

Transport Assessment



Homes
England



HOMES ENGLAND

BRISLINGTON MEADOWS

TRANSPORT
ASSESSMENT

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1. INTRODUCTION

- 1.1 Key Transport Consultants (KTC) is retained by Homes England to provide transport advice for the development at the Brislington Meadows site in Brislington, located to the south of Broomhill Road. This Transport Assessment (TA) supports an outline application (all matters reserved apart from access) for the redevelopment of the site to provide up to 260 dwellings. A separate Framework Travel Plan has also been produced.
- 1.2 This TA continues in Section 2 with a description of the site and local transport network. Section 3 describes the proposals for the site including access. Section 4 sets out the transport policy context and the accessibility of the site for public transport users, pedestrians and cyclists is considered in Section 5.
- 1.3 Traffic impact is assessed in Section 6. Finally, conclusions drawn from the study are provided in Section 7.

2. SITE DESCRIPTION AND LOCAL HIGHWAY NETWORK

Site Location and Use

- 2.1 The Site is located in Brislington in the southeast of Bristol within the administrative boundary of Bristol City Council and the Ward of Brislington East, as shown in **Figures 1 and 2**.
- 2.2 The site is currently open fields with a section of grazing land to the west of the site. There are pedestrian footpaths across the southern edge of the site and northeast corner, as well as several unofficial pedestrian routes around the perimeter of the site.
- 2.3 To the south of the site lies a section of private fields, and to the south of that is Victory Park. To the east lies the Brislington Trading Estate and to the north is a residential area. To the west lies allotments, and in the north western side of the site is School Road.

Local Highway Network

- 2.4 Broomhill Road to the north of the site links to a mini-roundabout junction with School Road and Birchwood Road to the west. Birchwood Road travels north to St Anne's. School Road travels south, down a hill, becoming Church Road and joining the A4 Bath Road at a priority junction to the south.
- 2.5 Some 100m south of the mini-roundabout junction of Broomhill Road and School Road, Allison Road heads to the west, where it meets Wick Road, which in turn provides access to Sandy Park Road and destinations towards the city centre.
- 2.6 East of the Allison Road junction, Allison Road is one-way westbound and links to Fermaine Avenue to the east and also the access for Broomhill Junior School.
- 2.7 To the east of the site, Broomhill Road continues south before joining Emery Road at a mini roundabout. Emery Road then heads south and joins the A4 Bath Road at a signal-controlled junction. To north of Emery Road lies Brislington Trading Estate. On the western boundary of the estate lies Bonville Road which part of the site fronts onto.
- 2.8 Pedestrian and cycle facilities in the vicinity of the site are described in more detail in Section 5 which in turn references a pedestrian and cycle audit provided as **Appendix A**.

Collision Data

- 2.9 For development, Planning Practice Guidance states accident data must be assessed 'on the public highway in the vicinity of the site access for the most recent three-year period, or five-year period if the proposed site has been identified as within a high accident area. As roads in

the vicinity of the site may be considered to have a high number of accidents, the personal injury accident (PIA) records have been acquired from Bristol Council for the local area including the most recent five-year period 1st November 2016 to 31st October 2021 and included as **Appendix B**.

- 2.10 The data shows 18 collisions listed with all except one being slight injury. Of the collisions, three involved children, five involved pedestrians and three involved cyclists. The collisions are summarised and reviewed in **Appendix B**.

Summary

- 2.11 The number of collisions that have occurred within the search area in the last five years isn't particularly unexpected given the size of the area analysed.
- 2.12 Overall, there appears to be no collision clusters which could point towards a problem with the existing road layout in the area.
- 2.13 The proposals, discussed later, seek to reduce traffic speed on Broomhill Road and provide better infrastructure for pedestrians.

3. DEVELOPMENT PROPOSALS

- 3.1 The proposals are for an outline application for up to 260 dwellings consisting of a mix of houses and apartments. Although the application is in outline, matters relating to access are submitted in detail and main access into the site is applied for in full. Other matters relating to layout, scale, landscape and appearance are reserved. An indicative masterplan is included as **Appendix C** to show one way in which the site could be developed and a series of parameters plans are submitted for approval which will guide design principles at reserved matters stage, including fixing key access points and movement across the site and connectivity to surrounding area..
- 3.2 Whilst Homes England will not be responsible for building out the development, they will remain involved through the development process and a building lease agreement between the developer and Homes England will ensure that homes are built to the necessary standard and the principles of the masterplan.
- 3.3 The site does propose 30% of homes to be affordable and the indicative masterplan includes 30% apartments.

Parking

- 3.4 Parking provision is set out in BCC's Site Allocations and Development Management Policies which sets out the minimum provision for cycle and disabled parking, and maximum standards for car parking.
- 3.5 For cycle parking, the minimum requirement is one space per 1-bedroom/studio dwelling, two spaces per 2 or 3-bedroom dwelling and three spaces per 4 or more bedroom dwelling. Residents cycle parking should be safe, covered and secure. Visitor cycle parking is one space per 10 units. For the apartment blocks this will be in the form of a Sheffield Stand located close to the building entrance.
- 3.6 Disabled parking standards apply to communal parking for the apartment blocks and is 5% in addition to the parking standard, with a minimum of one space.
- 3.7 The car parking standard is one space per one bedroom dwelling, 1.25 spaces two-bedroom dwelling and 1.5 spaces for three or more bed dwelling.
- 3.8 Where there are 10 or more spaces (apartment blocks), then one electric charging point should be provided for every five spaces. For individual dwellings with a driveway or garage, charging can be done in the form of a 13-amp socket.
- 3.9 If a garage is included, it must be at least 6m by 3m (internal dimensions) to count as a parking

space.

- 3.10 Parking is also set out in the Design Code that accompanies the application, which will guide the reserved matters and detailed design of the site.
- 3.11 For on plot parking, it sets out that allocated spaces for houses should be accommodated on the plot and that parking spaces should be located behind the building line wherever possible. Where parking is in front of dwellings, no more than six spaces should be grouped to break up the appearance and provide planting and pedestrian and cycle access.
- 3.12 For on street parking for visitors, these again would be limited to six perpendicular spaces or three parallel spaces to break up the parking and provide access for pedestrians and cyclists. Any EV charging infrastructure would be within the parking zone/build out and not within the footway.
- 3.13 Any courtyard parking would be predominantly for apartments and terraced housing. The parking should be well overlooked by active frontages wherever possible, and again, no more than six perpendicular spaces grouped together. A maximum of 20 spaces would be located within one court.
- 3.14 Final parking numbers and detailed layout to be confirmed at reserved matters stage.

Pedestrian/Cycle Link

- 3.15 A key element of the proposal is an east-west pedestrian and cycle link across the site linking School Road to the west to Bonville Road to the east. This route replicates the existing Public Right of Way (PROW), but provides a surfaced, lit route. The link allows pedestrians and cyclists in the wider area a shorter route, avoiding Broomhill Road.
- 3.16 An example of the journey time improvements offered to existing residents and employees as a result of the improved pedestrian and cycle links is provided as **Appendix D**. This graphic shows walking isochrones from a location within the Brislington Trading Estate and the different areas that are walkable within 5, 10, 15, 20 minutes of the site with the improved access link in place.
- 3.17 The shaded areas within the dashed lines show the areas that can be reached from the red dot in 5, 10, 15 and 20 minutes. The solid lines show the existing walking times, which exclude the existing footpath link across that the as this is not suitable for all users, is unlit and unsurfaced.
- 3.18 It shows that houses to the west of School Road are now within a 15-minute walk, and houses north of Allison Road are within a 20-minute walk.

Access

Main Access

- 3.19 The main vehicular access would be via a new priority junction onto Broomhill Road on the site of the former police station. Following discussion with BCC Highways, the layout of the junction allows for a BCC standard refuse lorry to enter the site at the same time another vehicle is waiting to turn right onto Broomhill Road, as shown on Figure 3. The swept paths are included as Figure 4.
- 3.20 Speed data from the traffic survey, included as **Appendix E** at the site access 85th percentile speeds were 29.7mph northbound and 30.8mph southbound. Visibility splays of 43m from a setback of 2.4m are therefore shown on Figure 3.
- 3.21 To the north of the access is a 2m wide footway with housing between the footway and the site boundary. To the south, the footway diverges from the carriageway and travels through a nature corridor, offering a quieter route. The nature corridor is designed to link Victory Park to the south to Eastwood Farm to the north.
- 3.22 It is intended that the main access into the site from Broomhill Road provides the only vehicle access into the site. Cycle access is promoted and most convenient from the dedicated pedestrian and cycle links around the site. For example, cyclists heading east could use the Bonville Road connection, and those heading west or north, the School Road or Fernaine Avenue Links, which would provide shorter, quieter routes.
- 3.23 Given the width of the access, dictated by vehicle tracking, the pedestrian route across the access is some 17m wide. To assist pedestrian crossing the road, it is proposed to enhance their priority by demarking the route in a contrasting surfacing colour, and additional give-way markings on the site access. Detailed design of the access will be discussed and agreed with BCC.
- 3.24 A secondary access was investigated from School Road on the western boundary of the site. However due to gradient of the site and the gradient of School Road, a solution without significant earthworks and loss of mature trees and vegetation could not be achieved.
- 3.25 Including a second vehicular access to the site could lead to through traffic using the development as a short-cut from Broomhill Road to Bonville Road.
- 3.26 With the provision of an emergency access (see below), a single point of access is considered acceptable. The access and junction have sufficient space for the largest reasonable vehicle to use at the same time as other traffic, and junction capacity analysis (see Section 6) demonstrates the junction has sufficient capacity.

Emergency/Bonville Road Access

- 3.27 To the east of the site, the main footway/cycleway link through and into the site connects to Bonville Road and will also double as an emergency access should there be any incidents at the main Broomhill Road access. The proposed layout is shown on Figure 5.
- 3.28 It is proposed that emergency vehicles would use the 3m cycleway, which would be constructed to a suitable standard, and a drop down/locked bollard would protect the route from unauthorised vehicular use.
- 3.29 A speed table with dropped kerbs and tactile paving would assist pedestrians crossing the road, and cyclists would use the carriageway.

School Road

- 3.30 Access to the west and to destinations such as Sandy Park Road and further on to the centre of Bristol are seen as vital for both existing and new residents. Due to the existing road layout, East/West routes are limited. Allison Road is not a pleasant environment for pedestrians or cyclists, so connection to a quieter route via Manworthy Road is proposed. See 9.6 of pedestrian/cycle audit in **Appendix A**.
- 3.31 To improve access this route, the existing footpath between the allotments to the west of the site (PROW BCC/482/20) would be improved. The route would be surfaced and lit, and the surfaced area would be widened within the existing corridor, although any quality trees/vegetation would be kept. Large conifer trees to the south within the allotment block light and darken the route, so ideally these would be trimmed back. See 9.1 of pedestrian/cycle audit in **Appendix A**.
- 3.32 Where the link meets School Road, a new zebra crossing is proposed, constructed on a speed table. At this point, more confident cyclists would cross School Road on the carriageway while others could use the zebra crossing. Once across School Road, cyclists would then use the quieter road of The Rock. The proposed layout is included as Figure 6.

Fermaine Avenue/School Link

- 3.33 Given the location of the school and Broomhill Local Centre, a pedestrian/cycle link is very beneficial for accessibility. Therefore, a new link is proposed to the west of Broomhill Junior School to link to Fermaine Avenue, as shown in Figure 7. The route is proposed as a 5m shared surface to allow more space to pedestrians at school start and finish times. In order to avoid any impact on the school playground, a pinch point is some 3m wide. This provides a link to local bus stops, schools and shops.
- 3.34 Following discussions with Broomhill Junior School, the proposals include relocating the existing pedestrian and vehicular access to the school and include a new footway across the

vehicular access giving priority to pedestrians. The photograph at 7.2 of the pedestrian/cycle audit shows the existing layout, with the new access proposed to emerge in the far corner.

Belroyal Avenue

- 3.35 The link from the site is via an unsurfaced footpath link (PROW BCC/478/10) . The route has chicane barriers which prevent access form mobility scooter users, which were presumably installed to prevent motorcycle access. These would be removed to allow access by everyone.

Victory Park

- 3.36 The route to Victory Park is seen more as a leisure route, as there are no planned surfaced footpaths within Victory Park, so any link would lead to a route over grass, which is not suitable for all users and for all seasons.

Offsite Highway works

Parking

- 3.37 Bonville Road experiences pavement parking, particularly where the car repair/service centre is. There are also issued where the footway crosses open property frontages where the parking/yard area of the property extends onto the footway. See 2.8 of the pedestrian and cycle audit.
- 3.38 Prevention of pavement parking is primarily down to enforcement, although Bristol City Council do not enforce pavement parking where there are no waiting restrictions on the carriageway. Double-yellow, no waiting markings will be proposed where there are regular issues. Should lining and enforcement be ineffective, bollards may be required to physically prevent pavement parking. Extents and locations of the restrictions will be discussed and agreed with BCC Highways.

Broomhill Road

- 3.39 Following comments from both the public consultation and meetings with BCC, traffic calming has been proposed along Broomhill Road, and is shown on the drawings in **Appendix F**. The principle of traffic calming, possibly speed tables at junctions, have been discussed with BCC.
- 3.40 The key proposals are to introduce speed tables at junctions. As this effectively lowers the height of kerbs to the footway, bollards are proposed to prevent vehicles from overrunning the footway.
- 3.41 In the absence of a BCC standard “Dutch Entrance Kerbs” have been proposed on the junctions with smaller roads. They offer benefits to pedestrians for footway crossovers, as more of the footway is level where on traditional footway crossovers, most of the footway is sloping. It also helps to slow traffic on the entry to side roads.
- 3.42 The layouts shown in **Appendix F** are initial proposals based on opening discussions with BCC, and the extents and layout will be agreed with BCC.

4. TRANSPORT POLICY CONTEXT

National Policy

National Planning Policy Framework

4.1 The National Planning Policy Framework (NPPF) was published by the Ministry for Housing, Communities and Local Government in July 2021. Section 9 of NPPF is titled Promoting Sustainable Transport and comprises paragraphs that specifically address transport issues for plan making and development.

4.2 The first paragraph of Section 9, numbered paragraph 104, sets out the main transport objectives of the NPPF. It states:

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.*

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- 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.*

4.3 Paragraph 105 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.

4.4 Paragraphs 106 to 109 provide the transport framework for planning policies, so they provide a context to plan making but are not directly relevant to development proposals.

4.5 Paragraph 110 is presented under a sub-heading of Considering development proposals and states that:

In assessing sites that may be allocated for development in plans, or specific applications for development, it should be ensured that:

- a) appropriate opportunities to promote sustainable transport modes can be – or have been – taken up, given the type of development and its location;*
- b) safe and suitable access to the site can be achieved for all users;*
- c) the design of streets, parking areas, other transport elements and the content of associated standards reflects current national guidance, including the National Design Guide and the National Model Design Code 46; and*
- d) any significant impacts from the development on the transport network (in terms of capacity and congestion), or on highway safety, can be cost effectively mitigated to an acceptable degree.*

4.6 Paragraph 111 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.

4.7 Paragraph 112 states:

Within this context, applications for development should:

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

- 4.8 Paragraph 113 sets out the requirements for transport documentation to be submitted in support of a planning application and reads:

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.

- 4.9 Paragraph 131 states that trees make an important contribution to the character and quality of urban environments and can also help mitigate and adapt to climate change. Planning policies and decisions should ensure that new streets are tree-lined (unless, in specific cases, there are clear, justifiable and compelling reasons why this would be inappropriate).

Planning Practice Guidance

- 4.10 The following is noted stating Travel Plans, Transport Assessments and Statements should be:

- *Proportionate to the size and scope of the proposed development to which they relate and build on existing information wherever possible;*
- *Established at the earliest practicable possible stage of a development proposal;*
- *Be tailored to particular local circumstances (other locally-determined factors and information beyond those which are set out in this guidance may need to be considered in these studies provided there is robust evidence for doing so locally);*
- *Be brought forward through collaborative ongoing working between the local planning authority/transport authority, transport operators, rail network operators, highways agency where there may be implications for the strategic road network and other relevant bodies.*

National Design Guide

- 4.11 The National Design Guide is a high level document which ‘addresses the question of how we recognise well designed places, by outlining and illustrating the Government’s priorities for well-designed places in the form of ten characteristics’ which include context, identity, built form, movement, nature public spaces, uses, homes & buildings, resources and lifespan.
- 4.12 The document encourages a holistic view of design of buildings and spaces taking consideration of context, potential climate change through to the future needs and advances in technology.
- 4.13 Reference is made to access, accessibility and movement under many of the characteristics. Of particular note is the movement characteristic which view focusses on the following:
- *M1 A connected network of routes for all modes of transport*
 - *M2 Active travel*
 - *M3 Well-considered parking, servicing and utilities infrastructure for all users.*

Local Policy

- 4.14 The current Development Plan for Bristol, as described further below, comprises:
- Bristol City Council Core Strategy (2011); and
 - Bristol City Council Site Allocations and Development Management Policies (2014).
- 4.15 The Bristol Local Plan is currently under review as described below.
- 4.16 Other documents used by BCC to assist in making decisions on planning applications, and which are relevant to the site, include the spatial framework known as City Centre Framework (CCF). The Bristol Temple Quarter Enterprise Zone Spatial Framework (TQEZ) does not include the site but the document Temple Quarter & St Philip's Marsh A vision for the future dated March 2021 does include it. The Temple Quarter Sustainable Urban Mobility Plan (SUMP) 2016 includes guidance on parking for employment uses.
- 4.17 The West of England Combined Authority has published strategic plans which are relevant material considerations in the determination of planning applications.

Core Strategy

- 4.18 The Core Strategy was adopted in June 2011. The Core Strategy does not set out site-specific proposals or allocations. Instead it looks at the broad locations for delivering new development.
- 4.19 Core Strategy Policy BCS10 Transport and Access Improvements includes the following:

The council will support the delivery of significant improvements to transport infrastructure to provide an integrated transport system, which improves accessibility within Bristol and supports the proposed levels of development. In particular it will support, subject to environmental impact assessment where appropriate:

- 1. The implementation of the Greater Bristol Bus Network.*
- 2. The delivery of transport infrastructure improvements, including, inter alia:*
 - *Rapid transit routes (Ashton Vale to Emerson's Green and Hengrove to the North Fringe, all via the city centre);*
 - *A network of routes to encourage walking and cycling.*
- 3. Making the best use of existing transport infrastructure through improvement and reshaping of roads and junctions where required to improve accessibility and connectivity and assist regeneration and place shaping.*
- 4. Appropriate demand management and sustainable travel measures.*

Safeguarding of Routes and Facilities

Land required for the implementation of transport proposals will be safeguarded to enable their future provision. Corridors with the potential to serve as future routes for walking, cycling and public transport will also be safeguarded. Appropriate existing transport facilities such as transport depots will be safeguarded where required.

Development Principles

Without prejudice to the implementation of the major transport schemes listed above, proposals will be determined and schemes will be designed to reflect the following transport user priorities as set out in the Joint Local Transport Plan:

- a) The pedestrian;*
- b) The cyclist;*
- c) Public transport;*
- d) Access for commercial vehicles;*
- e) Short stay visitors by car;*
- f) The private car.*

The needs of disabled people will be considered within all of the above headings.

Development proposals should be located where sustainable travel patterns can be achieved, with more intensive, higher density mixed use development at accessible centres and along or close to main public transport routes. Proposals should minimise the need to travel, especially by private car, and maximise opportunity for the use of walking, cycling and public transport.

Developments should be designed and located to ensure the provision of safe streets and reduce as far as possible the negative impacts of vehicles such as excessive volumes, fumes and noise. Proposals should create places and streets where traffic and other activities are integrated and where buildings, spaces and the needs of people shape the area.

Site Allocations and Development Management Policies

- 4.20 The Site Allocations and Development Management Policies Development Plan Document (DPD) was adopted in July 2014. This document includes site allocations for development across much of Bristol, excluding the central area of the city which is covered by the Bristol Central Area Plan.
- 4.21 The site is allocated for housing under BSA1201 for an estimated 300 homes.
- 4.22 The Site Allocations and Development Management Policies contains transport policies including Policy DM23: Transport Development Management. This sets out the transport and traffic considerations that development proposals should address and includes a schedule of parking standards (Appendix 2).

Development should not give rise to unacceptable traffic conditions and will be expected to provide:

- i. Safe and adequate access for all sections of the community within the development and onto the highway network including designs which secure low vehicle speeds; and*
- ii. Adequate access to public transport including, where necessary, provision for public transport improvements; and*
- iii. For appropriate transport improvements to overcome unsatisfactory transport conditions created or exacerbated by the development; and*
- iv. For pedestrians and cyclists including, where appropriate, enhancing the pedestrian and cycle network and, for major non-residential schemes, providing adequate changing, shower, storage and drying facilities for cyclists.*

Proposals should be supported by a Transport Assessment and/or a Travel Plan where development is likely to have a significant traffic impact.

**Bristol Local Plan Review - Draft Policies and Development Allocations - Consultation
March 2019**

- 4.23 The review of the Local Plan is ongoing. A consultation was undertaken from March to May 2019. Not all policies are proposed to be changed. Policy DM23: Transport Development Management of the Site Allocations and Development Management Policies document, which sets out car and cycle parking standards in Appendix 2, is proposed to be retained (as is Policy BCAP29 of the Bristol Central Area Plan). However, a new policy for parking provision in residential development is proposed as Draft Policy T3: Car and cycle parking provision for residential development which states:

New residential development will be expected to provide an appropriate level of safe, secure, accessible and usable car parking that makes effective and efficient use of land and is integral to the design of the development. The amount, design and proposed management of proposed car parking provision should be based on consideration of the following criteria:

- i. The standards set out in the Parking Standards Schedule;*
- ii. The site's accessibility by walking, cycling and public transport to employment opportunities, services and other facilities;*
- iii. Local car ownership levels;*
- iv. The type and mix of housing proposed;*
- v. The type of parking proposed and associated management arrangements, having regard to the characteristics of the surrounding area;*
- vi. The availability of and potential for car clubs in the locality; and*
- vii. The availability of on-street parking in the vicinity of the site taking into account existing parking management schemes in the area.*

The provision of cycle parking in residential development is a priority and provision will be expected to be in accordance with the standards in the Parking Standards Schedule.

- 4.24 However, no weight is currently applied to the draft amended policies given the draft stage of the Plan review.

Joint Local Transport Plan 4 2020 – 2036, March 2020

- 4.25 The Joint Local Transport Plan 4 (JLTP4) 2020 - 2036, dated March 2020, is led by the West of England Combined Authority (WECA), working with Bath & North East Somerset, Bristol, North Somerset and South Gloucestershire councils. It aims to achieve a well-connected sustainable transport network that works for residents, businesses and visitors across the region; a network that offers greater, realistic travel choices and makes walking, cycling and public transport the natural way to travel.

4.26 It identifies five objectives based on the aspirations of the West of England authorities and previous plans and policies prepared. The objectives are (in no particular order):

- Take action against climate change and address poor air quality;
- Support sustainable and inclusive economic growth;
- Enable equality and improve accessibility;
- Contribute to better health, wellbeing, safety and security;
- Create better places.

4.27 Regarding parking it is noted in Section 7: Connectivity within the West of England that:

We will continue to work with Highways England and other key stakeholders to explore and develop innovative measures to improve the efficiency of the transport network, including car parking, through technology.

4.28 Later in the section is noted:

Through the development of local parking strategies, we will continue to manage parking to control future traffic demand, including policies for on-street parking, off-street parking and residential parking schemes where appropriate. The design and location of new developments and at workplaces, as well as the numbers of spaces, will help to manage demand and reduce the dependency on the private car. All day parking will be controlled in a way to discourage users who could transfer to lower carbon travel choices.

4.29 Section 11 of the document sets out the major schemes and a summary of interventions. The schemes are set out under the headings:

- Transformational - including improvements to the bus network, an expanded metrobus network, new Park & Ride sites and enhanced rail services;
- Early investment schemes - including committed projects and schemes under development;
- Joint Transport Study Required Schemes - including Local Plan schemes;
- Working with partners to build our current programme - including schemes to be developed in partnerships with Highways England and Network Rail.

West of England Local Cycling and Walking Infrastructure Plan 2020 - 2036 (January 2021)

4.30 The West of England Local Cycling and Walking Infrastructure Plan has been produced by the West of England Combined Authority in conjunction with the four local unitary authorities. Its aim is to significantly improve cycling and walking infrastructure to make these modes the natural choice for shorter journeys.

5. ACCESSIBILITY

- 5.1 This section considers the accessibility of the site by alternative travel modes.
- 5.2 The National Travel Survey (NTS): 2019, published in August 2020, provides details of all trips per person per year, and is shown in **Table 5.1** below. This provides clear evidence of the relationship between distance and probability of use of different modes of transport. The analysis shows that walking is the dominant mode for trips under 1.6km (79.81%).

Table 5.1: Proportion of Total Trips by Mode and Distance							
Modal Split by Distance							
Distance	Car Driver	Car Passenger	Bus	Train	Walk	Cycle	Other
0 - 1.6km	11.26%	6.58%	0.70%	0.00%	79.81%	1.06%	0.58%
1.6 - 3.2km	36.98%	21.94%	5.03%	0.07%	31.03%	2.85%	2.10%
3.2 – 8km	51.59%	27.22%	9.88%	0.63%	4.04%	2.40%	4.24%
All Journeys	39.89%	21.01%	5.28%	2.23%	26.23%	1.70%	3.66%

- 5.3 The NTS is consistent with guidance in the CIHT document Providing for Journeys on Foot (2000). This identifies that the preferred maximum walking distance is around 2km. DfT guidance contained within Local Transport Note 1/20 – Cycle Infrastructure Design notes that five miles is an achievable distance for most people to cycle. The recent development of electric cycles is such that this distance can comfortably increase.

Walking and Cycling

- 5.4 The accessibility of the site includes for the proposed pedestrian and cycle accesses to the site. Five-minute walking isochrones from the site is shown on Figure 2.
- 5.5 An audit of pedestrian and cycle routes from the site to local destinations was undertaken in the summer of 2021 and is included as **Appendix A**. Destinations included local shops and education facilities.
- 5.6 The closest shops to the site are on Broomhill Road, which would be accessed by the proposed school link. The shops include a Co-op convenience store, a newsagent/convenience store, takeaways and hairdressers. Further shops and services are located on Bath Road, some 900m walk to the south.
- 5.7 The closest primary schools to the site are Broomhill Junior and Broomhill Infants School to the north of the site. With the new school link, the distance will be some 70m from the northern edge of the site and would be suitable for pushchairs, wheelchairs, cyclists and children on scooters. Immediately to the east of the school link is Mama Bear's nursery and pre-school.

- 5.8 The nearest Secondary Education facility is Oasis Brislington Academy, some 1.3km as the crow flies to the south of the site. The proposed route is covered under route 2 in **Appendix A**. Similarly, the nearest college is St Brendan's Sixth Form College, which is covered under route 3 in the same Appendix.
- 5.9 Footway parking along Bonville Road could cause issues for pedestrians especially people in wheelchairs and parents/carers with small children. The solution would be parking restrictions and regular enforcement. Physical options include bollard located on the edge of the footway. The route along Emery Road is less prone to footway parking as there is a verge between the carriageway and footway.
- 5.10 Allison Road to the west of the site from School Road is a steep road, with traffic islands, and not a nice environment for cyclists or pedestrians. Given there are also two speed cameras on the road, it is assumed that vehicles speeding is an issue. Therefore, an alternate route for both pedestrians and cyclists is proposed via The Rock and Manworthy Roads. These 20mph speed limit quieter roads are more appropriate for less confident cyclists, but also provide a quieter route for pedestrians.
- 5.11 The Travelwest Isochrones included as **Appendix G** shows 10-, 20- and 30-minute walking isochrones from a notional point of Broomhill Junior School. It shows Brislington Trading Estate within a 10-minute walk, the shops on Bath Road and St Brendon's College within a 20-minute walk and Arnos Vale, St Annes and Oasis Academy Brislington within a 30-minute walk.
- 5.12 To improve the link, it is proposed to be signed to and from the site to Sandy Park Road and connect into the wider cycle network. Where the route climbs up from The Rock to Sherwell Road, it is proposed to widen the path and remove the bollard shown in the photograph at 9,5 in **Appendix A**, although some access restriction would still be required to prevent vehicles from using the route.

Cycle

- 5.13 Cycle routes in the vicinity of the site are limited to mainly on carriageway.
- 5.14 The cycle isochrone plan from Travelwest included as **Appendix G** shows the shops on Bath Road and Oasis Academy Brislington within a 10-minute cycle, Knowle, St Phillips within a 20-minute ride and Keynsham, Bedminster, Longwell Green and the centre of Bristol within a 30-minute ride.
- 5.15 A potential for an improved route to the east along Ironmould Lane has been raised by local residents, although this is currently designated as a footpath and would require changing to a bridleway for it to be used by cyclists. Parts of the route are roads and open to all traffic, but

looking at historic mapping, the footpath section was a vehicular route up until at least 1949, so a hard surface may still exist below the surface.

Public Transport

Buses

- 5.16 The development site is well located for easy access to the Number 1 bus service which operates every 15 minutes during the day Monday to Saturday and 20-minute intervals on Sundays. It connects to Cribbs Causeway via Broadmead, the City Centre and Clifton. During the evening it operates every 30 minutes throughout the night.
- 5.17 Other less frequent services are available connecting to Knowle and Hengrove, with a school service to Keynsham.
- 5.18 The stop outside co-op has a shelter, real time information and a raised bus boarder. Stops on the other side of the road has a raised boarder and flag. The stop on School Road, served by the 36 service only has a flag with timetable on the northbound side.
- 5.19 The Travelwest Isochrone plot in **Appendix G** shows the centre of Bristol, Hengrove and Keynsham all within a 30-minute bus journey.
- 5.20 **Table 5.2** below identifies the bus services and frequencies operating from stops within a walk of the site. The bus services and frequencies are as of February 2024. The bus timetables are provided in **Appendix H**.

Table 5.2: Bus Services Nearest to Site						
Service	Route	Mon-Fri		Sat		Sun
		Day	Eve	Day	Eve	
Broomhill Road						
1 (First)	Cribbs Causeway – Broadmead – Broom Hill	15 mins	30 mins	15 mins	30 mins	20 mins
96	Brislington – Hengrove	2 hrs	-	2 hrs	-	-
435	Brislington – Keynsham (School service)	1 jny	-	-	-	-
513	Knowle – Brislington	1 hour (Tues & Thurs)	-	-	-	-
514	Knowle – Brislington	1 hour (Mon, Wed & Fri)	-	-	-	-

School Road						
36	Brislington Centre	–	30 min	1 hr 10 min	30 min	1 hr 10 min
						1 hr

5.21 The table above shows that there is a good level of service during the weekday, but evening and weekend travel relies on the 1 service.

5.22 First Group have been contacted with regard to the existing service and the proposed development.

Public Transport Accessibility Index (AI)

5.23 The Bristol Access Transport Level (BrisTAL) is a Public Transport Access Level used to measure the connectivity by public transport, ranging from 0 to 6, with 6 being the highest.

5.24 For the site itself the level is 2 out of 6 because residents would have to walk to Broomhill Road or School Road to bus stops. For locations at the edge of the site, such as at the access points to School Road and Broomhill Road the level rises to 3. The BrisTAL level provided by BCC is based on 2019 data, so may not include any changes to bus services in the past few years.

Summary

5.25 Overall, it is considered that the site enjoys good accessibility by non-car modes and is well located for maximising active and public transport modes of travel.

6. TRAFFIC IMPACT

Existing Use Traffic Flows

- 6.1 The proposed site access was previously occupied by a police station, which would have generated flows throughout the day. However, the building was demolished in October 2020, and therefore the existing flows have not been included in the calculations.

Existing Network Traffic Flows

- 6.2 An Automatic Traffic Count (ATC) was available at the proposed site access for week commencing 4th February 2020. A new traffic count was commissioned for the Broomhill Road/School Road and School Road/Allison Road junctions, which was undertaken on 30th November 2021.
- 6.3 The location of the traffic survey was agreed with BCC and undertaken in November 2021, before Covid advice to “work from home if possible”.
- 6.4 Both sets of survey data are included as **Appendix E**.
- 6.5 The flows for Broomhill Road/School Road and School Road/Allison Road junctions are summarised on the traffic flow diagrams in **Appendix I**.

Proposed Use Traffic Flows

- 6.6 TRICS has been used to forecast the person trips likely to be generated by the proposed development. The TRICS category Residential/Private Housing and Affordable Housing has been used. The TRICS private housing category includes up to 25% affordable housing, but given the large proportion (30%) included on this site, a separate category has been used.
- 6.7 The TRICS selection excluded town centre and edge of town centre sites, and is included as **Appendix J**.
- 6.8 The peak hour and daily person trip rates are set out in **Table 6.1** below.

Table 6.1 Person Trip Rates/Dwelling			
Private Housing			
Time Period	Inbound	Outbound	Two Way
08:00 to 09:00	0.190	0.766	0.956
17:00 to 18:00	0.644	0.272	0.916
Affordable Housing			
08:00 to 09:00	0.323	1.020	1.343
17:00 to 18:00	0.667	0.394	0.916

- 6.9 On the basis of the trip rates in **Table 6.1**, the proposed development of 260 units is estimated to generate the person trips shown in **Table 6.2** below.

Table 6.2: Person Trips			
Time Period	Inbound	Outbound	Two Way
08:00 – 09:00	60	219	279
17:00 – 18:00	168	80	249

- 6.10 For the mode share of the potential residents, 2011 Census data is the most recent data available, and is shown in **Table 6.3** below.

Table 6.3 Travel Mode to Work of E01033359 Bristol 39E Residents – 2011 Census	
Mode	Percentage
Train	0.6%
Bus, coach or minibus	13.7%
Taxi	0.1%
Motorcycle, scooter or moped	1.7%
Driving a car or van	59.6%
Passenger in a car or van	5.9%
Bicycle	5.8%
On foot	12.3%
Other method of travel to work	0.2%
Total	100

- 6.11 It can be seen from **Table 6.3** that three fifths of residents of the local area drove to work, recorded in the 2011 Census. The mode share in **Table 6.3** is then combined with the people trips from **Table 6.2** and shown in **Table 6.4** below.

Table 6.4 Forecast Travel Mode to Work of Proposed Development						
Mode	08:00 to 09:00			17:00 to 18:00		
	In	Out	2 Way	In	Out	2 Way
Train	0	1	2	1	0	1
Bus, coach or minibus	8	30	38	23	11	34
Taxi	0	0	0	0	0	0
Motorcycle, scooter or moped	1	4	5	3	1	4
Driving a car or van	36	131	166	101	48	148
Passenger in a car or van	4	13	16	10	5	15
Bicycle	3	13	16	10	5	14
On foot	7	27	34	21	10	31
Other method of travel to work	0	0	1	0	0	0
Total	60	219	279	169	80	249

- 6.12 The table above shows an increase of 38 extra bus passengers in the morning peak hour and 34 in the evening. With four buses an hour for the 1 service, this equates to 10 extra passengers

in the morning peak hour and nine in the evening.

- 6.13 As a comparison, a TRICS calculation based on houses and only assessing vehicle trips generates the following vehicle trips and should be compared with the green shaded row in **Table 6.4** above.

Table 6.5: Vehicle Trips			
Time Period	Inbound	Outbound	Two Way
08:00 – 09:00	34	94	129
17:00 – 18:00	83	41	124

- 6.14 The table above shows that flows used for the analysis is higher than those used for a standard TRICS calculation, and therefore offers a robust assessment. It should also be noted that both Census data and TRICS data are pre-Covid, and there is a perception that flexible working has reduced peak hour travel.

Trip Distribution

- 6.15 The same census data was used to distribute the vehicular traffic generated by the site onto the local network. Workplace destination was used as a rough guide for vehicle direction, and results from the Census data assigned to the local road network based on Google Maps directions.
- 6.16 The distribution is included in **Table 6.6** below.

Table 6.6: Trip Distribution	
Route	Distribution
Sandy Park Road	50%
A4 – Towards Bath	14%
A4174	8%
Wick Road	5%
Birchwood Road	16%
Destinations within Brislington Census area	7%

- 6.17 For the destinations within Brislington, some 4% of all flows went to the Brislington Trading Estate area. Other destinations were allocated to local roads.
- 6.18 Given the above distribution, the critical junctions are the site access, the roundabout junction of Broomhill Road and School Road and the Allison Road/School Road junction, where the majority of traffic would travel through
- 6.19 The vehicular flows from **Table 6.4** are assigned to the network based on the distribution, and development flows are shown on the traffic flows sheets in **Appendix I**.

Future Flows

- 6.20 The traffic surveys from 2020 and 2021 have been growthed using TEMPRO to the anticipated year of full occupation of the site of 2028.
- 6.21 The future base flows, the development flows and the total future flows are all included on the flow diagrams in **Appendix I**.

Traffic Capacity

- 6.22 Computer models using Junctions 10 were constructed of the Broomhill Road/School Road and School Road/Allison Road junctions as well as the proposed site access junction. For the two existing junctions the models included 2028 with and without development so the impact of the extra traffic can be determined. For the proposed access, only the scenario with development was modelled.
- 6.23 The model outputs are included as **Appendix K** and summarised below.

Table 6.7: Broomhill Road/School Road Roundabout 2028 - Base				
	08:00 – 09:00		17:00 – 18:00	
	RFC	Queue	RFC	Queue
Birchwood Road	0.65	1.8	0.58	1.3
Broomhill Road	0.67	2.0	0.56	1.2
School Road	0.80	3.8	0.65	1.9

Table 6.8: Broomhill Road/School Road Roundabout 2028 – With Development				
	08:00 – 09:00		17:00 – 18:00	
	RFC	Queue	RFC	Queue
Birchwood Road	0.67	2.0	0.63	1.7
Broomhill Road	0.80	3.7	0.60	1.5
School Road	0.85	5.1	0.40	2.7

- 6.24 For modelling of unsignalised junctions, an RFC (Ratio of Flow to the Capacity) of 0.85 if less is considered acceptable to demonstrate the junction can accommodate the flows.
- 6.25 The results show that with the development the existing junctions remain within capacity. School Road increases to an RFC of 0.85 in the morning peak hour with development, and the queue increases by just 1.3 vehicles.

Table 6.9: Allison Road/School Road Junction 2028 – Base				
	08:00 – 09:00		17:00 – 18:00	
	RFC	Queue	RFC	Queue
Allison Road – East	0.42	0.7	0.3	0.4
School Road – North	0.60	1.8	0.54	1.4
Allison Road - West	0.63	1.6	0.71	2.3

School Road - South	0.00	0.0	0.00	0.0
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Table 6.10: Allison Road/School Road Junction 2028 – With Development				
	08:00 – 09:00		17:00 – 18:00	
	RFC	Queue	RFC	Queue
Allison Road – East	0.46	0.8	0.31	0.4
School Road – North	0.76	3.7	0.60	1.8
Allison Road - West	0.67	2.0	0.81	3.9
School Road - South	0.00	0.0	0.00	0.0

- 6.26 The modelling of the School Road/Allison Road junction shows that the junction is within capacity for the future scenario including development.

Table 6.11: Site Access 2028 – With Development				
	08:00 – 09:00		17:00 – 18:00	
	RFC	Queue	RFC	Queue
Site Access	0.36	0.6	0.14	0.2
Broomhill Road – West	0.10	0.2	0.26	0.7

- 6.27 Modelling for the proposed access for the scenario of with development shows that the junction is within capacity. It also shows that the through movement is not impacted in the morning peak hour and just a queue of 0.7 vehicles in the evening peak hour.

Highway Safety

- 6.28 As shown in Section 2, there are no apparent highway safety issues on the local road network. Therefore, the slight increase in traffic as a result of the proposals should not lead to a highway safety issue.

Annual Average Daily Traffic

- 6.29 Annual Average Daily Traffic (AADT) flows were required for air quality assessment. To calculate the AADT, the ratio of the peak hour flows over the average daily flow over a week was determined, which is a ratio of around 9.4%. This was then applied to the traffic flows in **Appendix I** and provided to the air quality consultants.
- 6.30 This leads to an increase in flows over the course of a day of 1126 vehicles. This the average flow over a 24-hour period. However, the flows are considered to be a worse case, as it is based on census data from 2011 (most recent available), and current trends see an increase in flexible working and working from home.

Conclusion

- 6.31 The traffic modelling has been based on Census data from the existing residents, where travel mode is likely to be influenced by accessibility by walking, cycling and public transport. It has been assigned to the local road network, again based on Census data.
- 6.32 The junction modelling shows no junctions over capacity in future years with the development fully occupied.

7. CONCLUSIONS

- 7.1 Key Transport Consultants is retained by Homes England to provide transport advice for development at Brislington Meadows, Bristol. The site is located in the Brislington area of Bristol City Centre to the south-east of the centre, The transport aspects have been assessed and will provide the following benefits.

Pedestrian and Cycle Improvements

- 7.2 A new pedestrian/cycle link through the site from Bonville Road to School Road will provide a connection for new residents to shops, employment and education. The link also benefits existing local residents and employees providing a quieter, shorter route from west to east.
- 7.3 A new pedestrian/cycle link is proposed from the site to Fermaine Avenue to link to local shops, schools and bus stops. This route also allows existing residents a route through the site to local destinations.
- 7.4 The proposals also include for traffic calming on Broomhill Road to reduce vehicle speeds, and a new crossing on School Road to provide a route for pedestrians from the site to Sandy Park Road and the city centre beyond.

Parking

- 7.5 Car and cycle parking will be provided in line with Bristol City Council standards. The design code that accompanies the planning application sets out how and where parking will be located within the development.

Traffic Analysis

- 7.6 Traffic generation of the development has been assessed on the local road and there are no junction capacity issues identified at either off-site junctions or the site access for the future year when the development is occupied.

Collision Assessment

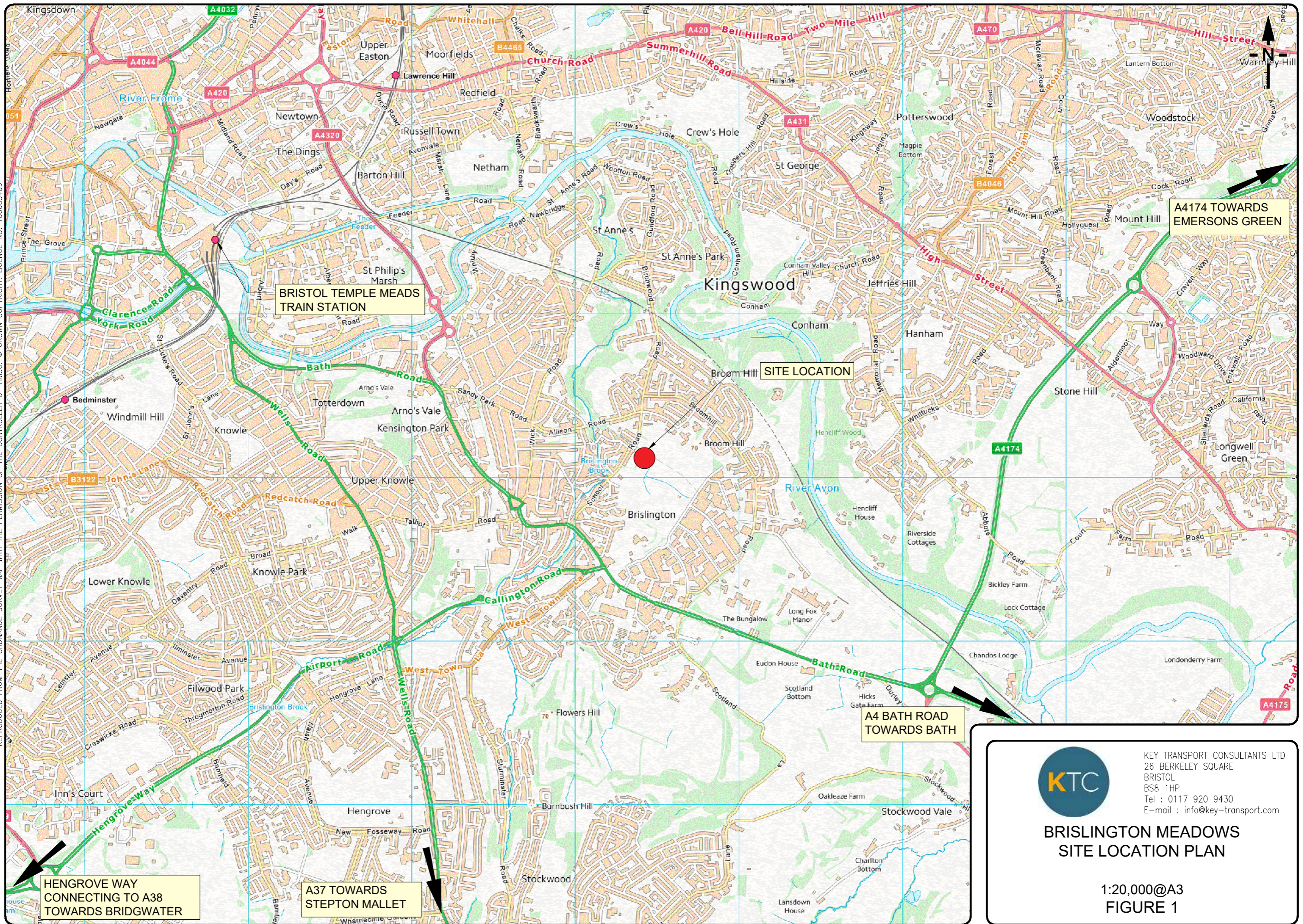
- 7.7 Personal injury accident records have been examined in the area surrounding the development and do not indicate any particular highway safety issues. It is considered that the development proposals would not have a significant impact on highway safety.

Conclusion

- 7.8 In light of all the above, it is considered that appropriate highway and sustainable travel measures to mitigate the impact of the proposed development have been identified and can be delivered by the development. Consequently, with reference to NPPF paragraph 111, the

development proposals would not lead to an unacceptable impact on highway safety or to severe residual cumulative impacts on the road network. Therefore, there are no transport reasons why the planning application should not be approved.

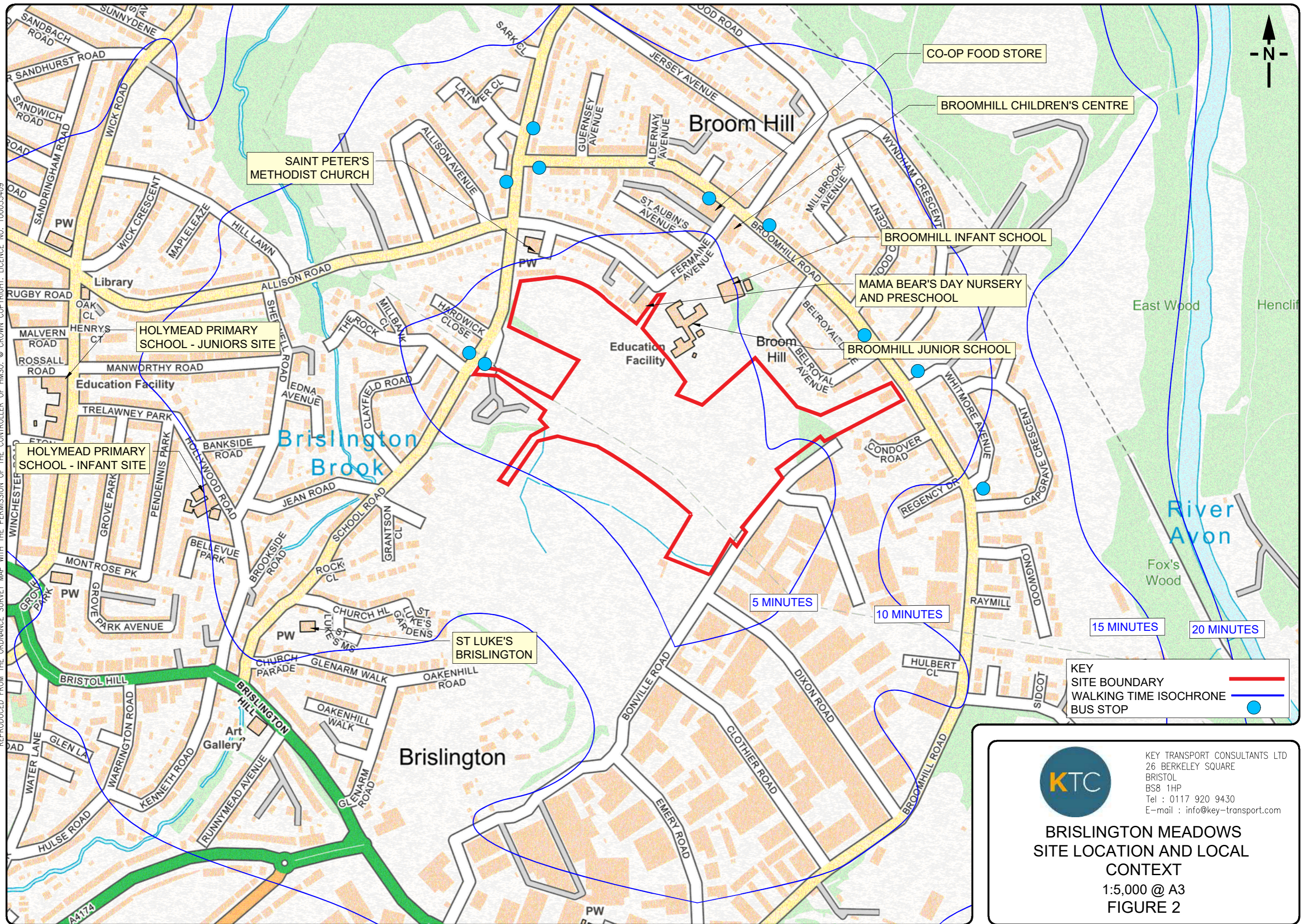
FIGURES



KEY TRANSPORT CONSULTANTS LTD
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BS8 1HP
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E-mail : info@key-transport.com

BRISLINGTON MEADOWS SITE LOCATION PLAN

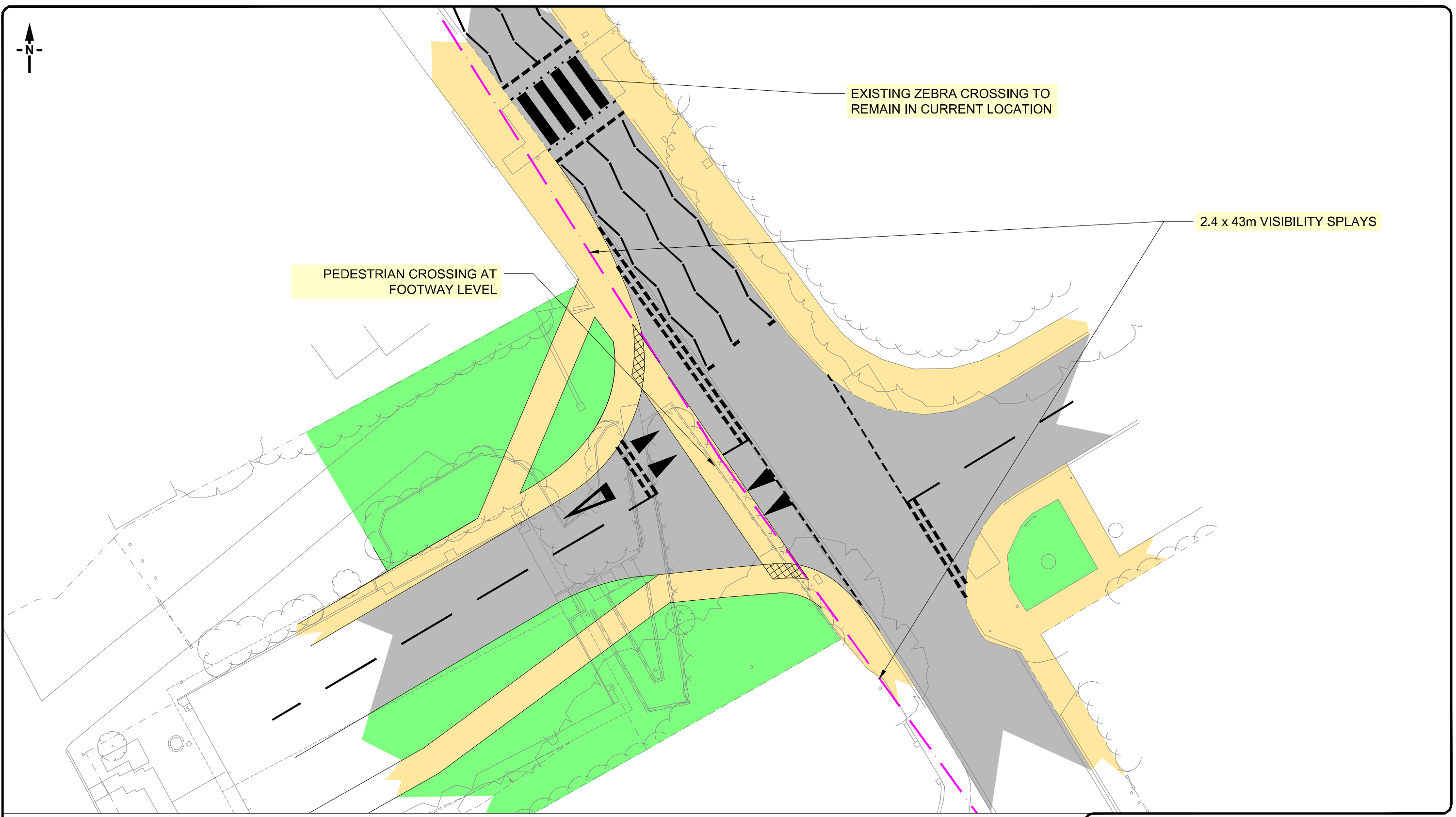
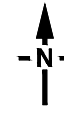
1:20,000@A3
FIGURE 1



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**BRISLINGTON MEADOWS
SITE LOCATION AND LOCAL
CONTEXT
1:5,000 @ A3
FIGURE 2**

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- ROAD
- FOOTWAY
- GRASS/LANDSCAPING

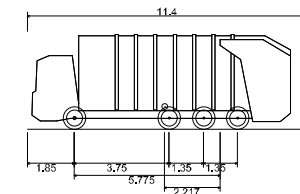
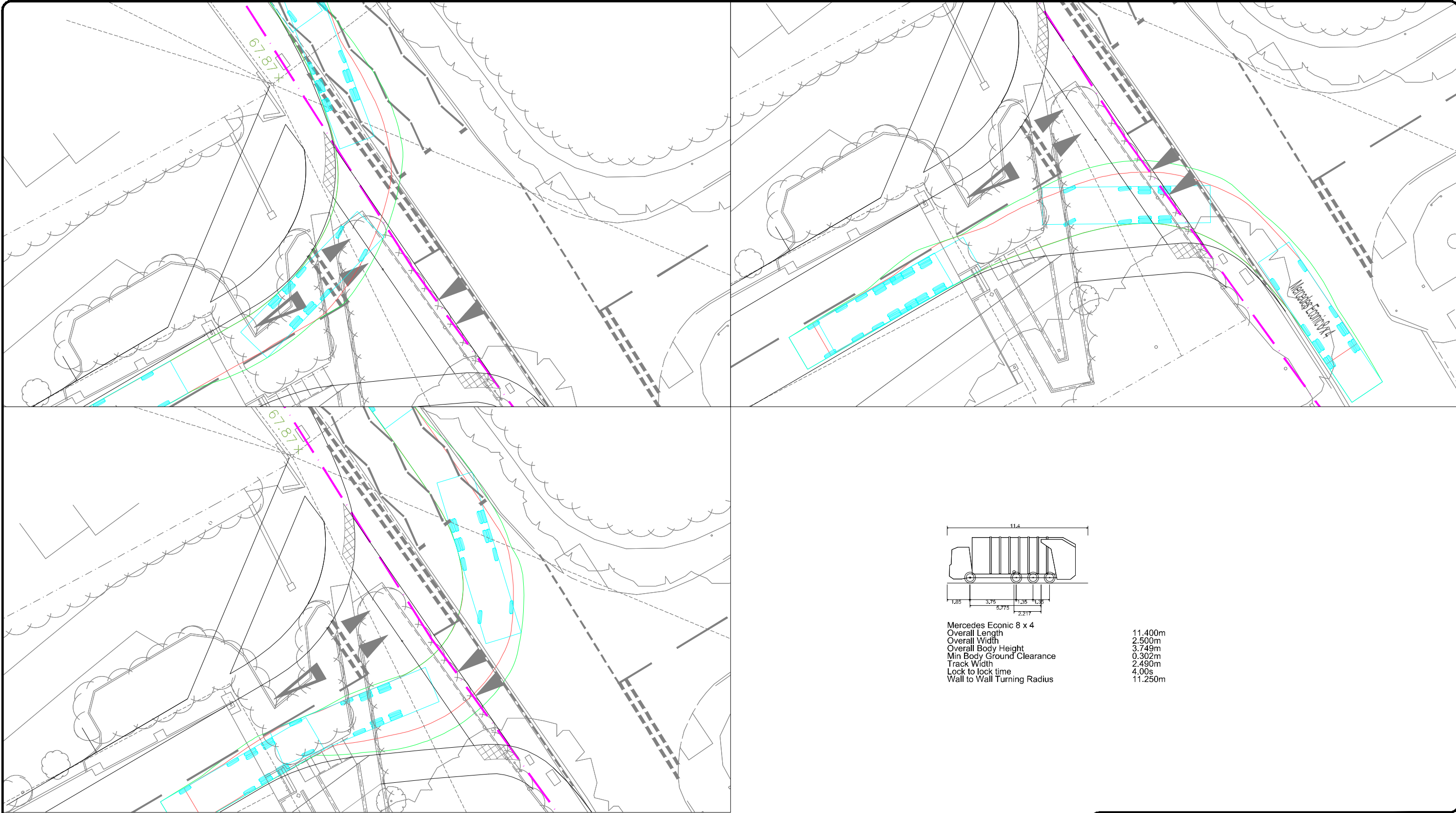


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BRISLINGTON MEADOWS SITE ACCESS LAYOUT

1:250 @ A3
FIGURE 3

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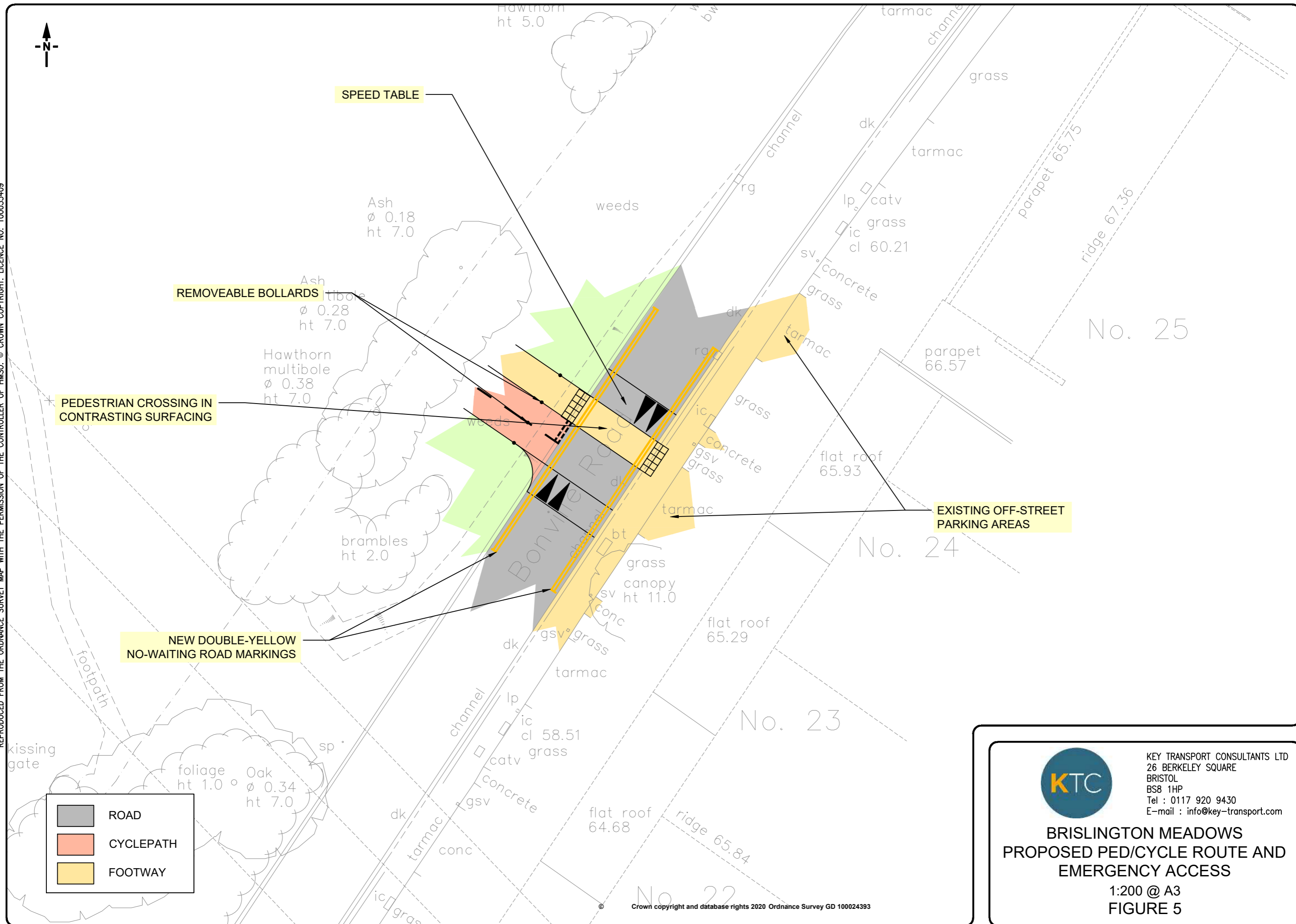


Mercedes Eonic 8 x 4
Overall Length 11.400m
Overall Width 2.500m
Overall Body Height 3.749m
Min Body Ground Clearance 0.302m
Track Width 2.490m
Lock to lock time 4.00s
Wall to Wall Turning Radius 11.250m



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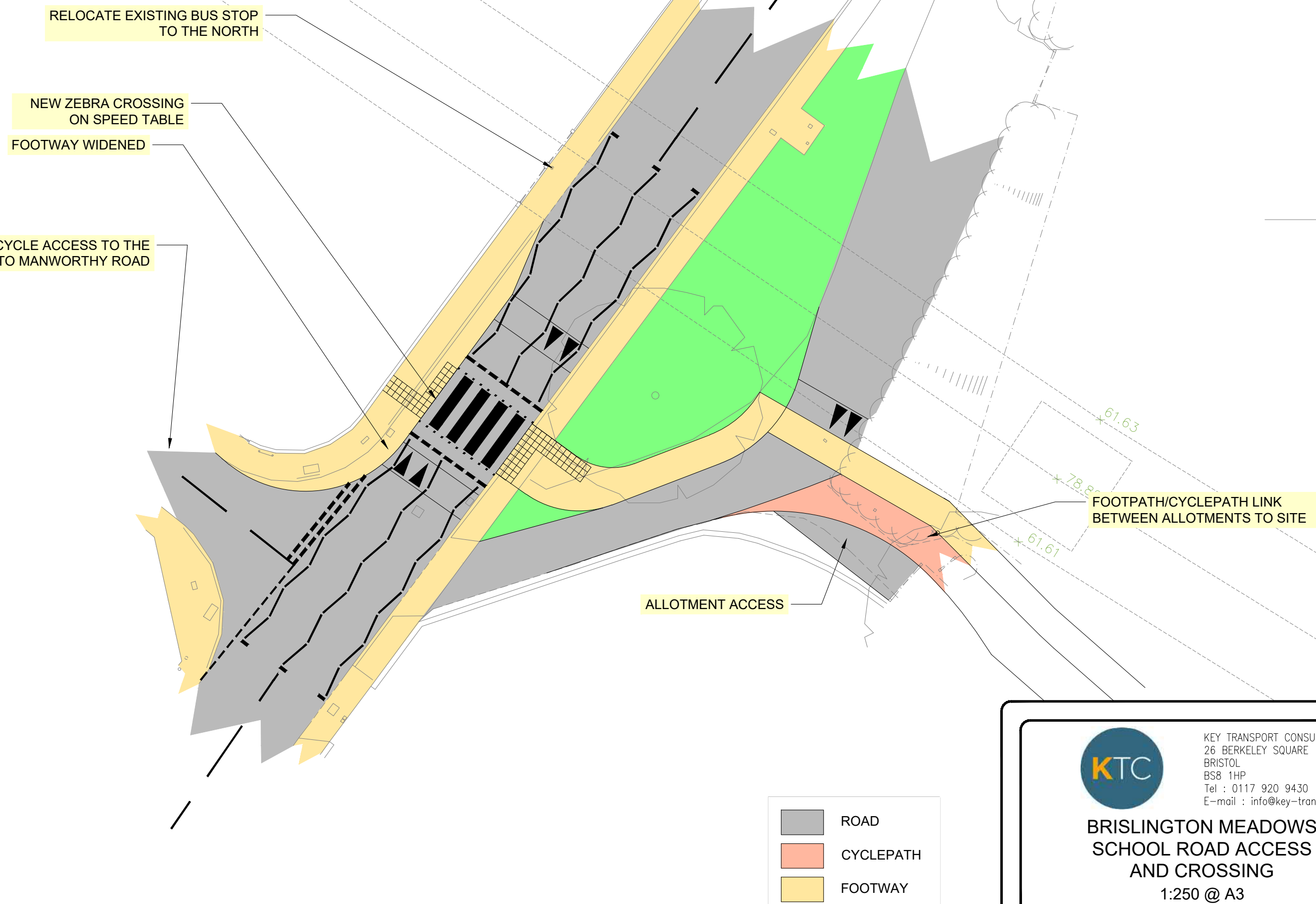
**BRISLINGTON MEADOWS
VEHICLE SWEEP PATH
SITE ACCESS**
1:250 @ A3
FIGURE 4



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BRISLINGTON MEADOWS PROPOSED PED/CYCLE ROUTE AND EMERGENCY ACCESS

1:200 @ A3
FIGURE 5



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**BRISLINGTON MEADOWS
SCHOOL ROAD ACCESS
AND CROSSING**
1:250 @ A3
FIGURE 7