

TRANSPORT ASSESSMENT

Taylor Wimpey

Land at Chapel Lane, Halton

May 2023

Transport Assessment

Contents

1 Introduction 1

2 Highway Engagement 3

3 Existing Situation 5

4 Policy Review 32

5 Proposed Development 41

6 Mobility Strategy & Travel Trends 53

7 Trip Generation Forecast 62

8 Highway Network Assessment 80

9 Summary and Conclusion 97

Figures

Figure 3.1	– Site Location Plan – Local
Figure 3.2	– Site Location Plan - Strategic
Figure 3.3	– Local Facilities Plan
Figure 3.4	– Existing PRowS
Figure 3.5	– Walking Isochrones
Figure 3.6	– Existing National Cycle Network – Strategic
Figure 3.7	– Existing National Cycle Network – Local
Figure 3.8	– Cycling Isochrones
Figure 3.9	– Bus Routes Plan
Figure 3.10	– Local Highway Network
Figure 3.11	– Collision Location Plan
Figure 5.1	– Illustrative Masterplan
Figure 5.2	– Pedestrian & Cycle / Emergency Access – Sandy Lane
Figure 5.3	– Site Access Arrangements
Figure 5.4	– Forward Visibility Splays
Figure 5.5	– Sandy Lane Crossing Arrangements
Figure 5.6	– Proposed Cycle/Pedestrian Crossing – Queensbury Way
Figure 6.1	– Sustainability Accessibility Mobility Framework
Figure 6.2	– 20 Minute Neighbourhood Concept
Figure 6.3	– Example of Mobility as a Service

Appendices

Appendix A	– Scoping Note
Appendix B	– Collision Report
Appendix C	– Emergency Site Access Arrangements
Appendix D	– Site Access Arrangements – Chapel Lane
Appendix E	– Site Access RSA Stage 1
Appendix F	– Hale Gate Road Trip Methodology
Appendix G	– HBC Email Regarding Upton Grange Trip Rates
Appendix H	– Traffic Distribution Diagrams
Appendix I	– Site Access Junction – Chapel Lane (Knowsley) PICADY Report
Appendix J	– Cronton Road / Chapel Lane / Smithy Lane Signals (Knowsley) LinSIG Report
Appendix K	– Prescott Road / Queensbury Way (Halton) ARCADY Report
Appendix L	– Cronton Road / Queensbury Way (Knowsley) ARCADY Report
Appendix M	– Cronton Road / Lunts Heath Road Double Roundabouts ARCADY Report
Appendix N	– Liverpool Road / Hale Road (Halton) Signals LinSIG Report

1 Introduction

- 1.1 This Transport Assessment (TA) has been prepared by Vectos, Part of SLR on behalf of Taylor Wimpey UK Ltd to assist the local planning authority's consideration of an outline planning application on land to the east of Chapel Lane, Widnes for:

Outline planning application (with all matters other than access reserved) for the development of up to 350 dwellings, public open space, landscaping and associated infrastructure works. Site-access proposals are situated within Knowsley Borough Council authority area (emergency access in Halton Borough Council authority area via Sandy Lane). Full planning permission for the access arrangements only, via a new junction on Chapel Lane (to be determined by Knowsley Borough Council only) and emergency access via Sandy Lane (to be determined by Halton Borough Council). All of the outline proposals are situated within Halton Borough Council authority area and are to be determined by Halton Borough Council only.

- 1.2 The proposed development site is located to the north-west of the Widnes urban area. The site is situated within the boundary of two separate allocations for residential development within the adopted Halton Delivery and Allocations Local Plan [DALP] (March 2022) under Policy RD1 (Residential Development Allocations). The allocations comprise two separate land parcels separated by Sandy Lane, (Site Ref. W4 to the west of Sandy Lane and Site Ref. W5 to the east). The application red line boundary does not extend to the full extent of the allocation.

- 1.3 The proposed application site is bounded to the:

1. north by Alder Brook which is marked by mature trees and a hedgerow. There is open countryside beyond the brook;
2. to the east by an area of young woodland situated adjacent to Queensbury Way;
3. to the south by the curtilage of residential properties along Old Upton Lane; and
4. to the west by Chapel Lane and a group of modern and traditional farm buildings fronting onto Chapel Lane (Rose Farm).

- 1.4 A Scoping Note was submitted to both Halton Borough Council and Knowsley Council and is contained at **Appendix A**, along with meeting minutes of subsequent pre-application discussions.

- 1.5 The remainder of the report is structured as follows:

- **Engagement** – sets out the consultation timeline.
- **Existing Situation** – details the current accessibility of the site by all modes of travel, and the proximity to local services and facilities.
- **Policy Review** – reviews the local and national policy applicable to the site.
- **Proposed Scheme** – details the proposed scheme and the Mobility Strategy.

- **Network Assessment Scope** – outlines the scope of the assessment undertaken on the local transport networks, including the road network.
- **Trip Generation** – sets out the expected and realistic trip generation of the development.
- **Highway Network Assessment** – determine the impact of the proposed vehicular trip generation on the local highway.
- **Summary and Conclusion** – summarises and concludes the report.

1.6 This TA provides the conclusion that the proposed development will be accessible by foot, cycle and public transport services. It also concludes that the access is appropriate and vehicular traffic associated with the development can be accommodated without detriment to future safety or operation of the surrounding highway network.

2 Highway Engagement

- 2.1 The following section summarises the consultation undertaken with highway officers and will set out what has been agreed with each Council regarding who is the determining authority for transport and highways related matters.

Highway Consultation

- 2.2 Initial discussions were held on 19th February 2019 between Taylor Wimpey and Halton Borough Council (HBC) to discuss the allocated sites W4 – Chapel Lane to Old Upton Lane and W5 – Sandy Lane to Queensbury Way.
- 2.3 The meeting note of 19th February 2019 advises that multiple points of access would be preferred to serve the site and the maximum number of dwellings served by a single access being 180. The note also refers to access from Queensbury Way via the Queensbury Way roundabout to the south of the site, subject to land ownership.
- 2.4 Vectos has subsequently engaged with Highway Officers at HBC on behalf of the Applicant, prior to submission of the Outline Planning Application.
- 2.5 A Transport Assessment (TA) Scoping Note setting out background information, a policy review, development proposals and the assessment methodology was submitted to officers in May 2022. The Hale Gate Road trip methodology was also set out. The Scoping Note was subsequently agreed, however discussions relating to the access arrangements were ongoing.
- 2.6 A virtual Transport and Highways pre-app meeting was subsequently held with Officers at HBC on 1st July 2022 to discuss agreed matters in terms of the TA and in relation to the access strategy and the single point of access for the proposed development, as well as particulars for the assessment including committed developments and the future year assessment.
- 2.7 Open dialogue was held with Officers at HBC and Vectos regarding the proposed access arrangements with matters discussed covered via email.
- 2.8 Vectos and HBC met with Mott MacDonald to discuss the Liverpool City Region Transport Model (LCRTM) on 26th October, and it was concluded that the model was a high-level model which could not drill down at individual junction or link level and therefore may not be appropriate to use in this instance. The Halton Saturn Model was also discussed, this was estimated to be ready in early 2023. Further discussions were held with officers at HBC to establish when the model would be available for assessment purposes. The most recent email exchanges indicate that the model is not yet available.
- 2.9 A further virtual Transport and Highways pre-app meeting was held with officers from Knowsley Council (KC), as well as HBC officers and the Applicant on 4th November 2022 to discuss all areas, including the access arrangements, cross boundary matters and to determine the overall scope of determining power for the planning application.

Planning Application

- 2.10 At the most recent meeting on 4th November 2022 with both highway authorities, it was agreed that identical planning submissions would be provided to both HBC and KC.
- 2.11 Halton Borough Council will consider and determine the application in its entirety except for the access arrangement from Chapel Lane.
- 2.12 Knowsley Council will consider and determine the application for the access arrangement serving the site from Chapel Lane only. A review of the impacts of the development on the wider Knowsley Council highway network will be reported to Halton Borough Council as a statutory consultee to the HBC application. A letter outlining the Council's position will be submitted as part of the planning application.

3 Existing Situation

- 3.1 This section of the report will consider the existing accessibility of the site having regard to a range of transport opportunities, including active travel, public transport, and the local highway network in the surrounding area.

Site Location

- 3.2 The site is located approximately 3 km northwest of Widnes town centre and 11 km west of Warrington town centre.
- 3.3 The site is located within an area of open agricultural land, which lies adjacent to the built-up area of Widnes. The site is bound to the north by open land, by woodland to the east, existing residential development to the south, and Chapel Lane to the west. Sandy Lane bisects the site in the east providing a traffic-free active travel link directly through the site.
- 3.4 Chapel Lane and Sandy Lane connect the site to the nearby villages and communities of Parklands and Cronton. The M62 connects the site to wider destinations such as Liverpool and Warrington.
- 3.5 The location of the site in its local context is illustrated in **Figure 3.1**.

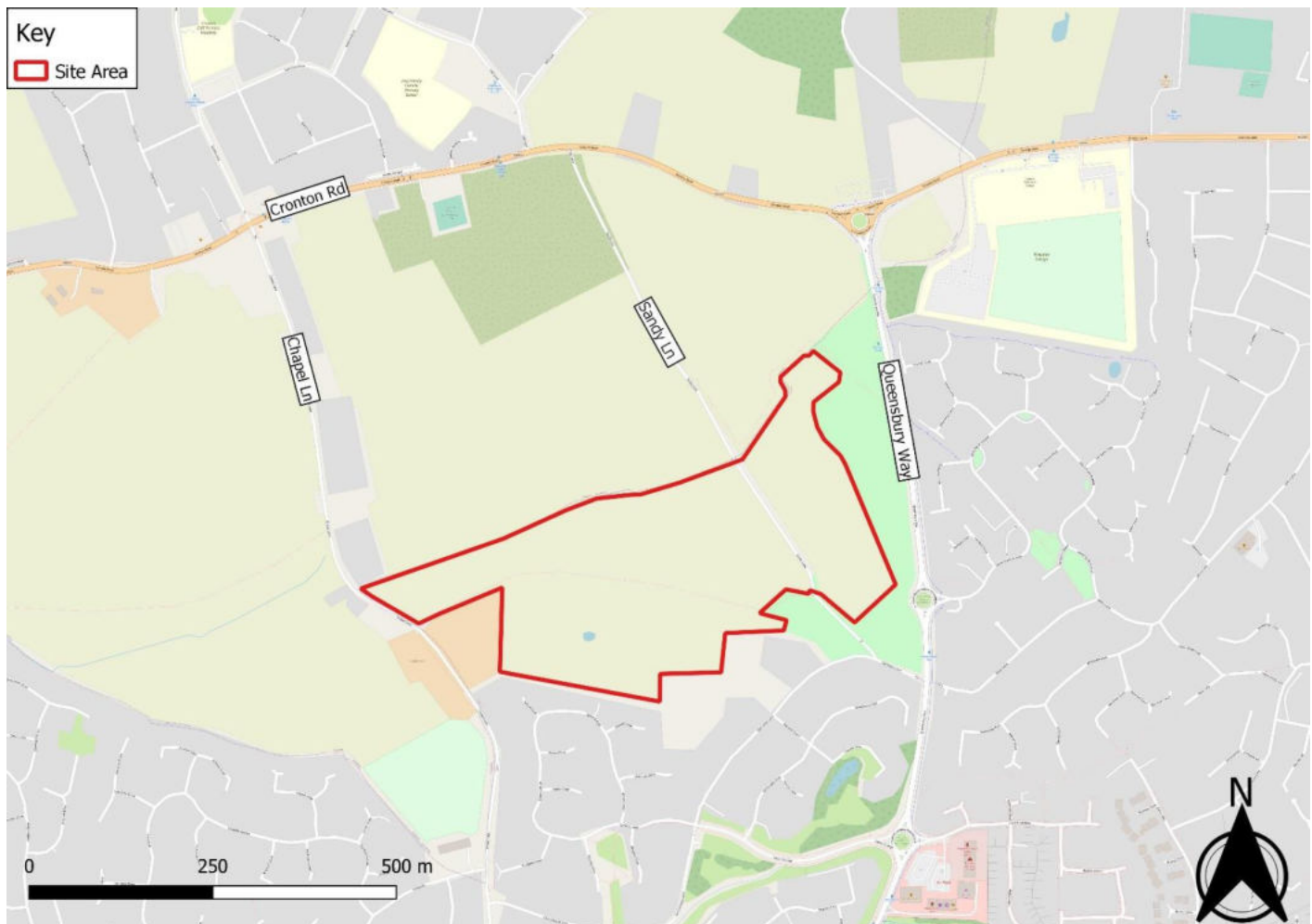


Figure 3.1 - Site Location – Local Context

3.6 The location of the site in its wider context is illustrated in in **Figure 3.2**.

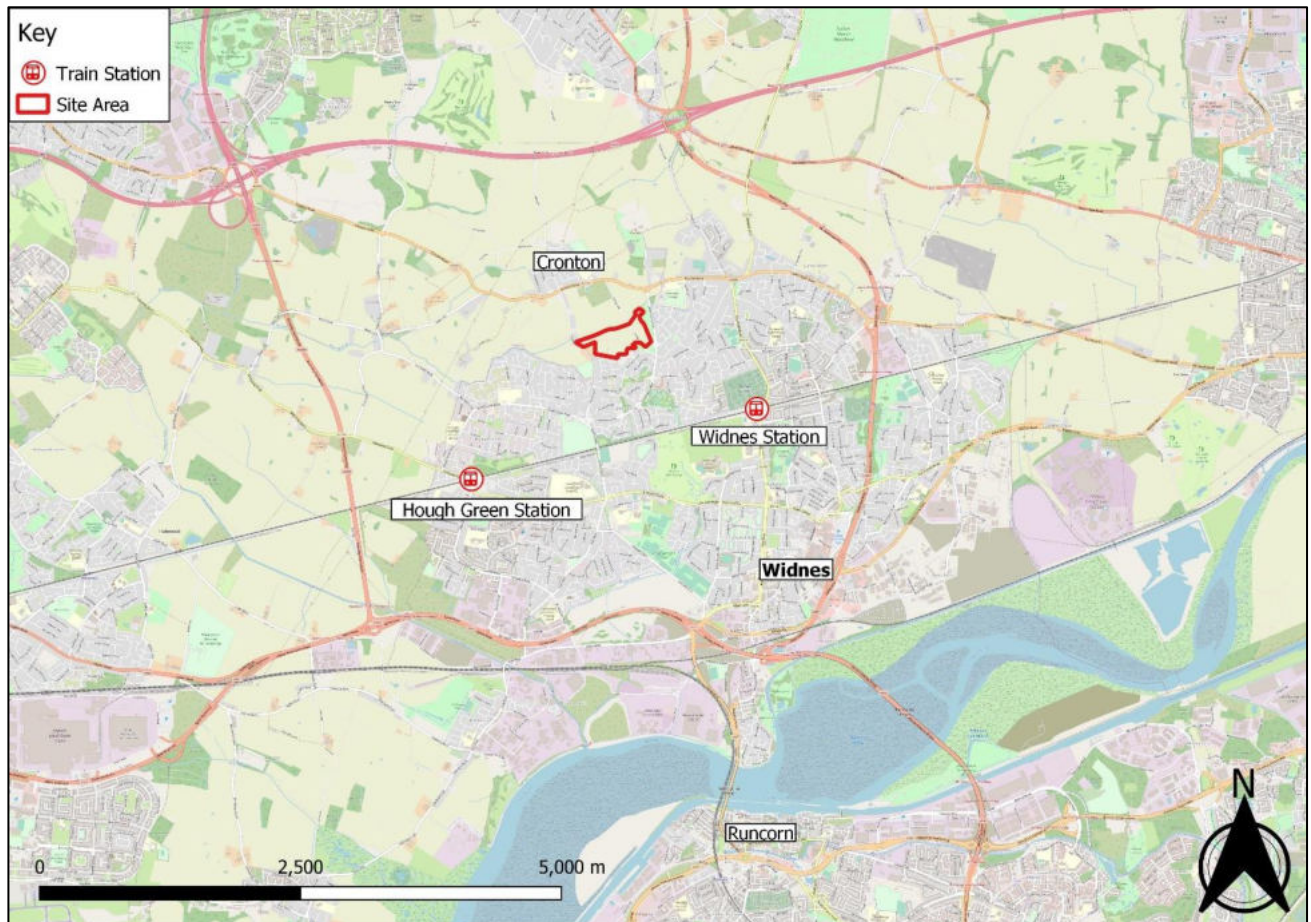


Figure 3.2 - Site Location – Strategic

Historic Travel Behaviour

- 3.7 Travel trends are changing rapidly, with these changes being accelerated by the Covid-19 pandemic. Attitudinal flexibility to movement is increasing and there is a renewed emphasis on the desire for local living and healthy lifestyles.
- 3.8 To gain an understanding of historic travel behaviour in the local area the travel patterns for journeys to work have been investigated for the Halton 002 Middle Layer Super Output Area (MSOA) obtained from the 2011 Census. This data is now some 11 years old and is only representative of journeys to work at that time.
- 3.9 With the recent release of the 2021 Census data, this most recent set of data has been appraised by the office for national statistics (ONS). The ONS have examined the results of the 2021 census and concluded:
- The Office for National Statistics (ONS) collected Census 2021 responses during the coronavirus (COVID-19) pandemic, a period of unparalleled and rapid change; the national lockdown, associated guidance and furlough measures will have affected the travel to work topic;

- ONS provided extra guidance to respondents affected by the pandemic on how to respond to travel to work questions, but it is not clear how this guidance was followed;
- Large numbers of people were still being supported by government furlough schemes, and it is not clear how the questions' guidance provided was followed by respondents;
- some people may have provided travel information for the last time they worked, or they may have answered based on their behaviours on Census Day;
- Restrictions on travel ended later in 2021, and while there will have been a shift back towards some behaviours from before COVID-19, hybrid and home working remain commonplace;
- At the moment, ONS advise users to continue to make use of the 2011 Travel to Work Areas for analytical and statistical work, and they will continue to update users on future developments.

3.10 With this conclusion from the ONS the assessment to understand existing mode share was undertaken using 2011 census data which represents a worst-case scenario in travel assumptions and mode splits given the recent changes in travel behaviour relating to working from home and commuter trips. As such, the use of the 2011 Census is considered to be robust.

3.11 **Table 3.1** shows the mode splits for the journey to work from this MSOA, taken from the 2011 Census data.

Table 3.1 – Method of Travel to Work – Halton 002 MSOA

Travel Mode	% Mode Split
Work mainly at or from home	4%
Underground, metro, light rail, tram	0%
Train	3%
Bus, Minibus or Coach	3%
Taxi	0%
Motorcycle, Scooter or Moped	1%
Driving a Car or Van	80%
Passenger in a Car or Van	5%
Bicycle	1%
On Foot	2%
Other Method of Travel to Work	0%
Total	100%

- 3.12 As shown in **Table 3.1**, in 2011 there was a relatively high mode share driving to their workplace (80%) with 5% travelling to work as a passenger of a private vehicle. A smaller proportion (6%) travelled to work by public transport with 3% travelling to work on foot or by bicycle.
- 3.13 It should be emphasised that the data in **Table 2.1** relates only to journeys to work and does not include journeys for the purpose of education, shopping, or leisure.
- 3.14 Furthermore, the data does not take into account multi-modal trips to work (the census asks for method of travel to work for the longest part of the journey) i.e., park and ride or cycle and ride. However, it does provide an indication of existing travel patterns in the area.

Accessibility by Sustainable Travel Modes

- 3.15 Contemporary local and national transport policy states that new developments should be designed to minimise travel through providing for virtual mobility, and where travel does occur encourage more trips to be made by sustainable modes including walking, cycling or on shared/public transport. This approach maximises social inclusion and helps to minimise the number of single occupancy private car trips. Providing travel choice is policy compliant and essential in terms of today's modern and dynamic society, particularly where policy seeks to achieve the Net Zero Carbon target for the UK by 2050.

Local Facilities

- 3.16 One of the primary factors to be considered when considering the suitability of a new development is its proximity, accessibility, and connectivity in relation to key local facilities by non-car modes. The development site is already established as suitably located for residential development through its allocation in the adopted Halton Borough Council Local Plan (2022).
- 3.17 The site is demonstrated to be well located to access the nearby local facilities and services within and around Widnes. A summary of the local facilities is provided in **Table 3.2** and the location of these facilities relative to the site are shown in **Figure 3.3**, with approximate walking and cycling journey times provided. Additional further local facilities are also shown. It should be noted that the distances and walking/cycling times shown in **Table 3.2** are based on the existing highway/pedestrian/cycle networks but utilising the proposed access points to the site.

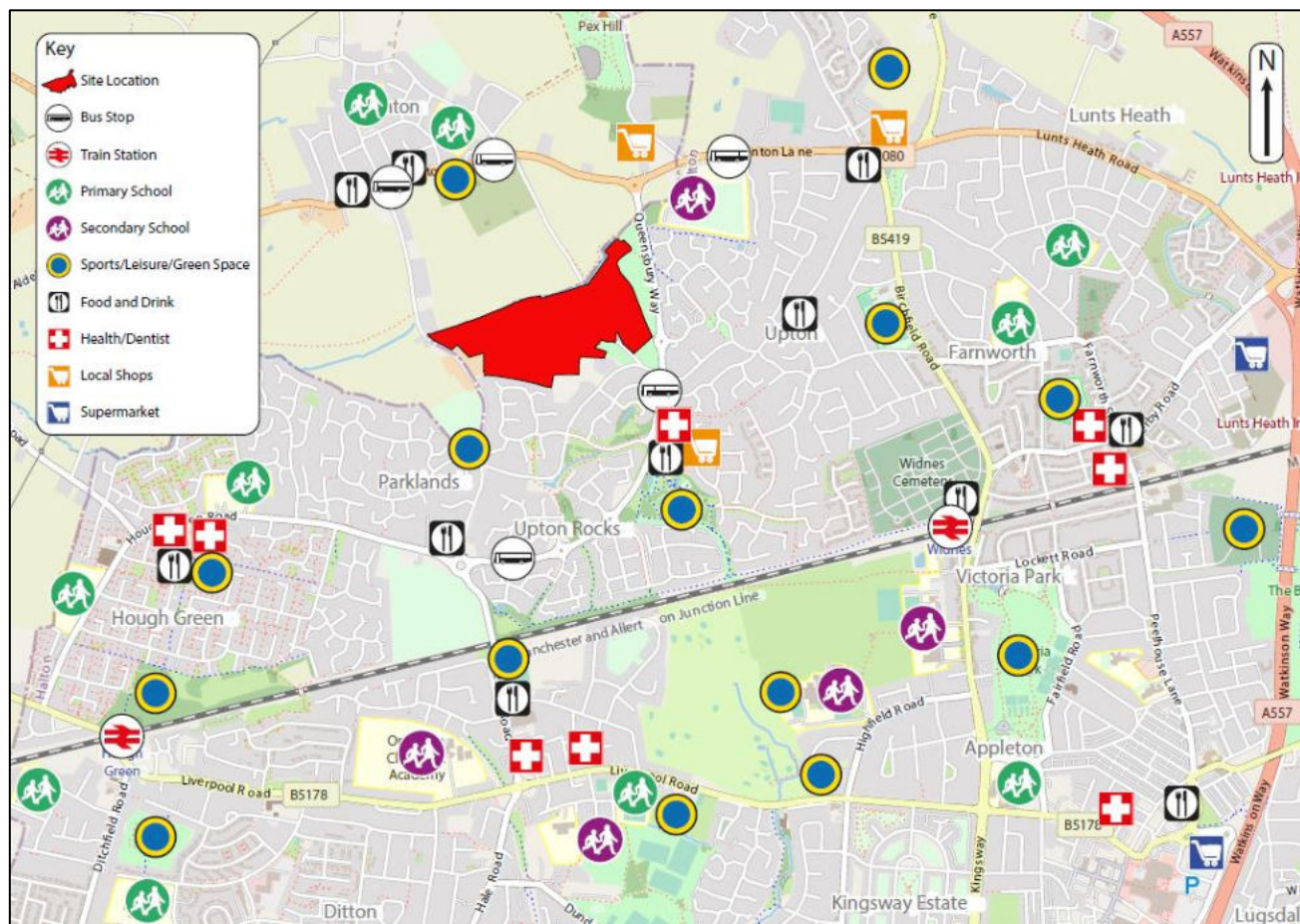


Figure 3.3 – Local Facilities Plan

- 3.18 **Figure 3.3** demonstrates that the nearest bus stop to the site is located within a seven-minute walk and 2-minute cycle from the centre of the site, located along Queensbury Way. Widnes Railway Station is located within a 29-minute walk or 10-minute cycle, and several local primary and secondary schools, as well as Cronton Sixth Form College, can all be accessed on foot in under 30 minutes.
- 3.19 The walking and cycling distances and journey times to each local facility from the centre of the site are indicated in **Table 3.2**. Walking and cycling journey times are based on an average speed of 5km/hour for walking, and 15 km/hour for cycling.

Table 3.2 – Local Facilities

Local Facility	Distance from Centre of Site (metres)	Walking Time (mins)	Cycling Time (mins)
Public Transport			
Upton Rocks Bus Stop	550	7	2
Cronton Chapel Lane Bus Stop	1,050	13	4
Widnes Railway Station	2,300	29	10
Hough Green Railway Station	2,800	35	15
Education			
Cronton Sixth Form College	1,300	16	5
Farnworth C of E Primary School	1,800	23	8
Lunt's Heath Primary School	2,200	28	9
Cronton C of E Primary School	1,300	16	5
Wade Deacon High School	2,400	30	10
Ormiston Chadwick Academy	2,450	31	10
Restaurants			
The Observatory Public House	500	6	2
The Tavern	600	7	2
The Dandelion	540	7	2
Cronton Fish Bar	510	7	2
The Unicorn Inn	560	7	2
Pesto Widnes	1,500	19	6
Lifestyle/Healthcare Facilities			
Parkland Sports Club	900	11	4
Widnes Cricket Club	1,900	24	8
Upton Rocks Surgery	1,950	24	8
Hough Green Health Park	2,050	26	9
Farnworth Village Pharmacy	2,200	28	9
Highfield Hospital	3,300	36	13
Retail			

Co-op Food - Widnes	800	10	3
Cronton Garden Centre	1,200	15	5
Spar Halton	1,500	19	6
Aldi	2,600	33	11

- 3.20 **Table 3.2** demonstrates that the site is well connected and accessible by foot (15-30 minutes) or by bicycle (under 15 minutes) to a wide range of local amenities in the local area including bus stops, local primary and secondary schools, local food shops and Highfield Hospital.
- 3.21 As highlighted above, the site is well located with regard to local facilities within a convenient walk and cycle time based on existing infrastructure, such that future residents will have the opportunity to access key services via active travel modes.
- 3.22 Development of this site would be designed to encourage trips to be made by sustainable modes, including active travel (walking and cycling), by public transport and car sharing in an effort to maximise social inclusion and minimise the number of single occupancy private car trips. A Travel Plan will be introduced at the site which will encourage sustainable travel to residents from the outset by introducing short and long term measures. In addition, connections to the wider area can be made via Sandy Lane to the north and south and the existing PRow to the east. Improvements will be made to the Sandy Lane / Old Upton Lane junction to allow for a pedestrian crossing to be introduced, as well as an uncontrolled pedestrian crossing proposed on Queensbury Way. Furthermore, the location of the site is well suited to the promotion of sustainable travel and forms a natural extension of Widnes.

Active Travel

- 3.23 Active travel encompasses walking and cycling journeys. Whilst these are innately healthy activities that are to be encouraged, it is when they displace car journeys that they deliver significant benefits for the health and well-being of residents; increasing active travel contributes to the UK's carbon neutral and health-oriented goals.
- 3.24 The health benefits are seen as a key part of the reasoning behind encouraging active travel, with Sustrans describing walking and cycling as the "most effective ways to promote routine physical activity" amongst people.
- 3.25 Future residents at the proposed development will be encouraged to undertake shorter journeys on foot or by bicycle where appropriate. The location of the site is suited for the promotion of active travel journeys to the local convenience store, primary and secondary school.
- 3.26 Furthermore, the Covid-19 pandemic has seen a substantial rise in the desire to live locally, thus many people are now travelling shorter distances for essential journeys, often within their local communities rather than further afield. There has also been an exponential take-up of active modes of travel for both short purpose driven trips, as well as leisure trips.
- 3.27 The following section provides an overview of the existing sustainable active travel infrastructure in the proximity to the site.

Walking

- 3.28 The area is served by good quality pedestrian and cycle routes, through attractive and active environments. Existing pedestrian facilities in the vicinity of the site include formal footways, shared footway/cycleways, and Public Rights of Way (PRoW).
- 3.29 Good quality footways measuring between 1.5 and 2.5 metres in width are provided on the eastern side of Chapel Lane, providing access to the north and south, as well as continuing into the surrounding residential streets. The area is fully illuminated and subject to a 30mph speed limit.
- 3.30 Sandy Lane bisects the site and is promoted as a high-quality active travel link (designated as an 'off-road walking/cycling route' PRoW W.16 within HBC's Definitive Map) and is subject to a Prohibition of Driving Order. Sandy Lane forms part of the adopted highway network (HMPE) connects Cronton to existing residential development and the built-up area of Widnes at Old Upton Lane, where it is restricted for vehicular traffic except for emergency vehicles.
- 3.31 From the roundabout to the north with the A5080 Cronton Road, Queensbury Way is a marked shared walking and cycle route on the definitive map and has a continuous, segregated shared route running north to south on the eastern edge of the carriageway. This route can be used to access Widnes Railway Station and various other local facilities in the local area. Walking and cycling connections will be made to Queensbury Way via Sandy Lane and via an existing PRoW to the northeast of the site, as well as introducing an uncontrolled crossing on Queensbury Way, acting as a traffic calming feature to make the route more attractive to active travel users.
- 3.32 PRoW [W/16] crosses the site in an east to west direction, connecting Chapel Lane with Sandy Lane. There are further PRoWs within the vicinity of the site which will be retained to provide high quality links to local facilities / amenities and safe routes to schools.
- 3.33 A summary of existing PRoWs in the area are illustrated in **Figure 3.4**.

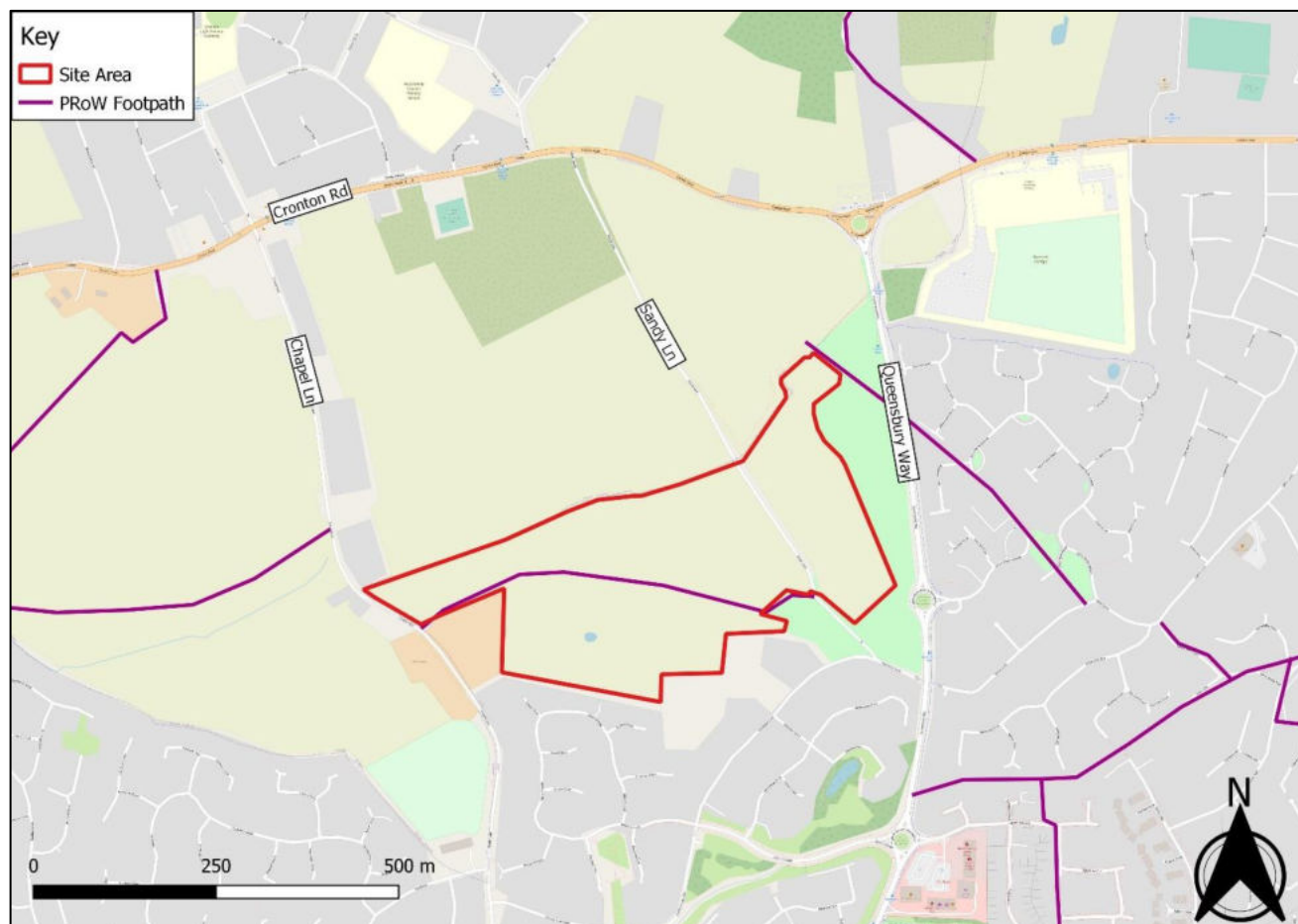


Figure 3.4 – Existing PRoWs in the Vicinity of the Site

- 3.34 An individual's propensity to walk depends on a range of individual preferences and circumstances. These may include journey purpose, the attractiveness of an activity, the weather, and the cost of alternatives.
- 3.35 Local and national land use and transportation policy has acted to promote the choice of walking and cycling above all other modes of travel. Henceforth, it is reasonable to assume that walking is a viable and growing means of travel and that new developments should promote and encourage it. This is particularly salient in the wake of the Covid-19 pandemic where active travel use rose in popularity.
- 3.36 In practice, the distance that any individual is likely to choose to walk depends on individual circumstances, however, it is fair that over time, given current policies to encourage community, health and wellbeing, as well as good design, tendency and inclination to walk more often and further will increase.
- 3.37 **Figure 3.5** indicates the 15 and 30-minute walking isochrones from the site. These are based on a comfortable walking speed of 5km/hour and are based on the extent of the existing pedestrian network. The walking isochrones highlight the extent of the residential areas and local facilities that can be reached from the site in just a short walk. The walking isochrones are based on the pedestrian access from the southeast corner of the site onto Sandy Lane which represents the most likely route access for use by pedestrians to access local facilities.

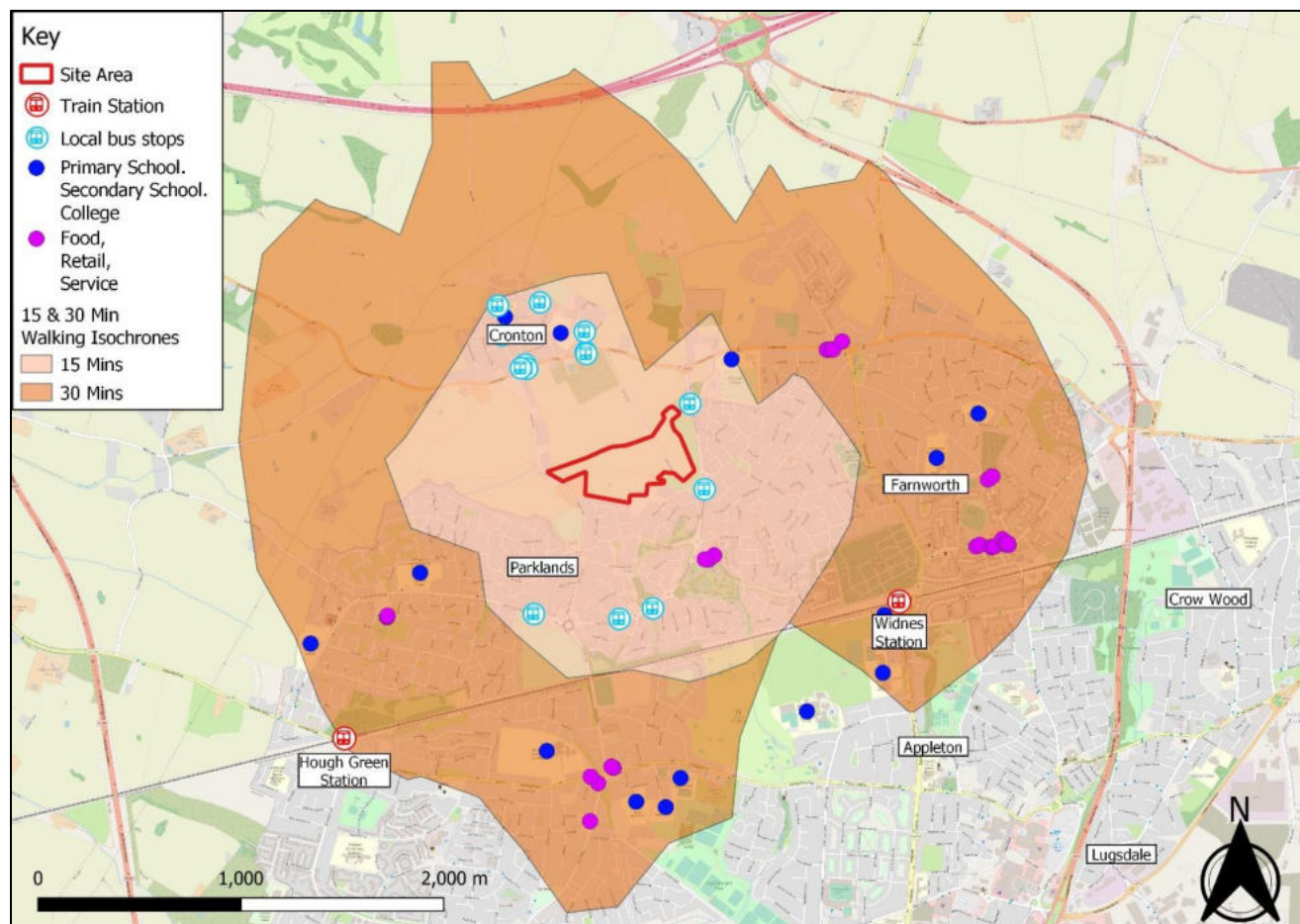


Figure 3.5 – 15 and 30 Minute Walking Isochrones

Cycling

- 3.38 Several designated cycling routes exist in the vicinity of the site, with Sandy Lane forming a traffic-free active travel route penetrating the site directly. Additional off-road infrastructure is provided on Queensbury Way in the form of a shared footway/cycleway. Queensbury Way is a marked shared walking and cycle route on the definitive map and has a continuous, segregated shared route running north to south on the eastern edge of the carriageway. This route is fully illuminated and can be used to access Widnes Railway Station. This route is illustrated in **Figure 3.6**.

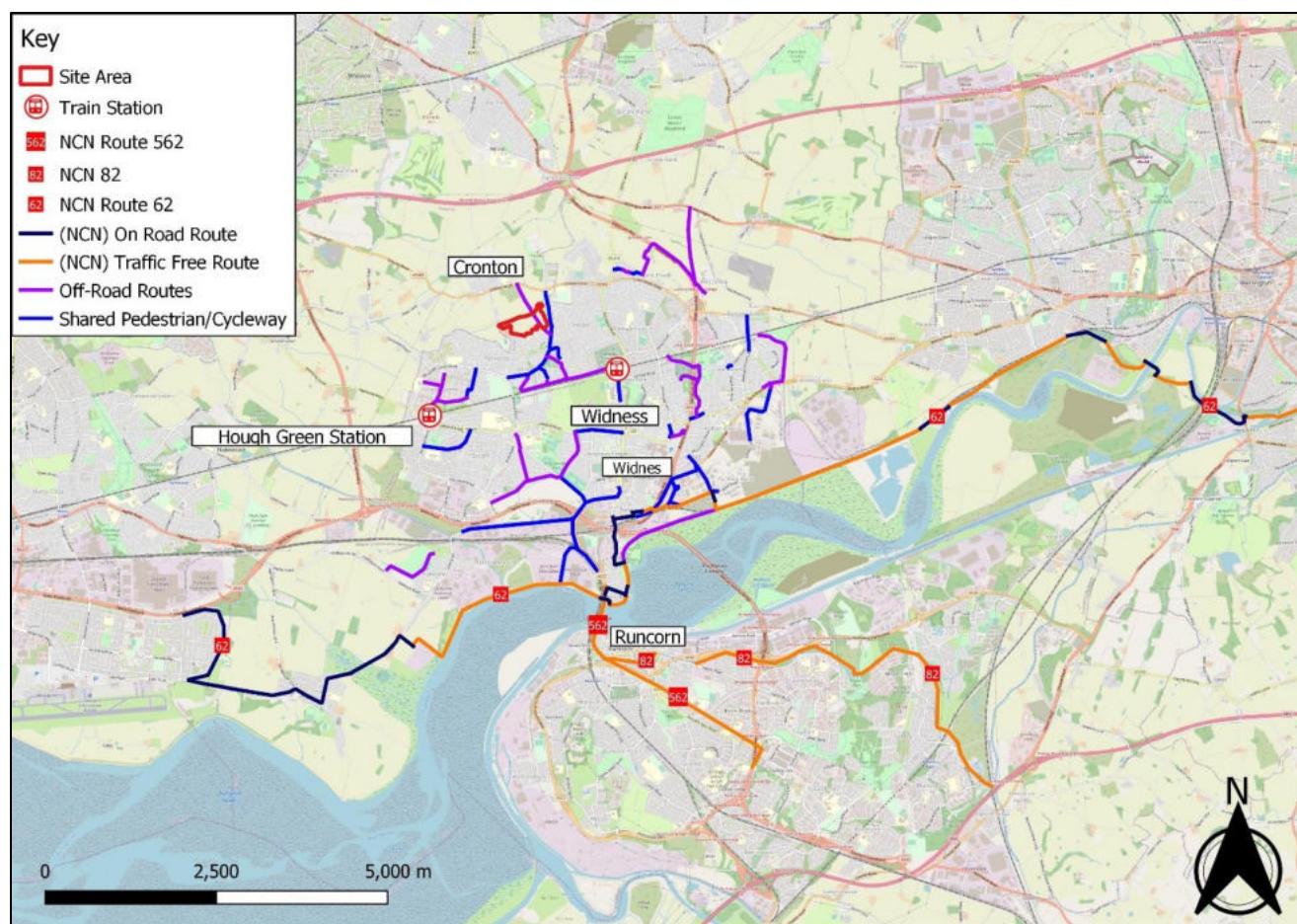


Figure 3.6 – Existing National Cycle Network – Strategic

- 3.39 **Figure 3.6** indicates that the National Cycle Network (NCN) route 62 can be accessed via Croft Street, approximately 5 kilometres to the south of the site; this equates to around a 16-minute cycle.
- 3.40 NCN route 62 connects Fleetwood on the Fylde region of Lancashire with Selby in North Yorkshire. It forms the west and central sections of The Trans Pennine Trail which is a long-distance path running from coast to coast across northern England.

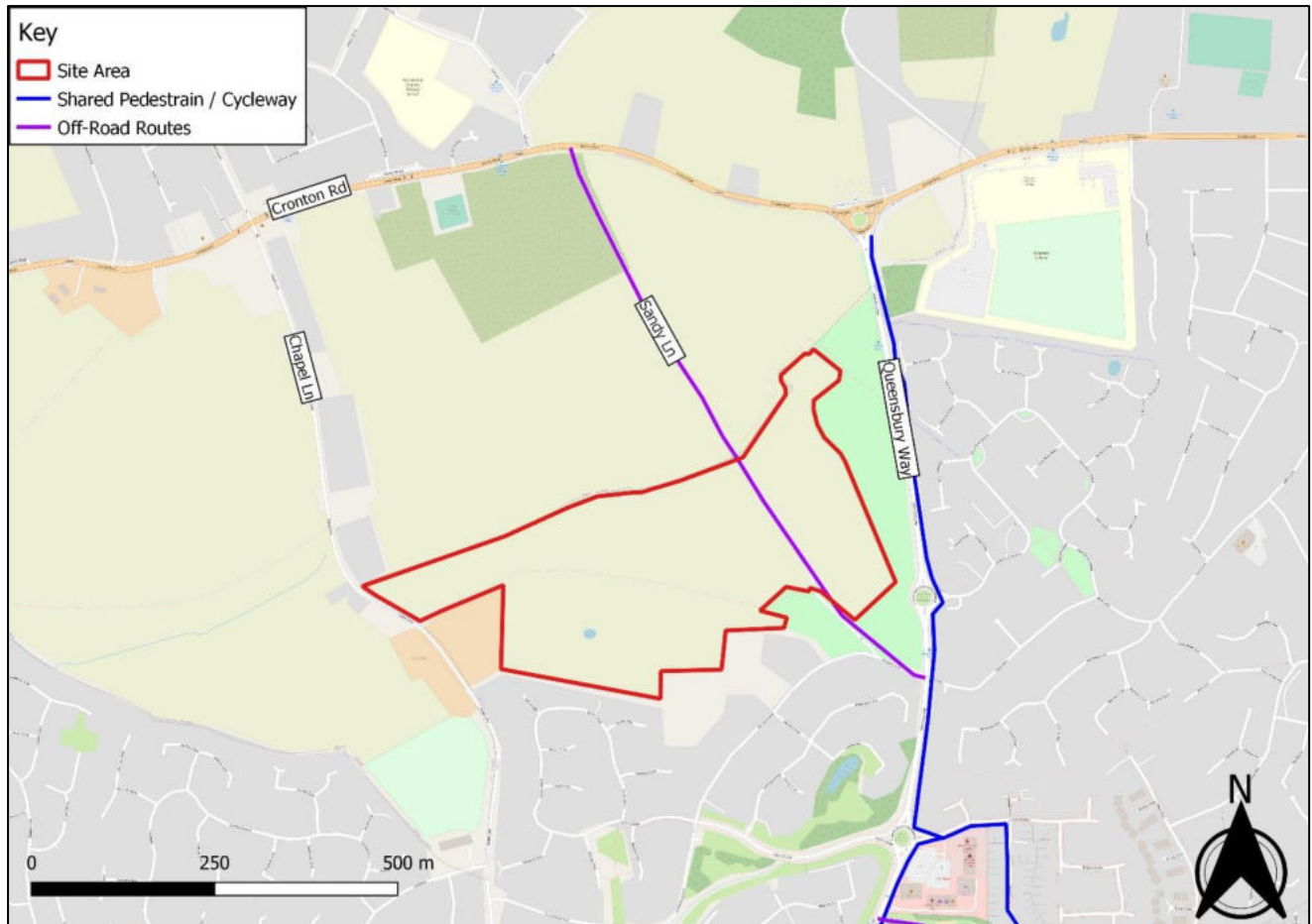


Figure 3.7– Existing National Cycle Network - Local

- 3.41 As demonstrated in **Figure 3.6** and **3.7** there are a number of opportunities in the local area to enable residents to travel to work and also for shopping and leisure purposes by bicycle. Importantly, cycling can also be used as part of a multimodal journey i.e., cycle and ride to/from Widnes Railway station.
- 3.42 In practice, the distance that any individual is likely to choose to cycle, depends on that individual and their circumstances, but it is fair to assume that over time, given policies to encourage community wellbeing, health and active travel, the propensity for individuals to cycle, and to cycle further will increase.
- 3.43 **Figure 3.7** indicates the 15 and 30-minute cycling isochrones to/from the site, assuming a comfortable average cycle speed of 15km/hr (9mph). Sustrans have suggested that up to five miles is an appropriate distance to cycle for commuting. At 15km/h, this equates to 33 minutes covering a wide area from the site.

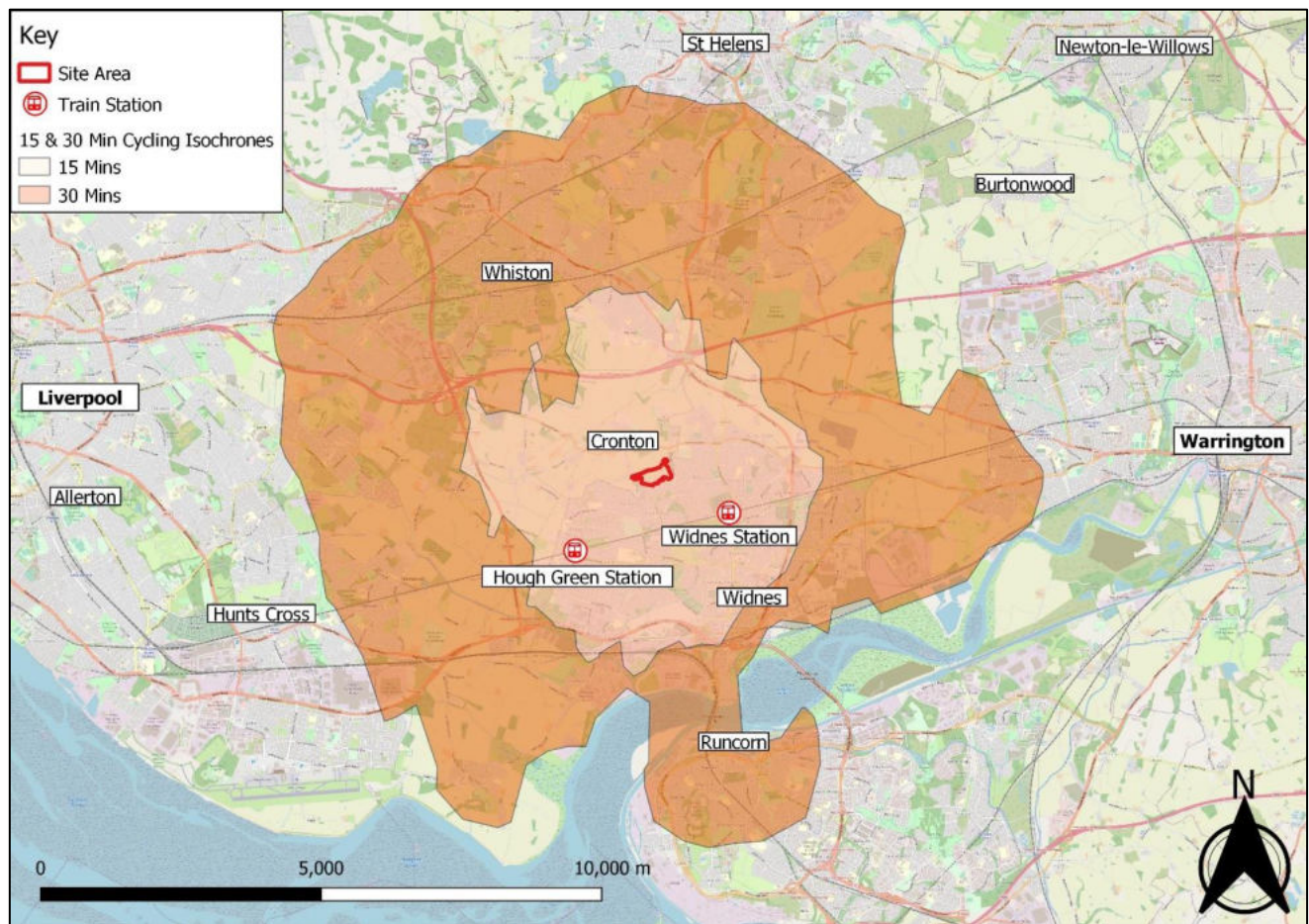


Figure 3.8 – 15- and 30-Minute Cycling Isochrones

- 3.44 As illustrated in **Figure 3.8**, all of Widnes is within a 15-minute cycle of the site and further afield within a 30-minute cycle, including parts of north Runcorn, eastern Liverpool, and western Warrington.
- 3.45 The rise in popularity of e-bikes has led people to be more likely to travel further and for longer periods of time. Therefore, it is fair to assume that people would be willing to travel further than illustrated in **Figure 3.8** if they were traveling on an e-bike. Additionally, e-bikes attract users that otherwise may not consider using a bike in replacement of a car trip for shorter (or medium) length journeys.

Public Transport

Bus

- 3.46 There are a number of bus stops within close proximity to the site. These are located on Queensbury Way, the A5080 Cronton Road and the B5419 Birchfield Road.
- 3.47 The local bus routes are shown in **Figure 3.9**.

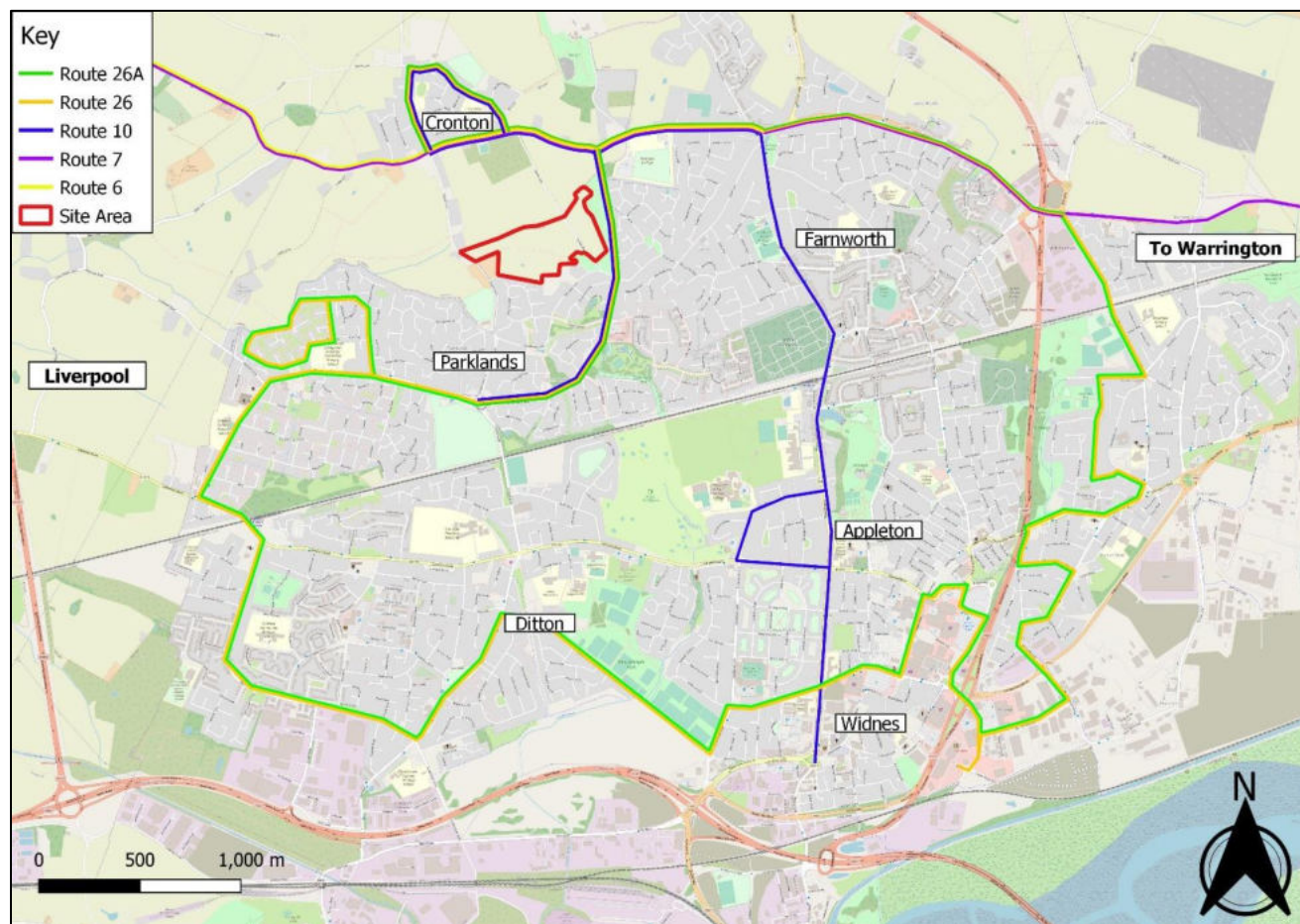


Figure 3.9 –Bus Services Plan

- 3.48 The 'Upton Rocks' Bus stop is located around 550 metres from the centre of the site and is served by services 10,26 and 26A. Further stops are located at the 'Cronton Chapel Lane' bus stop located on the A5080, approximately 1,050m from the centre of the site (13-minute walk). Both can be accessed from the pedestrian and cycle access onto Chapel Lane. There are additional stops located further east and west along the A5080 names 'Hall Lane'. This stop is served by services 6 and 7. The 6 service provides a connection between Upton Rocks and Liverpool and operates once daily. Number 7 operates more frequently by providing a service every 30 minutes and offering connections eastbound to Warrington, and westbound to Liverpool. A summary of these services are set out in **Table 3.2**. This bus stop is equipped with a bus shelter, seating, and concise timetable information. On the opposite side of the carriageway, the stop is equipped with a flag post and timetable.
- 3.49 A summary of local bus routes that serve the site is shown in **Table 3.2**.

Table 3.2 – Summary of Existing Bus Services

No.	Route	First Bus (M-F)	Last Bus (M-F)	Frequency (mins)			Operator
				M-F	S	S	
From: 'Cronton Chapel Lane'							
6	Upton Rocks - Liverpool	05:20	-	Once	Once	-	Arriva Merseyside
	Liverpool – Upton Rocks	06:08	-				
7	Liverpool – Warrington	06:46	23:48	30	30	30	Arriva Merseyside
	Warrington - Liverpool	08:35	22:58	30	30	30	
10	Upton (Halton) – Victoria Park/Ches	08:14	-	Once	-	-	Ashcroft Travel
26	Widnes – Widnes	08:28	18:01	60	60	-	Ashcroft Travel
26a	Widnes – Widnes	08:55	17:18	60	60	-	Ashcroft Travel
C42	Croxteth - Norris Green, Old Swan, Tarbock Road - Widnes	08:30	-	Once	-	-	Warrington's Own Buses
	Widnes - Norris Green, Old Swan, Tarbock Road - Croxteth	-	16:52	Once	-	-	Warrington's Own Buses
C46	Stockbridge Village - Page Moss, Pilch Lane - Widnes	08:30	-	Once	-	-	Warrington's Own Buses
	Widnes - Page Moss, Pilch Lane - Stockbridge Village		16:52	Once	-	-	Warrington's Own Buses
From: 'Upton Rocks Queensbury Way'							
10	Upton (Halton) - Victoria Park/Ches	08:08	-	Once	-	-	Arriva Merseyside
26	Widnes – Widnes	08:25	17:58	60	60	-	Ashcroft Travel
C44	Wavertree - Netherley, Hough Green, Cronton - Widnes	08:37	-	Once	-	-	Warrington's Own Buses
C44A	Widnes - Belle Vale	0837	-	Once	-	-	Warrington's Own Buses
C45	Garston - Speke, Hale - Widnes	0834	-	Once	-	-	Warrington's Own Buses

- 3.50 As shown in **Table 3.2**, there a number of services each hour in each direction serving the local area to the site, with services provided to Warrington and Liverpool.
- 3.51 It is understood that the ‘C’ services run by Warrington’s Own Buses are services run for educational services and thus providing a good level of service for school / college students within the vicinity.
- 3.52 The quality, frequency and affordability of bus services are important factors which people evaluate as part of their selection process for mode of travel to day-to-day activities and clearly there is travel choice for residents in Widnes.

Rail

- 3.53 The nearest rail station to the site is Widnes Railway Station which is located approximately 2.3 km to the east of the site, which is a comfortable walking and cycling distance at approximately 29 minutes and 10 minutes respectively. Widnes Railway Station offers direct connections to major cities such as Manchester, Liverpool and Nottingham, as well as local connections.
- 3.54 Widnes Railway Station has 50 car parking spaces and seven bicycle parking lockers, secured by CCTV. This enables multi-modal journeys, particularly as part of a regular commute, making use of the shared footway/cycleway along Queensbury Way and Birchfield Road / B5419. The station also benefits from having a ticket office and ticket machines, as well as a ramp for train access.
- 3.55 A summary of rail services from Widnes Railway Station is included in **Table 3.3**.

Table 3.3 – Summary of Rail Services from Widnes Railway Station

Destination	Frequency	Average Journey Time
Manchester Oxford Road	15 minutes	35 minutes
Liverpool Lime Street	10 / 15 minutes	30 minutes
Nottingham	60 minutes	150 minutes

- 3.56 Hough Green Railway Station is located around 2.8 km to the southwest of the site. Like Widnes, it offers direct connections to Liverpool Lime Street, Manchester Oxford Road and Nottingham.
- 3.57 There is a free car park with 41 car parking spaces and three accessible spaces available. There are also 15 cycle spaces provided, comprising five cycle lockers and 10 cycle stands.

Summary

- 3.58 The above review demonstrates that the site is well located regarding accessing a range of transport networks including the active travel and public transport networks, such that future residents would not have to rely on the private car to access day-to-day facilities. The site forms a natural extension to this part of Widnes and could capture the existing accessibility features and enhance them, to the benefit of new and future residents of the area alike.

Local Highway Network

3.59 The location of the site in relation to the local highway network is shown in **Figure 3.10**.

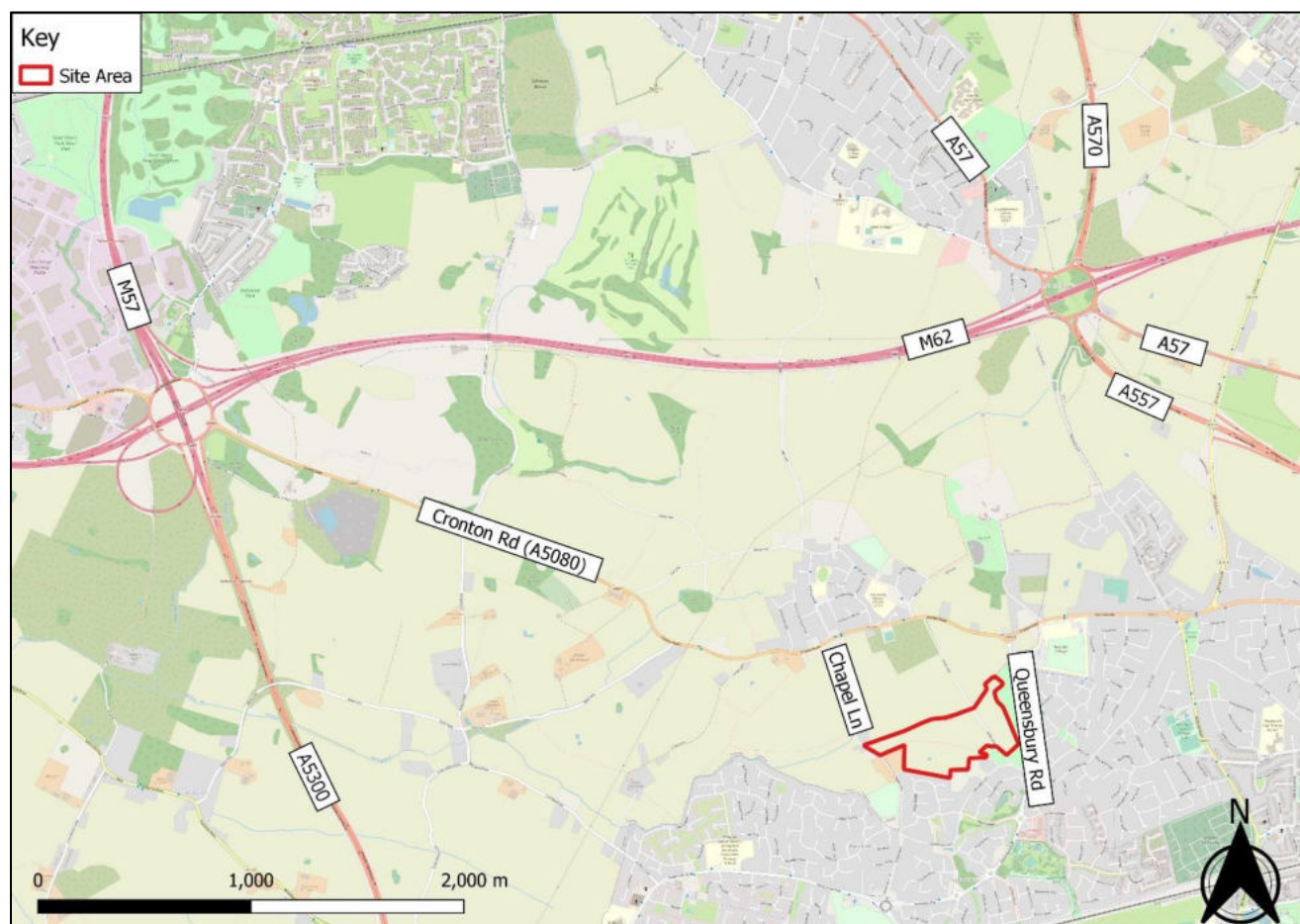


Figure 3.10 – Local Highway Network

Chapel Lane

- 3.60 The vehicular access to the site will be provided from Chapel Lane which runs along the western boundary of the proposed development site. Chapel Lane is a two-way single lane carriageway road which connects the site to the A5080 Cronton Road in the north and Prescott Road in the south, providing connectivity to the northern residential areas of Widnes.
- 3.61 Chapel Lane currently provides access to a number of residential areas as well as direct access to residential dwellings. It is subject to 30 mph speed limit and is fully illuminated. Footways are present on the eastern edge of the carriageway for its entire length.
- 3.62 In the vicinity of the proposed development access, Chapel Lane forms part of Knowsley Council's adopted highway network.

Sandy Lane

- 3.63 Sandy Lane is a single-track lane and is restricted to non-vehicular modes only. It is currently subject to a Traffic Regulation Order (TRO) that restricts any vehicles, except 'blue-light' vehicles and any vehicles authorised by HBC, travelling along or across the carriageway and as such is designated and promoted as a traffic-free active travel link connecting Old Upon Lane to the south with Cronton Road to the north.

Queensbury Way

- 3.64 Queensbury Way runs in a north south direction and connects with the A5080 Cronton Road via a roundabout junction to the north, and a roundabout junction with Prescott Road and Hough Green Road to the south. It is a single carriageway road and footways are provided on both sides along much of its length often separated by verges.
- 3.65 A shared footway/cycleway is provided for its entire length providing access to several residential developments, Upton Rocks Pharmacy, The Observatory Public House, and Co-op food. It is subject to a 30-mph limit and is fully illuminated throughout.

Cronton Road (A5080)

- 3.66 Cronton Road runs east to west and is located to the north of the proposed development. Footways of good quality are provided on both sides up to the junction with Hall Lane; from here on footways are present just on the southern edge for the remainder.
- 3.67 This road provides a link to the wider strategic highway network including the M62 and M57, connecting the site to the wider area. Cronton Road is fully illuminated and subject to 30 mph speed limit in the vicinity of the site.

Lunts Heath Road

- 3.68 Lunts Heath Road runs east to west and is located 1.1km to the northeast of the proposed development. Footways of good quality are provided on both sides; most minor junctions provide dropped kerbs or tactile at crossing points.
- 3.69 To the west, there is a double roundabout junction which connects to the west, towards the site with the A5080 Cronton Lane and south with the B5419 Birchfield Road.
- 3.70 This road provides a link to the wider strategic highway network including the A557 and M62, connecting the site to the wider area. Lunts Heath Road is fully illuminated and subject to 30 mph speed limit in the vicinity of Widnes.

Prescot Road

- 3.71 Chapel Lane becomes Prescott Road south of the junction with Cornerhouse Lane. Prescott Road runs north to south and is located to the southwest of the proposed development. Footways of good quality are provided on both sides up to the junction with Chapel Lane; from here on Chapel lanes footways are present only on the eastern edge when travelling north.

- 3.72 This road provides a link to the wider local highway network including the B5178 which, connects the site to Widnes and to Hough Green Station. Prescott Road is fully illuminated and subject to 30 mph speed limit in the vicinity of the site.

Liverpool Road (B1578)

- 3.73 Liverpool Road runs east to west and is located to the 1.5km south of the proposed development. Footways of good quality are provided on both throughout its extent.
- 3.74 This road provides a link to the wider Widnes connecting the site to Widnes and to Hough Green Station, with option to continue along the A5300 onto the M57 and M62. Liverpool Road is fully illuminated and subject to 30 mph speed limit in the vicinity of Widnes.

Hale Road

- 3.75 Hale Road runs north to south and is located to the 1.5km south of the proposed development. Footways of good quality are provided on both sides through its extent.
- 3.76 This road provides a link to the wider Widnes including Widnes Industrial Estate and the A562 which links into Liverpool. Cronton Road is fully illuminated and subject to 30 mph speed limit in the vicinity of Widnes.

Smithy Lane

- 3.77 Smithy Lane runs north to south and is located to the north of the proposed development. Footways of good quality are provided on both sides with dropped kerbs provided at crossing points.
- 3.78 This road provides a link through Cronton and connects with Hall Lane which links to Rainhill, connecting the site to the wider area. Smithy Lane is fully illuminated and subject to 20 mph speed limit in the vicinity of the site.

Collision Data

- 3.79 Personal Injury Collision data was requested from Halton Borough Council (HBC) for the most recently available five-year period (2017-2021), and the recorded collisions are reported in the following section. The records relate to personal injury collisions (PICs) on public roads that are reported to the police and subsequently recorded, using the STATS19 collision reporting form.
- 3.80 Collisions that are recorded are ranked in order of severity, with these being:
- Slight Collisions – Medical attention as required but no hospital stay was necessary;
 - Serious Collisions – Medical attention involving a hospital stay was required; and
 - Fatal.
- 3.81 A map showing the locations of the recorded collisions in the requested time period is shown in **Figure 3.11**. The full collision reports are included within **Appendix B**.



Figure 3.11 – Halton Council Collision Data

- 3.82 The description typically provided with each incident has been redacted by the Cheshire Constabulary so in place of an incident description the contributory factor information will be provided where available.
- 3.83 Analysis of the collision data demonstrated that there was a total of 17 collisions, resulting in 22 slight and two serious injuries, in the study area over the latest five-year period.
- 3.84 No information regarding the casualties was provided by HBC, however one collision involved an active travel user (pedestrian or cyclist).
- 3.85 **Table 3.4** summarises each collision using the information available.

Table 3.4 Collision Summary

	Location	Severity	Contributory Factor (If provided)
1	Chapel Lane	Slight	None
2	Queensbury Way at Prescott Road roundabout	Slight	None
3	Queensbury Way	Slight	403 - Poor turn or manoeuvre
4	Queensbury Way at Lingwell Avenue roundabout	Slight	None
5	Queensbury Way at Galway Avenue roundabout	Slight	405 - Failed to look properly 406 - Failed to judge other person's path or speed
6	Queensbury Way at Lanark Gardens roundabout	Slight	103 - Slippery Road (due to weather)
7	Queensbury Way at Lanark Gardens roundabout	Serious	None
8	Queensbury Way at Upton Rocks Ave roundabout	Slight	505 - Illness or disability, mental or physical
9	Queensbury Way south of Cronton Lane	Slight	None recorded
10	Queensbury Way at Cronton Lane roundabout	Slight	None recorded
11	Queensbury Way at Cronton Lane roundabout	Slight	101 - Poor or defective road surface 102 - Deposit on road
12	Cronton Lane	Slight	706 - Vision affected by dazzling sun
13	Cronton Lane	Slight	None recorded
14	Cronton Lane	Slight	306 - Exceeding speed limit 308 - Following too close 405 - Failed to look properly 406 - Failed to judge other person's path or speed 509 - Distraction in vehicle 706 - Vision affected by dazzling sun

15	Cronton Lane	Slight (Pedestrian)	None recorded
16	Cronton Lane	Slight	None recorded
17	Cronton Lane	Slight	None recorded
18	Cronton Lane	Slight	None recorded
19	Lunts Heath Road at Birchfield Road roundabout	Slight	None recorded

- 3.86 An analysis of the data provided by the Council demonstrates that there is no pattern that suggests an immediate highways safety concern, contributory information, when provided, does not indicate towards a design problem with the exception of incident 11 which occurred in 2017 with poor road quality, the fact that no other incident has been attributed to poor road quality suggests this issue has been addressed.
- 3.87 Furthermore, incidents do not overlap in date or time or cluster in a location.
- 3.88 A collision occurred to the north of the proposed access at 00:20 on Monday 16th January 2023 involving one vehicle. The relevant STATS19 Police report is not yet available, therefore causation factors and the collision classification are currently unknown.
- 3.89 The analysis of the collision data does not identify any abnormal trends or patterns in the collisions recorded, nor does it identify any specific highway safety issues in the vicinity of the site.

Baseline Traffic Data

3.90 Baseline traffic data has been obtained for the study area surrounding the site and is summarised in the following section. The study area has been developed in accordance with the Scoping Note contained at **Appendix A** and agreed with the Highway Officers through pre-application discussions.

3.91 Manual Classified Count (MCC) traffic surveys were undertaken on Tuesday 17th May 2022 at the following junctions, where junctions in red are in Knowsley Council and blue are in Halton Borough Council:

Knowsley Council

- Cronton Road / Chapel Lane
- Cronton Road / Queensbury Way

Halton Borough Council

- Prescott Road / Queensbury Way
- Queensbury Way / Upper Rocks Avenue
- Cronton Road / Lunts Heath Road (Double Mini Roundabout)
- Lunts Heath Road / Wilmere Lane
- Lunts Heath Road / Derby Road
- Liverpool Road / Hale Road

3.92 Two Automatic Traffic Count (ATC) surveys were also undertaken on Chapel Lane and Queensbury Way between the 11th and 17th May 2022, to record existing speeds and flows.

3.93 **Table 3.5** and **3.6** shows the recorded traffic flows on Chapel Lane and Queensbury Way, respectively.

Table 3.5 - Existing Traffic Flows on Chapel Lane

Time Period	N-bound traffic flow (vehicles)	S-bound traffic flow (vehicles)	Two-way vehicle flow
0700-0800	182	104	286
0800-0900	292	220	512
0900-1000	151	128	279
1600-1700	205	227	432
1700-1800	206	239	445
1800-1900	150	189	339
Average 24-hour (weekday)	2,560	2,405	4,965

- 3.94 Two-way traffic flows on Chapel Lane were recorded as 4,965 vehicles per day, with peak hour flows recorded as 512 two-way vehicles in the AM peak period (0800-0900) and 445 in the PM peak period (1700-1800).

Table 3.6 - Existing Traffic Flows on Queensbury Way

Time Period	N-bound traffic flow (vehicles)	S-bound traffic flow (vehicles)	Two-way vehicle flow
0700-0800	410	188	598
0800-0900	557	341	898
0900-1000	279	262	541
1600-1700	299	426	725
1700-1800	297	429	726
1800-1900	236	316	552
Average 24-hour (weekday)	4,288	4,446	8,734

- 3.95 Two-way traffic flows on Queensbury Way were recorded as 8,734 vehicles per day, with peak hour flows recorded as 898 two-way vehicles in the AM peak period (0800-0900) and 726 in the PM peak period (1700-1800).
- 3.96 Speeds were also recorded by the ATCs, under free flow conditions, with no exceptional weather conditions reported. These are summarised in **Table 3.7** and **3.8**.

Table 3.7 Existing Traffic Speeds on Chapel Lane

Time Period	Average (mph)		85 th %ile	
	N-bound	S-bound	N-bound	S-bound
0700-0800	32.6	30.8	37.1	34.5
0800-0900	31.2	29.7	34.9	33.1
0900-1000	30.5	29.6	34.5	33.7
1600-1700	31.4	30.2	34.9	33.6
1700-1800	31.3	30.3	35.0	33.8
1800-1900	31.0	30.2	34.9	33.8
24-hour weekday	31.0	30.0	35.2	34.0

3.97 The average speed of traffic on Chapel Lane is 32.6mph in both directions.

3.98 The northbound average speed is between 30.5mph and 32.6mph, and the 85th %ile is between 34.5mph and 37.1mph.

3.99 The southbound average speed is between 29.7mph and 30.8mph and the 85th%ile is between 33.1mph and 34.5mph.

3.100 **Table 3.8** summarises the existing traffic speeds on Queensbury Way.

Table 3.8 Existing Traffic Speeds on Queensbury Way

Time Period	Average (mph)		85 th %ile	
	N-bound	S-bound	N-bound	S-bound
0700-0800	32.8	33.5	36.5	38.6
0800-0900	30.3	31.7	34.2	36.0
0900-1000	32.1	32.0	36.9	36.5
24-hour weekday	32.5	32.4	36.8	37.0

3.101 The average speed of traffic on Queensbury Way is 32.8mph. in both directions.

3.102 The northbound average speed is between 30.3mph and 32.8mph, and the 85th%ile is between 34.2mph and 36.9mph.

3.103 The southbound average speed is between 31.7mph and 36.9mph and the 85th%ile is between 36.0mph and 38.6mph.

- 3.104 It should be noted that the ATC tube was damaged on the final day of recording and therefore only averages for the AM periods were available.

Summary

- 3.105 The proposed development site is situated on the northern edge of built-up Widnes and forms an extension of Widnes. The principle of residential development in this location has already been established through the adopted Local Plan which allocates this site for residential development of up to 432 dwellings.
- 3.106 The site off Chapel Lane is well-located to access an array of local facilities within Widnes, and the local area is served by a comprehensive range of active travel routes, including formal footways, cycle paths, and a traffic-free active travel route bisecting the site. The site is located a short walk or cycle to key public transport nodes, including bus stops and a railway station.

4 Policy Review

- 4.1 The following section sets out the proposed development in the context of national, regional, and local policies.

National Policy

National Planning Policy Framework (July 2021)

- 4.2 The national Planning Policy Framework was revised on 20th July 2021 and sets out the Government's planning policies for England and how these are expected to be applied.
- 4.3 This revised Framework replaces the previous National Planning Policy Framework published in March 2012, revised in July 2018 and updated in February 2019.
- 4.4 In terms of transport related policies, it places the sustainability of development at the heart of the decision-making process. In Paragraph 104 it states that 'transport issues should be considered from the earliest of stages of plan-making and development proposals'.
- 4.5 Paragraph 105 the NPPF states that sustainable travel is about 'offering a genuine choice of transport modes', with recognition given to the different travel needs of those who live in urban or rural areas. It advises that the safety and security of accesses to the site are achieved for all users and 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'.
- 4.6 In assessing sites that may be allocated for development in plans, or specific applications for development, NPPF Paragraph 107 states it should be ensured that:
- 'Appropriate opportunities to promote sustainable transport modes can be – or have been taken up, given the type of development and its location;
 - safe and suitable access to the site can be achieved for all users; and
 - any significant impacts from the development on the transport network (in terms of capacity and congestion), or on highway safety, can be cost effectively mitigated to an acceptable degree.'

4.6.1 The NPPF states in Paragraph 107 that if setting local parking standards for residential and non-residential development, policies should take into account:

- the accessibility of the development;
- the type, mix and use of development;
- the availability of and opportunities for public transport;
- local car ownership levels; and
- the need to ensure an adequate provision of spaces for charging plug-in and other ultra-low emission vehicles.

4.7 The ‘Promoting Sustainable Transport’ section in Paragraph 112 concludes by stating that all applications for development should:

- give priority first to pedestrian and cycle movements, both within the scheme and with neighbouring areas; and second – so far as possible – to facilitating access to high quality public transport, with layouts that maximise the catchment area for bus or other public transport services, and appropriate facilities that encourage public transport use;
- address the needs of people with disabilities and reduced mobility in relation to all modes of transport;
- create places that are safe, secure and attractive – which minimise the scope for conflicts between pedestrians, cyclists and vehicles, avoid unnecessary street clutter, and respond to local character and design standards;
- allow for the efficient delivery of goods, and access by service and emergency vehicles; and;
- be designed to enable charging of plug-in and other ultra-low emission vehicles in safe, accessible, and convenient locations.

4.8 It is also stated in paragraph 113 that “all developments that will generate significant amounts of movement should be required to provide a travel plan, and the application should be supported by a transport statement or transport assessment so that the likely impacts of the proposal can be assessed”.

Planning Policy Guidance – Travel Plans, Transport Assessments and Statements (March 2014)

4.9 Paragraph 113 of the National Planning Policy Framework sets out that all developments that generate significant amounts of transport movement should be supported by a Transport Statement or Transport Assessment.

4.10 Key issues to consider at the start of preparing a Transport Assessment or Statement are covered in Paragraph 014, and may include:

- The context of the development proposal;
- appropriate study parameters;
- Assessments of public transport networks, Walking and cycling capacity, and road network capacity;
- Road trip generation and trip distribution methodologies;
- measures to promote sustainable travel;
- safety implications of development; and mitigation measures.

4.11 The scope and level of detail in a Transport Assessment or Statement will vary from site to site but Paragraph 015 suggests the following should be considered when settling the scope of the proposed assessment:

- Site layout;
- information about neighbouring uses, amenity and character, existing functional classification of the nearby road network;
- data about existing public transport provision, including provision/ frequency of services and proposed public transport changes;
- a qualitative and quantitative description of the travel characteristics of the proposed development, including movements across all modes of transport that would result from the development and in the vicinity of the site;
- an assessment of trips from all directly relevant committed development in the area;
- data about current traffic flows on links and at junctions within the study area and identification of critical links and junctions on the highways network;
- an analysis of the injury accident records on the public highway in the vicinity of the site access for the most recent 3-year period, or 5-year period if the proposed site has been identified as within a high accident area;
- an assessment of the likely associated environmental impacts of transport related to the development, particularly in relation to proximity to environmentally sensitive areas (such as air quality management areas or noise sensitive areas);
- measures to improve the accessibility of the location (such as provision/enhancement of nearby footpath and cycle path linkages) where these are necessary to make the development acceptable in planning terms;

- a description of parking facilities in the area and the parking strategy of the development;
- ways of encouraging environmental sustainability by reducing the need to travel; and
- measures to mitigate the residual impacts of development (such as improvements to the public transport network, introducing walking and cycling facilities, physical improvements to existing roads).

Decarbonising Transport, A Better Greener Britain, June 2021

- 4.12 This plan sets out the government's commitments and the actions needed to decarbonise the entire transport system in the UK.
- 4.13 It includes:
- Our pathway to net zero transport in the UK;
 - The wider benefits net zero transport can deliver; and
 - The principles that underpin our approach to delivering net zero transport.
- 4.14 The plan follows on from Decarbonising transport: setting the challenge, published in March 2020, which laid out the scale of additional reductions needed to deliver transport's contribution to legally binding carbon budgets and delivering net zero by 2050.
- 4.15 Priority 1: – 'Accelerating modal shift to public transport and active transport' seeks to reduce the need for the car and instead make active travel and public transport the number one choice of travel by:
- Providing zero emission buses which will link communities with each other, town centres and the wider transport network;
 - Providing a modern, net zero rail network to connect the country and regions, serving commuters, holidaymakers and business travellers with a faster, cleaner, and more reliable rail service;
 - Providing affordable bus and train tickets;
 - Creating a high-speed decarbonised rail and zero emission coaches as an affordable alternative to the car for longer journeys; and
 - and embracing new ways of sustainable travel, such as e-cycles and other emerging technologies.

Manual for Streets / Manual for Streets 2

- 4.16 The Department for Transport's 'Manual for Streets' replaced their general road and street design guidance manual 'DB32' in 2007 and specifically focuses on lightly trafficked residential streets and highways. In terms of design, it states:

- 4.17 ‘A key consideration for achieving sustainable development is how the design can influence how people choose to travel. Designers and engineers need to respond to a wide range of policies aimed at making car use a matter of choice rather than habit or dependence. Local transport plans and movement strategies can directly inform the design process as part of the policy implementation process.’
- 4.18 Manual for Streets 2 builds on the guidance contained in Manual for Streets, and the proposed development is reflective of both documents, with the design and layout of the proposed infrastructure and the illustrative masterplan at a pedestrian scale, with priority given to walking and cycling with the aim of creating a connected, socially inclusive community.

Local Policy

Halton Borough Council Delivery and Allocations Local Plan (Adopted March 2022)

- 4.19 Halton Borough Council Delivery and Allocations Local Plan sets out the long-term spatial vision, strategic priorities, and policies for future development in the borough to 2037, including the quantity and location of new homes, employment provision shops, facilities and other services, transport and other infrastructure provision, climate change mitigation and adaptation and the conservation and enhancement of the natural and historic environment.
- 4.20 The Delivery and Allocations Local Plan replaces the Halton Core Strategy Local Plan (2013) and the saved policies from the Unitary Development Plan (2005).
- 4.21 Part 1 of the document outlines the strategic policies. These largely comprise of revised policies from the Core Strategy Local Plan.
- 4.22 In relation to sustainable transport, policy ‘**CS(R)15: Sustainable Transport**’ outlines the considerations that development proposals should address to ensure that a development is accessible by sustainable transport methods.
- 4.23 To encourage journeys to be made by sustainable modes of travel, the Council plans to:
- Support a reduction in the need to travel by car;
 - Encourage a choice of sustainable transport modes; and
 - Ensure new developments are accessible by sustainable modes.
- 4.24 To support sustainable transport across the Borough:
- Halton’s existing sustainable transport network will be protected;
 - Improvements to the existing sustainable transport network will be supported;
 - The introduction of new sustainable routes and facilities will be encouraged and;
 - Promote the use of green technology to reduce transport emissions.

- 4.25 High trip generating developments will be expected to be minimise the need for the car and instead prioritise public transport and active travel, by being situated in locations with good access to public transport and active travel links.
- 4.26 Development proposals must be consistent with and contribute to the implementation of the transport strategies and priorities.
- 4.27 Policy '**RD 1: Residential Development Allocations**' identifies sites to accommodate the identified requirement for new housing. The proposed development in Widnes is located on a Green Belt site (W4 – Chapel Lane to Old Upton Lane) and as such will need to provide appropriate mitigation for the loss of green belt land in line with NPPF requirements.
- 4.28 Policy '**RD4: Greenspace Provision for Residential Development**' outlines the provision that is required for residential developments of 10 or more dwellings in areas that are expected to create or exacerbate a projected quantitative shortfall of greenspace or are not served by existing accessible greenspace. In relation to transport, the policy states that the greenspace provided should be easily accessible from all dwellings within the development and form an integral part of the layout of the development.
- 4.29 To encourage and enable a shift to more sustainable modes of travel, policy '**C1: Transport Network and Accessibility**' outlines the necessary objectives required in ensuring that a successful sustainable transport network is in place:

Walking and Cycling:

- 4.30 Development will only be permitted where:
- a. It does not prejudice the access on to or through the walking and cycling network or it provides a suitable alternative link of equal quality and convenience; and*
 - b. It does not affect the enjoyment of the walking and cycling network.*
- 4.31 The walking and cycling network is taken to include but not limited to: the Greenway Network; The Bridgewater Way; Mersey Way; Mersey Timberland Trail, The Trans-Pennine Trail, the Cycle Network and Public Rights of Way.
- 4.32 The Council will support development provided that:
- a. The internal layout, access and highway network is safe, attractive, in character, functional and accessible for all users and does not discourage existing and proposed users;*
 - b. It does not have an unacceptable impact on highway safety, or the residual cumulative impacts on the road network would be severe;*
 - c. Appropriate provision for car and cycle parking is made;*
 - d. Road designs are well laid out and where appropriate incorporate highway safety measures, such as traffic management and traffic calming schemes, where appropriate;*

Sustainable Transport and Accessibility

4.33 The Council will support development provided that:

- a. *It gives priority to walking, cycling and public transport within its design where appropriate;*
- b. *there is inclusive walking and cycling provision to local facilities and sustainable networks;*
- c. *Promotes the use of Ultra Low Emission Vehicles (ULEV)⁹⁸*
- d. *Appropriate provision for car and cycle parking is made;*
- e. *Road designs are well laid out and where appropriate incorporate highway safety measures, such as traffic management and traffic calming schemes, where appropriate*
- f. *It is located within 400 metres walking distance of a bus stop or railway station with a suitable level of service wherever possible; and*
- g. *It is accessible to all.*

4.34 Where development does not meet all of these criteria or may be expected to have negative impacts, appropriate mitigation measures will be required at the developer's expense.

Transport Hubs

1. *The Council will seek to protect and enhance transport hubs where possible. Transport hubs have been identified at: Hough Green Train Station and Widnes Train Station.*

Transport Assessments and Travel Plans

2. *The Council will require the submission of a Transport Assessment or Transport Statement for Development proposals that are likely to generate significant numbers of trips, HGV movements and/or have location specific issues or traffic sensitivities. The level and content of supporting Transport Assessments/Statements should be scoped with the Highway Authority prior to application.*
3. *A travel plan will be required as part of a new development in all of the following circumstances:*
 - a. *Major development proposals comprising jobs, shopping, leisure and services.*
 - b. *Smaller development proposals comprising jobs, shopping, leisure and services which would generate significant amounts of travel in or near to air quality management areas.*
 - c. *Where the green travel plan will help to address a particular traffic problem associated with the proposal, which might otherwise have to be refused on local traffic grounds.*
 - d. *Proposals for new and expanded school facilities (school travel plan).*

4.35 Where a green travel plan is not required, developers will be encouraged to prepare one where appropriate in the interests of sustainability.

4.36 Policy ‘**C2: Parking Standards**’ considers the parking standards within residential developments. All developments must provide an appropriate level of safe, secure, accessible and viable parking, taking into account:

- The accessibility of the site, including the availability of public transport;
- The type, mix and use of development.
- The availability of on-street parking or shared parking facilities; and
- An overall need to encourage the use of ultra-low emissions vehicles.

Halton Borough Council Local Transport Plan (LTP3) 2011-2026

4.37 Halton Borough Council LTP3 contains the transport strategy and policies from 2011-2026 and the proposed schemes and implementation table.

Transport: Providing for Halton’s Needs

4.38 LTP3, which runs from 2011, presents itself in two parts. The first sets out a strategy for Halton until 2026. The second part lies beneath the long-term strategy and it is an Implementation Plan, which sets out in detail how the strategy will be delivered in the first four years.

4.39 Halton has set its own transport goals, these are:

- Ensure transport network resilience with particular regard to enhancing cross Mersey linkages, by the implementation of the Mersey Gateway project and the Mersey Gateway Sustainable Transport Strategy.
- Ensure the transport system supports the priorities of the Halton’s Local Strategic Partnership (LEP) and Liverpool City Region (LCR).
- Provide and promote a clean and low carbon transport system.
- Ensure the transport system promotes and enables improved health and wellbeing.
- Ensure the transport system allows people to connect easily with employment, services and social activities.
- Ensure the transport network supports the economic success of Halton and the LCR by the efficient movement of people and goods.
- Maintain our transport and highway assets to a high standard.

The third Local Transport Plan (LTP) for Merseyside (Adopted 2011)

4.40 The LTP for Merseyside sets out a series of goals and should be treated as a statutory framework for all transport considerations in the Merseyside area and sets out a series of goals.

- **Goal One** - Help create the right conditions for sustainable economic growth by supporting the priorities of the Liverpool City Region, the Local Enterprise Partnership and the Local Strategic Partnerships.
- **Goal Two** - Provide and promote a clean, low emission transport system which is resilient to changes to climate and oil availability.
- **Goal Three** - Ensure the transport system promotes and enables improved health and wellbeing and road safety.
- **Goal Four** - Ensure equality of travel opportunity for all, through a transport system that allows people to connect easily with employment, education, healthcare, other essential services and leisure and recreational opportunities.
- **Goal Five** - Ensure the transport network supports the economic success of the city region by the efficient movement of people and goods.

4.41 Each LTP goal has strategies to achieve them including for goal three and how sustainable transport should be made a focus by:

- Enhancing environment for cycling and walking including pedestrian and cycle routes, junction improvements and cycle facilities.
- An expansion of cycle and rail integration and of cycle hire facilities within the City Centre and other key locations.
- Increasing the extent of low-speed zones, where appropriate.
- Smarter choices and behavioural change interventions programmes, to increase active travel.

4.42 In addition, as a part of goal four; fares, information and ticketing including the need to provide enhanced information provision to residents at a neighbourhood level.

Summary

4.43 The site is shown to comply with the relevant national and local policies including aiding in reducing carbon emissions whilst delivering much needed growth in order to meet the UK's climate aspirations. It is a well-located site with a variety of opportunities to integrate itself with the existing surrounding residential areas in terms of active travel and sustainable transport.

5 Proposed Development

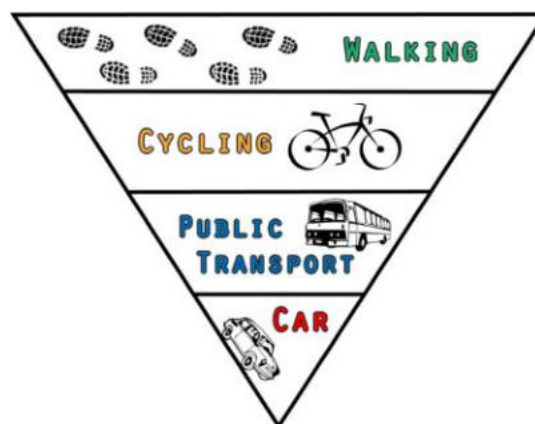
- 5.1 The site is shown to comply with the relevant national and local policies. It is a well-located site with a variety of opportunities to integrate itself with the existing surrounding residential areas in terms of active travel and sustainable transport.
- 5.2 The proposed development comprises 350 dwellings accessed via Chapel Lane for all modes and in a variety of locations for active travel. The planning application is outline with all matters reserved except access.

Masterplan & Mobility Strategy

- 5.3 The site is well located in terms of access and connectivity to local amenities and facilities (see Chapter 2) and is designed to meld with the existing transport links in this area of Widnes. There are also pedestrian links to the east and south which are indicative of the good level of existing infrastructure to support active travel in the area.
- 5.4 The development is designed from the outset with movement and active travel as a first choice and will retain the existing PRow network through the site.
- 5.5 There are four key stages in creating a socially inclusive community that encourages community interaction (within and neighbouring the scheme) in such a way to promote non-motorised travel modes, prioritising walking and cycling, followed by use of the bus. These stages are:
 - Design;
 - Choice;
 - Behaviour; and
 - Network Management.
- 5.6 **Design** is in terms of creating communities, where public interaction, outdoor and indoor, is the norm. Where friends and day-to-day activities are nearby and easy to get to, and where it is not an automatic reaction when leaving home to get into a car. The site is well placed to take advantage of the proximity of a range of day-to-day facilities.
- 5.7 The site design is of a pedestrian scale. Walking, cycling, and using a bus, will be easy, and vehicle intimidation will be at a minimum.
- 5.8 **Choice** is in terms of providing the infrastructure and facilities to minimise reliance on any single option. This widens social inclusion, and for instance, makes contributing to commuter car congestion on average more of a choice and less of a necessity.
- 5.9 Through increased choices a change in behaviour can be affected. The proposals will introduce and maintain any sustainable transport options and seek to encourage a net travel behavioural change.

5.10 **Behaviour** is in terms of educating people in the options and consequences. It brings together awareness, health, environment, and personal convenience.

5.11 Finally, one of the 'by design' aims is to create an environment where fewer people automatically choose to use their cars when leaving their homes, therefore decreasing the impact on the road network. These proposals strive to not only influence the traffic impact of the proposed development, but also the surrounding communities.



5.12 **Network Management** is in terms of managing the road network in accord with the user hierarchy preferred by the Council. Car travel is the lowest capacity network in terms of space occupied per person. It also occupies the lowest priority in the user hierarchy. This means, for instance, prioritising the reliability and speed of bus and cycle movement over that of cars in the commuter peaks.

5.13 The principles of Manual for Streets (MfS) and Manual for Streets (MfS2) have been used as a framework for the design philosophy, encompassing an effective movement strategy whereby streets are designed to a pedestrian scale.

5.14 The illustrative masterplan is illustrated in **Figure 5.1**.



Figure 5.1 – Illustrative Masterplan

5.15 Provision for EV parking will be provided within the development to ensure that residents are able to charge their vehicles at their homes.

Pedestrian and Cycle Access / Emergency Access – Sandy Lane

5.16 The aim is to create an environment in which pedestrians and cyclists feel as though they are afforded highest priority. The proposals aim to create direct, convenient, and attractive active travel links from the site to the existing network and will seek to maximise and enhance the permeability of the site to pedestrians and cyclists to encourage these modes for shorter trips.

5.17 Access for emergency vehicles is currently available along Sandy Lane pursuant to the terms of the Sandy Lane TRO. The TRO also allows the Council to authorise the use of Sandy Lane by other vehicles. The scheme proposes a single vehicular crossing point over Sandy Lane. Sandy Lane will remain available to active travel users.

5.18 Designing the site to a pedestrian scale allows for the maximum opportunity to provide social inclusion. Pedestrian and cycle routes are designed to ensure full permeability through the site.

- 5.19 The road network within the site will be designed to encourage low speeds and prioritise active travel. The intention will be to create a natural 10-15mph environment within the site to encourage pedestrian and cycle activity and to prioritise social inclusion before the private car / motorist.
- 5.20 Two emergency access points, one for each parcel, are proposed to be provided on Sandy Lane, both of which provide pedestrian and cycle access providing a traffic free route connecting to Old Upton Lane and the built-up area of Widnes. This arrangement is shown in **Figure 5.2** and contained at **Appendix C**.

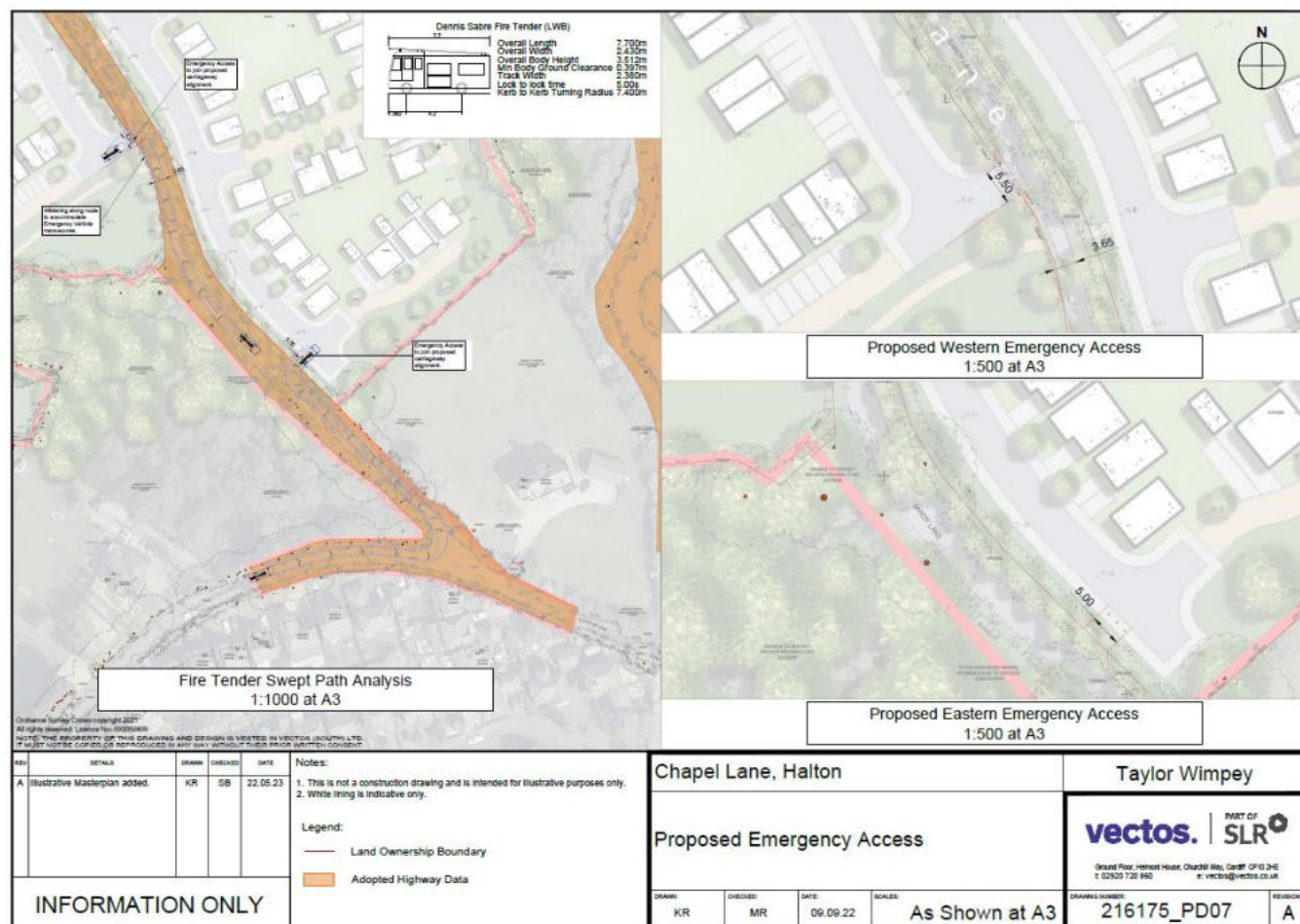


Figure 5.2 – Pedestrian & Cycle / Emergency Access Arrangements

- 5.21 Sandy Lane is currently subject to a Traffic Regulation Order (TRO) that restricts any vehicles travelling along or across the carriageway, with the exception of emergency vehicles and any other vehicles authorised by the Council. This is proposed to be modified to allow for a single vehicular crossing point over Sandy Lane to facilitate vehicular access between the parcels to the east and west of the Lane.
- 5.22 It is proposed that the emergency access points are controlled by the current gate arrangement, collapsible bollards or similar as per the Council's preferred method of restriction.

Vehicular Access – Chapel Lane

- 5.23 Vehicular access to the site has been considered and the most appropriate and suitable option shown in **Figure 5.3** and contained at **Appendix D**.

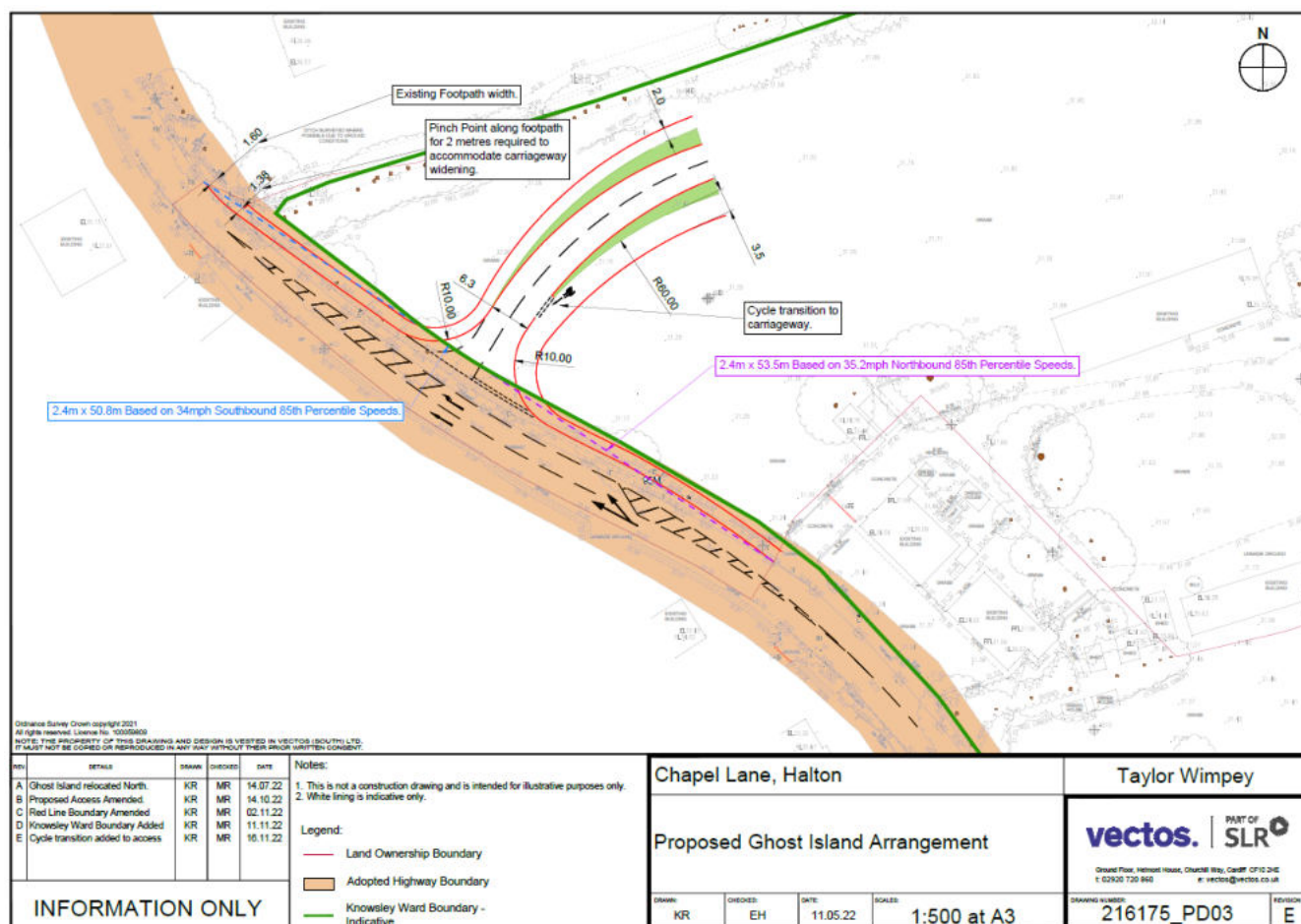


Figure 5.3 – Site Access Arrangements

- 5.24 A priority junction with a ghost-island right-hand turn lane arrangement has been designed to serve the development with appropriate visibility splays.
- 5.25 The achievable visibility to the left (looking south) is 2.4 metres x 53.5 metres, in line with recorded northbound 85th percentile speeds of 35.2mph. Looking right out of the access, visibility splays of 2.4 metres x 50.8 metres can be achieved, in line with recorded southbound 85th percentile speeds of 34mph.
- 5.26 The development spine road will be 5.5 metres wide with a two metre footway on the northern side and a three-metre-wide shared facility on the southern side of the carriageway. These will tie into the existing footway provided on Chapel Lane. To the north, the footway will be required to be reduced to around 1.4 metres in width for a short length to provide appropriate carriageway curve widening.

5.27 Intervisibility between a cycle waiting to access the shared cycle route and vehicles approaching is shown on **Figure 5.4**.

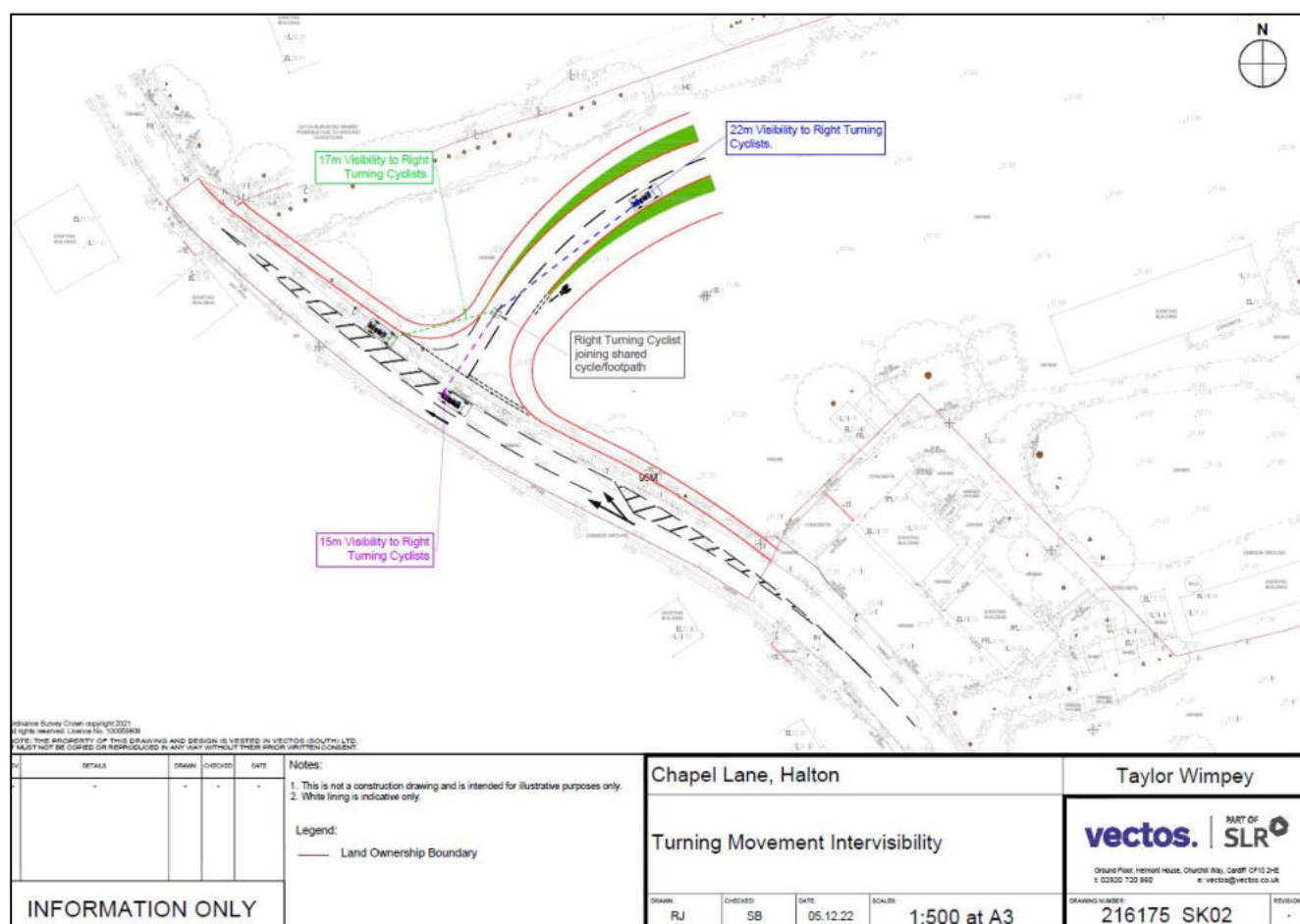


Figure 5.4 - Forward Visibility Splays

Additional Site Access – Queensbury Way

- 5.28 The possibility of creating an access from Queensbury Way was considered further to detailed investigatory work regarding land ownership, adopted highway boundary records, Public Right of Way records, land ownership and title deeds for land within the vicinity of the north-eastern most corner of the site. The option to provide a new roundabout was drawn up, but ultimately the option of providing a secondary access via Queensbury Way was rejected due to land ownership constraints and therefore uncertainty on the ability to deliver the link.
- 5.29 A second option of providing a link via a fourth arm to the southernmost roundabout was also considered, and again, the land required to accommodate this was outside of the Applicants control and therefore not deliverable.
- 5.30 It should be noted that the development proposals with access via Chapel Lane would not preclude the ability for the remainder of the local plan allocation to connect to Queensbury Way, if other parcels were to come forward.

Principle of a Single Vehicular Access

- 5.31 The access strategy proposes a primary access to serve the development from Chapel Lane, in the form of a ghost-island right-turn priority junction. Chapel Lane is subject to a 30mph speed limit in this location and the junction has been designed to accommodate visibility splays suitable for the recorded 85%ile speeds, which are marginally higher than 30mph. An emergency access also exists via Sandy Lane. Under the terms of the TRO, emergency vehicles are able to use this access together with any other vehicles authorised by the Council. In the very unlikely situation of the primary access being blocked in an emergency, the Council would be entitled to authorise use of Sandy Lane as a temporary alternative. Sandy Lane is currently available for use by pedestrians and cyclists and those access arrangements are intended to continue, albeit with a single vehicular crossing proposed over Sandy Lane to facilitate access between the parcels of land to the east and west of the Lane.
- 5.32 The proposed access junction location on Chapel Lane resides upon adopted highway land managed by Knowsley Council, rather than Halton Borough Council.
- 5.33 There is no technical design reason that an access from Chapel Lane is inappropriate to support up to 350 homes from Chapel Lane, on either highway safety or junction capacity grounds.
- 5.34 Halton BC have advised that they have a 180-unit threshold from a single point of access. However, Halton Borough Council do not have any specific design guidance to indicate a 180 unit threshold from a single point of access. There are a number of schemes across the UK where a single point of access has been accepted by the Highway Authority, or by an Inspector, for schemes in excess of 180 units.
- 5.35 The following examples are within the neighbouring authority of Knowsley, however there are plenty more examples across the rest of England and Wales where a single point of access has been accepted. Local examples include:
- 360 dwellings from a single signal-controlled access with Windy Arbor Road (Land North of M62 Motorway off Windy Arbor Road (Halsnead) & Knowsley Council reference: 18/00283/HYB) – no emergency access.
 - 311 dwellings from a single point of access (East Halewood SUE Plot 4 & Knowsley Council reference: 19/00521/HYB).
 - up to 220 dwellings from a single point of access (East Halewood SUE Plot 1 & Knowsley Council reference: 19/00521/HYB).
- 5.36 Other examples include:
- 395 dwellings from a single access & one ped/cycle/emergency access (Land off Hargreaves Road, Northwich & West Cheshire and Chester Council reference: 21/00055/FUL)
 - 700 dwellings from a single access & two emergency only accesses (Somerdale, Keynsham & BANES reference: 13/01780/EOUT).

- 212 dwellings from a single access (Sudbrook Paper Mill & Monmouthshire Council reference: DC/2015/01184).
- 380 dwellings and up to 450 sqm Use Class E/F from a single access (Land West of Church Road, Bapchild, Tonge, Kent. Swale reference: 22/502834/EIOUT).

- 5.37 Officers at the Council have raised concerns regarding the single access onto Chapel Lane on the basis that there could be a sewer collapse (or similar scenario) which would require the full closure of the Chapel Lane access. Whilst a sewer collapse (or similar) is inherently unlikely, it is considered that, if such an event were to occur there is every prospect that one lane could remain open, with temporary traffic lights in place and emergency vehicles would still be able to access the site via Sandy Lane. Notwithstanding, the same risks must apply to all the examples above which have a single access and yet were not refused on those grounds. Concerns appear to be an in-principle objection to a single access serving any development over 180 dwellings, rather than the specifics of the site. There is nothing in the particular road network that makes a single access inherently unsuitable or unsafe.
- 5.38 With reference to the guidance in Manual for Streets (MfS), the access strategy for the site benefits from a number of access points for movement by all modes, meaning there is ample opportunity to travel between the site and the many local facilities within Widnes by sustainable travel modes. These are very much direct and safe links for people movement, including the vehicle access strategy. Vehicular access to local amenities, services, employment, education and leisure facilities is not the only way to access these destinations, and the proposed scheme addresses this with a range of accesses for active travel modes.
- 5.39 Additionally, it is important to note that the proposed permeability of the site for active travel users supports active travel and placemaking objectives in designing for places, and provides for a 20 minute neighbourhood as is best practice. Many local facilities including those listed in **Table 3.2**, can be reached within a comfortable walking and cycling distance of the site. Furthermore, given the site's allocation within the Halton Borough Council's Delivery and Allocations Local Plan (adopted March 2022) the Authority have already recognised the sustainability credentials of the site. The site provides good connectivity, delivered through multiple access points for pedestrians and cyclists at the forefront.
- 5.40 A Stage 1 Road Safety Audit (RSA) has been undertaken on the proposed site access arrangements, this concludes that the access and emergency access arrangements are safe and fit for purpose to serve the development. This is contained at **Appendix E**.
- 5.41 Finally on highway capacity matters, the access has been tested using industry standard junction modelling software which indicates that the access junction on Chapel Lane operates well within its theoretical capacity during the morning and evening peak periods. A maximum RFC (ratio of flow to capacity) of 0.49 is forecasted on any arm in the most intensive test scenario. This means that there is ample capacity still available at the junction with a maximum forecasted queue of 1 vehicle on any one arm, and delay of 16 seconds.

Crossing Arrangements on Sandy Lane

- 5.42 The indicative arrangements for crossing Sandy Lane from the western to the eastern parcels of development are shown in **Figure 5.5**.

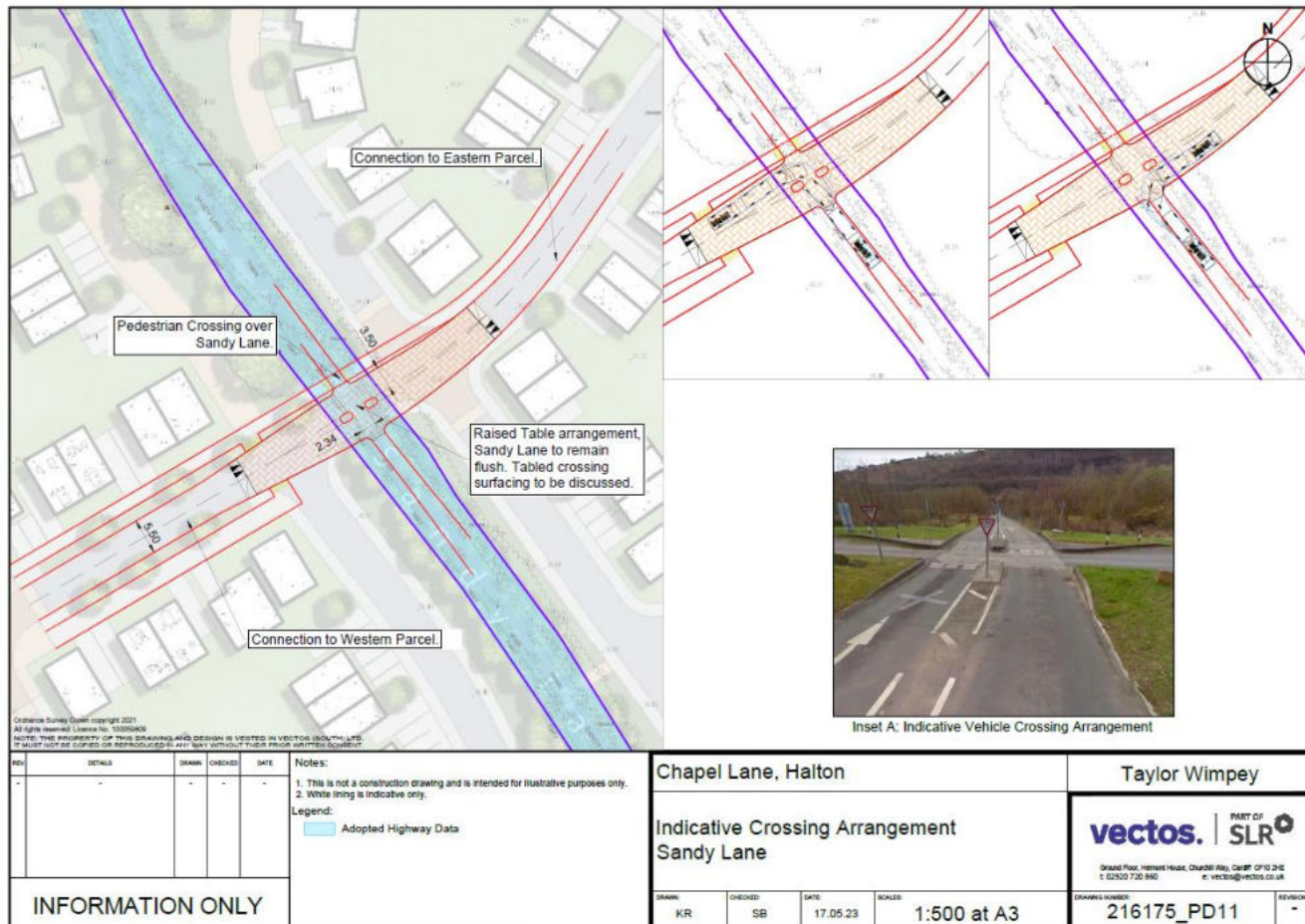


Figure 5.5 – Sandy Lane Crossing Arrangements

- 5.43 The crossing has been designed to allow priority for pedestrians and cyclists on Sandy Lane travelling north to south or vice versa. The turning movements from the site onto Sandy Lane are restricted by the carriageway width and physical traffic islands as shown in the vehicle tracking.

Parking

- 5.44 Optimum car parking standards are set out within the Halton Borough Council's Delivery and Allocations Local Plan (2014-2037). The standards for 'non town centre' locations are summarised in **Table 5.1**.

Table 5.1 - Summary of Car Parking Standards

Dwelling type	Number of spaces
1 bedroom house	1 space
2 & 3 bedroom house	2 spaces
4+ bedroom house	3 spaces
1 bedroom apartment	1 space
2 bedroom apartment	1.5 spaces

- 5.45 The proposed development will conform to HBC's car parking standards, including providing the requisite number of visitor parking spaces.
- 5.46 Electric vehicle (EV) charging will be provided on site at individual dwellings.
- 5.47 No standards are specified by HBC for cycle parking, however, to facilitate convenient ownership and use of bikes by residents, it is proposed an on-plot cycle parking space is provided for each dwelling.

Servicing and Waste

- 5.48 The Design of New Residential Development SPD sets out that all new residential schemes should include a designated area within the curtilage of each property for the required storage bins for waste and recyclables which is readily accessible.

Offsite Highway Works

Queensbury Way

- 5.49 An upgraded uncontrolled pedestrian / cyclist crossing with dropped kerbs, tactile paving and a refuge island will be provided across Queensbury Way connecting PRow W/12 to the existing shared use foot/cycleway and 'Upton Rocks' residential development.
- 5.50 The pedestrian / cyclist refuge will also act as traffic calming along this section of Queensbury Way, will improve accessibility and allow pedestrians and cyclists to cross the carriageway more comfortably.
- 5.51 A contribution for the full cost to provide this crossing will be secured via a Section 106 Agreement.
- 5.52 The proposed crossing is shown on **Figure 5.6**.

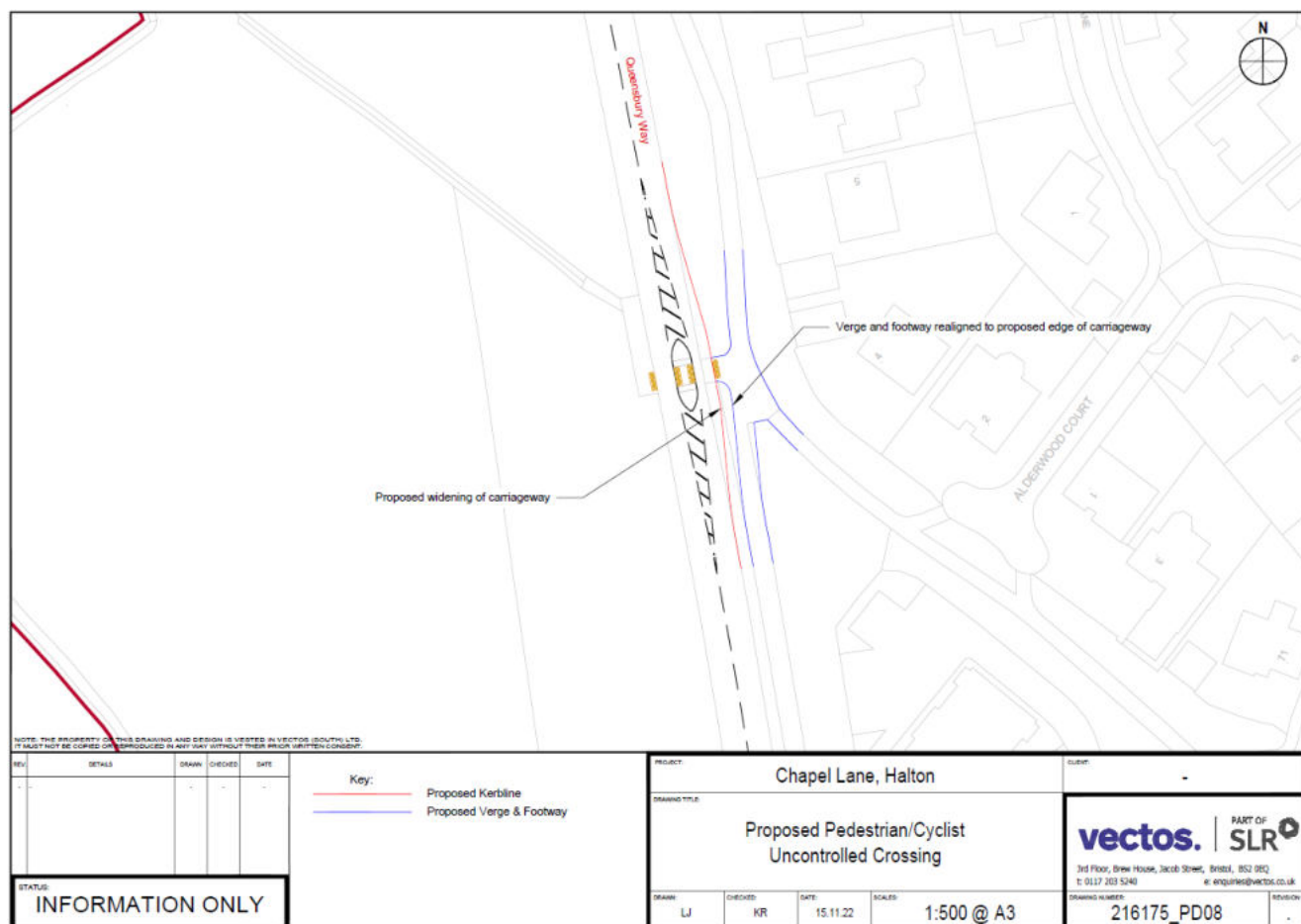


Figure 5.6 – Proposed Pedestrian / cyclist Uncontrolled Crossing

Travel Plan

- 5.53 A Travel Plan will be provided to support the development proposals at this site.
- 5.54 The primary objective of a Travel Plan is to set out a long-term strategy to facilitate and encourage modes of travel to the site by sustainable means, which reflects current central and local government policy as well as the objectives behind this development.
- 5.55 As part of the Travel Plan the developer will fund a Travel Plan Coordinator for a five-year period from first beneficial occupation of the site. After the five years, the development is expected to have critical mass of residents who will have been involved/exposed to the TPC and sustainable measures. At this point, it is considered that the ethos of green travel and its associated benefits will be supported by the local community.
- 5.56 At this stage, it has not been agreed who will take responsibility for the TPC role. This will follow as detailed design of the scheme is progressed. It may be that a separate management company or suitably qualified transport planning consultant, or similar, is appointed to take on this role.

Summary

- 5.57 The proposed development will be designed to promote travel choice where possible, and to encourage sustainable travel for short journeys, and shared or public transport for longer journeys. First and foremost, the development is designed to reduce the need to travel in the first instance.
- 5.58 The site is conveniently connected to local services and connections to the existing pedestrian infrastructure will be provided to facilitate use of these amenities. The development proposals seek to enhance this connectivity to ensure that, where short journeys occur, undertaking them by active travel modes is the first choice.

6 Mobility Strategy & Travel Trends

- 6.1 The proposed new community in this part of Widnes is designed to be an extension to the existing town, and will ultimately create an additional character area within northern Widnes. This is a crucial feature of the mobility strategy, which considers the future site holistically with Widnes.
- 6.2 Mobility is a function of placemaking and is about accessing day to day facilities such as schools, shops, family and friends, healthcare, and the workplace. Strategic sites such as the proposed site allow for a planned and coordinated approach to development, ensuring provision of effective mobility infrastructure. The aim of this approach is first and foremost to reduce the need to travel and offering a range of choice in how to travel. The site does all of these things.
- 6.3 The 'predict and provide' (P&P) approach to assessment and development is now outdated and discredited, and policy dictates that designing communities centred around the private car or judging developments based on the ease at which the private car commuter passes through a highway network during peak periods cannot continue. Instead, a 'vision and validate' (V&V) approach should be adopted to create the places which stand the passage of time for years to come, are not car dominated and break the chain with respect to mobility. National and local policy with respect to movement, health and wellbeing and working from home is now starting to reinforce the V&V approach to placemaking, and these are an essential part of meeting the UK's carbon reduction goals to tackle the declared climate emergency.

Shift in Trends

- 6.4 The Covid-19 crisis has focused minds and brought issues, such as working from home, health, community, internet shopping, deliveries to the forefront. This means that there is no certainty of the future traffic or travel situation beyond the immediate short to medium term.
- 6.5 The requirement for access to local shops and services has been amplified by the Covid-19 pandemic with an increased level of dependence on neighbourhoods and neighbourhood centres, rather than larger urban centres traditionally relied upon for access to jobs, shops and other community-based services.
- 6.6 This change in attitude towards travel and mobility has been facilitated by a number of factors including the rapid growth in smart phones with internet access, combined with location services enabling users to access, order and pay for transport services in an integrated way, as well as the recent Covid-19 pandemic and a renewed desire for local living.
- 6.7 The Covid-19 pandemic has provided a step-change in working habits when it comes to revealing to employers and employees alike, that working from home or from a 'Third-Place' is a viable and attractive option for every-day life. During the first Covid-19 pandemic in the UK, every worker who had the ability to work from home did so.
- 6.8 More than working habits however, the Covid-19 pandemic has shown people the benefits of local living and taking an active part in their local communities. It has never been more important to build for communities where residents can visit friends and family within their local neighbourhood, get a coffee, or pop to a shop for milk all within a walk or cycle from their home.

- 6.9 The vision and validate approach for the development at Chapel Lane embraces a place-based solution that supports the changing needs of residents post Covid-19, by demonstrating that many of the needs for day-to-day living are available within a walkable neighbourhood, thereby minimising the need for individual wider travel. This supports not only prevailing transport principles, but also key health and wellbeing aspirations, as well as aiding in working towards reduced carbon emissions.

Sustainable Accessibility and Mobility (SAM) Framework

- 6.10 Within the Royal Town and Planning Institute (RTPI) report on Net Zero Transport, research was undertaken on how places can reduce their surface transport emissions by 2030, as part of measures to achieve net zero by 2050. It recognises that a decisive break for the conventional approach of creating additional road capacity to meet predicted changes is needed.
- 6.11 To achieve this, there is a need to create a place-based approach with solutions that create better communities. A focus on the role of place in reducing trips should be the priority, followed by maximising the remaining trips to use sustainable transport modes.
- 6.12 This hierarchy is summarised within the Sustainable Accessibility and Mobility (SAM) Framework, shown in **Figure 6.1**.

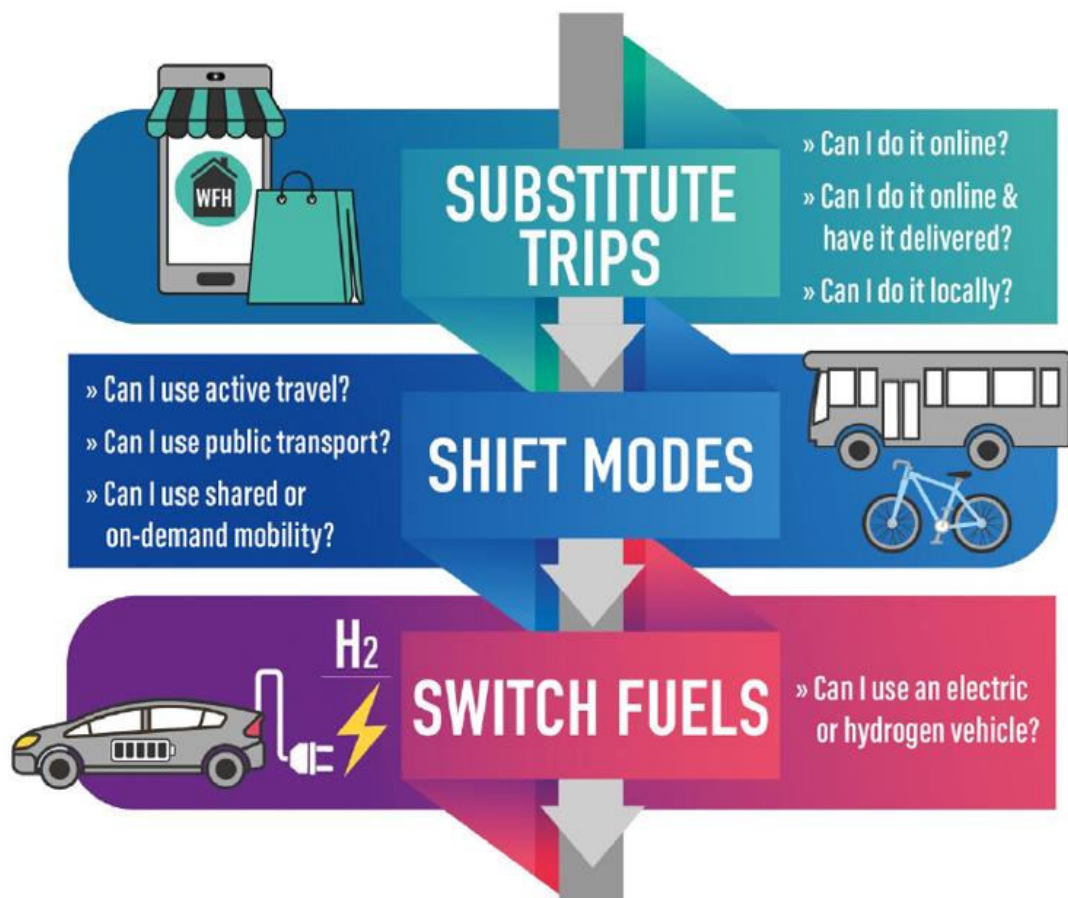


Figure 6.1 – Sustainable Accessibility Mobility Framework

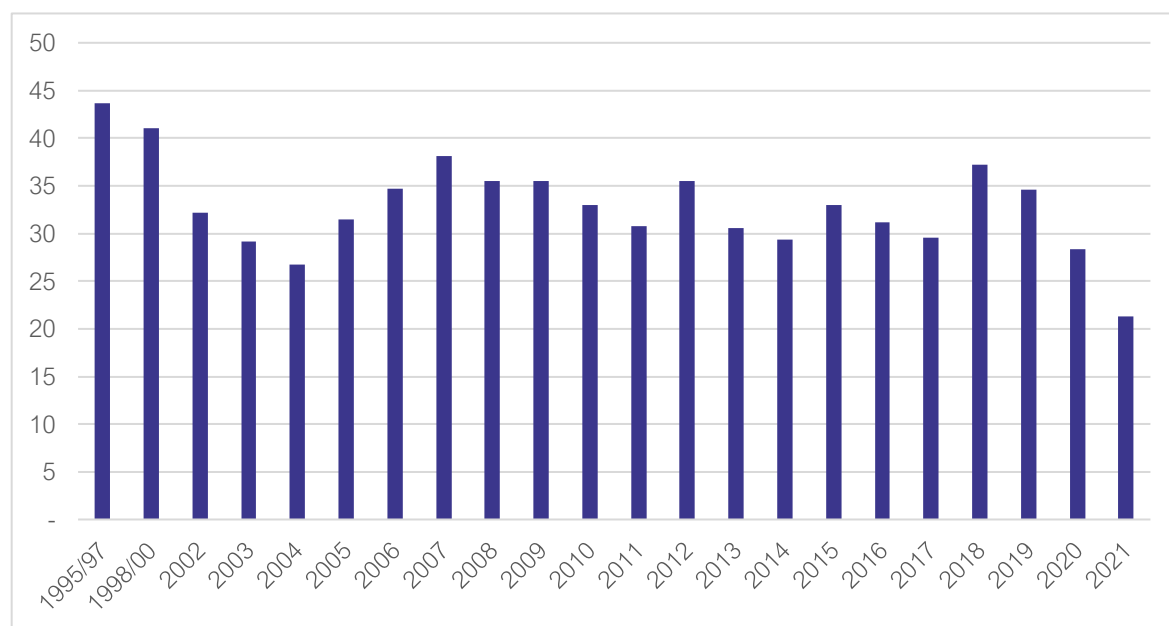
- 6.13 The SAM Framework advocates designing new and extended communities in the most sustainable way whilst reducing the need to travel, supporting uptake in shared and active travel whilst advancing low emission vehicles; as follows:
- Substitute Trips (minimise trips): Minimise travel demand by applying 20-minute neighbourhood principles to site design. Maximise opportunities for living local with safe streets, amenities, superfast broadband, and work-hubs.
 - Shift Modes (minimise least sustainable modes): Make shared mobility the natural choice over private car with public transport enabled by Mobility as a Service applications.
 - Switch Fuels (minimise most polluting fuels): Future-proofed charging infrastructure to enable growth in electric vehicles.
- 6.14 The Mobility Strategy supports the vision by following the SAM (sustainable accessibility and mobility) Framework¹. The first stage is a substitution of trips, this is minimising travel demand first through facilitating virtual mobility. This includes working from home, online shopping etc. Secondly, this refers to where travel needs to occur, ensuring it can be done locally by making certain that key needs are available within a walkable environment.
- 6.15 Shifting modes is making active and shared mobility the natural choice over the private car, with MaaS (mobility as a service) enabled transport options.
- 6.16 Finally, switching fuels refers to minimising the most polluting fuels. Future-proofing of the proposal to provide charging infrastructure is crucial.

Millennials & Gen Z

- 6.17 “The millennials don’t value cars and car ownership, they value technology – they care about what kinds of devices you own.” – Mimi Sheller, a sociology professor at Drexel University and Director of the Centre for Mobilities Research and Policy².
- 6.18 In 1992/94 almost 50% of people aged 17-20 possessed a car license. In 2021 the proportion had reduced to under 25%, reflecting the change of priorities of young people. The graph below shows that the trend has remained stagnant when considering the average over the last decade or more, although the most recent decrease between 2019 and 2021 may be in part due to Covid-19. The change in car license possession is summarised in **Graph 6.1**.

¹ RTPI, Net Zero Transport: the role of spatial planning and place-based solutions, January 2021

² <http://drexel.edu/coas/faculty-research/faculty-directory/sheller-mimi/>



Graph 6.1 – Full Car Driving License Holders Aged 17-20 Years (ONS 2021)

- 6.19 The travel patterns and behaviour of young people is critical given the timescales for the proposed development, and the need to address and accommodate the needs of the people who will be living at the proposed development in the future in line with V&V rather than design and forecast based on historic travel patterns and behaviour

Mobility

- 6.20 Transport policy, which promotes active travel and places single occupancy car use at the bottom of the movement hierarchy, is intrinsically linked to health policy. Rising obesity is caused by sedentary lifestyles, and there is now a cross over between transport and health in prioritising investment in, and use of, active (walking and cycling) travel corridors to deliver transport objectives and health objectives.
- 6.21 The common threads through local and national policy are:
- Mobility, access to day to day and other facilities, is fundamental to ‘liveability’;
 - Mobility must be provided through a plethora of realistic choices; and,
 - The highest priority travel choices are ‘those which are most space efficient, most energy efficient, are likely to result in good community integration, and those which combat a sedentary lifestyle.’
- 6.22 Less reliance on the private car is largely delivered by a shift in culture. It is a shift in the way in which people choose to live, work and expect to be able to travel.
- 6.23 This is people exercising choice in minimising their own inconvenience. It is people choosing healthier lifestyles. By and large the result is more interactive communities and a greater capacity for movements without building more and bigger roads.

- 6.24 The opportunities for mobility, where mobility includes accessibility of friends, services, facilities, workplace, school and other places, includes these in hierarchical order (highest priority first).
- Using technology at homes (video calls, internet shopping etc)
 - Walking and cycling
 - Public transport
 - Multi-occupancy cars
 - Single-occupancy cars
- 6.25 Through the proposed initiatives, beginning with design and including the Travel Plan, a new residential development off Chapel Lane will manage behaviour. It can provide travel education, travel help, and the means of encouragement to travel sustainably from the outset. In doing so, it will accentuate interaction within the community.
- 6.26 Mobility measures applied from the outset at this site will deliver an excellent foundation in new residents' travel from that of existing residents, which in turn will be influenced by changing attitudes and changing policies. The masterplan design supports this behavioural change, providing people with the flexibility to choose how they travel where possible, and how they plan their journeys.
- 6.27 Pedestrian connectivity in the area will be enhanced through the development proposals which will benefit new residents at the site as well as residents within the existing communities.

Local Living

- 6.28 Local living or 'liveability' is at the forefront of people's minds right now and 20-minute neighbourhoods are based upon a design ethos of creating complete, compact, and connected neighbourhoods where people can meet their everyday needs within a short walk or cycle. Many of the existing local facilities within Widnes are within a 20-minute walk or cycle of the proposed development site.
- 6.29 It is stated in the DfT Active Travel: Local Authority Toolkit (13th April 2022) that:
- 'Research shows that people are happy to walk for 20 minutes to get to the places they need to go. Eighty percent of journeys under a mile are made on foot, which usually equates to around a 20-minute walk.'*
- 6.30 This is not a new concept and historically many towns and cities have evolved around walkable neighbourhoods, and thus model similar to a 20-minute community. The emergence of these walkable places to live has grown around the world, and the need for them has only been quickened by the Covid-19 pandemic which has put a spotlight on the importance of the liveability of where we live.
- 6.31 This idea presents multiple benefits including boosting local economies, improving people's health and wellbeing, increasing social connections in communities, and tackling the climate change emergency.



Figure 6.2 – 20 Minute Neighbourhood Concept

- 6.32 **Figure 6.2** illustrates examples of the types of facilities provided within towns and cities, and in the case of the development site many of these facilities are situated within the surrounding area and are not required on site.

Mobility as a Service

- 6.33 Mobility-as-a-Service (MaaS) is at the forefront of change, and is a concept of combining services from public and private transport providers in one place which allows users to create and manage trips, which they can then pay for from a single account, typically a single app.

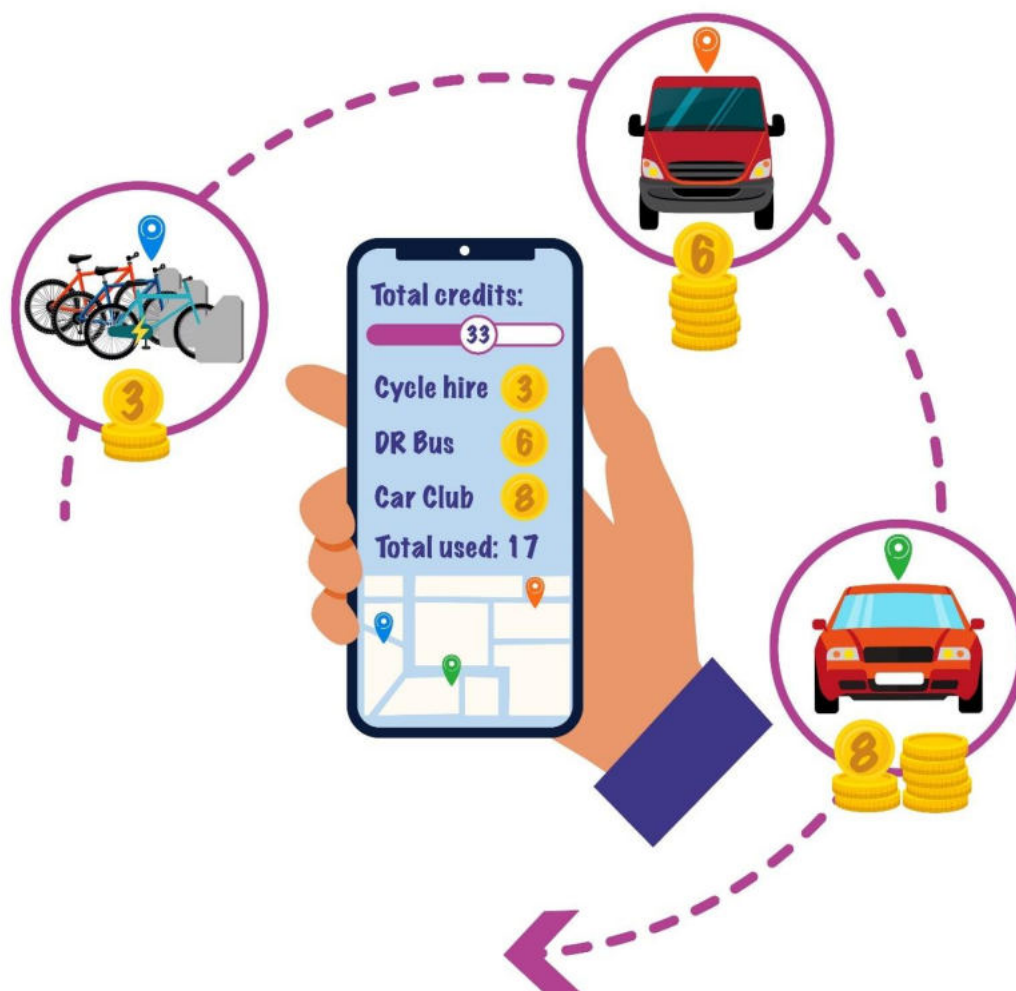


Figure 6.3 – Example of Mobility as a Service

- 6.34 MaaS can be delivered by a range of innovative new mobility services complimenting more established transport modes, and can include:
- Active Travel Corridors;
 - Car clubs/carpooling;
 - Virtual mobility; and
 - Personalised Travel Planning.
- 6.35 One single initiative will not deliver mobility, but the combination of these services and the collection of access to each service in a single location (or app) will provide people with the mobility and choice they desire.
- 6.36 It is anticipated that the site can provide for MaaS through many of these initiatives.

Car Clubs and Carpooling

- 6.37 A car club is where several people access and drive the same vehicle. For example, several people in the same community would drive the car on different days of the week.
- 6.38 A community car club is a local, member-based initiative that provides access to self-service, pay as you drive, low-carbon vehicles. Often community car clubs are run by local groups to support their communities. It is a convenient and affordable way of using a car, without the expense of owning one.
- 6.39 Access without ownership is becoming more common in modern-day living particularly in areas which are accessible and have good access to public transport – i.e. travel choice.
- 6.40 Related to the observed trend in car ownership and driving licenses, car clubs are becoming more prominent in towns and cities across the UK, and car club spaces can be located strategically at key destinations, major employment sites, transport hubs, and town and city centres. The membership of car clubs is increasing, reflecting people's changing attitudes towards Mobility.
- 6.41 Formal car clubs include Enterprise Car Club and Co-Cars. Enterprise Car Club has numerous cars across the UK and most notably closest the site in Chester, Liverpool and Manchester. It does appear to be expanding to the peripheries and there are a car club car and van located approximately eight kilometres to the south of the site, in Runcorn.
- 6.42 Carpooling or car sharing is where a car driver will use their own personal vehicle to give lifts to other passengers, usually whose origins and destinations are similar to their own.
- 6.43 App-based carpooling has now very much taken-off (i.e. Bla Bla Car and Liftshare), and lifts can be booked on demand, reflecting modern lifestyles, removing the requirement to plan journeys well in advance to participate in an effective carpooling system. Carpooling is also available through apps such as Uber and Lyft.
- 6.44 There are several benefits to car clubs/carpooling:
 - Cost savings (i.e. travel costs and the costs of owning a vehicle);
 - Less congestion and fewer cars on the road;
 - Reduces parking issues; and
 - Networking/making friends.
- 6.45 Carpooling will be encouraged within the development as part of the Travel Planning initiatives.

Personalised Travel Planning

- 6.46 Personalised Travel Planning (PTP) can have a significant impact on travel behaviour and travel patterns, helping to achieve more sustainable travel practices and healthier lifestyles, which in turn contribute to a more socially inclusive community and help protect the environment. PTP can be effective both amongst existing residents and communities and in new developments.

- 6.47 PTP provides tailored information directly to the individual on sustainable mobility options through a one-to-one discussion with a PTP Adviser. The personal approach and specifically tailored information can lead to a greater propensity for behavioural change than a one-size-fits-all approach.
- 6.48 PTP will be put in place at the proposed site by the Travel Plan Coordinator to enable residents to make the most of the wide range of travel choices that will be available, and to contribute to instilling sustainable travel behaviour from the outset (See the Travel Plan).

Summary

- 6.49 The proposed residential development off Chapel Lane is an intuitive addition to this part of Widnes and will create an additional character area within the town.
- 6.50 To ensure the sustainability of the site, the Mobility Strategy has defined what current travel trends will impact the site and how the development will both adapt to this and ensure that journeys are undertaken in the most sustainable way possible.
- 6.51 The site, by design, will deliver many of these benefits within the site in terms of mobility, and being located close to local facilities including schools, employment, shopping, and public transport facilities, will deliver growth in that coordinated and sustainable manner. It will be one of the catalysts for the uptake of the increasing realistic travel choices within the community, in accordance with national and local policy.
- 6.52 This development has the opportunity to facilitate changes in attitudes towards new residential development in terms of sustainability and accessibility of services, and will provide measures to ensure that choice is provided so that travel behaviour is enabled to change. In this respect, the measures proposed will provide betterment to the existing community and hence have a more far-reaching effect on travel behaviour, choice, and modal split.
- 6.53 One single initiative will not deliver mobility, but the combination of these services will provide people with the mobility and choice they desire for the various trips they make.

7 Trip Generation Forecast

- 7.1 To determine the anticipated level of multi-modal trips generated by the proposed development of 350 homes, the national database for trip generation analysis TRICS has been used. The trip generation forecast has been developed in accordance with the Scoping Note contained at **Appendix A** and agreed with the Highway Officer through pre-application discussions.
- 7.2 TRICS is a database of trip generation derived from a wide variety of land uses (housing, retail, employment, etc.) across the UK. Traffic surveys are carried out to measure how many people travel to a site, by mode and what time of day. The purpose of the database is to provide an estimate of likely trip generation to/from a land use, by comparing it with trip generation from existing comparative sites of the same land use.
- 7.3 A trip generation exercise has been undertaken using the trip rates extracted from the TRICS database. The 'Residential' category and 'Houses Privately Owned' subcategory has been assessed as this is considered most representative of the proposals.
- 7.4 It is generally acknowledged that trip generation associated with private housing is greater than that associated with affordable housing and as such, whilst the proposals will likely include a proportion of affordable housing, the same trip rates associated with private housing used for Hale Gate Road will be used to provide a robust assessment.
- 7.5 These trip rates included the following site parameters:
- Sites in England and Wales (excluding Greater London);
 - Weekday surveys;
 - Sites in 'Edge of town' or 'Suburban' locations; and
 - Sites with up to 800 dwellings.
- 7.6 The resultant three-hour AM and PM peak periods, as well as a daily total people trip rates are set out in **Table 7.1** and forecast number of trips is shown in **Table 7.2**. TRICS only accounts for 12-hours (0700-1900) for residential sites which has been factored to 24hr AADT using a factor derived from the ATC data on Chapel Lane which equates to +12%.

Table 7.1 – TRICS Trip Rates – Total People

Time Period	Arrivals	Departures	Totals
07:00 – 08:00	0.122	0.514	0.636
08:00 – 09:00	0.191	0.779	0.970
09:00 – 10:00	0.201	0.287	0.488
16:00 – 17:00	0.534	0.273	0.807
17:00 – 18:00	0.602	0.257	0.859
18:00 – 19:00	0.502	0.291	0.793
24hr AADT	4.264	4.393	8.657

Table 7.2 – Total People Trip Generation

Time Period	Arrivals	Departures	Totals
07:00 – 08:00	43	180	223
08:00 – 09:00	67	273	340
09:00 – 10:00	70	100	171
16:00 – 17:00	187	96	282
17:00 – 18:00	211	90	301
18:00 – 19:00	176	102	278
24hr AADT	1,493	1,538	3,030

- 7.7 **Table 6.2** shows that the development is likely to generate with up to 340 two-way total people trips in the AM peak hour (between 08:00-09:00) and up to 301 two-way person trips in the PM peak hour (17:00-18:00), and that the PM peak hours are fairly evenly distributed across the three-hours between 16:00-19:00.
- 7.8 The trip generation methodology disaggregates the total person trips by journey purpose, using National Travel Survey (NTS) data to determine the proportion of trips in each peak period that relate to education, commuting, and leisure/recreation purposes.
- 7.9 This allows for a bespoke mode split to be applied to each set of trips to ultimately determine a realistic demand for the site, for all modes.

- 7.10 The trip generation methodology will follow this approach and reflects the agreed approach by HBC used at Hale Gate Road, Halton, as set out in the Scoping Note. The trip methodology for Hale Gate Road is included in **Appendix F**.

Journey Purpose

- 7.11 The National Travel Survey, which consists of a face-to-face interviews and a seven day self-completed written travel diary, allows us to understand trips by journey purpose, and the mode split of trips for each purpose. The 2021 dataset has been used as the latest data available at the time of assessment, however more recent data has been released subsequently in 2022 which demonstrates a lower proportion of trips for commuting purposes than used in this assessment. This supports the direction of trends towards less travel associated with commuting and supports the application of increased working from home used later on for commuting trips.
- 7.12 A summary of trips by journey purpose in the AM and PM peak periods is provided in **Table 7.3**. It demonstrates that trips can be classified into three general journey purposes, commuting, education, and leisure/recreation.

Table 7.3 – National Travel Survey – Trips by Journey Purpose

Start Time	Commuting	Education	Leisure / Recreation
07:00 - 07:59	53%	20%	27%
08:00 – 08:59	23%	51%	26%
09:00 - 09:59	16%	10%	74%
16:00-16:59	26%	11%	63%
17:00 – 17:59	36%	5%	59%
18:00 – 18:59	24%	2%	74%
24hr AADT	22%	17%	62%

- 7.13 It is clear from the above table that most trips in the AM peak period are made for education purposes, this therefore presents a key target for influencing a significant mode shift from observed patterns.
- 7.14 Distributing the total number of trips summarised in **Table 7.2** by the journey purpose summarised in **Table 7.3**, results in a breakdown of trips by journey purposes as summarised in **Table 7.4**.

Table 7.4 –Total People Trips by Journey Purpose

Start Time	Commuting*		Education		Leisure / Recreation	
	Arr	Deps	Arr	Deps	Arr	Deps
07:00 - 07:59	23	96	8	36	11	48
08:00 – 08:59	15	62	34	140	17	70
09:00 - 09:59	11	16	7	10	52	75
16:00-16:59	49	25	21	11	117	60
17:00 – 17:59	75	32	11	5	125	53
18:00 – 18:59	42	24	3	2	131	76
24hr AADT	322	332	247	254	924	951

*Excludes existing working from home

Commuting

- 7.15 Within the Hale Gate Road assessment, working from home has been acknowledged and as a result it was agreed to increase school trips by 10% to account for individuals who drive their children to school between 08:00-10:00, without an onward trip to work.
- 7.16 Developing on the strategy adopted for Hale Gate Road, it is considered that the onward case for home working following the Covid-19 pandemic is now clear, and that the trend is strongly that home (or remote) working in a hybrid form is here to stay. The expected level of future home working of all new residents who work has therefore been calculated using the methodology below.
- 7.17 This is based on the working from home tool developed by Vectos SLR which collates data on pre-Covid (2019) levels of working from home at the Local Authority district level, and then estimating both variation in working from home according to area classification within districts, as well as to estimate future (2022 and onwards) working from home rates by district and area classification. Using this tool shows a change in working from home proportion from 8.2% (pre Covid-19) to 18.2% (now). As such, the future expected level of home working has been applied to the trip generation set out in this section. TRICS does not account for the existing 8.2% of people working from home, therefore the existing working from home trips have been added onto the total people trips.
- 7.18 This approach has been shared with HBC and KC within the Scoping Note and is therefore considered acceptable.
- 7.19 The updated commuter trips are therefore shown in **Table 6.5**. As aforementioned, TRICS does not account for the existing 8.2% of people working from home, therefore the existing working from home trips have been added onto the total people trips.

Table 7.5 – Commuting Trips including Work from Home (350 dwellings)

Time Period	External Trips		Work From Home (existing & increase)	
	Arrivals	Departure	Arrivals	Departure
07:00 – 07:59	20	85	5	19
08:00 – 08:59	14	56	3	12
09:00 – 09:59	10	14	2	3
16:00 – 16:59	43	22	10	5
17:00 – 17:59	67	28	15	6
18:00 – 18:59	37	22	8	5
24hr AADT	287	296	64	66

7.20 The commuting mode split is based on 2011 Census data which is representative of a situation now some 12 years ago, and prior to the Covid-19 pandemic which has accelerated changed to typical travel patterns. The mode splits assumptions for commuting are shown in **Table 7.6**.

Table 7.6 – Mode Split - Commuting

Method of Travel	Commuting
Train	3%
Bus	3%
Taxi	0%
Motorcycle	1%
Car Driver	84%
Car Passenger	5%
Bicycle	1%
Foot	2%
Other	0%
Notes:	Census – MSOA Halton 002

7.21 Applying the mode split in **Table 7.6** to the external employment trips and applying those who work from home from **Table 7.5** results in the Residential Employment Trips in **Table 7.7 to 7.9**.

Table 7.7 – Residential Employment Trips AM

	07:00 – 07:59		08:00 – 08:59		09:00 – 09:59	
	Arr	Dep	Arr	Dep	Arr	Dep
Train	1	3	0	2	0	0
Bus, minibus or coach	1	3	0	2	0	0
Taxi	0	0	0	0	0	0
Motorcycle, scooter or moped	0	0	0	0	0	0
Driving a car or van	17	72	11	47	8	12
Passenger in a car or van	1	4	1	3	1	1
Bicycle	0	1	0	1	0	0
On foot	0	2	0	1	0	0
Other method of travel to work	0	0	0	0	0	0
Total	20	85	14	56	10	14

Table 7.8 – Residential Employment Trips PM

	16:00 – 16:59		17:00 – 17:59		18:00 – 18:59	
	Arr	Dep	Arr	Dep	Arr	Dep
Train	1	1	2	1	1	1
Bus, minibus or coach	1	1	2	1	1	1
Taxi	0	0	0	0	0	0
Motorcycle, scooter or moped	0	0	0	0	0	0
Driving a car or van	36	19	56	24	31	18
Passenger in a car or van	2	1	4	1	2	1
Bicycle	0	0	1	0	0	0
On foot	1	0	1	1	1	0
Other method of travel to work	0	0	0	0	0	0
Total	43	22	67	28	37	22

Table 7.9 – Residential Employment Trips 24hr AADT

	24hr AADT	
	Arr	Dep
Train	9	10
Bus, minibus or coach	9	9
Taxi	1	1
Motorcycle, scooter or moped	2	2
Driving a car or van	241	248
Passenger in a car or van	15	16
Bicycle	3	3
On foot	6	7
Other method of travel to work	1	1
Total	287	296

7.22 It is noted that census data only records main mode, and does not give any indication of occasional modes, for instance it does not record whether a person works one day a week from home. As such, this is likely to overestimate car borne proportion and underestimate active travel and working from home.

Education

7.23 The NTS data demonstrates that in the AM peak 51% of journeys are undertaken for the purpose of education, reducing to 5% in the PM peak. Of these journeys, approximately 50% relate to primary education, and 50% to secondary education.

7.24 There has also been no internalisation in terms of education trips, as this development does not propose any school facilities.

7.25 The education mode splits are based on 2019 (pre Covid-19) NTS table 614, which provides mode splits to school for 5-10 and 11-16 year olds. A summary of these mode splits is shown in **Table 7.10**.

Table 7.10 – Mode Split by Journey Purpose

Method of Travel	Primary Education	Secondary Education
Walk	40%	67%
Bicycle	3%	5%
Car / van	53%	19%
Bus	4%	8%
Other Transport	1%	1%
Notes:	NTS 0614 – Ages 5-10 – under 2 miles	NTS 0614 – Ages 11-16 – under 2 miles

- 7.26 It is acknowledged that two out of three primary schools lie between one and two miles from the site, whilst the others are under one mile. Therefore, the NTS mode splits for under one mile and one to two miles have been combined using a 1:2 ratio respectively.
- 7.27 Similarly, two out of the three secondary schools, including Cronton Sixth Form College, are between one and two miles from the site, whilst the other is under one mile. Therefore, the NTS mode splits for under one mile and one to two miles have been combined using a 1:2 ratio respectively.
- 7.28 Applying the mode split in **Table 7.10** to the primary education trips (50% of those in **Table 7.4**) results in a multi-modal trip demand for the purpose of primary school education, as summarised in **Table 7.11 to 7.13**.

Table 7.11 – Educational Multi-Modal Trip Demand – Primary School AM

	07:00 – 07:59		08:00 – 08:59		09:00 – 09:59	
	Arrivals	Departures	Arrivals	Departures	Arrivals	Departures
Walk	2	7	6	25	1	2
Bicycle	0	0	0	2	0	0
Car / van	2	9	10	41	2	3
Bus	0	1	1	2	0	0
Other Transport	0	0	0	0	0	0
Total	4	18	17	70	4	5

Table 7.12 – Educational Multi-Modal Trip Demand – Primary School PM

	16:00 – 16:59		17:00 – 17:59		18:00 – 18:59	
	Arrivals	Departures	Arrivals	Departures	Arrivals	Departures
Walk	4	2	2	1	1	0
Bicycle	0	0	0	0	0	0
Car / van	6	3	3	1	1	1
Bus	0	0	0	0	0	0
Other Transport	0	0	0	0	0	0
Total	10	5	5	2	2	1

Table 7.13 – Educational Multi-Modal Trip Demand – Primary School 24hr AADT

	24hr AADT	
	Arrivals	Departures
Walk	49	51
Bicycle	3	3
Car / van	66	68
Bus	5	5
Other Transport	1	1
Total	123	127

7.29 Applying the mode split in **Table 7.10** to the primary education trips (50% of those in **Table 7.4**) results in a multi-modal trip demand for the purpose of secondary school education, as summarised in **Table 7.14 to 7.16**.

Table 7.14 – Educational Multi-Modal Trip Demand – Secondary School AM

	07:00 – 07:59		08:00 – 08:59		09:00 – 09:59	
	Arrivals	Departures	Arrivals	Departures	Arrivals	Departures
Walk	3	12	11	46	2	3
Bicycle	0	1	1	3	0	0
Car / van	1	3	4	15	1	1
Bus	0	1	1	5	0	0
Other Transport	0	0	0	1	0	0
Total	4	18	17	70	4	5

Table 7.15 – Educational Multi-Modal Trip Demand – Secondary School PM

	16:00 – 16:59		17:00 – 17:59		18:00 – 18:59	
	Arrivals	Departures	Arrivals	Departures	Arrivals	Departures
Walk	7	4	4	2	1	1
Bicycle	0	0	0	0	0	0
Car / van	2	1	1	0	0	0
Bus	1	0	0	0	0	0
Other Transport	0	0	0	0	0	0
Total	10	5	5	2	2	1

Table 7.16 – Educational Multi-Modal Trip Demand – Secondary School 24hr AADT

	24hr AADT	
	Arrivals	Departures
Walk	83	85
Bicycle	6	6
Car / van	24	25
Bus	10	10
Other Transport	1	1
Total	123	127

7.30 The total education trips are shown in **Table 7.17 to 7.19**.

Table 7.17 – Total Educational Multi-Modal Trip Demand – AM

	07:00 – 07:59		08:00 – 08:59		09:00 – 09:59	
	Arrivals	Departures	Arrivals	Departures	Arrivals	Departures
Walk	5	19	17	71	4	5
Bicycle	0	1	1	5	0	0
Car / van	3	13	14	56	3	4
Bus	0	2	2	8	0	1
Other Transport	0	0	0	1	0	0
Total	8	36	34	140	7	10

Table 7.18 – Total Educational Multi-Modal Trip Demand – PM

	16:00 – 16:59		17:00 – 17:59		18:00 – 18:59	
	Arrivals	Departures	Arrivals	Departures	Arrivals	Departures
Walk	11	6	6	2	2	1
Bicycle	1	0	0	0	0	0
Car / van	8	4	4	2	1	1
Bus	1	1	1	0	0	0
Other Transport	0	0	0	0	0	0
Total	21	11	11	5	3	2

Table 7.19 – Total Educational Multi-Modal Trip Demand 24hr AADT

	24hr AADT	
	Arrivals	Departures
Walk	132	136
Bicycle	9	9
Car / van	90	92
Bus	14	15
Other Transport	2	2
Total	247	254

Leisure / Recreation

- 7.31 The NTS data demonstrates that in the AM peak, 26% of journeys are undertaken for the purpose of leisure / recreation (shopping, personal business, visiting friends, holiday / day trips etc), increasing to 59% in the PM peak.
- 7.32 The proposals do not include community, retail or leisure facilities and therefore all trips will be external. The same mode split which was used to distribute the ‘employment’ trips has also been used to distribute the leisure / recreation trips, as summarised in **Table 7.6**.
- 7.33 A breakdown of the leisure / recreation trips is provided in **Tables 7.20 to 7.22**.

Table 7.20 – Leisure / Recreation Multi-Modal Trip Demand – AM

	07:00 – 07:59		08:00 – 08:59		09:00 – 09:59	
	Arrivals	Departures	Arrivals	Departures	Arrivals	Departures
Walk	0	1	0	2	1	2
Bicycle	0	0	0	1	0	1
Driving Car / van	10	41	14	59	44	63
Passenger in Car / van	1	3	1	4	3	4
Train	0	2	1	2	2	2
Bus	0	2	1	2	2	2
Other Transport	0	0	0	0	0	0
Total	11	48	17	70	52	75

Table 7.21 – Leisure / Recreation Multi-Modal Trip Demand –PM

	16:00 – 16:59		17:00 – 17:59		18:00 – 18:59	
	Arrivals	Departures	Arrivals	Departures	Arrivals	Departures
Walk	3	1	3	1	3	2
Bicycle	1	1	1	0	1	1
Driving Car / van	98	50	105	45	110	64
Passenger in Car / van	6	3	7	3	7	4
Train	4	2	4	2	4	2
Bus	4	2	4	2	4	2
Other Transport	1	0	1	0	1	0
Total	117	60	125	53	131	76

Table 7.22 – Leisure / Recreation Multi-Modal Trip Demand 24hr AADT

	24hr AADT	
	Arrivals	Departures
Walk	20	21
Bicycle	8	9
Driving Car / van	775	798
Passenger in Car / van	49	50
Train	30	31
Bus	29	30
Other Transport	4	5
Total	924	951

Total Development Demand

7.34 The total residential demand, combining all journey purposes (employment, education, leisure / recreation) is summarised in **Tables 7.23 to 7.25**. Note that the working from home and total includes the existing working from home that TRICS does not account for.

Table 7.23 – Total Residential Demand – AM (350 dwellings)

	07:00 – 07:59		08:00 – 08:59		09:00 – 09:59	
	Arrivals	Departures	Arrivals	Departures	Arrivals	Departures
Work from Home (incl. existing / increase)	5	19	3	12	2	3
Train	1	4	1	4	2	3
Bus, minibus or coach	1	6	3	12	2	3
Taxi	0	0	0	0	0	0
Motorcycle, scooter or moped	0	1	0	1	0	0
Driving a car or van	30	125	40	162	55	78
Passenger in a car or van	2	7	2	7	3	5
Bicycle	1	3	1	6	1	1
On foot	5	22	18	73	5	7
Other method of travel to work	0	1	0	2	0	0
Total	45	188	68	278	71	102

Table 7.24 – Total Residential Demand – PM (350 dwellings)

	16:00 – 16:59		17:00 – 17:59		18:00 – 18:59	
	Arrivals	Departures	Arrivals	Departures	Arrivals	Departures
Work from Home (incl existing / increase)	10	5	15	6	8	5
Train	5	3	6	3	5	3
Bus, minibus or coach	6	3	7	3	5	3
Taxi	1	0	1	0	1	0
Motorcycle, scooter or moped	1	0	1	0	1	1
Driving a car or van	142	73	165	70	142	82
Passenger in a car or van	8	4	10	4	9	5
Bicycle	2	1	2	1	2	1
On foot	15	8	10	4	6	3
Other method of travel to work	1	0	1	0	1	0
Total	191	98	217	93	179	104

Table 7.25 – Total Residential Demand –24hr AADT (350 dwellings)

	24hr	
	Arrivals	Departures
Work from Home (incl. existing / increase)	64	66
Train	4	41
Bus, minibus or coach	52	54
Taxi	4	4
Motorcycle, scooter or moped	6	7
Driving a car or van	1,106	1,139
Passenger in a car or van	64	65
Bicycle	20	21
On foot	158	163
Other method of travel to work	8	8
Total	1,521	1,567

- 7.36 The trip generation exercise demonstrates that approximately 490 and 674 two-way vehicle trips are forecast in the AM and PM peak periods respectively, with 202 and 235 of these falling within the traditional peak hours of 08:00-09:00 and 17:00-18:00. This equates to a maximum of under 4 new car trips per minute (two-way) in the peak hours.
- 7.37 These trip rates have been subsequently distributed to the network to allow assessment of the impact of the development on the local highway network.

Upton Grange Estate Trip Rates

- 7.38 In an email from HBC (23rd November 2022 – **Appendix G**), a traffic survey was undertaken on Tuesday 8th November 2022 of the Upton Grange residential estate which consists of 172 properties and HBC requested that this should be taken into consideration within the TA. The Upton Grange data that HBC

have collected is a one-off survey and only covers the AM peak on what is an established and historic residential development. This has therefore been used as a simple comparison.

- 7.39 The survey included the vehicular in/outs between 0800-0900 which were used to derive an AM peak vehicle trip rate of 0.63 per house. Applying this trips rate to the 350-unit development equates to 221 two-way vehicular trips in the AM peak. In comparison to the agreed scoping methodology of 202 vehicular trips in the AM peak, there is a minor difference of 19 car trips. Once this number of trips are distributed across the network the overall differences would be minimal, as demonstrated for Chapel Lane in **Table 7.26**.

Table 7.26 – Chapel Lane Access – AM Peak

Link	TA Trip Rates	Upton Grange Trip Rates	Difference
Chapel Lane - North of Access	136	150	+14
Chapel Lane - South of Access	65	71	+5

- 7.40 The bespoke multi-modal trip methodology used for the proposed development has been replicated from another proposed development on Hale Gate Road in Halton. This has been accepted by HBC for the Hale Gate Road development and this development. In addition, the TRICS methodology includes 21 surveys which allows for an average weekday across a 12-hr day (0700-1900), instead of a one-off survey in the AM peak.
- 7.41 In summary, the forecast trips for the proposed development account for an average of multiple TRICS surveys and are only slightly below, in terms of total vehicular trips, the one-off AM peak survey undertaken by HBC. Therefore the trip forecast, which was included in the Scoping Note, is considered realistic and acceptable for a weekday peak hour assessment.

8 Highway Network Assessment

- 8.1 This section determines the impact of the proposed vehicular trip generation on the local highway network. It evaluates the effect of the vehicular access point via Chapel Lane and various junctions surrounding the site.

The junctions to be assessed were shared with HBC and KC in the Scoping Note, and no further comments regarding the assessment area has been received. Therefore the assessment area is considered acceptable.

Commuting

- 8.2 In the absence of any more recent or relevant data, the distribution of commuting trips through the local highway network has been undertaken using 2011 Census, specifically 'Journey to Work' data for 'Driving a car or van'. Halton 002 MSOA has been used to provide the distribution for the commuting trips and a summary of the distribution is shown in **Table 7.1**. Due to the potential routes to the M62 (E) via Hall Lane or B5419, a judgement that traffic will route using a 30/70 split respectively has been applied to Hall Lane and B5419. The B5419 is the most attractive route as it provides a two-way route for the entire route to the M62 whilst Hall Lane is narrow at certain points and will therefore not be as utilised. This distribution has been shared with HBC and KC (email dated 1/12/2022) and has not been raised as an issue and is therefore considered acceptable.

Table 8.1 – Commuting Distribution

Actual route	Percentage
Hall Lane	7.4%
M62 (E)	13.4%
Via Hall Lane (30%)	4.0%
Via B5419 (70%)	9.4%
B5419 (N)	1.4%
A5080 (E)	16.1%
Queensbury Way	1.2%
Liverpool Road (E)	13.3%
Hale Road	21.3%
Liverpool Road (W)	1.8%
Hough Green Road	1.5%
B5178 (W)	4.5%
M62 (W)	8.9%
Cronton Road (W)	1.4%
M57 (N)	7.7%
M57 (S)	0.0%

Education

- 8.3 The distribution of education trips has been assigned based on the location of local education establishments. The primary school distribution has been proportioned equally across all accessible schools, while secondary school / further education has been split by number of years which is 5 years and 2 years respectively, and then equally proportioned across all accessible schools. This is summarised in **Table 8.2**.

Table 8.2 – Education Distribution

Primary School	
Farmworth C of E	33.0%
Lunt's Heath Primary School	33.0%
Cronton C of E	33.0%
Secondary School / Further Education	
Wade Deacon High School	35.7%
Ormiston Chadwick Academy	35.7%
Cronton Sixth Form Academy	28.6%

Leisure / Recreational

- 8.4 The commuting distribution has been applied to leisure / recreational trips as shown in **Table 8.1**. This approach has been shared with HBC and KC, and no comments have been received in relation to this distribution and is therefore considered appropriate.
- 8.5 The traffic distribution diagrams are shown in **Appendix H**.

Traffic Growth

- 8.6 In the context of traffic growth and for a robust assessment, TEMPro growth has been applied to the observed base flows to growth them to 2025 (opening), 2028 (+5 years) and 2033 (+10 year). The factors are presented without any adjustment and are considered to be high given the changing traffic patterns and future trends which have only been accelerated by the Covid-19 pandemic. They are therefore considered to be overly robust.
- 8.7 The proposed TEMPro growth factors are shown in **Table 8.3**.

Table 8.3 – TEMPro Growth Factors

		Level	Area	Local Growth Figure
2022 > 2025	AM	E02002575	Halton 002	1.017
	PM			1.015
		Level	Area	Local Growth Figure
2022 > 2028	AM	E02002575	Halton 002	1.031
	PM			1.026
		Level	Area	Local Growth Figure
2022 > 2033	AM	E02002575	Halton 002	1.055
	PM			1.047

- 8.8 TEMPro includes all strategic development growth in the local area, and therefore associated traffic growth predictions. As such, this has been used as the basis on which impact assessments associated with committed developments have been based to avoid double counting.
- 8.9 Despite growth being applied, DfT counters found on Prescott Road and Liverpool Road have identified that there was no indication of traffic growth before the Covid-19 pandemic. The manual counts for the 5 years prior to the pandemic are shown in **Table 8.4**.

Table 8.4 – DfT Growth (Pre-COVID) – AADT

Year	Prescot Road (DfT ID: 944123)	Liverpool Road (DfT ID: 944118)
2015	5049	7667
2016	4896	-
2017	4608	7675
2018	4473	6838
2019	4804	7230

- 8.10 As such, it is both reasonable and realistic that background traffic growth is not likely to occur on the surrounding local highway network to the site. However, to ensure emerging strategic growth is accounted for in the following highway network assessment, the TEMPro growth factors have been applied and the future year scenarios remain representative of an overly robust position which is unlikely to occur in reality.

Committed Developments

- 8.11 The Miller Homes Lunt's Heath development has been included within the assessment, given the site has recently been subject to planning application for 317 residential dwellings [planning reference 2200318/FUL]. Despite being a strategic site, it is likely that there is an element of double counting with cross boundary growth within TEMPro. This is therefore considered to be an overly robust assessment.
- 8.12 There are also a number of allocated sites on the A5080 east of the A557, which have not been included within the assessment because reviewing the current TA's indicates a total of 12 and 5 trips on the Lunts Heath Road corridor in the AM and PM peaks respectively. Therefore, including TEMPro growth is considered more robust in terms of those allocated sites.

Junction Impact Assessment

- 8.13 Using the 2022 baseline surveys, a percentage impact assessment by junction and arm has been undertaken. The results for the surveys compared with the forecast development flows for the outline development are shown in **Table 8.5** (AM) and **Table 8.6** (PM).

Table 8.5 – Percentage Impact Assessment (AM)

	2022 Observed	Development	Development Impact
--	---------------	-------------	--------------------

Junction			
Cronton Road / Chapel Lane	1,028	136	13.3%
Smithy Lane	204	6	3.1%
Cronton Road (E)	284	15	5.2%
Chapel Lane	292	110	37.5%
Cronton Road (W)	248	6	2.3%
Junction			
Prescot Road / Queensbury Way	1,755	65	3.7%
Prescot Road (N)	303	52	17.2%
Queensbury Way	495	0	0.1%
Prescot Road (S)	497	12	2.4%
Hough Green Road	460	0	0.1%
Junction			
Cronton Road / Queensbury Way	1,534	75	4.9%
Cronton Road (E)	594	15	2.5%
Queensbury Way	584	0	0.0%
Cronton Road (W)	356	60	16.9%
Junction			
Queensbury Way / Upper Rocks Avenue	965	0	0.0%
Queensbury Way (N)	317	0	0.0%
Upper Rocks Avenue	100	0	0.0%
Queensbury Way (S)	548	0	0.0%
Junction			
Cronton Road / Lunts Heath Road (Double Roundabout)	2,256	69	3.1%
Norlands Lane	230	0	0.0%
Lunts Heath Road	735	10	1.4%
Birchfield Road	613	3	0.5%
Cronton Lane	678	56	8.2%
Junction			
Lunts Heath Road / Wilmere Lane	1,830	52	2.9%
Wilmere Lane	400	3	0.7%
Lunts Heath Road (E)	465	8	1.6%
Lunts Heath Road (W)	965	42	4.4%
Junction			

Lunts Heath Road / Derby Road	1,890	21	1.1%
Derby Road (E)	722	4	0.6%
Derby Road (S)	676	0	0.0%
Lunts Heath Road	492	17	3.5%
Junction			
Liverpool Road / Hale Road	2,023	61	3.0%
Prescot Road	537	49	9.1%
Liverpool Road (E)	564	5	0.8%
Hale Road	438	6	1.3%
Liverpool Road (W)	484	2	0.4%

Table 8.6 – Percentage Impact Assessment (PM)

	2022 Observed	Development	Development Impact
Junction			
Cronton Road / Chapel Lane	1055	144	13.7%
Smithy Lane	180	19	10.8%
Cronton Road (E)	349	45	13.0%
Chapel Lane	223	43	19.3%
Cronton Road (W)	303	36	12.0%
Junction			
Prescot Road / Queensbury Way	1,797	91	5.1%
Prescot Road (N)	219	27	12.4%
Queensbury Way	533	2	0.4%
Prescot Road (S)	637	59	9.3%
Hough Green Road	408	2	0.6%
Junction			
Cronton Road / Queensbury Way	1,651	65	3.9%
Cronton Road (E)	914	45	5.0%
Queensbury Way	361	0	0.0%
Cronton Road (W)	376	19	5.2%
Junction			
Queensbury Way / Upper Rocks Avenue	1,039	0	0.0%
Queensbury Way (N)	594	0	0.0%
Upper Rocks Avenue	53	0	0.0%
Queensbury Way (S)	392	0	0.0%

Junction			
Cronton Road / Lunts Heath Road (Double Roundabout)	2,445	64	2.6%
Norlands Lane	127	0	0.0%
Lunts Heath Road	1087	44	4.1%
Birchfield Road	581	1	0.2%
Cronton Lane	650	19	3.0%
Junction			
Lunts Heath Road / Wilmere Lane	2,017	63	3.1%
Wilmere Lane	669	17	2.6%
Lunts Heath Road (E)	580	27	4.6%
Lunts Heath Road (W)	768	19	2.5%
Junction			
Lunts Heath Road / Derby Road	2,270	37	1.6%
Derby Road (E)	947	26	2.7%
Derby Road (S)	895	0	0.0%
Lunts Heath Road	428	11	2.6%
Junction			
Liverpool Road / Hale Road	2,000	85	4.2%
Prescot Road	482	25	5.3%
Liverpool Road (E)	587	22	3.7%
Hale Road	536	34	6.4%
Liverpool Road (W)	395	3	0.8%

8.14 As shown within **Tables 8.5** and **Table 8.6**, the development is forecast to impact on several junctions during the peak hours. As the impact of the development is greater than 5% on at least one arm on many of the junctions, the following junctions have been further reviewed using the appropriate individual modelling software:

- Site access via Chapel Lane;
- Cronton Road / Chapel Lane;
- Prescot Road / Queensbury Way;
- Cronton Road / Queensbury Way;
- Cronton Road / Lunts Heath Road Double Roundabout; and
- Liverpool Road / Hale Road.

Highway Network Assessment

- 8.15 Traffic modelling is not a pass or fail assessment, providing a picture of the future position on the highway network. Models instead act as a useful tool which can be used to allow a judgement to be made on the likely effects of the proposed development but this needs to be balanced against the overall movement picture and matters pertaining to travel choice, sustainability and behavioural change.
- 8.16 The relevant junctions have been further reviewed using the appropriate modelling software, for the following scenarios:
- 2022 Observed;
 - 2025 Base + Committed;
 - 2025 Base + Committed + Development;
 - 2028 Base + Committed;
 - 2028 Base + Committed + Development;
 - 2033 Base + Committed; and
 - 2033 Base + Committed + Development.
- 8.17 The two 2032 scenarios are shown in the following tables.

Site Access Junction – Chapel Lane (Knowsley)

- 8.18 The results of the site access priority junction are presented in **Table 8.7**, and the full PICADY output is contained in **Appendix I**. The site access junction is a proposed new junction and therefore has been assessed for the development scenarios only.

Table 8.7 - B4836/Site Access Junction Modelling Results

	AM			PM		
	Q (PCU)	Delay (s)	RFC	Q (PCU)	Delay (s)	RFC
2033 + Committed + Development						
Stream B-AC	0.6	12.96	0.39	0.2	9.64	0.17
Stream C-AB	0.0	6.35	0.02	0.1	7.39	0.13

(A = Chapel Lane (N), B = Site Access, C= Chapel Lane (S))

- 8.19 **Table 8.7** shows that the site access junction will operate well within its theoretical design capacity in all scenarios, with minimal queuing on Chapel Lane, and a maximum RFC of 0.39.

Cronton Road / Chapel Lane / Smithy Lane Signals (Knowsley)

- 8.20 The results of the Cronton Road / Chapel Lane / Smithy Lane signalised junction are presented in **Table 8.8**, and the full LinSIG report is contained at **Appendix J**.

Table 8.8 – Cronton Road / Chapel Lane Traffic Signals Results

Arm	AM				PM			
	DoS (%)	MMQ (PCU)	Delay (S/PCU)	PRC (%)	DoS (%)	MMQ (PCU)	Delay (S/PCU)	PRC (%)
	2022 Base							
Smithy Lane	33.3	5.4	34.7	67.3%	36.4	5.2	41.6	69.1%
Cronton Road (E)	53.0	8.5	42.4		53.2	9.8	36.1	
Chapel Lane	53.8	8.6	40.3		53.2	6.8	47.2	
Cronton Road (W)	45.1	7.4	34.4		45.9	8.3	30.1	
	2033 Base + Committed							
Smithy Lane	35.1	5.8	35.0	53.0	37.8	5.4	41.8	58.5
Cronton Road (E)	58.8	9.8	44.0		56.8	10.5	37.1	
Chapel Lane	57.6	9.2	41.6		55.7	7.4	48.1	

Cronton Road (W)	50.7	8.2	36.5		52.0	9.5	32.3	
	2033 Base + Committed + Development							
Smithy Lane	32.0	5.6	30.4	24.5	40.4	6.0	41.4	31.6
Cronton Road (E)	71.5	11.4	54.0		66.5	12.7	40.9	
Chapel Lane	72.3	13.5	45.0		68.4	9.5	53.8	
Cronton Road (W)	66.1	9.5	48.1		67.9	11.9	42.8	

8.21 **Table 8.8** shows that in the future year scenarios, the Cronton Road / Chapel Lane signal controlled junction will operate within its theoretical capacity, with a nominal level of queuing and a maximum DoS of 72.3%.

Prescot Road / Queensbury Way (Halton)

8.22 The results of the Prescot Road / Queensbury Way roundabout are presented in **Table 8.9**, and the full ARCADY report is contained at **Appendix K**.

Table 8.9 – Prescott Road / Queensbury Way Roundabout

	AM			PM		
	Q (PCU)	Delay (s)	RFC	Q (PCU)	Delay (s)	RFC
2022 Base						
Prescot	0.3	3.33	0.24	0.2	2.96	0.17
Queensbury	0.5	3.16	0.32	0.5	3.02	0.33
Prescot	0.9	6.11	0.48	1.6	8.14	0.61
Hough Green Road	0.6	3.93	0.36	0.5	3.70	0.32
2033 + Committed						
Prescot	0.3	3.47	0.25	0.2	3.05	0.18
Queensbury	0.5	3.35	0.35	0.5	3.14	0.35
Prescot	1.1	6.62	0.52	1.9	9.20	0.66
Hough Green Road	0.6	4.15	0.38	0.5	3.88	0.34
2033 + Committed + Development						
Prescot	0.4	3.63	0.30	0.2	3.13	0.20
Queensbury	0.6	3.45	0.36	0.6	3.19	0.36
Prescot	1.1	6.80	0.53	2.4	11.09	0.71
Hough Green Road	0.6	4.18	0.38	0.5	4.06	0.35

- 8.23 **Table 8.9** shows that the junction would operate well within its theoretical capacity in all scenarios. The highest RFC of the junction is 0.71 on the Prescott Road (S) arm of the junction, during the future year 2033 base + committed + development scenario, within the PM peak hour. This results in a queue of 2.4 PCUs and a maximum delay of 11 seconds. This remains well within the operational capacity of the junction.

Cronton Road / Queensbury Way (Knowsley)

- 8.24 The results of the Cronton Road / Queensbury Way roundabout are presented in **Table 8.10**, and the full ARCADY report is contained at **Appendix L**.

Table 8.10 – Cronton Road / Queensbury Way Roundabout

	AM			PM		
	Q (PCU)	Delay (s)	RFC	Q (PCU)	Delay	RFC
2022 Base						
A5080 (E)	0.8	4.61	0.46	2.3	8.40	0.70
Queensbury	0.9	4.87	0.47	0.4	3.87	0.30
A5080 (W)	0.7	6.27	0.41	0.6	5.59	0.39
2033 + Committed						
A5080 (E)	1.0	5.09	0.51	2.9	9.88	0.75
Queensbury	1.0	5.38	0.51	0.5	4.11	0.33
A5080 (W)	0.8	6.84	0.44	0.8	6.12	0.43
2033 + Committed + Development						
A5080 (E)	1.1	5.21	0.52	3.5	11.46	0.78
Queensbury	1.0	5.47	0.51	0.5	4.28	0.34
A5080 (W)	1.0	7.82	0.51	0.8	6.34	0.45

- 8.25 **Table 8.10** shows that the junction is forecasted to operate within its theoretical capacity in all scenarios. The highest RFC of the junction is 0.78 on the A5080 (E) arm of the junction, during the future year 2033 base + committed + development scenario, within the PM peak. This results in a queue of 3.5 PCUs and a delay of just over 11 seconds. This remains well within the operational capacity of the junction.

Cronton Road / Lunts Heath Road Double Roundabout (Halton)

- 8.26 The results of the Cronton Road / Lunts Heath Road double roundabout are presented in **Table 8.11**, and the full ARCADY report is contained at **Appendix M**.

Table 8.11 – Cronton Road / Lunts Heath Road Double Roundabout

	AM			PM		
	Q (PCU)	Delay (s)	RFC	Q (PCU)	Delay (s)	RFC
2022 Base						
1 A5080 / Norlands Lane – 1 –	0.3	3.57	0.20	0.1	2.99	0.10
1 A5080 / Norlands Lane – 2 – A5080	1.3	5.69	0.56	3.1	9.89	0.76
1 A5080 / Norlands Lane – 3 – A5080	2.7	13.09	0.73	2.6	13.32	0.73
2 A5080 / Birchfield Road 1 –	0.2	15.42	0.19	0.2	10.90	0.14
2 A5080 / Birchfield Road 2 –	0.9	3.99	0.47	2.3	6.86	0.70

2 A5080 / Birchfield Road 3 –	0.7	3.65	0.41	0.8	4.36	0.44
2 A5080 / Birchfield Road 4 – A5080 (w)	1.1	3.89	0.52	0.7	3.09	0.42
2033 + Committed						
1 A5080 / Norlands Lane – 1 –	0.3	3.78	0.22	0.1	3.14	0.12
1 A5080 / Norlands Lane – 2 – A5080	1.6	6.51	0.62	4.0	12.16	0.80
1 A5080 / Norlands Lane – 3 – A5080	3.6	16.53	0.79	3.8	17.98	0.80
2 A5080 / Birchfield Road 1 –	0.3	18.43	0.22	0.2	12.60	0.16
2 A5080 / Birchfield Road 2 –	1.2	4.58	0.54	2.9	8.29	0.75
2 A5080 / Birchfield Road 3 –	0.8	4.02	0.45	0.9	4.90	0.49
2 A5080 / Birchfield Road 4 –	1.3	4.32	0.56	0.8	3.40	0.46
2033 + Committed + Development						
1 A5080 / Norlands Lane – 1 –	0.3	3.95	0.23	0.1	3.18	0.12
1 A5080 / Norlands Lane – 2 – A5080	1.7	6.68	0.63	4.9	14.47	0.84
1 A5080 / Norlands Lane – 3 – A5080	4.9	21.59	0.84	4.3	19.91	0.82
2 A5080 / Birchfield Road 1 –	0.3	20.65	0.24	0.2	12.96	0.17
2 A5080 / Birchfield Road 2 –	1.2	4.70	0.55	3.4	9.30	0.77
2 A5080 / Birchfield Road 3 –	0.8	4.07	0.45	1.0	5.17	0.50
2 A5080 / Birchfield Road 4 –	1.4	4.63	0.59	0.9	3.46	0.47

8.27 **Table 8.11** shows that the junction would operate within its theoretical capacity in all scenarios. The highest RFC of the junction is 0.84 with a queue of 5 PCUs and delay of 22 seconds, which remains within the operational capacity of the junction. This level of delay is unlikely to be perceptible to existing road users.

Liverpool Road / Hale Road Signals (Halton)

8.28 The results of the Liverpool Road / Hale Road signalised junction are presented in **Table 8.12** (AM) and **Table 8.13** (PM), and the full LinSIG report is contained at **Appendix N**. The AM and PM shoulder peaks have also been summarised.

Table 8.12 – Liverpool Road / Hale Road Traffic Signals AM Results

Arm	AM (0700-0800)				AM (0800-0900)			
	DoS (%)	MMQ (PCU)	Delay (S/PCU)	PRC (%)	DoS (%)	MMQ (PCU)	Delay (S/PCU)	PRC (%)
	2022 Base							
Prescot Road	68.7%	10.5	35.5	31.1%	88.3%	14.1	57.5	-0.7%
Liverpool Road (E)	35.1%	4.4	29.1		66.6%	10.1	33.4	
Hale Road	61.6%	4.8	53.3		90.3%	113	71.4	
Liverpool Road (W)	67.9%	7.5	49.0		90.6%	15.5	67.5	
	2033 Base + Committed							
Prescot Road	76.2	11.6	37.2	23.0	94.6	18.0	74.8	-6.6
Liverpool Road (E)	37.0	4.6	29.6		70.2	10.9	34.8	
Hale Road	65.5	5.2	55.0		96.0	14.8	92.7	
Liverpool Road (W)	71.8	8.2	51.1		95.9	19.5	87.3	
	2033 Base + Committed + Development							
Prescot Road	77.9	13.1	38.8	15.6	99.8	25.2	105.4	-10.9
Liverpool Road (E)	38.1	4.7	30.6		72.0	11.2	36.3	
Hale Road	67.8	5.5	56.3		97.9	16.9	105.1	
Liverpool Road (W)	75.1	8.6	54.4		99.7	23.5	115.4	

8.29 **Table 8.12** shows that between 0700 and 0800 the junction will operate well within its theoretical capacity, with an acceptable level of queuing, and a maximum DoS of 77.9%. It also demonstrates that between 0800 and 0900, the junction is modelled to operate approximately 10.9% over capacity but within the theoretical capacity (less than 100% DoS) with vehicle delays of up to 115 seconds on the Liverpool Road (W) arm of the junction.

Table 8.13 – Liverpool Road / Hale Road Traffic Signals PM Results

Arm	PM (1630-1730)				PM (1730-1830)			
	DoS (%)	MMQ (PCU)	Delay (S/PCU)	PRC (%)	DoS (%)	MMQ (PCU)	Delay (S/PCU)	PRC (%)
	2022 Base							
Prescot Road	93.1%	15.3	75.9	-5.7%	84.6%	12.6	53.3	4.4
Liverpool Road (E)	76.0%	10.9	41.9		63.9%	8.3	37.0	
Hale Road	93.5%	17.7	71.0		84.9%	11.5	57.1	
Liverpool Road (W)	95.2%	15.1	97.6		86.2%	11.2	67.4	
	2033 Base + Committed							
Prescot Road	98.2	19.9	102.0	-11.2	89.2	14.4	60.6	-1.0
Liverpool Road (E)	79.5	12.0	43.9		67.0	8.9	38.0	
Hale Road	99.0	23.9	101.9		80.2	13.7	67.2	
Liverpool Road (W)	100.1	20.0	132.0		90.9	13.0	78.1	
	2033 Base + Committed + Development							
Prescot Road	104.0	29.7	161.3	-18.0	95.4	18.5	80.5	-7.1
Liverpool Road (E)	85.8	12.4	46.0		76.3	9.3	40.7	
Hale Road	106.2	39.3	185.3		94.0	16.6	78.2	
Liverpool Road (W)	101.3	21.7	145.2		96.4	16.1	104.3	

- 8.30 The results demonstrate however that the junction is already reaching its theoretical capacity in the 2022 baseline scenarios, especially during the PM peak and this has been observed on site. With the inclusion of committed and development traffic, the model results demonstrate that the junction will operate just over its theoretical design capacity (over 100% DoS) in the PM peak period, with a maximum queue of 39 PCUs when considering 350 dwellings. Evidentially, given the known sensitivities in the model for even the baseline scenario, it is sensitive to any change in vehicular demand and therefore may be showing unrealistic results.

- 8.31 The caveat with any model, including these, is that in no circumstance can a mathematical traffic model provide an accurate forecast of future reality. This is because the future is subject to multiple variables and uncertainties.
- 8.32 There is no empirical pass/fail trigger in traffic modelling. They aid in making judgements about characteristics and cannot be an arbiter in their own right on the planning acceptability of development.
- 8.33 The likely effect in this scenario is that people will respond to their environment, and act to minimise their inconvenience, retiming journeys (which may result in peak spreading) or switching modes. In reality, traffic is a function of road space. At busy times, increasing road capacity generates traffic, and reducing road capacity reduces traffic. Capacity is a tool.
- 8.34 Therefore, the highway capacity constraints at the Liverpool Road / Hale Road Junction should not be a reason to refuse much needed residential development in Halton Borough, and should not mean that this part of the road network is 'closed for development'. The likelihood at a junction such as this, is that the demand and queueing will not actually increase in the way the model predicts, because people will act to minimise their own inconvenience. This is something the model cannot account for.
- 8.35 However, the development is forecast to add 61 and 85 vehicular trips in the AM (0800-0900) and PM (1630-1730) peaks respectively, which equates to a 3% in the AM peak and 4.2% impact in the PM peak. This is well within the +/- 10% daily variation as assumed by TAG guidance for MCC surveys, demonstrating that this junction could fluctuate in flows more than the development is forecast to add to it.
- 8.36 In addition to this, through the application of TEMPro and committed developments, from 2022 observed counts to the '2033 Base + Committed' this adds 124 and 106 vehicular trips in the AM and PM peaks respectively, which is again greater than the impact of the proposed development. Therefore, despite the robust nature of the future baseline scenario, there is a maximum increase from the development of +15 PCUs of queueing which also does not account for any people acting to minimise their own inconvenience.
- 8.37 For the purposes of three hours over the course of a day that the junction operates close to capacity, which relies on robust assumptions, no mitigation is deemed necessary beyond the Travel Planning measures set out in the Mobility Strategy. It is also considered that due to the Covid-19 pandemic and the changes in work practices that it has brought, working from home and more flexible working patterns available, future residents will likely actively avoid this junction during the main commute peak periods if it inconveniences them as people naturally act to minimise their own inconvenience.
- 8.38 Furthermore, any highway capacity enhancements would only remove existing space for active travel users at this junction. This was identified in the Widnes Golf Course TA (ref: 21/00471/FUL) as HBC determined that traffic capacity improvements to the junction were not viable due to the space that would have been taken away from active travel users.

- 8.39 As previously set out and emphasised within this report, any improvements made to this junction would entail a predict and provide approach and is wholly the antithesis of current and emerging policy in seeking to prioritise car user convenience over more sustainable forms of transport.
- 8.40 Therefore, impact of the proposed residential development is not considered significant or 'severe', as labelled in The Framework, in this location.

Summary

- 8.41 The impact of the proposed development on the local highway is demonstrated to be minimal, with mostly imperceptible increases to delay and queuing on existing junctions. Equally, the findings from the junction modelling and existing traffic behaviour will not result in any detrimental impact to highway safety and would not give rise to any unacceptable safety impacts.
- 8.42 The proposed site access junction will not result in any perceptible queuing as a result of the proposed development and will therefore have a minimal impact on the existing operation of Chapel Lane. It is therefore considered that the proposed access arrangements are suitable in highway safety and operational terms to serve the proposed development.
- 8.43 The conclusion is that the effect of the development, in terms of highway capacity, is not significant and does not give rise to any severe residual cumulative impacts. It also concludes that the access is appropriate and vehicular traffic associated with the development can be accommodated without detriment to the future safety and operation of the local highway network.

9 Summary and Conclusion

Summary

- 9.1 This Transport Assessment (TA) has been prepared by Vectos, Part of SLR on behalf of Taylor Wimpey UK Ltd to assist the local planning authority's consideration of an outline planning application on land to the east of Chapel Lane, Widnes.
- 9.2 The proposed development site is located to the north-west of the Widnes urban area. The site is situated within the boundary of two separate allocations for residential development within the adopted Halton Delivery and Allocations Local Plan [DALP] (March 2022) under Policy RD1 (Residential Development Allocations). The allocations comprise two separate land parcels separated by Sandy Lane, (Site Ref. W4 to the west of Sandy Lane and Site Ref. W5 to the east). The application red line boundary does not extend to the full extent of the allocation.
- 9.3 The relevant national and local planning policy and guidance has been referenced in the preparation of this TA. The National Planning Policy Framework (NPPF) sets out a presumption in favour of sustainable development.
- 9.4 The development promotes travel choice from the outset where possible by providing links to existing residential areas and the established pedestrian routes. The accompanying Travel Plan will aid in encouraging sustainable travel for short journeys and shared or public travel for longer journeys. First and foremost, the development is designed to reduce the need to travel in the first instance which takes advantage of rapidly accelerating attitudes to home working and local living.
- 9.5 The site is located in a sustainable location and in close proximity to nearby local facilities and services, with access achievable by active modes of travel as well as by public transport. The development proposals include connections to the existing pedestrian and cycle networks in the vicinity of the site and off-site pedestrian improvements to provide continuous pedestrian routes between the site and local facilities.
- 9.6 To ensure the sustainability of the site, a Mobility Strategy has defined what current travel trends will impact the site and how the development will both adapt to this and ensure that journeys that are undertaken from the site are done in the most sustainable way possible and will integrate with Widnes where possible.
- 9.7 Vehicular access to the site will be from Chapel Lane via a new priority junction. The junction has been demonstrated to be safe, fit for purpose and cater for the capacity of the development, with significant spare capacity and minimal queuing on Chapel Lane.
- 9.8 Emergency access points and an additional active travel links will be provided via Sandy Lane and via existing PRowS.
- 9.9 Offsite highway works to improve the pedestrian and cyclist environment are proposed on Queensbury Way and on Old Upton Lane and will be secured through a s.106 obligation.
- 9.10 The impact of the proposed development on the local highway is demonstrated to be minimal, with mostly imperceptible increases to delay and queuing on existing junctions. The effect of the

development, in terms of highway capacity, is not significant. The development would not give rise to any severe residual cumulative impacts or any unacceptable impact on highway safety. The scheme takes appropriate opportunities to promote sustainable transport modes and provides safe and suitable access to the site for all users.

- 9.11 With the changing nature of travel, which has been accelerated by the Covid-19 events, accounting also for generational mindsets and the changing priorities reflected in policy, the potential to create sustainable travel habits for all residents from the outset is excellent. Therefore, delivery of this site ought to see far fewer vehicular trips than forecasted, particularly given an overly robust traffic growth assessment has been undertaken. It is clear that an ongoing shift in the travel methods of the UK is underway and ongoing. The dominance of the car is gradually being eroded by the pressing need to shift travel patterns towards more sustainable means of travel.

Conclusion

- 9.12 The site is well located for a residential development of this scale, with opportunities to connect to the existing active travel network and the local public transport options. Its inclusion in the Halton Borough Council Local Plan as an allocated site demonstrates this.
- 9.13 The development of this site offers an opportunity to create a sustainable community from the outset, through creative design and sustainable travel offer.
- 9.14 In conclusion, this is a well-located and sustainable site which, in transport terms, is policy compliant and hence should be acceptable from a transport and highways perspective. The proposals allow for delivery of much needed housing in the borough, whilst working towards the UK's target for Carbon Net Zero by 2050.