



Wirral A41 North Corridor Study

Baseline Report

1 March 2018

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Executive summary

Introduction

This report forms the baseline stage of the Wirral A41 North Corridor Study which aims to identify and prioritise transport infrastructure to support Wirral Council's ambitions for the regeneration of Woodside and the Hind Street area of the A41/East Wirral Corridor.

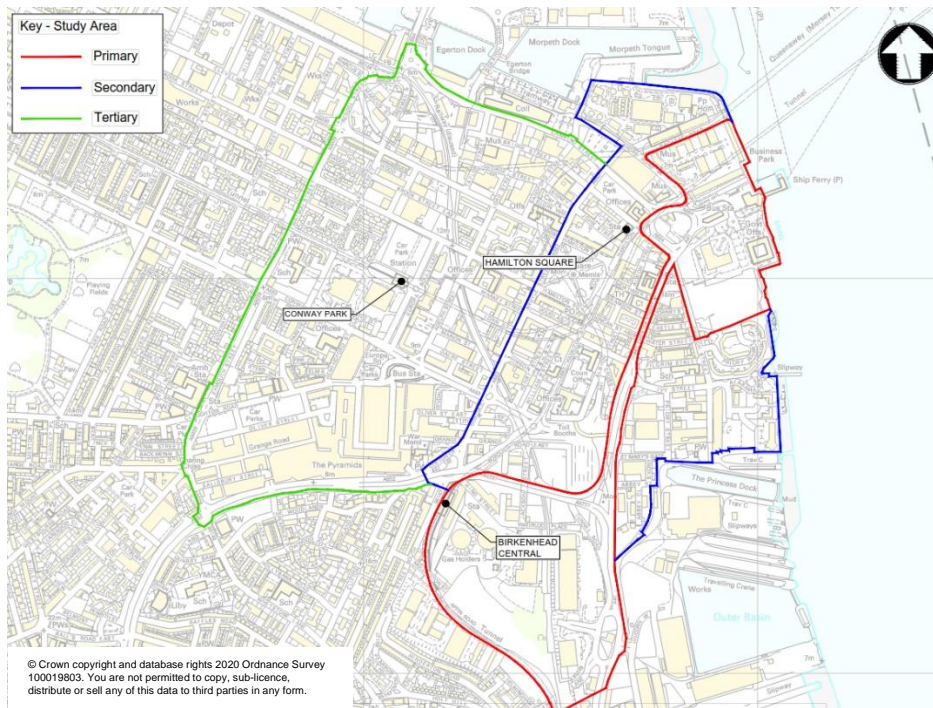
The A41 North Corridor is a key route through east of the Wirral, located adjacent to Liverpool city centre. As part of the regeneration proposals, an efficient and reliable transport network across the borough will be a key factor in facilitating this growth and ensuring the area remains accessible. As a key route through the borough, the A41 will be central to this accessibility.

The Council has set out its priorities within its Strategic Regeneration Framework which identifies the A41 North Corridor as a key area for redevelopment due to identified issues which are evidenced throughout this report.

Understanding the Study Area

A detailed baseline analysis has been undertaken to understand the study area and the context for which future regeneration will take place. Historically, the level of development in the area has declined dramatically over the past century with the more modern infrastructure (Birkenhead flyovers and tunnel approaches) now acting as a significant barrier for regeneration. The existing land uses in the area is used for retail or industrial puposes but there remain signifiicant parcels of land currently undeveloped.

Figure E1: Study Area



Source: Mott MacDonald

To support the baseline analysis, a desktop environmental analysis has been undertaken, identifying several potential environmental constraints such as Flood Zones and conservation areas. A land ownership review has also been undertaken to explore land owners in the area to consider how this may affect the delivery, phasing or extent of proposals.

Geography and Strategic Access

The A41 North Corridor lies to the east of the Wirral and is key to providing connectivity to key centres and the strategic road network due to its location between the M53 junction 5 and Mersey Tunnels. As a key route within the borough and between strategic destinations, it is important to ensure the A41 North Corridor remains accessible by all modes of transport.

In terms of the local transport network, a review of the key characteristics and modes has been undertaken. The key findings are as follows:

- The study area comprises a network of significant A roads which are central to local and strategic connectivity. However, a number of these primary roads create a complicated and convoluted layout which makes it difficult to navigate into and around Birkenhead via other modes.
- Birkenhead Town Centre is served by a comprehensive network of bus routes which has its focus at Birkenhead Bus Station on the A553 Conway Street. However, boarding and alighting opportunities are limited in some areas such as at Birkenhead Central.
- The study area is well served by three rail stations on branches of the Merseyrail Wirral Line connecting Liverpool City Centre with key destinations in Wirral and Cheshire West. It is therefore important to ensure there is suitable interchange and access to these stations to promote sustainable connectivity from the surrounding and wider area.
- The primary study area accommodates the Woodside Mersey Ferry terminal. The development of the Woodside ferry terminal area provides opportunities to increase tourist activity with enhanced services supporting development.
- The majority of off-street car parks are located around Conway Park, Hamilton Square and the Town Centre whilst on-street parking is concentrated around Birkenhead Central, the Priory and development to the north.
- The study area is well positioned to provide many opportunities for pedestrians and cyclists with key facilities in walking distance from transport hubs and residential areas. However, the current provision for pedestrians and cyclists is limited with poor crossing facilities at key desire lines and intimidating environments restricting access along the most direct routes.
- There are significant clusters of accidents present within the study area, several of which resulted in serious or fatal injury to pedestrians. Many accidents involving pedestrian over the last 5 years have occurred in areas which are central to pedestrian movements presenting issues of road safety.

Regeneration Strategies and Studies

Several regeneration strategies and studies have been undertaken which relate to the area, outlining the future aspirations for the area and identifying development opportunities that can be realised to support future regeneration. The key strategies and studies are:

- **Wirral Growth Plan-** outlines an ambitious vision for the future of Wirral including nationally significant economic development projects such as the Wirral Waters Enterprise Zone. Such transformational changes present challenges for the transport network in seeking to accommodate and facilitate the planned growth of Wirral.

- **Wirral Strategic Regeneration Framework-** builds on the Growth Plan and provides further detail on our spatial priorities for investment including Birkenhead Town Centre and the A41 Corridor.
- **East Wirral Transport Scoping Report-** reviewed several previous studies across Wirral and recommended a review of work to align with regeneration timescales.
- **Wirral Strategic Transport Strategy-** provides the context for delivering transport to enable the Strategic Regeneration Framework. The Strategic Transport Strategy suggests that to enable that potential of the A41 North Corridor to be reached, the transport infrastructure and supporting behaviour change campaigns need to be in place.
- **Wirral's Strategic Transport Framework Action Plan-** places future transport schemes in to a prioritised list in line with regeneration plans.

To date, Wirral Council have worked with Merseytravel and Mott MacDonald to identify a Pipeline of Wirral Transport Investment Schemes, with several schemes currently being progressed or have been completed. These include:

- A41 Cycle and Pedestrian Connectivity- funding secured.
- Wirral Waters Cross Dock Connectivity- costed proposal developed.
- Gateways to Wirral Waters- and Wirral Waters supporting road infrastructure- feasibility funding awarded.
- Wirral Waters Active Travel Connectivity- funding secured.
- Wirral Waters Streetcar- feasibility report produced.

Next Steps

As part of this study, key stakeholders have been engaged to ensure that all key issues have been captured and considered. This has included meetings with Merseytravel and a workshop with various stakeholders to establish transport aims and objectives that will support future regeneration in the area. This stakeholder engagement will continue and develop in greater detail for the next stages of this study.

The next stages will be to identify a long list of improvements options in response to the baseline issues which will be subject to appraisal. A further workshop will be held with stakeholders to discuss potential options and stimulate innovative thinking and a short list of schemes will be proposed for further development into a comprehensive transport strategy for the area.

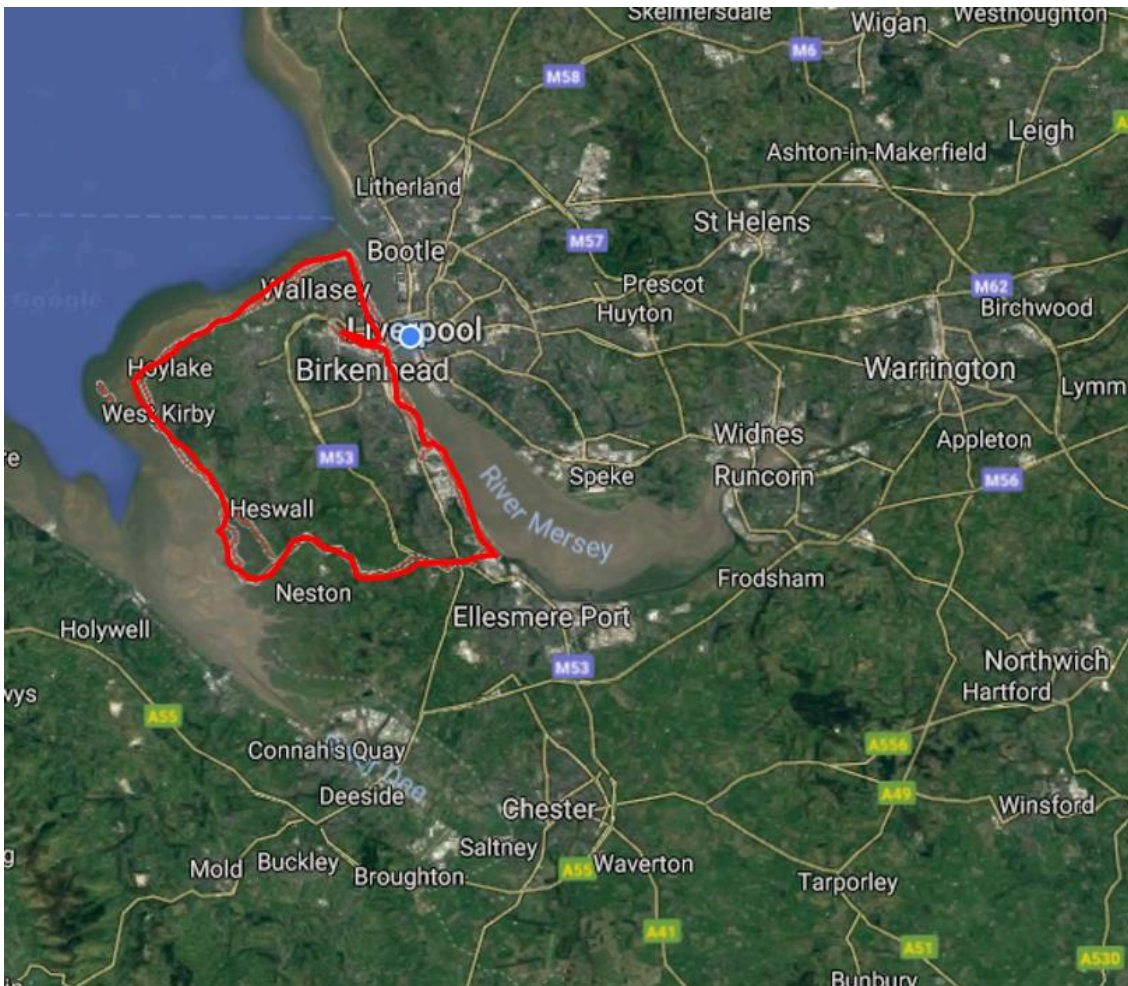
1 Introduction

This report documents the baseline stage of the Wirral A41 North Corridor Study, a transport feasibility and options appraisal study including the identification and prioritisation of transport infrastructure to support Wirral Council's ambitions for the Woodside and Hind Street area of the A41/East Wirral Corridor. The outputs will be an Integrated Transport Plan for the study area with a Transport Investment Programme and Funding Strategy which identifies schemes and funding options to achieve the area objectives.

1.1 Study Location

The A41 North Corridor is a key route through east of the Wirral, located adjacent to Liverpool city centre. The location of the borough is demonstrated in the following figure.

Figure 1: The Location of Wirral in the Wider Region



Source: Google Maps

1.2 Growth and Regeneration Across Wirral

Wirral Council (the Council) has demonstrated its desire for development and regeneration through the announcement at MIPIM 2018 of a billion-pound investment programme in the borough with the A41 North Corridor and waterfront areas being a key aspect to these proposals. A 10 year investment deal has been agreed by the council to accelerate economic growth in the borough through the biggest public-sector led regeneration programme in the UK.

Urban regeneration specialists Muse Developments have been appointed as a joint venture partner to create the Wirral Growth Company (WGC) which will be responsible for the development of new homes, shops and leisure development across the borough including a new retail centre in Birkenhead.

Figure 2: Artistic Impression of Birkenhead Regenerated and Renewed



Source: Wirral View

In addition to the future regeneration of the borough led by WGC, the development of Wirral Waters will also see significant growth around East Wirral and the study area. Wirral Waters aims to transform over 500 acres of Birkenhead Docklands creating 20,000 jobs and 13,500 dwellings therefore making a significant contribution to the boroughs economy. This report refers to the A41 North Corridor study area however a separate report will be issued to deal with the Wirral Waters regeneration area.

Figure 3: Artistic Impression of Wirral Waters



Source: Peel

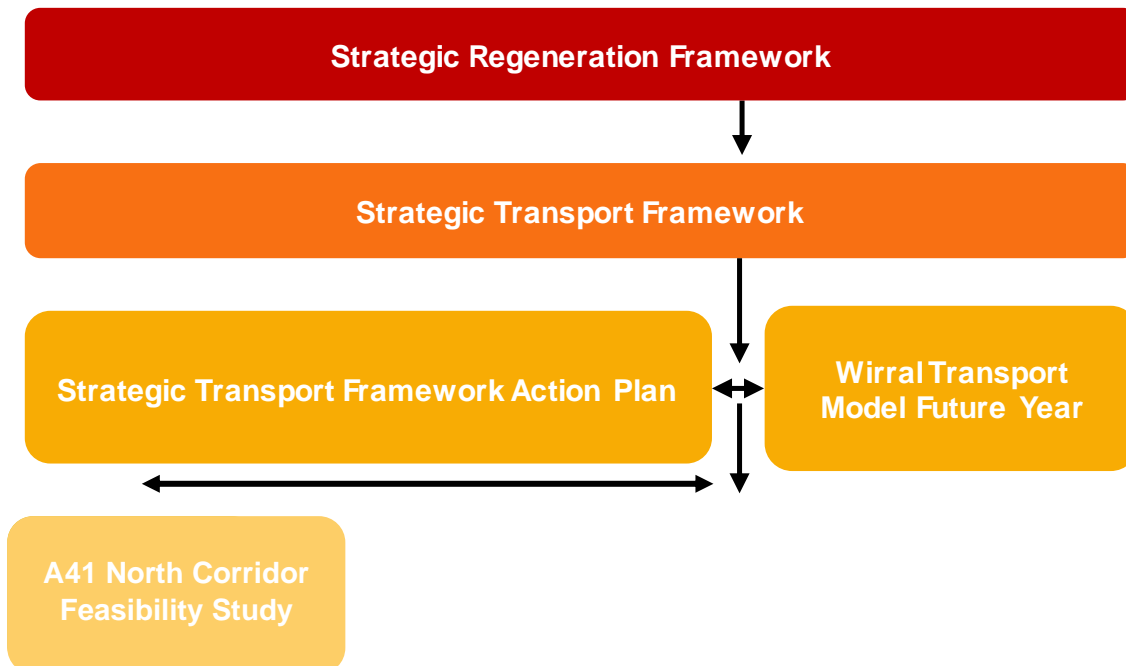
An efficient and reliable transport network across the borough will be a key factor in facilitating this growth and ensuring the area remains accessible, increasing attractiveness to future residents and investors. As a key route through the borough, the A41 will be central to this accessibility.

Therefore, this study is required to improve both local and strategic connectivity around the A41 by all modes of transport considering the impacts of growth and identifying opportunities to support regeneration proposals.

1.3 Wirral A41 North Corridor Study in Context

The Council has set out its priorities within its Strategic Regeneration Framework and has appointed Muse Developments as an investment partner to support the realisation of its ambitions. Figure 4 below highlights where this study sits in context alongside the Council's programme to identify a transport investment programme to support borough wide development.

Figure 4: Study Context



Source: Mott MacDonald

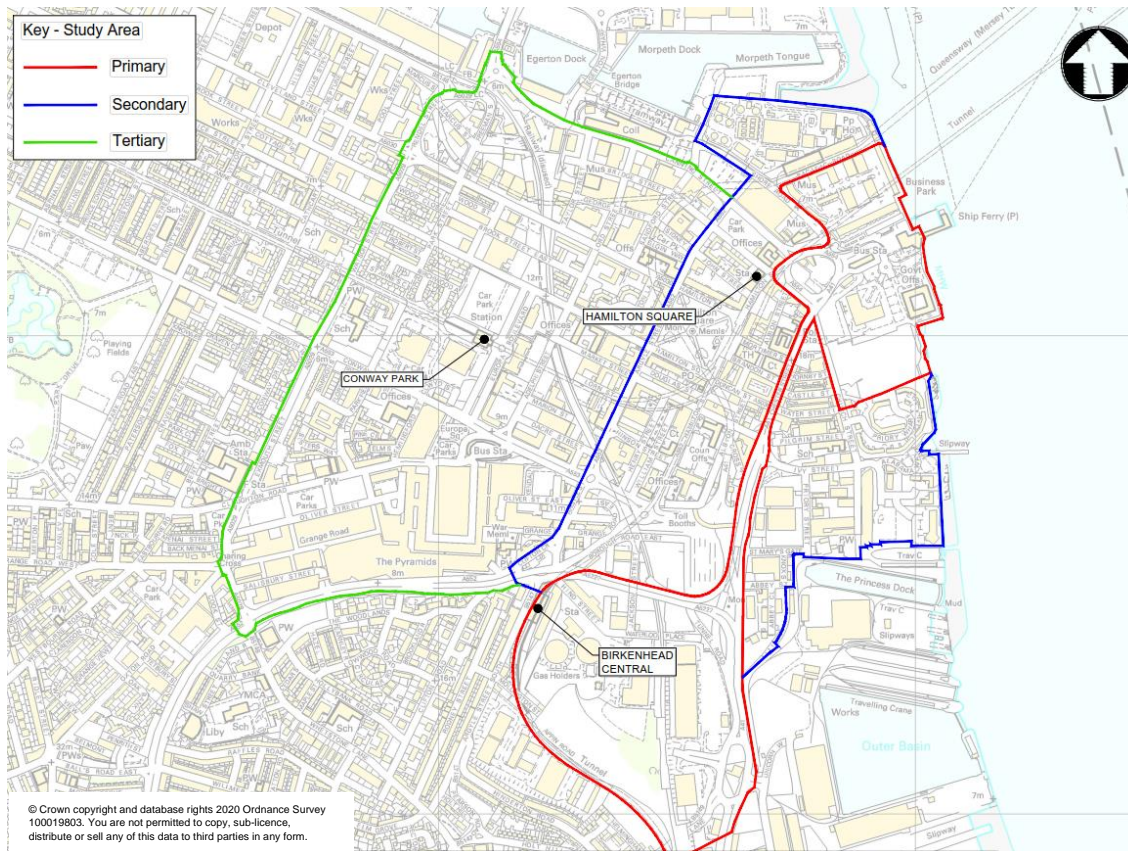
The council has already identified key issues in this area through previous thinking and discussion. These include the conflict between the role the A41 plays as a strategic corridor alongside its position as a local gateway to Birkenhead town centre and the Queensway tunnel. Whilst the A41 is a vital part of the strategic route network, at a local level it creates severance within the town and reduces connectivity by sustainable modes. Wirral Council are looking for transport schemes to help reconnect areas along the A41 North Corridor and directly improve investment, create jobs and develop skills.

The study has been tasked with specifically focusing on the following:

- Realignment of the Woodside Gyratory;
- A new road to access Rosebrae (Woodside);
- Access to Hind Street- Mollington Link road;
- Realignment / removal of the A41 Chester Street underpass, A5227 Town Link Viaduct, and Queensway Toll Plaza;
- Active Travel Routes; and
- Woodside Ferry Terminal.

The study area and key areas of focus are highlighted in Figure 5 below.

Figure 5: Study Area



Source: Mott MacDonald

There is a desire for the wider A41 North Corridor to complement the town centre and connect the key retail core to the waterfront. To realise these plans, we understand that it is necessary to develop a prioritised, cohesive, and coordinated approach to developing a transport network to support this and other key attractors and the wider regeneration programme for the borough.

As can be seen in Figure 5 the study boundary extends the A41 North Corridor to include key adjacent areas such as Birkenhead Town Centre within the tertiary area. This will enable the study to consider the interaction between the A41, the retail core and the waterfront with a focus on improving connectivity between these areas and supporting growth and wider regeneration programmes in the borough.

1.4 Study Methodology

Figure 6 below displays the study process that will be adhered to produce the final outputs:

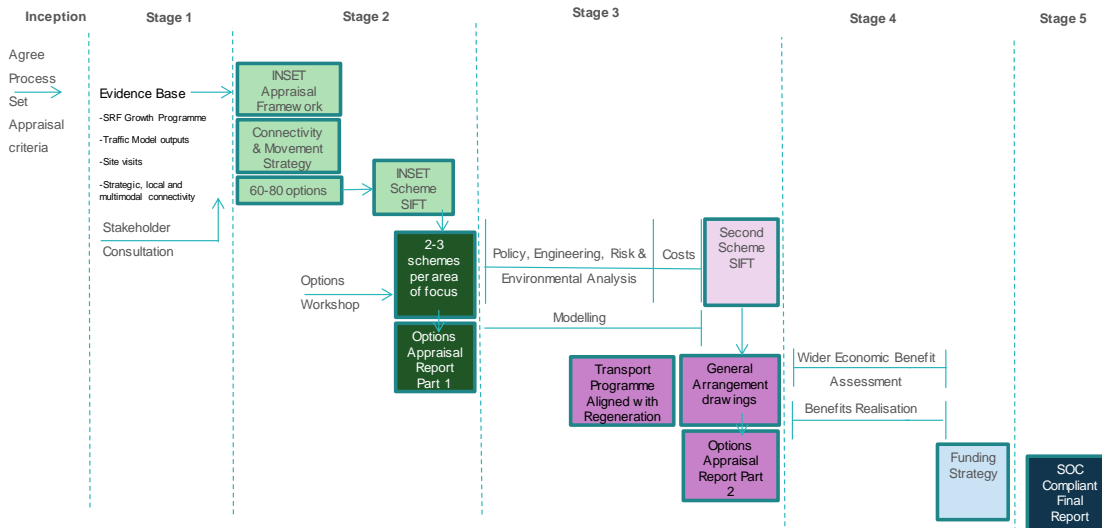
Stage 1 - Baseline analysis report.

Stage 2 - Options development culminating in the finalised options Appraisal Report (Part 1).

Stage 3 – More detailed emerging options assessment resulting in Options Appraisal Report (Part 2)

Stage 4 & 5 - Economic assessments and the identification of funding opportunities supporting the completion of the Strategic Outline Case compliant report, using the information captured in the preceding stages.

Figure 6: Study Process



Source: Mott MacDonald

1.5 Report Format

This report is structured in the following order:

- **Section 2: Understanding the study area** - A high level overview of the context of the A41 North Corridor study area including its geography and history followed by a more detailed examination of access and movement to and within the area.
- **Section 3: Development Opportunities along the A41 North Corridor** - An overview of what is proposed as part of the Strategic Regeneration and Local Plan in addition to local masterplans underdevelopment and extant planning permissions.
- **Section 4: Stakeholder Engagement** - A summary of the consultation undertaken as part of the baseline stage of work, summarising the issues and priorities raised by the stakeholders.
- **Section 5: Issues and Opportunities** - Summary of key issues and opportunities emerging from of the baseline evidence gathering and stakeholder engagement.
- **Section 6: Next Steps**- Final conclusions of the baseline stage outlining the way forward to produce the overall transport strategy.

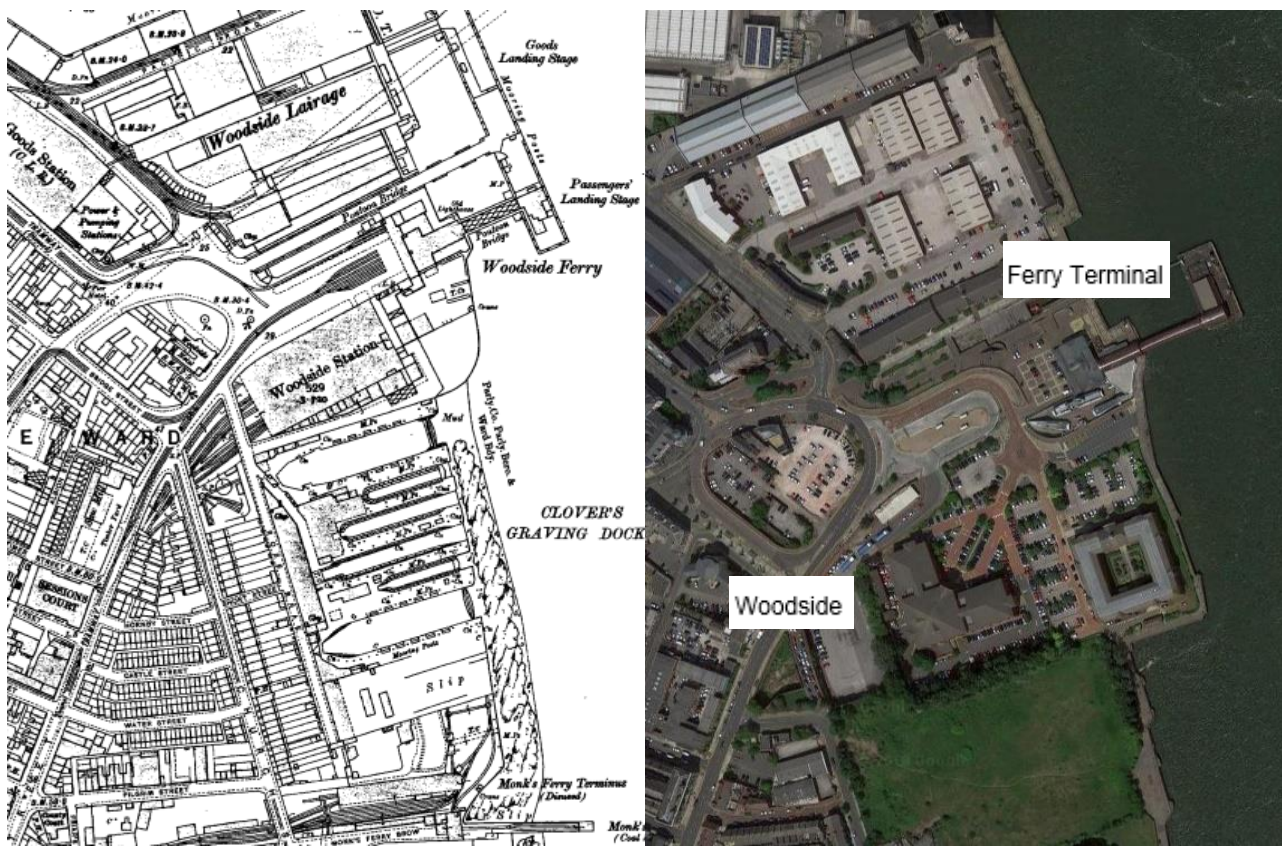
2 Understanding the Study Area

This section sets out the context of the study area in terms of the land uses and key characteristics of the transport network including traffic flows and travel patterns. This aims to identify the key issues around the A41 North Corridor and highlight opportunities for this study to address these issues.

2.1 Historic Context

The following figures demonstrate a comparison of the land uses and transport network around the primary study area in 1912 and 2018. Figure 7 shows the north of the study area including Woodside and the ferry terminal.

Figure 7: North of Primary Study Area in 1911/12 (left) and 2018 (right)



Source: Wirral Council

Source: Google Satellite Images

The level of development around this area of the A41 has dramatically decreased between 1912 and 2018 with the majority of land to the south now unoccupied. In 1912 this area was primarily an industrial area which focused on building and repairing ships. Today, the area is home to the Woodside ferry terminal and a mixture of residential apartments, offices and small business units. Former rail land is now used in part as a Merseytravel bus station and an Arriva bus depot.

The heritage of Hamilton Square is clearly shown in Figure 8 as the area and its surroundings has remained virtually the same in over 100 years. This highlights the significance of the area and the importance of maintaining it to a high quality. The below figure shows the central part of the A41 North Corridor.

Figure 8: Centre of Primary Study Area in 1911/12 (left) and 2018 (right)

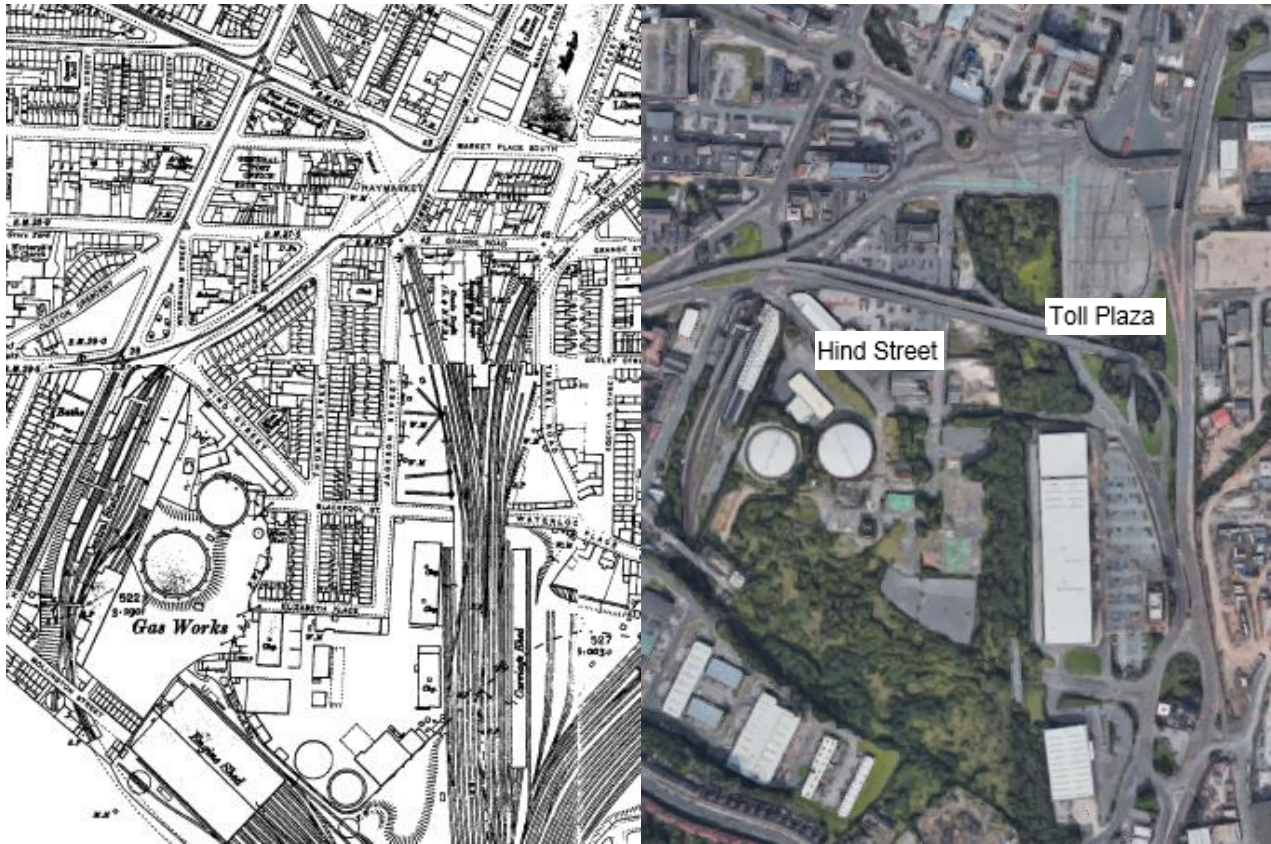


Source: Wirral Council

Source: Google Satellite Images

Figure 9 demonstrates the most significant changes between 1912 and 2018 with a shift from a dense network of tram and rail lines to major roads above ground and the Birkenhead road tunnel and its approaches. The removal of rail lines from this area and lack of alternative development has led to the creation of a large brownfield site which can be seen to the south of the study area.

Figure 9: South of Primary Study Area in 1911/12 (left) and 2018 (right)



Source: Wirral Council

Source: Google Satellite Images

So, what does this mean for the A41 North Corridor Study?

The level of development around Woodside (Figure 7) and Hind Street (Figure 9) has dramatically declined over the past century. However, this creates significant opportunities for regeneration as these areas are now the centre of development proposals within the scope of this study and across the borough. Also, much of the more modern infrastructure (Birkenhead flyovers and tunnel approaches) act as a significant barrier through the area, and stifle new development.

2.2 Environmental Context

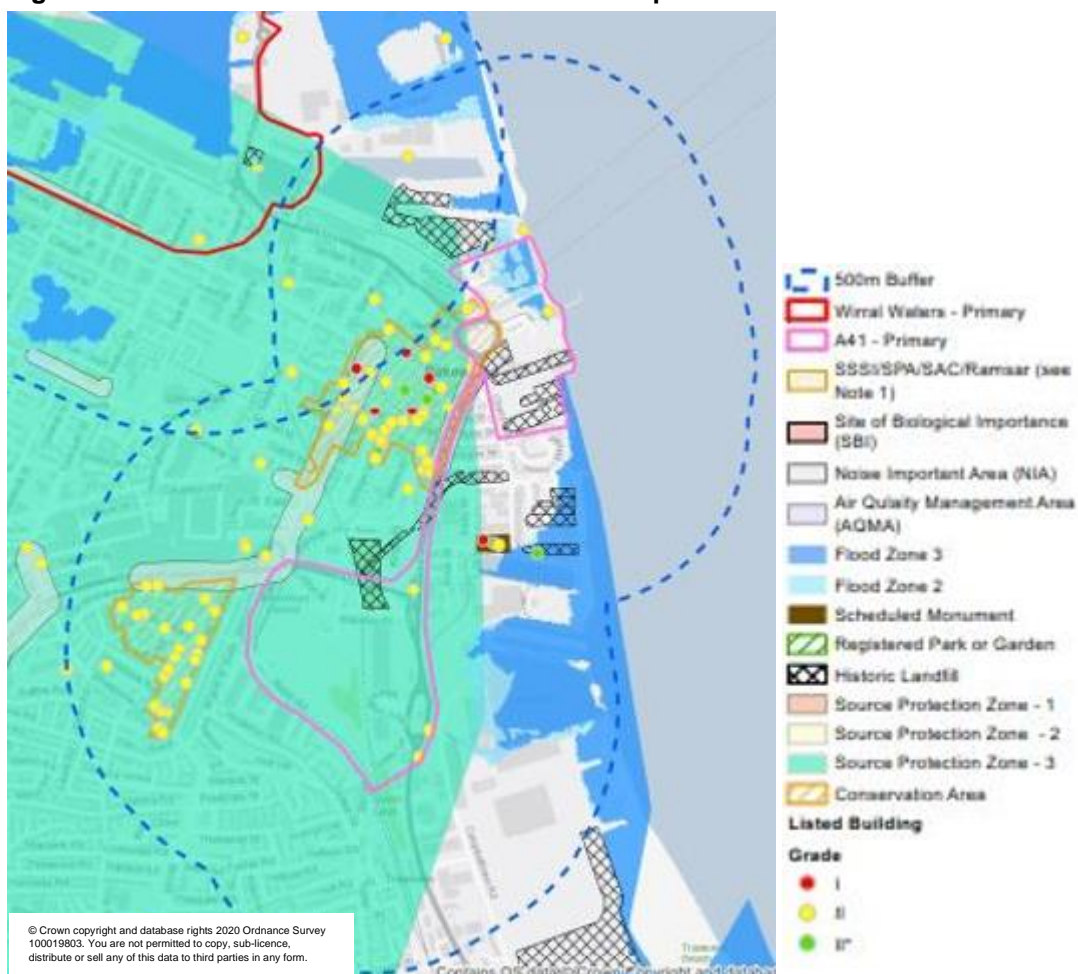
A desktop analysis has been undertaken to identify any potential environmental constraints within the study area that may affect the delivery of potential transport schemes. The environmental baseline has been established using publicly available information, including Ordnance Survey (OS) mapping, local planning policy documentation and environmental data sets from government agencies.

This analysis found a number of environmental constraints within the study area and within 500m of the study boundary, these are summarised in the points below:

- Multiple locations around the study area in Flood Zone 2 and Flood Zone 3 due to the proximity to the River Mersey and associated docklands. This poses a potential risk of surface water flooding around the site.
- Two conservation areas are present at Hamilton Square and Clifton Park in addition to a significant number of listed buildings. These areas are therefore likely to require planning permission if any alterations are made to the principal character of the area. The location of these areas is discussed in more detail in the following section.
- Indicative recorded historic landfill sites were identified at 18 locations within the study area and within a 500m boundary.
- There are 2 Noise Important Areas (NIA) within the study area associated with the A41 and Argyle Street. Therefore, the study will need to consider potential increases in noise during and on completion of schemes and the possible mitigation measures required.
- Birkenhead Priory is a scheduled monument and therefore consideration will need to be given to any works in proximity to this monument and their potential to alter its setting.
- Multiple locations were identified as a Groundwater Source Protection Zone (SPZ) (Zone 3) meaning schemes could result in potential impacts to underlying groundwater. Planning permission/consent from the Environment Agency may also be required in these areas.

The location of these constraints is demonstrated in the figure below.

Figure 10: Environmental Constraints Overview Map



Source: Mott MacDonald

Whilst some constraints such as designated ecological sites pose an increased risk to any proposed works, and should be avoided where possible, they do not necessarily prevent any works from being undertaken and the development going forward. The presence of constraints may make the design or consenting regime more complex, however mitigation measures can be examined to minimise this risk.

Further investigation will be required during the detailed design stage of this project prior to any works commencing including various risk assessments and consultation with the council's planning team, highways authorities and the Environment Agency. More detail on the location, potential risks and actions required associated with these constraints are set out within the Environmental Constraints Report supporting this document.

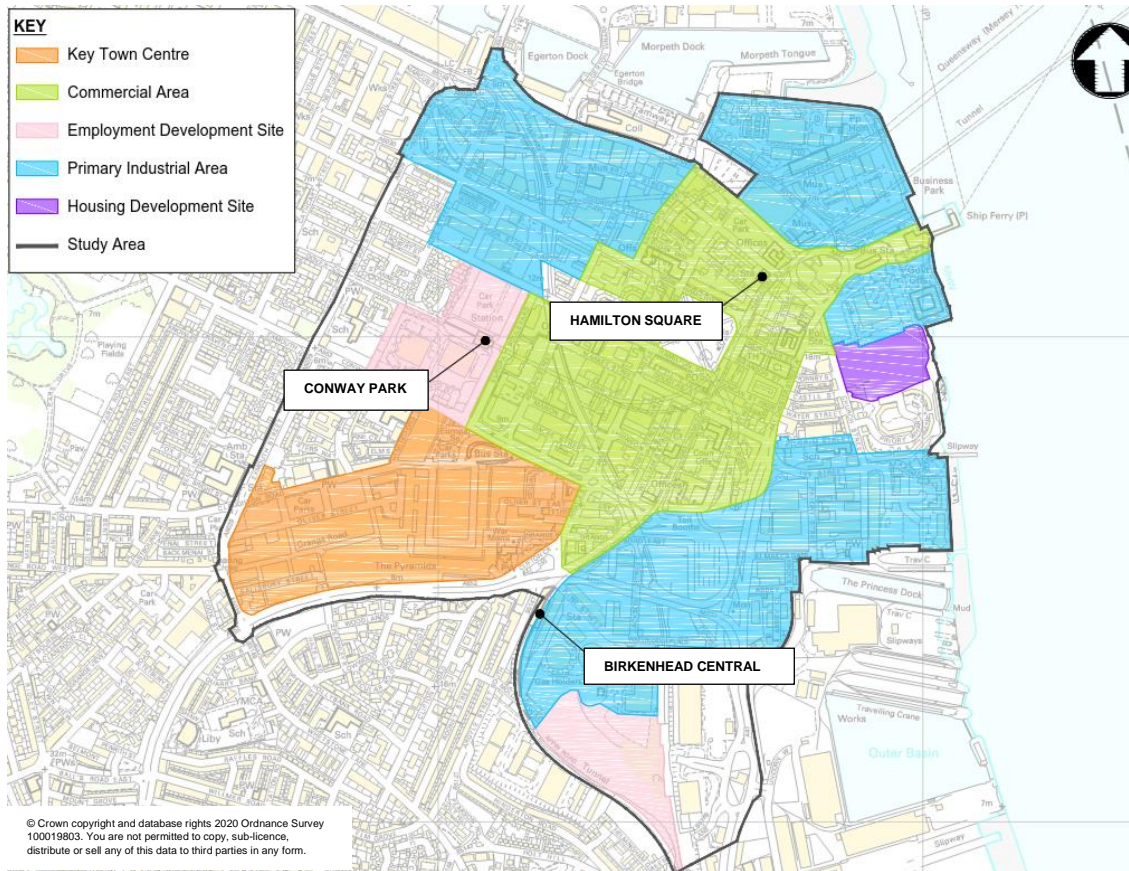
So, what does this mean for the A41 North Corridor Study?

- A number of environmental constraints have been identified within the study area and within 500m of the study boundary which may restrict options for transport improvements.
- Further investigation will be required at the detailed design stage to assess the potential impacts of schemes.

2.3 Current Land Uses

Figure 11 highlights the different land uses within the study area today. As can be seen in the figure below, the majority of land within the study area is used for retail or industrial purposes. There is also a small area of housing development towards the waterfront and a number of employment development sites around Conwy Park and to the south of the primary study area.

Figure 11: Land Uses in the Study Area



Source: Mott MacDonald

Industrial areas to the east of the study area includes Cammell Laird which is the largest and most successful ship repair and conversion specialist in the UK. Industrial and employment land needs to remain highly accessible to ensure the area remains attractive to current and future businesses and investment opportunities.

The study area is also in close proximity to major development areas such as Wirral Waters to the north of the study area which aims to provide a significant amount of high quality housing and employment. This creates opportunities for increasing numbers of visitors and residents to the area and the need for enhanced accessibility.

Figure 12 highlights the level of development around the study area. Grey areas represent buildings and development. This shows that there are substantial areas of undeveloped land within the study area. These are located predominantly to the south and east of the study area as well as along the disused railways which run through the centre and provide significant opportunities for development and regeneration.

Development across the study area is also of a low density. Despite a large amount of industrial and office space, buildings are predominantly only 1 to 2 storeys high creating an inefficient use of space.

Figure 12: Developed Areas



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distribute or sell any of this data to third parties in any form.

Source: Mott MacDonald

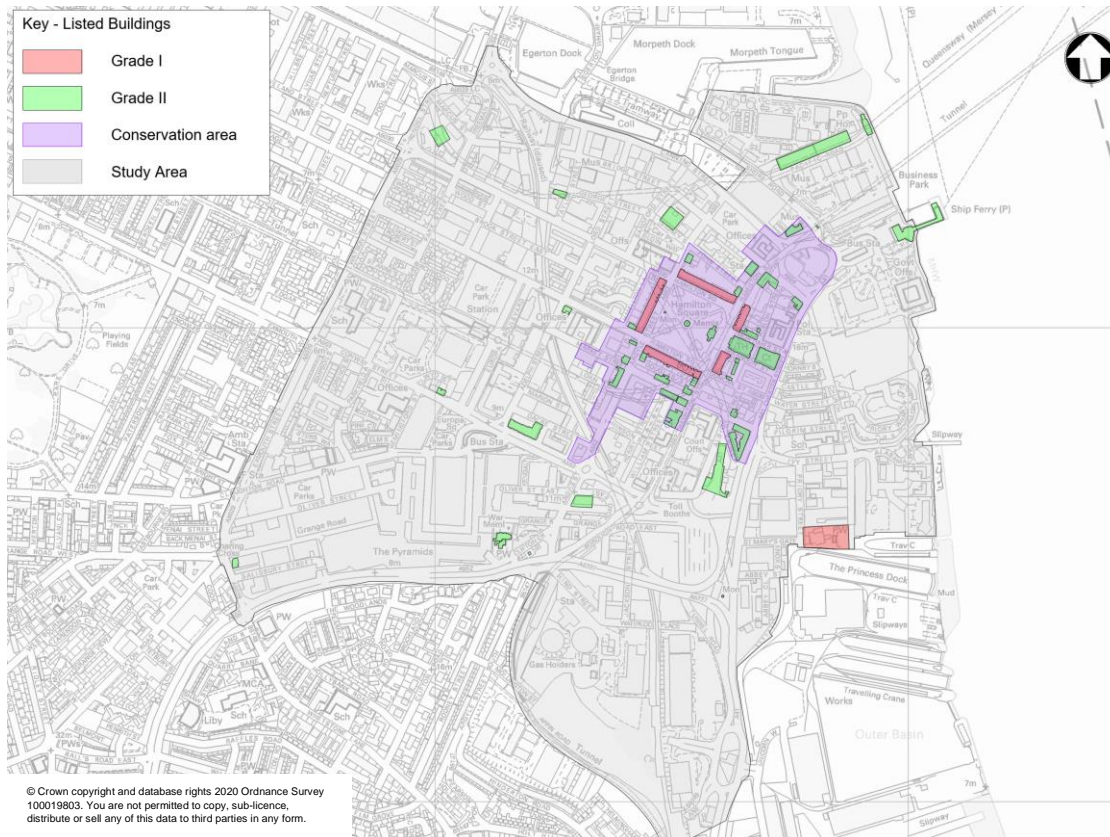
The most heavily developed areas are located to the south west of the study area around the Town Centre and retail core. However, buildings and infrastructure in this area is often of a low grade which is not suitable for town centre environments.

Photo 1: Buildings of low grade within Birkenhead Town Centre



A number of listed buildings and conservation areas exist within the study area which will need to be considered when developing any schemes around the A41. The location of listed buildings and conservation areas is demonstrated in the figure below. These are predominantly located around Hamilton Square with a number of Grade I and Grade II listed buildings also located within Princess Dock and the Woodside development area.

Figure 13: Listed Buildings in the Study Area



Source: Mott MacDonald

The conservation area around Hamilton Square is a distinct urban area near Birkenhead Town Centre with 63 listed buildings. This presents an opportunity to build on the historic character within the study area creating a unique and attractive sense of place.

So, what does this mean for the A41 North Corridor study?

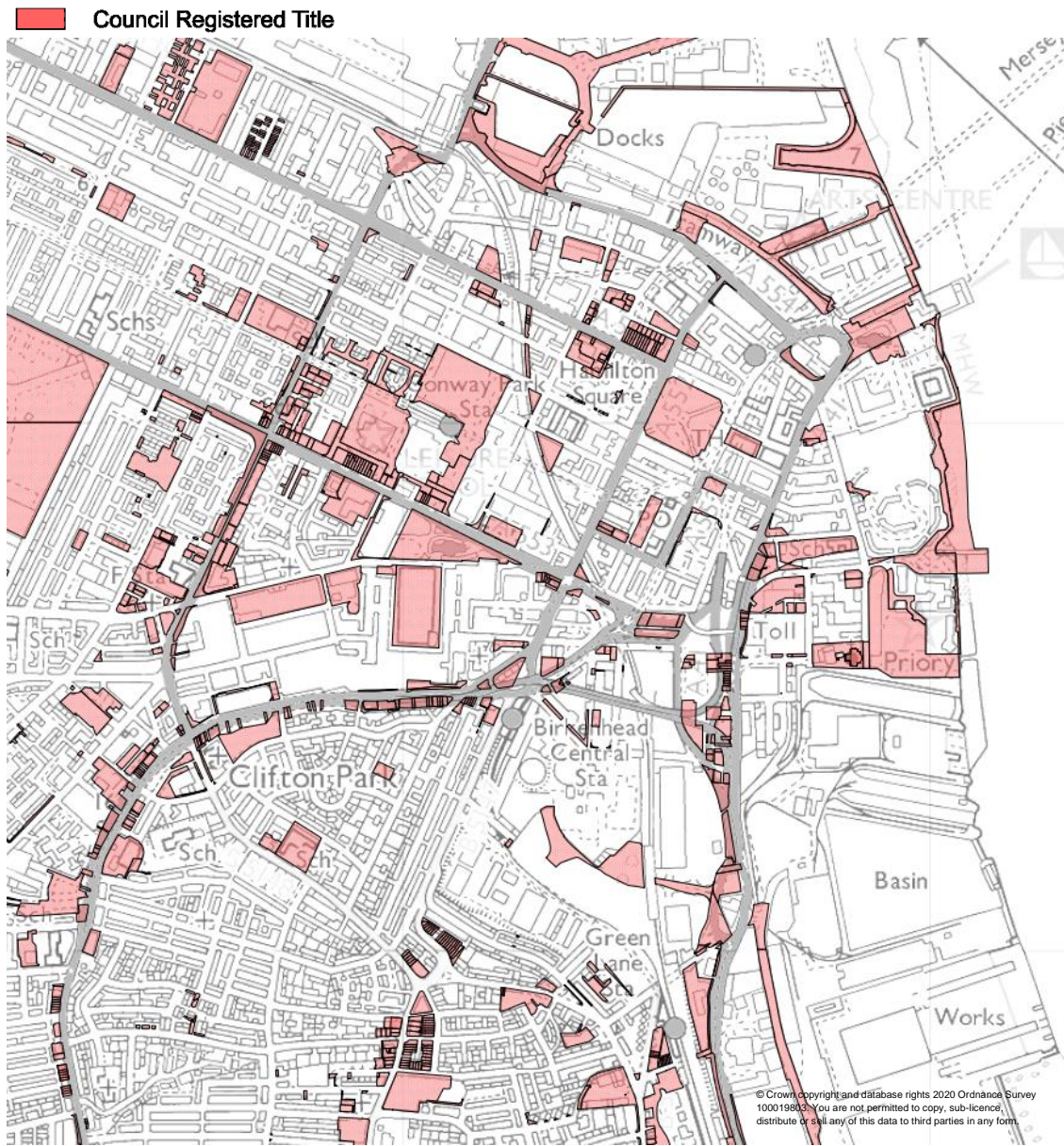
- There is a large amount of commercial, industrial and employment land within the study area which require an efficient and reliable transport network to support and encourage economic growth.
- Significant amounts of land within the study area remain undeveloped creating opportunities for new development and regeneration emphasizing the need to improve and maintain connectivity.
- Listed buildings and the conservation area within the study area emphasise historic character increasing attractiveness of the area as a place to live, visit and work. But, currently are an underutilised asset for Wirral.



2.4 Land Ownership

The majority of land within the study area is owned by Wirral Council with the exception of the disused railway lines which are still under the ownership of Network Rail. The location of land owned by Wirral Council is set out in Figure 14.

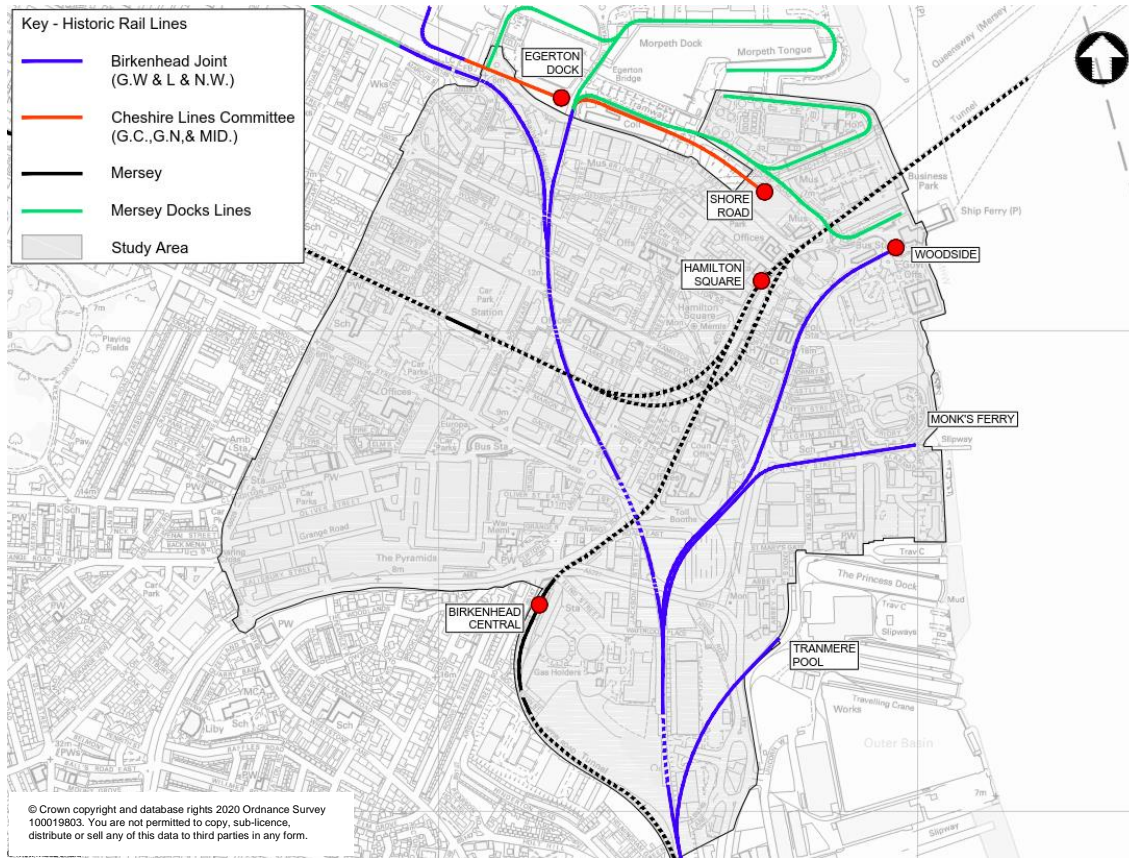
Figure 14: Land Owned by Wirral Council



Source: Wirral Council

Figure 14 demonstrates that there are areas of land within the study area, and two key Masterplan areas of Woodside of Hind Street, which are outside of the Council's Ownership. Land ownership therefore needs to be carefully considered when developing proposals in these areas. The land under ownership of Network Rail can be seen in Figure 15 which outlines the location of current and historic rail lines.

Figure 15: Historic Rail Lines



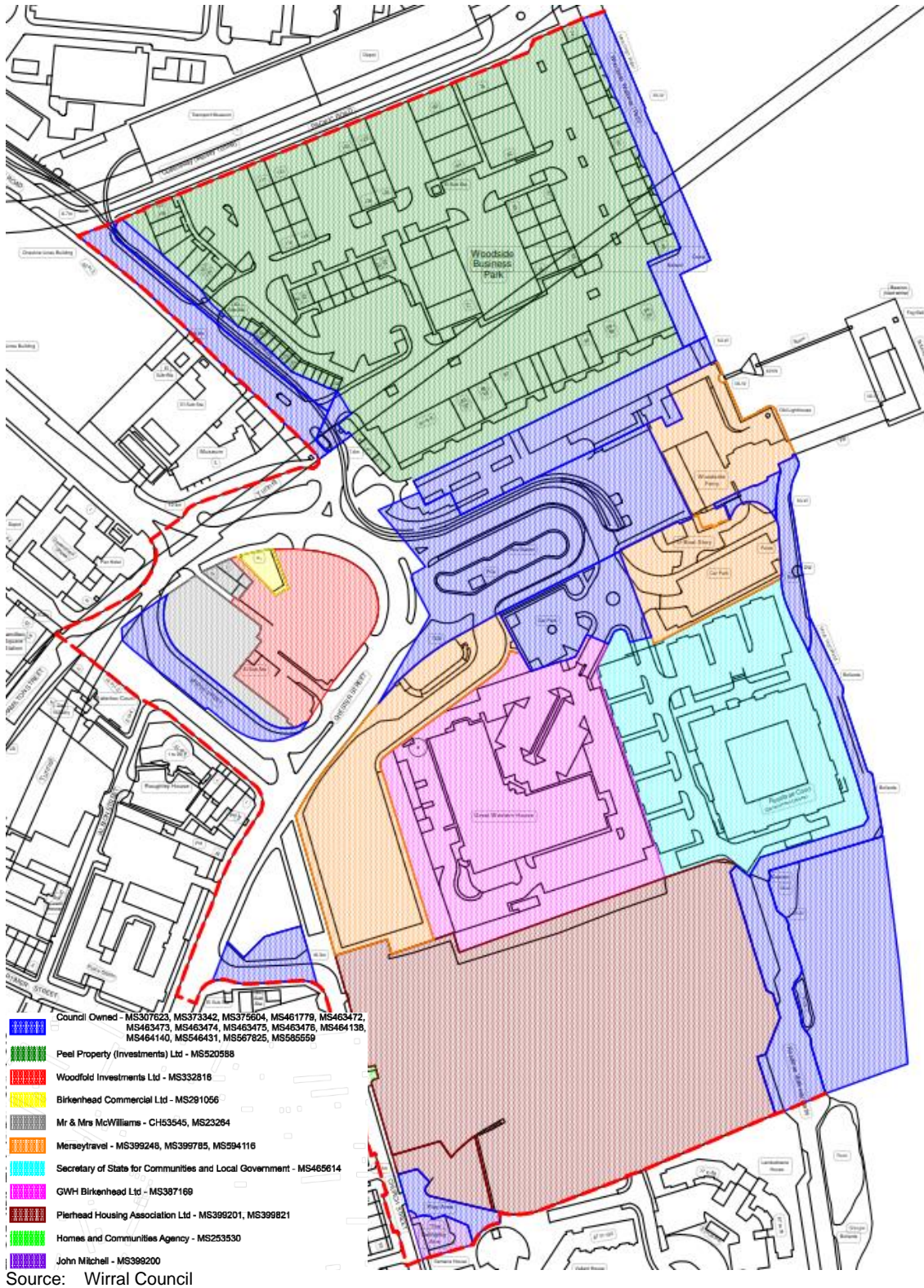
Source: Mott MacDonald

More specifically, within the Woodside Masterplan area there are also a variety of land ownerships which are demonstrated in Figure 16.

Areas owned by Wirral Council include the south east where the HM Land Registry offices are located, the tram lines to north west and the waterfront areas which form part of the Wirral circular trail. Although the ferry terminal and bus layover areas are owned by Merseytravel, Figure 16 shows that the bus station and surrounding area is also under the ownership of Wirral Council.

The vacant site on the south of the masterplan area is believed to be owned by the residential developer Prima.

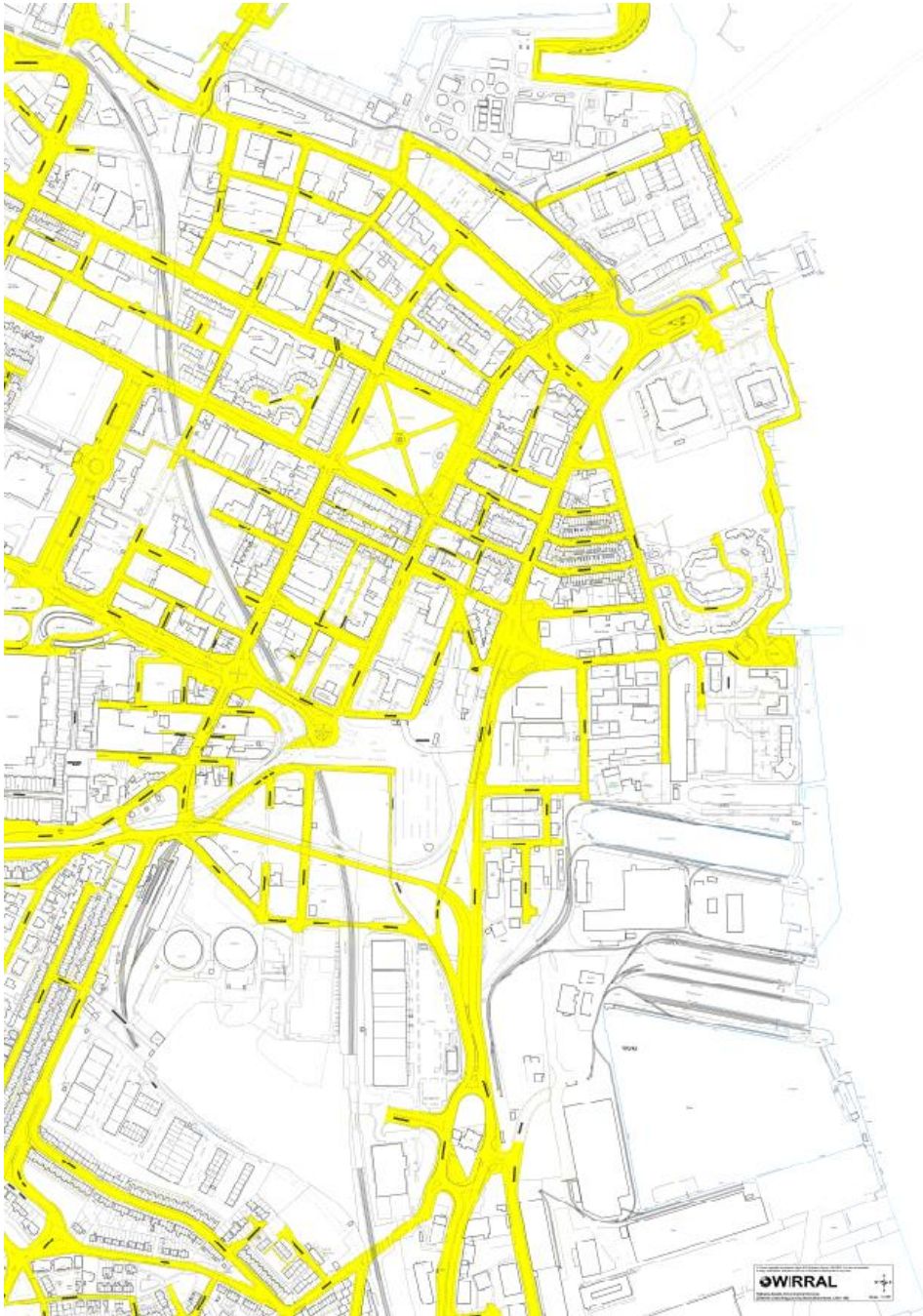
Figure 16: Land ownership within Woodside Masterplan Area



The majority of highways are under the control of Wirral Council as shown in yellow in Figure 17. This includes small local access roads in areas around the town centre. The key sections of highway within the study area which are not owned by the council are the flyovers, toll plaza and access routes to the Birkenhead Tunnel. These areas are currently managed by Merseytravel.

Therefore, any proposals in the vicinity of the tunnel entrance will need to consider land outside of the council's ownership and Merseytravel will need to be consulted on any changes throughout the process.

Figure 17: Adopted Highways



Source: Wirral Council

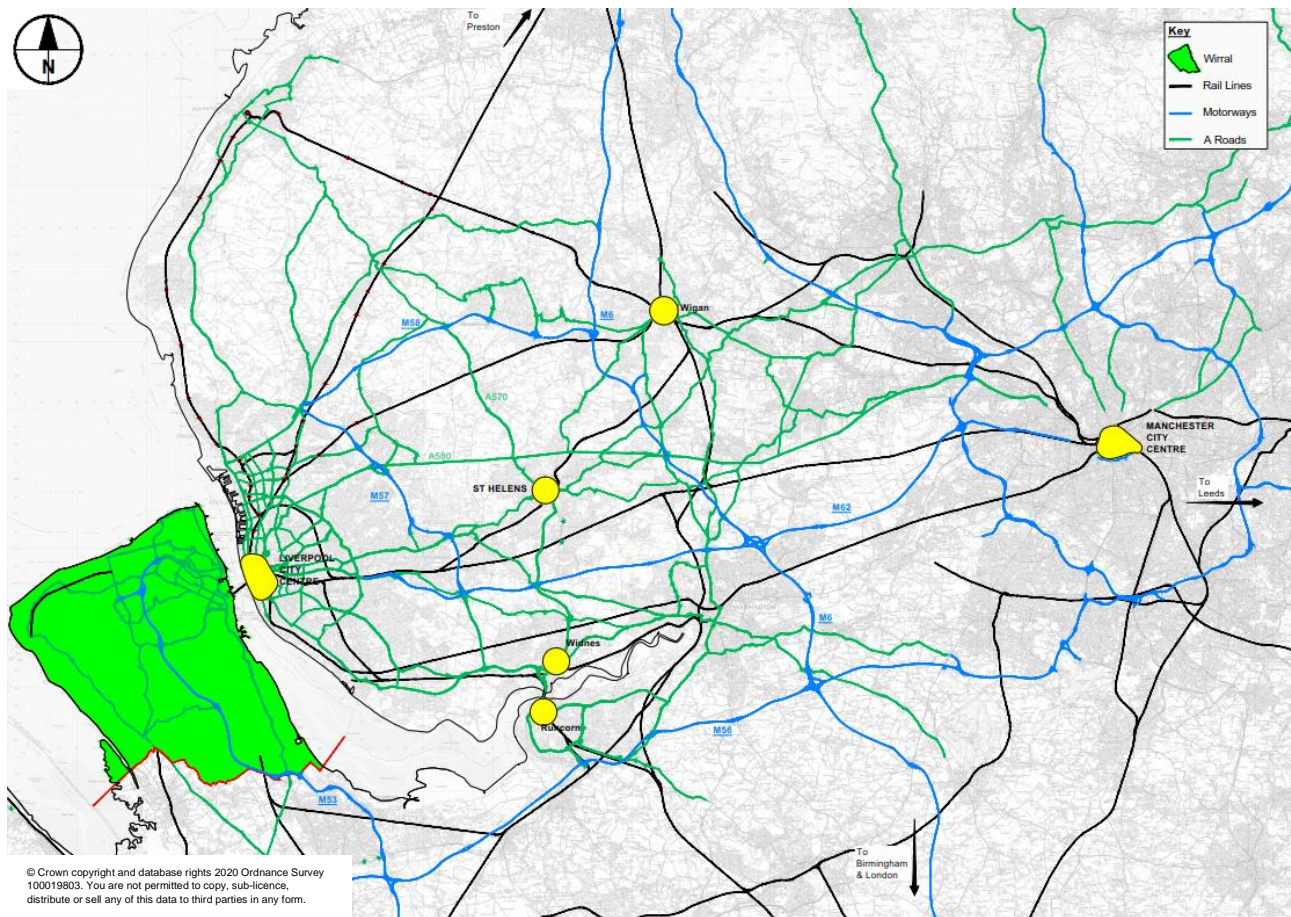
So, what does this mean for the A41 North Corridor Study?

- There are multiple land ownerships within the two key Masterplan areas and wider study area boundary. Therefore, land ownership will need to be carefully considered throughout this study and how this may affect the delivery, phasing or extent of proposals.

2.5 Geography and Strategic Access

The A41 North Corridor lies to the east of the Wirral and is key to providing connectivity to key centres and the strategic road network due to its location between the M53 and Mersey Tunnels. The location of Wirral in relation to the wider area and transport network is illustrated in Figure 18.

Figure 18: Location and Strategic Connectivity



Source: Mott MacDonald

The location of the A41 is one of the key routes to the Queensway Tunnel and therefore provides a vital connection to Liverpool city centre for both private vehicles and public transport. To the south of the borough, the A41 provides a direct connection to the M53 at junctions offering connectivity across the North West. A good level of strategic connectivity also provides the study area with a large population catchment which will be attracted to the area following current regeneration proposals.

So, what does this mean for the A41 North Corridor Study?

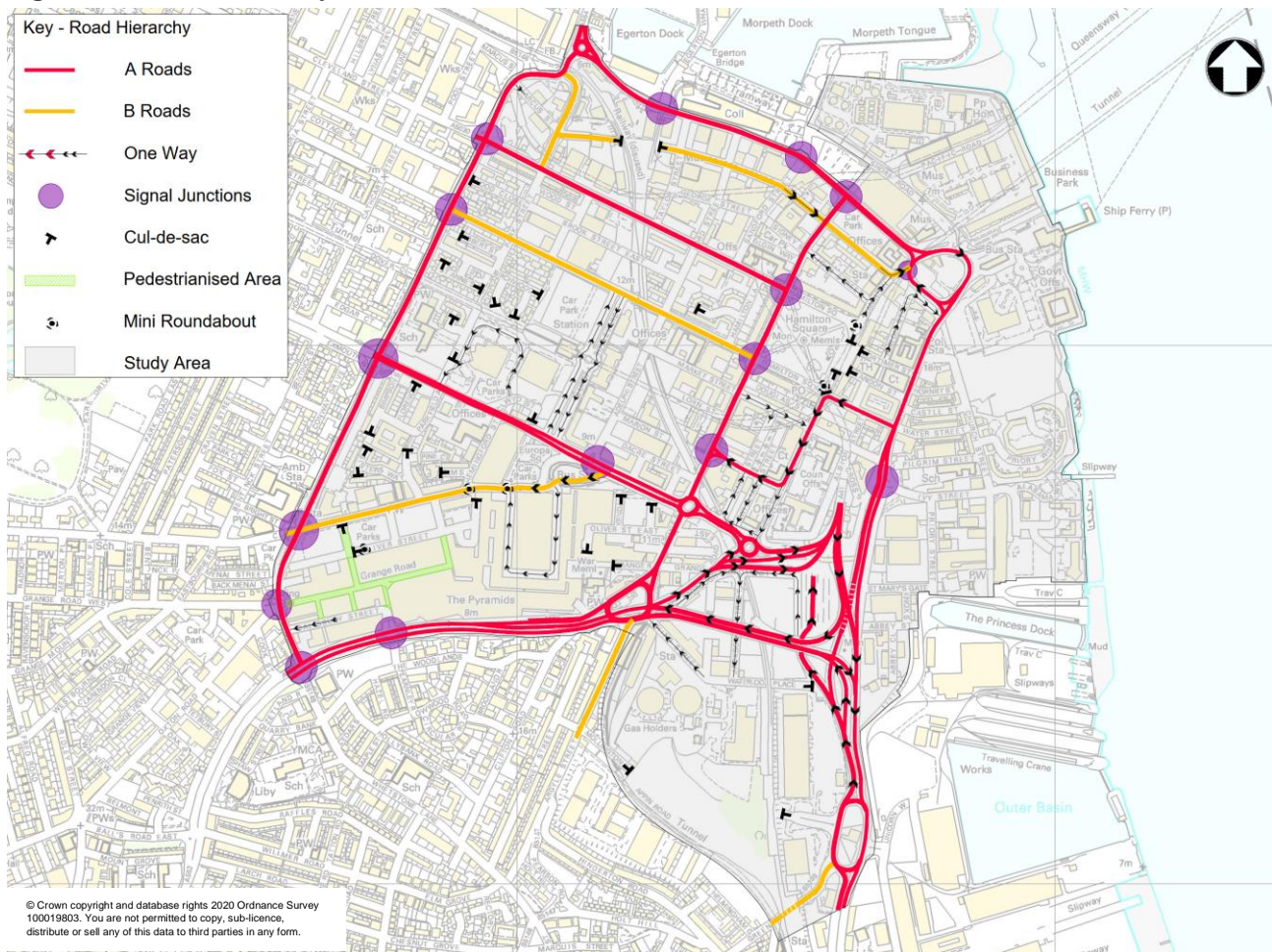
- As a key route within the borough and between strategic destinations it is important to ensure the A41 remains accessible by all modes of transport. This will be essential to support a growing number of trips in and out of the area resulting from increased economic activity and development.

2.6 Local Transport Network Key Characteristics

2.6.1 Highways and Traffic Circulation

The study area comprises a network of significant A roads which are central to local and strategic connectivity. Figure 19 below demonstrates the network of key roads, junction and direction of traffic flow within the wider study area.

Figure 19: Road Hierarchy and Traffic Circulation



Source: Mott MacDonald

However, a number of these primary roads are routed through retail areas and across key pedestrian desire lines, for example A41 runs between the town centre, rail station and residential areas to the south.

Figure 19 also shows the complicated and convoluted layout of the road network to the south of the study area which is a key entrance to Birkenhead. When travelling from the south of the A41 it is therefore often difficult to navigate into Birkenhead Town Centre particularly for visitors and people unfamiliar with the network.

The road network within the study area also comprises a large number of one way streets and no-through-routes making it harder to navigate and reducing activity in central areas.

So, what does this mean for the A41 North Corridor Study?

- A number of A roads are routed through town centre areas which should generally be limited to local access roads.
- Complicated road layouts to the south of the study area makes it difficult to navigate into and around Birkenhead.
- Road closures also add to routing issues and reduce activity in certain areas.

2.6.2 Bus Network

Birkenhead Town Centre is served by a comprehensive network of bus routes which has its focus at Birkenhead Bus Station on the A553 Conway Street and adjacent to Birkenhead Market and the Grange Shopping Precinct. The vast majority of services in Birkenhead serve this important node, which also provides interchange with the rail network at Conway Park. The station is predominantly accessed by bus from Conway Street, and on foot from the Grange Precinct and Birkenhead Market forming the key desire lines to the south of the bus station. Additional pedestrian movements are focussed along Claughton Road and on Argyle Street.

The bus station is served by routes from all over Wirral and frequent cross-river services to Liverpool City Centre. The following table summarises the full list of services with frequencies of at least one per hour calling at Birkenhead Bus Station:

Table 1: Summary of bus services serving the study area

Route No.	Route	Frequency (buses per hour)			Operator
		Peak	Mon - Sat Daytime	Evening and Sunday	
1/2	Liverpool - Chester	5	5	2	Stagecoach
18	Birkenhead - Moreton	2	2/1(Sat)	-	Avon Buses
38/38A	West Kirby – Mill Park	2 Birkenhead	2 Birkenhead	1	Stagecoach
41/41A/42	Mill Park –Woodchurch / Arrowe Park	3	2/3	1	Stagecoach
77	Birkenhead - Heswall	1	1	-	Avon Buses
81	Woodside - Greasby	-	1 (sat only)	-	Avon Buses
90	Birkenhead - Prenton	1	1	-	Avon Buses
91/92	Birkenhead – Prenton Circular	1	1	-	Avon Buses
216/217	Woodside – Arrowe Park Circular	2/3	3/5 (sat only)	1 (sat/sun only)	Merseytravel

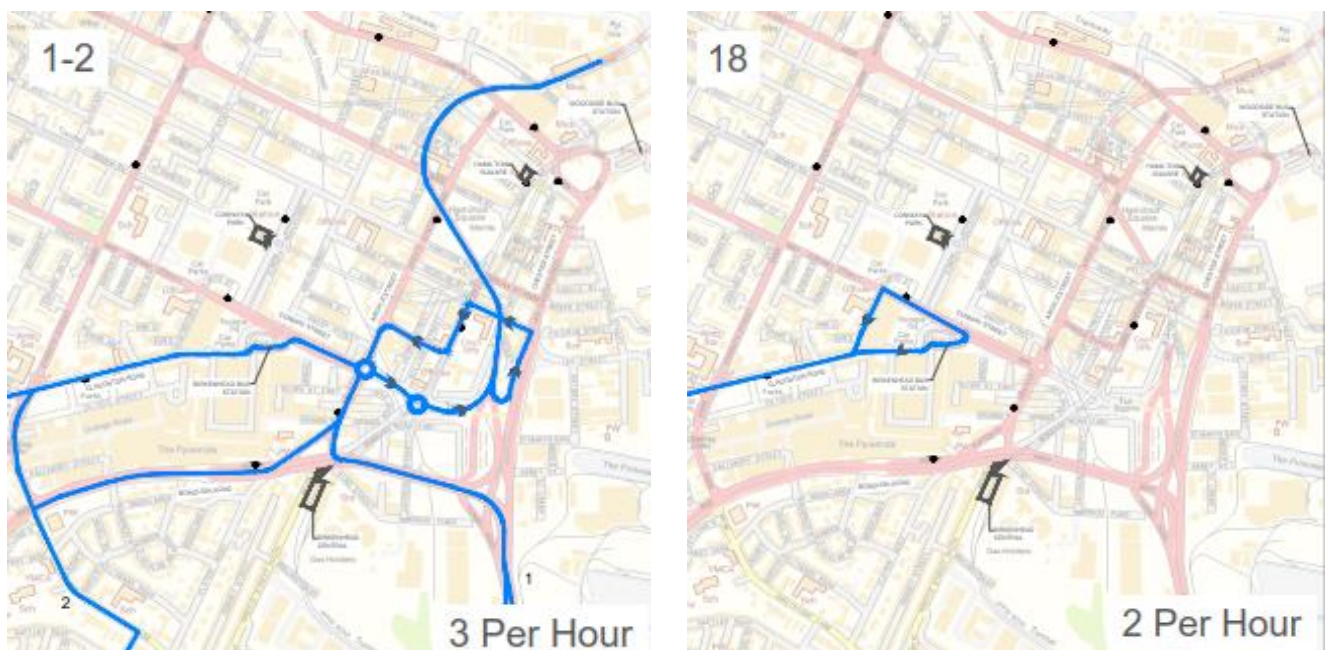
Route No.	Route	Frequency (buses per hour)			Operator
		Peak	Mon - Sat Daytime	Evening and Sunday	
407	Town Meadow – Liverpool City Centre	3	3	-	Arriva
408/409	Woodside -Liscard – Woodside Circular	2	2	-	Merseytravel
410	New Brighton – Clatterbridge	6 Birkenhead	6/4 Birkenhead	2	Arriva
411	Woodside - New Brighton	2	2	1	Arriva
413	Woodside - Seacombe	2	2	-	Arriva
414	Woodside -New Brighton	2	2	-	Arriva
418	Woodside -New Ferry	2	2	-	Arriva
423	Liverpool - Seacombe	-	-	2	Arriva
437	Liverpool – West Kirby	6	6	3/4	Arriva
164/464	Liverpool / Woodside – New Ferry (one direction only)	2	2	1	Arriva / Merseytravel
471/472	Liverpool – Heswall (one way)	6	6	2/4	Arriva / Stagecoach
487	Liverpool – Ness Gardens / Parkgate	2	2	1	Arriva
492/495	Woodside – Noctorum Circular	2	2	1	Arriva

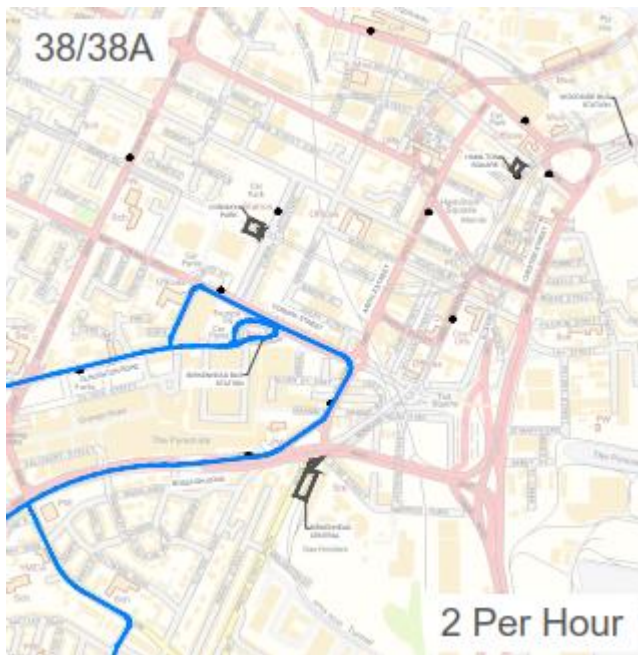
Source: Merseytravel

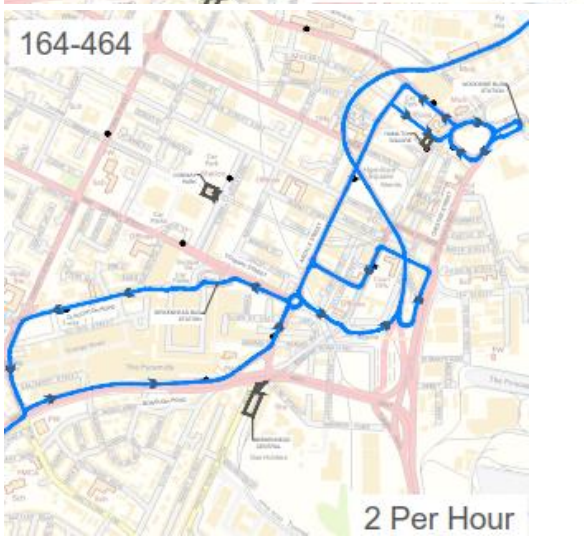
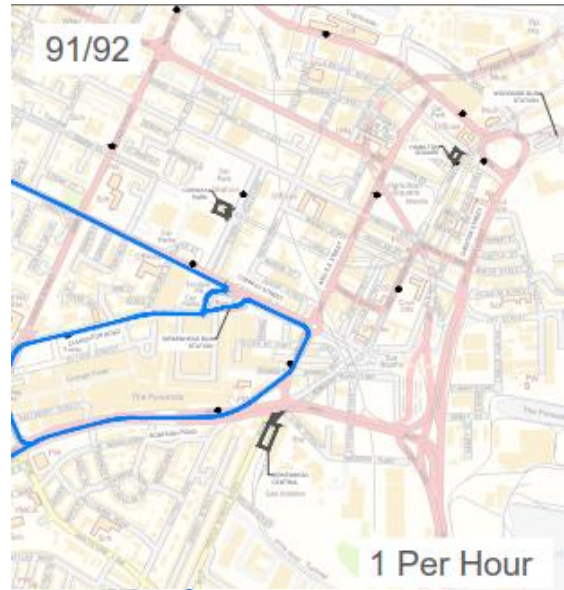
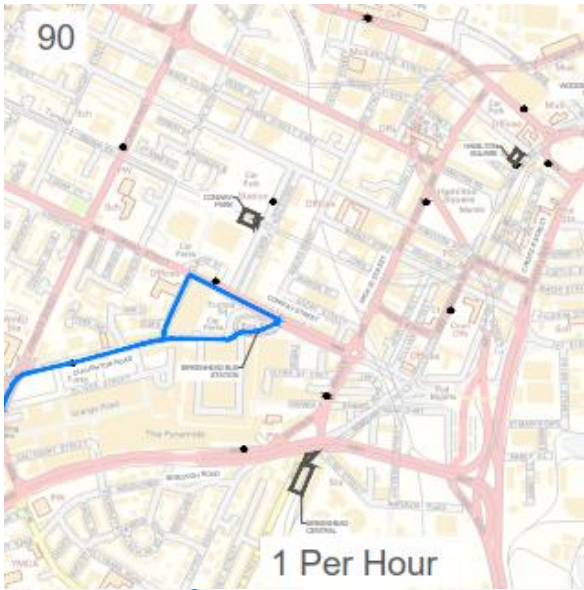
The individual routes around Birkenhead Town Centre are shown in the following plans. This shows a dense network of bus routes with the majority of the study area being well served by frequent services.

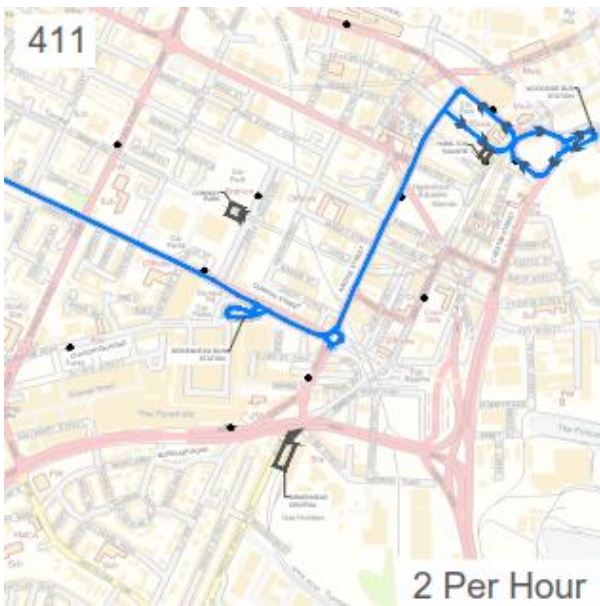
Figure 20: Bus Movement within the Study Area

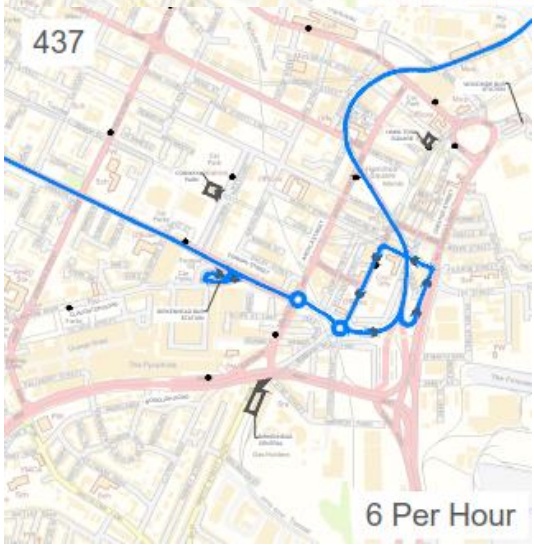
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Source: Mott MacDonald

These services amount to more than 40bph in each direction of the route meaning that the bus station accommodates more than 80 arrivals and departures per hour.

The primary study area is predominantly served by buses at Woodside Bus Station which provides a total of 28 departures per hour at peak time to destinations all over the Wirral, and interchange with rail at Hamilton Square station. Despite the relatively large number of buses serving Woodside, there are limited attractions in this area. However, there are clear opportunities to make use of relatively high levels of accessibility to increase proportional bus use.

The following table highlights the buses of at least hourly frequency at Woodside that are available at these locations, and their respective frequencies and operators. Services run in both directions unless stated:

Table 2: Woodside Bus Station Service Specification

Route No.	Route	Frequency (buses per hour)			Operator
		Peak	Mon - Sat Daytime	Evening and Sunday	
41 (morning only)	Mill Park –Woodchurch	3	-	-	Merseytravel
81	Woodside - Greasby	-	1 (sat only)	-	Avon Buses
124	Woodside – Harrison Drive (Wallasey)	-	-	1	Merseytravel
125	Woodside – Harrison Drive (Wallasey)	-	-	1	Merseytravel
164	Woodside – New Ferry	-	-	1	Merseytravel
216/217	Woodside – Arrowe Park Circular	2/3 journeys	3/5 journeys (sat only)	1 (sat / sun only)	Merseytravel
408/409	Woodside -Liscard – Woodside Circular	2	2	-	Merseytravel
410	New Brighton – Clatterbridge	6 Birkenhead 3 Clatterbridge	6/4 B'head	2	Arriva
411	Woodside - New Brighton	2	2	1	Arriva
413	Woodside - Seacombe	2	2	-	Arriva
414	Woodside -New Brighton	2	2	-	Arriva
418	Woodside -New Ferry	2	2	-	Arriva
492/495	Woodside – Noctorum Circular	2	2	1	Arriva

Source: Merseytravel/Arriva

Photo 2: Woodside Bus Stops



The secondary study area comprises Argyle Street which is a busy corridor for buses. This corridor offers some limited interchange between bus and rail at Birkenhead Central station although this is badly severed by the A552 and the network of junctions and overpasses adjacent to the station. The secondary study area is also passed through by the majority of services heading across the river between Birkenhead and Liverpool, although boarding and alighting opportunities on these services are limited in this area.

Photo 3: Argyle Street Bus Stops



The tertiary study area provides the main focus for bus services in Birkenhead containing Birkenhead bus station. The vast majority of bus services in Wirral pass through this area at some point in their journey, providing interchange with rail at Conway Park.

Frequent bus corridors include the A553 Conway Street, Claughton Road, the A552 Borough Road and the A554 Canning Street.

Photo 4: Birkenhead Bus Station



Mode share surveys undertaken in November show that just under 30% of trips into central Birkenhead (29% in the AM peak, 27% in the interpeak) are undertaken by bus and, importantly, that this proportion has been growing steadily since at least 2008/2009.

The significant number of services operating around the A41 and increasing number of passengers highlights the importance of this mode of transport for access to the study area. It is therefore important to carefully consider development on or around the highway to ensure that bus routes aren't significantly affected and that opportunities to maximise bus use to access development are taken.

So, what does this mean for the A41 North Corridor Study?

- There is a dense network of bus movements around the study area creating lots of opportunities to increase sustainable access.
- However, boarding and alighting opportunities are limited in some areas and stations such as Birkenhead Central and Hamilton Square lack an efficient interchange.

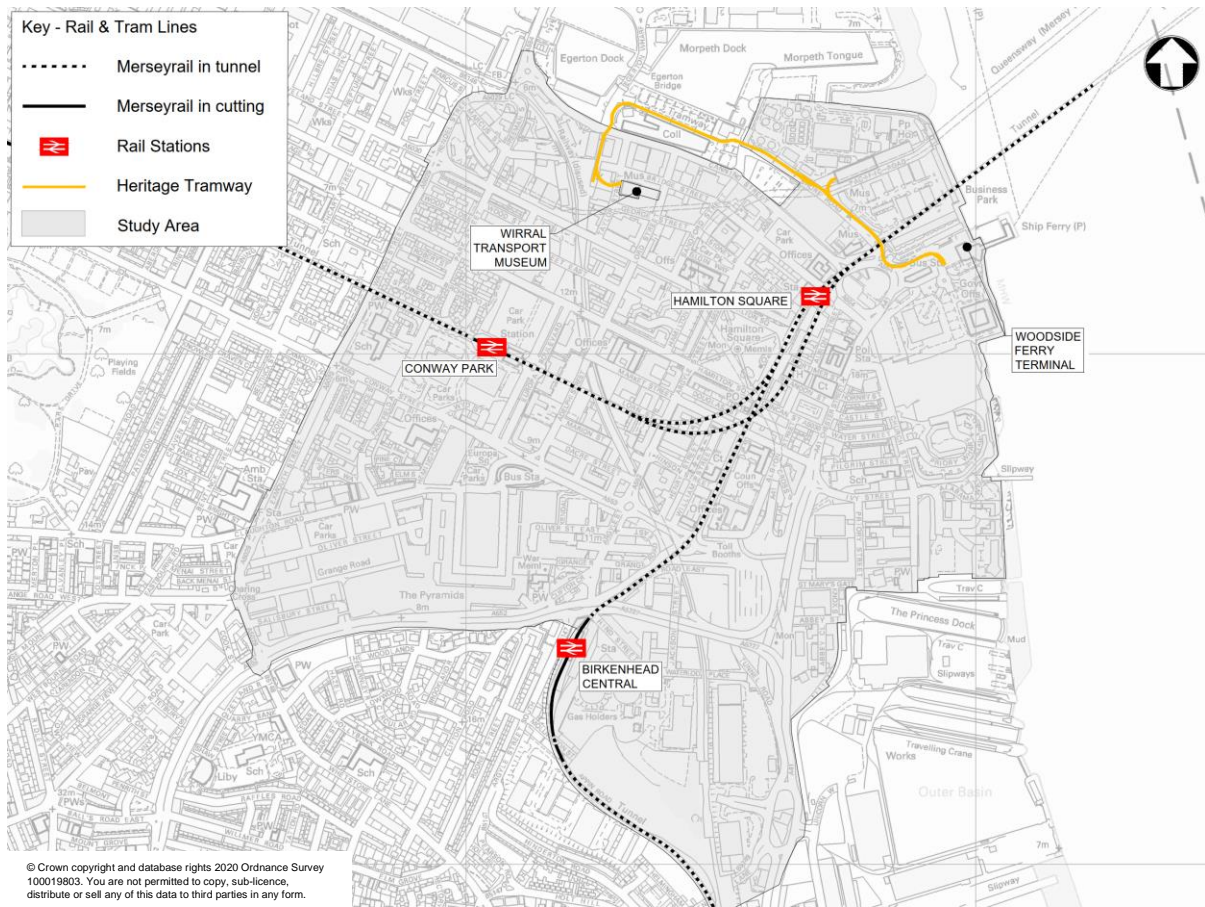
2.6.3 Rail

There are three rail stations in the A41 study area, all on branches of the Merseyrail Wirral Line connecting Liverpool City Centre with key destinations in Wirral and Cheshire West.

Mode share surveys undertaken in November show that just under 8% of trips into central Birkenhead in the AM peak (7.9%) and just under 6% in the inter-peak period (5.7%) are undertaken by rail with this proportion growing steadily year on year.

The location of stations in the study area on the rail network is demonstrated in Figure 21. A summary of services available from each station is summarised in the subsequent sections.

Figure 21: Rail Stations and Station Connectivity



Source: Mott MacDonald

2.6.3.1 Birkenhead Central

Birkenhead Central is on the Chester / Ellesmere Port branch and lies within the primary site boundary. Access to the station is from Argyle Street South with a footbridge and steps (or alternatively a lift) providing access to both platforms. Key pedestrian desire lines lead between the station and Birkenhead Town Centre either via Argyle Street, or via the Grange Precinct – both of these routes require multiple busy road crossings via controlled pedestrian crossings.

The station has secure sheltered cycle parking, and a staffed ticket office in common with most Merseyrail stations, but no off-road parking is available. Bus interchange is provided to the front of the station on Argyle Street South, with buses serving Rock Ferry, New Ferry, Bromborough, Eastham, Bebington and Clatterbridge in one direction, and Birkenhead Bus Station, Woodside, Woodchurch and New Brighton in the other. In total, the road is served by 6 buses per hour in each direction during the day.

A summary of the services calling at Birkenhead Central is summarised in the following table:

Table 3: Birkenhead Central Service Specification

Route	Frequency (trains per hour)			Operator
	Peak (in peak direction)	Weekday	Evening and Sunday	
Liverpool to Chester	4	4	2	Merseyrail
Liverpool to Ellesmere Port	4	2	2	Merseyrail

Source: National Rail

Demand at Birkenhead Central is comparatively high due to its proximity to both trip attractors (town centre and key nearby employment) and trip producers (residential off Argyle Street South, Whetstone Lane and Hinderton Road). In the year 2016-2017 it generated nearly **934,000** entries and exits, making it Merseyside’s 26th busiest station.

Photo 5: Birkenhead Central Rail Station



2.6.3.2 Conway Park

Conway Park is a relatively new underground station on the Merseyrail network, opening in the mid 1990s. The station is located on both the West Kirby and New Brighton branches of the line and is located on Europa Boulevard to the west of the core site but within the tertiary site boundary.

Access to the station is from Europa Boulevard, with platform access provided primarily by large passenger lift (although stairs are available for the able-bodied). Key desire lines run south from the station along Europa Boulevard towards Birkenhead Bus Station and the town centre, and to the north west towards Hamilton Square and Woodside.

The station has secure sheltered cycle parking and a staffed ticket office but no off-road car parking directly available, but a large public car park is available nearby. Only the infrequent 216

/ 217 circular services between Birkenhead and Arrowe Park serve the station directly, but it is located very close to Birkenhead Bus Station for services all over Wirral and to Liverpool and Chester City Centres. The station is served by all passenger trains between Liverpool and West Kirby and between Liverpool and New Brighton which run to the frequencies specified below:

Table 4: Conway Park Service Specification

Route	Frequency (trains per hour)			Operator
	Peak	Weekday	Evening and Sunday	
Liverpool to West Kirby	4	4	2	Merseyrail
Liverpool to New Brighton	4	4	2	Merseyrail

Source: National Rail

Demand at Conway Park mainly consists of attraction trips to Birkenhead Town Centre for work, leisure and retail. In the year 2016-2017, it generated just over 897,000 entries and exits making it Merseyside’s 28th busiest station.

Photo 6: Conway Park Rail Station



2.6.3.3 Hamilton Square and Woodside

Hamilton Square is a major interchange station for Merseyrail and lies on all of the Wirral Line branches adjacent and to the west of Woodside. It is located adjacent to the large Victorian Square of the same name (to the south) and by the Woodside area of Birkenhead to the north. Access to the station is from Hamilton Street with all three platforms (for Liverpool, Chester/Ellesmere Port, and West Kirby/New Brighton bound trains) accessible by lift and steps (with full lift access available for people of limited mobility).

Pedestrians and cyclists access the station from both the Hamilton Square and Woodside directions, but dedicated secure cycle parking is not available. There is no off-road car parking

at Hamilton Square either, however a large publicly available but privately operated car park does exist on Bridge Street with all day parking available for £3.

Photo 7: Hamilton Square Rail Station



The station is served by all Wirral Line trains and service levels on each line are summarised in the table below:

Table 5: Hamilton Square Service Specification

Route	Frequency (trains per hour)			Operator
	Peak (in peak direction)	Weekday	Evening and Sunday	
Liverpool to West Kirby	4	4	2	Merseyrail
Liverpool to New Brighton	4	4	2	Merseyrail
Liverpool to Chester	4	4	2	Merseyrail

Route	Frequency (trains per hour)			Operator
	Peak (in peak direction)	Weekday	Evening and Sunday	
Liverpool to Ellesmere Port	4	2	2	Merseyrail

Source: National Rail

Interchange opportunities exist with buses serving Woodside Bus Station, many of which also stop outside the station on Hamilton Street.

The study area is therefore well served by a variety of rail services offering frequent connections to the city centre and wider area. Proposals identified within this study should therefore aim to promote rail connectivity through improving access and interchange facilities at stations. This will contribute to continuing growth in rail patronage and greater use of sustainable transport across the borough.

So, what does this mean for the A41 North Corridor Study?

- There are strong rail connections to and from the study area with three stations providing direct and frequent services to key locations such as the city centre.
- It is important to promote this connectivity by enhancing access and interchange to encourage the use of sustainable transport modes.

2.6.4 Ferry

The primary study area accommodates the Woodside Mersey Ferry terminal adjacent which is immediately adjacent to the bus station and a short walk from Hamilton Square rail station. In recent years, Woodside has been removed as a stop on the Mersey Ferries Commuter service (which now runs as a shuttle between Seacombe and Pier Head in Liverpool) but it is still an important calling point on the River Explorer Cruise. Ferries call at the terminal hourly between 10:30 and 16:30 every day (11:30 and 15:30 on winter weekends).

Woodside Ferry terminal is also home to the U-Boat attraction – a cut-away exhibition of a real German U-Boat sunk during the second World War, representing one of several tourist attractions within the area.

In recent years, patronage on the ferry has been declining and, concurrently, the aging ferries themselves have become less reliable and more prone to cancellation. New ferries are currently in the process of being commissioned and the future of Woodside as a leisure terminal appears to be secure after assurances from local politicians and Merseytravel (as Mersey Ferries owners).

As a unique factor of the study area and key facility in the borough for supporting commuter trips and the tourist economy, ferry terminals and services should be promoted through the schemes identified in this study. This area is also visible from the Liverpool Waterfront further increasing opportunities to attract visitors and tourists. Schemes should therefore aim to improve access to these areas by all modes to promote their use for both commuting leisure purposes.

Photo 8: Woodside Ferry terminal



The Twelve Quays Ferry Terminal is also located to the north of the A41 and just outside of the study area. Therefore, the A41 provides a significant route for freight movement leading to increased traffic volumes and number of HGVs.

So, what does this mean for the A41 North Corridor Study?

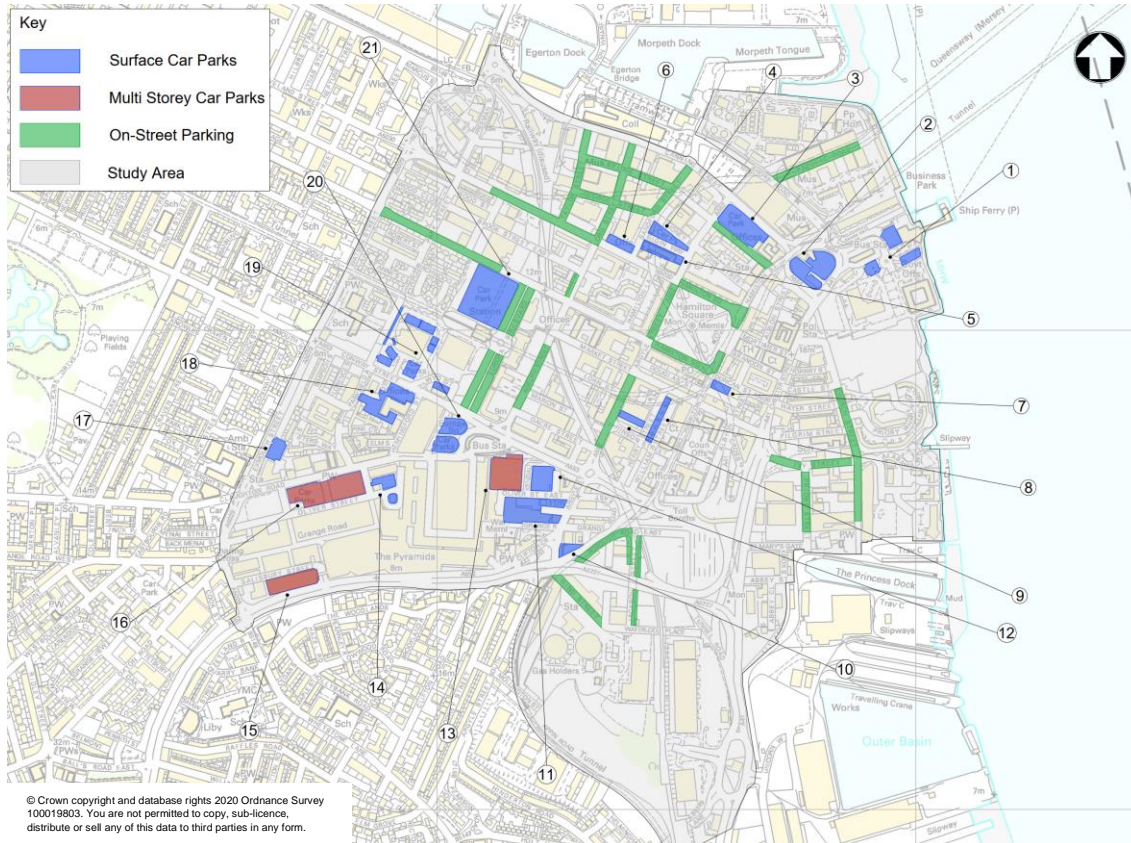
- The development of the Woodside ferry terminal area provides opportunities to increase tourist activity with enhanced services supporting development.
- The impact of HGV movements towards the Belfast ferry terminal on the A41 needs to be considered during the next stages of this study.
- The combination of car parking, the historic tram line, bus station, the A41 gyratory and level difference currently create an unattractive barrier to movement for visitors arriving in the area and for onward exploration towards Hamilton Square and Birkenhead.



2.6.5 Car Parking

Figure 22 illustrates the location of both off and on street parking facilities within the study area.

Figure 22: Public Parking Provision (on and off street) and numbers of spaces



Source: Mott MacDonald

As can be seen in the figure above, the majority of off-street car parks are located around Conway Park, Hamilton Square and the Town Centre whilst on-street parking is concentrated around Birkenhead Central, the Priors and development to the north. A number of multi storey car parks are also located to the west of the study area to support retail facilities around the Town Centre.

Table 6 below provides a summary of the car parking sites shown in Figure XX above, including the number of spaces and operator type.

Table 6: Car parking sites and capacities

Reference	Car Park	Number of spaces	Operator
1	Woodside Approaches	26	Public
2	Chester Street	~190	Private
3	Bridge Street	200	Private
4	Elgin Way	38	Public
5	Hamilton Square	130	Private
6	Cleveland Street	35	Private
7	Duncan Street	40	Public

Reference	Car Park	Number of spaces	Operator
8	Hinson Street	90	Public
9	Argyle Street	34	Private
10	Wilbraham Street	54	Public
11	Oliver Street East (1)	64	Private
12	Oliver Street East (2)	~80	Private
13	Pyramids Shopping Centre (1)	495	Private
14	Oliver Street	22	Private
15	Pyramids Shopping Centre (2)	685	Private
16	Asda	700	Private
17	Exmouth Street	51	Public
18	Hamilton Building	62	Public
19	Europa Pools	219	Public
20	Europa Square	164	Public
21	Price Street	500	Public

Source: Mott MacDonald

Conway Park and Hamilton Square are served by large nearby car parks which are currently underutilised and of low quality creating opportunities to reduce the amount of parking provision in some areas to provide more attractive and productive spaces. Although there is sufficient parking provision at Conway Park and Hamilton Square rail stations, there are no off-street parking facilities at or in proximity to Birkenhead Central reducing opportunities for rail services to the wider area from this station.

On-street parking across the study area is also confusing particularly to non-regular visitors as there are a number of various parking tariffs on different streets. Consistent parking tariffs across the study area would therefore provide greater user experience.

So, what does this mean for the A41 North Corridor Study?

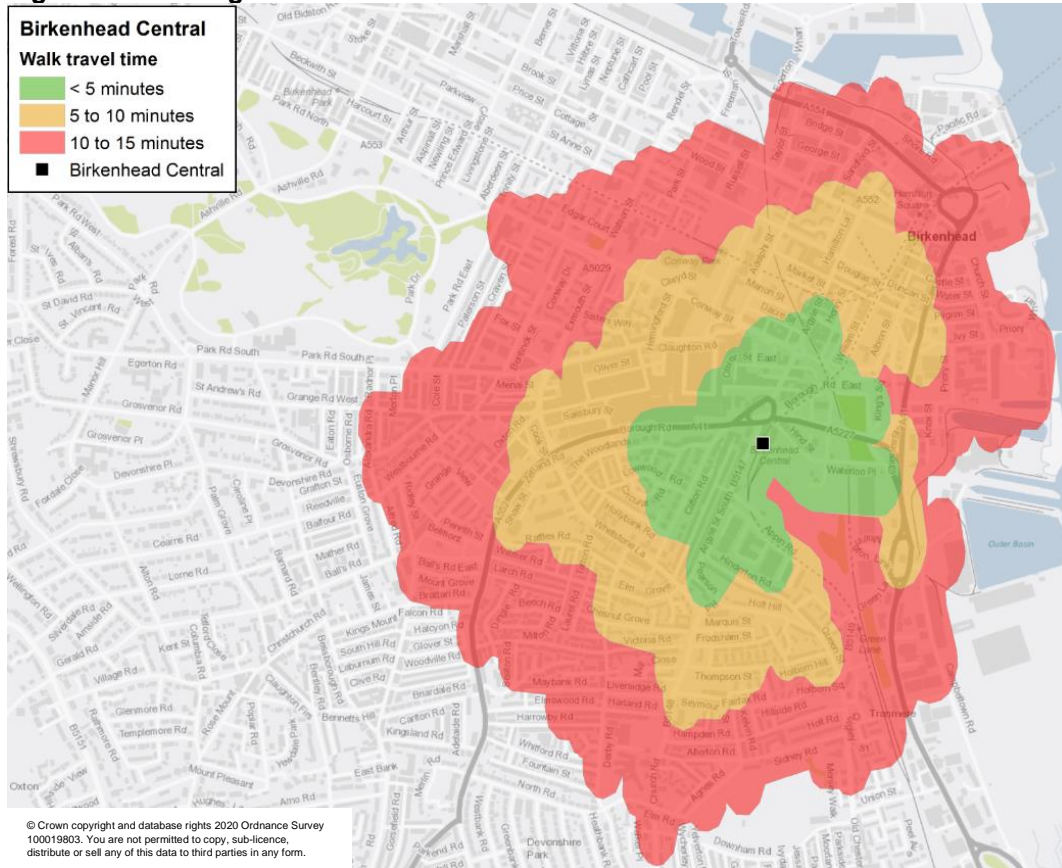
- No off-street car parking facilities exist at Birkenhead Central limiting Park and Ride connectivity to strategic locations.
- Consistent parking tariffs should be considered within the study to enable greater user experience.



2.6.6 Walking and Cycling

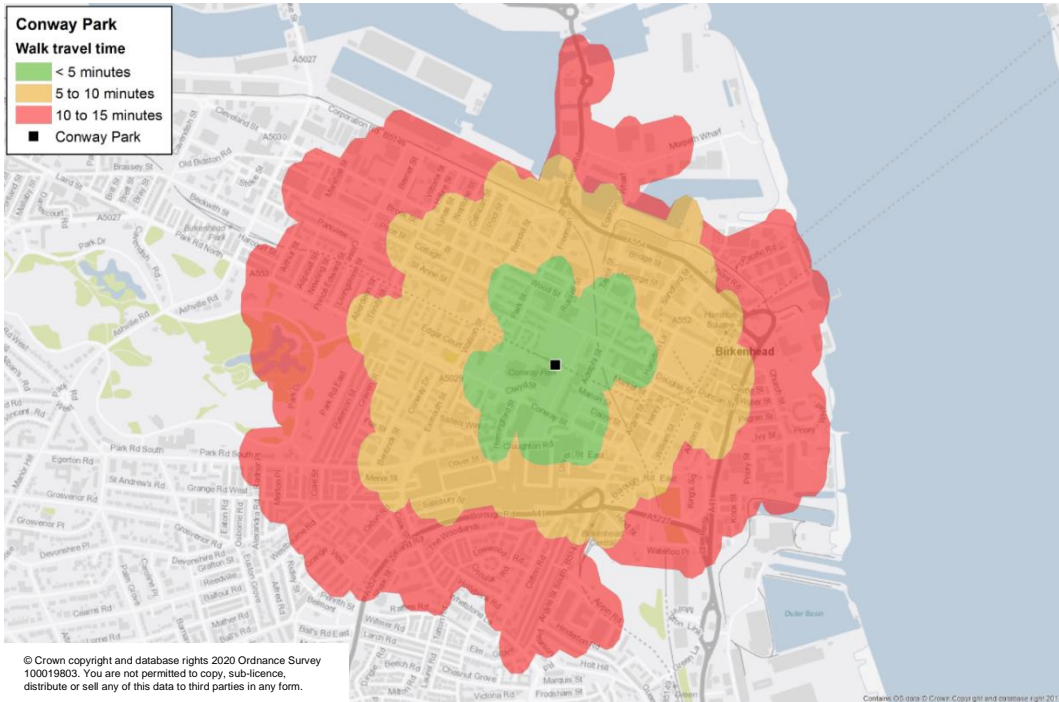
The study area is well positioned to provide many opportunities for pedestrians and cyclists with key facilities in walking distance from transport hubs and residential areas. The proximity to the waterfront also provides an excellent route for leisure and recreation. Figure 23 to Figure 25 demonstrate the areas accessible on foot from each rail station in 5, 10, and 15 minutes walking time. This shows how the majority of the study area is accessible within 15 minutes walking time from each rail station.

Figure 23: Walking isochrones from Birkenhead Central Rail Station



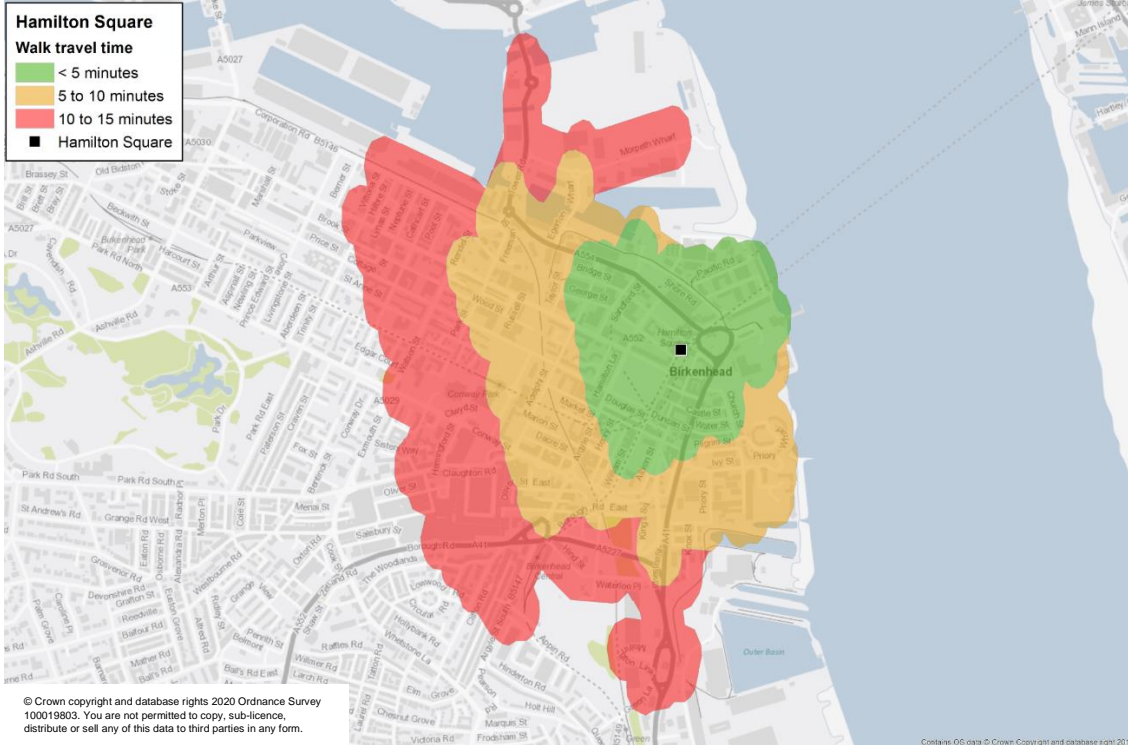
Source: Mott MacDonald

Figure 24: Walking isochrones from Conway Park Rail Station



Source: Mott MacDonald

Figure 25: Walking isochrones from Hamilton Square Rail Station



Source: Mott MacDonald

Although key facilities such as the town centre are within 15 minutes walking time from each of the rail stations, the current provision for pedestrians and cyclists is limited and environments are not conducive. Figure 26 summarises the pedestrian and cyclist infrastructure within the study area including the location of crossing points and cycle parking.

Figure 26: Pedestrian and Cycling Infrastructure



Source: Merseytravel

There are also significant barriers to pedestrian movements around the south of the study area where many people utilising facilities in the town centre will be travelling from. Figure 26 demonstrates a lack of crossing points along Exmouth Street and the A552 Borough Road limiting walking and cycling opportunities between the town centre and residential areas to the west and south of the study area. The crossing points which are available between these locations are infrequent and user unfriendly creating confusion and reducing the safety of pedestrians.

Photo 9: Crossing Borough Road from residential areas to the south



There are also significant clusters of accidents on the main roads between these areas suggesting issues of road safety and further reducing the attractiveness of active travel modes. The number and location of accidents are discussed in more detail in Section 2.5.8.

The A552 Borough Road also forms a key pedestrian desire line between Birkenhead Central station and the town centre. Crossing points in this area present similar issues for pedestrians with complicated crossings across a busy road.

Photo 10: Pedestrian route between Birkenhead Central and retail facilities



East/west pedestrian movements are also restricted with the most direct route between the Rock Retail Park, Birkenhead Central station and town centre presenting intimidating environments. The image below demonstrates how this route is poorly lit, poorly overlooked and unattractive to pedestrians and cyclists.

Photo 11: Direct route between Rock Retail Park, Birkenhead Central and town centre



The presence of anti-social behaviour in Hamilton Square has been highlighted as an issue with local police which also creates intimidating walking environments between Hamilton Square station and Birkenhead particularly during evening periods.

There are also few cycle lanes or signed routes in the study area meaning people are often unaware of off-road routes which may be safer and more attractive particularly to less confident cyclists. It is important that this study considers a network of paths and cycle routes which offer well-lit open spaces increasing the level of natural surveillance.

Cycle parking facilities are also somewhat limited within the study area. Although there is a concentration of cycle parking around the town centre this could be improved to help increase cyclist activity by ensuring it is sheltered and secure. Rail stations within the study area are provided with secure cycle parking. This encourages interchange via active travel modes and should be supported by surrounding infrastructure.

The Wirral Circular Trail provides significant opportunities for cyclists as a well signed and attractive route passing through the east of the study area along the waterfront with excellent views of the Liverpool Waterfront.



The entire route of the Wirral Circular Trail is shown in the following figure.

Figure 27: Wirral Circular Trail



Source: Wirral Council

In addition to providing a key route for leisure and recreational purposes, the Wirral Circular Trail presents opportunities to create active links to development areas such as Woodside within the study area and Wirral Waters to the north of the study area.

So, what does this mean for the A41 North Corridor Study?

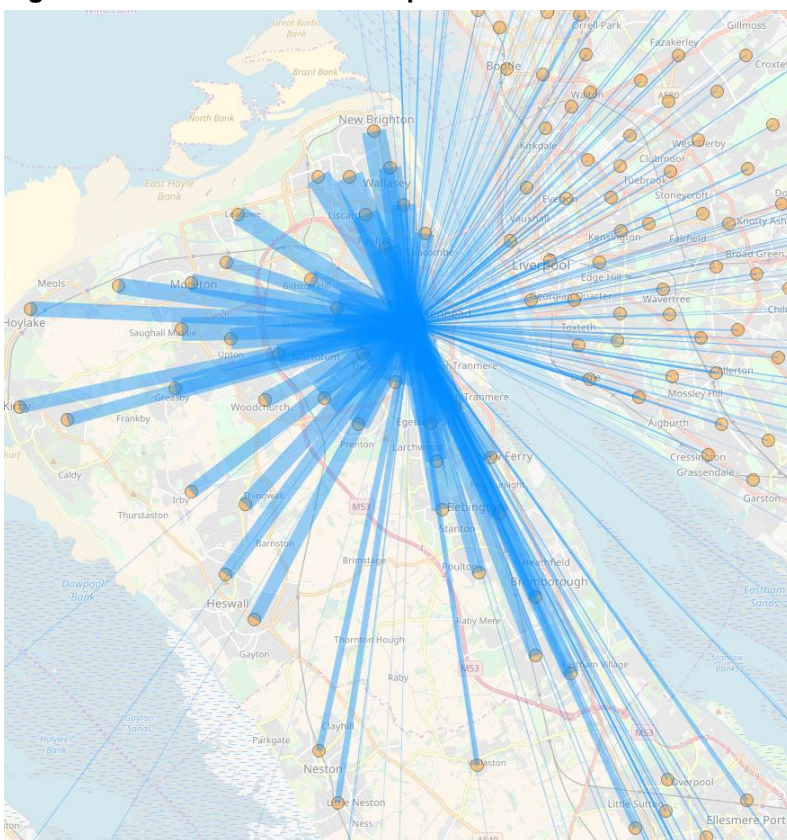
- Although there is a high level of accessibility for pedestrian, some routes are in poor condition / non-direct creating intimidating and unattractive environments.

- Pedestrian infrastructure is limited along key pedestrian desire lines such as that between Birkenhead Central station and the town centre.
- While the Wirral Circular Trail provides good opportunities for leisure and recreation. However, a lack of secure cycle parking through the study area and few crossings reduces the attractiveness of cycling for more everyday purposes.

2.6.7 Travel to Work

Figure 28 summarises the pattern of commuter trips to the study area demonstrating where people are frequently travelling from.

Figure 28: Inward Commuter Trips



Source: Datashine

This shows that the majority of people live and work in proximity to study area highlighting the importance of local connectivity and the need for an efficient transport network with reliable journey times.

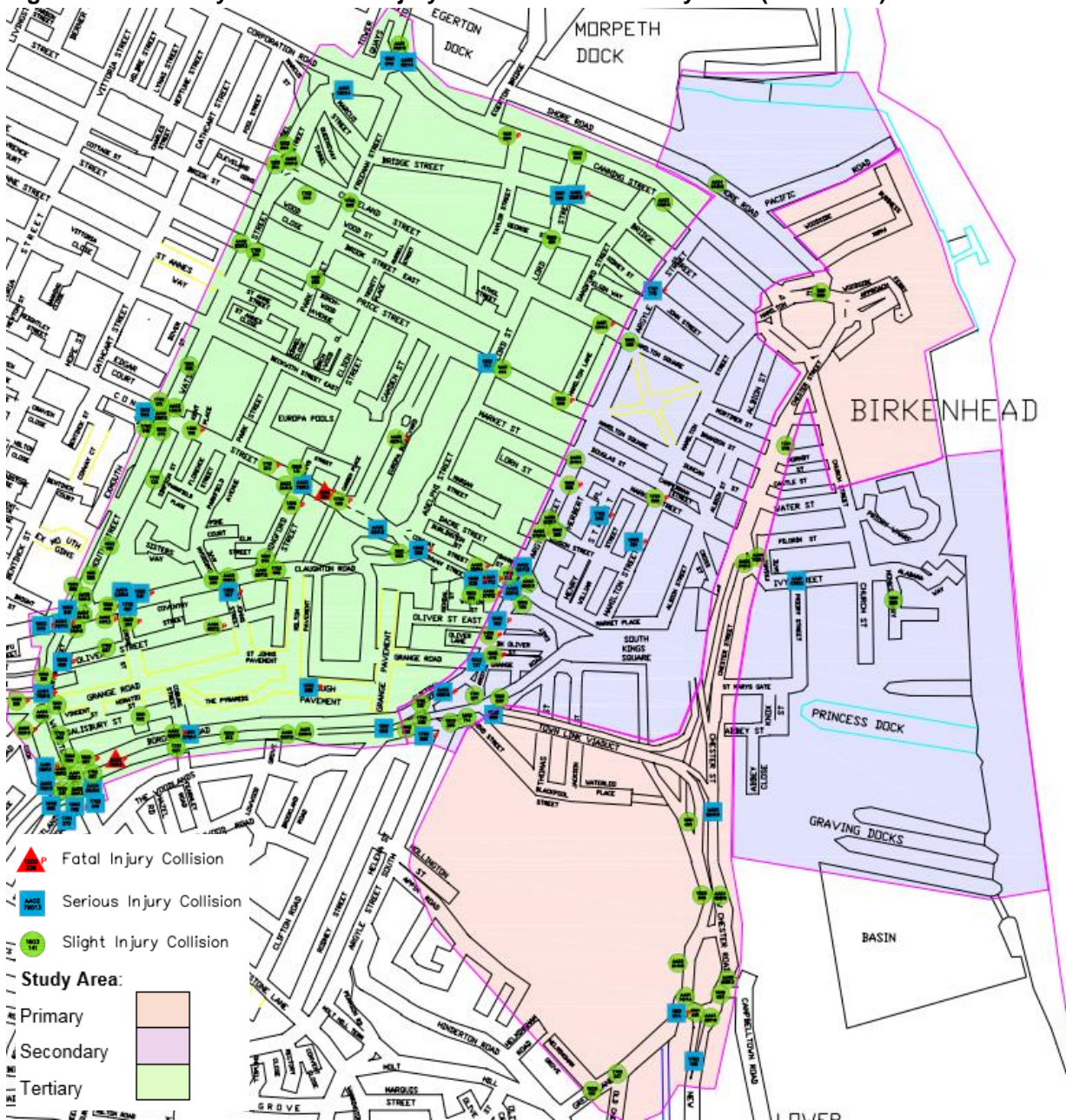
So, what does this mean for the A41 North Corridor Study?

- The majority of commuter trips into Birkenhead occur from within the Wirral peninsula area highlighting the need to maintain local accessibility.
- Cross river trips are however still important, and will be increasingly so as regeneration gathers pace in Birkenhead.

2.6.8 Accident Analysis

Figure 29 illustrates the location of recorded collisions resulting in slight serious or fatal injury within the study area between 2012 and 2017.

Figure 29: Summary of Recorded Injury Collisions in the Study Area (2012-2017)



Source: Wirral Council

As can be seen in the above figure there are significant clusters of accidents present within the study area, a number of which resulted in serious or fatal injury to pedestrians.

Areas of particular concern in terms of road safety include the section Argyle Street from Birkenhead Central rail station to Conwy Street. Within this cluster there were 25 recorded

incidents, 10 of which resulting in serious injury and 9 of which involved pedestrians. This area is a key route between the rail station, town centre and bus interchange and therefore currently poses a risk to pedestrians. The number of incidents occurring in this area could be a result of the limited crossings and complicated road layout forcing pedestrians arriving at the station to cross a fast and busy road.

Between 2012 and 2017 there was also a significant number of incidents occurring along the A5029 between its junction with the A552 and Claughton Road. This included one fatal pedestrian incident. This area is also a key access route to the retail core for vehicles and pedestrians from residential areas to the south and west of the study area. Any schemes suggested in the tertiary study area should therefore consider the safety of vehicles and pedestrians to improve access to the Town Centre.

Another cluster of accidents which includes a fatal pedestrian incident exists along Conway Street between its junction with Park Street and the bus interchange. A number of facilities are located around this area including the bus station and cinema complex. The section forms part of a key route between Conway Park rail station and the retail core.

The majority of accidents involving pedestrian over the last 5 years have occurred in areas which are central to pedestrian movements presenting issues of road safety. Therefore, schemes involving streets and highways around this area should consider safety improvements for all road users.

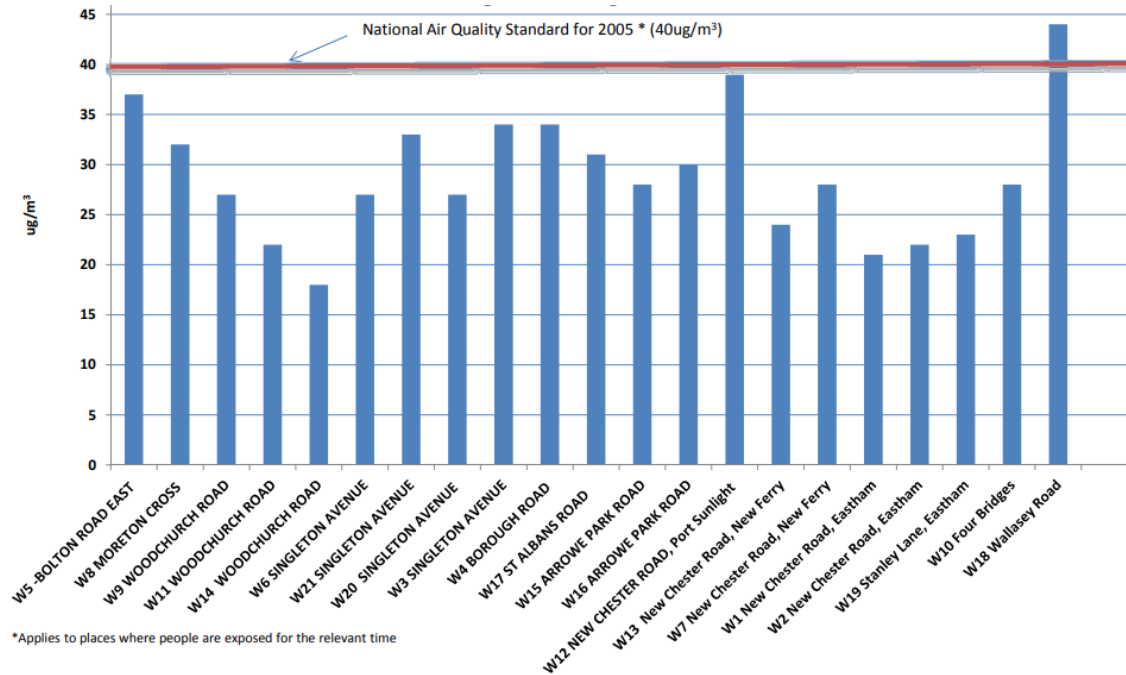
So, what does this mean for the A41 North Corridor Study?

- Road safety is a concern along key routes between stations, residential areas and the retail core and therefore needs to be considered in scheme design to enhance pedestrian connectivity to town centre.

2.6.9 Air Quality

There are no Air Quality Management Areas (AQMA) identified within the study area or wider area of the borough and it is important to ensure that this remains the case. One of the key contributors to poor air quality, and focus of the majority of monitoring undertaken in Wirral, is Nitrogen Dioxide (NO₂). A summary of NO₂ levels in Wirral in 2016 is outlined in the table below. Monitoring sites within the study area include site W4 Borough Road.

Figure 30: 2016 Annual Average NO₂ Levels in Wirral



Source: Wirral Council

This type of pollution is primarily associated with road traffic and congestion. Therefore, it is important that this study considers schemes which aim to promote travel by active modes and public transport, reducing the number of vehicles on the network as a result. Improving the flow of traffic in congested areas will also be key to maintaining a good level of air quality.

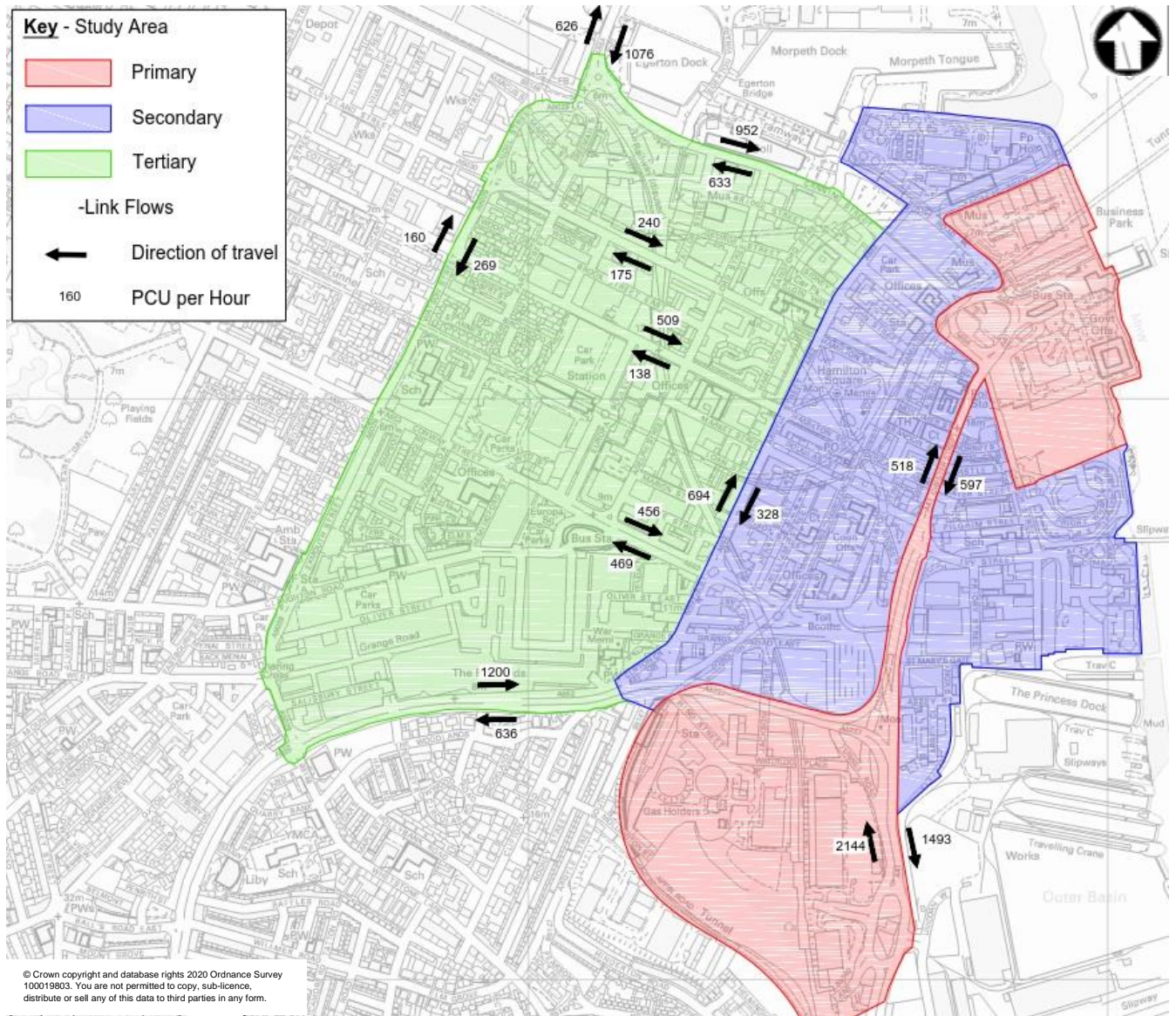
So, what does this mean for the A41 North Corridor Study?

- Relatively good levels of air quality are present within the study area. The A41 North Corridor study therefore needs to ensure this remains the case through enhancing facilities for active travel and improving or making better use of public transport connectivity.

2.6.10 Traffic Modelling

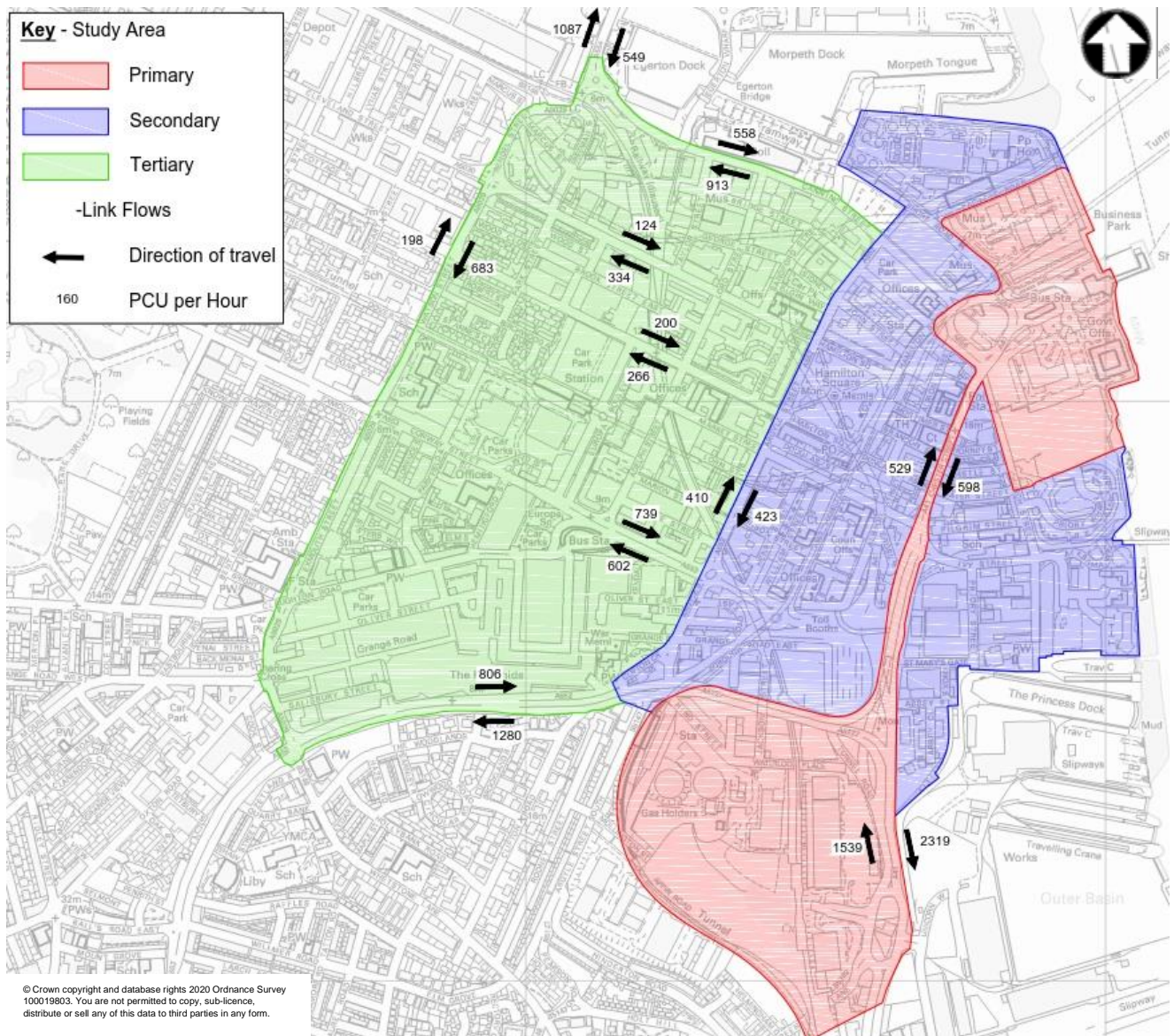
The Wirral SATURN model has been used to present the current traffic flows on key routes within the study area. Flows for both the AM and PM peak periods are noted along key roads within the study area in the following plans. The numbers represent the Passenger Car Units each hour in each direction along the route.

Figure 31: Baseline AM Peak Link Flows



Source: Mott MacDonald

Figure 32: Baseline PM Peak Link Flows



Source: Mott MacDonald

This shows that the busiest roads are the A554 in the north of the study area towards the Wirral Waters development, Argyle Street, Borough Road to the South and the A41 itself. However, these roads remain generally uncongested with particularly low levels of traffic around the town centre.

The above figures also demonstrate similar levels of traffic along Argyle Street and the A41 despite the fact the A41 is a key distributor road for the east of the borough.

SATURN model results and on-site observations suggest that there are no congestion issues within the study area. This creates a surplus of highway capacity particularly to the south where large complicated road layouts serve moderate volumes of traffic. However, as a key route towards major developments such as Wirral Waters, this study should consider the impacts of significant volumes of traffic through the A41 in the future.

So, what does this mean for the A41 North Corridor Study?

- There is a surplus of highway capacity particularly to the south of the study area with traffic flows presenting no issues of congestion in both the AM and PM peak periods.

The key issues and opportunities emerging from this chapter are set out in Section 5.

3 Development Opportunities for A41 North Corridor

3.1 Regeneration Strategies and Studies

3.1.1 Wirral Growth Plan

Wirral's 2020 Growth Plan outlines an ambitious vision for the future of Wirral. Large amounts of development are anticipated across the borough, including nationally significant economic development projects such as the Wirral Waters Enterprise Zone. Such transformational changes across the borough undoubtedly presents significant opportunities for the Borough. However, in tandem, development of this scale also poses future challenges for the transport network in seeking to accommodate and facilitate the planned growth of Wirral.

Figure 33: Wirral Growth Plan



Source: Wirral Council

3.1.2 Wirral Strategic Regeneration Framework

Building on the Wirral Growth Plan Wirral Strategic Regeneration Framework provides further detail on our spatial priorities for investment:

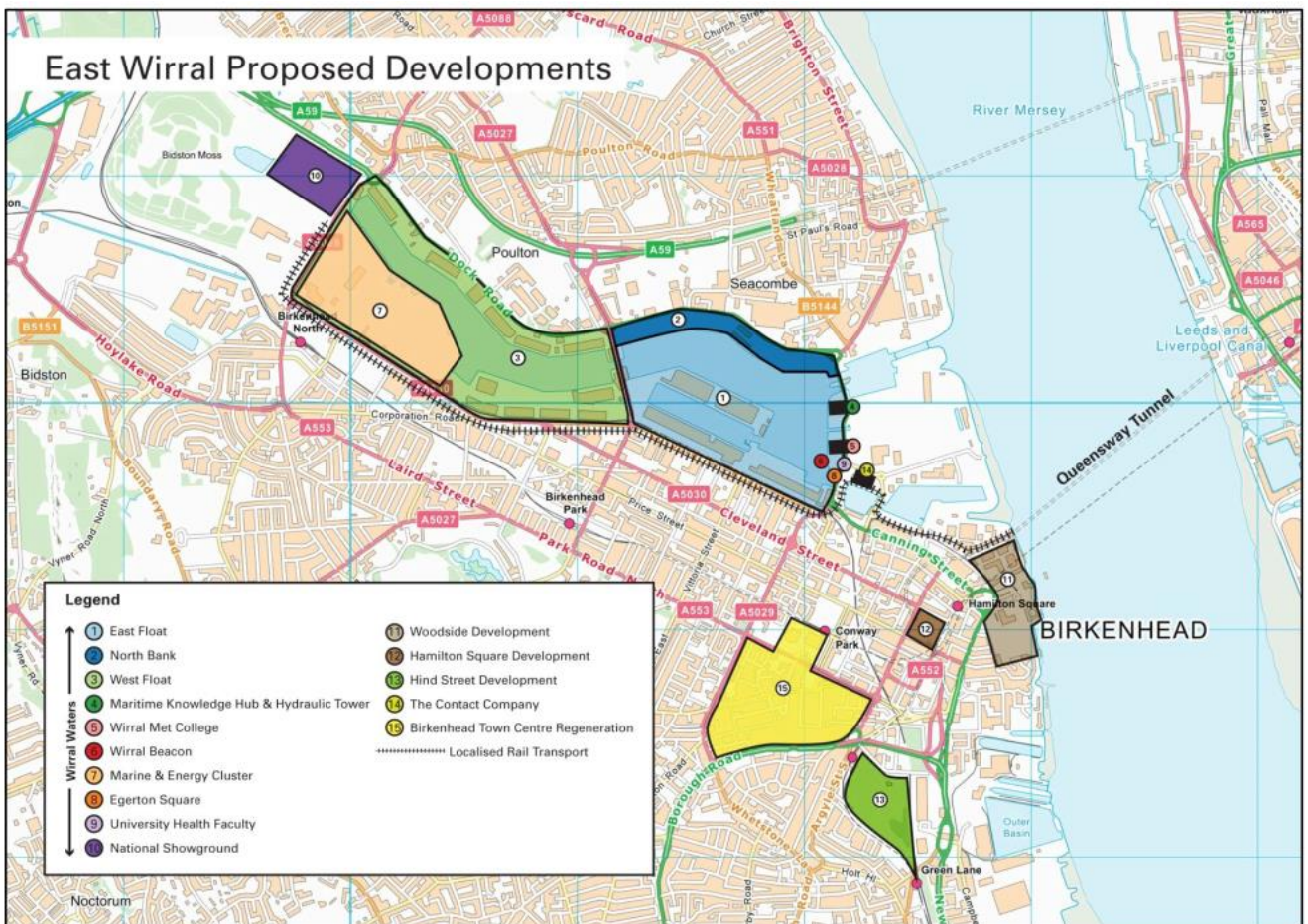
- Birkenhead Town Centre- including Hamilton Square and Woodside
- Wirral Waters Enterprise Zone
- The A41 employment corridor- including Wirral International Business Park
- New Brighton
- Local town centres

3.1.3 Wirral East Wirral Transport Scoping Report

In 2016 an East Wirral Transport Scoping Report was produced by KBR. This report reviewed a range of studies that have been completed across Wirral over the past decade, outlining the need to be refreshed into a co-ordinated programme of activity.

The key recommendation was to review the current lists of projects, pin-pointing and prioritising gaps to identify and direct work, and importantly aligning them with regeneration timescales in order to ensure that the basis of scheme development is benefits led. The proposed East Wirral regeneration sites identified in the report are shown in Figure 34 below.

Figure 34: East Wirral Proposed Developments



Source: KBR East Wirral Scoping Report

The recommendations of East Wirral Transport Scoping Report were as follows:

- Develop a 'Strategic Transport Framework for East Wirral' in order to identify a priority list of projects to support the regeneration ambitions for East Wirral. This is essential to underpin the Strategic Regeneration Framework with the development of specific transport packages to be linked to place shaping profiles/spatial plans for regeneration.
- Progress the development of options, business cases and funding applications as appropriate to reflect the agreed spatial priorities;
- Review current governance and programme delivery arrangements to ensure efficient decision making, accountability and efficiency.

3.1.4 Wirral Strategic Transport Strategy

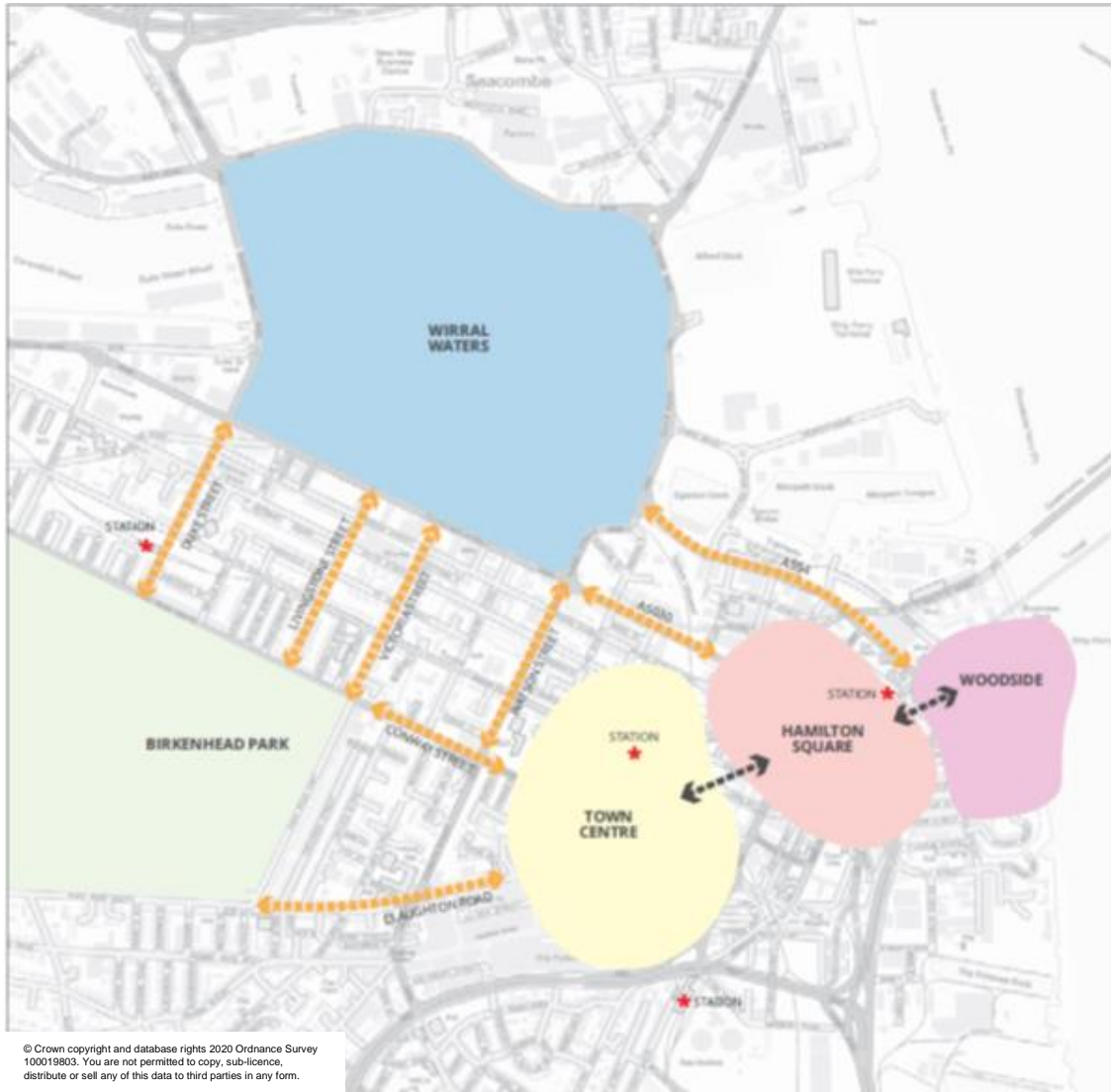
The Wirral Strategic Transport Framework provides the context for delivering transport to enable the Strategic Regeneration Framework. It sets out the ambition and opportunities for transport within, and linking to, spatial priority areas.

Wirral Council identifies Woodside as having the true potential to enable Wirral to develop out a prime waterfront location overlooking the Liverpool skyline. With the principle of a key commercial core at Woodside with key links to Hamilton Square and Birkenhead needing to be embedded in the plans to create a corridor of opportunity to Birkenhead Town Centre.

The Strategic Transport Framework suggests that to enable that potential of the A41 North Corridor to be reached, the transport infrastructure and supporting behaviour change campaigns need to be in place. It states that the A41 North Corridor provides exciting development opportunities to grow and expand the employment and housing opportunities along this key corridor to Birkenhead.

As shown in Figure 35 below, the movement of people between the three spatial priorities is key to the success of regeneration within the area.

Figure 35: East Wirral Spatial Priority Areas



Source: Wirral Council

The Wirral A41 North Corridor Study has been referenced in the Wirral Strategic Transport Strategy indicating that Feasibility funding has been awarded for the A41 North Corridor to look specifically at the section of the corridor between the Woodside gyratory and the roundabout at Hind Street to support the implementation of transport infrastructure to support the Woodside and Hind Street developments on the A41/East Wirral Corridor.

3.1.5 Wirral Strategic Transport Framework Action Plan

The aim of Wirral's Strategic Transport Framework Action Plan is to place future transport schemes in to a prioritised list in line with regeneration plans. The Strategic Transport Framework and its Action Plan will give the Council a strategic vision for when transport schemes need to be developed and enable the Council to seek funding to enable the development of the appropriate business cases. Mott MacDonald are currently working with Wirral Council to develop an updated Wirral Strategic Framework Action Plan.

3.2 Development Opportunities

3.2.1 Wirral Growth Partnership

Muse Developments have recently been appointed to create a Limited Liability Partnership with the council as a joint venture. The Wirral Growth Company Prospectus outlines 10 growth opportunities Wirral is looking for partners to engage with them to develop the following area linked to the A41 North Corridor Study:

- **Wirral Waters;**
120-hectares of planning-ready land available on a plot-by-plot basis for mixed residential, office, leisure and commercial uses, including an energy innovation hub. 20,000 new jobs and 13,000 new homes.
- **Hamilton Square**
Potential for a £60m transformation to include boutique hotels, offices and 36,000 sqft of leisure space. Birkenhead Town Hall can become a destination hotel and wedding venue, an arts space or theatre complex.
- **Woodside Waterfront;**
A prime waterfront site with outstanding views to Liverpool's World Heritage waterfront. A 500,000 sqft mixed use scheme with a GDV in excess of £300m and scope for hotels, leisure, offices and high-end residential.
- **Birkenhead Civic Hub**
A 290,000 sqft office requirement for Wirral Council and several other public-sector covenants, with scope for additional leisure development of up to 25,000 sqft on adjacent sites.
- **Birkenhead Town Centre**
The council is developing a regeneration plan for Birkenhead's historic core and has brought numerous properties in to its ownership so it can work with joint venture partners. There is scope for almost 350,000 sqft of commercial development, 200 residential units and car parking.
- **Birkenhead Market**
A transformation of the market to create a unique and highly differentiated food and leisure dining offer capable of drawing in tourists and visitors from a wide area.

3.2.2 Masterplans, Completed and Committed Development

3.2.2.1 Woodside

In 2003 Wirral Council commissioned BDP to undertake a master planning exercise for Woodside refreshed in 2010 on behalf of Peel Holdings. Peel Holdings are currently looking to refresh this masterplan again.

3.2.2.2 Wirral Waters

Wirral Waters forms part of Mersey Waters Enterprise Zone, one of the first four UK enterprise zones created in 2011. Wirral Waters was granted a 30 year planning consent in 2012.

Based on the original Masterplan, the Wirral Waters regeneration programme was expected to provide:

- Up to 14,000 homes of different types across a number of sites;
- 420,000 sqm of office floor space;
- 60,000 sqm retail
- 38,000 sqm hotel and conference facilities;
- 100,000 sqm of cultural education and amenity;
- 250,000 sqm B2/B8 consent.

Since the development of the original Masterplan:

- Up to 13, 000 new homes have been consented;
- 20 million sq ft of mix use floor space has been approved;
- 20 thousand permanent jobs are expected to be created; and
- 1, 500 native trees planted around the Wirral Waters Estate.

A number of developments have already been implemented within Wirral Waters these include:

- Wirral Metropolitan College comprising 38,000 sqft it was completed in 2015.
- A new building was constructed in 2015 for The Contact Company in Wirral Waters providing more than 500 jobs.

3.2.2.3 Hind Street

In 2012 National Grid Property Holdings LTD and Homes and Communities Agency submitted an application to replace an extant planning permission 2005/07764 was approved by Wirral Council for the erection of non food retail, office, trade sales, restaurant/public house, car showroom and creche (Outline). This includes the implementation of a new road from Mollington Link at the Rock Retail Park on the A41 to the roundabout at Borough Road/ Argyle Street/ Hind Street. Work is currently taking place on site to dismantle the gas holders.

Figure 36: Hind Street Development



Source: APP/11/01118 Wirral Council Planning Application

3.2.3 Transport Scheme Progress

Working with Merseytravel and Wirral Council Mott MacDonald identified a Pipeline of Wirral Transport Investment Schemes in 2015. These schemes are now currently being reviewed and prioritised in the Strategic Transport Framework against the Strategic Regeneration Framework priority areas for investment.

A number of schemes identified in the 2015 pipeline have been completed or have obtained funding for implementation as shown in the Table 7 below. The additional schemes identified but not progressed to date are included within Table 8.

Table 7: Funded or Implemented Transport Schemes to support development in development areas influenced by A41 North Corridor

Location	2015 Pipeline Scheme	Progress
A41 North Corridor	A41 Cycle and Pedestrian Connectivity	Funding has been secured and work is due to be completed by 2020.
Birkenhead	Wirral Waters Cross Dock Connectivity	A costed proposal for the replacement of the Poulton Bridge Road bridge has been developed.

Location	2015 Pipeline Scheme	Progress
Birkenhead	Gateways to Wirral Waters	Feasibility Fund money has been awarded to Wirral Council to undertake some preliminary feasibility work.
Birkenhead	Wirral Waters Supporting Road Infrastructure	Supporting road infrastructure is included in the Feasibility funding award above. Design for Tower Road Civilised Street has been progressed and an NPIF bid has been successful to complete a phase 1 from Canning Street roundabout to the RoRo roundabout.
Birkenhead	Wirral Waters Active Travel Connectivity	Funding has been secured for elements of the scheme. Work has been undertaken on Beaufort Road phase 1, Duke Street phase 1, Rendel Street. Work on Northbank East is about to go to tender.
Birkenhead	Wirral Waters Streetcar	Trampower have produced a feasibility report for phase 1a and Vectos have produced a capital expenditure report.
Birkenhead	Wirral Waters Transport Accessibility	Merseytravel improve bus access to Wirral Waters, specifically around the Tower Road / Tower Wharf sites but this has been delayed due to the bridge work on Tower Road

Source: Wirral Council

Table 8: Additional Wirral Transport Pipeline 2015 Schemes identified to support development in development areas influenced by A41 North Corridor

Location	2015 Pipeline Scheme
A41 North Corridor	A41 North Corridor (Capacity)
A41 North Corridor	A41 rail freight link
A41 North Corridor	A41 Bus Connectivity and Improvements
A41 North Corridor	Port Wirral
Cross River Connectivity	Mersey Tunnels
Cross River Connectivity	Water taxis
Birkenhead	Birkenhead Town Centre Gateways
Birkenhead	Birkenhead Town Centre Streetscape
Birkenhead	Wirral Waters Transport Accessibility
Birkenhead	A553 / A554 Improvements
Wirral Borough (Merseyrail network improvements)	Improvements to Bus Infrastructure at Birkenhead Park and Conway Park
Wirral Borough (Merseyrail network improvements)	Green Lane Station Refurbishment
Wirral Borough (Merseyrail network improvements)	Park and Ride at Birkenhead Central

Source: Wirral Council

4 Stakeholder Engagement

It is important to ensure that all key stakeholders are engaged throughout the process of this study to ensure that all the key issues are captured and the most appropriate solutions are developed. This section outlines details of consultation which has been carried out to date and how stakeholders will be engaged going forward.

4.1 Merseytravel

During the early stages of this study a meeting was held with Merseytravel to understand any issues with the public transport network, which could be addressed within the scope of the study, and the key aspects that work well which the study should aim to support. The key messages from this meeting are summarised in the points below:

- Merseytravel (MT) are key partners in Wirral Growth Company with a particular focus on the Woodside area where MT own the ferry terminal and bus lay over.
- Bus station at Woodside is underutilised. Currently it is used mainly by employees in the offices and Arriva employees (using canteen facilities) so there is little demand after 6pm and during interpeak.
- There is a need for better bus interchange outside of Hamilton Square rail station. MT would like to explore options to relocate taxi rank and reroute buses.
- Hamilton Sq. station is well utilised but mainly as an interchange facility between Wirral lines.
- MT are prepared to explore options for toll plaza safety holding area.
- Any changes to facilities at Woodside need to be highly credible as many previous plans have produced little benefit.
- Bus and rail networks are generally good however these are patchier towards the Woodside area.
- Need to increase footfall and pedestrian movements towards the North of the town centre and increase connectivity to key employment centres.
- Town centre bus station is a well located and serves a central interchange hub for shoppers and visitors. This is also a busy station which is currently at capacity.
- Relocation of bus station- not economically viable could pose risks to Birkenhead retail economy.

4.2 Workshop

A workshop was held on the 21st of March 2018 with various stakeholders, including Wirral Council and Peel Group, to establish transport aims and objectives for the borough in relation to upcoming developments. Following an update from the Strategic Commissioner for Growth from Wirral Council, 3 discussions were held to discuss how transport schemes can help achieve economic ambitions. The key points in relation to this study are summarised below:

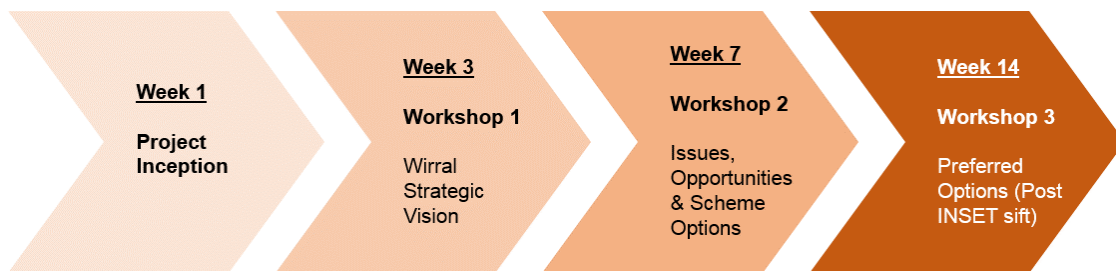
- There is a key aim to bring spark to Birkenhead and make it more attractive to young people.
- Need to present achievable and sustainable aims and schemes.
- There is a need to make better use of the existing transport links.
- There is a need make better use of the A41 North Corridor.

- There are vast quantities of brownfield land available next to existing transport hubs i.e. Hind Street.
- Aim to create a health agenda and promote the '10,000 steps' culture. Proposals need to consider supporting this mentality.
- There is a possibility to consider downgrading highway infrastructure.

4.3 Next Steps

The following diagram outlines the proposed strategy for engaging with stakeholders throughout the next stages of this study.

Figure 37: Indicative consultation programme for Wirral STF Action Plan, Wirral Waters and A41 North Corridor studies



Source: Mott MacDonald

5 Issues and Opportunities

Table 9 summaries the key issues and opportunities identified through the analysis of baseline evidence and discussion with stakeholders. These issues and opportunities will be used to inform the next stages of the study and identify the most appropriate solutions and proposals across the study area.

Table 9: Summary of key Issues and Opportunities

Issues	Opportunities
Context	
<ul style="list-style-type: none"> • The location of historic rail corridors creates barriers to vehicle and pedestrian movement • Land targeted for development is isolated creating the need for new transport links • The potential of Hamilton Square as an attractive area is not realised as the quality of buildings are gradually declining • Multiple land owners within the study area may influence the types of transport schemes in the short to medium term • Aside from Hamilton Square, there is a lack of green space in the study area limiting opportunities for leisure and recreation • A number of environmental constraints have been identified within the study area and within 500m of the study boundary which may restrict options for transport improvements 	<ul style="list-style-type: none"> • Historic rail corridors still exist which can be developed within the emerging transport strategy • Large amount of land available for development • Cluster of high quality historical buildings in Hamilton Square is a major asset for the borough • Large population catchment which is currently not fully exploited • Close proximity of Wirral Waters regeneration initiative increasing the number of residents, visitors and businesses around the study area
Vehicle Access	
<ul style="list-style-type: none"> • Key roads within the study area create barriers to movement including a number of A roads through town centre areas • Surplus of cheap long stay car parking increases the number of vehicles in the area and discourages walking and cycling from local areas • Current car parking provision is of a low grade with poor lighting and surfacing • Inconsistent on-street parking tariffs causes confusion for visitors • Complicated road layout to the south of the study area creates confusion for visitors • Large number of one way and closed off roads within the study area, making it harder to navigate and reducing activity • Proximity of Wirral Waters and the potential to 'drag' significant volumes of traffic through the A41 study area 	<ul style="list-style-type: none"> • The area is well connected to the wider strategic transport network proving good links to areas across the North West • Surplus of highway capacity to support future development and ensure congestion remains minimal • There are no issues of congestion within the study area resulting in relatively good levels of air quality • Belfast ferry terminal generates large numbers of HGV's through the study area
Public Transport	
<ul style="list-style-type: none"> • Over provision of bus infrastructure at Hamilton Square and Woodside • Restricted access for buses outside of Hamilton Square and Birkenhead Central stations • Lack of interchange from rail stations including poor walking and cycling links • Woodside ferry terminal is served by ageing infrastructure causing services to become increasingly unreliable 	<ul style="list-style-type: none"> • The area is highly accessible by bus with a high quality bus station located near the retail core • Excellent access to the area via heavy rail with three stations offering frequent services to the wider area • There is an opportunity to make better use of the rail network to support sustainable transport to future developments • Ferry services between Liverpool and Birkenhead can be used to attract and transport visitors

Issues

Opportunities

Active Travel	
<ul style="list-style-type: none"> ● The majority of walking and cycling routes are in poor condition decreasing the attractiveness of active modes ● The biggest opportunity for pedestrian movements to the town centre is from residential areas to the south. However, this is where major A roads create barriers to movement ● East-west pedestrian and cyclist movements are restricted by unsafe and unattractive footways ● Limited infrastructure for pedestrians and cyclists including crossings, cycle lanes and secure cycle parking ● Disconnect, particularly for pedestrians, between key areas in and around the study area – Woodside, Hamilton Square, Birkenhead town centre 	<ul style="list-style-type: none"> ● The Wirral Circular Trail provides an excellent leisure route and offers connectivity to key locations such as the Wirral Waters development area ● The east of the Wirral Circular Trail within the study area provides excellent views of the river and Liverpool skyline ● The majority of the study area is accessible within 15 minutes walking time from rail stations
Safety and Environment	
<ul style="list-style-type: none"> ● Clusters of accidents occur along key pedestrian desire lines ● The majority of accidents involving pedestrians occur in areas with the most pedestrian movements ● Anti-social behaviour in Hamilton Square, poorly lit and poorly overlooked streets and footpaths creates intimidating environments for pedestrians 	<ul style="list-style-type: none"> ● There are no Air Quality Management Areas within the study area. Continued low levels of Nitrogen Dioxide can be supported by the use of sustainable transport

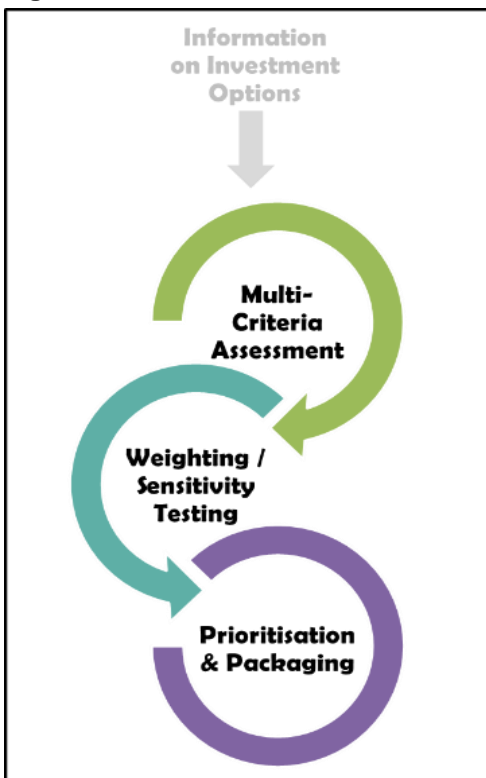
Source: Mott MacDonald

With the above issues and opportunities in mind it is important that objectives and schemes emerging within this study make better use of the highway network and available public transport services and improve the quality of walking and cycling networks. The scheme objectives will be defined within the options appraisal report and form part of the appraisal framework to identify a preferred list of schemes.

6 Next Steps

The next stages of this study will be to identify a long list of improvements options in response to the baseline issues. The long list of options will then be subject to appraisal to support the initial sifting of schemes into a shortlist. To aid this appraisal process, Mott MacDonald's INSET (Investment Sifting and Evaluation Tool) will be used to assess scheme options against a number of objectives and criteria identified specifically for this study.

Figure 38: Mott MacDonald's Investment Sifting and Evaluation Tool (INSET)



Source: Mott MacDonald

A further workshop will also be held with stakeholders during this stage to discuss potential options and stimulate innovative thinking.

Following the use of modelling tools and discussions with stakeholders, a short list of schemes will be proposed and set out in an Options Appraisal Report for further development into a comprehensive transport strategy for the area.

