BIRMINGHAM CITY COUNCIL

BIRMINGHAM CITY COUNCIL (PERRY BARR – COMMONWEALTH GAMES ATHLETES’ VILLAGE AND LEGACY) COMPULSORY PURCHASE ORDER 2018

THE TOWN AND COUNTRY PLANNING ACT 1990

THE ACQUISITION OF LAND ACT 1981

PUBLIC INQUIRY

PROOF OF EVIDENCE OF ANDREW EVEREST

CHARTERED ENGINEER

ON BEHALF OF BIRMINGHAM CITY COUNCIL
1. Qualifications and experience

1.1 My name is Andrew Everest. I am a Technical Director with Jacobs and am currently seconded to Birmingham City Council (The Council) to lead the Council team in delivering the A34 Perry Barr highway improvements. I have a BSc (Hons) in Civil Engineering from Loughborough University. I am a Chartered Engineer and a Member of the Institution of Civil Engineers (ICE). As a Member of the ICE I am required to comply with their Rules of Professional Conduct and I confirm that I have done so in relation to the preparation and giving of expert evidence. The evidence in this Proof of Evidence is true and I confirm that the opinions expressed are my true and professional opinions.

1.2 I have 35 years of experience in the design, procurement, construction and maintenance of highways. I have a broad experience of working on a wide variety of highway projects, from minor maintenance works through to junction improvements and bypasses to the widening of the M25 Motorway.

1.3 I have been involved in the development of the A34 Perry Barr scheme since August 2018.
2. **Introduction**

2.1 Birmingham City Council will host the 2022 Commonwealth Games. This will entail an ambitious games-time and legacy development which will deliver transformational change in Perry Barr and promote wider growth (“the Scheme”). The Council and its partners committed during the bid process to provide transport enhancements ahead of the Games to ensure a reliable transport network for athletes, officials, workforce and spectators.

2.2 The Games-time Athletes’ Village will comprise residential accommodation for 6,500 or more athletes and officials, which will be provided as permanent development with legacy residential use, along with a range of temporary Games-time facilities. The residential element of the Village is important as it will be the first phase of the significant housing growth proposed at Perry Barr. The partial closure of Aldridge Road is a vital element of this scheme, bringing together the whole site to operate as an integrated place and providing a high quality public space at the heart of the scheme which links to future phases of development.

2.3 The proposed improvements to the A34 Perry Barr (“the Highway Element”) are an important component of the CPO Scheme.

2.4 My evidence provides a detailed explanation of the layout of the proposed Highway Element and will demonstrate that design issues have been properly considered in developing the Highway Element.

2.5 I shall refer to the Statement of Case and the Proofs of Evidence prepared by Mr MacLeod, Mr Lee, Mr Shingadia, and Mrs Farr.

2.6 My evidence is structured as set out below:

- Section 3 Existing Situation
- Section 4 Need for the Highway Element
- Section 5 Design Factors
- Section 6 Design Standards and Guidance
- Section 7 Development of Highway Element
Section 8  Description of Highway Element
Section 9  Benefits of the Highway Element
Section 10 Planning and Transportation Development Framework
Section 11 Delivery of the Highway Element
Section 12 Response to Objections
Section 13 Summary and Conclusions
3. Existing Situation

3.1 The Scheme Area forms part of a strategic movement corridor between Birmingham City Centre and parts of the northern conurbation of the West Midlands. The A34 is a primary corridor linking the City Centre to Walsall and Junction 7 of the M6. The A453 is a primary corridor linking the City Centre to Aldridge, Kingstanding and Boldmere. These two routes meet at Perry Barr at a complex junction that includes a gyratory element and a flyover taking A34 flows above two northbound links to the A453 Aldridge Road. The partial gyratory junction does not allow all movements, so the roundabout to the south with the A4040 is an important element in providing all the desired traffic movements in the locality. It is therefore important to consider the A4040 roundabout (known locally as Birchfield Island) as an integral part of the existing highway layout.

3.2 The One Stop Shopping Centre is situated to the west of the flyover and is a significant destination and traffic generator.

3.3 The individual components of the existing local highway network are described in the Statement of Case (4.28-4.40). The plan showing the existing highway layout and local features (BCC35) is a useful guide when referring to the descriptions of the main elements below.

The Road Layout

3.4 The road layout is best described in two parts: the section north of the railway that includes the partial gyratory; and the section south of the railway that includes Birchfield Island.

North of the Railway

3.5 The northern section comprises the A34 Walsall Road, the A34 flyover (“the Flyover”), the A453 Aldridge Road, One Stop Shopping Centre and a bus interchange.

- **A34 North of the River Tame**: North of the Tame bridge, the A34 is a dual carriageway, with 2 lanes in each direction and a short length of northbound bus lane.

- **A34 Flyover**: The Flyover is a small 2-lane flyover; it is 115m long with approach ramps at each end of approximately 80m. The bridge deck itself is a composite construction with a concrete deck supported by 4 steel beams. The deck comprises 5 spans supported by 2 abutments and 4 leaf piers. Two of the central spans are of sufficient height to enable vehicles to
pass beneath them. The deck itself is 9.5m wide which allows sufficient space for one lane of traffic in each direction.

Figure 1 A34 Flyover viewed from Aldridge Road

- **A34 Gyratory Southbound**: As the A34 heads south over the River Tame bridge, it bifurcates: southbound A34 traffic continues over the Flyover, which passes over two of the links taking northbound traffic from A4040 and A34 to A453; while the diverging route southbound takes 2 lanes of traffic wishing to access A453, A4040 and the One Stop Shopping Centre.

- **A34 Gyratory Northbound**: To the north of One Stop Shopping Centre, the merging flows northbound comprise a single lane from A4040, the Bus Interchange and One Stop Shopping Centre.

- **Northbound Gyratory Links**: The two link roads that pass under the Flyover serve to connect the A34, A4040 and One Stop Shopping Centre with the A453 and facilitate U-turn manoeuvres to allow traffic from One Stop and Birchfield Road to head south.

- **A34 South of the Flyover**: The A34 passes over the railway as a dual carriageway with 2 lanes in each direction. The southbound traffic merges from A453 and northbound traffic diverges that wishes to access A453 or to ‘U-turn’ back onto A34 Southbound or A4040.

- **A453 Aldridge Road**: To the north of the junction with Wellhead Lane, the A453 Aldridge Road is a single carriageway 4 lane highway. South of Wellhead Lane, a short length of bus lane is added to the 2 southbound lanes. There is a signalised junction situated just south of the Greyhound Stadium (where traffic joins from the link from A34 (southbound), A4040 and One Stop Shopping Centre. A priority junction is situated 120m south of the signalised junction, where the link taking U-turning traffic from A34 (northbound) joins A453.
South of the Railway

3.6 The section south of the railway includes the significant junction with the A4040 at Birchfield Island.

- **A34 and Birchfield Road:** South of the railway, the A34 continues as a dual carriageway (with 2 Lanes in each direction) which passes beneath the A4040 roundabout in an underpass. The underpass is flanked by 2 lane link roads on each side that serve to access local shops and to connect the A4040 and One Stop to the A34 and A453. Both of these link roads are called Birchfield Road.

- **A4040 and Birchfield Island:** The A4040 is aligned east-west and passes over the A34 at a roundabout known locally as Birchfield Island. The roundabout arms include the 4 Birchfield Road slip roads that merge to A34 (to the South) and the gyratory junction (to the North).

- **Birchfield Island Subways:** The roundabout is situated amongst several shops and businesses that form the retail centre of Perry Barr and Birchfield. Pedestrian movements are facilitated by a network of subways under the roundabout and a footbridge over the A34. These do not include ramps for step-free access.

Existing Access and Egress for One Stop

3.7 The Flyover presents a significant constraint to customers of the One Stop shopping centre ("One Stop").

3.8 Customer access is provided by access roads to the north and south of One Stop. These are used by customers and delivery vehicles. Both of these access roads join the northbound one way link road to the A34 and in each case a flyover approach ramp is opposite the access road. Both of the accesses therefore operate as 'left in, left out' junctions, with no ability to turn right. The limitations of these junctions result in some long access and egress routes which are shown on the drawing at Appendix A titled ‘Routes in and out of One Stop’. These routes are described below.

3.9 Traffic wishing to access One Stop from the A34 from Walsall needs to leave the A34 and follow the gyratory, diverging left before the Rail Bridge to Birchfield Island. It then needs to go all the way around the roundabout to U-turn back north, accessing the centre at either the south or north access road.

3.10 Traffic wishing to leave One Stop and head south needs to use the southern access road, they need to head north, moving into the right lane to pass under the flyover and join the gyratory, eventually heading south to Birchfield Island, before heading straight on to merge with A34 southbound. If the customer is
unaware of this and uses the northern exit, there is no U-turn facility to turn south and drivers would have to use nearby residential streets to facilitate this movement.

**Access for Non-Motorised Users**

3.11 The existing environment is challenging for non-motorised users.

**Birchfield Island**

3.12 The area around Birchfield Island includes many shops and local businesses which are poorly linked across the junction. The current layout of roundabout and underpass requires that pedestrians wishing to cross from one side of the A34 to the other negotiate a network of four subways and a footbridge. There is no ramped access to any of the subways or the footbridge, which makes it an unfriendly environment for those relying on wheeled access including pushchairs, prams, wheelchairs and bicycles. To travel from one side of A34 to the other currently involves negotiating 2 subways, a footbridge and a total of approximately 65 steps.

3.13 A pair of at-grade puffin pedestrian crossings is available immediately south of the roundabout which does permit east-west travel but the pedestrian fencing limits its width to around 1.5m in places which causes problems for pushchairs, wheelchairs or mobility scooters especially when needing to pass each other.

3.14 At grade pedestrian crossings exist to cross both the Wellington Road (Pelican) and Aston Lane (Puffin). These are set back 40m and 30m respectively from the roundabout island.

**Northern Gyratory**

3.15 At the northern end, pedestrian access east-west across A34 and A453 is via at grade pedestrian crossing facilities. These were installed in 2016 as an upgrade to replace the previous network of subways. The crossing of A34 is a Puffin.Crossings of Gyratory links and A453 are also via puffin.

3.16 Pedestrian crossing of Harrier Way is via a pelican pedestrian crossing integrated with the traffic signalised junction with A453. The crossing of A453 at this point is also via Pelican crossing.

**Cycling Facilities**

3.17 There is no segregated or shared use cycling facilities through the Scheme Area. All cyclists would need to either stay on the road or dismount.
Public Transport

3.18 Local bus services stop at several locations throughout the Scheme Area. The Bus Interchange adjacent to One Stop is within the Scheme Area, but is poorly served by bus lanes. Short lengths of bus lanes exist to the north of the Scheme Area on A453 and A34, and to the south of the scheme on Birchfield Road. There are no bus lanes connecting through the scheme area to serve the bus interchange.

3.19 The express service bus X51 does not stop within the Scheme Area; the nearest stop being 1.4km north at Alexander Stadium.

Public Utilities

3.20 Most utility companies have plant and equipment in the area. We have obtained location information from the utility companies and most have submitted estimated costs for diverting their equipment where necessary.

Summary of the Existing Situation

3.21 The existing layout and features as described above, present a significant constraint to the movement of pedestrians, cyclists, less able users and public transport. The predominance of highway infrastructure in the area also inhibits the redevelopment of Perry Barr and if it is left unimproved, would compromise the Council’s promise to deliver a public transport games.
4. **Need for the Highway Element**

4.1 The need for the Highway Element arises from the need to improve the existing situation; support sustainable travel modes; assist with the regeneration of Perry Barr and to facilitate the Council’s goal of delivering the public transport games.

4.2 The need is driven by four complementary factors:

(i) changing the nature of a section of Aldridge Road to allow only buses, cyclists and pedestrians, thereby unlocking development potential;

(ii) extending the Birmingham Cycle Revolution scheme north from Heathfield Road;

(iii) incorporating bus priority measures for local and Sprint buses; and

(iv) improving accessibility for pedestrians, cyclists and less able users at Birchfield Island.

These factors are explained individually below:

**Aldridge Road**

4.3 The primary scheme trigger is the traffic restriction of the section of Aldridge road between Harrier Way and the A34 Walsall Road. As part of the Athletes’ Village housing development, this will become restricted to general traffic, with only cyclists, pedestrians and southbound buses permitted to use it. This traffic restriction requires that a revised highway layout be implemented to accommodate the appropriate traffic movements. Mr MacLeod has explained why this is an important aspect in unlocking the development potential of the area and regenerating Perry Barr.

**Cycleway Provision**

4.4 The cycleway along the A34 is being promoted across Birmingham as the Birmingham Cycle Revolution (BCR). The BCR along the A34 has already been constructed from the City Centre as far north as Heathfield Road. This Highway Element will continue the BCR from Heathfield Road north through Perry Barr to the Tame River Bridge. This cycleway will be segregated from traffic and pedestrians wherever possible, with the aim of improving safety for cyclists and pedestrians and promoting cycling for all ages by making it a more attractive mode of transport.

**Public Transport**
4.5 There is a need to improve facilities for buses within the Scheme Area and to provide facilities for Sprint buses. Sprint is the branding for the Bus Rapid Transit System being promoted by West Midlands Combined Authority (WMCA) and Transport for West Midlands (TfWM) and I refer to the evidence presented by Mr Shingadia to support the case for Sprint. Sprint services are to be provided along A34 and the highway element will include Sprint facilities within the Scheme Area. Roundabouts and priority junctions do not allow for implementation of bus priority measures. Within the scheme, bus priority measures will be incorporated at traffic signals to improve journey time reliability for all buses passing through the scheme.

Non-Motorised Users

4.6 The existing highway layout tends to dominate the local landscape and presents obstacles to movement of pedestrians, cyclists and less able users. At Birchfield Island, non-motorised users need to use the network of stepped subways and a footbridge to cross the 4 arms of the roundabout. This is not possible for wheelchair users, and difficult for cyclists and pushchairs. The subways present safety and security risks for all users, and do not make a positive contribution to wellbeing.

4.7 Furthermore, at the gyratory junction, the predominance of highway infrastructure creates an element of severance between the facilities on the west of A34 and the community to the east.

The Commonwealth Games

4.8 The Commonwealth Games were promoted as a ‘public transport games’ as set out in paragraph 2.20 of the Statement of Case. It can be seen that the four factors above will all contribute to that goal by improving facilities for public and sustainable transport.

4.9 Perry Barr will be a primary transport gateway for the Alexander Stadium during games time, with the Rail Station and the Bus Interchange performing key roles in transporting spectators to the venue.

Highway Element Objectives

4.10 The combination of factors outlined above was the prime consideration when drafting the objectives for the Highway Element that were stated in the Options Appraisal report (BCC36). These are to enable access to key sites by:

- managing the movement of cyclists, buses including Sprint and general traffic both to and through the area;
• improving journey time reliability for public transport;
• providing safer infrastructure for all road users;
• providing high quality & continuous facilities for cyclists; and
• enhancing connectivity for pedestrians and cyclists between the local centres of transport, residential, retail and leisure facilities.
5. Design Factors

5.1 A number of physical constraints were identified during the development of the design. These constraints serve to define the scheme limits as set out in the Statement of Case and in more detail below. The locations can be found on the drawings showing the highway element (BCC51).

- **The Tame River Bridge** carries the A34 Walsall road over the River Tame. Making structural alterations to this bridge would result in a significant increase in scheme costs, so the bridge constrains the width, and alignment of the scheme at this location.

- **The southern end of the Greyhound Stadium** includes an internal route to allow access for spectators and maintenance to the west side of the track. The need to maintain this access restricts the amount of widening to the north of Harrier Way.

- **One Stop Shopping centre and its vehicular accesses** is situated on the west side of A34. In between the north and south public accesses is a service and delivery access that serves ASDA and the eastern retail units. The geometry of this arrangement is such that there is no scope to move this access further west without compromising access for delivery vehicles. In the northeast corner, the delivery access into the ASDA store needs to be maintained at its current width to allow space for delivery vehicle access.

- **The Probation Centre** is located between the River Tame and the northern access to One Stop. Its presence restricts the amount of widening that can be achieved to the One Stop northern access.

- **The new Athletes Village housing development** received Planning permission on 20 December 2018. The element of the development that will be built on the old Gailey Park site constrains the degree to which the A34 can be widened to the East, and how far Harrier Way can be widened to the south.

- **The southern section of Aldridge Road** is not available to general traffic, so the traffic movements within the area need to be accommodated in a more compact area.

- **The railway line** cuts through the scheme on an east–west axis and a combination of six bridge decks carries the A34 above it. Alterations to rail bridges can be expensive in terms of cost and programme and the aim is to minimise any alterations required to these bridge decks.
• **The Flyover** occupies a significant amount of road space that would be unavailable to accommodate a new highway layout if the flyover were to be retained.
6. Design Standards and Guidance

6.1 The Council specify the use of the nationally recognised standards set out in the Design Manual for Roads and Bridges (DMRB). This is published by the Stationery Office and updated by Highways England for the Department for Transport. The Council specifies its use in so far as it applies but where the Council considers that DMRB does not provide appropriate solutions, it can implement pragmatic alternatives. The Council has powers as a Highway Authority (The Overseeing Organisation in DMRB) to grant departures from standards.

6.2 The Highway Element has been designed by AECOM who are engineering design consultants with an international reputation.

6.3 The design recognises that standards within DMRB are generally applicable to rural road networks, and where lesser standards are more appropriate in a confined urban area, AECOM have drafted ‘departures from standards’ applications.
7. Development of the Highway Element

Development history

7.1 The original concept for the scheme was identified to allow for the development of the Athletes Village and the restriction of Aldridge Road to through traffic. This development received planning consent on 20 December 2018. In addition, the scheme was required to incorporate linear improvements to sustainable transport modes along A34 including bus lanes for Sprint and general buses and the continuation of the cycleway facilities known as Birmingham Cycle Revolution (BCR).

Development of the Preferred Option

7.2 In developing the Highway Element, several options were developed and compared to assess their performance.

- Option 1 – Remove flyover and underpass and bring all road infrastructure to ground level
- Option 2 – Remove flyover and retain underpass
- Option 3 – Retain Flyover and underpass

7.3 These options were compared using traffic modelling and the conclusions were reported in the Options Appraisal report that was presented to Cabinet on 12 Feb 2019. (BCC36)

Option 1

7.4 The aim of option 1 was to create the biggest improvement in public realm by significantly reducing the impact of grade separation on the area. To this end, the option removed both the flyover at the northern end and the underpass at the southern end. This would have provided significant benefits in terms of reducing the visual clutter generated by the highway structures. However, bringing the combined traffic from both A453 and A34 to a signalised junction with the A4040 would significantly reduce the performance of the junction. The traffic signals would have been unable to cope with the increased traffic from the A34 underpass.

Option 2

7.5 This option aimed to achieve improved performance over option 1 by retaining the underpass at Birchfield Island, but keeping the signalisation of the A4040/A34 Junction by building a new bridge in the middle of Birchfield Island. This signalisation enabled improvements in access for pedestrians,
cyclists and less able users, as well as providing bus priority at the signals to improve the reliability of Sprint and bus services. At the northern end, the flyover would be removed which would reduce the severance impact of the highway infrastructure, and enable simplified signing and wayfinding around the junction. This option became the preferred option.

Option 3

7.6 This option included the sustainable transport improvements from Option 2, and retained the Flyover. Retaining the Flyover leaves significant obstacles in the form of the two approach ramps and four bridge piers. This, in turn, created challenges in terms of accommodating the required traffic movements. Option 3 seeks to achieve this by constructing a roundabout beneath the flyover, centred around one of the bridge piers. The physical constraints result in a smaller roundabout than would be ideal and the need for arms from the south to be signalised. While this layout coped with the morning peak traffic as well as option 2, in the pm peak, the traffic signals on the roundabout did not perform well.

7.7 Cabinet decided to develop the preferred option through to Full Business Case at the meeting of 12 February 2019. This decision was referred to Scrutiny Committee who concluded that the Cabinet had reached the correct decision, subject to a public consultation taking place. The public consultation for the highways element commenced on 3rd June 2019.

Why the Flyover is to be demolished

7.8 There has been much discussion in the media and in the local area as to why the flyover is being demolished. It is apparent that there are some who are of the opinion that the Council has set out to demolish the flyover purely on aesthetic grounds, and that the Highways Element of the scheme is driven by the flyover demolition. This is not the case.

7.9 As set out in Section 4 of my evidence, the primary trigger for the highways element is the closure of the lower section of Aldridge Road to through traffic. This means that all the traffic turning movements through the local junctions need to be accommodated within the corridor bounded by One Stop to the west, and the Gailey Park development of the Athletes Village to the east. This provides a corridor of approximately 45m wide, within which to accommodate all the turning movements.

7.10 If the flyover were to remain in place, its two approach ramps and 4 bridge piers would form a significant constraint within this corridor, which restricts the junction designs needed to accommodate the traffic turning movements.
7.11 Threading all the required junctions and carriageways around and beneath the flyover proved to be a significant design challenge, and the best performing design option that retained the flyover, needed a signalised roundabout centred around a bridge pier. This was appraised as option 3 above, and the design compromises of threading the roads around the flyover resulted in a poorly performing junction in the pm peak.

7.12 Removing the flyover creates more room to design a more efficient highway layout to cater for the required traffic movements.
8. **Description of Highway Element**

8.1 The proposed Highway Element is shown on drawings referenced as BCC51.

8.2 The main components of the scheme include an all movements signalised crossroads junction at the northern end and the conversion of Birchfield Island to a signalised crossroads. Signalisation enables the provision of bus priority to assist Sprint and general buses in improving journey time reliability. Signalisation also allows for improved crossing measures for pedestrians, cyclists and less able users. Throughout the scheme are improvements to assist sustainable transport including Sprint and Bus Lanes along A34 and the continuation of segregated cycleway facilities north from Heathfield Road to the River Tame.

*A453 Signalised Junction*

8.3 The signalised junction at the northern end is an all movements signalised crossroads with pedestrian crossing facilities across the eastern arm and the access to One Stop. This provides for a simplified and more transparent junction than the existing, with clearly understandable and direct ways to navigate between A34, A453 and One Stop shopping centre, without having to negotiate a gyratory system or Birchfield Island. The existing flyover is to be demolished to create sufficient space for the junction and its approach lanes.

*Crossing to Athletes Village*

8.4 A new Toucan crossing facility will be included approximately 120m south of this junction. The crossing will take pedestrians, cyclists and non-motorised users across the A34, improving connectivity between the Athletes Village development, the Rail Station, the Bus Interchange and One Stop shopping centre. The Toucan crossing will also link the segregated Cycleway facility from the west side of A34 to the east side.

*One Stop Southern Access*

8.5 The southern access road to One Stop will remain a left in, left out junction onto the northbound Birchfield road slip that joins the A34 just before the Toucan crossing.

*Birchfield Junction*

8.6 The A34 will continue south using the A34 underpass as it does in the existing layout, with the Birchfield Road slip roads to A4040 remaining. The eastern Birchfield Road slip includes the new segregated cycleway facility.

8.7 The transformation of the existing Birchfield Island to a signalised crossroads will require new bridge decking to be installed between the existing roundabout bridges that form the A34 underpass. This will be constructed in
the middle of the existing roundabout and will be surfaced to create the space for the turning movements within the signalised junction. All 4 arms of the junction will include signalised pedestrian crossing facilities to enable pedestrians, cyclists and non-motorised users to cross safely at grade. This will represent a significant improvement in connectivity for people using the local facilities. The crossing facilities across Aston Lane and the northern arms of Birchfield Road will be Toucan crossings. The crossing facilities across Wellington Road and the southern arms of Birchfield Road will be Puffins.

*Cycleway Facilities*

8.8 Cycling facilities for the BCR will extend north from the Heathfield road junction along the East side of A34 to A4040 Aston Lane. The cycleway provision will be segregated wherever possible, but some shared use with pedestrians will be incorporated where it is impracticable to implement full segregation. The segregated facility will cross the A4040 Aston Lane using a toucan crossing and head north over the rail bridge to the southern end of the Aldridge Road, where the route bifurcates. At this point a segregated facility will head up the old section of Aldridge Road alongside the bus lane through the Athletes’ Village development. The A34 route will cross the Aldridge Road bus lane and head north as far as the Toucan crossing, where the route will cross the A34 to serve One Stop, the bus interchange and the Perry Barr rail station. The route continues north from the toucan crossing on the west side of A34 as far as the bridge over the river Tame.

*Bus Lanes*

8.9 Bus lanes will be provided along Birchfield Road northbound from Willmore Road to the new bus interchange and north from there along A34 to the Tame River Bridge. Southbound, bus lanes will be provided from the south side of the new A453 junction along the A34 and Birchfield Road to the new Birchfield Junction at Aston Lane. A further bus lane will be provided southbound between The Broadway and a spot just north of Trinity Church.

8.10 A new bus gate will be provided at the junction of Harrier Way and Aldridge Road to allow services to head south from the bus interchange where required. A new bus stop will also be provided on the old section of Aldridge Road to serve the Athletes Village development.

*Facilities for Non Motorised users*

8.11 In addition to the new crossing facilities described above, most of the new cycleway will be segregated from a dedicated pedestrian footway, making the pavement a safer area for pedestrians.

*Improvements to Public Realm*
The geometry changes to Aston Lane and Wellington Road allow for improvements to the public realm landscape and will include improved facilities for seating, cycle parking, planters and landscaped paving.

The area adjacent to the former section of Aldridge Road will benefit from improved landscaping as part of the Village development.

**Traffic modelling**

8.14 A Technical Note summarising the traffic modelling is included at Appendix B.

8.15 The base year local microsimulation (VISSIM) model has been validated and agreed with One Stop’s transport consultants.

8.16 Forecast traffic models have been prepared using the ‘PRISM’ Strategic Traffic model operated by WMCA and a local VISSIM model.

8.17 Models have been prepared for the AM and PM peak hours and for the Saturday lunchtime peak which is relevant for One Stop. Each of these peaks were modelled for 2022 and 2026.

8.18 Comparisons between the do-nothing and do-something cases showed differences in journey times for a range of journeys through the model area.

8.19 The forecast models show that for the range of journeys in 2022, the new highway layout would cause an average increase in car journey times of 45 seconds. By 2026, this average increase is reduced to 23 seconds.

8.20 A similar analysis on bus journey times shows that the new layout would deliver and average journey time saving of 6 seconds in 2022 and a 4 second saving in 2026. Actual savings in bus journey times are expected to be greater than this as the bus priority measures at signals have not been modelled at this stage.
9. **Benefits of the Highway Element**

9.1 The benefits of the Scheme have been set out by Mr MacLeod. The Highway Element will deliver the following benefits:

**Public Transport**

9.2 The highways element will provide new bus lanes through the scheme area, combined with bus priority measures at traffic signalled junctions. These will work in combination with the upgraded bus interchange to deliver an improved experience for bus passengers and improved journey time reliability of bus services.

9.3 Stops and shelters for the new Sprint services will be provided which will deliver a new high quality public transport service for Perry Barr.

**Cyclists**

9.4 The BCR that is currently constructed as far as Heathfield Road will be extended further north to the River Tame. The majority of the new BCR will provide segregated 2 way cycleway facilities which will make it easier and safer for people of all ages to use bicycles for their journeys. The cycling facilities will include Toucan crossings which will enable cyclists to cross roads without dismounting, and to cross between the different corners of Birchfield without negotiation the steps, subways and footbridge.

**Pedestrians**

9.5 The segregated cycleway facilities of the BCR include a new footway which will improve safety for pedestrians. New at-grade crossing facilities at Birchfield will make it easier to move around Birchfield centre, on shorter routes, and without having to navigate the steps, subways and footbridge.

9.6 Restricting through traffic on the Aldridge Road will make it easier for the residents of the new Athletes Village development to access One Stop, the Bus Interchange and Perry Barr Rail Station.

**Less able users**

9.10 Those with limited mobility that rely on wheelchairs, mobility scooters or pushchairs will benefit from the step-free access at Birchfield and the new segregated footway alongside the BCR. The new footways segregated from the cycleway will also improve safety for users.

**One Stop Shopping Centre**
9.11 The improved access to One Stop Shopping Centre will benefit customers, staff and deliveries. Clearer ways in and out will improve the experience for new visitors. Improved public transport measures will make it easier for customers to access One Stop without using a car. The improved connectivity to the east of One Stop will make it easier for the residents of the Athletes Village to use the One Stop facilities.

**Connectivity**

9.12 The improved facilities for pedestrians, cyclists and public transport will make it easier for people to access all the parts of Perry Barr and will join up the public transport hubs of the Rail Station and Bus Interchange with the residential, retail and leisure facilities throughout Perry Barr.

**Public Realm**

9.13 The character of the public realm in Perry Barr is dominated by highway and its accompanying infrastructure. With the roundabout at Birchfield and the gyratory to the north, the multiple traffic lanes, retaining walls, safety barriers flyover and pedestrian fencing all serve to dominate the local environment. The proposals will reduce the amount of highway infrastructure and serve to rebalance the sense of place within Perry Barr.

9.14 At Birchfield, the wider pedestrian areas created by the new junction layout will be redesigned to provide seating, planters, bicycle racks and soft landscaping.

9.15 Replacing the Birchfield subway network with at grade crossings will provide increased sense of safety and security and reduce the opportunities for crime.

**Perry Barr Regeneration**

9.16 The evidence of Mr MacLeod makes it clear that the vision for the overall scheme is the regeneration of the Perry Barr area. It is clear from the benefits outlined above that the Highway Element plays a significant role in facilitating and delivering that regeneration.
10. Planning and Transportation Development Framework

10.1 The Highways Element is consistent with the Planning and Transportation Policies implemented by the Council. The relevant policies are detailed below.

Birmingham Development Plan (BCC13)

10.2 The Highway Element is consistent with the Birmingham Development Plan (“the BDP”), as covered in evidence given by Mr Lee. The connectivity aspects of the BDP are covered in policy TP38 which describes the development of a sustainable transport network. TP 38 provides as follows:

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.
- In some circumstances, the re-allocation of existing roadspace to more sustainable transport modes.

10.3 The proposed changes to the highway layout as part of the Highway Element are consistent with policy TP38.
10.4 The BDP includes further policies that support TP38. These include TP39 Walking, TP40 Cycling and TP41 Public Transport. The Highways Element supports all these policies by providing improved facilities for these modes of travel.

The Birmingham Connected White Paper (BCC19)

10.5 The Birmingham Connected White Paper is directly linked to the strategies and policies of the BDP. The White Paper was endorsed by Birmingham City Council Cabinet on 17th November 2014. It sets out the agenda for investing in a radically improved integrated transport system that will realise the city’s potential to support sustainable economic growth, job creation and linking communities. It seeks to make travel more accessible, more reliable, safer and healthier and to use investment in transport as a catalyst to improve the fabric of the city. In this way, the transport system will be used as a way of reducing inequalities across the city by providing better access to jobs, training, healthcare and education as well as removing barriers to mobility.

Transportation & Infrastructure

10.6 The Birmingham Connected White Paper sets out the following five guiding principles for transportation in the city:

(i) Efficient Birmingham – Birmingham Connected will facilitate the city’s growth agenda in the most efficient and sustainable way possible, strengthening its economy and boosting jobs.

(ii) Equitable Birmingham – Birmingham Connected will facilitate a more equitable transport system; linking communities together and improving access to jobs and services.

(iii) Sustainable Birmingham – Birmingham Connected will specifically reduce the impacts of air and noise pollution, greenhouse gas emissions and energy consumption.

(iv) Healthy Birmingham – Birmingham Connected will contribute to a general rising of health standards across the city through the promotion of walking and cycling and the reduction of air pollution.

(v) Attractive Birmingham – Birmingham Connected will contribute to enhancing the attractiveness and quality of the urban environment in local centres, key transport corridors and the city centre.

10.7 The Highways Element will contribute either directly or indirectly to all these objectives, particularly by providing improved facilities for Public Transport, cyclists and pedestrians.
10.8 The Birmingham Connected White Paper also sets out the vision for Active Travel which will include the establishment of walking and cycling as default modes of travel across the city. The underlying logic is that people will choose these 'active' modes because they will be safe, fast, healthy and affordable. The scheme has been developed and designed to help promote these active travel modes.

10.9 In particular, the scheme has been designed to promote cycling and dedicated or shared cycle lanes are provided throughout the scheme which connect into the wider cycling network across the city. The proposal will therefore contribute to Birmingham Connected objective that cycling will become a mainstream form of transport over the next 20 years including the target for 5% of all trips in the city to be made by bike by 2023 and to double this again to 10% by 2033.
11. **Delivery of the Highway Element**

**Funding**

11.1 The Highway element has been estimated to cost £27.1M including construction and Statutory Undertaker diversions. The funding for the Highway Element is included in the funding for the whole scheme that has been outlined in the section 7 of the proof of Mr MacLeod.

**Governance**

11.2 The Highway Element has progressed through The Council's governance and approvals as follows:

- Outline Business Case – Summer 2018
- Options Appraisal Report – February 2019
- Referral to Scrutiny Committee – February 2019
- Commence Public Consultation – June 2019
- Seek EIA Screening Opinion – July 2019
- Award Design phase of Design and build contract – August 2019
- Full Business Case – September 2019

11.3 The public consultation for the Highway Element commenced on 3 June 2019 and the last date for responses is 19 July 2019.

**Procurement**

11.4 The Highway Element is currently out to tender for a Design and Build Contractor and we anticipate awarding the contract for the detailed design element of the works in August 2019. The construction period in the Contract is for works completion in September 2021.

**Construction**

11.5 As the design and build contract is currently out to tender, we will not have a definitive construction programme until later in the year. There are a variety of construction sequences that a contractor could follow, but successful traffic management is vital to all of them. In recognition of this there are contractual obligations on the Contractor to keep open as many traffic lanes as possible throughout the various phases of the works.
11.6 It is inevitable that with works of this nature, some traffic lanes will need to be closed to enable the works to be constructed in a safe and efficient manner.

11.7 Temporary Traffic Management arrangements will conform to the Council’s Traffic Management Approvals Process to ensure that proposals are as efficient and safe as possible. Road closures will be necessary at certain times, but the effect of these will be mitigated by implementing local diversions and limiting closures to overnight wherever possible.

11.8 In combination with keeping lanes open, we are working together with TfWM to draft a Travel Demand Management Strategy to inform road users of the various construction works that will take place in Perry Barr during 2020 and 2021. The strategy will be similar to those successfully implemented by the Council in delivering highway works in traffic sensitive locations such as Paradise Circus and the A38 tunnels. The advice to drivers will be to re-route, re-time, re-mode, or reconsider their journeys to take account of the construction works at Perry Barr. Advice on all options will be provided together with roadside signage and a media campaign.

11.9 Accesses to adjacent properties and businesses will be maintained during working hours. Access to One stop will be maintained, with at least one access open at all times to allow for deliveries and 24/7 access to units. Both accesses will be maintained during normal trading hours.

11.10 The Contractor will implement a stakeholder engagement plan. This will ensure that local businesses have a point of contact and that the contractor is proactive in considering the needs of the local community in delivering the scheme.

11.11 The Council is proposing to develop a Design, Access and Implementation Strategy to demonstrate how the construction works will be undertaken whilst maintaining access to the One Stop Shopping Centre.

11.12 The Council will therefore manage the construction works to minimise the local impact by implementing the following:

- Contractual obligations of the D&B Contractor;
- Traffic Management approvals process;
- Travel Demand Management Strategy;
- Stakeholder Engagement Plan; and
12. Response to Objections

12.1 The Statement of Case summarises the Council's responses to objections. The following points are highlighted where they are specifically relevant to the Highways element of the scheme.

Perry Barr S.a.r.l.

12.2 Perry Barr S.a.r.l. (PBS) is the owner of the One Stop Shopping Centre. In terms of the Highway Element, PBS have freehold interest and a right of access over plots 111 (Northern Access), 119 (bus interchange) and 120 (southern access). They also have a freehold interest in Plot 114 and 115 which have been purchased to provide segregated cycleway facilities.

Objection Summary

12.3 PBS is concerned about the impact that the construction and operation of the Highway Element will have on the operation of the shopping centre. PBS contends that the scheme would:

- Cause unacceptable queuing within the site and car park, particularly on the main shopper/visitor access, which will have a detrimental impact on the operation of the car park.

- Force southbound traffic, including delivery vehicles, to use the northern egress resulting in HGV traffic mixing with shopper/visitor traffic, which is considered unacceptable.

- Potentially affect access to the service yard to the east of the centre.

12.4 The following aspects of their objection also relate to the Highway Element:

- no meaningful negotiations have taken place to acquire the plots, and that the Council has not submitted any proposals, nor entered into any agreements, with PBS to ensure the continued, uninterrupted operation of the centre.

- all plots not covered by the Planning Permission for the Athletes’ Village should be removed from the Order.

The Council's Response

12.5 At the time that PBS submitted their objection to the CPO, the Council had not made a decision as to the preferred scheme. Many of the points raised in the objection refer to the highway layout that was not selected, as it did not perform as well as the preferred option.
My responses below use the same numbering as the PBS objection:

- 14(a) It is inevitable that constructing highway works of this magnitude will cause some level of disruption to traffic on the A34. The Council will work with the contractor to ensure that as many lanes as possible are kept open through the works, but there will need to be lane closures to construct the works in a safe and timely manner. The Council will be working closely with TfWM to inform drivers of the works in advance in an effort to reduce the number of vehicles using the route during peak hours. The Travel Demand Management Strategy will advise drivers to travel at different times, use different modes, use different routes, and review the need for their journey. Similar initiatives by the Council have been successful in minimising delays during significant roadworks. Recent Council schemes where this approach has been successful include Paradise Circus, and the A38 Tunnel Refurbishment.

- 14(b) The Council and their consultants have continued to develop the traffic modelling for the scheme. Initial modelling work was shared with PBS, and we worked with transport consultants employed by PBS to develop a base year traffic model that addressed their initial concerns. Future year modelling has been carried out for 2022 and 2026 as set out in Appendix A.
  - It is considered that only the weekday afternoon peak and the Saturday peak hour are of relevance to PBS, when the One Stop is at its busiest.
  - In 2022, the results show that in the evening peak hour, four out of the five routes traffic leaving One Stop will experience an increase in journey time with the highways scheme compared to the do nothing scenario. These increases in journey time are between 2 and 3 minutes. The route to the A453 will experience a reduction in journey time as the route is shorter with the proposed highway scheme.
  - Turning to the Saturday peak hour, four out of the five routes leaving One Stop will experience a decrease in journey time with the implementation of the highways scheme compared to the do nothing scenario. These decreases in journey time are between 42 seconds and 02:23 minutes. Only the A34N will experience an in journey time of up to 03:19 minutes.
  - Overall, in the evening peak hour by 2022, there will be a slight increase in journey time from One Stop with the proposed scheme compared to the do nothing scenario. This is considered to be
offset by a reduction in the journey time in the Saturday peak hour, and on balance the impact is considered to be neutral.

- The impact on journey times for the 2026 future assessment year can be summarised as follows:
  
  • Evening peak hour – reduction in journey times for two of the routes leaving One Stop of between 23 – 25 seconds and an increase on three routes of between 7 seconds and 25 seconds; and
  
  • Saturday peak hour - reduction in journey times for four out of the five routes of between 59 seconds and 01:30 minutes.

- On balance, by 2026, the impact on the change in journey times for traffic leaving One Stop is considered to be neutral in the evening peak hour and positive in the Saturday peak hour as a result of the highway scheme.

- 14(c) The Council have continued to liaise with PBS regarding the traffic modelling, access arrangements and the impacts of construction works. The Council have made specific provisions in the Design and Build Contract to ensure that access is maintained to the shopping centre during opening hours and that at least one access remains open for overnight deliveries. The Council are drafting a Design, Access and Implementation Strategy to address these concerns.

- 14(d) The Council do not believe that there will be any specific impact on deliveries to the centre. It is general practice that deliveries would be made outside the peak hours, so the impact on deliveries during construction should be minimal.

- 14(e) It is important that construction workers can construct the works in a safe manner, and sufficient working space and safety zones will need to be provided for within the works. This will result in lane restrictions through the works which will vary depending on the construction activities being undertaken and the contractor’s construction programme. It is acknowledged therefore, that during construction, there will be fewer lanes available to traffic on A34 and this will reduce network capacity during peak times. I have set out in 14 c) the measures that will be taken to minimise such disruption.

- 14(f) The Council considers that the overall impact on the One Stop Shopping Centre of the regeneration of Perry Barr will be a positive one. Phase 1 of the Athletes Village development will bring 1,400 new homes
with an additional 500 in Phase 2. These will all be within walking distance of the centre, so the new residents will not need to use the One Stop car park, which is already at capacity on many days. Improvements to the bus interchange, bus priority measures and rail station will make it more desirable to travel to the centre by public transport. The new Sprint stop outside the centre will bring a higher standard of bus travel to One Stop customers. Improved visibility of the way in to One Stop by car will make it possible for passing customers to drop in without having to pre-plan their route through a complex road junction. With a larger local catchment and improved access by public transport, cycle and on foot, the Council would expect that traders would find units in One Stop to be a desirable proposition.

- 18 Regarding the queuing within the car park, the Council’s transport consultants have worked closely with PBS transport consultants in order to reach an agreed traffic modelling position which included the modelling of vehicles in the car park.

- 19 It is correct that in the new layout, all southbound traffic will use the northern exit from the one stop car park. Currently, all southbound traffic needs to use the southern exit, so delivery traffic already gets mixed with visitor traffic in the current layout. Mixing vans and lorries with cars on the same road is general practice and is not perceived to impact on safety. Furthermore, southbound traffic is not currently signposted to the correct exit from within the car park, so visitors that are unaware of the specific access and egress arrangements of the site, may well use the northern exit unaware of the turning restrictions. Such traffic could end up travelling north for many km before finding a suitable U-turn facility on the A34, or using the local residential road network to make a detour to enable a turn back south. The clear availability of an all-movements junction at the north exit is therefore considered to be an improvement on the existing layout. We have reviewed the proposed layout in the vicinity of the central access to the eastern service yard and have not found any negative impacts on its operation.

Perry Barr Ltd

12.7 Perry Barr Ltd (PBL) is the company that owns land and units to the west of One Stop Shopping Centre. They intend to redevelop the site and build new units that would access off Birchfield Road.

Objection Summary

12.8 PBL raise the following objections that are related to the Highway Element:
• 11 That the Council do not have a clear idea as to how to use the land that is being purchased

• 13 That the Council have not determined its preferred option for the Highway Element, nor has it consulted on the scheme

The Council’s Response

12.9 The Council Cabinet selected the preferred option for the scheme on 12 Feb 2019 and this decision was considered by scrutiny committee on 22 Feb 2019. The Council has met with representatives of PBS and PBL on many occasions to discuss the highway layout and these meetings are referred to in the evidence provided by Mrs Farr. The Highway Element commenced public consultation on 3 June 2019 and the last day for responses is 19 July 2019.

Marks and Spencer PLC

12.10 Marks and Spencer PLC (M&S) are leaseholders for Unit 3 of One Stop. They operate an M&S Outlet store from these premises. Their objection is a holding objection on the basis that the purchase of plots 111 and 119 by the Council (over which M&S have access rights) has the potential to significantly disrupt their business.

The Council’s Response

12.11 The Council is preparing a Design, Access and Implementation Strategy to document the measures that the Council and its contractors will take to maintain access and egress to the unit during working hours, and for deliveries.

Iceland Foods Ltd

12.12 Iceland Foods Ltd is the leaseholders for Unit 4 of One Stop shopping Centre. They operate a Food Warehouse store from these premises. Iceland has expressed concern that the works have the potential to inhibit traffic or restrict access which may deter customers from visiting.

The Council’s Response

12.13 The Council is preparing a Design, Access and Implementation Strategy to document the measures that the Council and its contractors will take to maintain access and egress to the unit during working hours, and for deliveries.

PAK Supermarket (Birchfield) Ltd
12.14 PAK Supermarket is the freehold owner of 313-317 Birchfield Road which is situated to the South East of Birchfield Island.

Objection Summary

12.15 The primary grounds for objection relate to disruption to PAK’s business operations during construction of the works and any potential restrictions on access for customers, deliveries, staff and occupiers.

The Council’s response

12.16 The Council have met with the agents and owner of PAK Supermarket and provided assurances that access will be maintained during shop opening hours, and that any temporary closures of Bragg Road would be carried out overnight. The public consultation for the Highway element commenced on 3 June 2019. Details of ongoing discussions are contained in the evidence provide by Mrs Farr.
13. **Summary and Conclusions**

13.1 The highways element of the regeneration of Perry Barr should be considered in the context of the status of highway networks in all major cities. In normal usage, urban networks are congested at peak times as commuters continue to use cars as a means of transport. Increasing the capacity of the highway network in urban areas is largely unaffordable as engineering works become constrained by adjacent development and other infrastructure. The future economic growth of cities therefore relies on an increased usage of alternative transport modes. This is recognised in transport policies, where the emphasis is on increasing the use of public and sustainable transport.

13.2 The highways element of the scheme is a vital component of the regeneration of Perry Barr and the need to deliver a Public Transport Games in the summer of 2022.

13.3 It contributes to increasing the cohesiveness of the Athletes Village development by reducing severance between communities caused by extensive highways infrastructure.

13.4 It provides improved facilities for walking and cycling which will encourage more people and families to walk and cycle rather than take the car. It provides improved step-free access for parents with pushchairs and less able users.

13.5 It provides improved facilities for public transport and buses, with bus lanes to deliver improved reliability of bus services and bus priority to improve bus journey times. The new Sprint stop in Perry Barr will provide access to high quality public transport services.

13.6 It provides improved vehicular access to One Stop Shopping Centre and improved access by public transport.

13.7 As urban road networks become increasingly congested it is vital that future economic growth is supported by delivering improved public and sustainable transport alternatives to the car. The highway improvements at Perry Barr promote these future travel modes and will contribute positively to the economic growth of the area and the hosting of the Commonwealth Games in 2022.
Appendix A

Drawing showing Routes in and Out of One Stop
Appendix B
Traffic Modelling Technical Note