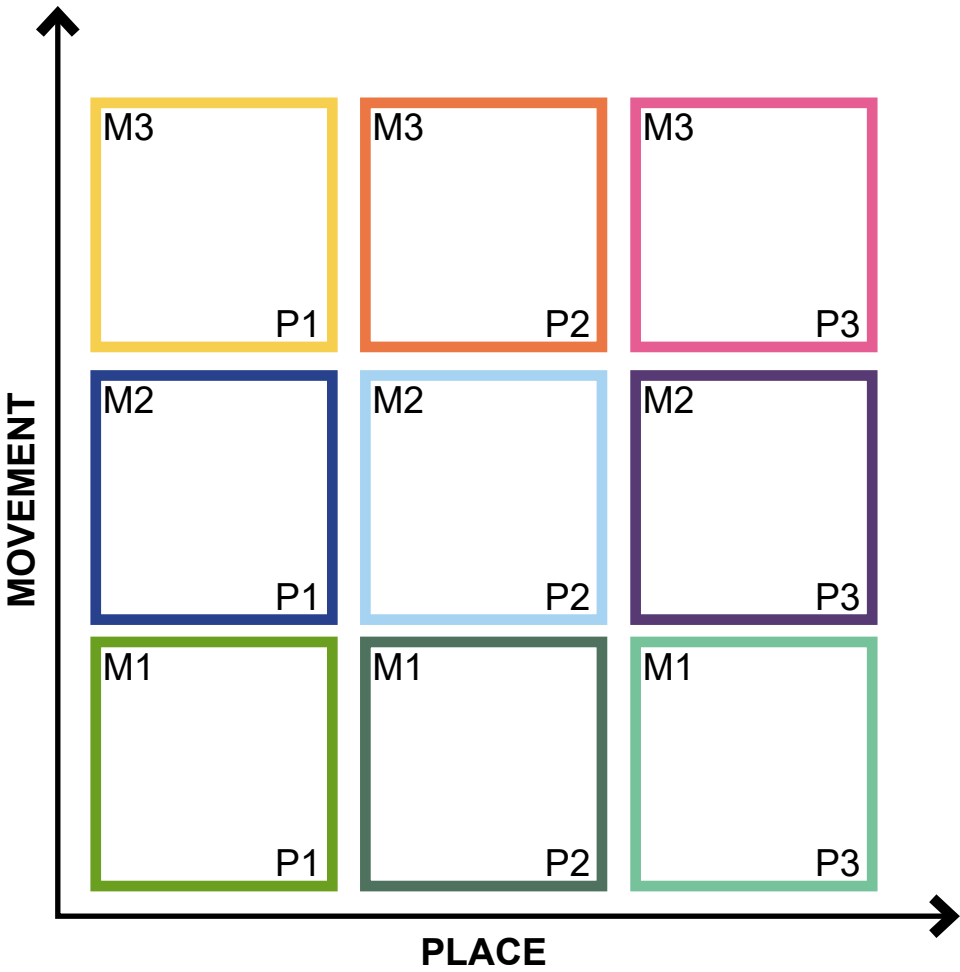
Site & Analysis . Movement and Place



Key:

 Community Square

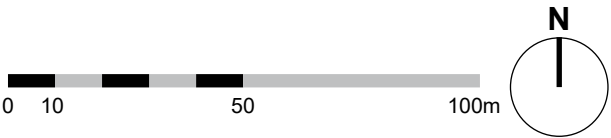
 Urban Fabric



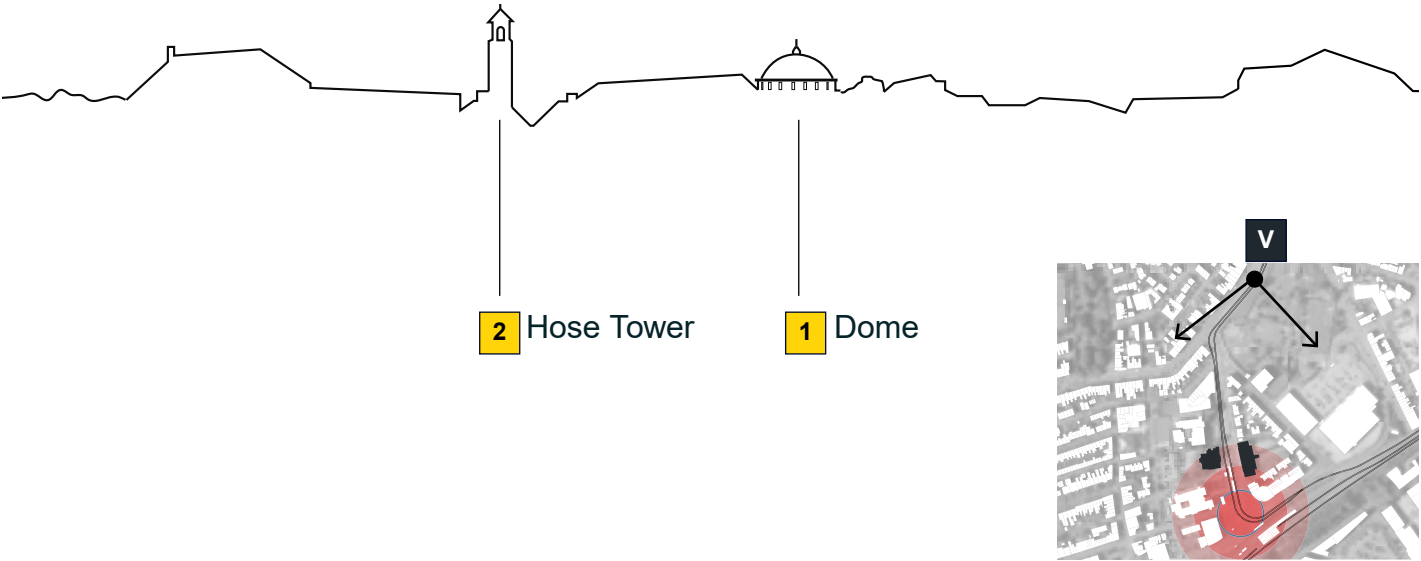
Place / Movement Criteria

Place Function	Movement Function
P3: Attracts National, Regional, non-adjacent District to District Visitors	M3: Connects local destinations to ensure people and goods can move freely and/or high levels of slower mode movements
P2: Attracts visitors from within the settlements and from Adjacent settlements (City, Town)	M2: Local access by people walking, cycling, using public transport & deliveries
P1: Predominantly local function/negligible attraction	M1: Local access only by people walking, cycling & deliveries

Site & Analysis . Landmarks and Key Views

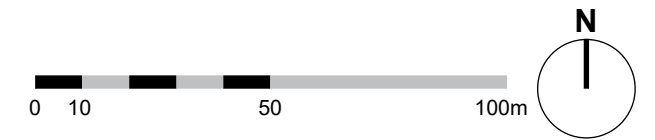


- Key:
- Community Square
 - Urban Fabric
 - Roadway
 - Sidewalk
 - Landmark - Roman Catholic of St John the Batiste Dome
 - Landmark - Greater Manchester Fire Service Museum Hose Tower

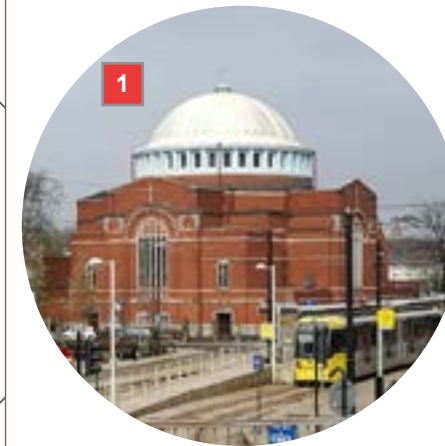


- Key Views
- View From Drake Street

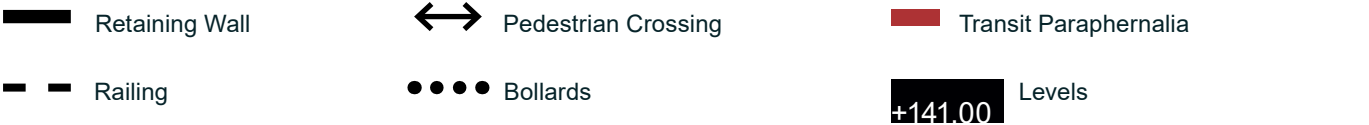
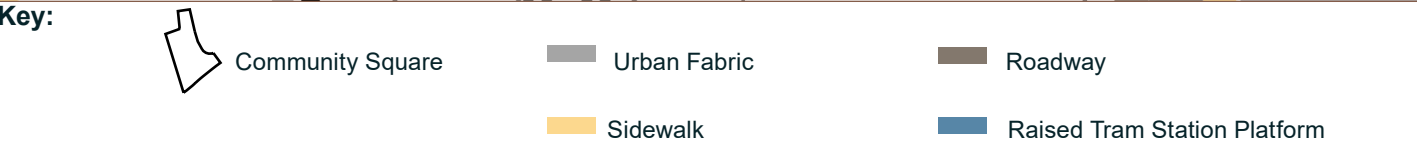
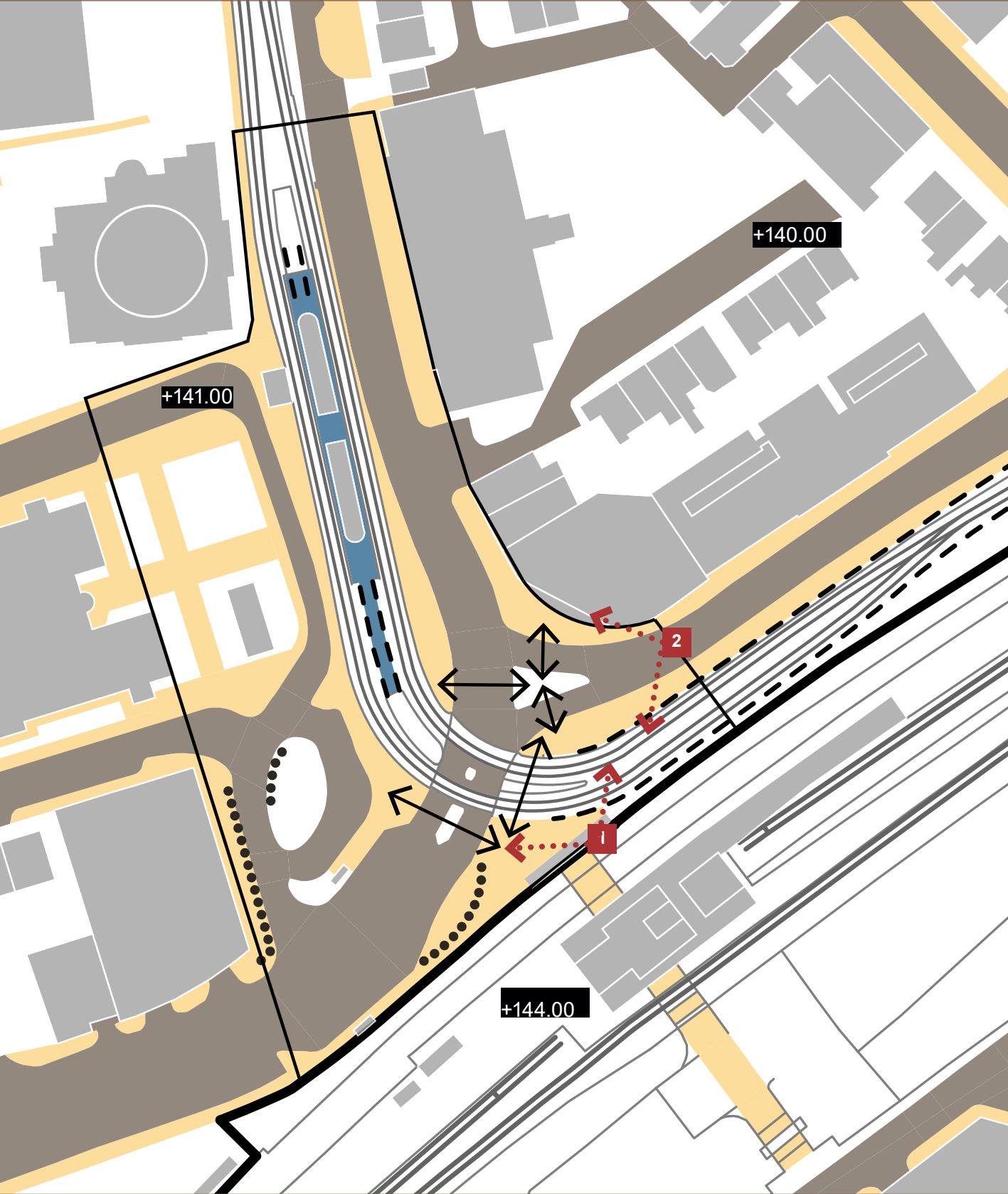
Site & Analysis . Key Buildings, Uses and Active Frontage



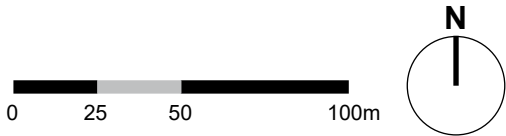
- Key:**
- | | | | | | | |
|------------------|---|---|--|---------------------|--------------------|---------------------------|
| Community Square | 0 St John's Roman Catholic Primary School | 1 Roman Catholic of St John the Batiste Church - Key Building | 3 Pennine Care NHS Rochdale - Key Building | 5 Haji Cash & Carry | 7 Vacant Buildings | 9 Regenerative Substation |
| Urban Fabric | Active Frontages | 2 Greater Manchester Fire Service Museum - Key Building | 4 Rochdale Station | 6 Residential | 8 Cycle Hub | |



Site & Analysis . Public Realm Comfort & Safety and Street Clutter



Site & Analysis . Public Realm Comfort and Safety



Key:

- Community Square
- Urban Fabric

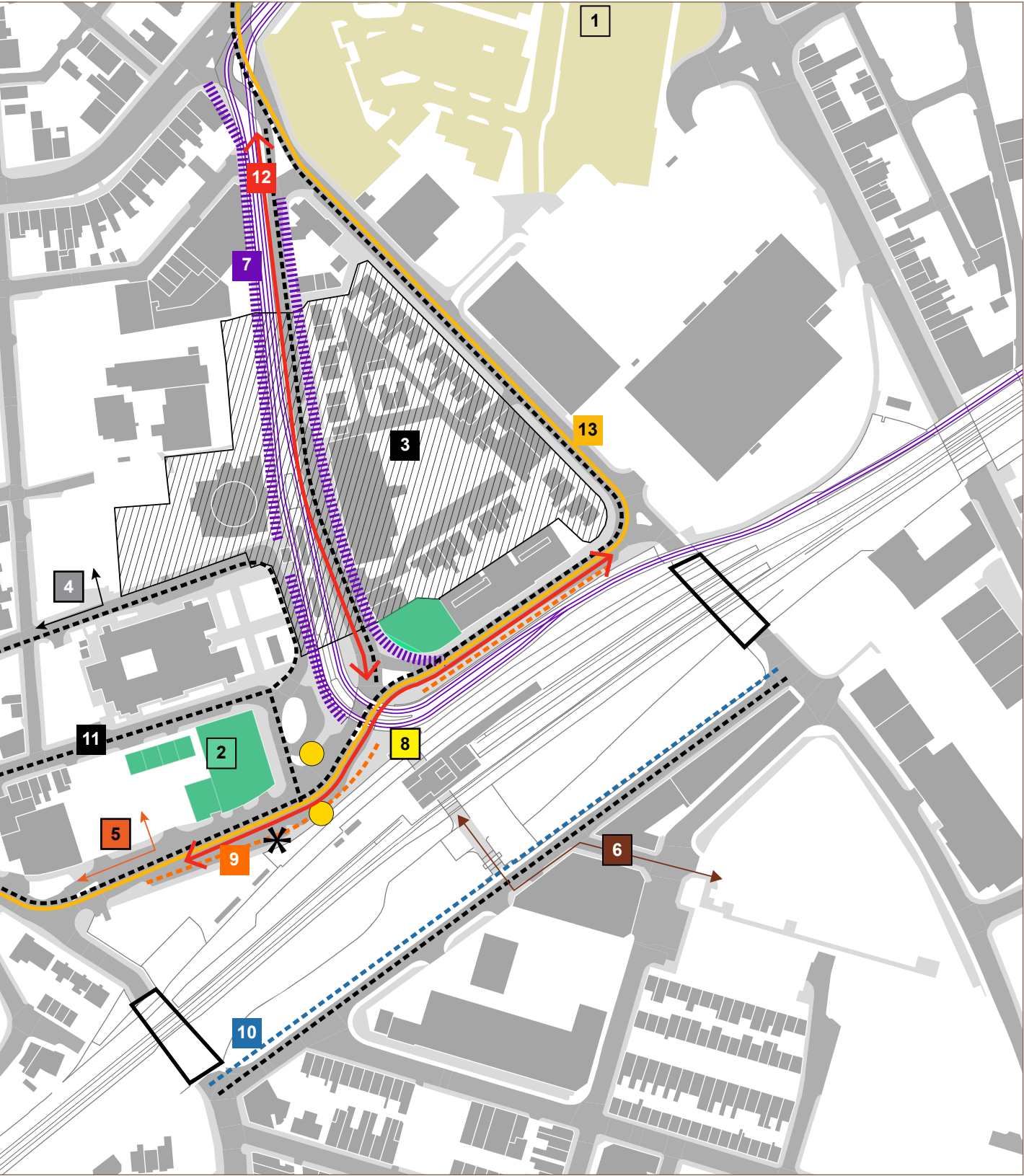
General feeling is of an unsafe / unpleasant / uncomfortable environment

- Emotive heat mapping records users perceptions of a street/ place against an established criteria of emotional responses:**
- Feels Unsafe / Unpleasant / Physically Difficult to cross
 - Can be uncomfortable / feels safe away from conflict points
 - Feels safe & comfortable
 - Pleasurable / Attractive Environment
 - High quality / Destination - Space is a draw in itself

Constraints and Opportunities

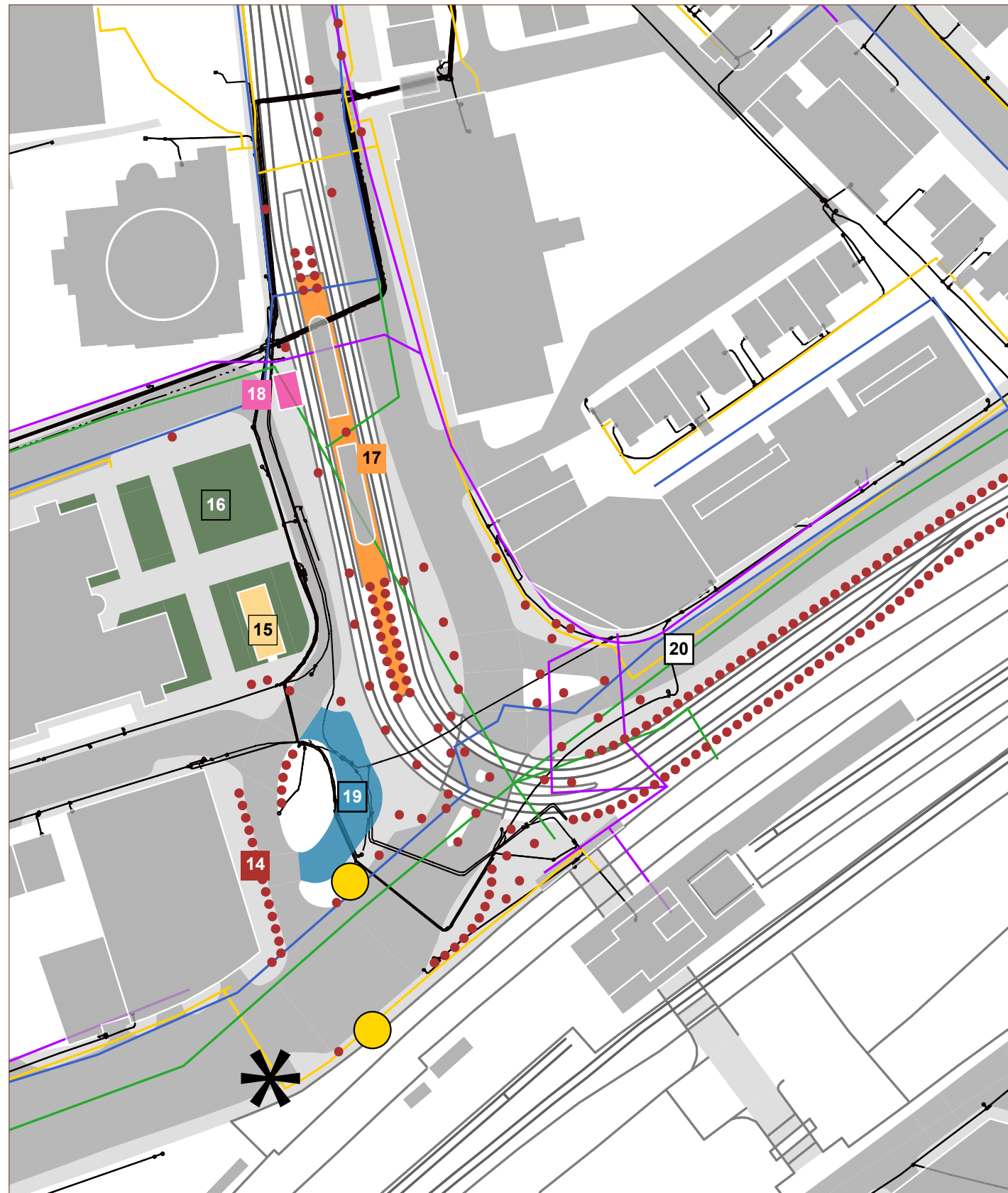


Site & Analysis . Constraints Analysis 1/2



- 1** Derelict site provides poor visitor arrival experience when coming from/to the railway station
- 2** Poor urban morphology and vacant buildings provides a lack of urban fabric value and an unsafe perception
- 3** Maclure Road Conservation Area. Inappropriate setting from buildings
- 4** Provide access to Nye Bevan House parking on Dowling Street
- 5** Retain access for businesses on the Worldwide Foods/Haji block
- 6** Poor pedestrian route to park and ride facility
- 7** Tramway track results in a poor East/West pedestrian connectivity including segments of segregated right-of-way
- 8** Rochdale Station provides poor arrival/ departure experience
- 9** Poor quality of vehicular drop off / pick up
- 10** Miall Street - narrow road with vehicles mounting kerbs
- 11** Lack of road hierarchy. Vehicular access with poor-quality space and layout. The road network is narrow and combine driveway with parallel car parking. Existing vehicular access inadequate to new uses
- 12** Lack of natural navigation and wayfinding from/to town centre and local communities
- 13** 471 Bus route and Bus Stops
- Low Bridges
- 3 x disabled car parking spaces

Site & Analysis . Constraints Analysis 2/2



14 Street Clutter - Transit paraphernalia with visual impact and potential pedestrian hazards



15 Cycle Hub location and separation from Station

16 Establish public realm with trees

17 Raised tram station platform and access ramp blocking pedestrian flow



18 Substation location and visual impact



19 Taxi Drop-off - Segregated traffic mode

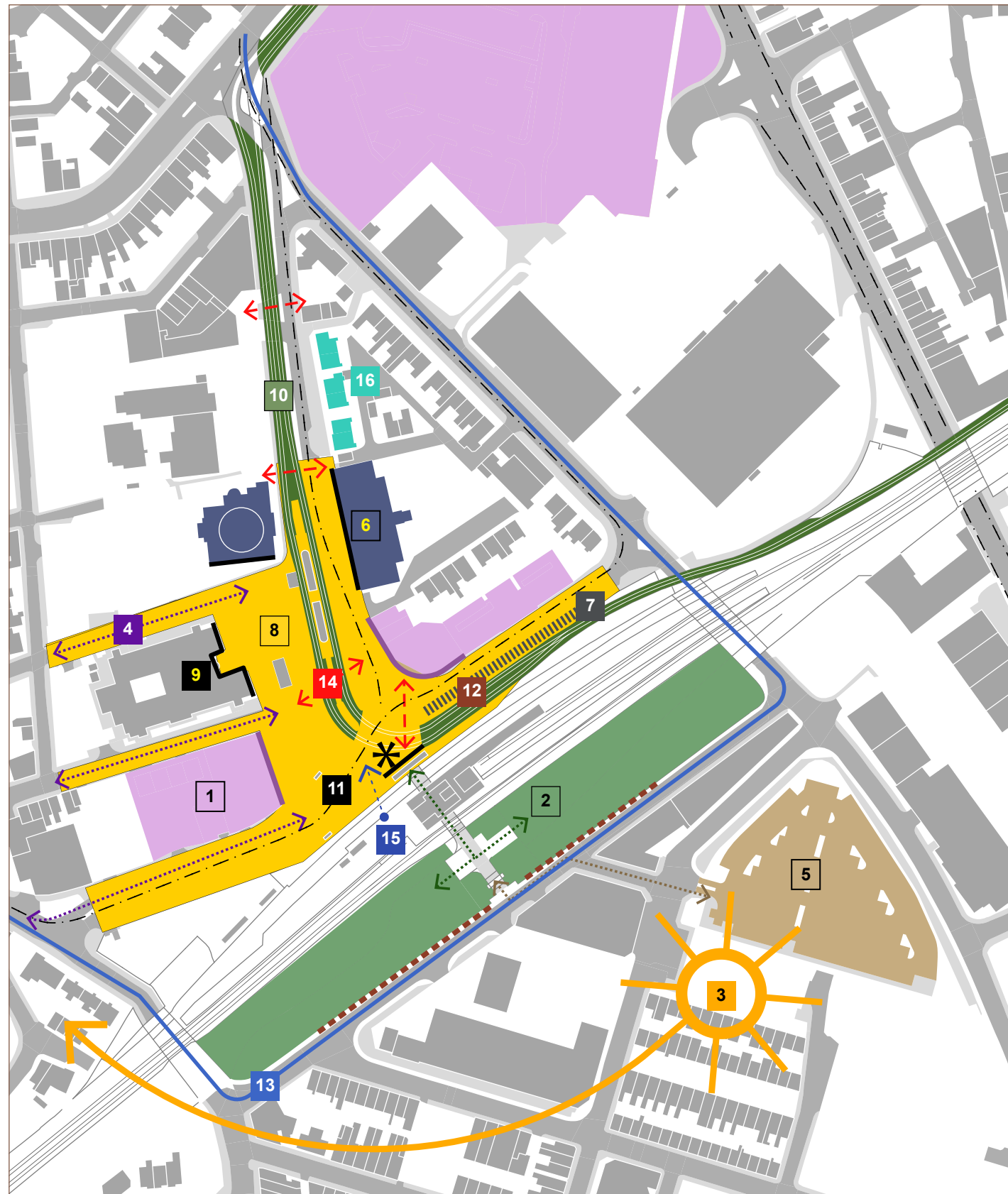
20 Existing Utilities Network:

— Electricity — Water — BT
— Gas — Sewage

● Bus Stops

✱ 3 x disabled car parking spaces

Site & Analysis . Opportunities



- 1 Development opportunities. Improve urban fabric uses and active frontages
- 2 Existing self seeded woodland to be retained and enhanced. Opportunity to give access to public and facility to community
- 3 Sun-path exposure. Find the hot spots
- 4 Opportunity to reconnect and establish a physical and psychological link with Milkstone community
- 5 Improve connectivity and “safety” to Park and Ride
- 6 Opportunity to celebrate historic buildings and provide appropriate setting
- 7 ■■■■ Opportunity to transfer/relocate disabled car parking. To Station Road [East] or Park and ride instead?
- 8 Opportunity/Indicative multi-use community square. Opportunity for a new vehicular free traffic model
- 9 Opportunity to improve and enhance existing active frontages
- 10 Opportunity to improve the sustainability and aesthetic of the tramway. At the same supporting and enhance the lack of green spaces/corridors
- 11 Opportunity to improve and enhance pedestrian / cycle way network natural navigation / wayfinding
- 12 Opportunity to relocate taxi rank, pick-up & drop-off and Bus Stops to North Sattion Road
- 13 Opportunity to divert 471 Bus route towards Miall Street.
- 14 Opportunity to improve and increase East/West connectivities and pedestrian safety
- 15 Maintain and enhance views towards Museum Hose Tower and St John the Bastille Church
- 16 Rochdale non-designated heritage assets
- ✱ Opportunity to improve station sense of arrival and gateway experience

SWOT Analysis



SWOT Analysis

Strengths

1. Footfall from station provides activation
2. Listed buildings and conservation area provides high quality setting
3. Church/Fire station tower as landmarks
4. Community facility neighbours– Health centre / School / Church
5. Established interchange (Bus/METRO/Train) facility
6. Council landownership of some adjacent future development plots
7. Existing engagement with Historic England/Officers/MSA
8. Longer views to surrounding countryside
9. Local community offer: Food/Theatre
10. View from station
11. Increased footfall on local rail service

Opportunities

1. Create more space and comfort for pedestrians and cyclists
2. Enable places to stop - face to face interactions for local community
3. Create a gateway to the town
4. Provide an appropriate setting for the heritage assets
5. New museum attracts broader demographic from across GM
6. Encourage active travel through a 'streets for all' approach
7. Create a flexible space for events and activity
8. Masterplan proposals: new residents / community growth / local spend /employment
9. Square as a platform for events and activity to enliven the space
10. Co-design with local communities/stakeholders
11. Incorporate community food/theatre offer into place
12. High quality public realm will increase land values and development viability of plots around the square

Weaknesses

1. Extremely poor arrival experience - street clutter a particular issue
2. Disjointed and low quality public realm - lack of coherent character in streetscape
3. Segregated modes create complex/severed urban realm
4. Vehicles dominate the space – issues of safety and air quality a place to pass through
5. Navigation and wayfinding is poor
6. Very low levels of green spaces and green infrastructure
7. Low bridges limit options to relocate buses

Threats

1. Funding for delivery of change
2. Non 'buy in' from community – engagement is key
3. Complexity of relocation of bus routes/stops / taxi ranking / pickup
4. Incorporation of CTU requirements
5. Restrictive working around Metrolink

Vision

Vision

Create a distinct, attractive and appealing community environment that provides a modern identity, exceptional gateway experience and setting for adjacent heritage assets. Beyond a high quality public realm, utilise the square as a catalyst for growth within the Station / Milkstone neighbourhoods.

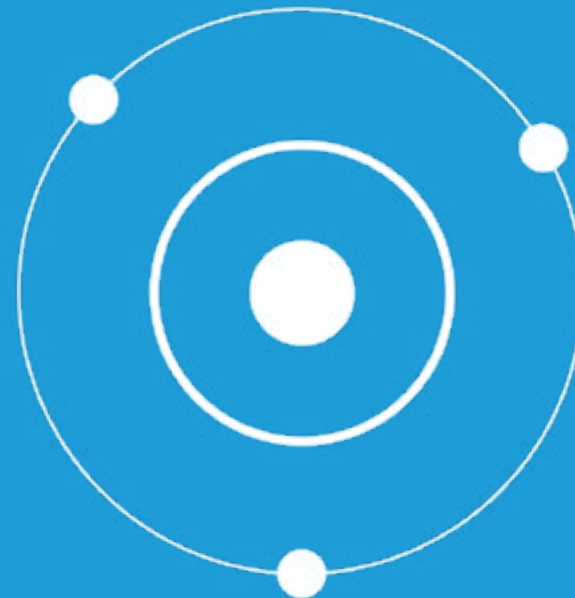


Vision . Project Aims



Movement

Establish a clear hierarchy of movement & access to support a 'Streets for All' approach



Place

Ensure a 'Place led' and contextual approach



Climate

Promote sustainability across all aspects of the design

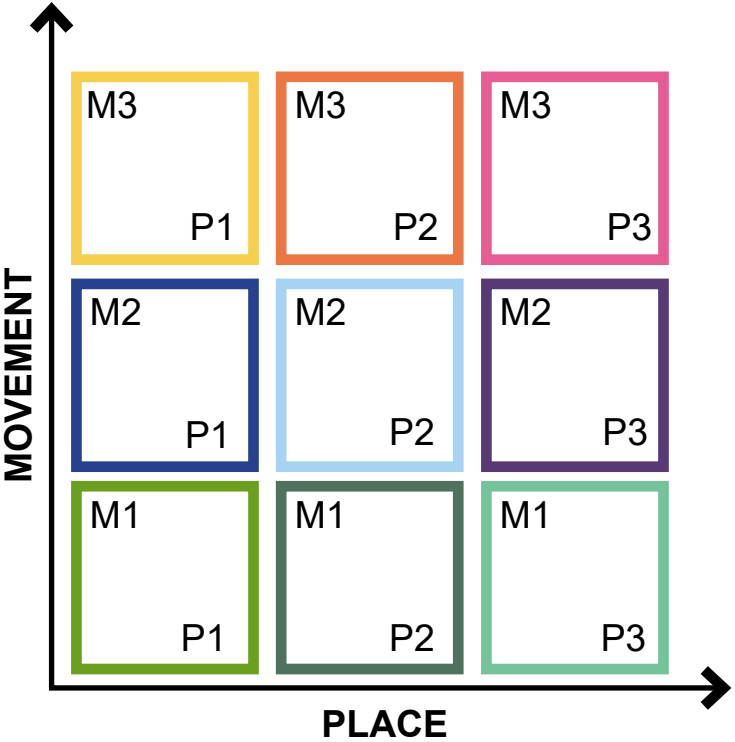
Vision . Project Drivers

1. Provide seamless physical links to the town centre and adjacent communities (existing/ new residents). Stimulate pride through ownership referencing local narratives
2. Create a people first space - Reduce movement conflicts. Consolidate parking/pick up and drop off facilities. Promote active travel
3. Create a space with a strong sense of purpose - a canvas for activity, vibrancy and community, accommodating places for events and to dwell
4. Promote station square area as a Gateway experience for the town and region
5. Ensure an adaptable and 'loose fit' approach to accommodate programming change/use flexibility
6. Enable connectivity. Create a place that facilitates natural navigation through design.
7. Celebrate and provide attractive and vibrant setting for existing heritage assets
8. Provide a green infrastructure hub that can connect into a network of public green spaces
9. Mitigate climate emergency through design
10. Recognise requirements for health and wellbeing

Vision . Movement and Places Aspirational



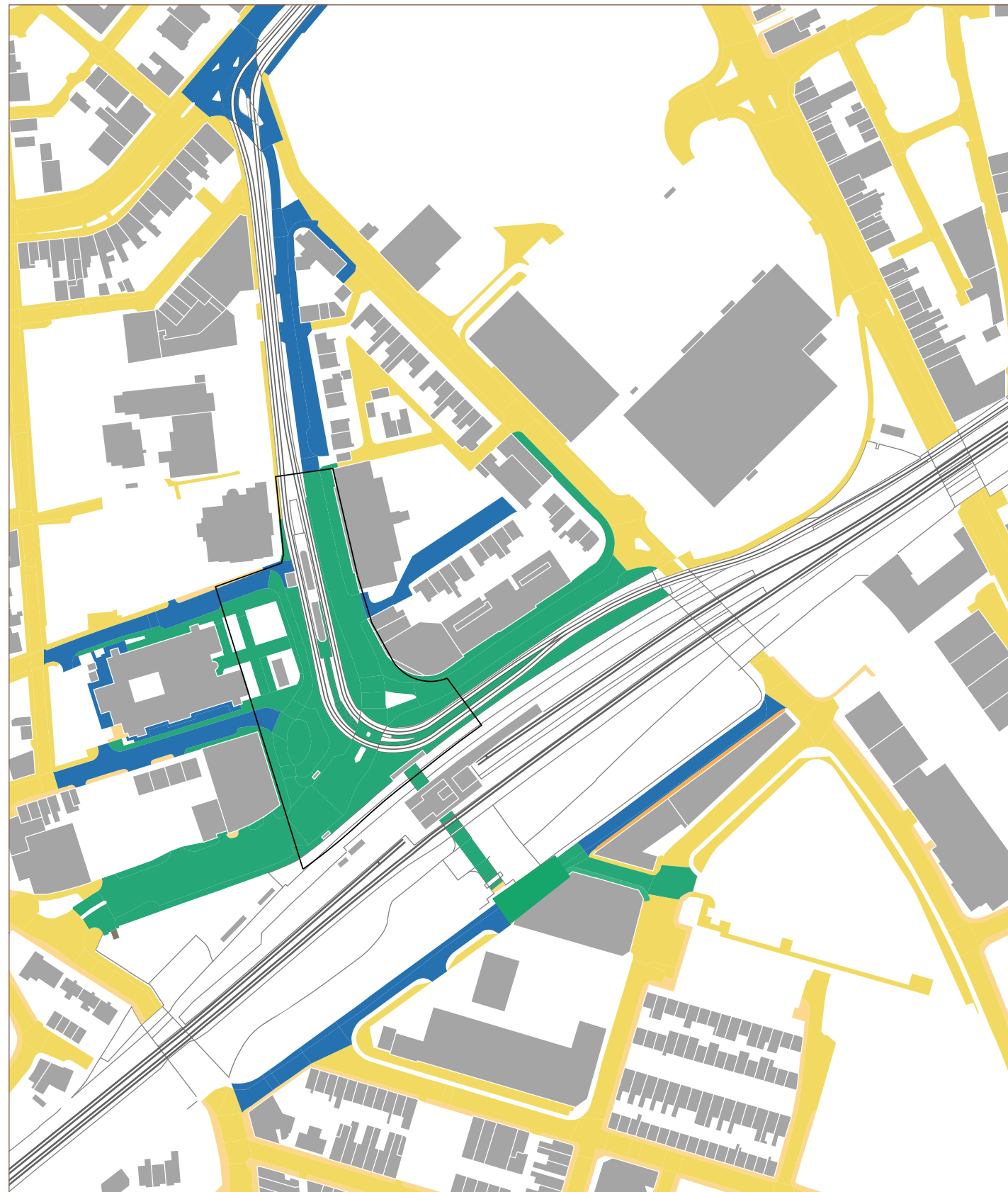
Movement and Place Today



Place / Movement Criteria

Place Function	Movement Function
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Vision . Public Realm Comfort & Safety Aspirational



Key:

-  Community Square
-  Urban Fabric



Public Realm Comfort & Safety Today

General feeling is of an unsafe / unpleasant / uncomfortable environment

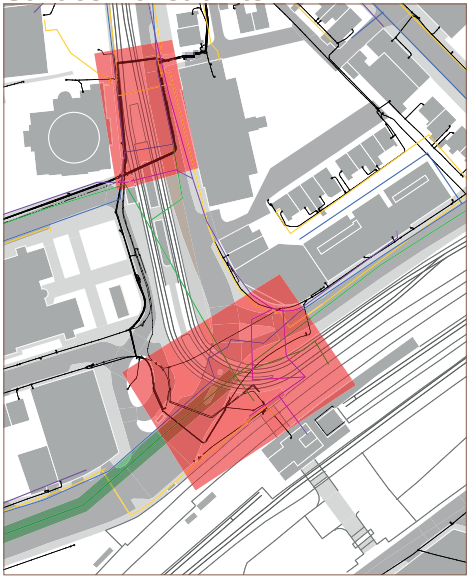
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-  • Can be uncomfortable / feels safe away from conflict points
-  • Feels safe & comfortable
-  • Pleasurable / Attractive Environment
-  • High quality / Destination - Space is a draw in itself

Derisking Activity

Derisking Activity . Summary

02 De-risking Utilities Constraints



North end of Rochdale Station tram stop

- ENW 6-6.6kV Cables
- ENW LV Cables
- UU Water Main
- Cadent Low Pressure Gas Main
- UU Surface water Sewer 300mm
- Abandoned UU sewer

The Western section of this hot-spot is directly underneath tram tracks. The Eastern side of this hotspot is within the footpath fronting on to the old fire station building - issues with working near residential properties and on pedestrian routes.

Appropriate traffic management for Maclure Road will apply.

Immediately north of Rochdale Railway Station

- ENW LV Cables
- Cadent Low Pressure Mains
- Openreach
- UU Combined sewers: 300mm, 450mm & 525mm
- UU water main

Consider metrolink working safely guidelines for any works within tram track area.

Appropriate traffic management for junction between Maclure Road and Station Road will be required in the event of any works being carried out.

Proximity to the northern entrance to Rochdale Railway station (access to Rochdale town centre 0.5 miles to the north). High foot traffic will have to be considered prior to any works.

Hot Spots Identified - note to avoid intrusive works in key areas i.e. tree planting/water features/public realm structures/ foundation

RISK

02 De-risking Stakeholder Consultation

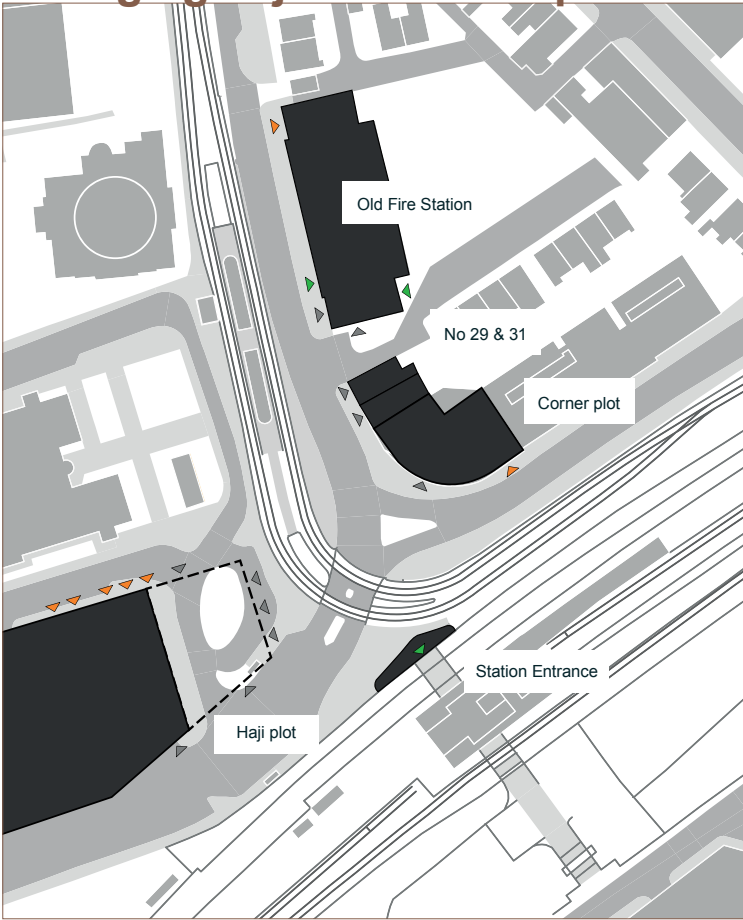
- ✓ Lead Members
- ✓ Rochdale Officers
- ✓ Historic England
- ✓ TfGM
- Local Community Leaders
- ✓ Metrolink
- ✓ Network Rail
- ✓ Utility companies / Statutory Undertakers
- NHS - Nye Bevan House
- Tenant and property owners
- Key Landowners

02 De-risking Stakeholder Responses

- Space for a piece of public art.
- Potential for fountain/water feature
- Higher quality environment/finishes
- Use railway viaduct for interactive artworks.
- Demonstrate the benefits for the local community
- Maintain vehicular access for residents in Fire Station Yard or create alternative
- Space for rail replacement buses
- Maintain vehicular access for resident car parking at top of Maclure Road or create alternative
- Space for Fire Station spill out and exhibitions
- Good positive feedback
- Important to commence dialogue with community in next stage of works to establish local needs and potential public realm features/activities/etc.
- Continuous engagement with key stakeholders

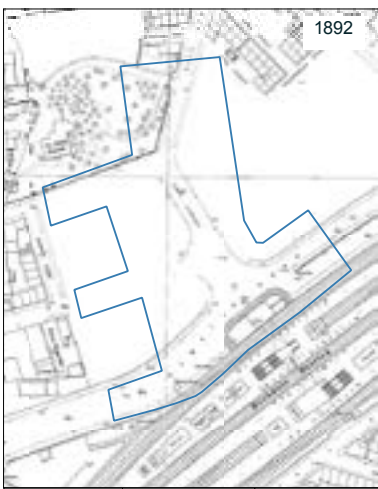
RISK

02 De-risking Emerging adjacent developments



- Ongoing two way dialogue with development plot designers essential to ensure opportunities are maximised for all parties
- Positive enclosure of the square to the West and East
- Framing views of the Fire Station and St John the Baptist Church
- Potential change of building footprints
- Increase of residential uses - footfall
- Square to be overlooked by new residents
- Active frontages to the square provide activation
- New access/parking/loading layouts may be required
- New station arrival / departure experience

RISK



- No significant show stoppers in study area
- Be aware of some sensitive buried elements and historic buildings within the study area
- Review report outputs to weave historical narrative into the story of the square

RISK

Framework . Overlay - Heritage Assets Setting and Key Views



Key:

← Key Views

|||| Historic Landmarks

■ Heritage Assets

■ Urban Fabric

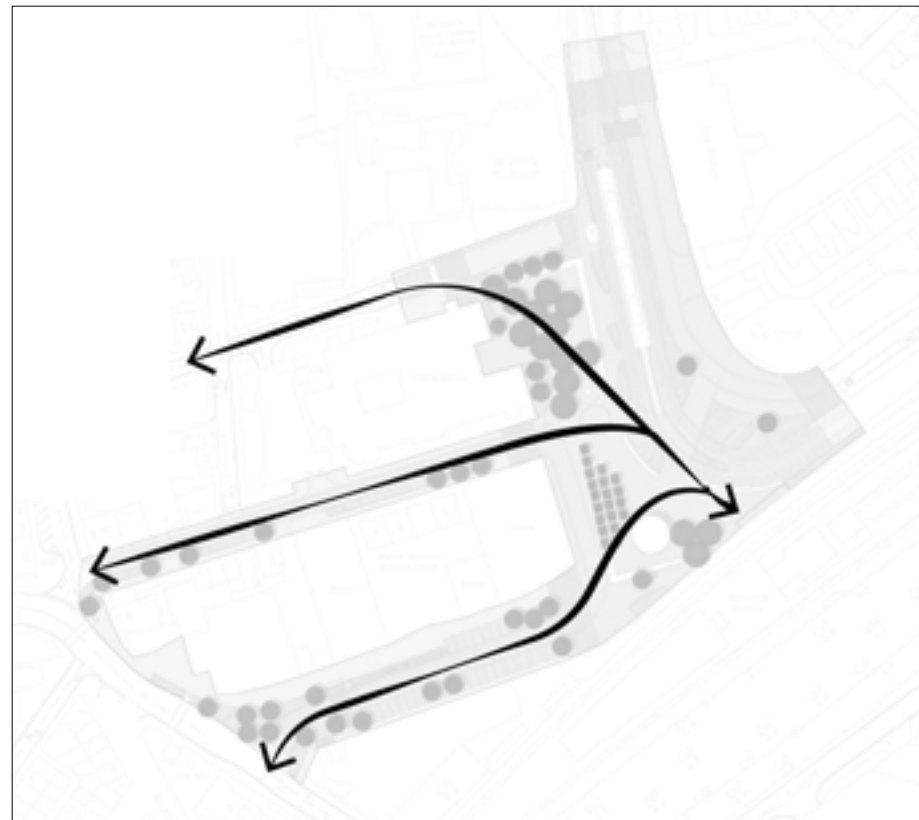
NOTE: Stage 1 Framework Plan with Heritage recommendations

Attributes of heritage assets and their physical surroundings considered:

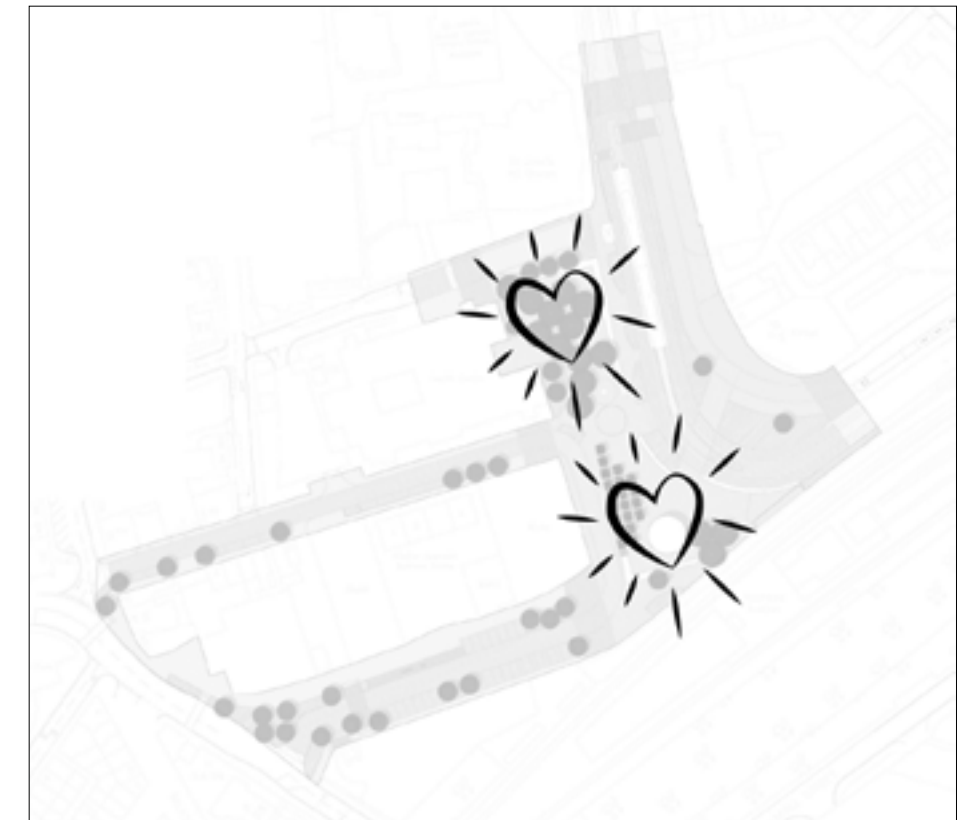
- Location and siting of asset e.g. position in relation to key views, facade orientation, elevation of asset feature e.g. hose tower and dome
- Form and appearance of Station Square proposals
- Wider effects of Station Gateway Masterplan
- Permanence of Station Square proposals

Enhancement of heritage assets and their setting to be achieved by:

- Assembly of heritage assets along the northern and eastern enclosure of the square contribute to positive pedestrian experience, especially while connecting to Rochdale town centre via Maclure Road. Proposed public realm components and historic facades act as landmarks to guide pedestrians.
- De-cluttering and revealing the facades/features of heritage assets as a sequence of framed views on a journey through the square an integral part of the Framework design.
- Removal of vehicular traffic allows better/ considered appreciation of heritage assets by residents and visitors.
- Opportunity to enhance curtilage with sympathetic and quality surfacing materials.
- Enabling new experience of heritage assets by activating frontages e.g. business/museum spillout and the placing of public realm components e.g. seating.



Reconnect & establish physical and psychological links with shops and business in the wider Milkstone community



The multi-use Plaza as the new heart for community business and recreation

Design Objectives

Station Square will provide a series of key design objectives.

These are described in this section add:

Reconnect establish a physical and psychological link with shops and business in the wider Milkstone community;

The multi-use Squares as the new heart for the community business and recreation;

Sense of arrival and welcome gateways to new Square;

Visual focal points design;

Celebrate and new sense of arrival on Rochdale Station;

Drop off and Pick up spaces around the Station;

Features inform movement and define spaces;

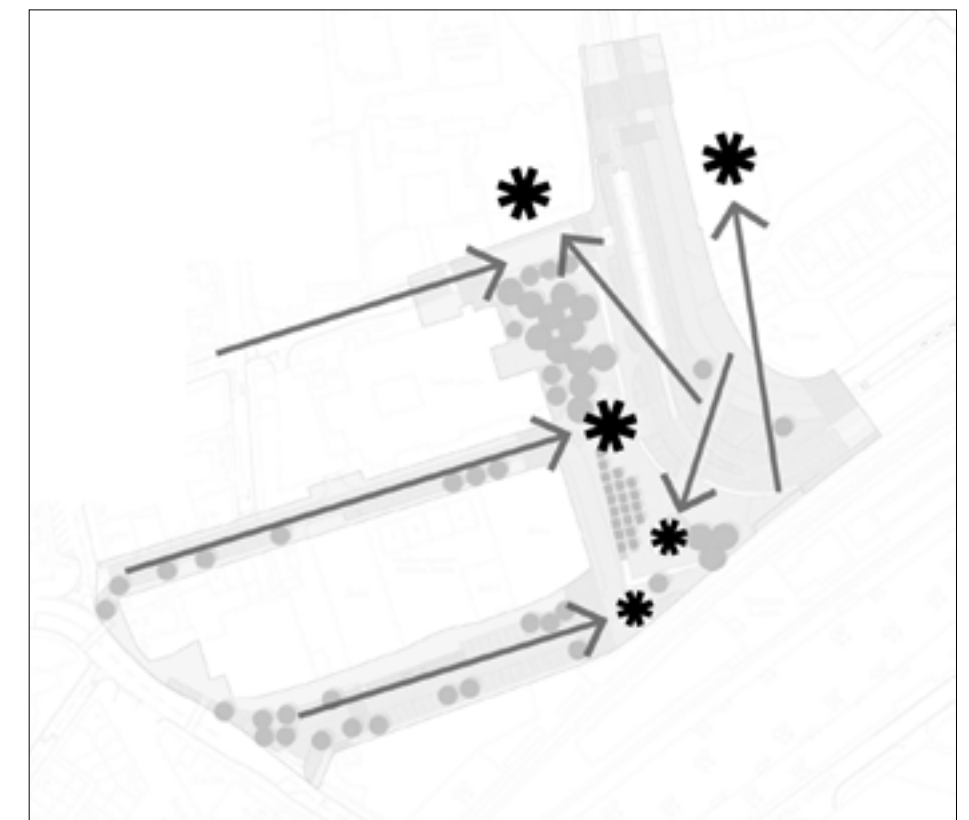
Walking friendly street design;

Improve and increase North&South and East&West connectivity and pedestrian priority and

Involving public space and squares with formal and informal nature. Tree planting to achieve, open and enclosure spaces , human scale and improve GI and sustainability.

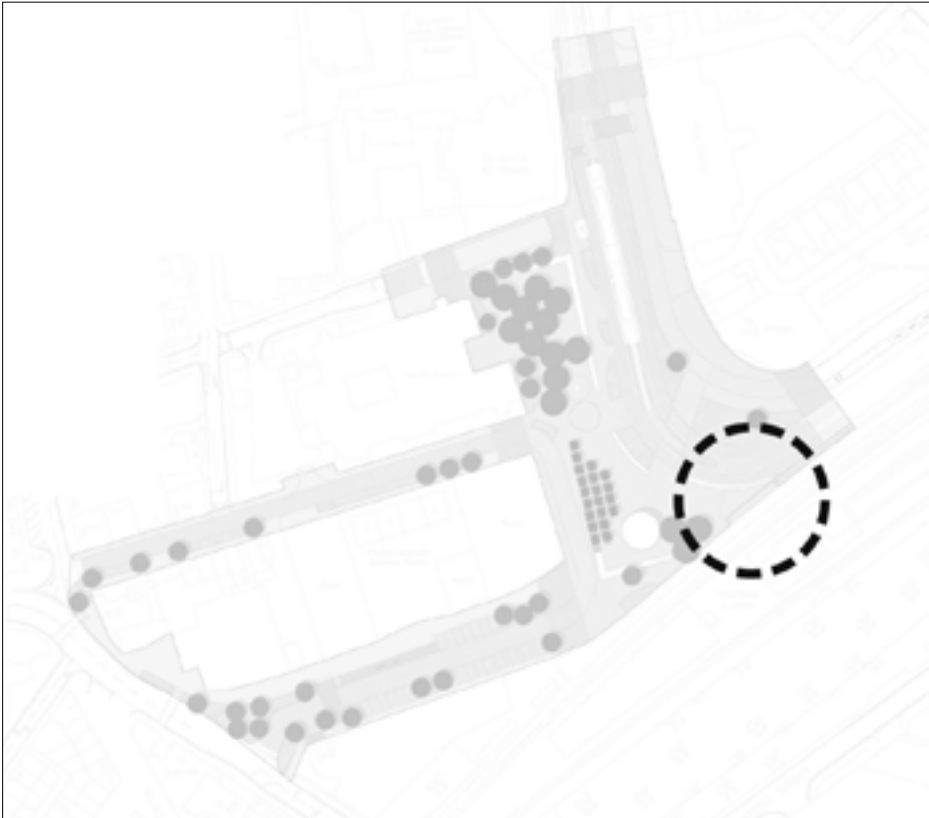


Sense of arrival and welcome gateways to new Square

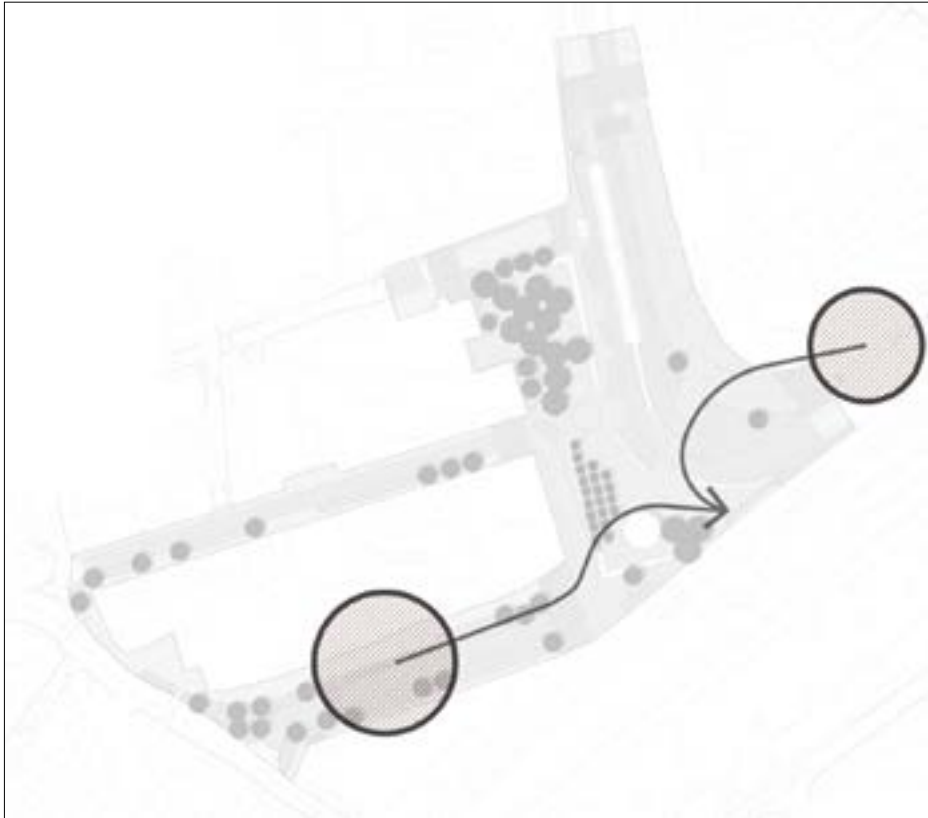


Visual focal points design

Design Objectives



Celebrate a new sense of arrival at Rochdale Station;



Drop off and Pick up spaces around the Station



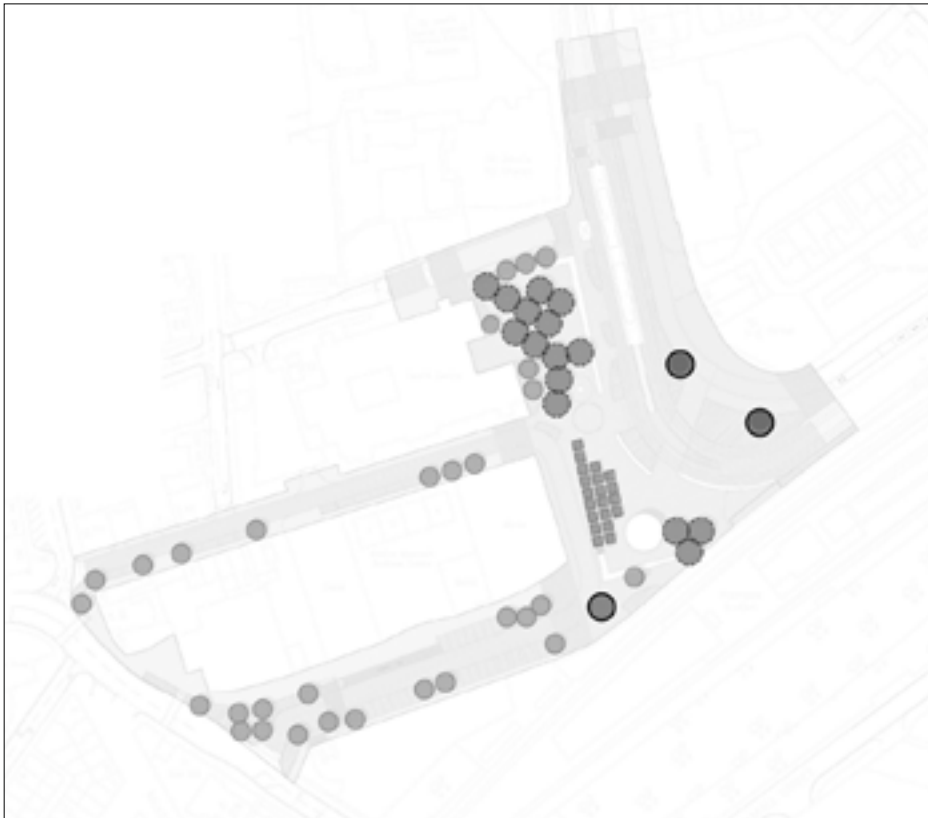
Features inform movement and define spaces



Walking friendly street design



Improve and increase North&South and East&West connectivity and pedestrian priority



Involving public space and squares with formal and informal nature. Tree planting to achieve, open and enclosure spaces , human scale and improve GI and sustainability

Design Statement

Station Square will provide an important and much needed space for local communities and is an exciting opportunity to develop a new civic space to the north of the railway station that can create an enhanced gateway experience to the town, act as a catalyst for investment in the station area, and support the wider regeneration strategy of the town and borough.

The scheme is made up of 2 distinctive character typologies:

- Streets and;
- Square

Streets

These will be pedestrian prioritised routes with and traffic calmed through design. Low kerbs, narrowed carriageways, widened footways and clear movement routes are proposed. High quality block materials, tree planting and integrated Sustainable

Urban Drainage (SUDs) in the form of rain gardens will create decluttered green corridors connecting the Milkstone community to the space. Vehicle parking, loading, access and circulation is incorporated into the design. Taxi ranking is relocated to Station Road (east) as is the bus stop. Thresholds between the streets/Square create a transition point to mark the changing character and emphasise arrival within the square.

Square

The space hosts both activity and movement.

Movements are simplified, reducing conflict points and prioritising pedestrians. Navigation is clear with natural wayfinding driving layout and design. A controlled access and bus route is incorporated within the square along Maclure Rd. Materials are small scale block units and coloured/ textured poured materials that provide a pedestrian character to the square.

Tree Planting/Greening helps to separate modes, adds SUDs and provides sustainability/environmental/biodiversity value.

A plaza is divided in to parts supporting both passive and formal activity. Bespoke furniture clearly defines the space, protecting and controlling movement flows. These provide unique, distinctive and strong features within the space. Outside Nye Bevin house a community garden provides space for informal dwell, meeting friends and health exercise. The space provides a positive heritage setting. Next to the station a more open, flexible area provide a stage for events and activation.. Tree planting humanises scale, creates natural sculpture and seasonal interest.

Design Features:

Viaduct

The Viaduct walls provide a canvas for local street art and green wall panels

which connect the platform park to the square physically and visually.

Surface Materials

Paving materials used to replace the current surface treatments, providing a cohesion across the square that promotes a pedestrian-first environment and community focus, whilst integrating the Metrolink and reflecting the local heritage

Tranquil Green Space

Located in the existing landscaped area outside Nye Bevan House, increased community use, providing a positive heritage setting

Proposed Tree Planting

Tree planting to help define the spaces within the Square, assist with the wayfinding and navigation, humanise the scale, integrating and expanding biodiversity and ecology. Existing trees

will be translocated into the new scheme where possible

Activated Edges and Active Space

Ground floor space immediately outside existing and proposed developments, opportunity to activate space and create a sense of ownership by businesses, provide on-going activity in the Square, maximising sunny spots

Street Furniture & Structures

The provision of street furniture that not only facilitates the interaction of communities, but also assists with wayfinding and navigation, further define the spaces for activity and screening where required, be part of the public art strategy

Special Features

Public art is incorporated within a fulcrum feature along the axis of Lower Tweedale St. An urban feature integrated into the

Key

- 0 Rochdale Station
- 1 Existing self seeded woodland
- 2 Raised Tram Station Platform
- 3 New Rochdale Station Square
- 4 Café spillout included /retained
- 5 Proposed Mix Ornamental Planting
- 6 Proposed SUDS
- 7 Art Installation & Key Point Landmark
- 8 Bespoke Bench Features
- 9 Spill out zone under green canopy
- 10 Sitting Steps
- 11 Proposed Trees



St John's Roman Catholic Primary School

Roman Catholic of St John the Batiste Church

Greater Manchester Fire Service Museum

Pennine Care NHS Rochdale

Dowling St

Lower Tweedale St

Station Rd

MacLure Rd

Station Rd



4

3

2

5

10

7

9

3

8

0

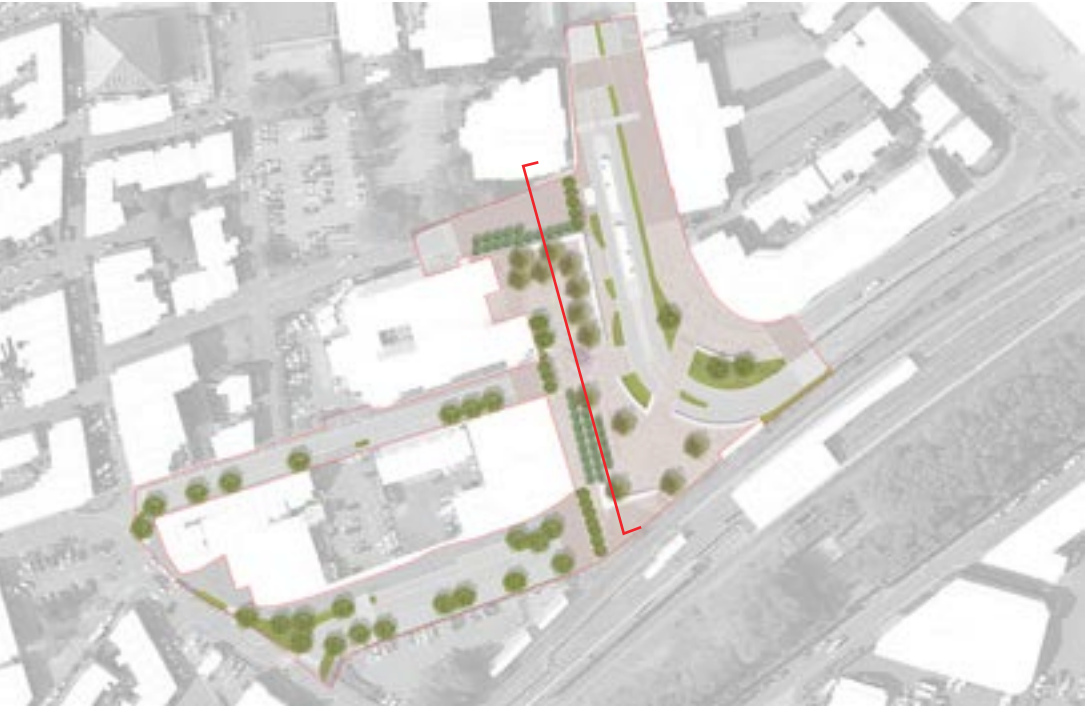
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6

1

1

Masteplan . Section AA



Masteplan . Section BB

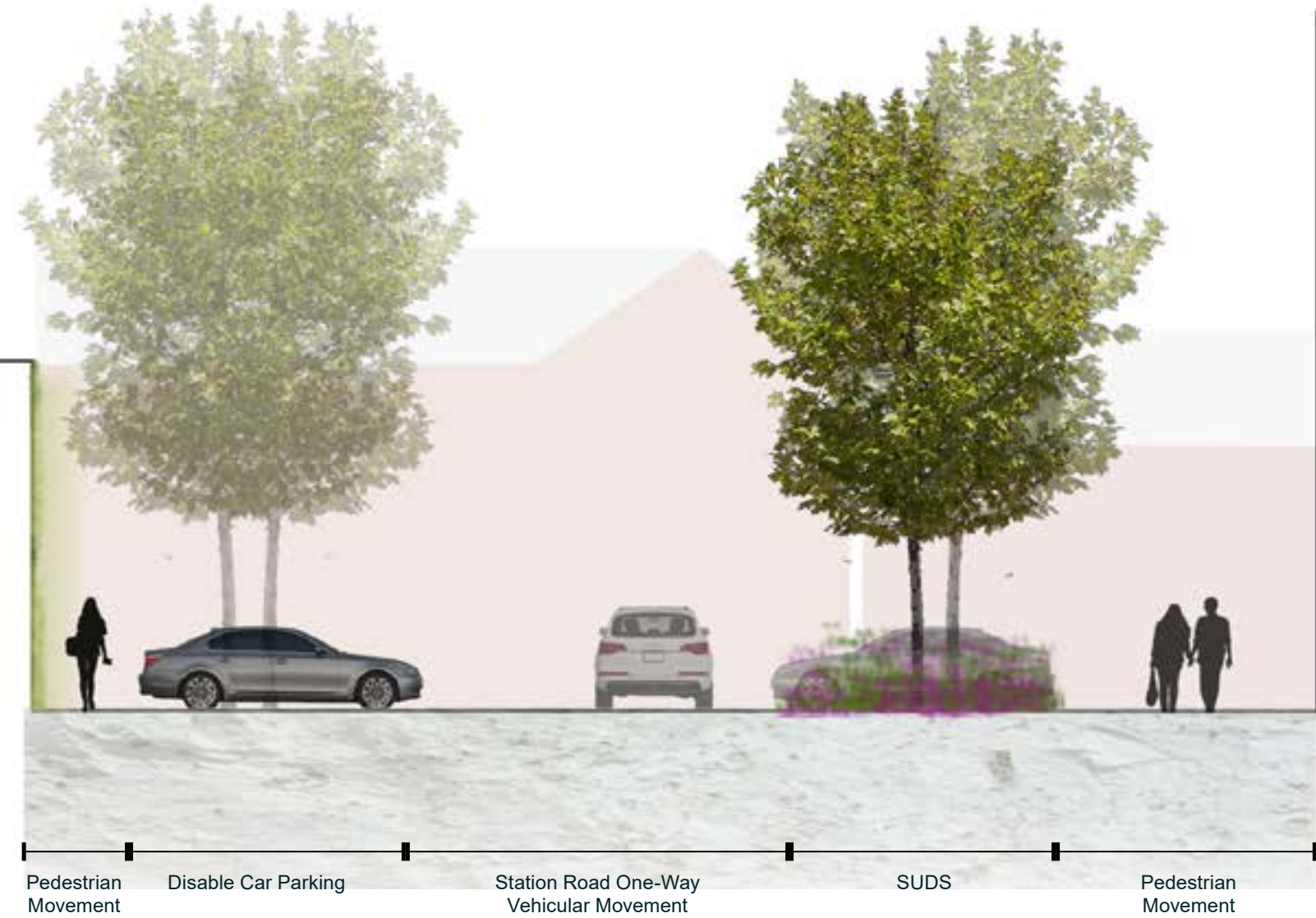


Art Installations Zone Rochdale Station Square Pop up Commercial Space Sitting Zone The Wall Multi use zone

Masteplan . Section BB



Masteplan . Section CC



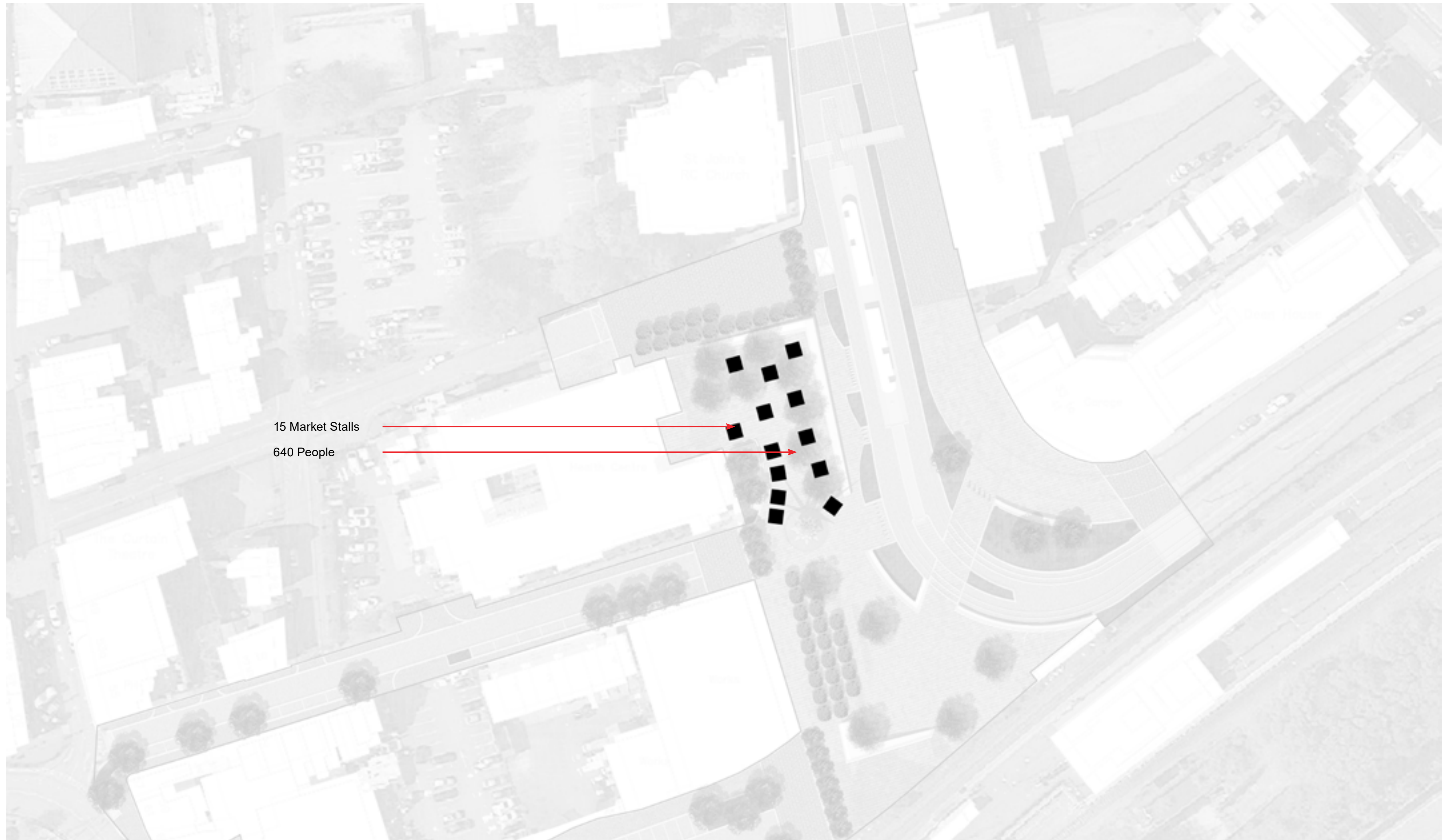
Activity Diagrams

The following diagrams explore the spatial requirements of possible use activities for the square.



Activity Diagrams . Squares

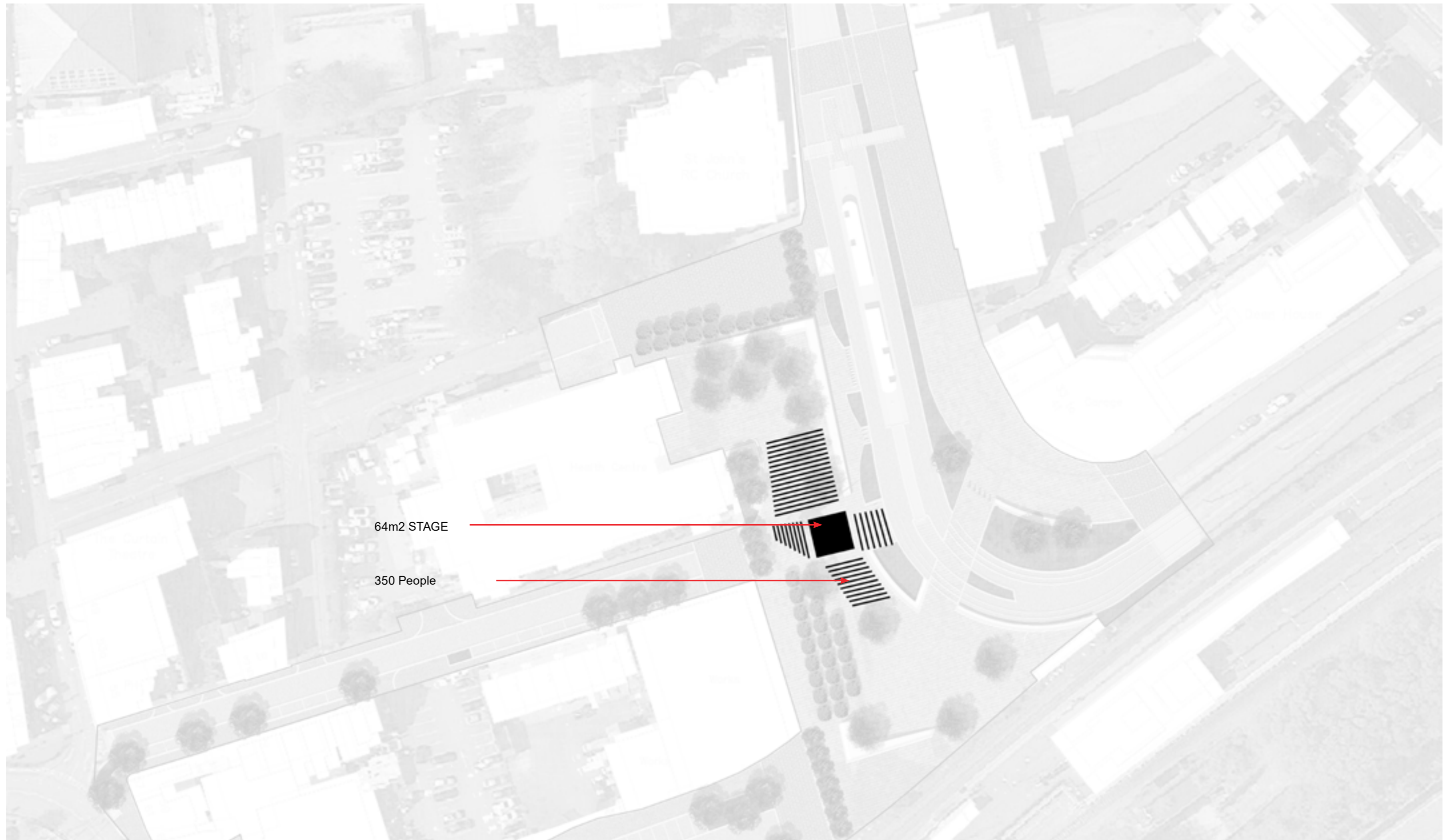
The multi-use Squares as the new
Heart of the community business and
recreation - MARKETS





Activity Diagrams . Squares

The multi-use Squares as the new
Heart of the community business and
recreation - PERFORMANCE STAGE





Activity Diagrams . Squares

The multi-use Squares as the new
Heart of the community business and
recreation - OUTDOOR EXHIBITIONS





Activity Diagrams . Spill Out

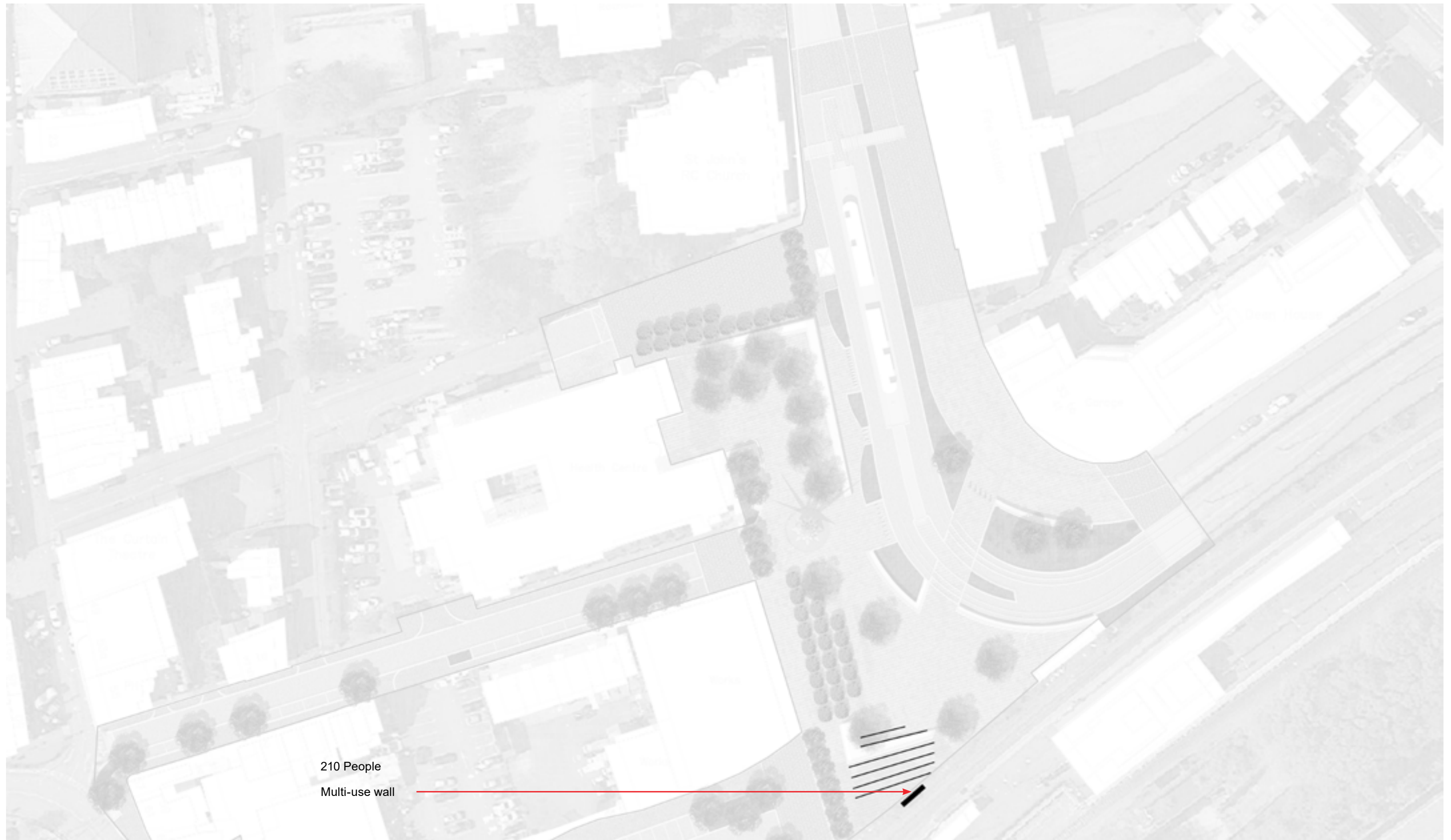
Cafe and restaurant spill out and outdoor museum





Activity Diagrams . The Wall

Multi-use area for temporary art exhibition, seasonal green wall and outdoor cinema





Landscape Design Detailing

The following pages illustrate landscape details for surface materials, street furniture and planting

Landscape Design Principles . Surface Materials

Paving

- Man-made hardscape pallet that complements existing colour tones
- Contemporary materials
- Robust and hard wearing



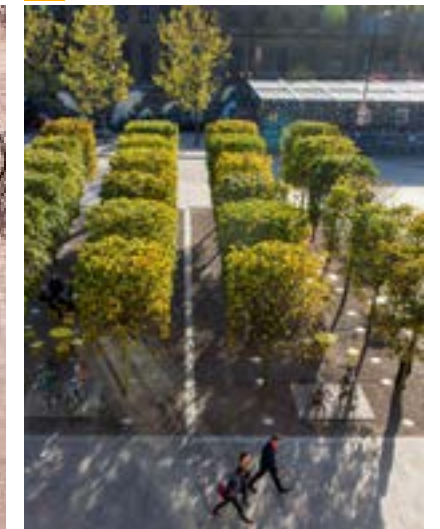
1 Mix slabs 300x200 - Grey dominant



2 Mix setts - 200x200 Red dominant



3 Compacted gravel



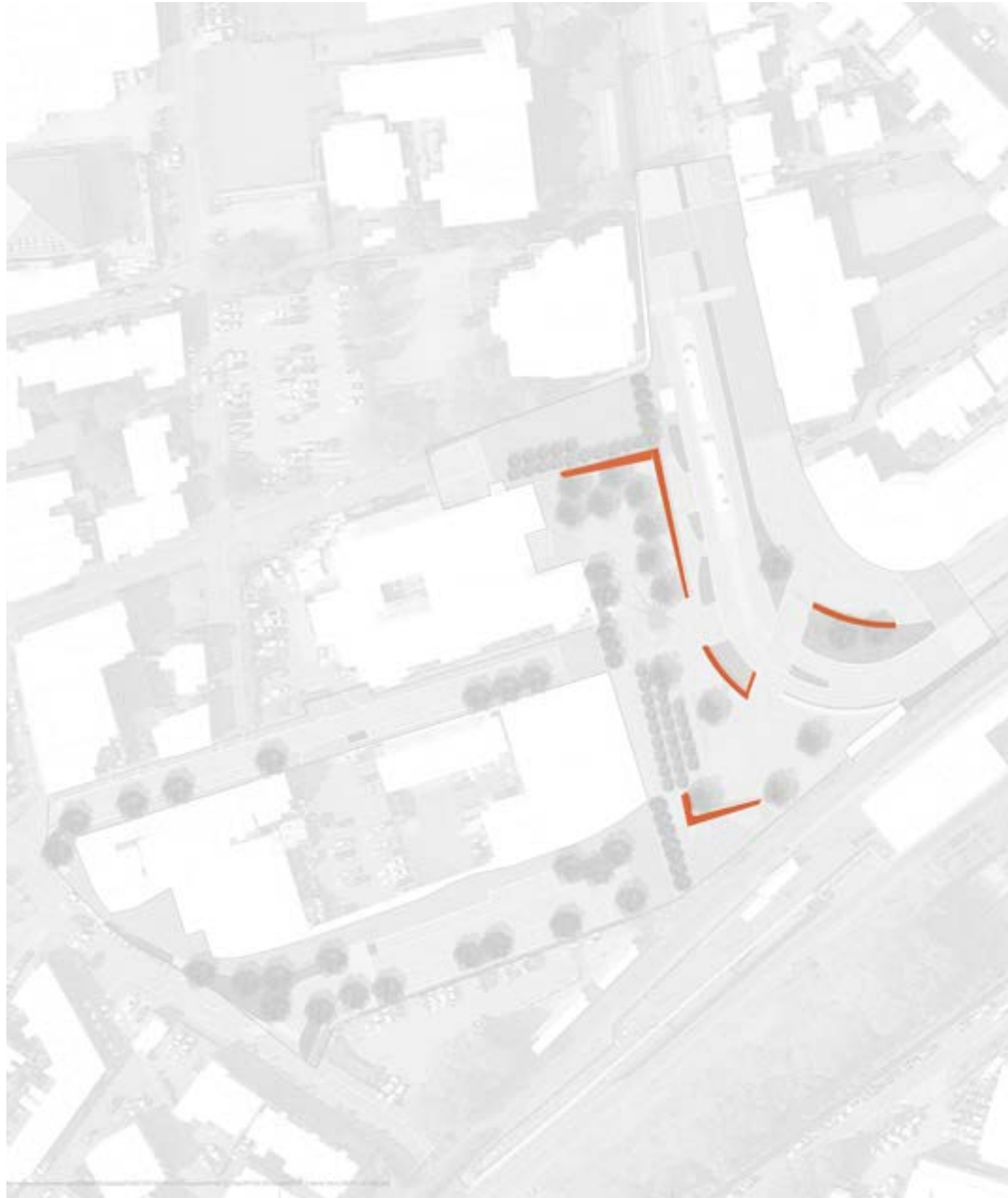
4 Mix setts - 100x100 Brown dominant



Landscape Design Principles . Street Furniture

Seating

- Flexible and robust design
- Provide stopping and resting places within square for all users



1 Bespoke concrete benches

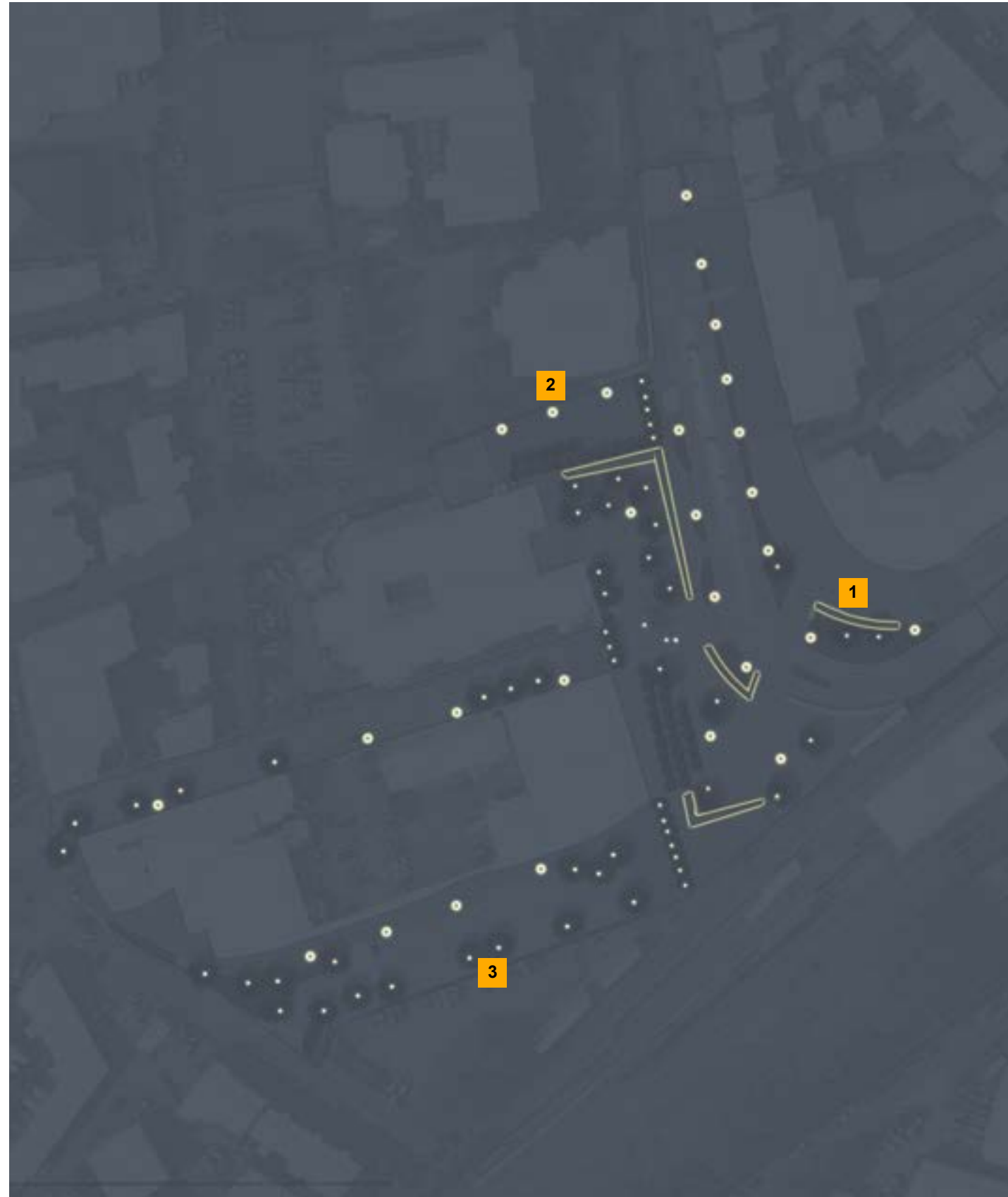


Landscape Design Principles . Street Furniture

Lighting

Note: Indicative lightning strategy subject to technical appraisal

- Simple and elegant materials



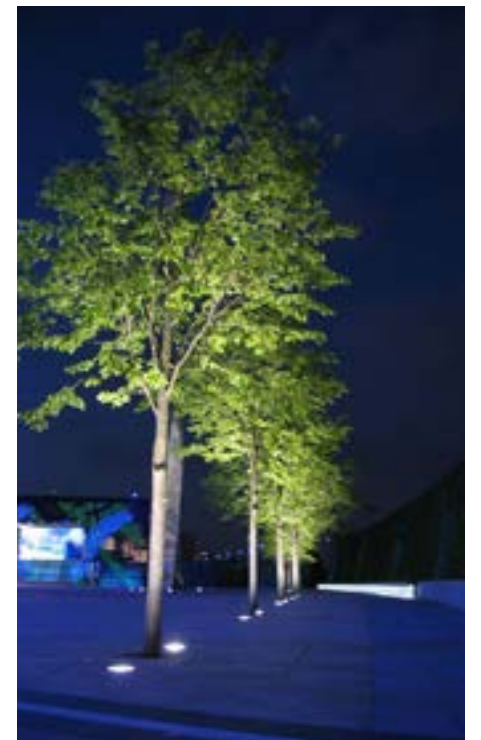
1 Indirect lighting



2 Light poles multi directions



3 Trees and Plinth sculpture up lighting



Landscape Design Principles . Street Furniture

Cycle Parking

- Simple and elegant materials
- Flexible and robust design

● Bike Racks



Landscape Design Principles . Street Furniture

Art

- Plinth with succession of temporary works
- Wall temporary art exhibition
- Regenerative Substation art street work
- 1.2m Signage wall



1 Plinth



2 Art wall



2 Regenerative Substation



4 Signage wall



Landscape Design Principles . Street Furniture



Identity

The motivations and reward for the cooperative movement are core to successful and sustainable community. These could form the basis of an annual arts programme acting as themes.

This is to be developed internally through council cultural offer.

Motivations and rewards

Given the voluntary nature of co-operatives, members need reasons to participate. Each person's motivations will be unique and will vary from one co-operative to another, but they will often be a combination of the following:

- *Financial – Some co-operatives are able to provide members with financial benefits.*
- *Quality of life – Serving the community through a co-operative because doing service makes one's own life better is perhaps the most significant motivation for*

volunteering. Included here would be the benefits people get from being with other people, staying active, and above all having a sense of the value of ourselves in society that may not be as clear in other areas of life.

- *Giving back – Many people have in some way benefited from the work of a co-operative and volunteer to give back.*
- *Altruism – Some volunteer for the benefit of others.*
- *A sense of duty – Some see participation in community as a responsibility that comes with citizenship. In this case, they may not describe themselves as volunteers.*
- *Career experience – Volunteering offers experiences that can add to career prospects.*

Landscape Design Principles . Planting Palette

Trees

Existing trees to be retained and relocated.

Proposed trees:

- Promote biodiversity and pollination
- Ornamental and air quality
- Dense crown for cooling
- 3m+ clear stem



Liquidambar styraciflua



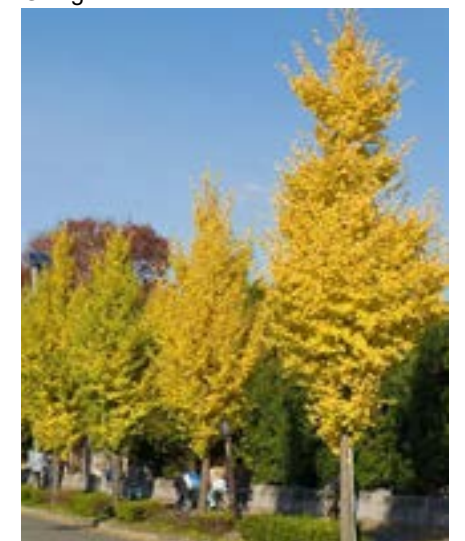
Langestromeica indica



Sorbus torminalis



Ginkgo biloba



Tilia cordata Boxhead



Koelreuteria paniculata



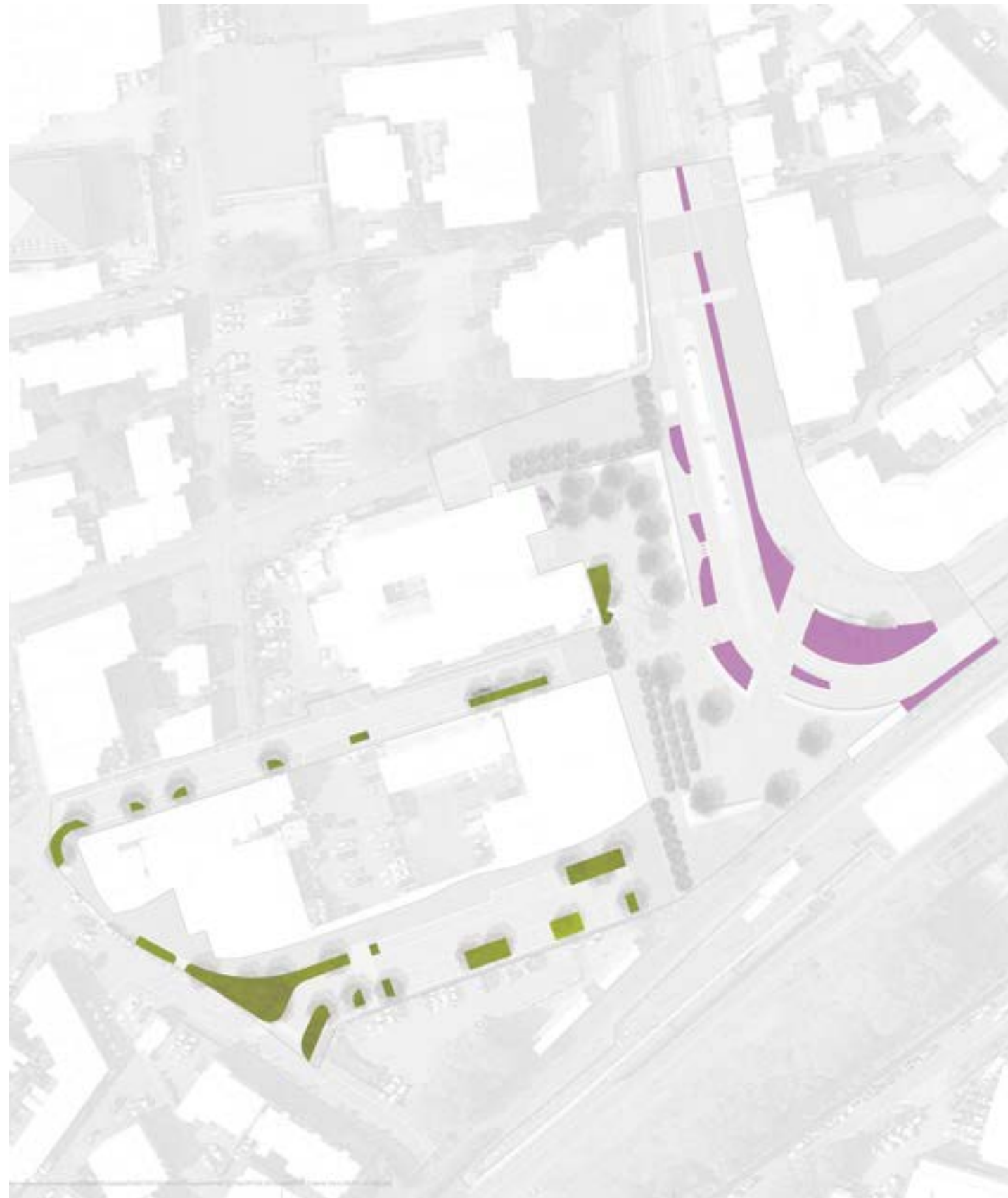
Landscape Design Principles . Planting Palette

Ornamental & Rain Garden Species

Proposed ornamental and rain garden species:

- Promote biodiversity and pollination
- Ornamental and air quality
- Flood mitigation

— Ornamental species
— Rain garden species



Rosmarinus officinalis



Lavandula angustifolia



Myrtus communis



Viburnum tinus



Allium ursinum



Iris pseudacorus



Stachys palustris



Lycopus europaeus



Myosotis scorpioides



Mentha aquatica



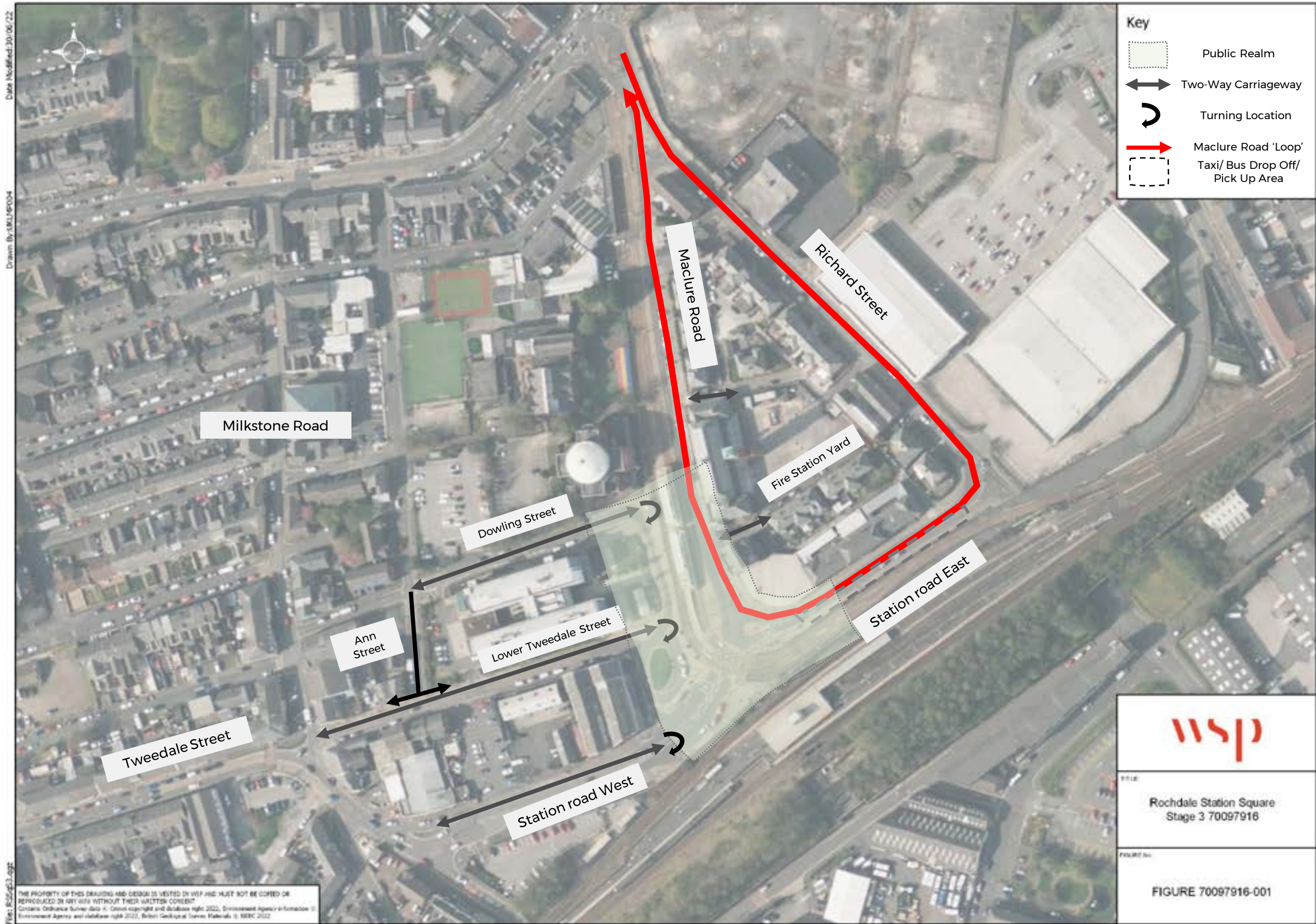
Calamagrostis sp



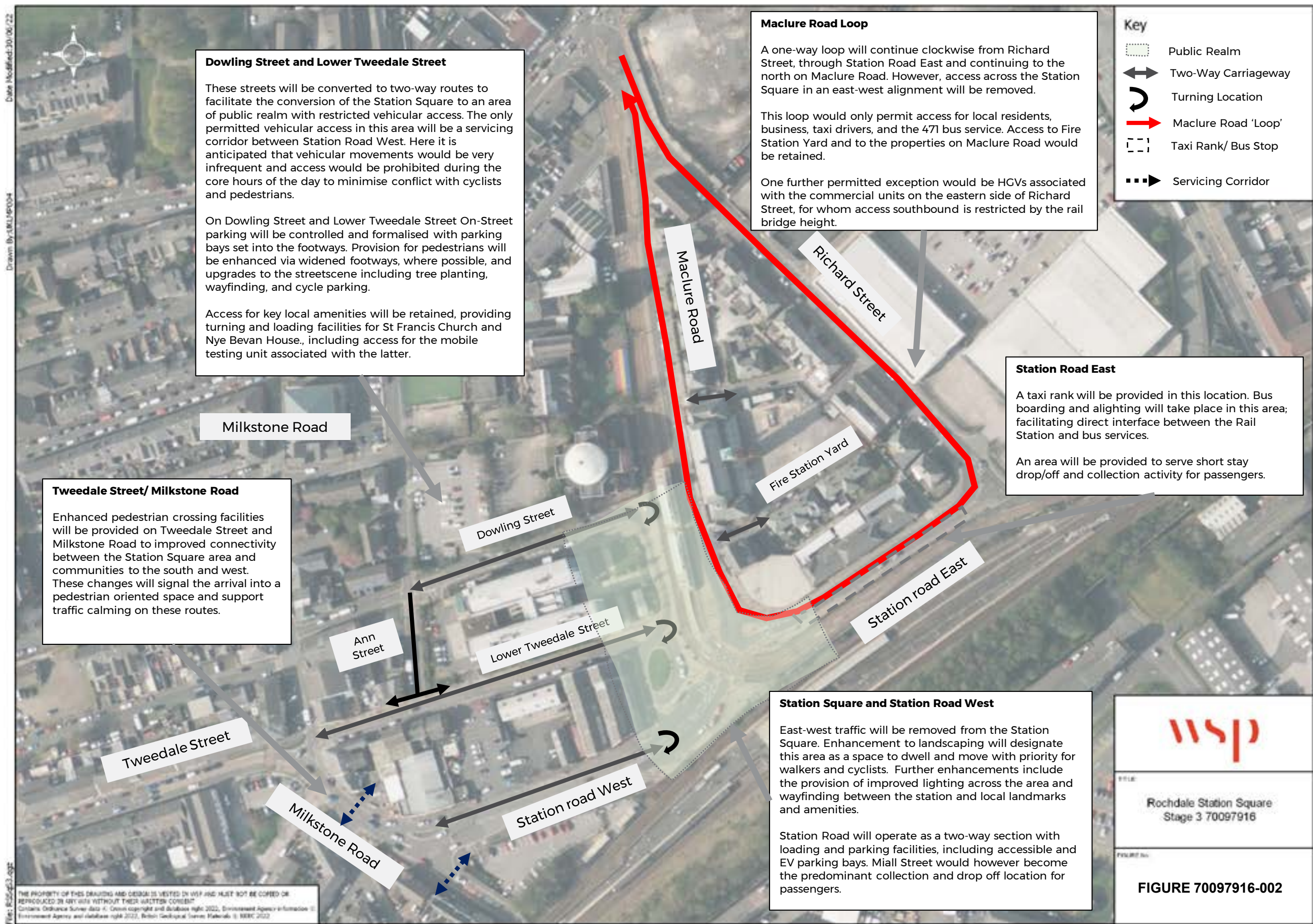
Engineering Design Strategies

The following written strategies/diagrams
illustrate: movement and access
proposals for the square along with early
SUDs options

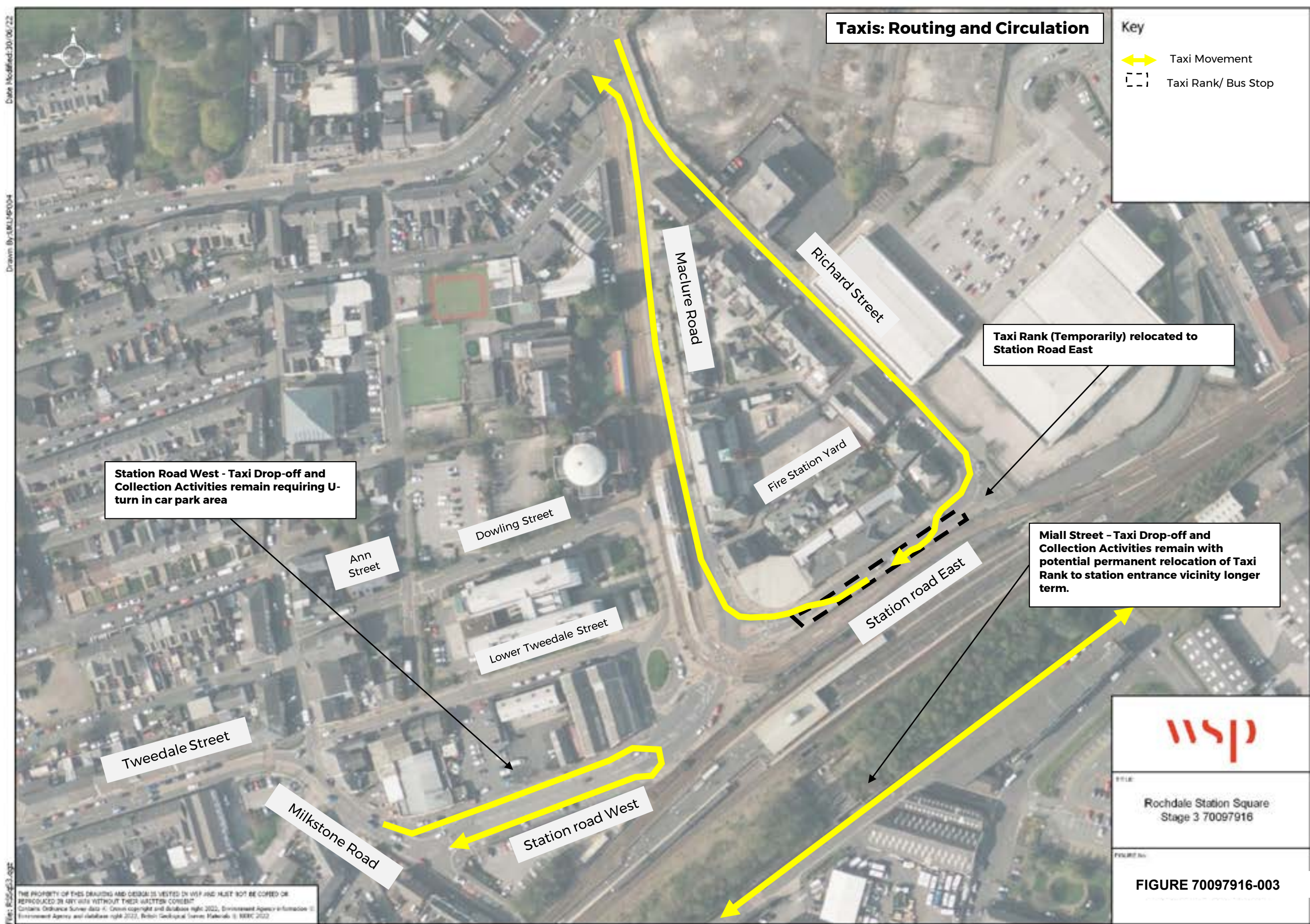
Engineering Design Strategies . Vehicular Movement



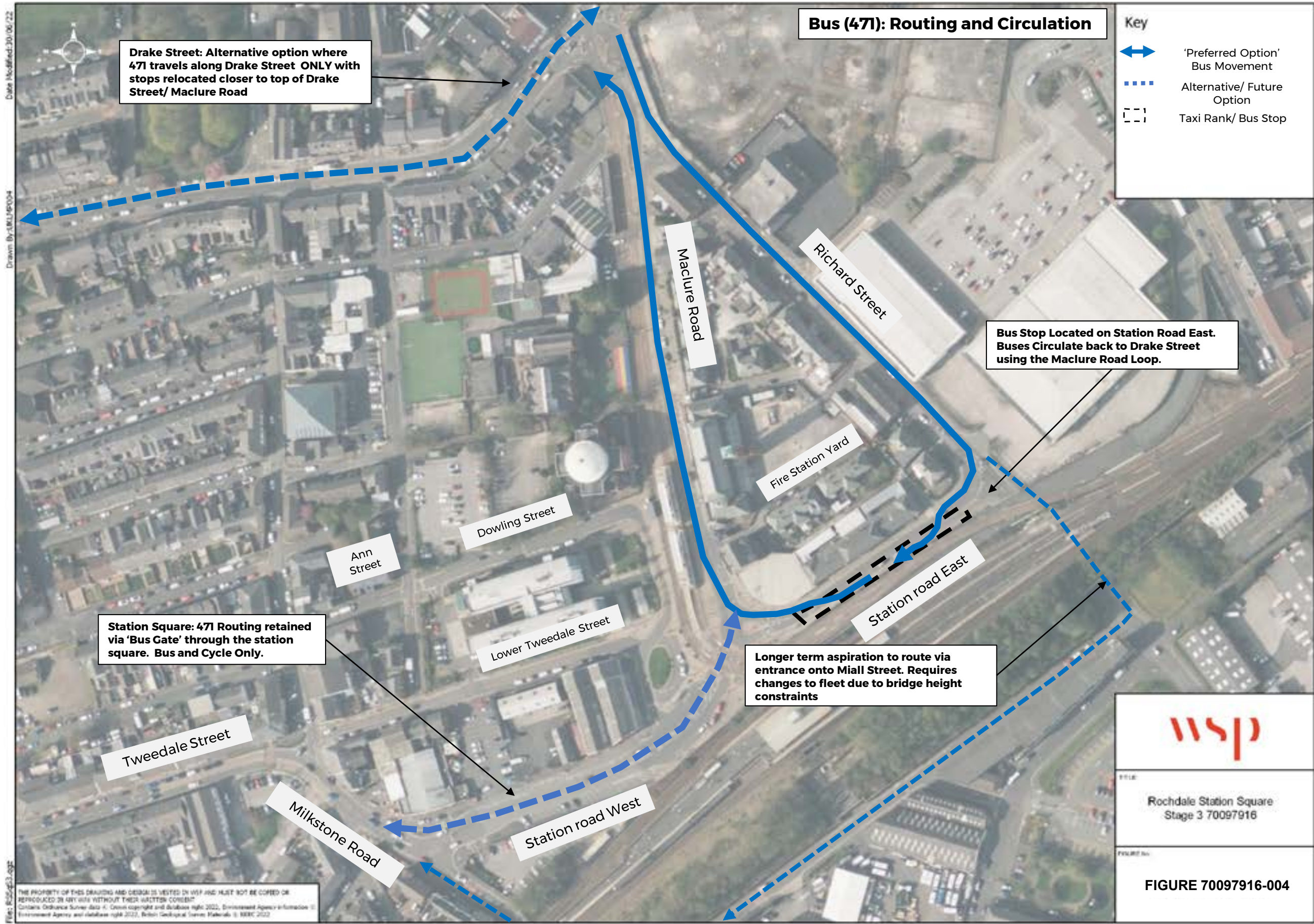
Engineering Design Strategies . Vehicular Movement



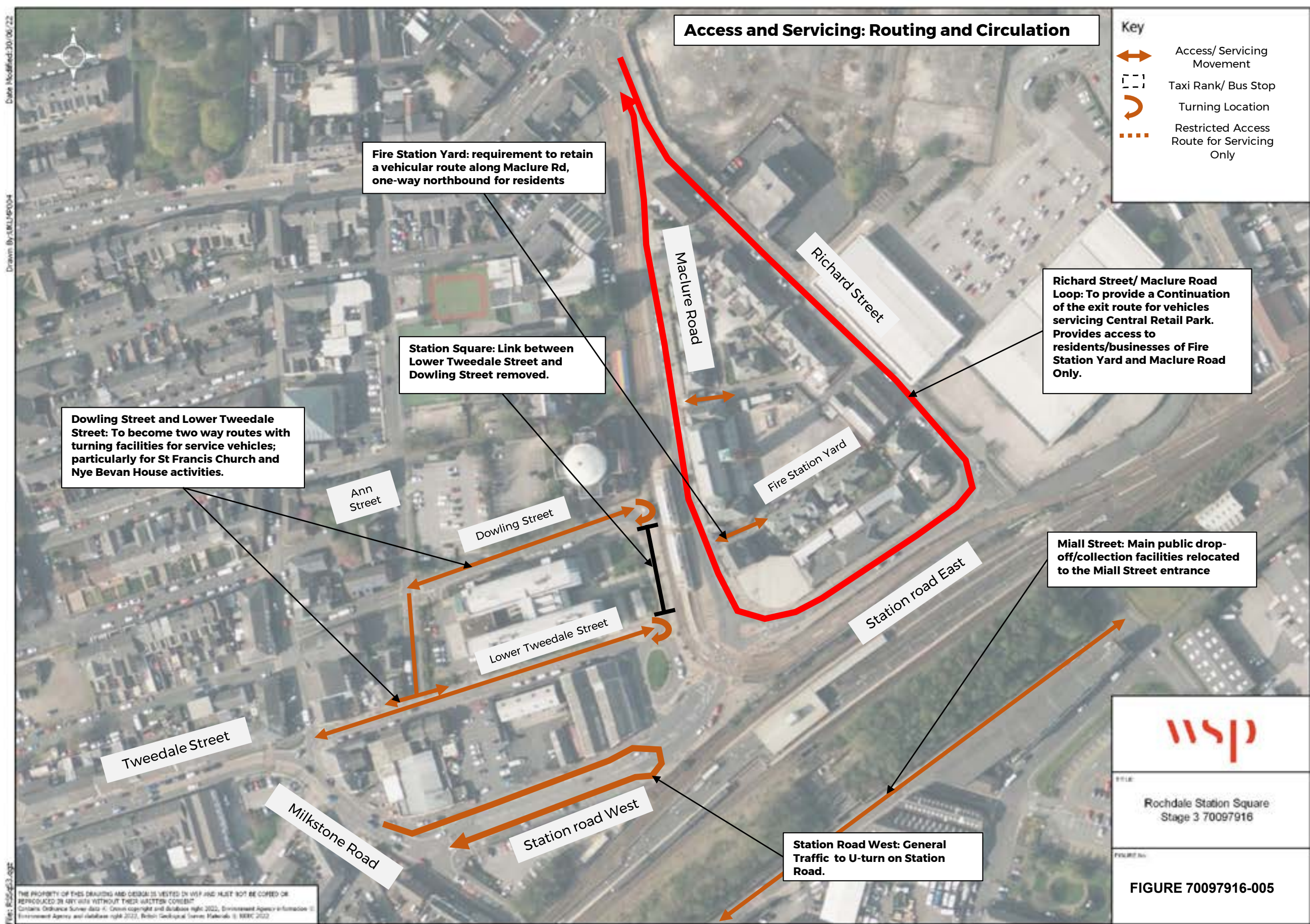
Engineering Design Strategies . Vehicular Movement



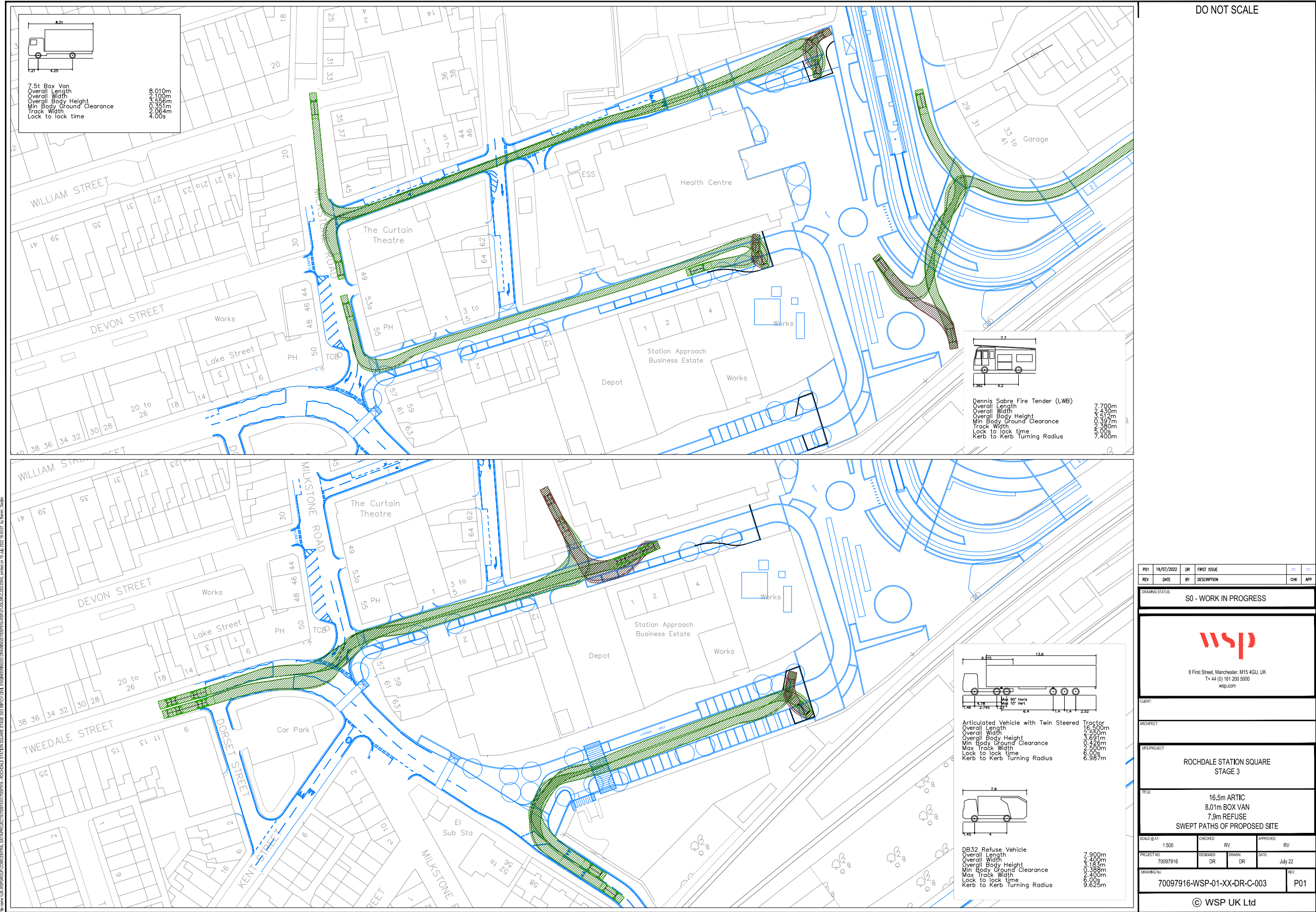
Engineering Design Strategies . Vehicular Movement



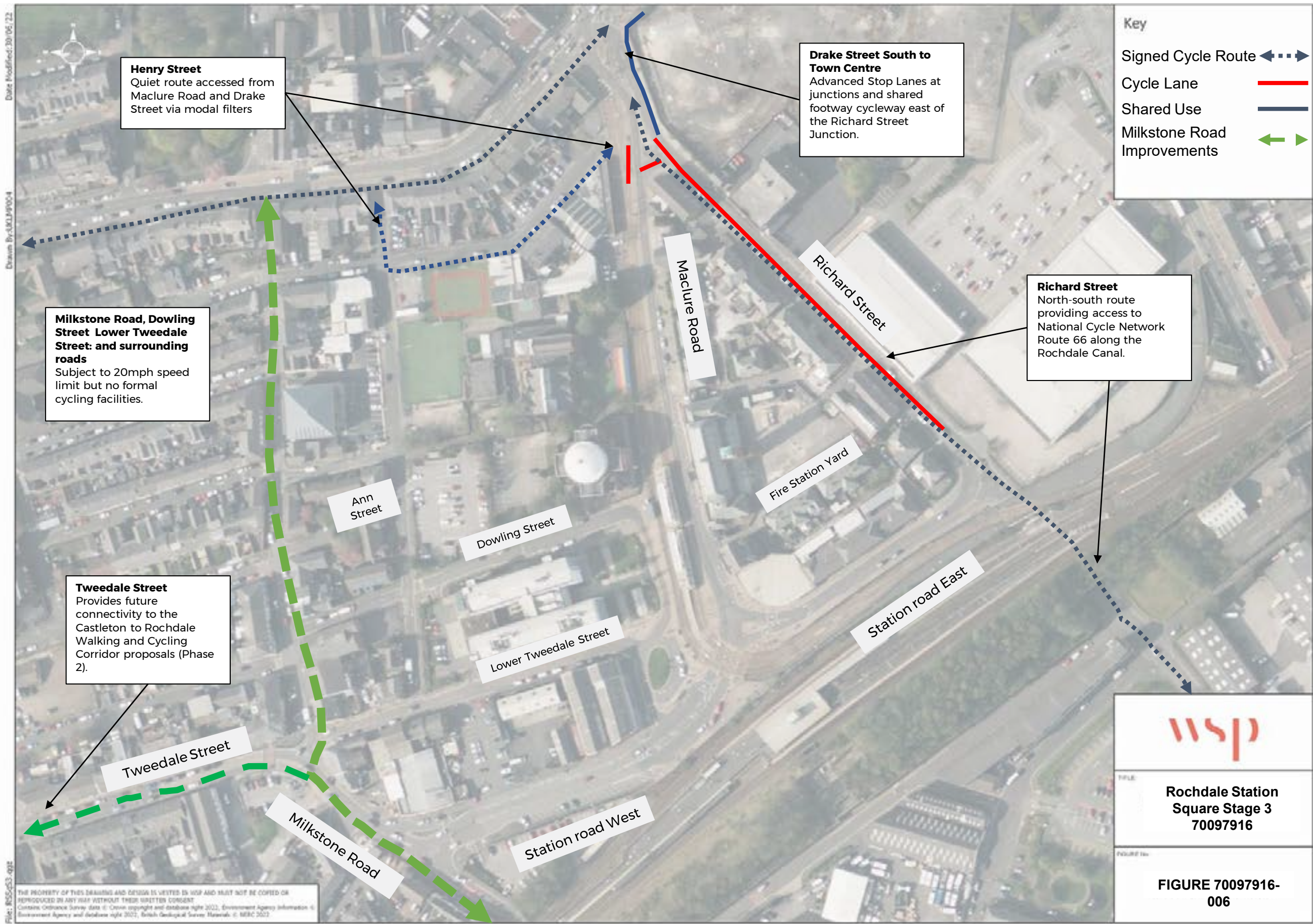
Engineering Design Strategies . Vehicular Movement



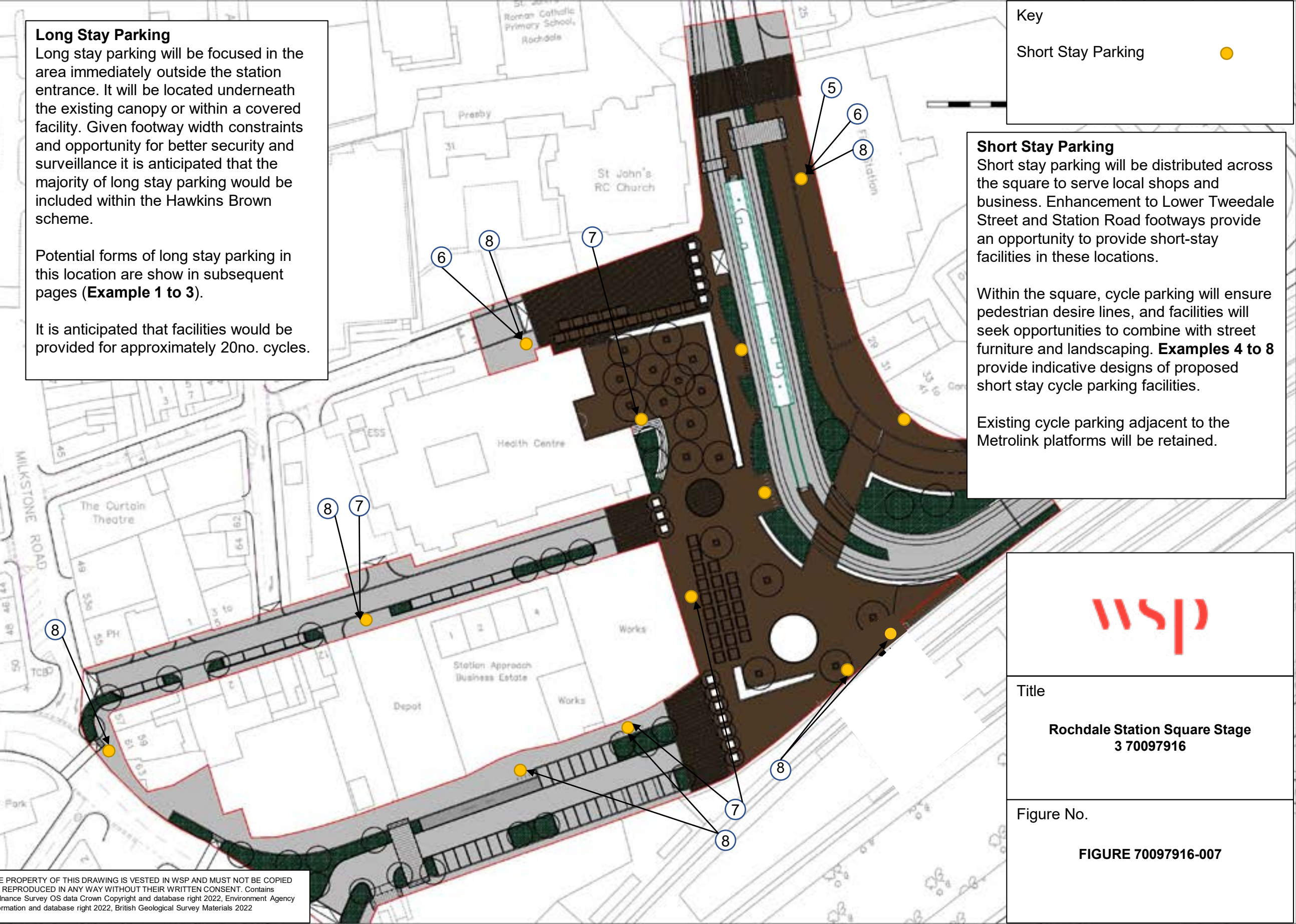
Engineering Design Strategies . Vehicular Tracking



Engineering Design Strategies . Cycling Movement



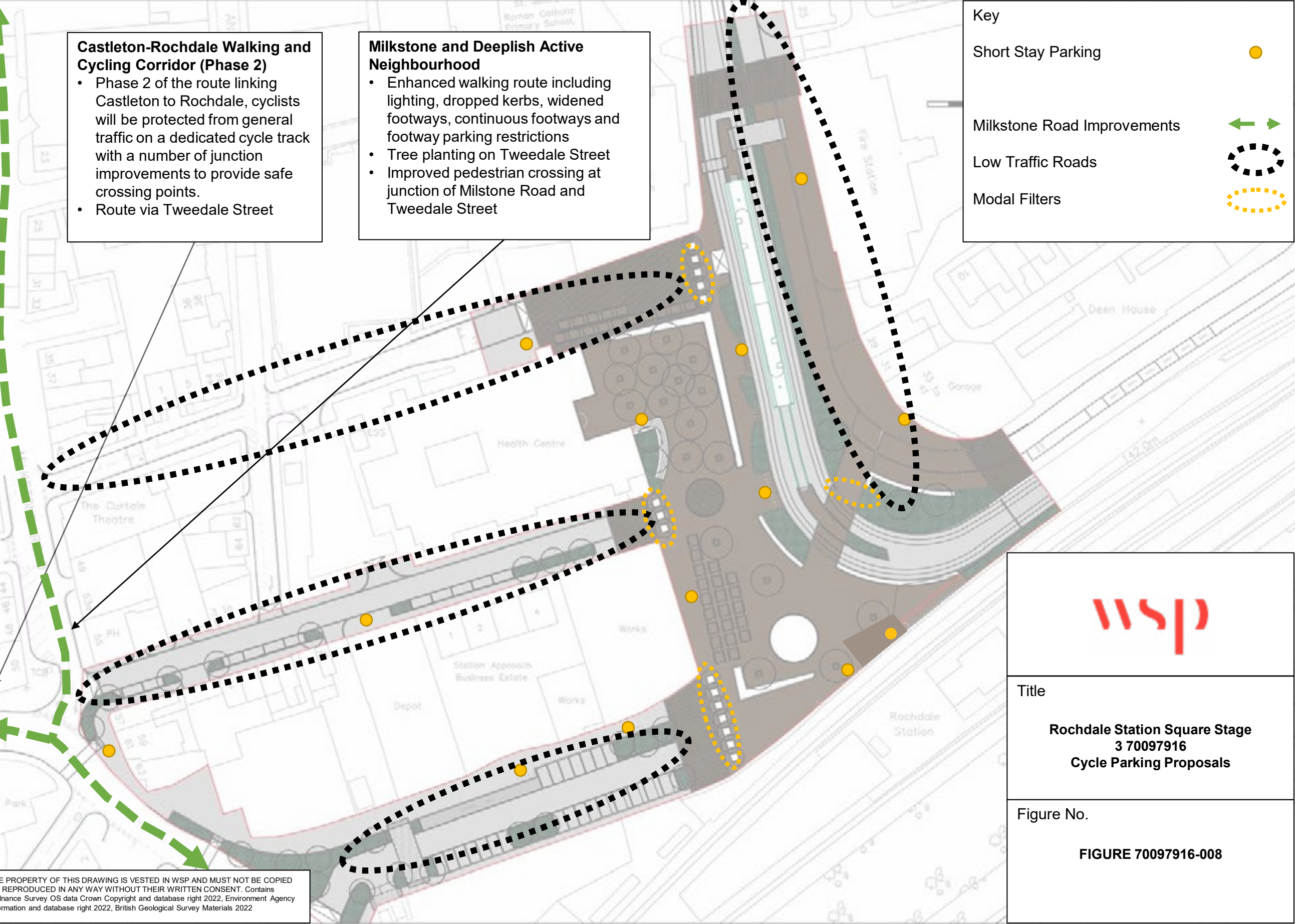
Engineering Design Strategies . Cycling Movement



Engineering Design Strategies . Cycling Movement

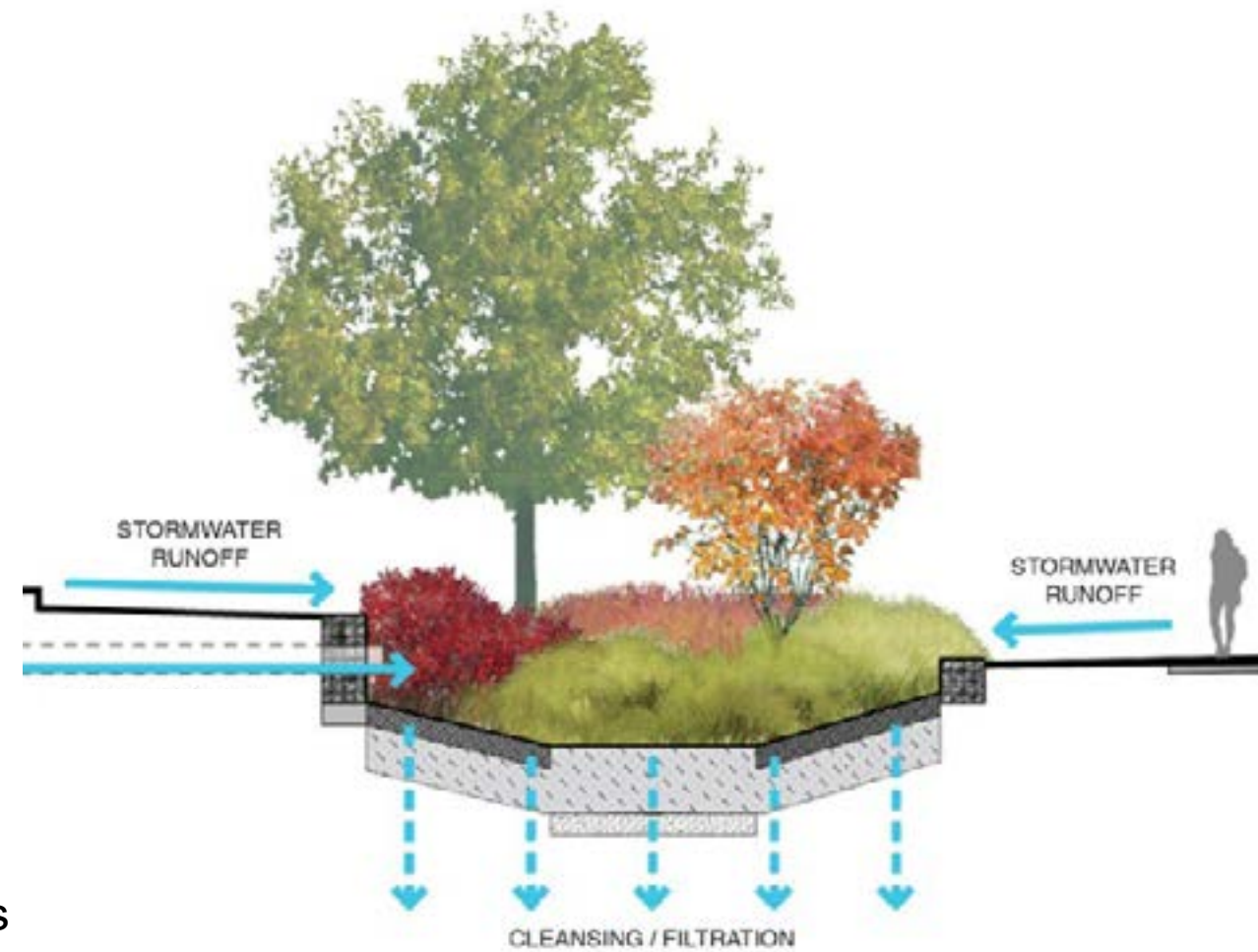


Engineering Design Strategies . Cycling Movement

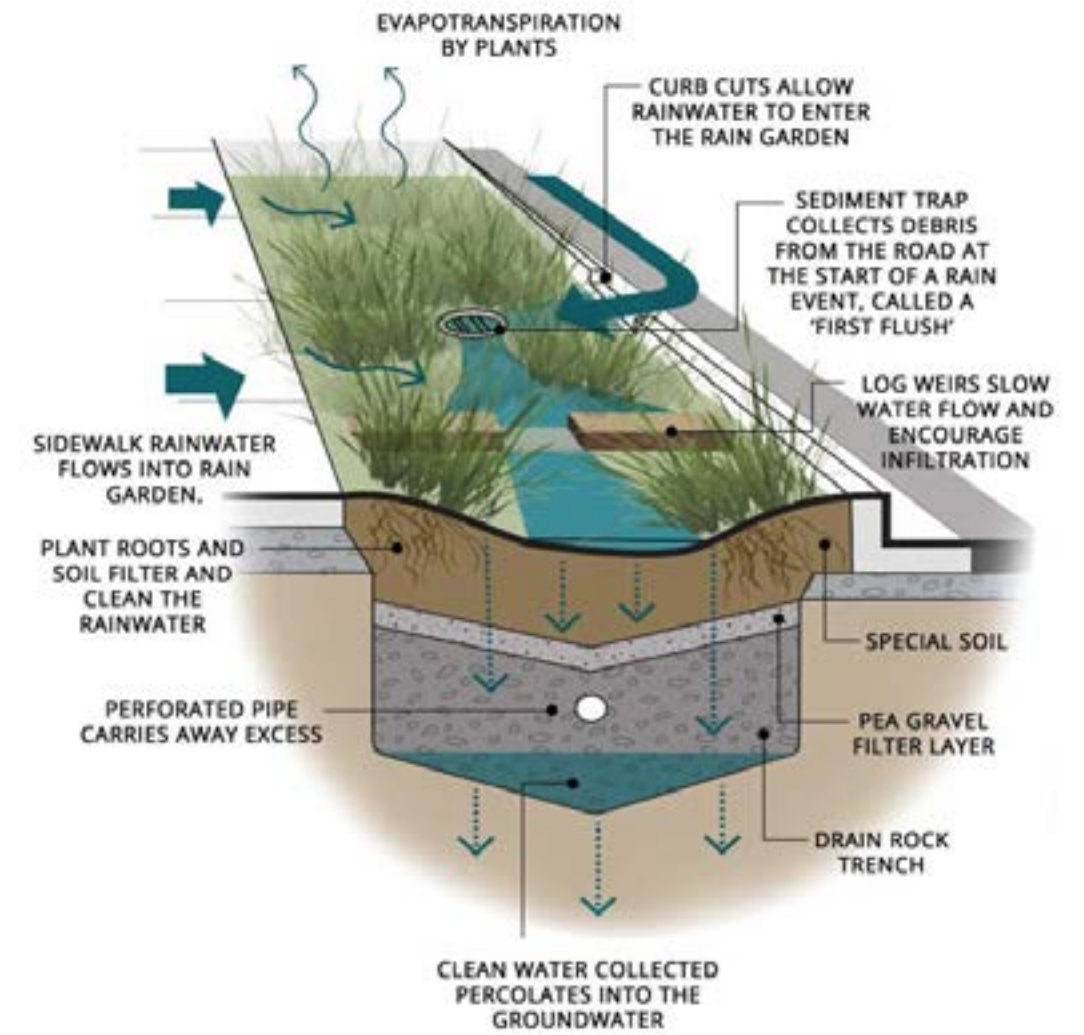


Engineering Design Strategies . SUDS

1 Roadside Bioswale



2 Rain Garden



SUDS: Possible Solutions

1. Roadside Bioswale
2. Rain Garden

Engineering Design Strategies . SUDS

1 Attenuation Tank



2 Pit Collection



SUDS: Possible Solutions

1. Attenuation Tank
2. Pit Collection

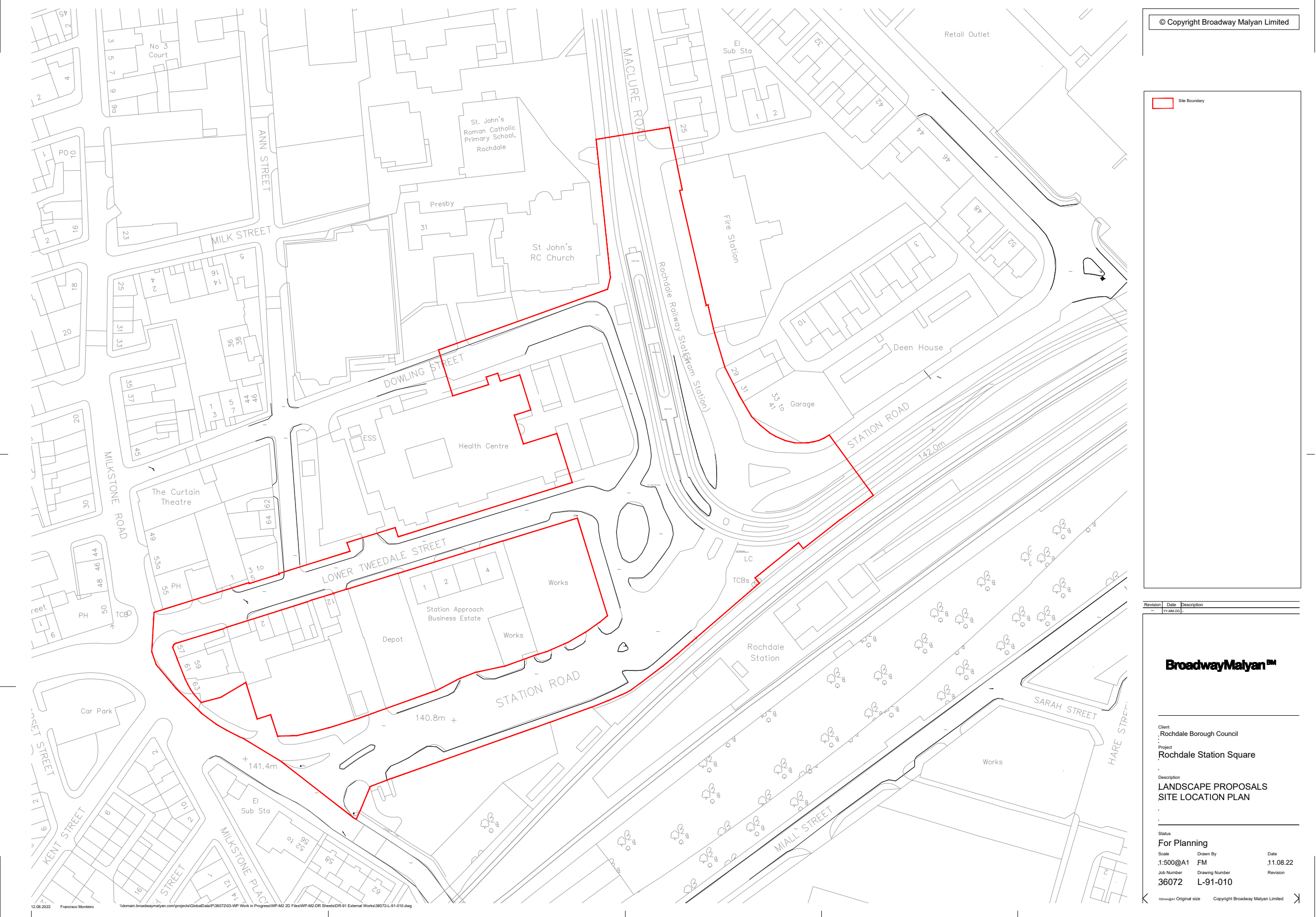
Appendix



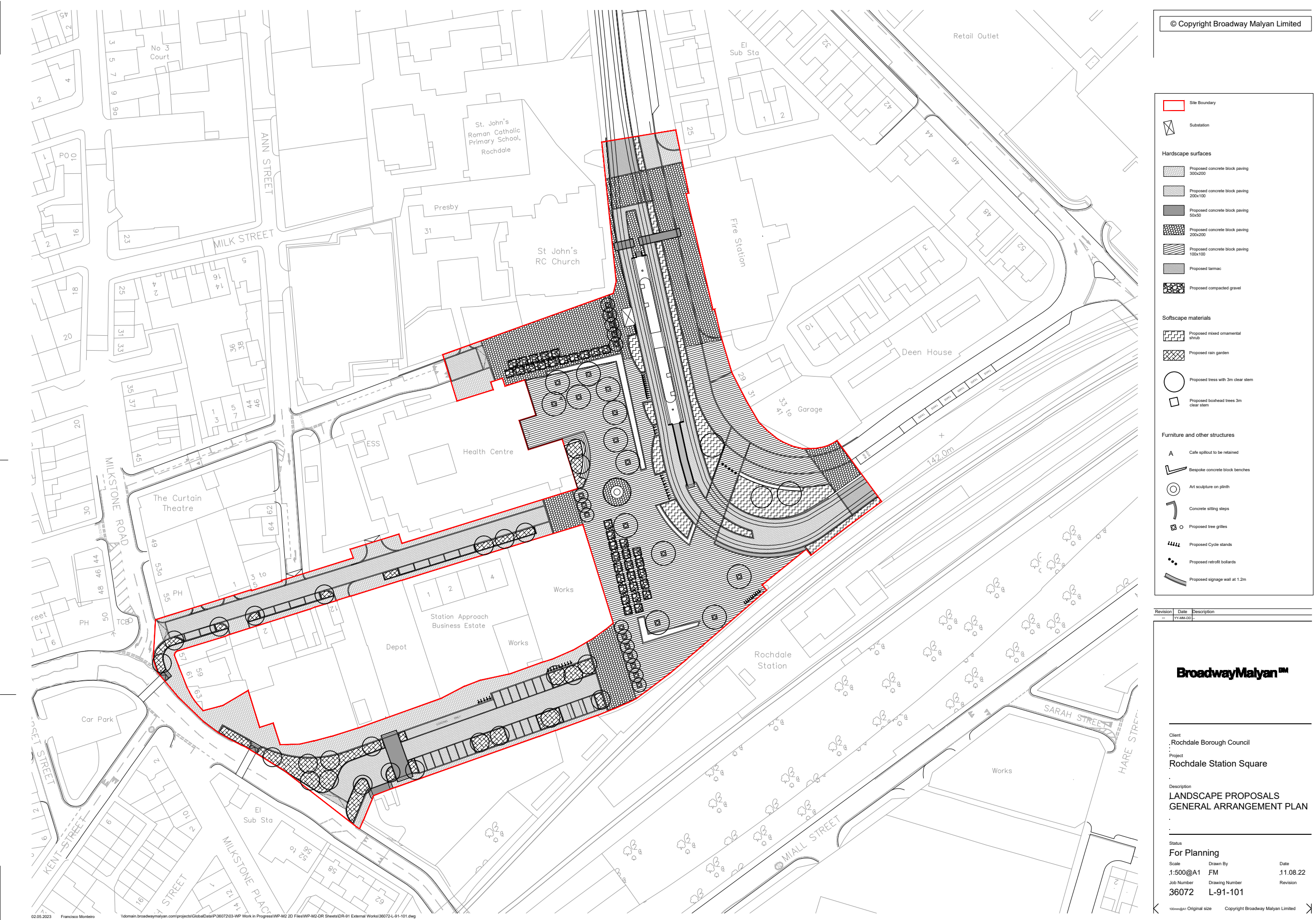
Selected Drawings

The following pages contain a selection of key drawings submitted. A full set of submitted drawings accompanies this Planning Application.

Select Drawings . Site Location Plan



Select Drawings . GA



Select Drawings . Illustrative Masterplan



Engineering Materials

The following pages contain a selection
of Engineering key drawings submitted. .

Rochdale Station Square Stage 3 - Strategy Note

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CHECKED:	RV	APPROVED:	RV

INTRODUCTION

This Strategy Note summarises the proposed project strategy in relation to drainage, lighting, utilities, paving and movement for vehicular and non-vehicular traffic.

This information is to be included in Broadway Malyan’s ‘Design Statement’ issued alongside the Levelling up Fund bid. This note has been informed by Swept Path Analysis carried out by WSP, discussions with Rochdale Borough Council, Broadway Malyan, Faithful & Gould, and Rochdale Borough Council/ Rochdale Development Agency’s “Vehicular Access and Movement Strategy’ Note (29th June 2022).

WSP has also provided Baseline Review Technical Note WSP (27th June 2022) which included recommended advisory actions for the project team and Rochdale Borough Council to support the next stage of design. Those identified relating to the movement strategy have been largely addressed in the development of the stage 3 designs however remaining engineering strategy advisory actions are listed at the end of the relevant sub section of this Strategy Note.

Figures supporting this Strategy Note are presented in **Appendix A**.

MOVEMENT STRATEGY

The station square area is characterised by a significant range of land uses including residential, commercial, industrial, and Healthcare; accessed in different ways, at different times of days, by different modes/vehicle types across a diverse range of user groups. The movement strategy for the Stage 3 proposals has therefore been developed primarily to balance the competing access requirements of these users and land uses, whilst achieving the overall Station Square Strategy Vision. The development of the Stage 3 proposals has focused on delivering this strategy whilst ensuring deliverability; taking into consideration stakeholder views, political acceptability, project team feedback and engineering feasibility.

To inform the final movement strategy, RBC identified every property and user impacted by the proposed scheme and recorded:

- Type of property;
- Type of user;
- Type of access;
- Type of vehicle(s);
- Other operational needs;
- Likely timing of access;
- How the Station Square (full vision) impacts their access; and
- The range of options to address and mitigate these needs

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This approach has informed considerations around the physical requirements for access for these users, as well as ensuring that routes maintain an appropriate level of accessibility and convenience; balanced across the area. This approach has also helped identify where some options – particularly to deliver a completely traffic free Station Square – would not be deliverable, due to the absence of alternative access. This strategy therefore represents the best achievable and deliverable solution, taking into account community access needs and the scheme objectives.

The proposed movements strategy is summarised as follows:

- The key principle of the access and movement strategy is to minimise vehicular traffic in and across the square; prioritising safe, comfortable, and coherent pedestrian space to move and dwell. Consequently all but emergency access is prohibited from the square east to west; bisecting Station Road with new areas of public realm (**Figure 70097916-001 and Figure 70097916-002**).
- Richard Street and Station Road will retain their existing one-way arrangement to create the ‘Maclure Road Loop’; a clockwise one way system from the Richard Street/ Drake Street Junction and the Drake Street/ Maclure Road junction (**Figure 70097916-002 to Figure 70097916-005**).
- Vehicular traffic will only be permitted for Buses, Taxis, HGVs associated with Matalan and Argos Retail Park, and Residents (at Fire Station Yard for example). This route would prohibit through movements and maintain a low speed, traffic calmed environment; one in which drivers will feel a guest in a pedestrian-oriented space.
- At Station Road East, a taxi rank will be provided in this location. Bus boarding and alighting will take place in this area; facilitating direct interface between the Rail Station and bus services. An area will also be provided to serve short stay drop/off and collection activity for passengers
- Parking on existing roads such as Lower Tweedale Street and Dowling Street – subject to existing on street parking and loading/unloading – will be better managed and controlled via formalised on street parking bays and loading areas. Street planting will be used to break up continuous sections of parking and footways widths will be maximised where possible in spaces created by these modifications to the streetscene.
- Lower Tweedale Street and Dowling Street would be two-way along their entirety. Turning areas will be provided for us associated with the Nye Bevan House Loading areas and St Francis Church on Dowling Street (**Figure 70097916-005**).
- Access for the mobile testing unit at Nye Bevan House would remain. This would be carried out via Milkstone Road and Lower Tweedale Street.
- Enhanced pedestrian crossing facilities will be provided on Tweedale Street and Milkstone Road to improved connectivity between the Station Square area and communities to the south and west. These changes will signal the arrival into a pedestrian oriented space and support traffic calming on these routes

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ACTIVE TRAVEL STRATEGY

Busy Beeways: Castleton-Rochdale Walking and Cycling Corridor (Phase 2)

Phase 2 of the route Busy Beeways Route linking Castleton to Rochdale is located on the A58 Manchester Road approximately 700m west of Rochdale Station. As part of this scheme cyclists will be protected from general traffic on a dedicated cycle track with a number of junction improvements to provide safe crossing points. This will significantly enhance the safety and convenience of cycling along this corridor and promote trips from communities in the west, along Tweedale Street, to the station. The scheme is due for completion in late 2023. This scheme, alongside the Milkstone and Deeplish Active Neighbourhoods proposal, is presented on **Figure 70097916-006**.

Active Neighbourhoods: Milkstone and Deeplish Active Neighbourhood

TfGM are proposing the development of an ‘Active Neighbourhood in the Milkstone and Deeplish areas of Rochdale. The proposals comprise an area bounded by Drake Street in the north, Manchester Road in the west, the Rochdale Bypass to the south, and Richard Street in the East. The area includes the station itself and the station square. Measures include

The proposed Active Neighbourhood will:

- Reduce traffic speeds and volume
- Create safer routes and attractive areas for local people to enjoy, spend time chatting or for children to play
- Help everyone get around more easily and safely, walking, cycling, and wheeling* especially for short journeys, leaving the car at home
- Improve the area, with more greenery, street art, benches, and lighting

There are a number of elements that are particularly relevant to the Station Square proposals, summarised below. The Station Square proposals have sought to promote synergies with these projects and provide walking and cycling links that strengthen and enhance the opportunities provided by the Active Neighbourhoods and Castleton-Rochdale corridor scheme.

- Enhanced walking route including lighting, dropped kerbs, widened footways, continuous footways and footway parking restrictions
- Tree planting on Tweedale Street
- Improved pedestrian crossing at junction of Milkstone Road and Tweedale Street

The proposed walking and cycling proposals are discussed further under the below subheadings.

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Proposals

The Station Square proposals have sought to provide streets that support walking and cycling, and bring people into the square for commuting, business, and leisure purposes. The project team has considered existing infrastructure (**Figure 70097916-006**) and constraints and sought to maximise opportunities presented by the aforementioned scheme, and removal of traffic from the square itself.

Lower Tweedale Street, Dowling Street, and Station Road West would become two-way cul-de-sacs. Their function would be to provide vehicular access only. In doing so, volumes of traffic will be minimised. Parking bays will be provided to minimise the prevalence of footway parking, and space will be provided for cycle parking and planting to make these routes more attractive to pedestrians and cyclists.

At the eastern end of each of these roads, modal filters (e.g. bollards or planters) will be provided to prevent vehicular access but allow pedestrians and cyclists to access the square.

Walking and considerate cycling would be permitted throughout the square itself. Again, modal filters would be provided across the Metrolink tram line between the station and the Maclure Road loop to prevent all but emergency vehicle access and ensure that pedestrian and cycle desire lines are maintained.

These proposals are summarised in **Figure 70097916-008**. A key feature of the cycling strategy is the provision of extensive cycle parking for long and short stay trips throughout the scheme. This is discussed in further detail below.

Parking

Long and short stay parking will be provided through the square to serve a variety of local land uses, including the station. Short stay parking will be located in areas of high surveillance close to local amenities such that they maintain pedestrian desire lines and remain convenient for cyclists. The types of stands could include Sheffield type stands

Existing stands serving the Metrolink platform would be removed. The existing cycle hub outside Nye Bevan house is no longer in use. As part of the proposals, short stay facilities would be located on Dowling Street, serving the pharmacy, and within the square adjacent to Nye Bevan house, to serve the main entrance.

Long stay parking will be provided outside the station in a covered and lockable store. It is anticipated that in the region of 20n0. Cycle parking spaces would be provided. In order to ensure that street clutter is minimise and sufficient space remains for pedestrians outside the station entrance, any further long stay parking for the station would be located within the station building itself.

The proposals, including examples of the types of parking facility, and suggested locations are summarised in **Figure 70097916-007**.

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PARKING STRATEGY

Parking has been located throughout the scheme to maintain, as far as possible, existing provision. Currently, parking is largely controlled by Traffic Regulation Orders (TROs), leading to significant signage requirements, street clutter and reduced pedestrian space.

Existing parking facilities will be retained on Dowling Street. On the southern side of Lower Tweedale Street parking bays will be provided to better manage and control the parking that is required by the local community and businesses. This will in turn create greater areas of footway for planting and cycle parking, as well as reducing carriageway widths to slow vehicle speeds. An existing loading ban TTRO would be retained on the northern side of the carriageway to prevent inconsiderate and obstructive parking and loading and maintain safe access.

At Station Road west, parking will be provided on a link for like basis in the form of perpendicular parking bays. These bays would provide an area of short stay parking serving the station. Bays would be interspersed with cycle parking, planting, and street furniture such as seating.

Disabled parking would be provided at a minimum of 5% of the total parking proposed at Station Road west, in accordance with "*Design Standards for Accessible Railway Stations*" (DfT 2015). This parking would be located on the eastern end of Station Road, at the location closest to the station entrance.

ENGINEERING STRATEGIES

Pavement Construction

Extensive re-surfacing of the scheme area is proposed. It is understood that the majority of surface will be concrete flags for both vehicular and pedestrian areas. Some bituminous surfacing may be used in Station Road and Lower Tweedale Street. Consideration of appropriate skid resistance (PSV) will need to be made through liaison with the highway authority.

To facilitate better pedestrian movement, it is proposed to reduce kerb upstand heights where possible. Discussions with the highway authority have identified that full height (125mm) berk upstand will eb required on the outside of the Station Road East / Maclure Road bend, adjacent to the Metrolink. Further discussion regarding kerb upstands will be needed with the highway authority in due course.

Adjustments to finished levels to suit the proposed layout and amended kerb upstand heights will be required. Wherever possible, levels should be at or above existing levels to limit any full depth re-construction of the pavement. This may not always be feasible and so an assessment of existing pavement construction thicknesses should be carried out through excavation of pavement core samples.

In existing vehicular areas, it is assumed that the current pavement thickness is sufficient as there are no obvious signs of failure. However, in areas which are currently pedestrian only, but are to become

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vehicular, an increase in pavement construction depth is likely to be required. Consequently, it may be necessary to lower/ divert any shallow utilities in these areas.

New pavements constructed from concrete paving units should be designed in accordance with BS 7533-101:2021. However, subject to confirmation of existing pavement construction, this may require full depth re-construction of the pavement to provide a compliant design. To limit cost, the existing pavement foundation may be left in-situ with the upper layers replaced only.

Construction depths will vary across the scheme due to the nature of the existing pavement construction, anticipated vehicle loading, and surface type (flags / slabs / setts, etc). As an initial assessment, in vehicular areas a replacement depth of 200mm (80mm flag, 40mm laying course, and 80mm bituminous binder) is suggested for costing purposes. In nominally pedestrian areas (subject to occasional vehicle overrun), a replacement depth of 150mm (60mm flag, 30mm laying course, and 60mm bituminous base) can be assumed.

Surface Water Drainage

In most areas, the scheme proposals will require relocation of kerbs and channels and thus existing gullies will need to be abandoned and replaced with suitable drainage features to suit the proposed 3D design. A summary of the likely scope of works is provided below.

STATION SQUARE / MACLURE ROAD

- Abandon existing gullies and replace with new gullies / linear drainage channels / combined kerb drains to suit layout and finished levels.
- New connections to public sewers required. Connections could be lengthy.

STATION ROAD

- Abandon existing gullies and replace with new to suit new kerb/channel location.
- Re-use of existing gully tails is likely in most cases, though some new connections to public sewer may be required.
- Adjustment to manhole cover and frames to suit minor amendments to finished levels

LOWER TWEEDALE STREET

- Existing drainage to be retained.
- Adjustment to gully frames and gratings may be required subject to minor level changes (e.g. kerb upstand height)

DOWLING STREET

- Existing drainage to be retained.
- Adjustment to gully frames and gratings may be required subject to minor level changes (e.g. kerb upstand height)

Rochdale Station Square Stage 3 - Strategy Note

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Sustainable Drainage Systems (SuDS)

The scheme provides an opportunity to introduce SuDS measures to reduce surface water discharge into the receiving public sewerage system as well as improving the water quality of the discharge.

It is not considered feasible to provide a single large attenuation system given the extent of drainage works to re-direct surface water to it, the space required below ground, and maintenance liabilities of such a system. Instead, the introduction of localised areas of soft landscaping can be used to provide small volumes of attenuation and filtration of runoff to improve discharge quality. In some locations they may directly accept runoff from adjacent paved areas (rain gardens) eliminating the need for road gullies.

A detailed SuDS strategy for the scheme should be prepared. However, rain gardens with geocellular storage tanks below are suggested as an appropriate means of maximising the SuDS potential of the scheme. Rain gardens would be lined and may be linked to each other via below ground pipework, with connection into the public sewer. Discussion with the highway authority has indicated that this approach to SuDS may be suitable, subject to further studies.

Utilities

In general, the aim is to limit any impact on utilities from the scheme proposals. The location of tree pits, SuDS and any other deep excavations (e.g. lighting columns, signage, foundations for art installations) should be co-ordinated around existing location of buried services such that diversions are not required.

Changes to finished levels will be required as a result of the scheme proposals. To avoid a reduction in cover to buried utilities, triggering a need for their lowering, finished levels should be at or above existing wherever possible (refer to Pavement Construction above). Utility works would then generally be restricted to adjusting cover and frames to suit finished levels and surfacing. Recessed covers are to be used to better integrate with the landscape scheme, although agreement with utility companies is required due to potential manual handling concerns.

An assessment of utility depths under areas which are currently pedestrian only, but are due to accommodate vehicular traffic should be carried out. It is possible that in such areas, that utility depths are insufficient and lowering / diversion will be required.

New electrical connections will be required for any EV charging points and lighting columns. It is likely that sufficient capacity for this is available within the local network and that points of connection can be found close to the appliance.

Rochdale Station Square Stage 3 - Strategy Note

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Lighting

A review of the lighting provision throughout the scheme is required. Within the Station Square / Maclure Road area, it is possible a change in lighting class is required due to change in nature of this area towards a pedestrian focus. A summary of likely interventions is provided below:

STATION SQUARE / MACLURE ROAD

- Review lighting strategy. New columns, lanterns and connections to suit revised layout and change in lighting class.
- Some existing lanterns are mounted on support posts for Metrolink overhead cables. These should be retained if possible.

STATION ROAD

- Retain existing column locations (back of footway)
- Replace columns and lanterns if necessary to suit required lighting standards following layout changes.

LOWER TWEEDALE STREET

- Retain existing column locations (back of footway)
- Replace columns and lanterns if necessary to suit required lighting standards following layout changes.

Engineering Strategy: Advisory Actions

It is recommended that the following actions are completed in order to progress designs.

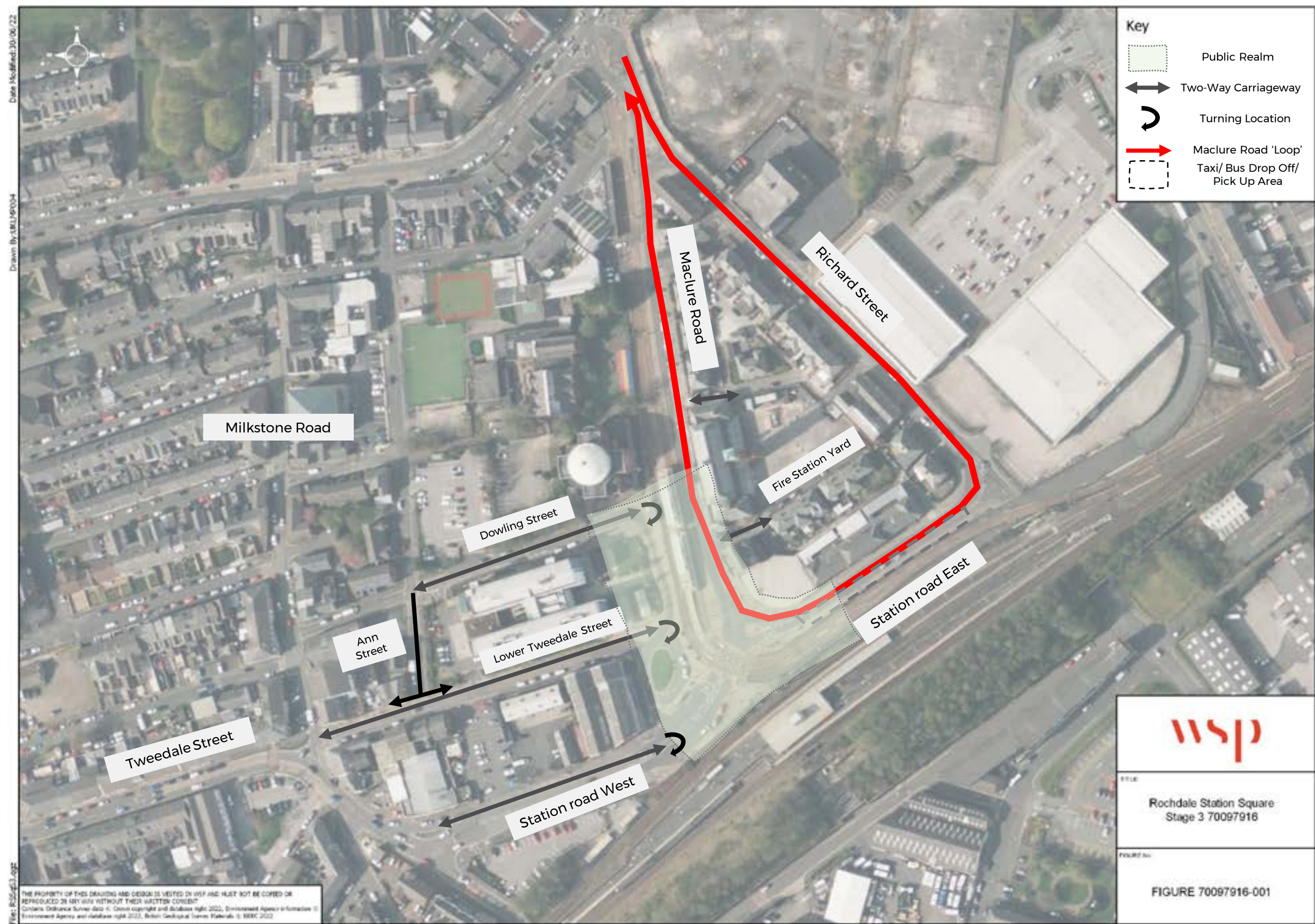
- Assessment of pavement strategy required, considering existing pavement construction depths, traffic loading, preferred surface finishes, utilities, maintenance liability and budget constraints.
- Prepare SuDS strategy.
- Complete utilities survey in missing areas and establish locations / depths where survey information is incomplete.
- Review impact of scheme on utilities.
- Prepare lighting strategy in consultation with RBC.

Rochdale Station Square Stage 3 - Strategy Note

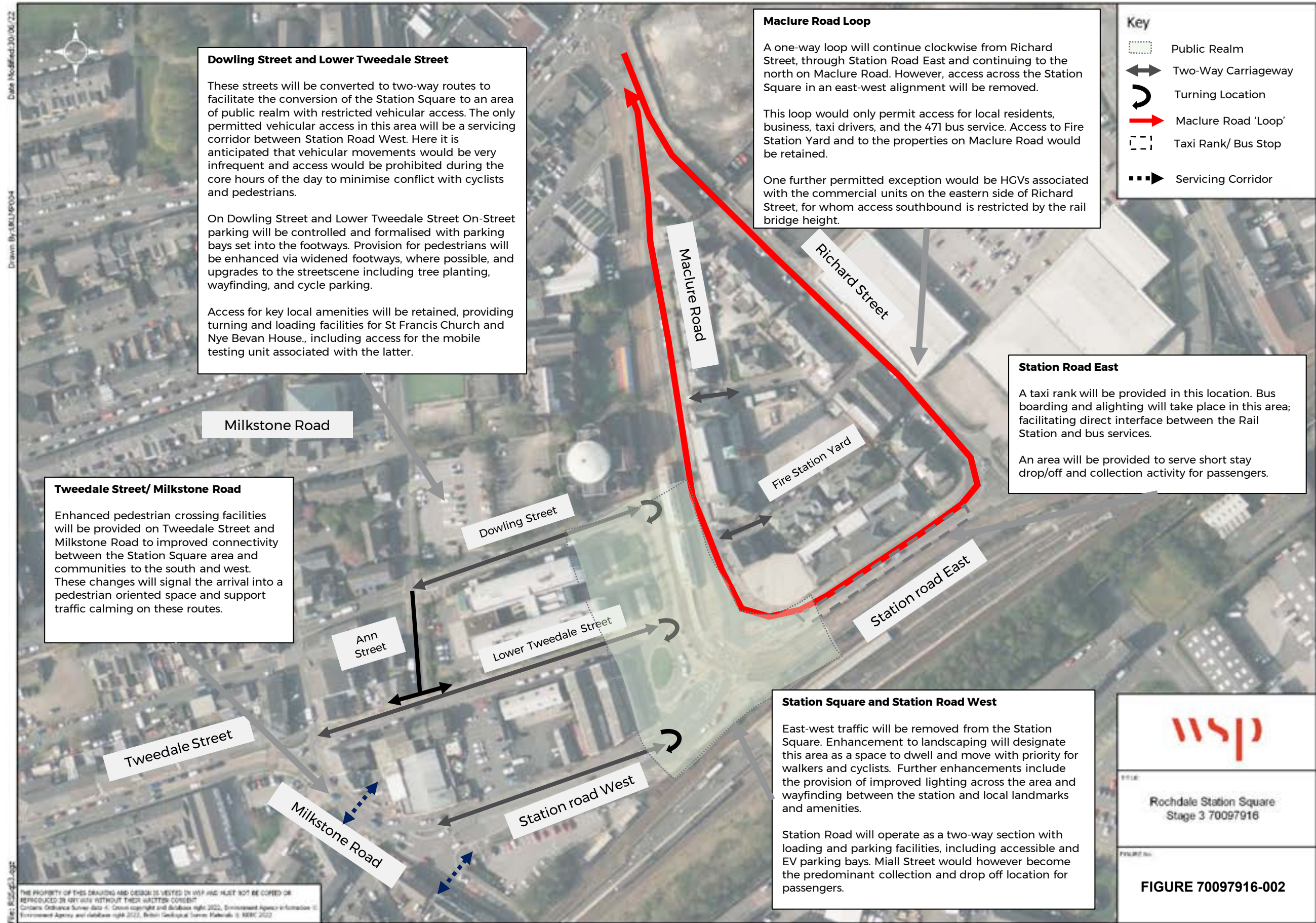
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APPENDIX A: FIGURES

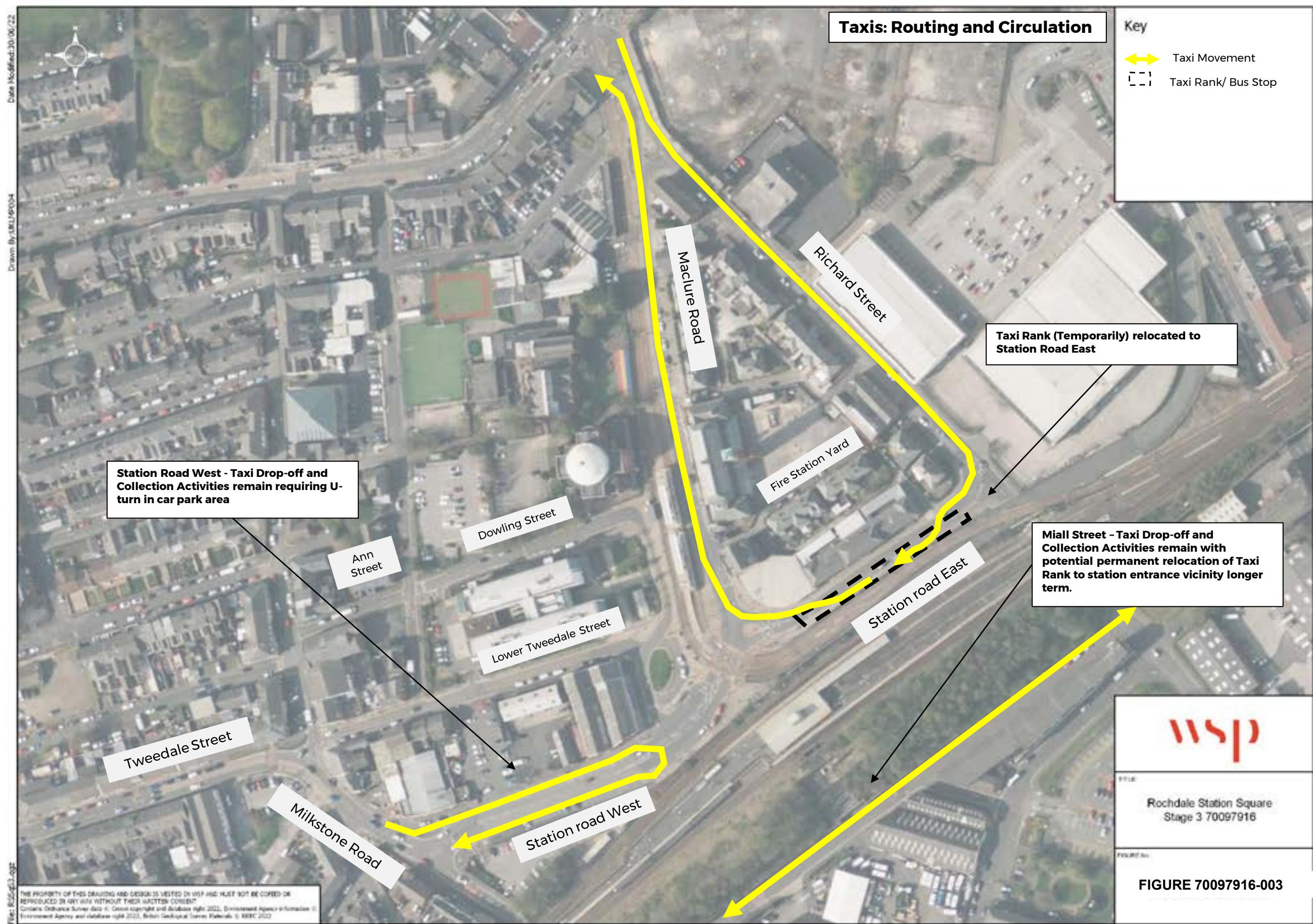
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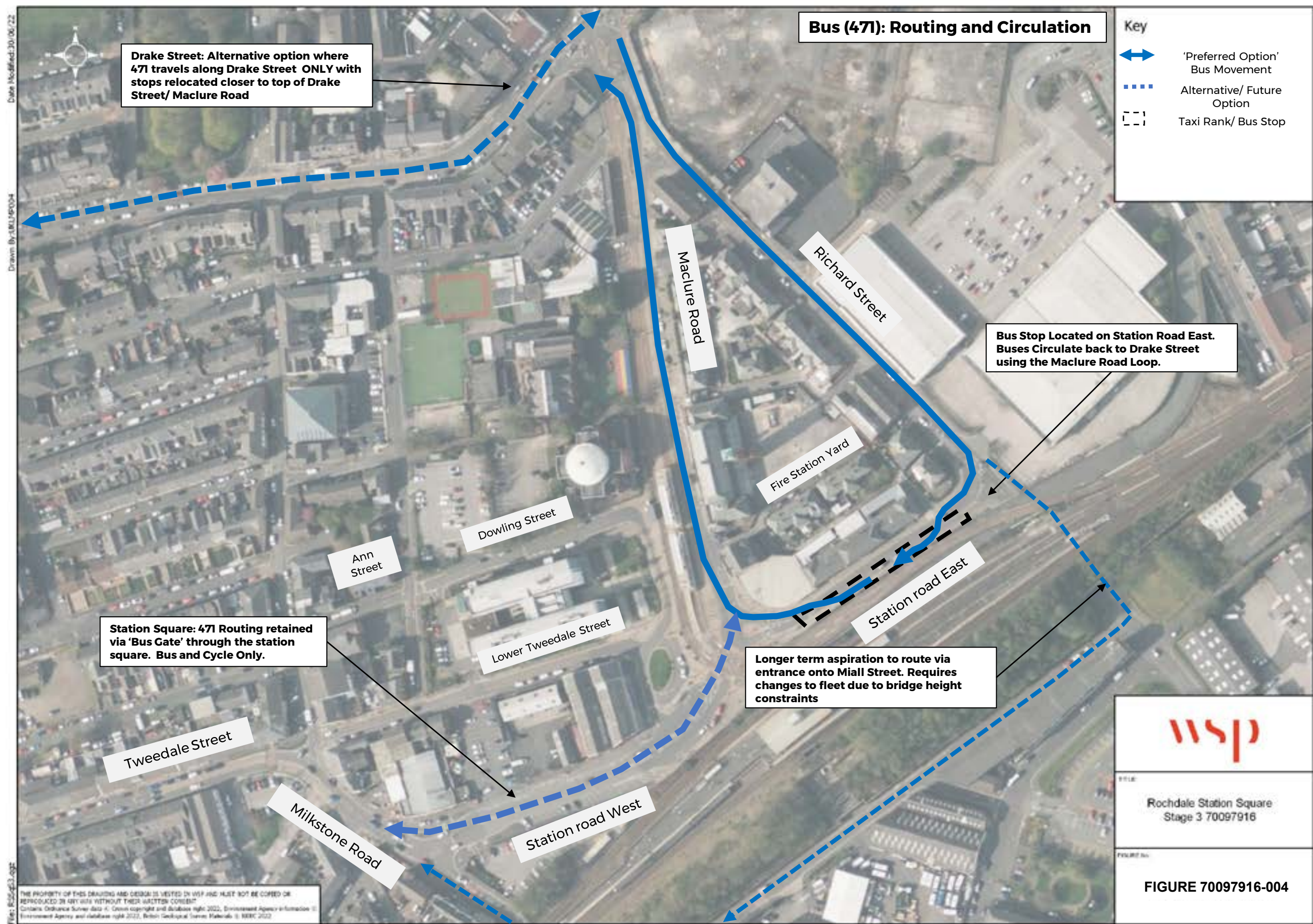
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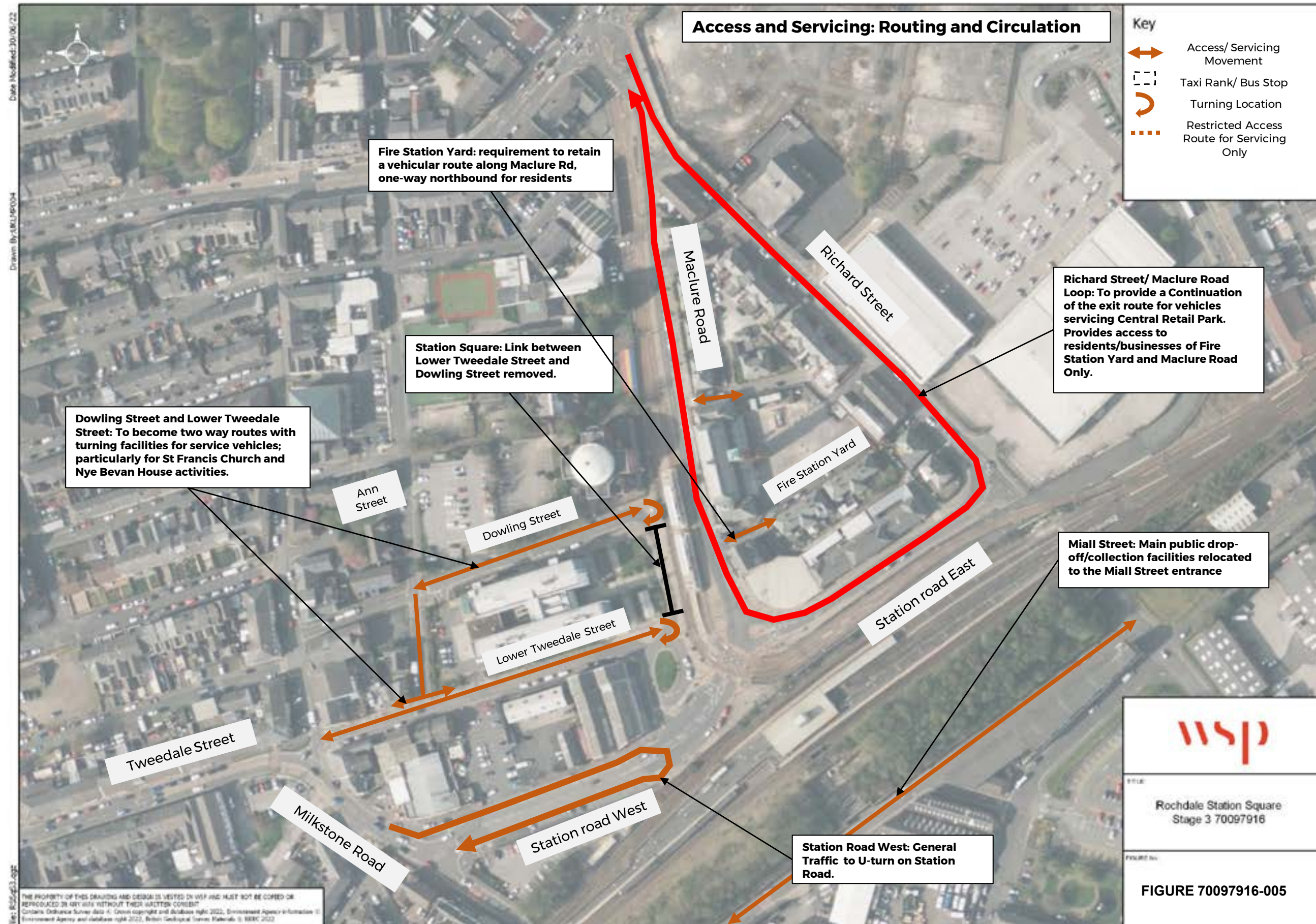
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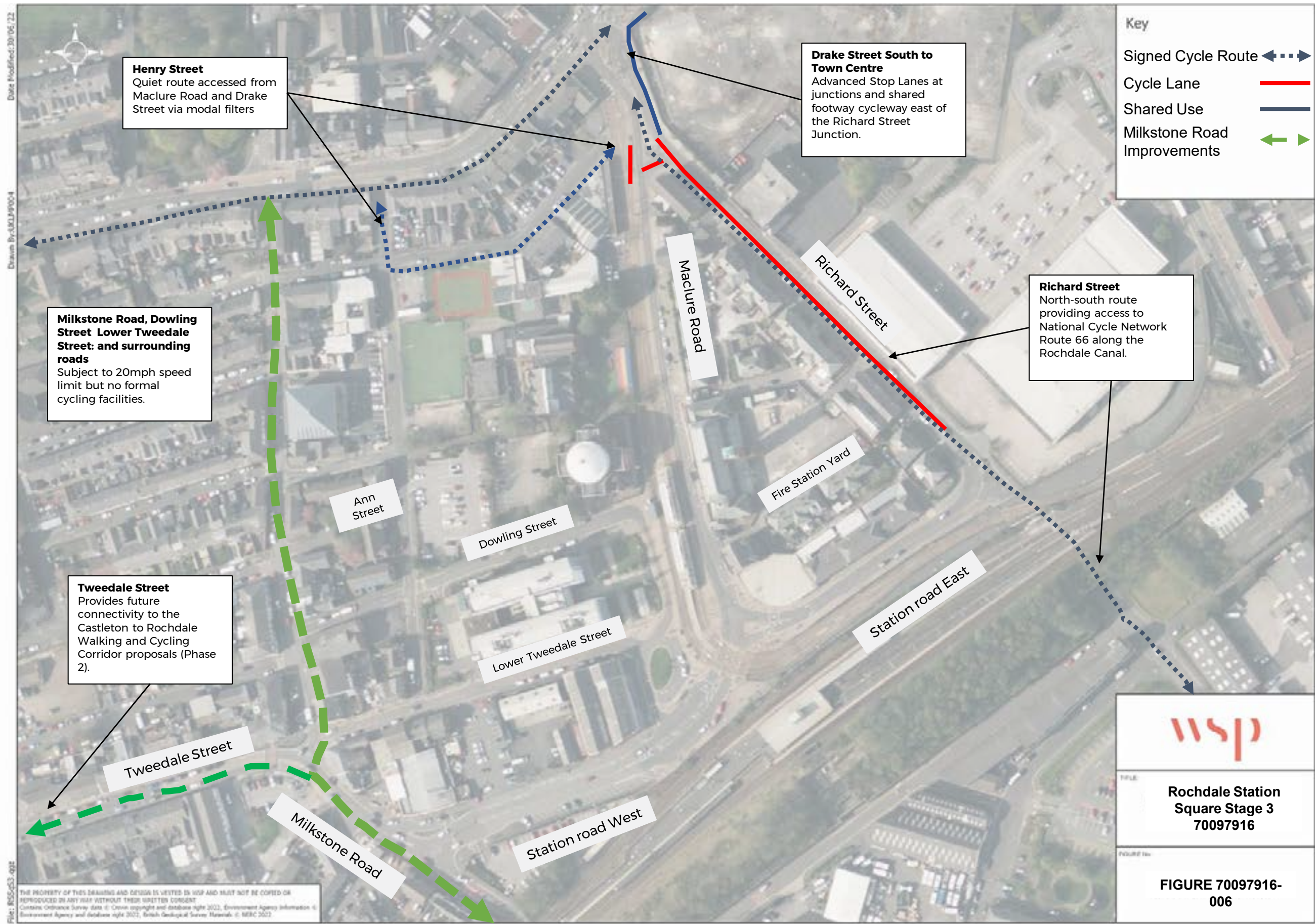
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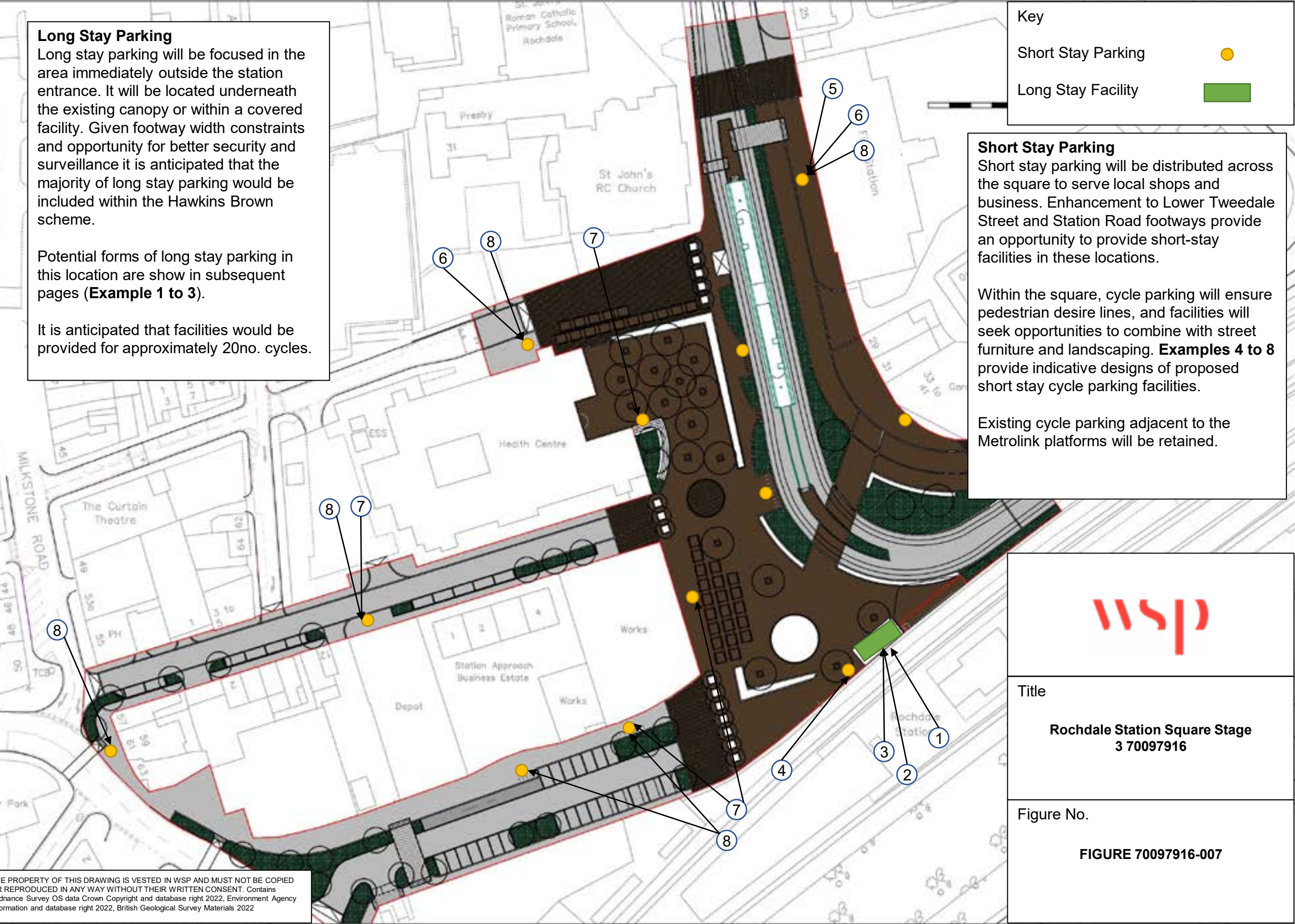
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WSP. Engineering Strategy



WSP. Engineering Strategy



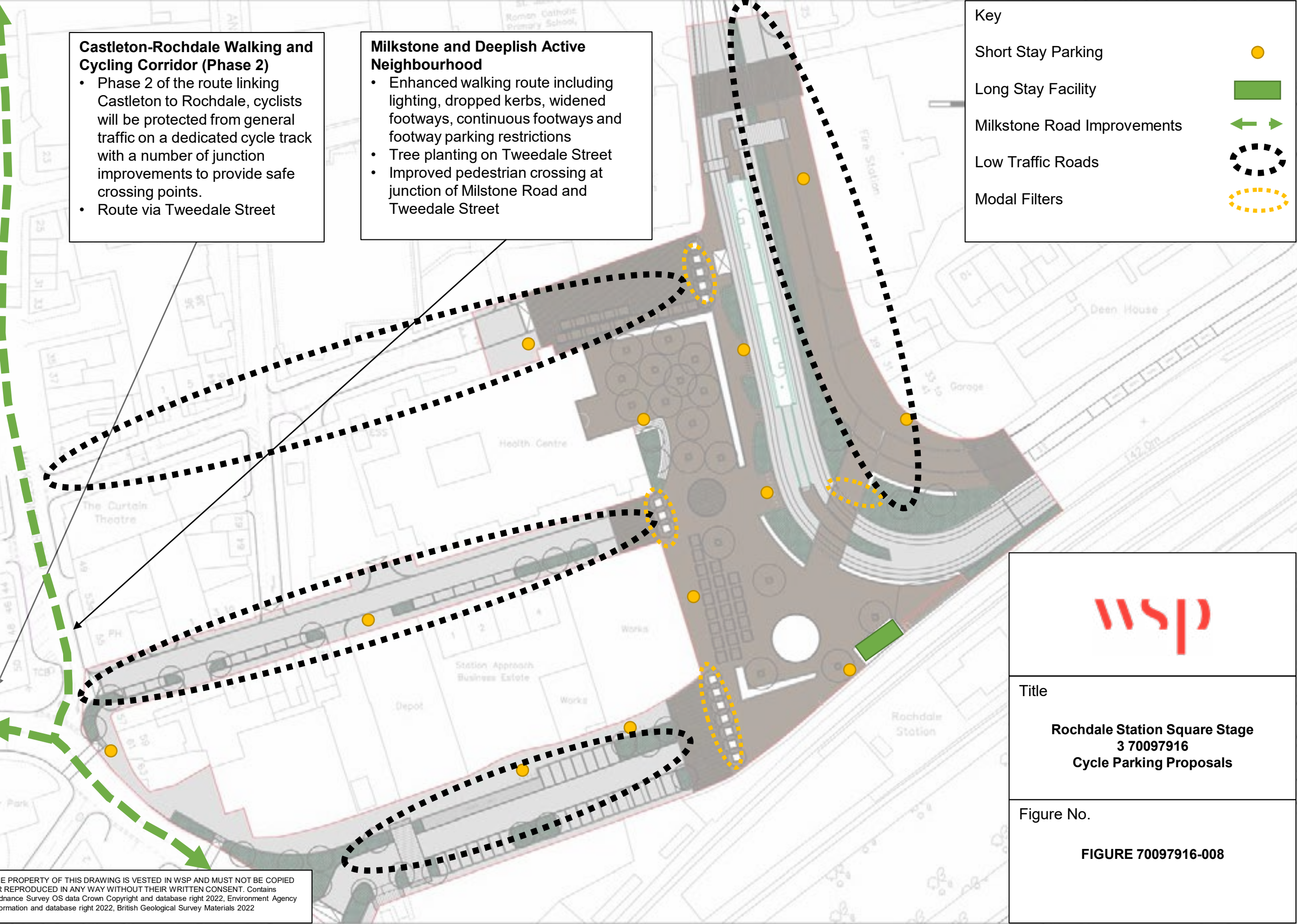
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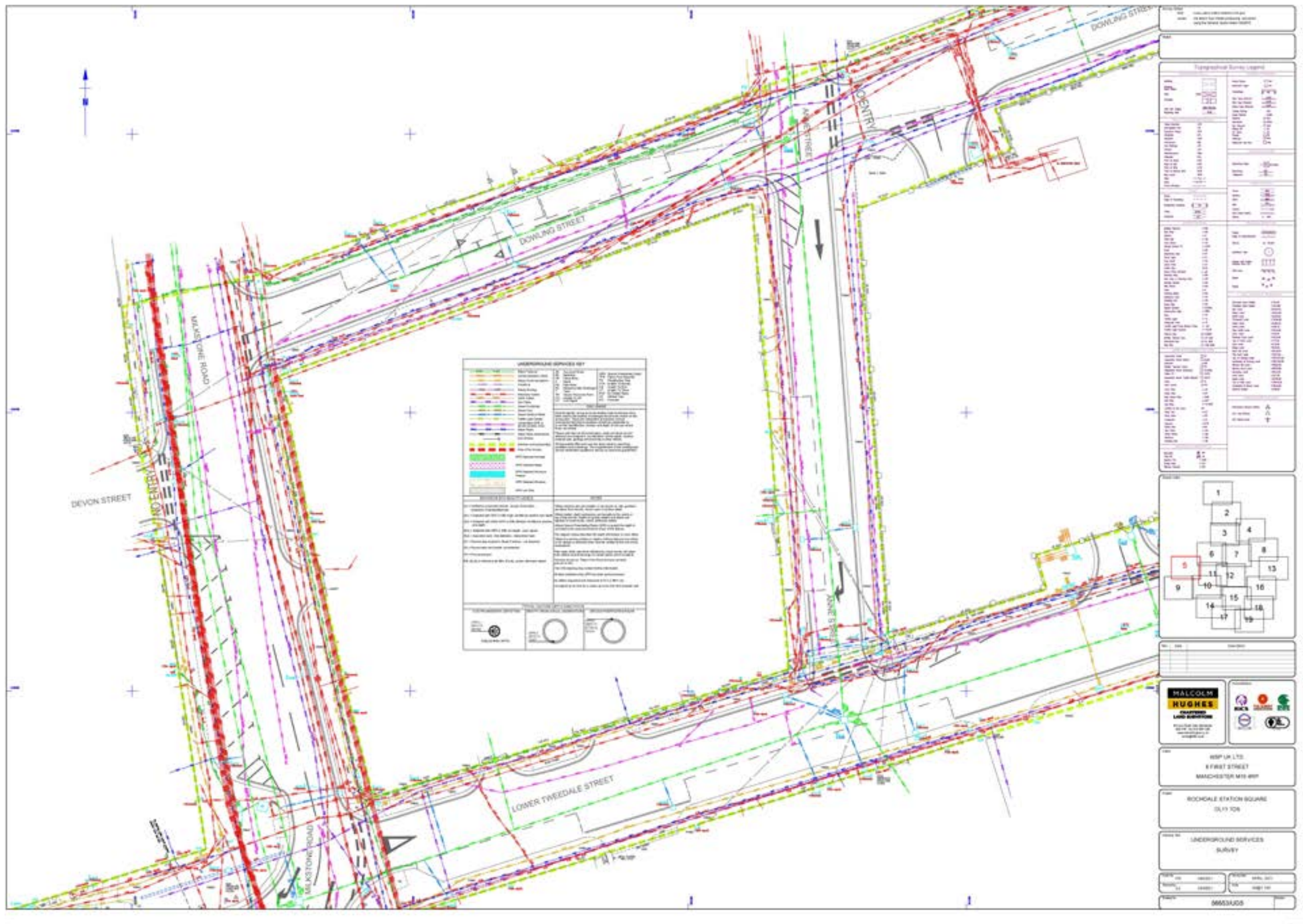
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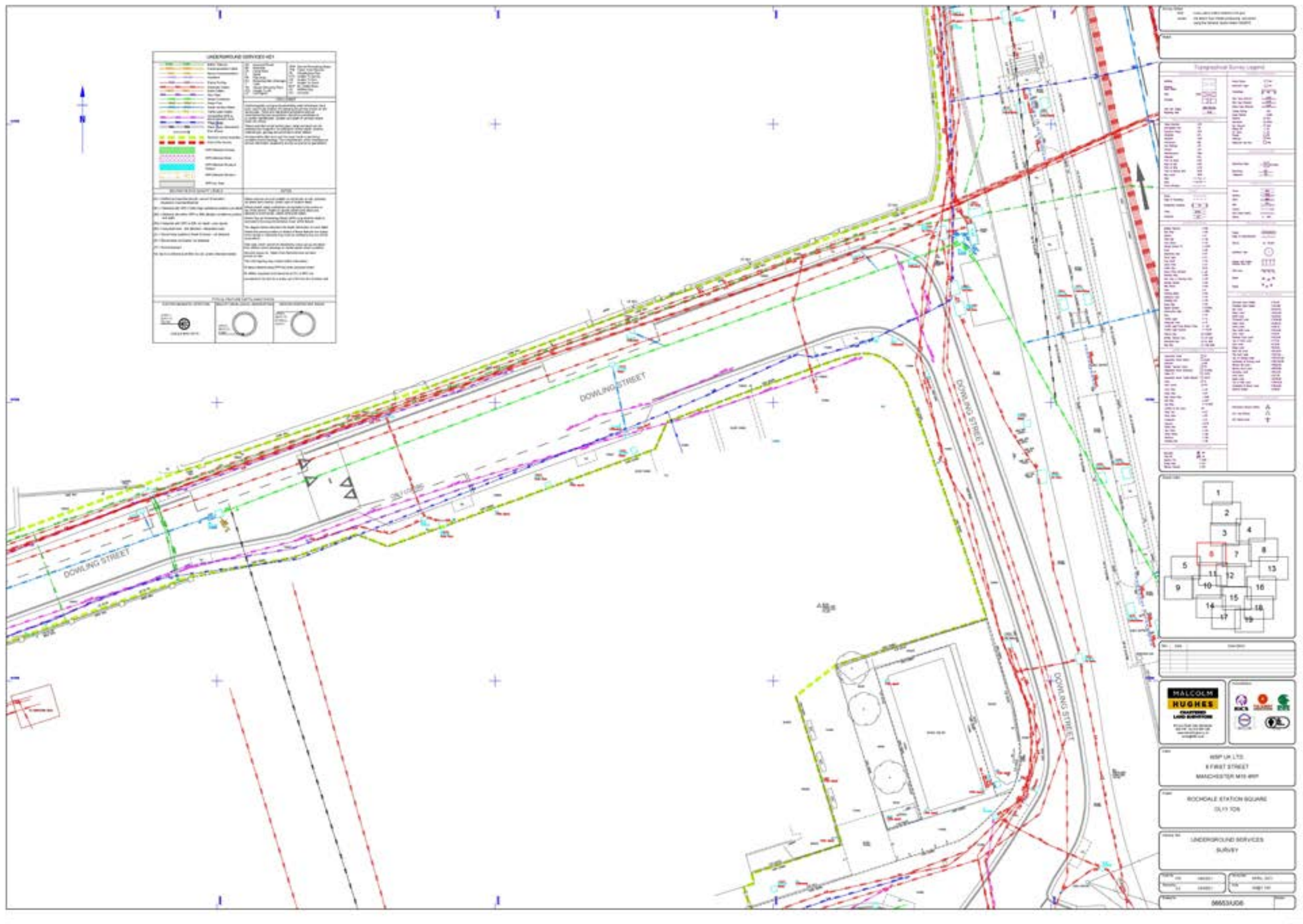
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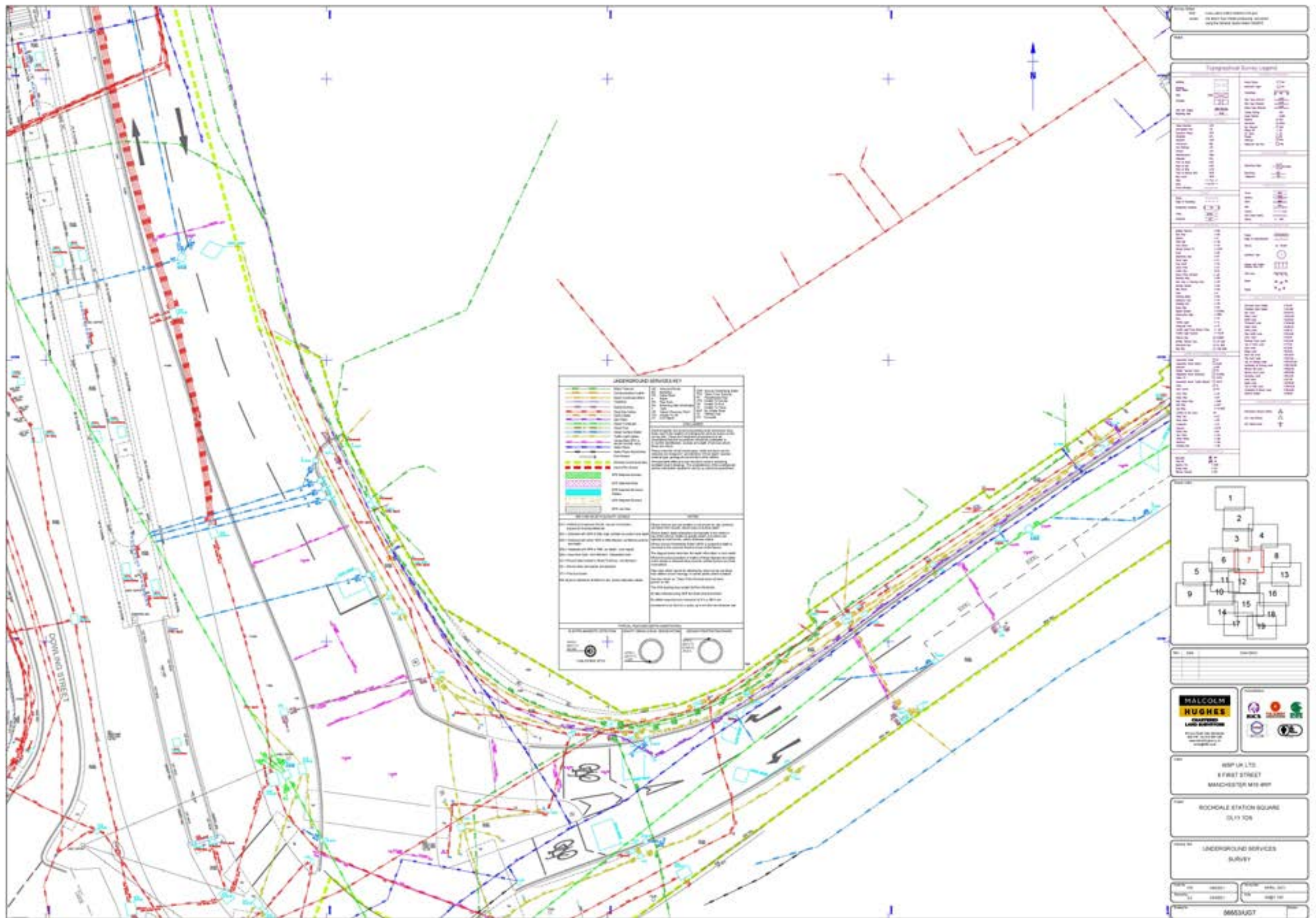
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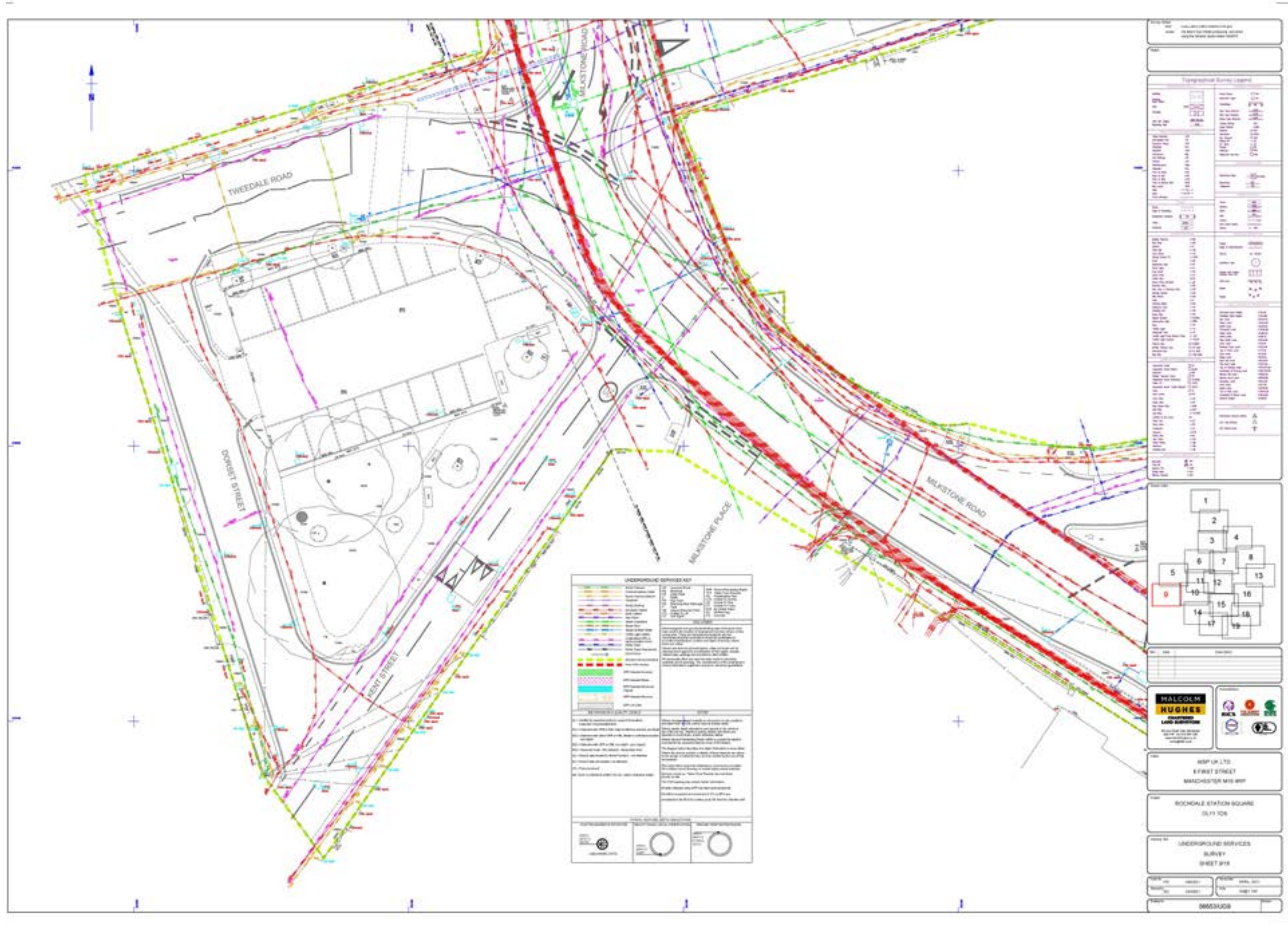
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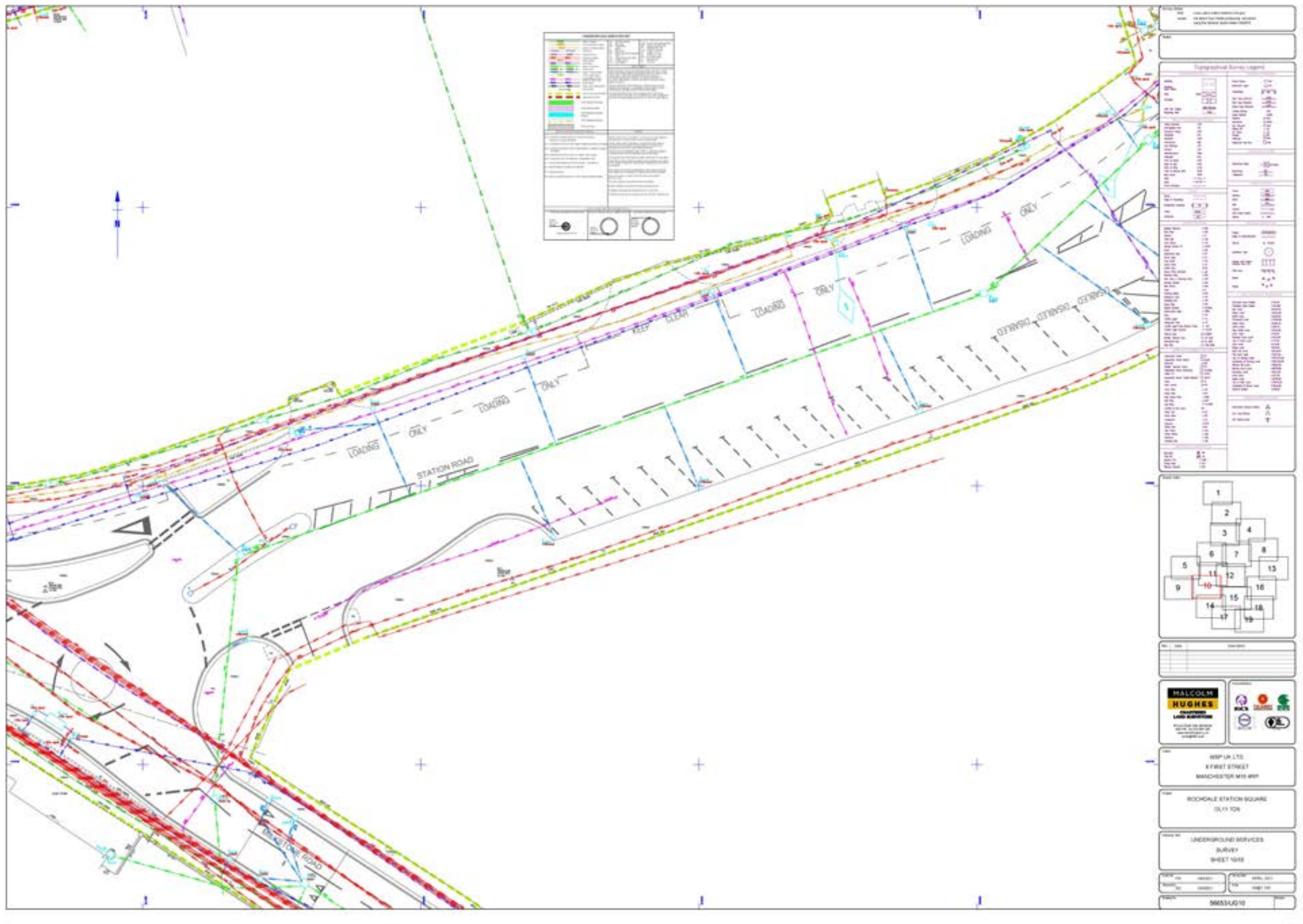
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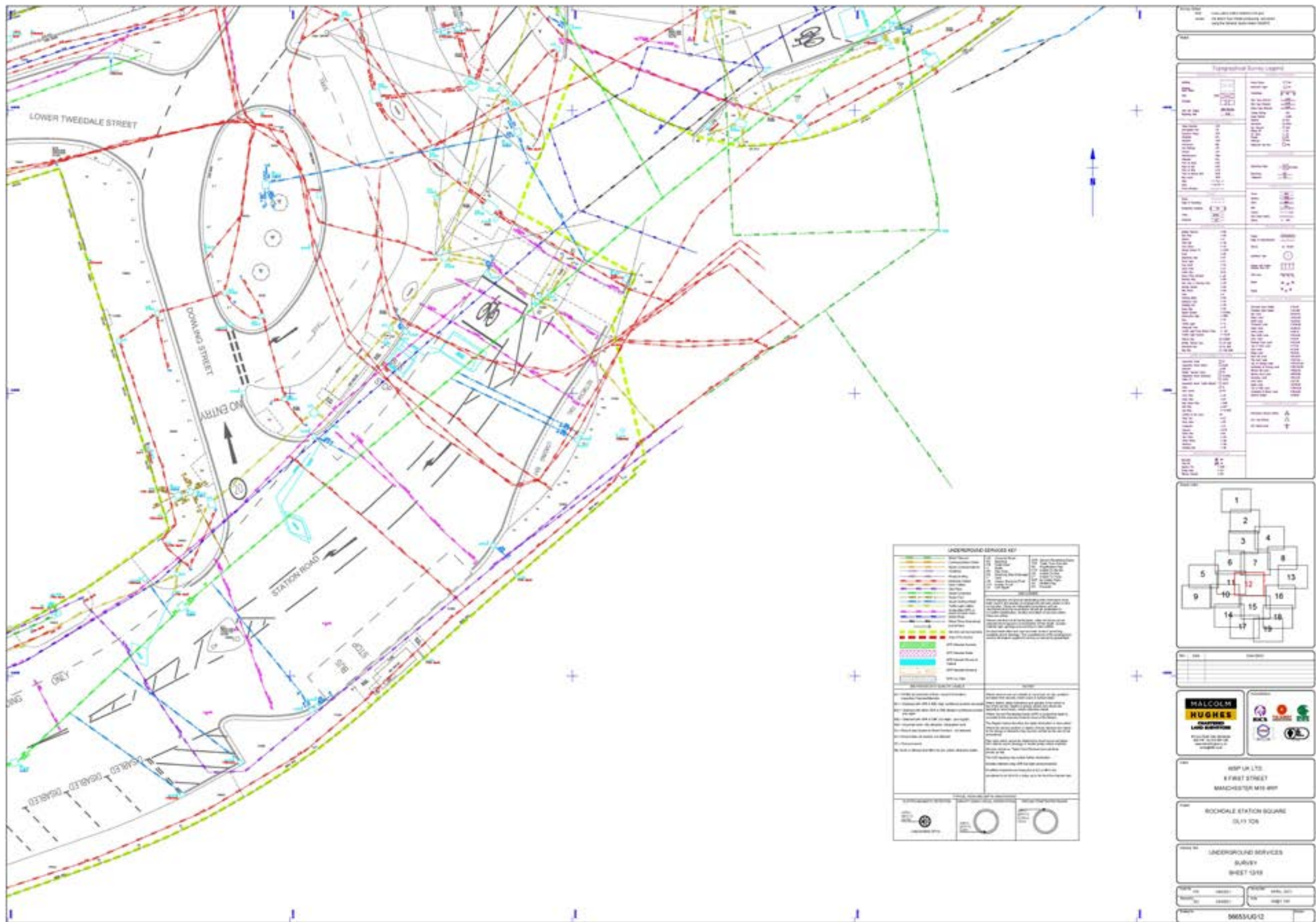
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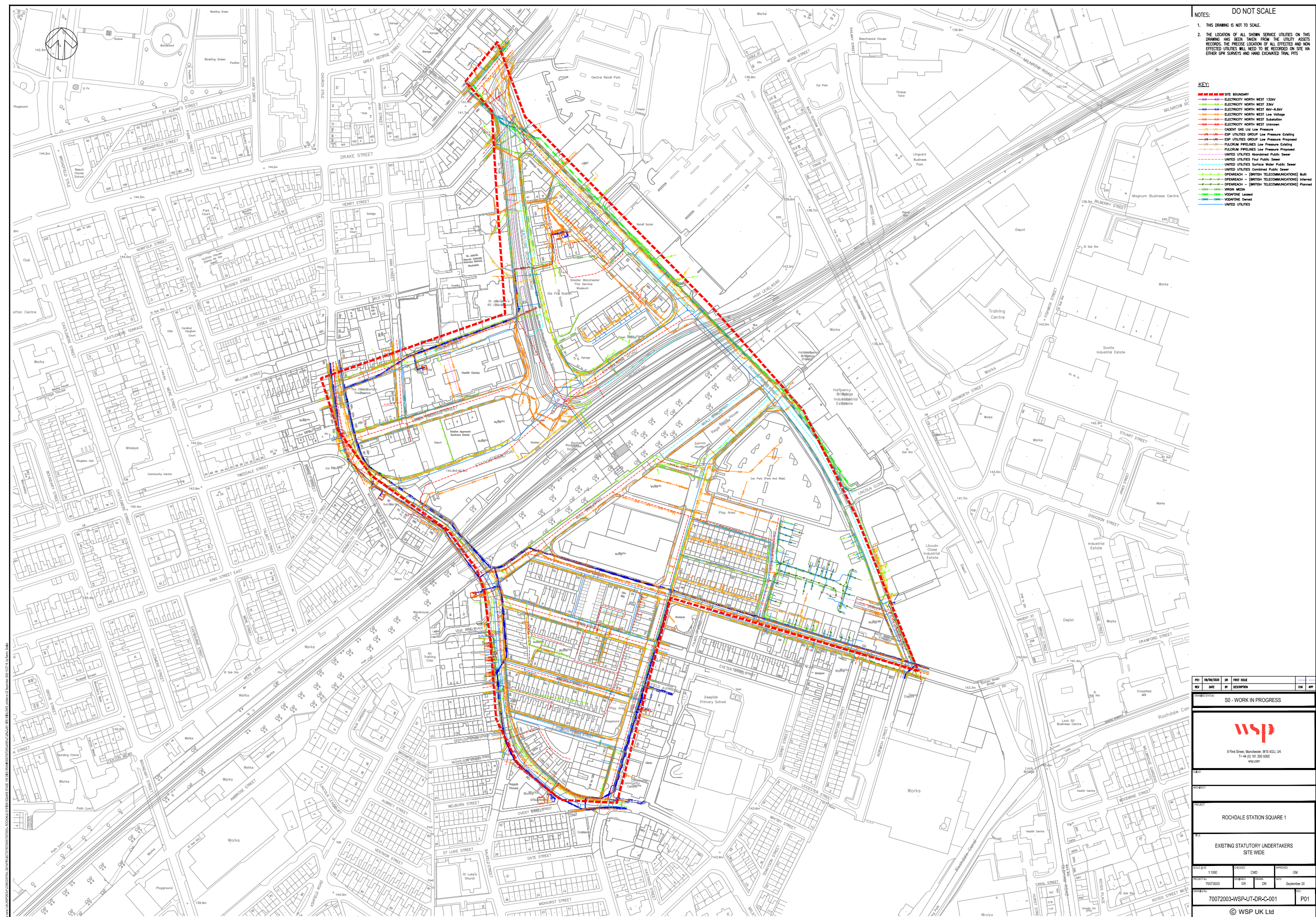
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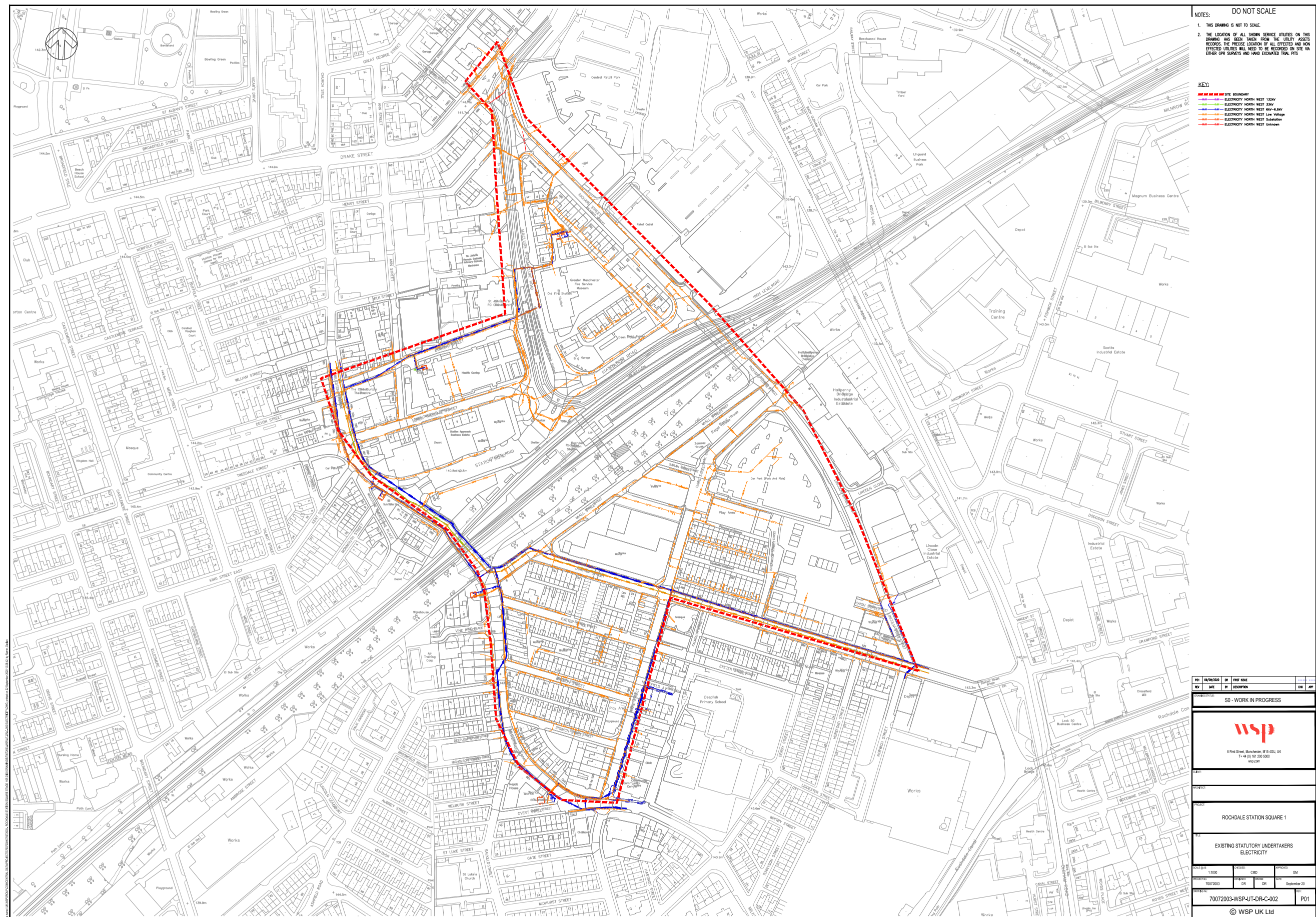
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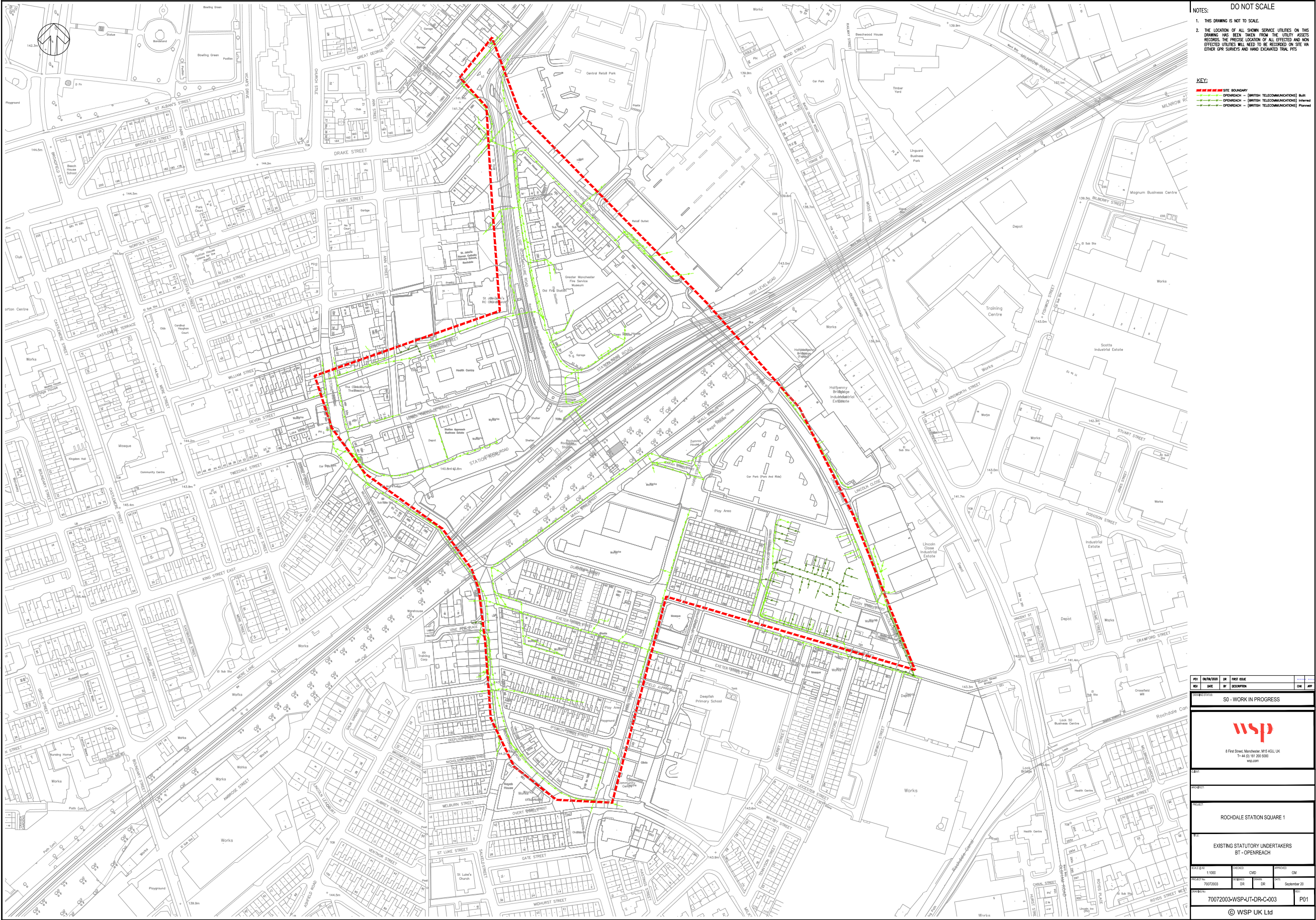
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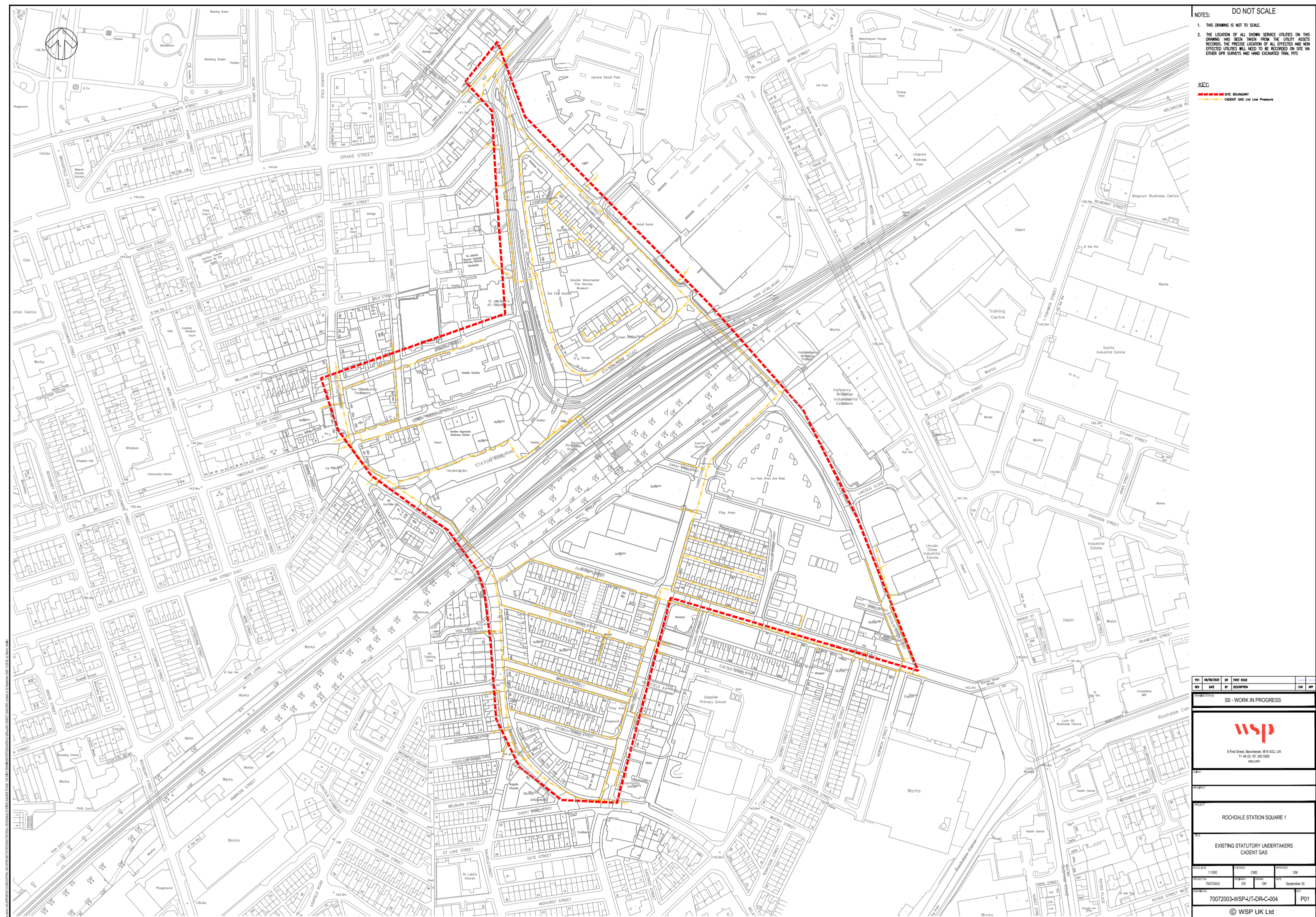
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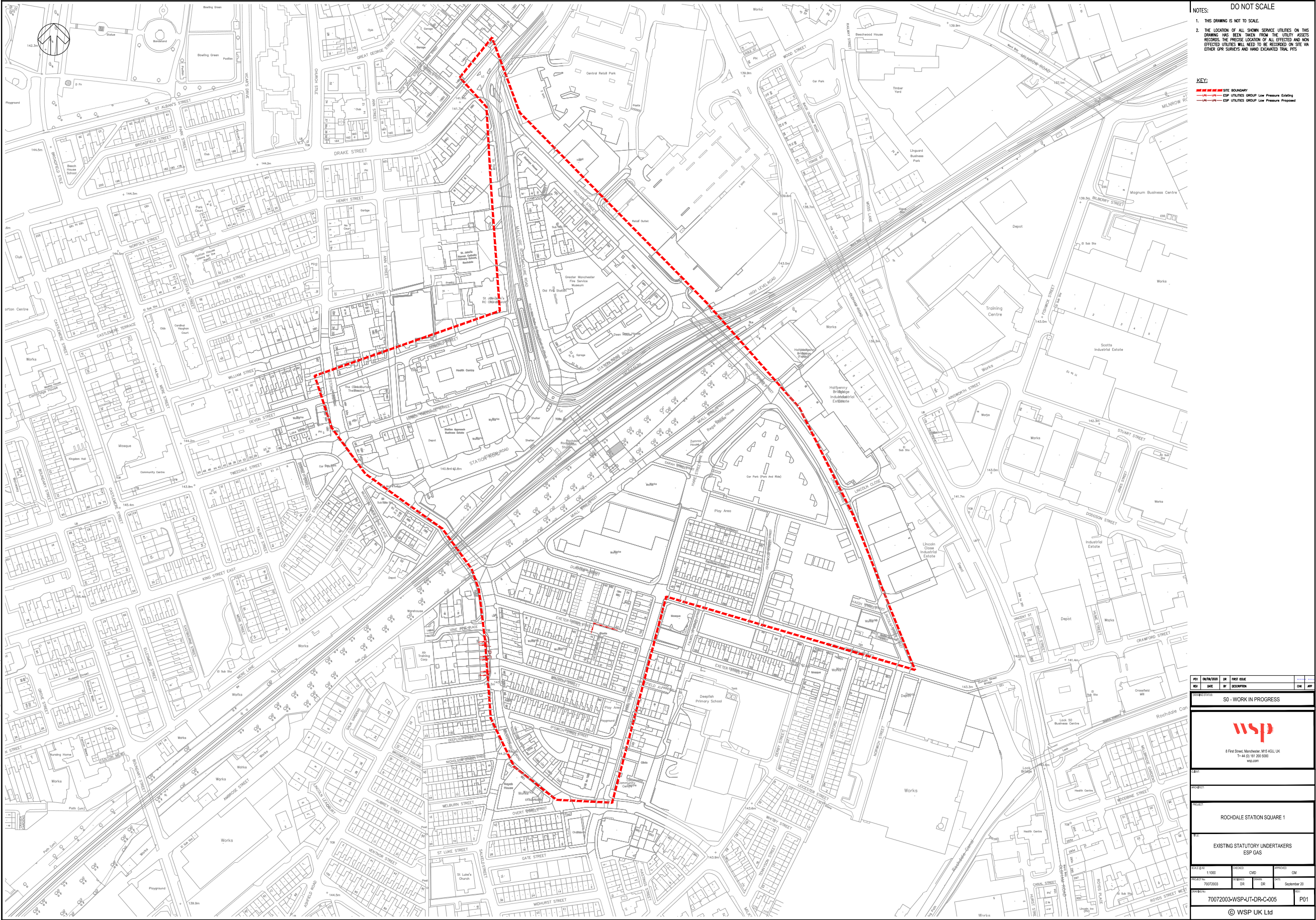
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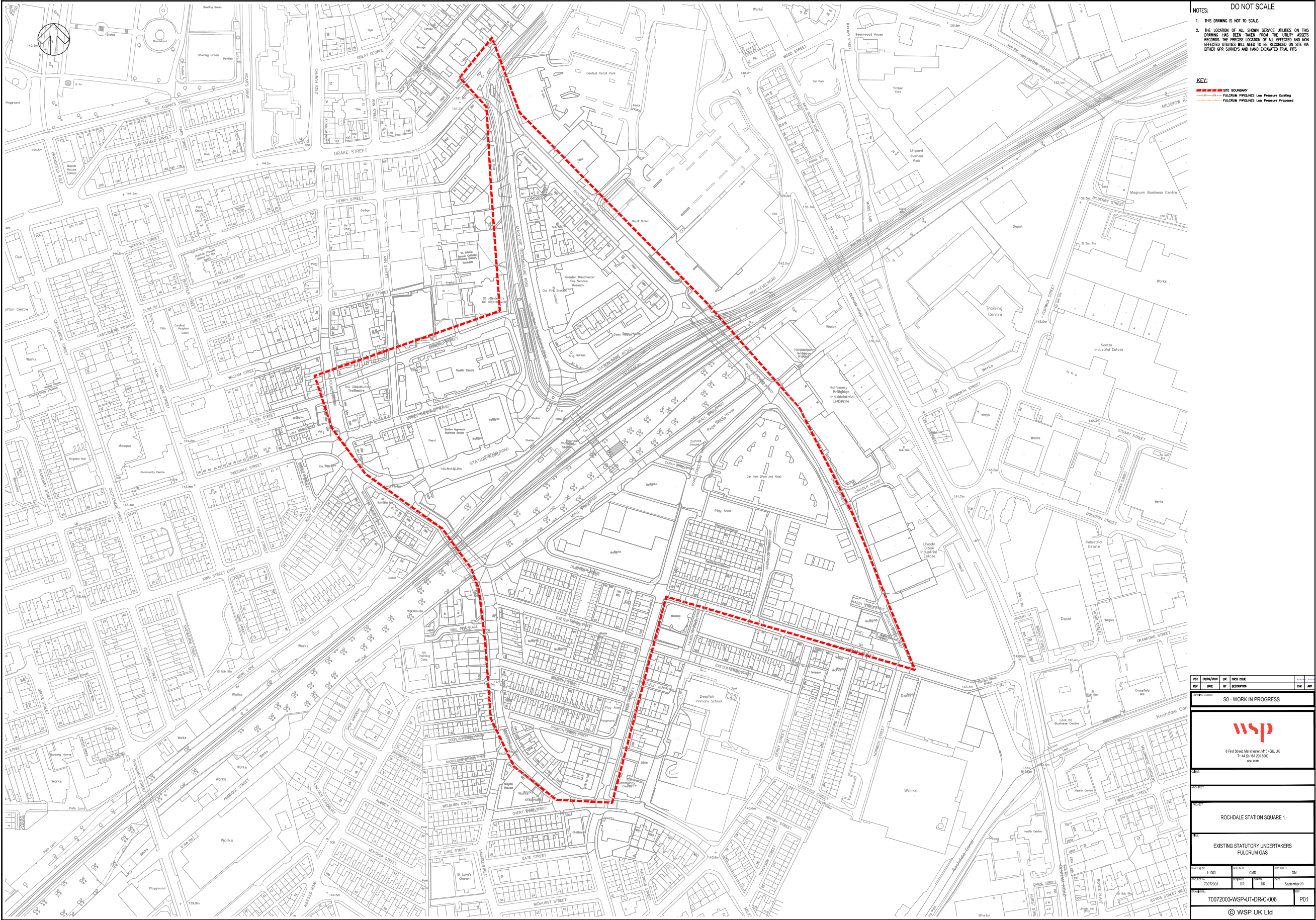
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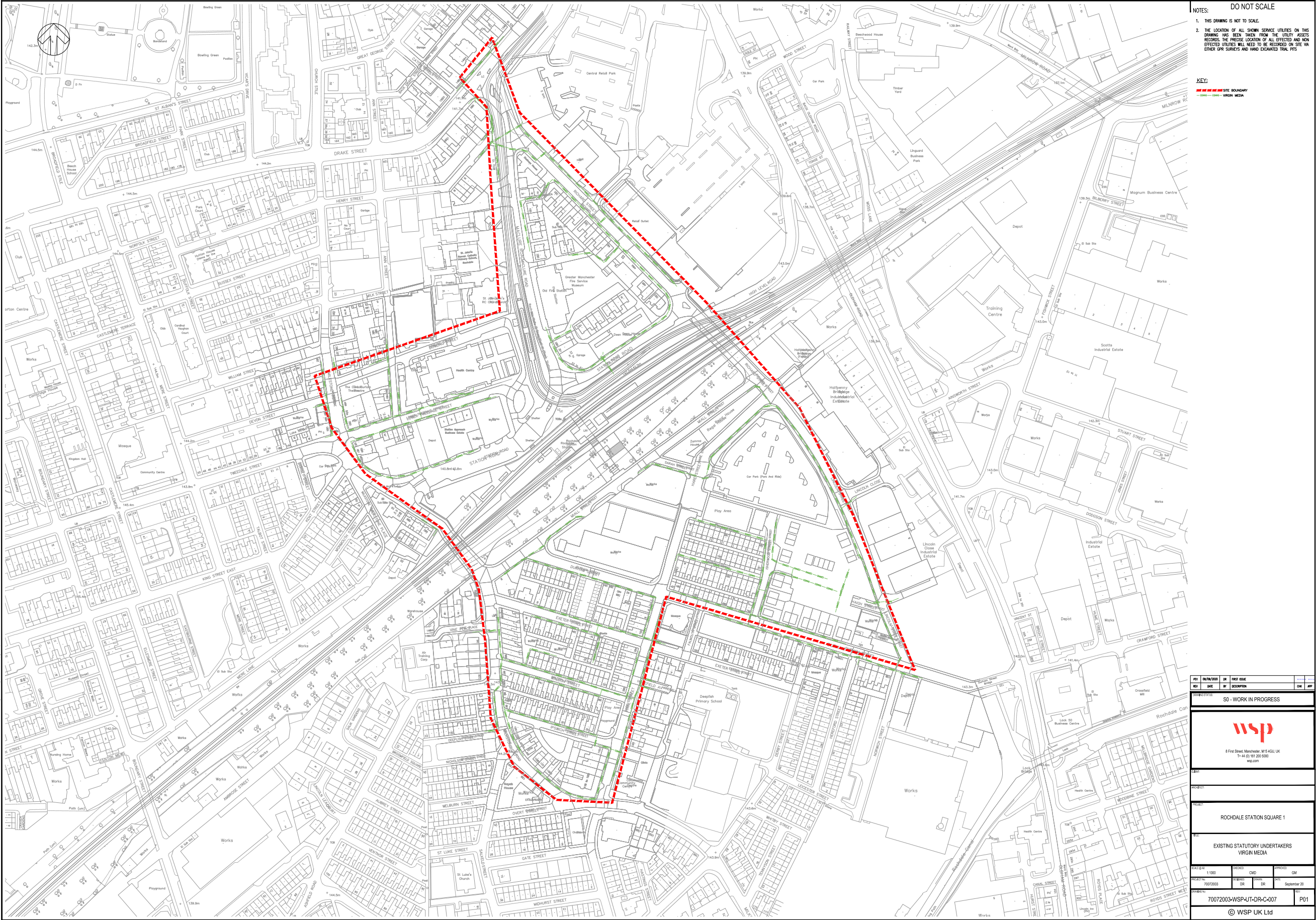
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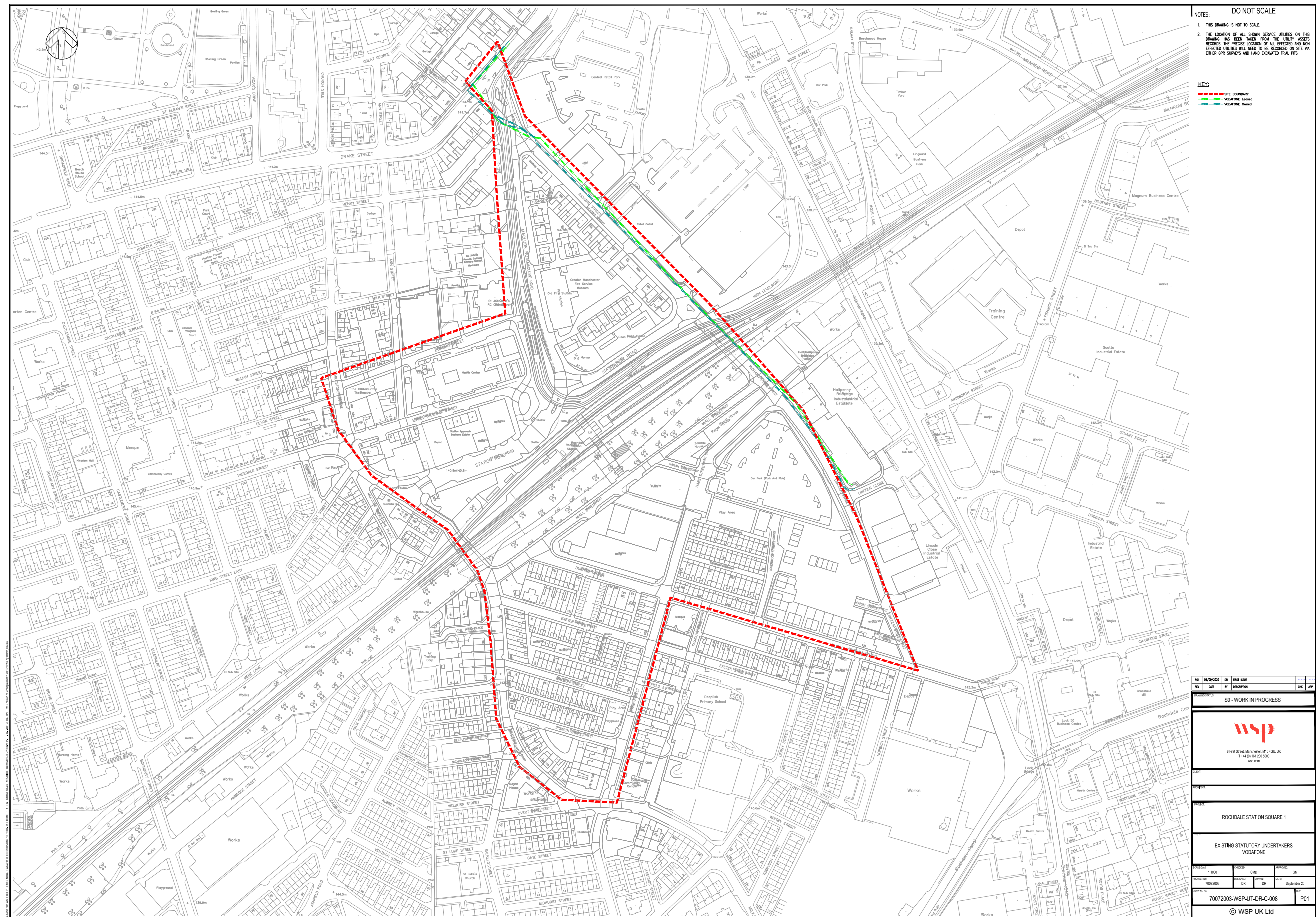
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NOTES:

- THIS DRAWING IS NOT TO SCALE.
- THE LOCATION OF ALL SHOWN SERVICE UTILITIES ON THIS DRAWING HAS BEEN TAKEN FROM THE UTILITY ASSETS RECORDS. THE PRECISE LOCATION OF ALL EFFECTED AND NON-EFFECTED UTILITIES WILL NEED TO BE RECORDED ON SITE VIA OTHER GPR SURVEYS AND HAND LOCATED TINS. PHS

KEY:

- RED DASHED LINE: SITE BOUNDARY
- SOLID BLUE LINE: UNITED UTILITIES

DO NOT SCALE

REV	DATE	BY	DESCRIPTION	CHECKED BY	APP
P01	19/08/2023	DR	FIRST ISSUE		

PROJECT INFORMATION

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 PROJECT REF: 70072003-WSP-UT-DR-C-009
 DATE: September 2023

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EXISTING STATUTORY UNDERTAKERS
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REVISIONS

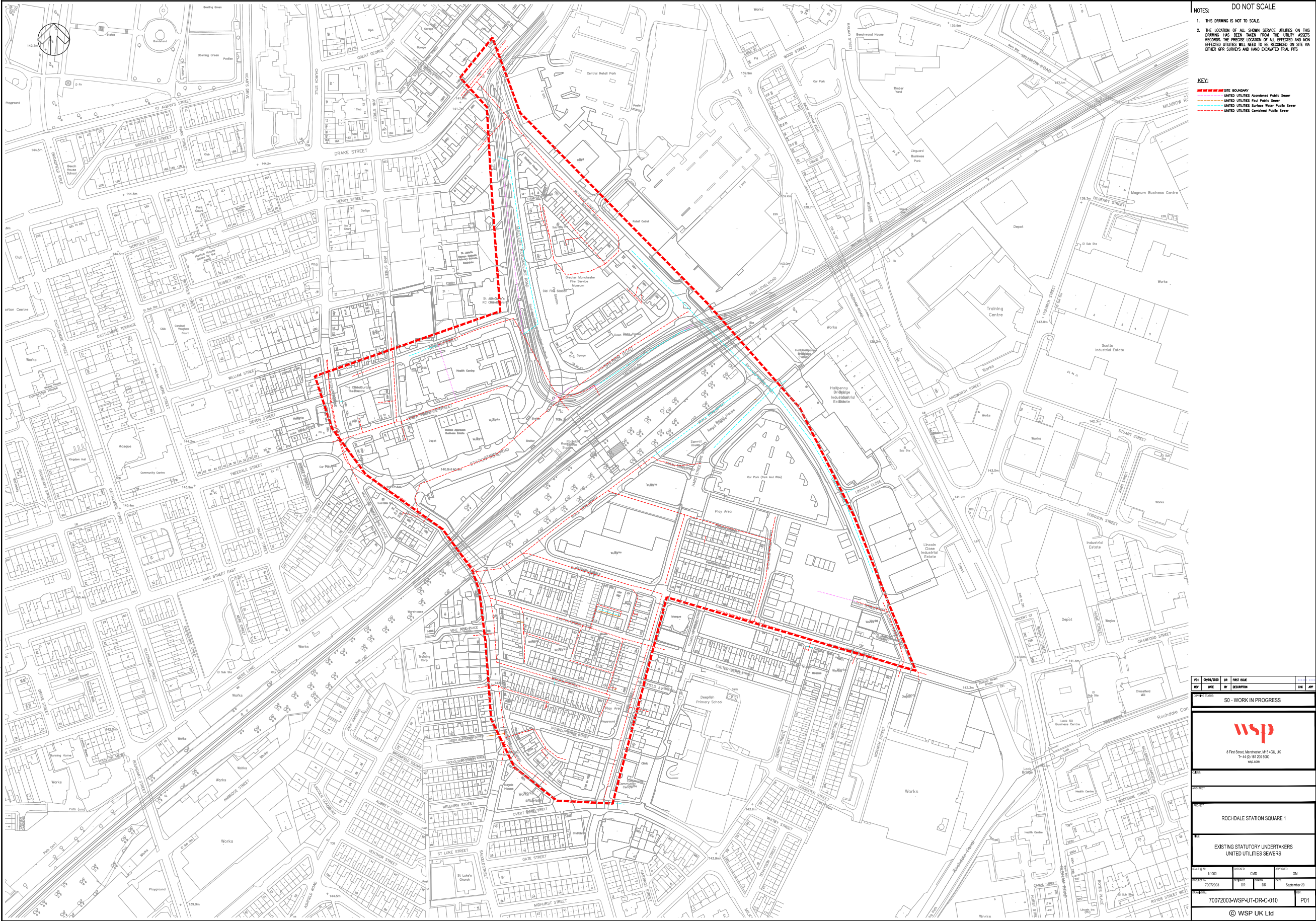
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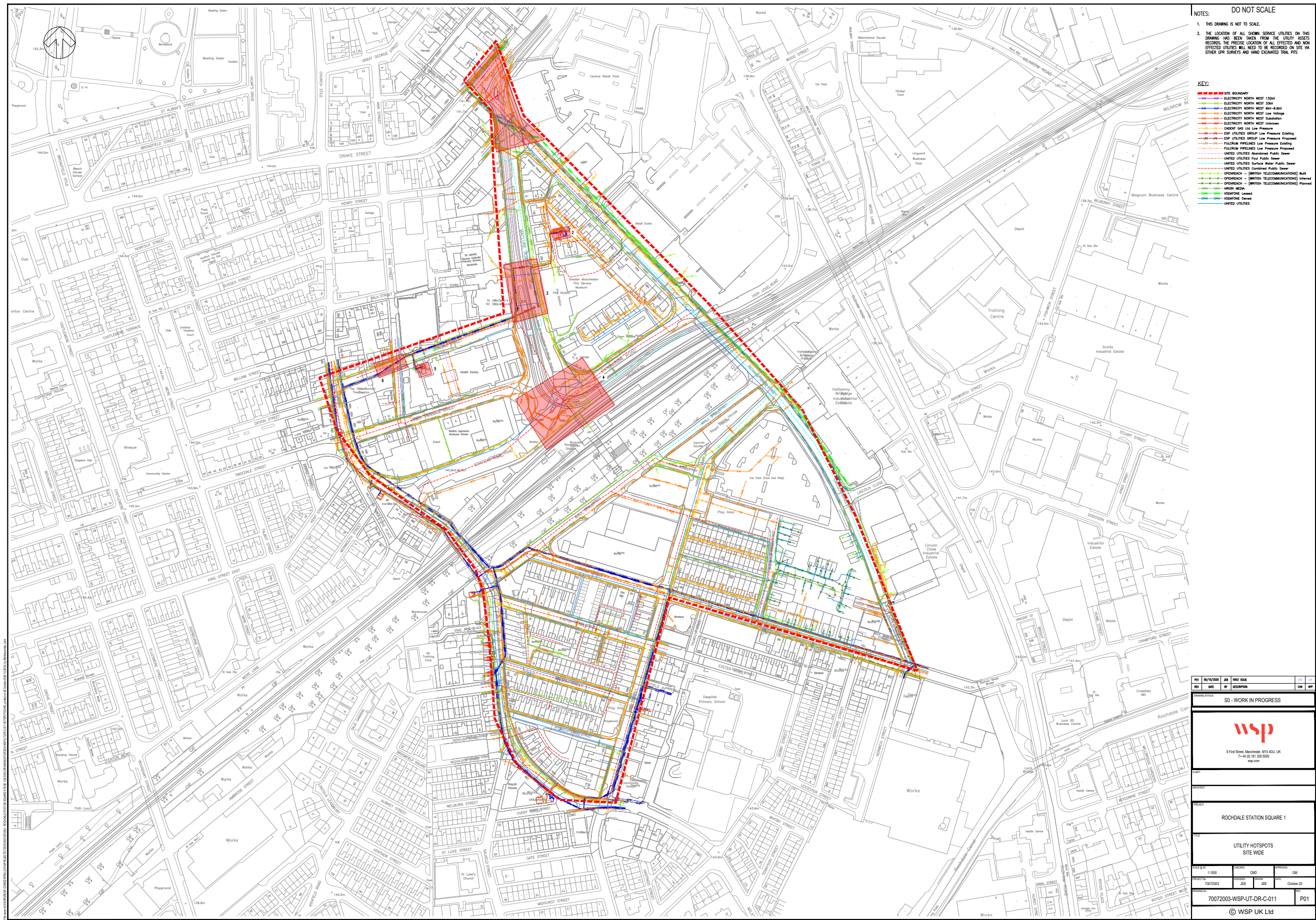
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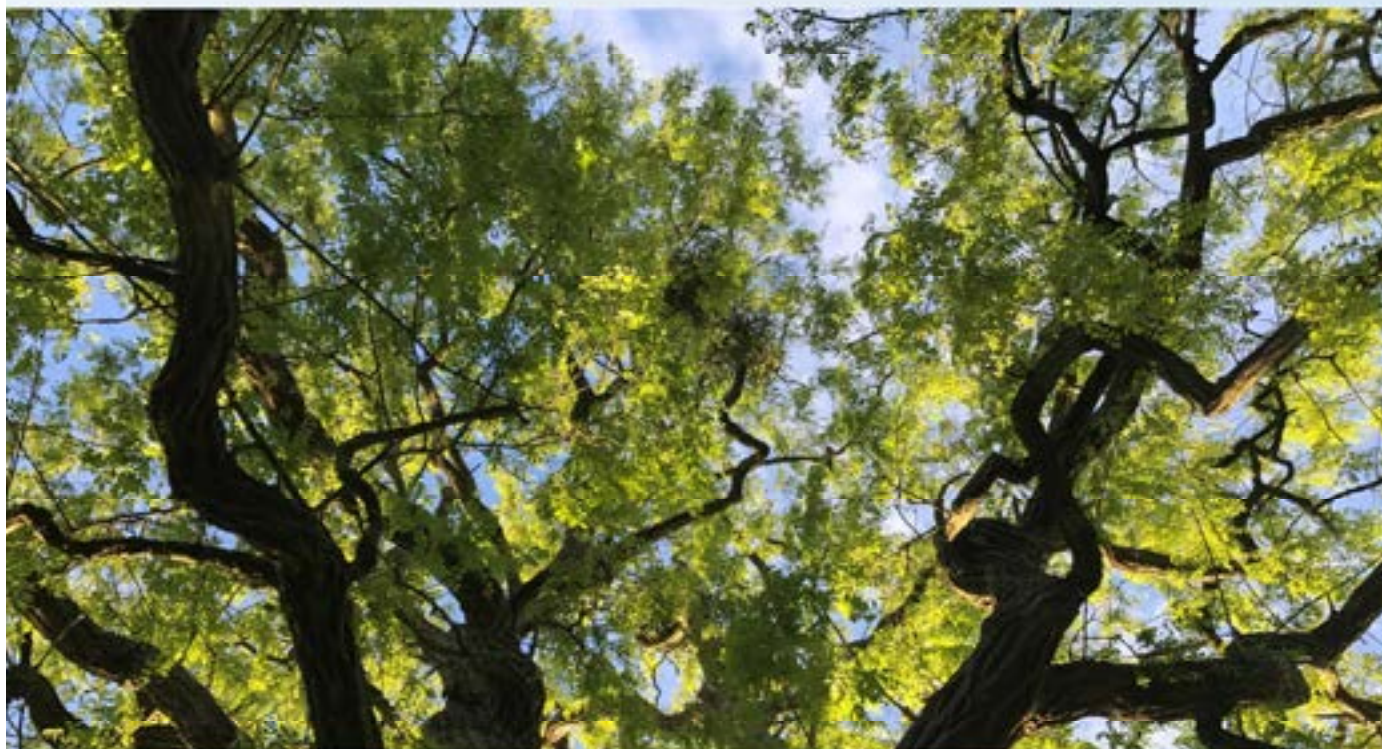
WSP. Arboricultural Impact Assessment Report



Broadway Malyan

ROCHDALE STATION SQUARE

Arboricultural Impact Assessment Report



70097916-ARB-001
OCTOBER 2022

PUBLIC

Broadway Malyan

ROCHDALE STATION SQUARE

Arboricultural Impact Assessment Report

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EXECUTIVE SUMMARY

The Proposed Development, situated between the Rochdale train station and tram stop, is an urban public realm scheme which centres on construction of a new station square. Proposed works within the station square include installation of new public infrastructure, new hard landscaping (such as new pedestrianised areas) and new soft landscaping inclusive of new tree plantings of trees and green spaces.

An arboricultural survey was undertaken on 13 October 2022. Details on surveyed trees are provided in the Arboricultural Survey Schedule presented in Appendix B. A total of 30 arboricultural features were surveyed, consisting of 25 individual trees and five tree groups. Two arboricultural features are assessed to be moderate quality and 28 features are low quality. Indicative locations of arboricultural features are shown on the Tree Removals and Protection Plan of Appendix C.

The Proposed Development requires the removal of 11 low quality trees which are T1, T2, T3, T8, T15, T16, T17, T18, T20, T22 and T24.

Retained trees within the station square and on the margins of the Planning Application Boundary are to be protected through special protection measures. Principles for tree protection are set out in the outline Arboricultural Method Statement provided in Appendix D. Tree protection measures, to be agreed pre-construction, shall confirm extents of Construction Exclusion Zones and precautionary working methods. This should include the need for existing hard surfacing to remain in-situ (currently covering indicative root protection areas), installation of protective fencing or ground protection and Arboricultural Clerk of Works site supervision.

WSP. Arboricultural Impact Assessment Report

1 INTRODUCTION

1.1 PROJECT BACKGROUND

- 1.1.1. WSP has been commissioned by Broadway Malyan to provide arboricultural support for a planning application for developments at Rochdale Station Square (hereafter referred to as the 'Proposed Development'). The Proposed development includes the installation of new public infrastructure, new hard landscaping (such as new pedestrianised areas) and new soft landscaping inclusive of new tree plantings and green spaces.

1.2 SCOPE OF REPORT

- 1.2.1. The purpose of this report is to identify all trees which may be affected by the Proposed Development, to assess the impact of the Proposed Development upon those trees and to recommend such protection measures as are necessary to ensure the health of retained trees.
- 1.2.2. The scope and level of detail included within this report is commensurate with that required for the adequate consideration of arboricultural features as part of the Proposed Development.
- 1.2.3. Information provided complies with the requirements of British Standard BS 5837:2012 Trees in relation to design, demolition and construction – Recommendations (BS 5837), and includes reference to the following:
- results of a BS 5837 walkover survey;
 - an Arboricultural Impact Assessment (AIA); and
 - an outline Arboricultural Method Statement (AMS).
- 1.2.4. Impacts should be defined as an assessment of tree loss, tree works or identification of matters to be addressed within an AMS.

1.3 LIMITATIONS

- 1.3.1. Provisional Tree Preservation Orders (TPOs) may be made whenever a local planning authority deems it appropriate with only those persons interested in the land served with a copy of the Order. Because of this, any reference to the presence of TPOs is only valid on the date at which the desk study search was undertaken. In instances where works unspecified in this report are to be undertaken, and which may impact trees, a further search for the presence of TPOs should be carried out prior to commencement.
- 1.3.2. Trees are dynamic organisms which are influenced by a variety of environmental variables and whose health and condition can rapidly change. Because of this, any recommendations made within this report are valid for a period of 24 months from the date of survey, when any site conditions change or pruning or other works unspecified in the report are carried out to, or affecting, the subject trees, whichever is the sooner.

- 1.3.3. This report does not constitute a health and safety survey. Where concerns for tree health and safety exist then necessary and appropriate tree inspections should be carried out.

1.4 RELEVANT LEGISLATION, POLICY AND GUIDANCE

- 1.4.1. This report has been compiled with reference to the following legislation, policy and guidance:

LEGISLATION

- *The Town and Country Planning Act 1990*

POLICY

- *National Planning Policy Framework (NPPF) (revised 20 July 2021)*
- *Rochdale Core Strategy, Section 10.35 (adopted October 2016)*¹

GUIDANCE

- *British Standards Institute. BS 5837: 2012 Trees in relation to design, demolition and construction – Recommendations. London: BSI*

1.5 ABBREVIATIONS OF TERMS USED

Table 1-1 – List of abbreviations used within this report

Acronym	Definition
ACoW	Arboricultural Clerk of Works
AIA	Arboricultural Impact Assessment
AMS	Arboricultural Method Statement - A methodology for the implementation of any aspect of development which is within the root protection area, or has the capacity to adversely affect, any retained tree.
BS 5837	British Standard BS 5837:2012 'Trees in relation to design, demolition and construction – Recommendations'. This standard 'gives recommendations and guidance on the relationship between trees and the design, demolition and construction process. It sets out the principles and procedures to be applied to achieve a harmonious and sustainable relationship between trees and structures'.
CEZ	Construction Exclusion Zone - An area within which all site clearance and construction activities, access and storage of materials are prohibited.

¹ Rochdale Borough Council, Core Strategy Document [online]. Available at: <https://www.rochdale.gov.uk/downloads/file/405/core-strategy> [Accessed 12/10/2022]

WSP. Arboricultural Impact Assessment Report

Acronym	Definition
RPA	Root Protection Area - Layout design tool indicating the minimum area around a tree deemed to contain sufficient roots and rooting volume to maintain the tree's vitality.
TRPP	Tree Removals and Protection Plan
TPO	Tree Preservation Orders - An order made by the Local Planning Authority to protect specific trees, groups of trees or woodlands in the interests of amenity.

2 METHODS

2.1 STUDY AREA

- 2.1.1. The spatial scope of arboricultural surveys (hereafter referred to as the study area) is presented on the Tree Removals and Protection Plan (TRPP) of Appendix C.
- 2.1.2. The study area has been informed by the red outlined planning application boundary indicated on the TRPP. The study area includes trees up to 15m from this boundary. The purpose of this 15m buffer is to ensure compliance with BS 5837 which recommends that all arboricultural features whose Root Protection Areas (RPAs) may be impacted are identified and surveyed. The British Standard caps RPAs to a maximum radius of 15m, hence the extent of the buffer.

2.2 BASELINE DATA COLLECTION

- 2.2.1. Baseline data collection has been undertaken with reference to BS 5837 and has been undertaken using the following data sources:
 - An arboricultural desk study; and
 - A walkover survey of arboricultural features within the study area.

2.3 DESK STUDY

- 2.3.1. A desk study was undertaken on 12 October 2022 to identify specific statutory and non-statutory arboricultural constraints which may apply to arboricultural features within the study area. The desk study review, as outlined in Appendix A, was undertaken to establish the following statutory and non-statutory arboricultural constraints:
 - Tree Preservation Orders;
 - Conservation Areas;
 - Ancient Woodland; and
 - Ancient or Veteran trees.

2.4 WALKOVER SURVEY

- 2.4.1. A walkover survey of trees was completed on 13 October 2022. The survey was undertaken to comply with BS 5837 and details of the method used are presented in Appendix A.
- 2.4.2. Where access to vegetation was restricted, stem diameter dimensions have been estimated as indicated by references within the 'Tree Condition Notes & Observations' column of Appendix B's Arboricultural Survey Schedule.
- 2.4.3. Topographical survey information indicating tree stem locations for T1, T2, T3, T15, T18 and T20 was available for the site. All other tree stem locations have been indicatively plotted using other reference points within the topographical survey, GPS locations and open-source aerial imagery.

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2.5 PROVIDED DESIGN INFORMATION

2.5.1. The following information has been viewed and used to prepare this report and arboricultural assessment:

- Topographical information as provided in .DWG format entitled '56653 TOPO 2D RevA (24-02-22)'.
- Proposed Masterplan layout figures as provided in pp24-26 of the 'Rochdale Station Square - Public Realm Design Statement' (July 2022).
- Design information provided as .DWGs entitled 'xref - site masterplan-arb' and 'BM36072-C-L-100 Bind'.

3 ARBORICULTURAL SURVEY FINDINGS

3.1 DESK STUDY FINDINGS

- 3.1.1. The desk study found no records of ancient or veteran trees nor ancient woodland and the walkover survey verified the absence of such trees. Correspondence with Rochdale Borough Council (dated 12 October 2022) also confirms the absence of TPOs within the study area.
- 3.1.2. The desk study confirms the presence of Maclure Road Conservation Area within the study area (see Figure 3-1).

Figure 3-1 – Location of 'Maclure Road Conservation area' pink outlined (Source: Rochdale Borough Council, Available at: <https://www.rochdale.gov.uk/downloads/download/191/list-of-conservation-areas-maps-and-appraisals>)



3.2 SITE DESCRIPTION AND WALKOVER SURVEY FINDINGS

- 3.2.1. The Proposed Development is centred on Ordnance Survey (OS) National Grid Reference: SD 89899 12678 and is located near Rochdale railway station and tram stop.
- 3.2.2. The study area is predominantly hard surfaced. The majority of surveyed trees are in front of the Nye Bevan building opposite the tram stop and are planted in a small grassy verge bordered in shrubbery surrounding a covered bike storage unit. These features are recorded as T8 through T25 within the schedule (Figure 3-2).

WSP. Arboricultural Impact Assessment Report

Figure 3-2 – Photo of Rochdale square tree (T8-T25)



3.2.3. Three young cherry trees are located on a grassed roundabout and were planted around the time of completion of the tramway upgrades circa 2013/2014 (Figure 3-3).

Figure 3-3 – Photo of T1-T3 located on grass roundabout



3.2.4. Tree cover predominantly consists of young or semi mature street trees. The exception to this are two groups of early mature broadleaved trees within the boundary of St John the Baptist Church recorded as G4 and G5.

3.2.5. Table 3-1 summarises the number of trees surveyed and their tree quality categories. Locations of arboricultural features are indicated on the TRPP of Appendix C.

Table 3-1 – Summary of tree quality categories

BS5837 Category	Quality	Individual Tree	Group	Totals
Category B	Moderate	0	2	2
Category C	Low	25	3	28
Totals		25	5	30

4 ARBORICULTURAL IMPACT ASSESSMENT

4.1 SCOPE OF ASSESSMENT

- 4.1.1. The scope of this assessment has been established with reference to BS 5837. The scope of assessment is to evaluate the effects of the Proposed Development on arboricultural features and where necessary recommend mitigation.
- 4.1.2. The assessment includes specific reference to the effects of tree loss and other potentially damaging activities which could foreseeably occur in the vicinity of retained trees. Further reference is made concerning recommendations for mitigation, including those matters which require inclusion within an AMS.

4.2 ASSUMPTIONS AND LIMITATIONS

- 4.2.1. This AIA report has been compiled on the basis of the following assumptions:
 - All construction and demolition activities will be confined to the planning application boundary of the Proposed Development as identified on the TRPP.
 - The extents of the ground level changes associated with new hard and soft landscaping proposals for station square are unknown at the time of report writing. It is assumed that the existing trees within the station square (T9, T10, T11, T12, T13, T14, T19, T21, T23 and T25) will be retained subject to a combination of special protection measures to be confirmed pre-construction within a detailed AMS.
 - Extensive hard surfacing fully covers the RPAs of G1, G2, G4, G5, T4, T5 and T6. It is assumed that no excavation will be required within RPA. It is also assumed that existing hard surfacing will remain in-situ to ensure retained tree RPAs are protected from the Proposed Development.
- 4.2.2. The following limitations apply to this AIA report:
 - Enabling works (such as the installation or diversion of services by statutory undertakers) or drainage proposals within the study area have not been considered.
 - Most arboricultural features subject to assessment have been indicatively plotted using OS base mapping, open-source aerial imagery and on-site GPS coordinates. The accompanying TRPP therefore have features plotted with approximate locations only.

4.3 ARBORICULTURAL FEATURES TO BE REMOVED

- 4.3.1. The Proposed Development will result in the removal of 11 low quality trees which are T1, T2, T3, T8, T15, T16, T17, T18, T20, T22 and T24. Trees T1, T2 and T3 are small, low quality cherries on a grassed roundabout which will be regraded and hard surfaced. The other eight features are all in front of the Nye Bevan House which will undergo extensive resurfacing and new soft landscaping.

4.4 ARBORICULTURAL FEATURES TO BE PRUNED

- 4.4.1. The design information received indicates that none of the trees in the study area require pruning for the Proposed Development. If any tree works are required, these should comply with British Standard 3998:2010 – Tree Work Recommendations as carried out by skilled tree surgery contractors.

4.5 OTHER ARBORICULTURAL IMPACTS

- 4.5.1. Other identified arboricultural impacts associated with the demolition and construction work for the Proposed Development are recorded in Table 4-1. These arboricultural impacts are activities which have the potential, if uncontrolled, to cause damage to arboricultural features which are retained.
- 4.5.2. Table 4-1 also provides details of the arboricultural features which are at risk of damage, the likely cause of damage and the mitigatory measures which are required. Implementation of the recommended mitigation measures will be sufficient to ensure that arboricultural features can be retained without significant loss of value or a notable reduction in health or longevity.

Table 4-1 – Other identified arboricultural impacts, proposed mitigation and likely effects

Features	Cause of Impact (construction of)	Potential Impact	Mitigation Measures
All retained features	General contractor spatial working requirements during demolition and construction (below ground impact).	Soil compaction and root damage for contractor spatial working requirements. Loss of vitality and decline in health. Reduction in quality of trees / potential death of trees.	Establishment of CEZs around retained tree RPAs for duration of demolition and construction set out in a detailed AMS. Mitigation to consider combined use of ground protection, no ground level changes within the RPAs of retained trees, tree protection fencing and ACoW supervision.

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Features	Cause of Impact (construction of)	Potential Impact	Mitigation Measures
All retained features	General contractor spatial working requirements during demolition and construction (above ground impact).	Injurious contact with above ground elements of retained trees. Loss of vitality and decline in health. Reduction in quality of trees / potential death of trees.	Establishment of CEZs around retained tree canopies for duration of demolition and construction as outlined in an AMS. Pruning to be determined prior to commencing all activities and undertaken in compliance with British Standard 3998:2010 – ‘Tree Work Recommendations.

commencement site meeting would be required with the Local Planning Authority Tree Officer to confirm tree protection measures.

- 4.5.3. The indicative RPAs used for design are based on a symmetrical circle and are shown in the TRPP of Appendix C. The shape of RPAs can be adjusted to ensure that sufficient area, and therefore soil volume is protected.
- 4.5.4. Details of the mitigation measures set out in this report are identified on the TRPP and should be viewed in conjunction with the outline AMS.
- 4.5.5. Through implementing appropriate tree protection measures, all retained trees can be kept without detrimental impact on them.

4.6 MITIGATION PLANTING

- 4.6.1. The design received has multiple trees being planted across the development to mitigate the losses of the trees outlined in this report. This approach is in line with the Rochdale Borough Council's strategy of trees being removed in urban developments to be replaced at a ratio of 2:1.

4.7 ARBORICULTURAL METHOD STATEMENT

- 4.7.1. An outline AMS is included in Appendix D. The AMS adopts a precautionary approach to tree protection and addresses activities which have the potential to cause damage to retained trees.
- 4.7.2. The AMS addresses, in principle, the following matters which are of relevance to the Proposed Development:
- arboricultural monitoring;
 - tree protection fencing;
 - ground protection; and
 - tree pruning.
- 4.7.3. It is recommended that this AMS be viewed as a ‘living document’. It should therefore be reviewed, and if necessary updated as and when required. It is anticipated that a pre-

5 SUMMARY AND CONCLUSIONS

- 5.1.1. A walkover survey of arboricultural features within the study area was undertaken on 13 October 2022. The arboricultural survey was undertaken in accordance with BS 5837 and tree features plotted using GPS, topographical survey information and aerial imagery.
- 5.1.2. One statutory constraint was found in the study area, and that is the Maclure Road Conservation Area (Figure 3-1).
- 5.1.3. A total of 30 arboricultural features were surveyed, consisting of 25 individual trees, and five tree groups. Two arboricultural features are assessed to be moderate quality and 28 features are low quality.
- 5.1.4. Indicative locations of arboricultural features are shown on the Tree Removals and Protection Plan of Appendix C. The Proposed Development will require the removal of 11 low quality trees (T1, T2, T3, T8, T15, T16, T17, T18, T20, T22 and T24). Mitigation for the tree removal is designed in the Proposed Development with new tree planting.
- 5.1.5. Retained trees within the station square and on the margins of the Planning Application Boundary are to be protected through special protection measures that should be confirmed within a detailed Arboricultural Method Statement. Principles for tree protection are set out in the outline Arboricultural Method Statement provided in Appendix D.

Appendix A

ARBORICULTURAL SURVEY METHOD



SURVEY METHOD

METHOD OF BASELINE DATA COLLECTION

Baseline data collection has been undertaken with reference to BS 5837 and uses the following data sources:

- An environmental desk study, and;
- A walkover survey of all arboricultural features within the study area.

DESK STUDY

The arboricultural desk study for the study area was undertaken on 12 October 2022. A desktop review of publicly available information on ancient woodland² and ancient/veteran trees³ confirms the absence within the study area.

Rochdale Borough Council's website⁴ confirms the presence of a Maclure Road Conservation Area within and adjacent to the study area. Telephone/email correspondence with Rochdale Borough Council's planning and development team on 12 October 2022 confirmed the absence of Tree Preservation Orders (TPOs) within the study area.

WALKOVER SURVEY

A walkover survey was undertaken on 13 October 2022 and in accordance with the following criteria:

- Arboricultural features have been recorded as individual trees or tree groups where this has been deemed appropriate. Tree groups have been recorded on the basis that they form distinct arboricultural features either aerodynamically, visually or because they collectively contain trees of similar size or value.
- The trees have been visually inspected from ground level only.
- No tissue samples were taken nor was any internal investigation of the subject trees undertaken.
- Tree heights and crown spreads have been estimated.
- Notes have been recorded where they relate to the quality of the arboricultural feature.
- Management recommendations have been provided where work is necessary for the abatement of a hazard which presents a high level of risk to persons or property.

Stem diameters have been measured in accordance with Annex C of BS 5837. By default, Root Protection Areas (RPAs) are calculated as an area equivalent to a circle with a radius 12 times the stem diameter.

Diameters of single stem trees on level ground have been measured at 1.5m above ground level unless specified in the Arboricultural Survey Schedule. The diameters of other commonly encountered stems have been measured as per BS 5837 guidance. The combined stem diameters for multi-stemmed trees have been calculated in accordance with BS 5837 paragraph 4.6.1. For tree groups, the largest visible stem near the outer margins of each feature was measured unless stated in the Arboricultural Survey Schedule.

QUALITY ASSESSMENT

The quality of arboricultural features has been determined in accordance with BS 5837 Table 1 as provided in Figure A-1. The purpose of the quality assessment is to enable informed decisions to be made regarding the removal and retention of arboricultural features in the context of development. For an arboricultural feature to be included within a particular quality category it should accord with the description provided.

The quality of each arboricultural feature is defined based on its sub-category. Sub-categories carry equal weight, do not influence retention priority and are simply included to indicate the primary value associated with each surveyed item. Sub-categories 1, 2 and 3 are intended to reflect arboricultural, landscape and cultural values, respectively.

The quality and sub-category assigned to each arboricultural feature are identified within the Arboricultural Survey Schedule included in Appendix B of this report.

² Natural England, 2022. *Multi-Agency Geographic Information for the Countryside (MAGIC) database* [online]. Available at: <https://magic.defra.gov.uk/MagicMap.aspx> [Accessed 12 October 2022]

³ Ancient Tree Inventory, 2022. *Ancient Tree Inventory* [online]. Available at: < <https://ati.woodlandtrust.org.uk> [Accessed 12 October 2022]

⁴ Rochdale Borough Council, Online list of Conservation areas within Rochdale area [online]. Available at: <https://www.rochdale.gov.uk/downloads/download/191/list-of-conservation-areas-maps-and-appraisals> [Accessed 12 October 2022]

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Figure A-1 - BS 5837 Table 1 - Cascade Chart for Tree Quality Assessment

Table 1 Cascade chart for tree quality assessment				
Category and definition		Criteria (including subcategories where appropriate)		Identification on plan
Trees unsuitable for retention (see Note)				
Category U Those in such a condition that they cannot realistically be retained as living trees in the context of the current land use for longer than 10 years	- Trees that have a serious, irremediable, structural defect, such that their early loss is expected due to collapse, including those that will become unviable after removal of other category U trees (e.g. where, for whatever reason, the loss of companion shelter cannot be mitigated by pruning) - Trees that are dead or are showing signs of significant, immediate, and irreversible overall decline - Trees infected with pathogens of significance to the health and/or safety of other trees nearby, or very low quality trees suppressing adjacent trees of better quality <i>NOTE Category U trees can have existing or potential conservation value which it might be desirable to preserve; see 4.5.7.</i>			See Table 2
1 Mainly arboricultural qualities		2 Mainly landscape qualities	3 Mainly cultural values, including conservation	
Trees to be considered for retention				
Category A Trees of high quality with an estimated remaining life expectancy of at least 40 years	Trees that are particularly good examples of their species, especially if rare or unusual; or those that are essential components of groups or formal or semi-formal arboricultural features (e.g. the dominant and/or principal trees within an avenue)	Trees, groups or woodlands of particular visual importance as arboricultural and/or landscape features	Trees, groups or woodlands of significant conservation, historical, commemorative or other value (e.g. veteran trees or wood-pasture)	See Table 2
Category B Trees of moderate quality with an estimated remaining life expectancy of at least 20 years	Trees that might be included in category A, but are downgraded because of impaired condition (e.g. presence of significant though remediable defects, including unsympathetic past management and storm damage), such that they are unlikely to be suitable for retention for beyond 40 years; or trees lacking the special quality necessary to merit the category A designation	Trees present in numbers, usually growing as groups or woodlands, such that they attract a higher collective rating than they might as individuals; or trees occurring as collectives but situated so as to make little visual contribution to the wider locality	Trees with material conservation or other cultural value	See Table 2
Category C Trees of low quality with an estimated remaining life expectancy of at least 10 years, or young trees with a stem diameter below 150 mm	Unremarkable trees of very limited merit or such impaired condition that they do not qualify in higher categories	Trees present in groups or woodlands, but without this conferring on them significantly greater collective landscape value; and/or trees offering low or only temporary/transient landscape benefits	Trees with no material conservation or other cultural value	See Table 2

NOTES AND LIMITATIONS

Arboricultural survey data is of a preliminary nature and has been collected based on a walkover survey.

Only defects visible from the ground have been noted and each individual feature may not have been inspected closely due to access difficulties, the presence of dense ivy, other vegetation or safety constraints. Safety related features have not been recorded on the basis that the arboricultural features will be subject to a normal programme of tree hazard assessment and only those features which materially affect the quality of the feature or pose a real and immediate safety concern have been recorded.

Arboricultural survey data is typically valid for a period of two years unless otherwise stated. Significant environmental events (such as extreme weather conditions) or changes within the study area may render it invalid within a shorter timescale.

Whilst arboricultural surveys are not seasonally limited it is the case that certain pests and diseases may be more or less evident at different times of the year. This is especially true of certain wood decaying fungi such as the Giant Polypore (*Meripilus giganteus*) where fruiting bodies are short-lived, and the early stages of root decay may not result in other identifiable

symptoms. Walkover survey data is therefore based upon observations made at the time of the site visit and may be subject to change should further or more detailed inspections be undertaken.

The survey has only been undertaken from public land.

Appendix B

ARBORICULTURAL SURVEY SCHEDULE



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KEY - ARBORICULTURAL SURVEY SCHEDULE

REFERENCE ABBREVIATIONS

- G – Tree Group
- T – Individual tree

MEASUREMENTS

Height is estimated to provide a relative indication of tree size.

Stem Diameter measurements are reported in accordance with BS 5837.

Crown spread for individual trees was estimated for each of the four cardinal points. Crown spread for tree groups is provided according to the greatest single lateral crown spread found for the feature.

LCH is the lowest canopy height. It is an estimate of the lowest point of foliage above ground level of the tree indicating the clearance below the tree.

LBH is the lowest branch height and is the height above ground level of the first branch union.

ASSESSMENTS

Life stage:

- Y – Young – planted within the last three years (unless heavy/extra heavy standard)
- SM – Semi-mature – <25% estimated life expectancy
- EM – Early Mature – < 50% estimated life expectancy
- M – Mature – >50% estimated life expectancy

Physiological condition:

- G – Good
- F – Fair
- P – Poor
- D – Dead

Structural condition:

- G – Good
- F – Fair
- P – Poor

ERC – Estimated Remaining Contribution - <10 years, 10+ years, 20+ years or 40+ years.

BS 5837 Category – A, B, C or U with a single sub-category recorded as 1, 2 or 3.

ROOT PROTECTION AREA

RPA is the radius of a circular Root Protection Area associated with an individual tree as drawn from the stem/tree line location.

The RPA for tree group features is based upon the largest individual margin tree surveyed and is drawn externally from the canopy extents of the feature unless stated.

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Tree Ref.	Species	Height (m)	Stem Dia. (mm)	Crown Spread N-E-S-W	LCH (m)	LBH (m)	Life Stage	Physiological Condition	Structural Condition	Tree Condition Notes & Observations	RPA Rad. (m)	ERC	BS5837 Category
T1	Cherry species	4	75	1 - 1 - 1 - 1	2.5	2	Y	G	G	Tree planted on grass verge.	0.9	20+	C1
T2	Cherry species	4	80	1 - 1 - 1 - 1	2.5	2	Y	G	G	Tree planted on grass verge.	0.9	20+	C1
T3	Cherry species	4	80	1 - 1 - 1 - 1	2.5	2	Y	G	G	Tree planted on grass verge.	0.9	20+	C1
T4	Common ash	8	200	2 - 2 - 2 - 2	1	2	Y	F	F	Inaccessible tree located circa 1m set back from highways boundary fencing.	2.4	10+	C2
T5	Common ash	8	190	2.5 - 2.5 - 2.5 - 2.5	2	2	Y	F	F	Inaccessible tree located circa 1m set back from highways boundary fencing.	2.3	10+	C2
T6	Common ash	4	150	1 - 1 - 1 - 1	2	2	Y	F	F	Inaccessible tree located circa 1m set back from highways boundary fencing.	1.8	10+	C2
T7	Pear species	5	90	0.5 - 0.5 - 0.5 - 0.5	3	1	Y	F	G	Tree in metal grate tree pit. Stem encircled by protective cage.	0.9	10+	C1
T8	Common ash	6	120	1 - 1 - 1 - 1	1	1.5	Y	P	F	Inaccessible tree located in shrub bed. Displays poor vigour with tip dieback.	1.4	10+	C1
T9	Whitebeam	7	120	2 - 2 - 1.5 - 2	2	2	SM	G	G	Part of landscape planting within Rochdale Square. Circa 0.3m from adjacent CCTV pole. Located in shrub bed.	1.4	20+	C2
T10	Whitebeam	7	110	2 - 2 - 2 - 2	2	2	SM	F	G	Part of landscape planting within Rochdale Square. Located within shrub bed.	1.4	20+	C2
T11	Whitebeam	7	150	2 - 2 - 2 - 2	2	2	SM	G	G	Part of landscape planting within Rochdale Square. Circa. 0.3m from adjacent CCTV pole. Located in shrub bed.	1.8	20+	C2
T12	Whitebeam	7	150	2.5 - 2.5 - 2.5 - 2.5	2	2	SM	G	G	Part of landscape planting within Rochdale Square. Circa 2m from adjacent lamp post column. Located in shrub bed.	1.8	20+	C2
T13	Pear species	7	120	1 - 1 - 1 - 1	2.5	2.5	SM	G	G	Part of landscape planting within Rochdale Square. Circa 0.3m setback from boundary feature. Located in shrub bed.	1.4	20+	C2
T14	Pear species	7	120	1 - 1 - 1 - 1	2.5	2.5	SM	G	G	Part of landscape planting within Rochdale Square. Circa. 0.3m setback from boundary feature. Located in shrub bed.	1.4	20+	C2
T15	Pear species	8	110	1 - 1 - 1 - 1	2.5	2.5	SM	G	G	Part of landscape planting within Rochdale Square. Circa 0.3m setback from boundary feature. Located in shrub bed.	1.3	20+	C2
T16	Pear species	7	100	1 - 1 - 1 - 1	2.5	2.5	SM	G	G	Part of landscape planting within Rochdale Square. Circa 0.3m setback from boundary feature. Located in shrub bed.	1.3	20+	C2

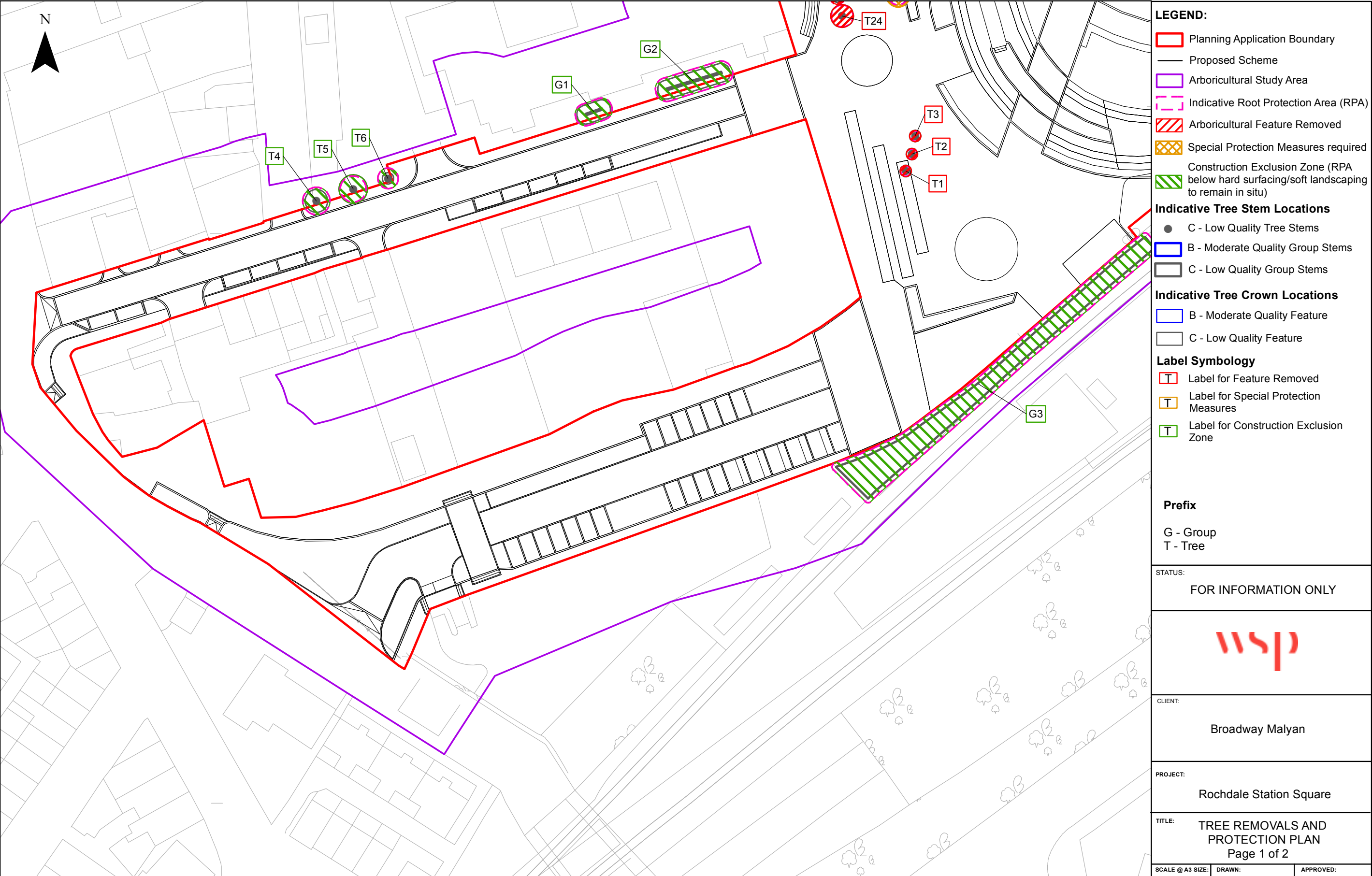
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Tree Ref.	Species	Height (m)	Stem Dia. (mm)	Crown Spread N-E-S-W	LCH (m)	LBH (m)	Life Stage	Physiological Condition	Structural Condition	Tree Condition Notes & Observations	RPA Rad. (m)	ERC	BS5837 Category
T17	Pear species	7	130	1 - 1 - 1 - 1	2.5	2.5	SM	G	G	Part of landscape planting within Rochdale Square. Circa 0.3m setback from boundary feature. Located in shrub bed.	1.5	20+	C2
T18	Pear species	7	110	1 - 1 - 1 - 1	2.5	2.5	SM	G	G	Part of landscape planting within Rochdale Square. Circa 0.3m setback from boundary feature. Located in shrub bed.	1.3	20+	C2
T19	Pear species	7	150	1 - 1 - 1 - 1	2.5	2.5	SM	G	G	Part of landscape planting within Rochdale Square. Circa 0.3m setback from boundary feature. Located in shrub bed.	1.8	20+	C2
T20	Pear species	7	90	1 - 1 - 1 - 1	2.5	2	SM	F	G	Part of landscape planting within Rochdale Square. Part of landscape planting within Rochdale Square. Located on grass verge.	1.0	20+	C2
T21	Whitebeam	7	130	2 - 2 - 2 - 2	2.5	2.5	SM	G	G	Part of landscape planting within Rochdale Square. Circa 1.5m setback from boundary feature. Located in shrub bed.	1.6	20+	C2
T22	Pear species	7	110	1 - 1 - 1 - 1	2.5	2	SM	G	G	Part of landscape planting within Rochdale Square. Circa 0.3m setback from boundary feature. Located in shrub bed.	1.3	20+	C2
T23	Whitebeam	7	130	1.5 - 1.5 - 1.5 - 1.5	2.5	2.5	SM	G	G	Part of landscape planting within Rochdale Square. Circa 0.3m setback from boundary feature. Located in shrub bed.	1.5	20+	C2
T24	Whitebeam	7	160	2 - 2 - 2 - 2	2.5	2	SM	G	G	Part of landscape planting within Rochdale Square. Located in shrub bed.	1.9	20+	C2
T25	Whitebeam	7	140	2 - 2 - 2 - 2	2.5	2.5	SM	G	G	Part of landscape planting within Rochdale Square. Located in shrub bed.	1.7	20+	C2
G1	Pear species	9	150	1.5 - 1.5 - 1.5 - 1.5	3	3	SM	F	F	Two inaccessible trees set back circa 1m from boundary fence. 3m spacings.	1.8	20+	C2
G2	Pear species	9	160	1.5 - 1.5 - 1.5 - 1.5	2	2	SM	F	F	4 inaccessible trees set back c.1m from boundary fence. 2m spacings.	1.9	20+	C2
G3	Silver birch, buddleia	2	100	1 - 1 - 1 - 1	1	1	Y	F	F	Managed trackside scrub trees located atop >5m tall retaining structure. Inaccessible. looks to contain some buddleia.	1.2	10+	C2
G4	Sycamore, common hawthorn	14	450	4 - 4 - 4 - 4	2	2	EM	F	G	Inaccessible trees located with shrub bed to west of stone boundary wall. Maximum stem diameter and average crown spread reported.	5.4	20+	B2

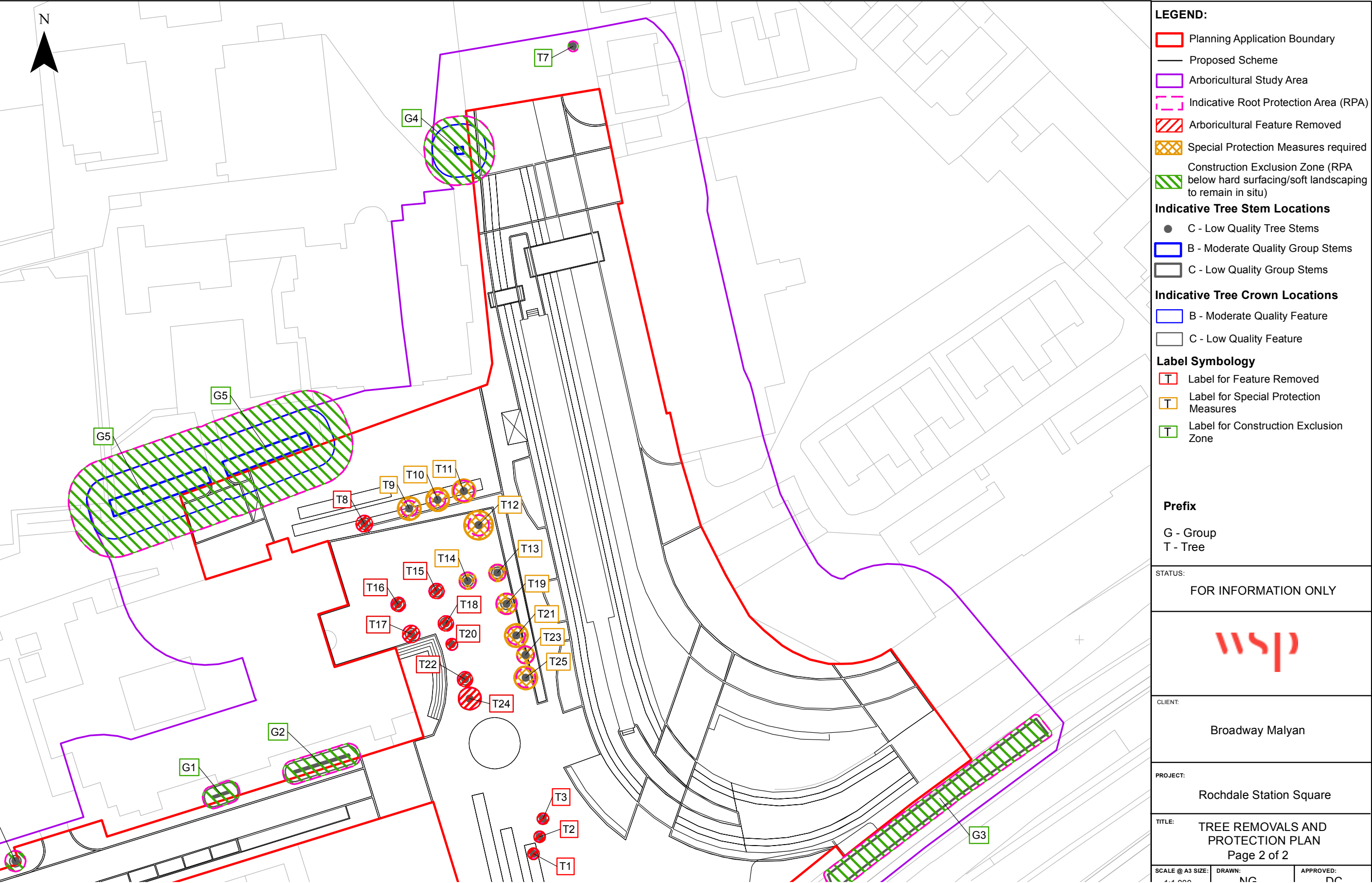
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Tree Ref.	Species	Height (m)	Stem Dia. (mm)	Crown Spread N-E-S-W	LCH (m)	LBH (m)	Life Stage	Physiological Condition	Structural Condition	Tree Condition Notes & Observations	RPA Rad. (m)	ERC	BS5837 Category
G5	Silver birch, common ash, cherry laurel, goat willow, lime species, wych elm	15	600	4 - 4 - 4 - 4	2	2	EM	G	F	Located north of stone boundary wall. Continuous cover group intersected by vehicular access track. Maximum stem diameter reported. Contains rhododendron and some ash dieback.	7.2	20+	B2

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Appendix D

ARBORICULTURAL METHOD STATEMENT



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INTRODUCTION

The Arboricultural Method Statement (AMS) is designed to provide guidance to the Principal Contractor to ensure appropriate protection is given to retained trees during the demolition and construction phases of the project.

The AMS should be considered as a working document and be modified appropriately with input from the Site Manager and the appointed project arboriculturist acting as an Arboricultural Clerk of Works (ACoW).

PHASING

Detailed below is the phasing programme which should be followed by the contractor throughout the life of the Proposed Development to ensure that trees are protected in accordance with the Arboricultural Method Statement.

Phase 1 – Pre-development

- Pre-commencement site meeting with client, contractor, Local Planning Authority, engineer and appointed arboriculturist;
- Pegging out of construction areas;
- With reference to project plans and in consultation with client, contractor, LPA and scheme arboriculturist confirm trees to be removed and trees to be retained;
- Install protective fencing; and
- Carry out tree removal.

Phase 2 – Scheme development/construction

- Establish site compounds - location for cabins, car park and the storage of materials;
- Carry out initial ground works and services installations; and
- Undertake main development.

Phase 3 – post-development

- Carry out soft landscaping;
 - Remove protective fencing; and
 - Remove ground protection.
-

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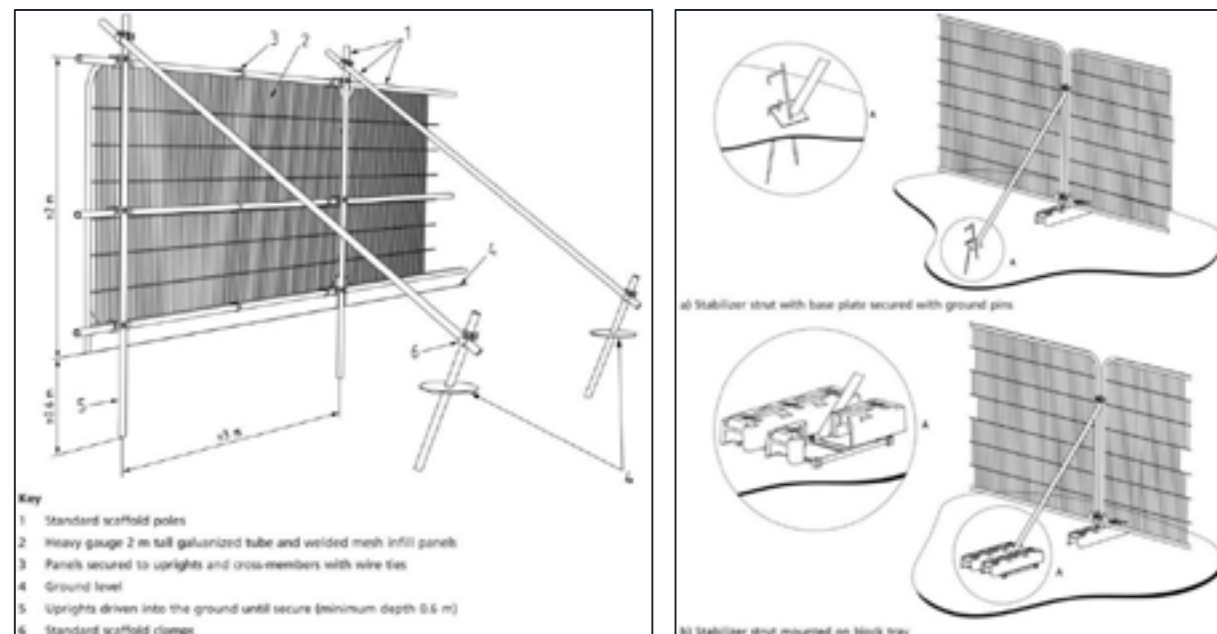
TREE PROTECTION FENCING

Effective tree protection can only be achieved by adherence to a logical sequence of works combined with effective arboricultural monitoring. Tree protection fencing (and ground protection) in accordance with BS5837 (or similar and approved) shall be erected prior to the commencement of any of the following activities:

- The delivery of any plant or materials;
- Demolition;
- Soil stripping;
- Construction works;
- Installation of utilities; and
- Landscape works.

The protective fencing will be erected to protect retained trees with positioning agreed on site with the ACoW. CEZs presented on the TRPP (of Appendix C) should indicate positioning of fencing and should be used as a guide. Typical examples of the type of tree protection fencing are included in Figure D-1.

Figure D-1 - Tree Protection Fencing (Extracts taken from BS 5837:2012 - Trees in relation to design, demolition and construction – Recommendations)



All weather notices should be attached to the tree protection fencing at suitable intervals and positioned at eye level. These notices should include suitably sized informative text containing the following statement:

“TREE PROTECTION FENCING

CONSTRUCTION EXCLUSION ZONE – NO ACCESS”

Once erected these areas should be regarded as sacrosanct, and, once installed, barriers should not be removed or altered without prior recommendation by the project arboriculturist and, where necessary, approval from the Local Planning Authority (LPA).

This fencing is to remain in place until completion of all construction works on site.

The areas covered by the tree protection fencing are known as the Construction Exclusion Zones (CEZ) and should not be compromised. The following shall apply within these areas:

- No mechanical excavations;
- No excavations by other means without the agreement of the project arboriculturist;
- No change in levels (except removal of grass sward using hand tools);
- No storage of plant or materials;
- No storage or handling of any chemicals including cement washings; and
- No vehicular access.

GROUND PROTECTION

Suitable ground protection with the objective of avoiding soil compaction should be installed where the Root Protection Areas (RPAs) for retained trees exceeds the perimeter of the tree protection fencing. To accord with British Standard BS5837:2012 ground protection shall comply with the following specification:

Areas of Unmade Ground

- For pedestrian only, access ground protection measures shall include a single thickness of scaffold boards placed on top of 100mm depth of compression resistant material (e.g. woodchip) laid onto a geotextile membrane.
- For pedestrian activities and plant up to 2 tons in weight proprietary interlinked ground protection boards will be used and placed on top of 150mm depth of compression resistant material (e.g. woodchip) laid onto a geotextile membrane.
- For wheeled or tracked equipment exceeding 2 tons in weight a structural engineer will design an alternative system. This may include the use of temporary cellular confinement systems, reinforced concrete slabs or track board systems details of which are to be approved before construction commences.

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Areas of Existing Hard Surfacing

- Areas of existing hard surfacing identified for use as ground protection shall not be removed during site clearance and shall be retained throughout the construction period.
- Areas of existing hard surfacing shall be assessed by an engineer to ensure that they are sufficient to prevent damage or disturbance to the underlying soil. A precautionary approach to any anticipated loadings should be adopted.

In instances where the engineer identifies existing surfacing as inadequate then a specification for additional protection must be provided and any requirements actioned onsite.

On completion of all works the above systems shall be removed only with the consent of the LPA. Surface de-compaction and root zone enhancement measures may then be undertaken. This may include spiking, aeration and/or injection of rhizobium inoculants.

ADDITIONAL PRECAUTIONS OUTSIDE THE CEZ

Care should be taken when planning site operations to ensure that wide or tall loads or plant with booms, jibs and counterweights can operate without coming into contact with retained trees. Such contact can result in serious damage to them and might make their safe retention impossible. Consequently, any transit or traverse of plant in close proximity to trees should be conducted under the supervision of a banksman to ensure that adequate clearance from trees is maintained at all times. In some circumstances it may be impossible to maintain adequate clearance thus necessitating access facilitation pruning in consultation with the project arboriculturist. Notice boards, telephone cables or any other services shall not be attached to any part of a tree to be retained.

SITE HUTS, STORAGE OF MATERIALS AND SPOIL

Temporary site compounds, including mobile WCs and all their service connections, are to be positioned clear of the RPAs of retained trees.

The delivery, storage, mixing and discharge of concrete and all other cement-based materials shall be carried out so that there is no run-off and spillage near the RPAs of retained trees. No substances that are potentially injurious to plant tissue (including diesel, bitumen, concrete, mortar and other phyto-toxic materials) shall be stored, discharged, prepared or used, where direct contact, infiltration or run-off might reasonably be considered liable to harmfully affect existing root growth or other parts of retained trees. Where chemicals are stored it is now standard practice to have emergency spillage kits available to minimise the impacts of any accidental spillages to the local environment. All cement mixing, vehicle washing or any other activity where toxic chemicals are used shall have the provision to contain any accidental spillage. This can be achieved using suitable soil bunding or using a supporting timber framework sealed with heavy duty plastic sheeting.

No building materials shall be stored within RPAs of retained trees. Spoil from any site activity, including demolition and any materials from the project designated for re-use, shall either be

removed from site; or, if kept on site, shall be stored or piled well clear of RPAs of retained trees.

INSTALLATION OF UNDERGROUND SERVICES

All underground services should be routed well outside the RPAs of all retained trees as mechanical trenching severs any root present and can adversely affect the local soil hydrology. Where this is not feasible then it is preferable to keep all apparatus in common ducts to minimise disturbance. Contractor to adopt precautionary working methods in line with National Joint Utility Group (NJUG) Volume 4.

Provided that roots can be retained and suitably protected (i.e. exposed roots are immediately wrapped or covered to prevent desiccation and rapid temperature change and all wrappings removed prior to backfilling) excavation with hand tools may be acceptable for shallow service runs under the supervision of the project arboriculturist.

Where services are to pass within the RPA then plans showing the proposed route should be drawn up with input from the project arboriculturist. Trenchless insertion methods should be used with the entry and exit pits situated outside the RPAs.

Demolition of existing structures in close proximity to retained trees should be carried out under the supervision of the project arboriculturist as necessary and should be undertaken from within the footprint of the building or structure using the “top down, pull back” method. Great care must be exercised to ensure that no parts of the adjacent trees are damaged during this process.

SOFT LANDSCAPING

For all soft landscape works, excavations and ground preparation within these areas is to be carried out using hand tools only in a sensitive manner to ensure root damage is kept to a minimum. At no time shall a rotavator be used within any of the protected areas to prepare the soil.

Removal of existing vegetation and turf will be carried out by hand only. Any herbicide used during the development works shall be appropriate for the type of vegetation to be killed and all instructions, warnings and other relevant information from manufacturers should be strictly observed and followed. Care should be taken to avoid any damaging effects upon existing plants and trees to be retained.

Care should be taken to avoid changes in ground levels within the RPAs and no changes in ground levels shall occur within CEZs of all retained trees.

No works shall be carried out within the RPAs if the soil moisture levels are high enough to allow compaction to occur. If compaction of the ground has occurred then decompaction measures should be undertaken, these may include forking, spiking, soil augering and tilled radial trenching.

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Final grading to marry in new levels with existing ground will be achieved by importing good quality topsoil and spreading it using hand tools only. Areas of proposed grass shall then be raked to a fine tilth and will be grass seeded or turfed as necessary by hand.

All new tree planting should be undertaken in accordance with *BS8545:2014 Trees: from nursery to independence in the landscape. Recommendations*. Planting pits for shrubs or trees must be hand excavated taking care to avoid damage to existing tree roots. If substantial roots are discovered then the planting pit should be relocated if possible in order to retain them. Hedging plants if bare root shall be notch planted and no trench planting shall take place within the RPAs. If fertiliser is to be incorporated into the planting pits it should be a slow release type such as 'Enmag' or other similar approved and should be applied in accordance with the manufacturer's recommendations.

Roots shall be retained and carefully worked around, wherever practicable. No root greater than 25mm dia. shall be cut without confirmation from the project ACoW. If damage does occur to a root greater than 25mm dia, then advice must be sought from the project ACoW. Where it is essential to sever roots they shall be cleanly cut, using an appropriate, sharp bladed hand-tool.

If in the course of operations, roots, that are to be retained, are unearthed, they shall not be left unduly exposed, but shall be covered with hessian, or similar, to protect from desiccation. Prior to backfilling, any hessian wrapping should be removed and retained roots should be surrounded with sharp sand, or other loose granular fill before soil or other material is replaced.

Where materials or plants are to be brought into or removed from the RPAs they should be transported in wheelbarrows and must be moved across existing hard surfacing or temporary ground protection in accordance with BS5837 in a way that prevents compaction of the soil.

Mulch should be applied to open soils and shrub planting areas to inhibit weed growth, reduce groundwater evaporation, resist and mitigate soil compaction and reduce maintenance requirements. Material that may be used shall include well composted wood chip, pulverised bark, leaf mould or green waste conforming to PAS 100. The depth of mulch should not exceed 100mm, taking particular care not to lay excessive mulch around new plants and should be avoided in areas of established tree growth.

MONITORING

Once the protective fencing and ground protection measures have been installed but prior to the commencement of the development a site inspection should be undertaken by the project ACoW. This is to confirm that all protection measures have been installed in accordance with the TRPP and AMS.

Regular monitoring visits should be carried out as necessary during the development.

On completion of the development a general survey of the trees is recommended to identify any remedial action necessary as a result of the works. Note that permission for any additional

tree works not included in the original development consent may need to be obtained through application to the LPA.

If any arboricultural issues arise during the development, then the site manager should immediately contact the project ACoW for advice on how to proceed.