
Ansty Garden Community

Environmental Statement

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APPENDIX C: TRAFFIC AND TRANSPORT

FAIRFAX ACQUISITIONS LTD

ANSTY GARDEN COMMUNITY

TRANSPORT ASSESSMENT

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Document Control Sheet

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EXECUTIVE SUMMARY

This document sets out the traffic and transport assessment of the proposed development at Land Adjoining Ansty, West Sussex. The Local Planning Authority is Mid Sussex District Council and the Local Highways Authority is West Sussex County Council.

The proposed development comprises a residential-led, mixed-use development comprising up to 1,450 homes, a local centre, two schools and other community uses such as sports pitches. Extensive pre-application discussions were held with the local highways authority with regards to the design, active and public transport strategies, and traffic assessment of the development.

The development is in an accessible location with a number of existing facilities nearby, with improvements to active travel connectivity and public transport included as part of proposals. The internal development layout has been designed in line with the principles of a Walkable Neighbourhood, with a network of LTN 1/20 compliant footway / cycleways supported by a series of recreational and leisure routes.

An indicative street hierarchy and indicative street geometries have been set out, which provides maximum flexibility for intermediary and final bus provision while also prioritising active travel. Access to the development by active modes is available at numerous points, with improvements to on-site and off-site public rights of way being considered. Vehicular access to the development is via three new standard roundabouts, which have been tested for capacity and found to operate suitably with minimal queuing and delays.

Car and cycle parking provision are to be provided in line with the principles agreed with the local highways authority, matching the standards set for outer areas of Haywards Heath. Public transport improvements have been discussed with local bus operators with a series of options available for both the intermediary and final stages of the development, with the final bus provision to be confirmed in agreement with bus operators and the local highways authority as part of the legal agreement for the development. A series of mobility hubs will be provided to encourage multi-modal sustainable travel, with the hubs centred around bus stops within the development and designed to CoMoUK's minimum silver accreditation and maximum gold accreditation. Car club provision will also be explored, with car club operators expressing interest in providing vehicles within the development.

The traffic assessment of the development is based on a version of the Mid Sussex strategic traffic model. The model was previously utilised as part of the Regulation 18 process for the Draft Mid Sussex Local Plan, with the strategic traffic model indicating significant effects at 4 junctions within Mid Sussex. The model has since been further refined, as per the recommendations set out within the local plan modelling report, with these refinements undertaken in conjunction with the local highways authority. The amendments were made in order to better represent the condition of the existing network as well as changes made to the proposed development since the preliminary considerations utilised for the Regulation 18 process.

The outputs from the updated strategic model have been used to assess a wide study area, with a sifting criteria used to determine the absolute and relative traffic impact of the proposed development. The sifting criteria identified two junctions where detailed assessment was required, one of which was one of the four junctions highlighted at Regulation 18 stage. The effect of the development at the remaining three junctions highlighted at the Regulation 18 stage was found to be negligible. Using the updated outputs, where mitigation was required, a mitigation scheme has been designed based on advice provided by the local highways authority to prioritise active travel improvements over vehicular capacity. Nonetheless, the mitigation scheme required delivers both sustainable travel improvements and vehicular capacity improvements to a better-than-nil-detriment level.

In conclusion, the information presented in this TA (and associated Appendices) confirms the suitability for a residential-led, mixed-use development at this location.

1. Introduction

- 1.1. This Transport Assessment (TA) has been produced by Ardent Consulting Engineers (ACE) on behalf of Fairfax Acquisitions Limited, to provide an assessment of the highways and transport conditions resulting from the proposed development at the Land Adjoining Ansty site in Mid Sussex.
- 1.2. The Local Planning Authority (LPA) is Mid Sussex District Council (MDSC) and the Local Highways Authority is West Sussex County Council (WSCC), with National Highways (NH) retaining specific responsibility for the A23 corridor to the west of the site. Also relevant to the consideration of the proposals are Active Travel England (ATE), who became a highways-relevant statutory consultee in June of 2023.
- 1.3. The location of the proposed development in its local context is shown on **Figure 1.1** below.



Figure 1.1: Site Location in Local Context

- 1.4. The site in its wider context, including in the context of the County and National Strategic Road Network (SRN) is shown in **Figure 1.2** below.

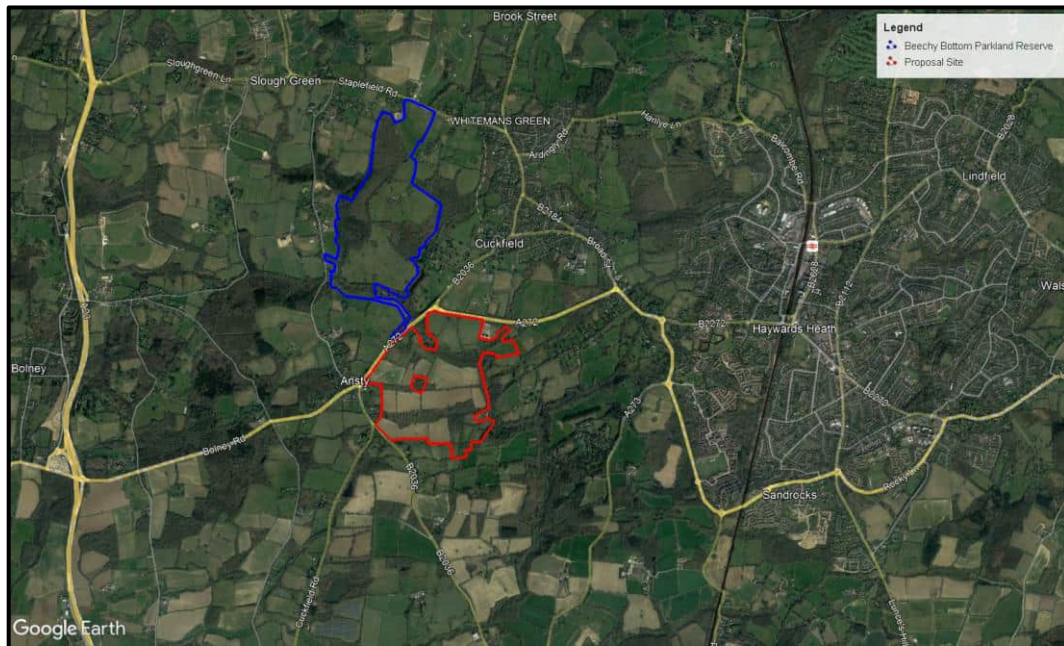


Figure 1.2: Site Location in Wider Context

Planning Background

- 1.5. The proposed development was initially considered for allocation within the draft Mid Sussex District Plan which is currently under review. As detailed in **Section 6.0** of this report, this TA builds on work undertaken as part of the Regulation 18 submissions for the above District Plan Review, including refinements to the strategic traffic modelling to better represent existing and future conditions. Details of the Regulation 18 work can be found within **ACE Report 2207280-01A**, with the updated strategic traffic modelling and resultant junction capacity / mitigation detailed in **Section 6.0** of this report.

Planning Strategy and Pre-Application Discussions

- 1.6. The proposals are to be subject to an Outline Planning Application (OPA), with all matters reserved excluding access. The Description of Development is as follows:

"Outline planning application (All matters reserved except for access) for the redevelopment of land to the east of Ansty to create a new Garden Community, comprising of the erection of up to 1,450 homes (including 30% affordable housing), up to 90 residential care (C2 units), a primary school, new SEND school, sports facilities including all weather hockey pitches and tennis centre, allotments, retail,

community and employment uses together with ancillary and associated development including new and enhanced pedestrian/cycle routes, open spaces, and landscaping”

- 1.7. In addition to the above the applicant is promoting a new Parkland Reserve, known as Beechy Bottom Parkland Reserve. The Parkland Reserve is subject to a separate planning application.
- 1.8. This TA follows on from extensive discussions with WSCC, NH and ATE with regards to the form and function of the proposed development, including discussions on the internal layout, street hierarchy and geometries, active travel and public transport strategies and strategic as well as local traffic modelling.
- 1.9. During these pre-application discussions, ACE produced a series of five Transport Technical Notes (TTNs) covering different aspects of the proposed development. These notes are listed below, along with which relevant bodies were consulted in defining the scope of agreement on the parameters that would be used within this TA:
- TTN #2 (Masterplanning Design Input) – WSCC & ATE.
 - TTN #3 (Parking Strategy and Trip Rates) – WSCC & ATE.
 - TTN #4 (Public Transport and Active Travel Strategy) – WSCC & ATE.
 - TTN #5 (Local and Strategic Modelling) – WSCC & ATE.
 - TTN #6 (National Highways Scoping) – WSCC, ATE & NH.
- 1.10. These TTNs, along with the overarching Transport Scoping Report, are provided in full at **Appendix A**. Pre-application responses were received from WSCC and NH, which are provided in full at **Appendix B**.
- 1.11. This TA incorporates comments received during pre-application discussions, and where relevant states where various aspects of the TA were agreed between ACE and the above consultees.

1.12. Following this introduction, this report is structured as follows:

- **Section 2.0** sets out the policy context in which the application is submitted, in terms of local, county and national policy.
- **Section 3.0** provides a review of the baseline accessibility of the proposal site.
- **Section 4.0** describes the proposed development, in terms of its quantum, mix, internal road layout and parking provision.
- **Section 5.0** outlines the Active Travel and Public Transport Strategy for the development, including details of mobility hubs within the development.
- **Section 6.0** details the strategic modelling approach for the countywide traffic assessment of the development.
- **Section 7.0** details the local junction capacity modelling conducted, on the basis of the output of the strategic modelling, as well as the proposed mitigation schemes.
- **Section 8.0** provides the summary and conclusions of the report.

2. Policy Context

Introduction

- 2.1. This section of the report reviews the policy context in which the application is made, addressing the policy base of MSDC, WSCC, NH and ATE where applicable.

MSDC Policy Context

Adopted Mid Sussex District Plan 2014 – 2031

- 2.2. The *Mid Sussex District Plan 2014 – 2031* is the current adopted Local Plan position of MSDC, being formally adopted in March of 2018. The plan outlines the vision and policies for development in Mid Sussex. The vision for Mid Sussex centres around four key themes:

- *"Protecting and enhancing the environment;*
- *Promoting economic vitality;*
- *Ensuring cohesive and safe communities; and*
- *Supporting healthy lifestyles."*

- 2.3. *Policy DP21 – Transport of the adopted Mid Sussex District Plan* reads as follows:

"Development will be required to support the objectives of the West Sussex Transport Plan 2011 – 2026, which are;

- *A high quality transport network that promotes a competitive and prosperous economy;*
- *A resilient transport network that complements the built and natural environment whilst reducing carbon emissions over time;*
- *Access to services, employment and housing; and*
- *A transport network that feels, and is, safer and healthier to use.*

To meet these objectives, decisions on development proposals will take account of whether:

- *The scheme is sustainably located to minimise the need for travel noting there might be circumstances where development needs to be located in the countryside, such as rural economic uses (see policy DP14: Sustainable Rural Development and the Rural Economy);*

- *Appropriate opportunities to facilitate and promote the increased use of alternative means of transport to the private car, such as the provision of, and access to, safe and convenient routes for walking, cycling and public transport, including suitable facilities for secure and safe cycle parking, have been fully explored and taken up;*
- *The scheme is designed to adoptable standards, or other standards agreed by the Local Planning Authority, including road widths and size of garages;*
- *The scheme provides adequate car parking for the proposed development taking into account the accessibility of the development, the type, mix and use of the development and the availability and opportunities for public transport; and with the relevant Neighbourhood Plan where applicable;*
- *Development which generates significant amounts of movement is supported by a Transport Assessment / Statement and a Travel Plan that is effective and demonstrably deliverable including setting out how schemes will be funded;*
- *The scheme provides appropriate mitigation to support new development on the local and strategic road network, including the transport network outside of the district, secured where necessary through appropriate legal agreements;*
- *The scheme avoids severe additional traffic congestion, individually or cumulatively, taking account of any proposed mitigation;*
- *The scheme protects the safety of road users and pedestrians; and*
- *The scheme does not harm the special qualities of the South Downs National Park or the High Weald Area of Outstanding Natural Beauty through its transport impacts.*

Where practical and viable, developments should be located and designed to incorporate facilities for charging plug-in and other ultra-low emission vehicles.

Neighbourhood Plans can set local standards for car parking provision that it is based upon evidence that provides clear and compelling justification for doing so."

2.4. Policy DP22 – Rights of Way and other Recreational Routes reads as follows:

"Rights of Way, Sustrans national cycle routes and recreational routes will be protected by ensuring development does not result in the loss of or does not adversely affect a right of way or other recreational routes unless a new route is provided which is of at least an equivalent value and which does not sever important routes.

Access to the countryside will be encouraged by:

- *Ensuring that (where appropriate) development provides safe and convenient links to rights of way and other recreational routes;*
- *Supporting the provision of additional routes within and between settlements that contribute to providing a joined up network of routes where possible;*
- *Where appropriate, encouraging making new or existing rights of way multi-functional to allow for benefits for a range of users. (Note 'multi-functional' will generally mean able to be used by walkers, cyclists and horse-riders)."*

Draft Mid Sussex District Plan 2021 - 2039

2.5. Per National Policy, MSDC have commenced a District Plan Review, due to be completed in 2023. The draft *Mid Sussex District Plan 2021 – 2039* was published for the Regulation 18 consultation process between the 7th November and the 19th December 2022.

2.6. As with the adopted local plan, the draft local plan sets out the vision and objectives for Mid Sussex. The draft local plan sets out three key themes for Mid Sussex:

- *"Environment: Protecting and enhancing the natural, built, and historic environment;*
- *Economy: Promoting economic vitality; and*
- *Social: Ensuring cohesive, safe and healthy communities."*

2.7. Chapter 12 of the draft local plan concerns transport policy in Mid Sussex. *Policy DPT1: Placemaking and Connectivity* reads as follows:

"Development shall provide appropriate infrastructure to support the vision and objectives of the West Sussex Transport Plan 2022 – 2036 and meet the requirements of the NPPF.

To meet these objectives:

- a) Development that is likely to generate significant amounts of movement and/or have a significant impact on the transport network shall provide a Transport Assessment / Statement, Sustainable Transport Strategy and Travel Plan to identify appropriate mitigation and demonstrate how development will be*

accompanied by the necessary sustainable infrastructure to support it and to accord with the requirements of the NPPF.

- b) Demonstrate how all relevant sustainable travel interventions (for the relevant local network) will be maximised and taken into account in terms of their level of mitigation before considering physical highway infrastructure mitigation.*
- c) Development shall integrate relevant requirements of Chapter 4 of the Mid Sussex Design Guide SPD and be designed to prioritize sustainable and active modes of travel, providing safe and convenient routes for walking and cycling through the development and linking with existing and enhanced networks beyond; before the highway layout is planned.*
- d) Create liveable communities which strive to embody the 20-minute neighbourhood concept and deliver attractive, healthy places that have a permeable street network within the site with clearly defined route hierarchies that are safe and designed for all users and supporting desirable opportunities for people to choose not to travel by car.*
- e) New streets shall be designed to adoptable standard which can easily incorporate advanced digital infrastructure, including fibre."*

2.8. *Policy DPT2: Rights of Way and Other Recreational Routes* reads as follows:

"Rights of way, Sustrans national cycle routes and recreational routes will be protected by ensuring development does not result in the loss of or does not adversely affected right of way or other recreational routes unless a new route is provided which is of at least an equivalent value and which does not sever important routes.

Access to the countryside will be encouraged by:

Ensuring that (where appropriate) development provides safe and convenient links to rights of way and other recreational routes;

Supporting the provision of additional routes within and between settlements that contribute to providing a joined up network of routes where possible;

Where appropriate, encouraging making new or existing rights of way multi-functional to allow for benefits for a range of users. (Note: 'Multi-functional will generally mean able to be used by walkers, cyclists and horse-riders)."

2.9. Policy DTP3: Active Travel reads as follows:

"Development will be required to help remove barriers to active travel and create a healthy environment in which people chose to walk and wheel; facilitated by:

- a) Where appropriate, providing high quality, fit for purpose active travel infrastructure, within the development which links to existing networks and builds on the schemes identified in the Mid Sussex Local Cycling and Walking Infrastructure Plan (LCWIP).*
- b) Providing appropriate levels of cycle parking facilities (taking account of WSCC Guidance on Parking at New Developments 2020 and subsequent iterations), well designed and laid out to be under cover, secure, conveniently located and easily accessible, close to the main entrance of the premises and in accordance with the guidance in the Mid Sussex Design Guide SPD."*

2.10. Policy DPT4: Parking and Electric Vehicle Charging Infrastructure reads as follows:

"Development will be required to:

- a) Provide adequate and well-integrated car parking, taking account of the guidance in the Mid Sussex Design Guide SPD and the WSCC Guidance on Parking at New Developments (2020 and subsequent iterations) along with the accessibility of the site to services and sustainable travel infrastructure, and the type, mix and use of development.*
- b) Parking associated with all new residential development shall be laid out to ensure the relevant requirements of Schedule 1 Part S of the Building Regulations regarding Electric Vehicle Charging are met.*
- c) All new non-residential buildings with more than 10 associated parking spaces within the site boundary, shall provide a minimum of 2 'Fast' (7kW) or faster, Electric Vehicle Charging points; cable routes shall be provided for 50% of the remaining total number of spaces."*

WSCC Policy Context

West Sussex Transport Plan 2022 to 2036

2.11. The *West Sussex Transport Plan 2022 to 2036* sets out the overall strategy for WSCC as highways authority, being formally adopted in April of 2022. The plan outlines the vision and policies for transport across West Sussex. The plan focuses on the following four themes:

- *"Prosperous West Sussex*
- *Healthy West Sussex*
- *Protected West Sussex*
- *Connected West Sussex"*

2.12. These are supported by a further 17 objectives which are as follows:

"Objective 1: Support sustainable economic prosperity across the County by enabling recovery from the COVID-19 pandemic and levelling-up underperforming areas.

Objective 2: Support development and regeneration plans across the County by enabling local living and through strategic investments, particularly in sustainable modes of transport, at the right time and place to ensure the transport network is fit for the future.

Objective 3: Accommodate the needs of an ageing population that is expected to grow most in existing settlements in the Gatwick Diamond and Coastal West Sussex Areas.

Objective 4: Avoid where possible and minimise air, noise and light pollution from use of the transport network to minimise impacts on public health and well-being.

Objective 5: Ensure the transport network allows residents and visitors (including people with disabilities) to live healthy lifestyles with good access to green and blue spaces, particularly the West Sussex coast and the protected South Downs, High Weald and Chichester Harbour.

Objective 6: Ensure rural communities can live locally by accessing local services or nearby towns.

Objective 7: Enable the transport network to achieve net zero carbon emissions by 2050.

Objective 8: Avoid where possible and minimise the impacts of the transport network on natural resources and on the natural, built and historic environment.

Objective 9: Improve the transport network whilst conserving and enhancing biodiversity.

Objective 10: To monitor and adapt infrastructure to the effects of climate change.

Objective 11: Reduce the need to travel by car by enabling local living.

Objective 12: Improve the efficiency of the County Strategic Road Network, particularly east-west routes including the A27, through targeted improvements to address congestion, pollution, rat-running and road safety issues on strategic or local routes.

Objective 13: Minimise the impacts on the transport network of surface access to Gatwick Airport by passengers and employees and ensure transport network improvements take the needs of other users and communities that share these routes into account.

Objective 14: Ensure the rail network is an attractive option for travel between West Sussex towns and to surrounding cities by improving the speed and quality of West Coastway and Arun Valley Line services, capacity on the Brighton Main Line and integration with other modes of transport.

Objective 15: Improve bus network efficiency and integration by reducing the effects of congestion into and within West Sussex towns, particularly where there are gaps in the rail network.

Objective 16: Ensure the bus network is customer focussed and integrated with other modes of transport to provide an attractive option for journeys to nearby towns.

Objective 17: Extend and improve the network of active travel facilities so it is coherent and high quality enough to make active travel an attractive, safe option for short distance trips and to transport interchanges."

National Highways

Department for Transport (DfT) – Circular 01/2022

2.13. Per the pre-application advise received from NH, the relevant overarching policy for NH is *DfT Circular 01/2022*, which was most recently updated in December of 2022. The Circular sets out the national level approach to the Strategic Road Network (SRN) maintained and operated by NH.

2.14. The circular sets out the recommended process by which developments should be designed. Of particular relevance to the proposed development is Paragraphs 47-51 of the Circular which lay out the NH approach to assessing development proposals:

"47. Where the company is requested to do so, it will engage with local planning authorities and development promoters at the pre-application stage on the scope of transport assessments/statements and travel plans. This process should determine the inputs and methodology relevant to establishing the potential impacts on the SRN and net zero principles that will inform the design and use of the scheme. Development promoters are strongly encouraged to engage with the company to resolve any potential issues and maximise opportunities for walking, wheeling, cycling, public transport and shared travel, as early as possible.

48. Where a transport assessment is required, this should start with a vision of what the development is seeking to achieve and then test a set of scenarios to determine the optimum design and transport infrastructure to realise this vision. Where such development has not been identified in an up-to-date development plan (or an emerging plan that is at an advanced stage), developers should demonstrate that the development would be located in an area of high accessibility by sustainable transport modes and would not create a significant constraint to the delivery of any planned improvements to the transport network or allocated sites.

49. A transport assessment for consideration by the company must also consider existing and forecast levels of traffic on the SRN, alongside any additional trips from committed developments that would impact on the same sections (link or junction) as the proposed development. Assumptions underpinning projected levels of traffic should be clearly stated to avoid the default factoring up of baseline traffic. The scenario(s) to be assessed, which depending on the development and local circumstances may include sensitivity testing, should be agreed with the company;

where a scenario with particularly high or low growth is proposed, this should be supported by appropriate evidence. Planned improvements to the SRN or local road network should also be considered in any assessment where there is a high degree of certainty that this will be delivered.

50. An opening year assessment to include trips generated by the proposed development, forecasted growth and committed development shall be carried out to establish the residual transport impacts of a proposed development. For multi-phase developments, additional assessments shall be provided based on the opening of each phase.

51. Where a transport assessment indicates that a development would have an unacceptable safety impact or the residual cumulative impacts on the SRN would be severe, the developer must identify when, in relation to the occupation of the development, transport improvements become necessary.

Ministry of Housing, Communities and Local Government

National Planning Policy Framework

2.15. The *National Planning Policy Framework* (NPPF) is the basis for all planning policy in England. Paragraph 10 states that “... *at the heart of the framework is a **presumption in favour of sustainable development.***” As such, all following plans and policies, including those of Local Planning Authorities, Local Highways Authorities, National Highways and Active Travel England.

2.16. Paragraph 111 sets the standard against which developments should be assessed in terms of their highways effects:

“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.”

2.17. Further guidance is given on the highways priorities for development design which are as follows:

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 efficiency 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.”*

2.18. In doing so, there is a recognition in Paragraph 110 (d) of the importance achieving growth in a manner than is cost effective and delivers improvements capable of mitigating the impact of development to an acceptable degree. This establishes that the outcome of a TA will be relevant within the overall decision-making process, when weighing up the balance of benefits and harm arising from a development.

Neighbourhood Plan

2.19. In February 2017, a *Neighbourhood Plan for Ansty, Staplefield and Brook Street* (ASBSNP) was formally adopted, following the designation of Neighbourhood Area by MSDC in 2012.

2.20. At the time of the ASBSNP, only the *2004 Mid Sussex District Local Plan* was adopted, and the neighbourhood plan did not at the time identify the proposed strategic development area.

2.21. The ASBSNP is considered relevant in so far as it set out some of the transport priorities for residents, which the proposed development may be able to address through its allocation and the subsequent OPA, including:

- A broader mix of housing, to improve availability for young families as well as older people wanting to downsize (Policy AS1 Part D and Policy AS4).
- A wish to see more improvements to community facilities such as leisure and recreational facilities (Policy AS8).
- Concerns over the loss of commercial land-uses within the villages, which provide vital services for some residents, with measures in place to seek retention or expansion of such facilities (Policy AS12);
- The need identified by the Community to improve cycling and walking routes to Cuckfield, Haywards Heath and the surrounding villages (Policy AS14).

2.22. Continuing engagement with the local parish councils is progressing, and a full programme of public consultation and events have been undertaken.

3. Accessibility Review

Introduction

- 3.1. This section sets out the accessibility of the site achievable by all relevant modes of travel. Through this review, the baseline accessibility of the site is presented reflective of current conditions, prior to any improvements being considered in response to the proposed development.

Local Amenities and Facilities

- 3.2. Several facilities catering for everyday needs are available within Ansty and Cuckfield, including Ansty Football and Cricket Club and a Co-Op foodstore within Cuckfield. The locations of these facilities are shown in **Figure 3.1**.



Figure 3.1: Existing Local Facilities

Accessibility by Foot

- 3.3. The Chartered Institution of Highways and Transportation (CIHT) document Providing for Journeys on Foot (2000) recommends acceptable walking distances of between 400m ("Desirable") for general journeys and 2km ("Preferred Maximum") for commuting and journeys to school purposes.
- 3.4. The Governments' Manual for Streets (MfS) itself identifies walkable neighbourhoods as being those typically characterised by having a range of facilities within an 800m (10-minute) walk distance. However, this is not an upper limit, with walking offering

the greatest potential to replace short car trips, particularly for those journeys under 2km.

- 3.5. A series of Public Rights of Way (PRoWs) run through the site including Footpaths 62CR, 65CR, 69CR and 72CR. The WSCC Local Land Charges Team have advised that there is also an outstanding application for the addition of a Public Right of Way between Courtmead Road and Newbury Lane in Cuckfield.
- 3.6. An extract from the West Sussex PRoW map showing the PRoWs that run through and surround the site, including the location of the application for a new footpath mentioned above, is shown in **Figure 3.2**.

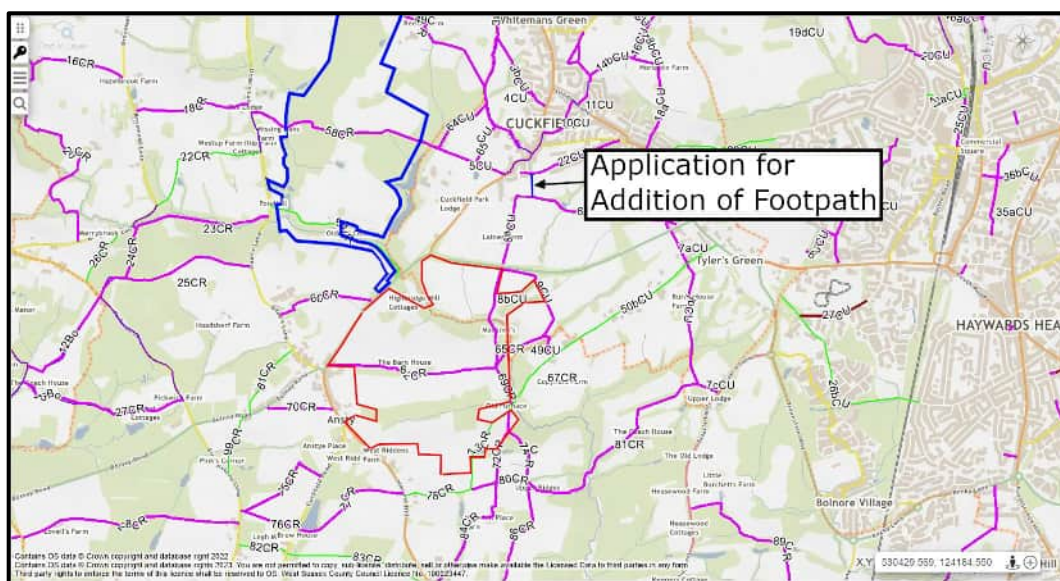


Figure 3.2: WSCC PRoWs within the Vicinity of Proposal Site

- 3.7. The PRoWs detailed in **Figure 3.2** connect the site to a variety of destinations, including the village of Ansty adjacent to the western edge of the proposal site, to the larger village of Cuckfield to the north of the proposal site and also towards Haywards East from routes on the eastern boundary of the site that extend eastwards, including Copyhold Lane. In the case of the latter, this is a bridleway and so can be used by both pedestrians and cyclists.
- 3.8. The A272 runs broadly along a north/south alignment to the west of the site and incorporates a footway on the western side. This footway extends north along the western side of the B2036 into the centre of Cuckfield, whilst it also extends south into the centre of Ansty where there are dropped kerb/tactile available at pedestrian crossing points.

3.9. Further south within Ansty, a footway is present along the eastern side of the B2036 from the A272 mini-roundabout junction to the Cuckfield Road/B2036 junction, where the footway terminates. There is currently no footway in place along the B2036 Harvest Hill along the site frontage.

Accessibility by Cycle

3.10. Bridleways 73CR and 67CR runs to the southwest of the proposal site, connecting the B2036 Harvest Hill to Copyhold Lane thorough towards Haywards Heath. A local cycle route is present to the east of the proposal site, connecting Tylers Green into central Haywards Heath.

3.11. An extract from OpenCycleMap.org showing the above local cycle route is shown in **Figure 3.3** below.

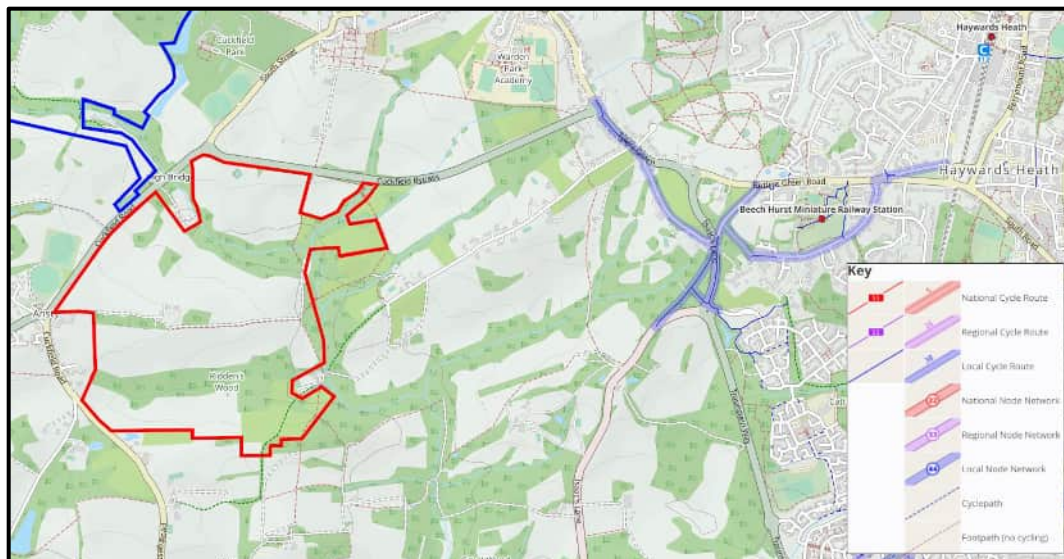


Figure 3.3: Cycle Routes within the Vicinity of the Site

3.12. Mid-Sussex published its Local Cycling and Walking Improvement Plan (LCWIP) in March 2023, as part of the WSCC Active Travel Strategy. The LCWIP forms part of the evidence base for the Mid Sussex District Plan review, specifically proposed Policy DPT 3 Active Travel which states:

"Development will be required to help remove barriers to active travel and create a healthy environment in which people chose to walk and wheel; facilitated by, where appropriate, providing high quality, fit for purpose active travel infrastructure, within the development which links to existing networks and builds on the schemes identified in the Mid Sussex Local Cycling and Walking Infrastructure Plan (LCWIP)".

3.4 below. The site is denoted by a Red Star.



Figure 3.4: Every Day Origin-Destination Pairs (reproduced from Figure 6-15 of LCWIP 2023).

The above shows that the existing propensity for cycling to/from the village Ansty will mainly be towards Haywards Heath.

Accessibility by Public Transport

The closest existing bus stops to the site are located within Ansty, on either side of the A272 Bolney Road. Both stops are exclusively served by Compass Travel bus service no. 89 whose routes is between Horsham and Haywards Heath, and which operates at a frequency of one bus per hour on weekdays, with no service on Saturdays or Sundays.

Other bus routes run through Cuckfield and Haywards Heath, which are shown on the diagram in **Figure 3.5** below.

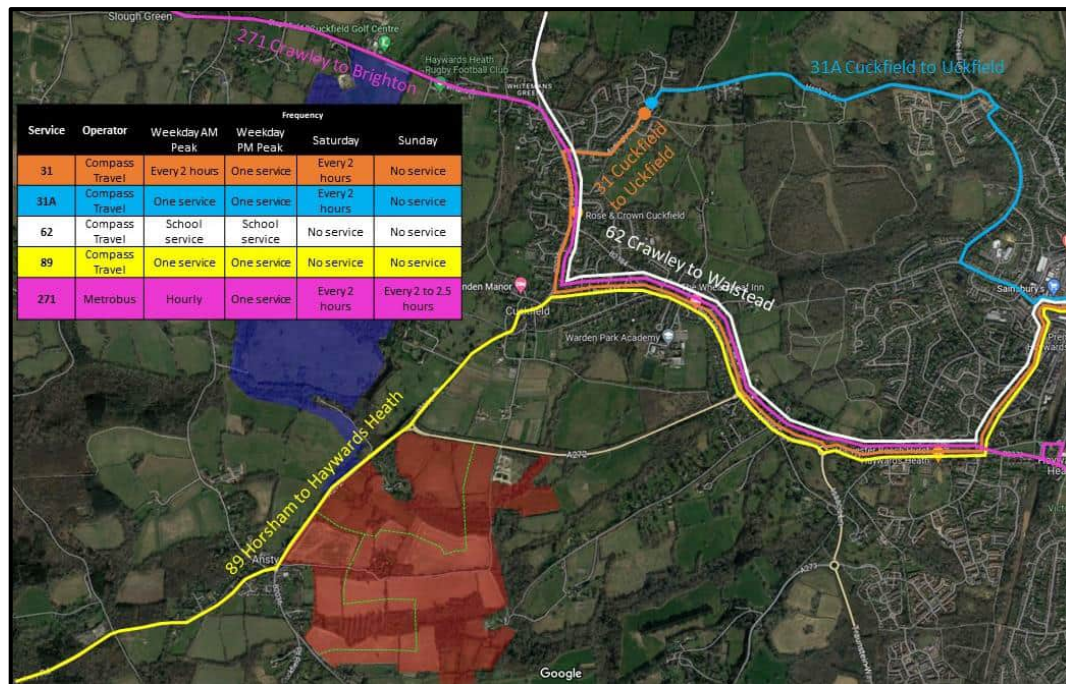


Figure 3.5: Local bus routes within the Vicinity of the Site

3.17. The nearest railway station to the proposal site is located within Haywards Heath, approximately 3.5km from the centre of the proposal site. Typical off-peak service for Haywards Heath Railway Station includes:

- 2 Trains per hour to Bedford
- 2 Trains per hour to Cambridge
- 6 Trains per hour to London Victoria
- 6 Trains per hour to Brighton
- 2 Trains per hour to Eastbourne
- 2 Trains per hour to Littlehampton

Summary

3.18. A summary of this section of the report is as follows:

- There are a number of local facilities located within Ansty and Cuckfield, which allows for a degree of 'local living' by catering for some of the needs to existing residents, thereby minimising the need to travel and/or reducing journey times.
- The site is surrounded by a network of PRowS, including footpaths and bridleways, with a series of complementary routes located within the site boundary.
- There is an existing propensity to cycle from Ansty Village, with the primary pole of attraction being towards East and Haywards Heath.
- Public transport in the area includes an existing bus service that runs directly adjacent to the proposal site, which also serves the closest train station.

4. Proposed Development

Introduction

- 4.1. This section of the report sets out the parameters for the proposed development, including the quantum of development, internal road layout and parking provision.

Development Composition

- 4.2. The Description of Development for the OPA is as follows:

"Outline planning application (All matters reserved except for access) for the redevelopment of land to the east of Ansty to create a new Garden Community, comprising of the erection of up to 1,450 homes (including 30% affordable housing), up to 90 residential care (C2 units), a primary school, new SEND school, sports facilities including all weather hockey pitches and tennis centre, allotments, retail, community and employment uses together with ancillary and associated development including new and enhanced pedestrian/cycle routes, open spaces, and landscaping"

Movement Principles

- 4.3. The site lies at the confluence of a number of movement corridors thereby providing access opportunities for the proposed development for future residents but also opportunity for improvements for existing residents of nearby settlements.
- 4.4. At the heart of the design of the Masterplan lies the principle of the 'walkable neighbourhood', which was originally enshrined within the Government's Manual for Streets guidance.
- 4.5. The concept has taken more prominence through the increasing focus there has been for new sustainable settlements to provide a range of facilities within the development that can be easily accessed, thereby reducing the overall travel distance required for people to meet basic needs.
- 4.6. The proposed development will be arranged in such a way that it delivers a permeable network of streets in order to enhance pedestrian and cycle movements and linking with existing PRoWs. Priority is also provided for public transport, through the establishment of a dedicated Bus Route, alongside this pedestrian/cycle infrastructure.

- 4.7. In designing the access and movement strategy for the development, a positive skew towards sustainable modes of travel has been centred, with private car travel being a lower priority. Therefore where active travel corridors are designed to be direct, legible and prioritised through the layout, the comparable vehicular routes are less direct and longer in length.
- 4.8. While the natural choice for internal travel and travel to/from Ansty will therefore always be for people to walk, cycle or wheel, some car travel must be facilitated in simple recognition that some end users may have originated from places that do not lend themselves as well to alternative modes of transport.
- 4.9. The design choices that have been made focus on increasing travel options for residents, employees, students and / or visitors and, where car travel is unavoidable, to ensure that sufficient provision is provided to ensure such movements can be accommodated, including through the provision of Electric Vehicle (EV) charging points.
- 4.10. The outcome of the approach is a form of development that is primarily designed to be at a human scale, with a clear focus on priority spaces and corridors for people to move freely or congregate, in line with objectives 2, 5 and 11 of the West Sussex Transport Plan.

Illustrative Masterplan

- 4.11. The proposed concept masterplan is provided at **Appendix C**.
- 4.12. The illustrative masterplan promotes permeability through the site and encourages non-car access and movement. This is considered in more detail later in this section and, but this focuses on achieving integration with the existing surrounding network and offering suitable improvements to encourage active travel.
- 4.13. The proposed wider active travel strategy will reduce reliance on private car use by making sustainable modes of transport attractive to future residents / visitors, and will supplement the bus strategy also detailed in **Section 5.0**.

Access Arrangements

4.14. Access to the site via active travel modes (including walking and cycling) will be possible from 10 locations:

- Via northern and southern multi-modal accesses, provided through new road junctions;
- At a new crossing point over the A272 into Beechy Bottom Parkland Reserve including a signalised crossing over the A272;
- Via Public Right of Way (PRoW) 62CR into Ansty;
- Via PRoWs 103CR, 69CR and 71CR on the eastern boundary of the site; and
- Via 72CR, 73CR and 74CR on the south eastern Boundary of the site.

4.15. The external vehicular access to the proposed development is to be at the three points:

- Access 1 – On the northern edge of the site onto the A272;
- Access 2 – On the western edge of the site onto the A272; and
- Access 3 – On the south-western edge of the site onto the B2036 Harvest Hill.

Access Principles

4.16. All three proposed access roundabouts comprise normal three-arm roundabouts, with the northern and southern junctions adopting 4.5m width entry and 4.5m width exit lanes on each arm and an Inscribed Circle Diameter (ICD) of between 28m and 100m.

4.17. It is anticipated that the western roundabout would cater for a higher volume of traffic than the northern and southern junctions (see **Section 6.0**) and so, whilst this is also a normal three-arm roundabout, it would incorporate two-lane entry/exits on the two A272 arms of the junction. It would have an ICD of 36m to ensure it suitably caters for the forecasted traffic demand.

4.18. Swept path analysis of each roundabout has been conducted, based on a 16.5m articulated Heavy Goods Vehicle (HGV) and the necessary turning manoeuvres are satisfactorily accommodated by the designs proposed.

4.19. The proposed roundabout geometries are based on standards included within the Design Manual for Roads and Bridges (DMRB) documents CD109 – Highway Link

Design and CD 116 – Geometric Design of Roundabouts. Visibility splays have been calculated based on the design speed of the road using the desirable minimum visibility from DMRB CD 109 – Highway Link Design. Footway and Cycleway widths have been based on Local Transport Note (LTN) 1/20 – Cycle Infrastructure Design and Manual for the Streets / Manual for Streets 2.

- 4.20. The design of all three access roundabouts are capable of providing visibility splays of 215m, commensurate with a 60mph design speed as per DMRB visibility standards. Therefore, the proposed access arrangements are not contingent on any changes to speed limits, but would secure additional benefits to deliver further traffic management.
- 4.21. Details of the public transport strategy for the site, including the proposed internal bus route through the development are provided in **Section 5.0** of this report, but all access points are able to accommodate the swept path of a public service vehicle to ensure permeability by buses as required from all access points.
- 4.22. As a complementary measure, the applicant is willing to work with WSCC to review existing speed limits in the vicinity and consider a change from the current national speed limit to 50mph on the A272 to the north of the proposal site and an extension of the 30mph zone to the south of Ansty.
- 4.23. The potential area of speed limit change to be considered is shown in **Figure 4.1** below, with existing 30mph limits shown blue, potential extension of 30mph limit shown yellow and potential change to 50mph limit shown in red.



Figure 4.1: Potential Change in Speed Limit (Indicative)

Access 1 – Northern Access

4.24. Plans showing the proposed northern access roundabouts are shown in **ACE Drawing 2207280-003F**.

4.25. The site arm of northern access roundabout includes a tiger crossing for pedestrians and cyclists, connecting the internal pedestrian / cycle network within the development to a 4.5m shared footway / cycleway on the southern side of the A272.

4.26. This shared footway / cycleway then continues to a signalised crossing on the A272 to provide a connection to a new footway on the northern side of the road that leads to ProW 8aCU further north, whilst the shared footway / cycleway extends further east towards Haywards Heath on the southern side of the A272.

4.27. The proposed northern access roundabout design has been subject to a Stage 1 Road Safety Audit (RSA1). The Designers' Response, including the RSA1 report, is provided within **ACE Report 2207280-R13**. The above drawing includes amendments made as a result of the RSA1.

Access 2 – Western Access

- 4.28. The layout of the proposed western access is shown in **ACE Drawing 2207280-004D**.
- 4.29. The new junction will cater for vehicles and on-road cyclists only, as other proposed segregated footways and cycle routes will diverge from the carriageway prior to this roundabout.
- 4.30. The proposed western access roundabout design has been subject to an RSA1. The Designers' Response, including the RSA1 report, is provided within **ACE Report 2207280-R14**. The above drawing includes amendments made as a result of the RSA1.
- 4.31. A signalised pedestrian crossing is however to be provided to the west of the site on the A272 in order to connect the internal pedestrian routes through the site to the proposed Beechy Bottom Parkland Reserve further west. The design of this crossing is shown on **ACE Drawing 2207280-010B**.
- 4.32. The proposed western access roundabout design has been subject to an RSA1. The Designers' Response, including the RSA1 report, is provided within **ACE Report 2207280-R17**. The above drawing includes amendments made as a result of the RSA1.

Access 3 – Southern Access

- 4.33. The layout of the proposed western access is shown in **ACE Drawing 2207280-005D**.
- 4.34. The site arm of the southern access roundabout include a crossing point for pedestrians and cyclists, with a dropped kerb cycle route leading onto the B2036 Harvest Hill to the south and a continuation of the 4.5m shared footway / cycleway to the north.
- 4.35. The proposed western access roundabout design has been subject to an RSA1. The Designers' Response, including the RSA1 report, is provided within **ACE Report 2207280-R15**. The above drawing includes amendments made as a result of the RSA1.

Junction Capacity

4.36. Each of the proposed access roundabouts has been modelled to determine their junction capacity and were found to operate satisfactorily. The details of the modelling tests conducted are provided in **Section 7.0** of this report.

Internal Street Layout

4.37. The illustrative Masterplan indicates how the development would be arranged around a permeable layout of inter-connected streets, with very few underlying constraints to delivering the concept of the walkable neighbourhood enshrined in the Government's Manual for Streets.

4.38. The MfS guidance recognises that streets have a number of functions, and it considers these to be as follows:

- Place;
- Movement;
- Access;
- Parking; and
- Drainage, Utilities and Street Lighting.

Street Hierarchy

4.39. Being subject to an OPA, the layout of the development is only intended to be illustrative, as it is only guided by the siting of the access and the relevant Parameter Plans (PP). Many of the decisions regarding the design of streets will therefore be subject to subsequent RM submission, and the adoption of any new highways will be subject to agreement with WSCC as part of a formal Technical Approval process entered into under Section 38 of the Highways Act 1980.

4.40. However, during pre-application discussions with WSCC, a hierarchy of six street-types were outlined. The street-type sequence was as follows:

1. Primary Spine Road (with Bus);
2. Primary Spine Road (Without Bus);
3. Secondary Routes (With Bus);
4. Secondary Routes (Without Bus);
5. Tertiary Routes (Individual Parcel Access); and
6. Shared Streets (Individual Dwelling Access).

4.41. Following discussions with bus operators, discussions with Design South East and further discussions with WSCC, the proposed street hierarchy has been refined into a total of four street types, which are as follows:

1. Bus Route ("Ansty Avenue");
2. Secondary Street ("The Crescent");
3. Tertiary Street ("The Lanes");
4. Shared Street ("The Walks").

4.42. The above street hierarchy provides some additional flexibility to address the requirement for buses, subject to the final bus route that would be specified at the OPA stage and, subsequently, incorporated into more detailed layouts when these are submitted at later Reserved Matters (RM) stage.

4.43. The design for each street type consists of four elements:

- Carriageway;
- Verge(s);
- Cycle Path(s); and
- Footway(s).

4.44. Local Transport Note (LTN) 1/20 – Cycle Infrastructure Design places the emphasis on the consistency of routes, as well as on the level of infrastructure within new strategic developments. The guidance sets out the principle that the standard of provision should reflect the expected number of users.

4.45. As such, carriageway widths, verges and segregated footways are based on WSCC guidance as well as Manual for Streets / Manual for Streets 2, while the shared footway / cycleway widths are based on the guidance contained in LTN 1/20.

4.46. Feedback from the *Design South East* review panel has also suggested that the geometries for the various elements are specified using ranges, as opposed to specific widths, as this provides maximum flexibility when later RM applications are being considered.

4.47. A plan based on this, showing the indicative street hierarchy across the site, is provided in **Appendix D**.

Bus Route (Ansty Avenue)

4.48. The configuration of the central route within the site (excluding one section of Secondary Street, as detailed below) will allow for a continuous Bus Route to be delivered, connecting the three site access roundabouts with all sections of the development.

4.49. The parameters for the Bus Route are anticipated to be as follows:

- Carriageway Width = 6.4m – 6.8m;
- Verge Width = 2m – 3m (both sides of the carriageway);
- Shared Footway / Cycleway = 3.0m – 4.5m (One side of the carriageway);
- Footway = (One side of the carriageway);
- Total Width = 15.4m – 19.3m.

4.50. A cross-section of the section of the Bus Route is shown in **Figure 4.2**, below.

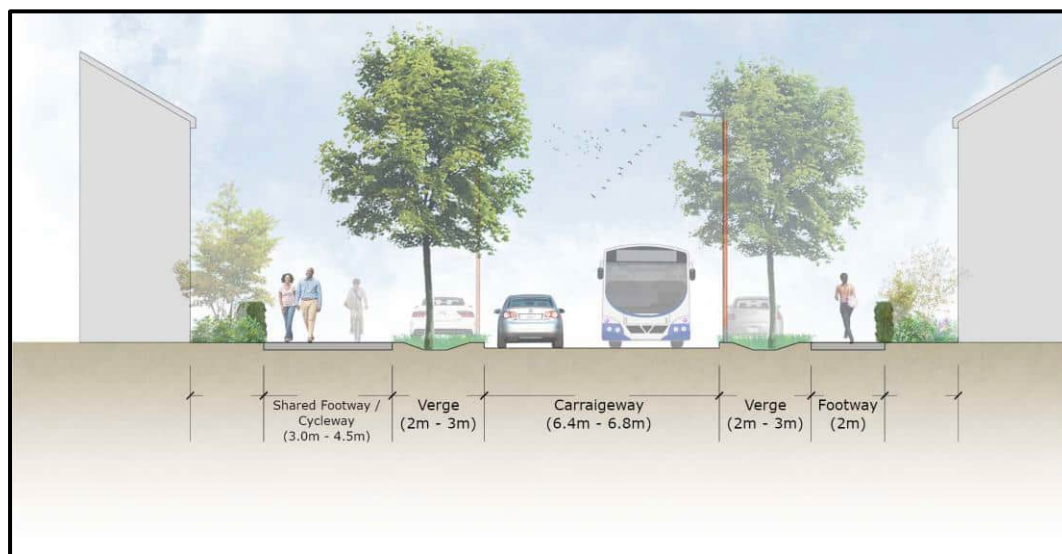


Figure 4.2: Indicative Bus Route Geometries

4.51. The final geometries of the Bus Route will be subject to refinement, depending on the exact routing of the Bus Service, with non-selected sections being re-designated as Secondary Streets.

Secondary Streets

4.52. Only one section of the development is confirmed to have a Secondary Street, specifically the loop within the northern part of the development, the indicative parameters for which will be as follows:

- Carriageway Width = 4.5m – 5.5m;
- Verge Width = 2m – 2.5m (both sides of the carriageway);
- Shared Footway / Cycleway = 3.0m – 4.5m (One side of the carriageway);
- Footway = (One side of the carriageway);
- Total Width = 13.5m – 17m.

4.53. An indicative cross-section of a section of a secondary street is shown in **Figure 4.3**, below.

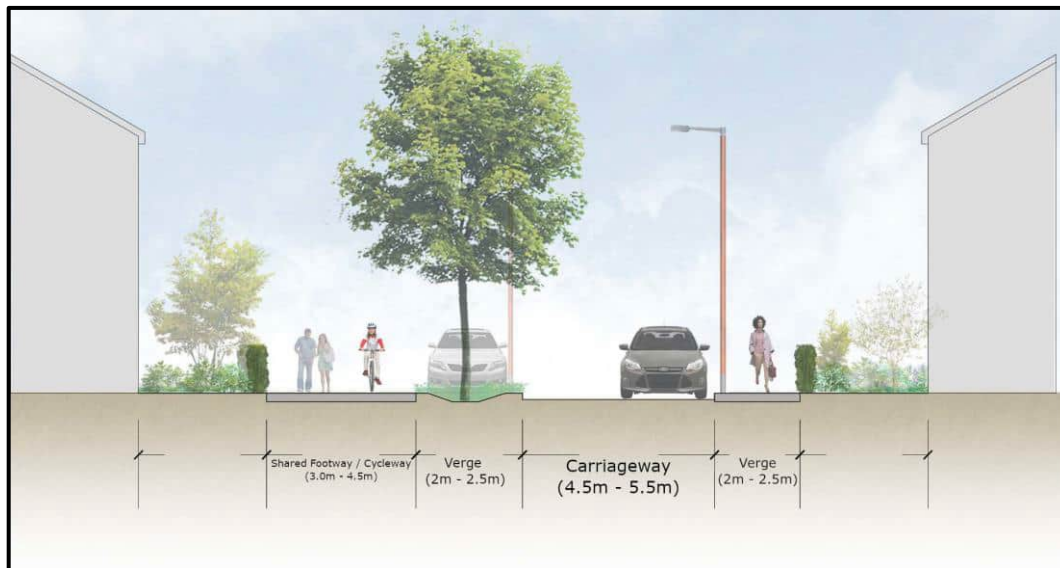


Figure 4.3: Indicative Secondary Street

Tertiary Streets

4.54. At present, four sections of tertiary street are included within the development in the north, central-east, central-west and south-east sections of the site.

4.55. To maintain a cohesive and direct cycle route throughout the site, cyclists are intended to travel on the carriageway on the tertiary streets before joining the main cycle route, and so no off-carriageway cycle route is provided for tertiary streets.

4.56. The indicative geometric parameters of the tertiary streets are as follows:

- Carriageway Width = 4.5m – 4.8m;
- Verge Width = 2m – 2.5m (one side of the carriageway);
- Footway = 2m (both sides of the carriageway including pinch points);
- Total Width = 10.5m – 13.8m

4.57. An indicative cross-section of the section of the tertiary street is shown in **Figure 4.4**, below.

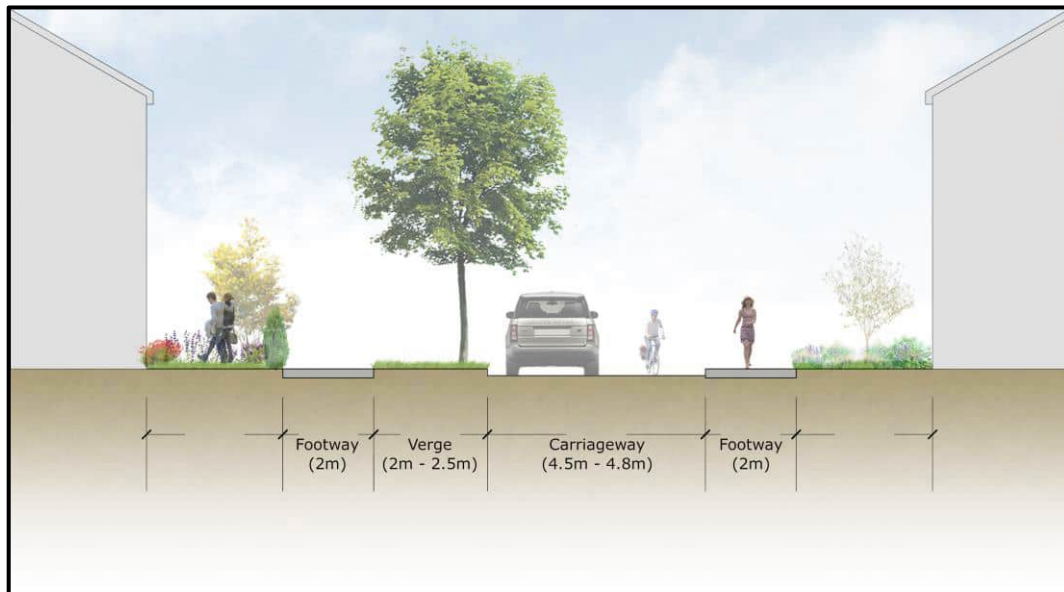


Figure 4.4: Indicative Tertiary Street

Shared Surface

4.58. Connections to cul-de-sacs, mews or individual dwellings will be via shared surface streets. Pedestrians, cyclists and vehicles will share the carriageway, with a change in surface finish of the carriageway denoting the transition from separated traffic to a shared surface.

4.59. Shared streets will be comprised of a shared 6m carriageway with 0.5m provided on both sides of the street for a utility margin. Traffic calming features, including build-outs and planting, will be used to reduce vehicle speeds. An indicative cross section of a shared surface is shown in **Figure 4.5**.

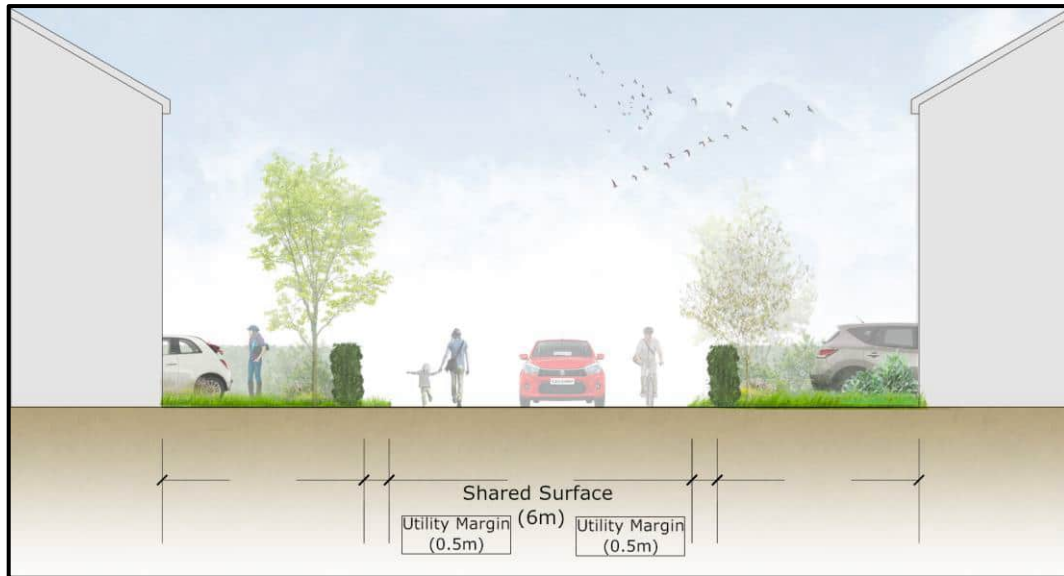


Figure 4.5: Indicative Shared Surface Street

West Sussex Parking Principles

4.60. The car parking standards for residential developments within West Sussex are stipulated within the WSCC document Guidance in Parking at New Developments, dated September 2020.

4.61. The guidance outlines a series of principles that form recommendations for car parking at new development. *Principle A* considers accommodating parking demand and notes that:

"Expected levels of parking demand in residential developments should be determined, where appropriate taking account of; location (parking behaviour zone), dwelling size (rooms), parking provision (allocated or unallocated), and arrangements for control/enforcement (charges, etc). Calculation of expected levels of parking demand should normally be based on local or comparable data taking account of forecast changes in demand for the local plan period."

4.62. The above approach seeks to provide sufficient car parking to meet the likely demand for development without, however, over-providing it to an extent that it could encourage greater car ownership.

4.63. Taking this further, Principle C considers the impact of sustainable transport and its impact upon parking demand/car ownership, outlining that:

"in some locations, limiting parking provision should form part of a strategy to exploit the potential for sustainable transport".

4.64. It goes on to outline that, in order to promote lower car ownership levels, this can be supported by travel plan measures, accessibility to non-car modes of travel and amenities/facilities and comprehensive parking controls. A Framework Travel Plan has been prepared as a separate document (**ACE Report Reference 2207280-R10**) to support the sustainability credentials of the site and encourage non-car modes of travel.

4.65. Noting that the site incorporates a range of uses, in association with these measures, rationalisation of parking provision between uses will be explored in order to avoid an over provision of parking spaces and promote non-car travel. This is be limited to uses that do not "compete" for parking and so are complimentary to each other.

4.66. Although an Outline planning application is being submitted, the design parameters set out within Principle E will be given due regard when the layout is considered in detail as part of a future Reserved Matters application.

Residential Car Parking Standards

4.67. The guidance splits West Sussex into Parking Behaviour Zones (PBZs) based on proximity to alternative transport modes and local amenities.

4.68. The car parking ratios guiding development in the different PBZs are outlined below in **Table 4.1**.

Number of Bedrooms	Number of Habitable Rooms	Car Parking Spaces per Unit				
		PBZ1	PBZ2	PBZ3	PBZ4	PBZ5
1	1 to 3	1.5	1.4	0.9	0.9	0.6
2	4	1.7	1.7	1.3	1.1	1.1
3	5 to 6	2.2	2.1	1.8	1.7	1.6
4+	7 or more	2.7	2.7	2.5	2.2	2.2

Table 4.1: WSCC Residential Car Parking Standards

4.69. The development is currently located within PBZ 1, as shown by the red star in **Figure 4.6** below.

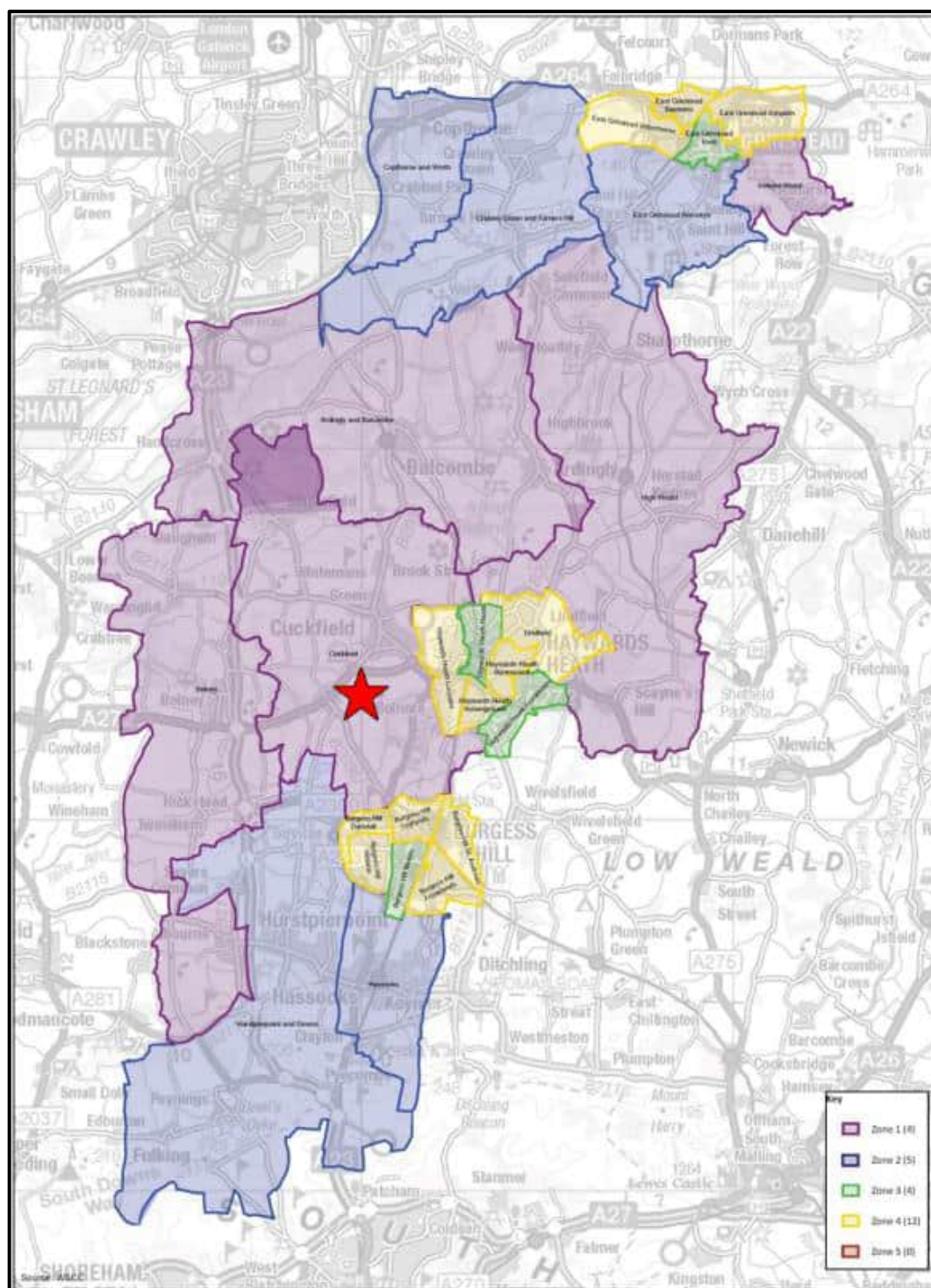


Figure 4.6: Mid Sussex Parking Behaviour Zones

4.70. As can be seen in Figure 4.6, PBZ1 covers predominantly rural areas with minimal public or active transport infrastructure. Considering the scale, land uses and betterments to public transport, walking and cycling infrastructure included within the proposed development, it is considered more appropriate to apply the parking standards for PBZ 3. This would mirror the standards applied to the other peripheral areas of Haywards Heath which will be more analogous with the fully delivered

development. This is in accordance with pre-application discussions with WSCC Highways. Furthermore, we note that the guidance goes on to state:

"to meet with current and emerging guidance on the promotion of sustainable travel modes and choices, consideration could also be given to reducing the expected level of parking demand by 10%. This is based on the Department for Transport's 'Smarter Choices' research that shows reductions in traffic movements can be achieved by up to 10 to 30% where a range of travel choices are available through provision of travel plans, public transport contributions, and other sustainable travel initiatives."

4.71. Based on the above, a mixed approach will be taken with up to a 10% reduction in the residential car parking provision, subject to the future mix and specification of house types.

Residential Cycle Parking

4.72. The residential cycle parking standards are also provided within the WSCC guidance and these are replicated in **Table 4.2** below.

Type	Dwelling Size	Cycle Parking Spaces per Unit
Houses	1 and 2 Bedroom	1
Houses	3+ Bedroom	2
Houses	Multiple Occupation	1
Flats	1 and 2 Bedroom	0.5 (if communal, otherwise 1)
Flats	3 Bedroom	1

Table 4.2: WSCC Residential Cycle Parking Standards

4.73. In terms of design, cycle parking will be provided in the following ways:

- Within garages, with appropriate minimum sizing to accommodate cycle storage
- Individual cycle store within front or rear gardens
- Communal secure cycle storage areas where parking is generally accommodated communally (e.g. flats)

Non-Residential Parking Standards

4.74. The WSCC document Guidance in Parking at New Developments also provides guidance on car and cycle parking for non-residential land uses.

4.75. It is, however, stated within the guidance that the standards should be used as an initial guide and that developers “*should undertake a site-specific assessment and seek to balance operational needs, space requirements, efficient use of land and cost attributed to providing parking and where relevant, attracting/retaining staff*”.

4.76. A selection of the standards considered relevant to the proposals are provided in **Table 4.3**.

General Industrial	Vehicular Parking	Cycle Parking
General Industrial	1 space per 40 sqm	1 space per 200sqm for staff and 1 space per 500sqm for visitors
Storage	1 space per 100 sqm	1 space per 500sqm for staff and 1 space per 1000sqm for visitors
Shops and Retail	1 space per 14 sqm	1 space per 8 parking spaces provided
Food and Drink	1 space per 5 sqm of public space	1 space per 4 staff and 1 space per 25 sqm for customers
Office and Light Industrial	1 space per 30 sqm	1 space per 150sqm for staff and 1 space per 500sqm for visitors
Assembly and Leisure	1 space per 22 sqm	1 space per 4 staff plus visitor/customer cycle parking

General Industrial	Vehicular Parking	Cycle Parking
Community Hall and Outdoor Sport	1 space per 14 sqm	1 space per 100sqm for staff and 1 space per 100sqm for customers
Medical Centre and Nurseries	Site-specific assessment based on travel plan and needs	Site-specific assessment based on travel plan and needs

Table 4.3: WSCC Non-Residential Vehicular and Cycle Parking Standards

Car Parking

4.77. As previously mentioned, the sharing of parking between complementary land uses is to be explored at Reserved Matters stage to avoid overprovision of parking and to reduce the reliance on the private car, whilst it is further anticipated that the detail of cycle parking will also be a matter subject to a future Reserved Matters planning application to resolve in detail.

Cycle Parking

4.78. Cycle parking for non-residential land-uses will be provide communally in close proximity to the relevant land-uses.

Visitor Car Parking

4.79. The WSCC guidance outlines that:

“Developers should take an approach that is consistent with national research which suggests, that no special provision should be made for visitors where at least half of the parking provision associated with the development is unallocated. In all other circumstances it may be appropriate to allow for additional demand for visitor parking of 0.2 spaces per dwelling” (DCLG, 2007, Residential Car Parking Research).”

4.80. Visitor parking will be located conveniently within the development, potentially as on-street parking, inset parking within street verges, on driveways or in communal parking areas.

Disabled Car Parking Provision

4.81. In terms of disabled parking provision, the WSCC standards expect a minimum of 5% of the total number of parking spaces to be disabled parking spaces.

4.82. Paragraph 6.8 of the standards also states that:

"In designing provision for disabled persons parking at non-residential development developments with over 200 spaces, consideration may be given to reducing the percentage of spaces for disabled persons below the minimum level..."

4.83. This principle will be considered when designing the detailed layout as the design progresses.

Electric Vehicle Charging Provision

4.84. Electric vehicle charging provision will be provided in line with *Building Regulations Approved Document S: Infrastructure for the charging of electric vehicles* which requires the following minimum provision:

Requirement	
The erection of new residential buildings	
S1.	(1) A new residential building with associated parking must have access to electric vehicle charge points as provided for in paragraph (2). (2) The number of associated parking spaces which have access to electric vehicle charge points must be— (a) the total number of associated parking spaces, where there are fewer associated parking spaces than there are dwellings contained in the residential building; or (b) the number of associated parking spaces that is equal to the total number of dwellings contained in the residential building, where there are the same number of associated parking spaces as, or more associated parking spaces than, there are dwellings. (3) Cable routes for electric vehicle charge points must be installed in any associated parking spaces which do not, in accordance with paragraph (2), have an electric vehicle charge point where— (a) a new residential building has more than 10 associated parking spaces; and (b) there are more associated parking spaces than there are dwellings contained in the residential building.

Figure 4.7: Building Regulations Extract

4.85. In addition to the above, *Appendix B* of the WSCC guidance provides a year-by-year proportion of spaces that should be active electric vehicle charging points, from 20% in 2018 to 70% 2030.

4.86. The above provision also aligns with Policy DPT4 of the draft Mid Sussex Local Plan and objectives 7 and 10 of the West Sussex Transport Plan.

Summary

4.87. This section of the report is summarised as follows:

- The proposed development comprises a residential led mixed-use development, including a primary school, local facilities and a country park.
- The proposed vehicular access arrangements include three standard roundabouts on the north, west and south sides of the site.
- Changes to speed limits could be facilitated to respond to local feedback for greater Traffic Management, including the consideration of a potential reduction from national speed limit on the A272 to 50mph and extension of the 30mph zone to the south of Ansty.
- The principle of delivering a hierarchy of street has been devised, with applicable geometric parameters sourced on WSCC guidance, Manual for the Street / Manual for Streets 2 and LTN 1/20.
- Car and cycle parking provision will be based on the relevant WSCC parking standards for both residential and non-residential parking. Parking standards for PBZ3 will be used as a basis for this, to reflect the agreed characteristics of the proposed development once implemented.

5. Active Travel and Public Transport Strategies

Introduction

5.1. This section of the report details the active travel strategy (including walking and cycling) and the public transport strategy in terms of access, internal layout and routing.

Active Travel Strategy

Principles

5.2. The primary desire lines associated with the site and surrounding area are to:

- Haywards Heath, including the rail station;
- Cuckfield, including Warden Park Academy;
- Ansty, including the community/leisure facilities at Ansty cricket club; and
- Burgess Hill northern arc mixed-use development located on the northern fringes of Burgess Hill.

5.3. Options have been explored to make improvements along each of the above desire lines where feasible within the applicant's land or designated highway, and where cost-effective improvements can be delivered commensurate with the development's impact.

5.4. With a focus on the continuity of routes, as per the LTN1/20 guidance, new shared pedestrian/cycle infrastructure will be delivered that knits together or plug the gaps in the existing network.

5.5. In doing so, a distinction is made between 'commuter' routes, which primarily link the proposed development with Haywards Heath and other 'leisure' routes which fulfil more of a recreational function.

5.6. The active travel strategy has been designed with reference to Policy DTP3 of the draft Mid Sussex Local Plan and objectives 5 and 11 of the West Sussex Transport Plan.

5.7. An overview of pedestrian and cycle routes in the vicinity are shown on **ACE Drawing 2207280-SK09A**.

Internal Active Travel Strategy

- 5.8. Within the site, the primary LTN 1/20 cycle route follows the Bus Route through the development, with a 3.0 – 4.5m shared footway / cycleway on one side of the street and a 2m footway on the other side. The principle of the shared footway / cycleway was agreed with WSCC during pre-application discussions.
- 5.9. As the majority of parcels within the development are located to the west of the primary north / south street through the development, it is expected that the shared footway / cycleway will be generally provided on the western side of the carriageway.
- 5.10. Where the share cycle/pedestrian route crosses side roads, Copenhagen-style facilities or drop kerbs could be provided to ensure that the appropriate priority to active modes is communicated to drivers.
- 5.11. Also included within the development are a series of recreational foot / cycle paths, which provide significant interconnectivity between parcels within the development and to the main cycle route through the development.

Public Rights of Way

- 5.12. As previously mentioned, there are a number of Public Rights of Way (PRoW) in the vicinity of and traversing the site, as shown in **ACE Drawing 2207280-SK04B**.
- 5.13. Following discussions with Public Rights of Way officers at WSCC, the proposals include the upgrading of all the existing footpaths within the site to Bridleways status. The applicant is open to exploring these upgrades where appropriate. Where these upgrades are made, they will adhere to WSCC's standards specification for Bridleways, shown in **Figure 5.1**, where achievable. Where not achievable, discussions will be held with WSCC to determine the most appropriate design.

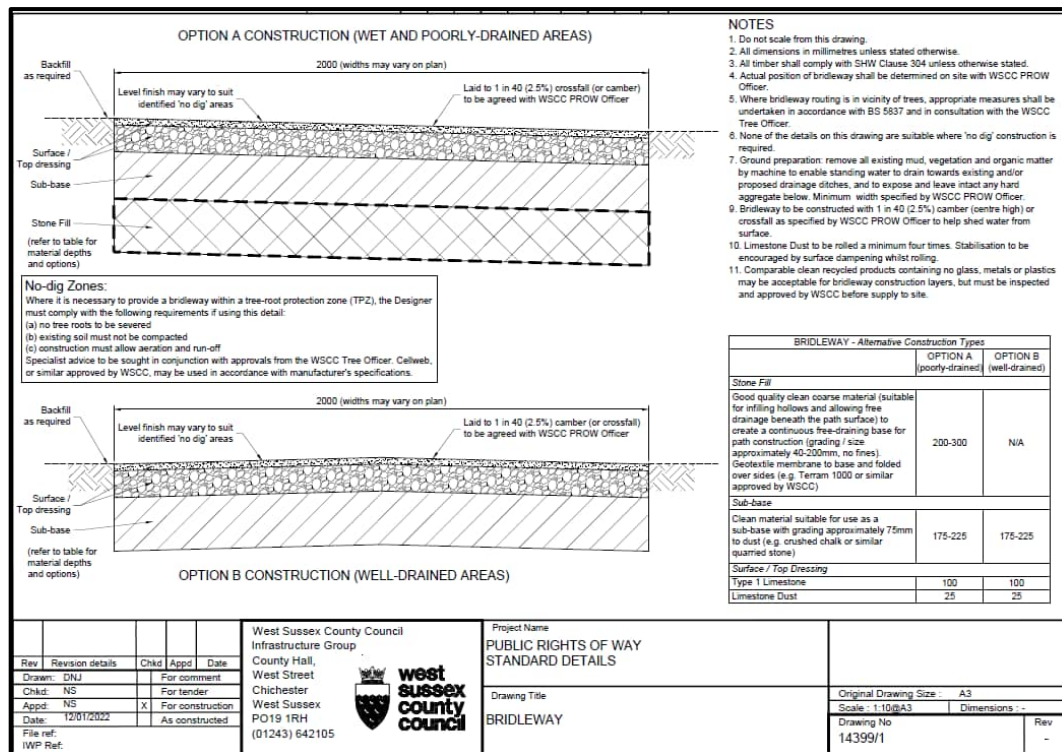


Figure 5.1: WSCC Bridleway Standard Specification

5.14. A minor diversion of existing Footpath 8bCU, which runs directly adjacent to the Sewage Works that abut the northeastern corner of the site, is included within the proposals. This diversion will relocate Footpath 8bCU to run along the proposed bridge within the site, before rejoining existing Footpath 65CR.

5.15. As part of the proposed northern access roundabout, a new signalised pedestrian and cycle crossing is to be provided on the eastern arm of the roundabout. Further to this, a 2m footway will then be provided along the north side of the A272 to connect into existing Footpath 8aCU, leading towards Cuckfield.

5.16. In addition, improvements will be made to the existing Bridleway between the proposal site and Tylers Green to the east of the site. Discussions are ongoing with WSCC with regards to the specification for the improvements than can be made in recognition of underlying constraints that exist along this route.

5.17. It is understood that the preference of the PROW team within WSCC is for the improvements to be completed by the developer, as part of the Section 278 agreement, as opposed to seeking financial contribution through a Section 106 legal agreement. The applicant can confirm that this is suitable in principle subject to all necessary land being made available for delivery, with further discussions to be held

with WSCC to confirm the extent of works. The above is in line with Policy DP22 of the adopted Mid Sussex Local Plan and Policy DPT2 of the draft Mid Sussex Local Plan.

Active Travel Access Points

5.18. Access to the site via active travel modes (including walking and cycling) will be at a total of 10 locations:

- At the North and South vehicular accesses, via off-carriageway provision as detailed in **Section 3.0** above;
- At a new crossing point over the A272 into Beechy Bottom Parkland Reserve including a signalised crossing over the A272;
- Via Public Right of Way (PRoW) 62CR into Ansty;
- Via PRoWs 103CR, 69CR and 71CR on the eastern boundary of the site; and
- Via 72CR, 73CR and 74CR on the south eastern Boundary of the site.

Wider Cycle Improvement Schemes

5.19. **ACE Drawing 2207280-SK03C** summarises the existing cycle routes in the area and identified locations where there are opportunities to make improvements. The focus of these improvements is to provide a continuous route along existing desire lines.

5.20. A 4.5m shared footway / cycleway is proposed along the southern side of the A272 towards Haywards Health, from the northern site access roundabout to the A272 / Broad Street / Tylers Green roundabout to the east of the site, as shown in **ACE Drawings 2207280-SK05B**. At this point, the new footway / cycleway will tie into the existing shared footway / cycleway on the south side of Tylers Green.

5.21. Following the junction with Copyhold Lane, further improvements to pedestrian and cycle connectivity to Haywards Heath are proposed to be facilitated as part of the proposed development. As shown on **ACE Drawing 2207280-SK05B**, a shared 3m footway / cycleway will be provided on the north side of Tylers Green through to the B2272 / Bolnore Road / Paddockhall Road Double Mini-Roundabout junction, at which point the route again ties into the existing cycle routes within Haywards Heath, specifically Cycle Route A as designated by the WSCC *Local Walking and Cycle Improvement Plan*.

- 5.22. Finally on **ACE Drawing 2207280-SK05B**, a new pedestrian and cycle crossing point is proposed on the southern A272 arm of the A272 / B2036 roundabout adjacent to the northwest edge of the development. This crossing point will lead into a pedestrian and cycle only access point into the development, and to a new off-carriageway 4.5m shared footway cycleway provided towards Cuckfield via the B2036.
- 5.23. The proposed A272 cycle scheme has been subject to an RSA1. The Designers' Response, including the RSA1 report, is provided within **ACE Report 2207280-R16**. The above drawing includes amendments made as a result of the RSA1.
- 5.24. In addition to the above, sustainable transport improvements to the A272 / B2036 / Bolney Road mini-roundabout within Ansty have been considered as a continuation of the improvements to PRoW 62CR. **ACE Drawing 2207280-007B** provides details of this scheme, which includes a new refuge island on the northern A272 arm of the junction and improvements to the shared footway / cycleway to the northwest of the junction.
- 5.25. In addition, the proposed improvement scheme also allows for the provision of a two-lane vehicular entry on the Bolney Road arm of the junction, which will also increase vehicular capacity. The proposed mitigation scheme may require the relocation of the existing bus stop on Bolney Road, which will be discussed with WSCC.
- 5.26. The proposed A272 cycle scheme has been subject to an RSA1. The Designers' Response, including the RSA1 report, is provided within **ACE Report 2207280-R19**. The above drawing includes amendments made as a result of the RSA1.

Public Transport Strategy

- 5.27. Discussions have been held with the public transport operators Compass Travel and Metrobus, who operate bus services within the vicinity of the site.
- 5.28. The intended goal of the public transport strategy for the proposed development is to provide a regular connection to/from Haywards Heath, which can be achieved either through the provision of a new bus service or through the diversion of an existing bus service.

5.29. While the final bus strategy is subject to reaching agreement over a Section 106 agreement, a number of intermediate and final options are being considered and are presented below.

Intermediary Bus Service

5.30. In the intermediary stages, where the development is partially constructed / occupied and therefore the full final bus service would not be commensurate with demand, Demand Response Transport (DRT) could be employed. DRT allows for passengers to request a DRT vehicle from their location to provide transport to a location within the DRT operating zone.

5.31. Compass Travel operate two existing DRT bus services within West Sussex (the "99 Flex" and "98 Flex") which operates via passengers requesting a bus through the "Book-a-Bus" app or telephone number. Although the area covered by the above services does not currently include Ansty, Compass Travel have suggested that a hybrid DRT / Conventional bus service could be used in the intermediary stage, where peak time trips could be scheduled per the final conventional bus service timings but with off-peak bus trips requiring passengers to book, akin to a DRT service.

Final Bus Service

5.32. In terms of the final bus service, a number of potential options are being explored, which are summarised below, split by bus operator:

- Compass Travel:
 - New Bus Service between the development and Haywards Heath at a 20-minute / 30-minute / 60-minute frequency.
 - New Bus Service between the development, Haywards Heath and Burgess Hill at a 20-minute / 30-minute / 60 minute frequency.
- MetroBus:
 - Diversion of bus route 271 and increase of frequency to 20-minute / 30-minute / remain 60-minute frequency.
 - New Bus Service between Ansty Garden Community and Haywards Heath at a 20-minute / 30-minute / 60-minute frequency.

- New Bus Service between Ansty Garden Community, Haywards Heath and Burgess Hill at a 20-minute / 30-minute / 60 minute frequency.
- 5.33. Again, while the specific bus route, frequency and funding discussions with WSCC or the operator are to be determined at a later stage, the proposed development has been designed to accommodate any of the potential options outlined above.

Mobility Hubs

- 5.34. The development will deliver Mobility Hubs throughout the site, comprising of one large mobility hub and a series of micro-mobility hubs. Mobility Hubs can encourage sustainable multi-modal travel by concentrating different modes of travel, such as public transport and cycling, into a single convenient location.
- 5.35. All mobility hubs with the development are centred around bus stops, which themselves have been located to maximise the number of dwellings within the 400m nominal walk catchment for bus stops. The location of the mobility hubs can be seen on the plan provided at **Appendix D**. The design of the mobility hub has been based on guidance included in the *West Sussex Bus Service Improvement Plan*, with an example mobility hub shown in Figure 5.2, as well guidance provided by CoMoUK (Collaborative Mobility UK, a charity that promotes inclusive mobility), and accreditation to CoMo gold standard will be sought following delivery. For CoMo gold accreditation for New Housing Developments, a total of 5 “Desirable Elements” are required.

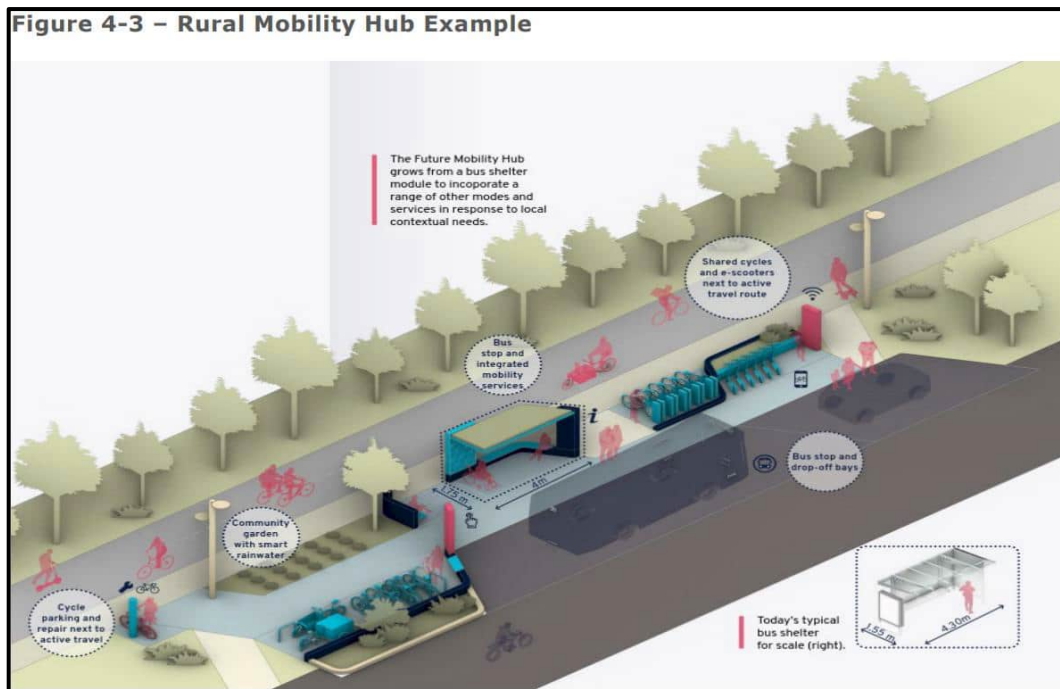


Figure 5.2: WSCC Example Mobility Hub (Figure 4-3 of West Sussex Bus Improvement Plan)

5.36. **ACE Drawing 2207280-SK01** provides an example layout for a gold standard mobility hub layout, while **ACE Drawing 2207280-SK06** provides an example layout for a mini-mobility hub. These example layouts are not site-specific, and have been approved in principle by CoMo.

5.37. The Mini-Mobility Hubs could contain the following features:

- Essential:
 - High Quality Public Transport Option
 - High Quality shared Mobility (Cycle Parking, Car Club)
 - Clear Signage
 - Located in prominent, well-lit location
 - Safe Crossings
 - Compatible with accessibility guidance
 - Information on what the hub is at the site
 - Co-located with linking signage
 - Easily accessible timetables
 - Street lighting
 - Covered Seating

- Desirable:
 - Cycle Parking
 - Safe Cycle Routes
 - Plans for network of Hubs / Real Time Data

5.38. The proposed Mini-Mobility Hubs would therefore meet the 3 desirable elements required for silver CoMo accreditation.

5.39. The Large Mobility Hub could contain the following desirable elements:

- Cycle Parking
- Car Club Bay
- Safe Cycle Routes
- Plans for network of Hubs / Real Time Data
- Package Delivery Lockers

5.40. The proposed large mobility hub would therefore exceed the 5 required desirable elements for gold accreditation. The large mobility hub will also be located at the bus stop located closest to the local centre and school, thereby making sustainable travel within the site more attractive.

Car Club Provision

5.41. Discussions have been held with Enterprise Rent-a-Car and CoWheels, who both operate existing car club vehicles within West Sussex. While the exact number and location of car club vehicles is an item for reserved matters stage, both providers have expressed interest in working with the applicant to provide car club vehicles at an early stage of the development.

5.42. A letter of intent provided by Enterprise Rent-a-Car is attached at **Appendix E**.

Summary

5.43. In this regard, the first priority will be to demonstrate that the level of benefits that would arise from complementary land-uses, in terms of the way in which travel demand is 'contained' within the site (See **Section 7.0**).

5.44. The second priority is to outline those measures that would seek to reduce the 'residual' impact of car-borne traffic by promoting a sustainable transport strategy

that provides means to both promote better travel choices and control the level of traffic that a new settlement would generate.

5.45. Based on the above, this section of the report has sought to summarise the following benefit that future residents will be able to enjoy:

- The Active Travel Strategy for the site includes an internal LTN 1/20 compliant pedestrian / cycle route network supplemented by a series of commuter/recreational routes accessed from a variety of locations including PRowS.
- The development includes the upgrading of all existing Footpath PRowS within the development to Bridleway status, with improvements to meet the WSCC standard specification for Bridleways where achievable, and for improvements to be discussed with WSCC where the standard specification is not achievable.
- An off-carriageway shared footway / cycleway is proposed between the development and Haywards Heath, connecting to and improving existing cycle routes where appropriate.
- The development has been designed to maximise the options for public transport, details of which would be confirmed at a later stage. Multiple bus operators have expressed interest in the provision of a bus service for the development, either as a diversion of existing services or as a new service.
- A network of mobility hubs is proposed, with all bus stops being mobility hubs designed to CoMo silver accreditation minimum, and one mobility hub designed to CoMo gold accreditation.
- Multiple Car Club operators have expressed interest in providing car club vehicles within the development, and appropriate provision of preferential car parking spaces will be provided as part of the Mobility Hub.

6. Strategic Modelling

Introduction

- 6.1. This section of the report details the approach that has been taken in respect of the strategic traffic modelling of the proposed development.

Model Availability

- 6.2. The basis for the derivation of traffic flows, taking into account the effects of the proposed development, is the Mid Sussex Strategic Highway Model (MSSHM), which is coded within the SATURN strategic traffic modelling software. The model is maintained by Systra, on behalf of MSDC / WSCC.
- 6.3. This is a strategic model covering Mid Sussex, as part of its core area, as well as other parts of Sussex and Surrey. The Fully Modelled Area (FMA) comprises Mid Sussex district, Ashdown Forest (Wealden) and parts of Horsham, down to the coast at Brighton. The FMA is shown in **Figure 6.1** below.
- 6.4. This is a large area, and by necessity, such a model comprises both 'simulation' and 'buffer' coding areas. As a strategic tool, the model is able to take account of delays at intersections coupled with an assignment of the routes taken by traffic, based on travel demand, a matrix of origins/destinations and a set of convergence criteria.
- 6.5. SATURN is a suitable program for deriving appropriate traffic forecasts from a calibrated baseline model, and can be used in appraisals to determine the effects arising from spatial strategies and/or infrastructure schemes. This is especially the case where a strategic model requires to assess the consequences of peak hour congestion on the road network.
- 6.6. Strategic modelling is not necessarily a substitute for detailed junction assessment models (such as local capacity modelling via ARCADY, PICADY, LINSIG etc.), which are able to assess the operational effectiveness of junctions. However, strategic modelling can provide useful inputs to that process, by providing traffic flow outputs which can be used to subsequently model junction performance at a 'finer grain' level.



Figure 6.1: Fully Modelled Area of MSSHM

- 6.7. The current MSSHM is understood to be in the process of being updated by MSDC, including amendments to the Reference Case, and forecast scenarios. The updates are understood to include accounting for amendments to the underlying vehicular trip rates for the proposed development, by shifting the emphasis from '85th percentile' to 'average trip' rates.
- 6.8. Pending these further updates, the completion of which do not match the timelines for the OPA, the latest version of the MSSHM available has been used to assess the strategic traffic effect of the proposed development and provide the necessary inputs for the subsequent local modelling. This is considered to also confer a robust position from the perspective of quantifying the impact arising from the proposed development.
- 6.9. Also relevant to the consideration of forecast traffic scenarios, is the recently published National Road Traffic Projections 2022 from the Department of Transport (DfT). This guidance sets out uncertainty surrounding potential future changes in travel patterns and mode shift, with particular regard to the positive effects on traffic flows following the COVID-19 pandemic. The guidance sets out various modelling scenarios, for example the 'High Economy' and 'Low Economy' scenarios, which reflect two potential alternative scenarios for the long term growth of the economy.

6.10. Of particular relevance is the Behaviour Change Scenario, which seeks to account and estimate the potential long-term effect of flexible and remote working, online shopping and reduced driving licence uptake by young people through reductions in 'per person' trip rates, and vehicular trip generation in particular.

6.11. The outcome is a range of potential traffic growth between 2025 and 2060 of between 8% and 39%, which could have significant effect on future planning measures for development. Previous versions of strategic models, including the MSSHM, are therefore likely to provide robust traffic figures, including compared to the Core Scenario assumptions posited by the DfT.

6.12. As part of the pre-application discussions referenced above, ACE have been granted access by MSDC to the MSSHM in order to obtain suitably robust traffic flows from which to undertake a more detailed analysis of the local road network, as is considered in the following chapters.

6.13. In this respect, the time periods covered by the MSSHM reflect the following morning and evening peak hours:

- AM Peak: 08:00-09:00
- PM Peak: 17:00-18:00

6.14. The latest version of the MSSHM from which the strategic assessment has been carried was based on Scenarios 4m1 / 4Bm1 which were produced by Systra in late 2022.

Local Plan Evidence Base

6.15. The District Local Plan 2031-2039 evidence base included a Draft Mid-Sussex Transport Study District Plan Review Scenario 4 Report (6 October 2022), which confirms the suitability of the strategic modelling approach more generally, with Para 1.3.1 stating that:

"The Mid Sussex Strategic Highway Model (MSSHM) was produced in accordance with standard good practice as set out in the Department for Transport's (DfT) transport analysis guidance (TAG), in particular TAG Unit M3-1 Highway Assignment Modelling. As such, the approaches to data processing, matrices and network production, along with model calibration are consistent with those of similar strategic highways models."

6.16. Using the MSSHM, this study looks at 2039 development scenarios to inform the Council's District Plan Review process when selecting a preferred option.

6.17. The latest MSSHM Local Plan study considers the following modelled scenarios:

- *2039 Reference Case*
 - The Reference Case represents the road network in 2039, and includes any committed highway infrastructure, development in the district and background growth to this date. This acts as a baseline when assessing the impacts of the development scenarios.
- *2039 Scenario 4 and Scenario 4B*
 - *2039 Scenario 4* assess proposed Local Plan development and supporting infrastructure in 2039.
 - *2039 Scenario 4B* differs from Scenario 4 in that it additionally includes the development site at Ansty.
- *2039 Scenarios 4 and 4B with Car Trip Rate Reduction*
 - *2039 Scenarios 4m1* applies the reductions to Scenario 4
 - *2039 Scenario 4Bm1* applies the reductions to Scenario 4B

6.18. The outputs from the above scenarios were then used to determine the effect of the proposed development on the Mid Sussex road network for the purpose of site allocation within the draft Mid Sussex Local Plan. A total of four junctions were highlighted as having "severe" impacts.

6.19. ACE reviewed the outputs from the model and developed mitigation schemes for the effect of the development where necessary, details of which can be found in **ACE Report 2207280-01A**. The below assessment builds upon the assessment done for the draft Mid Sussex Local Plan but includes further refinements and improvements to the Model that were not completed for consideration at the Regulation 18 stage.

Strategic Model Amendments

6.20. It has been identified that the 2022 version of the MSSHM assumed that the proposed development would comprise a total of two access points, however the latest version of the proposed development includes a total of three access points, all of which are proposed to be standard roundabouts.

6.21. As identified with a separate Transport Technical Note (**Ardent Report Reference: 2007280-01**), certain technical elements of the network could benefit from refinement to improve the quality of the model.

6.22. As such, ACE have developed an amended version of the MSSHM, which includes the following refinements to better reflect the proposals under consideration:

- No through route across the development, to ensure there are no local diversions. The internal road network is not intended to be a through route, which will be secured through horizontal alignment and speed limits measures, as opposed to physical restriction.
- Amending coding of the A272 / B2036 / Bolney Road mini-roundabout within Ansty which uses the main road number of lanes, not the junction flare lanes.
- Amending capacities and other parameters coded for the 4 junctions which are affected in Scenario 4b.
- Amending minor discrepancies within the model relating to the arms on the Fox Hill roundabout - the northeast arm should not be Colwell Road, but is Kennard Lane (a missing fifth arm) which leads to a cul-de-sacs. Junction to be remodelled and new delays derived.
- Amending the access arrangements of the proposed development to three access points.

6.23. The above model refinements were agreed with WSCC at pre-application stage, allowing the respective scenarios to be run. This amended version of the MSSHM, hereby referred to as ACE-MSSHM, will form the basis of the strategic traffic modelling of the proposed development.

Scenario Selection

6.24. A total of 3 development-specific scenarios have been assessed within the ACE-MSSHM, which are as follows:

- 2019 Baseline – The calibrated model.
- 2039 Without Development ('Do Minimum') – Based on 2019 baseline model, with committed developments and infrastructure included within the existing MSSHM 2039 Reference Case (as described above), plus generalised TEMPro Growth.
- 2039 With Development ('Do Something') – Based on the Do Minimum scenario with the effect of the development added.

6.25. The above scenarios were agreed with WSCC to be the most applicable for assessment. The primary comparison from which to reach conclusions on impact of the proposed development will therefore rely on a comparison between the 2039 Do Minimum and 2039 Do Something scenarios, which will identify the specific traffic effect of the proposed development.

TEMPro Growth

6.26. To derive future forecast 2039 Do Minimum scenario, and as agreed with WSCC during pre-application discussions, growth factors were applied using the "High Economy" scenario within the TEMPro v8.0 database, to account for future generalised development growth within Mid Sussex, as the committed developments already contained within the 2039 Reference Case are not the totality of development expected to be delivered between 2019 - 2039.

6.27. To account for the committed developments included within the Reference Case, the recognised 'Alternative Assumptions' feature contained within TEMPro was used.

6.28. As confirmed by WSCC, a total of 8039 additional Households and a total of 6,500 additional jobs are included within the Reference Case committed developments.

6.29. As such the following parameters were utilised to create the 2039 Do Minimum scenario:

- For zones within Mid Sussex Local Authority Administrative Zone:
 - Base Households = 70,655
 - Base Jobs = 79,897

6.30. These growth factors were applied for all vehicle user classes and all purposes. For all other existing Local Authority Administrative areas, standard TEMPro growth factors for the 'High Economy' scenario were used.

Vehicular Trip Rates

6.31. Looking ahead to the future MHSMM revisions, the following vehicular trip rates have been used to replace the 85th percentile on which the existing Local Plan 2039 *Scenario 4* assessment was run. The agreed TRICS outputs are provided at **Appendix F** and summarised in **Table 6.1**.

Peak Hours	Arrivals	Departures	Totals
AM (08:00 - 09:00)	0.135	0.377	0.512
PM (17:00 - 18:00)	0.317	0.142	0.459

Table 6.1: Proposed Development Trip Rates (Baseline)

6.32. Both the Local Plan MSSHM *Scenario 4m1* and *Scenario 4Bm1* made an allowance for the application of trip rate reductions "*as a result of home working, internalisation and mode share assumptions for to and from the scenario's significant site developments*" (extract taken from the Systra Scenario 4 Report). The vehicular trip rate reductions assumed for the Crabbet Park, West of Burgess Hill, Sayers Common and the proposed development are as follows:

- 15% reduction on residential unit car trip rates to account for home working, internalisation and future mode share assumptions.
- 80% reduction on primary school car trip rates to account for internalisation of trips.

6.33. It is understood that the above reductions are applied at the matrix level, prior to the route assignment.

6.34. In addition to the above, as agreed with WSCC during pre-application discussions, a 25% trip rate reduction is to be applied to the proposed development to reflect the effects of the active and public transport strategies. This reduction consisted of a

20% reduction, to reflect the high proportion of employment types suited to working from home in Mid Sussex, as well as a further 5% for sites with local retail and community facilities.

6.35. This reduction was disaggregated using distance banding, to reflect the likelihood of active travel being used over car trips. For example, a trip rate reduction of 22% was applied to trips under 1km in length and a trip rate reduction of 14% was applied to trips between 1-3km in length.

6.36. The resultant total vehicular trips assumed for the development without and with the application of the above reduction and distance banding are shown in **Table 6.2**.

Peak Hour	Total Development Trips (Without Reduction)			Total Development Trips (With Reduction)		
	Arr	Dep	Tot	Arr	Dep	Tot
AM (08:00 - 09:00)	196	547	743	181	514	695
PM (17:00 - 18:00)	460	206	666	190	427	617

Table 6.2: Total Development Trips With & Without Reduction

Strategic Model Outputs

6.37. SATURN utilises a zonal system and follows an iterative process to allow for the re-distribution of trips based on changes in journey times between all Origin-Destination pairs within the assigned matrix.

6.38. As such, it is possible that the addition of new trips or new infrastructure can result in changes in traffic on certain routes or at certain junctions due to changes in delay affecting background traffic routing. The changes can be expressed as decreases or increases in traffic compared to the corresponding baseline scenarios (i.e. in this case, the 2039 Do Minimum scenario)

6.39. The outputs from the 2039 Do Minimum and 2039 Do Something runs of the MSSHM have been obtained in the form of turning counts for each junction within the traffic study area, as detailed in **Section 7.0**.

6.40. Traffic flow diagrams showing the 2019 Baseline, 2039 Do Minimum, 2039 Do Something are also provided at **Appendix G**.

6.41. The outputs extracted from SATURN reflect 'Actual Flows' (rather than 'Demand Flows'), therefore include the effect of capacity and queuing to present the most likely forecast of traffic across the local highway network.

Summary

6.42. This section of the report is summarised as follows:

- Strategic modelling was agreed as the best means of forecasting traffic volumes on the local highway network, given regard to changes in background growth and development generated traffic.
- The Mid Sussex Strategic Highways Model (MSSHM), using the SATURN software, was previously used by MSDC to help inform its Local Plan Review process. The Local Plan MSSHM scenarios previously considered included a *2039 Reference Case* scenario and variations to *2039 Scenario 4*.
- The MSSHM is in the process of being updated to reflect more contemporary trip generation forecast and this update does not align with the current timescales for the submission of the OPA.
- As such, a bespoke version of the MSSHM has been developed by ACE for the purpose of this TA. This version takes into account certain refinements to the coding of the network as well as changes to the access arrangements, to better reflect the form and function of the proposed development.
- A total of three scenarios have been modelled, as agreed with during pre-application discussions with WSCC Highway officers.
 - 2019 Baseline – The calibrated model.
 - 2039 Do Minimum ('Without Development').
 - 2039 Do Something ('With Development').
- In the above scenarios, a reduction of 25% to the vehicular trip rate for the proposed development has been applied via distance banding, as agreed during pre-application discussions.
 - The vehicular trip rate reduction is intended to reflect the post-COVID19 changes in commuting patterns during the peak hours, such as home-working and / or peak spreading.

- This reflects the anticipated changes that MSDC are looking to include in its re-consideration of its future Local Plan evidence base, which additionally models the effects of cumulative development.
- The purpose of the strategic modelling runs undertaken in this TA is to provide suitable traffic estimates for used within detailed junction capacity tests. The purpose of these tests is to establish what the impact of the proposed development is on the operational performance of local junctions, and whether the effects can be reduced or mitigated in a cost effective manners, in line with the requirements of Para 110 of the NPPF.

7. Highway Mitigation Strategy

Introduction

- 7.1. This section of the report provides details of the local junction capacity modelling approach, including the traffic study area, the sifting process involved in selecting junctions for more detailed modelling, and subsequent mitigation strategy for the proposed development.

Impact Definition

- 7.2. Any improvements or scheme required to mitigate the transport impact(s) of the proposed development needs to adhere to the Regulation 122 of the Community Infrastructure Levy Regulations 2010. This states that:

"A planning obligation may only constitute a reason for granting planning permission for the development if the obligation is—

(a) necessary to make the development acceptable in planning terms;

(b) directly related to the development; and

(c) fairly and reasonably related in scale and kind to the development."

- 7.3. The implications for this Transport Assessment are that any mitigation will first need to reflect the 'stand-alone' impacts of the proposed development.
- 7.4. Notwithstanding this, the current status of the proposals against the backdrop of the emerging District Plan may also mean that additional mitigation could be identified to accommodate the 'cumulative' impacts of growth.
- 7.5. The first aspects will be easier to define in the current context of this TA, particularly as any cumulative assessment will be the responsibility of MSDC to undertake.
- 7.6. Should this assessment result in the identification of transport schemes or measures on no one development is wholly responsible for, the expectation is that MDSC would need to establish a means of apportioning the cost of mitigation so that the proportion attributed to any one development is fair and reasonable.
- 7.7. The following sections consider the outcome of the strategic modelling and detailed capacity tests from the perspective of any 'stand-alone' mitigation.

Stand-Alone Mitigation

Principles

- 7.8. When considering mitigation, the first step is to consider what measures are inherent to the form and function of the development that would minimise the need to travel. In this respect, **Section 4.0** has demonstrated how the mixed-use nature of the development would lead to the internalisation of trips within the development.
- 7.9. Secondly, the layout of the development has been shown to promote active travel by prioritising routes for pedestrian and cyclists.
- 7.10. Thirdly, improvements to the PRow network has been proposed which ensures maximum connectivity to/from nearby destinations and settlements, from Ansty to Haywards Heath.
- 7.11. This mitigation is indicative of the 'Decide and Provide' paradigm, which requires the visioning of outcomes when setting out the requirements for mitigation.
- 7.12. In its review of the above technical note, WSCC officers noted that:

"The West Sussex Transport Plan policies states that on non-strategic roads mitigation proposals must be directed towards improvements for active or sustainable modes..."

- 7.13. Paragraph 4.12 of the *West Sussex Transport Plan 2022-2036* states that:

"Even if high levels of sustainable transport mode share are achieved at development sites, there is still expected to be an overall increase in the number of trips on the transport network."

- 7.14. This is consistent with the NPPF which outcome of these mitigation measures leads, finally, to a requirement to assessment the 'residual' impact of car trips.
- 7.15. In doing so, it is important to note the extent of a development's responsibility when judging the outcomes of mitigation proposals against the corresponding baseline conditions. Indeed, paragraph 4.14 of the *West Sussex Transport Plan 2022-2036* states that:

"While a number of major schemes and junction improvements are planned to mitigate development, developer-led highway mitigation schemes are not

intended to resolve pre-existing issues. This can result in gaps between development-led mitigation and those required to address cumulative impacts and/or pre-existing issues. There is also a challenge to ensure that these schemes do not overprovide capacity which could lead to unmanaged traffic growth."

7.16. The implications are that any mitigation would be expected to deliver at least a 'nil detriment' situation, when compared to the underlying situation.

7.17. Even then, a certain degree of judgement can be exercised when determining the benefits arising from mitigation by recognising the importance of active travel and the priority that should be given to investment in pedestrian and cycle infrastructure.

7.18. This is in line with paragraph 8.12 of the *West Sussex Transport Plan 2022-2036* states:

"The County Council would like to see LPAs and developers taking a 'vision-led' approach to development and improvement of the transport network. This approach should place emphasis on place-shaping and creating liveable neighbourhoods with infrastructure to support travel by a range of modes of transport rather than designing to cater for forecast traffic demand."

7.19. As can be seen above, there is a clear preference for mitigation that prioritises sustainable modes of transport over the provision of vehicular capacity within the West Sussex Transport Plan.

As such, when considering mitigation for affected junctions, priority has been given to providing improvements to sustainable modes of transport with improvements to vehicular capacity being a secondary objective.

Methodology

Traffic Study Area

7.20. An extensive traffic study area has been assessed, including junctions within Ansty, Cuckfield, Haywards Heath and Burgess Hill. A full list of study junctions is provided below and in **Figures 7.1 – 7.5**.

- Junction A – B2114 / Sloughgreen Lane Priority Junction
- Junction B – B2036 Brook Street / Whitemans Green Roundabout
- Junction C – B2036 London Road / Ardingly Road Mini-Roundabout
- Junction D – B2036 / B2184 Mini-Roundabout
- Junction E – A272 / B2036 Roundabout
- Junction F – Northern Site Access Roundabout
- Junction G – A272 / Tylers Green / Broad Street Roundabout
- Junction H – B2272 / Tylers Green / Issac's Lane Roundabout
- Junction I/J - B2272 / Bolnore Road / Paddockhall Road Double Mini-Roundabouts
- Junction K – B2272 Square Gyratory
- Junction L – Western Site Access Roundabout
- Junction M – A273 / Issac's Lane / Traunstein Way / Parkfield Way Roundabout
- Junction N – B2272 / B2112 Roundabout
- Junction O – A23 / London Road Roundabout
- Junction P – A272 Cowfold Road / London Road Priority Junction
- Junction Q – A23 / Bolney Road / Cowfold / Crossroads Roundabout
- Junction R - A272 / B2036 / Bolney Road Roundabout
- Junction S - A272 / Rocky Lane / Highbank Roundabout
- Junction T - A272 / Rocky Lane / Rocky Drive Roundabout
- Junction U – Foxhill Roundabout
- Junction V – B2036 Cuckfield Road Priority Junction
- Junction W – Southern Site Access Roundabout
- Junction X – B2036 / A273 / Fairbridge Way Roundabout
- Junction Y – A2300 / Cuckfield Road Roundabout
- Junction Z – A2300 / A273 Roundabout
- Junction AA - A273 / Sussex Way Roundabout
- Junction AB - A273 / B2036 Marchants Way Roundabout

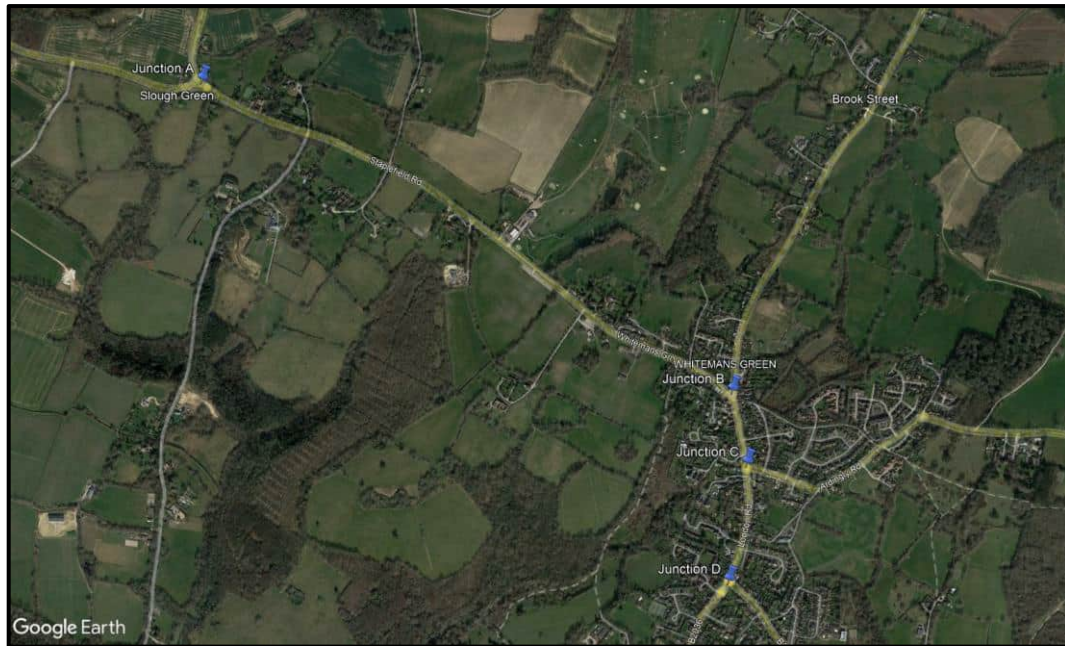


Figure 7.1: Traffic Study Area #1



Figure 7.2: Traffic Study Area #2

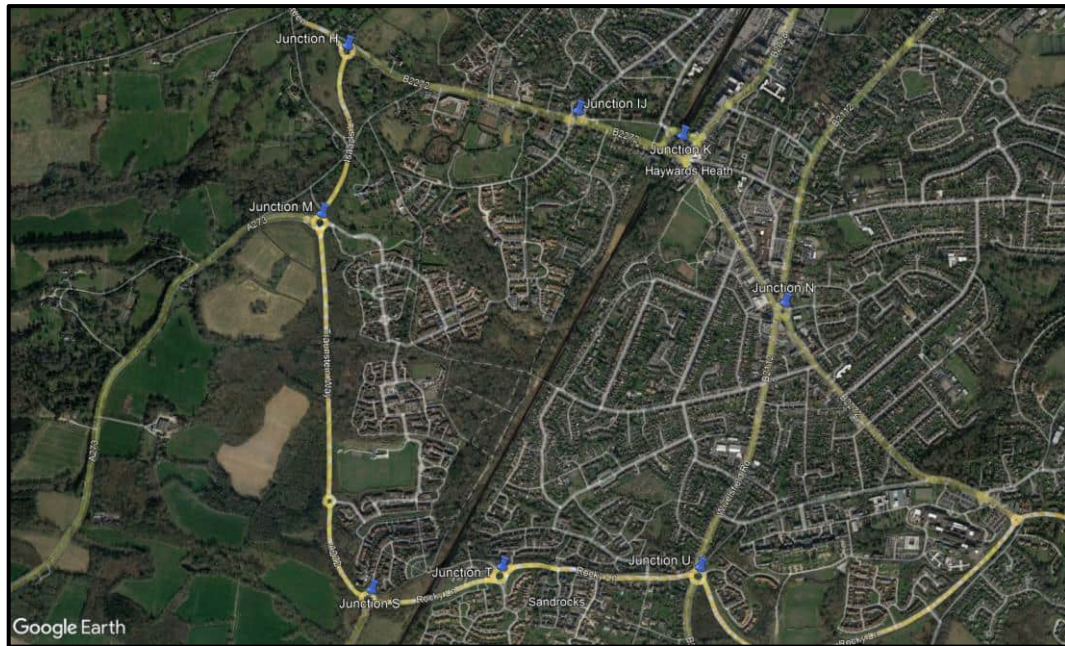


Figure 7.3: Traffic Study Area #3

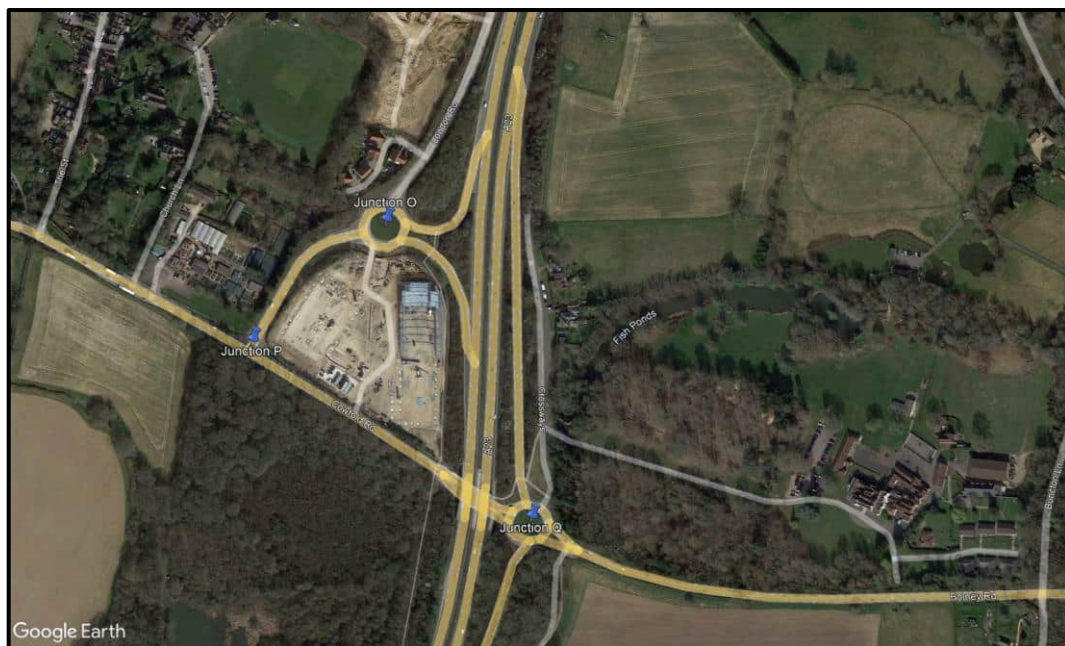


Figure 7.4: Traffic Study Area #4



Figure 7.5: Traffic Study Area #5

7.21. The above study was agreed with WSCC and NH during pre-application discussions.

Sifting Criteria

7.22. WSCC's typical criterion, originally outlined in the Highway Impacts Assessment section of its Transport Assessment Methodology (21 June 2007) states the scope of a TA should:

"... include all junctions where there is a predicted increase in total entry flows of 30 or more vehicles in any hour - or if the junction already experiences peak period congestion an increase of 10 or more vehicles - as a result of the development proposals"

7.23. It has previously been agreed with WSCC where other strategic developments are concerned that some means of undertaking an initial 'sifting' of the junctions within the study area could be used to focus the assessment at locations where there is likely to be a material change in traffic which could affect the operation of the road network.

7.24. Similarly, the below sifting criteria was presented to WSCC during pre-application discussions for the proposed development specifically.

7.25. Prior to the application of any thresholds, the sifting criteria first excludes from further analysis any junctions where forecasted traffic volumes reported in the 2039

Do Something 'with development' scenarios are lower than under the corresponding 2039 Do Minimum. As previously referenced the introduction of new trips and infrastructure to a network can result in the redistribution of background trips, thereby allowing for the traffic to both increase as well as decrease along certain routes.

7.26. Of the remaining locations, a graduated approach has been adopted when determining the significance of any increase in forecasted traffic flow, based around the following nested criteria:

- The volume of development related trips at each junction; and
- The percentage impact of development generated traffic at each junction.

7.27. Considering the criteria above in further detail, the following sequenced methodology has been employed in determining the candidate junctions that have been subject to further detailed analysis and modelling.

- **Stage 1** - Number of Predicted New Trips
 - Stage 1 involves examining the absolute trip numbers to determine whether junctions are to be excluded or included within our detailed assessment.
 - Per the WSCC guidance from 2007, a threshold of 30 PCUs (in the peak hour) will be used as the initial screening criteria.
- **Stage 2** - Percentage Impact Analysis
 - Stage 2 then reviews the percentage change in traffic at the junction as a result of the traffic effect of the proposed development.
 - This further filtering allows the absolute traffic figures to be reviewed in context of the existing conditions, where an absolute traffic effect beyond the 30 trip threshold could have a negligible effect compared to existing background traffic.
 - While a 10% change in traffic is considered to be within expected daily fluctuations, per guidance from the Institute of Environmental Assessment, a robust threshold of a 5% increase in traffic at a junction will be used in this sifting stage.

7.28. The above filtering process has been applied to all junctions located within the traffic study network, and the results are summarised in **Table 7.1** below.

Junction	Absolute Effect		Percentage Effect (vs Do Minimum)		>30 Absolute & >5% Relative?	
	AM	PM	AM	PM	AM	PM
Junction A – B2114 / Sloughgreen Lane Priority Junction	8	53	0.7%	4.7%	NO	NO
Junction B – B2036 Brook Street / Whitemans Green Roundabout	17	71	0.9%	4.3%	NO	NO
Junction C – B2036 London Road / Ardingly Road Mini-Roundabout	88	103	4.1%	5.8%	NO	YES
Junction D – B2036 / B2184 Mini-Roundabout	51	54	3.4%	4.7%	NO	NO
Junction E – A272 / B2036 Roundabout	-24	-16	-1.3%	-0.8%	NO	NO
Junction F – Northern Site Access Roundabout						
Junction G – A272 / Tylers Green / Broad Street Roundabout	38	54	1.5%	2.5%	NO	NO
Junction H – B2272 / Tylers Green / Issac's Lane Roundabout	58	69	1.5%	2.0%	NO	NO
Junction I – Bolnore Road Mini-Roundabout	19	22	0.6%	0.8%	NO	NO
Junction J – Paddockhall Road Mini-Roundabout	15	22	0.5%	0.8%	NO	NO
Junction K – B2272 Square Gyratory	8	22	0.4%	2.9%	NO	NO
Junction L – Western Site Access Roundabout						
Junction M – A273 / Issac's Lane / Traunstein Way / Parkfield Way Roundabout	76	60	2.5%	2.4%	NO	NO
Junction N – B2272 / B2112 Roundabout	27	49	1.0%	1.7%	NO	NO
Junction O – A23 / London Road Roundabout	107	18	16.8%	3.0%	YES	NO
Junction P – A272 Cowfold Road / London Road Priority Junction	76	24	3.3%	1.0%	NO	NO
Junction Q – A23 / Bolney Road / Cowfold / Crossroads Roundabout	95	50	4.4%	2.1%	NO	NO
Junction R – A272 / B2036 / Bolney Road Roundabout	48	-2	2.2%	-0.1%	NO	NO
Junction S – A272 / Rocky Lane / Highbank Roundabout	44	52	1.9%	2.5%	NO	NO
Junction T – A272 / Rocky Lane / Rocky Drive Roundabout	29	21	1.9%	1.3%	NO	NO
Junction U – Foxhill Roundabout	51	23	2.1%	0.9%	NO	NO
Junction V – B2036 Cuckfield Road Priority Junction	-107	-64	-11.4%	-8.2%	NO	NO
Junction W – Southern Site Access Roundabout						
Junction X – B2036 / A273 / Fairbridge Way Roundabout	12	19	0.7%	1.0%	NO	NO
Junction Y – A2300 / Cuckfield Road Roundabout	147	103	3.3%	2.9%	NO	NO
Junction Z – A2300 / A273 Roundabout	44	-82	1.9%	-4.3%	NO	NO
Junction AA – A273 / Sussex Way Roundabout	44	-40	1.7%	-2.0%	NO	NO
Junction AB – A273 / B2036 Marchants Way Roundabout	17	21	0.7%	0.9%	NO	NO

Table 7.1: Sifting Criteria Summary

7.29. As can be seen above, Junction C (B2036 London Road / Ardingly Road Mini-Roundabout) and Junction O (A23 / London Road Roundabout) are the only junctions to meet both stage 1 and stage 2 of the sifting criteria. Notably, of the four junctions identified during the Regulation 18 process (Junctions C, G, IJ and U) only Junction C was identified as needing additional assessment using the sifting criteria.

7.30. As such, junctions C and O will be looked at in detail for the more detailed junction capacity tests. In addition, all three of the proposed site access roundabouts will be tested for junction capacity, in order to provide the confidence required that they would be capable of accommodating the forecast traffic flows.

7.31. Junction Capacity Modelling Results

Detailed Assessment Criteria

7.32. Junction capacity is specified with reference to the Ratio of Flow over Capacity (RFC) for priority and roundabout junctions. In doing so, a value of 0.85 would typically indicate the practical design capacity at which congestion is likely to begin to occur with a value of 1.00 being the theoretical point at which this congestion is forecast to occur regularly during the assessment period.

7.33. As all junctions to be tested for capacity are roundabouts, the ARCADY module of Junctions10 will be utilised as this is industry standard software for the modelling of roundabouts.

7.34. Queues in Junctions10 are reported in terms of the average maximum forecast queue during the modelled period (in vehicles), with delay reported as seconds per vehicle.

7.35. While the above indicators are industry standard for the review of junctions, it is notable that the indicators provide a purely quantitative perspective of specifically the worst time period. As such, it is not uncommon for higher congestion levels to be reported by capacity modelling but for this congestion to be short lived in practice.

7.36. Values should also be taken in the context of the NPPF guidance that requires decision-makers to consider the severity of impacts, particularly where other benefits of development are judged to outweigh any transport implications. Assessing the residual impact of development is therefore a matter of judgement based on the comparison between individual scenarios, recognising (where applicable) the overall benefits of changing network conditions.

7.37. Geometric properties for the junction models will primarily be based on measurements from OS mapping, with topographical data taking preference over OS mapping where available. Geometries for roundabouts will be measured following best practice from the TRL Junctions10 User Guide.

Junction C – B2036 / Ardingly Road Mini-Roundabout

7.38. As set out in **ACE Report 2207280-01**, the 'Standard Roundabout' option has been used for the detailed modelling of Junction D, as opposed to the "Mini-Roundabout" option, as traffic flows at this junction are weighted towards the North and South arms, reflecting its role as a major vs minor road junction¹.

7.39. Similarly, and as also set out in **ACE Report 2207280-01**, the 'FLAT' demand profile option in ARCADY, which utilises uniform traffic flows across the modelled period, has been used to assess Junction C. This was justified by an analysis of the existing traffic flow profile of each 15-minute segment in the peak hours, derived from surveys of the junction that were conducted in September 2022, which showed that traffic flows across the modelled peak hours were broadly uniform across the peak hours. Full details of the flow analysis can be found in Appendix C of **ACE Report 2207280-01**.

7.40. The results of the junction capacity modelling for the existing arrangement of Junction C are summarised in **Table 7.2** below, with full outputs provided at **Appendix H**.

¹ This is based on advice given by TRL with regards to the assessment of the B2036 / B2115 Mini-Roundabout in Cuckfield as part of the Transport Assessment for the Penland Farm development (Planning Reference: DM/16/1803).

	AM			PM		
	Q (Veh)	Delay (s)	RFC	Q (Veh)	Delay (s)	RFC
	2019 Baseline					
1 - B2036 Whitemans Green (N)	3.4	17.23	0.78	2.1	11.17	0.68
2 - Ardingly Road (E)	1.1	9.58	0.52	1.4	11.95	0.59
3 - B2036 London Road (S)	5.8	24.87	0.86	0.8	5.91	0.43
	2039 Do Minimum					
1 - B2036 Whitemans Green (N)	28.2	103.05	1.02	8.7	35.5	0.91
2 - Ardingly Road (E)	2.2	17.61	0.7	2	16.27	0.67
3 - B2036 London Road (S)	7.6	32.1	0.9	1.2	7.87	0.55
	2039 Do Something					
1 - B2036 Whitemans Green (N)	47.5	162.71	1.08	11.8	46.61	0.94
2 - Ardingly Road (E)	1.9	15.28	0.67	3.9	27.88	0.81
3 - B2036 London Road (S)	17.5	65.45	0.98	1.3	8.35	0.56

Table 7.2: ARCADY – Junction C (Existing Layout)

7.41. As can be seen above, the B2036 Whiteman's Green arm operates over its theoretical capacity and the B2036 London Road arm operates above its practical capacity in the future year with the proposed development in place.

7.42. A mitigation design has been prepared following the approach set out above, with improvements to sustainable travel infrastructure taking priority over increases to junction capacity.

7.43. The proposed mitigation scheme can be seen on **ACE Drawing 2207280-002B**, comprising improvements to sustainable travel at this junction to include the provision of a new parallel crossing point on the southern arm of the junction and a new zebra crossing point on the northern arm of the junction. The provision of a new 3m shared footway / cycleway on the western side of the junction is also proposed, to fill gaps in existing provision per the active travel strategy outlined in **Section 4.0**.

7.44. With regards to increases to vehicular capacity, the proposed mitigation scheme allows for two lane entry on all arms of the junction, as opposed to the single lane entry on all arms as existing.

7.45. The proposed mitigation scheme has been modelled for vehicular capacity under 2039 traffic conditions, with the results of the capacity modelling summarised in **Table 7.3**, and full outputs provided at **Appendix H**.

	AM			PM		
	Q (Veh)	Delay (s)	RFC	Q (Veh)	Delay (s)	RFC
	2039 Do Something					
1 – B2036 Whitemans Green (N)	2.4	9.22	0.71	1.7	6.48	0.64
2 - Ardingly Road (E)	1.5	11.82	0.61	2.4	16.52	0.71
3 - B2036 London Road (S)	3.8	14.11	0.8	0.8	5.43	0.46

Table 7.3: ARCADY – Junction C (Mitigation Layout)

7.46. As can be seen above, the proposed mitigation scheme results in all arms delivers better than a nil detriment situation, in respect of the operation of the junction, compared to the 2039 Do Minimum situation.

7.47. The proposed mitigation scheme therefore meets the sustainable travel preferences of WSCC and also provides satisfactory mitigation to accommodate the vehicular capacity required.

7.48. The proposed mitigation scheme has also been subject to an RSA1. The Designers' Response, including the RSA1 report, is provided within **ACE Report 2207280-R18**. The above drawing includes amendments made as a result of the RSA1.

Junction O – A23 / London Road Roundabout

7.49. The results of the junction capacity modelling for the existing arrangement of Junction O are summarised in **Table 7.4** below, with full outputs provided at **Appendix H**.

	AM			PM		
	Q (Veh)	Delay (s)	RFC	Q (Veh)	Delay (s)	RFC
	2019 Baseline					
1 - London Rd (N)	0.1	2.14	0.06	0	1.88	0.04
4 - A23 Northbound offslip	0.2	1.62	0.13	0.2	1.58	0.13
5 - London Rd (S)	0.1	1.57	0.11	0.1	1.5	0.09
	2039 Do Minimum					
1 - London Rd (N)	0	0	0	0	0	0
4 - A23 Northbound offslip	0.1	1.49	0.11	0.1	1.52	0.13
5 - London Rd (S)	0.2	1.65	0.15	0.1	1.56	0.12
	2039 Do Something					
1 - London Rd (N)	0	0	0	0	0	0
4 - A23 Northbound offslip	0.1	1.48	0.11	0.1	1.51	0.13
5 - London Rd (S)	0.3	1.75	0.2	0.2	1.57	0.13

Table 7.4: ARCADY – Junction O (Existing Layout)

7.50. As can be seen above, all arms of Junction O are forecasted to operate within capacity in the 2039 Do Minimum and 2039 Do Something scenarios.

7.51. This indicates that there are not specific mitigation requirements at this location arising from the proposed development.

Junction F – Northern Site Access Roundabout

7.52. Geometries for the northern site access roundabout have been taken from **ACE Drawing 22072800-003F**. The results of the junction capacity modelling under 2030 Do Something traffic conditions are shown in **Table 7.5**, with full outputs provided at **Appendix H**.

	AM			PM		
	Q (Veh)	Delay (s)	RFC	Q (Veh)	Delay (s)	RFC
	2039 Do Something					
1 - A272 (E)	0.6	4.48	0.39	2.5	9.38	0.72
2 - Site Access 1	0.2	4.08	0.16	0.1	4.77	0.08
3 - A272 (W)	3	14.4	0.75	1	6.12	0.49

Table 7.5: ARCADY – Junction F

7.53. As can be seen above, all arms of Junction F operate within capacity in the 2039 Do Something scenarios.

Junction L – Western Site Access Roundabout

7.54. Geometries for the northern site access roundabout have been taken from **ACE Drawing 22072800-004D**. The results of the junction capacity modelling under 2030 Do Something traffic conditions are shown in **Table 7.6**, with full outputs provided at **Appendix H**.

	AM			PM		
	Q (Veh)	Delay (s)	RFC	Q (Veh)	Delay (s)	RFC
	2039 Do Something					
1 - A272 (NE)	0.7	3.97	0.42	2.3	7.59	0.7
2 - Site Access 2	0.4	4.99	0.28	0.1	5.36	0.08
3 - A272 (SW)	4.8	14.67	0.83	1.8	6.69	0.64

Table 7.6: ARCADY – Junction L

7.55. As can be seen above, all arms of Junction L operate within capacity in the 2039 Do Something scenario with the proposed development in place.

Junction W – Southern Site Access Roundabout

7.56. Geometries for the northern site access roundabout have been taken from **ACE Drawing 22072800-005D**. The results of the junction capacity modelling are shown in **Table 7.7**, with full outputs provided at **Appendix H**.

	AM			PM		
	Q (Veh)	Delay (s)	RFC	Q (Veh)	Delay (s)	RFC
	2039 Do Something					
1 - B2036 (N)	0.1	3.58	0.12	0.5	4.8	0.34
a2 - Site Access 3	0	3.26	0.04	0	3.71	0.04
3 - B2036 (S)	0.6	4.68	0.37	0.5	4.28	0.33

Table 7.7: ARCADY – Junction W

7.57. As can be seen above, all arms of Junction W operate within capacity in the 2039 Do Something scenarios.

Cumulative Impact

7.58. Initial mitigation design work was conducted by ACE on the four junctions which were identified in the cumulative assessment undertaken pursuant to the Regulation 18 process for the *Draft Mid Sussex District Local Plan 2021-2039*.

7.59. Initial mitigation schemes were considered for the following:

- B2036 London Road / Ardingly Road Mini-Roundabout
 - The proposals include the minor relocation of the junction to allow for increased flares on the over-capacity arms.
- B2272 / Bolnore Road / Paddockhall Road Double Mini-Roundabouts.
 - The proposal comprise the signalisation of the Bolnore Road junction and the conversion of the Paddockhall Road junction into a priority junction.

7.60. These mitigation schemes showed that the cumulative impact of background traffic, Local Plan allocations as well as traffic from the proposed development could be accommodated.

7.61. Specific details of the mitigation schemes can be found within **ACE Report Reference 2007280-01**.

7.62. It is important to note that these above locations were not identified as requiring mitigation specifically under the 'stand-alone' scenarios outlined in this section.

7.63. As such, the responsibility for the identified mitigation schemes is only considered to be 'shared' between the strategic allocations should the District Local Plan be progressed, and a means of apportioning the cost of mitigation is identified.

Summary

7.64. This section of the report is summarised as follows:

- The basis for the traffic assessment of the development is an amended version of the MSSHM, using new growth factors, baseline trip rates and trip rate reductions as agreed with WSCC.
- A sifting criteria has been applied to determine the scale of changes in traffic attributable to the development and, in turn, which existing junctions would be triggered for further detailed capacity modelling.
- Two existing off-site junctions being selected for junction capacity modelling.
 - Junction C was found to operate above theoretical capacity, requiring a mitigation scheme, as designed in **ACE Drawing 2207280-002B**.
 - Junction O was found to operate within theoretical capacity, negating any requirement for mitigation specifically as a result of the proposed development.
- The primary focus of any infrastructure mitigation has been on active modes with vehicular capacity being a secondary issue.
- The consequent overall mitigation delivers both sustainable transport improvements and a better-than-nil-detriment increase to vehicular capacity.
- The proposed site access roundabouts were also modelled for capacity, and were found to operate within the limits of satisfactory highway capacity.

8. Summary and Conclusion

Summary

8.1. This report is summarised as follows:

- The proposed development is to be subject to an Outline Planning Application with all matters reserved excluding access, and comprises a residential-led, mixed-use development.
- Extensive pre-application discussions have been held with WSCC, the Local Highways Authority, with regards to the design and traffic assessment of the development.
- The development is located in an accessible location, within a range of existing facilities accessible by multiple modes of transport, including active and public transport.
- The basis for the access and movement strategy is the principle of the walkable neighbourhood, with an emphasis on design at a human scale through prioritising active and public transport over the private car.
- Access to the development via active travel modes will be possible from 10 locations. Access to the site by vehicle will be from three new standard roundabouts on the northern, western and southern edges of the development. The access arrangements have been subject to relevant road safety audits, and amended based on the recommendations provided where appropriate.
- The indicative street hierarchy and geometries have been outlined based on standards provided by WSCC and feedback from Design South East. The proposed street hierarchy allows for maximum flexibility with regards to bus provision with refinements expected at RM stage.
- Cycle and car parking provision have been agreed with WSCC and are based on standards set out by WSCC and Buildings Regulations.
- The active travel strategy follows the principles and geometries set out in LTN 1/20, as agreed with WSCC, with a network of internal footway / cycleways connecting to an improved, off-carriageway cycle route connecting the site to Haywards Heath. Additional improvements to off-site public rights of way are also being explored to expand the benefits arising from the improved connectivity which the proposed development will bring.

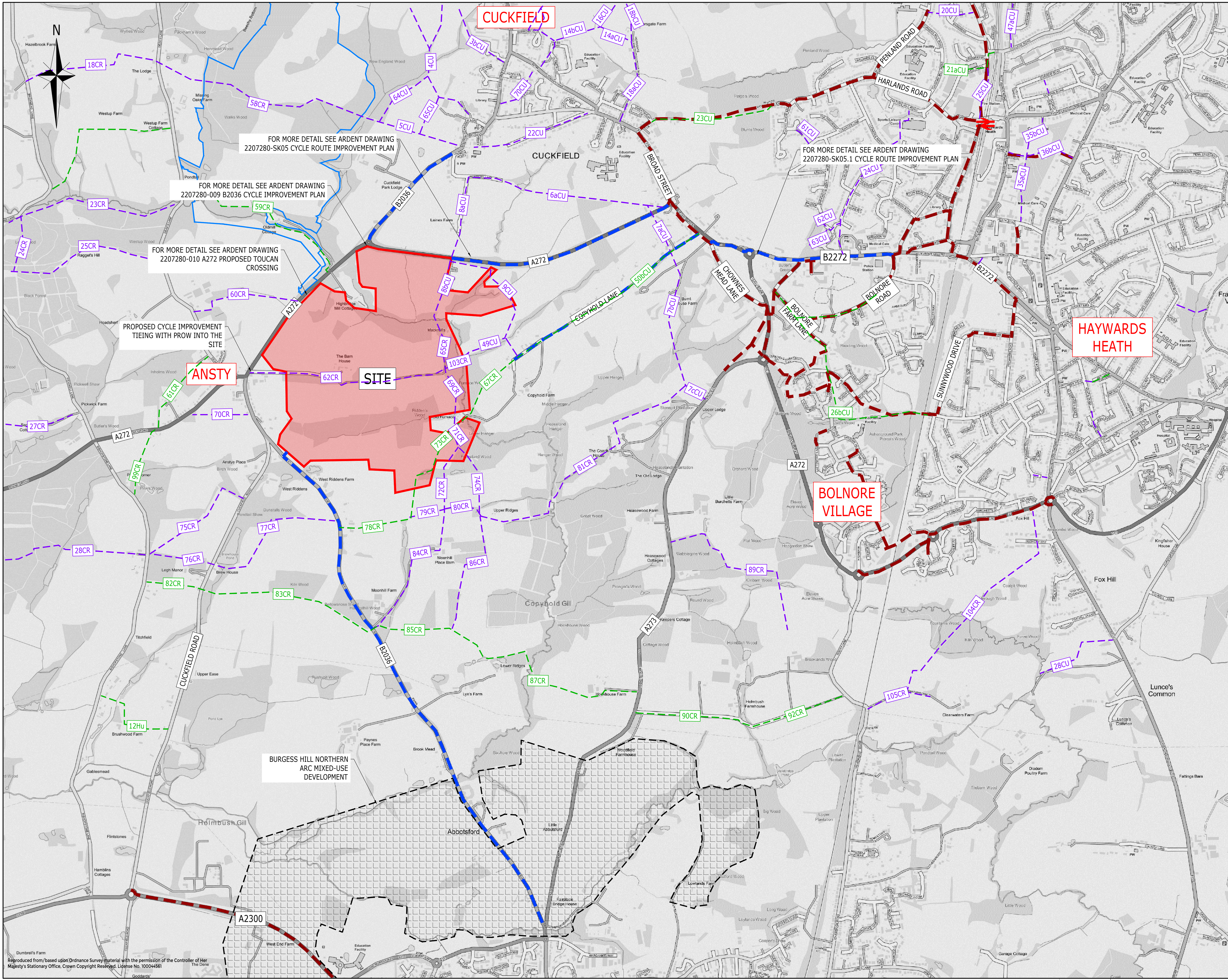
- The intended goal of the public transport strategy is to provide a regular connection to / from Haywards Heath. Various options are being considered for both the intermediary stage, while the development is being delivered, and the final bus service.
- A network of mobility hubs is proposed within the development, with the potential for additional cycle parking and Realtime Passenger Information at each bus stop.
 - The Mobility Hubs will be designed to CoMo silver accreditation at minimum, with one mobility hub meeting Como gold accreditation.
 - The Mobility Hubs may also include Electric Vehicle (EV) charging ports, and preferential spaces for car club vehicles, which car club operators have expressed interest in providing.
- When considering mitigation, this TA considered how the need to travel would be minimised through the internalisation of trips, promotion of active travel modes, and connectivity to/from nearby destinations and settlements.
- This mitigation is indicative of the 'Decide and Provide' paradigm, which requires the visioning of outcomes when setting out the requirements for mitigation. This is consistent with the NPPF which outcome of these mitigation measures leads, finally, to a requirement to assessment the 'residual' impact of car trips.
- The basis for traffic assessment of the proposed development was undertaken with reference to a sequential process:
 - An amended version of the MSSHM, using refined parameters on traffic growth, trip rates and trip rate reductions as agreed with WSCC.
 - A sifting criteria applied to an analysis of traffic changes between the following scenarios:
 - 2019 Baseline – The calibrated model.
 - 2039 Do Minimum ('Without Development').
 - 2039 Do Something ('With Development').
- From this comparison of the results for the 2039 Do Minimum and 2039 Do Something scenarios, two junctions were selected for further detailed assessment via junction capacity modelling.

- A mitigation scheme was developed for one of the above junctions, focusing first on sustainable travel per WSCC advice, which both improves sustainable travel opportunities and provides a better-than-nil-detriment improvement to vehicular capacity.
- The three proposed site access roundabouts were also modelled and found to operate within capacity in the future year with the proposed development in place.
- Finally, consideration has been given to the 'cumulative' effects of the District Local Plan 2021-2039 and the 'shared' responsibility that the proposed development may have towards the funding of additional measures. However, this is subject to the Local Plan being progressed and a means of apportioning the cost of mitigation, both of which MSDC would be responsible in identifying.

Conclusion

- 8.2. In conclusion, the information presented in this TA (and associated Appendices) confirms the suitability for a residential-led, mixed-use development at this location.
- 8.3. Taken together, this TA provides the justification necessary to ensure that the proposed development can be considered in a favourable light and secure a positive determination of the planning application.

Drawings



- KEY:
- THE SITE
 - PROPOSED CYCLE ROUTE
 - EXISTING CYCLE ROUTE
 - BURGESS HILL NORTHERN ARC MIXED-USE DEVELOPMENT
 - BEECHY BOTTOM PARKLAND RESERVE
 - EXISTING FOOTPATHS
 - EXISTING BRIDLEWAYS
 - RAILWAY STATION

FOR INFORMATION ONLY

WORK IN PROGRESS

A	PARKLAND RESERVE BOUNDARY ADDED (BLUE LINE)	HP	JS	DH	20.10.23
Rev	Description	Dn	Chk	App	Date

ARDENT CONSULTING ENGINEERS

Third Floor
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Client

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Project Title:

LAND AT ANSTY FARM, MID SUSSEX

Drawing Title:

CYCLE & PEDESTRIAN ROUTES

A1 Scale	Date	Designed by
NTS	28.09.23	ADS
Drawn by	Checked by	Approved by
ADS	JS	DH

Drawing Number

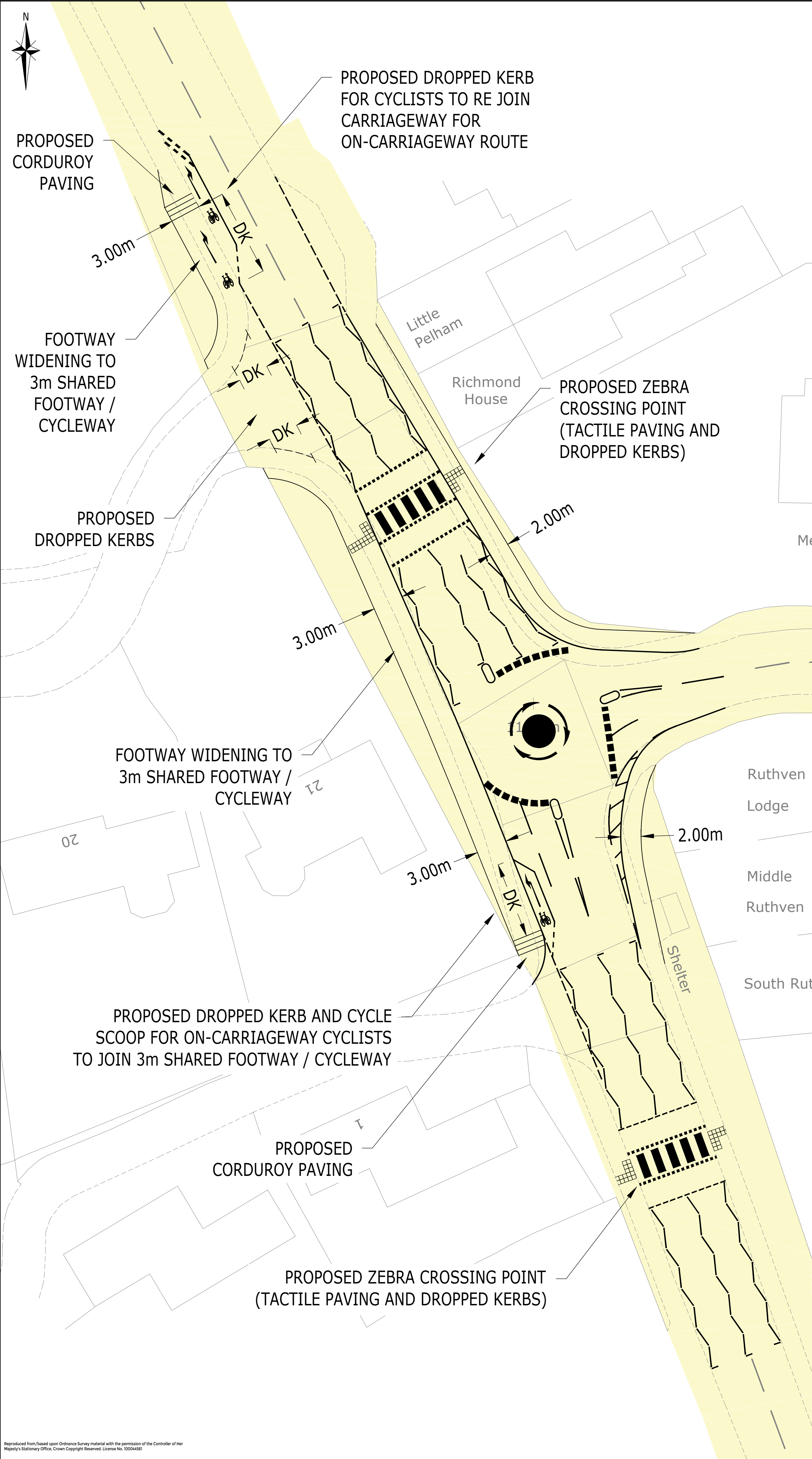
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File Location: \\ace-host01\projects\ap recovered\ardent\projects\2207280 - land at ansty farm, mid sussex\technical\acad\drawings\sketches\2207280-sk09a cycle & pedestrian routes.dwg



NOTES:

DRAWING IS SUBJECT TO: TOPOGRAPHICAL SURVEY, DETAILED DESIGN AND HIGHWAYS APPROVAL.

SIGNAGE DETAILS TO BE PROVIDED IN ACCORDANCE WITH TSRGD AND LT1/20 STANDARDS

KEY:

HIGHWAY BOUNDARY TRANSCRIBED FROM MSCC RECORDS

DRAFT

B	UPDATED FOLLOWING STAGE 1 RSA COMMENTS	DV	DV	DH	17.10.23
A	CYCLE IMPROVEMENTS ADDED	BT	SAF	DH	20.09.23
Rev	Description	Drm	Chk	App	Date

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Client

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Project Title:

LAND AT ANSTY FARM, MID SUSSEX

Drawing Title:

POTENTIAL ROUNDABOUT IMPROVEMENTS

A2 Scale	Date	Designed by
1:250	14.12.22	BT
Drawn by	Checked by	Approved by
BT	SAF	DH

Drawing Number

2207280-002

Rev

B