

CWG A34 Perry Barr Highway Infrastructure Options Appraisal Report Call-in

Additional Information Pack

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2.	Summary of documents
3.	Transport assessment for Athletes Village
77.	Flyover retention – alternative potential layouts
79.	Design opportunities
83.	Written questions presented to City Council
88.	Letter and Addendum - Sovereign Centros/One Stop Shopping Centre (Perry Barr S.A.R.L and Perry Barr Ltd)

1/ Transport assessment for Athletes Village

This was the transport assessment submitted with the planning permission for the athletes village/phase 1 housing development in Perry Barr and assumed retention of the flyover

2/ Flyover retention – alternative potential layouts

This was sent to the cabinet member on February 1st and was developed by the ward councillors , with community input, to suggest an improved road layout and environment, using the flyover, following the briefings that we received during January. It is based on the opportunity provided by the recent decision not to use the land between the A34 and the Aldridge Road for the Athletes' Village, therefore allowing for new flexibility in design for the area. These are relatively crude sketch maps and are not necessarily to scale.

3/ Design opportunities. Some photos of the flyover together with photos of some of the multiple projects in US cities that seek to retain urban structures as part of creative urban design

4/ Written questions: these written questions from the ward councillors indicate some of the timelines leading up to the present proposal and responses received from cabinet members.



Birmingham City Council

**Residential Redevelopment of the Former
Birmingham City University Campus, Perry
Barr**

Transport Assessment

July 2018

Project Code: 3339

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I Introduction

I.1 Background

1.1.1 PJA has been commissioned by Birmingham City Council (BCC) to prepare a Transport Assessment to accompany a full planning application for the residential redevelopment of the former Birmingham City University (BCU) Campus, west of Wellhead Lane, Perry Barr.

1.1.2 The development comprises:

Erection of a residential development to first serve as the Commonwealth Games Athletes' Village, and later converted to 1,424 residential units and circa 1,400sqm of commercial floorspace with associated parking, landscaping and infrastructure.

1.1.3 The residential units include townhouses, apartments and an extra care facility. This report relates solely to the development in legacy mode following the completion of the Commonwealth Games, however it will still be referred to as the 'Athletes Village' within this report. **Appendix A** provides the masterplan for the site.

I.2 Scoping Discussions

1.2.1 Scoping discussions have been held with officers from the Transportation Development Control team at BCC between January 2018 to June 2018, in order to agree the principles of the assessment set out within this report.

1.2.2 PJA has also attended several workshops in relation to the regeneration of the wider Perry Barr area and the associated transport infrastructure improvements. This engagement with wider stakeholders has enabled the scheme to be developed to maximise the wider transport opportunities that will come forward in the future.

I.3 Purpose of the Report

1.1.1 This report accompanies a full planning application and evaluates the impact of the development proposals on the local highway network. The aim of this report, and the Transport Assessment process, is to identify the transport characteristics of the development site and surrounding area, and to examine the likely transport implications of the proposed development.

1.1.2 This TA has been prepared with reference to the National Planning Policy Framework (2012) and Planning Practice Guidance (PPG)¹.

¹ <http://planningguidance.planningportal.gov.uk/blog/guidance/travel-plans-transport-assessments-and-statements-in-decision-taking/>



1.1.3 PPG states that a Transport Assessment should address the following:

- *the planning context of the development proposal;*
- *appropriate study parameters (i.e. area, scope and duration of study);*
- *assessment of public transport capacity, walking/ cycling capacity and road network capacity;*
- *Trip generation, distribution and assignment methodologies and/ or assumptions about the development proposal;*
- *measures to promote sustainable travel;*
- *safety implications of development; and*
- *mitigation measures (where applicable) – including scope and implementation strategy.*

1.1.4 This report seeks to demonstrate that the development site is well located in terms of access to local facilities and public transport opportunities, and as such will enable access by sustainable transport modes.

1.1.5 A Travel Plan has been produced alongside this report and this will provide a long-term management strategy for the development site aiming to minimise travel to the site by single-occupancy car trips. Principally, the Travel Plan aims to increase modal choice through the implementation of a package of measures and initiatives.

1.4 Report Structure

1.4.1 The remainder of this report is structured as follows:

- **Chapter 2** – Policy Context;
- **Chapter 3** – Baseline Conditions;
- **Chapter 4** – Operation of BCU Campus;
- **Chapter 5** – Wider Perry Barr Regeneration;
- **Chapter 6** – Development Proposals;
- **Chapter 7** – Parking;
- **Chapter 8** – Integrated Transport Strategy;
- **Chapter 9** – Travel Demand;
- **Chapter 10** – Highway Capacity Assessment; and
- **Chapter 11** – Summary and Conclusion.

2 Policy Context

2.1 Introduction

- 2.1.1 This chapter sets out the policy context in relation to the site both at a national and local level. The summary at the end of this chapter demonstrates how the development accords with these policies.

2.2 National Policy

National Planning Policy Framework

- 2.2.1 The National Planning Policy Framework (NPPF) was updated in July 2018 and sets out the Government's wider planning policies. The presumption in favour of sustainable development remains at its core.
- 2.2.2 Policies aimed at promoting sustainable development are covered within section 9, paragraphs 102 to 111 of the NPPF with paragraph 102 stating that:-

"Transport issues should be considered from the earliest stages of plan-making and development proposals, so that:

- a) the potential impacts of development on transport networks can be addressed;*
- b) opportunities from existing or proposed transport infrastructure, and changing transport technology and usage, are realised – for example in relation to the scale, location or density of development that can be accommodated;*
- c) opportunities to promote walking, cycling and public transport use are identified and pursued;*
- d) the environmental impacts of traffic and transport infrastructure can be identified, assessed and taken into account – including appropriate opportunities for avoiding and mitigating any adverse effects, and for net environmental gains; and*
- e) patterns of movement, streets, parking and other transport considerations are integral to the design of schemes, and contribute to making high quality places."*

- 2.2.3 Paragraph 103 states:

"The planning system should actively manage patterns of growth in support of these objectives. Significant development should be focused on locations which are or can be made sustainable, through limiting the need to travel and offering a genuine choice of transport modes. This can help to reduce congestion and emissions, and improve air quality and public health. However, opportunities to maximise sustainable transport solutions will vary between urban and rural areas, and this should be taken into account in both plan-making and decision-making."



2.2.4 Paragraph 109 states:

2.2.5 *"Development should only be prevented or refused on highways grounds if the residual cumulative impacts on the road network or road safety would be severe."*

2.2.6 Paragraph 111 states:

"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."

2.3 Local Policy Context

2.4 Birmingham Development Plan

2.4.1 The Birmingham Development Plan (adopted January 2017) sets out the statutory planning framework to guide decisions on development and regeneration in Birmingham until 2031.

2.4.2 Chapter 9 emphasises the importance of connectivity in generating a prosperous and safe city.

2.4.3 Policy TP38 states:

"The development of a sustainable, high quality, integrated transport system, where the most sustainable mode choices also offer the most convenient means of travel, will be supported."

The delivery of a sustainable transport network will require:

- *Improved choice by developing and improving public transport, cycling and walking networks.*
- *The facilitation of modes of transport that reduce carbon emissions and improve air quality.*
- *Improvements and development of road, rail and water freight routes to support the sustainable and efficient movement of goods.*
- *Reduction in the negative impact of road traffic, for example, congestion and road accidents.*
- *Working with partners to support and promote sustainable modes and low emission travel choices.*
- *Ensuring that land use planning decisions support and promote sustainable travel.*
- *Building, maintaining and managing the transport network in a way that reduces CO₂, addresses air quality problems and minimises transport's impact on the environment."*

2.4.4 Policy GA2 refers specifically to the Aston, Newtown and Lozells area in which the site is located:

An AAP is in place for the area to secure comprehensive regeneration and guide future development over a 15-year period.

The AAP has planned for the following levels of growth; over 700 new homes, one Regional Investment Site, up to 10,000m² gross office space and up to 20,000m² gross comparison retail. The growth of Perry Barr will be supported in line with Policy TP21.

In the case of the Birmingham City University teaching campus there is the potential, due to the relocation of the University, to accommodate growth including a range of local centre uses and housing. High quality design to assist with place-making and a more attractive public realm is essential given the site's prominent location. Any proposal brought forward for the site should contribute to improving pedestrian linkages, particularly to the One Stop Shopping Centre, Perry Barr rail station and the more traditional retail area to the south at Birchfield Roundabout. This replaces Policy ED1 of the adopted AAP.

Aston, Newtown and Lozells Area Action Plan (AAP)

2.4.5 The AAP, forms part of Birmingham's Local Development Framework and acts as a basis for determining planning applications and bringing forward regeneration in the AAP area. It provides a clear vision and strategy for regeneration and development over the period 2011-2026. The AAP supports the regeneration process that will make Aston, Newtown and Lozells a location of choice by creating mixed, balanced and successful communities.

2.4.6 Policy T1 refers to area-wide transport and focuses on the following key themes:

- Network efficiency: maximising efficient and reliable operation of the current and making network enhancements where necessary;
- Smarter Choices: techniques to encourage the use of sustainable options;
- Technology: introduction of technology such as real-time information and new fuel technology;
- Accessibility to services: key services should be within a suitable walking distance; and
- Connectivity: good public transport links between major land uses.

2.4.7 The Area Action Plan for Aston, Newtown and Lozells area, highlights policy SP38 of Birmingham Core Strategy which refers to car parking and states:

The City Council will take account of the following factors in determining the appropriate level of car parking provision in new developments:

- *Need to minimise congestion and promote more sustainable patterns of travel.*
- *Need to ensure that Birmingham is not disadvantaged in its ability to attract investment.*
- *Need to ensure that the operational needs of new developments are met.*
- *Likelihood that any existing on-street parking problems will be made worse.*
- *Need to ensure that on-street parking remains at levels which can be accommodated.*



- *Need to avoid land being unnecessarily 'sterilised' by car parks.*

West Midlands Local Transport Plan 3 (LTP), 2011 – 2026

- 2.4.8 The LTP is a statutory document which looks at the transport needs of the West Midlands and sets out a strategy to meet those needs through short, medium and long-term transport solutions.
- 2.4.9 The LTP sets out how the transport network can play its part in the transformation of the West Midlands economy. It demonstrates how this will bring real benefits to people through its contribution to economic revival, creation of jobs, improved accessibility, improved local and national connections by road and rail and better quality of life.
- 2.4.10 The first part of the document sets out a 15-year Transport Strategy based around the five objectives of the economy, climate change, health, equality of opportunity and quality of life. In order to achieve these objectives, three strategic principles have been identified: Smarter Management, Smarter Choices and Smarter Investment.
- 2.4.11 The Implementation Plan sets out how the Strategy will be delivered during the 15 years. The delivery is split into two distinct phases; the initial phase covers the first 5 years of the Strategy and includes a Transport Investment Programme; the second phase outlines major schemes and initiatives required to deliver the LTP during the subsequent 10 years.

Movement for Growth: 2026 Delivery Plan for Transport

- 2.4.12 The West Midlands Combined Authority (WMCA) has set out an ambitious plan for growth in its Strategic Economic Plan and has established a 20-year vision for the transport system needed to support this. The Movement for Growth strategic transport plan (MfG) articulates this vision and provides a high-level policy framework and overall long-term approach for improving the transport system serving the West Midlands.
- 2.4.13 Movement for Growth's long-term strategy will see a shift in emphasis of travel in line with thriving, prosperous, attractive, large European city regions, where car use is typically 35 – 45 % of all journeys, compared to 63% in the West Midlands.
- 2.4.14 There are a number of key priorities for the strategy which are relevant to the site including:
- Birmingham Cycle Revolution on the A34;
 - SPRINT services;
 - Local bus network improvements;
 - Improvements for walking as integral elements of schemes for city town and suburban district centres;

- Smarted choice initiative with ongoing marketing and promotion; and
- Area wide residential road 20mph speed limits.

Birmingham Connected

- 2.4.15 The Birmingham Connected white paper (2014) outlines the strategy for transport and connectivity improvements across Birmingham over the next two decades (to 2034).
- 2.4.16 Of particular interest to this development is the formation of ‘Green Travel Districts’, in which private car travel is strongly discouraged primarily through the transfer of street space to sustainable modes. Perry Barr has been highlighted as a Green Travel District, the key objectives of which are:
- 1 To achieve and sustain ambitious targets for single occupancy vehicle use of 50% or less;
 - 2 To harness the mode shift potential of innovative technology and smarter choices measures at both established communities where potential is identified and at newly created business communities in the identified core growth locations in the BDP;
 - 3 To promote sustainable travel initiatives within the GTDs and across the city, be models of best practice and exemplars of what is achievable;
 - 4 To provide a blueprint for successful modal shift which can be adopted elsewhere in the city
 - 5 To enhance the attractiveness and quality of the urban environment within the GTDs
 - 6 To embed a culture of sustainable travel within the GTDs and provide strong motivations for travel behavioural change

2.5 Summary

- 2.5.1 The site has been identified in the local policy as a location for regeneration and a Green Travel District. This report demonstrates how the development will connect with existing amenities and transport links along with ambitious strategic sustainable transport improvements on the development doorstep.
- 2.5.2 The development will set a precedent for low car mode shift in accordance with the Movement for Growth strategy to significantly shift emphasis on travel away from single occupancy cars within the city.



3 Baseline Conditions

3.1 Introduction

- 3.1.1 This chapter provides a summary of the existing transport conditions in the vicinity of the site.

3.2 Site Context

- 3.2.1 The site is located in Perry Barr in north Birmingham, adjacent to the Perry Barr gyratory and One Stop Shopping Centre. The site was formerly Birmingham City University's North Campus, with associated landscaping and car parking. The site was operational until recently, however initial phases of demolition have now commenced.
- 3.2.2 The site is bounded to the north by Aldridge Road, to the east by Wellhead Lane, to the south by the railway line and to the west by A34 Walsall Road. Land uses in the vicinity of the site are varied and include residential, industrial, retail and leisure.

3.3 Local Highway Network

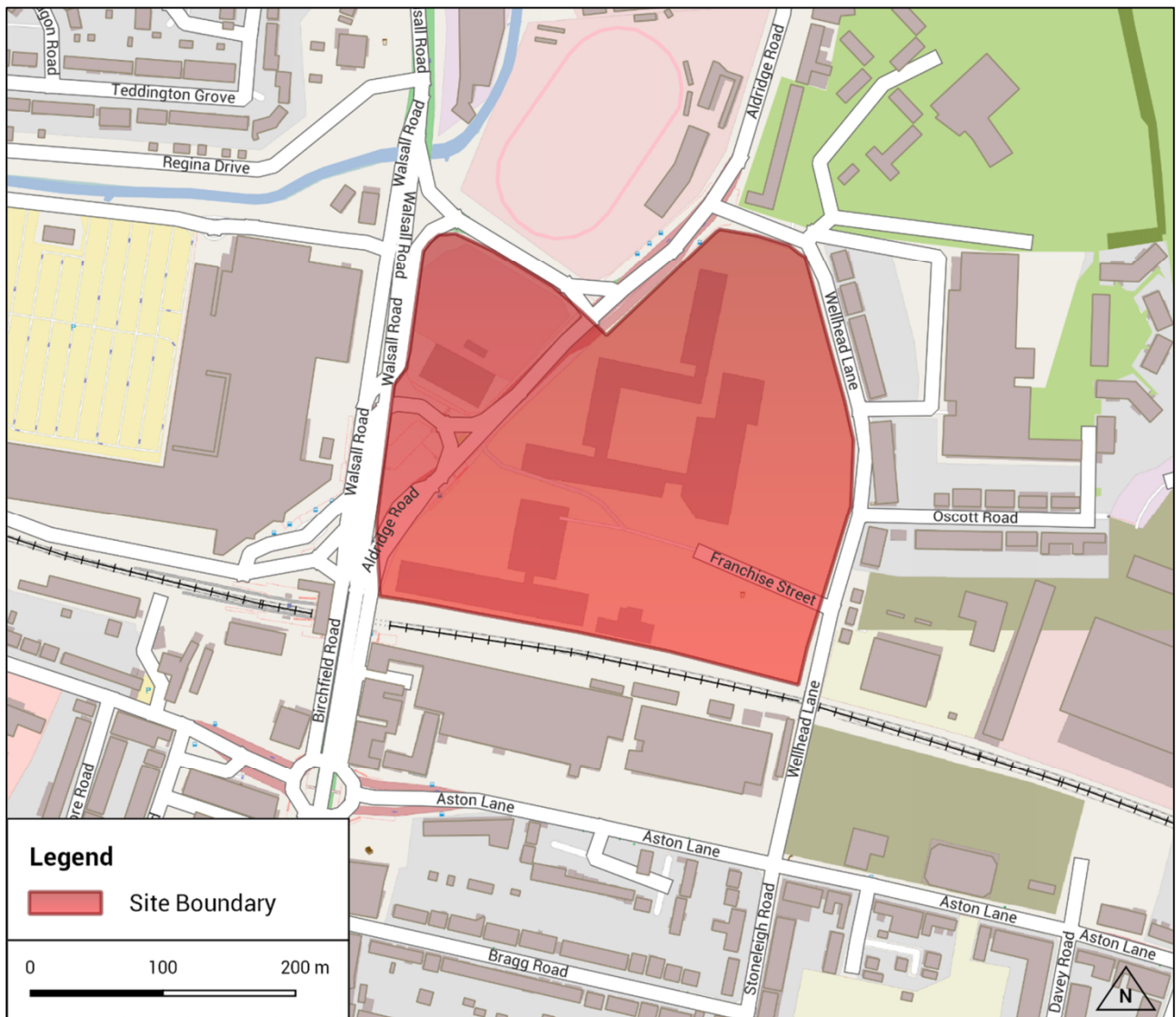
Wellhead Lane

- 3.3.1 Wellhead Lane is a single carriageway road circa 8m in width, which connects Aldridge Road with Aston Lane to the south of the railway line. It provides access to residential dwellings on Wellhead Lane and Oscott Road, Eden school, a bus depot and buildings associated with the former university including residential halls and a sports centre. The former university campus was also accessed off Wellhead Lane while operational.
- 3.3.2 On-street parking for the dwellings on Wellhead Lane is present on the eastern side of the carriageway, with double yellow lining in existence elsewhere to prohibit parking. All other land uses accessed via Wellhead Lane have off-street car parking.
- 3.3.3 Wellhead Lane joins Aldridge Road at its northern extent at a three-arm signalised junction, and Aston Road at its southern extent at a four-arm signalised junction.

A34 Gyratory

- 3.3.4 The interchange between the A34 (Walsall Road/ Birchfield Road) and A453 (Aldridge Road) currently forms a gyratory. All traffic movements use the gyratory with the exception of A34 through traffic which uses a flyover to bypass the junction.
- 3.3.5 Gailey Park forms the centre of the gyratory. The industrial units within Gailey Park are accessed off the northern link of the gyratory. Perry Barr Greyhound Stadium is located immediately to the north of the gyratory and accessed off Aldridge Road.

Figure 3-1: Site Location



Aldridge Road

- 3.3.6 Aldridge Road forms part of the gyratory and provides two lanes in each direction with an additional dedicated southbound bus lane. It is one-way (southbound) at the southern extent of the site. North of the site Aldridge Road continues towards Sutton Coldfield with two lanes in each direction and sections of dualling.

A34 Walsall Road

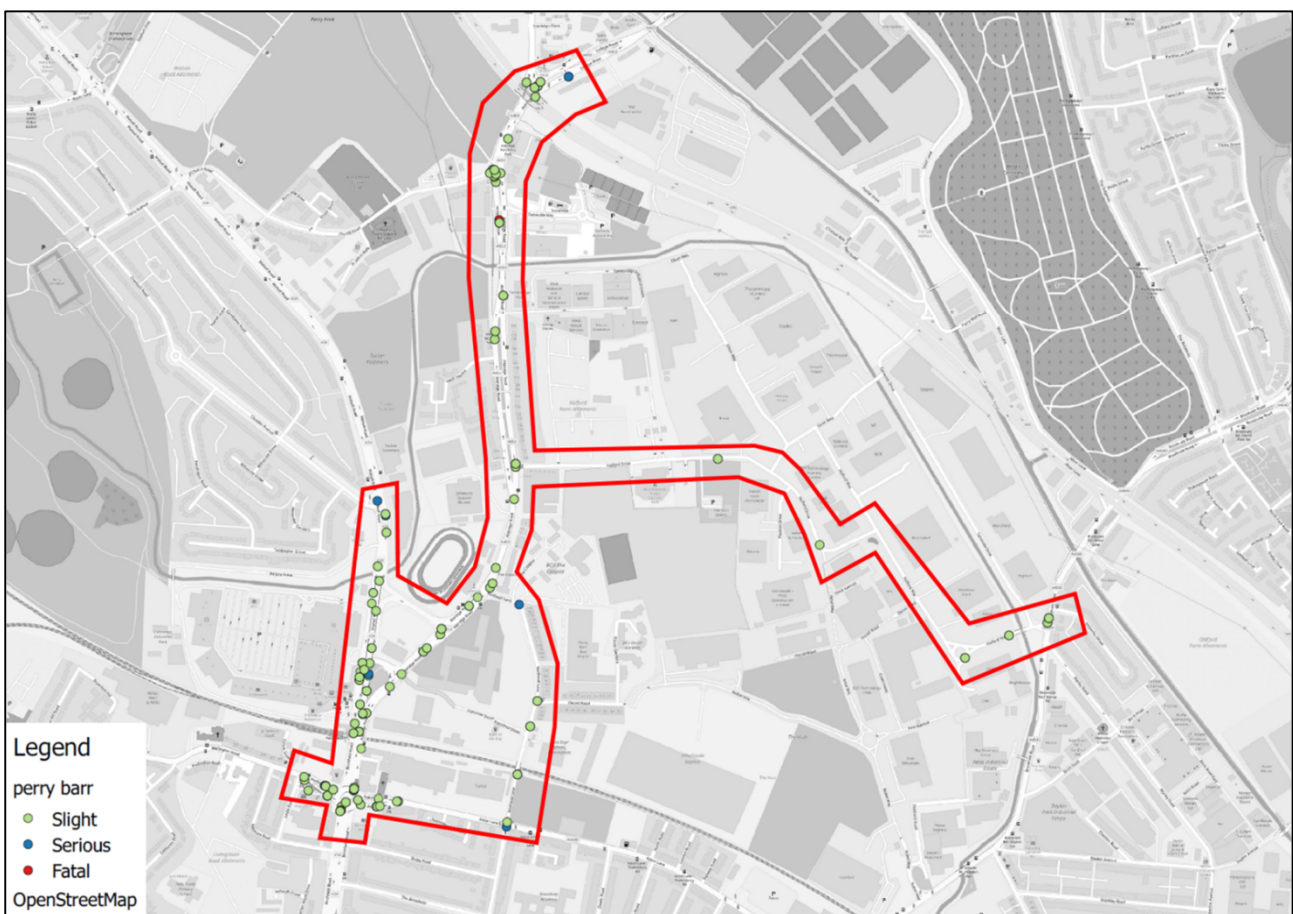
- 3.3.7 The A34 is a strategic route connecting the site with Birmingham Ring Road (A4540) and city centre to the south and M6 Junction 7 and Walsall to the north. It is predominantly a dual carriageway

with two lanes of traffic in each direction. South of the site there are a number of underpasses and flyovers to allow A34 through traffic to bypass junctions.

3.4 Highway Safety

3.4.1 In order to establish whether there are any safety concerns on the local highway network that could be exacerbated by travel demand associated with the proposed development, the highway safety of the existing network has been considered. To assess the current position, Personal Injury Collision (PIC) data for the most five-year period available (01/01/2013 – 14/12/2017) was obtained from Transport for West Midlands.

Figure 3-2: Personal Injury Collision Plan



3.4.2 The records indicate that there have been 113 collisions within the study area, of which 101 were slight, 11 serious and one fatal.

Table 3-1: Summary of PIC data

Road	Slight	Serious	Fatal	Total
A34 Birchfield Road	18	0	0	18
A435 Aldridge Road	29	2	1	32
A34 Walsall Road	18	4	0	22
A435 College Road	4	1	0	5
A4040 Aston Lane	8	0	0	8
A4040 Brookvale Road	2	0	0	2
A4040 Wellington Road	8	2	0	10
Motorway M6	1	0	0	1
Church Road	4	0	0	4
Gavin Way	1	0	0	1
Holford Drive	1	0	0	1
Holford Way	2	0	0	2
Leslie Road	1	0	0	1
Oscott Road	1	0	0	1
Stoneleigh Road	0	1	0	1
Wellhead Lane	3	1	0	4
	101	11	1	113

Wellhead Lane

- 3.4.3 A total of four collisions occurred on Wellhead Lane including one serious collision and three slight collisions. One of the slight collisions resulted in the injury of a pedestrian who was crossing during the pedestrian phase of the signals. The collisions had a variety of contributing factors including alcohol impairment, disobeying stop sign/ give way markings and other.

Wellhead Lane/Aston Lane signal junction

- 3.4.4 Two further slight collisions at the signalised crossroads between Wellhead Lane and Aston Lane. Both resulted in the casualty of a pedestrian during the pedestrian phase of the signals.

Wellhead Lane/Aldridge Road signal junction

- 3.4.5 Four collisions occurred at the signal junction between Wellhead Lane and Aldridge Road of which three were classified as slight and one serious. The main contributing factor was drivers failing to look properly including moving off into another vehicle, turning into a pedestrian and failure to stop/ slow suitably.



A34 Gyratory

- 3.4.6 There have been 35 collisions within the gyratory during the study period, which represents a significant proportion of collisions in the vicinity of the site. As part of the regeneration of the wider Perry Barr area the existing gyratory layout will be transformed, and a number of the existing junctions removed. Therefore, the collisions associated with this section of highway have not been considered further as part of this assessment.

Aldridge Road

- 3.4.7 A total of 30 collisions occurred on Aldridge Road between Wellhead Land and College Road. One collision within this corridor resulted in a fatal casualty, the only fatal casualty within the entire PIC study. This collision was a hit and run at the Aldridge Road signalised crossing north of Tameside Way and was a result of reckless driving.

Crown and Cushion Roundabout

- 3.4.8 A total of 28 collisions were recorded at the Crown and Cushion roundabout of which one was classified as serious and 27 as slight. Contributing factors included:
- Reckless driving;
 - Defective brakes;
 - Disobeying pedestrian crossing facilities;
 - Failure to look properly;
 - Following too close;
 - Exceeding speed limit;
 - Poor turning/ manoeuvring; and
 - Poor weather conditions.

Holford Drive

- 3.4.9 Six collisions occurred on Holford Drive/ Holford Way, all of which were slight. These were a result of various contributory factors including poor manoeuvring, defective brakes, reckless driving and weather conditions.

Summary

- 3.4.10 The collision analysis indicates that there is no underlying safety issue that could be exacerbated by the proposed development or on any of the surrounding highway network which are to be retained.

3.5 Sustainable Travel

3.5.1 Planning guidance highlights the emphasis being placed on the integration of land use, transport and planning decisions. Specifically, NPPF (2018) states that:

“Significant development should be focused on locations which are or can be made sustainable, through limiting the need to travel and offering a genuine choice of transport modes.”

3.5.2 In order to achieve good integration, developments should be encouraged in areas with good accessibility to local facilities, employment opportunities and public transport. This section demonstrates the amenities, employment and educational facilities that can be accessed from the site by sustainable modes, as well as describing the existing public transport, pedestrian and cycle connections.

3.5.3 Guidance provided by the Institution of Highways and Transportation (IHT) in their publication 'Guidelines for Providing for Journeys on Foot' (2000) suggests that in terms of commuting, walking to school and recreational journeys; walk distances of up to 2,000m can be considered as a preferred maximum, with 'desirable' and 'acceptable' distances being 500m and 1,000m, respectively. It should however be noted that journeys of a longer length are often undertaken.

3.5.4 For non-commuter journeys, the Guidance suggests that walk distance of up to 1,200m can be considered a preferred maximum, with the 'desirable' and 'acceptable' distances being 400m and 800m, respectively. Again, it should be noted that journeys of a longer length are often undertaken.

3.5.5 Assuming a typical walking speed of approximately 1.4m/s (as per IHT guidance), Table 3-2 summarises the broad walk journey times that can fall under each category.

Table 3-2: Walk Journey Distance and Time Thresholds

IHT Standard	Distance (m)		Walk Time (mins)	
	Commuting, Walking to School and Recreation	Other, non-commuter journeys	Commuting, Walking to School and Recreation	Other, non-commuter journeys
Desirable	500	400	6	5
Acceptable	1000	800	12	10
Preferred maximum	2000	1200	24	14

Access to Local Amenities

3.5.6 The Government's index of multiple deprivation statistics comprises four indicators of "Transport Inclusion". These indicators are defined as four essential types of facilities in which access is required. These comprise:



- Primary Schools;
- Health Centres;
- Convenience Stores; and
- Post Offices.

Table 3-3: Access to Local Amenities

Type	Description/Name	Distance from centre of site (km)	Approximate Walking Journey Time (mins)	Approximate Cycle Journey Time (mins)	IHT Standard
Health	Asda Pharmacy	0.3	4	1	Desirable
	Shanklin House Surgery, Aston Lane	0.7	8	3	Acceptable
	Perry Park Medical Centre, Dental and Pharmacy	1.3	15	5	-
Education	Canterbury Cross Primary	0.8	10	3	Acceptable
	Broadway Academy (Secondary)	0.6	7	2	Acceptable
	Eden Boys School (Secondary)	0.1	1	0	Desirable
	Yew Tree Community School	1.4	17	6	Preferred maximum
	Sacred Heart Catholic School	1.5	18	6	Preferred maximum
	Birchfield Community School	1.5	18	6	Preferred maximum
Retail	One Stop Shopping Centre	0.3	4	1	Desirable
	Tesco Superstore	1.0	12	4	Preferred maximum
	Birchfield Road convenience stores	0.8	10	3	Acceptable
Post Office	Perry Barr Post Office	0.8	10	3	Acceptable
	Witton Post Office	1.2	15	5	Preferred maximum

3.5.7 The One Stop shopping centre is a major facility directly to the west of the site (on the opposite side of the A34). It provides a range of retail uses including a supermarket, high street brands, independent stores and cafés.

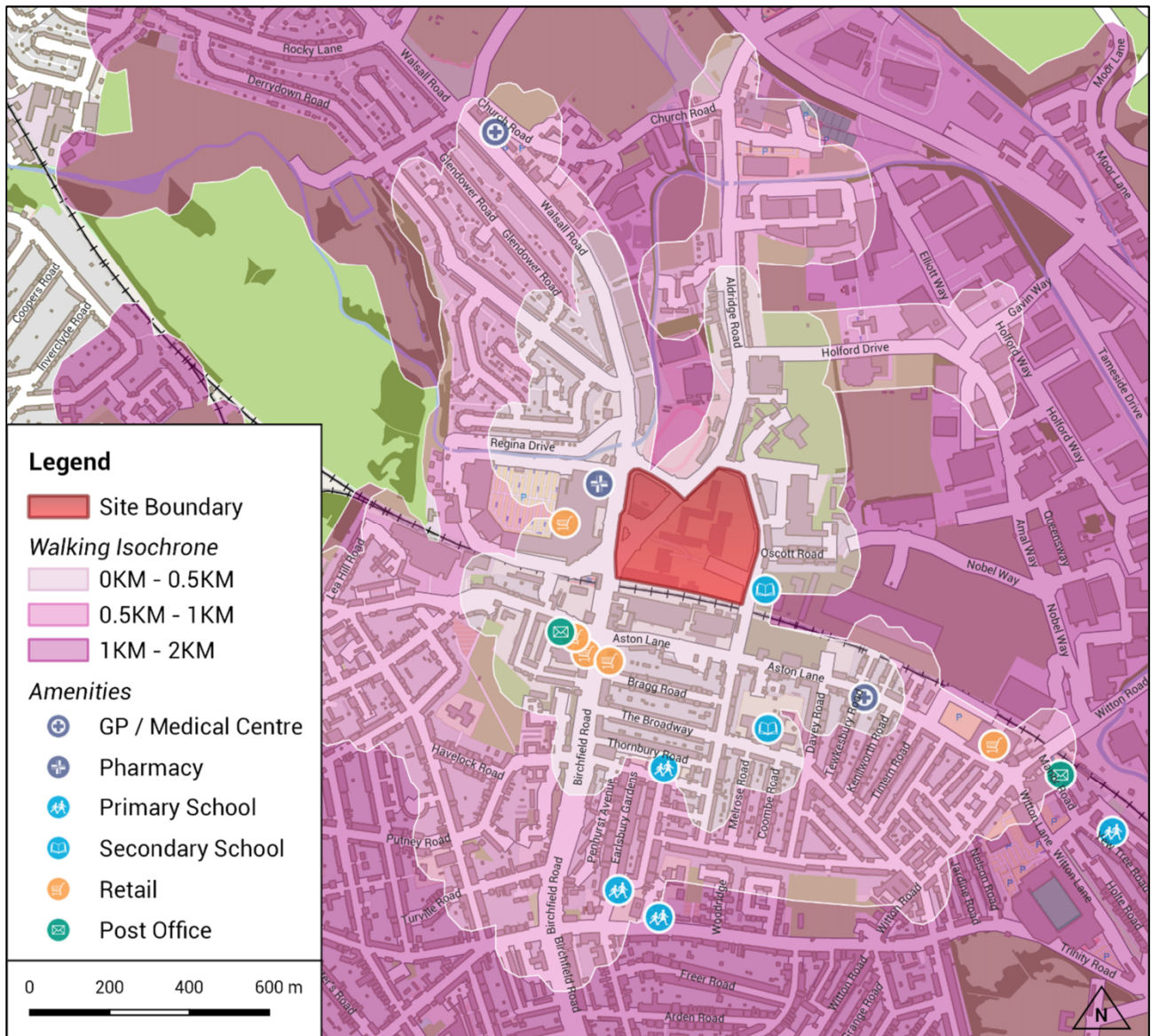
3.5.8 The site is within the preferred maximum walking distance for all four indicators of transport inclusion. Many facilities fall within the acceptable or desirable walking distance and with a choice of facilities available.

3.5.9 The AAP also sets out guidelines for accessibility within policy T1, which states:

‘Accessibility to services – residential developments should be within a 15-minute walk of a GP Surgery and local food shops, a 10-minute walk from a primary school and a 20-minute walk from a secondary school. Developments should also be within a 10-minute public transport journey from a local centre.’

3.5.10 The development is within the local guidelines for walking distances to schools, food shops and a GP surgery. It is also within a 10-minute walk of Perry Barr local centre and within 15-minute public transport journey of Birmingham City Centre which provides a significant number of amenities.

Figure 3-3: Amenities Location Plan





Bus

3.5.11 The closest bus stops to the site are within 400m and are located on:

- Aldridge Road;
- Birchfield Road (southbound);
- One Stop Interchange (northbound); and
- Aston Lane.

3.5.12 The services using these stops provide in excess of 20 buses per hour during weekdays, all on radial routes between the site, Birmingham City Centre, Walsall and Sutton Coldfield.

Table 3-4: Summary of Local Bus Services

Service number	Route	Daytime Frequency	Days of Operation
33	Birmingham - Newtown - Perry Barr - Kingstanding - Pheasey	Every 10 minutes	Monday – Sunday
46 & 46A	Birmingham - Lozells - Perry Barr	Every 15 minutes	Monday – Sunday
51	Birmingham - Newtown - Perry Barr - Great Barr, Scott Arms - Walsall	Every 10 minutes	Monday – Sunday
52 & 52A	Birmingham – Perry Barr - Perry Beeches	Every 30 minutes	Monday - Saturday
54 & 54A	Perry Barr, One Stop - Hamstead Village via Handsworth Wood	Every 30 minutes	Monday - Saturday
61	Handsworth – Perry Barr	Hourly	Monday - Saturday
68A & 68C	Perry Barr – Aston	Hourly	Monday - Saturday
886	Walsall - Great Barr, Scott Arms - Birmingham - King Edward VI High School, Edgbaston	School Service	Monday - Friday
888	Perry Beeches - Birchfield RD before Six Ways Aston	School Service	Monday - Friday
907 & 907A	Birmingham - Perry Barr - New Oscott - Sutton Coldfield	Every 20 minutes	Monday - Sunday
952	Birmingham - Perry Barr - Perry Beeches	Every 20 minutes	Monday - Sunday
934	Birmingham - Kingstanding - Pheasey - Walsall	Every 30 minutes	Monday - Sunday
935	Birmingham - Kingstanding - Streetly, Hardwick Arms - Walsall	Every 15 minutes	Monday - Saturday
937	Birmingham - Brownhills	Every 10 minutes	Monday - Sunday
997	Birmingham - Perry Barr - Pheasey - Aldridge - Walsall	Every 20 minutes	Monday - Sunday
Outer Circular 11(A/C)	Perry Barr - Bearwood - Cotteridge - Kings Heath - Acocks Green - Erdington - Perry Barr	Every 10 minutes	Monday - Sunday

Rail

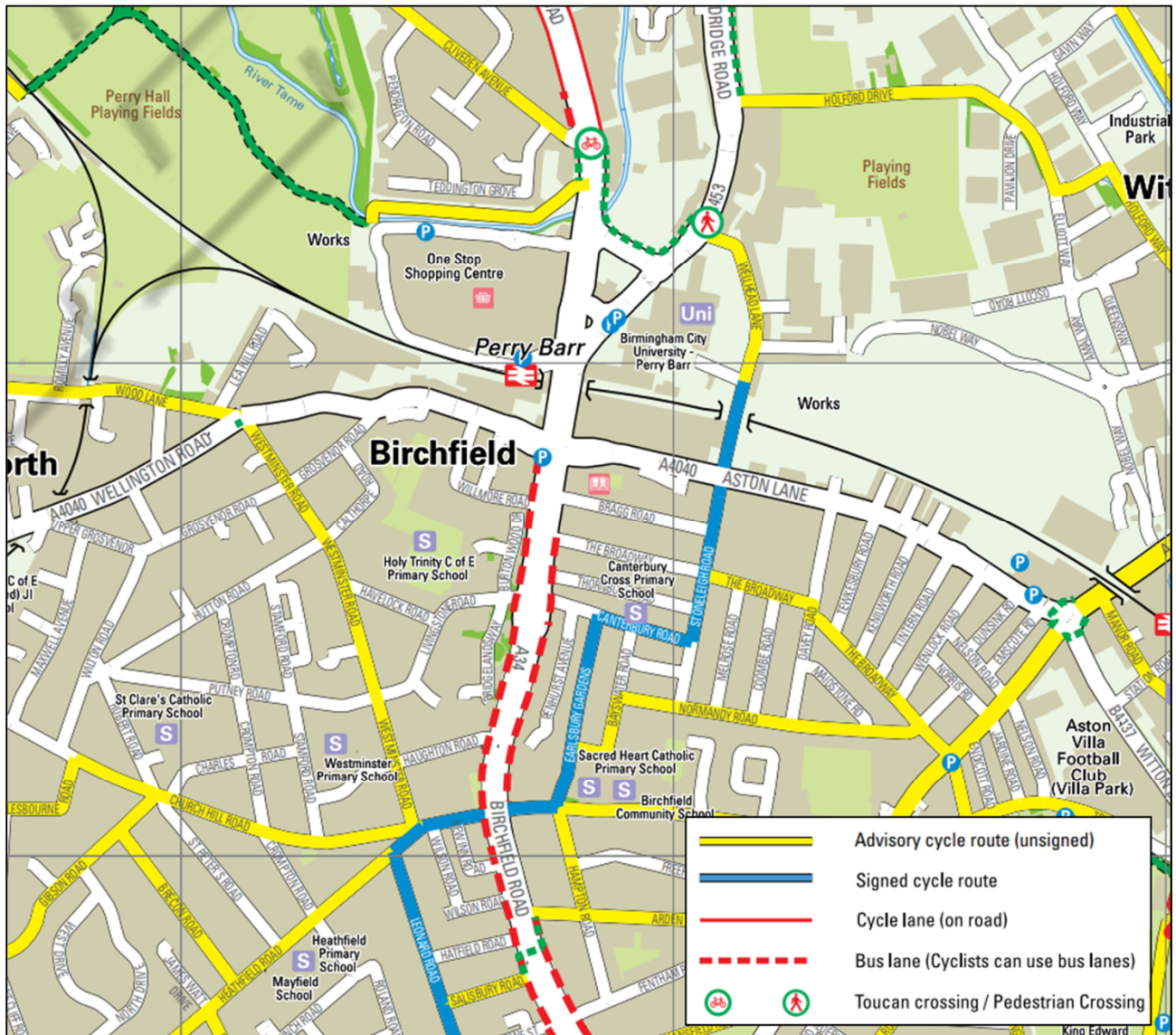
3.5.13 Perry Barr Station is served by a half hourly train between Walsall and Wolverhampton via Birmingham New Street and local stations. Journey times are under 15 minutes to both Birmingham New Street and Walsall.

- 3.5.14 Perry Barr Station is currently accessed via A34 Walsall Road 350m south west of the site. It is located immediately adjacent to One Stop bus interchange and together they provide the transport hub for the area.

Pedestrian and Cycle Connections

- 3.5.15 Footways are provided along Wellhead Lane and Aldridge Road including the gyratory. All footways are wide with street lighting provided. Signalised crossings are provided on the majority of pedestrian and cycle routes from the site including:
- Wellhead Lane to the north of Franchise Street;
 - Wellhead Lane/ Aldridge Road junction on the north and east arms;
 - Aldridge Road at both gyratory intersections allowing staged crossing on all routes;
 - Walsall Road to the north of One Stop and the transport interchange; and
 - Wellhead Lane/ Aston Lane crossroads.
- 3.5.16 However, it should be noted that a number of these pedestrian crossing, notably the Aldridge Road and Walsall Road crossings are convoluted in nature at present given the interaction with the gyratory junction and the associated severance. Pedestrians are required to cross at least four separate pedestrian crossings to move between the site and Perry Barr Station/One Stop shopping centre.
- 3.5.17 Figure 3-4 indicates the existing cycle infrastructure and recommended cycle route between the A34 at Heathfield Road and Wellhead Lane.

Figure 3-4: Amenities Location Plan



- 3.5.18 Wellhead Lane is promoted as a ‘cycle friendly street’ which typically have low traffic speeds and volumes. At Aston Lane it becomes a signed cycle route which connects with the A34 where bus lanes, suitable for cyclists, are provided.
- 3.5.19 As part of the Birmingham Cycle Revolution scheme, between Heathfield Road (circa 1km south of the site) and the city centre a segregated cycle route on the western side of the A34 will be provided. The route is being constructed in phases and the section to Heathfield Road is near completion. The city centre is approximately 5km south of the site, approximately a 20 minutes cycle.



3.5.20 The A34 north of the site also has cycle lanes or bus lanes on both sides of the carriageway however there are no existing cycle facilities within the gyratory.

3.6 Summary

3.6.1 The site is highly sustainable and the key points to note are:

- There are several bus stops adjacent to the site which provide in excess of 20 services per hour many of which serve Birmingham city centre;
- Perry Barr station is located 350m from the site and provides two trains per hour between Wolverhampton and Birmingham via Walsall;
- There is a large range of facilities and amenities within walking distance of the site including shops (most notably One Stop shopping centre), schools, post offices and healthcare provision;
- Footways are provided on all streets in the vicinity of the site with a series of signalised crossings on Wellhead Lane and at all major junctions;
- Cycle routes are provided in the local area along with a network of cycle friendly streets. A new segregated off- street route between Perry Barr and Birmingham city centre via the A34 as part of the Birmingham Cycle Revolution Scheme is soon to open; and
- There is no underlying highway safety concern that could be exacerbated by the proposed development.



4 Operation of BCU Campus

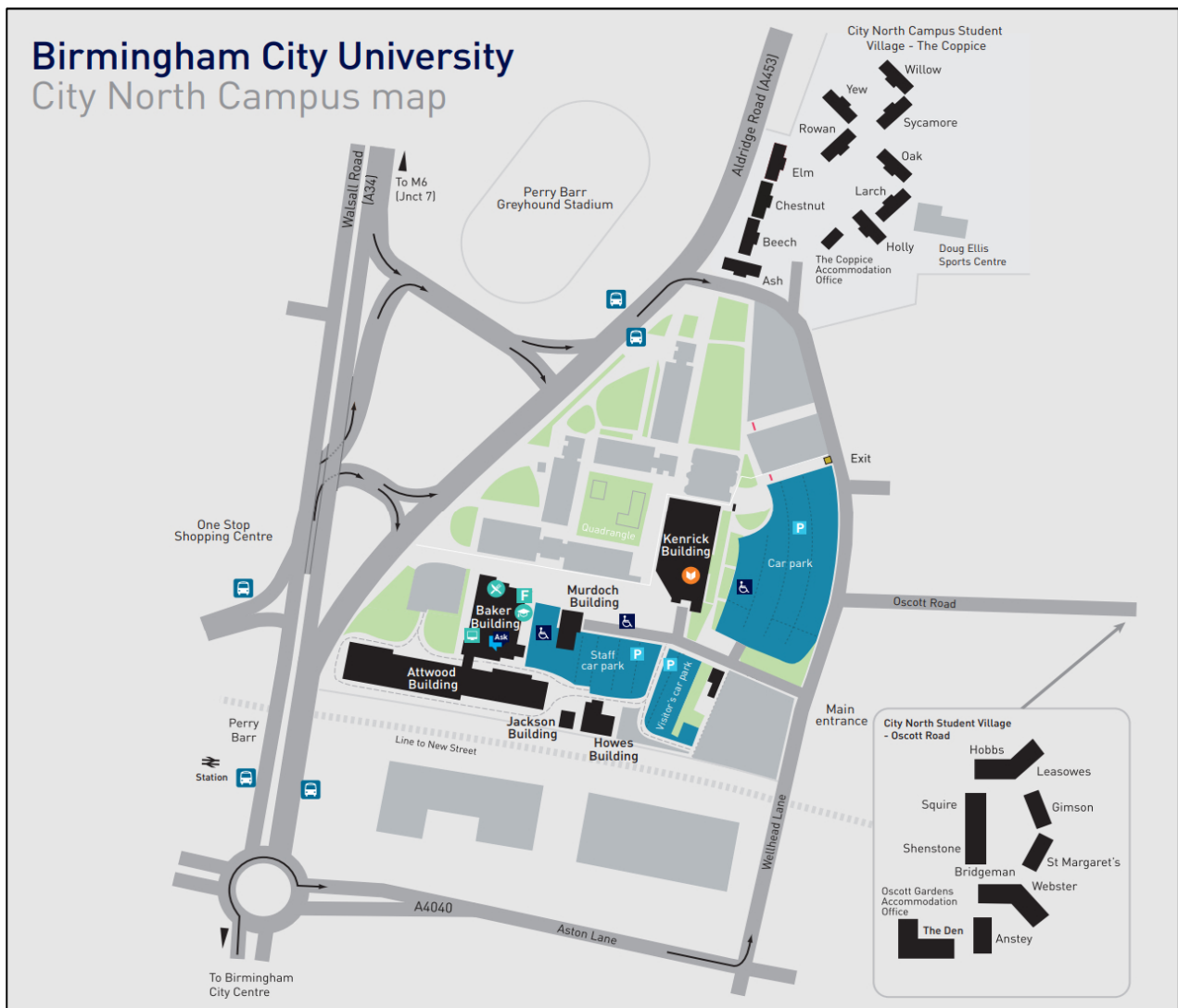
4.1 Introduction

4.1.1 This chapter sets out the details relating to the operation of the former Birmingham City University North Campus with regard to access, parking and travel demand.

4.2 Overview

4.2.1 The site is no longer operational as Birmingham City University North Campus and is currently undergoing partial demolition. Notwithstanding this, the following section summarises how the site operated as a university, to establish a baseline against which the current proposals can be considered.

Figure 4-1: Former Layout (BCU website extract)





4.3 Access

- 4.3.1 The primary access to the site was via Franchise Street. This access served the staff and visitor parking and also the servicing and deliveries for the site. Franchise Street is circa 7m in width with a raised median strip separating inbound and outbound traffic. Access to the campus was barrier controlled in both directions.
- 4.3.2 Access into the student car park was also via Franchise Street. Egress from this car park was directly onto Wellhead Lane north of the bus depot access. Again, these accesses were barrier controlled. When the site was fully operational there was an additional access on Wellhead Lane north of the bus depot.
- 4.3.3 Pedestrian access to the site was provided adjacent to the vehicular accesses with an additional pedestrian access onto Aldridge Lane which connects with Franchise Street. This route formed the only permeable connection through the site.

4.4 Parking

- 4.4.1 The site previously provided a number of surface car parks on site for staff, visitors and students. Based on the topographical survey and an average parking bay width of 2.5m the site provided approximately 815 parking bays. Additional informal parking also occurred on site when fully operational.
- 4.4.2 The parking for staff, visitors and students was segregated into different car parks with barrier controls directing people to the correct area.

4.5 Trip Envelope

- 4.5.1 In order to define the trip envelope for the site the extant trip generation has been calculated using a first principles approach.

First Principles Approach

- 4.5.2 A Travel Plan for the site was prepared by Mott MacDonald in January 2014, which set out the number of staff and pupils associated with the site at the end of 2013 and provides a detailed breakdown of travel behaviour.
- 4.5.3 At the Perry Barr campus the level of activity in 2013 was:
- 8,478 students;
 - 606 full-time staff; and
 - 516 part-time staff.



4.5.4 An assessment of existing travel demand has been calculated on the basis of the data presented in the Travel Plan. The numbers presented below do not consider the vehicle trips generated by the part-time staff, any servicing/deliveries, or any drop-offs.

4.5.5 In order to estimate the two-way trips in each peak, the split between arrival/departures from the TRICS data has been applied and this is summarised below.

Table 5-2: Trip Envelope – First Principles Approach (factored by TRICS)

	AM Peak 08:00-09:00		PM Peak 17:00-18:00	
	Arrivals	Departures	Arrivals	Departures
Students	566	Not known	Not known	184
Staff	217	Not known	Not known	162
Total	789	Est - 139	Est - 115	346

4.5.6 Adopting a first principles approach is considered to be appropriate as this directly relates to the site; on this basis the BCU North campus has a minimum trip envelope of 928 trips in the AM peak and 461 trips in the evening peak.

4.5.7 The first principles trip generation is consistent with the on-site parking of at least 815 spaces.

4.6 Existing Distribution

4.6.1 On-site observations were undertaken on 4th November 2014 in order to determine the volume and distribution of vehicle trips currently generated by the BCU campus.

Table 4-1: BCU Vehicle Demand (Car Parks Only)

	AM Peak			PM Peak		
	To/From North	To/From South	Total	To/From North	To/From South	Total
Inbound	138	239	377	25	43	68
Outbound	7	43	50	76	170	246
Two-Way	145	282	427	101	213	314

4.6.2 It should be noted that these flows did not represent the full vehicle demand associated with the site for two reasons:

- The campus was not operating at full capacity as a number of courses/functions have already relocated to the City Centre campus on Curzon Street; and
- The flows do not account for trips which are parking off-site on the surrounding streets.



4.7 Summary

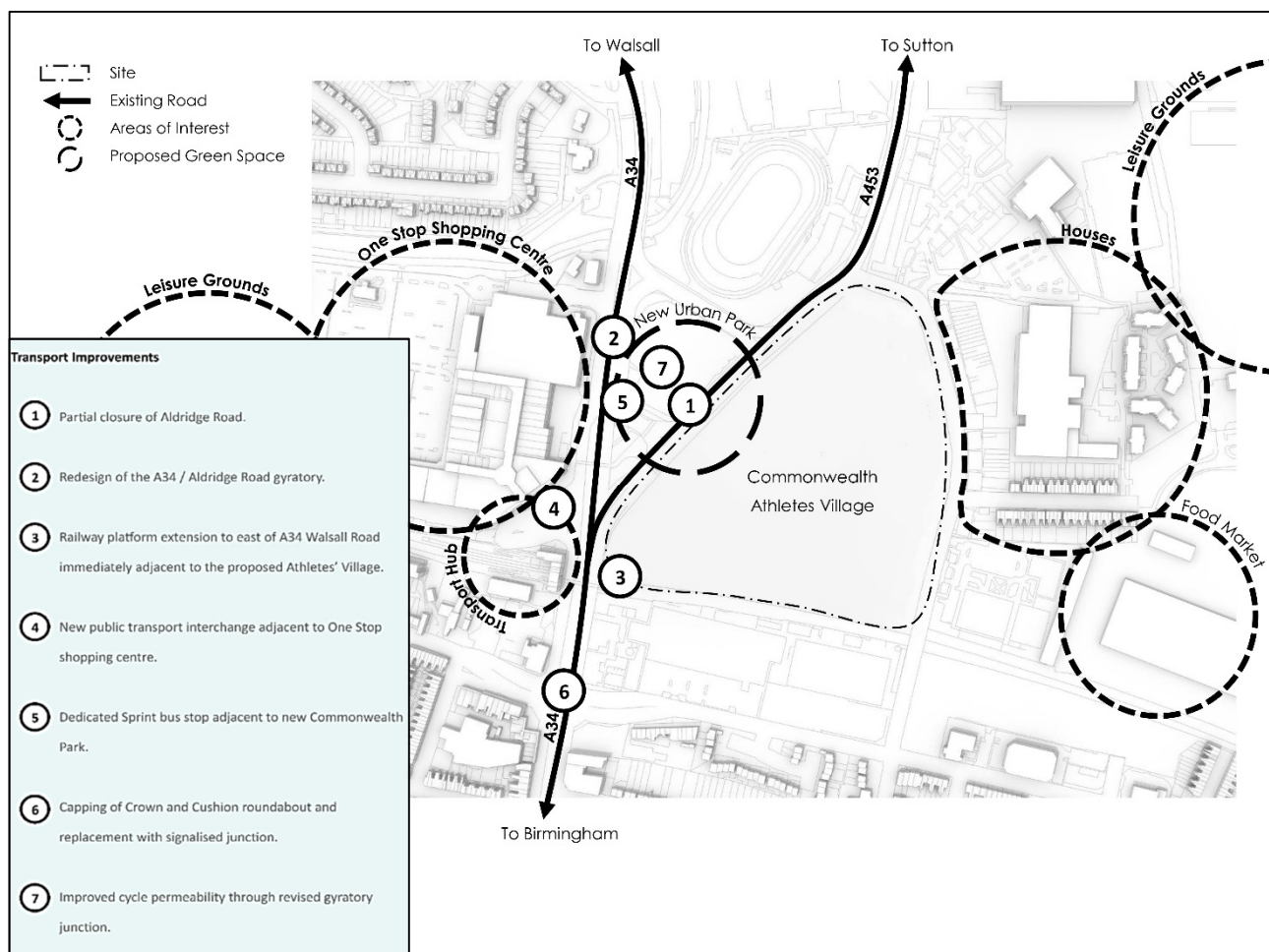
- 4.7.1 The BCU campus is no longer operational, however the site had a former travel demand of a minimum of 928 two-way trips in the AM peak and 461 in the PM peak when operational.
- 4.7.2 Access to the site was provided from Wellhead Lane with Franchise Street providing the primary access. There was a single pedestrian/ cycle route through the site connecting Franchise Street with Aldridge Road. There were approximately 815 parking spaces provided on site when fully operation.

5 Wider Perry Barr Regeneration

5.1 Introduction

- 5.1.1 This chapter sets out the planned strategic improvements for the Perry Barr area from a transport perspective, many of which are set out in the Aston, Newtown and Lozells Area Action Plan Transport Strategy.
- 5.1.2 The strategy seeks to provide a balanced multi-modal transport network to serve all land uses in a sustainable, efficient and effective way. It is anticipated that these improvements will come forward to improve the connectivity of the Perry Barr area. The wider regeneration expectations and how these integrate with the masterplan are summarised on Figure 5-1.
- 5.1.3 It should be noted that although the planned transport improvements would be of clear benefit, the site is already well located both in terms of access to amenities and public transport provision.

Figure 5-1: Perry Barr Regeneration





5.2 Gyratory Proposals

- 5.2.1 A significant highway improvement scheme is proposed in the Perry Barr local centre area comprising the junctions of Birchfield Road/ Wellington Road/ Aston Lane and Walsall Road/ Aldridge Road.
- 5.2.2 Reconfiguration of the gyratory will facilitate improvements of the public realm of the area along with improved rapid transit operations, a revised public transport interchange at Perry Barr, at grade crossings and the removal of subways.
- 5.2.3 The gyratory design (**Appendix B**), as prepared by AECOM on behalf of BCC, considers the needs of all modes of transport where possible, whilst also complementing the Athletes' Village masterplan. It includes:
- Partial closure of Aldridge Road and a redesign of the A34/Aldridge Road gyratory in order to reduce the junction footprint and the associated severance;
 - Direct and wide signalised pedestrian crossings over the A34 connecting the site with One Stop and public transport provision;
 - A34 crossing strategically located on the desire line of the main pedestrian route through the site;
 - All pedestrian crossings provided at level with the removal of pedestrian underpasses;
 - Continuous off-road cycle route from Aldridge Road to the south of the gyratory;
 - Continuous southbound bus lane through the junction; and
 - New bus stop (with layby) and Sprint stop on the western boundary of Gailey Park.

5.3 Pedestrian and Cycle Connectivity

- 5.3.1 The Athletes' Village and the wider area to the east is severed from One Stop shopping centre and Perry Barr Station by the A34, with pedestrian access via a series of staggered crossings. As part of the gyratory works, it is proposed to minimise severance by creating attractive, safe and convenient routes for pedestrians and cyclists. The preferred strategy would be in the form of direct at grade crossings on the desire line through the new gyratory layout.
- 5.3.2 One of the key elements of the Birmingham Cycle Revolution is to provide a high-quality cycle route from the city centre out to Sutton Coldfield. The first phase of the route is approaching completion and will provide a segregated cycle route along the A34 between the city centre and Heathfield Road circa 1km south of the Athletes' Village.



- 5.3.3 The next stage of this route is the section from Heathfield Road through Perry Barr towards Sutton Coldfield. The preferred alignment for the route would be to continue north along the A34, through the gyratory and onwards to Aldridge Road. There is an opportunity for this route to continue through the site allowing easy access to the route for residents.

5.4 Public Transport

- 5.4.1 A tender specification has recently been issued for the construction of a new railway station at Perry Barr. The railway station improvements will form the base for a high-quality interchange facility allowing easy transition between rail, bus, rapid transit and foot. It will provide improvement facilities for passengers and relocate the main entrance to face One Stop and bus interchange.
- 5.4.2 There is also an aspiration for a platform extension to the east of the A34. This would provide an access to the station on both sides of the A34 further reducing the severance and maximising rail connectivity with the proposed development.
- 5.4.3 A new Sprint bus interchange is proposed to replace the existing facility adjacent to the One Stop shopping centre. The current proposals have LEP funding, however this was designed prior to the award of the Commonwealth Games. Collaboration with the wider CWG team is therefore being undertaken to enhance this design and ensure that the facilities maximises the benefits of the proposed connections to the improved station and the crossing point over the A34.
- 5.4.4 Perry Barr is located on proposed Sprint Route 1 which extends to Walsall via Alexander Stadium and Scott Arms in the north and Curzon Street for HS2 in the city centre via Aston University. The main Sprint interchange will be located at Curzon Street to transfer between routes and connect with rail services.
- 5.4.5 The Sprint standards set out the minimum targets for all services, including Route 1 through Perry Barr:
- Daytime services at least every 10 minutes;
 - Early morning and late evening services at least every 20 minutes with regular 'clock face' spacing;
 - Stops approximately every 800m; and
 - Complementary to feeder services, ensuring a coordinated network.
- 5.4.6 Sprint interchanges are identified as being important to ensure that the network is fully integrated with other modes of transport. Interchange stops are in key locations to allow easy access to other public transport services. Where Sprint stops interface with cycle routes and networks opportunities to improve cycle infrastructure and storage will be considered as part of the stop design.



5.5 Local Area Developments

5.5.1 The regeneration of the area will also include a number of developments, particularly areas to the east of Wellhead Lane. Developments are likely to include:

- Pre-application discussions have taken place regarding the relocation of the existing bus depot. The relocation site is located between the railway line and Aston Lane, accessed via Wellhead Lane. It is anticipated this, and surrounding areas will be replaced with new residential areas; and
- Pre-application discussions are underway for Prince Albert School, a new school between Holford Drive and Aldridge Road. It is proposed to provide a secondary school (including sixth form) for 1,260 pupils with parking provided on site.

5.6 Summary

5.6.1 A number of proposals are identified for Perry Barr, which will benefit the area considerably. The wider regeneration package will offer significant improvements to existing and proposed users in terms of improved accessibility, sustainable travel and urban realm. The package includes:

- A new public transport interchange between Perry Barr Station and One Stop bus stops with excellent pedestrian access to the station and interchange between travel modes;
- A potential extension to the Perry Barr Station platform, to facilitate direct access from the east of the A34;
- A Sprint bus route on the A34 with associated bus stops adjacent to the site which will provide an improved service compared to standards bus routes. Benefits include improved journey times, improved reliability, high quality customer service and real time information at new stops and onboard;
- A fast and direct segregated cycle route as part of Birmingham Cycle Revolution between Birmingham city centre and Sutton Coldfield via Perry Barr;
- A high quality at grade pedestrian route between the site, One Stop and the transport interchange. The high capacity crossings will replace the existing outdated underpasses; and
- Benefits from the redevelopment of a number of existing/brownfield sites in the vicinity.



6 Development Proposals

6.1 Introduction

- 6.1.1 This chapter sets out the development proposals including the proposed development schedule, points of access (vehicular and pedestrian), parking and internal layout.

6.2 Overview

- 6.2.1 The development proposals are for 1,424 dwellings comprising:

- 1,087 one and two bed apartments;
- 69 two, three and four-bedroom town houses;
- A 268-bed extra care facility including:
 - Restaurant;
 - Village hall;
 - Gym;
 - Shops; and
- Commercial space totalling circa 1,400m².

6.3 Access

Wellhead Lane

- 6.3.1 Vehicular access to the main site will be in two principle locations, both of which will be suitable for two-way traffic:
- Wellhead Lane Southern Access – priority junction (existing Franchise Street); and
 - Wellhead Lane Northern Access – mini-roundabout (opposite existing bus depot).
- 6.3.2 The southern access will be located where the existing Franchise Street access enters to the site. The carriageway will be treated to bring it up to an exemplar standard which will include removal of the raised central strip. Upgrading the existing access will allow the urban realm to be improved while retaining the existing trees along the carriageway. A stopping sight distance of 2.4 x 47m has been provided based on a wet weather speed of 30mph in accordance with the posted speed limit and Manual for Streets. The access drawing demonstrates that this visibility can be achieved.
- 6.3.3 The northern access will form a mini roundabout between Wellhead Lane, the bus depot access (to the east) and the site (to the west). The geometry of the existing arms will remain comparable to

the existing priority layout. Swept path analysis of the junction has been undertaken which indicates that buses can access the depot and suitable servicing and delivery vehicles can access the site. A visibility of 2.4 x 25m has been provided in accordance with DMRB TD54/07 Table 6/1 and a design speed of 20mph.

- 6.3.4 Details of the form and layout of the two Wellhead Lane accesses are provided in drawings CWG_AV-SW-TR-DR-0010 and 0011, contained within **Appendix C**. All accesses have been designed in accordance with the relevant standards and are deliverable wholly within land within control of the applicant and highway land.
- 6.3.5 In addition to the main accesses, the parking within Plot 2 will be accessed directly off Wellhead Lane in the form of a footway crossover. The podium will provide circa 30 parking spaces and therefore will have a limited trip generation.
- 6.3.6 Pedestrian accesses will be provided adjacent to the vehicular access and along Wellhead Lane and Aldridge Road. The permeability of the site will be further discussed in Section 8 of this report.

Figure 6-1: Access Strategy





Gyratory

- 6.3.7 A third separate access will take the form a left in/ left out simple priority junction as part of the gyratory works. It will serve Gailey Park only, a limited parcel of the development serving a circa 60 spaces within Plot 10's parking podium. There will be no vehicular connection to the rest of the site.
- 6.3.8 The proposed gyratory scheme incorporates the left in/left out access (**Appendix B**). A stopping sight distance of 2.4 x 43m has been provided in accordance with the posted speed limit of 30mph and Manual for Streets. The access drawing demonstrates that this visibility can be achieved.

6.4 Parking Provision

- 6.4.1 The development has been designed as an exemplar development focusing on sustainability. In accordance with this, the site will be a low car development with controlled parking provision. It will provide:
- 90-100% parking provision for townhouses;
 - 20-25% parking provision for the apartment blocks; and
 - 20-25% parking provision for the Extra Care facility.
- 6.4.2 Chapter 7 of this report sets out further details on parking policy and management strategy.
- 6.4.3 Parking for the townhouses will be provided near to each plot within parking bays, driveways or garages dependant on the plot. Parking for the apartment buildings and Extra Care will be within parking courts associated with each block. The internal road layout has been designed such that informal on-street parking will not be available.

Cycle Parking

- 6.4.4 BCC's Car Parking Guidelines Supplementary Planning Document (February 2012) set out the following standard for cycle provision:
- A minimum of one space per unit (for flats and apartments)
- 6.4.5 The development will provide at least one cycle parking space per dwelling. Suitable short stay and long stay cycle parking will be provided in secure and convenient locations across the site.

Ultra-Low Emission Vehicle (ULEV) Charging

- 6.4.6 Policy TP43 within the Birmingham Development Plan 2031 states, proposals for Low Emission Vehicles will be supported by ensuring that new development include adequate provision for

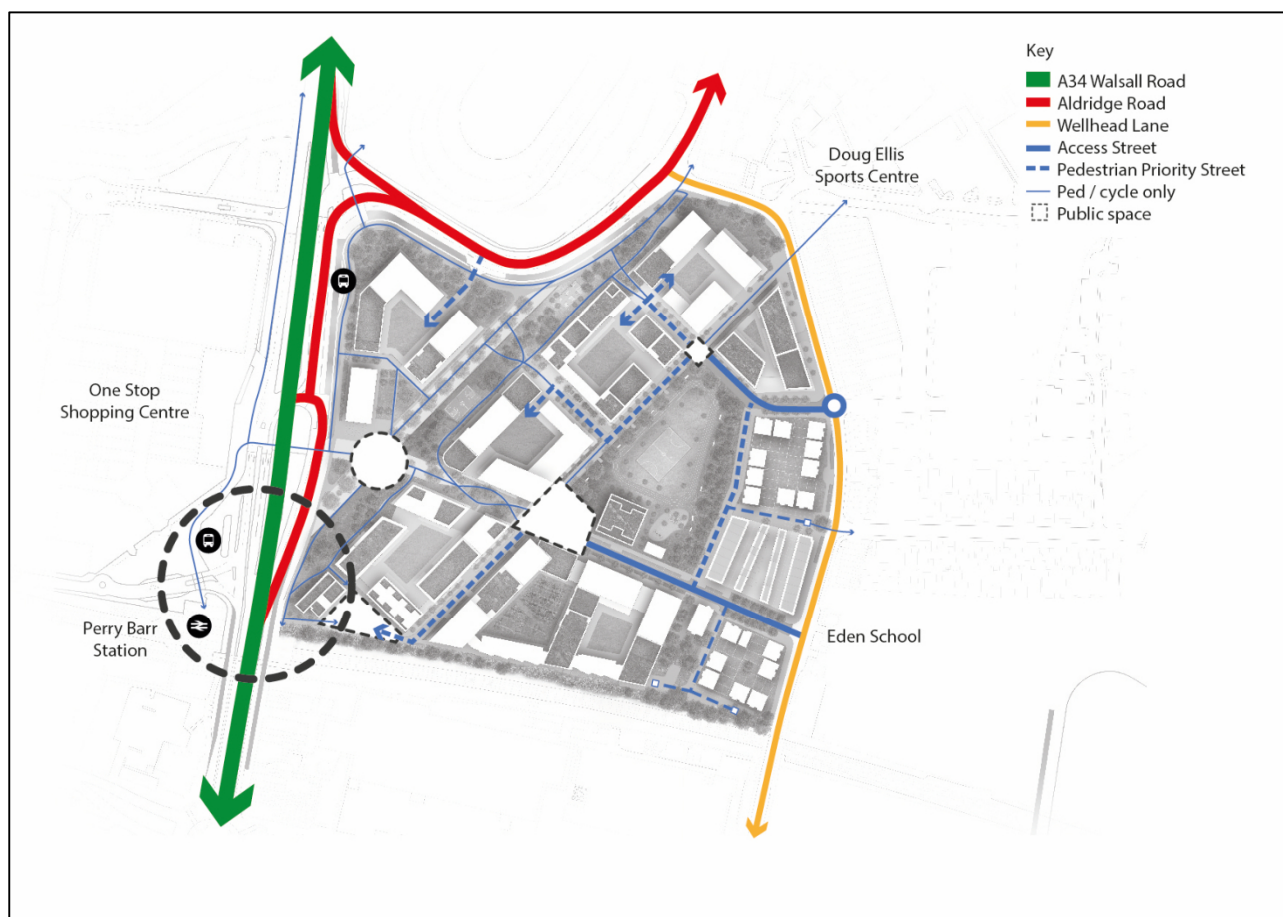
charging infrastructure e.g. electric vehicle charging points in car parks, measures to encourage LEV use through Travel Plans and other such initiatives.

- 6.4.7 As part of the development proposals, 20% of the allocated car parking spaces in the development will be supplied with charging points for ULEVs.

6.5 Internal Layout

- 6.5.1 The street sections throughout the development have been designed with a focus on creating places and minimising the impact of cars. Figure 6-2 indicates the key vehicular and pedestrian movements through the site and connections into the wider area.

Figure 6-2: Street Hierarchy



6.6 Summary

- 6.6.1 The development of the masterplan has been design-led with a focus on sustainable transport opportunities. It fulfils the aspirations of local policy to:

- Maximise the opportunities for sustainable travel;



- Create a highly permeable layout; and
- Minimise the impact of cars – both internally and on the surrounding highway network.

7 Parking

7.1 Introduction

7.1.1 This chapter sets out in detail how car parking within the site will be designed and managed:

- Parking guidance and policy;
- Parking provision;
- Justification for parking provision; and
- The parking management strategy.

7.2 Car Parking Policy

BCC Car Parking Guidelines – Supplementary Planning Document (February 2012)

7.2.1 BCC's Car Parking Guidelines are the adopted parking policy for the area, which identify the site as being located in 'Area 2' as it is within a 500m radius of a suburban rail station and centre with good public transport provision.

7.2.2 With regard to residential developments (Use class C3), the SPD sets out a maximum standard for 'Area 2' of 1.5 spaces per dwelling. This is the standard which BCC will seek to achieve across the area as a whole. The level of parking provision appropriate to any individual proposal will be assessed in light of this standard, but will also consider the circumstances of the particular scheme including in particular:

- The size of dwellings proposed;
- The proximity of facilities such as schools, shops or employment areas;
- The availability of on-street and off-street public car parking in the area;
- The width of the highway and its capacity for safe on-street parking in front of dwellings;
- The likelihood that any existing on-street parking problems will be exacerbated or add to congestion; and
- The availability of public transport provision and desire to achieve wider sustainability objectives.



7.3 Parking Provision

7.3.1 The development is located in a highly sustainable location and therefore considered to be in a prime location to provide an exemplar 'low-car' development in line with policy. The development will provide:

- 90-100% parking provision for townhouses;
- 20-25% parking provision for apartment blocks; and
- 20-25% parking provision for the Extra Care facility.

7.4 Parking Justification

Site Context

7.4.1 As identified in the review of baseline conditions, the site is in a highly sustainable location with good access to local facilities and opportunities to travel by sustainable modes. There are also significant regeneration plans for the wider Perry Barr area, which will further improve the sustainability of the site. The key opportunities for travel by modes other than private car are:

- A new public transport interchange between Perry Barr Station and One Stop bus stops with improved station access;
- A potential extension to the Perry Barr Station platform, to facilitate direct access from the east of the A34;
- A Sprint bus route on the A34 with associated bus stops;
- A segregated cycle route as part of Birmingham Cycle Revolution between Birmingham city centre and Sutton Coldfield via Perry Barr;
- A high quality at grade pedestrian route between the site, One Stop and the transport interchange; and
- A large range of facilities within a desirable walking distance of the site.

Policy Reduction

7.4.2 Within the policy set out in Movement for Growth there is an aspiration to reduce car mode share from 63% to between 35% and 45%.

7.4.3 The development is in a prime location to set a precedent for reducing the use of cars within the West Midlands and is therefore considered to be an exemplar site where such policies are implemented.

Extra Care Parking Demand

- 7.4.4 The Extra Care aspect of the development will have a bespoke end user. The parking requirements will therefore be dependent on the operator. The operator will agree to manage the parking demand in line with the dedicated Extra Care provision.

7.5 Parking Management

Travel Plan

- 7.5.1 A Travel Plan (TP) has also been produced alongside this report which will provide a long-term management strategy for the site aiming to minimise travel to the site by single-occupancy car trips. Principally, the TP aims to increase modal choice through the implementation of a package of measures and initiatives.
- 7.5.2 The initiatives proposed in the TP are considered to reflect the nature of the scheme as a flagship project for the city of Birmingham that requires excellence in sustainable transport. The initiatives include, but are not limited to:
- Transport Stakeholders Group;
 - ‘Whim’ travel cards;
 - Encourage Home Working;
 - Local Recruitment Strategy;
 - Walking Information / Promotion;
 - On-Line Interactive Walking Map;
 - Footpath Condition Monitoring;
 - Walkers Community Group;
 - Cycle Information / Promotion;
 - Bike-share information / nearby station;
 - Bicycle Community Group;
 - Bicycle Maintenance (‘Doctor Bike’ station / e-forum);
 - Public Transport Information;
 - Promotion of Smartphone apps;
 - Site-Specific Car Share Group;
 - Car Club Information / Promotion;
 - Provision of Car Club Spaces;



- Promotion of travel plan measures on site-wide website;
- Promotion of measures on site-specific social media groups; and
- Welcome Packs.

Parking Management and Monitoring

- 7.5.3 All parking within the site will have clear markings to indicate whether it is dedicated to a specific property/ land use or available to visitors. There will also be dedicated parking for car club vehicles. Where an apartment does not have a designated parking bay there will be a condition within the deed or lease agreement for the property preventing the occupant from bringing a vehicle on site.
- 7.5.4 Parking within the site will be limited by the design of the internal layout which will deter on street parking outside of dedicated bays.
- 7.5.5 Parking within the site will be controlled by a management company enforcing parking notices for inappropriate parking, or parking in breach of the deed/ lease agreement. Parking will be monitored primarily by Automatic Number Plate Recognition (ANPR) cameras given that barriers are not conducive for a masterplan focused on public realm and permeability.

Existing Residents Parking

- 7.5.6 As part of the parking strategy the applicant is willing to fund the consultation and implementation of a resident parking scheme for existing residents of Wellhead Lane and Oscott Road.

7.6 Summary

- 7.6.1 The parking provision associated with the development is summarised as follows:
- 100% cycle parking provision for all dwellings;
 - 90-100% parking provision for townhouses; and
 - 20-25% car parking provision for apartments and Extra Care.
- 7.6.2 The parking provision is considered appropriate for the following reasons:
- The opportunities for sustainable travel to/from the site are excellent, and will be improved further with a number of enhancements to the Perry Barr area;
 - The site is ideally located to provide an exemplar site for mode share;
 - The design has the potential to fulfil the aspirations of local policy; and
 - There is a strong Travel Plan which provides hard and soft measures promoting sustainable travel.

8 Integrated Transport Strategy

8.1 Introduction

8.1.1 The masterplan for the site has been developed with consideration of the key transport opportunities in the wider Perry Barr area. Although the wider regeneration does not form part of the site, the masterplan has been designed such that it does not preclude the potential benefits and opportunities for existing and future residents of the area.

8.2 Pedestrian and Cycle Connectivity

8.2.1 As illustrated in Figures 6-1 and 6-2, the layout of the site has been designed to maximise pedestrian/cycle connectivity and to ensure the site is permeable. All key routes will be open to new residents and the public:

- A key east-west route is provided along the retained Franchise Street alignment connecting with Wellhead Lane to the east;
- A new north-south route is created through a new linear park on the alignment of the closed section of A453 Aldridge Road;
- A new north-south connection is provided to the west of the central public open space connecting with the new public space in the south-western corner of the site known as 'Station Square' and Wellhead Lane to the north;
- A new route is provided to the western edge of the site adjacent to the re-aligned gyratory.
- In addition, a network of small pedestrian and cycle routes will be provided throughout the site providing connections with individual parcels and development plots.

8.2.2 The former BCU site was predominantly private and therefore routes through the site, particularly those open to the public, have previously been limited. All the proposed routes through the site will be accessible to the public and therefore benefit surrounding land uses and all residents.

8.3 Public Transport Connectivity

8.3.1 As the site is adjacent to a range of high quality existing and proposed transport links, the public transport strategy for the site will focus on not precluding opportunities and improving the walking provision to access these. The key walking routes set out above have been strategically designed on the key desire lines to the public transport interchange and Sprint stop.

8.3.2 The masterplan also incorporates squares where public transport facilities directly front the site. A transport square is provided adjacent to the A34 where the Sprint bus stop will be located. A further

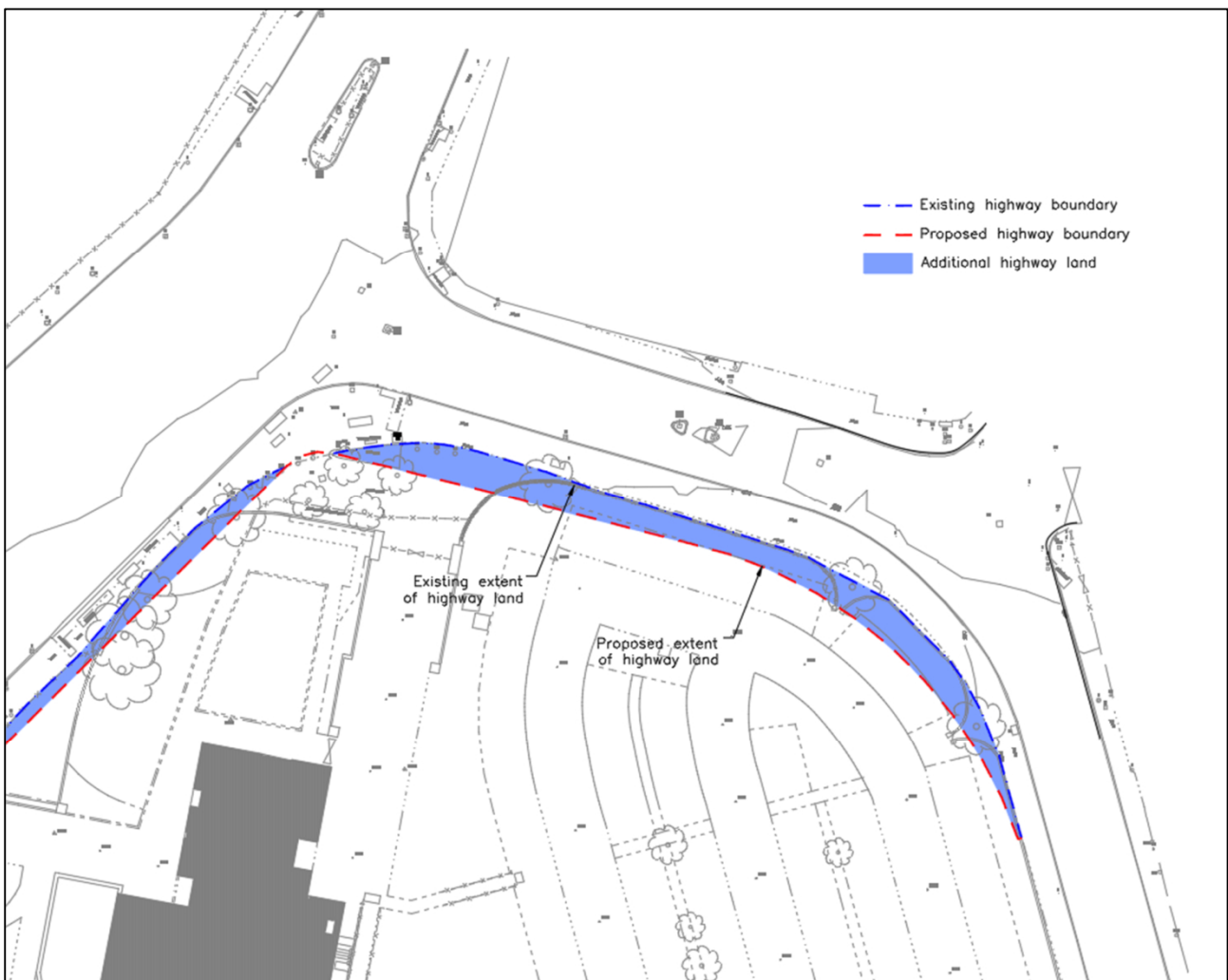
square will be provided on the southern boundary of the site where there is potential for a second access to Perry Barr station east of the A34 following a platform extension.

8.4 Highways

8.4.1 The development will produce minimal traffic compared to the previous use (as further detailed in Section 9) and therefore no highways mitigation will be required.

8.4.2 Notwithstanding this, land has been removed from the site and will be dedicated as highway at the as shown in Figure 8-1 (adjacent to the Wellhead Lane/Aldridge Road junction). This will provide BCC with the flexibility to incorporate potential improvements to pedestrian/cycle links and/or increase the highway capacity for trips associated with the wider regeneration of the Perry Barr area.

Figure 8-1: Proposed Highway Boundary



8.5 Summary

- 8.5.1 The transport strategy for the site focuses on integrating the site with existing and proposed sustainable travel opportunities immediately adjacent to the site.
- 8.5.2 The masterplan increases permeability of the site allowing pedestrians and cyclists to travel through the site to access amenities and public transport provision.



9 Travel Demand

9.1 Introduction

9.1.1 This chapter provides a summary of the travel demand calculations that have been used to determine the highway impact of the development proposals.

9.2 Trip Generation

9.2.1 Within the TRICS database there are only a small number of sites with a parking provision of less than one space per dwelling and no sites which have a comparable provision. As the development will be a 'low-car' site a typical trip rate for a housing development would significantly over estimate the trips associated with the site. Therefore, trip rates for the development have been calculated on a per parking space basis, rather than per dwelling.

9.2.2 Following best practice guidance, trip rates for the development have been estimated using TRICS for the AM peak hour of 08:00-09:00 and the PM peak hour of 17:00-18:00 using the most comparable sites available. The following selection criteria has been used:

- Land Use 03/A – Privately owned housing;
- Excluding sites in Ireland;
- Sites between over 50 dwellings;
- Monday to Friday Surveys; and
- Excluding Free Standing, Edge of Town and Town Centre locations.

9.2.3 Based on the sites selected, the average trip rate per parking space was calculated as summarised in Table 9-1, full TRICS outputs are provided in **Appendix D**.

Table 9-1: Proposed Vehicular Trip Rates

Trip Rate (per parking space)	AM Peak (08:00-09:00)			PM Peak (17:00-18:00)		
	Arrival	Departure	Two-Way	Arrival	Departure	Two-Way
Vehicular	0.053	0.158	0.211	0.143	0.082	0.226

9.2.4 A trip generation for the site has been calculated based on 398 parking spaces in both the AM and PM peak. The trip generation compared with the site trip envelope is summarised in Table 9-2.

Table 9-2: Vehicular Trip Generation

	AM Peak (08:00-09:00)			PM Peak (17:00-18:00)		
	Arrivals	Departures	Two-Way	Arrivals	Departures	Two-Way
Proposed Trip Generation	21	63	84	57	33	90
Site Trip Envelope	789	139	928	115	346	461
Net Trip Generation	-768	-76	-844	-58	-313	-371

9.2.5 The trip generation indicates there will be circa 90 two-way trips during each peak hour for the residential development. This is equivalent to approximately three two-way trip every two minutes. Based on the trip envelope for the site the proposed development will provide a significant reduction in total peak hour vehicular trips. The most significant trip generation improvement will be AM with 768 fewer arrivals.

85th Percentile Trip Generation

9.2.6 At the request of BCC, 85th percentile trip rates have also been calculated. These have been based on the same selection criteria as the proposed trip rates and included within Table 9-3 for information.

Table 9-3: 85th Percentile Vehicular Trip Generation

	AM Peak (08:00-09:00)			PM Peak (17:00-18:00)		
	Arrivals	Departures	Two-Way	Arrivals	Departures	Two-Way
85 th Trip Rate (per parking space)	0.154	0.244	0.398	0.249	0.159	0.408
85 th Percentile Trip Generation	61	97	159	99	63	162
Site Trip Envelope	789	139	928	115	346	461
Net Trip Generation (85 th percentile)	-728	-42	-769	-16	-283	-299

9.2.7 As a sensitivity test, the 85th percentile trip generation has also been calculated. The arrivals and departures calculated in each peak are within the trip envelope for the site.

9.3 Trip Distribution and Assignment

9.3.1 The distribution of development traffic has been based on 2011 Census Journey to Work data for the Middle Layer Super Output Area (MSOA) in which the site is located (Birmingham 033).

9.3.2 The workplace MSOAs with more than two trips were extracted and traffic assigned from Wellhead Lane to the centre of each MSOA:

- 51% of journeys use the A34 southbound to central and south Birmingham;
- 7% travel north on the A34 to Walsall, Wolverhampton and the M6 northbound;
- 27% of trips use Aston Lane eastbound towards Erdington, Aston and M6 southbound;
- 10% use Aston Lane westbound to Handsworth, Smethwick, West Bromwich and the M5; and



- 5% of trips use Aldridge Road northbound towards Kingstanding and Sutton Coldfield.

Figure 9-1: Journey to Work Distribution

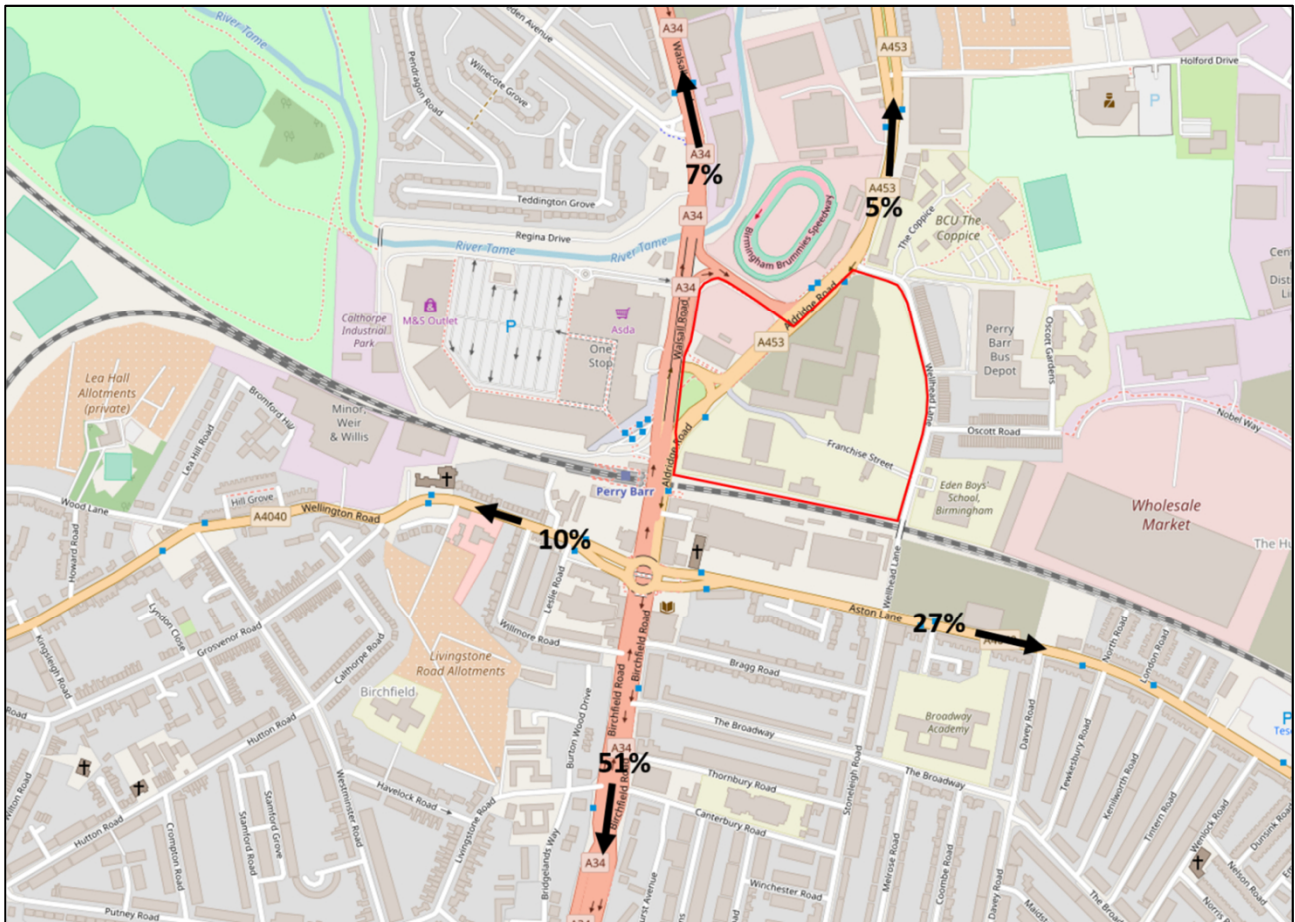


Table 9-4: Trip Generation per Route

Route	AM Peak (08:00-09:00)			AM Peak (08:00-09:00)		
	Arrivals	Departures	Two Way	Arrivals	Departures	Two Way
A34 South	11	32	43	29	17	45
A34 North	2	5	6	4	2	6
Aston Lane East	6	17	23	16	9	24
Aston Lane West	2	6	8	5	3	9
Aldridge Road North	1	3	5	3	2	5

9.3.3 Table 9-4 indicates that beyond Wellhead Lane and the gyratory, the trips will disperse across the highway network and the impact of the development would not be significant across the wider network.

9.4 Non-residential trip generation

- 9.4.1 The residential trip generation has been calculated to include Extra Care 'dwellings'. Whilst it is appreciated that trip generation for extra care facilities will marginally vary from a typical residential site the effect on overall trip generation will not be significant.
- 9.4.2 The commercial units on site are aimed at serving residents of the site and the immediate local area. The retail units will have no parking associated with them and hence will not encourage travel by private car. Therefore, it has been assumed there is no significant additional trip generation associated with this land use.

9.5 Summary

- 9.5.1 The development will generate approximately 90 two-way trips in each peak hour. The development impact is therefore significantly less than when the site was operating as a university campus.



I0 Traffic Impact Assessment

I0.1 Overview

- 10.1.1 This chapter of the report sets out the assessment methodology and the results of the junction capacity assessments.

I0.2 Geographical Scope of Assessment

- 10.2.1 Junction assessments have been undertaken for the site access points and the junctions at the northern and southern extent of Wellhead Lane; Wellhead Lane/ Aldridge Road and Wellhead Lane/ Aston Lane / Stoneleigh Road, and the proposed gyratory.

I0.3 Traffic Surveys

- 10.3.1 Baseline traffic information for the local junctions has been provided by AECOM, on behalf of BCC, based on seven MCCs (26/04/2018) and six ATCs (week commencing 24/04/2018):

- ATC1: Aston Lane (west of Wellhead Lane);
- ATC2: Wellington Road (west of the Crown and Cushion);
- ATC3: Walsall Road (north of Cliveden Avenue);
- ATC4: Aldridge Road (north of Wellhead Lane);
- ATC5: Birchfield Road (A34 northbound off slip);
- ATC6: Birchfield Road (A34 southbound on slip);
- MCC1: A34 Birchfield Road / A4040 Aston Lane / A4040 Wellington Road;
- MCC2: A453 Aldridge Road / Wellhead Lane;
- MCC3: A34 Walsall Road / Cliveden Avenue;
- MCC4: A453 Aldridge Road / Holford Drive;
- MCC5: One Stop Shopping Centre – southern access;
- MCC6: One Stop Shopping Centre – northern access and A34 filter lane; and
- MCC7: A453 / A34.

I0.4 Network Growth

- 10.4.1 TEMPro V7 has been used to generate traffic growth factors, specific to the area (Birmingham 033) between 2018 and 2023 to provide a future year scenario for the site access points. 2023 has been used as the application year plus five years.

**Table 10-1: TEMPro Growth Factors 2018 - 2023**

Peak Period	Growth Factor
AM Peak	1.0636
PM Peak	1.0625

10.5 Assessment Scenarios

10.5.1 In order to provide a comprehensive assessment of the potential development impact the following scenarios have been assessed for the relevant junctions:

- 2023 Base;
- 2023 Base plus BCU;
- 2023 Base with development; and
- 2023 Base with development (85th percentile trip generation).

10.5.2 The development traffic has been included based on the trip rates set out in Section 9 and an assumption of 450 parking spaces. The resultant development trip generation for each scenario are summarised in Table 10-2. The junction capacity assessments for 'with development' scenarios should therefore be considered as a worst case.

Table 10-2: Development Traffic Assumptions

	AM Peak (08:00-09:00)			PM Peak (17:00-18:00)		
	Arrivals	Departures	Two Way	Arrivals	Departures	Two Way
Development Traffic	24	71	95	65	37	102
85 th percentile Development Traffic	69	110	179	112	72	184

10.6 Junction Capacity Assessments

10.6.1 The following section provides a summary of the capacity assessments undertaken and summarises the key findings. The full output reports for the junction capacity assessments are provided in **Appendix E**.

Site Access Points

10.6.2 A junction capacity assessment has been undertaken for the proposed site access based on a 2023 plus development scenario and 2023 plus 85th percentile development using Junction 9 software.

10.6.3 As there will be a choice of access for residents within the main site, junction capacity assessments have been undertaken which assume 100% of traffic uses each of the Wellhead Lane access points.

**Table 10-3: Site Access Capacity Assessment (mini roundabout)**

	AM Peak			PM Peak		
	RFC	Queue (PCU)	Delay (s)	RFC	Queue (PCU)	Delay (s)
2023 + Development						
Wellhead Lane North	0.34	1	7	0.24	0	6
Bus Depot	0.03	0	6	0.03	0	6
Wellhead Lane South	0.21	0	5	0.21	0	5
Site Access	0.11	0	6	0.06	0	5
2023 + 85th percentile Development						
Wellhead Lane North	0.38	1	7	0.28	0	6
Bus Depot	0.03	0	7	0.03	0	6
Wellhead Lane South	0.24	0	6	0.25	0	6
Site Access	0.17	0	6	0.11	0	6

Table 10-4: Site Access Capacity Assessment (Franchise Street)

	AM Peak			PM Peak		
	RFC	Queue (PCU)	Delay (s)	RFC	Queue (PCU)	Delay (s)
2023 + Development						
Site Access	0.16	0	9	0.08	0	8
(Right turn)	0.02	0	5	0.05	0	6
2023 + 85th percentile Development						
Site Access	0.26	0	10	0.17	0	9
(Right turn)	0.06	0	5	0.10	0	6

10.6.4 Gailey Park provides access to a single plot and its associated parking. As there is no through connection to the main site the capacity assessment for the left in left out access.

**Table 10-5: Site Access Capacity Assessment (Gailey Park left in left out)**

	AM Peak			PM Peak		
	RFC	Queue (PCU)	Delay (s)	RFC	Queue (PCU)	Delay (s)
2023 + Development						
Site Access	0.03	0	12	0.01	0	8
Aldridge Road	0.00	0	0	0.00	0	0
2023 + 85th percentile Development						
Site Access	0.05	0	12	0.02	0	8
Aldridge Road	0.00	0	0	0.00	0	0

- 10.6.5 The results indicate that each of the three site access points will operate with significant reserve capacity for the assessed flows. The maximum RFC will be 0.38 on Wellhead Lane in the AM peak. The queues on each junction will not exceed one vehicle or twelve seconds in delay.

Off-site Junctions

- 10.6.6 The microsimulation modelling of the gyratory scheme is currently being undertaken by AECOM. The results of this modelling will be provided in due course. For the purpose of this assessment the local highway network has been modelled using LinSig.
- 10.6.7 The gyratory has been designed such that there is no substantial reduction in capacity despite reallocating a section of Aldridge Road to a shared use path. The overall benefits of the scheme to all road users and particularly travel by sustainable modes are anticipated to be significant.

Existing Gyratory

- 10.6.8 In order to provide a baseline scenario against which to compare the proposed gyratory scheme, the existing junction layout has been modelled in LinSig.



Table 10-6: Existing Gyratory 2023 Base Capacity Assessment

Link No	Arm (turning)	AM Peak (08:00 – 09:00)			PM Peak (17:00 – 18:00)		
		DoS (%)	Delay (s/pcu)	Queue	DoS (%)	Delay (s/pcu)	Queue
Junction 1 Wellhead Lane							
1/1	Aldridge Road (north) Left Ahead	84.6	9	30	69.6	43	15
1/2	Aldridge Road (north) Ahead	85.6	36	34	71.1	43	17
2/1	Wellhead Lane	83.8	113	7	69.6	84	6
3/1	Aldridge Road (south) Ahead	30.8	9	7	64.8	17	24
3/2	Aldridge Road (south) Ahead	32.4	8	7	65.2	14	24
3/3	Aldridge Road (south) Right	22.9	45	1	9.3	27	1
Junction 2 Aldridge Road Link Road							
1/1	Aldridge Road (north) Ahead	54.1	4	2	40.8	5	1
1/2	Aldridge Road (north) Ahead	57.3	4	2	38.9	5	1
2/1	Aldridge Road (south) Ahead	21.4	8	4	63.4	24	18
2/2	Aldridge Road (south) Ahead	26.1	8	5	70.5	26	21
3/1	Link Road Left	85.8	105	9	30.5	39	5
3/2	Link Road Left	85.0	100	9	71.3	50	14
3/3	Link Road Right	81.1	94	8	40.5	41	7
3/4	Link Road Right	45.5	66	4	39.0	41	6
Junction 3 Aldridge Road Triangle							
1/1	Aldridge Road (north) Ahead	43.8	9	5	49.1	10	6
1/2	Aldridge Road (north) Ahead	60.6	11	8	32.4	8	3
1/3	Aldridge Road (north) Ahead	61.2	12	8	32.7	8	3
3/1	Loop Road Left	22.1	5	2	49.8	6	5
3/2 + 3/3	Loop Road Left Ahead	25.2	5	2	51.7	6	6
6/1	Priority Right	0.0	0	0	0.0	0	0
Junction 4 One Stop South							
2/1	One Stop Exit Right	20.1	35	1	67.6	34	6
5/1	Walsall Road (south) Ahead	12.1	4	1	24.5	7	3
5/2	Walsall Road (south) Ahead	26.7	4	3	62.0	11	10
Junction 6 One Stop North							
2/1	One Stop Exit Right	5.6	3	0	60.9	7	1
		Cycle Time	240/65/60		Cycle Time	240/65/60	
		PRC	4.9%		PRC	25.4%	
		Total Delay	54 pcuHr		Total Delay	59 pcuHr	

Table 10-7: Existing Gyratory 2023 plus BCU

Link No	Arm (turning)	AM Peak (08:00 – 09:00)			PM Peak (17:00 – 18:00)		
		DoS (%)	Delay (s/pcu)	Queue	DoS (%)	Delay (s/pcu)	Queue
Junction 1 Wellhead Lane							
1/1	Aldridge Road (north) Left Ahead	94.4	58	37	78.2	51	16
1/2	Aldridge Road (north) Ahead	94.7	57	41	79.7	51	18
2/1	Wellhead Lane	94.5	130	14	80.2	79	11
3/1	Aldridge Road (south) Ahead	31.9	12	8	69.7	22	24
3/2	Aldridge Road (south) Ahead	35.4	10	7	71.8	19	24
3/3	Aldridge Road (south) Right	47.9	48	3	12.9	32	2
Junction 2 Aldridge Road Link Road							
1/1	Aldridge Road (north) Ahead	54.5	5	2	38.9	5	1
1/2	Aldridge Road (north) Ahead	57.2	5	3	37.8	5	1
2/1	Aldridge Road (south) Ahead	22.8	8	4	60.4	21	17
2/2	Aldridge Road (south) Ahead	29.1	8	5	67.8	23	20
3/1	Link Road Left	94.0	137	12	34.2	43	5
3/2	Link Road Left	94.0	133	12	80.4	60	16
3/3	Link Road Right	81.1	94	8	45.6	45	7
3/4	Link Road Right	45.5	66	4	43.0	44	7
Junction 3 Aldridge Road Triangle							
1/1	Aldridge Road (north) Ahead	43.9	9	5	49.2	10	6
1/2	Aldridge Road (north) Ahead	61.1	12	8	32.9	8	3
1/3	Aldridge Road (north) Ahead	61.1	12	8	33.2	8	3
3/1	Loop Road Left	23.5	5	2	49.9	6	5
3/2 + 3/3	Loop Road Left Ahead	28.1	5	3	52.5	7	3
6/1	Priority Right	0.0	0	0	0.0	0	0
Junction 4 One Stop South							
2/1	One Stop Exit Right	20.1	35	1	67.6	34	6
5/1	Walsall Road (south) Ahead	12.1	4	1	24.5	7	2
5/2	Walsall Road (south) Ahead	28.3	4	3	65.5	12	11
Junction 6 One Stop North							
2/1	One Stop Exit Right	5.7	3	0	61.8	8	1
		Cycle Time	240/65/60		Cycle Time	240/65/60	
		PRC	-5.2 %		PRC	11.9	
		Total Delay	76.3 pcuHr		Total Delay	68.3 pcuHr	

10.6.9 The modelling indicates the for the 2023 scenario the gyratory will be approaching capacity in the AM peak hour. With the addition of BCU traffic it would operate at capacity in the AM peak for the Wellhead Lane and Aldridge Road Link Road junctions. The junction would operate with reserve capacity during the PM peak for both scenarios. The total delay across the junction will be circa 55 and 70 pcuHr in each peak for the without and with BCU scenarios respectively.

Proposed Gyratory

10.6.10 The proposed gyratory, as prepared by AECOM on behalf of BCC, has also been modelled within LinSig. The results for the Crown and Cushion roundabout have been omitted from the summary to provide like for like results to the existing gyratory modelling.



Table 10-8: Proposed Gyratory 2023 Base

Link No	Arm (turning)	AM Peak (08:00 – 09:00)			PM Peak (17:00 – 18:00)		
		DoS (%)	Delay (s/pcu)	Queue	DoS (%)	Delay (s/pcu)	Queue
Junction 1 Walsall Road/ Birchfield Road							
1/1	Walsall Rd S/B Ahead Ahead2	15.5	1	0	15.9	1	0
1/2	Walsall Rd S/B Ahead Ahead2	86.9	7	3	31.3	1	0
2/1	Walsall Rd S/B Ahead	76.6	87	7	69.4	76	6
2/2	Walsall Rd S/B Ahead	0.0	0	0	0.0	0	0
3/1	Ahead	9.0	2	1	9.7	3	1
4/1	Aldridge Rd W/B Left	52.6	8	10	28.8	6	4
4/2	Aldridge Rd W/B Left	57.8	9	13	32.4	6	6
5/1	Walsall Rd N/B Right	27.5	5	4	60.2	3	2
5/2	Walsall Rd N/B Right	29.2	5	4	60.7	3	18
6/1	Birchfield Rd Left	5.5	28	1	50.1	30	10
9/1	Underpass Ahead	28.2	2	0	61.1	3	7
9/2	Underpass Ahead	31.2	2	0	64.1	5	18
11/1	E/B Ahead	22.4	4	1	29.6	5	1
12/1	Flyover S/B	93.2	13	6	33.6	1	0
13/1	Flyover N/B	25.5	1	0	80.3	5	2
14/1	Left One Stop	21.9	3	0	51.9	7	2
14/2	Ahead	18.7	3	0	48.6	6	1
15/1	Ahead	9.7	1	0	36.5	1	0
Junction 2 Signalisation crossing							
1/1	S/B Ahead	65.6	10	13	54.1	16	9
1/2	S/B Ahead	59.5	9	7	44.1	20	10
2/1	Walsall Rd N/B Ahead	72.0	53	10	91.9	52	26
2/2	Walsall Rd N/B Ahead Ahead2 Right	72.7	55	11	91.7	53	28
3/1	Under Pass S/B	77.2	4	2	33.8	1	0
3/2	Under Pass S/B	77.2	4	2	33.7	1	0
4/1	Under Pass N/B Ahead	33.5	1	0	72.1	3	1
4/2	Under Pass N/B Ahead	23.8	1	0	74.9	3	2
5/1	S/B Ahead	27.7	2	1	34.5	2	2
5/2	S/B Ahead	81.0	9	30	43.5	3	13
6/1	S/B Ahead	23.1	1	0	28.7	1	0
6/2	S/B Ahead	67.5	3	3	36.3	1	0
7/1	N/B Slip Ahead Ahead2	29.0	14	6	91.4	57	27
7/2	N/B Slip Ahead Right	29.5	14	6	91.2	55	29
8/1	Right	8.8	13	0	34.6	8	1
Junction 3 Birchfield Road							
1/1	Birchfield Rd south Ahead	2.9	3	0	21.5	4	2
2/1	Left	7.5	3	0	74.9	21	8
3/1	Birchfield Road W/B Ahead	5.8	3	0	13.1	3	1
5/1	Birchfield Rd N/B Ahead Left	33.5	2	0	67.7	3	1
		Cycle Time	120		Cycle Time	120	
		PRC	-3.6		PRC	-1.9	
		Total Delay	45.4 pcuHr		Total Delay	74.7 pcuHr	

Table 10-9: Proposed Gyratory 2023 plus BCU

Link No	Arm (turning)	AM Peak (08:00 – 09:00)			PM Peak (17:00 – 18:00)		
		DoS (%)	Delay (s/pcu)	Queue	DoS (%)	Delay (s/pcu)	Queue
Junction 1 Walsall Road/ Birchfield Road							
1/1	Walsall Rd S/B Ahead Ahead2	17.4	1	0	16.2	1	0
1/2	Walsall Rd S/B Ahead Ahead2	86.9	7	3	31.3	1	0
2/1	Walsall Rd S/B Ahead	71.1	78	6	69.4	76	6
2/2	Walsall Rd S/B Ahead	0.0	0	0	0.0	0	0
3/1	Ahead	11.3	3	1	10.1	3	1
4/1	Aldridge Rd W/B Left	53.3	9	11	29.2	6	5
4/2	Aldridge Rd W/B Left	58.5	9	14	32.8	6	6
5/1	Walsall Rd N/B Right	29.4	2	1	60.8	4	2
5/2	Walsall Rd N/B Right	32.7	3	1	61.2	4	18
6/1	Birchfield Rd Left	5.6	28	1	50.1	30	10
9/1	Underpass Ahead	29.8	3	2	61.7	3	7
9/2	Underpass Ahead	34.5	3	3	64.6	5	19
11/1	E/B Ahead	28.6	4	1	30.9	5	1
12/1	Flyover S/B	93.2	13	6	33.6	1	0
13/1	Flyover N/B	25.5	1	0	80.3	5	2
14/1	Left One Stop	21.5	3	0	51.8	7	2
14/2	Ahead	19.6	3	0	53.7	6	1
15/1	Ahead	10.2	1	0	38.5	1	0
Junction 2 Signalisation crossing							
1/1	S/B Ahead	66.5	10	11	54.37	16	9
1/2	S/B Ahead	60.2	11	13	44.6	20	10
2/1	Walsall Rd N/B Ahead	72.3	53	10	94.1	63	29
2/2	Walsall Rd N/B Ahead Ahead2 Right	72.8	55	11	94.4	61	31
3/1	Under Pass S/B	77.3	4	2	34.1	1	0
3/2	Under Pass S/B	77.3	4	2	34.0	1	0
4/1	Under Pass N/B Ahead	36.4	1	0	72.7	3	1
4/2	Under Pass N/B Ahead	23.8	1	0	74.9	3	2
5/1	S/B Ahead	27.7	2	1	34.5	2	2
5/2	S/B Ahead	81.2	10	28	44.1	3	13
6/1	S/B Ahead	23.1	1	0	28.7	1	0
6/2	S/B Ahead	67.6	3	1	36.8	1	0
7/1	N/B Slip Ahead Ahead2	31.7	15	6	92.2	59	28
7/2	N/B Slip Ahead Right	32.8	15	7	92.1	56	30
8/1	Right	8.5	12	0	34.6	8	1
Junction 3 Birchfield Road							
1/1	Birchfield Rd south Ahead	2.9	3	4	21.5	4	2
2/1	Left	7.5	3	0	76.6	22	8
3/1	Birchfield Road W/B Ahead	5.8	1	0	13.1	3	1
5/1	Birchfield Rd N/B Ahead Left	34.8	5	2	70.0	3	1
		Cycle Time	120		Cycle Time	120	
		PRC	-3.6%		PRC	-5.0 %	
		Total Delay	47.7 pcuHr		Total Delay	81.0 pcuHr	



Table 10-10: Proposed Gyratory 2023 plus Development

Link No	Arm (turning)	AM Peak (08:00 – 09:00)			PM Peak (17:00 – 18:00)		
		DoS (%)	Delay (s/pcu)	Queue	DoS (%)	Delay (s/pcu)	Queue
Junction 1 Walsall Road/ Birchfield Road							
1/1	Walsall Rd S/B Ahead Ahead2	15.6	1	0	16.2	1	0
1/2	Walsall Rd S/B Ahead Ahead2	86.9	7	3	31.3	1	0
2/1	Walsall Rd S/B Ahead	77.7	79	6	69.4	76	6
2/2	Walsall Rd S/B Ahead	0.0	0	0	0.0	0	0
3/1	Ahead	9.1	2	1	10.1	3	1
4/1	Aldridge Rd W/B Left	53.9	9	11	29.1	6	5
4/2	Aldridge Rd W/B Left	59.0	9	14	32.8	6	6
5/1	Walsall Rd N/B Right	27.6	4	3	60.6	3	2
5/2	Walsall Rd N/B Right	30.0	5	5	61.3	3	18
6/1	Birchfield Rd Left	5.6	28	1	50.1	30	10
9/1	underpass Ahead	28.0	2	0	61.5	3	8
9/2	Underpass Ahead	31.7	2	0	64.7	5	19
11/1	E/B Ahead	22.7	4	1	30.7	5	1
12/1	Flyover S/B	93.2	13	6	33.6	1	0
13/1	Flyover N/B	25.5	1	0	80.3	5	2
14/1	Left One Stop	21.5	3	0	51.8	7	2
14/2	Ahead	18.9	3	0	49.0	6	1
15/1	Ahead	10.7	1	0	36.7	1	0
Junction 2 Signalisation crossing							
1/1	S/B Ahead	66.3	10	12	54.5	16	9
1/2	S/B Ahead	60.0	8	7	44.6	20	10
2/1	Walsall Rd N/B Ahead	72.2	53	10	91.2	53	26
2/2	Walsall Rd N/B Ahead Ahead2 Right	73.6	56	11	91.9	54	28
3/1	Under Pass S/B	77.6	4	2	34.1	1	0
3/2	Under Pass S/B	77.7	4	2	33.9	1	0
4/1	Under Pass N/B Ahead	33.8	1	0	72.8	3	1
4/2	Under Pass N/B Ahead	23.8	1	0	74.9	3	2
5/1	S/B Ahead	27.7	2	1	34.5	2	2
5/2	S/B Ahead	82.0	9	32	44.0	3	13
6/1	S/B Ahead	23.1	1	0	28.7	1	0
6/2	S/B Ahead	68.4	3	5	36.7	1	0
7/1	N/B Slip Ahead Ahead2	29.5	14	6	92.4	60	29
7/2	N/B Slip Ahead Right	29.5	14	6	92.2	57	30
8/1	Right	8.8	13	0	34.6	8	1
Junction 3 Birchfield Road							
1/1	Birchfield Rd south Ahead	2.9	3	0	21.5	4	2
2/1	Left	7.5	3	0	75.0	20	8
3/1	Birchfield Road W/B Ahead	5.8	2	0	13.1	3	1
5/1	Birchfield Rd N/B Ahead Left	33.8	1	0	67.8	3	1
		Cycle Time	120		Cycle Time	120	
		PRC	-3.6%		PRC	-2.7%	
		Total Delay	46.1 pcuHr		Total Delay	76.7 pcuHr	

Table 10-11: Proposed Gyratory 2023 plus 85th percentile Development

Link No	Arm (turning)	AM Peak (08:00 – 09:00)			PM Peak (17:00 – 18:00)		
		DoS (%)	Delay (s/pcu)	Queue	DoS (%)	Delay (s/pcu)	Queue
Junction 1 Walsall Road/ Birchfield Road							
1/1	Walsall Rd S/B Ahead Ahead2	15.8	1	0	16.3	1	0
1/2	Walsall Rd S/B Ahead Ahead2	86.9	7	3	31.3	1	0
2/1	Walsall Rd S/B Ahead	71.1	78	6	69.4	76	6
2/2	Walsall Rd S/B Ahead	0.0	0	0	0.0	0	0
3/1	Ahead	9.3	2	1	10.3	3	1
4/1	Aldridge Rd W/B Left	54.1	9	11	29.3	6	5
4/2	Aldridge Rd W/B Left	59.4	9	14	33.1	6	6
5/1	Walsall Rd N/B Right	28.0	4	4	61.0	3	2
5/2	Walsall Rd N/B Right	30.4	5	5	61.7	4	19
6/1	Birchfield Rd Left	5.6	28	1	50.1	30	10
9/1	Underpass Ahead	28.4	2	0	61.8	4	8
9/2	Underpass Ahead	32.1	2	0	65.2	5	19
11/1	E/B Ahead	23.3	4	1	31.3	5	1
12/1	Flyover S/B	93.2	13	6	33.6	1	0
13/1	Flyover N/B	25.5	1	0	80.3	5	2
14/1	Left One Stop	21.5	3	0	51.8	7	2
14/2	Ahead	19.2	3	0	49.2	6	1
15/1	Ahead	10.1	1	0	36.8	1	0
Junction 2 Signalisation crossing							
1/1	S/B Ahead	66.5	10	13	54.9	16	9
1/2	S/B Ahead	60.4	8	7	45.1	20	10
2/1	Walsall Rd N/B Ahead	72.5	53	10	91.5	54	26
2/2	Walsall Rd N/B Ahead Ahead2 Right	74.1	56	11	91.9	54	29
3/1	Under Pass S/B	77.8	4	2	34.3	1	0
3/2	Under Pass S/B	77.9	4	2	34.1	1	0
4/1	Under Pass N/B Ahead	34.4	1	0	73.4	3	1
4/2	Under Pass N/B Ahead	23.8	1	0	74.9	3	2
5/1	S/B Ahead	27.7	2	1	34.5	2	2
5/2	S/B Ahead	84.6	10	34	44.5	3	13
6/1	S/B Ahead	23.1	1	0	28.7	1	0
6/2	S/B Ahead	68.8	3	6	37.1	1	0
7/1	N/B Slip Ahead Ahead2	30.0	14	6	92.0	61	29
7/2	N/B Slip Ahead Right	30.1	14	6	93.0	59	31
8/1	Right	8.8	13	0	34.6	8	1
Junction 3 Birchfield Road							
1/1	Birchfield Rd south Ahead	2.9	3	0	21.5	4	2
2/1	Left	7.5	3	0	75.1	21	8
3/1	Birchfield Road W/B Ahead	5.8	2	0	13.1	3	1
5/1	Birchfield Rd N/B Ahead Left	33.9	3	0	67.9	3	1
		Cycle Time	120		Cycle Time	120	
		PRC	-3.6%		PRC	-4.4%	
		Total Delay	46.6 pcuHr		Total Delay	78.2 pcuHr	

10.6.11 The modelling indicates that when compared to the BCU scenario, the operation of the local highway network improves in both peaks in terms of total delay.



Wellhead Lane / Aldridge Road

10.6.12 The Wellhead Lane junction has been modelled as a standalone junction within LinSig. This junction will remain as per the existing scenario with the arms and phases associated with the Aldridge Road/ Link Road junction removed.

Table 10-12: Wellhead Lane/ Aldridge Road Capacity Assessment

Link No	Arm (turning)	AM Peak (08:00 – 09:00)			PM Peak (17:00 – 18:00)		
		DoS (%)	Delay (s/pcu)	Queue	DoS (%)	Delay (s/pcu)	Queue
2023 Base							
1/1	Aldridge Road (north) Left Ahead	78.8	29	38	43.0	19	11
1/2	Aldridge Road (north) Ahead	80.0	29	32	44.5	19	12
2/1	Wellhead Lane	80.5	102	7	64.3	75	5
3/1	Aldridge Road (south) Ahead	31.0	8	7	65.2	14	21
3/2	Aldridge Road (south) Ahead	32.5	8	8	66.3	14	23
3/3	Aldridge Road (south) Right	28.0	52	1	14.9	19	1
		Cycle Time	240		Cycle Time	240	
		PRC	11.8%		PRC	35.8%	
		Total Delay	21.8 pcuHr		Total Delay	15.5 pcuHr	
2023 + BCU							
1/1	Aldridge Road (north) Left Ahead	88.8	38	36	50.3	25	12
1/2	Aldridge Road (north) Ahead	89.8	38	41	51.9	25	14
2/1	Wellhead Lane	87.6	118	9	72.3	66	10
3/1	Aldridge Road (south) Ahead	31.2	8	7	72.1	20	23
3/2	Aldridge Road (south) Ahead	32.6	8	8	73.1	20	26
3/3	Aldridge Road (south) Right	59.9	61	4	20.7	28	1
		Cycle Time	240		Cycle Time	240	
		PRC	0.2%		PRC	23.2%	
		Total Delay	31.7 pcuHr		Total Delay	22.5 pcuHr	

Table 10-12 continued...

Link No	Arm (turning)	AM Peak (08:00 – 09:00)			PM Peak (17:00 – 18:00)		
		DoS (%)	Delay (s/pcu)	Queue	DoS (%)	Delay (s/pcu)	Queue
2023 + Development							
1/1	Aldridge Road (north) Left Ahead	80.7	31	29	43.5	20	11
1/2	Aldridge Road (north) Ahead	81.8	31	32	44.9	20	12
2/1	Wellhead Lane	81.9	99	8	67.0	76	6
3/1	Aldridge Road (south) Ahead	31.6	9	7	65.6	14	21
3/2	Aldridge Road (south) Ahead	33.0	9	8	66.7	14	23
3/3	Aldridge Road (south) Right	30.6	53	1	19.3	21	1
		Cycle Time	240		Cycle Time	240	
		PRC	9.9%		PRC	34.3%	
		Total Delay	23.6 pcuHr		Total Delay	16.3 pcuHr	
2023 + 85 th percentile Development							
1/1	Aldridge Road (north) Left Ahead	82.1	32	30	44.3	20	11
1/2	Aldridge Road (north) Ahead	83.2	32	33	45.8	20	12
2/1	Wellhead Lane	81.4	94	8	67.1	74	6
3/1	Aldridge Road (south) Ahead	32.0	9	7	66.4	15	21
3/2	Aldridge Road (south) Ahead	33.4	9	8	67.5	15	23
3/3	Aldridge Road (south) Right	35.5	53	2	22.7	23	2
		Cycle Time	240		Cycle Time	240	
		PRC	8.1%		PRC	33.4%	
		Total Delay	24.9 pcuHr		Total Delay	17.1 pcuHr	

10.6.13 The junction between Wellhead Lane and Aldridge Road will operate with reserve capacity for all scenarios during the AM and PM peak. When compared to the BCU scenario, the operation of the local highway network improves with the development proposals in place.

Aston Lane/ Wellhead Lane/ Stoneleigh Road

10.6.14 The junction between Aston Lane, Wellhead Lane and Stoneleigh Road has been modelled as existing.

Table 10-13: Aston Lane/ Wellhead Lane/ Stoneleigh Road Capacity Assessment

Link No	Arm (turning)	AM Peak (08:00 – 09:00)			PM Peak (17:00 – 18:00)		
		DoS (%)	Delay (s/pcu)	Queue	DoS (%)	Delay (s/pcu)	Queue
2023 Base							
1/1	Wellhead Lane	58.8%	43	6	70.9%	40	10
2/1	Aston Lane East	50.3%	9	8	70.0%	16	15
3/1	Stoneleigh Road	49.6%	40	5	59.1%	36	8
4/1	Aston Lane West	59.0%	10	10	39.0%	11	6
		Cycle Time	90		Cycle Time	90	
		PRC	52.4%		PRC	26.9%	
		Total Delay	8.7 pcuHr		Total Delay	12.5 pcuHr	



2023 + BCU							
1/1	Wellhead Lane	82.9	52	12	82.8	41	15
2/1	Aston Lane East	73.7	16	16	82.9	27	20
3/1	Stoneleigh Road	57.3	37	7	51.2	28	7
4/1	Aston Lane West	82.6	21	20	45.7	16	7
		Cycle Time	90		Cycle Time	90	
		PRC	8.5%		PRC	8.6%	
		Total Delay	18.2 pcuHr		Total Delay	17.5 pcuHr	
2023 + Development							
1/1	Wellhead Lane	61.9	41	7	73.1	40	10
2/1	Aston Lane East	53.4	11	9	72.8	18	17
3/1	Stoneleigh Road	42.8	36	4	56.9	34	7
4/1	Aston Lane West	62.2	13	12	40.3	12	6
		Cycle Time	90		Cycle Time	90	
		PRC	44.7%		PRC	23.1%	
		Total Delay	9.7 pcuHr		Total Delay	13.2 pcuHr	
2023 + 85 th Percentile Development							
1/1	Wellhead Lane	62.2	39	7	74.6	40	11
2/1	Aston Lane East	56.3	12	10	75.3	19	17
3/1	Stoneleigh Road	39.2	33	4	54.9	33	7
4/1	Aston Lane West	64.7	14	12	41.5	12	6
		Cycle Time	90		Cycle Time	90	
		PRC	39.1%		PRC	19.5%	
		Total Delay	10.4 pcuHr		Total Delay	13.9 pcuHr	

10.6.15 The results indicate that the junction currently operates with reserve capacity in all scenarios. The development traffic does not have a significant impact on the operation of the junction in comparison to the 2023 base. The with development scenario operates better than the BCU scenario.

10.7 Summary

10.7.1 Table 10.14 provides a summary of the junction delay for all modelled scenarios. For Junctions 9 assessments the results represent the maximum delay (seconds) for an arm. For LinSig assessments the results represent the total delay across the junction in pcuHr.

Table 10-14: Capacity Assessment Summary

Junction	Scenario (Delay)							
	Existing Layout				Proposed Layout			
	2023 Base	2023 + BCU	2023 + Dev	2023 + 85 th ile	2023 Base	2023 + BCU	2023 + Dev	2023 + 85 th ile
AM Peak								
Franchise Street Access	-	-	-	-	-	-	9	10
North Access (Bus Depot mini roundabout)	-	-	-	-	-	-	7	7

Junction		Scenario (Delay)							
		Existing Layout				Proposed Layout			
		2023 Base	2023 + BCU	2023 + Dev	2023 + 85 th ile	2023 Base	2023 + BCU	2023 + Dev	2023 + 85 th ile
AM Peak									
Gailey Park Access		-	-	-	-	-	-	12	12
Wellhead Lane/ Aldridge Road		-	-	-	-	21.8	31.7	23.6	24.9
Gyratory	Wellhead Lane	25.7	43.1	-	-	-	-	-	-
	Aldridge Road/ Link Road	20.1	25.2	-	-	-	-	-	-
	Aldridge Road Triangle	6.7	6.9	-	-	-	-	-	-
	One Stop South	1.1	1.2	-	-	0.4	0.4	0.4	0.4
	Underpass	0.0	0.0	-	-	-	-	-	-
	Signalisation crossing	-	-	-	-	25.1	27.5	25.8	26.2
	One Stop North	0.0	0.0	-	-	-	-	-	-
Walsall Road/ Birchfield Road		-	-	-	-	19.9	19.8	19.9	20.0
Wellhead Lane/ Aston Lane		8.7	18.2	9.7	10.4	-	-	-	-
PM Peak									
Franchise Street Access		-	-	-	-	-	-	8	9
North Access (Bus Depot mini roundabout)		-	-	-	-	-	-	6	6
Gailey Park Access		-	-	-	-	-	-	8	8
Wellhead Lane / Aldridge Road		-	-	-	-	15.5	22.5	16.3	17.1
Gyratory	Wellhead Lane	23.5	31.2	-	-	-	-	-	-
	Aldridge Road/ Link Road	23.3	24.0	-	-	-	-	-	-
	Aldridge Road Triangle	5.9	5.9	-	-	-	-	-	-
	One Stop South	6.1	6.4	-	-	3.4	3.6	3.3	3.4
	Underpass	0.0	0.0	-	-	-	-	-	-
	Signalisation crossing	-	-	-	-	54.7	60.4	56.6	60.5
	One Stop North	0.8	0.8	-	-	-	-	-	-
Walsall Road/ Birchfield Road		-	-	-	-	16.6	17.0	16.8	17.1
Wellhead Lane/ Aston Lane		12.5	17.5	13.2	13.9	-	-	-	-

10.7.2 The traffic impact assessment has indicated the following:

- When compared to the BCU scenario, the operation of the local highway network improves and total delay across the network is reduced;
- All proposed site access points operate with reserve capacity; and
- The Wellhead Lane/Aston Lane signal junction operates with reserve capacity.



10.7.3 In addition, it should be noted that the benefits of the gyratory redesign go beyond highway capacity, by providing improved public realm of the area, improved rapid transit operations and improvements to public transport connectivity.



II Summary and Conclusion

II.1 Summary

- 11.1.1 PJA has been commissioned by BCC to prepare a Transport Assessment to accompany a full planning application for the Commonwealth Games Athletes' Village. The application relates to the 'legacy mode' which proposes 1,424 dwellings on land off Wellhead Lane, Perry Barr.
- 11.1.2 The site location is considered highly sustainable for the following reasons:
- There are several bus stops adjacent to the site which provide in excess of 20 services per hour many of which serve Birmingham city centre;
 - Perry Barr station is located 350m from the site and provides two trains per hour between Wolverhampton and Birmingham via Walsall;
 - There is a wide range of facilities and amenities within walking distance of the site including shops (including the One Stop shopping centre), schools, post offices and healthcare provision;
 - Footways are provided on all streets in the vicinity of the site with a series of signalised crossings on Wellhead Lane and at all major junctions; and
 - Cycle routes are provided in the local area, including a link between the site and Birmingham city centre via the A34. A new segregated off-street route as part of the Birmingham Cycle Revolution Scheme.
- 11.1.3 Further to this, a number of proposals are identified for Perry Barr as part of a wider regeneration package:
- A new public transport interchange between Perry Barr Station and One Stop bus stops with improved station access;
 - A potential extension to the Perry Barr Station platform, to facilitate direct access from the east of the A34;
 - A Sprint bus route on the A34 with associated bus stops;
 - A segregated cycle route as part of Birmingham Cycle Revolution between Birmingham city centre and Sutton Coldfield via Perry Barr; and
 - A high quality at grade pedestrian route between the site, One Stop and the transport interchange.



- 11.1.4 The proposals consist of 1,424 dwellings including townhouses, apartments and a care home, and circa 1,400m² of commercial land uses. The site will be accessed via two primary access points from Wellhead Lane, with a further limited left in/left out access from the proposed gyratory scheme.
- 11.1.5 The development of the masterplan has been design-led with a focus on sustainable transport opportunities. It fulfils the aspirations of local policy and maximises the opportunities for sustainable travel by creating a highly permeable layout and minimising the impact of cars internally within the site and on the surrounding highway network.
- 11.1.6 The parking proposals are for 100% cycle parking provision for all dwellings, 90-100% car parking provision for houses and 20-25% car parking provision for apartment blocks. The parking provision is considered appropriate for the following reasons:
- The parking provision meets the aspirations of local policy;
 - The opportunities for sustainable travel to/from the site are excellent, and will be improved further with a number of enhancements to the Perry Barr area;
 - The site is therefore ideally located to provide an exemplar site for mode share; and
 - There is a strong Travel Plan which provides hard and soft measures promoting sustainable travel.
- 11.1.7 The development will generate approximately 90 two-way trips in each peak hour. The development impact is therefore significantly less than when the site was operating as a university campus.
- 11.1.8 The traffic impact assessment has indicated that the Wellhead Lane site accesses will all operate with reserve capacity for the future year scenario. It should also be noted that the benefits of the gyratory redesign go beyond the highway capacity, by providing improved public realm of the area, improved rapid transit operations and improvements to public transport connectivity.

11.2 Conclusion

- 11.2.1 Paragraph 109 of the NPPF states:

“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.”



- 11.2.2 In conclusion, based on the evidence presented in this report PJA consider the impact of the proposed development to be minimal and in accordance with the relevant national and local policies.
- 11.2.3 On this basis, the proposed development should not therefore be prevented or refused on transport grounds.



Appendix A Site Masterplan



Appendix B Gyratory Masterplan



Appendix C Proposed Access Drawings



Appendix D TRICS Summary



Appendix E Junction Modelling Output Reports

HOW TO KEEP THE PERRY BARR FLYOVER AND KEEP TRAFFIC MOVING

This sketch map involves taking a little bit of land from the former lorry park. This is now available as the Athletes Village will not now be built on this section. The diagram probably exaggerates the amount of land needed - it is not to scale.

This proposal delivers several improvements on the existing road network. There is a direct access to OneStop from the A34 southbound.

Traffic to and from the A453 Aldridge Road will flow largely uninterrupted. There are pelican crossings and bus gates and by using coordinated systems it can be ensured that traffic is halted along the line of the roads once only every few minutes, depending on demand, meaning that drivers face no more than one stop unless traffic is moving very slowly for other reasons. And there is a tricky junction into Wellhead Lane around the corner.

Notes: Very unclear if the red northbound bus lane is needed here as most buses will stop at the One-Stop bus terminus and then proceed onto the Aldridge Road. The authorities may want to encourage some local buses to run through the heart of the village northbound so we have included this lane. These lanes cannot be used by taxis.

KEY

-  Northbound traffic - Existing plans as part of athlete village planning approval- lane boundary
-  Southbound traffic - Existing plans as part of athlete village planning approval- lane boundary
-  Additions to the roads - inc new access to One-Stop - lane boundary
-  Green tree-lined central reservation with cycle track - NEW!
-  Bus only - Existing plan. It is not clear whether the north bound lane is needed or not as most buses will stop at One-Stop
-  Lanes under flyover or merging lanes

To underpass To Birchfield

HOW TO KEEP THE PERRY BARR FLYOVER AND KEEP TRAFFIC MOVING

PROPOSAL NUMBER 2

This proposal uses less land than version 1 and we have supplied less detail. It may not have enough 'storage space' for traffic in the event of queues building up for access to Birchfield. It may also not allow enough space for lane changing

Both plans depend on the restoration of a limited u-turn facility to allow traffic from the A453 to access One Stop from the south. However this would be limited and much traffic from the A453 may choose to use the yellow 'shepherd's hook' instead by diverting onto the Walsall Road

Notes: Very unclear if the red northbound bus lane is needed here as most buses will stop at the One-Stop bus terminus and then proceed onto the Aldridge Road. The authorities may want to encourage some local buses to run through the heart of the village northbound so we have included this lane. These lanes cannot be used by taxis.

KEY

-  Northbound traffic - Existing plans as part of athlete village planning approval
-  Southbound traffic - Existing plans as part of athlete village planning approval
-  Addition to the roads - new access to One-Stop and extra turn at Aldridge Road lights
-  Green central reservation - NEW!
-  Bus and cycles only - Existing plan

A Major Opportunity for creative urban design is being missed

The former lorry park site to the east of the flyover is no longer being used for accommodation for the Athletes' Village

This could allow design competitions to take place for the post-2022 phase.

These urban structures have stimulated innovative design and genuinely interesting new spaces in other cities

The existing
Perry Barr
flyover



Highline . New York



The Underline, Miami



Proposed Lowline Park, New York



12
CITY COUNCIL – ~~11~~ SEPTEMBER 2018

WRITTEN QUESTION TO CABINET MEMBER FOR TRANSPORT AND
ENVIRONMENT FROM COUNCILLOR JON HUNT

"Perry Barr Flyover - Replace with Traffic Light Junction"

Question:

Could the Cabinet Member share the cost-benefit analysis behind the proposal to remove the Perry Barr flyover and, as I understand it, replace it with a complex traffic light junction?

Answer:

Highway options are being developed for Perry Barr including appropriate analysis. A report to Cabinet will be produced to consider a preferred option in due course.

CITY COUNCIL - 4 DECEMBER 2018

WRITTEN QUESTION TO THE CABINET MEMBER FOR TRANSPORT AND ENVIRONMENT FROM COUNCILLOR JON HUNT

"Perry Barr Flyover - disruption"

Question:

The recent Perry Barr ward forum was told that demolition of the flyover at Perry Barr – if it proceeds – will cause two years of disruption. What assessments are being undertaken of the cost of that disruption to the economy of the city, the health and welfare of the Perry Barr area and household budgets of those using the route?

Answer:

No decision on the future of the flyover has yet been made, an Options Appraisal report is expected to be presented to Cabinet early in the New Year.

The highway changes being considered at Perry Barr, specifically the A34/A453 junction and the A34/A4040 junction are significant (whether the flyover is retained or removed). The construction works programme is expected to be around 2 years in duration; the programme will be developed once a contractor has been appointed and every effort will be made to deliver the highway changes in the shortest time possible.

The Council has a duty under the Traffic Management Act 2004 to manage the highway network, with a view to achieving, so far as may be reasonably practicable, the expeditious movement of traffic on the road network and the more efficient use of the road network having regard to its other obligations, policies and objectives. To deliver physical changes to the highway it is necessary to put in place temporary traffic management arrangements that may involve lane closures or lane narrowing and/or road closures. Where possible these restrictions are limited to the off peak periods. Not only are these restrictions necessary for the efficient delivery of the works, they are also required to ensure the safety of construction workers and highway users.

There is no specific cost benefit analysis carried out to measure the disruption impact. An air quality assessment of the impact of the construction together with the final scheme will be undertaken.

The Council working with the appointed Contractor and Transport for West Midlands will produce a comprehensive construction management plan and also implement travel demand management to help mitigate any adverse impacts during the construction period.

The proposed Perry Barr regeneration scheme is an extremely important and long-awaited opportunity for the city, which will deliver much-needed homes and better public transport for the citizens of Birmingham.

CITY COUNCIL - 15 JANUARY 2019

WRITTEN QUESTION TO THE CABINET MEMBER FOR TRANSPORT AND ENVIRONMENT FROM COUNCILLOR JON HUNT

"Perry Barr Flyover - Costs Extensive Modelling Work"

Question:

Could the Cabinet Member spell out the costs, explaining how it is funded, for the extensive "modelling" work that has been undertaken over the last six months in pursuit of the administration's ambition to demolish the Perry Barr flyover?

Answer:

An external consultant was commissioned in Spring 2018 to develop options for the A34/A453 junction that is required to be modified as part of the proposed residential development. The commissioned work included traffic modelling.

The cost of the modelling work, which is ongoing, is £37,000 and is funded from Government Infrastructure Grant. The modelling work is a key element of the options development work and necessary to provide traffic data outputs to enable Cabinet to decide which option to take forward.

CITY COUNCIL - 5 FEBRUARY 2019

WRITTEN QUESTION TO THE LEADER OF THE COUNCIL FROM COUNCILLOR
MORRIAM JAN

"Perry Barr Flyover - how many residents consulted?"

Question:

At the recent Commonwealth Games residents liaison group, the Leader restated his view that the Perry Barr flyover somehow "divides" the Perry Barr community - even though it has substantial open space around it. How many residents has he consulted and found in agreement with him in order to reach this view? (For instance I don't think he gained any support at the meeting I refer to)

Answer:

On the 12th February 2019 Cabinet will recommend a preferred option for highway works in Perry Barr and approve full public consultation in accordance with the Council's governance process. Engagement has taken place with the Ward Councillors, MP, those parties affected by the Compulsory Purchase Order, Walsall and Sandwell Councils, Transport for West Midlands, Department for Transport, Highways England along with the Commonwealth Games Residents Liaison Group and Perry Barr Ward Committee.

The public consultation responses will be reported in the Full Business Case as per normal practice.

F

CITY COUNCIL - 5 FEBRUARY 2019

WRITTEN QUESTION TO THE CABINET MEMBER FOR TRANSPORT AND ENVIRONMENT FROM COUNCILLOR MORRIAM JAN

"Perry Barr Flyover - scrutiny inquiry"

Question:

Individual Councillors, such as myself, have been briefed on the "modelling" that lies behind the proposal to remove the Perry Barr flyover. However, we have not been offered any opportunity to reflect on the briefings we received. Given that, on reflection, it is quite clear the modelling is based on false premises and that thousands of people have signed the petition to save it, will the Cabinet Member agree to a scrutiny inquiry into the proposals so that the local Councillors can present and have assessed a reasonable alternative?

Answer:

The traffic modelling information presented to Councillor Jan and other Ward Councillors who accepted the invitation to the meetings to discuss the proposals covers the three options considered for the A34 / A453 and A34 / A4040 junctions. The decision on which option is to be taken forward to consultation will be made by Cabinet on 12 February 2019. The briefing to Councillor Jan took place on 24 January, however the briefings with the other Ward Councillors were on the 7 and 8 January thereby giving several weeks to reflect on the options and modelling information discussed.

The modelling has been undertaken by an external consultant and each option assessed in the morning and afternoon peaks and on a Saturday using the same base traffic data.

In the event the Cabinet Report is 'called in' and subject to scrutiny I will provide responses to any questions raised.

Councillor Liz Clements
Birmingham City Council
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B1 1BB

13 February 2019

By email: liz.clements@birmingham.gov.uk

Dear Councillor Clements

COMMONWEALTH GAMES PERRY BARR INFRASTRUCTURE CHANGE PROPOSALS

Sovereign Centros are responsible for the asset management of One Stop Shopping, Perry Barr (One Stop) on behalf of the owners Perry Barr S.A.R.L and the industrial land at the rear of One Stop, known as Regina Drive that is owned by Perry Barr Limited. Both owners have formally objected to the Compulsory Purchase Order (CPO) made on 21 December 2018.

One Stop has 377,000 sq ft of retail space on a 27.91 acre (11.29 hectare) site and has 39 retail units within the covered mall area and 21 retail warehouse units facing onto a 1,225 space surface level car park. It is the main retailing destination in Perry Barr with an exceptionally loyal catchment population of some 168,000 people within a 10 minute drive time. One Stop attracts an annual footfall of circa 6.4 million through the covered mall areas and an additional circa 4 million through the retail warehouse park.

One Stop operates 24 hours a day and both the northern and southern entrances are used intensively. The southern entrance is adjacent to the bus interchange and is the junction that the majority of delivery vehicles use to exist and travel south. A total of 5,302,648 vehicles used One Stop car park in 2018 and this number was an increase of 20.6% from 2017.

Sovereign Centros have managed the entre since the purchase by the current owners in December 2016 and have invested significantly into the asset to improve and develop the site and the retailer tenant mix. Despite the challenging UK retailing market we have successfully introduced retailers such as JD Sports; The Food Warehouse; The Gym (24 hour opening) and Costa Coffee. A great deal of work continues as we actively market to attract new businesses into One Shop for the benefit of the local community.

It is the owner's intention to continue to invest in One Stop as well as develop the industrial site at Regina Drive where a planning application has already been submitted for the development. As a consequence, it is critical for the future prosperity of these assets to ensure the road infrastructure cross this area is not adversely affected. Damaging road connectivity by increasing travel times, creating unacceptably long vehicular queues for both customers and deliveries entering or leaving One Stop and

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forcing traffic to undertake convoluted routes across the road network and will undoubtedly deter customers from visiting. It will also deter retailers from taking space which will lead to a drop in income and asset value for the landlord and less facilities for the community and the potential new residents during and post the Commonwealth Games.

In respect of the proposed road changes to the A34, Walsall Road we have been liaising with Birmingham City Council (BCC) transportation team led by Jas Chahal. Following meetings held with Mr Chahal and colleagues on 4 December and 15 January, we raised our serious concerns about the proposal to remove the flyover completely and the requirement to CPO so much of our land.

We strongly believe that by doing this it will adversely affect the operation of One Stop Shopping and cause major disruption to vehicular movements across this area. It was evident no real understanding of the vehicular movements around our two ownerships and in particular One Stop had been considered.

We have reviewed the Report to Cabinet published on 5 February and is to be submitted to Cabinet on 12 February 2019 and there are several critical areas within this report that have raised our immediate concern. Paragraph 5.6 states One Stop Shopping's concerns and the objection registered on the CPO. The wording underestimates the depth of our opposition to the scheme and the CPO proposals.

The technical assessment work on BCC's preferred option No. 2 gives us severe concerns. The increase in the queuing distances predicted will undoubtedly gridlock and bring One Stop Shopping to a complete standstill at peak times. It will impact on the vitality and viability of the Centre and thus undermine all the objectives of the project.

BCC have, in their opinion, set out what they believe to be the benefits of the scheme in para 4.3 in the Report to Cabinet. It is important we address these and highlight our concerns on each, as follows: -

The management of the movement of people to/from Perry Barr and along the A34 using sustainable modes of transport whilst recognising the A34 as a strategic route;

Whilst the suggestion of the improvements to Perry Barr railway station and bus interchange are supported, these improvements can both be achieved through the retention of the flyover, which better respects the A34, Walsall Road as a strategic route.

The delivery of transport infrastructure to support the development of new commercial and residential uses in the district centre, which create a sense of arrival;

As stated above, the significant impact on vitality and viability will have the opposite intended impact. Further, it is not clear what 'sense of arrival' is achieved that differs from the existing scenario.

The provision of direct pedestrian crossing between the new village and the shopping centre, bus interchange and rail station, along with the creation of high quality public realm at the A34/A453 and A34/A4040 junctions to create a place where people want to visit, shop, work and live;

These objectives can be achieved with all three options.

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The provision of a cycle track/shared footway from the District Centre connecting to the Birmingham Cycle Revolution scheme at Heathfield Road;

This objective can be achieved with all three options.

The provision of bus lanes on both sides of the A34 between Birchfield Island and Aldridge Road;

This objective can be achieved with all three options.

Access to One Stop Shopping Centre through the creation of a focal point all movement traffic signal junction at A34/A453;

The proposed access presents a critical risk to the shopping centre; with the extensive queuing forming during peak times and gridlocking One Stop Shopping. This cannot be overstated.

The removal of the convoluted pedestrian subway/footbridge arrangement at the A34/A4040 junction and introduction of at grade crossings incorporated into the proposed traffic signals thereby reducing the perception of crime/anti-social behaviour; and the ability to link, and remotely control, traffic signal junctions and pedestrian crossing on the A34 to manage the flow of traffic.

The majority of these objectives can be achieved through an option that retains the existing flyover.

Paragraph 4.4 states that *“The flyover is a physical and visual barrier that contributes to transport and highways infrastructure dominating and bisecting the centre. Its removal will deliver a much more attractive, legible and connected urban centre, whilst promoting sustainable forms of transport. It will create a better quality environment and access for sites fronting the highway, including residential and commercial development delivered here, and will improve development value thereby improving viability. The introduction of the wider transport infrastructure proposals at this location are key to encouraging people to travel by bus, train and cycle. Modal shift is essential to the efficient management of traffic along the A34 and the wider movement of people in the context of growth and City Council policies.*

With the exception of aesthetic improvements all other objectives can be achieved with an option that retains the flyover. Further, the assertions that the preferred option will encourage new development and improve development value in the area are not backed up by any evidence. With a road reconfiguration that stands to increase travel times through the area and cause major queuing and disruption to the operation of One Stop Shopping and any new development to the employment land at the rear will deter new businesses from trading or considering trading at One Stop Shopping.

The impact of the preferred option on Perry Barr has not been balanced against the described benefits. Further consideration of these matters must be considered by BCC through scrutiny before a decision to proceed is made.

Sovereign Centros and the owners of One Stop Shopping and the industrial land are at their own expense testing the impact of the preferred option on the Centre. An independent survey of vehicular flows around One Stop Shopping has been carried out and the results of these are due to be reported.

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In addition, the transport modelling BCC have now provided has being reviewed by transport consultants Mayer Brown; who have flagged concerns with the proposed alterations. A copy of their conclusion is attached as an Addendum. It concludes that the modelling conducted is insufficient and unrepresentative, and is therefore inadequate to be used to accurately assess the Highways impact of the Athletes Village development proposals or the proposed changes to the Highway Network.

The owners of One Stop and Regina Drive are fully supportive of the improvements proposed for the bus interchange and railway station and the much needed wider investment the area will receive. However, we are vehemently opposed to changes being made to remove the A34, Walsall Road, flyover and the requirement to CPO, the north entrance to One Stop. BCC have a substantial area of land to the immediate east of the flyover that is not going to be developed as part of the Commonwealth Games development that should be included in the road network proposed changes. To date, this has been completely ignored.

Yours sincerely



Simon Phipps

For and on behalf of Perry Barr S.A.R.L and Perry Barr Ltd

cc: Councillor Jon Hunt (by email: jon.hunt@birmingham.gov.uk)

ADDENDUM

6 Conclusion

- 6.1 This Modelling Review has been prepared to provide a review of the VISSIM and LinSig models produced by AECOM to model the effect of the development of the Commonwealth Games Athlete's Village in Perry Barr, Birmingham, and the associated highways improvements.
- 6.2 Three options for highways improvement schemes were put together to support the development of the Commonwealth Games Athlete's Village. Of these, Options 2 and 3 were deemed viable transport schemes and were selected for further modelling.
- 6.3 This report concludes that the modelling conducted by AECOM is not representative of the traffic situation on-the-ground, and that it does not adequately model or consider the impact of the highways proposals on the operation of the One Stop Shopping Centre. Justification for this conclusion is provided throughout this report, however a number of key points include:
- Unrepresentative queueing observed in the models at the One Stop Shopping Centre accesses
 - Queue surveys were not collected at the One Stop Shopping Centre accesses, and no consideration of these queues has been made in the modelling or calibration
 - There is insufficient space at the Northern One Stop Access for the two-lane exit arm proposed in Option Two
 - The VISSIM models of Options Two and Three incorrectly model the One Stop car park as a continuous circuitous route through the car park
 - Modelling indicates queues from the northern access would block access to and from lanes of the One Stop car park
 - The LinSig models have a number of inconsistencies and errors, including numerous examples of default values being used for lane widths, saturation flows and link lengths, when it is evident that this information is incorrect
 - The schemes do not adequately consider safe access for HGVs to the service yard directly to the west of Walsall Road (A34)
- 6.4 It is therefore concluded that the modelling conducted is insufficient and unrepresentative, and is therefore inadequate to be used to accurately assess the highways impacts of the Athletes' Village development proposals or the proposed changes to the highway network.