

Trafford Council

Greening Trafford Park

Infrastructure Framework

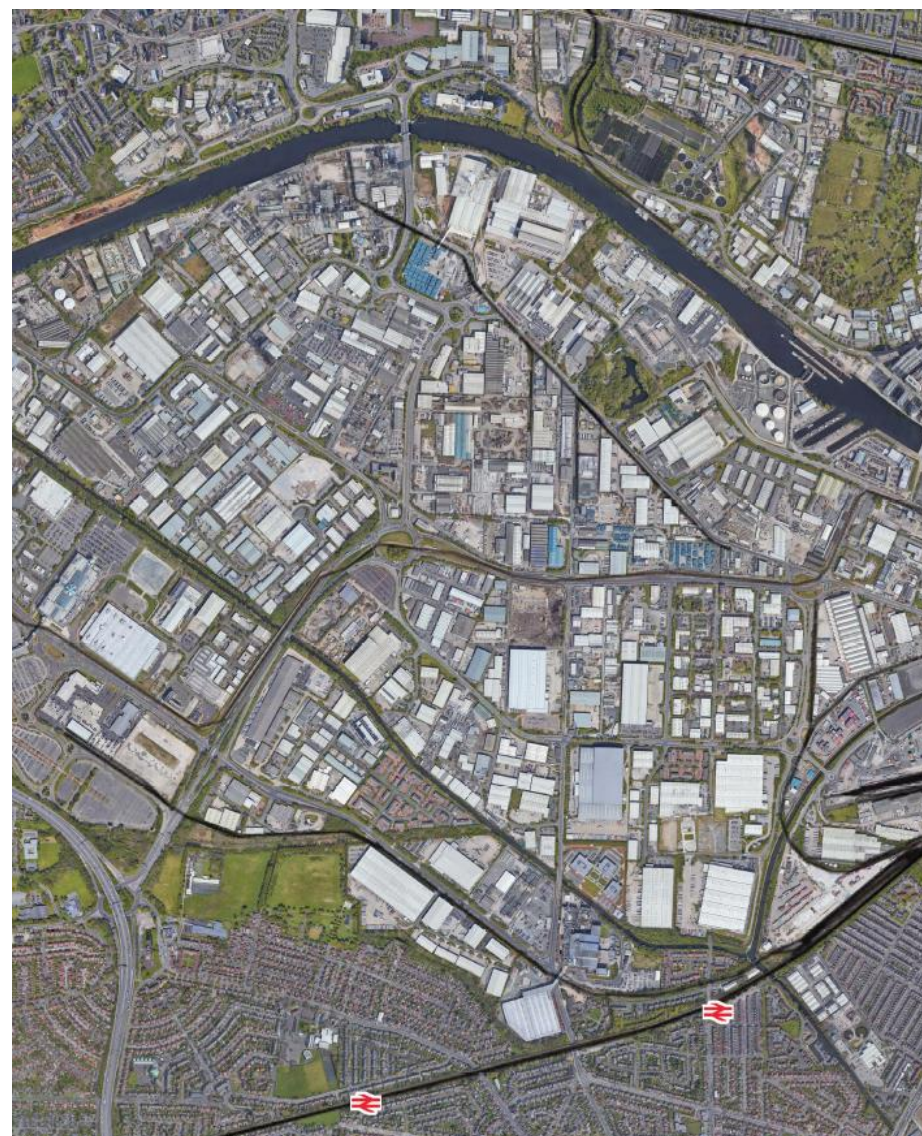
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Intervention Schedule

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1. Introduction

Trafford Park is a recognised regionally and nationally significant employment area and business park with over 1,300 businesses employing over 35,000 people. Trafford Council's vision for Trafford Park is as a world class entrepreneurial and business area, which also provides a green and healthy place for people to work, visit, and move through. This Green Infrastructure Framework will help to support the Council to build upon the success of Trafford Park and develop it into a thriving and sustainable employment area which is a healthy, attractive place for the local community and a catalyst for sustainable green jobs.

In order to achieve this, the 'greening' of Trafford Park through the development of sustainable transport and green infrastructure networks must be planned and designed cohesively to connect people and businesses to, from and within the Park whilst improving amenity value, biodiversity, and climate resilience. The transport network should offer greater, more sustainable, multi-modal travel choices and integrate effectively with existing and new green infrastructure.

Arup and Groundwork have been appointed on behalf of Trafford Council to develop a Green Infrastructure Framework for Trafford Park. This framework for Trafford Park is based around inclusivity, prioritising people walking, wheeling, and cycling as the most vulnerable road users within the Park, envisioning a safer and accessible network for all. The framework recognises and strikes a balance between the requirement to provide for active, sustainable modes of travel, improved environmental and ecological quality of place and the need for vehicle-based travel, recognising the needs of businesses that are located in Trafford Park and the associated vehicle movements.

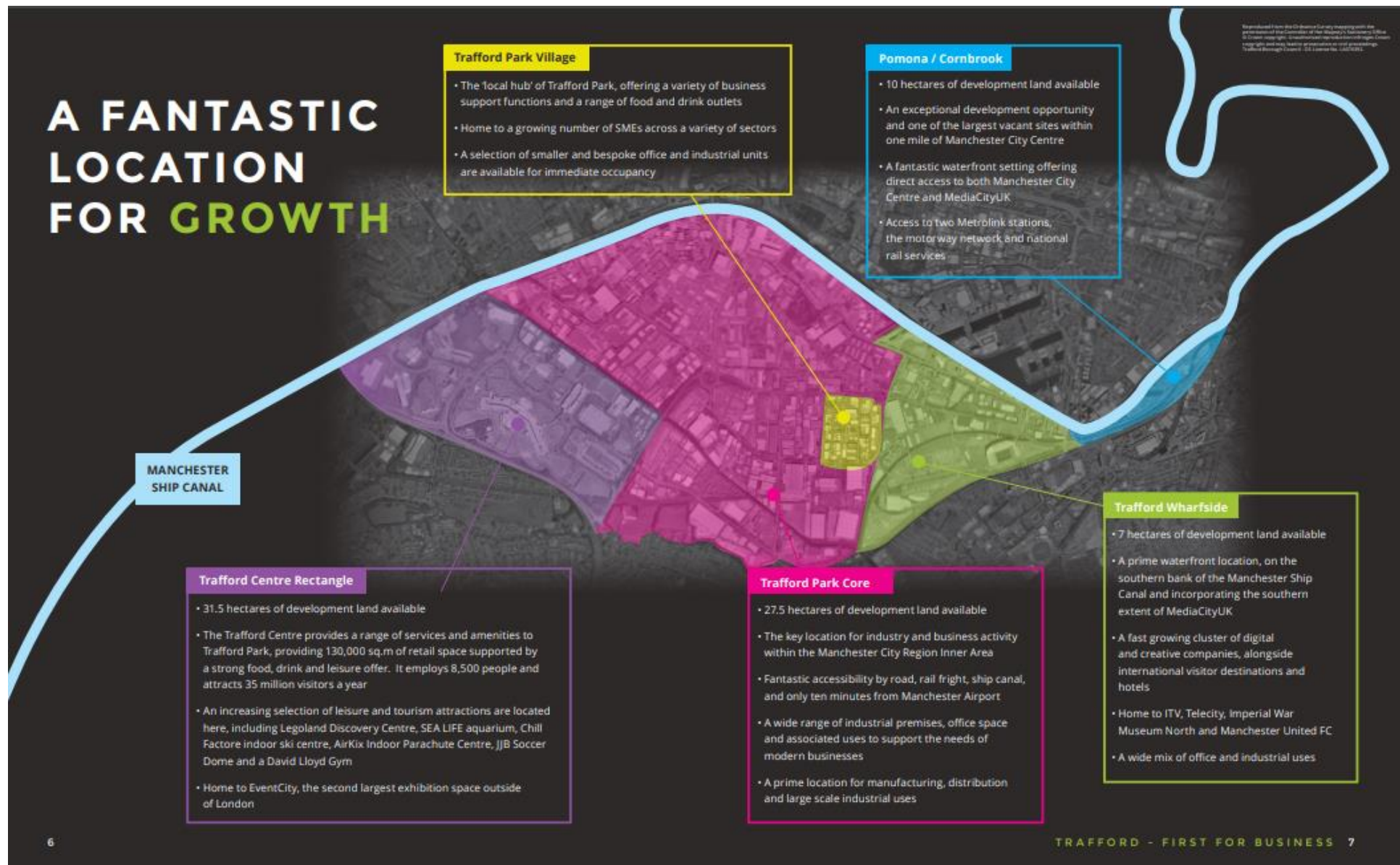
The framework identifies the positive outcomes and ambitions that will help to ensure that Trafford Park continues to fulfil its potential in the future and ensure its long-term viability. These outcomes will be taken forward by businesses and stakeholders in collaboration with Trafford Council.

They are likely to include improved health, community benefits and environmental improvements for occupiers and visitors to Trafford Park,

alongside traditional measures of success, such as additional capacity and economic growth. This will be crucial to creating a future Trafford Park that is a successful, attractive, and equitable place where issues such as road safety, congestion, climate resilience and air quality can be effectively addressed to support the long-term viability of the Park.

The Low Carbon Trafford Park Project has been developed concurrently to this work. The project has been delivered by Siemens and explores the opportunity to reduce carbon emissions related to businesses energy consumption within The Park. The two strategies will be essential in meeting Trafford's net zero ambitions

Figure 1 - Trafford Park areas (Trafford – First for Business, Trafford Council)



2. Baseline Analysis

A baseline analysis of the transport and green infrastructure networks within and connecting to Trafford Park has been undertaken. This analysis has helped to identify improvement opportunities across the Park.

2.1 Policy Context

The Trafford Local Plan: Core Strategy was adopted in 2012 and sets out the overarching strategy and development principles for Trafford to guide development until 2026. A new Local Plan is currently being prepared and public consultation was held on the Draft Plan in March 2021.

The Core Strategy (2012) identifies Trafford Park as continuing to have a significant role in the economy of the region and the overall performance of the sub-region. The spatial profile for the area summarises the key issues facing Trafford Park as:

- Limited sustainable transport options that exist within the Park, particularly at morning peak times;
- The decline of manufacturing employment and the need to accommodate diversification of land uses;
- The lack of appropriate community facilities to serve those using the Park;
- The need to maintain, protect and/or enhance the park's environmental assets; and,
- The need to maximise the potential of the Bridgewater and Manchester Ship Canals.

As such, several place objectives are set out for Trafford Park including:

- TPO3: To ensure that the Park as a whole is well served by public transport and in particular improve access to the area from locations with low car ownership;
- TPO5: To ensure the new communities in Trafford Park are provided with sufficient and good quality open space for recreational purposes;
- TPO12 To maximise the potential of the Bridgewater canal to provide new recreational and biodiversity opportunities;
- TPO13: To ensure that the new communities in Trafford Park are provided with sufficient and appropriate greenspace for the needs of the occupiers;
- TPO14 To secure improved sustainable transportation links to the Regional Centre, Trafford Park, and other employment areas;
- TPO16: To secure improvements for pedestrians and cyclists along the Bridgewater Canal;
- TPO17 To ensure all new development is constructed in accordance with the latest environmental standards;
- TPO18 To encourage and support opportunities to locate low-carbon / decentralised energy facilities and
- TPO19: To maximise opportunities for green roofs and tree planting.

The draft Local Plan identifies the Trafford Park area as an Area of Focus (Policy AF3). Trafford Wharfside is also identified an Area of Focus at Policy AF2. Policies highlight Trafford Park as a key location for industry and business activity within the Manchester City Region and a principal location for employment development in Trafford. The policy supports sustainable development for business, industry, storage, and distribution and sets out that the area presents a prime opportunity for advancing digital connectivity in the borough.

There are a range of overarching goals for development proposals in Trafford Park, including:

- TP3: Improved sustainable transport links within Trafford Park to the Regional Centre and other employment areas are secured;
- TP3: Improvements are made to active travel opportunities by preserving and enhancing existing canalside walkways, and providing new and enhanced active travel routes within the Trafford Park area;
- TP3: Improvements to pedestrian and cycling facilities connecting to the Bridgewater Canal, Manchester Ship Canal and other routes that contribute to Trafford's integrated active travel network are secured;
- AF 3.3: An opportunity for around 60,000 sqm of new or improved industry and warehousing (B2 and B8) employment floorspace in the Trafford Park Area of Focus up to 2037;
- AF 3.7: Improvements to sustainable transport infrastructure via a number of Nodes including:
 - improvements for pedestrians and cyclists along the Bridgewater Canal
 - improvements to public transport provision throughout Trafford Park
 - the potential for future expansion of Rapid Transit Systems through and within Trafford Park
- AF 3.9: Enhancement of the appearance of the Parkway Circle roundabout; and,
- AF1.5: A range of specific green infrastructure measures to mitigate the adverse impacts of development and combat climate change, which may include the provision of tree, shrub and hedgerow planting, green walls and roofs, swales, rain gardens and porous surfaces.

Places for Everyone (PfE) (2021) identifies Trafford Park as being part of the Core Growth Area offering the conditions to boost the role of Greater Manchester as a Global City. The Core Growth Area will deliver higher

density development, maximising the potential arising from national and international assets, attracting high profile companies to invest, improving visitor facilities and international/national sporting assets, accommodating the majority of commercial employment growth.

2.2 Deprivation Levels

Data has been taken from the Index of Multiple Deprivation (IMD) 2019, which shows that Trafford Park is bounded by areas of deprivation in the north, west and east including Barton, Eccles and areas of Salford which are ranked in the 10% most deprived of Lower-layer Super Output Areas (LSOAs) nationally.

There are, however, pockets of areas which rank higher in the IMD decile including neighbouring areas of Trafford to the south, which are ranked in the 10% of least deprived of LSOAs¹ nationally.

¹ A Lower-layer Super Output Area (LSOA) is a geographical area with an average population of 1,500 people or 650 households.

Figure 2 - Areas of Derivation in the Trafford Park Locality
 (https://dclgapps.communities.gov.uk/imd/iod_index.html)



2.3 Vehicle Network

Trafford Park's vehicle network provides capacity for large volumes of vehicle movements. This enables movement of freight into and out of the area as well as access for people working in the park.

Figure 3 identifies the hierarchy of vehicle routes across Trafford Park. It does not include routes which do not connect to any other road.

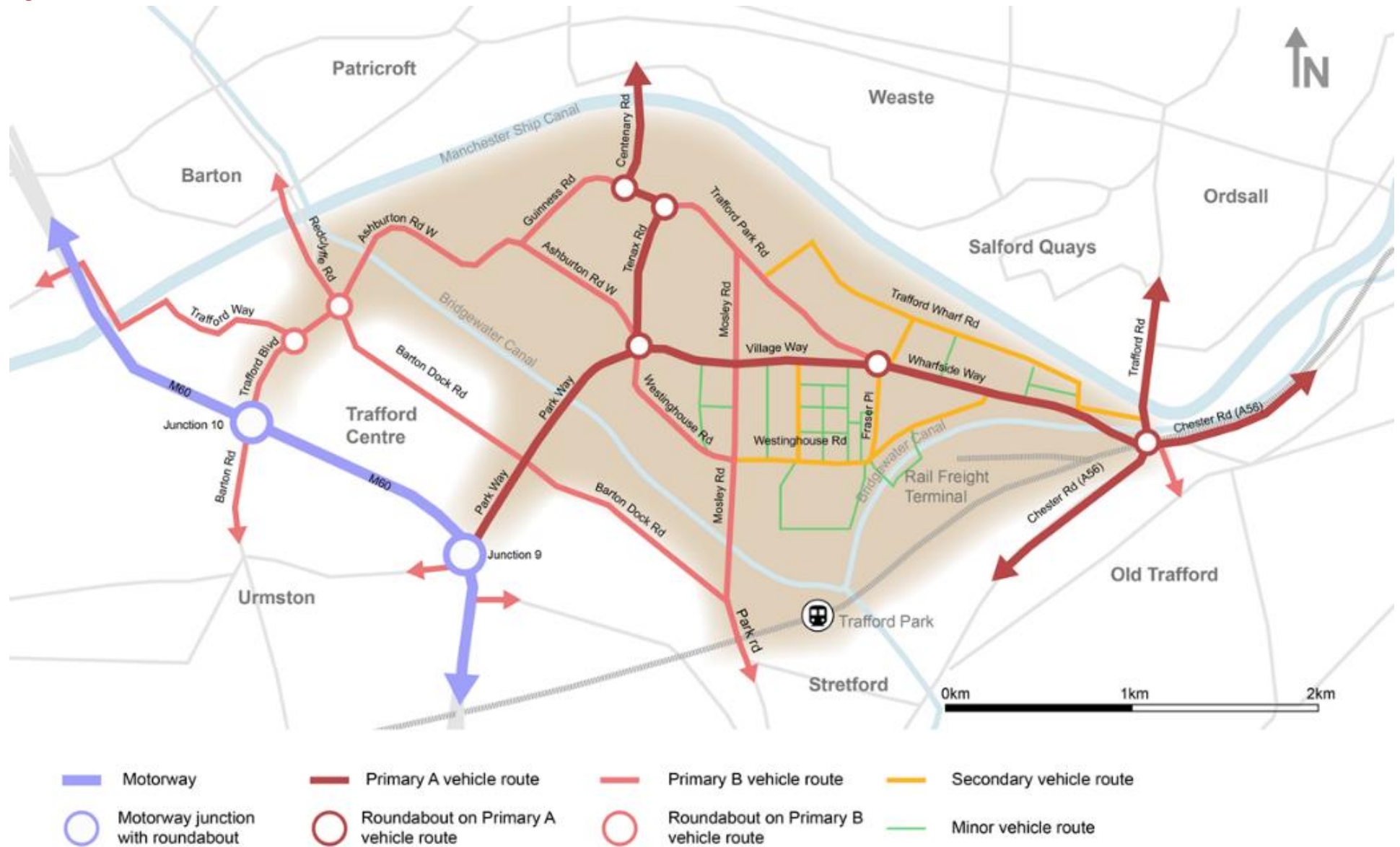
The M60 motorway is located to the west of Trafford Park. Junctions 9 and 10 provide vehicle connectivity between the M60 and Trafford Park.

A number of primary routes have been identified within and around The Park. These primary routes are judged to be essential for vehicle movement into and around Trafford Park. Further consideration has been given to further sub divide these primary routes into 'Primary A' and 'Primary B' routes. This is based on traffic counts, site visits, and professional judgement.

Primary A and Primary B routes are the key vehicle movement corridors across the park. Primary A routes experience higher volumes of vehicles than Primary B routes. Secondary routes provide alternative connectivity across the park but have lower vehicle volumes than primary routes.

Minor vehicle routes experience lower vehicle volumes than secondary routes. They link between other routes but are more likely to be used to access businesses located on these roads.

Figure 3 - Vehicle Network



2.4 Public Transport

Trafford Park is served by multiple forms of public transport including heavy rail, bus services and (since opening in 2020) Metrolink. An overview of the public transport network within Trafford Park is shown in Figure 4 **Error! Reference source not found.**

Trafford Park rail station lies on the southern border of Trafford Park, to the south of the Bridgewater Canal. The station is managed by Northern Trains and all services stopping there are also operated by Northern Trains.

Trafford Park is a two-platform station providing direct services to Manchester Oxford Road via Deansgate to the east. To the west, services run direct to Liverpool Lime Street via Flixton, Birchwood, Warrington, Widnes, and Liverpool South Parkway. Trains towards Liverpool Lime Street operate at a higher frequency than those towards Manchester Oxford Road. As noted in **Error! Reference source not found.**, services are relatively infrequent, especially outside of weekday peak hours, which is not conducive to supporting high levels of use for workers within Trafford Park by rail.

Table 1 - Services from Trafford Park Rail Station

| Destination | Journey Time | First / Last Weekday Service | Weekday Peak Frequency | Weekday Off Peak Frequency | Saturday Freq | Sunday Freq |
|------------------------|---------------|------------------------------|------------------------|----------------------------|-------------------------|-------------|
| Manchester Oxford Road | 10 minutes | 06:28 / 23:03 | 1-2 trains per hour | 1 train every 1-2 hours | 1 train every 2 hours | No service |
| Liverpool Lime Street | 60-75 minutes | 06:29 / 21:53 | 2 trains per hour | 1 train per hour | 1 train every 1-2 hours | No service |

The nearest bus connection to / from Trafford Park station is via bus stops on Park Road (A5181), which is served by the 150 bus. These stops are located 800m (approximate 10 minutes) walking distance from the station.

Despite its name, due to its location right on the southern boundary of Trafford Park, the station mainly serves the residential areas to the south of the Park. Its use in serving the wider Trafford Park (particularly to the north

of the Bridgewater Canal) is more limited due to walking distances between 1.5km and 4km to areas within the park and the isolated nature of some of the routes to the station.

Figure 5 (which it should be noted presents a pre-Metrolink assessment) demonstrates that the public transport accessibility levels close to the station (shown in blue) are actually some of the lowest within Trafford Park. Whilst Metrolink will have resolved some of the accessibility issues shown within the northern part of the Park, it will not have addressed the issues closer to the Station.

The Metrolink Trafford Park line, which opened in March 2020 runs in a broadly east-west alignment, connecting with Manchester city centre to the east and the Trafford Centre to the west. This is shown in Figure 6.

Passengers travelling eastbound on the Trafford Park line must interchange at Cornbrook to join one of six other Metrolink lines to access a wider range of destinations across the network. This limits the attractiveness of this service as passengers must interchange to access the city centre and other key destinations.

The Barton Dock Road, Parkway and Village Metrolink stops are located within the core of Trafford Park. Barton Dock Road lies within Metrolink Zone 3, with Parkway and Village in Zone 2. The Trafford Centre (Zone 3) and Imperial War Museum (Zone 2) stops serve the peripheral areas of the park to the west and east respectively.

The Trafford Park line is in operation between 5:30am and midnight Monday- Saturday, and 06:30am to midnight on Sundays. Trams run every 12 minutes in each direction.

Figure 4 - Public Transport Network

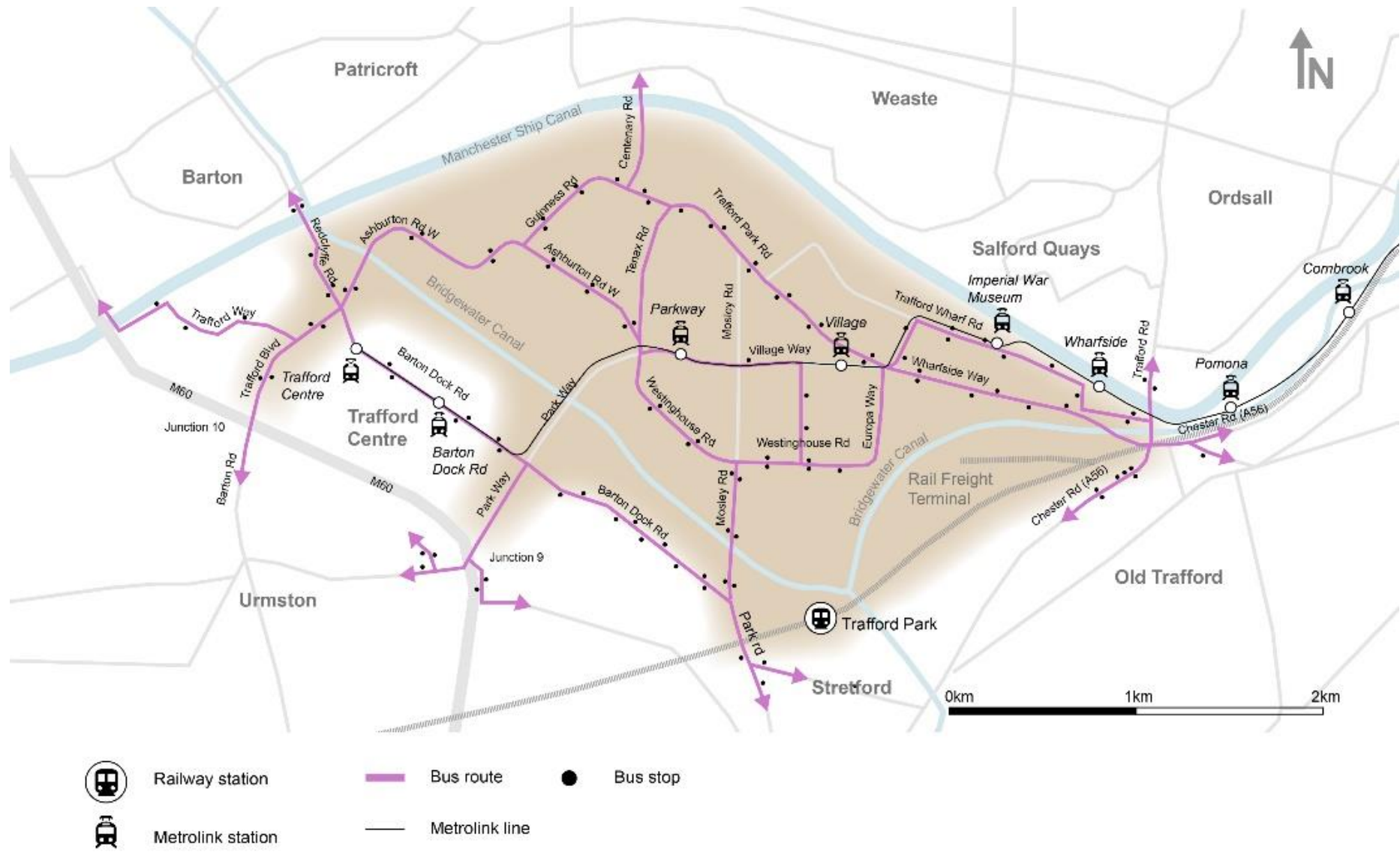


Figure 5 - GM Accessibility Levels – Trafford Park 2016 (Source: mappinggm.org.uk)

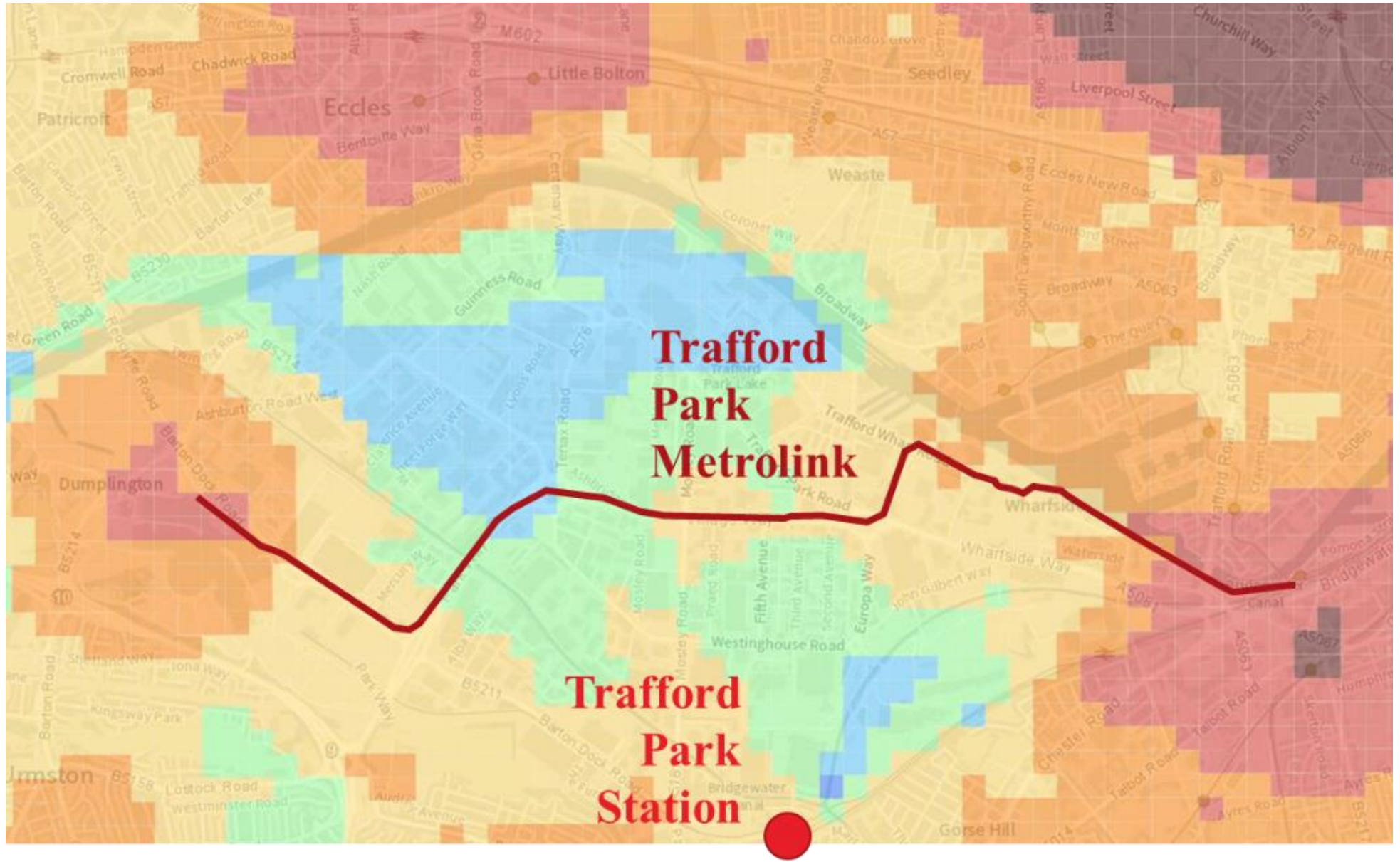
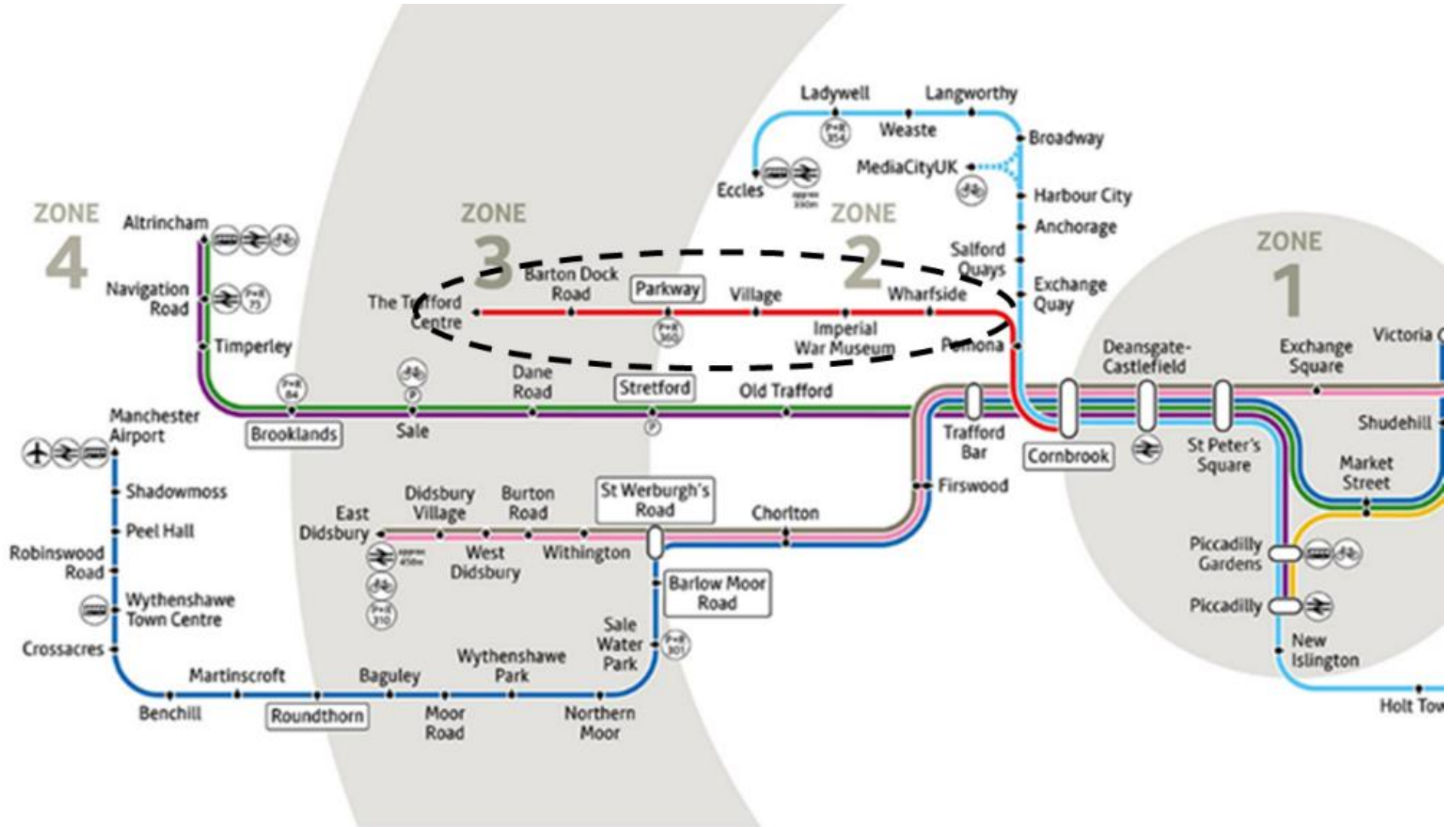


Figure 6 - Metrolink Route Map (Source: <https://tfgm.com/public-transport/tram/network-map>)



Several bus services operate through the centre of Trafford Park, as summarised in the Table 2. These services provide an average weekday frequency of 35 buses per hour to a range of local destinations, including interchange opportunities.

Table 2 - Bus Accessibility

| Service | Route | Average Weekday Frequency | First / Last Weekday Service |
|---------|---|----------------------------------|------------------------------|
| 18 | Eccles Interchange – Trafford Centre – Flixton – Sale – Wythenshawe Hospital – Manchester Airport | 1 bus per hour, each direction | 06:03 / 19:33 |
| 25 | Trafford Centre – Trafford Park – Stretford Mall – Chorlton – Burnage – Stockport | 2 buses per hour, each direction | 06:02 / 23:54 |
| X50 | Trafford Centre – Trafford Park – IWM North – Piccadilly Gardens | 2 buses per hour, each direction | 05:39 / 22:53 |
| 150 | Gorton – Longsight – Levenshulme Rail Station – Chorlton – Stretford Mall – Trafford Park – Trafford Centre | 2 buses per hour, each direction | 05:45 / 00:19 |
| 250 | Trafford Centre – Trafford Park – Trafford Bar – Oxford Road – Piccadilly Gardens | 5 buses per hour, each direction | 05:17 / 00:48 |
| 256 | Flixton – Trafford Park – Stretford Mall – Trafford Bar – Hulme – Piccadilly Gardens | 5 buses per hour, each direction | 05:17 / 01:03 |

Some services offer a moderate service frequency outside of the typical peak hours, although there are few services operating past midnight or before 06:00. A wider selection of services operates via the Trafford Centre, as well as on the key route network bordering Trafford Park. Local Link Partington also offers services to Trafford Park. This is a bookable service for use by

anyone starting or ending a journey in Partington. It operates between 05:00-08:30 and 18:30-00:00.

Bus stops located within Trafford Park are well positioned on key routes. TfGM is responsible for the provision and maintenance of these stops. The quality of bus stops varies throughout Trafford Park, ranging from sheltered stops with seating and timetable information, to simple flag and pole arrangements on narrow footways. In some locations, stops are poorly maintained. Walking routes to / from some stops are poor in places, with narrow footways, heavy traffic, overgrown vegetation, lack of safe crossings, and lack of active frontages to provide passive surveillance making them relatively inaccessible, particularly for women, disabled users, and children. Examples of the conditions of stops are provided overleaf.

Photograph 1 - Bus Stop on Guinness Circle



Photograph 2 - Bus Stop on Ashburton Road West



Photograph 4 - Bus Stop on Park Road



Photograph 3 - Bus Stop on Tenax Circle



2.5 Active Travel Routes and Infrastructure

2.5.1 Summary of active travel infrastructure and conditions

The level of provision and quality of infrastructure for walking, wheeling, and cycling varies across Trafford Park, however the majority of roads, junctions, and traffic free paths require improvement in order to provide an accessible, attractive and inclusive network for active travel

The pedestrian experience across Trafford Park suffers from narrow footways near high volumes of vehicle traffic and a lack of convenient and safe crossing points. Many junctions and desire lines lack controlled crossings which creates severance and deters pedestrian activity.

There is existing cycle infrastructure on several roads throughout Trafford Park, however the infrastructure is largely below the standards set out in Local Transport Note 1/20 (LTN 1/20). LTN 1/20 provides national guidance for designing and delivering cycling infrastructure. The issues relate to inconsistency in protection from vehicle traffic, below minimum standard widths, routes which deviate from desire lines, and uneven surfacing.

The Bridgewater Canal provides a traffic free active travel route through Trafford Park. However the canal route is isolated, creating a real and perceived safety issue deterring potential users, particularly women. Moreover, the path often falls below minimum width standards which creates conflict for existing users, a situation which would be exacerbated by increased use. There is limited opportunity to widen the path due to surrounding land uses and the canal itself.

The A56, Trafford Road, and Wharfside junction (White City Circle) at the eastern edge of the park creates major severance for active travel access into and out of Trafford Park. The junction requires multi stage crossing for pedestrians over multiple lanes of traffic and lacks protected crossings for cyclists.

Figure 11 shows an analysis of the active travel infrastructure along roads in Trafford Park.



Photograph 5 - The narrow cycle lane on Centenary Way does not provide adequate infrastructure with existing traffic volumes.



Photograph 6 -Bidirectional cycle track on Barton Dock Road



Photograph 7 - Existing active travel infrastructure on Trafford Wharf Road



Photograph 9 - Cycle lane without protection on Trafford Park Road



Photograph 8 - Existing active travel infrastructure lacking protection at Trafford Park Road Churchill Way junction



Photograph 10 - Bridgewater Canal shared use path



Photograph 11 - White City Circle looking towards Trafford Park

The Propensity to Cycle Tool (based on 2011 journey to work data) highlights key cycle routes in the wider Trafford Park area and has been used to understand existing cycle movement patterns within Trafford Park.

Figure 7 outlines the routes currently used in Trafford Park and the surrounding area. The routes which see the highest levels of cyclist activity are predominantly north west to south west across Barton Road Bridge and Redclyffe Road (shown in green and light blue), linking with routes along Chester Road and Bridgewater Way providing connectivity to Manchester city centre.

Comparative data taken from Strava in 2022 as shown in Figure 8 outlines a similar scenario, with most frequented cyclist routes (darker lines) supporting travel around Trafford Park, rather than to it. The data suggests that near the Trafford Park site, the level of cyclist activity begins to reduce (as shown by the lighter lines).

There are several committed and proposed Bee Network active travel schemes in the local area. These are shown in Figure 9 and include:

- Barton Aqueduct - pedestrian and cycle bridge - scheme in development;
- Trafford Road cycle route from Salford Quays to Trafford border at Wharfside – scheme under construction;
- A56 protected cycle lane - scheme in development; and
- Wharfside Way and Moss Road – Parklets scheme in development (estimated completion date December 2023).

However, there are no schemes identified within the bulk of Trafford Park.

Figure 7 - Propensity to Cycle Tool Routes (pct.bike)



Figure 8 - Strava Cycle Data, 2022 (Source: Strava Metro)

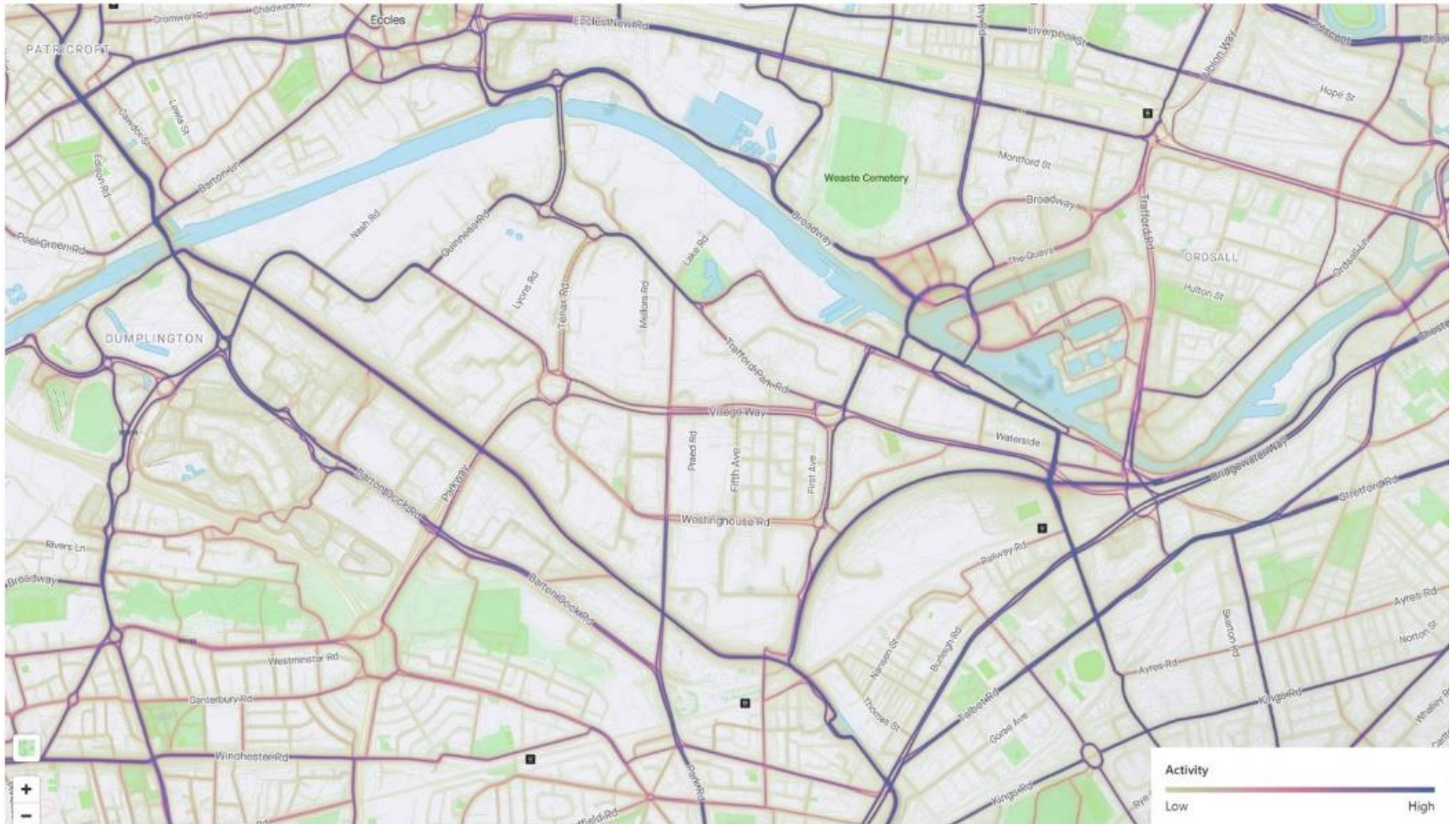
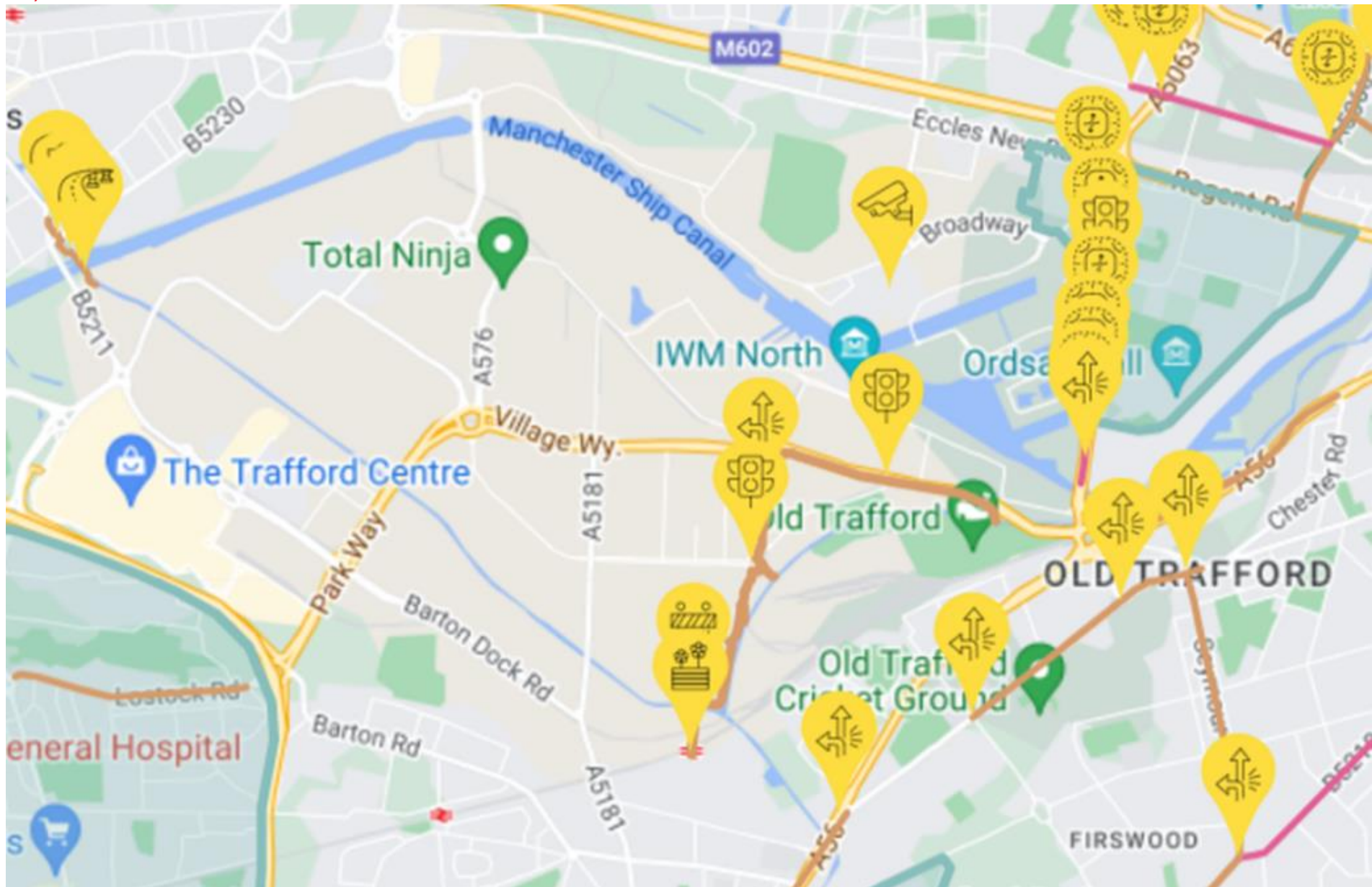


Figure 9 - Bee Network Schemes (Source: <https://beeactive.tfgm.com/schemes-near-me/>)



Accident data has been reviewed with particular focus on collisions involving pedestrians and cyclists as the most vulnerable road users. This data is presented in Figure 10.

This shows that there was a fatality in 2020 on Ashburton Road West. Serious collisions were recorded at several locations, including multiple incidents along Village Way/Wharfside Way.

A qualitative assessment has been undertaken of active travel infrastructure for links and junctions on key routes within Trafford Park. This is presented in Figure 11. It illustrates the lack of good quality infrastructure across Trafford Park

Red indicates roads with limited active travel infrastructure. This ranges from mixed carriageway cycling on roads with more than 2,500 vehicles per day to painted cycle lanes without protection. At junctions and roundabouts this indicates a lack of safe crossing opportunities.

Amber indicates roads which have some cycle infrastructure. This includes protected cycle tracks and shared use paths which meet the minimum LTN 1/20 width standards but do not provide priority at side road junctions. At junctions and roundabouts this includes shared toucan crossings and junctions which don't provide protected crossings for all cycle movements.

No roads or junctions are currently meet the recommended LTN 1/20 standards.

Figure 10 - Pedestrian and Cyclist Collision Data 2017-2021 (Source: <https://www.crashmap.co.uk/>)

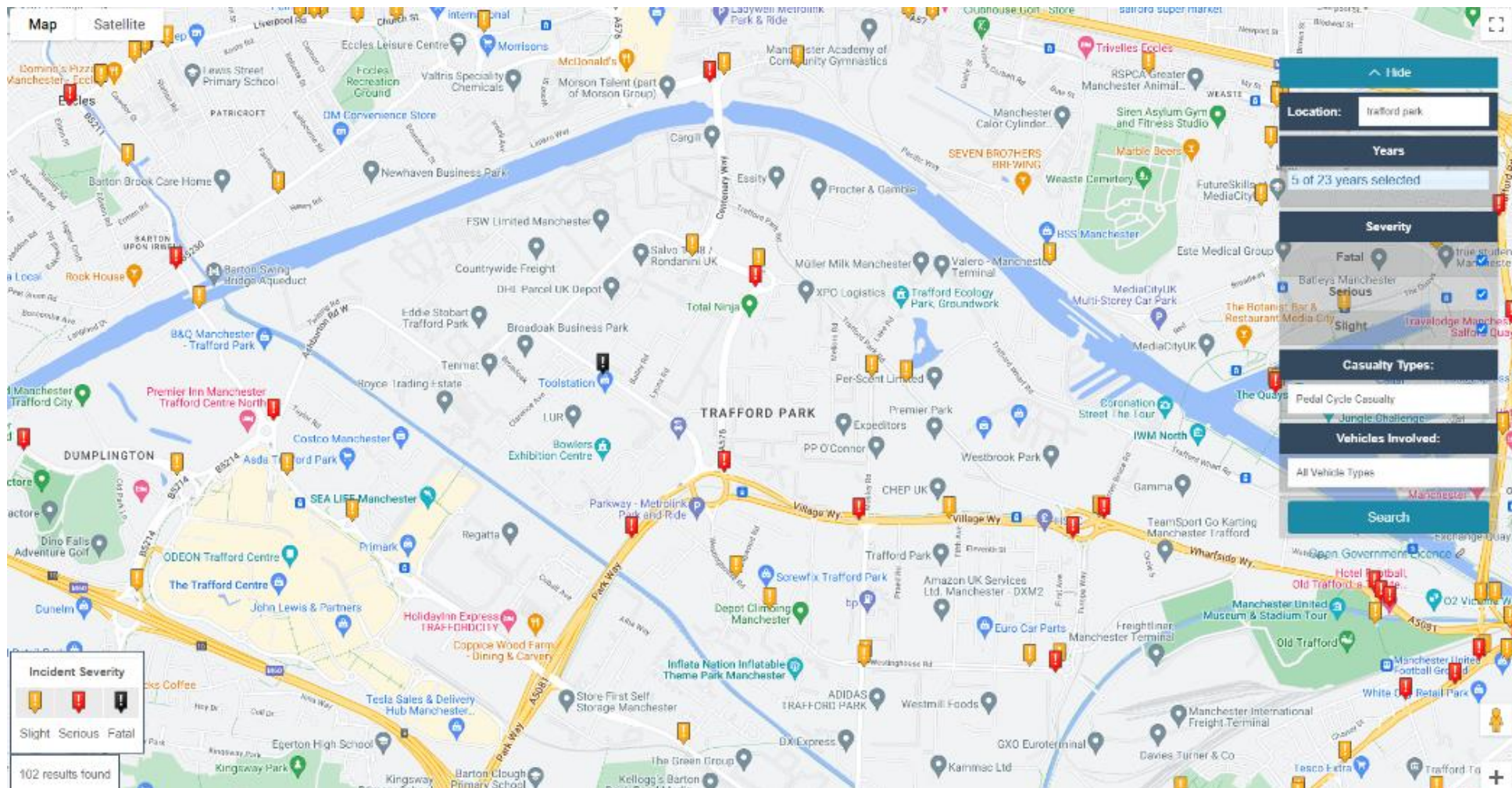
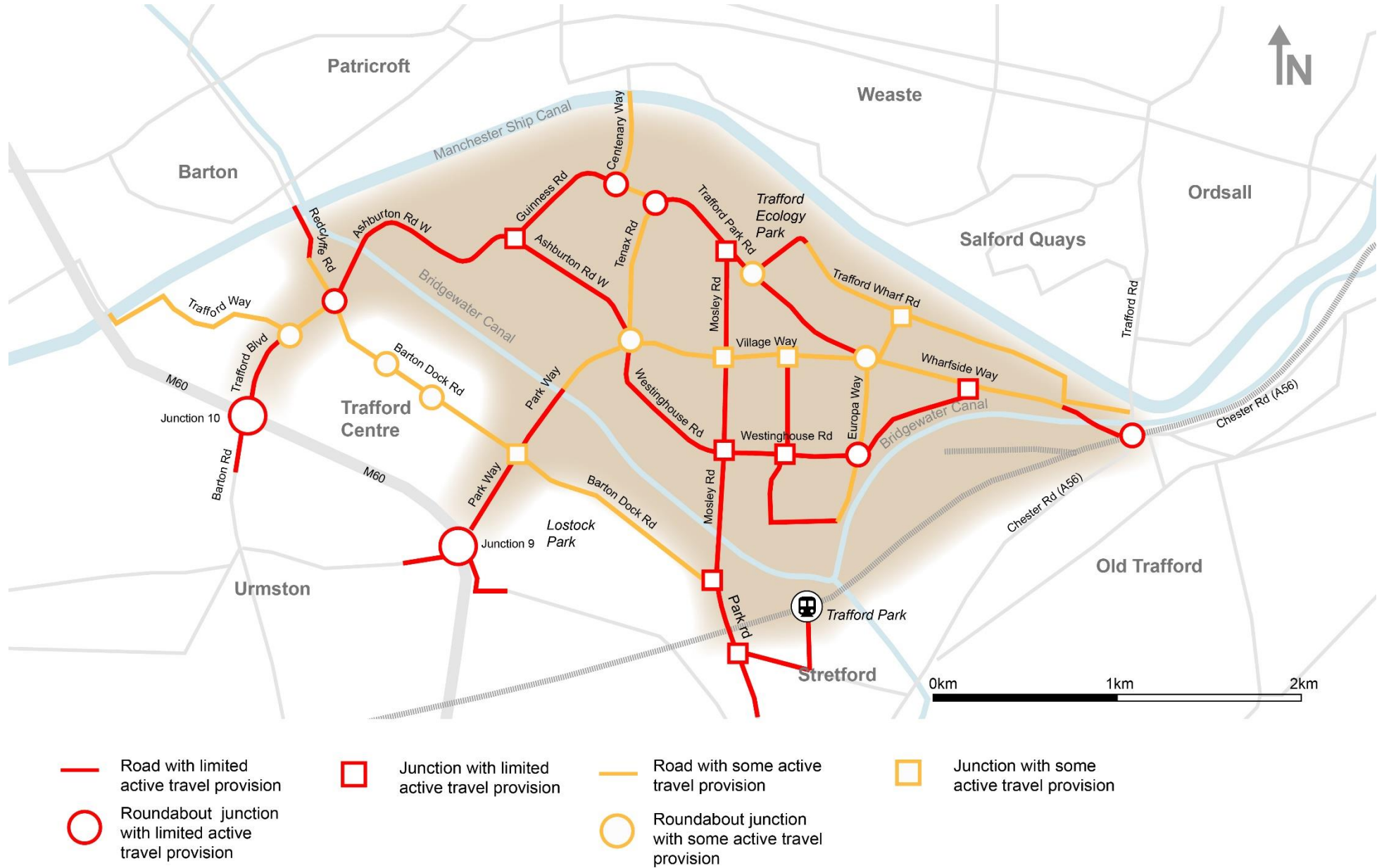


Figure 11 - Audit of Existing Active Travel Infrastructure Provision



2.6 Habitat

Living England Habitat Map provides a high-level national habitat map of England using satellite imagery, field collected data and machine learning. An extract of the map covering the Trafford Park area is shown in Figure 12.

The majority of Trafford Park is classified as ‘built-up areas and gardens’ (black), with large areas lacking existing habitats. The next most prevalent land use is unclassified (grey), which are areas where satellite imagery was not available as part of the data. There are small and disconnected areas of existing grasslands (pink), and very limited areas of tree cover (green) identified. Two areas of improved grassland (light green) are identified in the south of the study area, which correlate to Lostock Park.

Generally the map indicates there is a lack of existing habitat within the study boundary, and that existing habitat is in small, disconnected patches.

The Priority Habitat Inventory has been developed by Natural England and describes the extent and location of Natural Environment and Rural Communities Act (2006) Section 41 habitats of principle importance.

The areas identified within the site as priority habitats are shown in Figure 13.

Key points of note on this plan are as follows.

- Two sites of deciduous woodland identified by the dark green areas (1);
- Two sites of Open Mosaic Habitat (draft) (diverse habitats on previously developed land) which is identified by the blue lined areas (2);
- A very small area of traditional orchard which is identified in light green on the corner of Lostock Park (3); and
- There are no areas of ancient woodland within or in close proximity of the site.

Analysis of existing habitat designations has also been undertaken for the site. The only existing habitat designation on the site is at Trafford Ecology

Park, which is designated as a Local Nature Reserve (LNR). Trafford Ecology Park is managed by Groundwork and contains a wide range of habitats including a lake, ponds, pine and deciduous woodland, wetland, grassland, and hedgerow.

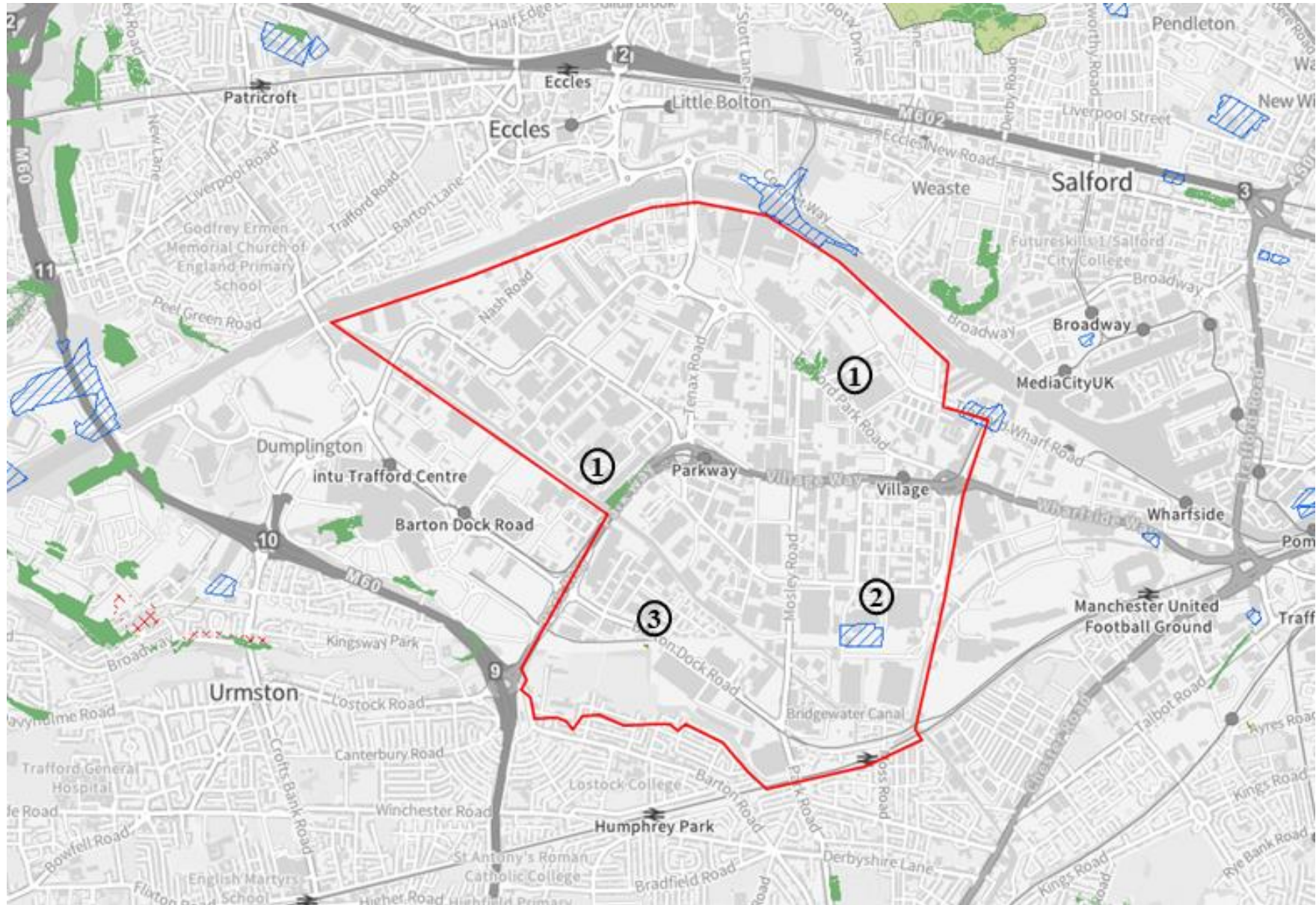
There are no other habitat designations within close proximity (5km) to the site, with the nearest designations identified below:

- SSSI and Special Area of Conservation: 6km to the west (Astley & Bedford Mosses);
- Special Protection Areas: 20km to the east (Peak District Moors); and
- Ramsar and National Nature Reserve: 11km to the south west (Rostherne Mere).

Figure 12 - Living England Habitat Map (Natural England, 2022)



Figure 13 - Map of Priority Habitat Inventory (2021)



2.7 Landscape and Heritage

The key landscape and heritage assets are shown in Figure 14.

There are two listed buildings within the site, both located close to Village Way and indicated with an orange dot on Figure 14:

- Grade II Trafford Park Hotel,
- Grade II Trafford Park War Memorial

In addition, there are several listed historic assets sat just to the north west of the site. These assets are located within Barton-upon-Irwell Conservation Area.

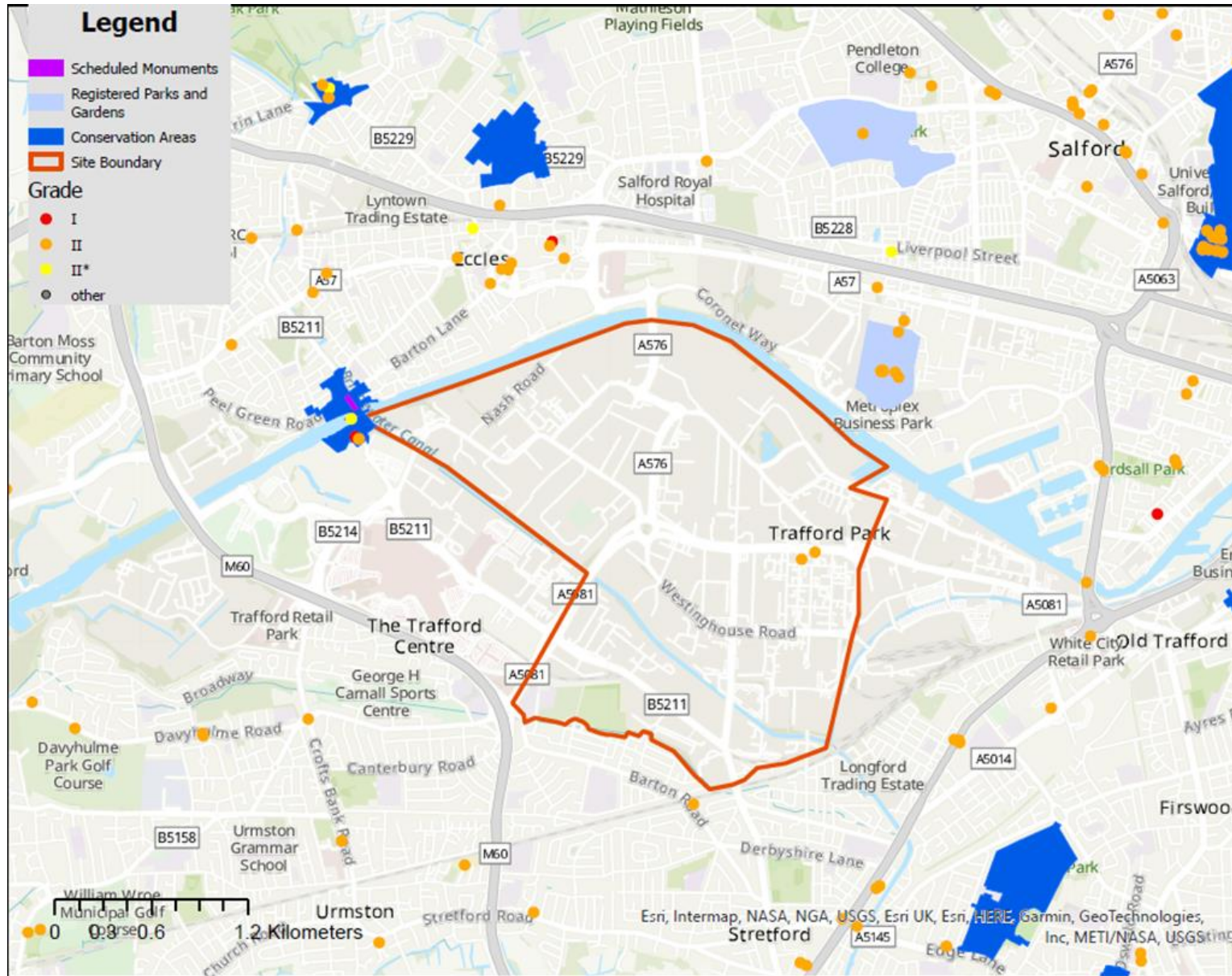
- Grade I listed building Church of All Saints,
- Grade II listed building All Saints Presbytery
- Grade II* listed building Barton Bridge, Barton Aqueduct and Control Tower
- Scheduled Monument; Bridgewater Canal's Barton Aqueduct embankment and retaining walls

The nearest Registered Park and Garden to the site is Weaste Cemetery which is located 0.3km to the north east of the site.

The site is located within the Manchester Conurbation National Character Area (55) which is classified as an area which is dense with urban and industrial development.

There could be opportunities to make these areas a feature- to increase awareness and interest by the local communities, improve legibility, and strengthen identity.

Figure 14 - Landscape and Heritage Designations



2.8 Water Environment

There are two water bodies identified within the site, as shown in Figure 15. The Manchester Ship Canal runs along the northern boundary of the site, with the Bridgewater Canal running towards the southern boundary of the site.

A large area of the north eastern part of the site is within Flood Zone 2 which is land having between a 1 in 100 and a 1 in 1,000 annual probability of river flooding. This is primarily focussed on the Manchester Ship Canal but also extends extensively into the Village area of Trafford Park.

Surface Water Flooding occurs due to inadequate drainage of surface water during storm events. There are areas throughout Trafford Park which are prone to intermediate flooding and/or suffer from high susceptibility to surface water flooding. These areas include adopted highways in addition to private industrial units. Factors contributing to this surface water flooding (in addition to rainfall criteria) including capacity of existing drainage network, topography/ground levels, and current impermeability of ground surfaces.

Figure 16 indicates those areas with the greatest levels of susceptibility to surface water flooding, primarily located towards the central part of Trafford Park and in particular around the Village area.

In addition to the above data sources, anecdotal evidence has observed that during heavy rain events, several drains across the site become flooded with surface water, leaving areas of standing water on the road. It is noted that this surface water flooding often has the greatest impact on space at the end of the carriageway that have the potential for cycle infrastructure.

These images demonstrate that lack of maintenance of surface water drainage assets can be a contributing factor to surface water flooding.

Photograph 12 - Surface Flooding on Ashburton Road



Photograph 13 - Surface Flooding on Guinness Road



Traditionally, surface water drained into the combined sewer network, rather than a separate surface water sewer network which discharged to

watercourse. This means that during large storm events, excess rainfall enters the combined sewer which can exceed its capacity. To avoid pollution events where sewers flood sewage onto streets/buildings, Combined Sewer Overflows (CSOs) are permitted to discharge combined sewer water into nearby watercourses.

The local sewer network discharges CSOs into the Manchester Ship Canal and Bents Lane Brook/Longford Brook. The 2021 discharges are illustrated in Figure 17.

Figure 15 - Water Bodies and Flood Zones

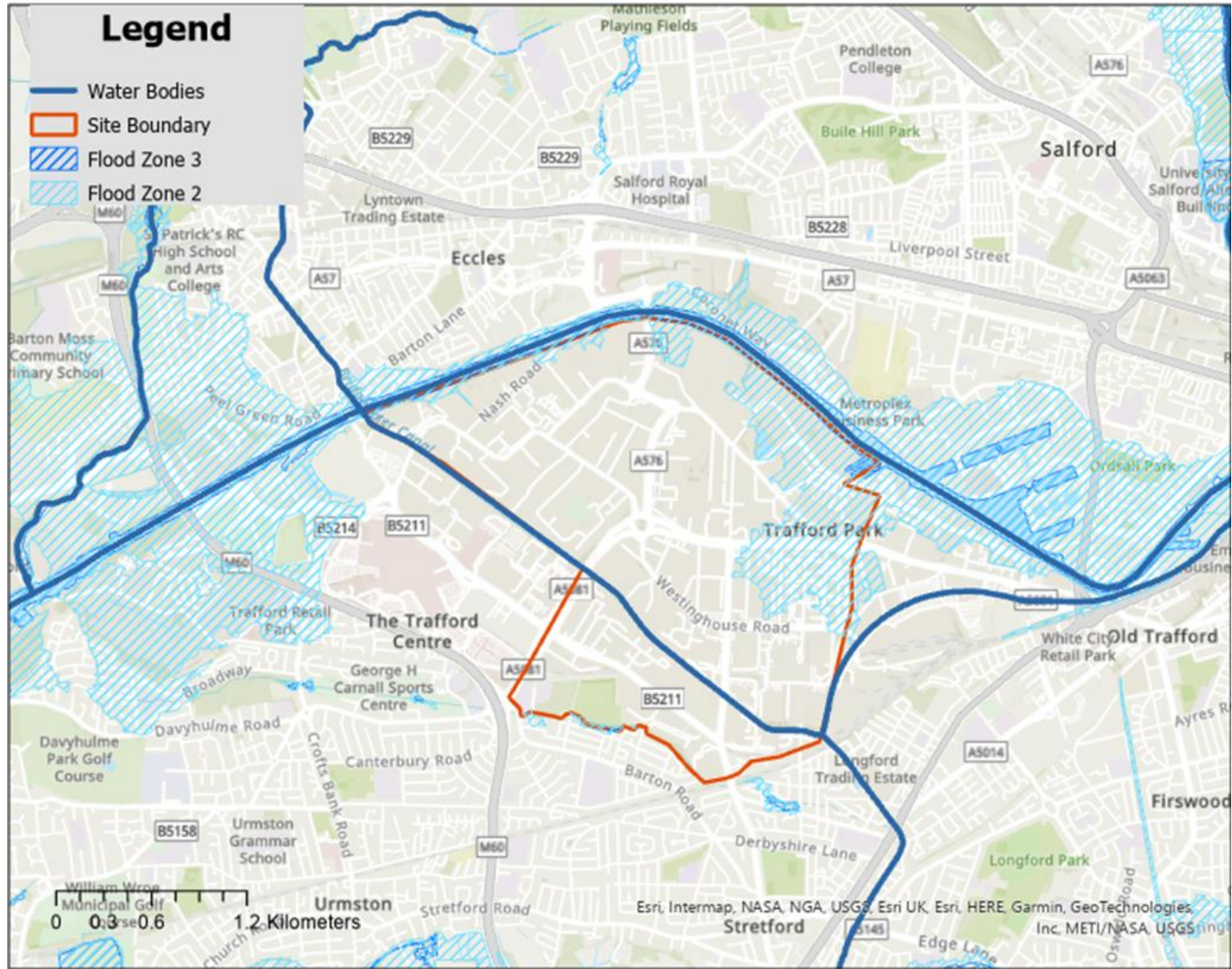


Figure 16 - Susceptibility to Surface Water Flooding

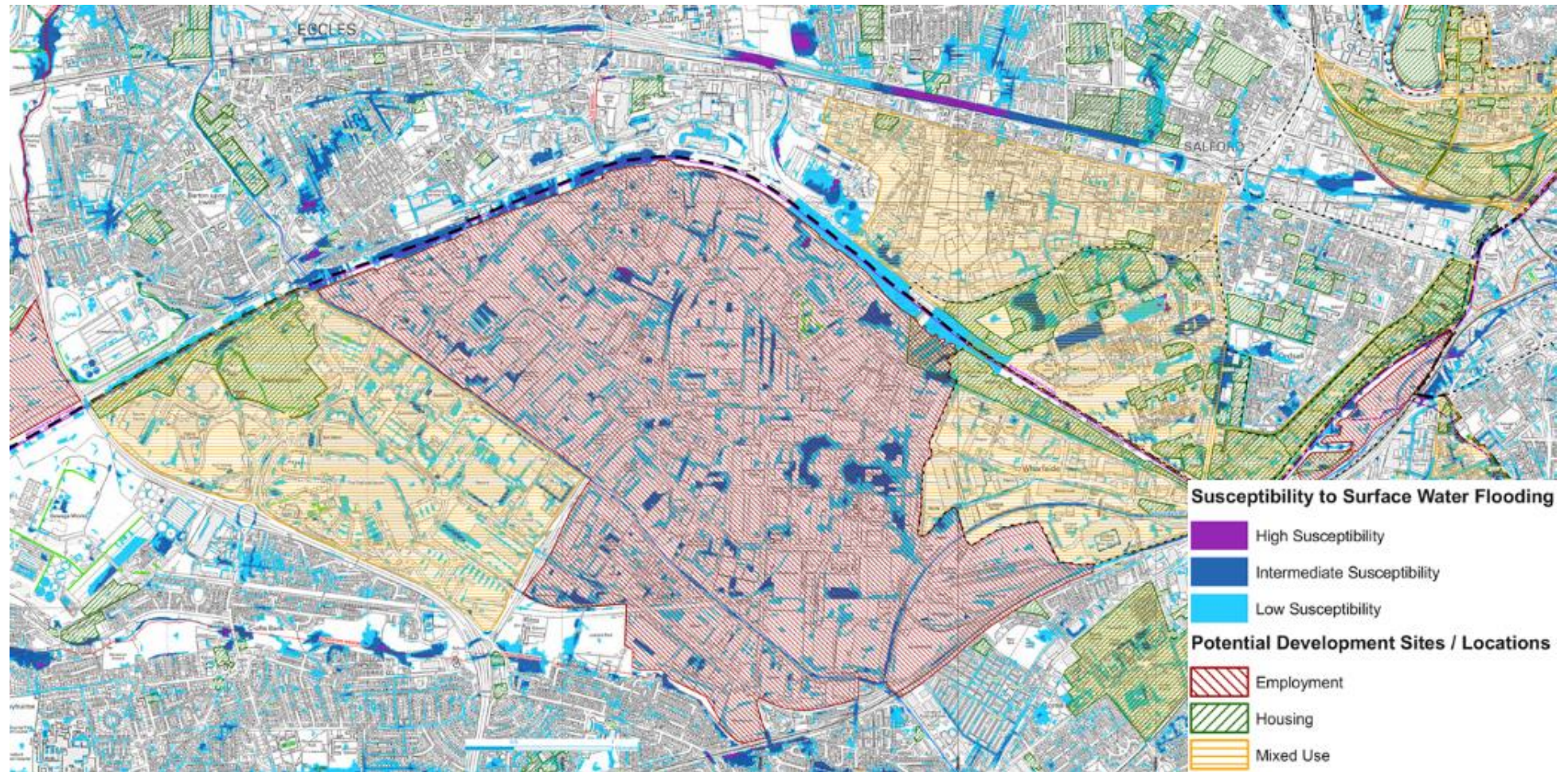
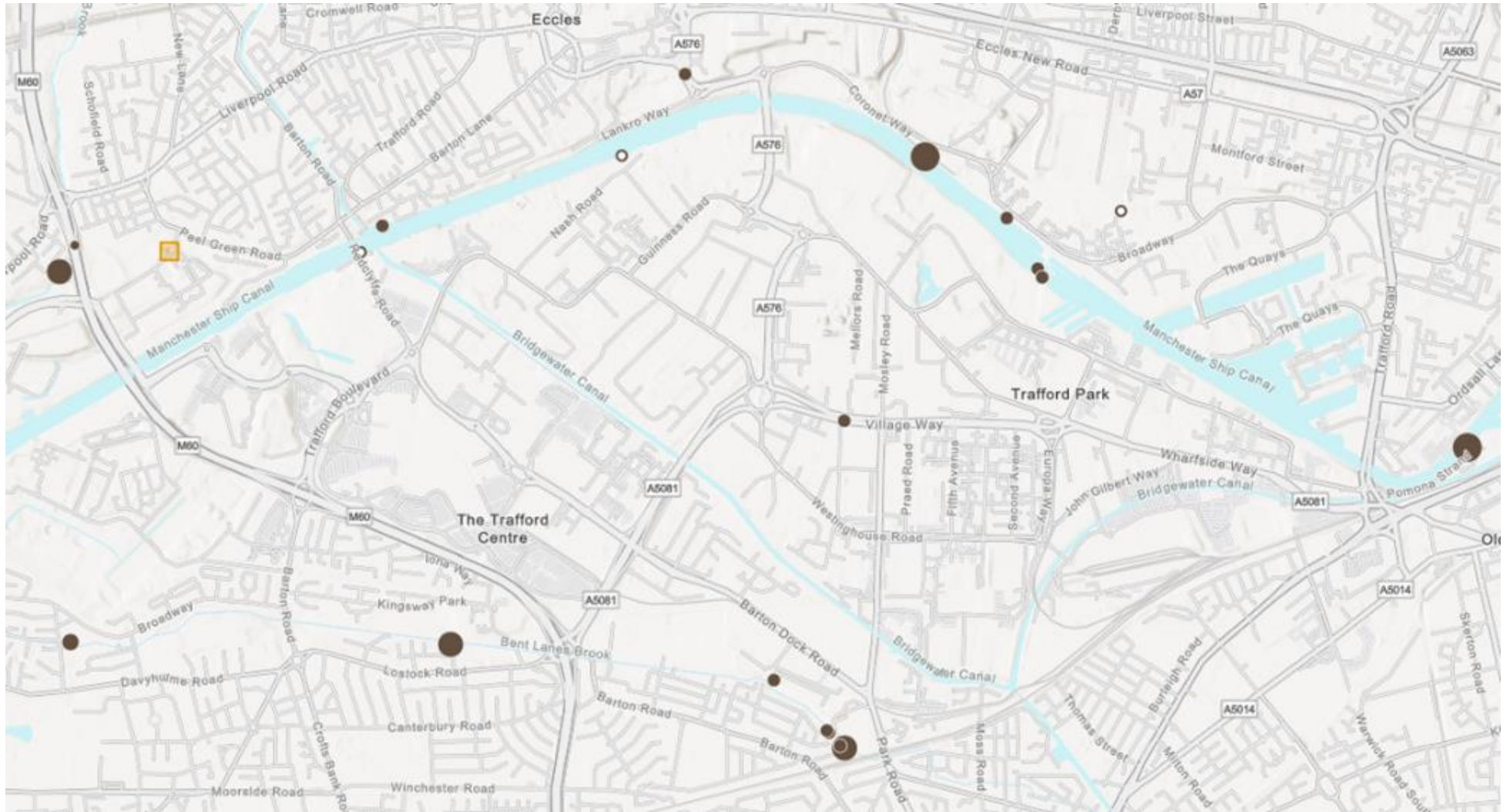


Figure 17 - Combined Sewer Overflows



2.9 Open Space

Baseline mapping identifies key existing open spaces within the site as shown in Figure 18.

These are:

- Lostock Park and adjacent playing fields in the south of the site (1);
- An area in the west of the site named as a sports facility (which appears to be an indoor exhibition centre) (2); and
- A small area in the east of the site which is St Antony's Roman Catholic Church religious grounds (3).

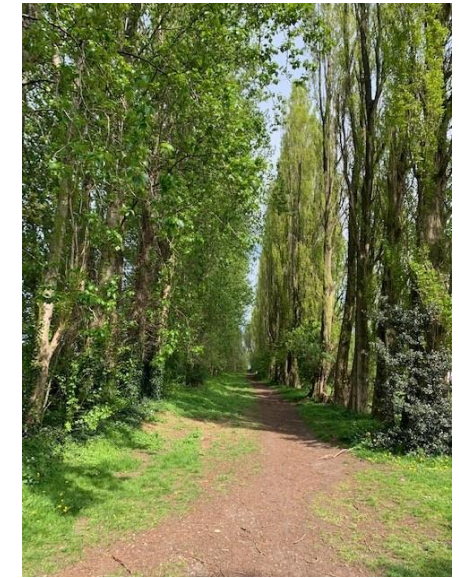
The OS access points demonstrate that key access points to Lostock Park and adjacent playing fields are to the south of the park, off Barton Road, with limited access from Trafford Park.

Error! Reference source not found. shows the entrance to Lostock Park from the direction of Trafford Park, which is currently not shown on OS map as an official entrance way into the park. The access is currently visually unappealing, does not have formal and accessible footpaths and lacks any passive surveillance, lighting, or CCTV. However, once in the park, this route leads to a tree lined pathway (Photograph 8) which runs through the centre of the park and leads the main entrance point.

Photograph 14 - Access to Lostock Park



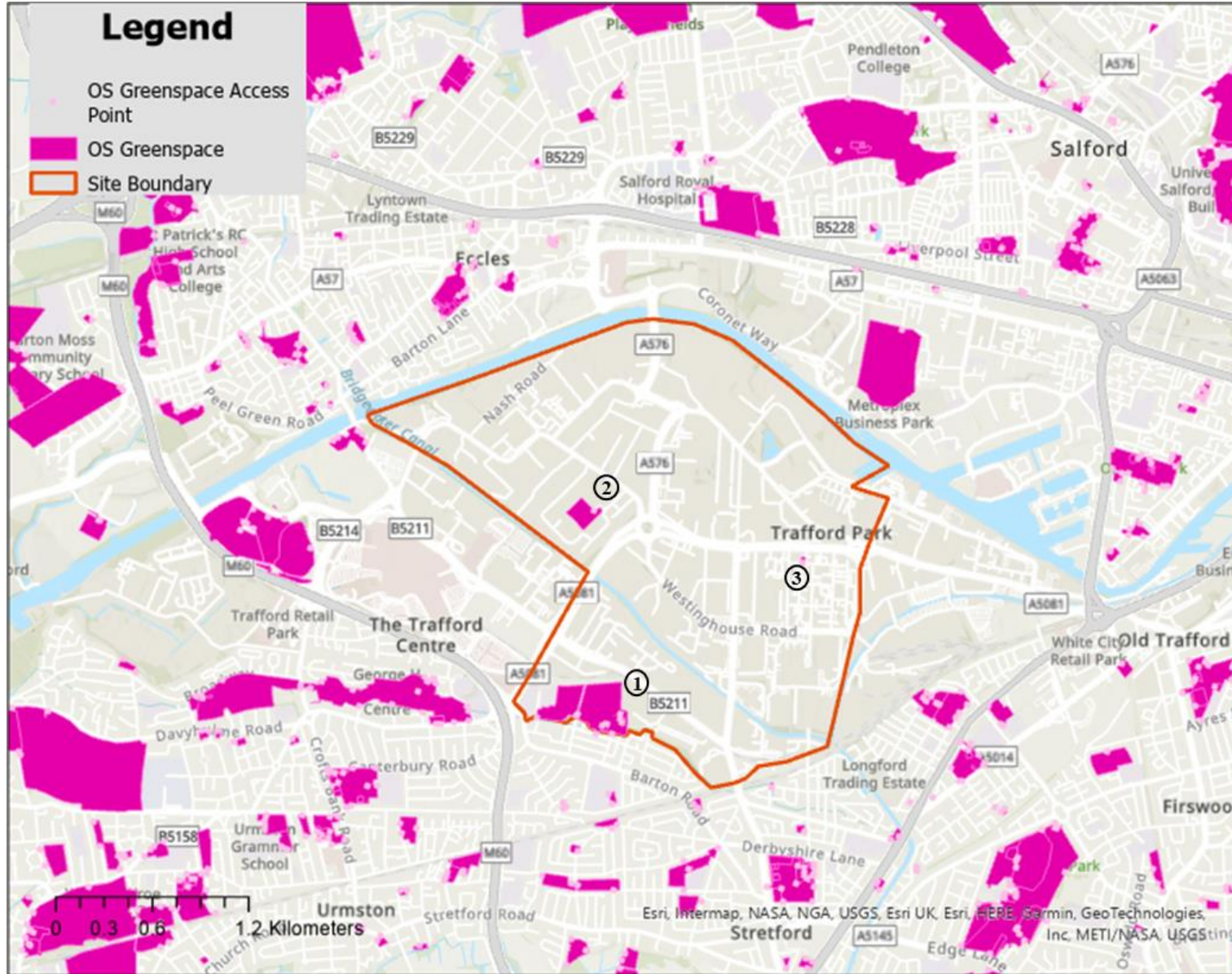
Photograph 15 - Pathway through Lostock Park



Photograph 16 - Main Park Entrance



Figure 18 - Open Space Plan



2.10 Baseline Summary

2.10.1 Transport

Trafford Park has several vehicle access points including Park Road from the south, Centenary Way from the north, White City Circle to the east, and two junctions from the M60. These provide connections across the Greater Manchester and to the wider national road network. Park Way, Village Way, and Wharfside Way form a main vehicular spine through The Park connecting between junction 9 of the M60 and White City Circle.

There are bus services across Trafford Park providing connections to locations including Manchester City Centre, Salford, Urmston, Stretford and Old Trafford. Service frequency decreases outside of peak hours and there are few services after midnight, making bus travel difficult and inconvenient for people who work in the park outside of the standard 9-5 working day. Bus stops located within Trafford Park are well positioned on key routes, although the quality of bus stops varies, and pedestrian access can be poor.

Trafford Park railway station lies on the southern boundary of the park, but its use in serving the wider Trafford Park area is limited due to walking distances between 1.5km and 4km to areas within The Park and the isolated nature of some of the routes to the station. There are also only approximately 1-2 trains per hour in each direction at peak times during the day.

The Trafford Park Metrolink line runs in a broadly east-west alignment, connecting Manchester city Centre to the east and the Trafford Centre to the west. Trams runs every 12 minutes in each direction and several stops are located in Trafford Park, however comments from stakeholder engagement suggests a perception of inconvenient journey lengths due to the interchange requirement at Cornbrook to connect with the wider network.

Active travel provision within Trafford Park is relatively extensive, but does not meet current national infrastructure standards for attractive, convenient, and safe routes. Footways are often narrow and provide little space between the back of the footway and vehicle traffic, and there is a lack of safe and convenient crossings. Where cycle infrastructure exists, it rarely meets minimum width standards, has intermittent protection from vehicle traffic, and lacks protection at junctions.

2.10.2 Green infrastructure

Existing habitat mapping indicates that there is a lack of existing habitat within the study boundary, and that existing habitat is in small, disconnected patches. There are limited Priority Habitat Inventory areas within the site, and the only habitat designation within the site is Trafford Ecology Park which is a Local Nature Reserve (LNR). Trafford Ecology Park is the key existing ecological asset within the study boundary.

There are two clusters of heritage designations. One located just to the west, adjacent to the study boundary at Barton Bridge which includes Barton-upon-Irwell Conservation area and a number of listed buildings and scheduled monuments. In addition, there is a small cluster of grade II listed buildings within Trafford Park Village. As such, providing solutions that are sensitive to, and enhance the setting of these existing heritage assets should be encouraged in design development.

Most of Trafford Park is within Flood Zone 1, which has the lowest probably of flood risk. A large area of the Park to the north east is in Flood Zone 2 which has between a 1 in 100 and a 1 in 1,000 annual probability of river flooding. This would suggest that Sustainable Drainage Systems (SuDS) related interventions could be more appropriate within this area of the site.

SuDS are drainage solutions that provide an alternative to the direct channelling of surface water through networks of pipes and sewers to nearby watercourses. SuDS aim to reduce surface water flooding, improve water quality and enhance the amenity and biodiversity value of the environment. SuDS achieve this by lowering flow rates, increasing water storage capacity and reducing the transport of pollution to the water environment. On site observations demonstrate that surface water flooding is an issue across elements of the site located in flood zone 1, and therefore more detailed analysis of localised flood risk should be considered when developing locations for SuDS interventions.

The OS green space map demonstrate that key existing open space within the site is Lostock Park. The OS access points demonstrate that access points to Lostock Park and adjacent playing fields are to the south of the park, off Barton Road, with limited access from Trafford Park. As such, potential to access this existing facility could be considered as part of the framework.

3. Business Engagement

3.1 Audit of Businesses

A Dataset received from Trafford Council for businesses located within Trafford Park has been reviewed and data verification completed. This study is focussed on the industrial employment heart of Trafford Park (Trafford Park Core, Trafford Park Village, Wharfside and Pomona / Cornbrook).

Several further data lines which were identified by the client and tagged 'on the Trafford Park list' are outside the target area and these have been removed. The remaining data set has been tagged to identify Wharfside, with the remaining data representing the Trafford Park Core location. Figure 19 shows postcodes for the final data set used for the project (as mapped using postcodes).

Figure 19 - Final Dataset used for Project (Base map source: Google Maps)



A final cut of all premises with a rateable value of below £12,000 has also been undertaken. The target data set consists of 592 premises. The list of target premises has a total rateable value of £59million. The 20 largest premises are shown in Table 3.

Table 3 - Largest Premises in Study Area

| Rateable Value | Description | Ratepayer |
|----------------|---------------------------|----------------------------------|
| £1,780,000 | Works and premises | Cargill PLC |
| £1,710,000 | Works and premises | Kellogg Co (GB) LTD |
| £1,410,000 | Warehouse and premises | AKW Global Warehousing LTD |
| £1,360,000 | Factory and premises | P and G Product Supply (UK) LTD |
| £1,340,000 | Warehouse and premises | Kellogg Company of Great Britain |
| £1,310,000 | Warehouse and premises | L'Oréal (UK) LTD |
| £1,300,000 | Warehouse and premises | XPO Supply Chain UK LTD |
| £1,250,000 | Museum | Imperial War Museum North |
| £1,010,000 | Factory and premises | Essity Operations Manchester LTD |
| £980,000 | Warehouse and premises | Essity UK LTD |
| £930,000 | TV studios and premises | ITV PLC |
| £835,000 | Warehouse and premises | PCL Transport 24/7 LTD |
| £795,000 | Warehouse and premises | TDG UK LTD |
| £755,000 | Factory and premises | Muller UK AND Ireland Group LLP |
| £720,000 | Warehouse and premises | Amazon UK Services LTD |
| £605,000 | Warehouse and premises | SIG Trading LTD |
| £580,000 | Factory and premises | Unilever UK LTD |
| £560,000 | Misc. communications | Gamma Telecom Holdings LTD |
| £515,000 | Bulk liquid storage depot | Valero Energy Products LTD |
| £512,500 | Hotel and premises | Old Trafford Supporters Club LTD |

3.2 Consultation

The dataset was used to consult with companies regarding the key challenges and opportunities that exist on Trafford Park with a particular focus on the potential for environmental and infrastructure improvements.

The consultation ran from 26 February to 18th March 2022. 31 company responses were received, representing 35 premises. Most responses came from manufacturing or digital and creative companies, with a third of responses coming from independent businesses and the remaining companies being part of a larger regional or national group.

3.2.1 Key Findings

Key findings from the consultation were as follows:

- 52% of respondents export, and all companies reported moderate or high levels of business confidence;
- 25% describe the image of Trafford Park as poor or below average, 58% describe it as average with 16% describing the image / perception of Trafford Park as above average;
- The poorest rated issues relating to the general environment on Trafford Park were:
 1. Litter,
 2. Highways,
 3. Pavements,
 4. Side streets,
 5. Street furniture.
- 35% of companies reported having unused space / capacity for additional green infrastructure;
- 29% provided suggestions for locations on Trafford Park that may be suitable for additional green infrastructure;
- 83% would like to see a stronger branded identity for Trafford Park;

- 50% of companies reported staff having difficulty in travelling to and from work;
- 41% reported public transport creates a barrier to employing new staff;
- 31% reported car parking is an issue for their premises;
- 47% reported new employees, visitors or delivery drivers report difficulties in locating their premises;
- 78% currently have no green travel plan in place; and
- 20% of companies have measures in place to promote sustainable travel.

3.2.2 Priorities for Investment

Using responses that indicated a topic was very important for future investment, companies prioritised the following areas for investment:

1. Safety and Security (66%)
2. Cleansing and General Maintenance of Trafford Park (60%)
3. Active and Sustainable Travel Projects (e.g. cycling and walking projects) (43%)
4. Green Infrastructure / General Image and subsequent maintenance schemes (40%)
5. Business Support and Networking (28%)
6. Business Park Management Services to co-ordinate improvement project (24%)

3.3 In-Person and Online Engagement Workshops

Following the initial business engagement stage and survey work, companies and Elected Members of Trafford Council were invited to attend a series of interactive workshops in June 2022 to learn about the preliminary findings from the Greening Trafford Park project and the Low Carbon Trafford Park project (delivered by Siemens).

Photograph 17 - In person workshop at Trafford Ecology Park



The workshops consisted of scene setting and context by Trafford Council. This was followed by presentations from Arup and Groundwork covering the Greening Trafford Park project findings, with a final presentation from Siemens outlining the Net-Zero opportunities and challenges for Trafford Park.

Three in-person workshops were held at the Trafford Ecology Park on Monday 20th June. The online workshop was held on Tuesday 21st June through the MS Teams platform. Each workshop (online and in person) provided businesses and stakeholders with an opportunity to ask questions and share their views on the findings.

Over 40 businesses and stakeholders booked onto the workshops representing organisations including:

- Manchester Growth Company;
- Trafford Council;
- Manufacturing companies;
- Transport and logistics companies;
- Digital and Creative;

- Telecommunications;
- Green Technology;
- Scientific / analytical companies; and
- Service businesses.

Feedback from companies attending was taken by Arup and Siemens to inform the development of interventions proposed within each study with information also being provided to attendees on how the results of the study would be shared with companies and taken forwards.

4. Vision and Objectives

Trafford Park is a regionally and nationally significant employment area and business park. Trafford Council's vision for Trafford Park is for a world class entrepreneurial and business area, which also provides a green and healthy place for people.

More specifically, in terms of this framework, Trafford Park should be:

- An accessible, green and sustainable employment destination;
- A place where people are proud to work, and have a sense of community;
- A location that is stimulating and enjoyable to move around in, and enhances people's health and wellbeing;
- A safe and secure environment, inclusive and accessible to all²; and
- A resilient place able to adapt to future development and change.

From the baseline analysis presented earlier and the outcomes of the business engagement, the interventions set out within this framework seek to:

- Enable greater use of active and sustainable travel for Trafford Park businesses and employees;
- Identify a range of specific green infrastructure measures to mitigate the adverse impacts of development and combat climate change;
- Engage with businesses to explore issues and opportunities and potential funding options for transport and green infrastructure improvements.
- Connect adjacent deprived communities to the Park to unlock economic opportunities;

² The vision of the Greater Manchester Strategy 2021-2031 is for a 'place where everyone can live a good life, growing up, getting on and growing old in a greener, fairer, more prosperous region'.

- Improve access to leisure opportunities and amenities within the park, such as the canals, parks, and the Village;
- Improve the visual appearance and identity of the Park to retain and attract businesses.

The summary objectives for the framework against which the interventions have been developed are set out below.

Objective 1 - Connecting People



Improving the walking, wheeling, and cycling connections and public realm (including streets) throughout the Park through the provision of green infrastructure and safe, attractive active travel routes. This would help to improve access to jobs and link disadvantaged areas of Trafford to the opportunities within Trafford Park without the reliance on cars. Delivering on opportunities to improve the identity and 'feel' of the Park, with particular focus on the Village as the primary local centre serving the wider Trafford Park, to increase footfall and vibrancy in the area.

Objective 2 - Managing Water



Identifying flooding and drainage issues to inform decision making on the type and location of proposed interventions. The current lack of porous surfaces, green space and presence of large building footprints must be addressed to develop a sustainable water management system.

Objective 3 - Creating Place



Prioritising investment in key areas, such as the Village, and identifying opportunities for public realm improvements associated with blue-green

infrastructure to promote a sense of place and biodiversity within Trafford Park. Maximising existing assets, such as the canals, Trafford Ecology Park, and Lostock Park to encourage people to use and enjoy spaces within the Park.

5. Potential Interventions

This section of the framework presents a range of potential interventions that could help to deliver a Greener Trafford Park through the implementation of sustainable transport, green infrastructure, and environmental improvements.

Appendix A sets out further details of the potential projects alongside a high-level indication of the delivery timescale and cost. The projects support the Greater Manchester Transport Strategy 2040 and the associated 'Right Mix' vision for future increased modal share for sustainable modes.

5.1 Sustainable Transport Routes

The baseline analysis identified a lack of safe and direct routes that enable active travel to/from/through Trafford Park. A series of direct active travel routes have been identified that, together, could form the basis of a core walking, wheeling, and cycling network serving Trafford Park. These routes have been identified as locations where enhanced infrastructure for active travel and public transport could be provided with opportunities to deliver infrastructure in accordance with best practice such as LTN 1/20.

The routes identified are mostly busy traffic routes requiring cycle tracks and protected junction upgrades. This approach follows national best practice guidance for primary active travel routes serving Trafford Park that are direct, convenient, safe, and attractive. The proposed Sustainable Transport Route network is presented in Figure 20.

The primary function of the key sustainable transport routes is one of movement. These routes have been selected as they have the opportunity for LTN 1/20 standard cycle infrastructure on direct routes across Trafford Park.

These corridors are likely to continue to have a strong focus on movement of vehicles alongside active travel, but could be enhanced for sustainable transport and green infrastructure. Following Trafford Design Guide and TfGM's Streets for All vision for 'Strategic Roads' and 'Connector Roads', the proposed interventions include:

- Improved crossings to enhance links to key destinations;

- Reduced road width (whilst maintaining space for HGVs);
- Opportunities for reallocating road space;
- Enhanced protected cycle tracks;
- Widened footways;
- Green opportunities including street trees and sustainable urban drainage solutions; and
- Enhanced signage.

To support the phased delivery of this network, it has been split into several discrete schemes or sections that could be delivered independently. As set out below, the East West Spine along Parkway, Village Way and Wharfside Way would be the strategic spine of the network through Trafford Park. Connector routes could tie into this enabling access to Trafford Park using active travel modes from all directions.

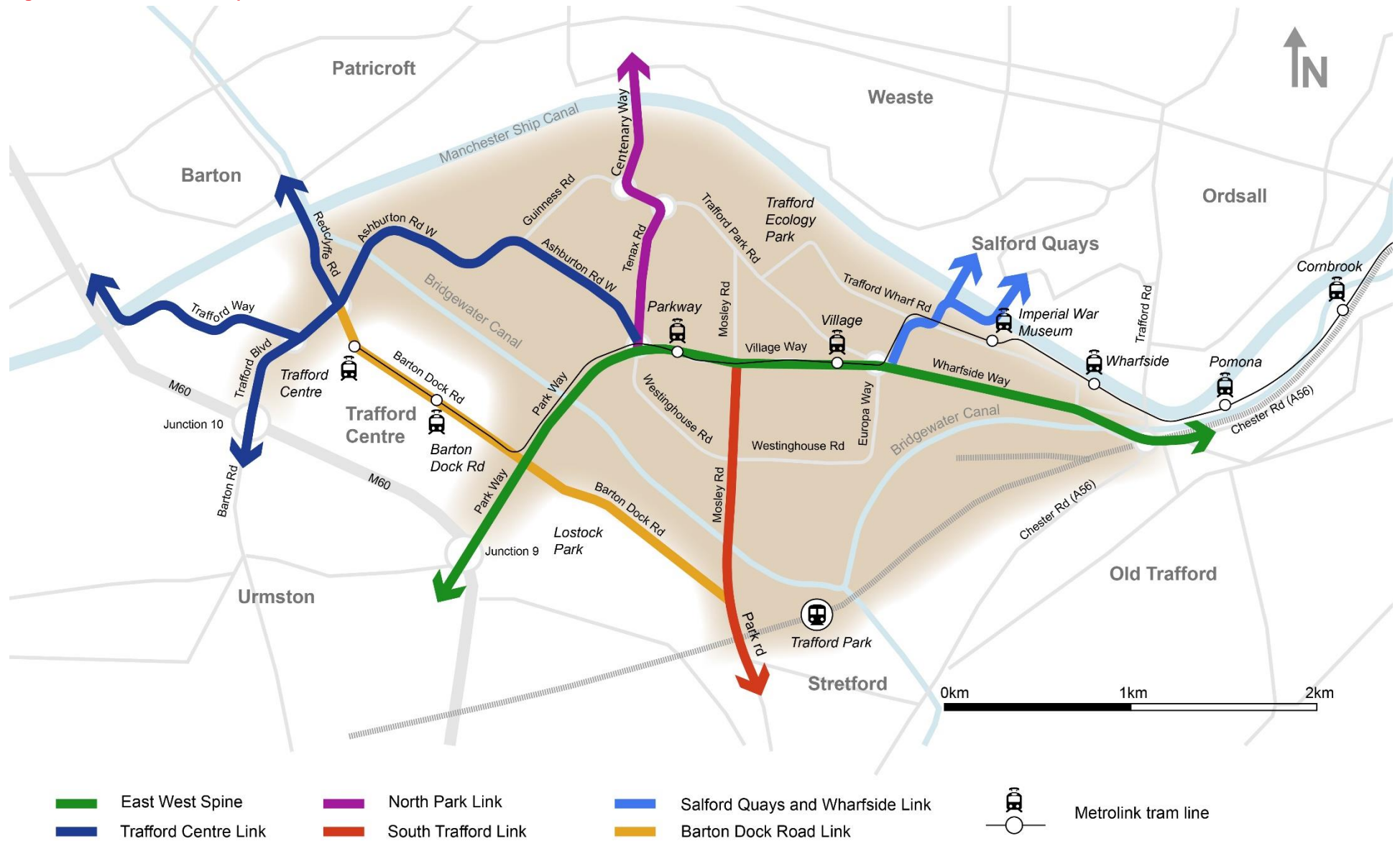
Strategic Route

- East West Spine (Parkway, Village Way, Wharfside Way)

Connector Routes

- South Trafford Link (Park Road, Mosley Road)
- North Park Link (Centenary Way)
- Trafford Centre Link
- Barton Dock Road Link
- Salford Quays and Wharfside Link

Figure 20 - Sustainable Transport Route Network



5.1.1 East West Spine Strategic Route

The key connection within this network is the East West Spine, which each of the other routes could connect into. A cross section has been developed to demonstrate the form that this route could take. This is presented in Figure 22. re-allocation of road space could enable wider cycle tracks and new SuDS zones.

Figure 21 - Existing Cross Section of East West Spine Sustainable Transport Route (at Village Way)

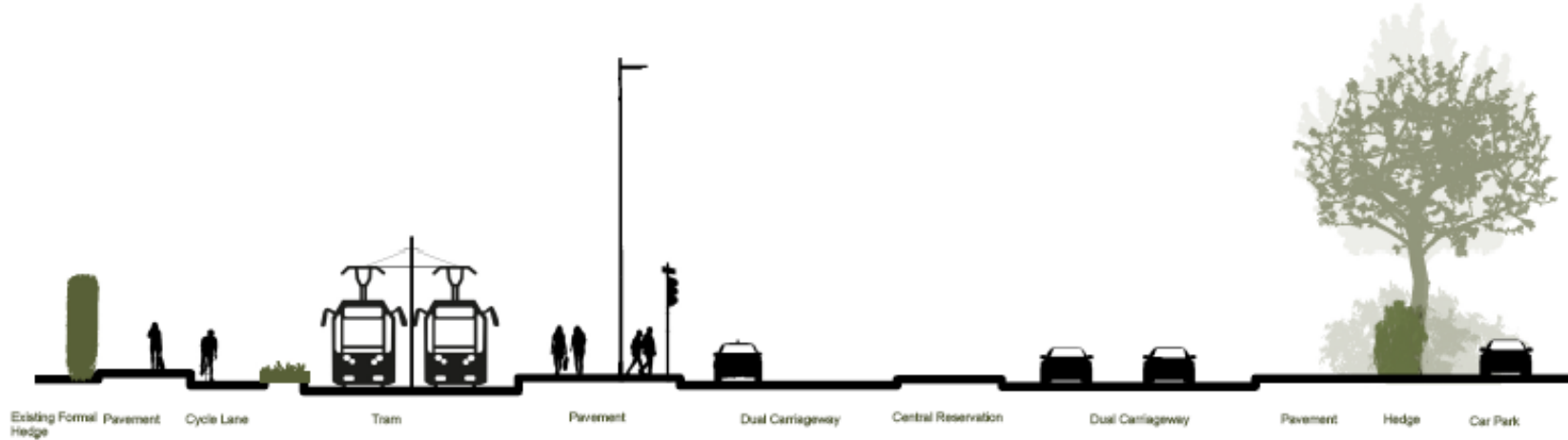
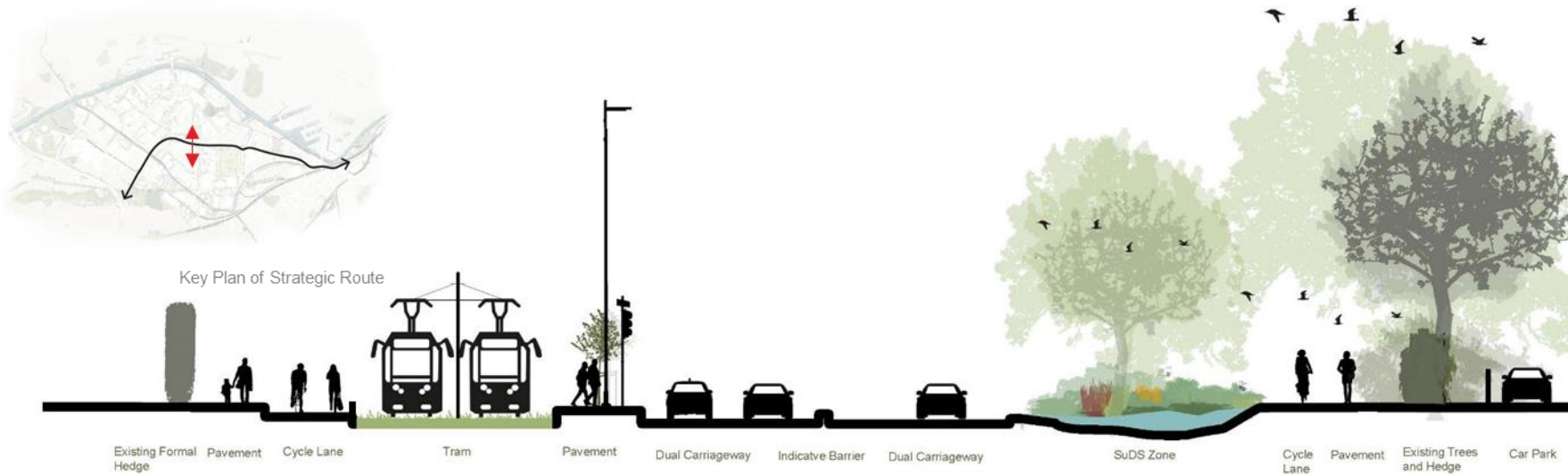


Figure 22 - Indicative Cross Section of East West Spine Sustainable Transport Route (at Village Way)



The case study of the Charter Square (Grey to Green) project in Sheffield demonstrates the level of ambition that could be achieved on the East West Spine. The Grey to Green design is a celebration of local character incorporating innovative measures to support climate resilience, which includes sustainable urban drainage, specialist planting mixes and sustainable engineered soils. This distinctive scheme establishes a blueprint for future phases and provides a stimulus for further inward investment. The scheme remains a high traffic environment but promotes sustainable transport modes through a multi-functional approach with integrated cycleways and SuDS planting receiving water from roads, cycleways and all hard-standing paved areas.

Photograph 18 - Existing Village Way



Photograph 19 - Precedent for East West Spine (SuDS planting)



Photograph 20 - Precedent for East West Spine (Protected cycle track)



Photograph 21 - Precedent for East West Spine (Footway SuDs and cycle crossing)



Photograph 22 - Precedent for East West Spine (Multi-functional space)



5.1.2 Connector Routes

A network of connector routes has been identified that could feed into the Strategic East West Spine Road. The proposed network of connector routes is presented in Figure 20.

Connector routes should aim to include the following:

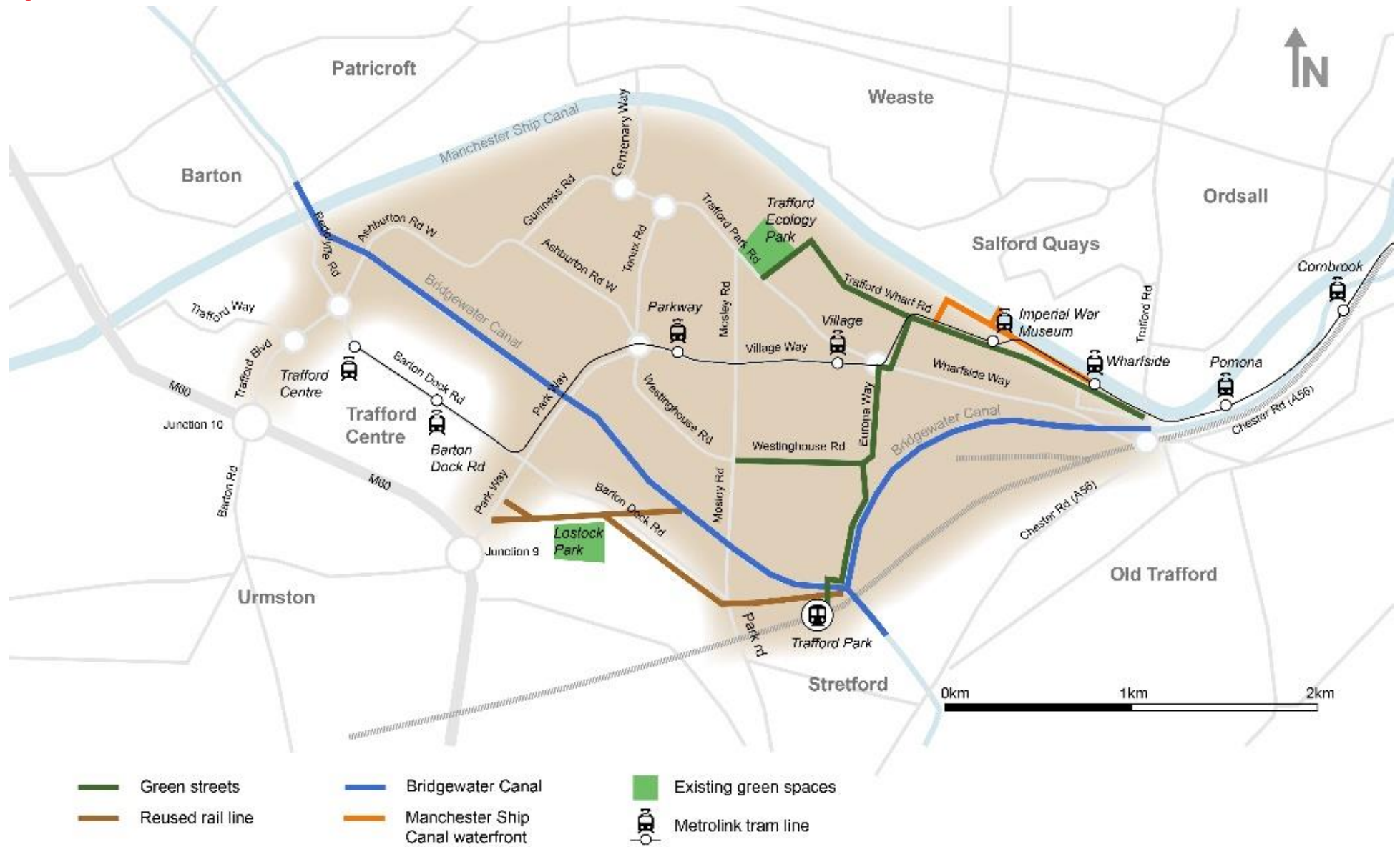
- Utilise significant areas of roadside verges and roundabouts across Trafford Park to improve ecological connectivity and appearance of the park.
- Include planting initiatives such as wildflower meadows and habitat creation;
- Provide wide, continuous and clear footways for pedestrians;
- Include fully protected cycle lanes;
- Sustainable Drainage Systems
- Signalised crossings for pedestrians and cyclists on desire lines at busy locations.

5.2 'Green Routes'

As set out in the baseline analysis, green space and amenities within Trafford Park are currently limited. Opportunities have been identified, to create a network of 'Green Routes' that would perform a 'people movement' function but with a greater focus on place and amenity space than the strategic and connector routes described earlier.

These spaces will provide linear green spaces for people working in the park and connect to key existing and enhanced green and blue infrastructure assets. Green Routes could utilise less trafficked roads, disused rail tracks, the Bridgewater canal, waterfront along the Manchester Ship Canal, and connect into Lostock Park and Trafford Ecology Park.

Figure 23 – Green Route Network



To balance the competing needs of ‘movement’ and ‘place’ on such streets, the following interventions could be appropriate:

- Reduced road widths whilst maintaining vehicle access;
- Enhanced footways, paths, and cycle tracks;
- Seating;
- Improved access to canal tow path;
- Planting within heritage railway corridor; and
- Sustainable urban drainage.

Green Routes would require bespoke and site-specific solutions that respond to the specific opportunities and constraints of the individual location and scheme. The canals and old railway corridors could be reimagined as off-road, recreational walking routes.

As with Sustainable Transport Routes, the proposed network has been split into discrete schemes or sections that could be delivered independently.

- Healthy Green Streets;
- Waterfront Opportunities;
- Disused Rail Line Opportunities; and
- Bridgewater Canal Towpath Enhancements.

5.2.1 Healthy Green Streets

Healthy green street treatments could be implemented on connector routes and local roads where space is available or underused space can be utilised. These streets have been identified as having capacity to increase the biodiversity, water environment, air quality and visual amenity to improve walkability and experience of the Trafford Park

Healthy Green Streets could include the following where possible:

- Segregated walking routes;

- Protected cycle tracks;
- Sustainable urban drainage and planting on both sides of street;
- Large street trees and significant increase in canopy; and
- Pocket parks and potential for improved public space.

Figure 24 and Figure 25 present the existing and potential cross sections respectively for Trafford Park Road. This example of a Healthy Green Street shows the benefits that the inclusion of landscaping and SuDS alongside the inclusion of outdoor seating areas could bring to such a location.

Figure 24 - Existing Cross Section of Trafford Park Road

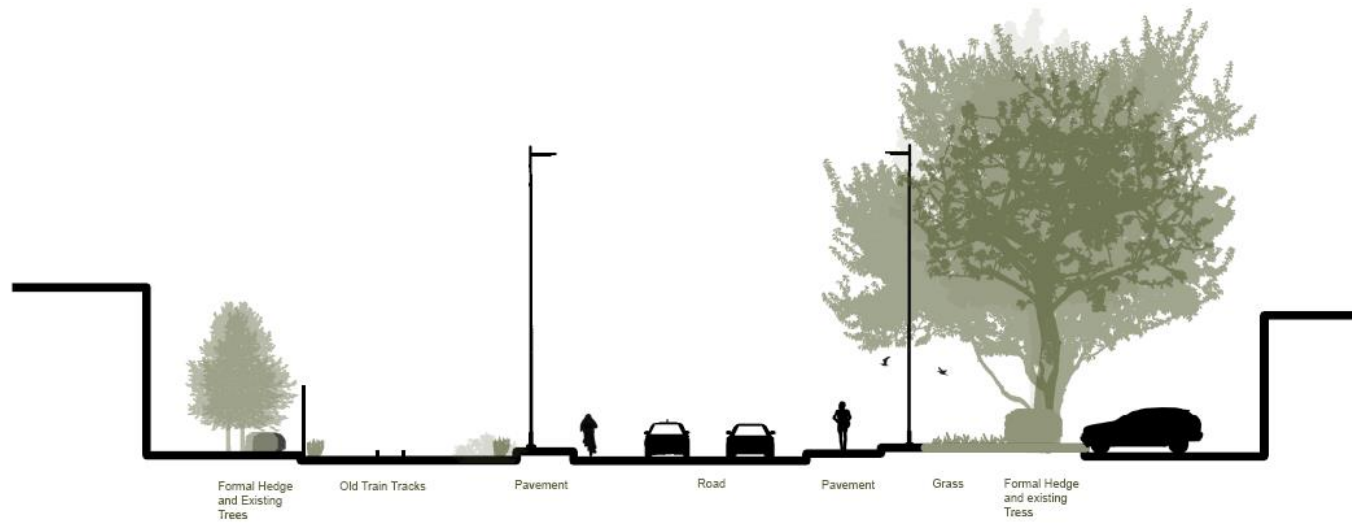
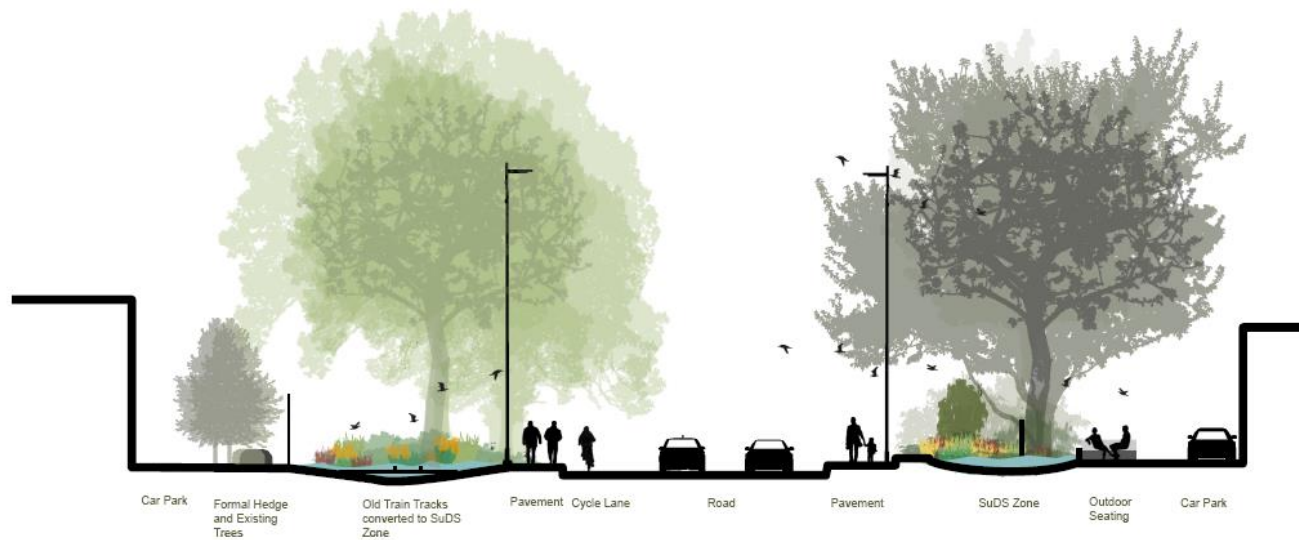


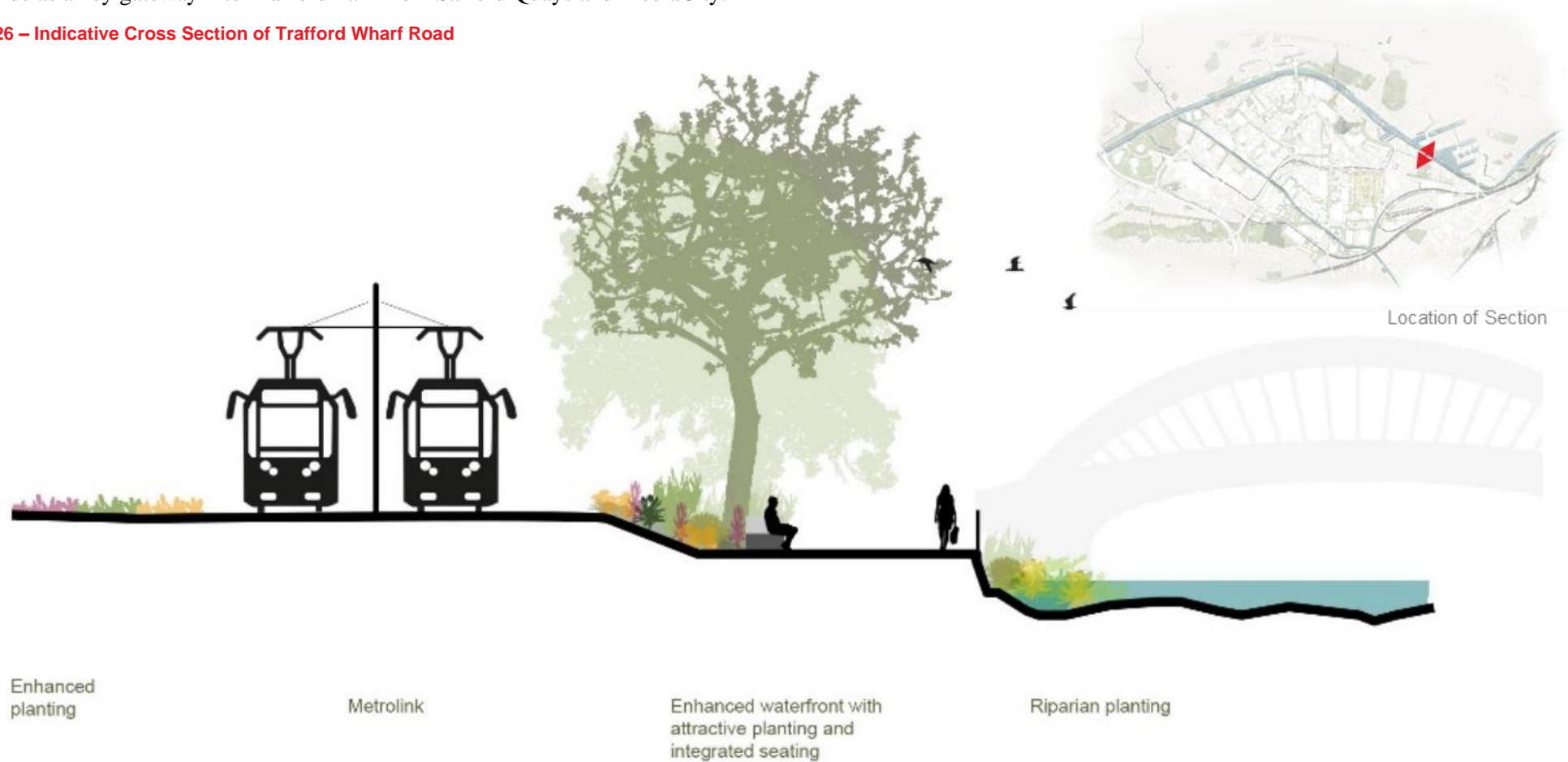
Figure 25 - Indicative Cross Section of Trafford Park Road



5.2.2 Waterfront Opportunities

Whilst there are two key waterways that run through Trafford Park, these are currently underutilised assets in terms of public realm and green infrastructure. Figure 26 shows an indicative cross section of a vision for Trafford Wharf Road. In this location, an enhanced waterfront environment could be delivered with attractive planting and integrated seating capitalising on the prominent location on the banks of the Manchester Ship Canal. This type of scheme could enhance Trafford Wharfside as a key gateway into Trafford Park from Salford Quays and MediaCity.

Figure 26 – Indicative Cross Section of Trafford Wharf Road



Further to the west along the Manchester Ship Canal, Figure 27 shows the potential vision for the creation of a new/extended waterfront along the banks of the Manchester Ship Canal. Whilst access and land ownership issues would need to be resolved, this could provide an opportunity to extend a continuous waterfront along the Ship Canal to enhance the waterfront offering and public access through and into Trafford Park from the north and west. It also provides a potential opportunity to create new public open space and walking cycling routes to the waterfront.

Figure 27 - Indicative Cross Section of Manchester Ship Canal



5.2.3 Disused Rail Line Opportunities

There are a wide range of disused rail lines within Trafford Park. Repurposing these disused lines into green routes through the Park could help to connect key destinations and provide spaces for people to spend time away from heavily trafficked routes. Examples of the disused lines are presented below.

Photograph 23 - Disused Rail Line Adjacent to Lostock Park



Photograph 24 - Disused Rail Line, Barton Dock Road



There are numerous examples of other locations where such spaces have been reimagined to provide key walking and green infrastructure corridors. Some examples are presented below.

Photograph 25 – Promenade de la Petite Ceinture, Paris



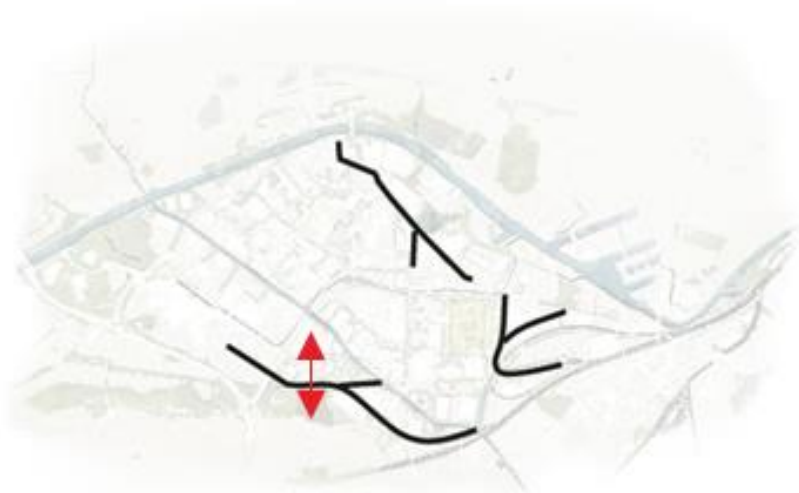
Photograph 26 – High Line, New York



Photograph 27 – Castlefield Viaduct Park, Manchester



Figure 28 - Indicative Cross Section of Disused Railway Line north of Lostock Park



5.2.4 Bridgewater Canal Improvements

Bridgewater Canal stretches 65km and, within Trafford Park, 7km of the canal runs from north west to south west in a curvature around the site, towards Manchester city centre. The canal is owned and operated by The Bridgewater Canal Company Limited, part of Peel Holdings Land & Property, in conjunction with the Bridgewater Canal Trust. The Bridgewater Canal Company Limited is a statutory body responsible for navigation and maintenance of the Bridgewater Canal.

Sections of Bridgewater Canal Cycleway have been upgraded with widened sections of towpath and improved surfaces however, some sections of the route present use issues with narrow footways and cycleways, lack of lighting infrastructure and accessibility. Whilst the Bridgewater Canal therefore provides an important traffic-free artery through Trafford Park, there are issues to be addressed associated with its current form and suitability as a key walking and cycling route.

Improvements to the Bridgewater canal could include the following:

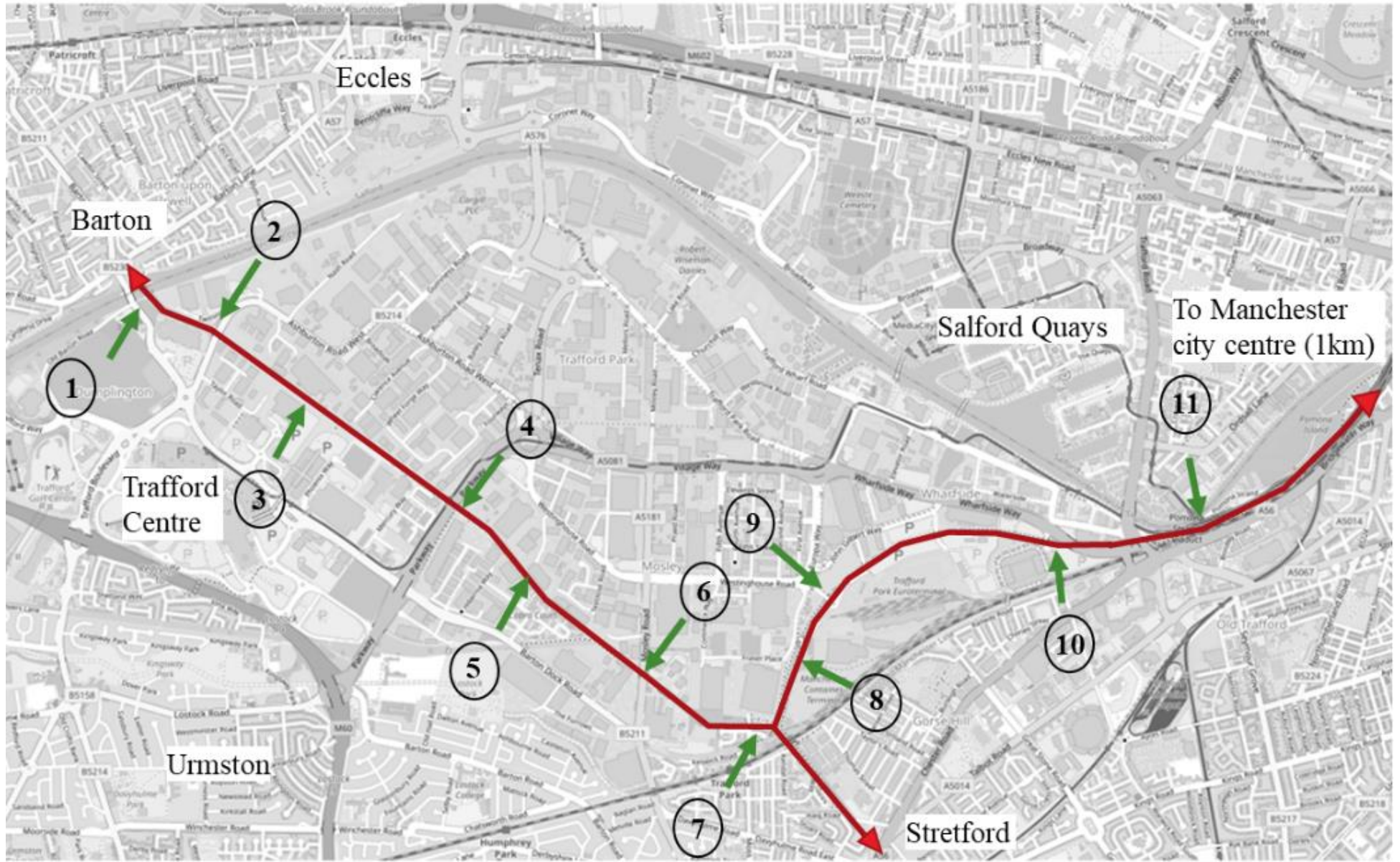
- Improvements to the towpath to provide as safe and accessible movement as possible for users throughout the year;
- Increase the number of and accessibility of access points into the canal;
- Improve visibility of the canal from the surrounding area to improve the relationship of the watercourse to Trafford Park;
- Improving the biodiversity value of the canal through tree planting and riparian vegetation along the banks to improve ecological connectivity and visual amenity;
- Pocket park creation for dwell space where space is available along the canal;
- Potential to utilise boardwalks to extend usable space at pinch points; and
- Opportunities for business to create waterside areas for workers.

- Identify and respond to opportunities to increase active frontages to increase passive surveillance and vibrancy of the canal.

Figure 29 sets out the key points of access onto the canal and areas for enhancement.

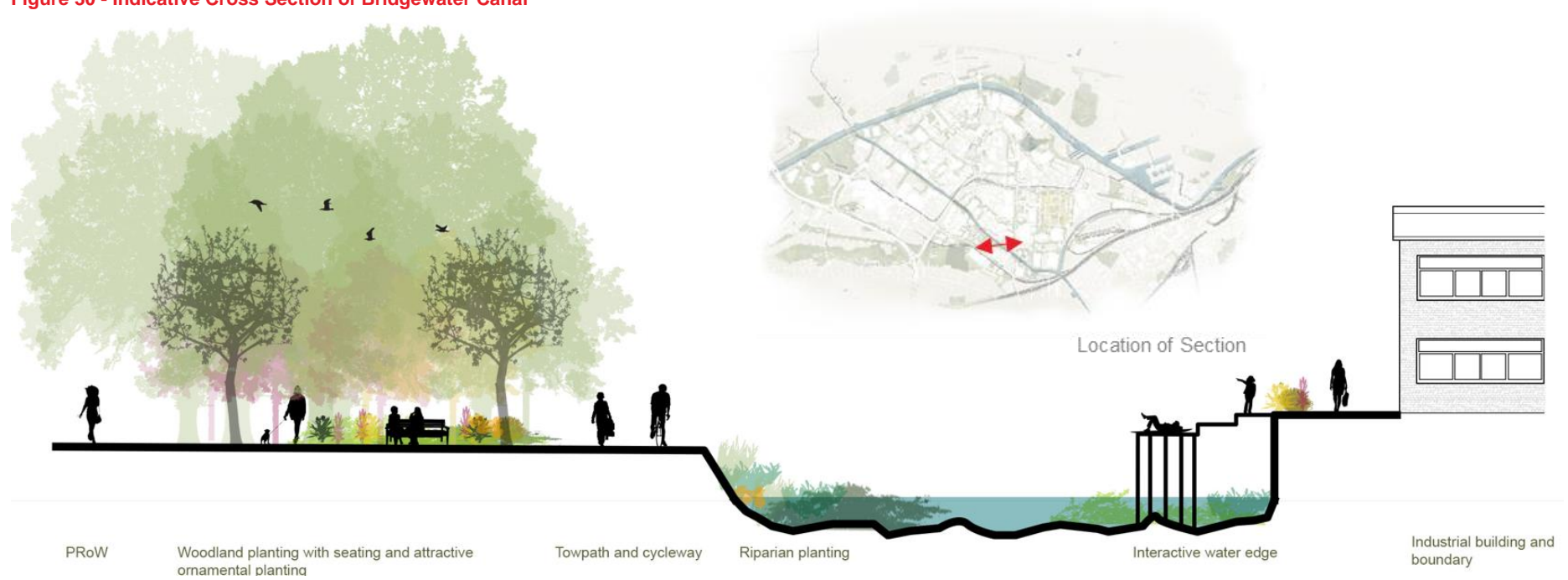
Figure 30 presents an indicative cross section of how the Bridgewater Canal could look in the future.

Figure 29 - Bridgewater Canal Access Points



1. Shared use path level access point to Redclyffe Road.
2. Shared use path ramped access to Ashburton Road. Overgrown vegetation to be cut back and improved lighting to address safety and security issues. The path is less than the 2.5m absolute minimum width for shared use paths in LTN 1/20 and would need to be widened to meet this standard.
3. Shared use path level access point which provides a route to Event City and the Trafford Centre. Barriers on entry to the canal are not inclusive and should be addressed to remove accessibility constraints.
4. Shared use path level access point to Parkway Barton Dock Road junction. Barriers on entry to the canal are not inclusive and should be addressed to remove accessibility constraints. Overgrown vegetation to be cut back and improved lighting to address safety and security issues. The path is less than the 2.5m absolute minimum width for shared use paths in LTN 1/20 and would need to be widened to meet this standard.
5. Shared use path level access point to Barton Dock Road. Overgrown vegetation to be cut back and improved lighting to address safety and security issues. The path is less than the 2.5m absolute minimum width for shared use paths in LTN 1/20 and would need to be widened to meet this standard.
6. Stepped access which connects to Mosley Road. Requires cyclists to dismount and creates inclusivity issues. A ramped solution could help to address this issue. Overgrown vegetation to be cut back and improved lighting to address safety and security issues.
7. Shared use path level access point. Overgrown vegetation to be cut back and improved lighting to address safety and security issues.
8. Shared use path ramped access point to Fraser Place with a pedestrian and cycle bridge which provides access to the canal path to the south. Overgrown vegetation to be cut back and improved lighting to address safety and security issues.
9. Shared use path ramped access point to Europa Way with a pedestrian and cycle bridge which provides access to the unsurfaced canal path to the south. Overgrown vegetation to be cut back and improved lighting to address safety and security issues. The path is less than the 2.5m absolute minimum width for shared use paths in LTN 1/20 and would need to be widened to meet this standard.
10. Stepped access which requires cyclists to dismount and creates inclusivity issues. A ramped solution could help to address this issue. Provides connection to Old Trafford football ground.
11. Shared use path ramped access point to Pomona Strand with a pedestrian and cycle bridge which provides access to the canal path to the south. The path is less than the 2.5m absolute minimum width for shared use paths in LTN 1/20 and would need to be widened to meet this standard.

Figure 30 - Indicative Cross Section of Bridgewater Canal



5.3 Place Based Streets

The Village has been identified as a key destination within Trafford Park, performing a ‘local centre’ function for the wider park and being the location for key services within the Park not provided elsewhere. The development of ‘Place based streets’ in the Village area could enhance the quality of this location with a focus on place functions such as pedestrian movement, creating a pleasant environment to be in.

A Low Traffic Neighbourhood approach could be adopted within the Village. Point closures (or modal filters) within the Village could be implemented to prevent through-traffic and rat-running. These could be delivered through the introduction of strategically located planters or bollards, that create space to walk/wheel, cycle, sit and rest, and providing further opportunities for greening of the area. Vehicles could still have easy access to all businesses without driving directly through the neighbourhood. This could open up networks of streets within the Village to enable people to safely travel through the area on foot, bicycle, by wheeling (an equivalent alternative to foot/pedestrian-based mobility including wheeled mobilities such as wheelchairs and mobility scooters) or by bus. Emergency vehicles could also be prioritised to reach their destinations quicker.

Figure 31 - Location of the ‘Village’ within Trafford Park



The baseline analysis identifies a range of surface water and flood risk issues within this part of Trafford Park. Enhanced green infrastructure within the Village, including SuDS solutions could help to address these flooding issues whilst providing a more pleasant and attractive place at the core of Trafford Park.

The following interventions could be appropriate:

- High quality materials particularly on Third Avenue
- Spill out space in front of shops for seating
- Modal filters to reduce cut through traffic
- Wide footways where possible, with reallocation of road space
- Vehicle access for servicing and delivery designed for, but not overbearing on the design
- Single lane roads

- More cycle parking spaces
- Potential for cycle streets
- Sustainable urban drainage systems
- Slow vehicle environment (20mph limit)
- Informal play
- Sensitive on-street parking - only if streets require it
- Pocket parks and planting
- Improved street furniture

Photograph 28 - Third Avenue (existing)



Photograph 29 - Precedent Image Place Based Streets 1



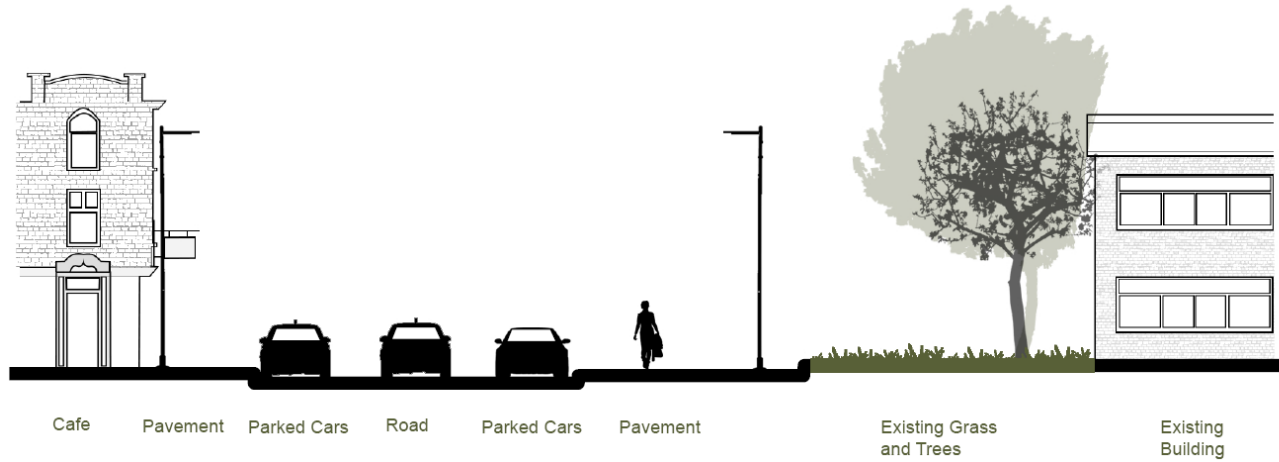
Photograph 30 - Precedent Image Place Based Streets 2



Photograph 31 - Precedent Image Place Based Streets 3



Figure 32 - Existing Cross Section of Third Avenue



Key Plan of Location

Figure 33 - Indicative Cross Section of Third Avenue



5.4 Public Transport Improvements

One of the key themes that came out of business engagement was the limitations of public transport, in particular the times of operation of bus services throughout Trafford Park. As set out in the baseline analysis there are a range of bus services that operate within Trafford Park providing reasonable coverage along key routes. However, these services do not necessarily operate at the times that are required by employees accessing the Park, particularly outside of normal working hours.

TfGM are progressing a range of wider initiatives intended to ensure that the transport system as a whole works more effectively, to reduce carbon and create cleaner air as well as to eliminate barriers to travel and proactively exploring transport innovations. These activities are all in support of achieving the seven Network Principles set out in the 2040 Transport Strategy (integrated; inclusive; healthy; environmentally responsible; reliable; safe and secure; well maintained and resilient).

These initiatives would need to be delivered at a GM-level but would help to support increased accessibility of Trafford Park by public transport. Relevant commitments as set out in TfGM's Delivery Plan include:

- Investment in and expansion of the electric vehicle charging network to support the transition to electric vehicles in Greater Manchester;
- Assessing and developing a roadmap to deliver a zero-emission bus fleet from 2025;
- Transformation of cycling and walking infrastructure in Greater Manchester;
- Assessing and developing a roadmap to reduce freight emissions through modal shift, increased efficiency and alternative fuels for heavy vehicles;
- Testing and trialling transport innovations where they support the 2040 Transport Strategy ambitions such as: dynamic demand responsive public transport, e-mobility solutions (including e-bikes and escooters), first/last mile mobility hubs, autonomous transport services, dynamic kerbside

management, e-freight consolidation, car clubs and a mobility platform that integrates existing and new services;

- Undertaking further work to explore smart ticketing & payment opportunities within Greater Manchester; and
- Enabling the provision of accurate, reliable and easy to understand travel information to residents, businesses and visitors of Greater Manchester when and how they choose – so they can make informed choices and get the most out of the transport network.

5.4.1 Bus Franchising

TfGM is developing major proposed changes to bus travel within Greater Manchester, which represent a major step towards full integration of the public transport network. TfGM have secured a bus franchising scheme for the whole of Greater Manchester. This will see Greater Manchester taking control of bus services and deciding which services should be provided. This will give Greater Manchester the power to set the routes, timetables, tickets, and standards within Trafford Park, while the bus operators will run the services. Issues relating to service frequencies and times could be addressed through the negotiations and service specifications for bus franchises serving Trafford Park.

5.4.2 Bus Stops

As the beginning and end of all bus journeys, bus stops play an important role in the travel experience and ultimately whether people decide to travel via public transport.

Many of the bus stops in Trafford Park are of poor quality. There is therefore an opportunity to enhance the experience of travelling by bus through improvements to the quality of bus stops and potential opportunities for the introduction of green infrastructure. Common issues are lack of seating, lighting, and shelters, as well as a need for safe pedestrian crossings to connect to the stops. All bus stops across Trafford Park could be further improved by locating cycle parking in close proximity, live timetables, and taking the opportunity to utilise green roofs where bus shelters are provided to increase biodiversity and reduce runoff.

Design considerations for bus stops could include the adoption of a minimum level of service for bus stops within Trafford Park which could include:

Accessibility - Including connectivity with footways, appropriate type and height of kerbs, free from obstructions, sufficient space for wheelchairs and pushchairs. Stops should be located so as not to impede on footways.

Attractiveness – Bus stops should be bright and welcoming. Features such as green roofs, planting and art can contribute to creating an attractive waiting space.

Comfort and cleanliness - Sufficient seating and shelter should be provided at stops. Regular maintenance should also be undertaken.

Safety and security – Lighting and CCTV improves passenger safety. Avoid placing bus stops in isolated locations, instead providing stops in busier locations where they are overlooked.

Information – service and fare information should be up to date and accessible, with live information provided where available. USB charging facilities can also help passengers access information.

Photograph 32 - Existing Bus Stop, Ashburton Road West



Photograph 33 - Bus stop with green roof and seating, Manchester City Centre



5.4.3 Sustainable Transport Hubs

The scale of Trafford Park is such that some journeys from public transport nodes to end destinations can be considerable. This could discourage some people from using public transport where they are unable or unwilling to walk longer distances. There is an opportunity to develop a network of Sustainable Transport Hubs across Trafford Park that provide opportunities for people to use active travel for the first/last mile of their journey.

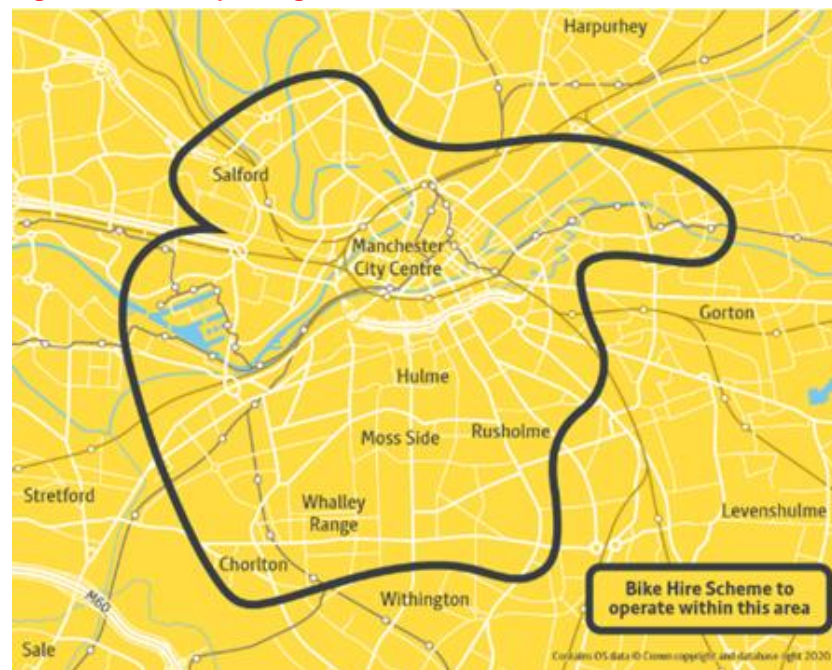
Metrolink stops within Trafford Park are key potential interchanges between public transport and active travel. Sustainable transport hubs located close to Metrolink stations and bus stops (where space allows) would enhance the convenience and comfort of using cycling for the first and last stages of journeys.

Photograph 34 - Example Sustainable Transport Hub, Edmonton Green



Larger sites might be able to include secure cycling parking, cycle repair station and pumps, e-bike charging, and opportunities for green roofs. The hubs could also provide an ideal location for Greater Manchester cycle hire stations as the scheme is expanded across the region enabling people without bicycles the opportunity to cycle to and from public transport nodes. The initial operating area of the scheme already includes a small section at the eastern edge of Trafford Park as shown in Figure 34.

Figure 34 - Initial Operating Area of GM Bike Hire Scheme



5.4.4 Bus decarbonisation in Greater Manchester

At present, about 1.8% of the buses in Greater Manchester are fully electric. The proportion is expected to increase rapidly in the next few years with operator investment and central government support. The region's Bus Service Improvement Plan have committed transition to a 50% electric fleet by 2027, and a further ambition to have a fully electric fleet by 2032. The transition would mean a 1.1 million tonnes of carbon reduction.

The ambition is supported by both local and central governments funding. In 2020, the region received DfT funding through the Ultra-Low Emission Bus (ULEB) Fund to become the beacons of zero emission bus operation. The fund helped Stagecoach to roll out 32 zero emission battery electric buses on from their Sharston depot and supported the conversion of 25 buses used on the First's Vantage BRT group of services. In 2022, the DfT have also awarded funding through the Zero Emission Bus Regional Areas (ZEBRA)

Fund to GMCA to create a fully Zero Emission “Bus Depot of the Future” in Stockport. By 2025, Stockport would become one of the first zero emission bus towns in the country. As part of the new Greater Manchester Clean Air Plan, the region has also committed £14.7m to retrofit local buses and a further £3.2m to support fleet replacement for small/medium sized operators.

As for the preferred technology, GMCA and operators have a consensus to adopt battery electric buses over hydrogen fuel cell buses because they are currently more cost effective with proven in-service reliability. They also have a preference on depot-based charging over on-street opportunity charging for the reasons of cost and scheduling efficiency. To enable a faster pace of transition, they are also exploring new technology options to re-powering existing diesel vehicles with an electric drive system to give zero emission.

Buses could play a significant role in accelerating the reduction in traffic and road emissions in Trafford Park. Having electric/ zero emission buses serving the Trafford Park will further increase their benefit.

The key points to note regarding zero emission bus operations are:

- Very few operators in the region currently have an electric bus fleet. The fleets are expected to grow rapidly (around 150 electric buses a year), but some could potentially be safeguarded for operation within Trafford Park;
- There are lower cost bus retrofit/repower solutions which can be considered as interim solutions, including renewable natural gas, Diesel/HVO or Diesel/Hydrogen internal combustion engine for LEBs, and Hydrogen internal combustion engine for ZEBs;
- Opportunity chargers could be provided within Trafford Park at bus stops or waiting area (circa £40k per DC charger including civils, grid connection and associated infrastructure costs). Opportunities to align this with TfGM freight and environment strategy and policy should be explored.

5.5 Wayfinding Strategy

One of the key issues raised in the business engagement was a lack of brand identity for Trafford Park. The vast scale of the park, alongside a lack of gateway landmarks also makes navigating the Park difficult across all modes of transport. This could deter people from using sustainable transport modes (as it is easier to drive to locations using satellite navigation systems).

Provision of clear and consistent wayfinding would be of great benefit to helping people navigate Trafford Park. As green infrastructure corridors and networks are developed, these could be integrated into the wayfinding strategy to act as a method of orientation and navigation through the Park for people and connecting key green spaces such as Trafford Ecology Park and Lostock Park. Anecdotally at the business engagement workshop sessions, employees had limited or no prior awareness of the existence of these key green spaces.

At present, the core of Trafford Park (pink area) is situated between the following four other key areas/ zones in the vicinity:

- Trafford Centre Rectangle (purple);
- Trafford Park Village (yellow);
- Pomona/Cornbrook (blue); and
- Trafford Wharfside (green).

However, in reality there is little to no distinction between these areas/ zones on the ground and the areas merge into one entity.

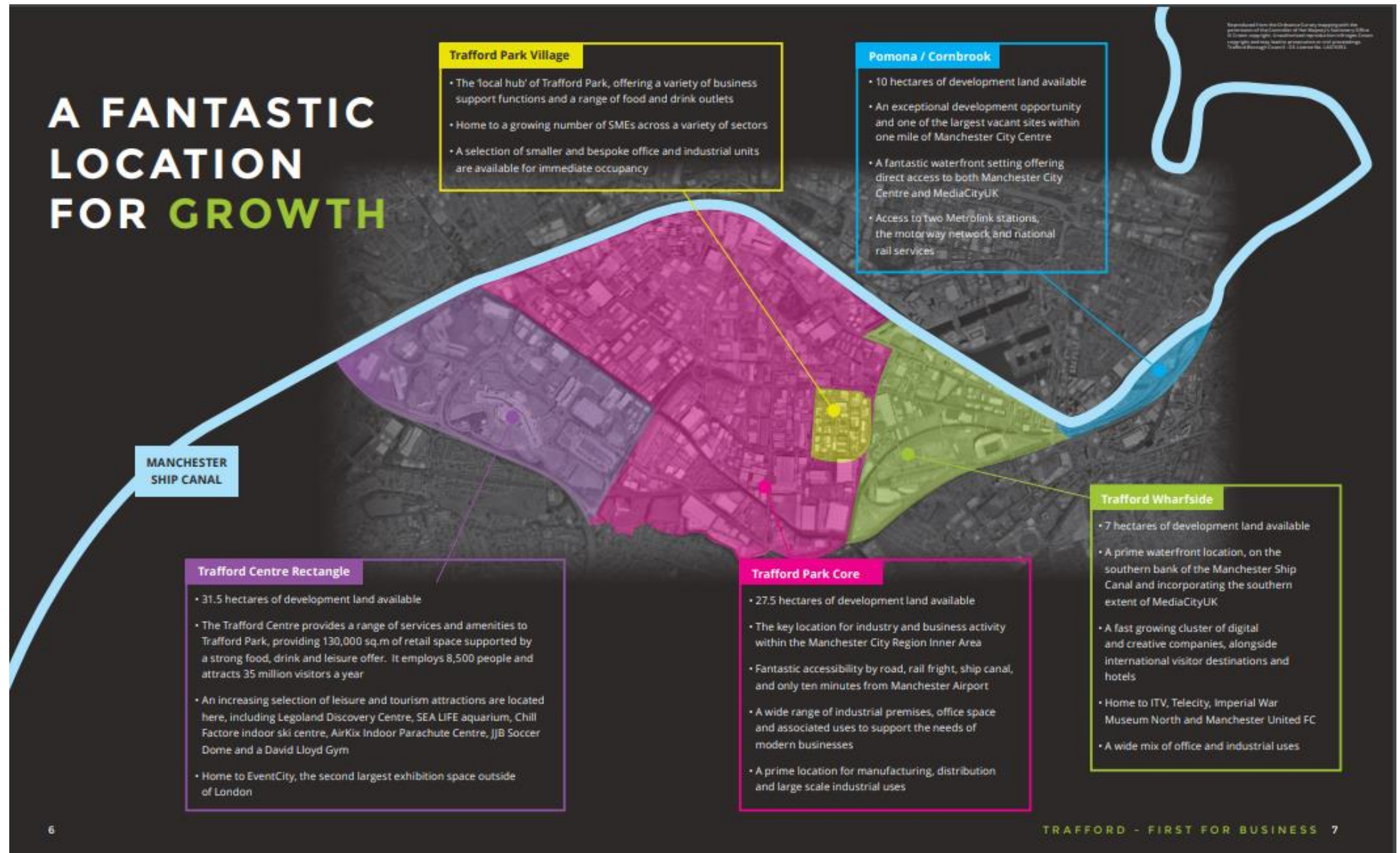
Key considerations for a wayfinding strategy for Trafford Park include:

- **Less is more** - An approach to wayfinding that rationalises and reduces signage across Trafford Park will not only be easier to follow but could be more attractive and cost effective. In place of signed information, landmarks within Trafford Park (including green infrastructure) could be used to create orientation cues and memorable locations.
- **Logical spacing** - To ensure a consistent wayfinding strategy, signs should be provided at all decision points within Trafford Park, whether at

minor junctions or at access points to informal routes, where a pedestrian or cyclist may need to make a decision about their direction of travel. A logical wayfinding sequence should be provided along the key Sustainable Transport Routes and Green Routes, then supplemented with additional wayfinding features at any significant decision points.

- **Style and branding** – A consistent wayfinding style, potentially matched to the existing style/branding of Trafford Park, would be attractive and easy to spot. A unique wayfinding style (potentially Green Infrastructure-led) could also contribute to the Park’s identity and sense of place.
- **Accessibility** – To ensure inclusivity, accessible wayfinding information should be provided, for example, provision of large-print directions, audio information points and/or an accessible wayfinding app. Solutions for improving access to existing wayfinding features could include providing information at a lower height, ensuring areas around information are free of obstructions, and highlighting accessible step-free routes to key destinations.
- **Clear and consistent** - To encourage active travel within Trafford Park, it is essential to provide necessary information in a clear and concise format including, where practicable, distances and journey times. Wayfinding should also direct pedestrians and cyclists to the Sustainable Transport Corridors and Green Routes.

Figure 35 - Adjoining Areas/Zones to Trafford Park Core (Trafford – First for Business, Trafford Council)



Photograph 35 - Example Wayfinding Sign, Brisbane



Photograph 36 - Example Wayfinding, Adelaide



5.6 Gateway Opportunities

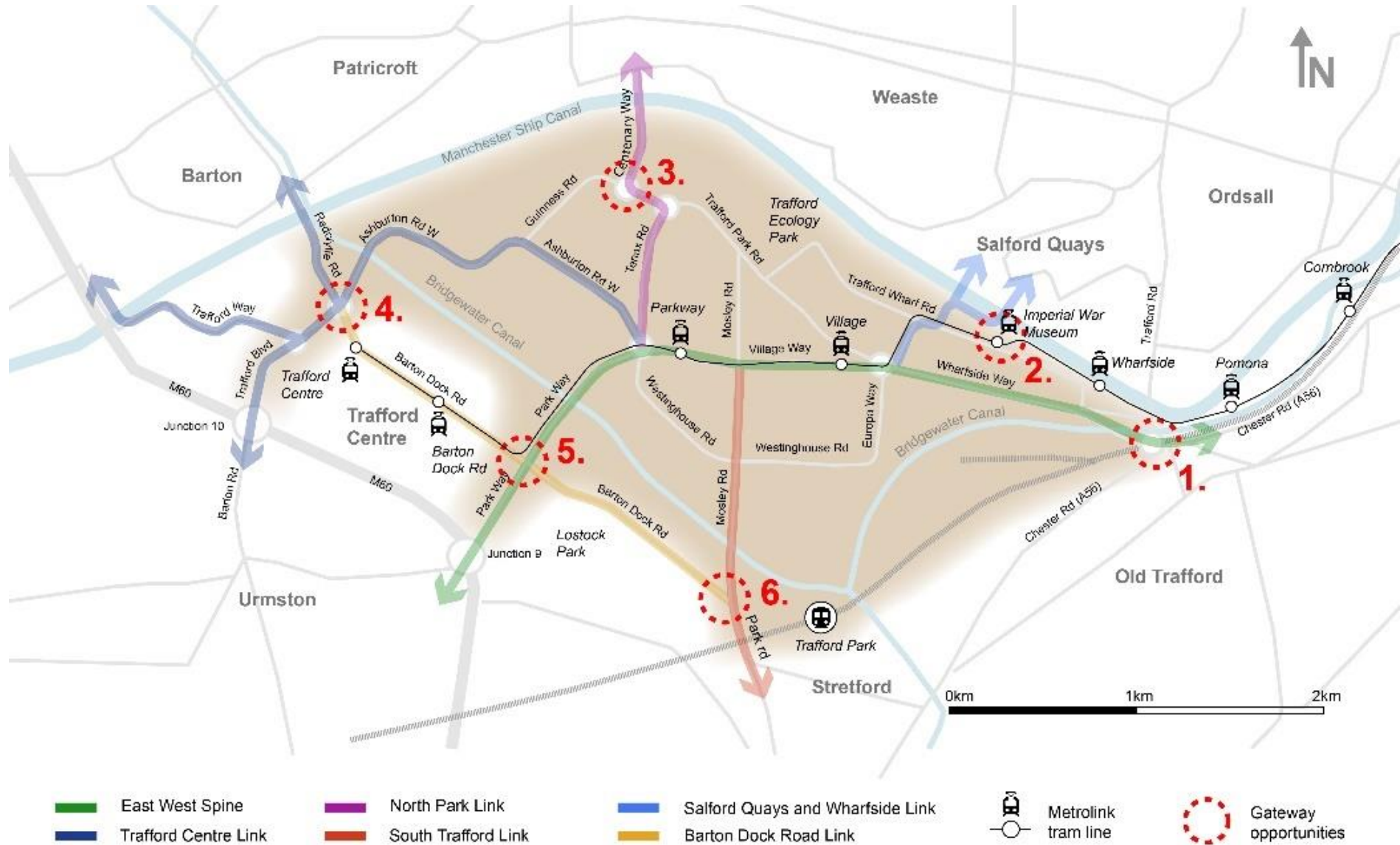
Across Trafford Park a series of Gateway locations or opportunities have been identified. These represent spaces which form key entry points into Trafford Park. As part of the wayfinding and branding strategy discussed earlier, these could become key landmarks and points of reference to give greater identity to Trafford Park.

Some gateways will require improved connectivity and accessibility to be provided, particularly for active travel modes. However, some opportunities may be more focussed upon identify, wayfinding and branding.

The key gateway opportunities identified are set out below:

- **1. White City Circle** – an opportunity for a major green infrastructure intervention with wayfinding signage at the White Circle at the junction of Trafford Road, Wharfside Way, and Chester Road. This is a key access point into the park from the east and forms part of the proposed East West Spine sustainable transport route. This could provide a defined entrance to Trafford Park, improve legibility around the area, and enhance the pedestrian and cycle provision with protected crossings and reduced crossing distances. There is opportunity to use the White City Pillars and Victoria Warehouse as landmarks to enhance legibility through the space.
- **2. Salford Quays and Waterfront** - This is a key access point into Trafford Park from Media City and Salford Quays and forms part of the proposed Salford Quays and Wharfside Link sustainable transport route. A landmark sculpture/scheme could be provided in this location with wayfinding signage at the Wharfside access to Media City footbridge and/or the Millennium Bridge. There is opportunity to use the Imperial War Museum and pedestrian bridges as landmarks to enhance legibility through the space.
- **3. Centenary Way/Guinness Circle** – an opportunity for a landmark green infrastructure scheme within the roundabout with wayfinding signage within the Guinness Circle at the junction of Centenary Way and Guinness Road. This is a key access to the park from the north and forms part of the proposed North Park Link sustainable transport route;
- **4. Ellesmere Circle** – another opportunity for a landmark green infrastructure scheme with wayfinding signage within the Ellesmere Circle at the junction of Redclyffe Road, Ashburton Road West, Barton Dock Road, and Trafford Boulevard. This is a key access to the park from the west and forms part of the proposed Trafford Centre Link sustainable transport route.
- **5. Parkway** – opportunity for a landmark sculpture with wayfinding signage on Parkway. This is a key access to the park from the south and junction 9 of the M60. The gateway will form part of the proposed East West Spine strategic sustainable transport route;
- **6. Kellogg's** – opportunity for a landmark sculpture with wayfinding signage at the Kellogg's factory access to Trafford Park. This is a key access to the park from the south. The gateway will form part of the proposed Trafford South Link. This could incorporate the existing landmark Kellogg's signage/structure.

Figure 36 - Gateway opportunities



5.7 Toolkit for Businesses

The land and buildings within private ownership across Trafford Park provide a considerable opportunity to increase, diversify and improve green space. Businesses can take measures to contribute towards a net-zero economy, respond to climate change and accelerate a green recovery. Developing a toolkit for businesses could be a means of providing ideas, resources, and the associated benefits to investing in and installing green infrastructure within their premises.

The toolkit should consider:

- **Functionality** - green infrastructure can improve air quality, reduce flood risk, increase biodiversity, provide cooling, and shade and contribute to better health and wellbeing.
- **Investment benefits** – there is an associated cost to installing and maintaining green infrastructure but there are benefits such as increasing property value, providing water and energy savings, carbon capture opportunities and even improving employee productivity.
- **Nature Based Solutions** - there are a range of nature-based solutions and green interventions that businesses could install to green their premises. The toolkit would suggest a range of options for varying scale, budget, resource and site opportunity and constraints. From birdboxes and rainwater planters, boundary hedge planting, rain gardens to permeable paving, green walls and roofs, there are many varied ideas and opportunities.
- **Maintenance** – many forms of green infrastructure require some form of maintenance to remain functional and not impact negatively on the environmental quality of spaces. This requires consideration and planning. There is the opportunity to engage staff in taking on some responsibility and connecting with nature. Costs can even be reduced where for example regular mowing of lawns is replaced with wildflower meadow areas.

6. Greening of Existing Corridors

The analysis within this framework has identified that the greatest opportunities for greening within Trafford Park exist within the existing transport corridors and networks, rather than through the provision a large-scale greenspace creation. This approach will enable Trafford Park to maximise the use of green infrastructure to future proof the drainage network; providing climate change resilience whilst also delivering enhanced public spaces, promoting sustainable travel, and improving ecology.

Within the Framework a range of corridors have been identified which together will form a network of green infrastructure across Trafford Park. This section sets out further details on potential interventions and sustainable drainage solutions that could be implemented to create a ‘greener’ Trafford Park.

Sustainable urban drainage solutions should be delivered around Trafford Park for future resilience, however particular focus should be in areas already at risk of surface water flooding. Section 2.8 identified the central part of Trafford Park and the area around the Village as particularly at risk.

6.1 Rain Gardens

A rain garden is a planted depression or a hole that would allow rain and storm water runoff from impervious areas of Trafford Park to be absorbed. This could reduce rain runoff within the Park by allowing storm water to soak into the ground instead of into storm drains and thus reduces the risk of flooding, as currently experienced within the Village and other parts of Trafford Park.

Rain gardens can also help to filter runoff pollution which could be a significant benefit in Trafford Park due to the presence of large numbers of heavy goods vehicle movements. The filtered runoff could then be either collected or infiltrated into the surrounding soil with part of the runoff

volume dispersed through evaporation and plant transpiration. This approach has been used effectively on Liverpool Street in Salford., which sees a high number of HGV movements.

Rain gardens within Trafford Park could also provide amenity spaces within areas of the Park. Such solutions typically have good community acceptability, and this solution could be applied either within the public highway/public realm or within areas of external hardstanding within business premises.

Photograph 37 - Example of rain gardens integrated with active travel infrastructure



Rain garden solutions within Trafford Park could be adapted to a wide range of areas and sizes. Depending upon the species planted, maintenance requirements would be relatively low and could be performed as part of general landscaping. Habitat enhancement could also be achieved through the rain garden.

Key considerations when considering the potential implementation of rain gardens within Trafford Park are as follows³:

³ See ‘Designing Rain Gardens: A Practical Guide’ by Urban Design London for further guidance.

- They are not ideally suited to areas with steep slopes;
- Inspections will be needed periodically to ensure colonisation of invasive species do not compromise existing ecosystems;
- Requires maintenance (the level of which would be dependent on plant species used);
- They are better suited to areas not offered for adoption (i.e. within building plots or landscaping plots.); and
- Within Trafford Park this solution could need to be lined to avoid infiltration (likely high/medium ground contamination present).

6.2 Bio-retention Areas

Bio-retention areas are similar to rain gardens in that they are shallow landscaped depressions. However, unlike rain gardens, bio-retention areas rely on a layer or layers of engineered soils and enhanced vegetation and filtration to remove pollution and reduce runoff downstream. Their primary application is in managing and treating runoff from frequent rainfall events. This is a role that could be important in the greening of Trafford Park.

Photograph 38 - Example Bio-Retention Area



Bio-retention areas are relatively easy to implement and could be delivered within Trafford Park as a landscaping feature. They are ideal for retrofits and can be effective in removing urban pollutants and contaminants before they reach watercourses as well as reducing the volume and rate of runoff within Trafford Park. Where topography allows, use of

these features across Trafford Park could be promoted to reduce the volume and rate of runoff.

Key considerations when considering the potential implementation of bio-retention areas within Trafford Park are as follows:

- The requirement for ongoing landscaping and management;

- They are not ideally suited to areas with steep slopes;
- They can be susceptible to clogging in sites where upstream catchments have soils of a fine nature;
- Poor maintenance will result in blockages which can cause small, localised flooding;
- They require larger areas of space – which would limit the number of locations that such a solution could be delivered within Trafford Park;
- They could be used to primarily capture flows at source and surrounding areas.
- As with rain gardens, they would need to be lined to avoid infiltration (likely high/medium ground contamination present).

6.3 Bio-retention Tree Pit

A specific example of a bio-retention area that would be suitable for more densely populated parts of Trafford Park, such as the Village is a bio-retention tree pit. Such a solution could be implemented amongst hard or soft landscaping. These could help manage surface water runoff within this part of Trafford Park through:

- Interception of rainfall on branches/leaves which allows for evaporation;
- Increased infiltration through root growth; and
- Evapotranspiration where water absorbed from the soil is evaporated through its leaves.

Photograph 39 - Example Bio-Retention Tree Pit



Tree pits could be used to slow down traffic (as an alternative to bollards) as part of a low traffic neighbourhood approach within the Village. This type of solution could help to mask or reduce noise pollution within the Village as well as helping to improve air quality. Other benefits that this approach could bring include carbon sequestration,

helping to moderate the local climate, reducing surface water runoff. More generally, trees within this part of Trafford Park would be aesthetically pleasing and contribute towards improving the quality of the place.

Key considerations when considering the potential implementation of bio-retention tree pits within Trafford Park are as follows:

- Some species can be sensitive to de-icing salts, which may be relevant when used close to the highway;
- Over-compaction of soil due to loading can limit tree growth, appropriate design required;
- Tree pits need to be well drained (with outfall, as infiltration likely not possible);
- Approximately 20% of the soil within a tree pit is voids, which can be used as temporary stormwater storage;
- Can be accommodated by linear lengths alongside roads within Trafford Park.
- 1.5m depth pits are required (typical), and care is required to avoid conflicts with statutory services.

6.4 Swales

A swale is a ditch filled with vegetation layered above a porous base. An infiltration pipe/drainpipe is then often (but not always) situated within a second layer. The combination of the two systems allows for an effective

surface water management system through both the conveyance and storage of water.

The swale systems should enforce low flow velocities both minimising discharge rates and further allowing for much of the pollutants within the body of water to settle out (through shallow longitudinal slopes or check dams).

Photograph 40 - Example of a Swale



A swale system could help to reduce the burden on the existing drainage infrastructure within Trafford Park and contribute to a reduction in site discharge. It has been shown through the baseline analysis that there are locations within the Park where the existing drainage infrastructure is failing.

Swale solutions could provide aesthetic benefits to areas of the Park in which they are implemented. They would be relatively easy to incorporate into existing and new green landscaping areas within Trafford Park. As with other SuDS systems described they would contribute towards natural filtration of pollutants from vehicles using Trafford Park. In comparison to some of the other systems described, swales would require minimal maintenance other than landscaping and could be relatively inexpensive to implement.

Key considerations when considering the potential implementation of swales within Trafford Park are as follows:

- They are not suitable for areas of significant gradient;
- Swales could limit other landscaping opportunities that might have greater biodiversity benefits;
- There are potential risks of blockage within connecting pipework;
- Needs defined boundaries when used in some public realm environments;

- Require sufficient corridor width and so likely to be focussed on main corridors, for example on Village Way.
- As with rain gardens, this solution could need to be lined to avoid infiltration (likely high/medium ground contamination present).

Swales should be constructed with a maximum 1:4 (1:3 max) side slopes and minimum base width of 0.5m. For example: medium swales will be approximately 0.50m in depth with an overall minimum width of 4.5m. Small Swales will be approximately 0.25m in depth with an overall minimum width of 2.5m.

6.5 Infiltration Trenches

Infiltration trenches are shallow excavations filled with rubble, gravel or stone that temporarily store storm water runoff and act as a filter to remove contaminants and pollutants. Ideally, infiltration trenches should receive inflow perpendicular to the length of the trench from an adjacent impermeable surface. Infiltration trenches are non-storage systems and are designed to allow water to immediately infiltrate the surrounding soils from the bottom and sides of the trench.

Photograph 41 - Example of an Infiltration Trench



Infiltration trenches could be incorporated into landscaping proposals within Trafford Park relatively easily. By immediately dispersing runoff into the surrounding soils, runoff rates and volumes across parts of Trafford Park could be significantly reduced. The stone and gravel nature of these trenches could provide a filter that significantly reduces pollutant loads discharged into surrounding soils/watercourses from large vehicles using the roads within Trafford Park.

This type of solution could be incorporated beside roads across Trafford Park to act as a drainage sink.

Key considerations when considering the potential implementation of infiltration trenches within Trafford Park are as follows:

- They can be susceptible to clogging in sites where upstream catchments have soils of a fine nature;
- Built-up pollution/blockages can be below surface and difficult to see/remove;
- Poor maintenance will result in non-drainage which can cause small, localised flooding;
- Only suitable for relatively small catchments;
- These can be used adjacent to areas of hard landscaping such as car parks, public realm, or highways;
- Need to be lined to avoid infiltration (likely high/medium ground contamination present);
- Design considerations include:
 - Trenches width to be 300mm wider than the diameter of the pipe – i.e. average width to be 600mm
 - Trench depth to range between 1 to 2m
 - Trench base to be filled with 150mm of Type A filler and trench to be topped by 150mm Pee Gravel/Sand. Type B Filler to be used between.

6.6 Detention Basin

Detention basins are surface storage basins with sloping banks that facilitate storm water run-off and provides flow control through attenuation. They also facilitate some settling of particulate pollutants. Detention basins are often dry and often designed to only fill during times of severe storms flooding. Retention basins typically refers to versions which always contain some water, with water level increasing during storm events.

Photograph 42 - Example of Detention Basin



A detention basin could provide a pleasing local amenity use for the Trafford Park community, if located within a suitably large and accessible location. This type of SuDS can be simple to design and implement, easy to maintain and could cater for a wide range of rainfall events likely within Trafford Park. In addition to the drainage benefits, this solution could be used to help introduce wildlife to Trafford Park and increase levels of biodiversity.

Key considerations when considering the potential implementation of a detention basin within Trafford Park are as follows:

- They can become a litter refuge if not regularly checked and maintained;
- Detention depths may be constrained by system inlet and outlet levels;
- Not ideally suited to areas with steep slopes;
- Requires larger areas of space;
- Design considerations include:
 - Maximum Side Slope 1:4
 - 300mm freeboard
 - Land take for attenuation will depend on inlet and outlet depths, volume requirements and topography.
- Consideration of appropriate planting and vegetation required; and
- Need to be lined to avoid infiltration (likely high/medium ground contamination present).

6.7 Ponds/Wetlands

Ponds are depressions designed to temporarily store surface water above permanently wet pools. Wetlands are shallower areas of ponds that are densely populated with marsh or wetland vegetation.

Through a system of both algae and aquatic vegetation wetlands provide natural sedimentation and filtration to provide treatment of surface water runoff. Wetlands act as a detention basin by holding run-off for extended periods to allow sediments to settle and in doing so remove contaminants by facilitating aerobic decomposition.

Photograph 43 - Example of a Wetland



A pond or wetland could bring potential high ecological benefits to Trafford Park by introducing flora and fauna as well as aesthetic and amenity benefits. It could also store large volumes of run-off for potential reuse by Trafford Council or businesses within Trafford Park. Such solutions can potentially also add value to local businesses and make it a more pleasant place for employees and visitors to Trafford Park.

Key considerations when considering the potential implementation of a pond or wetland within Trafford Park are as follows:

- This solution would require a significant area of space. It is considered that there is unlikely to be sufficient available land within Trafford Park unless new designated space is created;
- They are vulnerable to high sediment inflows from run-off;
- Not suitable for areas of significant gradient;
- Limited depth ranges for flow attenuation;

- Inspections needed to ensure colonisation of invasive species do not compromise existing ecosystems;
- In densely populated areas, health and safety risks may result in fencing and isolation of wetland;
- Treatment requires higher retention times meaning larger quantity of storage required; and
- Treatment is also less efficient in colder environments (for Trafford Park this would coincide with times of higher rainfall).

6.8 Permeable Paving

Permeable paving is an alternative to the traditional impermeable surfacing prevalent across Trafford Park. In this system the material has a higher void content allowing water to permeate through the layers of the pavement. They are designed to collect and infiltrate surface water at source thus illuminating piped run-off discharge. They also provide treatment / capture of pollutants.

Due to the high likelihood of the existing ground being contaminated across large parts of Trafford Park, subbase beneath the permeable paving could be lined to prevent infiltration. Stormwater storage is provided in the sub-base.

Photograph 44 - Example of Permeable Paving



The use of permeable paving within Trafford Park could help reduce surface water run-off and avoid local surface pooling of water, as observed on site and as described in the baseline section. This solution could also be used to control pollutants within the surface water arising from large goods vehicles within Trafford Park.

This solution may benefit from greater levels of community acceptance than some of the other alternative SuDS systems as it is used in the same way as a conventional paving. This type of system has good retrofit capability which would make it appropriate for

selected areas of Trafford Park where enhanced finishes may be appropriate (e.g. Wharfside). It can also increase the prosperity of growing plant life.

Key considerations when considering the potential implementation of permeable paving solutions within Trafford Park are as follows:

- Regular maintenance would be required where geo-textiles are used to avoid reductions in drainage capacity because of blockages;
- It is not suitable where run-off may carry large sediment loads;
- There is a risk of long-term blockage and weed growth if a suitable management plan is not implemented;
- This carries a higher cost than impermeable paving types – hence selective use in priority areas of public realm may be appropriate;
- Better suited to areas not to be considered for adoption;
- Low biodiversity benefits; and
- Design considerations include:
 - Pavers to be laid upon 50mm laying course and jointed with permeable fill.
 - Laying course to be laid upon Geotextile filter overlaying a 125mm hydraulically bound base and 225 sub-base.

6.9 Kerb Drains, Channel Drains and Rills

Kerb drains, Channel drains and Rills could be used within Trafford Park to capture surface water close to its source and convey water in a controlled manner close to surface level. These systems are suited to urban environments such as Trafford Park and can often be used where green solutions may not. Some systems can include silt and oil traps to also provide a level of treatment, which may be beneficial in this context.

Kerb drains capture water laterally through holes in an upstand to an enclosed channel. Channel drains capture water through holes / slots vertically to an enclosed channel. Rills are open channels that work similar to channel drains but are open topped and can be used as an architectural feature.

Photograph 45 - Example of a Channel Drain



These types of solution are well suited to urban environments and offer a lower maintenance alternative to other ‘green’ solutions. These systems could be used to convey water to other SuDS solutions e.g. tree pits and rain gardens by retaining minimum depth. Within the context of Trafford Park, this type of solution could be easier to adapt for changing catchment size.

Key considerations when considering the potential implementation of this type of solution within Trafford Park are as follows:

- These solutions are well suited for areas up for adoption by Trafford Council;
- They do not require large land take;
- However, they will not reduce rate or quantity of runoff and will have limited treatment of surface water; and
- These systems could capture and convey flows in areas of hard landscaping within Trafford Park and where space / contamination does not allow for swales in other areas.

6.10 Green / Blue Roofs

Green roofs comprise of a multi-layered system that could cover the roof of buildings or podium structures within Trafford Park with vegetation over a drainage layer. They are designed to intercept and retain precipitation, reducing the volume of runoff and attenuating peak flows at roof level.

Blue roofs are very similar to that of green, in their intention to store water at roof level the only exception being that these are not intended to be landscaped. Blue roofs can include open water surfaces, storage within or beneath a porous media or modular surface or below a raised decking surface or cover.

Photograph 46 - Example of a Green Roof



Green or blue roofs on buildings within Trafford Park could help to achieve the main SuDS goal of mimicking predevelopment state of a building footprint. They could help to improve local air quality by helping to remove atmospheric pollutants such as CO₂. Other local benefits could include sound absorption and moderation of local climate. A good example is the Living Lab at Salford University.

Photograph 47 - Example of a Blue Roof



Green or blue roofs could reduce the need for attenuation at ground level and minimise additional landtake within what is a heavily developed location. Green and blue roofs can be retrofitted where conditions are favourable. This will require consideration as aspects of buildings within the Park such as roof strength, low pitch etc.

Key considerations when considering the potential implementation of green or blue roofs within Trafford Park are:

- Higher cost than of conventional roof systems, but reduces cost of drainage downstream;
- Increased roof loading that needs to be included in the structural design/retrofit.
- Not suitable for roofs of significant gradient;
- Retrofitting may be limited by existing roof structure (strength, pitch);

- Roof vegetation needs to be maintained; and
- Requirement to maintain filtration membrane to prevent siltation blockages.

6.11 Rainwater Harvesting

Storage tanks enable the storage of rainwater for use in and around buildings that would otherwise have re-entered watercourses or drainage systems to be processed. These tanks could be either under or above ground depending on space restrictions and usage needs. The harvested water can potentially be used for a wide range of non-potable purposes, such as flushing toilets, cooling systems and irrigation. Ideally a tank should be located in a place without extreme temperatures as to reduce bacterial growth in summer and frost damage in winter – therefore underground units are generally favoured.

Photograph 48 - Example of Rainwater Harvesting



Within Trafford Park rainwater harvesting could be situated below ground, thus saving space in built up urban environments. Such a solution could provide source control, reducing the rates and volumes of storm water runoff within Trafford Park. Subject to the scale of implementation, this approach could offer a water supply to businesses in times of drought. Other benefits to business could include reduced utility bills and lower demand on reservoirs

Key considerations when considering the potential implementation of green or blue roofs within Trafford Park are as follows:

- Above ground tanks could be deemed unsightly;
- Depending on the use, the water may need to be disinfected and cleaned before use;

- Tanks are required to be accessible for internal cleaning and maintenance and fitted with a removable cover to allow inspection;
- May be hazardous if the water is not appropriately treated, allowing bacteria such as legionnaires to develop;
- Systems can be complex depending on the structure and costly to install;
- Harvested water requires a separate system from potable water; and
- Require storage tank space.

6.12 Grey Water Recycling

Grey water is defined as wastewater generated from wash basins, showers, baths, washing machines and dishwashers which can be stored and reused for uses such as toilet flushing, landscaping, and irrigation. Grey water does not include the discharge of toilets which is designated sewage or black water to indicate it contains human waste. However, grey water can be used for toilet flushing.

Photograph 49 - Example of Grey Water Recycling



Grey water recycling could help to reduce discharge to sewers within Trafford Park, reducing potable water consumption and offering a ready water supply in times of drought. For businesses this could help to reduce the demand on mains water and reduce water bills.

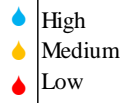
The suitability of this solution will be dependent upon location. Key considerations for Trafford Park include:

- Potential risks to public health if not maintained and managed correctly.
- Could encounter negative public perception.
- Only useful if a water demand is required & grey water is produced.

6.13 Summary

The various SuDS systems are summarised in Table 4.

Table 4 - Summary of Potential SuDS systems applicable to Trafford Park

| | | Rain Gardens | Swales | Bio-Retention Areas | Bio-Retention Tree Pits | Detention Basins | Ponds / Wetlands | Infiltration Trenches | Permeable Pavements | Rills and Channels | Green Roof | Blue Roof | Rain Water Harvesting | Grey Water Recycling | |
|-------------------------|--|---|--------|---------------------|-------------------------|------------------|------------------|-----------------------|---------------------|--------------------|------------|-----------|-----------------------|----------------------|--|
| | |  | | | | | | | | | | | | | |
| Suitability for: | Linear lengths along roads and cycleways | Medium | High | Medium | High | Low | Low | High | High | High | Low | Low | Low | Low | |
| | Areas of limited space | High | Medium | Low | High | Medium | Low | High | High | High | High | High | Medium | Medium | |
| Likely Benefits: | Aesthetic Value | High | High | High | High | High | High | Low | Medium | High | High | Low | / | / | |
| | Placemaking Potential | High | High | High | High | Medium | High | Low | Medium | Medium | High | Low | Low | Low | |
| | Social Value / Health & Wellbeing | High | Medium | High | High | High | High | Low | Low | Low | Medium | Low | Medium | Low | |
| | Ecological Potential | High | Medium | Medium | Medium | Medium | High | Low | Low | Low | High | Low | Low | Low | |
| | Local Climate Benefits | Medium | Medium | High | High | High | High | Low | Low | Low | Medium | Medium | Low | Low | |
| | Noise Quality Improvements | Medium | Medium | High | High | Medium | Medium | Low | Low | Low | Medium | Medium | Low | Low | |
| | Air Quality Improvements | Medium | Medium | High | High | Medium | Medium | Low | Low | Low | Medium | Low | Low | Low | |
| | Water Quality Improvements | High | High | High | High | Medium | High | High | Medium | Medium | High | Low | Low | Medium | |
| | Surface Water Runoff Reduction | High | Medium | High | High | High | High | Medium | Medium | Medium | High | High | Medium | Medium | |
| Stormwater Storage | Low | Medium | Medium | Medium | High | High | Medium | Medium | Medium | High | High | Medium | Low | | |
| Potential implications: | Cost | High | High | High | Medium | High | Low | High | Medium | High | Low | Medium | Medium | Medium | |
| | Maintenance | Medium | High | Medium | Medium | Medium | Medium | High | Medium | High | Medium | Medium | Medium | Medium | |
| Adoption / Maintenance: | Adoptable by United Utilities | / | High | / | / | High | High | High | / | / | / | / | / | / | |
| | Adoptable by Highways | Low | Medium | High | Low | High | Medium | High | Low | Medium | / | / | / | / | |
| | Adoptable by Council (where in their land) | High | High | High | High | High | High | High | High | High | / | / | / | / | |
| | Maintainable by Private Land Owner | High | High | High | High | High | High | High | High | High | High | High | High | High | |
| | Maintainable by a Maintenance Contractor | High | High | High | High | High | High | High | High | High | High | High | High | High | |

7. Illustrative Masterplans

Bringing together the interventions described in the previous section, Figure 37 presents the overall indicative masterplan framework for Trafford Park.

Figure 37 - Greening Trafford Park Masterplan

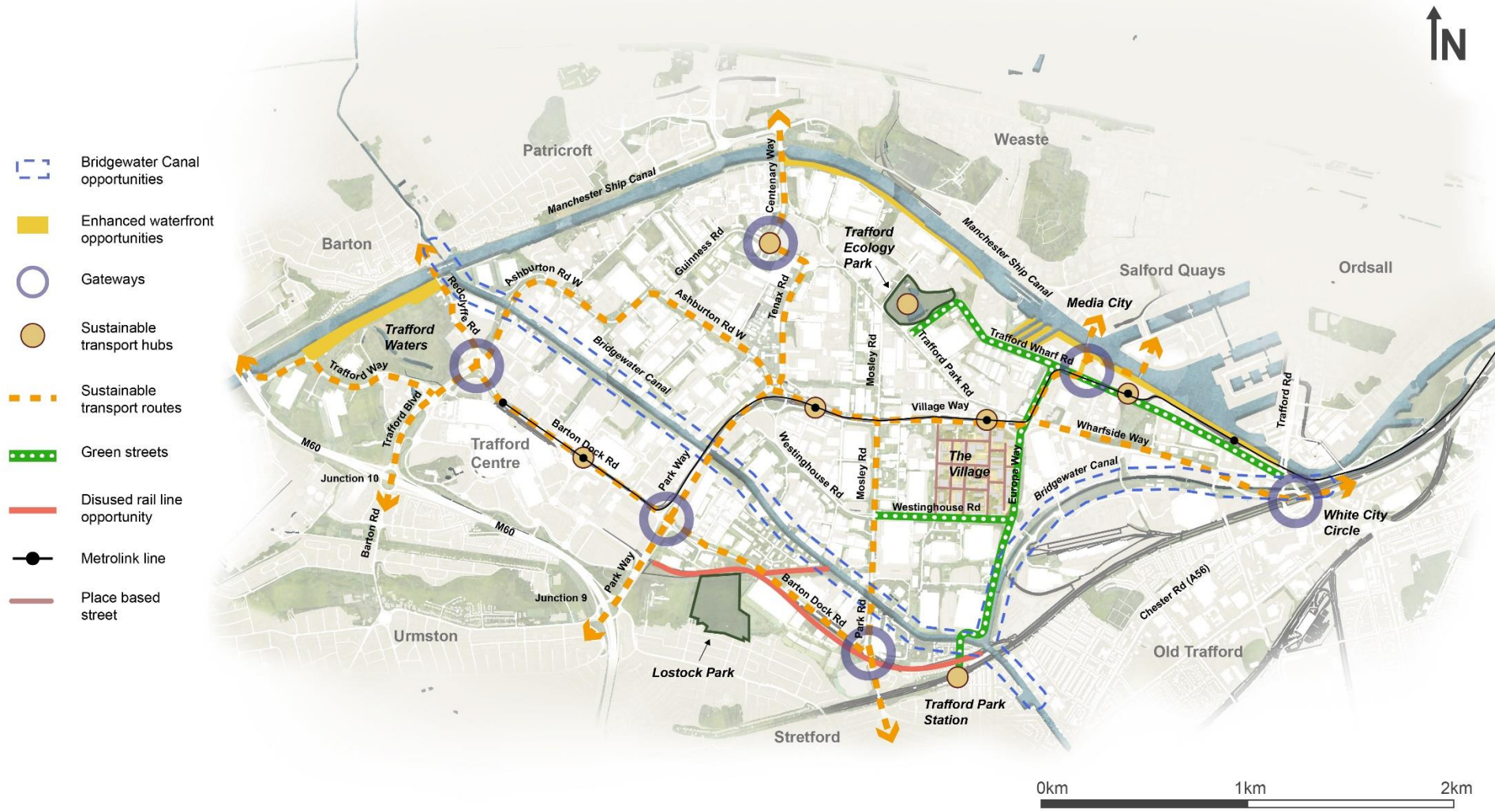


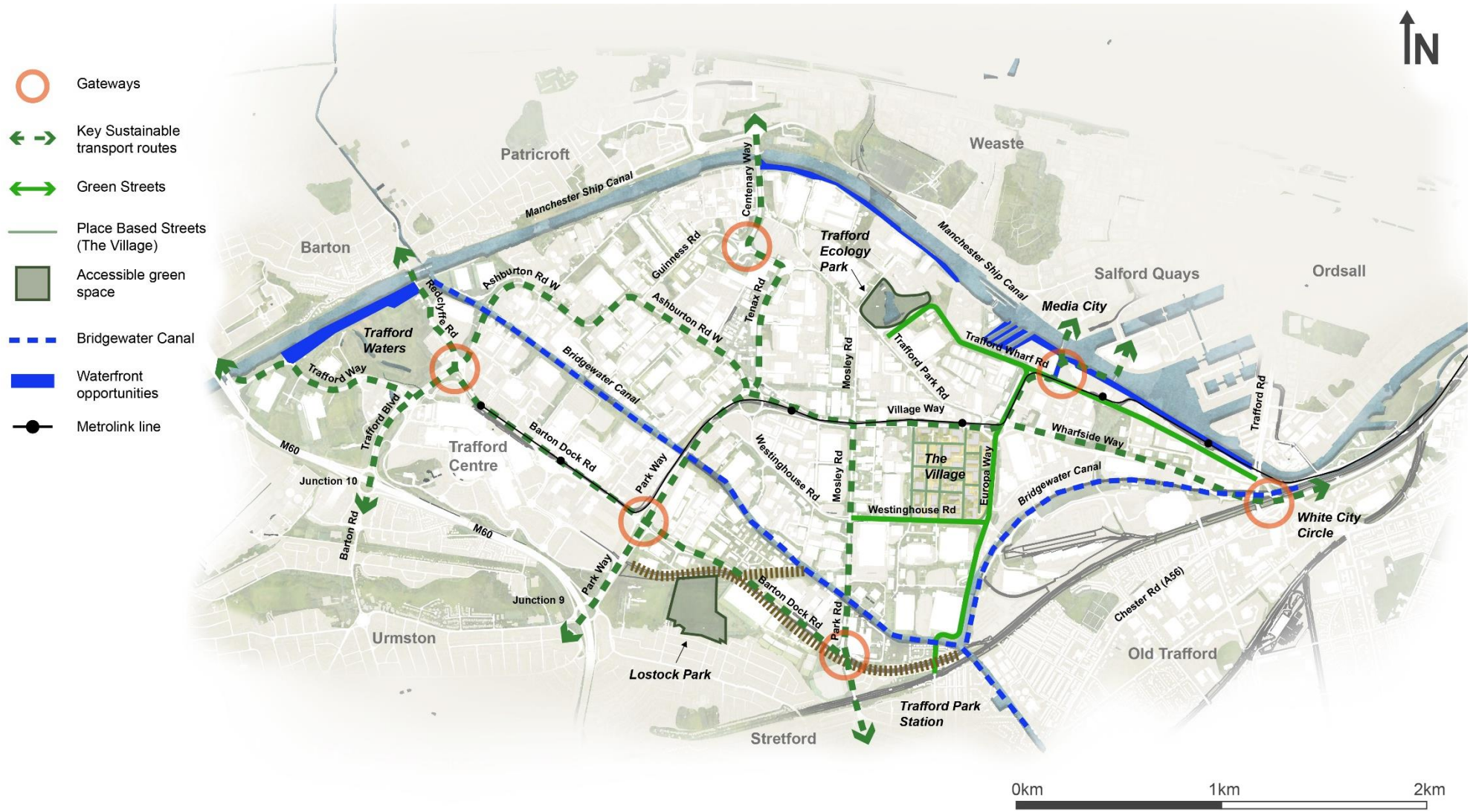
Figure 38 presents the active travel masterplan for the site combining the more direct strategic and connector routes along sustainable transport routes and secondary routes utilising the green streets, disused rail lines, and Bridgewater Canal. The plan also shows potential locations for sustainable transport hubs located at key locations and public transport nodes.

Figure 38 - Greening Trafford Park Active Travel Routes



Figure 39 presents the green and blue infrastructure networks for the site. Opportunities for enhanced greening are primarily focussed along transport corridors, with green streets identified on lower trafficked routes in the east of The Park and opportunity for greening along proposed key sustainable transport routes with associated gateway points. The disused railway lines provide further opportunity for enhancing the green network. The Bridgewater Canal and sections of the Manchester Ship Canal waterfront present opportunities to enhance accessibility to and quality of blue infrastructure within and surrounding Trafford Park

Figure 39 - Greening Trafford Park Blue and Green Infrastructure Networks



8. Funding and Delivery

Trafford Park is a key location for industry and business activity within the Manchester City Region and is a principal location for employment development in Trafford. However, the mixed ownership structure of Trafford Park, the extensive public realm and transport infrastructure requirements across the site combined with limited public sector resources and investment opportunities to support maintenance and enhancements of public realm and common areas across the business park mean that the image and perception of Trafford Park has fallen behind that of many other competing business environments.

This section sets out a general approach to the potential funding and delivery of some of the interventions set out in this framework. Whilst at this stage, no specific budget has been identified for the infrastructure works that would be required, it is recognised that the approach will need to be flexible and provide value for money given existing and future constraints on public sector funding.

The framework focusses on enhancements of existing infrastructure spread across the Park, primarily around existing transport corridors. The approach to enhance and make better use of existing infrastructure provides flexibility in delivery as interventions could be phased and packaged into more affordable and discrete schemes. The multi-functional approach to the use of spaces within the interventions also means that potential funding streams could come from a range of sources (transport-based, drainage-focussed, or landscape-led), with multiple funding sources e.g. planning contributions) being combined to deliver added value and achieve broader outcomes across a range of indicators.

8.1 Infrastructure Delivery

Many of the interventions set out within the framework, particularly those related to transport, represent major infrastructure schemes. Transport improvements within Trafford Park would need to be funded through public sector investment. This would most likely be funded via the GMCA capital

programme, which is in turn funded by a combination of grants and borrowings.

The current GMCA capital programme is made up of a series of different funding sources, some local, some national, the spending of which has been prioritised locally. These national sources, such as the City Region Sustainable Transport Settlement (CRSTS) can help to fund major packages of schemes which some of the interventions identified in the framework could be considered for future rounds of funding. Other potential funding sources for such schemes could be future rounds of Active Travel Fund, Growth Deal or UK Shared Prosperity Fund schemes. Interventions identified within this framework would need to be developed further and the strategic case developed in relation to the specific requirements of individual funding sources.

Further devolution of transport functions from central Government to a Greater Manchester level may also provide opportunities to think differently about how to fund and efficiently manage a cleaner, more efficient, and integrated transport network within Trafford Park at a local level. In the short-term Greater Manchester is taking back ownership of the bus network, with franchised services commencing from 2023. Under franchising, GMCA will coordinate the bus network and contract bus companies to run the services. Bus franchising will also mean that GMCA can set environmental standards for a green bus fleet, helping to meet the city-region's targets to tackle the climate emergency, reduce harmful emissions and improve air quality.

In the longer term, Greater Manchester also has aspirations to have more influence over the rail system, including control over stations such as Trafford Park station. Should this be achieved, locally funded investment in the station could help to enhance its form and function within its current context.

Sustainable Urban Drainage Solutions proposed would typically require funding from local or national government but in recent years there are a range of other beneficiaries and funding options that have become available.

It could potentially adopt the 'payment for outcomes' model with United Utilities which has been successfully tried out at Moorland Junior School in

Sale. This model maximises the water management benefit while providing incentives to site owners by reducing their wastewater charges. In principle, the upfront costs involved in the installation of SuDs can be offset and repaid through payments for outcomes, such as reduced sewer overflows or sewer flood incidents. Planning Obligations and the Community Infrastructure Levy (CIL) could also be used for maintenance of SuDs in public areas, in addition to new infrastructure.

8.2 Potential for a Trafford Park Business Improvement District (BID)

As part of this commission, Groundwork have provided expert advice and thought leadership on the role that businesses could play in bringing forward investment to deliver and support the greening, active travel and net-zero interventions presented in this framework. Groundwork developed the UK's first industrial estate BID in 2005 and have subsequently developed 21 proposals for BIDs in locations across the North West and South of England that have been approved by their local business communities delivering more than £15million of new investment into local business environments.

The legal framework for BIDs was introduced into English legislation in 2004, building on the concept of BIDs developed in the USA and other locations around the world. BIDs empower business communities to lead five-year, sustained investment programmes that work with local authority partners and other stakeholders to deliver transformational programmes of change that typically cannot be achieved by either party working in isolation.

For a BID to come into force, businesses must approve a documented proposal for a BID through a postal ballot. A majority by number and rateable value must approve the proposal at ballot for the BID to come into force for up to five years. Once approved, the BIDs programme of investment is principally derived from funds raised through a small additional levy (typically up to 1.5% of a premises rateable value) charged to eligible premises within the BID area. Typical daily costs for most premises are equivalent to a daily charge of £2-£3 / day. Larger premises will, through their larger rateable value, attract more significant levies, however in the context of the overall cost base for larger premises, BID levies still do not represent a cost of relative significance.

Small or micro premises are often excluded due to the small amounts collected from these premises and the diminishing return presented by the cost of collection. Once approved, all eligible premises within the BID area are required through the regulations to pay the levy.

The investment from a BID is managed by local business leaders and invested in the projects and services set out within the BID proposal approved at ballot.

In the UK more than 300 BIDs have been developed including town centre, city centre and business park locations. Analysis of data from recent BID ballots (71 ballots) across the UK between October 2021 and August 2022 has shown strong private sector support for the concept. Only one has been identified as being rejected at ballot during this period, with BIDs on average being approved by 80% of businesses at ballot, representing 84% of rateable value. Groundwork has between June 2022 and August 2022 supported three successful BID ballots on business parks.

9. Potential Next Steps

This document provides an initial framework for the greening of Trafford Park. It sets out a vision for a greener Trafford Park with improved sustainable and active travel links and more pleasant green spaces and connections through the Park. Delivering this vision will be a long-term commitment and will require the support and cooperation of a wide range of stakeholders at a local and national level.

Table 5 sets out some of the immediate next steps that could be undertaken to take the interventions and overall framework set out in this document forward. These are all actions that could be commenced in the short-term in order to establish momentum in the greening of Trafford Park.

As set out in the table, there will be a significant role for Trafford Council to take ownership of several of the identified next steps. This is likely to require additional capacity to procure, manage and deliver a range of further studies, projects, and commissions. This capacity could require additional internal and/or external resources for the Council.

Table 5 - Next Steps

| Potential Action | Description | Responsibility | Timescale for delivery ⁴ | Relative Cost ⁵ |
|---|---|--|-------------------------------------|----------------------------|
| Develop the projects identified in framework masterplan for strategic corridors and opportunity areas to a concept design stage | Investigate opportunities and draw up a prioritised list of projects for concept design/costing. Feasibility Study – explore further work on delivery plans /audits which include assessment of: Existing characteristic, quality and function, the scope for enhancement and potential to improve multi-functionality, delivery, and costings | Trafford Council | Short | High |
| Focus new and improved Green Infrastructure in Areas of significant growth and opportunity | Given the scale of Trafford Park and the large challenge of greening the Park, it is recommended that a pilot project or area of focus is selected that will act as an exemplar and deliver the largest impact in order to establish the scale of ambition and act as a catalyst for change across the wider Trafford Park. | Trafford Council | Medium | Medium |
| Develop masterplan proposals for Trafford Village | Develop proposals to create a low traffic neighbourhood within Trafford Village which could be a ‘quick-win’ enabling local landscape, transport, and green infrastructure benefits to be delivered within a focussed area of the Park. | Trafford Council TfGM | Short | Medium |
| Develop schemes to encourage active travel through the provision of protected infrastructure schemes along key corridors | The quality of the active travel network can provide a valuable contribution towards greening within Trafford Park as set out in this framework. | Trafford Council TfGM | Medium term | High |
| Trafford Park Business-led Development | Create local capacity within Trafford Park to begin the process of a business led transformation of Trafford Park. Secure approval and operational delivery of a model (which could include a BID) within two years, enabling local businesses to lead on funding future projects utilising private sector funding. | Trafford Council Businesses Consultant support | Medium-Long term | Medium |

⁴ Short term – next 12 months / Medium term – 1-3 years / Long-term – >3years

⁵ Low - <£100k / Medium - £100k-£500k/ High - £500k+ (excludes capital costs of delivery)

| Potential Action | Description | Responsibility | Timescale for delivery ⁴ | Relative Cost ⁵ |
|---|--|---|-------------------------------------|----------------------------|
| Provide developer guidance/toolkit on landscaping and inclusion of green infrastructure in design of developments and existing premises | Developing a toolkit for businesses could be a means of providing ideas, resources, and the associated benefits to investing in, installing, and maintaining green infrastructure within their premises. | Trafford Council Consultant support | Short-medium term | Low |
| Develop detailed green infrastructure planning policies | <p>Review draft policies within Local Plan and identify requirements for new/revised policies to address green infrastructure challenges and opportunities.</p> <p>Consider the preparation of specific Supplementary Planning Document relating to green infrastructure delivery within Trafford Park.</p> <p>Ensure that future development briefs and proposals for Trafford Park incorporate requirements for green spaces, green roofs, and SuDs where applicable</p> <p>All new developments should maximise on-site storm water management through implementation of SuDs and in some cases tree planting</p> | Trafford Council Business and landowners | Medium term | Low |
| Assess planning applications against Local Plan Policies on Green Infrastructure and secure funding from planning applications for mitigation/enhancement of green infrastructure | Explore ways of using the Community Infrastructure Levy (CIL) and S106 processes to secure funding to deliver sustainable transport and green infrastructure projects within Trafford Park. | Trafford Council | Medium term | Low-Medium |
| Explore opportunities for new development proposals to address identified gaps and opportunities within framework | Delivery of green infrastructure and active travel infrastructure could be supported by private sector contributions where appropriate, linked to action above. This could also include public sector investment in, for example, public realm schemes where green and active travel infrastructure can be integrated. | Trafford Council | Ongoing | Low |

| Potential Action | Description | Responsibility | Timescale for delivery ⁴ | Relative Cost ⁵ |
|--|---|-------------------------------|-------------------------------------|----------------------------|
| Establish Green Infrastructure steering group | Establish a green infrastructure steering group with representatives from across the council, planning, sport and leisure, Lead Local Flood Authority, transport. Share and utilise expertise to ensure that GI is considered on council development proposals. | Trafford Council Stakeholders | Medium | Low |
| Investigate opportunities for partnerships with external organisations and community groups | Develop a green infrastructure steering group with internal and external partners. Explore project and funding opportunities. Help businesses and other local community groups to access funding directly. | Trafford Council Stakeholders | Short-term | Low |
| Advocate for green infrastructure | To ensure green infrastructure included in council strategies/ projects, be responsible for coordinate partnership working between council departments and partner agencies, Secure funding bids. Establish consultation database, identify agencies associated with delivery of GI, understand roles and contributions. | Trafford Council | Ongoing | Low |
| Identify opportunities for Green Infrastructure delivery in accordance with indicative masterplans | Work with businesses within Trafford Park and landowners to increase awareness of the need to provide GI. Work with partners to raise the profile of GI across Trafford Park to encourage nomination of projects. Prioritisation of opportunities for the enhancement GI, costs and funding mechanisms which should guide the planning, design, and management of GI within Trafford Park | Trafford Council | Medium-long term | Medium |

