

Talbot Mill, Manchester
Capital & Centric
Transport Statement
170913/SK21683/TS01(-02)

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EXECUTIVE SUMMARY

Introduction

This Transport Statement assesses the traffic, transport, highways and parking impact of a proposal to redevelop the Talbot Mill complex on Ellesmere Street in the Castlefield area of the city centre.

The assessment has been undertaken in line with best practice methods and has been agreed with Manchester City Council.

Existing Situation

The site is a large mill complex comprised of two mill buildings, a time keeper's lodge and various smaller ancillary buildings. The existing uses on the site are associated with traffic flows, although the complex isn't generating traffic to its full potential as some areas of the site are unused.

Access to the site is currently provided from two locations on Ellesmere Street. The eastern access serves the courtyard in the centre of the site and the western access serves a small service stub. Both accesses have double yellow line parking restrictions to prevent parking.

Ellesmere Street is an unclassified street that routes east-west from Chester Road to the on-slip on Mancunian Way. Ellesmere Street provides access to a number of side roads along its length and is subject to a 20mph speed limit.

On-street parking is provided in marked bays. Double yellow lines are in place to prevent parking on the southern side of the carriageway and at side road junctions. Unusually for a city centre area, the parking bays have no time limited controls on them and consequently the area is popular with commuters from the city centre. To compound this, a number of the parking bays are temporarily suspended to allow for construction works in the area. This means that it can be difficult to find a parking space in the area.

Manchester City Council has advised that it intends to expand the city centre parking controls to the area to improve the existing situation, reduce commuter parking, and bring the controls in line with the Council's parking policy in city centre locations.

Road safety levels have been reviewed using Transport for Greater Manchester's accident database. This review shows that there have been no accidents on Ellesmere Street during the latest three years for which data is available.

Proposal

The proposal will redevelop the Talbot Mill complex to create 202 apartments. The proposal will demolish a number of ancillary buildings, redevelop mills 1 and 2, and construct a new residential block to the rear of the site.

The complex sits around three sides of a courtyard, with the fourth side created by the boundary of an adjacent residential building (Burton Place). The internal courtyard is retained as a green space that will create important amenity and community space for use by residents to allow the community to be built.

The primary entrance to the site is via a new bridge link in the cut through between the two mill buildings. The entrance directly serves the first-floor level of the existing mills with stair and lift access to the lower courtyard level. Once in the courtyard residents can directly access lower level apartments in the mills via individual front doors and using the foyer access to the new build block. Pedestrian access can also be gained to the new build block from the Worsley Street frontage.

202 cycle parking spaces, at a ratio of 1 space per apartment, are proposed for use by residents. Visitor cycle parking for 15 cycle is also proposed in the courtyard.

No car parking is proposed as part of the proposal as the development is car-free and has been designed to appeal to residents who do not own or want to own a car.

The existing courtyard vehicle access (to the east of the Ellesmere Street site frontage) is retained in the development to allow direct access to the courtyard. The courtyard access will also provide access for occasional sub-station maintenance vehicles entering the site. This access has been tested to make sure vehicles can make these manoeuvres.

A scheme has been developed to provide a loading bay and disabled parking bay outside the site. The removal of the existing western vehicular access bell mouth (currently governed by double yellow lines) means that space is released to allow the reconfiguration of the existing parking bays to include the loading bay and to convert a space to a disabled space. The scheme does not affect the existing number of parking space available.

The proposal includes a number of measures to assist residents to live sustainably without needing to own or use a car to meet their daily travel needs. These measures include:

- No car parking
- Honest & upfront Car-free Marketing Strategy to target right demographic & discourage pro-car residents from outset
- 100% resident cycle parking provision
- Visitor cycle parking on-site
- Promotion of Car Club vehicles on Ellesmere Street
- Site website with links to TfGM journey planning software & phone apps
- Resident travel packs (summary of journey planning tools & free TfGM maps)
- Links to other technology to promote sustainable (& fun) routes & activity (including Manchester Walking Tours app & City Mapper app)
- Site socials (Bike User Groups, Know Your Area Walking Group & site travel competitions) & community travel forum
- Use of practical hooks like regular cycle maintenance & repair facilities
- Tie ins with other interest groups (Manchester Green Badge Tours, Manchester Walking Tours, Mad Walkers, Manchester Wheelers & Tweed Ride)
- Promotion of GM Cycling Partnership Events (Skyride, Breeze Rides & Ride Social)
- Promotion of TfGM public transport ticket arrangements
- Negotiate discounts with local cycle retailers
- Negotiate discounts with local taxi firm (Street Cars)

Accessibility Impact

The site is connected to key destinations by a comprehensive network of pedestrian routes, typical of its city centre location. Pedestrian provision is of good condition, with wide footways, dropped kerb crossings and tactile paving present. Signalised crossing facilities are provided at a number of locations on busier roads (such as Chester Road). A continuous traffic-free connection is also provided along the Bridgewater Canal to the city centre and Trafford Park. The assessment shows that residents of the site can easily access the city centre and surrounding destinations on foot.

The site is also well located for access to the Greater Manchester Cycle Network. The routes near the site comprise a combination of traffic-free and on-road routes, meaning that cycling is a good mode of travel for future residents.

The closest bus stops to the site are a short walk away (3 minutes) on the A56 Chester Road. The stops are served by buses to the city centre, Flixton, Urmston, the Trafford Centre, Stretford, Chorlton and Didsbury. During the day, the bus stops are served by up to 14 buses per hour (in each direction) and coverage is provided throughout the week and during the evening.

The site also benefits from access to the Metrolink network with Cornbrook station being less than five minutes from the site. Access can also be gained to Deansgate mainline station within a 10-minute walk of the site.

A Greater Manchester Accessibility Level (GMAL) calculation has been undertaken for the site. A GMAL is calculated using the interactive tool managed and maintained by TfGM. This tool measures AM Peak accessibility by public transport of a point of interest and provides a score between 1 and 8, where 1 is a low level of accessibility and 8 is the highest level of accessibility. The site has a score of 7, indicating a very high level of accessibility.

Parking Impact

The accessibility analysis shows that the site benefits from a very high level of accessibility by non-car modes. Opportunities also exist for future residents to access a car by using one of the three Enterprise

Car Club vehicles that are in the area. The accessibility of the site supports the practicability of living in the area without needing to own a car.

There are currently no parking controls governing the use of on-street parking bays. This coupled with temporary suspensions of many of the bays means that existing parking activity is temporarily constrained to a much smaller area and it is currently difficult to find a space. MCC is proposing to expand the city centre parking zone to cover the area and bring it in to line with the rest of the city centre.

Research and evidence shows that Manchester city centre is the best place to live without a car outside London and that a high proportion of residents already live in the city without a car. Evidence also shows that a number of residents who have a parking space are not using them. It is also shown that residents select accommodation that meets their specific requirements. Local policy supports providing a mix of accommodation to meet the needs of a diverse range of residents. This includes developments that cater directly for car-free choosers, by not providing parking.

The appetite for car-free living is already strong in the city centre and new developments that are coming forward to market without parking (such as Capital & Centric's Crusader Works) are very popular. This emphasises the fact that parking is not a necessity or priority for some city centre residents.

Based on the above, it is shown that the proposal offers the opportunity to cater for car-free residential market in the city centre.

Traffic Impact

The proposal will extinguish the existing uses on site and deliver 202 apartments. As agreed with MCC, the site provides a good location for car-free development and will appeal to residents who do not own a car. On this basis, the traffic associated with the proposal will be limited to occasional activity associated with taxis, service vehicles and visitors.

Conclusions

SK Transport Planning has been appointed by Capital and Centric to prepare a Transport Statement in support of a planning application for the development of 202 apartments at the Talbot Mill complex in Manchester city centre. The site presents a strong opportunity to deliver a liveable and car-free community, where the daily travel needs of residents can be met sustainably without needing to own or use a car.

Research and evidence shows that Manchester city centre is the best place to live without a car outside London and that a high proportion of residents already live in the city without a car. The site has an exceptional level of accessibility and is well located to encourage trips by non-car modes to both city centre and regional destinations. The site benefits from the high level of accessibility by public transport (GMAL level 7). Evidence and local policy support the introduction of a car-free development in this location.

A transport strategy has been developed for the site that includes appropriate access solutions and facilities for pedestrians, cyclists and service vehicles, and measures to promote non-car living. The proposal includes measures to allow access by refuse, delivery and disabled vehicles.

It is concluded that the proposal meets the requirements of local and national policy, and that the residual traffic, road safety and parking impact of the proposal will not be significant when tested against NPPF.

1 INTRODUCTION

Background

- 1.1 SK Transport Planning Ltd (SK) has been appointed by Capital and Centric to assess the traffic, transport and parking implications of redeveloping the Talbot Mill complex to create 202 apartments. The proposed landscape layout is attached as appendix a.
- 1.2 The Talbot Mill complex is in the Castlefield area of the city centre. The site is occupied by a large mill complex, comprising two mill buildings, a time keeper's lodge and various smaller ancillary buildings in varying states of disrepair. The existing buildings on site have a combined floor area of 7,117sqm.

Scope

- 1.3 The TS assesses the traffic, transport, parking and accessibility impact of the proposal. The document has been prepared in line with guidance as set out in Manchester City Council (MCC) SPD 'Guide to Development in Manchester', 'Local Development Framework Core Strategy', and the endorsed 'Residential Quality Guidance'. The assessment is also mindful of Transport for Greater Manchester's (TfGM) guidance and policy as outlined in 'Transport for Sustainable Communities' and 'GM Transport Strategy 2040', and national guidance as detailed in the National Planning Policy Framework (NPPF) and National Planning Practice Guidance (NPPG).
- 1.4 The scope of the assessment was discussed and agreed with MCC in February 2017. A copy of the scoping study is attached as appendix b.

2 EXISTING SITUATION

Site Location

- 2.1 Figure 2.1 shows that the Talbot Mill complex is in the Castlefield area of the city centre. The location of the site has been found to be highly sustainable by MCC when considering other applications in the area.
- 2.2 The site is occupied by a large mill complex. The existing buildings on site have a combined floor area of 7,117sqm.
- 2.3 Vehicular access to the site is provided from two locations on to Ellesmere Street. The eastern access point provides a vehicular connection to the central courtyard on site and the western junction provides access to a short service stub. Both accesses form a simple priority arrangements with Ellesmere Street. Double yellow lines are provided around the access radii to prevent parking.
- 2.4 The access to the courtyard is under the existing building and currently has a maximum height of 3.3m.
- 2.5 Servicing and delivery movements associated with the current use of the site, and other uses in the area, currently occur from kerbside on Ellesmere Street.



Figure 2.1: Site Location

Local Highway Network

- 2.6 The site is currently accessed by all modes from Ellesmere Street, an unclassified street that routes east-west from the A56 Chester Road to the on-slip with the A57 Mancunian Way. At its eastern end (between the A56 and Hulme Hall Road) Ellesmere Street is one-way eastbound.
- 2.7 Ellesmere Street provides access to a number of side roads along its length, providing access to surrounding residential and commercial properties.
- 2.8 Ellesmere Street is typically 7.5m wide along its length with footways and street lighting present. The road is subject to a 20mph speed limit.

Parking Facilities

- 2.9 The local on-street parking provision is governed by marked parking bays and double yellow lines. Parking restrictions are in place along the south side of Ellesmere Street in the form of double yellow lines. Double yellow lines are also present at side road junctions on the northern carriageway edge.
- 2.10 The parking bays on the northern carriageway edge are currently uncontrolled, meaning that residents and commuters can park for any length of time even though the area is within the city centre.
- 2.11 Parking control plates are present on the street which limit parking to two hours' duration between 8am and 6pm, but these have been blacked out by MCC and it has been confirmed that these are currently not enforced. MCC has confirmed that although it was always the intention to control parking in the bays, that the plated times have never been brought into force. The consequence of the lack of parking controls in this area of the city centre is that parking on-street in the area is popular with commuters from the city centre.
- 2.12 In addition to this city centre anomaly, a number of the bays are currently suspended due to construction works. This has had the unfortunate consequence of squeezing parking activity into a constrained area and makes it, temporarily, difficult to find a suitable place to park at various parts of the day.
- 2.13 Surveys of existing parking activity have been undertaken on several occasions (including both daytime and late evening demand). The surveys show that should the suspended bays be brought back into use that there would be more than sufficient space to meet current demand levels.

- 2.14 MCC has confirmed that it proposes to extend the city centre parking zone to cover this area of the city centre to allow better management of the on-street activity and deter commuter parking. This would bring the area into line with MCC's parking strategy for the rest of the city centre.

Existing Site Use Traffic Flows

- 2.15 The existing buildings have a total floor area of 7,117sqm and are occupied by commercial uses. The TRICS database has been used to establish the traffic flows associated with the extant use of the site. For robustness TRICS use class 02/Employment/C – Industrial Unit has been used. This use is one of the lowest employment use trip generators in the TRICS database.
- 2.16 The TRICS output is attached as appendix c, with a summary of the TRICS output is provided in table 2.1.

	Trip Rate (per 100sqm)			Traffic Flows (in vehs)		
	IN	OUT	TOTAL	IN	OUT	TOTAL
AM	0.402	0.078	0.48	29	6	34
PM	0.056	0.363	0.419	4	26	30
Daily	2.315	1.989	4.304	165	142	306

Table 2.1: Existing Site Traffic Flows (in vehs)

Road Safety Record

- 2.17 The GMTU accident database has been reviewed to establish accident patterns and road safety issues on Ellesmere Street. Figure 2.1 shows that there have been no accidents on Ellesmere Street in the previous three years.

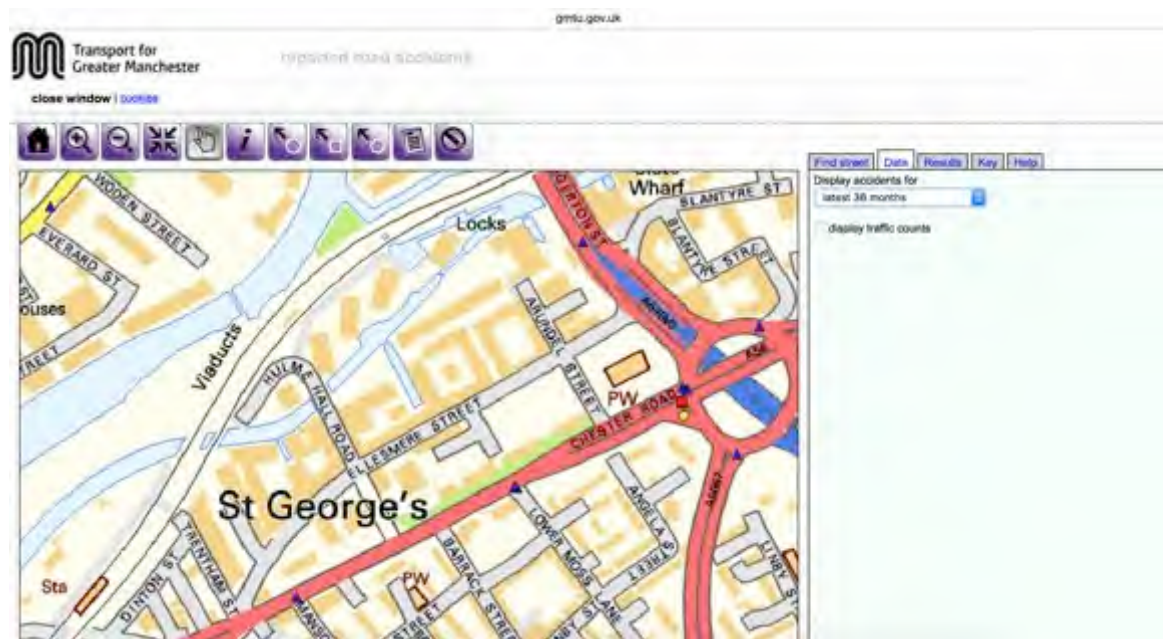


Figure 2.2: Accident Record

3 PROPOSAL

General Principles

- 3.1 The proposal will convert the Talbot Mill complex to create 202 apartments. The proposal will demolish buildings A, B, C and E, redevelop mills 1 and 2, and construct a new residential block up to 10 storeys (9+ basement level). Rooftop extensions are proposed for mills 1 and 2. Mill 1 will also be extended to the rear. For reference the existing and proposed site plan is shown on figures 3.1 and 3.2.

- 3.2 The complex sits around three sides of a courtyard, with the fourth side created by the boundary of an adjacent residential building (Burton Place). The internal courtyard is retained as a green space that will create important amenity space for use by residents to allow the community to be built. The landscape layout is attached as appendix a.
- 3.3 The courtyard incorporates a small building (known as the Time Keeper's Cottage) that is also retained for use as community space for residents. This space is an important component of the

proposal and will allow for enhanced social exchange by residents and is also an important component of the site's transport strategy.

Access

- 3.4 Existing levels through the site are challenging and there is a small level change between Ellesmere Street and level 00 of around 1 metre. Existing levels in the courtyard dip down to a basement level and at the far end of the site, along the Worsley Street frontage, a one storey change occurs between street level and the site. The access strategy for the site has been developed to sympathetically work with the level changes, while achieving inclusive and dignified access for all.
- 3.5 The primary entrance to the site is via a new bridge link in the cut through between the two mill buildings. The entrance directly serves the first-floor level of the existing mills with stair and lift access to the lower courtyard level. Once in the courtyard residents can directly access lower level apartments in the mills via individual front doors and using the foyer access to the new build block. Pedestrian access can also be gained to the new build block from the Worsley Street frontage.
- 3.6 202 cycle parking spaces, at a ratio of 1 space per apartment, are proposed for use by residents. 80 of the cycle parking spaces are in a store area on two floors of mill 2 and the remainder are provided for within individual apartments. The Design & Access Statement should be referred to for details of the space set aside in the apartments for storing cycles. Visitor cycle parking for 15 cycle is also proposed in the courtyard.
- 3.7 The existing courtyard vehicle access (to the east of the Ellesmere Street site frontage) is retained in the development to allow direct access to the courtyard. The changes in level across the courtyard have been addressed by gently sloping ramps. The courtyard is at the heart of the development and provides a large amenity area that can be used by residents for socials and resident-led activity groups. This facility will not only provide important social exchange and amenity space, but will also reduce the need to travel off-site for certain journey purposes.
- 3.8 The courtyard access will also provide access for occasional sub-station maintenance vehicles entering the site. The existing archway is to be raised as part of the proposal and no longer restricts vehicle heights. A swept path has been undertaken of a panel van to show that this can access the sub-station and leave the site in a forward gear. This is attached as appendix d.
- 3.9 As with surrounding developments, servicing and refuse collection activity will occur from kerbside on Ellesmere Street. On bin collection days, the bins will be moved by the site management to the area on-site under the access arch. MCC proposes the extension of the city centre parking zone to cover this area of the city centre. This parking scheme will include loading and disabled parking provision.
- 3.10 A scheme is attached as appendix d has been developed to show how the proposal site can be serviced. A loading bay is shown that can be used by refuse, delivery and removal vehicles to temporarily stop outside the site. A disabled parking bay is also shown in the scheme to meet the needs of visitors/residents with mobility issues.
- 3.11 The scheme attached as appendix d has been designed to minimise loss of existing parking space on Ellesmere Street. The removal of the existing western vehicular access bell mouth (currently governed by double yellow lines) means that space is released to allow the reconfiguration of the existing parking bays to include the loading bay and to convert a space to a disabled space. The proposal will therefore result in no net change in standard parking bay provision, when compared to the existing situation.

Parking

- 3.12 The site meets the criteria required by policy for the introduction of a car-free development. The suitability of the site for car-free development has been agreed with MCC.
- 3.13 Research shows that there is a strong relationship between accessibility, city centre developments and car ownership levels, with city centre residents being much more likely to live

without owning a car than residents of traditional suburban areas. TfGM also states that Manchester city centre is the easiest place to live without a car, outside London.

- 3.14 Local data, including evidence from Urban Splash developments, shows that there is already a strong appetite for car-free living in Manchester city centre. The applicant has good experience of delivering accommodation to meet this market demand and is already delivering a car-free development in Manchester. Using this experience, the proposal has been designed to appeal to residents who do not own or want to own a car.
- 3.15 Further information on the suitability of the site as a car-free development is provided in section 5.

Marketing & Promotion

- 3.16 The applicant is supportive of innovative measures to allow future occupiers to meet their daily travel requirements without needing to own or use a car. As part of this, the development will also be underpinned by a robust travel plan that will include promotional and infrastructure measures to assist residents to adequately meet their travel needs, including occasional and casual car use. A framework travel plan has been prepared for the site and is attached as appendix e.
- 3.17 As part of the travel plan a co-ordinator will be appointed that acts as a point of contact for residents, the surrounding community and MCC. The travel plan co-ordinator will be responsible for the day-to-day running of the plan and promoting the sustainable and liveable ethos of the transport strategy.
- 3.18 The site will be honestly marketed as a car-free development and it will be made clear to all applicants that there will be no opportunities to store a car on-street due to existing constraints and Manchester City Council's future control proposals. To meet casual car use needs the Enterprise Car Club will be promoted.
- 3.19 The website for the development will include a page dedicated to sustainable travel. This will include embedded links to TfGM journey planning software, local transport maps and links to city travel campaigns. The website will also include links to TfGM supported software, such as www.bikebudi.com, www.walkit.com and www.walkbudi.com.
- 3.20 Technology will be used to promote sustainable and fun routes and activities. The website will provide links to allow the download of phone apps, such as Manchester Walking Tours and City Mapper.
- 3.21 The travel plan co-ordinator will promote of TfGM supported initiatives & groups, such as Walk to Work Week, Better by Cycle CTC, Walking for Health, Walking Works & others, as advertised on the TfGM website www.travelplan.org.uk.
- 3.22 Each household will be issued with a sustainable travel pack when they move in that provides a succinct resource pack to assist them travel sustainably and hire a car as and when required.

Site Socials

- 3.23 The amenity space at the heart of the development will serve as a meeting place for residents.
- 3.24 Residents will be encouraged to set up site specific groups, such as a bicycle user group and to engage in site travel mileage competitions. Residents will be encouraged to make contact and engage with local interest groups such as Manchester Green Badge Tours, Manchester Walking Tours, MAD Walkers, Manchester Wheelers, the Tweed Ride, the Good Gym, and the GM Cycling Partnership.
- 3.25 Consideration will be given to setting up a sustainable sharing database that matches walkers and cyclists who work in the same locations so that residents can meet their neighbours and travel safely together.

Practical Hooks

- 3.26 The travel plan co-ordinator will investigate the feasibility of using the amenity space to provide regular cycle maintenance and repair sessions using one of the existing suppliers in the city.

- 3.27 The travel plan co-ordinator will promote local and national cycling events, including TfGM's free adult cycle training.
- 3.28 The travel plan co-ordinator will look to arrange taxi and cycle purchase discounts with local firms, and will promote the use of home delivery services for the site.

4 ACCESSIBILITY ASSESSMENT

Walking

- 4.1 The site is connected to key destinations by a comprehensive network of pedestrian routes, typical of its city centre location. Pedestrian provision is of good condition, with wide footways, dropped kerb crossings and tactile paving present. The streets surrounding the site are overlooked and lit.
- 4.2 Signalised pedestrian crossing facilities are provided at a number of locations along the A56 Chester Road allowing safe connections to routes into the city centre and also local bus stops. A continuous traffic-free connection is also provided along the Bridgewater Canal to the city centre and Trafford Park.
- 4.3 Access can also be gained to existing segregated cycle and pedestrian routes along the Manchester Ship Canal, by using the existing footbridge across the Manchester Ship Canal at St George's Island.
- 4.4 Two-thirds of all journeys in the UK are under-five miles and short distance trips offer the greatest opportunity for changes in travel behaviour. DfT best practice guidance states that walking has the potential to substitute for car trips at a local level for journeys under 2km.
- 4.5 Figure 4.1 shows a 2km walking catchment from the site representing a walk time of 25 minutes, using an average walking speed of 80 m/min. The walking catchments have been derived using the interactive walkit.com tool, a pedestrian journey planning system promoted by both Manchester City Council and TfGM.
- 4.6 A 2013 Manchester Household Survey shows that city centre residents will walk up to two miles (3.2km) to reach work, leisure and retail destinations. This is largely due to the favourable topography and compact nature of the city centre. A 3.2km walking catchment is shown in figure 4.2.



Figure 4.1: 2km Walking Catchment

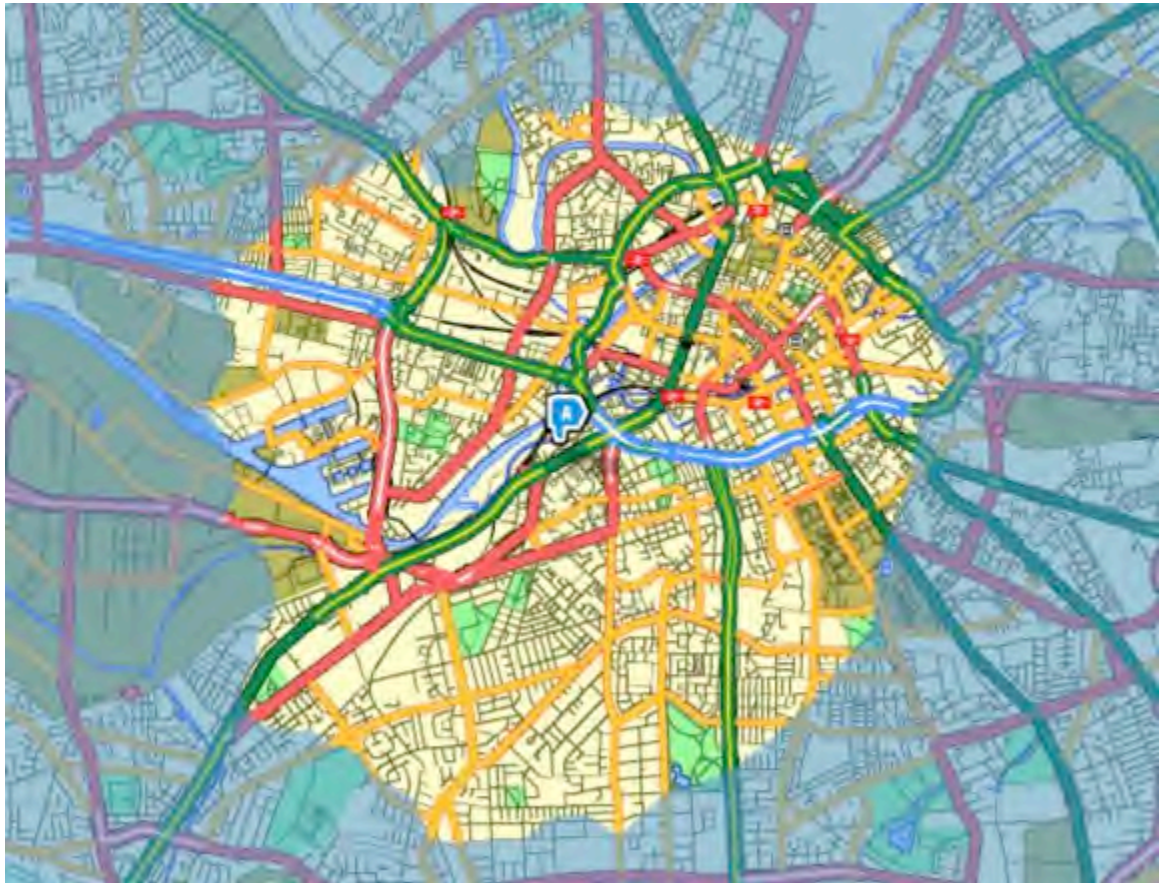


Figure 4.2: 3.2km Walking Catchment

- 4.7 Figures 4.1 and 4.2 show that a significant proportion of the city centre is within 2km of the site and all the city centre and Salford Quays is within 3.2km of the site.
- 4.8 The existing pedestrian infrastructure surrounding the site provides a good basis for future trips by residents to key destinations. The proximity of the site to a key city centre destinations, means that journeys on foot are likely to be a significant mode choice for future residents for both utility and leisure trips. Measures are included in the proposal to support access to the site on foot.

Cycling

- 4.9 Figure 4.3 shows that access can easily be gained to the Greater Manchester Cycle Network. The routes near the site comprise a combination of traffic-free and on-road routes, meaning that cycling is a feasible mode of travel for cyclists of different experience and confidence levels.



Figure 4.3: Local Cycle Network

- 4.10 The site sits within a 20mph zone that provides a suitable environment for cycle trips. Local streets link to the segregated cycle route that runs along the northern and southern alignment of the A56 Chester Road. A traffic-free route is also available along the Bridgewater Canal.
- 4.11 Cycling offers opportunities to substitute for short car trips under 5km, where 5km is taken to be a 25-minute journey time at a leisurely pace. The existing cycle routes provide connections to key destinations in the city centre, Trafford Park, Salford Quays and Stretford, all of which are within 5km of the site.
- 4.12 The site benefits from an exceptional level of cycle access and opportunities for cyclists of all abilities to safely access the site by this mode. Measures are included within the proposal to assist residents use this mode.

Access by Public Transport

- 4.13 Figure 4.4 shows the public transport network serving the site.



Figure 4.4: Local Public Transport Network

- 4.14 The closest bus stops to the site are a short walk away (3 minutes) on the A56 Chester Road. The stops are served by buses to the city centre, Flixton, Urmston, the Trafford Centre, Stretford, Chorlton and Didsbury. During the day, the bus stops are served by up to 14 buses per hour (in each direction) and coverage is provided throughout the week and during the evening.
- 4.15 The site also benefits from access to the Metrolink network with Cornbrook station being 350m from the site. Access to all areas can be gained using the Metrolink and the city centre is less than five minutes away using this mode.
- 4.16 Access can also be gained to Deansgate mainline station within a 10-minute walk of the site.
- 4.17 A Greater Manchester Accessibility Level (GMAL) calculation has been undertaken for the site. A GMAL is calculated using the interactive tool managed and maintained by TfGM. This tool measures AM Peak accessibility by public transport of a point of interest and provides a score between 1 and 8, where 1 is a low level of accessibility and 8 is the highest level of accessibility.
- 4.18 Figure 4.5 shows the GMAL analysis for the site.

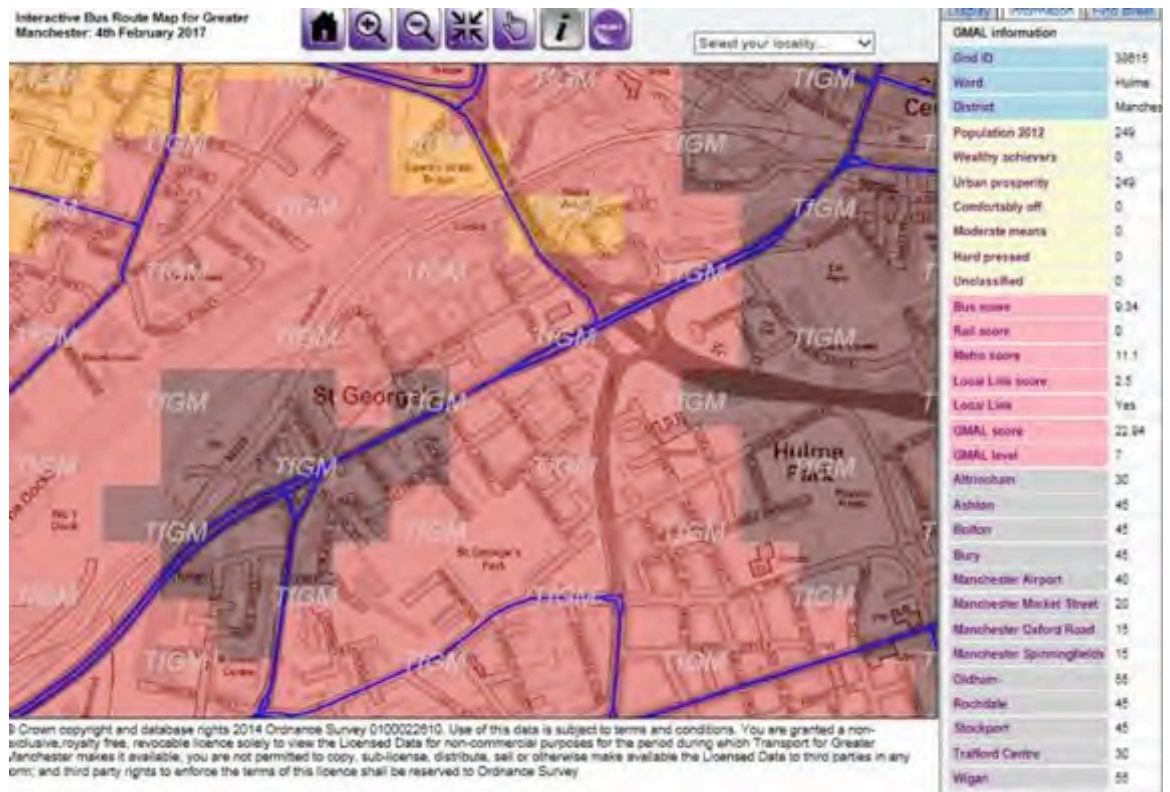


Figure 4.5: GMAL Analysis

- 4.19 The site has a GMAL at the upper end of level 7, indicating that the site benefits from a very high level of accessibility befitting of its city centre location and public transport connections offer a genuine alternative to private car trips.
- 4.20 GMAL has been developed by TfGM to allow the analysis of the accessibility of development sites and is based on the WebCAT/PTAL method used and supported by the London Authorities. The London Authorities, supported by the Mayor in the London Plan, use PTAL calculations to inform decisions on development parking levels. London has generally been more proactive with regard encouraging car-free development and setting the criteria for which this can work in policy.
- 4.21 The site's GMAL score is equivalent to a PTAL score of 5 (defined by Transport for London as 'very good'). The London Plan states that as accessibility levels increase parking provision should decrease and development sites with scores above PTAL 4 are suitable for car-free development.
- 4.22 The site benefits from excellent access by public transport and measures are included within the proposal to support residents using these modes.

Casual Car Use

- 4.23 Car clubs are an important component of the sharing economy and of a balanced city centre transport system as they offer a cost-effective and hassle-free alternative to private car ownership. By complementing public transport, walking and cycling systems, car clubs allow people to build mobility lifestyles that mean that they do not need to own private cars to the same extent as previously.
- 4.24 Enterprise Car Club provides a MCC supported solution that complements Manchester's sustainable transport system and to meet casual vehicle needs of residents who do not own a car. The initiative enables members to benefit from low cost, convenient and greener motoring, and a more sustainable pattern of living that negates the requirement to own and store a car.
- 4.25 Enterprise Car Club offers pay as you go motoring, with vehicles available to hire for as little as 30 minutes per trip. The vehicles are available 24/7 and members of the scheme can easily access vehicles on demand by reserving on line. The Enterprise Car Club can save motorists up to £3,500 a year on costs usually associated with fuel, insurance, servicing, MOT, cleaning and parking.

- 4.26 The merger of Enterprise and City Car Club now provides residents with solutions for longer term vehicle hire, for use when a resident wants to travel further afield on holiday, for example. From the Enterprise base at Piccadilly vehicles can be provided to meet longer car hire demand. The vehicles can be booked in advance and dropped off at the residence as required.
- 4.27 Three Enterprise Car Club vehicles are located close to the site, two on Ellesmere Street (two minutes from the site) and one on St George's Island (four minutes from the site).
- 4.28 The site benefits from easy access to car club vehicles and measures are included within the proposal to promote this facility for occasional car use requirements.

5 PARKING ASSESSMENT

- 5.1 This section of the TS examines the suitability of the site in to provide a car-free residential development. The assessment considers the existing characteristics of the city centre in terms of mobility and car ownership patterns, and accessibility levels, to allow an understanding of the existing appetite for non-car living and the ability of residents to meet their daily travel requirements without needing to use a car.

National Trends in Car Ownership

- 5.2 In the twentieth century growth in prosperity was associated with growth in car ownership. This relationship has changed in the twenty-first century, with growing prosperity in successful cities associated with decreasing car use. Increased urbanisation and population growth is leading to higher density cities where the car as a means of travel is less useful.
- 5.3 Intensification of population and activity in cities is having the effect of lowering per capita car ownership to a manner already seen in London. As car use becomes less practical and necessary for day-to-day journeys (because of parking charges at city centre destinations, traffic congestion conditions and improvements to alternative mode infrastructure) the convenience of owning and using a car has reduced for many city centre dwellers.
- 5.4 The Independent Transport Commission ('Traffic & Towns' 2015) has found that the rising costs of house purchase and rents means that discretionary income available for buying, storing and maintaining a car in the city centre has been squeezed, particularly when this is considered relative the amount of time the vehicle is used. Transport for London ('A Car Club Strategy for London' 2015) show that vehicles owned by city centre residents are only used on average for 4.6 hours per week. Meaning that the vehicle is parked for 97% of the time. This fact is making residents re-assess car ownership as although affordable for these resident types, the perceived cost of owning and maintaining a car simply to use for occasional journeys is higher (e.g. a higher cost per use).
- 5.5 'The Traffic & Towns' study undertaken by the Independent Transport Commission in 2015 concludes that there is also declining value and social status attached to car ownership among younger people. This is supported in Transport for Greater Manchester's LTP4 'Greater Manchester Transport Strategy 2040' (2017), which also concludes that attitudes to owning and using a car are evolving, and growing, ageing and affluent populations are changing how they travel. This is supported by a rise in the sharing economy where people are becoming more used to hiring things to meet their mobility needs rather than owning outright. This concept has seen the growth of online taxi dispatch companies (like Uber), the advent of using social media to arrange shared transport (like Bla-Bla Car), and the growing strength of car clubs across the UK (like Enterprise) and bike sharing (like Brompton hire).
- 5.6 The emergence of the sharing economy provides transport demand without the costs and inconvenience of owning and storing a car in city centre environments. It complements general improvements in other modes of travel, such as walking, cycling and public transport routes, to provide a more holistic transport system that flexibly meets the needs of urban dwellers and is known as a Mobility as a Service (MaaS).
- 5.7 MCC recognise these trends in city centre mobility and accept that many city centre residents already choose to live without a car.

- 5.8 TfGM is becoming a leading authority in providing the infrastructure and technology needed to further advance MaaS, including the TravelSpirit pilot scheme that is funded by the Government's Smart City initiative. TravelSpirit is an open collaboration to create a platform to deliver MaaS solutions including multimodal journey planning software and a full range of 'use cases'. 'Use cases' that are currently being promoted through TravelSpirit include bike sharing, car pooling/clubs, small vehicle transport systems (like taxi sharing) and taxi booking systems. The concept of TravelSpirit is to provide a single piece of software that allows people to obtain access to different modes of travel as they need to use them.
- 5.9 Although assisted by technological advances, choosing to live without a car in the city centre is not a new, Utopian concept. Many residents are self-selectors who choose homes in the city centre to ensure ease of access to central destinations and reduce the requirement to own or use a car. This is supported by research reported by Melia ('Car-free and Low Car Development' 2014). Melia's study shows that many residents of car-free/low parking developments are higher income people who either make an environmental decision not to own a car, or pick an accessible housing location where their daily travel needs can be met by other modes, and so don't prioritise car ownership and/or use. These residents tend to display pro-urban characteristics, favouring higher density living in flats and a better take up of walking and public transport.
- 5.10 Melia, Chatterjee and Clark ('Life Events and Travel Behaviour' 2014) also report that car ownership is strongly associated with life stages, such as moving to a new house, changing jobs, having children or retiring. At this time people will decide on whether a car is needed based on life characteristics, employment destination and type of urban area resided in. The 2014 Melia *et al* study found that car ownership and the desire to use a car was typically lower for residents living in inner urban areas where public transport is better and parking more difficult. Residents in these areas have been typically found to live without a car through choice, not income constraint.
- 5.11 This is supported by the findings of a TfL study ('Residential Parking Provision in New Developments' 2012) that was underpinned by a large postal survey of over 800 developments and 3,000 residents. The study concludes that parking is an important factor in some people's decision on where to live. In general, residents select a home location that meets their specific mobility, travel and car ownership needs. The study also established that the more parking provided the more a particular development will appeal to car owning people and/or people who prioritise car use when deciding where to live. Converse to this, the less parking provided the more the development appeals to people who do not prioritise car ownership or use when making the decision on where to live.
- 5.12 Importantly, this evidence shows that developments with more parking have higher levels of car ownership and produce more car travel than developments with less parking. This is even the case where the development is similar in all other aspects, such as resident characteristics accessibility and location. This shows that just because an area already has residential development with parking, that doesn't mean that limited parking at another, new development in that location can't also be successful. The TfL study shows that successful cities need to provide a mix of housing types and parking provision to meet the needs of different types of residents (car-free choosers and pro-drivers). This study, and others, support the idea that honest marketing of new residential developments will ensure that the right demographic is targeted from day one.
- 5.13 Guidance produced by Car Plus ('Car Clubs in New Developments – A Review of Experience and Good Practice in Low Car and Car-free Developments' 2016) states that car-free housing works best in locations with good access to local services and where existing local parking pressures make private car ownership unattractive.
- 5.14 Residents who are car-free choosers have always been present in the city centre housing market, but their numbers are rising as a result of technological advances, changes in attitudes to car ownership, and improvements to sustainable infrastructure.

Manchester City Centre Car Ownership

- 5.15 As with other large cities across the UK, the Centre for Cities shows that Manchester has seen an urban renaissance in the past 10 years, with city centre growth of 198% ('Where People Live and Work' 2015). 2011 Census data supports this finding, showing that car ownership levels in the

city centre are substantially lower than found in out-lying areas with 59% of city centre residents living without a car compared to 45% in the Manchester authority and 31% in Greater Manchester.

- 5.16 A study by the Campaign for Better Transport ('Car Dependency Scorecard' 2014) shows that, after London, Manchester is the least car dependent city in the country and the most accessible city in the country. This is attributed to the compact nature of the city, favourable topography, recent city centre residential intensification, and good quality infrastructure. The study supports local evidence that shows that a number of residents already live in the city centre without a car and that there is an appetite in the city centre for residential development that meets the specific mobility needs of residents (e.g. apartments both with and without parking provision).
- 5.17 As would be expected, the 2011 Census shows that the majority of city centre residents work in the city or in areas immediately adjacent to the city centre. 90% of these residents travel to work by sustainable modes including walking, cycling and public transport.
- 5.18 Evidence is presented below that shows that there are already a high proportion of residents in the city centre living without needing to own a car. This is supported by local and regional policy, that supports future accessible housing provision that enables existing and future residents to live without a car.
- 5.19 A survey and modelling exercise of Manchester city centre resident travel trends undertaken as part of a doctoral thesis at the University of Salford ('Understanding Travel Behaviour of Residents' 2013) found that of the households sampled that a notable proportion do not own a car (48%). Of the car owners, 37% stated that they rarely or never use their vehicle. This corresponds to the finding that 70% of all daily trips are within 2 miles of the place of residence, with the majority of these trips undertaken on foot.
- 5.20 A significant finding of the study was that residents with a parking space are significantly more likely to own a car, than those who owned an apartment without a parking space.
- 5.21 Respondents were asked if the building they lived in became car-free would they move out. Only 24% stated that they would, showing considerable support for the ability to live without a car and a desire to do so.
- 5.22 An overwhelming finding of the study was that respondents could be split into pro-driver or pro-active/sustainability. The pro-driver respondents were shown to have selected accommodation that provides a parking space. These respondents also indicated that parking availability was a significant consideration when deciding where to live. Pro-active/sustainability respondents where show to see Manchester as an accessible city centre where daily travel needs can be met without needing to use a car. These respondents also typically did not to own a car.
- 5.23 The study supports the findings of national studies, showing that there is a unique pattern of car ownership in city centres that is contrary to suburban trends in car ownership.
- 5.24 The study shows that residents select housing based on personal preferences and many of the residents choose to live in the city centre without a car. These residents are also more likely to live in apartments that do not have an associated parking space. It was also shown that these residents display a strong propensity for sustainable travel and perceive the city centre as a location where their needs can be met by non-car modes.

City Centre Resident Parking Demand

- 5.25 To establish mobility levels in the local area a review has been made of parking demand patterns at four nearby Urban Splash developments (Boxworks, Burton Place, MoHo and Timber Wharf). This review included a parking demand survey and information (provided by Urban Splash) on the take up of parking spaces in the developments.
- 5.26 The four developments provide 469 apartments and all include one, two and three-bedroom accommodation. Parking is provided in all four of the buildings.
- 5.27 Parking includes space for residents, commercial operators and Urban Splash staff. 464 spaces are available for use by residents, with additional spaces also provided for local commercial operators and Urban Splash staff. A number of the Urban Splash staff spaces are currently not used.

5.28 The resident parking is split into the following categories:

- Owned by residents
- Rented by residents
- On long term rent by letting agents for specific apartment lettings
- Currently available for rent

5.29 62% of the households own a parking space and 15% of households rent a space.

5.30 Table 5.1 shows the parking provision and current spare provision at the car parks.

	Unit Numbers	Parking Provision	Total Allocated	Total Spare
Urban Splash Sites	469	464	360	104

Table 5.1: Urban Splash Parking Provision

- 5.31 To understand the usage of the allocated parking spaces an occupancy survey was undertaken in the middle of the night on Monday 6th February 2017. The survey was timed to ensure maximum resident demand and occupancy, and minimum commercial demand. Table 5.2 shows the recorded occupancy.
- 5.32 The parking demand survey shows that of the total resident parking available only 58% is currently being used. The demand survey shows that 42% of households do not own a car. This is despite 77% of apartments having a space allocated to them and all residents having the opportunity to rent other spaces if they want them. The car ownership level is in line with 2011 Census data and the Manchester Household Survey.
- 5.33 The parking information provided by Urban Splash coupled with the demand survey data shows that a significant number of households do not own a car, even when parking is available to them, and these householders are meeting their daily travel requirements without needing to own a car.
- 5.34 The findings of the Urban Splash survey are in line with a similar survey undertaken at apartment buildings in Ancoats in 2016. The Ancoats area of the city centre is a similar distance from the central core of Manchester and has similar accessibility and local parking characteristics to St Georges-Castlefield. The Ancoats surveys, undertaken over several different days, showed that 41% of households don't own a car and that a maximum of 60% of the parking spaces available were in use. The take-up of parking at the Ancoats sites has been that low that the operator rents spaces in the car park to commuters and other surrounding residents on a daily, monthly or annual ticket basis.
- 5.35 A local estate agent has confirmed that of the city centre apartments that are currently under offer, 48% are being sold without a parking space. Jones Lang LaSalle has also confirmed that last year that 55% of apartments sold last year had a parking space and 45% didn't. This, and the preceding evidence, indicates that there is a strong market for car-free living in the city centre.
- 5.36 Discussions with other city centre developers has revealed a low take-up of parking spaces at new developments, with a demand of only 10% currently being found for on-site parking facilities both in the immediate area and in Greengates. This change in travel behaviour and parking demand is in keeping with the paradigm shift in mobility patterns found in city centres.
- 5.37 Capital & Centric (the applicant) is already bringing forward a car-free development in the city centre at Crusader Works. Interest in the apartments at this development is very high, despite there being no parking and the central courtyard being given over to amenity space, showing that there exists a strong market in the city of residents who do not want or need to own a car. On the 15th July Capital & Centric pre-released 20 loft apartments and these sold out, with potential residents queuing around the block. A further 10 apartments have been released and these have all sold out too.

City Centre Parking Rental Market

- 5.38 There is a flourishing market throughout the UK of residents leasing driveways, garages and allocated surface/basement parking to commuters and visitors to leisure events. After London, Manchester is the most popular area for the lease of private residential parking space. Manchester is the fourth most expensive area in the country for leasing private parking spaces, showing the popularity of this parking resource to commuters.
- 5.39 There are several resources available to residents who wish to advertise a parking space for rent, including:
- Justpark
 - Primal Park
 - Parklet
 - Your Parking Space
 - Secure Car Parking Manchester
 - Parkopedia
 - Preloved
 - Gumtree
- 5.40 In 2016 SK undertook a review of the spaces currently advertised for rent in residential buildings in Manchester city centre. The review showed that nearly 200 spaces were advertised for rent in the city centre. The analysis was limited by the fact that it was only possible to analyse spaces currently available for lease and not those for which rental agreements were already in place. On this basis, and given the fact that Manchester is the second most popular area in the UK for private parking rental after London, the analysis significantly underestimates the actual amount private resident parking rental activity in Manchester, but it does show that a number of residents are not using the parking spaces allocated to them. This is the same finding as shown from the surveys of the Urban Splash apartments close to the proposal site.
- 5.41 A new review of the most common parking rental websites show that there are a number of parking spaces at residential buildings in Castlefield currently advertised for rental. These spaces are offered for rent by residents and not the building operators. This shows that residents who purchased or rented apartments that have allocated parking spaces are not using them and are successfully living within the area without needing to own a car. Further examination of the parking needs at nearby apartment buildings is expanded on later in this section.
- 5.42 Agent sites offer a number of parking spaces within some residential developments. On discussion with the agents advertising the spaces it is clear that a number of the spaces were being offered for rental on the open market by the operators of the sites or by investors who had bought the parking spaces 'off plan'. Of particular note is parking offered to commuters in Skyline Chambers (Angel Meadows), The Bridge (Dandara), Ice Plant (Ancoats), and Flint Glass Works (Ancoats).
- 5.43 The data shows that there are even residents who own parking spaces and do not use them. The analysis also shows that it is possible to live in central areas of Manchester without needing to own a car.

The TRICS Database

- 5.44 The TRICS database is industry standard software that contains traffic and parking survey data relating to different land uses across the UK.
- 5.45 The TRICS database contains two surveys in Manchester, on Whitworth Street West (the Lock building) and Fairfield Street (the Warehouse). The Lock building provides 154 apartments and 100 parking spaces, and The Warehouse provides 20 apartments and 14 parking spaces. The Warehouse is currently operating as student accommodation, but was residential at the time of the TRICS survey.
- 5.46 The survey at the Warehouse recorded the number of vehicles parked in the car park at the start of the surveys, allowing an estimate of the site's car ownership level. The car ownership level at this site is 25%. Showing that residents in central Manchester areas can live without needing to own or use a car.

- 5.47 Unfortunately, the Lock building survey did not record the starting occupancy of the car park to allow an estimate of the site's car ownership level. However, only 19 vehicles accessed/egressed the building during the day. This indicates that only 12% of households typically use or require a car. This coupled with the evidence that there are currently nine parking spaces for rent in the building indicates that residential parking demand is significantly beneath that available.

Parking Evidence Summary

- 5.48 The existing car parking patterns and car ownership levels for residential developments in Manchester show that there a high proportion of residents in the city centre do not own a car and do not prioritise parking when looking for somewhere to live. The surveys also show that even when parking is provided with an apartment this does not encourage residents to purchase a car.
- 5.49 The information presented above demonstrates that there is a strong market for car-free accommodation in the city centre. The surveys show that housing development in the city centre should seek to accommodate the differing needs and requirements of city centre residents, including pro-drivers and car-free choosers. The need for a mix of housing and parking types is supported by recent consents for other car-free developments at Port Street and the Crusader Works.

Suitability for Car-free Development

- 5.50 The suitability of the site for a car-free development has been assessed in line with NPPF, with consideration given to accessibility and resident characteristics and requirements. These are set out below.

Accessibility Characteristics

- 5.51 The accessibility analysis shows that the site benefits from a very high level of accessibility by non-car modes. Opportunities also exist for future residents to access a car by using one of the three Enterprise Car Club vehicles that are in the area. The high level of accessibility of this city centre area is established in the recent committee reports for surrounding consented residential developments.

Parking Characteristics

- 5.52 There are currently no parking controls governing the use of on-street parking bays. This coupled with temporary suspensions of many of the bays means that existing parking activity is constrained to a much smaller area and it is difficult to find a space. The existing parking levels in the area are very likely to restrict the practicability of storing a car on-street for new residents in the area and will reduce the attractiveness of this area to residents who do not have a parking space off-street.
- 5.53 MCC has confirmed that although it was always the intention to control parking in the bays as it does elsewhere in the city centre, but that the plated times have never been brought into force. The consequence of the lack of parking controls in this area of the city centre is that parking on-street in the area is popular with commuters who park and then walk into the centre of the city. MCC has confirmed that it proposes to extend the city centre parking zone to cover the area to allow better management of the on-street activity and deter commuter parking.
- 5.54 The proposal includes a scheme for the reconfiguration of parking bays outside the site to allow the inclusion of a new loading bay and disabled bay. This scheme does not result in an overall reduction in parking bays due to the inclusion of the length of carriageway currently governed by double yellow lines in front of the existing western site access.

Resident Characteristics

- 5.55 Unlike other land uses (such as retail, education and employment developments), the future residents of the site have a choice of renting/buying an apartment within the development in the

knowledge that there is no parking. Research shows that people select a home location that meets their specific mobility, travel and car ownership needs. A resident that owns a car is very unlikely to choose to live at development that does not provide parking or in an area where it is impossible to guarantee a parking space on-street.

- 5.56 A high proportion of Manchester residents, and residents in the local area, already successfully live in the city centre without having or aspiring to own a car. These residents don't need to be nudged away from car use or encouraged to change behaviour, as they are already car-free choosers. The strong market for car-free living has been demonstrated by the popularity of the applicant's other car-free development at the Crusader Works.
- 5.57 Evidence shows that honest marketing of car-free developments assists in removing from the outset residents that own a car or prioritise car use. These residents will choose one of the number of apartment buildings nearby that provide parking on-site.
- 5.58 Both national and local transport strategies envisage that over time the propensity for city centre dwellers to live without a car will exponentially increase. This is due in part to the cost of owning a car in the city centre relative to the amount of times it is used, and also due to the emergence of the sharing economy where younger generations place less weight on ownership and more value on the flexible borrowing of utilities/services. These effects are embedded in Manchester policy and strategies (including the 'Greater Manchester Transport Strategy 2040', the 'Manchester Strategy: Our Manchester' and the 'Manchester Residential Quality Guidance'). Manchester City Council in conjunction with TfGM is currently piloting a smart cities programme that will actively facilitate the sharing economy by TravelSpirit.

Parking Assessment Conclusions

- 5.59 The accessibility analysis shows that the site benefits from a very high level of accessibility by non-car modes. Opportunities also exist for future residents to access a car by using one of the three Enterprise Car Club vehicles that are in the area. The accessibility of the site supports the practicability of living in the area without needing to own a car.
- 5.60 There are currently no parking controls governing the use of on-street parking bays. This coupled with temporary suspensions of many of the bays means that existing parking activity is temporarily constrained to a much smaller area and it is currently difficult to find a space. MCC is proposing to expand the city centre parking zone to cover the area and bring it in to line with the rest of the city centre.
- 5.61 The existing parking levels in the area are very likely to restrict the practicability of storing a car on-street for new residents in the area and will reduce the attractiveness of this area to residents who do not have a parking space off-street. The introduction of the intended parking controls for on-street areas in the vicinity of the site can be expected to alleviate the existing pressure on the available parking areas through the removal of inappropriate parking, as occurs at other areas within the city centre parking zone.
- 5.62 Research and evidence shows that Manchester city centre is the best place to live without a car outside London and that a high proportion of residents already live in the city without a car. Evidence also shows that a number of residents who have a parking space are not using them. It is also shown that residents select accommodation that meets their specific requirements. Local policy supports providing a mix of accommodation to meet the needs of a diverse range of residents. This includes developments that cater directly for car-free choosers, by not providing parking.
- 5.63 The appetite for car-free living is already strong in the city centre and new developments that are coming forward to market without parking (such as Capital & Centric's Crusader Works) are very popular. This emphasises the fact that parking is not a necessity or priority for some city centre residents.
- 5.64 Based on the above, it is shown that the proposal offers the opportunity to cater for a specific part of the residential market in the city centre. As these people do not own cars the proposal will not result in an undue impact on road safety or amenity.
- 5.65 The existing operation of the site is associated with parking activity. Existing uses will be extinguished removing this demand and resulting in a material betterment for the area.

6 TRAFFIC IMPACT

Extant Traffic Generation

- 6.1 The existing buildings on site have a combined floor area of 7,117sqm and is occupied by commercial operators. The TRICS database has been used to establish the traffic flows that would be associated with the full use of the existing buildings on site. The forecast has been undertaken in line with latest good practice guidance and for robustness the TRICS land use class 02/C (industrial unit) has been used.
- 6.2 The TRICS output is attached as appendix b, with a summary provided in table 6.1 of the traffic generating potential of existing site activity.

	Trip Rate (per 100sqm)			Traffic Flows (in vehs)		
	IN	OUT	TOTAL	IN	OUT	TOTAL
AM	0.402	0.078	0.48	29	6	34
PM	0.056	0.363	0.419	4	26	30
Daily	2.315	1.989	4.304	165	142	306

Table 6.1: Existing Site Traffic Flows (in vehs)

Development Traffic Generation

- 6.3 The proposal will extinguish the existing uses on site and deliver 202 apartments. As agreed with MCC, the site provides a good location for car-free development and will appeal to residents who do not own a car. On this basis, the traffic associated with the proposal will be limited to occasional activity associated with taxis, service vehicles and visitors.
- 6.4 Notwithstanding the above, a forecast has been undertaken of typical traffic flows associated with city/town centre residential developments to provide an absolute worst-case traffic impact assessment.
- 6.5 The TRICS database has been used in the forecast, with the land use set as flats privately owned. In line with best practice the location parameters have been set to town centre survey sites only. Table 6.2 shows the surveys resulting from the initial analysis.

Reference	Description	Town/City	Location	Units	Parking	Level
CB-03-C-01	Flats	Carlisle	Town Centre	40	43	108%
GM-03-C-02	Flats	Manchester	Town Centre	154	100	65%
GM-03-C-03	Flats	Manchester	Town Centre	20	14	70%
HI-03-C-01	Flats	Inverness	Town Centre	38	42	111%

Table 6.2: TRICS Survey Sites

- 6.6 It can be seen from table 6.2 that none of the TRICS survey sites have a low level of parking and, in fact, two of them have parking levels that exceed 100% provision. None of the TRICS survey sites are car-free.
- 6.7 To make a reasonable assessment within the limits of the TRICS data available, surveys with over 100% parking provision have been removed from the analysis. The two retained survey sites, both in Manchester, provide between 60% and 75% parking on site, a level that is still considerably higher than the development site.
- 6.8 Table 6.3 shows the TRICS development trip rates and resulting traffic flows. These flows are presented on a worst-case basis, as the forecast method used clearly overestimates forecast traffic associated with the proposal site when considered against the characteristics of the proposal and type of occupier it will appeal to.

	Trip Rate (per unit)			Vehicle movements (per unit)		
	IN	OUT	TOTAL	IN	OUT	TOTAL
AM	0.011	0.029	0.04	2	6	8
PM	0.023	0.006	0.017	5	1	3
Daily	0.146	0.154	0.3	29	31	61

Table 6.3: Forecast Traffic Flows

Net Traffic Impact

- 6.9 Even with no consideration of the changes to site traffic and the worst-case development forecast used, table 6.3 shows that the proposal will generate traffic well below DfT accepted significance thresholds of 30+ vehicles per hour or 100+ vehicles per day.
- 6.10 Notwithstanding this, table 6.4 shows the net change in site traffic when compared to the extant use of the site. In reality, the proposal will generate significantly less traffic than this and movements will be limited to taxi, servicing and visitor activity.

	IN	OUT	TOTAL
AM	-26	0	-26
PM	1	-25	-26
Daily	-135	-110	-246

Table 6.4: Net Traffic Impact

7 POLICY ASSESSMENT

National Policy

- 7.1 The National Planning Policy Framework (NPPF), published in 2012, consolidates previous national planning policy guidance into one document. At the heart of the policy is the presumption in favour of sustainable development that supports economic growth and vibrant communities. NPPF supports development that balances economic, social and environmental gains, while considering local circumstances and opportunities. NPPF states that local authorities should:

‘...actively manage patterns of growth to make the fullest possible use of public transport, walking and cycling, and focus significant development in locations which are or can be made sustainable.’

- 7.2 NPPF requires all developments that generate significant amounts of movement to be supported by a Transport Statement or Transport Assessment, and states at paragraph 32 that decisions should take account of whether:
- the opportunities for sustainable transport modes have been taken up depending on the nature and location of the site
 - safe and suitable access to the site can be achieved for all people
 - improvements are proposed to limit significant impacts of development

- 7.3 Paragraph 32 of NPPF also states that:

‘Development should only be prevented or refused on transport grounds where the residual cumulative impacts of development are severe.’

- 7.4 NPPF does not provide development scale thresholds for the assessment of transport impact or significance. Best practice has typically supported the use of DfT ‘Guidance on Transport Assessment’. The DfT document was withdrawn in 2014 and replaced with the advice in National Planning Practice Guidance (NPPG). However, TfGM TA guidance still references the DfT guidance and it is still pertinent to the assessment of development impacts in Manchester.

- 7.5 DfT guidance sets a threshold of development significance of 30 vehicles per hour and/or 100 vehicles per day. The net impact of the proposal is significantly less than this on a typical daily basis and so it is concluded that the proposal will not have an impact on the surrounding network or road safety conditions.
- 7.6 The proposal accords with NPPF and provides safe and suitable access for all people and the city centre location of the site offers excellent opportunities for sustainable trip making. The development includes measures that are commensurate with the scale, impact and nature of the proposal to facilitate and maximise access by sustainable modes and minimise the traffic impact of the proposal.
- 7.7 When considering appropriate levels of parking at a development, NPPF states that consideration should be given to the following criteria:
- The accessibility of the development
 - The type, mix and use of the development
 - The availability of and opportunities for public transport trips
 - Local car ownership levels
 - An overall need to reduce the use of high-emission vehicles
- 7.8 In line with NPPF, the site is located in a highly sustainable and accessible city centre location with excellent opportunities to access by non-car modes. The TS shows that future residents will undertake the majority of their daily trips to facilities within the city centre. These facilities are connected to the site by an excellent network of pedestrian, cycling and public transport routes. The car-free nature of the proposal is commensurate with the accessible location of the site and the characteristics of the future site residents.

Local Policy

- 7.9 'The Manchester Strategy: Our Manchester' states that the city is the best place to live, outside London, without a car due to its broad base of jobs, good-quality housing, and good public transport systems. The strategy outlines a commitment to creating a low carbon and liveable city that will become denser to allow more people to live and work in the city centre, and to allow more people to live without owning a car.
- 7.10 MCC's Core Strategy sets out transport policy against which developments are considered. Policy SP1 (Spatial Principles) sets out a requirement for future development where the potential for access by walking, cycling and public transport can be maximised, emissions can be minimised, and the need to travel to can be reduced. This is supported by Policy T1 and T2.
- 7.11 Policy T1 (Sustainable Transport) seeks to encourage modal shift from car travel by supporting developments that are in accessible locations, enable active and equitable travel, reduce congestion, and can assist in meeting air quality policy objectives.
- 7.12 Policy T2 (Accessible Areas and Opportunities) supports development that is located to ensure good accessibility to the regional centre, the airport and national/international connections. The policy also requires developments to be accessible by walking, cycling and public transport. The TS shows that the site benefits from a very high level of accessibility by all modes and a very high GMAL score of 7. Measures are included as part of the proposal to support non-car access to the site.
- 7.13 Policy T2 also outlines a requirement for developments to provide the appropriate level of parking that meets the realistic requirements of the users of the development. MCC's parking standards are outlined in appendix b of the Core Strategy. Paragraph 11.17 of this document states that:
- 'The Council recognises that parking is an essential facility for many developments, but will ensure that the level of parking complements its commitment to sustainable transport, through reducing emissions and congestion.'
- 7.14 There are no defined residential parking standards included in the Core Strategy. Notwithstanding this, the Core Strategy supports a reduction in parking levels when consideration is given to

accessibility and characteristics of a particular site. This is further supported by the endorsed (December 2016) 'Manchester Residential Quality Guidance'.

- 7.15 The 'Manchester Residential Quality Guidance' states that Manchester is highly accessible and, after London, is the easiest city to get around by non-car modes of transport. The guidance recognises that approaches to parking will be different for each site and will be dependent on a number of factors. It acknowledges that just as there is a need to create a mix of apartment types to meet the diverse demographics of city centre residents, there is also need to provide a mix of parking levels to meet what can be very different car ownership requirements of city centre residents.
- 7.16 As this TS shows, there is no one-size fits all when it comes to city centre resident parking demands. Some residents want to own a car and research shows that these people will look for an apartment that provides a parking space. Similarly, residents who do not own or want to own a car will not prioritise this feature when looking for a suitable place to live. National and Manchester research show that householders are self-selectors who choose accommodation to meet their individual needs. The new guidance supports this and the robust evidence presented in this note shows that lower levels of parking are appropriate in some instances.
- 7.17 Further guidance is provided in Transport for Greater Manchester's 'Transport for Sustainable Communities: A Guide for Developers' (2014). The TfGM policy document supports developments that:
 - Maximise accessibility
 - Reduce the need to travel by car
 - Make the best use of existing infrastructure
 - Encourage active travel
- 7.18 TfGM's guidance also states that developments should be in:

'...areas with good public transport links and most accessible locations... good pedestrian and cycle links to key local facilities... to provide low carbon access for short local journeys'
- 7.19 TfGM guidance also supports the introduction of restricted parking at new developments and identifies this as the most important method of influencing future travel behaviour. The TfGM document was produced post-NPPF and supports the underlying principles therein.
- 7.20 The development site meets the requirements of local policy guidance. The site is well located to encourage trips by non-car modes to both city centre and regional destinations. The site is also well connected to existing infrastructure for all travel modes and the development proposes measures to further enhance accessibility and reduce the dependence on the car.
- 7.21 The scheme proposes a car-free development, which is commensurate with the realistic requirements of users of the development, sustainable location of the site and a high GMAL score of 7.
- 7.22 The development proposal accord with relevant adopted local and national policy requirements.

8 CONCLUSIONS

- 8.1 SK Transport Planning has been appointed by Capital and Centric to prepare a Transport Statement in support of a planning application for the development of 202 apartments at the Talbot Mill complex in Manchester city centre. The site presents a strong opportunity to deliver a liveable and car-free community, where the daily travel needs of residents can be met sustainably without needing to own or use a car.
- 8.2 Research and evidence shows that Manchester city centre is the best place to live without a car outside London and that a high proportion of residents already live in the city without a car. The site has an exceptional level of accessibility and is well located to encourage trips by non-car modes to both city centre and regional destinations. The site benefits from the high level of accessibility by public transport (GMAL level 7). Evidence and local policy support the introduction of a car-free development in this location.

- 8.3 A transport strategy has been developed for the site that includes appropriate access solutions and facilities for pedestrians, cyclists and service vehicles, and measures to promote non-car living. The proposal includes measures to allow access by refuse, delivery and disabled vehicles.
- 8.4 It is concluded that the proposal meets the requirements of local and national policy, and that the residual traffic, road safety and parking impact of the proposal will not be significant when tested against NPPF.

Appendix A

Appendix B

TECHNICAL NOTE

Date: 28th February 2017

Project: Talbot Mill, Ellesmere Street, Castlefield

Title: Transport Statement Scoping Study

1. Introduction

Purpose

- 1.1 SK Transport Planning has been appointed by Capital and Centric to assess the traffic, transport and parking implications of converting the Talbot Mill complex to create 125 apartments, demolish Buildings B and C, erect a building to provide 83 apartments, and create a new landscaped courtyard. The development will create 208 apartments on site.
- 1.2 A scoping meeting was held on 15th February to discuss the general principles of the proposal in light of MCC's recently endorsed 'Residential Quality Guidance'.
- 1.3 This technical note outlines the proposed method for assessing the transport impact of the proposed redevelopment of site. To assist with agreeing the scope for the submission document, and also the proposed parking levels on site, comprehensive surveys, assessments and forecasts have been undertaken. The findings of this are presented below, alongside a study into the parking characteristics of city centre residential developments across the UK and in Manchester.

Background

- 1.4 As shown in figure 1.1, the Talbot Mill site is in the Castlefield area of the city centre. The location of the site has been found to be highly sustainable by MCC when considering other applications in the area.
- 1.5 The site is occupied by a large mill complex. The existing buildings on site have a combined floor area of 7,117sqm.
- 1.6 Vehicular access to the site is provided from two locations on to Ellesmere Street. The eastern access point provides a vehicular connection to the central courtyard on site and the western junction provides access to a short service stub. Both accesses form a simple priority arrangement with Ellesmere Street. The access to the courtyard is under the existing building and has a maximum height of 3.3m.
- 1.7 Servicing and delivery movements associated with the current use of the site, and other uses in the area, currently occur from kerbside on Ellesmere Street.



Figure 1.1: Site Location

Proposal

- 1.8 The proposal will deliver 208 apartments in the refurbished building and a purpose-built apartment block.
- 1.9 The proposal will provide no parking on site. A comprehensive study has been undertaken of the suitability of the site to enable residents to live successfully without a car. The study also examines the existing take-up of car-free living in the city centre and the market appetite for such dwellings. The outcome of the study is provided later in this scoping report.
- 1.10 The existing accesses to the complex will be retained, with the western access used for pedestrians and forming the main entrance to the site, and the eastern access gated and used for access to the courtyard. The eastern access will also be used for access by cyclists.
- 1.11 The applicant is supportive of including innovative measures to allow future occupiers to meet their daily travel requirements without needing to own a car. Emerging measures, that will be delivered as part of the site's travel plan, are still being finalised.
- 1.12 The proposal will provide a high level of cycle parking on site and temporary cycle parking areas for visitors to the site. The scheme layouts are still being finalised, however the current locations being considered for cycle storage include basement levels and in a covered location in the courtyard. It is likely to be the case that additional storage will be available in individual apartments. The Transport Statement will include layouts that clearly define the location of the proposed storage.
- 1.13 As with surrounding developments, servicing and refuse collection activity will occur from kerbside on Ellesmere Street. This is in part due to the site access height restriction, but also to protect the integrity of the central courtyard, which will provide amenity space for residents. On bin collection days, the bins will be moved by the site management to the area on-site under the access arch.
- 1.14 The access arch will be used can be used when residents are moving in. Though vehicles that can reverse in will be restricted to vans of either transit height or smaller. The Transport Statement will include swept paths that show vehicles undertaking this manoeuvre.
- 1.15 The applicant has agreed to commensurately contribute towards MCC's scheme to extend the city centre parking zone to this area of the city centre. As part of this scheme it is anticipated that MCC will introduce loading and disabled parking bays that are required for the area, in line with guidance.

2. Existing Traffic Characteristics

Local Highway Network

- 2.1 The site is currently accessed by all modes from Ellesmere Street, an unclassified street that routes east-west from the A56 Chester Road to the on-slip with the A57 Mancunian Way. At its eastern end (between the A56 and Hulme Hall Road) Ellesmere Street is one-way eastbound.
- 2.2 Ellesmere Street provides access to a number of side roads along its length, providing access to surrounding residential and commercial properties.
- 2.3 Ellesmere Street is typically 7.5m along its length with footways and street lighting present. The road is subject to a 20mph speed limit.

Extant Site Traffic Flows

- 2.4 The existing buildings have a total floor area of 7,117sqm and are occupied by commercial uses. The TRICS database has been used to establish the traffic flows associated with the extant use of the site. For robustness TRICS use class 02/Employment/C – Industrial Unit has been used. This use is one of the lowest employment use trip generators in the TRICS database.
- 2.5 A summary is provided in table 2.1.

	Trip Rate (per 100sqm)			Traffic Flows (in vehs)		
	IN	OUT	TOTAL	IN	OUT	TOTAL
AM	0.402	0.078	0.48	29	6	34
PM	0.056	0.363	0.419	4	26	30
Daily	2.315	1.989	4.304	165	142	306

Table 2.1: Extant Site Use Traffic Flows

Road Safety

- 2.6 The GMTU accident database has been reviewed to establish accident patterns and road safety issues on Ellesmere Street. Figure 2.1 shows that there have been no accidents on Ellesmere Street in the previous three years.

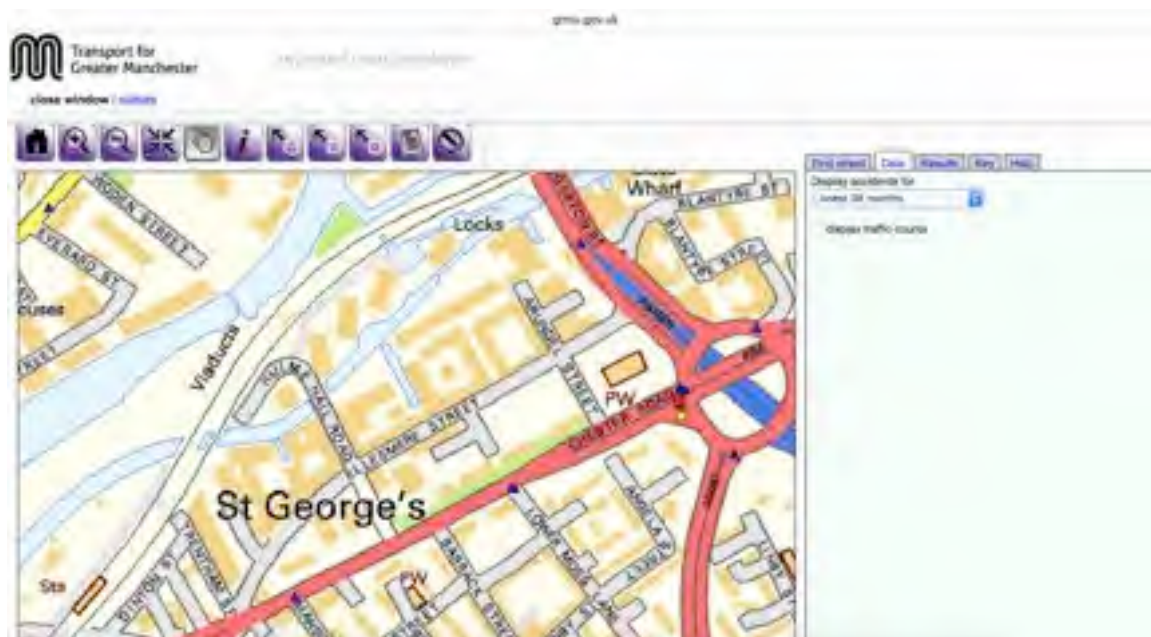


Figure 2.1: Accident Data

3. Parking Characteristics

- 3.1 The local on-street parking provision is governed by marked parking bays and double yellow lines. Parking restrictions are in place along the south side of Ellesmere Street in the form of double yellow lines. Double yellow lines are also present at side road junctions on the northern carriageway edge.
- 3.2 The parking bays on the northern carriageway edge are currently uncontrolled, meaning that residents and commuters can park for any length of time even though the area is within the city centre.
- 3.3 Parking control plates are present on the street which limit parking to two hours duration between 8am and 6pm, but these have been blacked out by MCC and it has been confirmed that these are currently not enforced. MCC has confirmed that although it was always the intention to control parking in the bays, that the plated times have never been brought into force. The consequence of the lack of parking controls in this area of the city centre is that parking on-street in the area is popular with both residents and commuters.
- 3.4 In addition to this city centre anomaly, a number of the bays are currently suspended due to construction works. This has had the unfortunate consequence of squeezing parking activity into a constrained area and makes it difficult to find a suitable place to park at various parts of the day.
- 3.5 Surveys of existing parking activity have been undertaken on several occasions (including both daytime and late evening demand). The surveys show that should the suspended bays be brought back into use that there would be more than sufficient space to meet current demand levels.
- 3.6 MCC has confirmed that, in line with the parking policy throughout other areas of the city centre, it proposes to extend the city centre parking zone to cover the area to allow better management of the on-street activity and deter commuter parking.

4. Accessibility

Walking

- 4.1 The site is connected to key destinations by a comprehensive network of pedestrian routes, typical of its city centre location. Pedestrian provision is of good condition, with wide footways, dropped kerb crossings and tactile paving present. The streets surrounding the site are overlooked and lit.
- 4.2 Signalised pedestrian crossing facilities are provided at a number of locations along the A56 Chester Road allowing safe connections to routes into the city centre and also local bus stops. A continuous traffic-free connection is also provided along the Bridgewater Canal to the city centre and Trafford Park.
- 4.3 Access can also be gained to existing segregated cycle and pedestrian routes along the Manchester Ship Canal, by using the existing footbridge across the Manchester Ship Canal at St George's Island.
- 4.4 Two-thirds of all journeys in the UK are under-five miles and short distance trips offer the greatest opportunity for changes in travel behaviour. DfT best practice guidance states that walking has the potential to substitute for car trips at a local level for journeys under 2km.
- 4.5 Figure 4.1 shows a 2km walking catchment from the site representing a walk time of 25 minutes, using an average walking speed of 80 m/min. The walking catchments have been derived using the interactive walkit.com tool, a pedestrian journey planning system promoted by both Manchester City Council and TfGM.
- 4.6 A 2013 Manchester Household Survey shows that city centre residents will walk up to two miles (3.2km) to reach work, leisure and retail destinations. This is largely due to the favourable topography and compact nature of the city centre. A 3.2km walking catchment is shown in figure 4.2.



Figure 4.1: 2km Walking Catchment



Figure 4.2: 3.2km Walking Catchment

- 4.7 Figures 4.1 and 4.2 show that a significant proportion of the city centre is within 2km of the site and all the city centre and Salford Quays is within 3.2km of the site.
- 4.8 The existing pedestrian infrastructure surrounding the site provides a good basis for future trips by residents to key destinations. The proximity of the site to a key city centre destinations, means that journeys on foot are likely to be a significant mode choice for future residents for both utility and leisure trips.

Cycling

- 4.9 Figure 4.3 shows that access can easily be gained to the Greater Manchester Cycle Network. The routes near the site comprise a combination of traffic-free and on-road routes, meaning that cycling is a feasible mode of travel for cyclists of different experience and confidence levels.

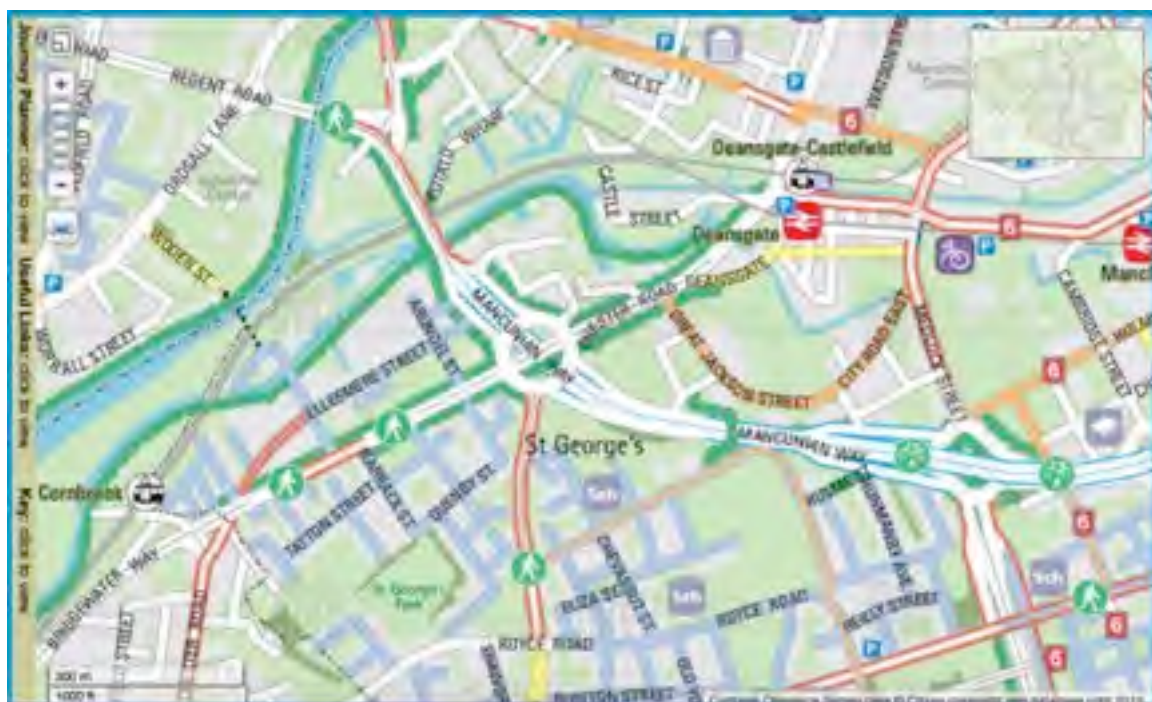


Figure 4.3: Local Cycle Network

- 4.10 The site sits within a 20mph zone that provides a suitable environment for cycle trips. Local streets link to the segregated cycle route that runs along the northern and southern alignment of the A56 Chester Road. A traffic-free route is also available along the Bridgewater Canal.
- 4.11 Cycling offers opportunities to substitute for short car trips under 5km, where 5km is taken to be a 25-minute journey time at a leisurely pace. The existing cycle routes provide connections to key destinations in the city centre, Trafford Park, Salford Quays and Stretford, all of which are within 5km of the site.
- 4.12 The site benefits from an exceptional level of cycle access and opportunities for cyclists of all abilities to safely access the site by this mode.

Access by Public Transport

- 4.13 Figure 4.4 shows the public transport network serving the site.



Figure 4.4: Local Public Transport Network

- 4.14 The closest bus stops to the site are a short walk away (3 minutes) on the A56 Chester Road. The stops are served by buses to the city centre, Flixton, Urmston, the Trafford Centre, Stretford, Chorlton and Didsbury. During the day, the bus stops are served by up to 14 buses per hour (in each direction) and coverage is provided throughout the week and during the evening.
- 4.15 The site also benefits from access to the Metrolink network with Cornbrook station being 350m from the site. Access to all areas can be gained using the Metrolink and the city centre is less than five minutes away using this mode.
- 4.16 Access can also be gained to Deansgate mainline station within a 10-minute walk of the site.
- 4.17 A Greater Manchester Accessibility Level (GMAL) calculation has been undertaken for the site. A GMAL is calculated using the interactive tool managed and maintained by TfGM. This tool measures AM Peak accessibility by public transport of a point of interest and provides a score between 1 and 8, where 1 is a low level of accessibility and 8 is the highest level of accessibility.
- 4.18 Figure 4.5 shows the GMAL analysis for the site.



Figure 4.5: GMAL Analysis

- 4.19 The site has a GMAL at the upper end of level 7, indicating that the site benefits from a very high level of accessibility befitting of its city centre location and public transport connections offer a genuine alternative to private car trips.
- 4.20 GMAL has been developed by TfGM to allow the analysis of the accessibility of development sites and is based on the WebCAT/PTAL method used and supported by the London Authorities. The London Authorities, supported by the Mayor in the London Plan, use PTAL calculations to inform decisions on development parking levels. London has generally been more proactive with regard encouraging car-free development and setting the criteria for which this can work in policy.
- 4.21 The site's GMAL score is equivalent to a PTAL score of 5 (defined by Transport for London as 'very good'). The London Plan states that as accessibility levels increase parking provision should decrease and development sites with scores above PTAL 4 are suitable for car-free development.

Casual Car Use

- 4.22 Car clubs are an important component of the sharing economy and of a balanced city centre transport system as they offer a cost-effective and hassle-free alternative to private car ownership. By complementing public transport, walking and cycling systems, car clubs allow people to build mobility lifestyles that mean that they do not need to own private cars to the same extent as previously.
- 4.23 Enterprise Car Club provides a MCC supported solution that complements Manchester's sustainable transport system and to meet casual vehicle needs of residents who do not own a car. The initiative enables members to benefit from low cost, convenient and greener motoring, and a more sustainable pattern of living that negates the requirement to own and store a car.
- 4.24 Enterprise Car Club offers pay as you go motoring, with vehicles available to hire for as little as 30 minutes per trip. The vehicles are available 24/7 and members of the scheme can easily access vehicles on demand by reserving on line. The Enterprise Car Club can save motorists up to £3,500 a year on costs usually associated with fuel, insurance, servicing, MOT, cleaning and parking.

- 4.25 The merger of Enterprise and City Car Club now provides residents with solutions for longer term vehicle hire, for use when a resident wants to travel further afield on holiday, for example. From the Enterprise base at Piccadilly vehicles can be provided to meet longer car hire demand. The vehicles can be booked in advance and dropped off at the residence as required.
- 4.26 Three Enterprise Car Club vehicles are located close to the site, two on Ellesmere Street (two minutes from the site) and one on St George's Island (four minutes from the site). Enterprise Car Club has confirmed that the take-up of the Ellesmere Street vehicles is very good and in line with the usage of other Car Club vehicles in more central areas of the city centre.

5. Trends in City Centre Living

- 5.1 This section of the scoping note has been prepared to establish the suitability of the site in to provide a car-free residential development. The assessment considers the existing characteristics of the city centre in terms of mobility and car ownership patterns, and accessibility levels, to allow an understanding of the existing appetite for non-car living and the ability of residents to meet their daily travel requirements without needing to use a car.
- 5.2 Consideration is also given to local, regional and national policy in relation to development parking and accessibility requirements. To test whether the site meets policy criteria, full analysis is included in the note of the existing transport and accessibility characteristics of the area in which the site sits, and whether (on this basis) the site is a suitable location for car-free development.
- 5.3 In the twentieth century growth in prosperity was associated with growth in car ownership. This relationship has changed in the twenty-first century, with growing prosperity in successful cities associated with decreasing car use. Increased urbanisation and population growth is leading to higher density cities where the car as a means of travel is less useful.
- 5.4 Intensification of population and activity in cities is having the effect of lowering per capita car ownership to a manner already seen in London and in Manchester city centre. As car use becomes less practical and necessary for day-to-day journeys (because of city centre parking charges, traffic congestion conditions and improvements to alternative mode infrastructure) the convenience of owning and using a car has reduced for many city centre dwellers.

National City Centre Mobility Trends

- 5.5 The Independent Transport Commission ('Traffic & Towns' 2015) has found that the rising costs of house purchase and rents means that discretionary income available for buying, storing and maintaining a car in the city centre has been squeezed, particularly when this is considered relative the amount of time the vehicle is used. Transport for London ('A Car Club Strategy for London' 2015) show that vehicles owned by city centre residents are only used on average for 4.6 hours per week. Meaning that the vehicle is parked for 97% of the time. This fact is making residents re-assess owning a car as, although affordable for these resident types, the perceived cost of owning and maintaining a car simply to use for occasional journeys is higher (e.g. a higher cost per use). This has had a discernible effect on city centre car ownership levels, particularly when examined against other types of areas.
- 5.6 'The Traffic & Towns' study undertaken by the Independent Transport Commission in 2015 concludes that there is also declining value and social status attached to car ownership among younger people. This is supported in Transport for Greater Manchester's LTP4 'Greater Manchester Transport Strategy 2040' (2017), which also concludes that attitudes to owning and using a car are evolving, and growing, ageing and affluent populations are changing how they travel. This is supported by a rise in the sharing economy where people are becoming more used to hiring things to meet their mobility needs rather than owning outright. This concept has seen the growth of online taxi dispatch companies (like Uber), the advent of using social media to arrange shared transport (like Bla-Bla Car), and the growing strength of car clubs across the UK (like Enterprise) and bike sharing (like Brompton hire).

- 5.7 The emergence of the sharing economy provides transport demand without the costs and inconvenience of owning and storing a car in city centre environments. It complements general improvements in other modes of travel, such as walking, cycling and public transport routes, to provide a more holistic transport system that flexibly meets the needs of urban dwellers and is known as a Mobility as a Service (MaaS).
- 5.8 Manchester City Council recognise these trends in city centre mobility and that a number of city centre residents already choose to live without a car. TfGM is becoming a leading authority in providing the infrastructure and technology needed to further advance MaaS, including the TravelSpirit pilot scheme that is funded by the Government's Smart City initiative. TravelSpirit is an open collaboration to create a platform to deliver MaaS solutions including multimodal journey planning software and a full range of 'use cases'. 'Use cases' that are currently being promoted through TravelSpirit include bike sharing, car-pooling/clubs, small vehicle transport systems (like taxi sharing) and taxi booking systems. The concept of TravelSpirit is to provide a single piece of software that allows people to obtain access to different modes of travel as they need to use them.
- 5.9 Choosing to live without a car in the city centre is not a particularly new concept. Many residents are self-selectors who choose homes in the city centre to ensure ease of access to central destinations and reduce the requirement to own or use a car. This is supported by research reported by Melia ('Car-free and Low Car Development' 2014). Melia's study shows that many residents of car-free/low parking developments are higher income people who either make an environmental decision not to own a car, or pick an accessible housing location where their daily travel needs can be met by other modes, and so don't prioritise car ownership and/or use. These residents tend to display pro-urban characteristics, favouring higher density living in flats and a better take up of walking and public transport.
- 5.10 Melia, Chatterjee and Clark ('Life Events and Travel Behaviour' 2014) also report that car ownership is strongly associated with life stages, such as moving to a new house, changing jobs, having children or retiring. At this time people will decide on whether a car is needed based on life characteristics, employment destination and type of urban area resided in. The 2014 Melia *et al* study found that car ownership and the desire to use a car was typically lower for residents living in inner urban areas where public transport is better and parking more difficult. Residents in these areas have been typically found to live without a car through choice, not income constraint.
- 5.11 This is supported by the findings of a TfL study ('Residential Parking Provision in New Developments' 2012) that was underpinned by a large postal survey of over 800 developments and 3,000 residents. The study concludes that parking is an important factor in some people's decision on where to live. In general, residents select a home location that meets their specific mobility, travel and car ownership needs. The study also established that the less parking provided the more the development appeals to people who do not prioritise car ownership or use when making the decision on where to live.
- 5.12 The TfL study shows that successful cities need to provide a mix of housing types and parking provision to meet the needs of different types of residents (car-free choosers and pro-drivers). This study, and others, support the idea that honest marketing of new residential developments will ensure that the right demographic is targeted from day one.
- 5.13 Guidance produced by Car Plus ('Car Clubs in New Developments – A Review of Experience and Good Practice in Low Car and Car-free Developments' 2016) states that car-free housing works best in locations with good access to local services and where existing local parking pressures make private car ownership unattractive.
- 5.14 Residents who are car-free choosers have always been present in the city centre housing market, but their numbers are rising as a result of increased city centre living, technological advances, changes in attitudes to car ownership, and improvements to sustainable infrastructure.

Manchester City Centre Mobility Trends

- 5.15 As with other large cities across the UK, the Centre for Cities shows that Manchester has seen an urban renaissance in the past 10 years, with city centre growth of 198% ('Where People Live and

Work' 2015). 2011 Census data supports this finding, showing that car ownership levels in the city centre are substantially lower than found in out-lying areas with 59% of city centre residents living without a car compared to 45% in the Manchester authority and 31% in Greater Manchester.

- 5.16 A study by the Campaign for Better Transport ('Car Dependency Scorecard' 2014) shows that, after London, Manchester is the least car dependent city in the country and the most accessible city in the country. This is attributed to the compact nature of the city, favourable topography, recent city centre residential intensification, and good quality infrastructure. The study supports local evidence that shows that a number of residents already live in the city centre without a car.
- 5.17 The 2011 Census shows that the majority of city centre residents work in the city or in areas immediately adjacent to the city centre. 90% of these residents travel to work by sustainable modes including walking, cycling and public transport.

Manchester City Centre Household Survey

- 5.18 Evidence is presented below that shows that there are already a high proportion of residents in the city centre living without needing to own a car. This is supported by local and regional policy, that supports future accessible housing provision that enables existing and future residents to live without a car.
- 5.19 A survey and modelling exercise of Manchester city centre resident travel trends undertaken as part of a doctoral thesis at the University of Salford ('Understanding Travel Behaviour of Residents' 2013) found that of the households sampled that a notable proportion do not own a car (48%). Of the car owners, 37% stated that they rarely or never use their vehicle. This corresponds to the finding that 70% of all daily trips are within 2 miles of the place of residence, with most these trips undertaken on foot.
- 5.20 The study supports the findings of national studies, showing that there is a unique pattern of car ownership in city centres that is contrary to suburban trends in car ownership. A significant finding of the study was that residents with a parking space are significantly more likely to own a car, than those who owned an apartment without a parking space.
- 5.21 Respondents were asked if the building they lived in became car-free would they move out. Only 24% stated that they would, showing considerable support for the ability to live without a car and a desire to do so.
- 5.22 An overwhelming finding of the study was that respondents could be split into pro-driver or pro-active/sustainability. The pro-driver respondents were shown to have selected accommodation that provides a parking space. These respondents also indicated that parking availability was a significant consideration when deciding where to live. Pro-active/sustainability respondents where show to see Manchester as an accessible city centre where daily travel needs can be met without needing to use a car. These respondents also typically did not to own a car.
- 5.23 The study shows that residents select housing based on personal preferences and many of the residents choose to live in the city centre without a car. These residents are also more likely to live in apartments that do not have an associated parking space. It was also shown that these residents display a strong propensity for sustainable travel and perceive the city centre as a location where their needs can be met by non-car modes.

City Centre Residential Parking Demand

- 5.24 To establish mobility levels in the local area a review has been made of parking demand patterns at four nearby Urban Splash developments (Boxworks, Burton Place, MoHo and Timber Wharf). This review included a parking demand survey and information (provided by Urban Splash) on the take up of parking spaces in the developments.
- 5.25 The four developments provide 469 apartments and all include one, two and three-bedroom accommodation. Parking is provided for all four of the buildings.

- 5.26 Parking includes space for residents, commercial operators and Urban Splash staff. 464 spaces are available for use by residents, with additional spaces also provided for local commercial operators and Urban Splash staff. A number of the Urban Splash staff spaces are currently not used.
- 5.27 The resident parking is split into the following categories:
- Owned by residents
 - Rented by residents
 - On long term rent by letting agents for specific apartment lettings
 - Currently available for rent
- 5.28 62% of the households own a parking space and 15% of households rent a space.
- 5.29 Table 5.1 shows the parking provision and current spare provision at the car parks.

	Unit Numbers	Parking Provision	Total Allocated	Total Spare
Urban Splash Sites	469	464	360	104

Table 5.1: Urban Splash Parking Provision

- 5.30 To understand the usage of the allocated parking spaces an occupancy survey was undertaken in the middle of the night on Monday 6th February 2017. The survey was timed to ensure maximum resident demand and occupancy, and minimum commercial demand. Table 5.2 shows the recorded occupancy.
- 5.31 The parking demand survey shows that of the total resident parking available only 58% is currently being used. The demand survey shows that 42% of households do not own a car. This is despite 77% of apartments having a space allocated to them. The car ownership level is in line with 2011 Census data and the Manchester Household Survey.
- 5.32 The parking information provided by Urban Splash coupled with the demand survey data shows that a significant number of households do not own a car, even when parking is available to them, and these householders are meeting their daily travel requirements without needing to own a car.
- 5.33 The findings of the Urban Splash survey are in line with a similar survey undertaken at apartment buildings in Ancoats in 2016. The Ancoats area of the city centre is a similar distance from the central core of Manchester and has similar accessibility and local parking characteristics to St Georges-Castlefield. The Ancoats surveys, undertaken over several different days, showed that 41% of households don't own a car and that a maximum of 60% of the parking spaces available were in use. The take-up of parking at the Ancoats sites has been that low that the operator rents spaces in the car park to commuters and other surrounding residents on a daily, monthly or annual ticket basis.
- 5.34 A local estate agent (Thornley Grove) has confirmed that of the city centre apartments that are currently under offer, 48% are being sold without a parking space. Jones Lang LaSalle has also confirmed that last year that 55% of apartments sold last year had a parking space and 45% didn't. This, and the preceding evidence, indicates that there is a strong market for car-free living in the city centre.
- 5.35 Discussions with other city centre developers has revealed a low take-up of parking spaces at new developments, with a demand of only 10% currently being found for on-site parking facilities both in the immediate area and in Greengates. This change in travel behaviour and parking demand is in keeping with the paradigm shift in mobility patterns found in city centres.

City Centre Parking Rental Market

- 5.36 There is a flourishing market throughout the UK of residents leasing driveways, garages and allocated surface/basement parking to commuters and visitors to leisure events. After London, Manchester is the most popular area for the lease of private residential parking space.

Manchester is the fourth most expensive area in the country for leasing private parking spaces, showing the popularity of this parking resource to commuters.

- 5.37 There are several resources available to residents who wish to advertise a parking space for rent, including:
- Justpark
 - Primal Park
 - Parklet
 - Your Parking Space
 - Secure Car Parking Manchester
 - Parkopedia
 - Preloved
 - Gumtree
- 5.38 In 2016 SK undertook a review of the spaces currently advertised for rent in residential buildings in Manchester city centre. The review showed that nearly 200 spaces were advertised for rent in the city centre. The analysis was limited by the fact that it was only possible to analyse spaces currently available for lease and not those for which rental agreements were already in place. On this basis, and given the fact that Manchester is the second most popular area in the UK for private parking rental after London, the analysis significantly underestimates the actual amount private resident parking rental activity in Manchester, but it does show that a number of residents are not using the parking spaces allocated to them.
- 5.39 A new review of the most common parking rental websites show that there are a number of parking spaces at residential buildings in Castlefield currently advertised for rental. These spaces are offered for rent by residents and not the building operators. This shows that residents who purchased or rented apartments that have allocated parking spaces are not using them and are successfully living within the area without needing to own a car. Further examination of the parking needs at nearby apartment buildings is expanded on later in this section.
- 5.40 Agent sites offer a number of parking spaces within some residential developments. On discussion with the agents advertising the spaces it is clear that a number of the spaces were being offered for rental on the open market by the operators of the sites or by investors who had bought the parking spaces 'off plan'. Of particular note is parking offered in Skyline Chambers (Angel Meadows), The Bridge (Dandara), Ice Plant (Ancoats), and Flint Glass Works (Ancoats). The Ice Plant and Flint Glass Works in Ancoats, operated by Northern Property Group, are advertised as commuter car parks. Again, showing that the take-up of parking and the car ownership of residents in the buildings is much lower than envisaged when the buildings were constructed.
- 5.41 The data shows that there are even residents who own parking spaces and do not use them. The analysis also shows that it is possible to live in central areas of Manchester without needing to own a car.

The TRICS Database

- 5.42 The TRICS database is industry standard software that contains traffic and parking survey data relating to different land uses across the UK.
- 5.43 The TRICS database contains two surveys in Manchester, on Whitworth Street West (the Lock building) and Fairfield Street (the Warehouse). The Lock building provides 154 apartments and 100 parking spaces, and The Warehouse provides 20 apartments and 14 parking spaces. The Warehouse is currently operating as student accommodation, but was residential at the time of the TRICS survey.
- 5.44 The survey at the Warehouse recorded the number of vehicles parked in the car park at the start of the surveys, allowing an estimate of the site's car ownership level. The car ownership level at this site is 25%. Showing that residents in central Manchester areas can live without needing to own or use a car.

- 5.45 Unfortunately, the Lock building survey did not record the starting occupancy of the car park to allow an estimate of the site's car ownership level. However, only 19 vehicles accessed/egressed the building during the day. This indicates that only 12% of households typically use or require a car. This coupled with the evidence that there are currently nine parking spaces for rent in the building indicates that residential parking demand is significantly beneath that available.

Summary

- 5.46 The existing car parking patterns and car ownership levels for residential developments in Manchester show that there a high proportion of residents in the city centre do not own a car and do not prioritise parking when looking for somewhere to live. The surveys also show that even when parking is provided with an apartment this does not encourage residents to purchase a car.
- 5.47 The information presented above demonstrates that there is a strong market for car-free accommodation in the city centre. The surveys show that housing development in the city centre should seek to accommodate the differing needs and requirements of residents, including pro-drivers and car-free choosers. The need for a mix of housing and parking types is supported by recent consents for other car-free developments at Port Street and the Crusader Works.

6. Transport Policy Context

National Policy

- 6.1 The National Planning Policy Framework (NPPF) and National Planning Practice Guidance (NPPG) support reduced parking levels at highly accessible residential developments. Both documents support a presumption in favour of sustainable development and that local authorities should:

'...actively manage patterns of growth to make the fullest possible use of public transport, walking and cycling, and focus significant development in locations which are or can be made sustainable.'

- 6.2 When considering appropriate levels of parking at a development, NPPF states that consideration should be given to the following criteria:

- The accessibility of the development
- The type, mix and use of the development
- The availability of and opportunities for public transport trips
- Local car ownership levels
- An overall need to reduce the use of high-emission vehicles

Local Policy

- 6.3 'The Manchester Strategy: Our Manchester' states that the city is the best place to live, outside London, without a car due to its broad base of jobs, good-quality housing, and good public transport systems. The strategy outlines a commitment to creating a low carbon and liveable city that will become denser to allow more people to live and work in the city centre, and to allow more people to live without owning a car.
- 6.4 Manchester City Council's (MCC) adopted parking standards are outlined in appendix b of the 'Local Development Framework Core Strategy Development Plan Document'. Paragraph 11.17 states that:

'The Council recognises that policy is an essential facility for many developments, but will ensure that the level of parking complements its commitment to sustainable transport, through reducing emissions and congestion.'

- 6.5 There are no adopted residential parking standards in Manchester. Notwithstanding this, adopted policy supports a reduction in parking levels when consideration is given to accessibility of the particular site. This is further supported by the endorsed 'Manchester Residential Quality Guidance'.
- 6.6 The 'Manchester Residential Quality Guidance' states that Manchester is highly accessible and, after London, is the easiest city to get around by non-car modes of transport. The guidance recognises that approaches to parking will be different for each site and will be dependent on a number of factors. It acknowledges that just as there is a need to create a mix of apartment types to meet the diverse demographics of city centre residents, there is also need to provide a mix of parking levels to meet what can be very different car ownership requirements of city centre residents. As this study has shown, there is no one-size fits all when it comes to city centre resident parking demands. Some residents want to own a car and research shows that these people will look for an apartment that provides a parking space. Similarly, residents who do not own or want to own a car will not prioritise this feature when looking for a suitable place to live. National and Manchester research show that householders are self-selectors who choose accommodation to meet their individual needs. The new guidance supports this and the robust evidence presented in this note shows that lower levels of parking are appropriate in some instances.

7. Suitability for Car-free Development

- 7.1 Policy and research shows that there is already a high proportion of car-free choosers in large urban areas in the UK, including Manchester. By virtue of their home locations these residents successfully live without needing to own a car and many are already active adopters of sharing economy principles, hiring vehicles to meet occasional demand and undertaking normal daily trips by non-car modes.
- 7.2 The suitability of the site for a car-free development has been assessed in line with NPFF, with consideration given to accessibility and resident characteristics and requirements.
- 7.3 The accessibility analysis shows that the site benefits from a very high level of accessibility by non-car modes. Opportunities also exist for future residents to access a car by using one of the three Enterprise Car Club vehicles that are in the area.
- 7.4 The high level of accessibility of this city centre area is established in the recent committee reports for surrounding consented residential developments.
- 7.5 There are currently no parking controls governing the use of on-street parking bays. This coupled with temporary suspensions of many of the bays means that existing parking activity is constrained to a much smaller area and it is difficult to find a space. The existing parking levels in the area are very likely to restrict the practicability of storing a car on-street for new residents in the area and will reduce the attractiveness of this area to residents who do not have a parking space off-street.
- 7.6 The introduction of MCC's parking controls for on-street areas in the vicinity of the site can be expected to alleviate the existing pressure on the available parking areas through the removal of inappropriate parking, as with other areas within the city centre parking zone. These measures, coupled with the existing parking controls in other areas of the city centre, will limit the practicability of storing a vehicle on-street for future residents of the development.
- 7.7 Unlike other land uses (such as retail, education and employment developments), the future residents of the site have a choice of renting/buying an apartment within the development in the knowledge that there is no parking. Research shows that people select a home location that meets their specific mobility, travel and car ownership needs. A resident that owns a car is very unlikely to choose to live at development that does not provide parking or in an area where it is impossible to guarantee a parking space on-street.
- 7.8 A high proportion of Manchester residents, and residents in the local area, already successfully live in the city centre without having or aspiring to own a car. These residents don't need to be nudged away from car use or encouraged to change behaviour, as they are already car-free choosers.

- 7.9 Evidence shows that honest marketing of car-free developments assists in removing from the outset residents that own a car or prioritise car use. These residents will choose one of the number of apartment buildings nearby that provide parking on-site.
- 7.10 Both national and local transport strategies envisage that over time the propensity for city centre dwellers to live without a car will exponentially increase. This is due in part to the cost of owning a car in the city centre relative to the amount of times it is used, and also due to the emergence of the sharing economy where younger generations place less weight on ownership and more value on the flexible borrowing of utilities/services. These effects are embedded in Manchester policy and strategies (including the 'Greater Manchester Transport Strategy 2040', the 'Manchester Strategy: Our Manchester' and the 'Manchester Residential Quality Guidance'). Manchester City Council in conjunction with TfGM is currently piloting a smart cities programme that will actively facilitate the sharing economy by TravelSpirit.
- 7.11 Research and evidence shows that Manchester city centre is the best place to live without a car outside London and that a high proportion of residents already live in the city without a car. Evidence also shows that a number of residents who have a parking space are not using them. It is also shown that residents select accommodation that meets their specific requirements. Local policy supports providing a mix of accommodation to meet the needs of a diverse range of residents. This includes developments that cater directly for car-free choosers, by not providing parking.
- 7.12 The location of the site in the city centre means that the site benefits from an exceptional level of accessibility and local infrastructure is already in place to enable residents to live without needing to use or own a car. Evidence and local policy support the introduction of a car-free development in this location.

8. Emerging Transport Strategy

- 8.1 The site offers a strong opportunity to develop sustainable residential accommodation in the city centre, where future residents will be able to meet their daily travel needs without needing to own a car. A transport strategy and travel plan is currently being developed for the site that will build upon the sustainable location of the site and promote non-car living. This includes honest marketing as a car-free development. From the outset it will be made clear to all applicants that there will be no opportunities to store a car on-street due to existing constraints and Manchester City Council's future control proposals.
- 8.2 MCC highways has requested a financial contribution towards its proposal to extend the city centre parking zone to cover the area. The applicant has agreed to a commensurate contribution, subject to a viability assessment and also discussions with the Council with regard other S106 contributions.
- 8.3 It is envisaged that MCC's proposal will also provide disabled parking bays and loading bays as required to serve the entire area, in line with the endorsed 'Residential Quality Guidance'.

9. Transport Statement Scope

- 9.1 Based on current local and national guidance, and the scale of the proposal, the Transport Statement for the site will include the following elements:

1. Existing Situation

Characteristics of the site (including historic and actual uses)
 Local transport network review
 Existing local on-street parking provision & MCC parking proposals
 Extant site traffic flows
 Historic accident record

2. Proposal

Scale of development

Sustainable access proposals

Servicing access

Parking provision

3. Accessibility

Connections with external walking and cycle networks

Public transport accessibility (train, tram, bus & shuttle bus)

Enterprise Car Club locations

Greater Manchester Accessibility Level analysis (GMAL)

On-site design measures to promote sustainable travel

Travel Plan policy/monitoring measures to promote sustainable travel & support parking levels

4. Parking Impact

National city centre mobility trends

Manchester city centre mobility trends

Manchester city centre parking trends

MCC and national policy context

Suitability for car-free development

5. Traffic Impact

Extant site traffic flows

Development traffic flows

Net traffic impact

Road safety impact

Appendix C

Calculation Reference: AUDIT-443201-160831-0839

TRIP RATE CALCULATION SELECTION PARAMETERS:

Land Use : 02 - EMPLOYMENT
 Category : C - INDUSTRIAL UNIT

VEHICLESSelected regions and areas:

02 SOUTH EAST	
HF HERTFORDSHIRE	1 days
03 SOUTH WEST	
BR BRISTOL CITY	1 days
05 EAST MIDLANDS	
DS DERBYSHIRE	1 days
06 WEST MIDLANDS	
WM WEST MIDLANDS	2 days
07 YORKSHIRE & NORTH LINCOLNSHIRE	
WY WEST YORKSHIRE	1 days
08 NORTH WEST	
LC LANCASHIRE	1 days
09 NORTH	
TW TYNE & WEAR	1 days

This section displays the number of survey days per TRICS® sub-region in the selected set

Filtering Stage 2 selection:

This data displays the chosen trip rate parameter and its selected range. Only sites that fall within the parameter range are included in the trip rate calculation.

Parameter: Gross floor area
 Actual Range: 300 to 13350 (units: sqm)
 Range Selected by User: 300 to 43325 (units: sqm)

Public Transport Provision:

Selection by: Include all surveys

Date Range: 01/01/08 to 19/10/15

This data displays the range of survey dates selected. Only surveys that were conducted within this date range are included in the trip rate calculation.

Selected survey days:

Monday	2 days
Tuesday	1 days
Wednesday	1 days
Thursday	4 days

This data displays the number of selected surveys by day of the week.

Selected survey types:

Manual count	8 days
Directional ATC Count	0 days

This data displays the number of manual classified surveys and the number of unclassified ATC surveys, the total adding up to the overall number of surveys in the selected set. Manual surveys are undertaken using staff, whilst ATC surveys are undertaken using machines.

Selected Locations:

Edge of Town Centre	1
Suburban Area (PPS6 Out of Centre)	7

This data displays the number of surveys per main location category within the selected set. The main location categories consist of Free Standing, Edge of Town, Suburban Area, Neighbourhood Centre, Edge of Town Centre, Town Centre and Not Known.

Selected Location Sub Categories:

Industrial Zone	7
Commercial Zone	1

This data displays the number of surveys per location sub-category within the selected set. The location sub-categories consist of Commercial Zone, Industrial Zone, Development Zone, Residential Zone, Retail Zone, Built-Up Zone, Village, Out of Town, High Street and No Sub Category.

Filtering Stage 3 selection:

Use Class:

B1	4 days
B2	3 days

This data displays the number of surveys per Use Class classification within the selected set. The Use Classes Order 2005 has been used for this purpose, which can be found within the Library module of TRICS®.

Population within 1 mile:

10,001 to 15,000	1 days
15,001 to 20,000	1 days
25,001 to 50,000	6 days

This data displays the number of selected surveys within stated 1-mile radii of population.

Population within 5 miles:

75,001 to 100,000	1 days
125,001 to 250,000	2 days
250,001 to 500,000	4 days
500,001 or More	1 days

This data displays the number of selected surveys within stated 5-mile radii of population.

Car ownership within 5 miles:

0.5 or Less	1 days
0.6 to 1.0	4 days
1.1 to 1.5	3 days

This data displays the number of selected surveys within stated ranges of average cars owned per residential dwelling, within a radius of 5-miles of selected survey sites.

Travel Plan:

No	8 days
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This data displays the number of surveys within the selected set that were undertaken at sites with Travel Plans in place, and the number of surveys that were undertaken at sites without Travel Plans.

LIST OF SITES relevant to selection parameters

1	BR-02-C-01	MECH. ENGINEERS	BRISTOL CITY
	NOVERS HILL		
	BEDMINSTER		
	BRISTOL		
	Suburban Area (PPS6 Out of Centre)		
	Industrial Zone		
	Total Gross floor area:	1100 sqm	
	Survey date: MONDAY	19/10/09	Survey Type: MANUAL
2	DS-02-C-02	ENGINEERED PRODUCTS	DERBYSHIRE
	PONTEFRACT STREET		
	DERBY		
	Suburban Area (PPS6 Out of Centre)		
	Industrial Zone		
	Total Gross floor area:	2600 sqm	
	Survey date: THURSDAY	25/06/15	Survey Type: MANUAL
3	HF-02-C-01	INDUSTRIAL UNIT	HERTFORDSHIRE
	BRIDGE ROAD EAST		
	WELWYN GARDEN CITY		
	Suburban Area (PPS6 Out of Centre)		
	Industrial Zone		
	Total Gross floor area:	1800 sqm	
	Survey date: THURSDAY	17/07/08	Survey Type: MANUAL
4	LC-02-C-02	RECYCLING CO.	LANCASHIRE
	ESSEX STREET		
	RED SCAR IND ESTATE		
	PRESTON		
	Edge of Town Centre		
	Industrial Zone		
	Total Gross floor area:	8000 sqm	
	Survey date: THURSDAY	10/05/12	Survey Type: MANUAL
5	TW-02-C-01	INDUSTRIAL UNIT	TYNE & WEAR
	SHAFTESBURY AVENUE		
	TYNE POINT IND. ESTATE		
	JARROW		
	Suburban Area (PPS6 Out of Centre)		
	Industrial Zone		
	Total Gross floor area:	950 sqm	
	Survey date: THURSDAY	15/11/12	Survey Type: MANUAL
6	WM-02-C-01	METAL BEARINGS	WEST MIDLANDS
	FORGE LANE		
	MINWORTH		
	SUTTON COLDFIELD		
	Suburban Area (PPS6 Out of Centre)		
	Industrial Zone		
	Total Gross floor area:	4200 sqm	
	Survey date: TUESDAY	25/11/08	Survey Type: MANUAL
7	WM-02-C-02	ARDONPRINT	WEST MIDLANDS
	SYDNEY ROAD		
	SMALL HEATH		
	BIRMINGHAM		
	Suburban Area (PPS6 Out of Centre)		
	Commercial Zone		
	Total Gross floor area:	300 sqm	
	Survey date: WEDNESDAY	17/06/09	Survey Type: MANUAL

LIST OF SITES relevant to selection parameters (Cont.)

8 WY-02-C-02 FLUID SYSTEMS

WEST YORKSHIRE

BROWN LANE WEST

HOLBECK

LEEDS

Suburban Area (PPS6 Out of Centre)

Industrial Zone

Total Gross floor area: 13350 sqm

Survey date: MONDAY

19/10/15

Survey Type: MANUAL

This section provides a list of all survey sites and days in the selected set. For each individual survey site, it displays a unique site reference code and site address, the selected trip rate calculation parameter and its value, the day of the week and date of each survey, and whether the survey was a manual classified count or an ATC count.

TRIP RATE for Land Use 02 - EMPLOYMENT/C - INDUSTRIAL UNIT

VEHICLES

Calculation factor: 100 sqm

BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate
00:00 - 00:30									
00:30 - 01:00									
01:00 - 01:30									
01:30 - 02:00									
02:00 - 02:30									
02:30 - 03:00									
03:00 - 03:30									
03:30 - 04:00									
04:00 - 04:30									
04:30 - 05:00									
05:00 - 05:30									
05:30 - 06:00									
06:00 - 06:30	1	13350	0.210	1	13350	0.000	1	13350	0.210
06:30 - 07:00	1	13350	0.247	1	13350	0.000	1	13350	0.247
07:00 - 07:30	8	4038	0.111	8	4038	0.019	8	4038	0.130
07:30 - 08:00	8	4038	0.214	8	4038	0.003	8	4038	0.217
08:00 - 08:30	8	4038	0.226	8	4038	0.028	8	4038	0.254
08:30 - 09:00	8	4038	0.176	8	4038	0.050	8	4038	0.226
09:00 - 09:30	8	4038	0.099	8	4038	0.053	8	4038	0.152
09:30 - 10:00	8	4038	0.087	8	4038	0.074	8	4038	0.161
10:00 - 10:30	8	4038	0.065	8	4038	0.040	8	4038	0.105
10:30 - 11:00	8	4038	0.056	8	4038	0.050	8	4038	0.106
11:00 - 11:30	8	4038	0.059	8	4038	0.037	8	4038	0.096
11:30 - 12:00	8	4038	0.037	8	4038	0.050	8	4038	0.087
12:00 - 12:30	8	4038	0.040	8	4038	0.053	8	4038	0.093
12:30 - 13:00	8	4038	0.065	8	4038	0.096	8	4038	0.161
13:00 - 13:30	8	4038	0.093	8	4038	0.074	8	4038	0.167
13:30 - 14:00	8	4038	0.087	8	4038	0.046	8	4038	0.133
14:00 - 14:30	8	4038	0.074	8	4038	0.059	8	4038	0.133
14:30 - 15:00	8	4038	0.077	8	4038	0.077	8	4038	0.154
15:00 - 15:30	8	4038	0.050	8	4038	0.149	8	4038	0.199
15:30 - 16:00	8	4038	0.093	8	4038	0.130	8	4038	0.223
16:00 - 16:30	8	4038	0.043	8	4038	0.272	8	4038	0.315
16:30 - 17:00	8	4038	0.050	8	4038	0.195	8	4038	0.245
17:00 - 17:30	8	4038	0.031	8	4038	0.214	8	4038	0.245
17:30 - 18:00	8	4038	0.025	8	4038	0.149	8	4038	0.174
18:00 - 18:30	8	4038	0.000	8	4038	0.046	8	4038	0.046
18:30 - 19:00	8	4038	0.000	8	4038	0.025	8	4038	0.025
19:00 - 19:30									
19:30 - 20:00									
20:00 - 20:30									
20:30 - 21:00									
21:00 - 21:30									
21:30 - 22:00									
22:00 - 22:30									
22:30 - 23:00									
23:00 - 23:30									
23:30 - 24:00									
Total Rates:			2.315			1.989			4.304

This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected survey days that have count data available for the stated time period. Then, the average count is divided by the average trip rate parameter value, and multiplied by the stated calculation factor (shown just above the table and abbreviated here as FACT). So, the method is: COUNT/TRP* FACT. Trip rates are then rounded to 3 decimal places.

Parameter summary

Trip rate parameter range selected:	300 - 13350 (units: sqm)
Survey date date range:	01/01/08 - 19/10/15
Number of weekdays (Monday-Friday):	8
Number of Saturdays:	0
Number of Sundays:	0
Surveys automatically removed from selection:	0
Surveys manually removed from selection:	0

This section displays a quick summary of some of the data filtering selections made by the TRICS® user. The trip rate calculation parameter range of all selected surveys is displayed first, followed by the range of minimum and maximum survey dates selected by the user. Then, the total number of selected weekdays and weekend days in the selected set of surveys are shown. Finally, the number of survey days that have been manually removed from the selected set outside of the standard filtering procedure are displayed.

TRIP RATE for Land Use 02 - EMPLOYMENT/C - INDUSTRIAL UNIT

OGVS

Calculation factor: 100 sqm

BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate
00:00 - 00:30									
00:30 - 01:00									
01:00 - 01:30									
01:30 - 02:00									
02:00 - 02:30									
02:30 - 03:00									
03:00 - 03:30									
03:30 - 04:00									
04:00 - 04:30									
04:30 - 05:00									
05:00 - 05:30									
05:30 - 06:00									
06:00 - 06:30	1	13350	0.000	1	13350	0.000	1	13350	0.000
06:30 - 07:00	1	13350	0.000	1	13350	0.000	1	13350	0.000
07:00 - 07:30	8	4038	0.009	8	4038	0.003	8	4038	0.012
07:30 - 08:00	8	4038	0.003	8	4038	0.000	8	4038	0.003
08:00 - 08:30	8	4038	0.012	8	4038	0.006	8	4038	0.018
08:30 - 09:00	8	4038	0.009	8	4038	0.012	8	4038	0.021
09:00 - 09:30	8	4038	0.006	8	4038	0.009	8	4038	0.015
09:30 - 10:00	8	4038	0.003	8	4038	0.003	8	4038	0.006
10:00 - 10:30	8	4038	0.006	8	4038	0.009	8	4038	0.015
10:30 - 11:00	8	4038	0.006	8	4038	0.006	8	4038	0.012
11:00 - 11:30	8	4038	0.006	8	4038	0.006	8	4038	0.012
11:30 - 12:00	8	4038	0.009	8	4038	0.006	8	4038	0.015
12:00 - 12:30	8	4038	0.003	8	4038	0.006	8	4038	0.009
12:30 - 13:00	8	4038	0.009	8	4038	0.006	8	4038	0.015
13:00 - 13:30	8	4038	0.003	8	4038	0.006	8	4038	0.009
13:30 - 14:00	8	4038	0.009	8	4038	0.003	8	4038	0.012
14:00 - 14:30	8	4038	0.006	8	4038	0.003	8	4038	0.009
14:30 - 15:00	8	4038	0.006	8	4038	0.009	8	4038	0.015
15:00 - 15:30	8	4038	0.009	8	4038	0.012	8	4038	0.021
15:30 - 16:00	8	4038	0.006	8	4038	0.000	8	4038	0.006
16:00 - 16:30	8	4038	0.003	8	4038	0.009	8	4038	0.012
16:30 - 17:00	8	4038	0.006	8	4038	0.000	8	4038	0.006
17:00 - 17:30	8	4038	0.000	8	4038	0.006	8	4038	0.006
17:30 - 18:00	8	4038	0.000	8	4038	0.000	8	4038	0.000
18:00 - 18:30	8	4038	0.000	8	4038	0.000	8	4038	0.000
18:30 - 19:00	8	4038	0.000	8	4038	0.000	8	4038	0.000
19:00 - 19:30									
19:30 - 20:00									
20:00 - 20:30									
20:30 - 21:00									
21:00 - 21:30									
21:30 - 22:00									
22:00 - 22:30									
22:30 - 23:00									
23:00 - 23:30									
23:30 - 24:00									
Total Rates:			0.129			0.120			0.249

This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

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Parameter summary

Trip rate parameter range selected:	300 - 13350 (units: sqm)
Survey date date range:	01/01/08 - 19/10/15
Number of weekdays (Monday-Friday):	8
Number of Saturdays:	0
Number of Sundays:	0
Surveys automatically removed from selection:	0
Surveys manually removed from selection:	0

This section displays a quick summary of some of the data filtering selections made by the TRICS® user. The trip rate calculation parameter range of all selected surveys is displayed first, followed by the range of minimum and maximum survey dates selected by the user. Then, the total number of selected weekdays and weekend days in the selected set of surveys are shown. Finally, the number of survey days that have been manually removed from the selected set outside of the standard filtering procedure are displayed.

Calculation Reference: AUDIT-443201-160831-0824

TRIP RATE CALCULATION SELECTION PARAMETERS:

Land Use : 03 - RESIDENTIAL
 Category : C - FLATS PRIVATELY OWNED

VEHICLESSelected regions and areas:**08 NORTH WEST**

GM GREATER MANCHESTER 2 days

This section displays the number of survey days per TRICS® sub-region in the selected set

Filtering Stage 2 selection:

This data displays the chosen trip rate parameter and its selected range. Only sites that fall within the parameter range are included in the trip rate calculation.

Parameter: Number of dwellings
 Actual Range: 20 to 154 (units:)
 Range Selected by User: 6 to 215 (units:)

Public Transport Provision:

Selection by: Include all surveys

Date Range: 01/01/08 to 26/05/15

This data displays the range of survey dates selected. Only surveys that were conducted within this date range are included in the trip rate calculation.

Selected survey days:

Thursday 1 days
 Friday 1 days

This data displays the number of selected surveys by day of the week.

Selected survey types:

Manual count 2 days
 Directional ATC Count 0 days

This data displays the number of manual classified surveys and the number of unclassified ATC surveys, the total adding up to the overall number of surveys in the selected set. Manual surveys are undertaken using staff, whilst ATC surveys are undertaken using machines.

Selected Locations:

Town Centre 2

This data displays the number of surveys per main location category within the selected set. The main location categories consist of Free Standing, Edge of Town, Suburban Area, Neighbourhood Centre, Edge of Town Centre, Town Centre and Not Known.

Selected Location Sub Categories:

Built-Up Zone 2

This data displays the number of surveys per location sub-category within the selected set. The location sub-categories consist of Commercial Zone, Industrial Zone, Development Zone, Residential Zone, Retail Zone, Built-Up Zone, Village, Out of Town, High Street and No Sub Category.

Filtering Stage 3 selection:Use Class:

C3 2 days

This data displays the number of surveys per Use Class classification within the selected set. The Use Classes Order 2005 has been used for this purpose, which can be found within the Library module of TRICS®.

Filtering Stage 3 selection (Cont.):

Population within 1 mile:

25,001 to 50,000

2 days

This data displays the number of selected surveys within stated 1-mile radii of population.

Population within 5 miles:

500,001 or More

2 days

This data displays the number of selected surveys within stated 5-mile radii of population.

Car ownership within 5 miles:

0.6 to 1.0

2 days

This data displays the number of selected surveys within stated ranges of average cars owned per residential dwelling, within a radius of 5-miles of selected survey sites.

Travel Plan:

No

2 days

This data displays the number of surveys within the selected set that were undertaken at sites with Travel Plans in place, and the number of surveys that were undertaken at sites without Travel Plans.

LIST OF SITES relevant to selection parameters

- 1 GM-03-C-02 BLOCK OF FLATS GREATER MANCHESTER**
WHITWORTH STREET W.

MANCHESTER
Town Centre
Built-Up Zone
Total Number of dwellings: 154
Survey date: THURSDAY 13/10/11 Survey Type: MANUAL
- 2 GM-03-C-03 BLOCK OF FLATS GREATER MANCHESTER**
FAIRFIELD STREET

MANCHESTER
Town Centre
Built-Up Zone
Total Number of dwellings: 20
Survey date: FRIDAY 14/10/11 Survey Type: MANUAL

This section provides a list of all survey sites and days in the selected set. For each individual survey site, it displays a unique site reference code and site address, the selected trip rate calculation parameter and its value, the day of the week and date of each survey, and whether the survey was a manual classified count or an ATC count.

MANUALLY DESELECTED SITES

Site Ref	Reason for Deselection
CB-03-C-01	over 100% parking
HI-03-C-01	over 100% parking

TRIP RATE for Land Use 03 - RESIDENTIAL/C - FLATS PRIVATELY OWNED

VEHICLES

Calculation factor: 1 DWELLS

BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	2	87	0.000	2	87	0.011	2	87	0.011
08:00 - 09:00	2	87	0.011	2	87	0.029	2	87	0.040
09:00 - 10:00	2	87	0.006	2	87	0.017	2	87	0.023
10:00 - 11:00	2	87	0.017	2	87	0.017	2	87	0.034
11:00 - 12:00	2	87	0.017	2	87	0.006	2	87	0.023
12:00 - 13:00	2	87	0.011	2	87	0.017	2	87	0.028
13:00 - 14:00	2	87	0.017	2	87	0.023	2	87	0.040
14:00 - 15:00	2	87	0.011	2	87	0.011	2	87	0.022
15:00 - 16:00	2	87	0.011	2	87	0.011	2	87	0.022
16:00 - 17:00	2	87	0.011	2	87	0.006	2	87	0.017
17:00 - 18:00	2	87	0.023	2	87	0.000	2	87	0.023
18:00 - 19:00	2	87	0.011	2	87	0.006	2	87	0.017
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.146			0.154			0.300

This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

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Parameter summary

Trip rate parameter range selected: 20 - 154 (units:)
 Survey date range: 01/01/08 - 26/05/15
 Number of weekdays (Monday-Friday): 2
 Number of Saturdays: 0
 Number of Sundays: 0
 Surveys automatically removed from selection: 0
 Surveys manually removed from selection: 2

This section displays a quick summary of some of the data filtering selections made by the TRICS® user. The trip rate calculation parameter range of all selected surveys is displayed first, followed by the range of minimum and maximum survey dates selected by the user. Then, the total number of selected weekdays and weekend days in the selected set of surveys are shown. Finally, the number of survey days that have been manually removed from the selected set outside of the standard filtering procedure are displayed.

TRIP RATE for Land Use 03 - RESIDENTIAL/C - FLATS PRIVATELY OWNED

OGVS

Calculation factor: 1 DWELLS

BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	2	87	0.000	2	87	0.000	2	87	0.000
08:00 - 09:00	2	87	0.000	2	87	0.000	2	87	0.000
09:00 - 10:00	2	87	0.000	2	87	0.000	2	87	0.000
10:00 - 11:00	2	87	0.000	2	87	0.000	2	87	0.000
11:00 - 12:00	2	87	0.000	2	87	0.000	2	87	0.000
12:00 - 13:00	2	87	0.000	2	87	0.000	2	87	0.000
13:00 - 14:00	2	87	0.000	2	87	0.000	2	87	0.000
14:00 - 15:00	2	87	0.000	2	87	0.000	2	87	0.000
15:00 - 16:00	2	87	0.000	2	87	0.000	2	87	0.000
16:00 - 17:00	2	87	0.000	2	87	0.000	2	87	0.000
17:00 - 18:00	2	87	0.000	2	87	0.000	2	87	0.000
18:00 - 19:00	2	87	0.000	2	87	0.000	2	87	0.000
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.000			0.000			0.000

This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

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Parameter summary

Trip rate parameter range selected: 20 - 154 (units:)
 Survey date range: 01/01/08 - 26/05/15
 Number of weekdays (Monday-Friday): 2
 Number of Saturdays: 0
 Number of Sundays: 0
 Surveys automatically removed from selection: 0
 Surveys manually removed from selection: 2

This section displays a quick summary of some of the data filtering selections made by the TRICS® user. The trip rate calculation parameter range of all selected surveys is displayed first, followed by the range of minimum and maximum survey dates selected by the user. Then, the total number of selected weekdays and weekend days in the selected set of surveys are shown. Finally, the number of survey days that have been manually removed from the selected set outside of the standard filtering procedure are displayed.

Appendix D



THIS DRAWING MAY BE USED ONLY FOR
THE PURPOSE INTENDED AND ONLY
WRITTEN DIMENSIONS SHALL BE USED

NOTES

Revision Details	By	Date	Suffix
	Check		

Drawing Number
SK21683-103

Talbot Mill, Castlefield

Drawing Title
**Proposed Amendment to
Waiting Restrictions**

Scale at A3
1:500

Drawn JAT	Approved LGS
Check LGS	Date 08.09.17

SK SK Transport Planning Ltd
Albion Wharf | Manchester | M1 5LN
www.sktransport.co.uk
0161 234 6509



THIS DRAWING MAY BE USED ONLY FOR THE PURPOSE INTENDED AND ONLY WRITTEN DIMENSIONS SHALL BE USED

NOTES

Vehicle Profile

3.5t Panel Van	5.350m
Overall Length	5.350m
Overall Body Height	2.550m
Wheel Ground Clearance	2.550m
Load to Load Time	1.00 sec
Kerb to Kerb Turning Radius	5.850m

Revision Details	By	Date	Suffix
	Check		

Drawing Number

SK21683-104

Talbot Mill, Castlefield

Drawing Title

Swept Path Analysis
Substation Access

Scale at A3

1:500

Drawn	Approved
JAT	LGS
Check	Date
LGS	12.09.17

SK Transport Planning Ltd
Albion Wharf | Manchester | M1 5LN
www.sktransport.co.uk
0161 234 6509

Appendix E

170912/SK21683/FTP01(-01)
TALBOT MILL, MANCHESTER
FRAMEWORK TRAVEL PLAN

CONTENTS

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1 Introduction	1
2 Audit	2
3 Proposal	9
4 Management	10
5 Toolkit	10
6 Monitoring	11

Project	Document	Rev	Description	Authorised by	Signed	Date
SK21683	FTP01	-00	-	L Speers	LGS	19/04/2017
SK21683	FTP01	-01	-	L Speers	LGS	12/09/2017

1 INTRODUCTION

Background

- 1.1 SK Transport Planning Ltd (SK) has been appointed by Capital and Centric to prepare a framework travel plan in support of redeveloping the Talbot Mill complex to create 202 apartments. The Talbot Mill complex is in the Castlefield area of the city centre. The site is occupied by a large mill complex. The existing buildings on site have a combined floor area of 7,117sqm.
- 1.2 A Transport Statement has been produced to assess the impact of the proposal. This document should be referred to for full details of the impact assessment and layout principles. The layout is attached as appendix a of the Transport Statement.

Travel Plan Structure

- 1.3 The framework travel plan outlines policy interventions and measures that are commensurate with the scale and impact of the proposal. In summary, the following information is included in the plan:
 - Information on existing transport services to the site and travel patterns
 - Measures included within the proposal to enhance accessibility and reduce car use
 - Identification of a travel plan co-ordinator
 - Mechanisms for monitoring and reviewing the travel plan

The Process

- 1.4 A travel plan is a tool for managing access to a site that aims to promote access by sustainable modes. It contains a package of measures designed to meet the objective to reduce car use generated from the site by supporting sustainable modes of transport and measures that will build on the good location of the site.
- 1.5 A travel plan should include a mixture of infrastructure measures and marketing measures to assist the plan to meet defined objectives. Within a travel plan there is a need to set objectives, targets and indicators, the purpose of which is to monitor change and review policies to meet the needs of the users of the site.
- 1.6 The travel plan process is not a one-off, static event, but a constantly evolving strategy that should grow and adapt to meet the travel patterns and needs of the end users of the site. The framework level of travel plan outlines the accessibility of the site, infrastructure measures proposed as part of the development and management and policy measures for adoption upon occupation of the site.
- 1.7 The measures outlined in the framework travel plan are based on those submitted with the planning application and have been drawn from UK and local area best practice. Specifically, the measures and initiatives included in the plan acknowledge TfGM adopted residential travel plan checklist as outlined in the 2013 document 'Transport for Sustainable Communities', emerging guidance taken from TfGM's travelplan.org.uk website, and travel plan measures adopted at other city centre development sites.

Benefits

- 1.8 Travel plans result in a variety of benefits to the occupiers of a development and the wider community, including:
 - Promoting active and healthy lifestyles
 - Reducing the need to own or use a car for daily travel
 - Providing sustainable and vibrant communities
 - Reducing carbon emissions and improving local air quality issues

Aims & Objectives

- 1.9 The main aims of a travel plan are to reduce the environmental effects of transport associated with developments and raise awareness of non-car means of access. In this instance the main aim of this stage of the travel plan is to outline possible sustainable and deliverable strategy measures that can be adopted on occupation of the proposal to assist future residents to live at the site without needing to use a car to meet their daily travel requirements.
- 1.10 A secondary aim of the travel plan is to outline an action plan for the site that clearly defines the strategy and monitoring measures to be adopted to meet the defined objectives of the plan. To this end, the following objectives have been set for framework submission of the plan:
 - Roles and responsibilities
 - Existing access opportunities & likely travel patterns
 - Awareness raising & promotion
 - Measures to support a car-free proposal
 - Monitoring & implementation methods

2 AUDIT

Site Location

- 2.1 Figure 2.1 shows that the Talbot Mill complex is in the Castlefield area of the city centre. The location of the site has been found to be highly sustainable by MCC when considering other applications in the area.
- 2.2 The site is occupied by a large mill complex. The existing buildings on site have a combined floor area of 7,117sqm.
- 2.3 Vehicular access to the site is provided from two locations on to Ellesmere Street. The eastern access point provides a vehicular connection to the central courtyard on site and the western junction provides access to a short service stub. Both accesses form a simple priority arrangement with Ellesmere Street. The access to the courtyard is under the existing building and has a maximum height of 3.3m.
- 2.4 Servicing and delivery movements associated with the current use of the site, and other uses in the area, currently occur from kerbside on Ellesmere Street.



Figure 2.1: Site Location

Walking

- 2.5 The site is connected to key destinations by a comprehensive network of pedestrian routes, typical of its city centre location. Pedestrian provision is of good condition, with wide footways, dropped kerb crossings and tactile paving present. The streets surrounding the site are overlooked and lit.
- 2.6 Signalised pedestrian crossing facilities are provided at a number of locations along the A56 Chester Road allowing safe connections to routes into the city centre and also local bus stops. A continuous traffic-free connection is also provided along the Bridgewater Canal to the city centre and Trafford Park.
- 2.7 Access can also be gained to existing segregated cycle and pedestrian routes along the Manchester Ship Canal, by using the existing footbridge across the Manchester Ship Canal at St George's Island.
- 2.8 Two-thirds of all journeys in the UK are under-five miles and short distance trips offer the greatest opportunity for changes in travel behaviour. DfT best practice guidance states that walking has the potential to substitute for car trips at a local level for journeys under 2km.
- 2.9 Figure 2.2 shows a 2km walking catchment from the site representing a walk time of 25 minutes, using an average walking speed of 80 m/min. The walking catchments have been derived using the interactive walkit.com tool, a pedestrian journey planning system promoted by both Manchester City Council and TfGM.
- 2.10 A 2013 Manchester Household Survey shows that city centre residents will walk up to two miles (3.2km) to reach work, leisure and retail destinations. This is largely due to the favourable topography and compact nature of the city centre. A 3.2km walking catchment is shown in figure 2.3.



Figure 2.2: 2km Walking Catchment
[source: Walkit 2017]



Figure 2.3: 3.2km Walking Catchment
[source: Walkit 2017]

- 2.11 Figures 2.2 and 2.3 show that a significant proportion of the city centre is within 2km of the site and all the city centre and Salford Quays is within 3.2km of the site.
- 2.12 The existing pedestrian infrastructure surrounding the site provides a good basis for future trips by residents to key destinations. The proximity of the site to a key city centre destinations, means that journeys on foot are likely to be a significant mode choice for future residents for both utility and leisure trips.

Cycle

- 2.13 Figure 2.4 shows that access can easily be gained to the Greater Manchester Cycle Network. The routes near the site comprise a combination of traffic-free and on-road routes, meaning that cycling is a feasible mode of travel for cyclists of different experience and confidence levels.

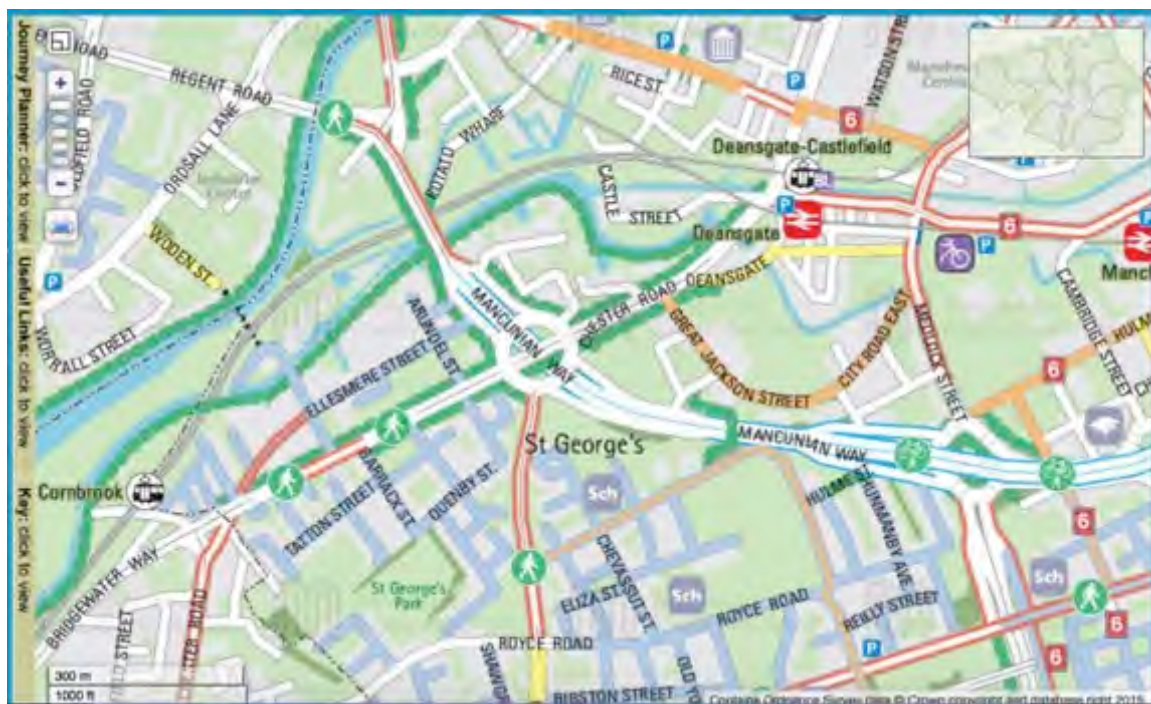


Figure 2.4: Existing Cycle Routes
[source: TfGM 2017]

- 2.14 The site sits within a 20mph zone that provides a suitable environment for cycle trips. Local streets link to the segregated cycle route that runs along the northern and southern alignment of the A56 Chester Road. A traffic-free route is also available along the Bridgewater Canal.
- 2.15 Cycling offers opportunities to substitute for short car trips under 5km, where 5km is taken to be a 25-minute journey time at a leisurely pace. The existing cycle routes provide connections to key destinations in the city centre, Trafford Park, Salford Quays and Stretford, all of which are within 5km of the site.
- 2.16 The site benefits from an exceptional level of cycle access and opportunities for cyclists of all abilities to safely access the site by this mode.

Access by Public Transport

- 2.17 Figure 2.5 shows the public transport network serving the site.



Figure 2.5: Existing Public Transport Network
[source: TfGM 2017]

- 2.18 The closest bus stops to the site are a short walk away (3 minutes) on the A56 Chester Road. The stops are served by buses to the city centre, Flixton, Urmston, the Trafford Centre, Stretford, Chorlton and Didsbury. During the day, the bus stops are served by up to 14 buses per hour (in each direction) and coverage is provided throughout the week and during the evening.
- 2.19 The site also benefits from access to the Metrolink network with Cornbrook station being 350m from the site. Access to all areas can be gained using the Metrolink and the city centre is less than five minutes away using this mode.
- 2.20 Access can also be gained to Deansgate mainline station within a 10-minute walk of the site.
- 2.21 A Greater Manchester Accessibility Level (GMAL) calculation has been undertaken for the site. A GMAL is calculated using the interactive tool managed and maintained by TfGM. This tool measures AM Peak accessibility by public transport of a point of interest and provides a score between 1 and 8, where 1 is a low level of accessibility and 8 is the highest level of accessibility.
- 2.22 Figure 2.6 shows the GMAL analysis for the site.

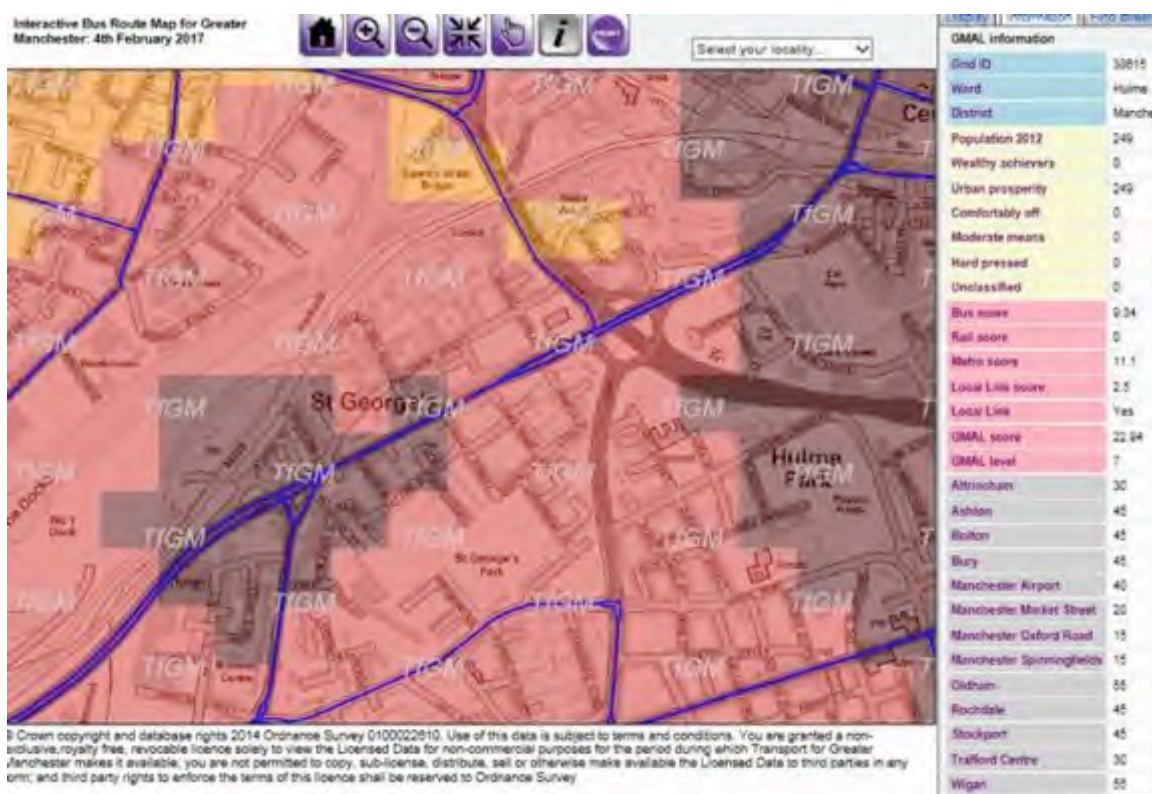


Figure 2.6: Greater Manchester Accessibility Level
[source: TfGM/GMTU 2017]

- 2.23 The site has a GMAL at the upper end of level 7, indicating that the site benefits from a very high level of accessibility befitting of its city centre location and public transport connections offer a genuine alternative to private car trips.
- 2.24 GMAL has been developed by TfGM to allow the analysis of the accessibility of development sites and is based on the WebCAT/PTAL method used and supported by the London Authorities. The London Authorities, supported by the Mayor in the London Plan, use PTAL calculations to inform decisions on development parking levels. London has generally been more proactive with regard encouraging lower parking at new developments and setting the criteria for which this can work in policy.
- 2.25 The site's GMAL score is equivalent to a PTAL score of 5 (defined by Transport for London as 'very good'). The London Plan states that as accessibility levels increase parking provision should decrease and development sites with scores above PTAL 4 are suitable for a lower parking provision.
- 2.26 The proposal is well connected to city centre and regional centre destinations by public transport.

Casual Car Use

- 2.27 Car clubs are an important component of the sharing economy and of a balanced city centre transport system as they offer a cost-effective and hassle-free alternative to private car ownership. By complementing public transport, walking and cycling systems, car clubs allow people to build mobility lifestyles that mean that they do not need to own private cars to the same extent as previously.
- 2.28 Enterprise Car Club provides a MCC supported solution that complements Manchester's sustainable transport system and to meet casual vehicle needs of residents who do not own a car. The initiative enables members to benefit from low cost, convenient and greener motoring, and a more sustainable pattern of living that negates the requirement to own and store a car.
- 2.29 Enterprise Car Club offers pay as you go motoring, with vehicles available to hire for as little as 30 minutes per trip. The vehicles are available 24/7 and members of the scheme can easily access vehicles on demand by reserving on line. The Enterprise Car Club can save motorists up

to £3,500 a year on costs usually associated with fuel, insurance, servicing, MOT, cleaning and parking.

- 2.30 The merger of Enterprise and City Car Club now provides residents with solutions for longer term vehicle hire, for use when a resident wants to travel further afield on holiday, for example. From the Enterprise base at Piccadilly vehicles can be provided to meet longer car hire demand. The vehicles can be booked in advance and dropped off at the residence as required.
- 2.31 Three Enterprise Car Club vehicles are located close to the site, two on Ellesmere Street (two minutes from the site) and one on St George's Island (four minutes from the site).

Parking

- 2.32 The local on-street parking provision is governed by marked parking bays and double yellow lines. Parking restrictions are in place along the south side of Ellesmere Street in the form of double yellow lines. Double yellow lines are also present at side road junctions on the northern carriageway edge.
- 2.33 The parking bays on the northern carriageway edge are currently uncontrolled, meaning that residents and commuters can park for any length of time even though the area is within the city centre.
- 2.34 Parking control plates are present on the street which limit parking to two hours' duration between 8am and 6pm, but these have been blacked out by MCC and it has been confirmed that these are currently not enforced. MCC has confirmed that although it was always the intention to control parking in the bays, that the plated times have never been brought into force. The consequence of the lack of parking controls in this area of the city centre is that parking on-street in the area is popular with both residents and commuters.
- 2.35 In addition to this city centre anomaly, a number of the bays are currently suspended due to construction works. This has had the unfortunate consequence of squeezing parking activity into a constrained area and makes it difficult to find a suitable place to park at various parts of the day.
- 2.36 Surveys of existing parking activity have been undertaken on several occasions (including both daytime and late evening demand). The surveys show that should the suspended bays be brought back into use that there would be more than sufficient space to meet current demand levels.
- 2.37 MCC has confirmed that, in line with the parking policy throughout other areas of the city centre, it proposes to extend the city centre parking zone to cover the area to allow better management of the on-street activity and deter commuter parking.

3 PROPOSAL

General Principles

- 3.1 The proposal will convert the Talbot Mill complex to create 202 apartments. The proposal will demolish buildings A, B, C and E, redevelop mills 1 and 2, and construct a new residential block up to 10 storeys (9+ basement level). Rooftop extensions are proposed for mills 1 and 2. Mill 1 will also be extended to the rear. For reference the existing and proposed site plan is shown on figures 3.1 and 3.2.

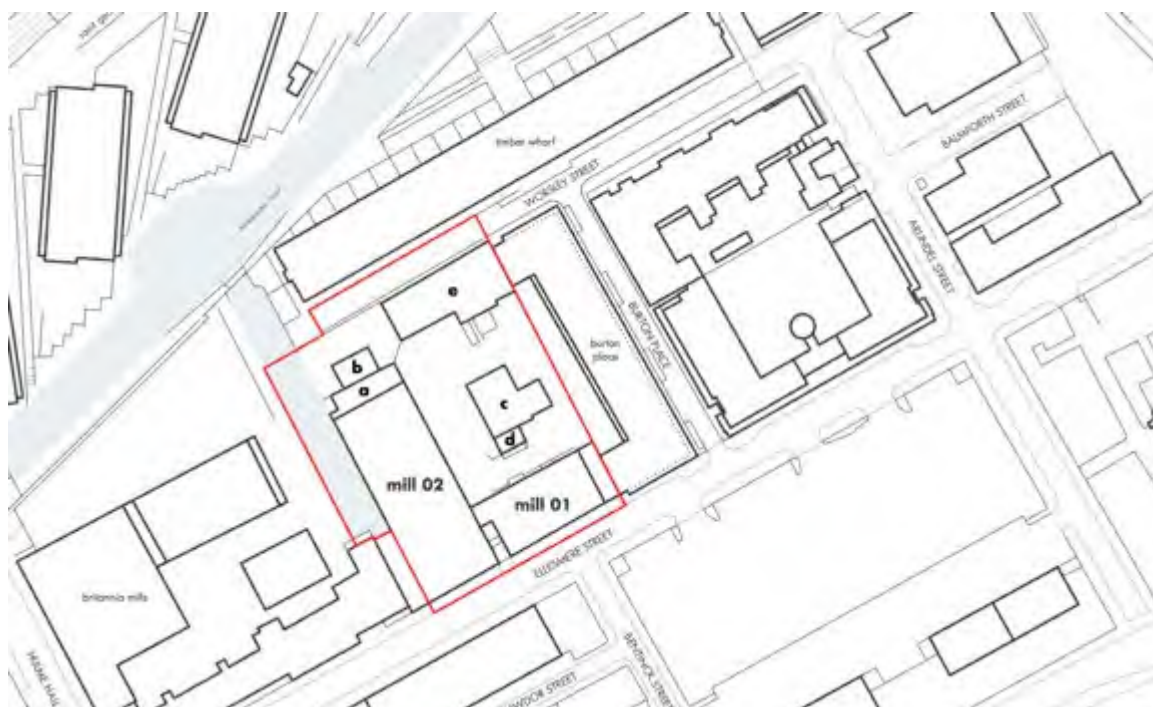


Figure 3.1: Existing Site Plan



Figure 3.2: Proposed Site Plan

- 3.2 The complex sits around three sides of a courtyard, with the fourth side created by the boundary of an adjacent residential building (Burton Place). The internal courtyard is retained as a green space that will create important amenity space for use by residents to allow the community to be built.
- 3.3 The courtyard incorporates a small building (known as the Time Keeper's Cottage) that is also retained for use as community space for residents. This space is an important component of the proposal and will allow for enhanced social exchange by residents and is also an important component of the site's transport strategy.

Access

- 3.4 Existing levels through the site are challenging and there is a small level change between Ellesmere Street and level 00 of around 1 metre. Existing levels in the courtyard dip down to a basement level and at the far end of the site, along the Worsley Street frontage, a one storey change occurs between street level and the site. The access strategy for the site has been developed to sympathetically work with the level changes, while achieving inclusive and dignified access for all.
- 3.5 The primary entrance to the site is via a new bridge link in the cut through between the two mill buildings. The entrance directly serves the first-floor level of the existing mills with stair and lift access to the lower courtyard level. Once in the courtyard residents can directly access lower level apartments in the mills via individual front doors and using the foyer access to the new build block. Pedestrian access can also be gained to the new build block from the Worsley Street frontage.
- 3.6 202 cycle parking spaces, at a ratio of 1 space per apartment, are proposed for use by residents. 80 of the cycle parking spaces are in a store area on two floors of mill 2 and the remainder are provided for within individual apartments. The Design & Access Statement should be referred to for details of the space set aside in the apartments for storing cycles. Visitor cycle parking for 15 cycle is also proposed in the courtyard.
- 3.7 The existing courtyard vehicle access (to the east of the Ellesmere Street site frontage) is retained in the development to allow direct access to the courtyard. The changes in level across the courtyard have been addressed by gently sloping ramps. The courtyard is at the heart of the development and provides a large amenity area that can be used by residents for socials and resident-led activity groups. This facility will not only provide important social exchange and amenity space, but will also reduce the need to travel off-site for certain journey purposes.
- 3.8 The courtyard access will also provide access for occasional sub-station maintenance vehicles entering the site. The existing archway is to be raised as part of the proposal and no longer restricts vehicle heights. A swept path has been undertaken of a panel van to show that this can access the sub-station and leave the site in a forward gear.
- 3.9 As with surrounding developments, servicing and refuse collection activity will occur from kerbside on Ellesmere Street. On bin collection days, the bins will be moved by the site management to the area on-site under the access arch. MCC proposes the extension of the city centre parking zone to cover this area of the city centre. This parking scheme will include loading and disabled parking provision.
- 3.10 A scheme is attached as appendix d has been developed to show how the proposal site can be serviced. A loading bay is shown that can be used by refuse, delivery and removal vehicles to temporarily stop outside the site. A disabled parking bay is also shown in the scheme to meet the needs of visitors/residents with mobility issues.
- 3.11 The scheme attached as appendix d of the TS has been designed to minimise loss of existing parking space on Ellesmere Street. The removal of the existing western vehicular access bell mouth (currently governed by double yellow lines) means that space is released to allow the reconfiguration of the existing parking bays to include the loading bay and to convert a space to a disabled space. The proposal will therefore result in no net change in standard parking bay provision, when compared to the existing situation.

Parking

- 3.12 The site meets the criteria required by policy for the introduction of a car-free development. The suitability of the site for car-free development has been agreed with MCC.
- 3.13 Research shows that there is a strong relationship between accessibility, city centre developments and car ownership levels, with city centre residents being much more likely to live without owning a car than residents of traditional suburban areas. TfGM also states that Manchester city centre is the easiest place to live without a car, outside London.

- 3.14 Local data, including evidence from Urban Splash developments, shows that there is already a strong appetite for car-free living in Manchester city centre. The applicant has good experience of delivering accommodation to meet this market demand and is already delivering a car-free development in Manchester. Using this experience, the proposal has been designed to appeal to residents who do not own or want to own a car.
- 3.15 Full assessment of the appropriateness of the site as a car-free development is provided in the TS.

4 MANAGEMENT

Travel Plan Co-ordinator

- 4.1 An effective travel plan needs a clear hierarchy of responsibility. The applicant has been involved in the development of the plan and is committed its successful implementation.
- 4.2 Travel plan co-ordinators play an important role in developing the plan. The travel plan co-ordinator for the site will be identified prior to the occupation of the development.
- 4.3 The travel plan coordinator will be responsible for the day-to-day running of the travel plan and will also develop, implement and monitor the travel plan's effectiveness. The coordinator will form the main point of contact for the local authority and residents. The coordinator will also be responsible for raising awareness and marketing the travel plan and surveying its effectiveness.
- 4.4 In summary, the travel plan coordinator's general role and responsibilities will include:
 - Implementing the plan measures
 - Providing a point of contact for site residents, the local community, MCC and TfGM
 - Publicising and raising awareness of local initiatives
 - Overseeing the production of the travel packs and updates to the website
 - Keeping up to date local public transport, walking and cycling route information on the travel notice board
 - Monitoring and surveying travel patterns
 - Annually reporting to MCC/TfGM

5 TOOLKIT

- 5.1 The toolkit and implementation plan have been developed to acknowledge and complement the site's scale, location, existing available sustainable connections, the needs of city centre dwellers and the site layout. The toolkit draws measures from TfGM's current adopted residential travel plan toolkit (outlined in the document 'Transport for Sustainable Development' and on the travelplan.org.uk website).

Marketing & Promotion

- 5.2 The site will be honestly marketed as a car-free development and it will be made clear to all applicants that there will be no opportunities to store a car on-street due to existing constraints and MCC's future city centre parking control proposals.
- 5.3 The website for the development will include a page dedicated to sustainable travel. This will include embedded links to TfGM journey planning software, local transport maps and links to city travel campaigns. The website will also include links to TfGM supported software, such as www.bikebudi.com, www.walkit.com and www.walkbudi.com.
- 5.4 Technology will be used to promote sustainable and fun routes and activities. The website will provide links to allow the download of existing local area and journey planning phone apps, such as Manchester Walking Tours and City Mapper.
- 5.5 The travel plan co-ordinator will promote of TfGM supported initiatives & groups, such as Walk to Work Week, Better by Cycle CTC, Walking for Health, Walking Works & others, as advertised on the TfGM website www.travelplan.org.uk.

- 5.6 Each household will be issued with a sustainable travel pack when they move in that provides a succinct resource pack to assist them travel sustainably and hire a car as and when required. The travel pack will include:

1. Website links to cycle and walking route maps
2. Website links to journey planning software
3. Website links to Enterprise Car Club information and Enterprise promotional information
4. TfGM public transport and cycle route maps

Resident Engagement & Socials

- 5.7 The amenity space at the heart of the development will serve as a meeting place for residents. It will also be the location where the travel plan is initially launched and any new initiatives are launched.
- 5.8 Residents will be encouraged to set up site specific groups, such as a bicycle user group and to engage in site travel mileage competitions. Residents will be encouraged to make contact and engage with local interest groups such as Manchester Green Badge Tours, Manchester Walking Tours, MAD Walkers, Manchester Wheelers, the Tweed Ride, the Good Gym, and the GM Cycling Partnership.
- 5.9 Consideration will be given to setting up a sustainable sharing database that matches walkers and cyclists who work in the same locations so that residents can meet their neighbours and travel safely together.

Practical Hooks

- 5.10 The travel plan co-ordinator will investigate the feasibility of using the amenity space to provide regular cycle maintenance and repair sessions using one of the existing suppliers in the city.
- 5.11 In addition to the high level of cycle parking on site for use by residents and cycle stands in the courtyard, a number of measures will be adopted to encourage use of this mode. The travel plan co-ordinator will promote local and national cycling events, including TfGM's free adult cycle training.
- 5.12 The travel plan co-ordinator will investigate taxi and cycle purchase discounts with local firms, and will promote the use of home delivery services for the site.

Toolkit

- 5.13 In summary, the travel plan and transport strategy toolkit for the proposal includes:
- No car parking
 - Honest & upfront Car-free Marketing Strategy to target right demographic & discourage pro-car residents from outset
 - 100% resident cycle parking provision
 - Visitor cycle parking on-site
 - Promotion of Car Club vehicles on Ellesmere Street
 - Site website with links to TfGM journey planning software & phone apps
 - Resident travel packs (summary of journey planning tools & free TfGM maps)
 - Links to other technology to promote sustainable (& fun) routes & activity (including Manchester Walking Tours app & City Mapper app)
 - Site socials (Bike User Groups, Know Your Area Walking Group & site travel competitions) & community travel forum
 - Use of practical hooks like regular cycle maintenance & repair facilities
 - Tie ins with other interest groups (Manchester Green Badge Tours, Manchester Walking Tours, Mad Walkers, Manchester Wheelers & Tweed Ride)
 - Promotion of GM Cycling Partnership Events (Skyride, Breeze Rides & Ride Social)
 - Promotion of TfGM public transport ticket arrangements
 - Negotiate discounts with local cycle retailers
 - Negotiate discounts with local taxi firm (Street Cars)

- Negotiate discounts with local taxi firm (Street Cars)

6 MONITORING

Targets

- 6.1 In line with DfT guidance, action based targets have been set for the travel plan. These targets will be based on the travel plan reaching set milestones or indicators. The following action based targets have been set for the first stage of the travel plan process:
- Produce travel packs for each household
 - Include a travel page on the site website
 - Identify travel plan co-ordinator
- 6.2 The mode share targets for the development will be set following the first travel survey for the site.
- 6.3 All targets will be reviewed and reset following each annual monitoring period.

Monitoring

- 6.4 Travel surveys will be undertaken of residents within six months of first occupancy. The survey will be conducted electronically using Survey Monkey. A website link to the travel survey will be provided in the welcome pack issued to each household.
- 6.5 Following the first survey, travel surveys will be undertaken annually for a period of three years. After each survey period a short survey report will be issued for discussion with MCC and new targets set, if required.

Appendix F

Calculation Reference: AUDIT-443201-160831-0824

TRIP RATE CALCULATION SELECTION PARAMETERS:

Land Use : 03 - RESIDENTIAL
Category : C - FLATS PRIVATELY OWNED

VEHICLES

Selected regions and areas:

08 NORTH WEST

GM GREATER MANCHESTER 2 days

This section displays the number of survey days per TRICS® sub-region in the selected set

Filtering Stage 2 selection:

This data displays the chosen trip rate parameter and its selected range. Only sites that fall within the parameter range are included in the trip rate calculation.

Parameter: Number of dwellings
Actual Range: 20 to 154 (units:)
Range Selected by User: 6 to 215 (units:)

Public Transport Provision:

Selection by: Include all surveys

Date Range: 01/01/08 to 26/05/15

This data displays the range of survey dates selected. Only surveys that were conducted within this date range are included in the trip rate calculation.

Selected survey days:

Thursday 1 days
Friday 1 days

This data displays the number of selected surveys by day of the week.

Selected survey types:

Manual count 2 days
Directional ATC Count 0 days

This data displays the number of manual classified surveys and the number of unclassified ATC surveys, the total adding up to the overall number of surveys in the selected set. Manual surveys are undertaken using staff, whilst ATC surveys are undertaken using machines.

Selected Locations:

Town Centre 2

This data displays the number of surveys per main location category within the selected set. The main location categories consist of Free Standing, Edge of Town, Suburban Area, Neighbourhood Centre, Edge of Town Centre, Town Centre and Not Known.

Selected Location Sub Categories:

Built-Up Zone 2

This data displays the number of surveys per location sub-category within the selected set. The location sub-categories consist of Commercial Zone, Industrial Zone, Development Zone, Residential Zone, Retail Zone, Built-Up Zone, Village, Out of Town, High Street and No Sub Category.

Filtering Stage 3 selection:

Use Class:

C3 2 days

This data displays the number of surveys per Use Class classification within the selected set. The Use Classes Order 2005 has been used for this purpose, which can be found within the Library module of TRICS®.

Filtering Stage 3 selection (Cont.):Population within 1 mile:

25,001 to 50,000

2 days

This data displays the number of selected surveys within stated 1-mile radii of population.

Population within 5 miles:

500,001 or More

2 days

This data displays the number of selected surveys within stated 5-mile radii of population.

Car ownership within 5 miles:

0.6 to 1.0

2 days

This data displays the number of selected surveys within stated ranges of average cars owned per residential dwelling, within a radius of 5-miles of selected survey sites.

Travel Plan:

No

2 days

This data displays the number of surveys within the selected set that were undertaken at sites with Travel Plans in place, and the number of surveys that were undertaken at sites without Travel Plans.

LIST OF SITES relevant to selection parameters

1 GM-03-C-02 BLOCK OF FLATS GREATER MANCHESTER
 WHITWORTH STREET W.

MANCHESTER

Town Centre

Built-Up Zone

Total Number of dwellings: 154

Survey date: THURSDAY 13/10/11

Survey Type: MANUAL

2 GM-03-C-03 BLOCK OF FLATS GREATER MANCHESTER
 FAIRFIELD STREET

MANCHESTER

Town Centre

Built-Up Zone

Total Number of dwellings: 20

Survey date: FRIDAY 14/10/11

Survey Type: MANUAL

This section provides a list of all survey sites and days in the selected set. For each individual survey site, it displays a unique site reference code and site address, the selected trip rate calculation parameter and its value, the day of the week and date of each survey, and whether the survey was a manual classified count or an ATC count.

MANUALLY DESELECTED SITES

Site Ref	Reason for Deselection
CB-03-C-01	over 100% parking
HI-03-C-01	over 100% parking

TRIP RATE for Land Use 03 - RESIDENTIAL/C - FLATS PRIVATELY OWNED

VEHICLES**Calculation factor: 1 DWELLS****BOLD print indicates peak (busiest) period**

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	2	87	0.000	2	87	0.011	2	87	0.011
08:00 - 09:00	2	87	0.011	2	87	0.029	2	87	0.040
09:00 - 10:00	2	87	0.006	2	87	0.017	2	87	0.023
10:00 - 11:00	2	87	0.017	2	87	0.017	2	87	0.034
11:00 - 12:00	2	87	0.017	2	87	0.006	2	87	0.023
12:00 - 13:00	2	87	0.011	2	87	0.017	2	87	0.028
13:00 - 14:00	2	87	0.017	2	87	0.023	2	87	0.040
14:00 - 15:00	2	87	0.011	2	87	0.011	2	87	0.022
15:00 - 16:00	2	87	0.011	2	87	0.011	2	87	0.022
16:00 - 17:00	2	87	0.011	2	87	0.006	2	87	0.017
17:00 - 18:00	2	87	0.023	2	87	0.000	2	87	0.023
18:00 - 19:00	2	87	0.011	2	87	0.006	2	87	0.017
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.146			0.154			0.300

This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected survey days that have count data available for the stated time period. Then, the average count is divided by the average trip rate parameter value, and multiplied by the stated calculation factor (shown just above the table and abbreviated here as FACT). So, the method is: $COUNT/TRP \times FACT$. Trip rates are then rounded to 3 decimal places.

Parameter summary

Trip rate parameter range selected:	20 - 154 (units:)
Survey date range:	01/01/08 - 26/05/15
Number of weekdays (Monday-Friday):	2
Number of Saturdays:	0
Number of Sundays:	0
Surveys automatically removed from selection:	0
Surveys manually removed from selection:	2

This section displays a quick summary of some of the data filtering selections made by the TRICS® user. The trip rate calculation parameter range of all selected surveys is displayed first, followed by the range of minimum and maximum survey dates selected by the user. Then, the total number of selected weekdays and weekend days in the selected set of surveys are shown. Finally, the number of survey days that have been manually removed from the selected set outside of the standard filtering procedure are displayed.

TRIP RATE for Land Use 03 - RESIDENTIAL/C - FLATS PRIVATELY OWNED

OGVS**Calculation factor: 1 DWELLS****BOLD print indicates peak (busiest) period**

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	2	87	0.000	2	87	0.000	2	87	0.000
08:00 - 09:00	2	87	0.000	2	87	0.000	2	87	0.000
09:00 - 10:00	2	87	0.000	2	87	0.000	2	87	0.000
10:00 - 11:00	2	87	0.000	2	87	0.000	2	87	0.000
11:00 - 12:00	2	87	0.000	2	87	0.000	2	87	0.000
12:00 - 13:00	2	87	0.000	2	87	0.000	2	87	0.000
13:00 - 14:00	2	87	0.000	2	87	0.000	2	87	0.000
14:00 - 15:00	2	87	0.000	2	87	0.000	2	87	0.000
15:00 - 16:00	2	87	0.000	2	87	0.000	2	87	0.000
16:00 - 17:00	2	87	0.000	2	87	0.000	2	87	0.000
17:00 - 18:00	2	87	0.000	2	87	0.000	2	87	0.000
18:00 - 19:00	2	87	0.000	2	87	0.000	2	87	0.000
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.000			0.000			0.000

This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected survey days that have count data available for the stated time period. Then, the average count is divided by the average trip rate parameter value, and multiplied by the stated calculation factor (shown just above the table and abbreviated here as FACT). So, the method is: $COUNT/TRP \times FACT$. Trip rates are then rounded to 3 decimal places.

Parameter summary

Trip rate parameter range selected: 20 - 154 (units:)
 Survey date range: 01/01/08 - 26/05/15
 Number of weekdays (Monday-Friday): 2
 Number of Saturdays: 0
 Number of Sundays: 0
 Surveys automatically removed from selection: 0
 Surveys manually removed from selection: 2

This section displays a quick summary of some of the data filtering selections made by the TRICS® user. The trip rate calculation parameter range of all selected surveys is displayed first, followed by the range of minimum and maximum survey dates selected by the user. Then, the total number of selected weekdays and weekend days in the selected set of surveys are shown. Finally, the number of survey days that have been manually removed from the selected set outside of the standard filtering procedure are displayed.