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TRANSPORT & INFRASTRUCTURE PLANNING

HB (South Caldecotte) Ltd

South Caldecotte, V10 Brickhill Street

Danesborough & Walton, Milton Keynes

Transport Assessment Addendum

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1.0 INTRODUCTION

Appointment & Background

1.1 BWB Consulting Ltd (BWB) has been appointed by HB (South Caldecotte) Ltd (the Applicant) to prepare this Transport Assessment (TA) Addendum report to support the Appeal associated with the outline planning application for employment development at land to the west of V10 Brickhill Street in South Caldecotte, Milton Keynes ('the Appeal Site').

1.2 The proposals comprise up to 2,600,000 sq.ft. (241,548 sq.m.) of B1(c)/B2/B8 land uses, which include storage, warehouse, distribution, light industrial and ancillary offices. The indicative site layout plan is included in **Appendix A** for reference.

1.3 This TA Addendum follows on from and should be read alongside the original TA report (Ref. SCD-BWB-GEN-XX-RP-TR-001_Transport Assessment-S2-P10) also produced by BWB and dated 10th July 2019.

1.4 The Local Planning and Highways Authority is Milton Keynes Council (MKC), a unitary authority. The original planning application (LPA reference 19/01818/OUT) was made on 17th July 2019 and validated on the same date. The planning application was presented to the LPA's Development Control Committee on 6th February 2020 with an officers' recommendation for refusal. At the meeting, the Committee resolved to refuse planning permission with three reasons for refusal. The decision notice was issued on 26th February 2020 and the appeal was lodged on 17th April 2020.

1.5 The third reason for refusal relates to transport and is worded as follows:

> *"The proposal, by reason of failure to demonstrate provision of necessary infrastructure to mitigate the impact of the development, in particular in relation to transport, would have a harmful impact on the transport network, in terms of road, cycle and public transport provision, and would therefore fail to mitigate the impact of development, contrary to Plan: MK policies INF1, CT1 CT2, CT3, CT5 and SD14 (C.3) of Plan: MK."*

1.6 Specific Highways-related responses to application 19/01818/OUT are documented in Stirling Maynard Transportation's (SMT) most recent advice made on behalf of MKC Highways dated 16th January 2020, a copy of this is provided in **Appendix B** for reference.

1.7 A copy of Highways England's (HE) recommendation to MKC on strategic road network (SRN) impact is contained in **Appendix C**.

1.8 **The purpose of this TA Addendum therefore is to build upon the parameters agreed with MKC Highways and HE in the original TA report and provide details of further assessment that has been undertaken to identify the highway impacts of the proposed development and ensure that these are mitigated accordingly. The TA Addendum provides further evidence that there would not be a severe impact on the highway network.**

Site Context

1.9 The development site is allocated under policy SD14 of MKC's adopted local plan 'Plan:MK' (March 2019) for a mixed employment development of Class B2 and B8. **Figure 1** below shows the allocated site.

Figure 1: Allocated Site

1.10 In summary, policy SD14 requires that the proposed development must have a minimum floorspace of 195,000 sq.m. of class B2/B8 and ancillary B1 employment floorspace, subject to a TA that details the development's impact on the local highway network including the A5 / Watling Street roundabout and provide footpath connections to Bow Brickhill railway station and the wider sustainable infrastructure.

Report Structure

1.11 Following the introductory section, the TA Addendum is structured as follows:

- **Section 2: Redway Infrastructure Provision** – provides further details in relation to Redway infrastructure provision;
- **Section 3: Safeguarded Land to Enable Future Upgrade of Brickhill Street to Grid Road Standard** – demonstrates that sufficient land along Brickhill Street has been safeguarded in order to facilitate the upgrading of V10 Brickhill Street to Grid Road Standard in the future if required;

- **Section 4: Public Transport Strategy** – provides further details on the public transport strategy for the development;

- **Section 5: VISSIM Modelling Results and Mitigation** – clarifies the changes made to the base and forecast VISSIM models and associated traffic impacts and mitigation proposals at the A5 Kelly's Kitchen Roundabout and Tilbrook Roundabout;

- **Section 6: Impact on Wider Strategic Road Network (SRN)** – details the impact of the proposed development on the wider SRN in terms of road safety and vehicle trip generation; and

- **Section 7: Summary and Conclusions** – summarises the findings of the report and offers conclusions in relation to the proposed development impacts.

1.12 This Transport Assessment Addendum should be read in conjunction with the Transport Assessment, which is understood to be agreed.

1.13 Relevant policy has been referred to in the sections as necessary, rather than a standalone section, for ease of reference.

2.0 REDWAY INFRASTRUCTURE PROVISION

Policy Context

2.1 MKC policy on Redway provision is set out in Plan:MK 2016-2031, which was adopted in March 2019.

2.2 Policy CT3 'Walking and Cycling' states that 'the Council will support development which enable people to access employment, essential service and community facilities by walking and cycling. '5. The existing Redway, footway and right of way network should be retained, improved and extended to the current Redway design standards'.

2.3 The current draft Redway design standards are set out in MKC's 'Redway Design Manual: Consultation Draft' (January 2020). This includes the key design principles, geometric design standards and horizontal and vertical alignments.

2.4 Policy CT4 'Crossover on Redways' goes on to state that 'new development proposals should aim to protect and enhance the existing Redways in the Borough. Where development proposes to crossover or remove an existing section of a Redway, a safe crossover or convenient alternative route should be provided, which safeguards the existing network and does not impede or comprise the safety of highway users".

Existing Walking and Cycling Infrastructure

2.5 Existing walking and cycling infrastructure in the vicinity of the site is detailed in the original TA with a re-cap provided in this TA Addendum report for ease of reference.

2.6 **Figure 2** is an extract taken from 'MK Cycling Map'[1] and shows the extent existing Redway and Redway Super Routes located in the vicinity of the proposal site.

[1] https://www.milton-keynes.gov.uk/highways-and-transport-hub/get-cycling-mk/cycle-routes-and-maps

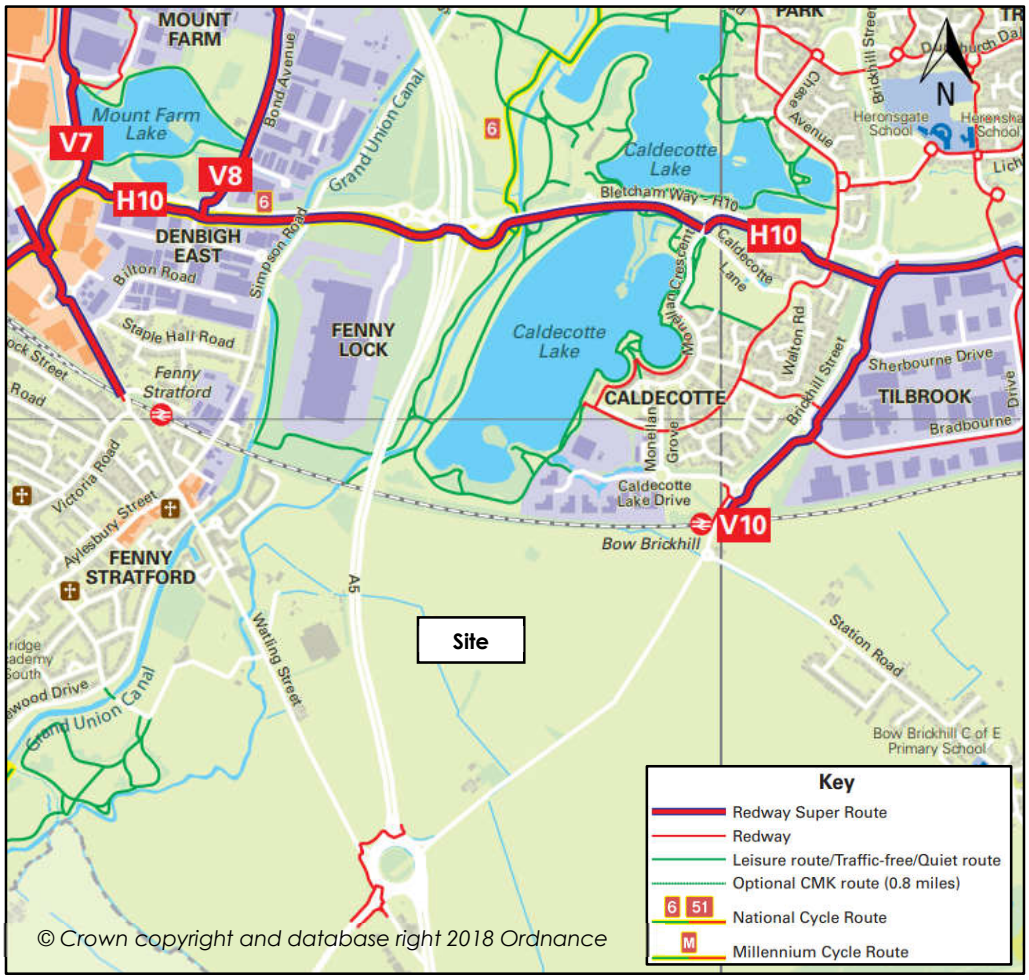


Figure 2: Redway Network in Vicinity of the Site

2.7 As shown, Redway Super Routes are provided along V10 Brickhill Street between Bow Brickhill Railway Station and towards the A4146 Bletcham Way (H10). Both routes connect to local Redways in Caldecotte and Tilbrook. To the south, Redways are provided on the northern and western sides of Kelly's Kitchen Roundabout, which link to the footway provision along Watling Street.

2.8 **Figure 3** identifies additional sustainable travel infrastructure, including public rights of way (PRoW), footpaths and pedestrian crossing points between the site and the wider Redway network.

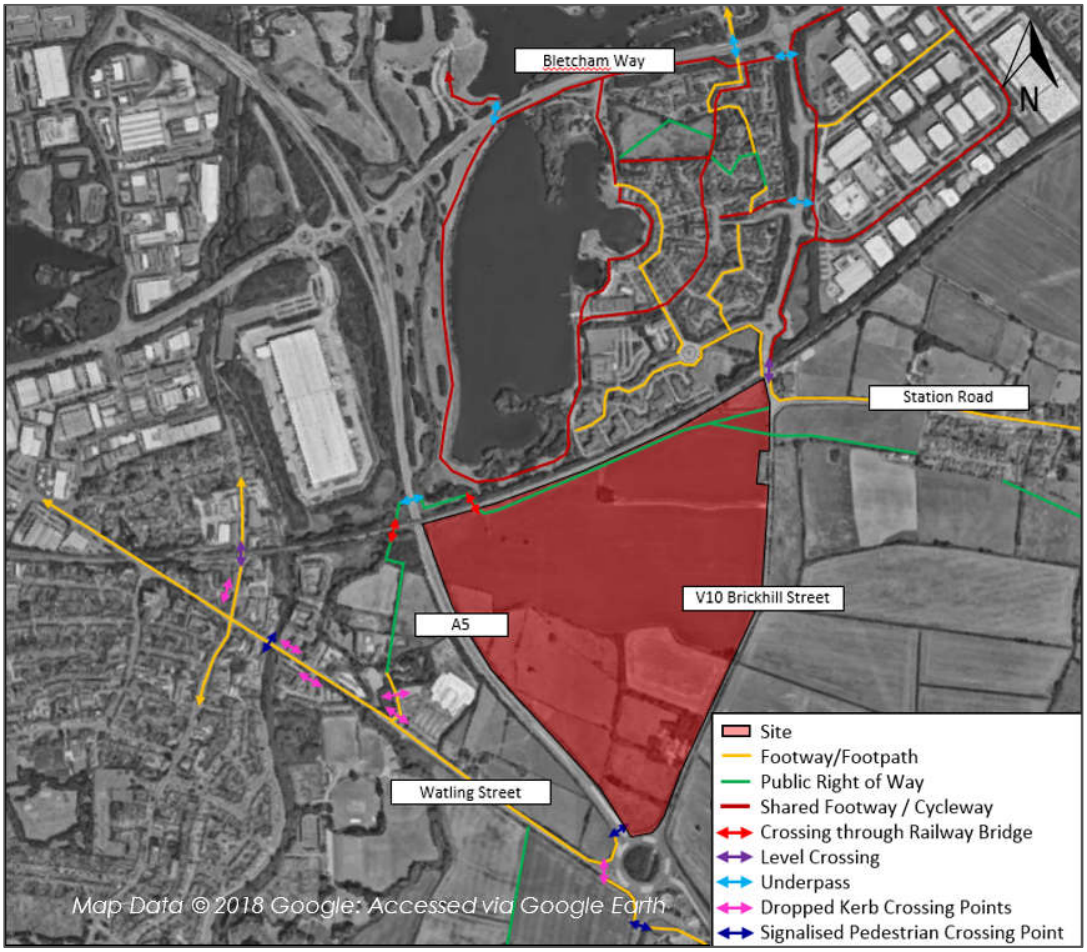


Figure 3: Existing Pedestrian Infrastructure

2.9 In addition to the existing walking and cycling infrastructure, the Land at Eaton Leys committed development (Planning Ref. 15/01533/OUTEIS) includes improvements to sustainable infrastructure in the surrounding area.

"Off-line" Redway Route Proposals

2.10 The proposed site masterplan (**Appendix A**) continues to include a new off-line Redway route linking the existing Redway routes at Kelly's Kitchen Roundabout to the south and on the V10 Brickhill Street to the north of the level crossing. The proposed alignment of the Redway route through the site has been planned to maximise the accessibility of the units on the site.

2.11 As noted in the original Transport Assessment report, there are only a limited number of existing cycle movements in the vicinity of the site. The traffic survey undertaken at the A5 Kelly's Kitchen Roundabout junction recorded just four and five two-way cycle trips through the junction during the morning and evening peak hours respectively, compared to 19 and 15 two-way cycle trips estimated to be generated by the development. This suggests that demand for cycling in the area is likely to be generated by the development itself and therefore an alignment through the site is considered most appropriate.

2.12 Notwithstanding the above, existing cyclists will also benefit from the proposed off-line Redway provision. The proposed route through the site is approximately 400m longer than the on-line alternative alongside V10 Brickhill Street, equating to an additional

cycle time of approximately two minutes based on an average cycling speed of 15 kph.

2.13 The proposed Redway would also link with the existing Bow Brickhill 004A public footpath, which currently runs to the north of the site between Belvedere Lane and Greenways to the east.

2.14 As noted in the original TA, pedestrian connectivity to Bow Brickhill Railway Station and beyond would also be improved by providing 3.0m wide Redway over the level crossing as shown on Drawing **SCD-BWB-GEN-01-DR-TR-002-Pedestrain Infrastructure and Redway Improvements around Bow Brickhill Station** contained in the original TA report.

"On-line" Redway Route Safeguarded

2.15 In addition to the Redway route proposed through the development site, the Applicant has safeguarded land along the western side of V10 Brickhill Street as part of the Grid Road Reserve to accommodate an on-line Redway route in the future. The extent of the Grid Road Reserve is discussed at detail in Section 3.0 of this TA Addendum.

2.16 Drawing **SCD-BWB-GEN-01-DR-TR-006-S2-P6** shows the potential future alignment of an on-line Redway route along the western side of V10 Brickhill Street within the Grid Road Reserve. The Applicant has amended the Parameters Plan to enable the Redway route to divert around the back (to the west) of the third-party Anglian Water compound.

2.17 As shown on the drawing, a minimum width of 10.8 metres has been retained between the amended site boundary and third-party Anglian Water compound to allow for a future Redway route. This width provides a 2.0 metre offset between the compound and Redway for construction, the 3.0 metre Super Redway and also a 4.5-metre-wide landscape buffer between the Redway and application site with approximately 1.3 metres in reserve.

2.18 The inter-visibility between cyclists emerging from behind the Anglian Water compound and other cyclists and pedestrians has been considered in accordance with Redway Design Manual: Consultation Draft' (January 2020). The indicative alignment of the Super Redway route at this location can accommodate these visibility requirements and therefore the Grid Road Reserve at this point is considered adequate to accommodate this infrastructure.

Summary

2.19 This section of the TA Addendum sufficiently demonstrates that the proposed development is planned in accordance with the relevant Plan:MK policies in respect to the provision of Redways.

2.20 The indicative masterplan includes a Redway route running alongside the estate road linking the existing Redway to the north of the site, with the proposed site access roundabout onto V10 Brickhill Street, the exact alignment would be subject to Reserved Matters applications. Between the access roundabout and existing Redway route to the south the proposed upgrading of Brickhill Street to Grid Road Standard includes a new on-line section of Redway Super Route.

2.21 Furthermore, the Applicant has safeguarded land as part of the Grid Road Reserve to enable a Super Redway Route to be provided along the entirety of the V10 Brickhill

Street in the future. This includes land to the rear (west) of the Anglian Water compound.

3.0 SAFEGUARDED LAND TO ENABLE FUTURE UPGRADE OF BRICKHILL STREET TO GRID ROAD STANDARD

Introduction

3.1 This section of the TA Addendum builds on the work agreed as part of the original TA in respect to upgrading V10 Brickhill Street to Grid Road Standard, including the safeguarding of land to enable a section of it to be upgraded in the future when required.

3.2 Based on the evidence presented in paragraphs 6.58-6.64 of the original TA, **MKC Highways is satisfied that the section of V10 Brickhill Street to the north of the proposed site access does not need upgrading to Grid Road standard for capacity reasons**. This is acknowledged in paragraphs 7.23 and 7.24 of the Officers Report, which state:

> *"Paragraphs 6.58-6.64 of the Transport Assessment sets out why the upgrading of Brickhill Street to a Grid Road is not required for capacity reasons. MKC Highways Officers response recognises that this does not comply with site allocation policy SD14 (as well as the draft Development Framework) but concur with the Transport Assessment that the upgrading is not required to enable the development. On this basis it is not considered that there is an unacceptable impact in highways terms from the non-compliance with this element of policy SD14.*
>
> *As mentioned, the application proposes to provide an area as reserved land for future grid road upgrading to take place. The width and details of this have not been agreed, but MKC Highways Officers response states that this could be addressed via planning condition. They have also stated that based on the Indicative Masterplan, an appropriate width of grid road upgrade/reserve can be provided. The response also states that due to the presence of an Anglian Water compound, widening along the entire relevant width of Brickhill Street would not be possible at present as this is outside the applicant's site ownership and power to control, but that the grid road reserve should still be provided".*

3.3 MKC Highways requested that additional evidence is provided showing that sufficient land is being safeguarded to enable Brickhill Street to be upgraded in the future to protect their longer-term policy objectives. This information is contained within this section of the TA Addendum.

Policy Context

3.4 MKC policy on the Grid Road Network is also set out in Plan:MK 2016-2031.

3.5 Policy SD14 is specific to the site, which is referred to as 'Strategic Employment Allocation, Land South of Milton Keynes, South Caldecotte'. Part C3 of the policy states 'access to be taken from Brickhill Street, which is to be upgraded to grid road standard'.

3.6 The sections of Policy CT8 'Grid Road Network' considered relevant to the development proposals and site location are extracted as follows:

'B. The complementary 'redway' network alongside the grid roads allows for the safe and efficient movement of pedestrians and cyclists through MK, with grade separated crossings of the grid roads via bridges or underpasses.

C. Opportunities for extending the grid road system design and redway super network route into any major new development areas will be required to ensure that the grid continues to function effectively and sufficient land/corridors are safeguarded for future highway/transit links around the district to accommodate and manage increased travel demands changing and future travel demands. The Council will also seek to extend grid roads and redway super network route to link with new cross-boundary developments. New grid roads should also include green infrastructure buffers to improve air quality, reduce noise and vibration and enhance the landscape and result in a net gain in biodiversity.

D. New grid roads will be designed with the following characteristics:

1. *Grid roads will run in generous multi-functional green infrastructure reservations (which are designed to allow for future upgrading to dual carriageways if and when required);*
2. *Grid roads will also accommodate main services, and landscaping of appropriate road surfaces to protect adjacent development from the noise and visual intrusion of traffic and five a green character to the road. Where possible, grid roads will incorporate a bund providing additional protection;*
3. *Grid roads will also be designed for use by public transport and for alternative forms of transport if required [eg electric cars/driverless cars], with bus laybys at intersections with pedestrian bridges and underpasses and controlled crossings where appropriate;*
4. *Grid Road Reserves will be identified in order to safeguard further potential extension of the grid and enable future development to access the grid;*
5. *Grid road reservations should be 80m in width where residential is on each side and 60m where other land uses occur; and*
6. *Junction spacings will be set out as in MK Planning Manual. Redways should be setback 3m from the carriageway.*

3.7 Note parts 7-9 of Policy CT8 are not shown as these are not relevant to the context of the proposed development and the Appeal Site.

Proposed Site Access Arrangements

3.8 The proposed site access arrangement from Brickhill Street in the form of a 60m ICD roundabout is retained in accordance with the original TA. The 'Proposed Site Access Roundabout and Dual Carriageway Link to the A5' drawing (**SCD-BWB-GEN-01-DR-TR-001-S2-P12**) has however been updated to include annotation of the geometric design standards of the junction and to provide consistency with the Grid Road Reserve drawing detailed in 3.10 below.

3.9 The proposed carriageway dualling along Brickhill Street between the A5 and proposed site access is the same as that presented in the original TA.

V10 Brickhill Street Grid Road Reserve

3.10 A V10 Brickhill Street Grid Road Reserve drawing has been produced in accordance with MKC Highways' comments as follows:

i. Land to the rear (west) of the Anglian Water compound has been safeguarded to enable the provision of an 'on-line' Redway route in the future alongside Brickhill Street.

ii. A 40 metre Inscribed Circle Diameter (ICD) roundabout is shown indicatively at the junction of V10 Brickhill Street and Station Road to show that the Grid Road Reserve has sufficient land to facilitate improving the junction in the future.

3.11 **Appendix D** contains a copy of the notes from the meeting between MKC, SMT, BWB, DLP and the Appellant held on 31st October 2019 following receipt of MKC Highways' Observations Note on 20th August 2019. One of the outcomes of the meeting was clarification of the extent of the grid road reserve and that this should be a minimum of 30 metres to the west of the centreline of the proposed dual carriageway. It should accommodate a 7.3m carriageway, 3m verge, 3m Redway and further buffer of 15m to the development site boundary to accommodate landscaping requirements.

3.12 The proposed extent of the Grid Road Reserve along Brickhill Street is shown on Drawing **SCD-BWB-GEN-01-DR-TR-006-S2-P6** appended to this report. The future realignment of Brickhill Street, the future Redway alongside Brickhill Street and the 40 metre ICD roundabout at the junction with Station Road are all shown indicatively. As agreed in October's meeting, the land to be reserved adjacent to the proposed development is a minimum of 30m from the centreline of a central reserve of the indicative Brickhill Street. This demonstrates that the proposed development would not preclude the entirety of Brickhill Street being upgraded to Grid Road Standard in the future.

3.13 The land shown hatched in purple on the Grid Road Reserve Drawing would be transferred to MKC to enable them to control the delivery of the potential future upgrade of Brickhill Street to Grid Road Standard. This is consistent with the proposed Parameters Plan, which has been updated accordingly and is provided in **Appendix E** to this report.

Summary

3.14 This section of the TA Addendum further demonstrates that the proposed development is planned in accordance with Plan:MK Policies SD14 and CT8.

4.0 PUBLIC TRANSPORT STRATEGY

Introduction

4.1 The Officer Report for MKC Development Control Committee for application 19/01818/OUT states;

> *"7.40 The submitted Transport Assessment refers to public transport provision in Paragraphs 7.7-7.11, but there is no commitment to services. MKC Highways Officers response states that it is essential that a frequent service, from early morning to late evening, including weekends, is provided to this site given its likely round-the-clock operation. A consultation response from MKC Public Transport Officers has requested provision of a financial contribution towards a bus service at the site. Negotiations on these issues have not been concluded so at present there is no financial contribution secured in relation to this, which would be considered unacceptable, contrary to Plan: MK policy CT5."*

4.2 Whilst the Appellant has not been provided with the consultee response made by MKC Public Transport Officers regarding the level of provision of a financial contribution, **the Appellant confirms that a financial contribution towards public transport provision will be made. This is being discussed with officers and will be set out in the S106 Agreement**.

Context

4.3 With an estimated 2540 full time equivalent jobs expected to be generated at the site once the development is fully operational, there is significant potential for a sustainable public transport solution.

4.4 Historically, similar sites have developed in out of town location due to their size and infrastructure requirements. At the same time, the demographics and range of skills means that driving is not always a possibility. As a result, occupiers often tend to provide their own work buses or minibuses. This means that employees can be guaranteed transport, particularly at the various shift times, which are currently unknown.

4.5 The full site extents are within 1km of Bow Brickhill Station, which is on the Marston Vale Line and is served by hourly services between Bletchley and Bedford, Monday to Saturday only. Milton Keynes Central is accessible via rail with a change at Bletchley Station. The proposal includes a Redway (foot/cycleway) connection between the site and Bow Brickhill Station to cater for journeys to work by rail.

Bus Strategy

4.6 The proposed site access arrangements from Brickhill Street have been designed to accommodate HGV access and therefore bus access is also catered for. An internal roundabout is provided within the site, which will facilitate a bus service entering and exiting the site.

4.7 In accordance with the original TA, the existing Vale Travel bus services 11/12 will be extended to the site. These services operate at a 30-minute frequency on weekdays between approximately 06:30 and 17:30 and on Saturdays between 07:30 and 17:30. There is currently no service on Sundays. The operating period of the services would be extended to cover the shift patterns of future occupiers. Shift patterns for industrial uses are generally as follows:

- 06:00 – 14:00 (morning shift)
- 14:00 – 22:00 (afternoon shift)
- 22:00 – 06:00 (overnight shift)

4.8 Therefore, the bus services would cater for people arriving and departing during shift changeover times (06:00, 14:00 and 22:00) as well as lesser numbers of people working typical office hours of 09:00 – 17:00. During the inter-shift (interval) periods, the buses could be used to operate a more traditional timetable pattern linked to the existing 11/12 services.

4.9 In terms of coverage, the services 11/12 provide access to/from Central Railway Station in Central Milton Keynes and pass through existing residential areas located on the eastern side of the town. The journey time between Central Railway Station (Stop Y4) and Tilbrook Roundabout on Service 11 is approximately 28 minutes. The journey time between Caldecotte Lake Drive and Central Railway Station (Stop Y4) on Service 12 is approximately 30 minutes. Therefore, it is anticipated that the proposed extension of these services to the Appeal Site would results in a journey time for users of slightly over 30 minutes in each direction.

4.10 The Appellant is committed to providing a financial contribution towards public transport provision to ensure the above bus service provision can be implemented ready for first occupation. This will be secured financially via the S106 Agreement.

5.0 VISSIM MODELLING RESULTS AND MITIGATION

Introduction

5.1 This section of the TA Addendum provides a summary additional VISSIM modelling assessment and discussions that have taken place between BWB and Highways England (HE) since the submission of the planning application. It presents the results of the most up to date VISSIM modelling, which supersede the findings summarised in paragraphs 7.13 to 7.32 of the original TA report. At the time of writing, the modelling and associated mitigation design is still under consideration by HE.

5.2 A timetable of discussions associated with the A5 Kelly's Kitchen Roundabout (KKR) VISSIM modelling assessment and associated mitigation proposals since the planning submission is listed chronologically below (from the end of January 2020 to most recent):

- **29th January 2020** – HE issues Holding Recommendation to MKC Planning requested that planning permission not be granted for a specified period owing to outstanding issues with the VISSIM modelling work. AECOM **Technical Note 7** detailing VISSIM model review submitted alongside recommendation identifying perceived significant issue with the forecast scenarios not replicating the accompanying report.

- **4th February 2020** – BWB responds to HE in (Ref. SCD-BWB-GEN-XX-RP-TR-005_TN) 'Forecast VISSIM Model Technical Note' informing them of changes made to the forecast model along with updated results showing the proposed development impact. This included mitigation in the form of a two-lane exit merge on the north arm at Tilbrook Roundabout and alteration to the road markings included in the Eaton Leys mitigation proposals at Kelly's Kitchen Roundabout.

- **24th March 2020** – HE issues AECOM **Technical Note 9** (dated 20th March 2020) in which they perceive two significant issues with the VISSIM models in the forecast scenarios. The first issue was AECOM has observed excessive queuing inside the roundabout, resulting in unrealistic operation and second issue being the use of different signal controllers between the Do Minimum and Do Something scenarios preventing a like for like comparison of the mitigation proposals.

- **26th March 2020** – The Appellant, BWB, HE and AECOM attend a video conference call to discuss outstanding issues with the VISSIM model.

- **2nd April 2020** – BWB responds to HE in (Ref. SCD-BWB-GEN-XX-RP-TR-010) 'Revised Forecast Model Technical Note' addressing outstanding VISSIM model coding issues and reporting the updated results of the assessment. BWB concluded that the proposed development impact at the Opening Year would not be severe and the proposed improvements would offset journey time impacts on all but two routes through the junction.

- **27th April 2020 -** HE issues AECOM **Technical Note 10** (dated 24th April 2020) and agree no issues with the models that require further attention. However, HE considered the model to show that the development would result in a severe impact in queuing on the A5 (South) approach and recommend further mitigation is considered.

- **14th May 2020** – BWB responds to HE in (Ref. SCD-BWB-GEN-XX-RP-TR-013_TN) 'VISSIM Model & Mitigation Technical Note' informing them of additional mitigation proposals to supplement the Eaton Leys mitigations scheme at the A5 KKR to offset the cumulative impact of the South Caldecotte development proposals.

- **3rd June 2020** – HE informs Appellant/BWB that whilst Gallagher Estates Limited has entered into a S278 Agreement with HE to deliver the KKR scheme, this may never be implemented. There is no trigger contained in the Eaton Leys planning permission (15/01533/OUTEIS) or S106 Agreement. However, Annex A of HE's formal recommendation response to said application states that:

  > *"A technical note has been submitted to the Local Planning Authority in support of the planning application which provides an initial forecast of when the need for the improvement to the A5/A4146 roundabout is expected to arise. On the basis of the occupations commencing in 2019 and continuing linearly to 2020, the need for the intervention is forecast to arise in 2021, prior to the occupation of the 629th residential unit".*

  The trigger being the 629th residential unit is of significance because the HE recommendation was applicable for the application of 1800 units split across MKC and Aylesbury Vale local plan authorities, of which 600 units (in MKC) have been granted planning permission. The application for the remaining 1200 units in Aylesbury Vale was subsequently withdrawn by Gallagher Estates. Therefore, the Eaton Leys development can be completely built out (600 units) without triggering the need to implement the S278 improvements sponsored by Gallagher Estates Limited.

- **19th June 2020** – BWB informs HE by email that they have considered the cumulative traffic impact of the South Caldecotte development excluding the Eaton Leys S278 scheme. BWB submits a summary of revised VISSIM modelling results reflecting this along with a standalone mitigation drawing for the A5 KKR.

- **26th June 2020** – BWB and the Appellant attend a video conference call with HE and AECOM. It was agreed that the Eaton Leys mitigation scheme at the A5 Kelly's Kitchen Roundabout should not be treated as committed and instead the opening year base assessment should only include the existing layout of the junction with committed development traffic (including 600 units Eaton Leys traffic). HE raised concerns regarding the mitigation drawing submitted on 19th June due to encroachment on central reservations and crash barriers. BWB submits the updated Forecast VISSIM model files supporting this assessment submitted on 19th June 2020 and agrees to revise the mitigation drawing to offset the impact on the available width for the central reservation on the A5 approach arms.

- **6th July 2020** – HE issues AECOM **Technical Note 11** (dated 3rd July 2020) responding to BWB TN 'SCD-BWB-GEN-XX-RP-TR-013' submitted on 14th May. Alongside this, HE issues **Technical Note 12** (dated 2nd July 2020) focusing on the associated mitigation design (for the with Eaton Leys Highways scheme – which is no longer being provided).

- **9th July 2020** – BWB sends HE revised mitigation drawing for A5 junction to HE along with supplementary drawings showing visibility and HGV swept paths. These drawings are currently under review by HE.

5.3 The only change to the VISSIM assessment since the original TA is the omission of traffic flows associated with the Land South of A5 (also known as Levante Gate) development in the baseline modelling scenarios, as this scheme is no longer committed in that it is not allocated and was refused planning permission. This has been agreed in principle with HE.

5.4 Following this introductory section, this chapter provides an overview of the modelled VISSIM network, the reasoning for further mitigation at Tilbrook Roundabout and summarises the results and associated mitigation proposals at the A5 KKR for both with and without the Eaton Leys improvements scheme.

Extent of VISSIM Model Network

5.5 The extent of the VISSIM model network under existing conditions is illustrated in **Figure 4** below.

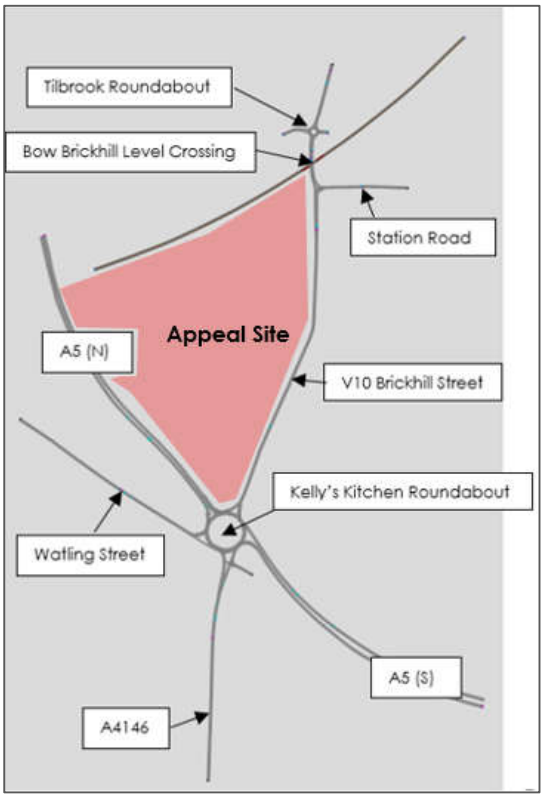


Figure 4: Extent of VISSIM Model Network

Tilbrook Roundabout Impact and Mitigation Proposals

5.6 Tilbrook Roundabout was assessed as a standalone junction as part of the original TA using Junctions 9 software. This accounted for the committed highway scheme associated with the Red Bull Racing (RBR) development, which includes extending the flare on the southbound approach to extend the two-lane approach and provision of a second egress lane on the site access arm. The RBR scheme is provided in order to facilitate additional diverted traffic to and from the roundabout as a result of a stopping-up order on Bradbourne Drive and to improve access to the Red Bull site to the east, following the removal of the existing car park. Red Bull has entered into a S278 Agreement with MKC dated 20 December 2019 to undertake the improvement works to the roundabout. The works are programmed to be carried out in summer 2020.

5.7 As detailed in the original TA, the standalone assessment shows that the junction is expected to operate with a maximum Ratio Flow to Capacity (RFC) value of 0.85 in the weekday morning peak hour on the V10 Brickhill Street (South) approach arm in the '2023 Base + Committed Development scenario'. This was shown to rise to 0.91 RFC on the same approach arm with the additional of development traffic.

5.8 It was concluded that the proposed development traffic impact at the junction was immaterial and this was agreed with MKC Highways and therefore no mitigation was required.

5.9 Notwithstanding this, owing to the nature of the Junctions 9 standalone assessment, it does not take into consideration wider implications of lane usage and the fact that there is only one exit lane northbound on Brickhill Street. Subsequently, when the junction has been assessed as part of the VISSIM model network, queueing was observed on the northbound Brickhill Street approach to the junction. This was attributed to vehicles only being able to use one lane to exit northbound. Therefore, a highway improvement is proposed at the junction in the form of widening the northbound exit from the roundabout to two lanes for 30 metres. As shown in **Figure 4** above, this improvement is included in both of the 'with mitigation network' models.

5.10 Drawing **SCD-BWB-GEN-XX-DR-TR-008-S2-P1** is appended to this report and provides a preliminary design for the improvement to Tilbrook Roundabout, which is in addition to the Red Bull Racing scheme improvements and will offset the impact associated with the proposed development. The drawing demonstrates that the additional mitigation proposals at the junction can be achieved within the extent of the adopted highway. **The improvement work can be conditioned to be delivered prior to first occupation of the development through a Highways Act S278 Agreement with MKC**

A5 Kelly's Kitchen Roundabout Impact and Mitigation Proposals (with Eaton Leys Scheme)

Eaton Leys Improvements to A5 Kelly's Kitchen Roundabout

5.11 Notwithstanding more recent comments made by Highways England and consistent with the original TA, BWB initially assessed the cumulative impact of the proposed development based on a VISSIM model including the Gallagher's improvement scheme at the A5 Kelly's Kitchen Roundabout in the 2023 and 2031 'Base + Committed Development' scenario.

5.12 Gallagher's scheme proposals include the provision of additional lanes and signalisation of the circulatory carriageway and approach lanes, alterations to the road markings and additional streetlights at the junction. Details of the scheme are shown on CH2MHILL 'Eaton Leys Roundabout General Arrangement Drawing 1 of 1' Ref. **481693.01.GA01** provided in **Appendix E** of this report. **Figure 5** provides an aerial view of the VISSIM model at the A5 KKR with the Eaton Leys improvement scheme.

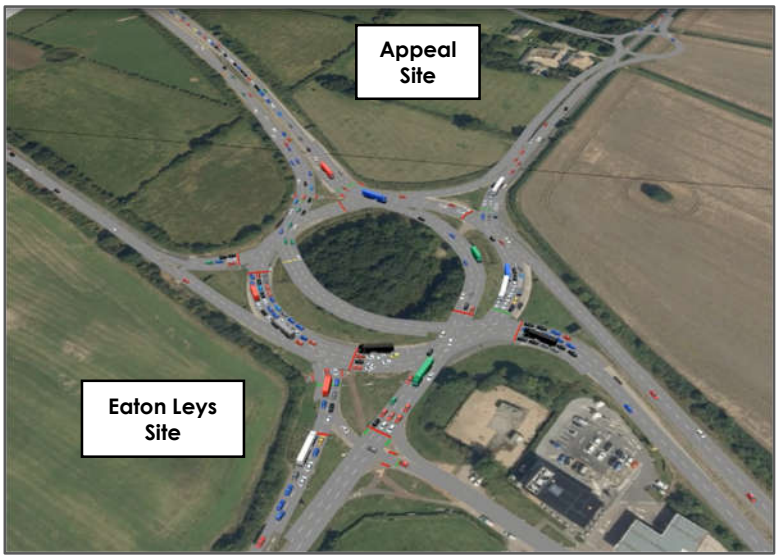


Figure 5: VISSIM Model at Kelly's Kitchen Roundabout with Eaton Leys Mitigation

Supplementary Improvements to Eaton Leys Scheme to Offset Cumulative Impact of South Caldecotte Development

5.13 BWB has undertaken an iterative VISSIM modelling process in order to identify the requirement for any additional mitigation at the A5 Kelly's Kitchen Roundabout to offset the traffic impact of the proposed development at the planned opening year (2023) in accordance with Highways England guidance. The traffic impact has been considered in terms of journey times, queuing, and delay.

5.14 The proposed additional improvements to the A5 Kelly's Kitchen Roundabout scheme are shown on Drawing **SCD-BWB-GEN-01-SK-TR-SK01-S2-P2** appended to this report and are summarised as follows:

i. Road marking change on A5 southbound approach (north arm) left lane from 'Left only' to 'Ahead/Left';

ii. Road marking change on circulatory (between A5 north arm and Brickhill Street) to allow for nearside lane 'Ahead' movement;

iii. Dualling of Brickhill Street between A5 and proposed site access (as part of the proposed site access arrangements); and

iv. A4146 approach widened from two to three lanes for 50 metres.

5.15 The impact of the above additional mitigation at the junction is reflected in the VISSIM Network Modelling Results presented below.

VISSIM Network Modelling Results (Including Eaton Leys Scheme)

5.16 This section presents the results associated with the revised VISSIM modelling accounting for the Eaton Leys scheme at the A5 Kelly's Kitchen Roundabout in the 'with committed scenario' and thereafter the supplementary mitigation to offset the impact of the South Caldecotte development.

5.17 The results are presented in terms of the overall impact on the performance of the modelled network, impacts on journey times through the network and queue comparisons.

5.18 In accordance with the original TA and HE policy relating to development impact on the Strategic Road Network (SRN)[2], the assessment covers the Opening Year (2023) - assuming full build out and occupation, and the Future Year (2031) – representing the end of the Local Plan period. The assessment at opening is used for the determination of impact mitigation needs whilst the latter is necessary to determine the risk that will transfer to HE.

5.19 For each of the assessment years, the results include the following scenarios for each weekday peak hour:

- **Base** = includes the surveyed traffic flows growthed to the assessment year, plus committed development traffic and the Eaton Leys improvements scheme at the A5 Kelly's Kitchen Roundabout.
- **Base + Development** = is the Base flows plus the proposed development traffic with no additional mitigation.
- **Base + Development + Mitigation** = is the Base + Development flows plus the proposed additional mitigation.

Overall Network Performance

5.20 Ten iterations of each of the models were run starting at a random seed of 42 and increasing by 5 each iteration. The network performance parameter 'average delay per vehicle' was obtained for each run. The mean value for 10 runs was found for each option and the average was selected for calibration, however where network instability was found, anomalies were removed and the seed closest to the 'average delay per vehicle' was used for output.

5.21 A summary of the overall network performance for the various modelling scenarios is shown in **Table 1** below. The rows highlighted show the Opening Year results without and with mitigation and are considered key for comparison in accordance with HE policy.

Table 1: Overall VISSIM Network Performance Comparison (including Eaton Leys Scheme)

	AM				PM			
	Delay (s)	Speed (mph)	Veh Arr	Latent Demand	Delay (s)	Speed (mph)	Veh Arr	Latent Demand
2023 Base	209	14	6645	1118	198	15	6268	926
2023 Base + Dev	218	13	6832	1469	202	14	6469	1148
2023 Base + Dev + Mitigation	170	16	7380	956	145	18	7224	154
2031 Base	243	12	6762	1757	212	14	6416	1588
2031 Base + Dev	255	12	6909	2127	213	14	6603	1832
2031 Base + Dev + Mitigation	221	13	7450	1526	172	16	7379	762

5.22 The results shown that in 2023 without additional mitigation, the development would increase the delay by 9 seconds and 4 seconds per vehicle in the morning and evening

[2] The strategic road network, Planning for the future, A guide to working with Highways England on planning matters (September 2015)

peak hours respectively. Average vehicle speeds would reduce, and latent demand would increase.

5.23 The introduction of the mitigation proposals, including further mitigation at A5 Kelly's Kitchen Roundabout would benefit the overall performance of the network significantly, with reductions in delay and increases in average vehicle speeds during both the both the weekday morning and even peak hours.

Journey Time Comparison

5.24 In addition to overall network performance, journey times have been assessed between markers on the network periphery points and the 'give-way' markers at Kelly's Kitchen Roundabout. The locations of these markers on the network are shown in **Figure 6.**

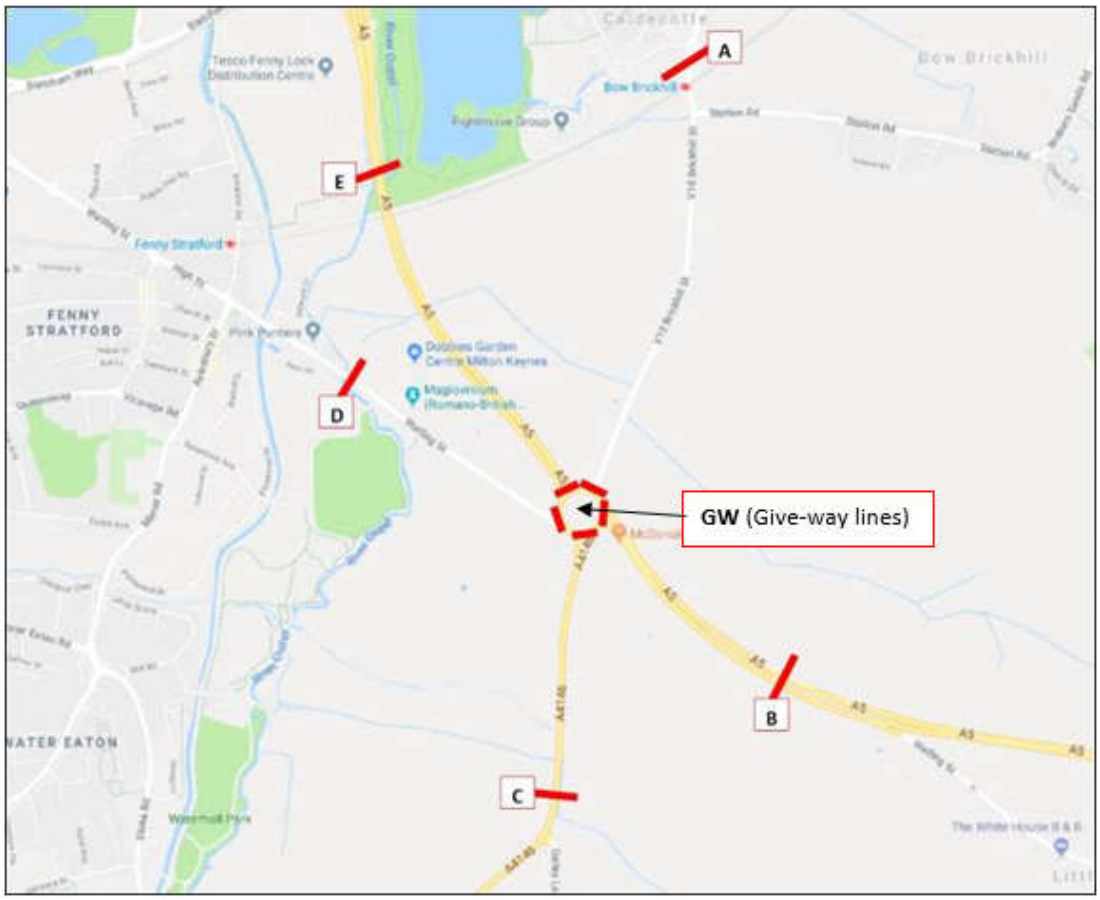


Figure 6: VISSIM Model Journey Time Markers

5.25 The tables below present the results for the 2023 and 2031 base and with development scenarios. A summary of the average and cumulative journey times through each arm of the junction is presented in **Table 2** for the various assessment scenarios during both the weekday morning and evening peak hours.

Table 2: Cumulative Journey Time (in seconds) Comparison without and with mitigation (including Eaton Leys Scheme)

	AM										PM									
	2023 DM	2023 DS	2023 DS + Mit	2023 DS - 2023 DM	2023 DS + Mit - 2023 DM	2031 DM	2031 DS	2031 DS + Mit	2031 DS - 2031 DM	2031 DS + Mit - 2031 DM	2023 DM	2023 DS	2023 DS + Mit	2023 DS - 2023 DM	2023 DS + Mit - 2023 DM	2031 DM	2031 DS	2031 DS + Mit	2031 DS - 2031 DM	2031 DS + Mit - 2031 DM
Brickhill Street	99	100	101	1	2	99	99	101	0	1	100	103	104	3	4	101	103	105	2	4
A5 South	100	105	93	5	-8	135	146	134	11	-1	38	39	39	1	1	39	39	39	0	0
A4146	273	330	276	57	3	294	353	280	58	-14	158	209	163	51	5	230	284	212	55	-17
Wattling Street	74	75	73	1	-2	86	115	80	29	-6	73	68	68	-5	-4	79	83	80	4	1
A5 North	459	471	326	11	-134	521	507	464	-14	-57	562	572	278	10	-284	593	582	350	-11	-243
Cumulative JT	1006	1081	868	75	-138	1135	1220	1058	85	-77	931	991	653	60	-278	1042	1092	786	50	-255

5.26 The highlighted columns show the impact of the proposed mitigation on journey times through the junction during the morning and evening peak hours respectively, in the 2023 Opening Year scenario.

5.27 As can be seen, without any of the proposed mitigation, the development would result in cumulative increases in journey times across the network of 75 seconds and 60 seconds during the weekday morning and evening peak hours respectively. However, with the mitigation proposals, there would be an overall cumulative decrease in journey times by 138 seconds and 278 seconds respectively.

5.28 In the future year (2031), the junction would also experience significant reduction in journey times as a result of the mitigation proposals.

Queue Comparison

5.29 In addition to overall network performance and journey times, this section presents the VISSIM modelling results in terms of average and maximum queues on all approach arms to the A5 Kelly's Kitchen Roundabout.

5.30 **Table 3** provides a comparison of the difference in **average** queue lengths (PCUs) on all approach arms to the junction in the peak hours at both 2023 and 2031.

Table 3: Average Queues Comparison (PCUs) – Including Eaton Leys Scheme

Average Queue (PCU)							
Queue Counter	Approach arm	2023 AM DM	2023 AM DS	Difference	2023 PM DM	2023 PM DS	Difference
1	Brickhill Street	1	1	0	1	1	0
2	A5 South	47	44	-3	2	2	0
3	A4146	71	71	0	43	43	0
4	Wattling Street	4	3	-1	4	3	-1
5	A5 North	85	77	-8	85	70	-15

Average Queue (PCU)							
Queue Counter	Approach arm	2031 AM DM	2031 AM DS	Difference	2031 PM DM	2031 PM DS	Difference
1	Brickhill Street	1	1	0	1	2	1
2	A5 South	71	67	-4	2	2	0
3	A4146	73	72	-1	65	58	-7
4	Wattling Street	6	5	-1	6	6	0
5	A5 North	85	81	-4	86	79	-7

5.31 The results demonstrate that the mitigation proposals would not result in any increases in the average queuing in either of the peak hours in 2023. The bottom part of the table also shows that this would continue to be the case in 2031, which is an added benefit.

VISSIM Network Modelling Results (Excluding Eaton Leys Scheme)

5.32 As noted in the introduction to this chapter, HE notified the Appellant that whilst the Eaton Leys roundabout improvements are consented and a S278 Agreement (dated 03 July 2019) in place with Gallagher Estates Limited, its delivery is only required at a trigger of 629 dwellings.

5.33 At the time, the scheme was developed to also accommodate the Aylesbury Vale element of Eaton Leys development (1,200 dwellings), this application was subsequently withdrawn and therefore not committed in planning terms. As Eaton Leys consent in Milton Keynes is only for 600 dwellings, the roundabout scheme is unlikely to be delivered by Gallagher Estates as part of the Eaton Leys development.

5.34 In light of this, HE has since agreed that the Eaton Leys mitigation scheme at the A5 KRR should not be included in the 2023 base scenario and instead this should include assessment of the existing roundabout layout with committed development (including the 600 dwellings from Eaton Leys). Thereafter, a separate scenario including the South Caldecotte development identifies the mitigation needed at the junction relative to the proposed development impact.

5.35 Therefore, this section of the TA Addendum presents the VISSIM modelling results excluding the Gallagher's S278 scheme at the junction in the Base scenario and including a new mitigation scheme to offset the cumulative traffic impacts of South Caldecotte development.

5.36 The assessment without the Eaton Leys scheme including in the base scenarios has been undertaken at the proposed Opening Year (2023) - assuming full build out and occupation, which is used to determine the impact mitigation needs. The results include the following scenarios for each weekday peak hour:

- **Base** = includes the surveyed traffic flows growthed to the Opening Year (2023), plus committed development traffic based on the **existing layout**.

- **Base + Development** = is the 'Base' scenario flows (including committed development flows) plus the South Caldecotte Development (including Brickhill Street dualling and site access roundabout), excluding offsite highways mitigation.

- **Base + Development + Mitigation** = is the 'Base + Development' scenario flows plus the mitigation proposals at Tilbrook Roundabout and the proposed A5 junction mitigation as shown on **Drawing SCD-BWB-GEN-01-SK-TR-SK02_Kelly's Kitchen Roundabout_S2_P3**.

5.37 As above, the proposed mitigation scheme is shown on **Drawing SCD-BWB-GEN-01-SK-TR-SK02_Kelly's Kitchen Roundabout_S2_P3** and includes increasing the flare on the A5 (N) approach arm and widening of the A5 (S) approach to create a fourth lane along with associated changes to white lining, hard strips and the inner circumference of the roundabout between the A5(S) and A4146.

5.38 **Drawing SCD-BWB-GEN-01-SK-TR-SK03_Kelly's Kitchen Roundabout Visibility Splays_S2_P3** has also been produced at the request of Highways England, as has Drawing **SCD-BWB-GEN-01-SK-TR-SK04_Kelly's Kitchen Roundabout (HGV Swept Paths)_S2_P3**.

Overall Network Performance

5.39 Again, 10 iterations of each of the models were run starting at a random seed of 42 and increasing by 5 each iteration. The network performance parameter 'average delay per vehicle' was obtained for each run. The mean value for 10 runs was found for each option and the average was selected for calibration, however where network instability was found, anomalies were removed and the seed closest to the 'average delay per vehicle' was used for output.

5.40 A summary of the overall network performance for the three scenarios is shown in **Table 4** below. The rows highlighted show the results that should be compared.

Table 4: Overall VISSIM Network Performance Comparison (excluding Eaton Leys Scheme)

	AM				PM			
	Delay (s)	Speed (mph)	Veh Arr	Latent Demand	Delay (s)	Speed (mph)	Veh Arr	Latent Demand
2023 Base	176	16	6822	820	144	19	6901	117
2023 Base + Dev	189	15	7087	1074	157	17	7076	296
2023 Base + Dev + Mitigation	149	17	7404	771	135	19	7266	128

5.41 The results show that with the development and mitigation proposals (SK02), delay through the overall network would reduce and average vehicle speeds increase slightly (morning peak) or stay the same (evening peak).

Journey Time Comparison

5.42 Again, journey times have been assessed between markers on the network periphery points and the 'give-way' markers at Kelly's Kitchen Roundabout as shown on **Figure 6** presented previously.

5.43 Table 5 provides a summary of the average and cumulative journey times through each arm of the junction for the assessment scenarios during both the weekday morning and evening peak hours in the opening year.

5.44 The highlighted columns show the cumulative impact of the development following implementation of the proposed mitigation scheme. As can be seen, the development would result in a cumulative decrease in average journey times through the junction of -37 in the morning peak hour and -30 seconds in the evening peak hour.

Table 5: Cumulative Journey Time (in seconds) Comparison without and with mitigation (excluding Eaton Leys Scheme)

	AM					PM				
	2023 DM	2023 DS	2023 DS + Mit	2023 DS - 2023 DM	2023 DS + Mit - 2023 DM	2023 DM	2023 DS	2023 DS + Mit	2023 DS - 2023 DM	2023 DS + Mit - 2023 DM
Brickhill Street	99	107	108	7	9	215	168	194	-47	-21
A5 South	361	402	313	41	-49	43	42	46	-2	3
A4146	199	199	201	1	2	171	173	178	2	7
Watling Street	64	63	66	0	2	57	62	62	5	5
A5 North	58	60	57	1	-1	231	298	207	67	-24
Cumulative JT	781	831	744	50	-37	718	743	688	26	-30

Queue Comparison

5.45 This section presents the VISSIM modelling results in terms of average queues on all approach arms to the A5 Kelly's Kitchen Roundabout excluding the Eaton Leys scheme.

5.46 **Table 6** provides a comparison of the difference in **average** queues (PCUs) on all approach arms to the junction in the peak hours in 2023.

Table 6: Average Queues Comparison (PCUs) – excluding Eaton Leys Scheme

Average Queues (PCU)							
Queue Counter	Approach arm	2023 AM DM	2023 AM DS + Mit	Difference	2023 PM DM	2023 PM DS + Mit	Difference
1	Brickhill St	2	2	0	35	19	-16
2	A5 S	82	77	-5	3	3	0
3	A4146	62	63	1	48	50	2
4	Watling Street	2	3	1	2	3	1
5	A5 N	6	4	-2	73	62	-11

5.47 The results show that the mitigation proposals would offset the impact of the proposed development on average queue lengths on the A5 arms with negligible increases 1 or 2 PCUs on the minor arms. An average increase of up to 2 PCUs on the A4146 arm and 1 PCU on the Watling Street arm is not considered a severe impact, particularly taking into account the wider average journey time savings through the junction.

Summary of Traffic Mitigation Proposals

5.48 As a result of the revised VISSIM modelling the following mitigation schemes are proposed to offset the traffic impact of the proposed development:

i. **Tilbrook Roundabout** – provision of a two-lane exit merge for northbound movements on Brickhill Street for 30m (see Drawing **SCD-BWB-GEN-XX-DR-TR-008-S2-P1**). This improvement is proposed in addition to the S278 works secured as part of the Red Bull Racing development. **The improvement work can be conditioned to be and delivered prior to first occupation of the development through a S106 or Highways Act S278 Agreement with MKC.**

ii. **A5 Kelly's Kitchen Roundabout** – further to the information detailed in paragraph 5.32 of this report, there is currently no enforceable trigger for the Gallagher's S278 scheme to be built out and therefore it cannot be considered 'committed' scheme in planning terms. In light of this, the mitigation scheme described at paragraph 5.35 and on **Drawing SCD-BWB-GEN-01-SK-TR-SK02_Kelly's Kitchen Roundabout_S2_P2** would be implemented to off-set the impact of the development. **The improvement work can be conditioned to be and delivered prior to first occupation of the development through a S106 or Highways Act S278 Agreement with HE.**

5.49 In addition to the above, the proposed **Walton Park Roundabout** mitigation scheme presented in the original Transport Assessment will be required. This includes increasing the effective flare length to 20m on the north arm approach, increase the entry width to 10m and the flare to 25m on the east arm, and increase the effective flare length to 20m to allow for three lanes of entry on the south arm to the junction. Details of this scheme are shown on Drawing **SCD-BWB-GEN-01-DR-TR-005-S2-P2**, which remain unchanged since the original TA, but is appended to this TA Addendum for reference.

5.50 **MKC Highways has indicated that wider improvement works over and above the proposed mitigation works to the Walton Park Roundabout are necessary. The cost associated with implementing the Walton Park Roundabout improvements can be secured in the form of a financial contribution as part of the Section 106 Agreement and would be used towards implementing a wider improvement scheme by MKC Highways. The Applicant confirms their agreement to this approach.**

6.0 IMPACT ON WIDER STRATEGIC ROAD NETWORK (SRN)

Introduction

6.1 This section of the TA Addendum quantifies the impact of the proposed development on the wider SRN junctions following further discussions with HE and their consultants AECOM since the submission of the original TA report.

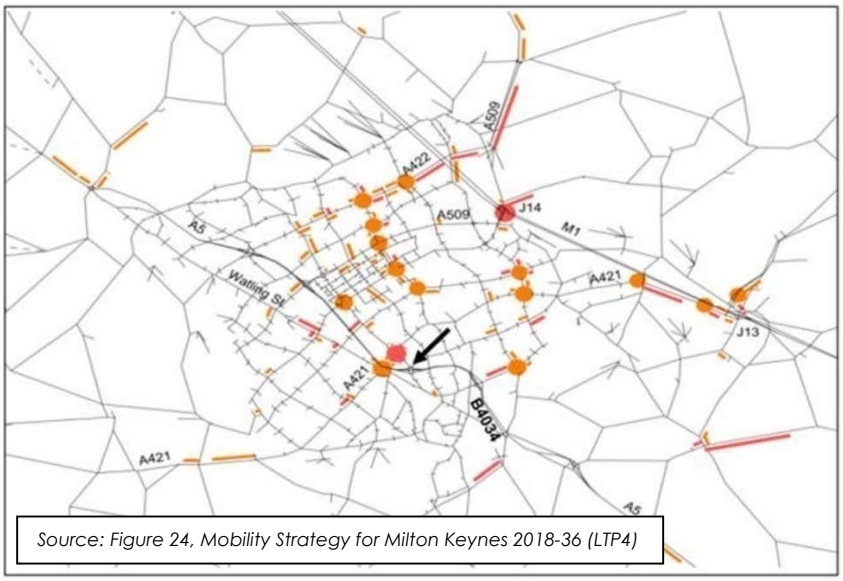
6.2 Following the agreement of proposed development trip generation and assignment with Highways England and MKC as part of the original TA, the development trips were distributed through each SRN junction and the trip impact identified.

6.3 In their Technical Note 06 response 'South Caldecotte Revised Transport Assessment Review' dated 24th January 2020, AECOM confirmed that junction capacity assessments were not required at A5 Portway Junction, A5 Monks Way junctions and M1 Junction 13. However, they recommend that a capacity assessment was undertaken at the A5 Redmoor Roundabout along with a Personal Injury Collision (PIC) analysis.

6.4 BWB responded to HE and AECOM on the A5 Redmoor Impacts in a Technical Note dated 5th February 2020. The following information was set out in the note.

Traffic Impact at A5 Redmoor Junction

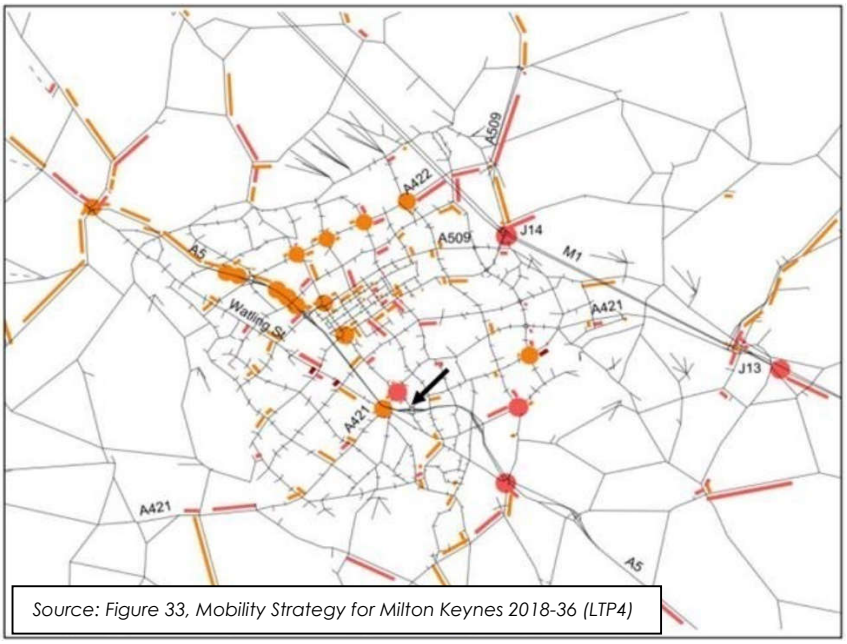
6.5 The A5 Redmoor roundabout was included in the study area of the MK Multi Modal Model, the results of which are presented in Chapter 5 of Mobility Strategy for Milton Keynes 2018-36 (LTP4) Detailed Context and Evidence Base. **Figure 7** below is an extract of Figure 24 taken from the document highlights congestion hot spots in Milton Keynes in the 2016 AM Base scenario and indicates that the A5 Redmoor roundabout operates with reserve capacity.



Source: Figure 24, Mobility Strategy for Milton Keynes 2018-36 (LTP4)

Figure 7: Congestion Hot Spots – 2016 AM Peak Link and Junction (v/c over 85%)

6.6 **Figure 8** below is an extract of Figure 33 from the Evidence Base and shows the same network in 2031 and indicates that the junction in question will continue to operate with reserve capacity in the future.



Source: Figure 33, Mobility Strategy for Milton Keynes 2018-36 (LTP4)

Figure 8: Congestion Hot Spots – 2031 AM Peak Link and Junction (v/c over 85%)

6.7 Based on the agreed 'light' vehicle and HGV trip distribution assumptions, only 15% of development traffic is expected to have an impact at the A5 Redmoor Roundabout junction i.e. trips travelling through the roundabout itself, rather than along the A5 mainline. The distribution percentages at the junction are presented on the traffic flow diagram present in **Figure 9**.

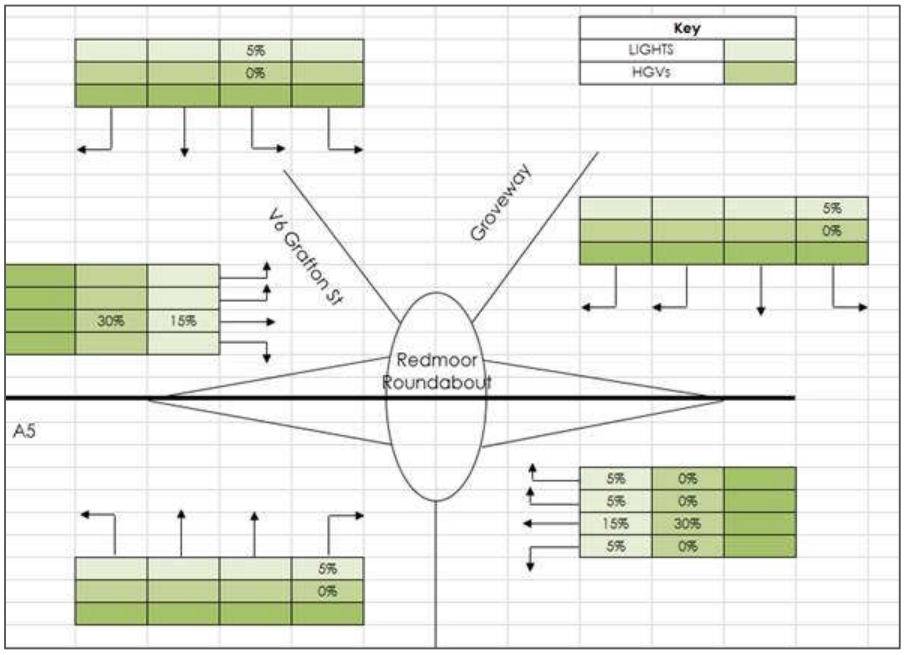


Figure 9: Proposed Development Traffic Distribution (%) through A5 Redmoor Roundabout

6.8 Based on the trip rates and generations agreed with AECOM and Highways England, the AM and PM Peak proposed development traffic assignment through the junction is shown in **Figure 10** and is split into light vehicles, HGVs and total PCUs.

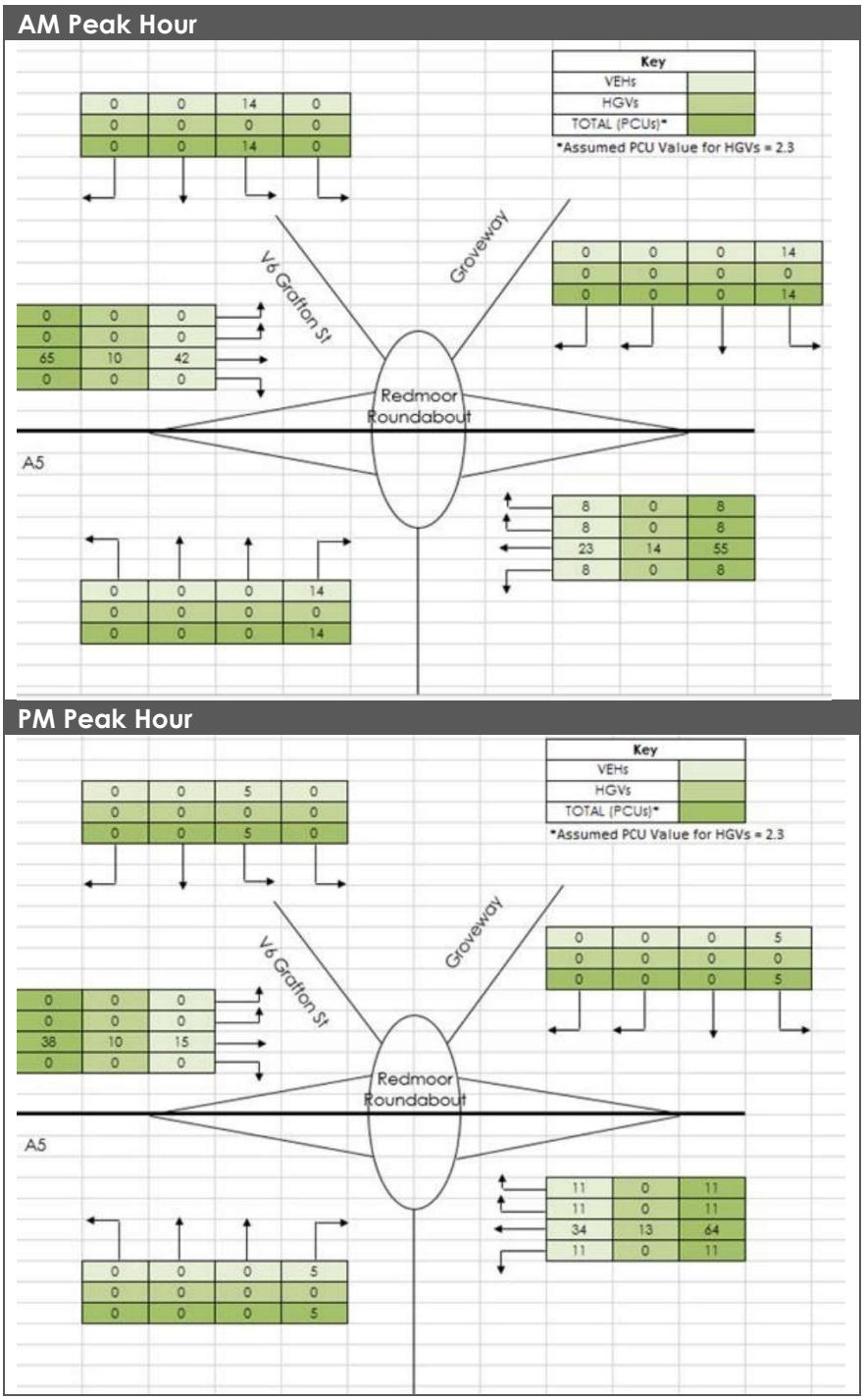


Figure 10: Proposed Development Traffic Assignment through A5 Redmoor Roundabout

6.9 In the AM Peak hour, of the 64 total vehicle movements having an impact at the A5 Redmoor junction, 24 vehicles will use the northbound off-slip with 14 vehicles approaching from V6 Grafton Street South, V6 Grafton Street North and Groveway. Therefore, the maximum impact at this junction would be at the northbound off-slip and this would be less than one vehicle every two minutes.

6.10 In the PM Peak hour, of the 49 total vehicle movements having an impact at the A5 Redmoor junction, 33 vehicles will use the northbound off-slip with 5 vehicles approaching from V6 Grafton Street South, V6 Grafton Street North and Groveway. Therefore, the maximum impact at this junction would be at the northbound off-slip and again this would be less than one vehicle every two minutes.

6.11 Based on the above evidence and taking into account the results of the MK Multi Modal Model, it is considered that the proposed development is unlikely to have a significant impact on this junction and therefore a full junction capacity assessment is not considered necessary.

A5 Redmoor Junction PIC Analysis

6.12 BWB reviewed PIC records for the junction covering the 5-year period 2014 to 2018 inclusive (most recently available) using Crashmap with the collision plot presented in **Figure 11** below. There have been 17 PICs recorded of which two (including one serious PIC) occurred on the mainline. There have been no fatalities recorded at the junction. The remaining 15 PICs are all of slight severity and located as follows:

- 2 PICs on the V6 Grafton Street NB approach;
- 1 PIC on the V6 Grafton Street SB approach;
- 2 PICs on the northern circulatory;
- 1 PIC on the Groveway NB exit;
- 1 PIC on Groveway SB approach;
- 1 PIC on eastern circulatory;
- 2 PICs on circulatory b/t northbound off-slip and V6 Grafton Street SB exit;
- 2 PICs on NB on-slip;
- 1 PIC on SB off-slip;
- 2 PICs on SB on-slip; and
- No PICs on NB off-slip.

6.13 The spread and severity of PICs across the junction indicates that there are no existing concerns relating to the operation of the junction in terms of highway safety.

6.14 Due to the low-level increase in vehicle trips during the peak periods at the junction, it is considered unlikely that the proposals at South Caldecotte would have a material impact on road safety at the A5 Redmoor junction.

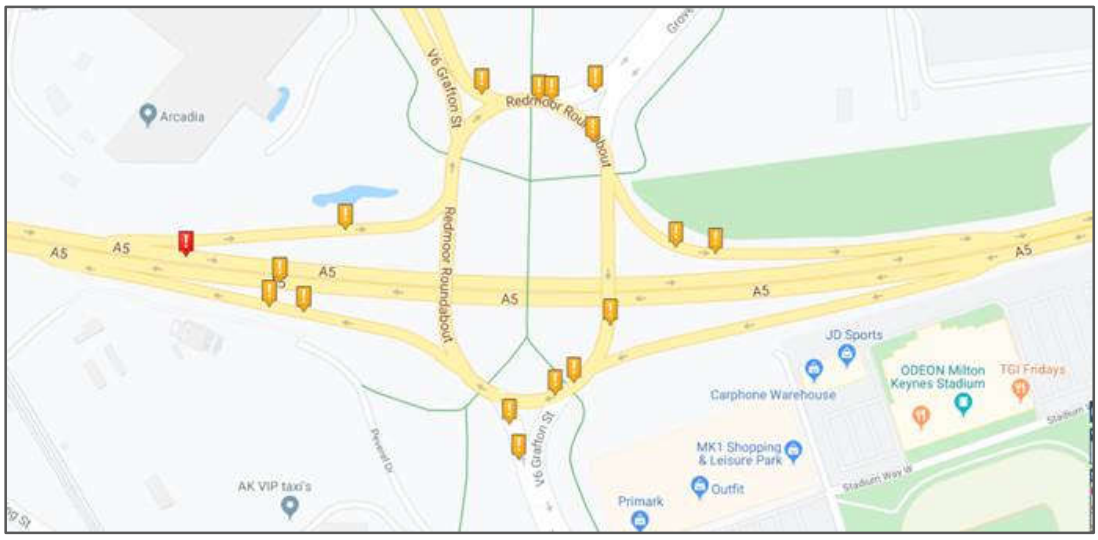


Figure 11: PIC Plot - A5 Redmoor Junction

Summary

6.15 Following review of the above additional information, AECOM and Highways England set out their response in a Technical Note dated 20th March 2020. In summary, this concluded that it would be unreasonable to request a more detailed assessment of the proposed development impact on the A5 Redmoor junction.

7.0 SUMMARY & CONCLUSIONS

7.1 BWB has been appointed by HB (South Caldecotte) Ltd to prepare this TA Addendum report in support of an outline planning application for employment development at the site located to the west of V10 Brickhill Street in South Caldecotte, Milton Keynes.

7.2 This TA Addendum build upon the work agreed as part of the original TA report (Ref. SCD-BWB-GEN-XX-RP-TR-001_Transport Assessment-S2-P10) also produced by BWB and dated 10th July 2019.

7.3 The proposals continue to comprise up to 2,600,000 sq.ft. (241,548 sq.m.) of B1(c)/B2/B8 land uses, which include storage, warehouse, distribution, light industrial and ancillary offices.

7.4 Vehicular access to the site is proposed via a 60m ICD roundabout in accordance with the original TA. This includes dualling the section of carriageway between the Appeal Site access and A5 Kelly's Kitchen Roundabout.

7.5 As part of the original TA, it has been agreed with MKC Highways that, to the north of the site access, Brickhill Street does not require to be upgraded to Grid Road Standard for capacity reasons. However, this report demonstrates that adequate land has been safeguarded by the Appellant to enable the road to be upgraded in the future if required. This includes land to the rear of the Anglian Water compound to facilitate a Super Redway Route and confirmation that a 40m ICD roundabout could be accommodated at the junction with Station Road. The extent of the safeguarded land is shown on the Parameters Plan.

7.6 The proposal includes a Redway Route through the site, which connects with existing Redway routes at the A5, to the south, and beyond Bow Brickhill level crossing, to the north. As above, adequate land has also been safeguarded to facilitate a Super Redway Route alongside Brickhill Street in the future when required as shown on Drawing **SCD-BWB-GEN-01-DR-TR-006-S2-P6** Brickhill Street Grid Road Reserve.

7.7 The Appellant confirms that a financial contribution towards public transport provision will be made. The level of public transport contribution is currently under discussion and will be secured as part of the S106 Agreement.

7.8 In accordance with the findings of the original TA, a highway mitigation scheme is proposed at the Walton Park Roundabout. These off-site highway works will also be secured as part of the S106 Agreement.

7.9 Based on the results of the revised VISSIM modelling, further mitigation is proposed at Tilbrook Roundabout (in addition to the S278 works associated with the Red Bull Racing development) and the A5 Kelly's Kitchen Roundabout and would be delivered as part of a S278 agreement between the Appellant and MKC.

7.10 BWB has assessed the proposed development traffic impact at the A5 junction both with and without the Eaton Leys highway improvements scheme included in the base scenarios. The former (with) scenario was assessed on the basis that the scheme was committed, however more recently HE has confirmed that the scheme is not technically committed and therefore the (without) scenario has been assessed.

7.11 VISSIM modelling results and mitigation schemes have been provided for both options. However, there is currently no enforceable trigger for the Gallagher's S278 scheme to

be built out and therefore it cannot be considered 'committed' scheme in planning terms. In light of this, the mitigation scheme described at paragraph 5.35 and on Drawing SCD-BWB-GEN-01-SK-TR-SK02_Kelly's Kitchen Roundabout_S2_P3 would be implemented to off-set the impact of the development. The agreed mitigation scheme at KKR will be delivered as part of a S278 agreement between the Appellant and HE.

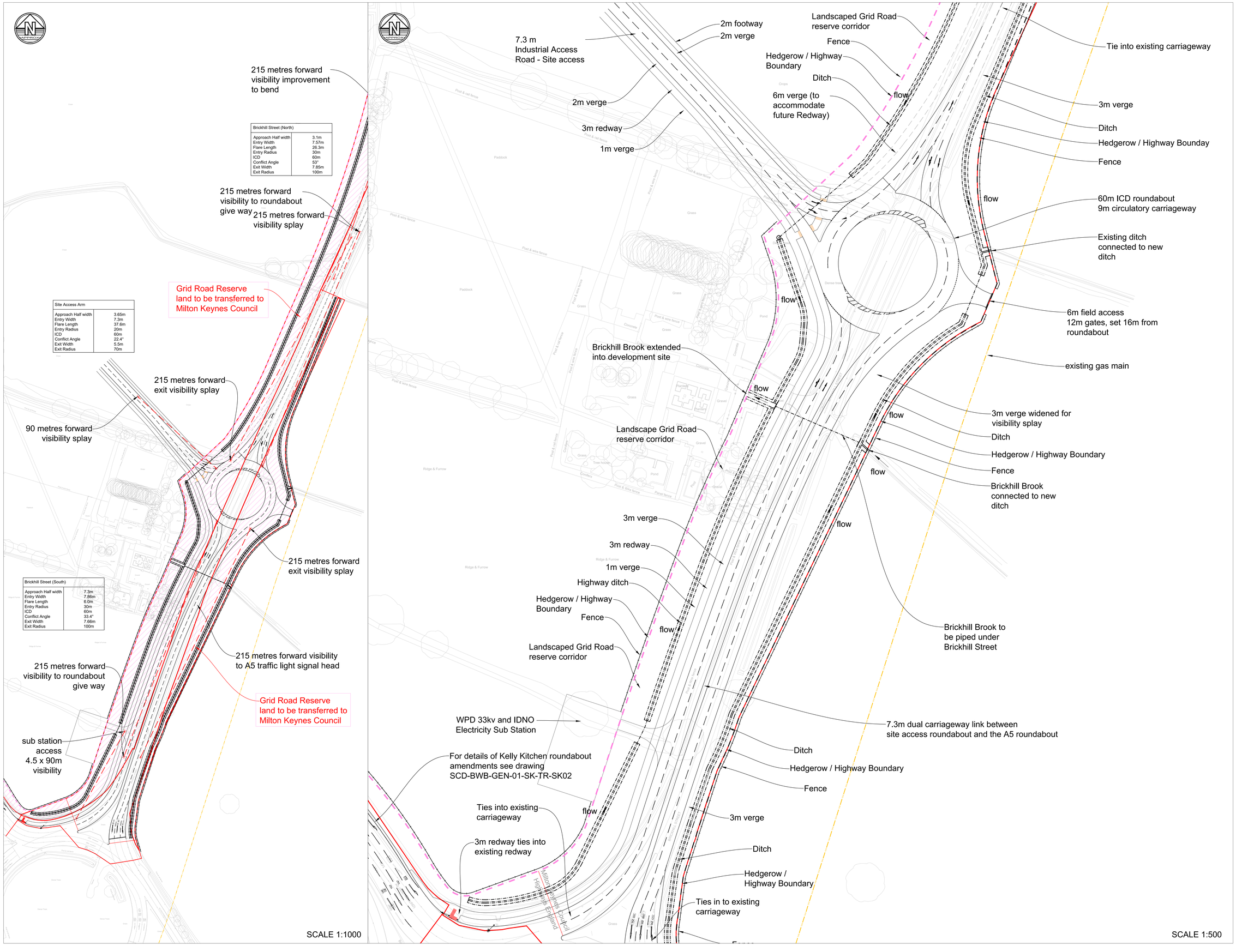
7.12 It is considered that with the mitigation proposals in place, the traffic impacts of the proposed development would be sufficiently offset, and the cumulative impact not considered severe in accordance with the National Planning Policy Framework.

7.13 In conclusion, this TA Addendum demonstrates that the traffic and transport impacts associated with the South Caldecotte development proposals can be accommodated on the local transport network in accordance with the mitigation proposals.

DRAWINGS

SCD-BWB-GEN-01-DR-TR-001_S2_P12

Proposed Site Access Roundabout and Dual Carriageway Link to A5



Brickhill Street (North)	
Approach Half width	3.1m
Entry Width	7.57m
Flare Length	26.3m
Entry Radius	30m
ICD	60m
Conflict Angle	53°
Exit Width	7.85m
Exit Radius	100m

Site Access Arm	
Approach Half width	3.65m
Entry Width	7.3m
Flare Length	37.6m
Entry Radius	20m
ICD	60m
Conflict Angle	22.4°
Exit Width	5.5m
Exit Radius	70m

Brickhill Street (South)	
Approach Half width	7.3m
Entry Width	7.86m
Flare Length	6.0m
Entry Radius	30m
ICD	60m
Conflict Angle	33.4°
Exit Width	7.66m
Exit Radius	100m

Notes

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2. This drawing is to be read in conjunction with all relevant architects, engineers and specialists drawings and specifications.
3. All dimensions in millimetres unless noted otherwise. All levels in metres unless noted otherwise.
4. Any discrepancies noted on site are to be reported to the engineer immediately.

Key Plan

Legend

Rev	Date	Details of issue / revision	Drw	Rev
P12	09.07.20	HE Amendments to Brickhill Street and A5	AJO	MA
P11	13.05.20	Hampton Brook Amendments	AJO	MA
P10	24.04.20	Amended Layout Northern Arm	AJO	MA
P9	18.12.19	Amended Layout	CC	MA
P8	05.07.19	Red Line boundary added	AJO	CH
P7	11.06.19	Roundabout location amended to suit masterplan	AJO	CH
P6	12.03.19	Shading added	KB	CH
P5	12.07.18	Verges and redways added	AJO	CH
P4	10.07.18	Access track added to eastern side of roundabout	AJO	CH
P3	22.06.18	Layout amended	AJO	CH
P2	24.04.18	Layout amended	AJO	CH
P1	19.02.18	Preliminary Issue	AJO	CH

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Client

HB (South Caldecotte) Ltd

Project Title

South Caldecotte, Milton Keynes

Drawing Title

Proposed Site Access Roundabout and Dual Carriageway Link to the A5

Drawn:	AJ Oakes	Reviewed:	C Holloway
BWB Ref:	NTS 2682	Date:	19.02.18
Scale@A0	As Shown		

Drawing Status

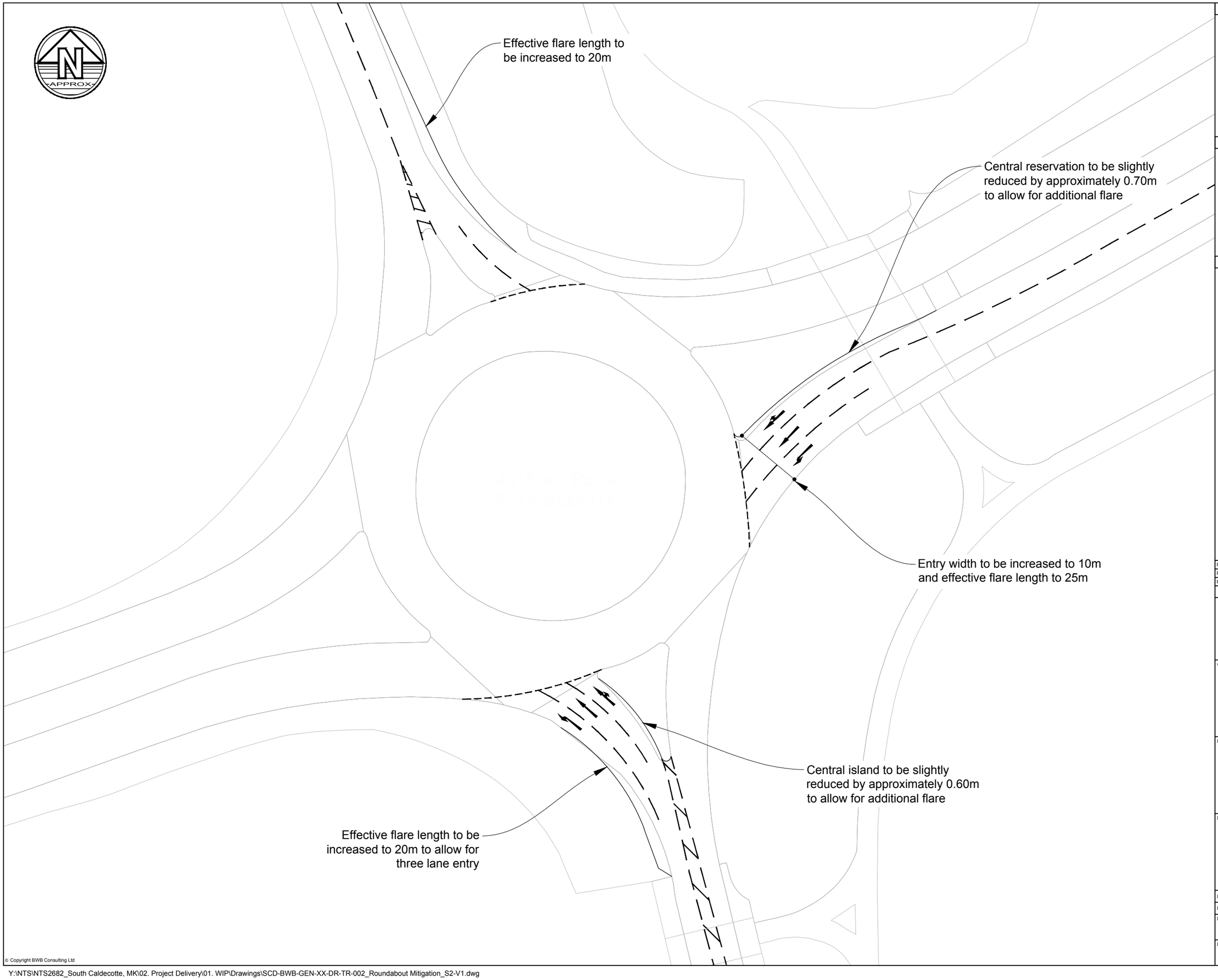
PRELIMINARY

Project - Originator - Zone - Level - Type - Role - Number	Status	Rev
SCD-BWB-GEN-01-DR-TR-001	S2	P12

Y:\NTS\NTS2682_South Caldecotte, MK22. Project Delivery\01. WIP\Drawings\SCD-BWB-GEN-01-DR-TR-001_Site Access Roundabout.dwg

SCD-BWB-GEN-01-DR-TR-005_S2_P2

Proposed Walton Park Roundabout Mitigation Scheme



Notes

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Key Plan

Legend

Rev	Date	Details of issue / revision	Drw	Rev
P2	29.10.18	FOR INFORMATION	CC	CH
P1	29.06.18	FOR INFORMATION	CC	CH

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Client

HB (South Caldecotte) Ltd

Project Title

South Caldecotte, Milton Keynes

Drawing Title

Proposed Walton Park Roundabout Mitigation Scheme

Drawn:	C. Cresswell		Reviewed:	C. Holloway
BWB Ref:	NTS 2682	Date:	29.10.18	Scale@A3: 1:500

Drawing Status

For Information

Project - Originator - Zone - Level - Type - Role - Number	Status	Rev
SCD-BWB-GEN-01-DR-TR-005	**S2**	**P2**

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SCD-BWB-GEN-01-DR-TR-006_S2_P6

Brickhill Street Grid Road Reserve

27.9m
34.5m
22.6m
19.7m
Existing Highway Boundary
17.3m
30.3m
Extent of land to be reserved to facilitate future upgrade to Grid Road
CUT
17.5m
Grid Road Reserve Centre Line
INDICATIVE FUTURE REDWAY ALIGNMENT
LINE
18.6m
REFER TO BWB SITE ACCESS DRAWING
24.9m
34.1m
37.3m
Extent of land to be reserved to facilitate future upgrade to Grid Road
35.7m
Site access roundabout
21.4m
30.0m

18.3m
Existing Highway Boundary
Existing Highway Boundary
20.6m
7.3m carriageway
3m verge
3m redway
Landscape Buffer
24.1m
Extent of land to be reserved to facilitate future upgrade to Grid Road
33.7m
28.7m
INDICATIVE FUTURE REALINGMENT OF BRICKHILL STREET
7.3m carriageway
3m verge
3m Super Redway
34.5m
35.5m
Existing Highway Boundary
27.9m
Grid Road Reserve Centre Line
34.5m
22.6m
19.7m
Existing Highway Boundary

34.4m
INDICATIVE 40M ICD ROUNDABOUT
40.0m
25.8m
40.3m
Extent of land to be reserved to facilitate future upgrade to Grid Road
29.0m
Existing Highway Boundary
29.0m
40.8m
Grid Road Reserve Centre Line
10.8m
INDICATIVE FUTURE REDWAY ALIGNMENT
ANGLIAN WATER COMPOUND LAND
11.3m
Extent of land to be reserved to facilitate future upgrade to Grid Road
18.3m
Existing Highway Boundary
Existing Highway Boundary

Notes

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Key Plan

Legend

Rev	Date	Details of issue / revision	Drw	Rev.
P6	03.07.20	Hampton Brook Amendments	AJO	MA
P5	17.06.20	Amendments to grid road reserve label wording	AJO	MA
P4	13.05.20	Hampton Brook Amendments	AJO	MA
P3	22.04.20	Station Road roundabout upgrade shown	AJO	MA
P2	15.04.20	Grid Road amended to single carriageway	AJO	MA
P1	03.04.20	Preliminary Issue	AJO	MA

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Client
HB (South Caldecotte) Ltd

Project Title
South Caldecotte, Milton Keynes

Drawing Title
Brickhill Street Grid Road Reserve

Drawn:	AJ Oakes	Reviewed:	M Addison
BWB Ref:	NTS 2682	Date:	15.04.20
Scale@A0:	1:500		

Drawing Status
PRELIMINARY

Project - Originator - Zone - Level - Type - Role - Number	Status	Rev
SCD-BWB-GEN-01-DR-TR-006	**S2**	**P6**

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SCD-BWB-GEN-01-DR-TR-008_S2_P1

Tilbrook Roundabout Mitigation

Two lanes provided for 30 metres on northbound exit arm

Tilbrook Roundabout

73.5m

Notes

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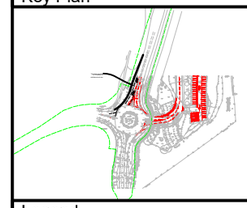
Key Plan



Legend

- BWB Mitigation Proposals
- Red Bull Racing S278
- MKC Highway Boundary

Rev	Date	Details of issue / revision	Drw	Rev
P1	18.12.19	PRELIMINARY ISSUE	CC	AJO

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Client

HB (SOUTH CALDECOTTE) LTD

Project Title

SOUTH CALDECOTTE, MILTON KEYNES

Drawing Title

TILBROOK ROUNDABOUT MITIGATION

Drawn:	C. Cresswell	Reviewed:	AJ. Oakes		
BWB Ref:	NTS2682	Date:	18.12.19	Scale@A3:	1:500

Drawing Status

PRELIMINARY

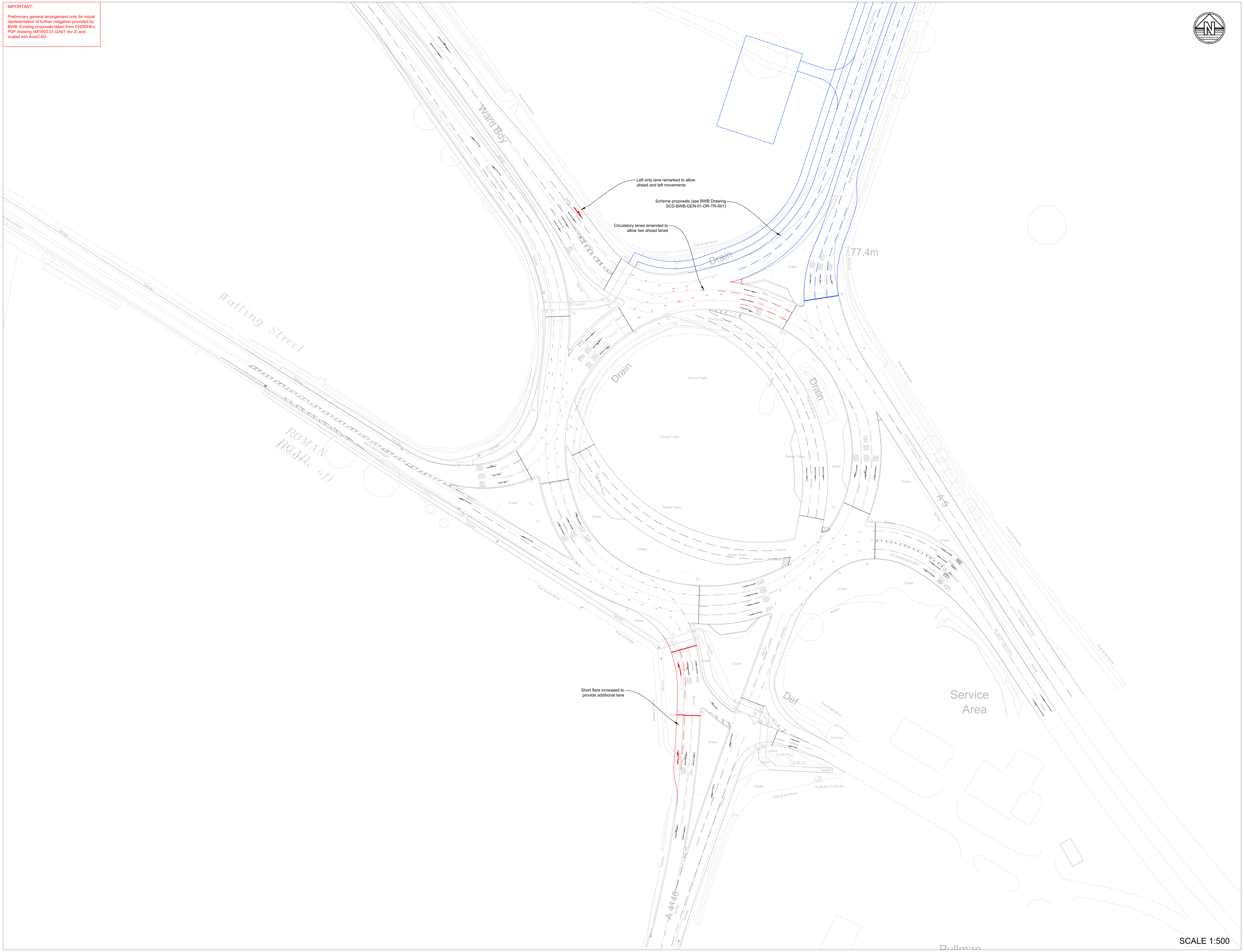
Project - Originator - Zone - Level - Type - Role - Number	Status	Rev
SCD-BWB-GEN-01-DR-TR-008	S2	P1

SCD-BWB-GEN-01-SK-SK01_S2_P2

Proposed Kelly's Kitchen Roundabout Mitigation (with Eaton Leys Improvements Scheme)

IMPORTANT:

Preliminary general arrangement only for visual representation of further mitigation provided by BWB. Existing proposals taken from CH2MHILL PDF drawing (481693.01.GA01 rev 2) and scaled into AutoCAD



Notes

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Key Plan

Legend

Changes required to S278 scheme to accommodate South Caldecotte proposed traffic impact

Changes required to S278 scheme to facilitate dualling of Brickhill Street between A5 and proposed site access roundabout

Rev	Date	Details of issue / revision	Drw	Rev
P2	21.05.18	Colour added for clarification of schemes	AJO	MA
P1	20.05.18	Preliminary Issue	AJO	MA

Issues & Revisions

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Client

HB (South Caldecotte) Ltd

Project Title

South Caldecotte, Milton Keynes

Drawing Title

Proposed Kelly's Kitchen Roundabout Mitigation

Drawn:	AJ Oakes	Reviewed:	M Addison
BWB Ref: NTS 2682	Date: 20.05.20	Scale@A0:	1:500

Drawing Status

PRELIMINARY

Project - Originator - Zone - Level - Type - Role - Number	Status	Rev
SCD-BWB-GEN-01-SK-TR-SK01	S2	P2

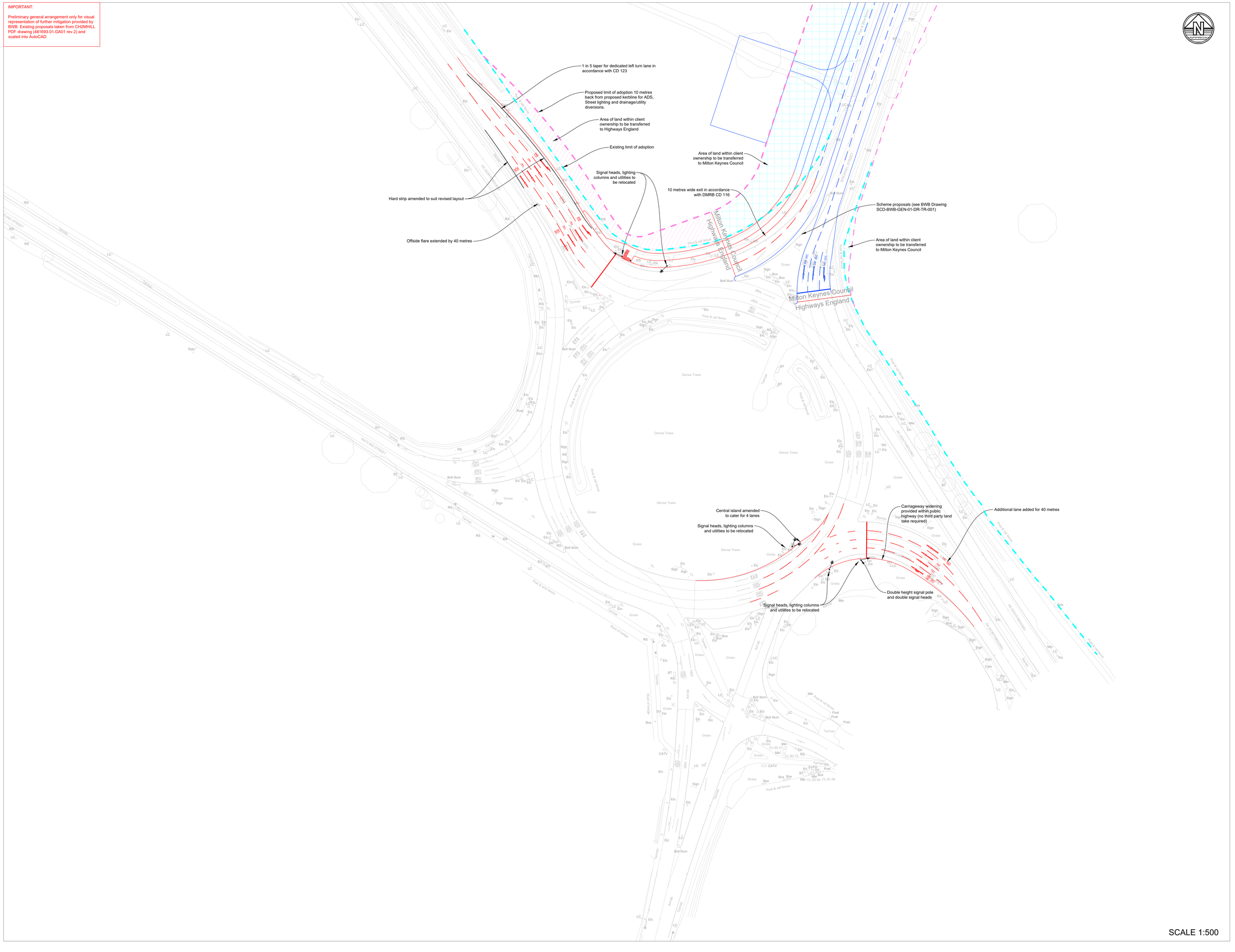
Y:\NTS\NTS2682_South Caldecotte, MK\02. Project Delivery\01. WIP\Sketches\SCD-BWB-GEN-01-SK-TR-SK01_Kelly's Kitchen Roundabout.dwg

SCD-BWB-GEN-01-SK-SK02_S2_P3

Proposed Kelly's Kitchen Roundabout Mitigation (excluding Eaton Leys Improvements Scheme)

IMPORTANT:

Preliminary general arrangement only for visual representation of further mitigation provided by BWB. Existing proposals taken from CH2HILL PDF drawing (481693.01.GA01 rev 2) and scaled into AutoCAD



SCALE 1:500

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3. All dimensions in millimetres unless noted otherwise. All levels in metres unless noted otherwise.
4. Any discrepancies noted on site are to be reported to the engineer immediately.

Key Plan

Legend

- Changes required to existing layout to accommodate South Caldecotte proposed traffic impact
- Changes required existing layout to facilitate dualling of Brickhill Street between A5 and proposed site access roundabout
- Existing extents of public highway
- New extents of public highway
- Land transferred to Highways England
- Land transferred to Milton Keynes Council
- Primary Signal Head
- Secondary Signal Head

Rev	Date	Details of issue / revision	Drw	Rev
P3	08.07.20	Further detail added to proposals for HE	AJO	MA
P2	02.07.20	Widening revised to retain central reservation/VRS	AJO	MA
P1	18.06.20	Preliminary issue	AJO	MA

Issues & Revisions

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Client

HB (South Caldecotte) Ltd

Project Title

South Caldecotte, Milton Keynes

Drawing Title

Proposed Kelly's Kitchen Roundabout Mitigation

Drawn:	AJ Oakes	Reviewed:	M Addison
BWB Ref:	NTS 2682	Date:	18.06.20
Scale@A0:	1:500		

Drawing Status

PRELIMINARY

Project - Originator - Zone - Level - Type - Role - Number	Status	Rev
SCD-BWB-GEN-01-SK-TR-SK02	S2	P3

Y:\NTS\NTS2682_South Caldecotte, MK22. Project Delivery\01. WIP\Sketches\SCD-BWB-GEN-01-SK-TR-SK02_Kelly's Kitchen Roundabout_P3.dwg

SCD-BWB-GEN-01-SK-SK03_S2_P3

Proposed Kelly's Kitchen Roundabout Mitigation Visibility Splays

A5 North Arm Visibility Splays

IMPORTANT:

Preliminary general arrangement only for visual representation of further mitigation provided by BWB. Existing proposals taken from CH2MHILL PDF drawing (481693.01.GA01 rev 2) and scaled into AutoCAD

295 metres forward visibility to signal heads

Junction intervisibility zone

Forward visibility to offside signal heads to be retained as existing

215 metres forward visibility to signal heads

215 metres forward visibility from roundabout exit

Junction intervisibility zone

Junction intervisibility zone

A5 South Arm Visibility Splays

Brickhill Street Arm Visibility Splays

Notes

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Key Plan

Legend

- Changes required to existing layout to accommodate South Caldecotte proposed traffic impact
- Changes required existing layout to facilitate dualling of Brickhill Street between A5 and proposed site access roundabout
- New extents of public highway
- Primary Signal Head
- Secondary Signal Head
- Junction intervisibility zone

Rev	Date	Details of issue / revision	Drw	Rev
P3	08.07.20	Further detail added to proposals for HE	AJO	MA
P2	02.07.20	Widening revised to retain central reservation/VRS	AJO	MA
P1	18.06.20	Preliminary issue	AJO	MA

Issues & Revisions

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Client

HB (South Caldecotte) Ltd

Project Title

South Caldecotte, Milton Keynes

Drawing Title

Proposed Kelly's Kitchen Roundabout Mitigation Visibility Splays

Drawn:	AJ Oakes	Reviewed:	M Addison	
BWB Ref:	NTS 2682	Date:	18.06.20	Scale@A0: 1:500

Drawing Status

PRELIMINARY

Project - Originator - Zone - Level - Type - Role - Number	Status	Rev
SCD-BWB-GEN-01-SK-TR-SK03	S2	P3

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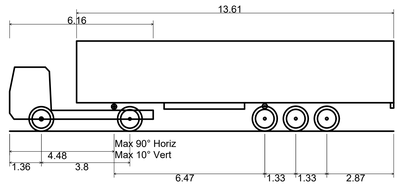
SCD-BWB-GEN-01-SK-SK04_S2_P3

Proposed Kelly's Kitchen Roundabout Mitigation (HGV Swept Paths)

Secondary Signal Head

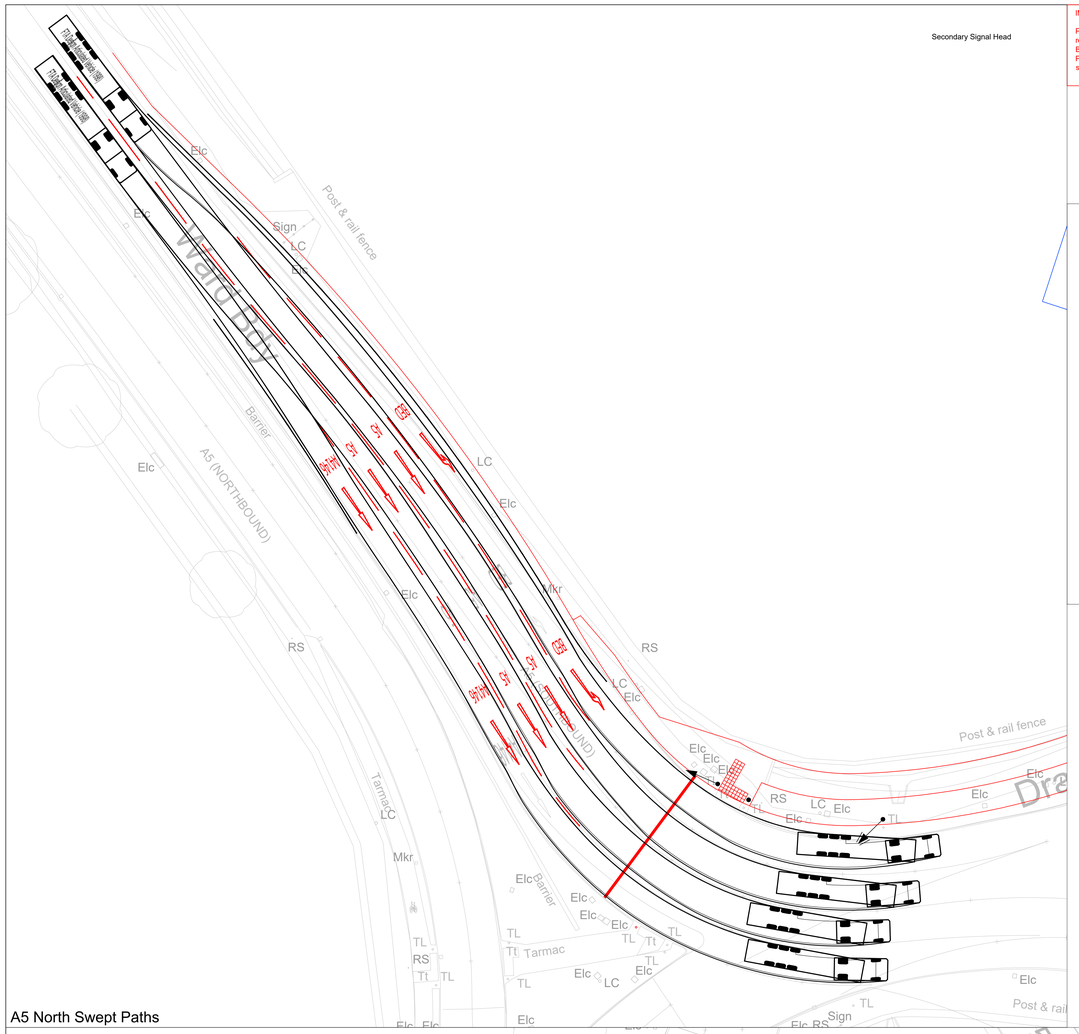
IMPORTANT:

Preliminary general arrangement only for visual representation of further mitigation provided by BWB. Existing proposals taken from CH2MHILL PDF drawing (481693.01.GA01 rev 2) and scaled into AutoCAD

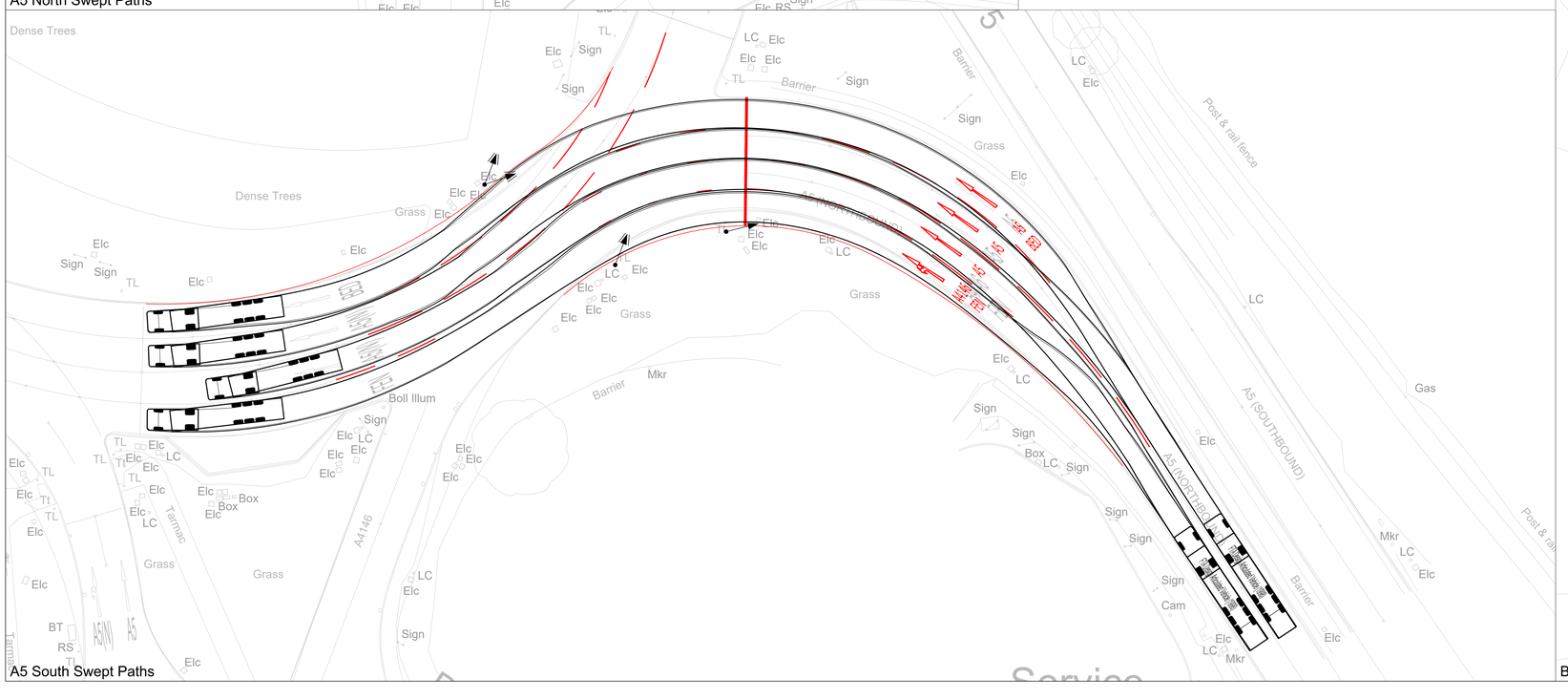


FTA Design Articulated Vehicle (1998)

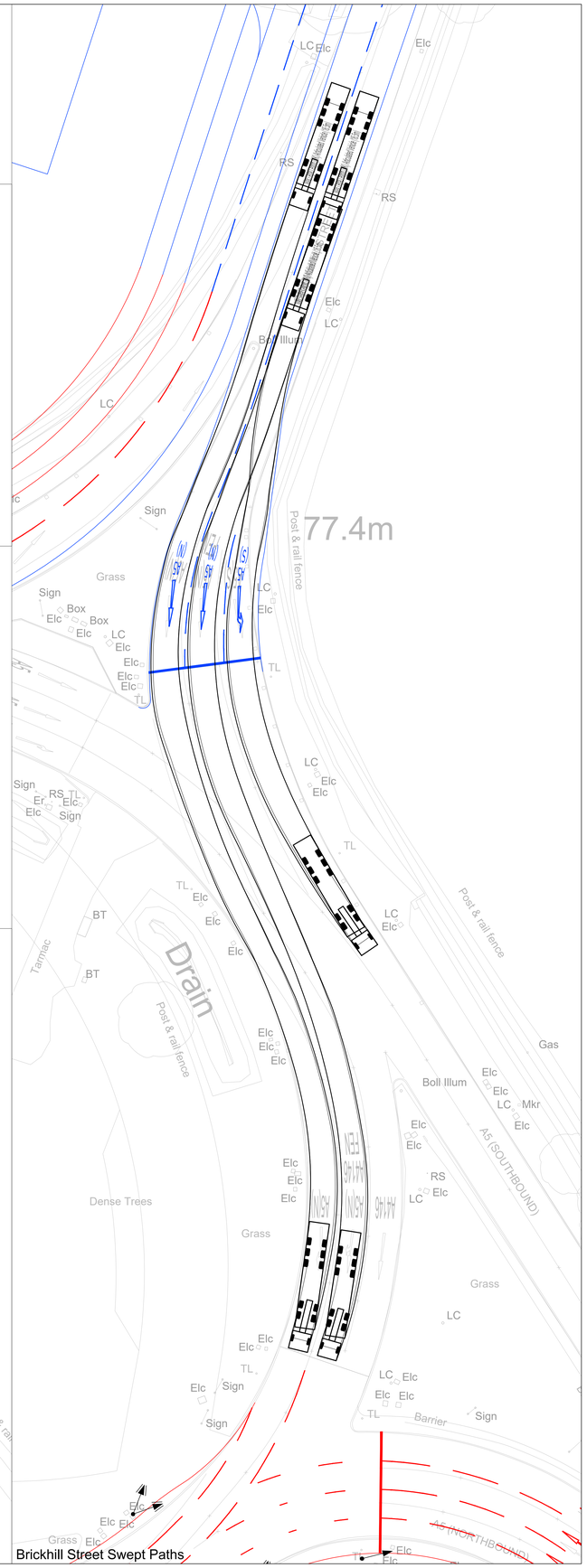
Overall Length	16.480m
Overall Width	2.550m
Overall Body Height	3.870m
Min Body Ground Clearance	0.515m
Max Track Width	2.470m
Lock to lock time	3.00s
Kerb to Kerb Turning Radius	6.550m



A5 North Swept Paths



A5 South Swept Paths



Brickhill Street Swept Paths

Notes

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3. All dimensions in millimetres unless noted otherwise. All levels in metres unless noted otherwise.
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Key Plan

Legend

Changes required to existing layout to accommodate South Caldecotte proposed traffic impact

Changes required existing layout to facilitate dualling of Brickhill Street between A5 and proposed site access roundabout

Rev	Date	Details of issue / revision	Drw	Rev
P3	08.07.20	Further detail added to proposals for HE	AJO	MA
P2	02.07.20	Widening revised to retain central reservation/VRS	AJO	MA
P1	18.06.20	Preliminary issue	AJO	MA

Issues & Revisions

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Client

HB (South Caldecotte) Ltd

Project Title

South Caldecotte, Milton Keynes

Drawing Title

Proposed Kelly's Kitchen Roundabout Mitigation

Drawn:	AJ Oakes		Reviewed:	M Addison	
BWB Ref:	NTS 2682	Date:	18.06.20	Scale@A0:	1:500

Drawing Status

PRELIMINARY

Project - Originator - Zone - Level - Type - Role - Number	Status	Rev
SCD-BWB-GEN-01-SK-TR-SK04	S2	P3

Y:\NTS\NTS2682_South Caldecotte, MK\02. Project Delivery\01. WIP\Sketches\SCD-BWB-GEN-01-SK-TR-SK04_Kelly's Kitchen Roundabout Swept Paths_P3.dwg

APPENDICES

Appendix A

Indicative Site Layout Plan

Ref:

Revisions:

P10: 16/04/20 kbl Client comments incorporated
P11: 10/07/20 IY Kelly Roundabout improvements revised

Site	GIA (ft²)	NDA (ac)
Unit 1	473,200	21.0
Unit 2	615,400	27.13
Unit 3	369,708	15.87
Unit 4	254,200	10.68
Unit 5	61,400	3.47
Unit 6 (office)	10,400	1.22
Unit 7	53,700	3.90
Unit 8	49,800	2.80
Unit 9	164,800	8.25
Unit 10	278,500	12.09
Total	**2,331,108**	**106.41**
	Total	**139.9**

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www.hamptonbrook.com

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2a Smith Way
Grove Park
Enderby
Leicester LE19 1SX
t: +44 (0)116 247 0557
www.stephengeorge.co.uk

South Caldecotte

Drawing Name:
Indicative Masterplan 23

Drawing Status:	PLANNING
Suitability:	S2
Rev:	P11
SGP Project:	16-048
Drawn:	KBL
Team:	IY
Date:	13/11/2018
Scale:	1:2500@ A1

Drawing Number:
16-048-01-SGP-XX-00-DR-A-1006-P11

Appendix B

MKC Highways Response (January 2020)

HIGHWAY OBSERVATIONS FOR: 19/01818/OUT

DATE: **16 Jan 2020**
CONTACT: **SMT**
TEL: **01908 690463**

APPLICATION FOR: Proposed mixed employment development (B1(a)/B2/B8/A3) on land to the west of Brickhill Street, Bow Brickhill, Milton Keynes.

Summary of advice from Transport Development Management

Object ☐

No objection ☐

Comment only ☐

Further to the Highway Observations dated 20th August 2019, meetings have taken place with the applicant (31st October 2019) and with other council officers (29th November 2019).

The outcome of these meetings requires an update to the previous Highway Observations and this is provided below. (It should be noted that the previous Highway Observations referred to Policy SD16 in error, all references to Policy SD16 should read "Policy SD14").

Following the pre-application discussions and as noted in the Highway Observations of 3rd September 2018 and 21st January 2019, there were several transport related issues that remain unresolved. In brief, these are:

- Upgrading Brickhill Street to a Grid Road
- Redway Provision
- Public Transport
- Kelly's Kitchen roundabout

Upgrading Brickhill Street to a Grid Road

Policy SD14 includes the upgrading in recognition of the key link between the A5 and south Milton Keynes provided by Brickhill Street. Paragraphs 6.58-6.64 of the TA set out why the upgrading of Brickhill Street to a Grid Road is not required for capacity reasons.

The information provided is sound; however, the upgrading / safeguarding for upgrading is a matter of policy (SD14) and therefore the Council will need to consider the policy and the response. As already stated above, the upgrading is not required to enable this development.

It should be noted that whilst the proposals safeguard the future upgrading of the road with a green corridor adjacent to the existing road, there is a compound labelled "Anglian Water" within this area that would prevent any enhancement / widening of Brickhill Street. The applicant has made available the land within their gift, but this excludes the compound.

At the 31st October meeting the applicant clarified, to an acceptable level, the width of the reserved land and agreed to provide drawings to demonstrate this. Those drawings do not appear to have been provided. The applicant should be aware that the width of the corridor remains a matter to be agreed; however, an appropriately worded condition could cover this.

Redway Provision

There remains no Redway provision proposed on this section of Brickhill Street. Again, due to the Anglian Water compound, the applicant is not in a position to provide the Redway along Brickhill Street within land they control.

This Redway is an essential piece of infrastructure that the development must contribute towards, notwithstanding the provision of a Redway through the site. This echoes the comments made in the Transport Policy team's consultation response.

Public Transport

The TA refers to public transport provision in Paragraphs 7.7-7.11, but there is no commitment to services. It is essential that a frequent service, from early morning to late evening, including weekends, is provided to this site given its likely round-the-clock operation.

Since the August Highway Observations there is no obvious formal response from the Passenger Transport team although discussions were being held. Any agreement on levels of service and contributions should be secured as part of the Section 106 agreement that any planning approval will no doubt be subject to.

A5/A4146 (Kelly's Kitchen) Roundabout

This junction has been assessed using a VISSIM microsimulation model and the results are summarised in Paragraphs 7.13-7.32 of the TA. The impacts on queuing at the junction have been assessed both with and without the major improvement scheme secured as part of the Eaton Leys proposals. The assessment shows that the impact from this development is relatively minor in terms of queue lengths in the short term.

Once background growth and committed developments are included the picture is less clear and the TA acknowledges that journey times across the junction will increase. However, the assertion in the TA is that this is due primarily to traffic growth and other development (such as Eaton Leys), which generate more significant volumes of peak hour traffic.

This junction assessment is being reviewed, as part of the review of the TA, by Highways England. Any mitigation sought by HE will need to be assessed for its impact on queuing at the non-A5 arms of the junction. It is noted that Highways England has recommended that the application is not determined prior to 28th February 2020 in order for that review to be completed.

Mitigation of Highway Impacts

The TA considers the impacts of the development on 3 local junctions; The Brickhill Street / Station Road mini-roundabout is considered in Paragraphs 7.33-7.42, Tilbrook Roundabout is considered in Paragraphs 7.43-7.47 and Walton Park Roundabout in Paragraphs 7.48-7.54.

Brickhill Street / Station Road mini-roundabout

The assessment concludes that no mitigation is required at this junction. Due to the nature of the proposed uses, the main impact of the development at this junction is considered to be outside peak hours.

Whilst this may be true in capacity terms, the retention of a mini-roundabout is not desirable when considered against the potential increase in HGV use and the future upgrading of Brickhill Street. Currently the junction does not have a recorded accident record (no Personal Injury Accidents) and therefore a request for an improvement at this stage could be considered unreasonable.

However, the protection of the future upgrading of Brickhill Street should include sufficient land to improve this junction to a minimum 40m ICD roundabout or a suitable alternative junction arrangement that offers comparable HGV provision and capacity.

This was another matter covered in the 31st October meeting and another matter where a drawing was to be provided. Again, no drawing appears to have been submitted.

Tilbrook Roundabout

Whilst the TA concludes that the impact at this junction is minimal, the assessment is based on the provision of an improvement to the junction delivered by the Red Bull proposals. Should that scheme not proceed and therefore not provide the improvement, this development should be required to do so.

As a result, any approval should include a requirement to provide the Red Bull mitigation scheme. As it is likely that such an approval will be subject to a Section 106 agreement, that would seem the most appropriate mechanism.

Whichever development occurs first will then provide the improvement.

Walton Park Roundabout

The assessment concludes that a mitigation scheme would sufficiently improve the operation of this junction to offset the impact of the development. The mitigation scheme proposed appears to be acceptable and a mechanism for securing this scheme is required. As it is likely any approval will be subject to a Section 106 agreement, that would seem the most appropriate mechanism.

Other Matters

Bow Brickhill Level Crossing

The impact of development crossing has been assessed and the TA concludes that the proposal would have a minimal impact on queuing on the approaches to the crossing.

Queues at the crossing are, as expected, longest during the peak periods (08.00-09.00 & 17.00-18.00) and therefore these periods have been assessed. The average time for the barriers being closed is stated as 3m31s, which seems reasonable. Observed barrier closed times in the two peak hours is given in the TA and averages approx. 2m48s.

The TA states that during each period of the barrier being down (based on 3m31s) the number of vehicles associated with the development that would add to any queuing is as shown in the table below.

	AM Peak		PM Peak	
	Northbound	Southbound	Northbound	Southbound
Average Queue	40	26	117	17
Additional Vehicles	5	8	7	4
Total	45	34	124	21

This shows that whilst the development is potentially adding to queues, the impact is not significant.

It is noted that the Transport Policy team has, in its response, stated that:

"*There is a strong likelihood that because of the East West Rail project the level crossing will close in future or the increased barrier downtime will have an unacceptable impact on traffic movements along the V10 Brickhill Street*".

As demonstrated above, the current impacts from the development clearly do not have an unacceptable impact.

The Transport policy response also refers to an aspiration to have identified potential land requirements for a bridge to replace the level crossing. This is hoped for by February 2020 (in line with the HE holding response) but it is unclear what the status of this exercise has in terms of determining the planning application.

Brickhill Street proposed dualling and New Roundabout

Drawings have been submitted as part of the TA which indicate the dualling of Brickhill Street between the A5 and the new access roundabout as well as the layout of the roundabout access junction. Technical approval of this infrastructure will take some time and will need to involve Highways England. As a result, it would not be appropriate to do this while the application is live.

Therefore, although Means of Access is not reserved for subsequent approval, only the location of the access and the principle of a roundabout can / should be agreed at this stage. Any approval should exclude the submitted plans and should require the submission of technical details as part of the Reserved Matters.

Potential Transport Schemes

In its consultation response the Transport Policy Team has also raised the potential issues of the (Oxford-Cambridge) Expressway and a possible Rapid Mass Transit route. Whilst both of these schemes may be brought forward in the future and both may be located close to the site, neither have sufficient certainty to make a clear recommendation at present.

Summary

The key highway / transport issues to address are:

- Upgrading of the full length of Brickhill Street to grid road standard is not part of the current application, but is not required to enable the proposed development. The applicant does not control the Anglian Water compound adjacent to Brickhill Street and therefore would not be able to deliver the dualling in any case.
- A Redway is required along the full length of Brickhill Street in addition to the on-site Redway. A contribution to this Redway is required as part of any planning approval;
- Public Transport provision needs to be resolved prior to approval being given and the means to secure that provision needs to be part of the planning approval / Section 106 agreement;
- A mechanism to secure the improvements to the Tilbrook and Walton Park Roundabouts should be in place prior to the issuing of any consent;
- The implications for queuing on local roads as a result of any mitigation scheme at the A5/A4146 roundabout need to be considered prior to agreement of any mitigation scheme being agreed between HE and the applicant.

Whilst there is no objection in principle to the proposed development, planning consent should not be granted until these issues have been satisfactorily addressed.

Appendix C

Highways England Holding Response

Developments Affecting Trunk Roads and Special Roads

Highways England Planning Response (HEPR 16-01)
Formal Recommendation to an Application for Planning Permission

From: Martin Fellows
Operations (East)
planningee@highwaysengland.co.uk

To: Milton Keynes Council

CC: transportplanning@dft.gsi.gov.uk
growthandplanning@highwaysengland.co.uk

Council's Reference: 19/01818/OUT

Referring to the planning application referenced above, dated 30 October 2019, an outline application including access for the development of the site for employment uses, comprising of warehousing and distribution (Use Class B8) floorspace (including mezzanine floors) with ancillary B1a office space, general industrial (Use Class B2) floorspace (including mezzanine floors) with ancillary B1a office space, a small standalone office (Use Class B1) and small café (Use Class A3) to serve the development; car and HGV parking areas, with earthworks, drainage and attenuation features and other associated infrastructure, a new primary access off Brickhill Street, alterations to Brickhill Street and provision of Grid Road reserve to Brickhill Street with appearance, landscaping, layout and scale to be determined as reserved matters, at land at Brickhill Street, South Caldecotte, Milton Keynes MK17 9FE, notice is hereby given that Highways England's formal recommendation is that we:

~~a) offer no objection;~~

~~b) recommend that conditions should be attached to any planning permission that may be granted (see Annex A – Highways England recommended Planning Conditions);~~

c) recommend that planning permission not be granted for a specified period (see Annex A – further assessment required);

~~d) recommend that the application be refused (see Annex A – Reasons for recommending Refusal).~~

Highways Act Section 175B ~~is /~~ is not relevant to this application.[1]

This represents Highways England formal recommendation and is copied to the Department for Transport as per the terms of our Licence.

[1] Where relevant, further information will be provided within Annex A.

Should you disagree with this recommendation you should consult the Secretary of State for Transport, as per the Town and Country Planning (Development Affecting Trunk Roads) Direction 2018, via transportplanning@dft.gsi.gov.uk.

Signature: 	**Date:** 24 April 2020
Name: Shamsul Hoque	**Position:** Spatial Planning Manager
Highways England: Woodlands, Manton Lane Bedford MK41 7LW shamsul.hoque@highwaysengland.co.uk	

Annex A Highways England recommended further assessment required

HIGHWAYS ENGLAND has been appointed by the Secretary of State for Transport as strategic highway company under the provisions of the Infrastructure Act 2015 and is the highway authority, traffic authority and street authority for the Strategic Road Network (SRN). The SRN is a critical national asset and as such we work to ensure that it operates and is managed in the public interest, both in respect of current activities and needs as well as in providing effective stewardship of its long-term operation and integrity.

This response represents our formal recommendations with regards to 19/01818/OUT and has been prepared by Shamsul Hoque.

Since our previous response in January 2020, the applicant has submitted revised VISSIM models. Following reviewing the revised model, we informed the applicant that there are still few more outstanding issues in the model as set out in the Technical Note 08 and 09 (dated 20 March 2020) by AECOM.

After this, the applicant has re-submitted another version of the revised VISSIM model on 2 April 2020. Now, we have completed our review and concluded our comments in the Technical Note 10 (dated 24 April 2020) prepared by AECOM. We (Highways England) recommend that further measures are required to ensure that the impact of the proposed South Caldecotte development on the A5 arms is not severe.

Therefore, we recommend that the application is not determined before 26 June 2020 to allow sufficient time to address the transport impact issues on the A5, part of the SRN. If we able to respond earlier than this, we will withdraw this recommendation accordingly.

Appendix D

BWB Meeting Notes (October 2019)

BETTER SOLUTIONS, INTELLIGENTLY ENGINEERED

Mr. David Buckley
Senior Planning Officer
Development Control
Milton Keynes Council

Job Ref: M. Addison/ NTS2682

13 November 2019

By email only (David.Buckley@milton-keynes.gov.uk)
Cc. carmstrong@hamptonbrook.com

Dear Mr. Buckley,

Planning Application Ref: 19/01818/OUT

Re. Notes from Meeting of 31 October 2019 to discuss comments and responses to Milton Keynes Council Highways Observations dated 20 August 2019

Present:

- **D Buckley** – MKC Planning Case Officer
- **R Edgington** - Planning Officer
- **P Caves** – MKC Highways
- **D Lawson** – Stirling Maynard Transportation
- **C Armstrong** – HB (South Caldecotte) Ltd
- **G Robinson** – DLP Planning
- **M Addison** – BWB Consulting

Please find below a summary of our meeting for your review and comment.

Item 1: Upgrading Brickhill Street to a Grid Road

MKC Highways refer to Policy SD16, however this should read Policy SD14.

Policy SD14 C2 requires "access to be taken from Brickhill Street, which will be upgraded to a grid road standard". The proposed works to form the roundabout access will also upgrade the connecting link to the A5 roundabout to dual carriageway with a single carriageway tie in to the existing Brickhill Street, the total length of improvement works is circa 450m.

The development proposals have been guided by and accord with para 3.5.5 of the South Caldecotte Development Framework SPD – Consultation Draft – March 2019.

> *3.5.5 It is the Council's intention to upgrade the whole length of Brickhill Street (south of the railway line) to grid road standard in order to serve growth in the wider area to the south east of Milton Keynes.*

5th Floor
Waterfront House
Station Street
Nottingham
NG2 3DQ

Tel: 0115 924 1100

nottingham@bwbconsulting.com
www.bwbconsulting.com

The developer will be required to upgrade the length of Brickhill Street from the A5 roundabout to the new junction to grid road standard, and make any further improvements that are necessitated by the Transport Assessment.

The developer will be required to make a financial contribution towards** improvements to the strategic highway network, **which would include a contribution to the upgrade of the remainder of Brickhill Street to grid road standard.

The level of contribution to be made is to be agreed with officers as part of s106 negotiations.

The application proposes a "grid road reserve" to be created on the side of the proposed development, ie the west side of Brickhill Street between the A5 and the railway line. The reserve will be a minimum of 30m to the west from the centre line of the proposed dual carriageway. This accommodates a 7.3m carriageway, 3m verge, 3m redway and a further buffer of circa 15m to the proposed development plot boundaries to accommodate landscaping / bunds.

This principle is extended north alongside the remainder of Brickhill Street, providing a reserve that varies in width between 21m and 37m from the existing western channel line to accommodate the proposed visibility improvements. The reserve extends beyond the Station Road junction up to the boundary with the railway. The land required for the grid road reserve would be agreed and included within the s106 agreement.

The existing Anglian Water compound is land owned by Anglian Water and contains underground valves and chambers on the existing 600mm and 800mm dia water mains. The AW land does not form part of the application. Future upgrading of the remainder of Brickhill Street resulting from growth in the wider area to the south east of Milton Keynes could be aligned to the east of the Anglian Water compound.

Item 2: Redway Provision

A Redway will be provided between the A5 and the development access roundabout, through the proposed development connecting to the existing Redway at the railway, providing the required connectivity. Given most of the demand for the use of the Redway along this stretch will be for the development, this is a reasonable approach. The Grid Road Reserve to be provided north of the access roundabout can accommodate a Redway as part of future upgrading work.

Item 3: Public Transport

The application commits to public transport service enhancements. The level of contribution to be made is to be agreed with officers as part of s106 negotiations.

Item 4: A5/A4146 (Kelly's Kitchen) Roundabout

Highways England has been involved in considerable pre application discussions, their formal response to the application is awaited. HE's consultant (AECOM) has requested additional details from BWB to allow further validation of the VISSIM modelling used in the Transport Assessment. These details have been provided and a further response from HE is awaited.

Item 5: Mitigation of Highway Impact

Brickhill Street/Station Road

Taking into account the constraints associated with third-party land (residential properties no. 1 and no. 3 Station Road), the proximity of the level crossing, the likely access arrangements to the planned growth in the wider area of Policy SD11 South East Milton Keynes SUE, and in order to achieve the required geometric design and entry deflection for Brickhill Street and forward visibility to the entry line, it is considered that any future improvement to the roundabout is likely to be located to the south-east of the existing junction.

The proposed grid road reserve in the vicinity of the junction as shown on the Parameters Plan is 21.5m wide from the existing western channel line. Sufficient land is therefore allocated as part of the development to accommodate future highway junction improvements.

MKC Highways requested that an indicative plan be submitted to show how a 40m ICD roundabout might be accommodated in the vicinity of the existing junction whilst taking into account the above constraints. BWB currently investigating this and will report back with an indicative junction design in due course.

Tilbrook Roundabout

D Buckley advised that all indications are that Red Bull are progressing their development as discharge of condition applications have been made and approved. The approach proposed by MKC Highways would be considered as part of s106 negotiations including the need to agree a sensible trigger point for the mitigation to be implemented in the event Red Bull does not implement their planning permission.

Walton Park Roundabout

Financial contributions towards the improvement of the Walton Park roundabout is to be agreed with officers as part of s106 negotiations.

Item 6: Other Matters

Bow Brickhill Level Crossing

No comment.

Brickhill Street proposed dualling and New Roundabout

No comment.

Yours sincerely,

Matthew Addison

Associate Director | Transport & Infrastructure Planning | BWB Consulting Limited
matthew.addison@bwbconsulting.com

Appendix E

Parameters Plan

Ref:

Milton Keynes / M1

A5

Caldecotte Business Park

Walton Park

Bow Brickhill Station

Station Road

Diversion of PROW

Emergency Access to Brickhill Street

Tilbrook Farm

to lakes

Marchley to Bedford Railway

Leisure Route Footpath / PROW Diversion

67.5m

73.9m

82.8m

Zone 2

Zone 2		
Developable Area (Ha)	21.72	
Number of Units	1 to 5	
Floorspace (GEA sqm)	140,389	
Floorspace (GIA sqm)	127,626	
Unit Roof Height (Highest Point)	15m min	24m max
Unit Haunch Height	12m min	21m max
Density (Unit coverage ratio)	58.8%	
Unit Floor Levels (AOD)	Lowest FFL +69.4m	Highest FFL +72.35m

Zone 4

Zone 4		
Developable Area (Ha)	3.50	
Number of Units	3 to 5	
Floorspace (GEA sqm)	15,128	
Floorspace (GIA sqm)	13,753	
Unit Roof Height (Highest Point)	9m min	11m max
Unit Haunch Height	6m min	8m max
Density (Unit coverage ratio)	43.2%	
Unit Floor Levels (AOD)	Lowest FFL +73.2m	Highest FFL +74.65m

V10 Brickhill Street

Grid Road Reserve
4.70h; 11.62Ac

Redway cycle route

Adopted spine road

Pumping station

Zone 3

Zone 3		
Developable Area (Ha)	9.50	
Number of Units	2 to 3	
Floorspace (GEA sqm)	56,401	
Floorspace (GIA sqm)	51,274	
Unit Roof Height (Highest Point)	18m min	21m max
Unit Haunch Height	15m min	18m max
Density (Unit coverage ratio)	54.0%	
Unit Floor Levels (AOD)	Lowest FFL +71.5m	Highest FFL +75.5m

public pathway

landscape buffer

Watling Street

Zone 1

watercourse

Cross Roads Farm

New roundabout

Proposed Site Access - refer to Engineers drawings

33kv Primary Sub-station

Kelly's Kitchen Roundabout

Dunstable/Luton

Sports Ground

Football Ground

Allotment Gardens

Zone 1		
Developable Area (Ha)	8.57	
Number of Units	1 to 2	
Floorspace (GEA sqm)	53,785	
Floorspace (GIA sqm)	48,896	
Unit Roof Height (Highest Point)	21m min	24m max
Unit Haunch Height	18m min	21m max
Density (Unit coverage ratio)	57%	
Unit Floor Levels (AOD)	Lowest FFL +70.45m	Highest FFL +70.85m

AREA SUMMARY:

Redline Area:
58.13 Ha / 143.64 Ac

Total Developable Area:
43.30 Ha / 106.9 Ac

Proposed Use:
Flexible B2/B8 with ancillary B1(a)

Number of Units:
Ranging from 7 -15 Units

Maximum Floorspace:
241,548 m² (2,600,000 ft²) GIA

Proposed Unit Height:
Haunch height ranging from 6m to 21m

Car Parking Provision:
Compliant with Council's parking standards for zone 3: B1 use - 1/30m²; B2 use - 1/60m² and B8 use - 1/100m²

SuDS Provision:
Each Unit will have its own surface water drainage strategy as well as attenuation of public realm

Landscaping:
Appropriate landscaping will be included as part of the development proposals

HamptonBrook
Creative Development & Investment
www.hamptonbrook.com

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2a Smith Way
Grove Park
Enderby
Leicester LE19 1SX

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www.stephengeorge.co.uk

South Caldecotte

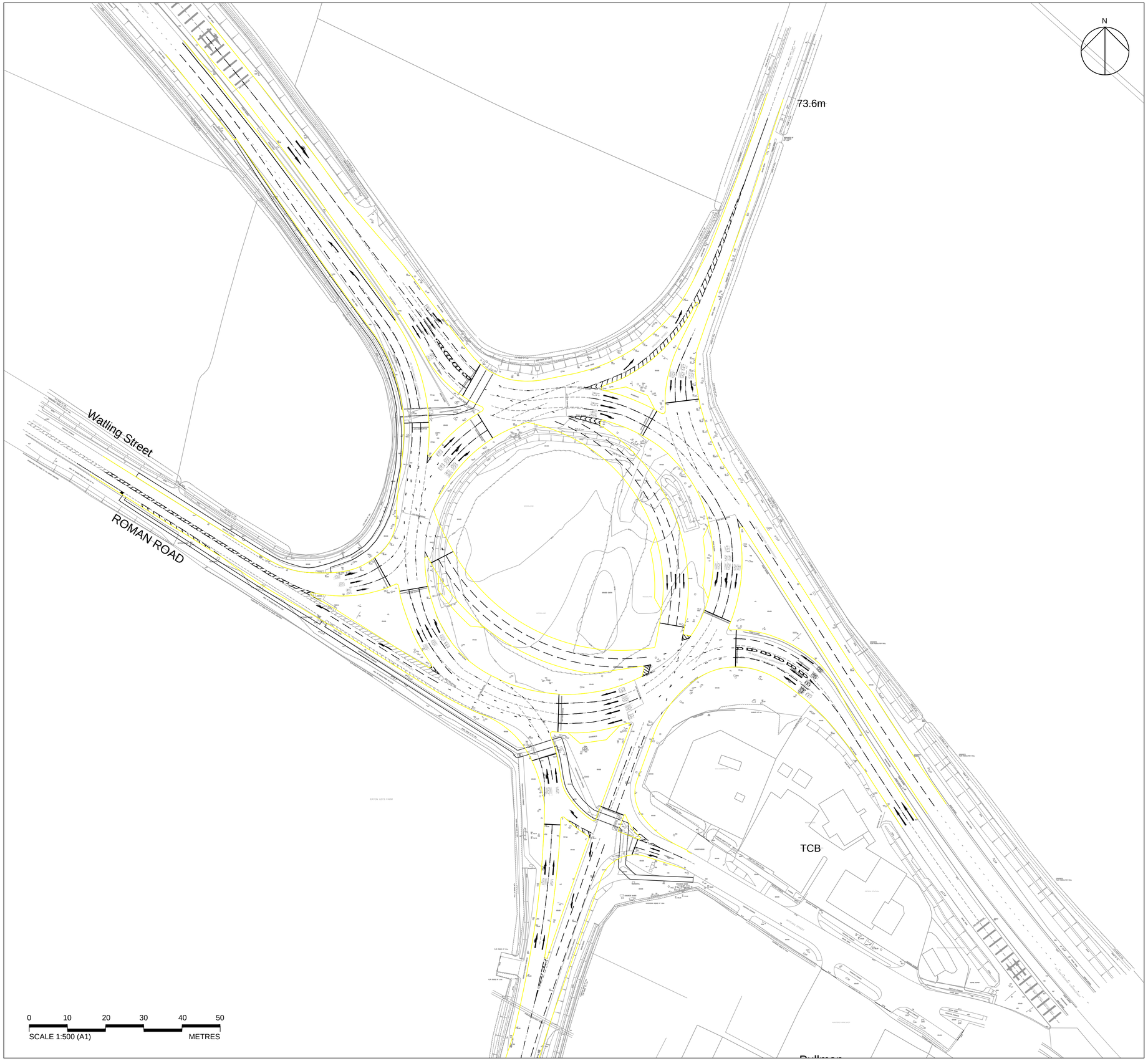
Drawing Name:
Parameters Plan

Drawing Status:	PLANNING
Suitability:	S2
Rev:	P9
SGP Project:	16-048
Drawn:	KBL
Team:	IY
Date:	13/11/2018
Scale:	1:2500@ A1

Drawing Number:
16-048-01-SGP-XX-00-DR-A-1004-P9

Appendix F

CH2M Hill Drawing 481693.01.GA01



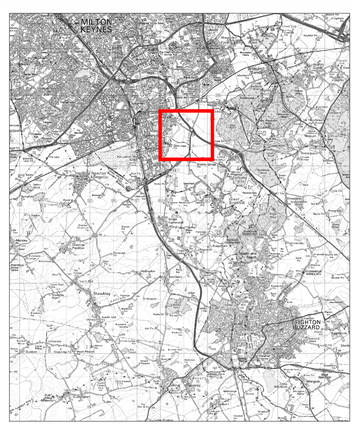
GENERAL NOTES

1. ALL DIMENSIONS IN METRES UNLESS STATED OTHERWISE.

NOTES

LEGEND

KEY PLAN



REV	DATE	REVISION	BY	APVD
2	17.07.2015	SKETCH - 2M WIDTH CYCLEWAY A5 NORTH	CM	-
1	19.06.2015	SKETCH	CM	-

DSGN	DR	CHK	APVD
C.McGEE	C.McGEE	C.McGEE	-

CH2M HILL, RED HILL HOUSE,
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CH2MHILL

GALLAGHER ESTATES

EATON LEYS ROUNDABOUT
GENERAL ARRANGEMENT
DRAWING 1 OF 1

NTS

VERIFY SCALE

BAR IS 25mm ON ORIGINAL DRAWING.
0 25mm

DATE	19.06.2015
PROJ	481693 - EATON LEYS
DWG	481693.01.GA01
SHEET	1 of 1

BWB

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