

Darwin Group

**Proposed Secondary School
Land at Connell Co-op College,
Alan Turing Way, Manchester
Transport Assessment**

December 2020

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Client Commission

Client:	Darwin Group	Date Commissioned:	November 2020
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LTP PROJECT TEAM

As part of our commitment to quality the following team of transport professionals was assembled specifically for the delivery of this project. Relevant qualifications are shown and CVs are available upon request to demonstrate our experience and credentials.

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PROPOSED SECONDARY SCHOOL LAND AT CONNELL CO-OP COLLEGE, ALAN TURING WAY, MANCHESTER TRANSPORT ASSESSMENT

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EXECUTIVE SUMMARY

This Transport Assessment (TA) provides a detailed appraisal of the transport impact associated with proposals associated with the provision of a secondary school located on land at Connell Co-op College to the east of Alan Turing Way in Manchester. The key findings of this TA are summarised below:

- The proposals involve the provision of a secondary school on land at Connell Co-op College to accommodate a capacity of 240 students. There are expected to be 16 Full-Time Equivalent (FTE) staff members at the secondary school.
- There is currently one vehicular access point provided at the wider Connell Co-op College site, set to be used by the secondary school as well as the college. The vehicular access connects with Wilson Street to the south and connects with the existing college car park. A footway flanks the eastern side of the vehicular access, providing pedestrian access through the car park. A separate pedestrian access is also provided, connecting with Alan Turing Way to the west of the site.
- It is proposed to provide a total of 70 standard car parking spaces, 3 disabled bays and 1 drop-off bay across the secondary school and Connell Co-op College site. This represents an uplift of 12 standard car parking spaces from existing. It is understood that 74 cycle parking spaces are provided which will accommodate the cycle parking of the secondary school and college.
- The site is in an accessible location, with key pedestrian, bus, Metrolink, rail and cycle routes between the site and local residential areas.
- Analysis of the most recently available road casualty data has not revealed any identifiable existing collision issues associated with the expected movements generated by the site, therefore it is considered that there are no pertinent existing road safety issues.
- The travel patterns of students and staff at the proposed secondary school have been established utilising the TRICS industry-standard database. The information indicates that there could be expected to be an additional 77 two-way vehicle trips during the AM peak (08:00-09:00), 38 during the school PM peak (16:00-17:00) and 23 during the network PM peak (17:00-18:00) associated with the secondary school. It is expected that 63% of trips to/from the secondary school will be made by sustainable modes (i.e. car passenger, walking, cycling and public transport).
- There are several factors to consider in relation to school travel; pass-by or diverted trips from the highway network local to the site, the school accommodating local demand and therefore reducing the distance travelled on the highway network, absence levels, a percentage of student drop-offs occurring on the local highway network and that a TP has been produced to promote travel by sustainable modes. When these factors are considered, it is concluded that the proposed secondary school would not be expected to have a significant impact in terms of sustainable travel, road safety and traffic impact. As the impact of the proposals is not expected to be severe, the proposals are therefore considered to be in accordance with the National Planning Policy Framework (NPPF).

I. INTRODUCTION

I.1 Background

- 1.1.1 Local Transport Projects Ltd (LTP) has been commissioned to produce a Transport Assessment (TA) in support of a planning application for the provision of a new secondary school on land at Connell Co-op College, located to the east of Alan Turing Way (A6010) in Manchester. This TA provides a detailed appraisal of the expected transport impact of the proposals. A plan of the proposed site layout is attached as Appendix 1.
- 1.1.2 The local planning and highway authority for the site is Manchester City Council (MCC). Alan Turing Way to the west of the site forms part of Transport for Greater Manchester's (TfGM) Key Road Network (KRN).
- 1.1.3 LTP has also been commissioned to prepare a Travel Plan (TP) (LTP, 2020) for the proposed secondary school, which outlines the approach to encouraging travel by sustainable modes at the site, and helps to achieve TRA 01 of BREEAM accreditation, as detailed in the 'UK New Construction Non-Domestic Buildings Technical Manual' (BRE, 2018). Although the TP has been prepared as a standalone document, both the TA and TP are linked and should be read in conjunction with each other.

I.2 Scope

- 1.2.1 This report is written in accordance with the Government's 'National Planning Policy Framework' (MHCLG, 2019) and 'Planning Practice Guidance' (DCLG, 2014), with the scope outlined below:
- **Executive Summary:** A non-technical summary of the report outlining the key outcomes of the assessment.
 - **Introduction & Description of Proposals:**
 - Description of the development site, including location and any existing access arrangements;
 - Summary of relevant planning and allocation history for the site;
 - Description of the proposed development including site layout, pedestrian/cycle facilities and proposed access arrangements.
 - **Site Assessment:**
 - Site assessments to determine existing traffic conditions, such as posted speed limits, road restrictions, highway geometry, on-street parking restrictions and any other relevant features of the local area;
 - Assessment of the sustainable transport infrastructure (pedestrian, cycle and public transport) local to the site.
 - **Road Casualty Appraisal:** Examination of road collision records (5-year study period) and assessment of the road safety impact of the proposed development on the local highway network.

- **Traffic Impact:**
 - Calculation of the projected trip generation for the proposed secondary school;
 - Assessment of the likely traffic impact of the proposed secondary school on the operation of the local highway network.
- **Access, Parking & Internal Layout:** Consideration of the proposed access arrangements and internal layout of the site, including parking provision and access/servicing arrangements.
- **Conclusions:** Conclusions summarising the outcomes of the TA, including a commentary on the suitability of the proposals in terms of sustainable travel, road safety and traffic impact.

1.2.2 This TA report has been prepared in accordance with the above scope and reference has been made to the following documents where appropriate:

- National Planning Policy Framework (MHCLG, 2019);
- Greater Manchester Transport Strategy 2040 (TfGM, 2017);
- Planning Practice Guidance (DCLG, 2014);
- Manchester's Local Development Framework, Core Strategy Development Plan Document (MCC, 2012);
- Manual for Streets 2: Wider Application of the Principles (CIHT, 2010);
- Guidance on Transport Assessment (DfT, 2007a); and
- Manual for Streets (DfT, 2007b).

2. SITE BACKGROUND

2.1 Site Location

- 2.1.1 The site is located on land associated with Connell Co-op College, located to the east of Alan Turing Way in Manchester. The site is located within the Beswick Community Hub, an area of regeneration in recent years. It is bound by the English Institute of Sport to the north, the Manchester City FC Team Centre & Training Ground to the east, the Manchester Institute of Health & Performance to the south and Alan Turing Way to the west. The Connell Co-op College site is shown in Figure 1 below.

Figure 1: Site Location



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2.2 Connell Co-op College

- 2.2.1 Connell Co-op College is a Sixth Form for 16-19 year olds operated by the Co-operatives Academies Trust.
- 2.2.2 Information relating to the operation and access arrangements of Connell Co-op College is outlined below:
- **Pupil numbers** – Connell Co-op College currently accommodates a total of 540 college students, although the college has the capacity to accommodate 600 students.

- **School catchment** – It is understood that Connell Co-op College does not have a defined catchment area.
- **Staff numbers** – There are currently 58 Full Time Equivalent (FTE) staff at the site, although 60 FTE staff are expected to be required if the college operates at full student capacity.
- **Vehicular access arrangements** – There is currently one vehicular access point provided at the site, located on Wilson Street to the south. The access, which also provides access to the Manchester Institute of Health & Performance, connects with the Connell Co-op College car park.
- **Pedestrian access arrangements** – There are two existing pedestrian access points to the college, with the main pedestrian access from Alan Turing Way, located to the west of the site. A footway also flanks the eastern side of the vehicular access on Wilson Street, providing pedestrian access through the car park.
- **Parking arrangements** – A total of 58 standard car parking spaces, 3 disabled bays and 1 drop-off bay are provided within the existing college car park. It is understood that 74 cycle parking spaces are provided at the college.

2.3 Secondary School Development Proposals & Access Arrangements

2.3.1 The proposals involve the provision of a new secondary school, to be accommodated within a new school building to the east of the existing Connell Co-op College building. As part of the provision of the new secondary school, two additional car parking areas adjoined to the existing college car park are proposed. The proposed site layout plan is attached as Appendix 1.

2.3.2 A summary of the secondary school proposals is provided below:

- **Building size** – The new secondary school building is expected to have a Gross Floor Area (GFA) of approximately 838m².
- **Pupil numbers** – The secondary school is expected to accommodate 240 students within academic years 7 to 11 (aged between 11 and 16 years).
- **School catchment** – The proposed secondary school is not expected to have a defined catchment area, as is the case for other schools in Manchester, although it is expected that students will generally live locally due to the high demand for local places.
- **Staff numbers** – The proposed secondary school is expected to accommodate 16 FTE staff members.
- **Access arrangements** – The existing access arrangements, as described in Section 2.2, are to provide access to the secondary school as well as the college. However, the proposed changes to the internal site layout also include a new turning circle.

- **Parking arrangements** – Parking standards are outlined within Manchester’s Local Development Framework, Core Strategy Development Plan Document (MCC, 2012), however, the document does not provide specific parking standards for school developments. It is proposed to provide a total of 70 standard car parking spaces, 3 disabled bays and 1 drop-off bay. This represents an uplift of 12 standard car parking spaces at the wider site, incorporating 5 new bays adjacent to the access road on the eastern side, 7 new bays in a parking area to the east of the proposed building, 11 new bays in a parking area to the west of the proposed building, and the loss of 11 existing bays in different locations to facilitate the layout changes. It is understood that cycle parking will be accommodated within the existing 74 cycle parking spaces at Connell Co-op College, with no new provision proposed.
 - **Turning area** – As part of the development, a turning circle will be provided to the east of the existing college car park to enhance circulation within the site by providing a facility for pupil drop-off/pick-up.
- 2.3.3 It is understood that the use of the proposed building by the secondary school is intended to be temporary, and then longer-term the space would be utilised by Connell Co-op College.

2.4 Planning History

- 2.4.1 It is understood that Connell Co-op College took on its first classes in 2013 using a dedicated area in The East Manchester Academy, prior to relocation to its current site, the planning history of which is outlined below.
- 2.4.2 A planning application (ref: 097342/OO/2011/N2) was submitted in September 2011 and subsequently approved in December 2011 for the *‘outline application for development comprising football training facilities, a 7,000-capacity Arena and ancillary Offices and Media Centre, 12 full-size and 2 half-size football training pitches, detached building forming accommodation for Youth Development and First Teams and incorporating two full size football pitches, a grounds maintenance building, Energy centre, pedestrian bridge across Ashton New Road linking to the Etihad Stadium, associated parking, landscaping, boundary treatments and other infrastructure works with all matters to be considered: and, Outline application for an Institute for Sports Medicine (a medical assessment, diagnosis and treatment centre, and research and product development facility in the fields of physiotherapy and sports science) and new **Sixth Form College** in the South West corner of the site with all matters reserved; following the demolition of all existing on site structures’*. A Transport Assessment and Travel Plan (AECOM Transportation, 2011) were produced as part of this application. Connell Co-op College was not progressed as per the details outlined within this application.

- 2.4.3 A planning application (ref: 101426/00/2013/N2) was submitted in January 2013 and subsequently approved in April 2013 for the *'outline application for development comprising **new Sixth Form College**, Rugby Pitch and Leisure Centre, associated parking, landscaping, boundary treatments and other infrastructure works including new link road from Alan Turing Way with all matters to be considered: and, outline application for a detached building to form Sports Research Institute, and a detached building to form retail floorspace (700sqm) with all matters reserved; following the demolition of all existing on site structures'*. A Transport Assessment and Framework Travel Plan (AECOM Transportation 2013) were produced as part of this application. A number of applications to discharge various conditions were subsequently submitted and approved. It is understood that the new purpose-built facility for Connell Co-op College was built and then occupied in 2014.

3. SITE ASSESSMENT

3.1 Local Highway Network

- 3.1.1 Alan Turing Way, which forms part of the Transport for Greater Manchester's (TfGM) Key Road Network (KRN), is a dual carriageway with two traffic lanes in each direction, segregated by a central reserve which measures approximately 4.5m in width. Each traffic lane measures approximately 3.6m in width, resulting in each side of the carriageway measuring approximately 7.2m in width. Alan Turing Way is subject to a 30mph speed limit. No Waiting At Any Time (NWAAT) restrictions are in place along both sides of the carriageway. A bus lay-by is provided on each side of the carriageway of Alan Turing Way within the vicinity of the site, measuring approximately 50m in length, including the taper on either side.

Photo 1: Alan Turing Way



- 3.1.2 Approximately 400m to the north of the bus stop on the eastern side of Alan Turing Way, a 4-way signalised junction is provided, connecting Alan Turing Way to Ashton New Road (A662). Alan Turing Way continues north, providing access to the Etihad Stadium and its associated car parks and an industrial area before connecting with the A62. Ashton New Road is a two-way single carriageway varying in width between 11.9m and 15.8m and is subject to a 30mph speed limit. It continues south-east, providing access to a range of facilities and residential areas before connecting with the A635 and M60. To the west, it provides access to a range of facilities before connecting with the A665.

Photo 2: Alan Turing Way/Ashton New Road Signalised Junction



- 3.1.3 Approximately 100m to the south of the bus stop on the eastern side of Alan Turing Way, a signalised crossroads is provided, connecting Alan Turing Way with Wilson Street and Grey Mare Lane. Wilson Street continues to the west, providing access to the Connell Co-op College vehicular access before becoming Cycle Street and connecting with Clayton Lane. Wilson Street is a two-way single carriageway measuring approximately 6.5m in width and subject to a 20mph speed limit. NWAAT restrictions are in place along the majority of the northern side of the carriageway, with no existing waiting restrictions in place along the southern side of the carriageway.
- 3.1.4 Clayton Lane is a two-way single carriageway which measures approximately 8.6m in width and is subject to a 20mph speed limit. It continues northbound, connecting with Ashton New Road and Clayton Street via crossroads. Clayton Street continues north, connecting with North Road via staggered crossroads, providing access to a wide residential area to the north and east. There are NWAAT restrictions along the majority of the length of the western side of the carriageway of Clayton Lane, with no existing waiting restrictions along the majority of the length of the eastern side of the carriageway.
- 3.1.5 Grey Mare Lane is a two-way single carriageway which measures approximately 6.9m in width and is subject to a 30mph speed limit. NWAAT restrictions are in place along both sides of the carriageway of Grey Mare Lane. It provides access to East Manchester Leisure Centre before becoming Bell Crescent to the north-west.

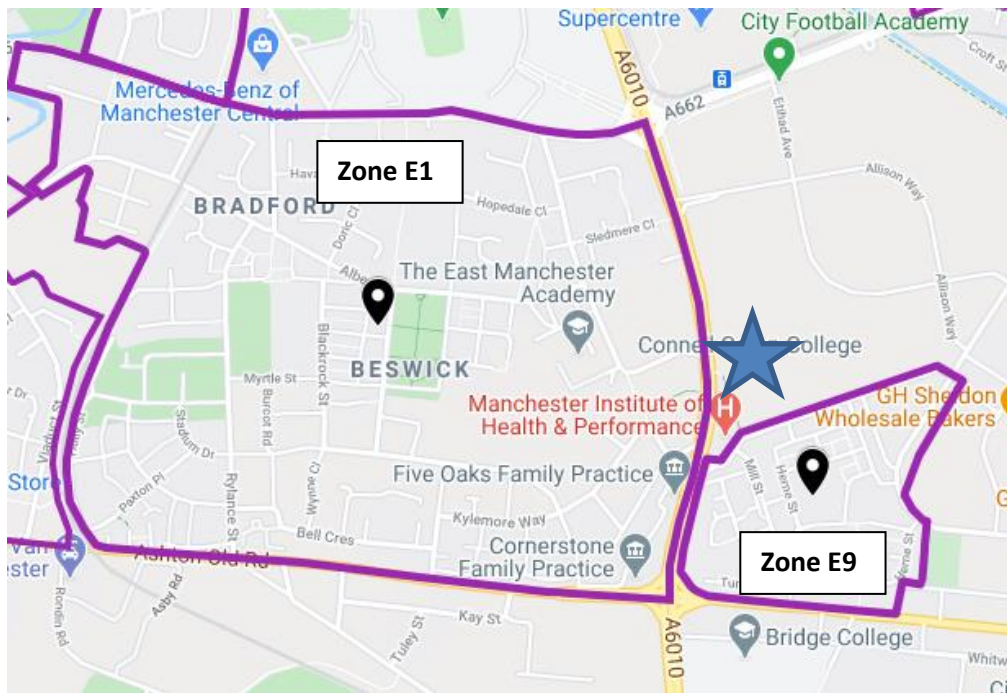
- 3.1.6 Alan Turing Way continues approximately 230m south of the signalised junction with Wilson Street and Grey Mare Lane before connecting with Ashton Old Road (A635) via a signalised crossroads. The A6010 continues south (as Pottery Lane), further connecting to the wider road network. Ashton Old Road is a two-way carriageway, which varies from single to double lanes in each direction. It measures approximately 9.9m in width and is subject to a 30mph speed limit. To the east, Ashton Old Road provides access to a number of industrial and residential areas before connecting with the M60, and to the west it provides access to a wide industrial area before connecting with the wider road network, including the B6469, the A665 and the A57(M).

Photo 3: Alan Turing Way/A635 Signalised Junction



- 3.1.7 A number of roads within the vicinity of the site, including Wilson Street and the connecting residential streets to the south of the site, are located within Controlled Parking Zones (CPZs) E9, which are operational on event days at the Etihad Campus. Parking is available to residents only on event days, from two hours before the event until it ends, and residents are required to obtain a permit to park within the zone on event days. CPZ E1 also covers areas on the western side of Alan Turing Way. The extents of zones E1 and E9 are shown within Figure 2 (site indicated by blue star):

Figure 2: Controlled Parking Zones E1 & E9

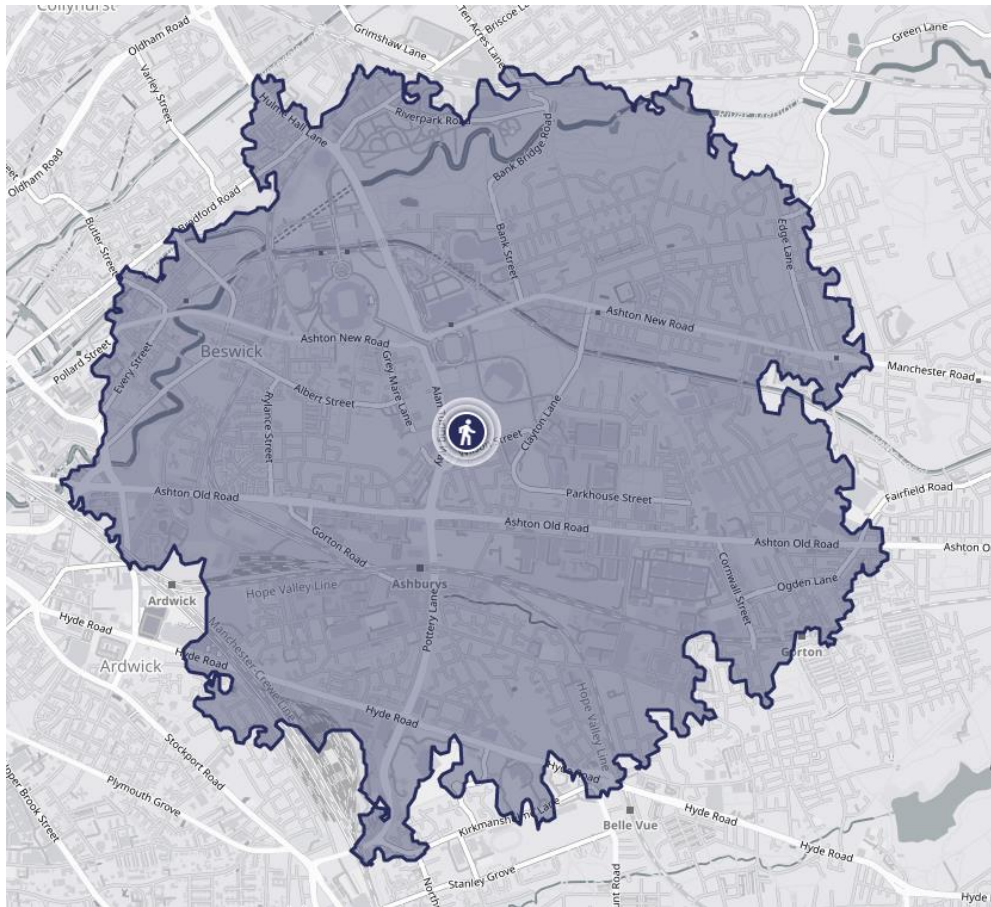


Source: MCC, 2020

3.2 Pedestrian Provision

- 3.2.1 Guidance from the Chartered Institution of Highways & Transportation (CIHT) suggests a preferred maximum walking distance of 2km for a number of trips, including commuting and school trips (IHT, 2000).
- 3.2.2 The isochrone map within Figure 3 shows the areas that are within an approximately 30 minutes' walk of the site, representing a walking distance of approximately 2.5km based upon an average walking speed of 1.4 metres per second. Whilst it is acknowledged that this represents a distance slightly in excess of that recommended by the IHT guidance, the isochrone map is considered to provide a reasonable indication of the areas within a walkable distance of the site.

Figure 3: 30-Minute Walking Isochrone



Source: TTM, 2020

- 3.2.3 Due to the site being located within the Beswick Community Hub and within a largely built-up area, a number of amenities are accessible within a 500m walk of the site and these are outlined within Table 1, with reference to the relevant amenity types outlined within the 'UK New Construction Non-Domestic Buildings Technical Manual' (BRE, 2018).

Table 1: Walking Routes & Distances to Local Amenities

Amenity
Appropriate food outlet
Mandarin Court Takeaway – 160m walk to the south of the site. One Stop Shop – 400m walk to the north-west of the site. Tony's Stadium Chippy – 500m walk to the north-west of the site. Catering facilities are also available on-site.
Access to cash
One Stop Shop – 400m walk to the north-west of the site.
Access to an outdoor open space
Outdoor space is provided within the site grounds.
Access to recreation or leisure
East Manchester Leisure Centre – 150m walk to the south-west of the site.
Publicly available postal facility
Mill Street – 240m walk to the south of the site. Kirkstead Close – 270m walk to the south-west of the site. Grey Mare Lane – 450m walk to the north-west of the site.
Pharmacy
Rowlands Pharmacy – 210m walk to the south of the site.

*Measured along footways from the closest building entrance

- 3.2.4 Table 1 demonstrates that there are several amenities within a 500m walk of the site, in terms of the BREEAM assessment criteria. These are located on local roads, including Wilson Street, Grey Mare Lane and Alan Turing Way, along with the local roads highlighted with postal facilities.
- 3.2.5 A semi-circular arrangement of footpaths is provided within the vicinity of Connell Co-op College, to the east of Alan Turing Way. This arrangement connects the footway on the eastern side of Alan Turing Way to Connell Co-op College and the Manchester Institute of Health & Performance. The footway on the eastern side of Alan Turing Way varies in width between approximately 3.1m and 5.9m and connects with pedestrian infrastructure on local roads, including Wilson Street, Ashton Old Road and Ashton New Road. A footway which varies in width between approximately 2.8m and 5.7m is provided on the western side of Alan Turing Way and connects with pedestrian infrastructure on Grey Mare Lane, as well as on Ashton Old Road and Ashton New Road.

Photo 4: Footway on Alan Turing Way

- 3.2.6 The local footways are complemented by existing crossing facilities, including a staggered toucan crossing on Alan Turing Way within the vicinity of the site. Signalised pedestrian crossings are also provided on all arms of Alan Turing Way/Ashton New Road junction, on the northern Alan Turing Way and Grey Mare Lane arms of Alan Turing Way/Wilson Street/Grey Mare Lane signalised junction and on all arms of the Alan Turing Way/Ashton Old Road signalised junction.

Photo 5: Staggered Toucan Crossing on Alan Turing Way

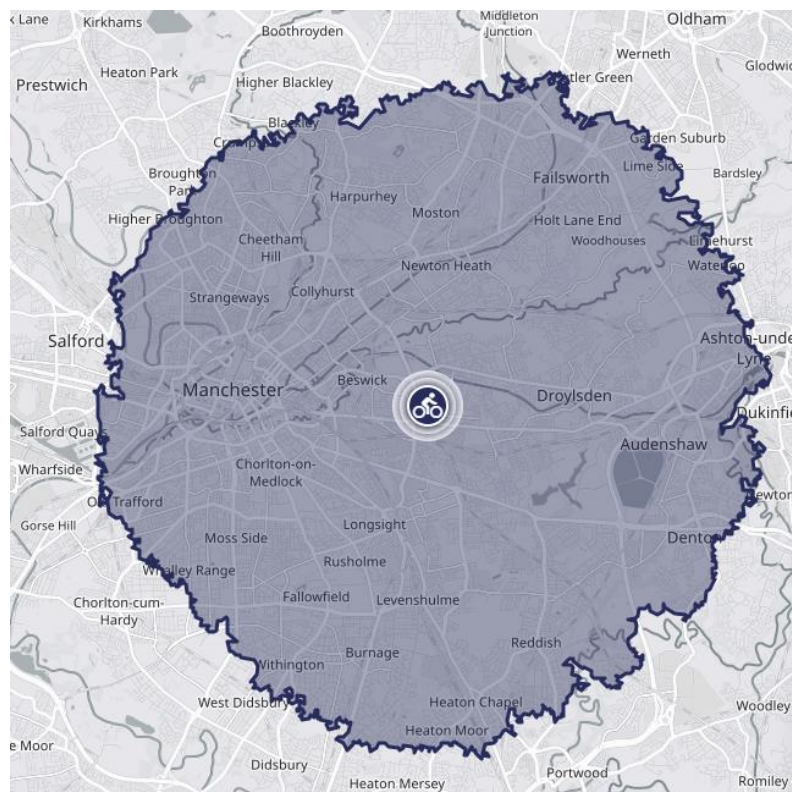
- 3.2.7 Given that most local roads are located within a 20mph/30mph speed limit with pedestrian crossing facilities, the local pedestrian environment is considered to be conducive to encouraging walking trips to/from the proposed secondary school.

- 3.2.8 The pedestrian infrastructure within the vicinity of the site appears to generally be sufficient to facilitate the movements of mobility and visually impaired people, with the provision of dropped kerbs and tactile paving at most local junctions and crossing points within the local area. The footways are generally of sufficient width and surface quality to accommodate the passage of wheelchairs (DfT, 2002).
- 3.2.9 It is expected that the internal pedestrian routes are of adequate width, with step-free access between the site and the local footway network to allow the secondary school to be suitably accessed on foot by all users, including those accompanied by young children and the mobility impaired.
- 3.2.10 Measures to promote walking trips to and from the secondary school are included within the Travel Plan for the school (LTP, 2020).

3.3 Cycling Provision

- 3.3.1 Cycling is a low cost and healthy alternative to car use, which can substitute for short car trips, or can form part of a longer journey by public transport. The Department for Transport (DfT) state that journeys up to five miles (circa 8km) are “an achievable distance to cycle for most people” (DfT, 2020).
- 3.3.2 The site is located within a reasonable cycle ride, up to 8km (approximately 25 minutes at the average cycling speed of 12mph), including the entire built-up area of central Manchester and areas to the north-east, east and south-east of central Manchester, as shown in Figure 4.

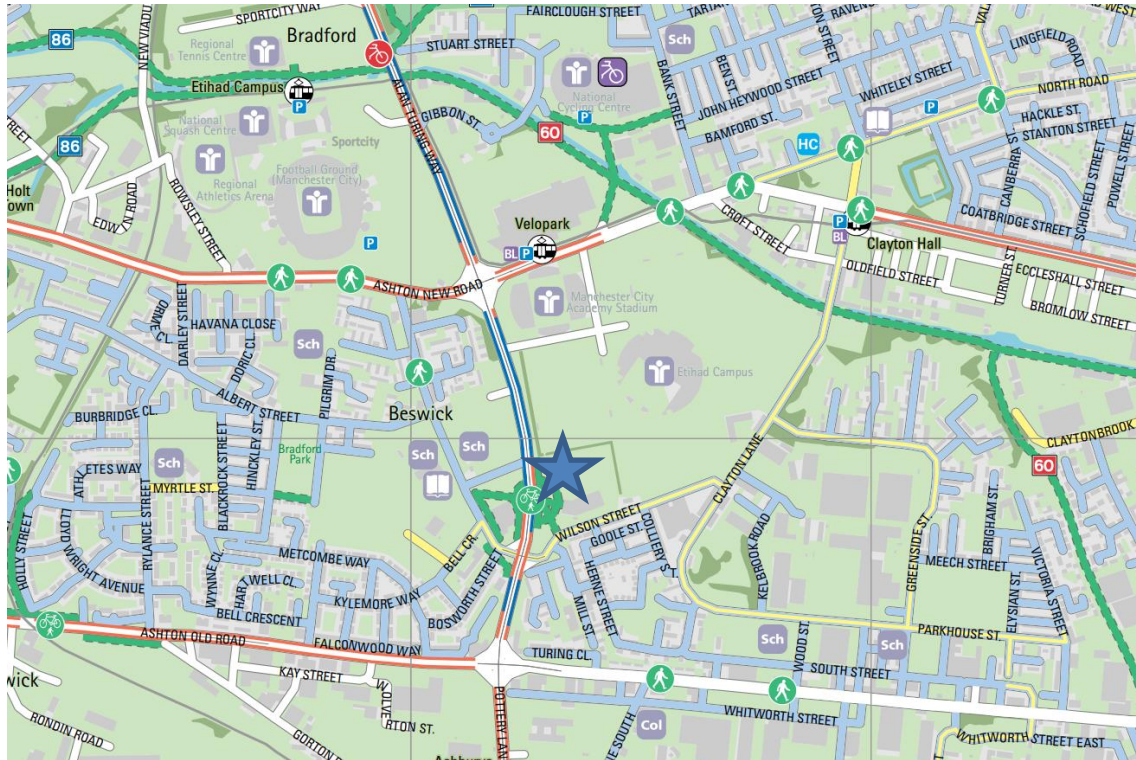
Figure 4: 25-Minute Cycling Isochrone



Source: TTM, 2020

- 3.3.3 An extract of the Manchester Cycle Map (TfGM, 2019) is provided in Figure 5 demonstrates that there are a number of on and off-road cycle facilities within the vicinity of the site, with off-road routes shown in green, on-road routes shown in blue and red, and 20mph zones highlighted in light blue. The site is indicated by the blue star.

Figure 5: Extract of Manchester Cycle Map



Source: TfGM, 2019

- 3.3.4 Figure 5 demonstrates that there is a segregated on-road cycle route along both sides of Alan Turing Way.

Photo 6: Cycle Lane on Alan Turing Way



- 3.3.5 Further on-road cycle facilities are available on a number of local roads, such as Ashton New Road and Ashton Old Road. National Cycle Network (NCN) Route 60 is available adjacent to a beck approximately 1.1km (4-minute cycle ride) to the north. Route 60 is an off-road route within the vicinity of the site which connects north and east Manchester, with its most southerly segment forming part of the Fallowfield Loophole.
- 3.3.6 Advanced Stop Lines (ASLs) for cyclists are also provided on all arms of the Alan Turing Way/Ashton New Road signalised junction, and on all arms of the Alan Turing Way/Ashton Old Road signalised junction.

Photo 7: Advanced Stop Line (ASL) at the Alan Turing Way/Ashton New Road Junction



- 3.3.7 Given the availability of local cycling infrastructure, and that most roads within the vicinity of the site are subject to a 20mph/30mph speed limit, it is considered that the local environment within the vicinity of the site is generally conducive to encouraging cycling trips.
- 3.3.8 It is noted that the National Cycling Centre is located a short 1km walk/cycle from the site to the north, and it is expected that there may be partnership working to provide opportunities for students.
- 3.3.9 As well as on-site cycle parking, Connell Co-op College provide access to the 'Cycle to Work' scheme for tax-free bicycle purchase, and there are also changing facilities for cyclists.
- 3.3.10 Measures to promote cycling trips to and from the secondary school are included within the Travel Plan for the school (LTP, 2020).

3.4 Greater Manchester Accessibility Level (GMAL)

- 3.4.1 The site is located in an area with a Greater Manchester Accessibility Level (GMAL) rating of 6, where a rating of 1 indicates a very low level of accessibility and 8 indicates a very high level of accessibility. The site is therefore considered to have good access to public transport (bus, Metrolink and rail).

3.5 Public Transport Provision – Bus

- 3.5.1 Advice outlined within ‘Guidelines for Public Transport in Development’ (IHT, 1999) states that the maximum walking distance to a bus stop from a development should not exceed 400m, although it is acknowledged that actual walking distances can be notably longer. There are bus stops on both sides of Alan Turing Way that are within an 80m walk of the site, providing travel in both directions. Bus service #53 providing a half-hourly service to Cheetham Hill, Old Trafford and a range of further areas is accessible from these bus stops.

Photo 8: Northbound Bus Stop on Alan Turing Way



- 3.5.2 There are also bus stops within a 400m walk of the site located on both sides of Ashton Old Road to the south of the site. Bus services accessible from these additional stops are outlined within Table 2 below:

Table 2: Local Bus Services

Service	Main Stopping Points	Mon-Fri Daytime Frequency*
219	Stalybridge Bus Station – Ashton Bus Station – Audenshaw – Ashton Old Road – Manchester Piccadilly Gardens	At least every 10 minutes
220/221	Dukinfield – Boyd’s Walk – Audenshaw – Higher Openshaw – Ashton Old Road – Manchester Piccadilly Gardens	4 services in each direction per day

*Refers to the general frequency of services between 08:00 and 19:00

- 3.5.3 Table 2 demonstrates that frequent services are available from local stops, including to a number of further bus stations and Manchester Piccadilly Gardens within Manchester city centre.
- 3.5.4 It is understood that a dedicated school bus service(s) will be provided to accommodate students of the proposed secondary school, however details of its/their route(s) and timings are yet to be confirmed.

3.6 Public Transport Provision – Metrolink

- 3.6.1 The nearest stop on the Manchester Metrolink is Velopark, which is located on Ashton New Road within an approximate 600m walk to the north of the site. The stop accommodates services on the East Manchester Line between Eccles/MediaCityUK and Ashton-under-Lyne, as outlined in Table 3:

Table 3: Velopark Metrolink Services

Key Stopping Points	Mon-Sat Daytime Frequency*
Eccles/MediaCityUK – Salford Quays – Exchange Quay – Cornbrook – Deansgate/Castlefield – St Peter’s Square – Piccadilly Gardens – Piccadilly – Etihad Campus – Velopark – Clayton – Droylsden – Audenshaw – Ashton-under-Lyne	Every 10 minutes

*Refers to the general frequency of services between 08:00 and 19:00

- 3.6.2 Table 3 demonstrates that services operate on the East Manchester Line up to every 10 minutes during the weekday daytime period, providing frequent access to Manchester city centre, Salford and Ashton-under-Lyne.
- 3.6.3 A zonal fare system is operated on the Metrolink, with the Velopark stop located within Zone 2 and the majority of the city centre within Zone 1. Relevant zonal travel passes are available, and train tickets to/from Manchester city centre are also valid for travel on Metrolink services within Zone 1.

Photo 9: Velopark Metrolink Station



3.7 Public Transport Provision – Rail

- 3.7.1 The nearest rail station to the site is Ashburys Rail Station, located an approximately 700m walk/cycle to the south of the site via Alan Turing Way. Ashburys Rail Station is operated by Northern Rail, and accommodates frequent services to local and regional destinations, including Manchester Piccadilly, Hadfield, Rose Hill Marple and New Mills Central. Amongst the facilities at the station is a car park and part step-free access.

Photo 10: Ashburys Rail Station



3.8 Sustainable Access Summary

- 3.8.1 The pedestrian and cycle infrastructure within the vicinity of the site is well developed, with a number of amenities within a short walk, and a wide area within a 25-minute cycle ride, including Manchester city centre. The site has a GMAL rating of 6, which represents a good level of accessibility by public transport, with bus, Metrolink and rail services all available within the vicinity. The site is therefore considered to have a good level of access by foot, cycle and public transport.

4. ROAD CASUALTY APPRAISAL

4.1 Collision Record

- 4.1.1 Personal Injury Collision (PIC) data for the highway network local to the site for the most recent available five-year study period (01/01/2015 to 31/12/2019) was obtained via a search of the Department for Transport's (DfT) road safety data (DfT, 2020).
- 4.1.2 A total of 9 collisions occurred within the study area, which includes sections of Alan Turing Way, Wilson Street, Clayton Lane and a number of local junctions. The study area and the locations of the collisions are shown on the plan attached as Appendix 2. Table 4 below outlines the collision history of the study area.

Table 4: Collision History

Year	2015	2016	2017	2018	2019	Total
Fatal	-	-	-	-	-	0
Serious	-	-	1	1	1	3
Slight	1	-	1	2	2	6
Total	1	0	2	3	3	9

- 4.1.3 The collision records show that the number of PICs per year has remained relatively low throughout the study period, with no collisions occurring during 2016. There were 3 Killed or Seriously Injured (KSI) collisions, resulting in a severity ratio of 33.3%.

4.2 Collision Conditions

- 4.2.1 Table 5 below summarises the collisions by road surface, weather and lighting conditions:

Table 5: Collision Conditions

Road Surface	Collisions	%
Dry	6	66.7%
Wet/Damp	3	33.3%
Weather	Collisions	%
Fine	6	66.7%
Rain	3	33.3%
Lighting	Collisions	%
Daylight	8	88.9%
Dark (with lighting)	1	11.1%

- 4.2.2 As illustrated in Table 5, the majority of collisions did not occur with an adverse road surface, in adverse weather or adverse lighting conditions.

4.3 Collision Times

4.3.1 Table 6 summarises the collisions by time of year:

Table 6: Collisions by Time of Year

Time of Year	Collisions	%
Winter (Dec-Feb)	1	11.1%
Spring (Mar-May)	2	22.2%
Summer (Jun-Aug)	3	33.3%
Autumn (Sep-Nov)	3	33.3%

4.3.2 Table 6 shows that collisions were evenly spread across the year.

4.3.3 Table 7 below summarises the collisions by day of week and also the time of day:

Table 7: Collisions by Day & Time

Day	Morning (06:00- 11:00)	Lunch (11:00- 14:00)	Afternoon (14:00- 19:00)	Evening (19:00- 01:00)	Night (01:00- 06:00)	Total	%
Monday	-	2	-	-	-	2	22.2%
Tuesday	-	-	-	-	-	0	-
Wednesday	2	1	-	-	-	3	33.3%
Thursday	2	-	-	-	-	2	22.2%
Friday	-	-	1	-	-	1	11.1%
Saturday	1	-	-	-	-	1	11.1%
Sunday	-	-	-	-	-	0	-
Total	5	3	1	0	0	9	
%	55.6%	33.3%	11.1%	-	-		

4.3.4 Table 7 shows that a third of the collisions occurred on a Wednesday, with no collisions occurring on a Tuesday and Sunday. Over half of the collisions occurred during the morning period (55.6%), with no collisions occurring during the evening and night-time period.

4.4 Collision Locations

4.4.1 The locations of the 9 study collisions (shown on the plot attached as Appendix 2) can be summarised as follows:

- 5 PICs occurred at the Alan Turing Way/Wilson Street/Grey Mare Lane signalised junction;
- 2 PICs occurred at the Clayton Lane/Greenside Street junction;
- 1 PIC occurred at the Cycle Street/Clayton Lane junction; and
- 1 PIC occurred at the Alan Turing Way/Willow Street junction.

4.4.2 No collisions occurred within the vicinity of the site.

4.5 Casualties

- 4.5.1 A total of 9 casualties occurred as a result of the 9 recorded injury collisions during the study period. Table 8 below provides a breakdown of the casualties according to the mode of travel and age group:

Table 8: Casualty Road User Groups

Road User Group	Age (years)						Total	%
	0 to 15	16 to 20	21 to 25	26 to 45	46 to 65	66+		
Pedestrian	-	1	-	-	1	-	2	22.2%
Cyclist	-	-	2	2	1	-	5	55.6%
PTW	-	-	1	-	-	-	1	11.1%
Car Driver	-	-	-	1	-	-	1	11.1%
Total	0	1	3	3	2	0	9	
%	-	11.1%	33.3%	33.3%	22.2%	-		

- 4.5.2 Table 8 shows that over half of the casualties (55.6%) were cyclists. A third of the casualties were aged 21 to 25 years and 26 to 45 years respectively.

4.6 Road Safety Impact

- 4.6.1 A total of 6 collisions, resulting in 6 casualties, have occurred within the study area during the five-year study period. Analysis of the study collisions has not revealed any identifiable existing collision issues associated with the expected movements of the proposed secondary school. Therefore, it is considered that there are no existing road safety issues pertinent to the development proposals.
- 4.6.2 If the proposed changes to the car park are designed with due consideration to road safety, with appropriate highway design features incorporated into the detailed design, then the development should not have a detrimental road safety impact on the local highway network and should not adversely affect the safety of pedestrians and cyclists.

5. TRIP GENERATION & TRAFFIC IMPACT

5.1 Proposed Secondary School Traffic Generation

5.1.1 The TRICS database is an industry-standard collection of traffic counts and trip generation statistics for calculating trip rates at development sites. The TRICS database has been interrogated to find suitable data to assist in projecting the trip generation of the proposed secondary school. This is consistent with the approved methodology utilised to predict the trip generation at Connell Co-op College as part of the associated planning application, which also utilised TRICS projections. This methodology and the trip generation for the college are outlined within the associated TA (AECOM, 2011).

5.1.2 In order to derive reflective trip rates, vehicle trip generation statistics within the 'Education - Secondary' category (04-B) of the TRICS database have been interrogated. To ensure that only trip generation statistics for comparable sites were used in calculations, the TRICS sites were filtered to the following criteria:

- Database version: v7.7.3;
- Survey type: Multi-modal sites;
- Size: All sizes (number of students);
- TRICS location type: 'Edge of Town Centre', 'Neighbourhood Centre' and 'Suburban Area';
- Regions: UK excluding Greater London and Ireland sites;
- Weekday survey data only (exclusion of Saturday and Sunday surveys); and
- Recent survey data only (exclusion of surveys undertaken prior to 01/01/2012).

5.1.3 As there were less than 20 comparable sites in the database after filtering (4 survey sites), mean trip rates (as weighted and calculated by the TRICS software) have been used to project the vehicle trip generation of the proposed development, in accordance with good practice guidelines (TCL, 2016). Details of the site selection and trip rates taken from the TRICS database are attached in full within Appendix 3, with the projected vehicle trip rates and generation shown in Table 9.

Table 9: Projected Vehicle Trip Generation

	AM Peak (08:00-09:00)		School PM Peak (16:00-17:00)		Network PM Peak (17:00-18:00)	
Secondary School Development	Arrivals	Departures	Arrivals	Departures	Arrivals	Departures
Vehicle Trip Rates (per student)	0.170	0.148	0.070	0.087	0.060	0.036
Vehicle Trips (240 students)	41	36	17	21	14	9

5.1.4 The vehicle trip generation projections indicate that the proposed secondary school could generate up to an additional 77 two-way vehicle trip movements during the AM peak (08:00-09:00), 38 during the school PM peak (16:00-17:00) and 23 during the network PM peak (17:00-18:00).

5.1.5 There are a number of factors to consider in relation to school travel, as outlined below:

- Vehicle trips associated with students travelling to/from the school as a car passenger may not represent 'new' trips to the local highway network. It is expected that the majority of trips whereby a student is dropped-off and picked-up will not be primary trips involving only one destination. For example, a number of drop-off/pick-up trips by parents/guardians will form part of their commute to work, therefore the school would not be the sole destination for the journey. It is recognised that such trips would only be rerouted to/from the school, with the associated trips not new to the wider highway network. If these trips are pass-by or diverted trips from the highway network local to the site, such as Alan Turing Way/Wilson Street/Clayton Road, then the rerouted distance would be negligible.
- By providing school places to accommodate the expected local demand, the overall distance travelled on the highway network is likely to be reduced. The alternative would be for students to be accommodated at other secondary schools further away, which is likely to give rise to a higher proportion of car-borne trips and longer car journey distances.
- A Travel Plan (LTP, 2020) has been produced in association with this TA to help promote and encourage sustainable travel to/from the proposed secondary school development. In order to ensure that this assessment robustly analyses a '*worst-case scenario*', the potential vehicle trip reducing benefits of the site Travel Plan have not been taken into account within trip generation projections. However, it is worth noting that the Travel Plan would be expected to increase the number of trips generated by sustainable modes and reduce the number of single occupancy car trips.
- There is inevitably a certain level of absence each day at schools. The current national average for state-funded secondary schools is 5.0% (DfE, 2020), meaning that approximately 12 of the 240 students could be expected to be absent on any given day.
- It is expected that there will be a spread of locations where student drop-offs will occur, therefore there will be fewer trips which directly enter the site than outlined above.

5.2 Modal Split & Person Trip Generation

- 5.2.1 The modal split of the development has been predicted based on travel pattern information from the comparable secondary school development sites in the TRICS database, with the number of trips generated by each mode projected utilising the total person trip generation for the site, as summarised in Table 10.

Table 10: Projected Modal Split Generation

Person Trips	Modal Split
Vehicle Drivers	37%
Vehicle Passengers	11.1%
Vehicle Occupants	48.1%
Pedestrians	28.3%
Cyclists	3.5%
Public Transport Users	20.1%
TOTAL	100%

*The total may not represent the sum of its parts due to rounding

- 5.2.2 These modal split predictions indicate that almost two-thirds (63%) of person trips generated by the secondary school development would be expected to be made by sustainable modes (pedestrian, cycle, public transport and car passenger).

5.3 Impact on the Local Highway Network

- 5.3.1 The DfT has previously issued guidance that transport assessment of development impacts could be based on a threshold of “30 two-way peak hour vehicle trips” (DfT, 2007a). This guidance acknowledged that this threshold was not to be applied rigidly, but rather that it provided “a useful point of reference from which to commence discussions”.
- 5.3.2 This national DfT guidance has now been superseded and replaced with the ‘National Planning Policy Framework’ (NPPF) (MHCLG, 2019) and its accompanying ‘Planning Practice Guidance’ (PPG) (DCLG, 2014). NPPF and PPG require that transport assessment is undertaken for “developments that generate significant amounts of movement”, although this is not defined. It is therefore acknowledged that there is no set threshold for assessment within the current national planning policy.
- 5.3.3 As detailed in Section 5.1, the secondary school development could be expected to generate up to an additional 77 two-way vehicle trip movements during the AM peak (08:00-09:00), 38 during the school PM peak (16:00-17:00) and 23 during the network PM peak (17:00-18:00).
- 5.3.4 As also outlined within Section 5.1, the majority of trips generated by the development are unlikely to be ‘new’ to the highway network, with many being already on local roads and simply rerouted to the school. Furthermore, other factors to consider in relation to school travel include the school accommodating local demand and therefore reducing the distance travelled on the highway network, absence levels, a percentage of student drop-offs occurring on the local highway network, and that a TP has been produced to promote travel by sustainable modes. It is therefore considered that the local highway network should be able to accommodate the trips associated with the proposed school and the impact of the additional trips on the wider highway network should not be significant.

- 5.3.5 Based upon the assessments of this TA, it is considered that the proposed secondary school development will not have a significant impact on the operation of the local highway network. Therefore, as the impact of the development is not expected to be severe, the proposals are considered to be in accordance with the *'National Planning Policy Framework'*, which states that *"development should only be prevented or refused on highways grounds if there would be an unacceptable impact on highway safety, or the residual cumulative impacts on the road network would be severe"*.

6. CONCLUSIONS

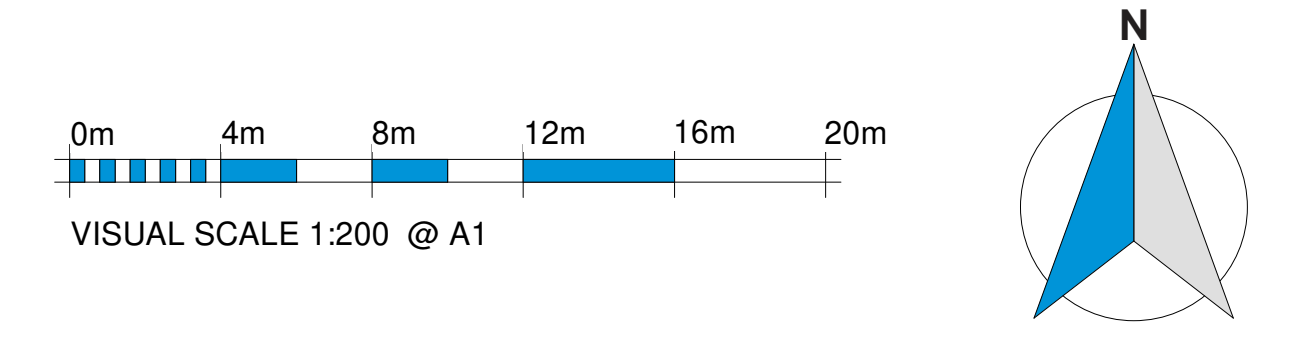
- 6.1.1 This TA provides a detailed appraisal of the expected transport impact associated with a proposed secondary school, located on land at Connell Co-op College to the east of Alan Turing Way in Manchester.
- 6.1.2 The proposals involve the provision of a secondary school on land at Connell Co-op College to accommodate a capacity of 240 students. There are expected to be 16 Full-Time Equivalent (FTE) staff members at the secondary school.
- 6.1.3 There is currently one vehicular access point provided at the Connell Co-op College site, set to be used by the secondary school, as well as the college. The vehicular access connects with Wilson Street to the south and connects with the site car park. A footway flanks the eastern side of the vehicular access, providing pedestrian access through the car park. A separate pedestrian access is also provided, connecting with Alan Turing Way to the west of the site.
- 6.1.4 It is proposed to provide a total of 70 standard car parking spaces, 3 disabled bays and 1 drop-off bay across the secondary school and Connell Co-op College site. This represents an uplift of 16 standard car parking spaces. It is understood that 74 cycle parking spaces are provided, and will accommodate the cycle parking of the secondary school.
- 6.1.5 The site has a Greater Manchester Accessibility Rating (GMAL) rating of 6, which represents a good level of accessibility by public transport.
- 6.1.6 The site is situated within an approximately 30-minute walk of a significant residential catchment. Within the immediate vicinity of the site, a semi-circular arrangement of footpaths is provided to the east of Alan Turing Way, connecting with footways on both sides of Alan Turing Way. The entire built-up area of central Manchester and settlements to the north-east, east and south-east of central Manchester are located within a 25-minute cycle ride of the site. The nearest bus stops to the site are located on Alan Turing Way, approximately 80m walk of the site, providing travel in both directions. Additional bus services are accessible from the bus stops on Ashton Old Road, approximately 400m walk of the site. The nearest Metrolink station is Velopark, situated approximately 600m walk to the north of the site on Ashton New Road, providing access to frequent services on the East Manchester line. The nearest rail station to the site is Ashburys Rail Station, located an approximately 700m walk/cycle to the south of the site via Alan Turing Way, providing frequent services to Manchester Piccadilly, Hadfield, Rose Hill Marple and New Mills Central.
- 6.1.7 A road casualty study showed that 9 collisions occurred within the local study area around the site during the five-year study period. Analysis of the study collisions has not revealed any identifiable existing collision issues associated with the expected movements generated by the proposed secondary school, therefore it is considered that there are no existing road safety issues pertinent to the development.

- 6.1.8 The travel patterns of students and staff at the proposed secondary school have been established utilising the TRICS industry-standard database. The information indicates that there could be expected to be an additional 77 two-way vehicle trips during the AM peak (08:00-09:00), 38 during the school PM peak (16:00-17:00) and 23 during the network PM peak (17:00-18:00) associated with the secondary school. It is expected that 63% of trips to/from the secondary school will be made by sustainable modes (i.e. car passenger, walking, cycling and public transport).
- 6.1.9 There are several factors to consider in relation to school travel; pass-by or diverted trips from the highway network local to the site, the school accommodating local demand and therefore reducing the distance travelled on the highway network, absence levels, a percentage of student drop-offs occurring on the local highway network and that a TP has been produced to promote travel by sustainable modes.
- 6.1.10 Based on the assessments of this TA, it is considered that the proposed secondary school development will not have a significant impact on the operation of the local highway network. Therefore, as the impact of the proposals at the site is not expected to be severe, the proposals are considered to be in accordance with the '*National Planning Policy Framework*' (NPPF) which states that "*development should only be prevented or refused on highways grounds if there would be an unacceptable impact on highway safety, or the residual cumulative impacts on the road network would be severe*" (MHCLG, 2019).
- 6.1.11 It is concluded from the assessments within this TA that the proposed development would not be expected to have a significant impact in terms of sustainable travel, traffic impact and road safety.

7. REFERENCES

- AECOM Transportation, 2013. Beswick Project – Transport Assessment.
- AECOM Transportation, 2013. Beswick Community Hub Project – Framework Travel Plan.
- AECOM Transportation, 2011. Manchester City Football Academy – Transport Assessment.
- AECOM Transportation, 2011. Manchester City Football Academy – Framework Travel Plan for Proposed South West Corner Development.
- BRE (Building Research Establishment), 2018. UK New Construction Non-Domestic Buildings Technical Manual.
- CIHT (Chartered Institution of Highways and Transportation), 2010. Manual for Streets 2: Wider Application of the Principles.
- DCLG (Department for Communities and Local Government), 2014. Planning Practice Guidance – Travel Plans, Transport Assessments and Statements in Decision-Taking (ID: 42-06/03/2014) [online: <http://planningguidance.planningportal.gov.uk>].
- DfE (Department for Education), 2019. Pupil Absence in Schools in England.
- DfT (Department for Transport), 2020. LTN 1/20 – Cycle Infrastructure Design.
- DfT, 2020. Road Safety Data [online: <http://data.gov.uk/dataset/road-accidents-safety-data>].
- DfT, 2007a. Guidance on Transport Assessment.
- DfT, 2007b. Manual for Streets.
- DfT, 2002. Inclusive Mobility.
- GMCA (Greater Manchester Combined Authority), 2020. Greater Manchester Accessibility Level Map. [online: https://mappinggm.org.uk/gmodin/#os_maps_light/11/53.5069/-2.3201] (accessed November 2020).
- IHT (Institution of Highways and Transportation), 2000. Guidelines for Providing for Journeys on Foot.
- IHT, 1999. Guidelines for Public Transport in Development.
- LTP (Local Transport Projects Ltd), 2020. Proposed Secondary School, Land at Connell Co-op College, Alan Turing Way, Manchester – Travel Plan.
- MCC (Manchester City Council), 2020. Manchester Controlled Parking Zone Map. [online: https://secure.manchester.gov.uk/info/500346/city_centre_parking/146/on-street_parking/6] (accessed November 2020).
- MCC, 2012. Manchester’s Local Development Framework, Core Strategy Development Plan Document.
- MHCLG (Ministry of Housing, Communities and Local Government), 2019. National Planning Policy Framework.
- TCL (TRICS Consortium Limited), 2016. TRICS Good Practice Guide 2016.
- TfGM (Transport for Greater Manchester), 2019. Manchester Cycle Map. [online: <https://tfgm.com/cycling/maps>].
- TfGM, 2017. Greater Manchester Transport Strategy 2040.
- TTM (Travel Time Maps), 2020. Travel Time Isochrone Map. [online: <https://app.traveltime.com/>] (accessed November 2020).

Appendix I – Proposed Site Layout Plan



- Prior to execution, the sub-contractor is to assume design responsibility for all elements of their work and satisfy themselves with the details shown on the drawing. Design, compliance with relevant regulations and execution on site is the responsibility of the appointed sub-contractor

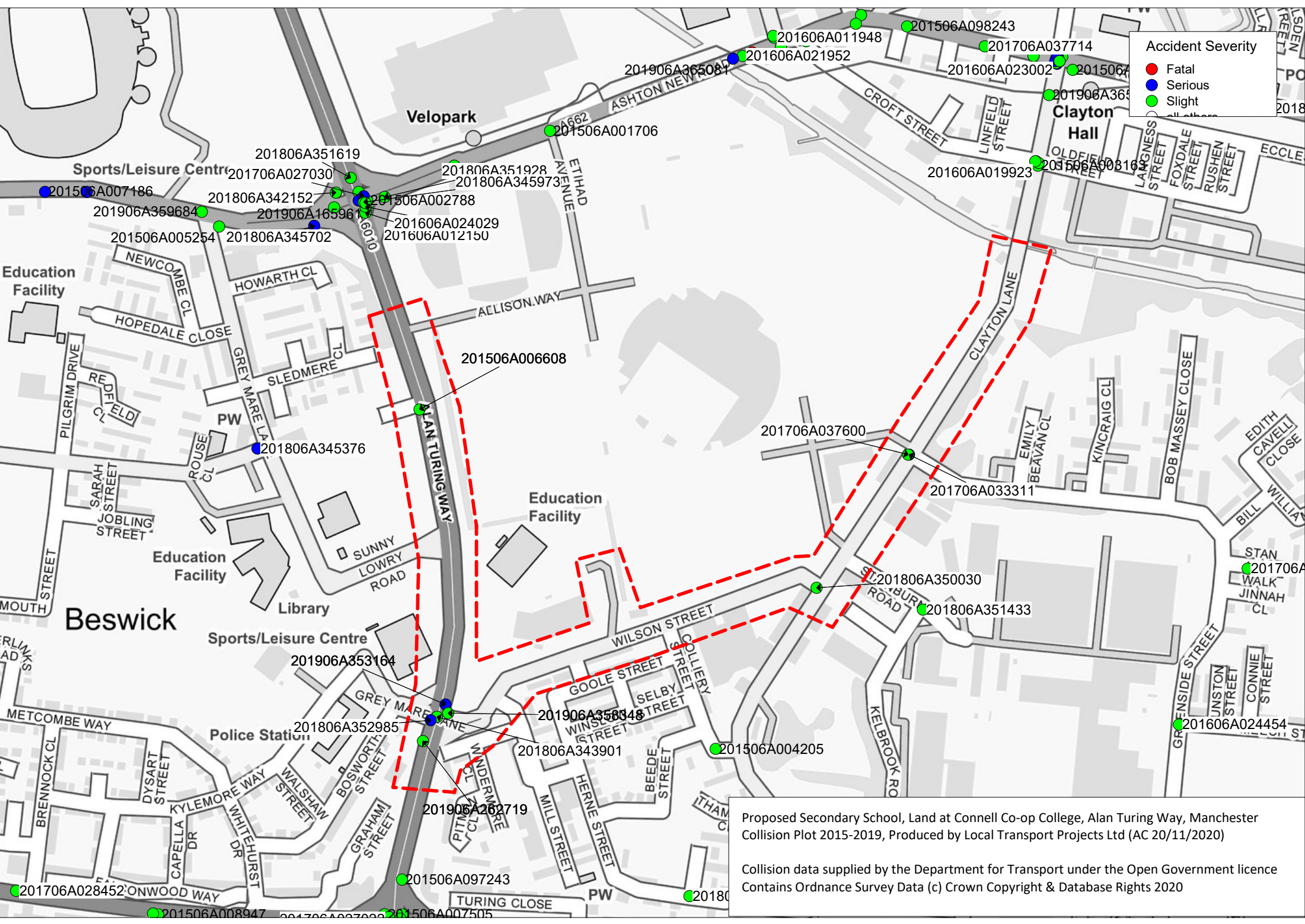
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PROJECT TITLE	ADDRESS
Connell Co-op College	301 Alan Turing Way Manchester M11 3BS

DRAWING TITLE					
Proposed Landscaping Plan					
DRAWING REFERENCE					
180398	DGL	01	XX	DR	A 1400
PROJECT	ORIGINATOR	VOLUME	LEVEL	TYPE	SCALE
INITIAL ISSUE DATE		INITIAL ISSUE BY	INITIAL CHECKED BY		GIFA
12/12/18		WH	ST		896 m ²
SUITABILITY			SCALE	SHEET	REV
S0 Work In Progress			1 : 200	A1	P8
STATUS CODE STATUS DESCRIPTION					

Appendix 2 – Collision Plot



Proposed Secondary School, Land at Connell Co-op College, Alan Turing Way, Manchester
Collision Plot 2015-2019, Produced by Local Transport Projects Ltd (AC 20/11/2020)

Collision data supplied by the Department for Transport under the Open Government licence
Contains Ordnance Survey Data (c) Crown Copyright & Database Rights 2020

Appendix 3 – TRICS Output

Projected Traffic Generation

04-B Education - Secondary

Vehicle Trip Rates (per student)

240 students

Time	IN	OUT	TOTAL
07:00-08:00	0.046	0.012	0.058
08:00-09:00	0.170	0.148	0.318
09:00-10:00	0.016	0.013	0.029
10:00-11:00	0.015	0.012	0.027
11:00-12:00	0.014	0.014	0.028
12:00-13:00	0.012	0.016	0.028
13:00-14:00	0.013	0.013	0.026
14:00-15:00	0.019	0.020	0.039
15:00-16:00	0.053	0.091	0.144
16:00-17:00	0.070	0.087	0.157
17:00-18:00	0.060	0.036	0.096
18:00-19:00	0.060	0.037	0.097

AM Peak

PM Peak

TOTAL	0.548	0.499	1.047
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IN	OUT	TOTAL
11	3	14
41	36	77
4	3	7
4	3	7
3	3	6
3	4	7
3	3	6
5	5	10
13	22	35
17	21	38
14	9	23
14	9	23

132	120	252
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TRICS 2020 v7.7.3 MM 04-B, All sizes, UK excl. GL and Ireland, 'Edge of Town Centre' 'Neighbourhood Centre' & 'Esurban Area', exc. Sat/Sun, 2012+, 4 Sites

Projected Person Trip Generation

Person Trip Rates (per resident)

Person Trips

Time	IN	OUT	TOTAL
07:00-08:00	0.074	0.005	0.079
08:00-09:00	0.815	0.095	0.910
09:00-10:00	0.045	0.130	0.175
10:00-11:00	0.036	0.020	0.056
11:00-12:00	0.024	0.022	0.046
12:00-13:00	0.023	0.037	0.060
13:00-14:00	0.039	0.046	0.085
14:00-15:00	0.037	0.119	0.156
15:00-16:00	0.046	0.572	0.618
16:00-17:00	0.041	0.224	0.265
17:00-18:00	0.120	0.077	0.197
18:00-19:00	0.106	0.074	0.180

AM Peak

PM Peak

TOTAL	1.406	1.421	2.827
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IN	OUT	TOTAL
18	1	19
196	23	219
11	31	42
9	5	14
6	5	11
6	9	15
9	11	20
9	29	38
11	137	148
10	54	64
29	18	47
25	18	43

337	341	678
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TRICS 2020 v7.7.3 MM 04-B, All sizes, UK excl. GL and Ireland, 'Edge of Town Centre' 'Neighbourhood Centre' & 'Esurban Area', exc. Sat/Sun, 2012+, 4 Sites

Projected Modal Split

Proportion of Vehicle Trips

Time	IN	OUT	TOTAL
07:00-08:00	62.2%	240.0%	73.4%
08:00-09:00	20.9%	155.8%	34.9%
09:00-10:00	35.6%	10.0%	16.6%
10:00-11:00	41.7%	60.0%	48.2%
11:00-12:00	58.3%	63.6%	60.9%
12:00-13:00	52.2%	43.2%	46.7%
13:00-14:00	33.3%	28.3%	30.6%
14:00-15:00	51.4%	16.8%	25.0%
15:00-16:00	115.2%	15.9%	23.3%
16:00-17:00	170.7%	38.8%	59.2%
17:00-18:00	50.0%	46.8%	48.7%
18:00-19:00	56.6%	50.0%	53.9%

TOTAL	39.0%	35.1%	37.0%
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Projected Modal Trip Generation

Mode	Split	12-Hour (07:00-29:00)		
		IN	OUT	TOTAL
Vehicle Drivers	37.0%	132	120	252
Vehicle Passengers	11.1%	37	38	75
Vehicle Occupants Sub-Total	48.1%	169	158	327
Pedestrian	28.3%	95	97	192
Pedal-cycle	3.5%	12	12	24
Public Transport	20.1%	68	69	137
	51.9%	175	178	353
Total Person Trips	100%	337	341	678

Calculation Reference: AUDIT-342901-201120-1147

TRIP RATE CALCULATION SELECTION PARAMETERS:

Land Use : 04 - EDUCATION

Category : B - SECONDARY

MULTI-MODAL TOTAL VEHICLES

Selected regions and areas:

03	SOUTH WEST	
	DV DEVON	1 days
	NS NORTH SOMERSET	1 days
06	WEST MIDLANDS	
	WK WARWICKSHIRE	1 days
07	YORKSHIRE & NORTH LINCOLNSHIRE	
	NY NORTH YORKSHIRE	1 days

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

Primary Filtering 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 pupils
 Actual Range: 800 to 900 (units:)
 Range Selected by User: 520 to 1913 (units:)

Parking Spaces Range: All Surveys Included

Public Transport Provision:

Selection by: Include all surveys

Date Range: 01/01/12 to 25/09/19

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:

Tuesday	1 days
Wednesday	2 days
Friday	1 days

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

Selected survey types:

Manual count	4 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)	2
Neighbourhood Centre (PPS6 Local Centre)	1

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:

Residential Zone	3
Village	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.

Secondary Filtering selection:

Use Class:

D1 4 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 500m Range:

All Surveys Included

Secondary Filtering selection (Cont.):

Population within 1 mile:

1,001 to 5,000	1 days
15,001 to 20,000	1 days
20,001 to 25,000	2 days

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

Population within 5 miles:

25,001 to 50,000	2 days
75,001 to 100,000	1 days
125,001 to 250,000	1 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
1.1 to 1.5	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:

Not Known	1 days
No	3 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.

PTAL Rating:

No PTAL Present	4 days
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This data displays the number of selected surveys with PTAL Ratings.

LIST OF SITES relevant to selection parameters

1	DV-04-B-04	SECONDARY ACADEMY	DEVON
	EARL RICHARD 'RD SOUTH		
	EXETER		
	Suburban Area (PPS6 Out of Centre)		
	Residential Zone		
	Total Number of pupils:	835	
	Survey date: TUESDAY	02/04/19	Survey Type: MANUAL
2	NS-04-B-01	SECONDARY SCHOOL	NORTH SOMERSET
	MIZZYMED ROAD		
	NAILSEA		
	Edge of Town Centre		
	Residential Zone		
	Total Number of pupils:	900	
	Survey date: WEDNESDAY	03/10/18	Survey Type: MANUAL
3	NY-04-B-03	GIRLS' HIGH SCHOOL	NORTH YORKSHIRE
	GARGRAVE ROAD		
	SKIPTON		
	Suburban Area (PPS6 Out of Centre)		
	Residential Zone		
	Total Number of pupils:	800	
	Survey date: FRIDAY	08/03/19	Survey Type: MANUAL
4	WK-04-B-01	SECONDARY SCHOOL	WARWICKSHIRE
	BANBURY ROAD		
	KINETON		
	Neighbourhood Centre (PPS6 Local Centre)		
	Village		
	Total Number of pupils:	839	
	Survey date: WEDNESDAY	25/09/19	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 04 - EDUCATION/B - SECONDARY
MULTI-MODAL TOTAL VEHICLES

Calculation factor: 1 PUPILS

BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. PUPILS	Trip Rate	No. Days	Ave. PUPILS	Trip Rate	No. Days	Ave. PUPILS	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	4	844	0.046	4	844	0.012	4	844	0.058
08:00 - 09:00	4	844	0.170	4	844	0.148	4	844	0.318
09:00 - 10:00	4	844	0.016	4	844	0.013	4	844	0.029
10:00 - 11:00	4	844	0.015	4	844	0.012	4	844	0.027
11:00 - 12:00	4	844	0.014	4	844	0.014	4	844	0.028
12:00 - 13:00	4	844	0.012	4	844	0.016	4	844	0.028
13:00 - 14:00	4	844	0.013	4	844	0.013	4	844	0.026
14:00 - 15:00	4	844	0.019	4	844	0.020	4	844	0.039
15:00 - 16:00	4	844	0.053	4	844	0.091	4	844	0.144
16:00 - 17:00	4	844	0.070	4	844	0.087	4	844	0.157
17:00 - 18:00	4	844	0.060	4	844	0.036	4	844	0.096
18:00 - 19:00	4	844	0.060	4	844	0.037	4	844	0.097
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:		0.548			0.499			1.047	

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.

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Parameter summary

Trip rate parameter range selected: 800 - 900 (units:)
 Survey date range: 01/01/12 - 25/09/19
 Number of weekdays (Monday-Friday): 4
 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 04 - EDUCATION/B - SECONDARY

MULTI-MODAL TOTAL PEOPLE

Calculation factor: 1 PUPILS

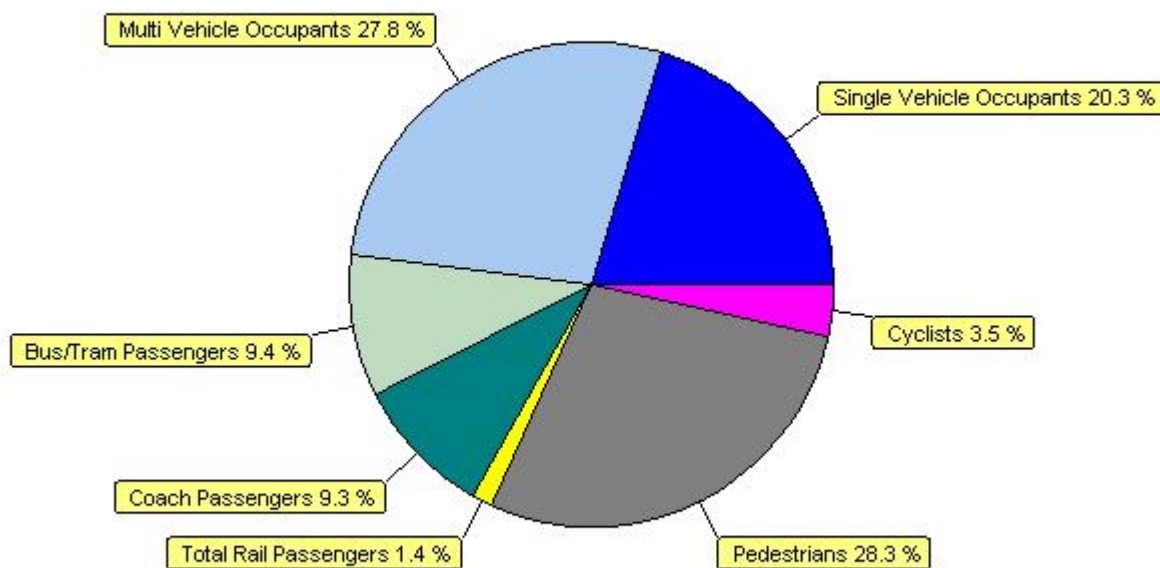
BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. PUPILS	Trip Rate	No. Days	Ave. PUPILS	Trip Rate	No. Days	Ave. PUPILS	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	4	844	0.074	4	844	0.005	4	844	0.079
08:00 - 09:00	4	844	0.815	4	844	0.095	4	844	0.910
09:00 - 10:00	4	844	0.045	4	844	0.013	4	844	0.058
10:00 - 11:00	4	844	0.036	4	844	0.020	4	844	0.056
11:00 - 12:00	4	844	0.024	4	844	0.022	4	844	0.046
12:00 - 13:00	4	844	0.023	4	844	0.037	4	844	0.060
13:00 - 14:00	4	844	0.039	4	844	0.046	4	844	0.085
14:00 - 15:00	4	844	0.037	4	844	0.119	4	844	0.156
15:00 - 16:00	4	844	0.046	4	844	0.572	4	844	0.618
16:00 - 17:00	4	844	0.041	4	844	0.224	4	844	0.265
17:00 - 18:00	4	844	0.120	4	844	0.077	4	844	0.197
18:00 - 19:00	4	844	0.106	4	844	0.074	4	844	0.180
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:		1.406			1.304			2.710	

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.

Modal Split Percentages



Time Range/Peak Period Selection
Direction: Totals / Use All Times