

Client	Furtho Development Objection Group		Page No.	1 of 24	
Project	Furtho Pits, Old Stratford, Northamptonshire		Project No.	23/115	
Subject	Review of Planning Application		Document No	TN001	
Prepared By	MK	Checked and Authorised By	MK	Date	July 2023

1 INTRODUCTION

1.1 NOTE PURPOSE

1.1.1 Velocity Transport Planning (VTP) has been appointed by the Furtho Development Objection Group to undertake a review of the highways and transportation technical information submitted in support of the Planning Application at Furtho Pits, Old Cosgrove Road, Old Stratford, Northamptonshire (Planning Ref: WNS/2022/1741/EIA).

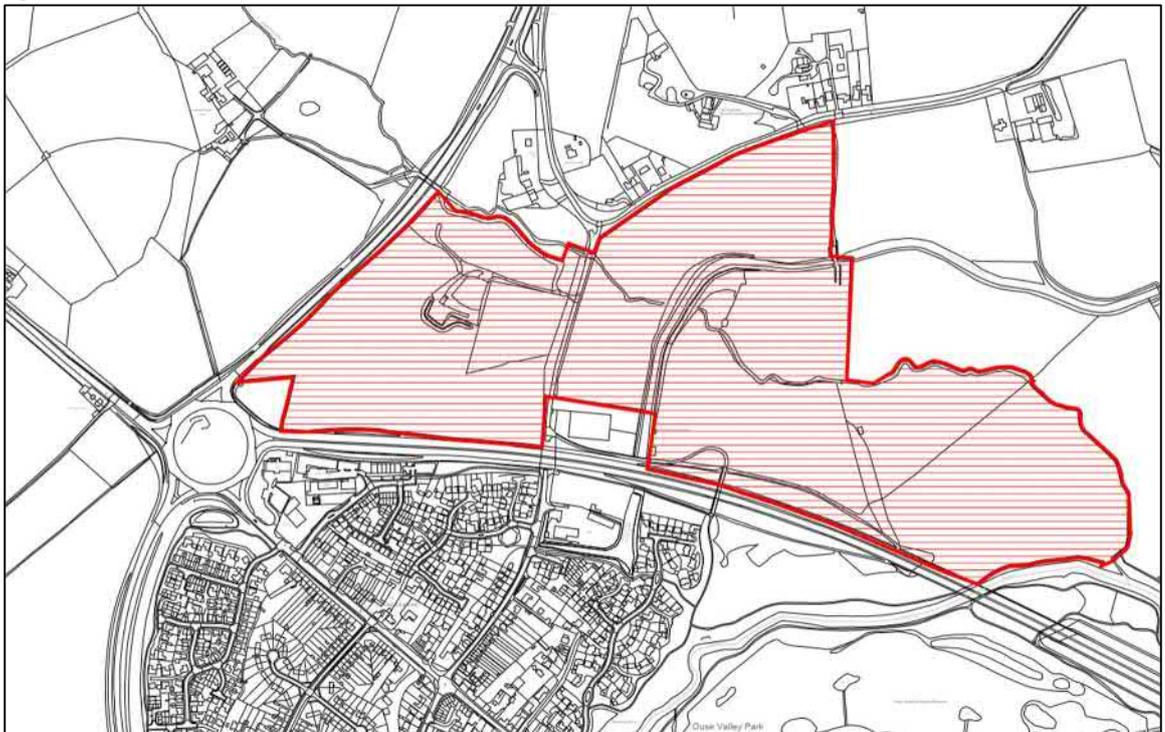
1.1.2 The Planning Application was received by West Northamptonshire Council (WNC) on 08/08/2022, validated on 05/09/2022, and comments on the Planning Application are to be received no later than 15/07/2023.

1.1.3 The Planning Application is identified as follows:

“Erection of 9 x employment units comprising circa 69,744sqm GIA. of floorspace within Class B2 or B8 Uses, with ancillary class E(g)(i) offices and E(g)(ii) research and development, together with country park, ground re-profiling in the country park, new vehicular access from the A508 and associated site infrastructure, including lorry parking. Application accompanied by an Environmental Statement.”

1.1.4 **Figure 1-1** shows the location of the site, which is to the north west of Milton Keynes.

Figure 1-1: Site Location and Local Context



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1.2 BACKGROUND INFORMATION

1.2.1 The Site is allocated as part of Policy AL5 within the South Northamptonshire Local Plan (2011-2029) and is described as being *“located at an important position adjoining the A5 and A508, this development site provides 16 hectares of mixed employment generating development.”*

1.2.2 A copy of Policy AL5, including a copy of the Site Allocation Plan, is provided at **ATTACHMENT A** of this Technical Note. Key highways and transport aspects of Policy AL5 are summarised below:

Access and Transport:

- a. Access from a new roundabout junction from the A508;
- b. Provision of new footpaths and cycleways that link to existing networks including to a proposed new adjoining country park and utilising the existing pedestrian crossing over the A5 linking to Old Stratford having appropriate regard to the retention and enhancement of the existing public rights of way through the site; and
- c. Good accessibility to public transport services should be provided for including contributions to the cost of establishing bus services including stops to the site, to promote sustainable transport; and
- d. A transport assessment and travel plan will be required to assess the transportation implications of the proposed development (including noise from the A5 and A508) and to identify appropriate mitigation measures.

1.2.3 BWB Consulting (BWB) has been appointed by Frontier Estates (The Applicant) to provide highways and transport advice to support the detailed Planning Application. BWB prepared a Transport Assessment (TA) dated April 2022, which was then updated to form the Transport Assessment Addendum (TAA) dated December 2022. BWB also prepared a number of relevant Technical Notes that were in response to the consultation comments received from WNC in their capacity as the Local Highway Authority (LHA), and National Highways (NH) in their capacity as Strategic Highway Authority (SHA).

1.2.4 A review of the supporting highways and transport information contained on the WNC Planning Portal, identifies the following documents and associated consultation responses from the relevant highway authorities:

- Technical Reports:
 - Transport Assessment (April 2022);
 - Framework Travel Plan (April 2022);
 - Transport Assessment Addendum (December 2022)
 - Framework Travel Plan (December 2022);
 - Framework Travel Plan (March 2023);
- Consultation Responses:
 - 29/09/2022 – National Highways
 - 10/10/2022 – West Northamptonshire Council (Highways)
 - 22/12/2022 – National Highways



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- 21/02/2023 – National Highways
- 02/03/2023 – West Northamptonshire Council (Highways)
- 05/05/2023 – National Highways
- Technical Notes:
 - TN04 – Response to NH & VISSIM Forecast Year Results (27/02/2023)
 - TN05 – Site Access Appraisal (20/03/2023)
 - TN07 – Site Access Arrangements Review (11/05/2023)
 - TN05 – Consideration of Proposed Cosgrove Road Footway (May 2023)

1.3 KEY HIGHWAY MATTERS TO BE CONSIDERED

1.3.1 In accordance with Policy AL5 Part 4, there are considered to be four key criteria that relate to highways and transport matters that are to be addressed as part of the Planning Application. These are summarised as follows:

- a. Site Access.
- b. Pedestrian and Cycle Connectivity.
- c. Public Transport Accessibility.
- d. Transportation Impacts and Mitigation.

1.3.2 In addition to the above, the following are also considered to be matters that should be appropriately addressed as part of the Planning Application:

- e. Access for Emergency Vehicles.
- f. Parking Provision.



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2 TECHNICAL ANALYSIS

2.1 INTRODUCTION

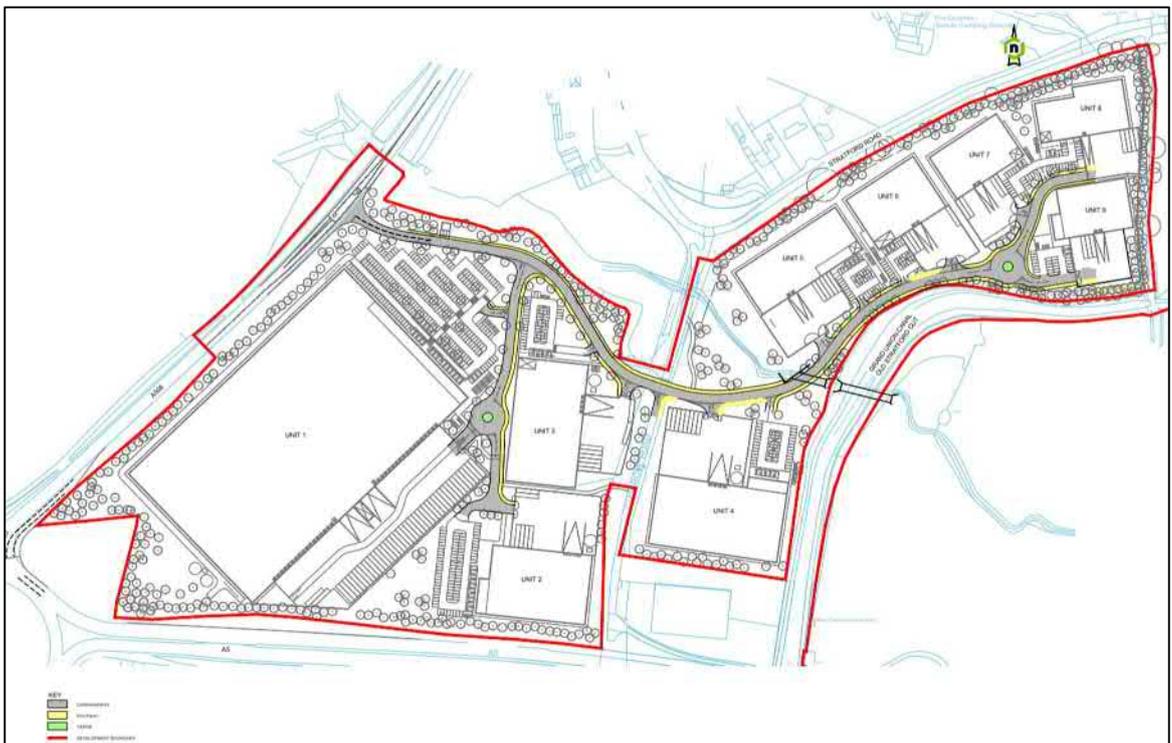
2.1.1 This section of the Technical Note will address each of the criteria that relate to highways and transport matters and identify any shortcomings or discrepancies that are not considered to be appropriately addressed.

2.2 SITE ACCESS

2.2.1 Policy AL5 specifies that access to the proposed development should be via a new roundabout junction from the A508. The current proposals identify a traffic signal junction arrangement.

2.2.2 LINK Engineering prepared a General Arrangement Plan for the development proposals. An extract of this General Arrangement Plan is presented in **Figure 2-1**, and a full copy of Drawing FP-LE-GEN-XX-DR-CE-000 is included at **ATTACHMENT B**.

Figure 2-1: Planning General Arrangement



2.2.3 The General Arrangement Plan shows a single point of access from the A508 at a point approximately 50m to the south of the nearby culvert that provides a pedestrian link underneath the A508.

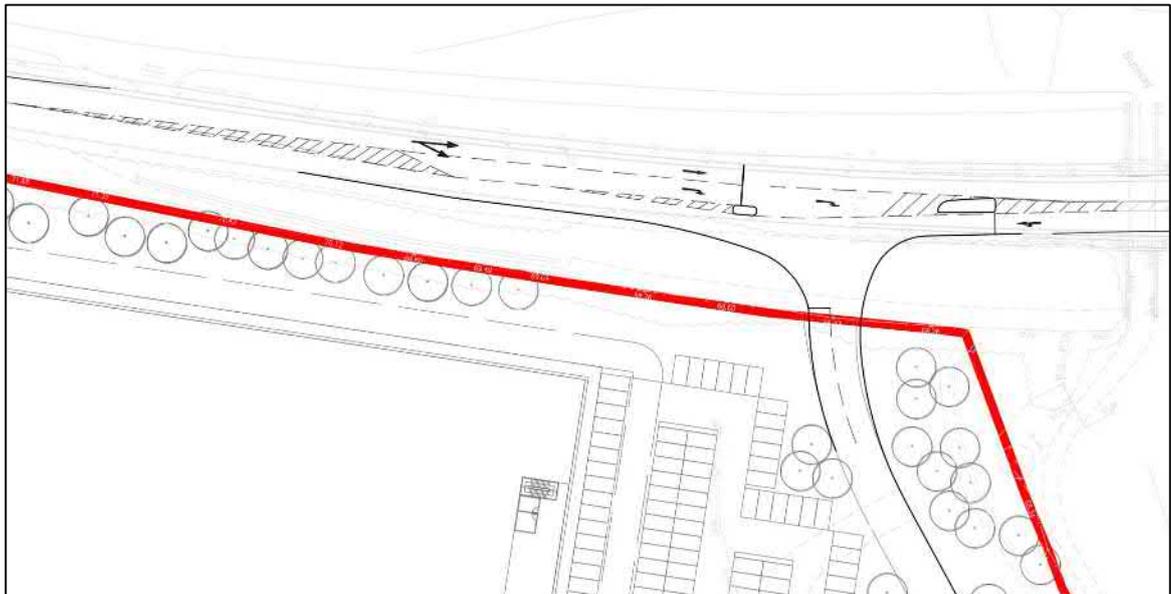
2.2.4 It is key to note that Cosgrove Road currently provides a vehicular access to an existing commercial unit (Jade Tyres) that will form part of the future development. Cosgrove Road also provides a means of access to an existing farm via a route that passes through the culvert on the A508. As the primary access road does not provide a link to Cosgrove Road, it must be assumed that the proposed development will not hinder this existing means of access to the farm. However, this is not clear from the General Arrangement Plan.



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- 2.2.5 The BWB technical reports set out the respective site access junction proposals that have been considered to date. The BWB TA did not set out a detailed site access proposal as there was insufficient up-to-date traffic count data available, and traffic surveys were unacceptable at the time due to the pandemic, to undertake junction capacity assessments.
- 2.2.6 The BWB TAA identified that the site access junction was proposed to take the form of a signalised junction, as presented on BWB Drawing FUP-BWB-GEN-XX-DR-TR-101 (Rev P1), a full copy of which is included within **ATTACHMENT B**, and an extract of which is presented in **Figure 2-2**.

Figure 2-2: Proposed Site Access Junction



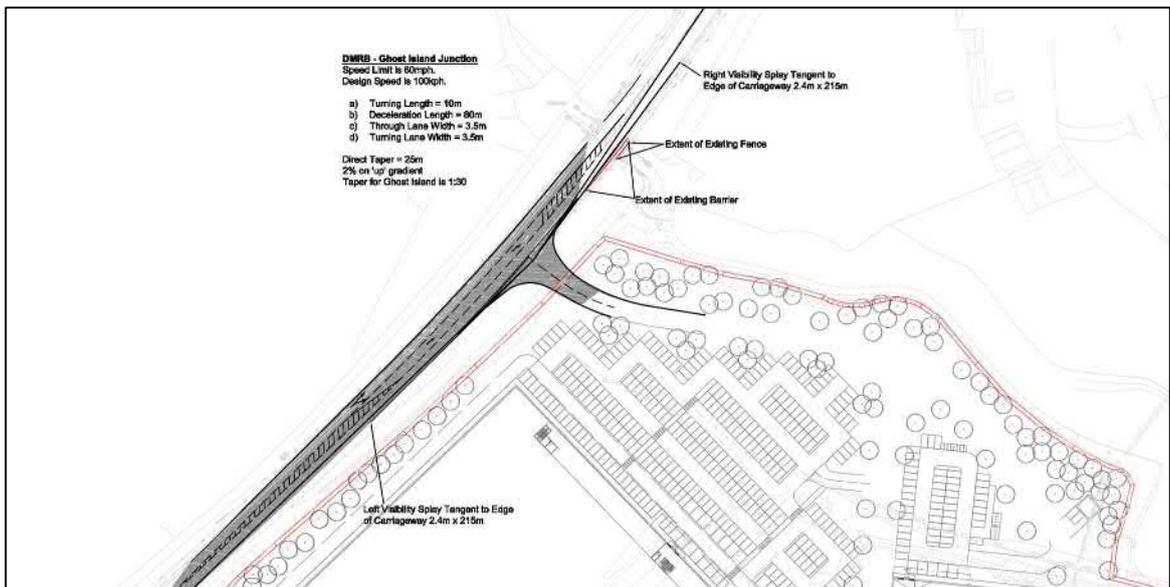
- 2.2.7 The initial consultation response from WNC dated 10/10/2022, commented that the signal junction arrangement was presented as an indicative proposal as part of the original application. This was due to the fact that traffic count data from the Northamptonshire Strategic Transport Model (NSTM) was not available at the time, and therefore it was not possible to undertake the capacity assessments that would establish the exact junction type and geometry that would be required.
- 2.2.8 Following the submission of the TAA, which included the capacity assessment of the proposed traffic signal junction with data obtained from the NSTM, WNC provided a further consultation response dated 02/03/2023. WNC stated that there had not been adequate justification for the provision of a traffic signal junction, which would lead to unjustified and unnecessary delays along the A508.
- 2.2.9 In addition, WNC noted that whilst not referred to within the TAA, Note 2 of the Proposed Site Access Junction Plan (a copy of which is included in **APPENDIX B**), states “As an outcome of the initial modeling work and due to capacity, it is proposed to reduce the speed along the A508 from Old Stratford roundabout within the vicinity of the proposed site access to 30mph (to be agreed with the Council).”



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- 2.2.10 As the A508 is currently derestricted, and as such, has a speed limit of 60mph, this reduction in speed limit would not only require approval from the highway authority, but would also require a formal Traffic Regulation Order (TRO) to be progressed. As a permanent TRO is subject to separate consultation, which in this instance is considered would only take place after the granting of planning permission, there is no guarantee that the reduction in speed limits from 60mph to 30mph would be acceptable. As such, the junction proposals may not be deliverable if the TRO process is not successful.
- 2.2.11 WNC also noted within their March 2023 consultation response that the proposed site access junction had not been the subject of a Stage 1 Road Safety Audit (RSA). As such, it was the highway authority’s view at the time that, subject to further capacity assessments and a Stage 1 RSA, insufficient justification had been provided for the proposed traffic signal junction arrangement.
- 2.2.12 To address the concerns raised by WNC in their March 2023 consultation response, TN05 – Site Access Appraisal (20/03/2023) was prepared by BWB. An alternative site access junction in the form of a proposed T Junction with Ghost Island was presented. It is noted that the design of this alternative site access arrangement was prepared in accordance with the guidance set out within the Design Manual for Roads and Bridges (DMRB) CD 123 – Geometric design of at-grade priority and signal-controlled junctions.
- 2.2.13 The assessment contained within TN05 concluded that a T Junction with Ghost Island would not be a suitable junction to accommodate the predicted level of traffic movements expected. For completeness, an extract of the T Junction with Ghost Island arrangement that was included within TN05 is presented in **Figure 2-3**, and a full copy is included in **ATTACHMENT B**.

Figure 2-3: Alternative Proposed Site Access Junction (T Junction with Ghost Island – One Lane Exit)



- 2.2.14 TN05 provided further details in relation to the proposed traffic signal junction, including detailed capacity assessments. It was concluded within TN05 that the alternative T Junction with Ghost Island arrangement would not accommodate the forecast flows in 2026 and 2031 PM peak hour scenarios. However, the proposed traffic signal junction could accommodate the forecast flows in 2026 and 2031 for both the AM and PM peak hours with all scenarios identifying a degree of saturation (DoS) of less than 90%.



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- 2.2.15 A DoS value of 90% is considered to be the ‘practical capacity’ of a traffic signal junction. This would still allow for approximately 10% of traffic fluctuation before the traffic signal junction reaches a DoS of 100%, which is considered to be the ‘theoretical capacity’ of a junction, at which point the junction would fail. New junctions should be designed to have a DoS no greater than 90%.
- 2.2.16 It is noted that TN05 does not include an assessment of a roundabout junction serving the proposed development from the A508, which Policy AL5 specifically identifies. The Applicant comments that a roundabout junction could not be accommodated from the A508 as it would impact on the location of the large warehouse unit on the site. In addition, TN05 does not include a Stage 1 RSA of the proposed traffic signal junction.
- 2.2.17 BWB prepared TN07 – Site Access Arrangements Review (11/05/2023) to provide further justification and evidence to support the proposed site access arrangement. This further review was partly to address queries raised by WNC in relation to the traffic flows on the A508, which would require further capacity assessments to ensure robust assessments are undertaken, but TN07 also provided commentary on a Signalised Roundabout Junction option, and a Priority T-junction with Ghost Right Turn Lane (two-lane exit) option for the proposed site access arrangement.
- 2.2.18 TN07 noted that a proposed Signalised Roundabout junction was considered by David Tucker Associates (DTA) in support of the Site Allocations process and set out within a Transport Appraisal from 2016. TN07 notes that whilst the proposed Signalised Roundabout arrangement was agreed in principle and written into Policy AL5, as the assessment at the time was not based on traffic data from the NSTM, the Applicant considers that the Traffic Signal junction is a more efficient arrangement in terms of land take. For completeness, an extract of the DTA proposed Signalised Roundabout junction arrangement is presented in **Figure 2-4**.

Figure 2-4: Alternative Proposed Site Access Junction (Signalised Roundabout)



- 2.2.19 TN07 also considers an alternative to the T Junction with Ghost Island that was set out within TN05. This alternative junction layout proposes a two-lane exit arrangement to provide more capacity on the site access approach to the junction. The proposed methodology for the assessment of this alternative option, is noted to have been agreed with the LHA (para 4.23).
- 2.2.20 Based on this agreed methodology, it is noted that the results suggest that the junction arrangement would work well within the accepted thresholds of a junction of this nature and would not result in the need to reduce the speed limit on the A508, which in turn would require a separate consultation process to agree a TRO following the granting of planning permission.



Figure 2-6: Signalised T-Junction LINSIG Results

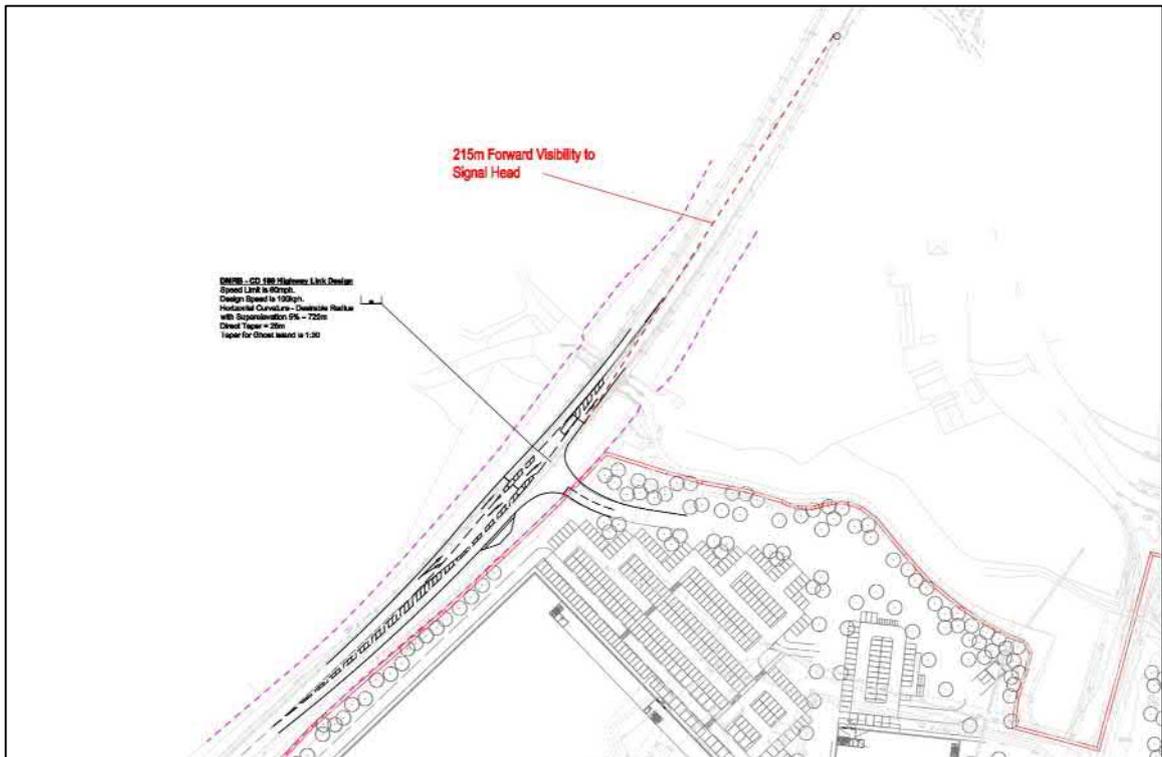
Table 4.5: Signalised T Junction 2026/2031 DM With Development Flows Modelling Results

Link			2026DM+Dev		2031DM+Dev	
			AM	PM	AM	PM
1/1+1/2	A508 South Ahead/Right	DoS Queue Avg. Delay	53.7%/54.4% 5.0 8 sec	8.0%/80.0% 25.5 15 sec	47.7%/52.0% 4.0 8 sec	87.2%/87.2% 33.4 20 sec
2/1	A508 North Ahead/Right	DoS Queue Avg. Delay	85.9% 16.2 20 sec	87.1% 24.0 25 sec	82.0% 14.3 17 sec	87.7% 24.3 25 sec
3/1	Site Access Left/Right	DoS Queue Avg. Delay	54.0% 2.7 1min 3sec	83.8% 10.5 1min 22sec	54.0% 2.7 1min 3sec	83.8% 10.5 1min 22sec
PRC Overall (%)			4.7	3.4	9.8	2.6

2.2.24 It is clear from the results presented above that in both the 2026 and 2031 scenarios, the DoS at the traffic signal junction is nearing 90% on a number of the approaches. The 2031 PM peak hour identifies that there is only 2.6% of practical reserve capacity (PRC) in this scenario.

2.2.25 **Figure 2-7** presents an extract of this revised Traffic Signal junction layout, a full copy of which is included within **ATTACHMENT B**.

Figure 2-7: Revised Proposed Site Access Junction



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SUMMARY

- 2.2.26 Whilst it is acknowledged that the Applicant considers that a Traffic Signal junction arrangement is the most efficient use of land to provide a means of access to the proposed development that has been demonstrated to operate within capacity, and it is acknowledged that an alternative T Junction with Ghost Island and two-lane exit arrangement would have sufficient capacity to serve the proposed development, no assessment of a proposed Roundabout Junction, signalised or uncontrolled, has been undertaken to demonstrate if this “policy compliant” arrangement would be acceptable.
- 2.2.27 The supporting technical work does not include a Stage 1 Road Safety Audit (RSA) of any of the proposed site access arrangements. As this is clearly a contentious and sensitive part of the network, it is considered that the LHA do not have sufficient information to confirm the safe operation of the potential site access junction without a Stage 1 RSA being provided.
- 2.2.28 It is not considered an appropriate justification to suggest that the land take required to deliver a roundabout arrangement would impact on the size of a potential development plot. The South Northamptonshire Design Guide (2017) states at paragraph 6.56 of Chapter 6: Commercial Development Design Guide that “*where parking and access isn’t considered from the outset or added as an afterthought, it can have substantive negative impact on the appearance of a development.*” As such, the provision of an appropriate site access arrangement should not be constrained to accommodate the layout of the proposed development, particularly when Unit 1 is of such a large scale.
- 2.2.29 As the Planning Application includes for access in detail, and as per the request from WNC in their most recent consultation response in March 2023, a Stage 1 RSA is required to support the Planning Application in order to demonstrate that the proposed site access arrangement is safe and suitable. As this has not been provided, it is not possible to confirm that the proposed traffic signal junction is appropriate.

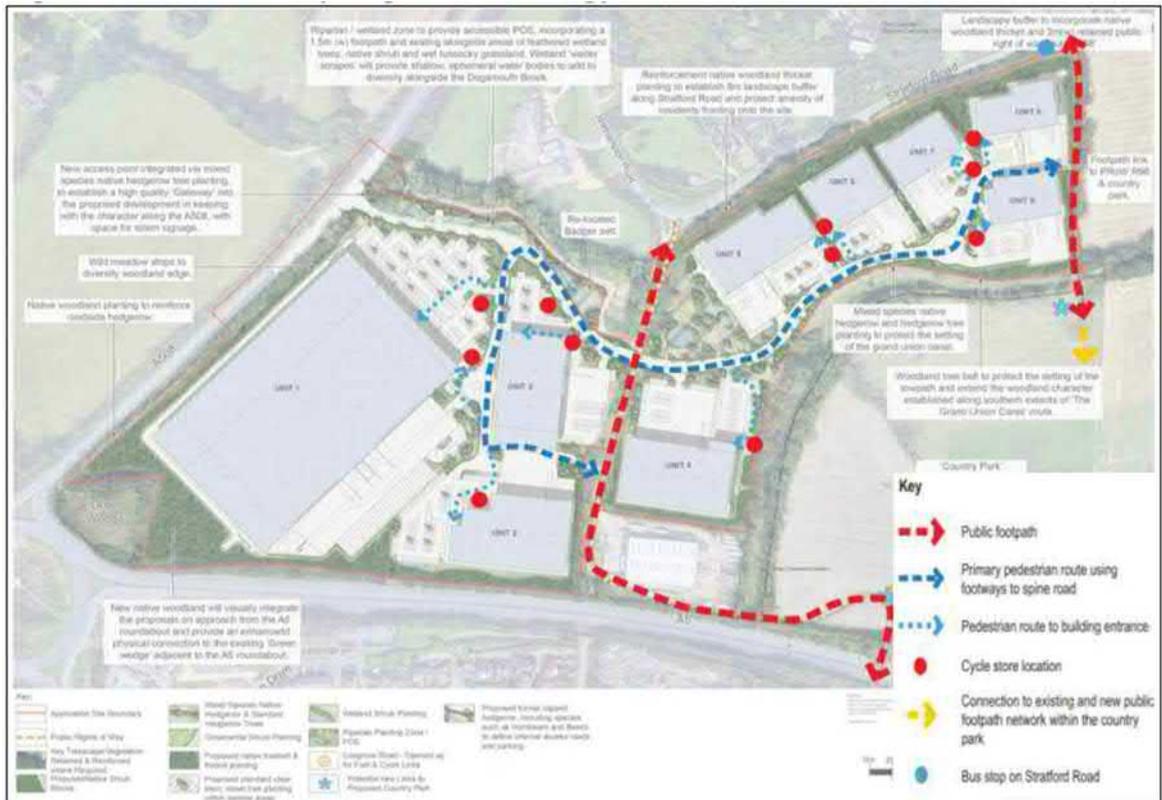
2.3 PEDESTRIAN AND CYCLE CONNECTIVITY

- 2.3.1 The pedestrian and cycle access strategy are commented upon within the TAA and the routes are presented at Figure 3.2 of the TAA. An extract of this is included at **Figure 2-8** for completeness.



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Figure 2-8: Pedestrian & Cycle Access Strategy



2.3.2 In addition to the above plan, Aspect Ecology prepared TN05 – Consideration of Proposed Cosgrove Footway (May 2023), which included a further plan referred to as Footpaths Strategy: Development Parcel. This Plan is included at **ATTACHMENT C** of this Technical Note.

PEDESTRIAN ACCESS

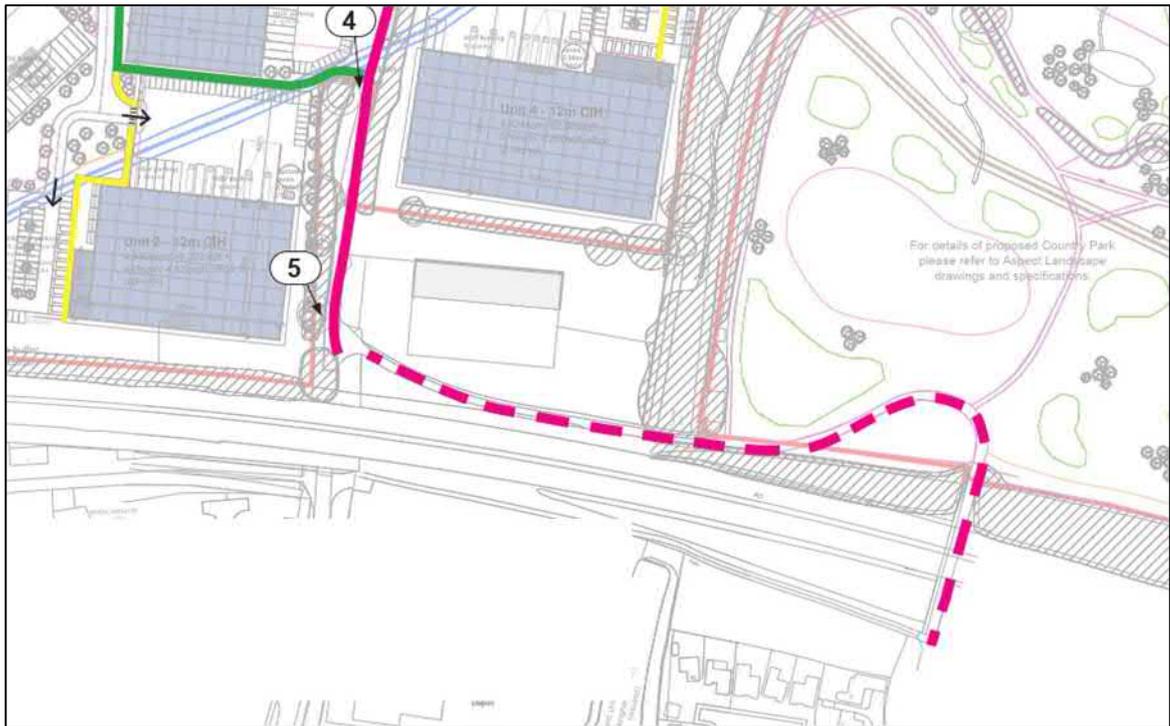
2.3.3 It is noted that the March 2023 consultation response from WNC, acknowledged that the Applicant is willing to provide an off-site pedestrian/cycle route which will link the site with the residential area of Old Stratford. WNC noted that this route should be designed in line with the DfT’s guidance on Cycle Infrastructure Design, LTN 1/20.

2.3.4 The Aspect Ecology Plan – 34946/IP/SK230502_rev4 (included at **ATTACHMENT C**) identifies this route as being via the existing track to the south of the site, over the existing bridge that crosses the A5, and then via the existing routes towards the residential area of Old Stratford. The extract presented in **Figure 2-9**, identifies a dashed pink route, which the plan identifies as being “Existing network upgraded to provide 4m wide segregated footpath & cycleway”.



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Figure 2-9: Extract of Pedestrian/Cycle Route to Old Stratford

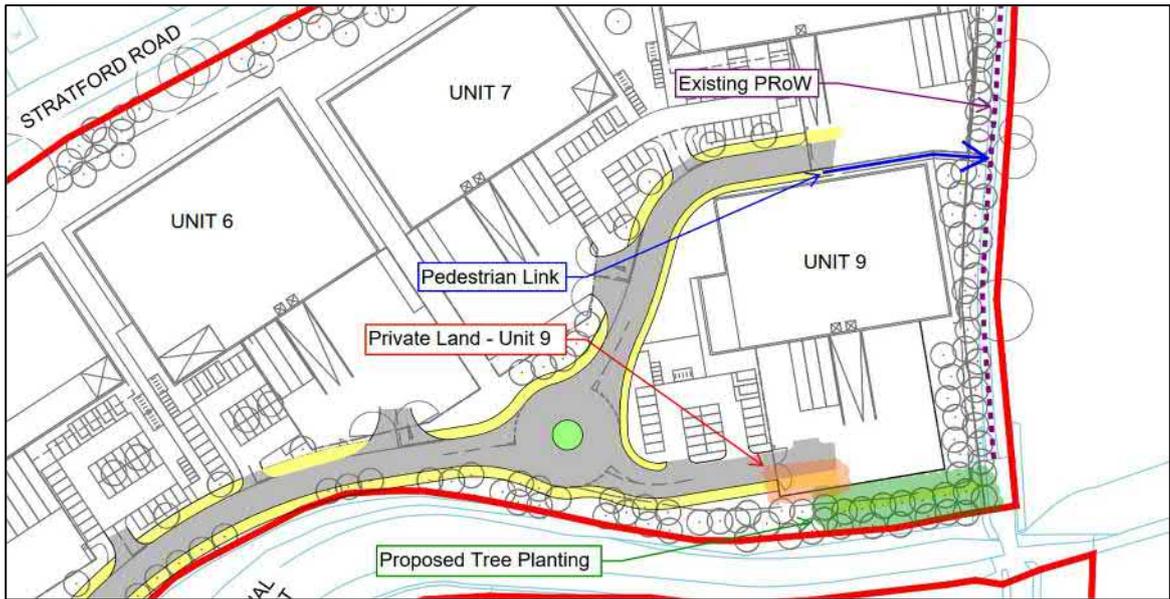


- 2.3.5 Whilst it is proposed to provide this route at 4.0m in width, which would be appropriate to accommodate shared pedestrian/cycle use, no detail has been provided to demonstrate that this 4.0m width could be provided. WNC specifically requested that detailed scaled plans be provided in this regard.
- 2.3.6 This shared pedestrian/cycle route will require an appropriate surface treatment to ensure that it can be used in all weather conditions. In addition, it will have to be lit, which may have a detrimental impact on the Country Park environment. These details should also be provided so that an appropriate assessment can be undertaken of the only realistic sustainable link to the proposed development.
- 2.3.7 A pedestrian link to the north of the site, towards Stratford Road and the local bus stop, is identified via the existing Public Right of Way (PRoW).
- 2.3.8 **Figure 2-10** presents an extract of the General Arrangement Plan (included at **ATTACHMENT B**), which identifies that the pedestrian connections to the existing PRoW are proposed via a pedestrian link adjacent to the internal access road to the immediate north of Unit 9, and to the south of Unit 9.
- 2.3.9 The proposed route to the north of Unit 9 is identified as being 2.0m in width, which is not considered to be an appropriate width to accommodate shared pedestrian and cycle use of this only link towards the north of the site. The proposed route to the south of Unit 9 appears to pass through a secure area that forms part of the service yard for Unit 9, which means it will have limited access for pedestrians, and also appears to pass through an area of new planting.



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Figure 2-10: Extract of Pedestrian/Cycle Route to Stratford Road via the Existing PRoW



2.3.10 The internal footway provision along the Spine Road appears to be generally consistent with the requirements that would be expected, including the LTN 1/20 guidance. A 3.0m wide provision is made along at least one side of the Spine Road linking all the Units within the development, which is generally considered to be a suitable width to accommodate shared pedestrian and cycle access for the expected number of users. Where a 3.0m provision is not identified, the footway width is 2.0m, which is considered to be an adequate provision for pedestrians only.

2.3.11 However, as the Planning Application is in detail, it would be expected that crossing facilities should be provided at appropriate locations along the pedestrian/cycle routes. In addition, there are locations where limited pedestrian access is not provided via a dedicated footway, i.e. between Units 3 and 4. Whilst it is considered that these detailed aspects could be addressed, they have not been identified within the details submitted as part of this Planning Application.

CYCLE ACCESS

2.3.12 As noted above, there are limited opportunities for cyclists to access this site. An improved route is to be provided towards the residential area of Old Stratford to the south of the A5, which is noted will be 4.0m in width to accommodate segregated pedestrians and cyclists.

2.3.13 No provision is made for cyclists to access Stratford Road towards the north of the site, as the only reasonable opportunity to connect to the existing PRoW has been identified from the proposed link to the immediate north of Unit 9, which is 2.0m in width. In accordance with the LTN 1/20 guidance, a provision of 2.0m is not considered to be adequate for pedestrians and cyclists to share and a provision of at least 3.0m should be made.

2.3.14 Whilst shared pedestrian and cycle routes are proposed within the development, no crossing facilities have been identified and adequate tactile paving should be incorporated into the design, particularly where pedestrians and cyclists will be required to share the 3.0m wide provision.



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SUMMARY

2.3.15 Whilst the comments made by WNC with regards to pedestrian and cycle connectivity in their consultation responses from October 2022 and March 2023, appear to have been acknowledged and the design of the pedestrian and cycle connections have been updated. However, the current proposals are not considered to adequately provide for pedestrians and cyclists throughout the site.

2.3.16 There are areas within the development that need to be addressed, particularly the point on adequate crossing facilities, and the provision of appropriate tactile paving. The single shared pedestrian and cycle link towards the south is proposed to be 4.0m in width, but no details have been provided as to how this provision could be made. The single pedestrian link towards the north is considered to be adequate for pedestrians only but does not accommodate cyclists.

2.4 PUBLIC TRANSPORT ACCESSIBILITY

2.4.1 It is noted that the WNC consultation response from March 2023 acknowledges that a single bus stop is provided on Stratford Road, which is served by Route 89. A review of the current bus timetables for bus Route 89, which is operated by Britannia Buses, identifies that this service operates on Monday – Friday, with 3 services in the morning from Potterspurty to Milton Keynes, via Stratford Road, and 3 services in the afternoon from Milton Keynes to Potterspurty. However, a review of the Britannia Buses website, identifies that this service is due to finish at the end of June 2023. The bus operators note that they are in discussions with West Northants and Milton Keynes Councils about a replacement service.

2.4.2 Regardless of the potential for this future service, which might be supported by future Section 106 financial contributions from this proposed development, it would appear that there is no guarantee that a future bus service will serve the site. Assuming that a future service extension could be agreed, which would utilise the existing bus stop on Stratford Road, WNC note that this existing bus stop is beyond the maximum walking distance of 300m.

2.4.3 A review of the actual walking distances between the existing bus stop and each of the respective Units has been undertaken, and based on the proposed pedestrian provision within the application site, the following walking distances and walking times (based on 80m per minute) are identified to each Unit:

- Unit 1 – 840m (approx 10.5 minutes)
- Unit 2 – 1,010m (approx 12.5 minutes)
- Unit 3 – 735m (approx 9.5 minutes)
- Unit 4 – 650m (approx 8.25 minutes)
- Unit 5 – 410m (approx 5.25 minutes)
- Unit 6 – 395m (approx 5 minutes)
- Unit 7 – 250m (approx 3.25 minutes)
- Unit 8 – 240m (approx 3 minutes)
- Unit 9 – 268m (approx 3.25 minutes)

2.4.4 Notwithstanding the fact that WNC consider that there is a lack of adequate pedestrian infrastructure linking the site with the bus stop, only Units 7, 8 and 9 are considered to be within 300m, which WNC consider to be the maximum walking distance. The remaining Units are all beyond this distance, and with respect to Units 1 and 2, a significant distance beyond this recommended maximum distance.

2.4.5 It is suggested that as part of the future consideration of bus services in the local area, the bus route should be routed into the proposed development to ensure that each Unit is adequately served by an appropriate bus service. This is considered to be a key requirement of Policy AL5.



TOTAL PERSON TRIP GENERATION

2.4.6 It is noted that neither the TA nor the TAA provided an indication of the number of total person trips associated with the application site. This information would have established the likely number of bus users that could be associated with the proposals. As such, a review of the Trip Generation details contained within the TA and TAA has been undertaken.

2.4.7 Table 3.1 of the TAA identified the Proposed Schedule of Development. This Table is replicated in **Figure 2-11** for ease of reference:

Figure 2-11: Proposed Development Schedule

Table 3.1: Proposed Schedule of Development

Ref.	Floor Area (sq.m)	Use Class
Unit 1	36,287.00	B8*
Unit 2	4,928.00	Flexible B2/B8*
Unit 3	6,048.00	Flexible B2/B8*
Unit 4	6,400.00	Flexible B2/B8*
Unit 5	4,353.00	B8*
Unit 6	3,328.00	B8*
Unit 7	2,815.00	B8*
Unit 8	2,876.00	Flexible B2/B8*
Unit 9	2,540.00	Flexible B2/B8*
Sub Total	69,575.00	-
Transport Office	105.00	-
Management Office	48.70	-
Gatehouse	15.00	-
Total Floor Space	69,743.70	-
B8 Total Floor Space	46,783.00	-
Flexible B2/B8 Total Floor Space	22,792.00	-
Note: *includes ancillary offices		

2.4.8 Tables 4.3 and 4.4 of the TAA set out the B8 and B2 Vehicle Trip Rates that have been agreed with WNC. These Trip Rates were derived from the TRICS database, and the output files were included within APPENDIX 3 of the TA (April 2022).

2.4.9 These tables are replicated in **Figure 2-12** for ease of reference:



Figure 2-12: Agreed Vehicle Trip Rates (B8 & B2 Uses)

Table 4.3: BWB B8 Trip Rates (per 100 sqm)

Trip Types	Weekday AM Peak (08:00-09:00)			Weekday PM Peak (17:00-18:00)		
	ARR	DEP	2-WAY	ARR	DEP	2-WAY
Total Vehicles	0.191	0.086	0.277	0.061	0.165	0.226
HGV	0.040	0.045	0.085	0.031	0.023	0.054
Lights	0.151	0.041	0.192	0.030	0.142	0.172

Note: Trip rates (per 100sqm).

Table 4.4: BWB B2 Trip Rates (per 100 sqm)

Trip Types	Weekday AM Peak (08:00-09:00)			Weekday PM Peak (17:00-18:00)		
	ARR	DEP	2-WAY	ARR	DEP	2-WAY
Total Vehicles	0.816	0.058	0.874	0.052	0.700	0.752
HGV	0.021	0.021	0.042	0.008	0.008	0.016
Lights	0.795	0.037	0.832	0.044	0.692	0.736

Note: Trip rates (per 100sqm).

- 2.4.10 The TAA identified 3 scenarios for the proposed development, which split the proposed units as follows:
- Scenario 1: Units 1, 5, 6 and 7 (B8 Use) & Units 2, 3, 4, 8 and 9 (B2 Use);
 - Scenario 2: Units 1, 5, 6 and 7 (B8 Use) & Units 2, 3, 4, 8 and 9 (floor area split equally between B2 and B8 uses); and
 - Scenario 3: All units B8 Use

2.4.11 Following comments from WNC, TN07 identified that as Scenario 1 would generate the maximum number of vehicle trips, this would be the worst-case and has therefore been considered to be the appropriate level of vehicle trip generation for the proposed development. Table 4.6 of the TAA and Table 3.1 of TN07 presented these vehicle flows. For ease of reference, these tables are replicated in **Figure 2-13**:

Figure 2-13: Agreed Vehicle Trips (Scenario 1)

Table 3.1: Scenario 1: Total Trip Generation (Table 4.6 TAA)

Trip Types	Weekday AM Peak (08:00-09:00)			Weekday PM Peak (17:00-18:00)		
	ARR	DEP	2-WAY	ARR	DEP	2-WAY
Total Vehicles	275	54	329	40	237	277
HGV	23	26	49	16	13	29
Lights	252	28	280	24	224	248

2.4.12 Having established the agreed vehicle trips for the AM and PM peak hours, the 2011 census data has been reviewed for the Northampton area to establish the general split for the “method of travel to work”. Whilst this is accepted to be a general assessment, it is considered to provide a more detailed representation of the likely mode split of the staff trips to and from the site. The details of this assessment are included in **ATTACHMENT D** and summarised in **Table 2-1**.

2.4.13 For clarity, only the AM and PM peak hours have been considered and only the light vehicles have been assessed as these are likely to be associated with staff trips. The HGV trips are not considered to form staff trips, but rather operational trips.



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Table 2-1: Multi-Modal Trip Assessment

PERIOD	BUS	TAXI	M'CYCLE	CAR/VAN (DRIVER)	CAR/VAN (PASSENGER)	P'CYCLE	ON FOOT	OTHER	TOTAL
% MODE SPLIT									
AM/PM	7.4%	0.6%	0.5%	69.0%	7.8%	2.8%	11.5%	0.5%	100%
MODE SPLIT									
AM	30	2	2	280	32	11	47	2	406
PM	27	2	2	248	28	10	41	2	360

- 2.4.14 Based on the above assumptions, i.e. that a total of 280 two-way light vehicle trips will be generated in the AM and 248 two-way trips in the PM, a total of 30 bus passengers could be assumed to travel to/from the site in the AM peak hour, and 27 bus passengers in the PM peak hour. As there is no guarantee that the existing bus service will be in place when the proposed development opens, there is every prospect that these bus passengers would effectively travel to/from the site by car.
- 2.4.15 Due the limited cycling and walking connectivity to the application site, the same could be said for cyclists and pedestrians. As such, these could also be considered to be misrepresented in the traffic generation figures.
- 2.4.16 Assuming that no bus trips are made to the site as a new bus service is yet to be agreed upon, the cycle trips are reduced by 0.8% to 2.0%, and the pedestrian trips are reduced by 6.5% to 5.0%, which is considered to be reasonable given the location of the proposed development, a proportionate redistribution of the multi-modal trip assessment can be undertaken. Table 2-2 presents the revised multi-modal trip distribution.

Table 2-2: Revised Multi-Modal Trip Assessment

PERIOD	BUS	TAXI	M'CYCLE	CAR/VAN (DRIVER)	CAR/VAN (PASSENGER)	P'CYCLE	ON FOOT	OTHER	TOTAL
% MODE SPLIT									
AM/PM	0.0%	0.7%	0.6%	81.9%	9.2%	2.0%	5.0%	0.5%	100%
MODE SPLIT									
AM	0	3	3	333	38	8	20	2	406
PM	0	2	2	295	33	7	18	2	360

- 2.4.17 It is clear from the above redistribution of multi-modal trips, which are considered to more accurately reflect the means of travel to work at a site in this location, the total car/van trips could increase by as much as 53 two-way vehicle movements in the AM and 47 two-way vehicle movements in the PM peak hours.

2.5 TRANSPORTATION IMPACTS AND MITIGATION

- 2.5.1 Having established that the multi-modal trip generation for the proposed development is very likely flawed, and that there could be an increase of as much as 53 two-way vehicle movements in the AM and 47 two-way vehicle movements in the PM peak hour, it is considered that the traffic generation figures should be adjusted, and the traffic impact assessments revisited.
- 2.5.2 An increase of 53 two-way vehicle movements in the AM peak hour would increase the total vehicle movements from the proposed development to 382 two-way vehicle movements, which equates to approximately 16% more traffic being generated in the AM peak hour. An increase of 47 two-way vehicle movements in the PM peak hour would increase the total vehicle movements from the proposed development to 324 two-way vehicle movements, which equates to approximately 17% more traffic being generated in the PM peak hour. In both the AM and PM peak hours, these increases are considered to be significant.



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2.5.3 As such, if 17% more development traffic were to be added to the network in the PM peak hour, there is every chance that the remaining 2.6% PRC would be required to accommodate this additional development traffic. As such, the DoS for the proposed site access Signal junction could exceed the recommended 90%, which would suggest that it is an inadequate design. In addition, there would still be a need to reduce the speed limit along the A508 from 60mph to 30mph to accommodate this traffic signal junction, which would require a TRO.

2.5.4 Whilst the latest consultation response from NH dated 05/05/2023 confirms that the SHA have no objection to the proposals due to the fact that NH considers that whilst the impact of the traffic associated with the proposed development is not minimal, the increase in queue and delay may largely be attributed to the backflow of queue that is likely to occur in the 'without the development scenario'. However, the NH response is unlikely to have factored in the assessment set out above, i.e. that due to the fact that there may not be any bus services available in the future, and that the pedestrian and cycle trips are considered to have been over estimated, a higher number of light vehicle trips would be generated from the site, which could have significant impact on the strategic highway network.

SUMMARY

2.5.5 The latest consultation response from the LHA on the WNC planning portal is that which is dated 02/03/2023. As such, no response to TN05 (March 2023) nor TN07 (May 2023) is available. As such, it is not possible to establish if the LHA consider that the traffic impact assessment on the local highway network is acceptable. However, based on the flaws that have been identified, it is considered that the LHA will not be in a position to appropriately assess the traffic impacts associated with the proposed development.

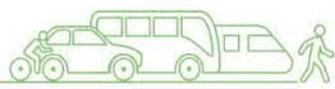
2.5.6 Likewise, whilst it is noted that the consultation response from NH dated 05/05/2023 offers no objection in relation to the traffic impacts on the wider strategic network, due to the fact that the predicted traffic associated with the proposed development is considered to be flawed, this position must be revisited. There is every opportunity that once the additional development traffic flows are included within the assessment of the wider strategic network, including the A5/A508 roundabout junction which has previously been described by NH as being over capacity, the impacts could be significant. As such, the SHA's position of no objection is considered to be based on a flawed assessment.

2.6 ACCESS FOR EMERGENCY VEHICLES

2.6.1 It is noted that only a single point of vehicular access is proposed to the development, which does not provide an alternative means of access for emergency vehicles. Both the BWB TA and the TAA identify that emergency vehicles are proposed to use the same routes as all other vehicles. However, as the primary access road, as presented in **Figure 2-1** has been designed as a single carriageway road with a general width of 7.3m.

2.6.2 Whilst a primary access road of this scale is generally considered to be acceptable, should the access road become blocked for any reason, particularly if this were to be close the site access junction near Unit 1, there is a risk that every vehicle on the site could effectively be trapped within the development.

2.6.3 It is considered that a development of this scale and nature should provide at least one secondary means of access, even if for the purposes of emergencies only.



2.7 CAR PARKING

2.7.1 The TAA sets out the proposed parking provision for the development, which it is suggested is in accordance with the Northamptonshire Parking Standards (September 2016). For completeness, the B2 and B8 parking standards are summarised in Table 3.2 of the TAA, which are presented in **Figure 2-14** for completeness.

Figure 2-14: Proposed B8 Parking Provision

Table 3.2: Minimum Parking Guidance (Northamptonshire Parking Standards, 2016)

Land Use	Cars/HGV's	Blue Badge Spaces	Motorcycle	Bicycle
B2	1 space per 50 sqm	10% of the total car parking spaces	1 space + 1 per 20 car spaces (for 1st 100 car spaces), then 1 space per 30 car spaces (over 100 car spaces)	1 space per 200 sqm for staff plus 1 space per 200 sqm for customers
B8	1 space per 120 sqm	10% of the total car parking spaces	1 space + 1 per 20 car spaces (for 1st 100 car spaces), then 1 space per 30 car spaces (over 100 car spaces)	1 space per 500 sqm for staff plus 1 space per 1000 sqm for customers

2.7.2 Table 3.3 of the TAA sets out the Proposed Parking Provision if the full 69,575sqm of development floor space were to be B8, which are suggested to be based on the parking requirements identified in the Parking Standards. For ease of reference, this table is replicated at **Figure 2-15**.

Figure 2-15: Proposed B8 Parking Provision

Table 3.3: Proposed B8 Parking Provision

Unit	Vehicle (car)			Disabled			Cycle			Motorcycle			Lorry Parking					
	Policy min Requirement	Provision	Difference															
1	302	302	0	30	30	0	109	110	1	16	16	0	46	46	0	45	45	0
2	41	100	+59	4	10	+6	15	50	35	7	9	+2	7	7	0	6	6	0
3	50	121	+71	5	12	+7	18	60	42	8	10	+2	9	9	0	8	8	0
4	53	128	+75	5	13	+8	19	64	45	8	10	+2	9	9	0	8	8	0
5	36	36	0	4	4	0	13	13	0	7	7	0	6	6	0	5	5	0
6	28	28	0	3	3	0	10	10	0	7	7	0	5	5	0	4	4	0
7	23	23	0	2	2	0	8	8	0	7	7	0	5	5	0	4	4	0
8	24	58	+34	2	6	+4	9	29	+20	7	8	+1	5	5	0	4	4	0
9	21	51	+30	2	5	+3	8	25	+17	7	8	+1	4	4	0	3	3	0

NOTE: Difference column, negative figure is a shortfall against minimum policy requirement, positive figure is an additional against policy

2.7.3 As set out in the Proposed Development Schedule, a copy of which is presented in Figure 2-11 of this Note, Units 2, 3, 4, 8 and 9 are proposed to be flexible B2/B8 uses. As the parking standards identify that a B2 use has a higher demand for car parking, Table 3.4 of the TAA set out the parking requirements for this Units at a maximum requirement of for the B2 use only. This table is replicated at **Figure 2-16**.

It is worth noting that the figures presented in the above table, reflect a maximum B2 provision in the B8 table.



Figure 2-16: Proposed B2 Parking Provision

Table 3.4: Proposed B2 Parking Provision

Unit	Vehicle (car)			Disabled			Cycle			Motorcycle			Lorry Parking					
	Policy min Requirement	Provision	Difference															
1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2	99	100	+1	10	10	0	49	50	+1	9	9	0	7	7	0	6	6	0
3	121	121	0	12	12	0	60	60	0	10	10	0	9	9	0	8	8	0
4	128	128	0	13	13	0	64	64	0	10	10	0	9	9	0	8	8	0
5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
8	58	58	0	6	6	0	29	29	0	8	8	0	5	5	0	4	4	0
9	51	51	0	5	5	0	25	25	0	8	8	0	4	4	0	3	3	0

NOTE: Difference column, negative figure is a shortfall against minimum policy requirement, positive figure is an additional against policy

2.7.4 A review of the actual parking provision based on the General Arrangement Plan has been carried out and this plan is presented in **ATTACHMENT E**. **Table 2-3** sets out a summary and comparison of the parking requirements based on the standards for the respective land use, the provision identified in the TAA tables by BWB, and the actual provision based on a review of the General Arrangement Plan. For completeness, the difference that is presented is a comparison of the actual provision and the requirements identified in the parking standards for the respective land uses, and floor area.

Table 2-3: Summary of Parking Provision

UNIT	AREA (sqm)	USE	STANDARDS	BWB	ACTUAL	DIFFERENCE	% DIFFERENCE
1	36,287	B8	302	302	301	-1	-0.3%
2	4,928	B2	99	100	99	0	0.0%
3	6,048	B2	121	121	50	-71	-58.7%
4	6,400	B2	128	128	53	-75	-58.6%
5	4,353	B8	36	36	36	0	0.0%
6	3,328	B8	28	28	26	-2	-7.1%
7	2,815	B8	23	23	23	0	0.0%
8	2,876	B2	58	58	24	-34	-58.6%
9	2,540	B2	51	51	24	-27	-52.9%
Total	69,575		846	847	636	-210	-24.8%

2.7.5 The actual parking provision for the majority of Units does not meet the parking standards, particularly if the most onerous approach to land use is taken. With the exception of Units 5 and 7, all are providing less than required, and in some instances considerably less. On average, the proposed development is identified to provide a shortfall of approximately 210 car parking spaces, which equates to an average shortfall of approximately 25%.

2.7.6 When the under estimation of car trips to the site due to the lack of public transport and under provision for pedestrian/cycle facilities is taken into account, the actual demand for on-site parking may be higher than even the standards would suggest should be provided. As such, it is considered that a significant under provision of car parking has been identified for the proposals.



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- 2.7.7 The disabled parking provision is accounted for within the figures presented in **Table 2-3**. The disabled parking provision is generally considered to be in line with the requirements set out in the parking standards. However, it is noted that the disabled parking requirements are to ensure that 10% of the total car parking provision is for disabled users. As such, the fact that an under provision has been made for the total number of car parking spaces, but as much as 25%, would mean that there is likely to be an under provision for disabled users.
- 2.7.8 A review of the HGV parking standards and the actual HGV parking provision identifies that a policy complaint provision has been made in accordance with the parking standards.
- 2.7.9 Whilst the cycle parking provision set out in the TAA identifies a considerable over provision beyond what the parking standards would require, as has already been identified, there is a distinct lack of connectivity to the site for cyclists, which would suggest far less cyclists would actual be associated with this scheme.
- 2.7.10 The motorcycle parking provision appears to be in excess of the parking requirements.



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3 SUMMARY

- 3.1.1 Velocity Transport Planning (VTP) has been appointed by the Furtho Development Objection Group to undertake a review of the highways and transportation technical information submitted in support of the Planning Application at Furtho Pits, Old Cosgrove Road, Old Stratford, Northamptonshire (Planning Ref: WNS/2022/1741/EIA).
- 3.1.2 The Site is allocated as part of Policy AL5 within the South Northamptonshire Local Plan (2011-2029) for a mix of employment generating development. It is described as being *“located at an important position adjoining the A5 and A508, this development site provides 16 hectares of mixed employment generating development.”*
- 3.1.3 In accordance with Policy AL5 Part 4, there are considered to be four key criteria that relate to highways and transport matters that are to be addressed as part of the Planning Application. These are summarised as follows:
- Site Access.
 - Pedestrian and Cycle Connectivity.
 - Public Transport Accessibility.
 - Transportation Impacts and Mitigation.
- 3.1.4 In addition to the above, the following are also considered to be matters that should be appropriately addressed as part of the Planning Application:
- Access for Emergency Vehicles.
 - Parking Provision.
- 3.1.5 Policy AL5 specifies that access to the Proposed Development is from a new roundabout junction on the A508. However, whilst a number of Traffic Signal junction arrangements, and options for a T-junction Ghost Right Turn Lane arrangement have been considered, the application maintains that a T-junction Traffic Signal arrangement with right turn lane is the most appropriate site access.
- 3.1.6 The technical reports identify that if a Traffic Signal junction were to be installed on the A508, there would be a need to reduce the existing speed limit from 60mph to 30mph in order for the junction to operate effectively. This reduction in speed limit would require a Traffic Regulation Order (TRO), which is subject to separate consultation, which in this instance is expected to take place after a potential planning permission would have been granted. Should planning permission be granted for the proposed development, and the TRO be refused, there is a risk that the planning permission could not be implemented.
- 3.1.7 West Northamptonshire Council (WNC) in their capacity as local Highway Authority (LHA), requested that the site access proposals be supported by a Stage 1 Road Safety Audit (RSA). Regardless of the form of the proposed site access junction, this Stage 1 RSA has not been provided.
- 3.1.8 The site access arrangement is not considered to be in line with Policy AL5, nor has sufficient evidence been provided to demonstrate the safe and suitable operation of the proposed site access arrangement.



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- 3.1.9 Based on the fact that the traffic analysis associated with the Proposed Development is considered to be flawed, the transportation impacts and mitigation measures cannot be considered to have been appropriately assessed.
- 3.1.10 Pedestrian and cycle access to the Proposed Development are very limited. There is an opportunity for pedestrians to access the site from the north via an existing Public Right of Way (PRoW) route, but the details that have been provided within the Planning Application identify that this route would not be suitable for cyclists. As such, no means of safety cycle access are provided to Stratford Road and the north of the Proposed Development.
- 3.1.11 The Applicant has acknowledged that pedestrian and cycle links towards the south will require improvements to be appropriate. However, this route is identified to be via an existing track over an existing agricultural bridge through the Country Park to Old Stratford. No details have been provided to demonstrate that this route is deliverable in line with the requirements of LTN 1/20 – Cycle Infrastructure Design, and as this route would form the primary means of sustainable access to the proposed development, it will need to be constructed to an appropriate standard, including lighting. This lighting may have a detrimental impact on the Country Park, but as no details have been provided, this cannot be assessed.
- 3.1.12 Whilst the Technical Reports acknowledge the bus stop on Stratford Road, they do not account for the fact that the operator of this service has identified that it will stop running at the end of June 2023. Regardless of the service status, WNC have recommended that the proposed development should be within 300m of bus stops. It has been demonstrated that the majority of the proposed development is outside of this recommended distance, and in some instances, substantially outside of this recommended distance.
- 3.1.13 In accordance with Policy AL5, the proposed development should ensure “*good accessibility to public transport services*”. As there is the potential for there to be absolutely no access to public transport services, it is considered that this element of Policy AL5 has not been demonstrated.
- 3.1.14 With regards to Transportation Impacts and Mitigation, a review of the trip generation methodology has established that this is flawed. As such, a significantly higher number of car trips would be expected from the Proposed Development. Therefore, the traffic impact assessment on the local and strategic highway networks is considered to be flawed.
- 3.1.15 It is accepted that National Highways (NH) have stated that they have no objection to the proposals, but it is unlikely that NH were made aware of the flawed trip generation assessment and therefore, their position is likely to change once this information is identified. As such, there can be no reliance on the junction capacity assessments that have been undertaken.
- 3.1.16 A development of this scale and nature would be expected to include for a secondary point of access for emergency vehicles. None has been provided, which is considered to be a safety concern.
- 3.1.17 The Technical Reports state that car parking has been provided in accordance with the requirements of the Northamptonshire Parking Standards (September 2016). However, a review of the actual parking provision presented on the General Arrangement Plan identifies a shortfall of as much as 25%. When considered in the context of the fact that a higher number of vehicle journeys by staff would be expected at this location, particularly due to the fact that there is potentially no access to public transport services and the pedestrian and cycle links are considered to be very limited, car parking provision should be in excess of standards with the appropriate justification provided to the authorities to identify this.



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3.1.18 In summary, it is considered that the highways and traffic aspects of the Proposed Development do not comply with Policy AL5 and as such, the proposals should not be accepted by the Local Planning Authority in their current form. A considerable amount of additional highways and traffic impact assessments will be required to demonstrate compliance with Policy AL5.



ATTACHMENT A

POLICY AL5 – LAND AT FORMER FURTHO PIT, OLD STRATFORD/COSGROVE



POLICY AL5: LAND AT FORMER FURTHO PIT, OLD STRATFORD/COSGROVE

- 1. Development description: located at an important position adjoining the A5 and A508, this development site provides for 16 ha. of mixed employment generating development. A variety of employment types will be sought to reflect the need for diversity and resilience in the local economy as expressed in the council's economic growth strategy.**
- 2. An integrated, coordinated and comprehensive planning approach will be taken for the employment site and a masterplan must be prepared, in consultation with the local planning authority, the relevant highway authorities and other statutory undertakers prior to the submission of a planning application covering the development of the whole site.**
- 3. Land uses employment**
 - a. An independently assessed, market-evidenced proportion of B1 (business)(office), B2 (general industrial) and B8 (storage and distribution) with ancillary with supporting uses that are demonstrably subservient and complementary in both scale and nature to an existing or proposed B class use.**
- 4. Access and transport**
 - a. Access from a new roundabout junction from the A508; and**
 - b. Provision of new footpaths and cycleways that link to existing networks including to a proposed new adjoining country park and utilising the existing pedestrian crossing over the A5 linking to Old Stratford having appropriate regard to the retention and enhancement of the existing public rights of way through the site; and**
 - c. Good accessibility to public transport services should be provided for including contributions to the cost of establishing bus services including stops to the site, to promote sustainable transport; and**
 - d. A transport assessment and travel plan will be required to assess the transportation implications of the proposed development (including noise from the A5 and A508) and to identify appropriate mitigation measures**
- 5. Key site specific design and place shaping principles (whole development); in addition to those required under Policy SS2 include:**
 - a. a detailed heritage impact assessment will be required to be agreed with the local Planning Authority in consultation with Historic England, prior to the design of the scheme in order to inform the height of any proposed buildings, their layout and the extent of the development. This will include a detailed assessment of the effects of the development of the site on the significance of the scheduled monument 1013660 'Motte**

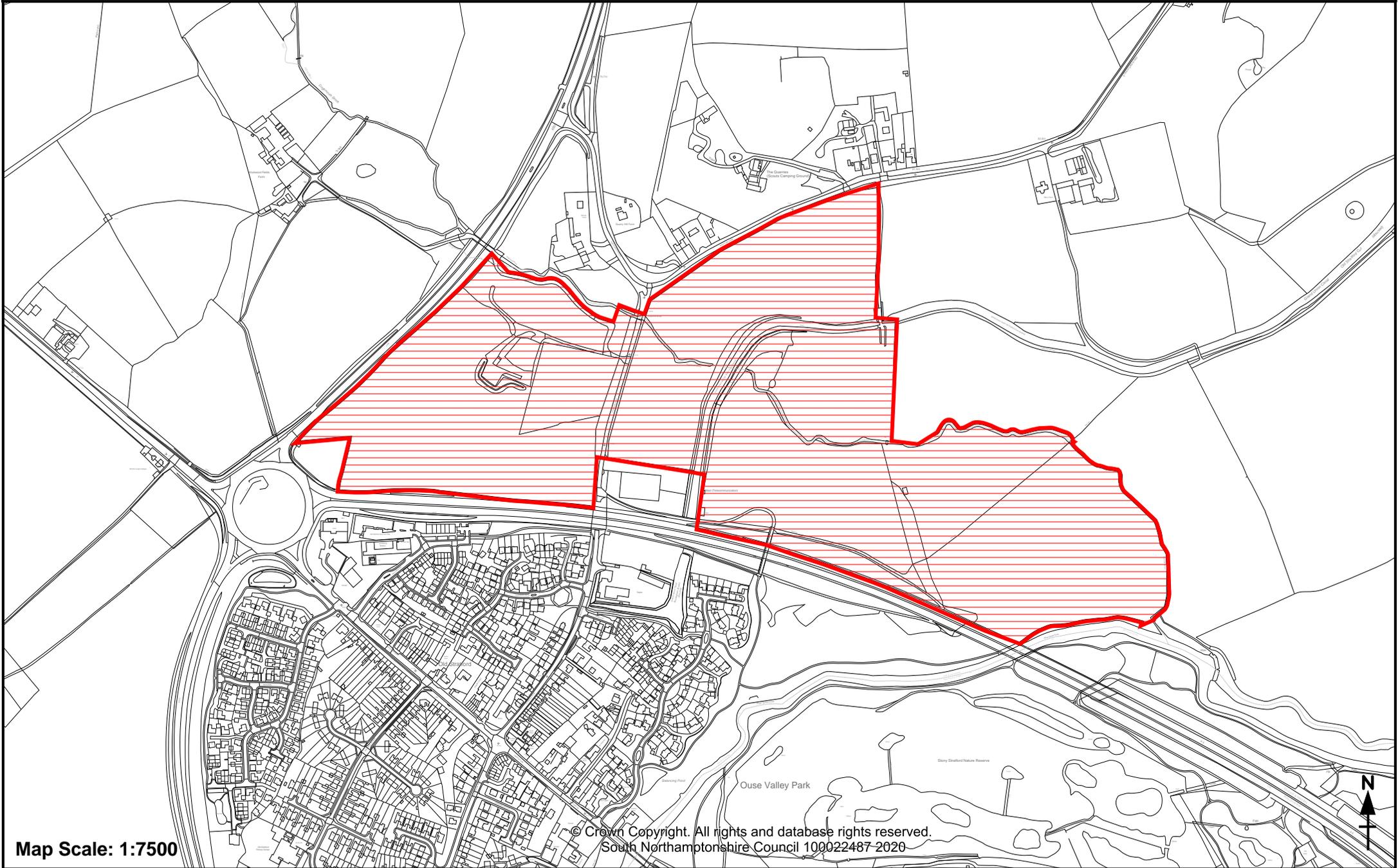
and Bailey Castle' Deserted Village and Monastic Grange at Old Wolverton; as well as detailed consideration of the development's effects on the significance of other designated and non-designated heritage assets, if any. The agreed assessment will inform any mitigation works required to ensure that the development of the site would avoid harm to the significance of heritage assets; and

- b. detailed consideration of the safeguarding of the existing canal route through the site and how the layout of the country park has regard to the potential future need for new sections of canal to cross it to facilitate restoration; and**
- c. prior to submission of an application, detailed assessment to characterise archaeological remains and identify direct impact of development proposals to inform design and a programme of archaeological mitigation which could involve preservation in situ by design or record or a combination of the two. This to be agreed with Historic England; and**
- d. protection of the existing Anglian water drainage and water infrastructure that crosses the site; and**
- e. detailed strategic landscape and visual impact assessments of the whole site to deliver a high quality landscaped setting within and around the boundary of the proposal; and**
- f. appropriate financial contributions to mitigate the impact of the development on services and facilities as required by the council's policies; and**
- g. detailed impact assessments will be required explaining how the proposals will safeguard the local wildlife site within its boundary and contribute towards biodiversity net gains.**

Delivers Objectives 1, 2, 9

South Northamptonshire Local Plan Part 2

Policy AL5: Land at Former Furtho Pit, Cosgrove/ Old Stratford



Map Scale: 1:7500

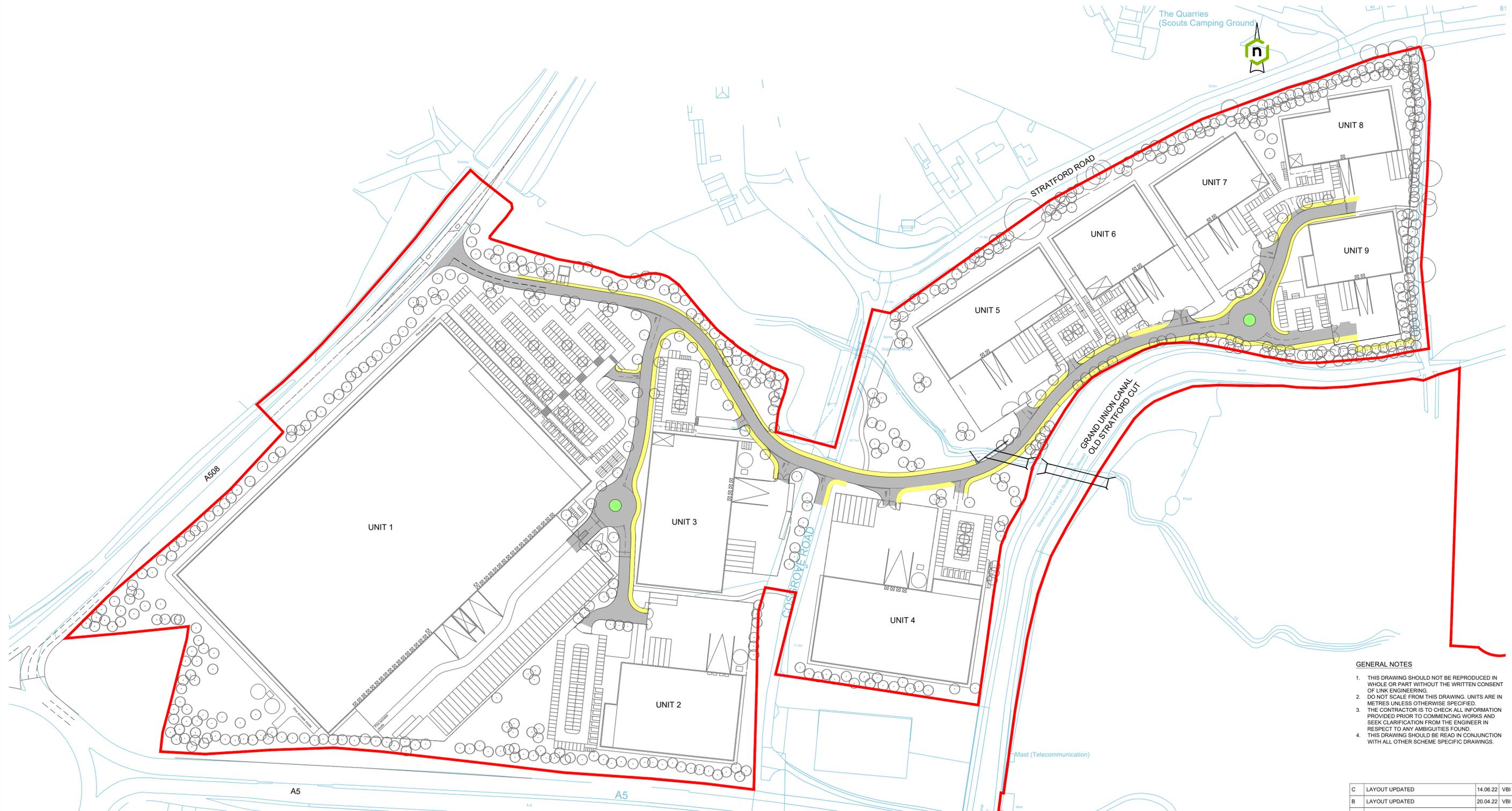
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ATTACHMENT B

DEVELOPMENT PLANS



The Quarries
(Scouts Camping Ground)



- KEY**
- CARRIAGEWAY
 - FOOTWAY
 - VERGE
 - DEVELOPMENT BOUNDARY

- GENERAL NOTES**
1. THIS DRAWING SHOULD NOT BE REPRODUCED IN WHOLE OR PART WITHOUT THE WRITTEN CONSENT OF LINK ENGINEERING.
 2. DO NOT SCALE FROM THIS DRAWING. UNITS ARE IN METRES UNLESS OTHERWISE SPECIFIED.
 3. THE CONTRACTOR IS TO CHECK ALL INFORMATION PROVIDED PRIOR TO COMMENCING WORKS AND SEEK CLARIFICATION FROM THE ENGINEER IN RESPECT TO ANY AMBIGUITIES FOUND.
 4. THIS DRAWING SHOULD BE READ IN CONJUNCTION WITH ALL OTHER SCHEME SPECIFIC DRAWINGS.

C	LAYOUT UPDATED	14.06.22	VBI
B	LAYOUT UPDATED	20.04.22	VBI
A	LAYOUT UPDATED	12.04.22	JNG
-	INITIAL ISSUE		JNG
Rev.	Amendments	Date	By

Revisions

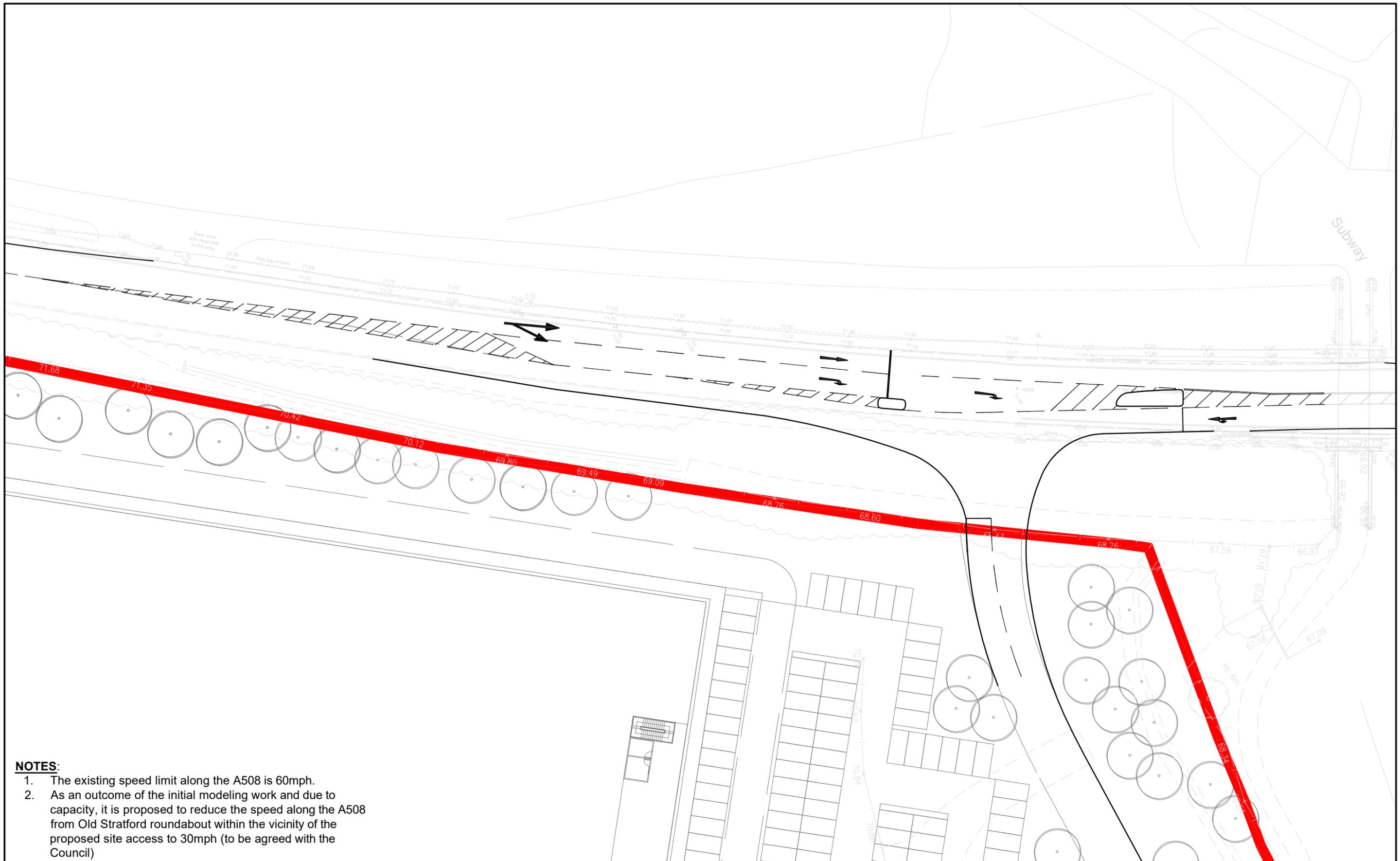
Client
FRONTIER ESTATES LTD

Project
LP265 - FRONTIER PARK

Drawing
**PLANNING
GENERAL ARRANGEMENT**

Scale @ A1 1:1250	Drawn JNG	Checked NHM	Rev B
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FILE: GEN-XX-DR-0E-000 STATUS: PLANNING (S3)



NOTES:

1. The existing speed limit along the A508 is 60mph.
2. As an outcome of the initial modeling work and due to capacity, it is proposed to reduce the speed along the A508 from Old Stratford roundabout within the vicinity of the proposed site access to 30mph (to be agreed with the Council)

<p>Notes</p> <ol style="list-style-type: none"> 1. Do not scale this drawing. All dimensions must be checked/ verified on site. If in doubt ask. 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. <p>© Copyright BWB Consulting Ltd</p>	<p>Key Plan</p>	<p>Issues & Revisions</p> <table border="1"> <thead> <tr> <th>Rev</th> <th>Date</th> <th>Details of issue / revision</th> <th>Drw</th> <th>Rev</th> </tr> </thead> <tbody> <tr> <td>P1</td> <td>27.01.22</td> <td>PRELIMINARY ISSUE</td> <td>AB</td> <td>MA</td> </tr> </tbody> </table>	Rev	Date	Details of issue / revision	Drw	Rev	P1	27.01.22	PRELIMINARY ISSUE	AB	MA	<p>BWB CONSULTANCY ENVIRONMENT INFRASTRUCTURE BUILDINGS</p> <p> <input type="checkbox"/> Birmingham 0121 233 3322 <input type="checkbox"/> Leeds 0113 233 8000 <input type="checkbox"/> London 020 7234 9122 <input type="checkbox"/> Manchester 0161 233 4260 <input type="checkbox"/> Nottingham 0115 924 1100 www.bwbconsulting.com </p>	<p>Client Frontier Estates</p> <p>Drawn: A Bilku Reviewed: M Addison Date: 27.01.22 Scale: A3, 1:500</p>	<p>Project Title Furtho Pits, Old Straford, Milton Keynes</p> <p>Drawing Status PRELIMINARY</p>	<p>Drawing Title Proposed Junction Access onto the A508</p> <p>Project - Originator - Zone - Level - Type - Role - Number FUP-BWB-GEN-XX-DR-TR-101</p> <p>Status Rev S2 P1</p>
Rev	Date	Details of issue / revision	Drw	Rev												
P1	27.01.22	PRELIMINARY ISSUE	AB	MA												



Notes

1. Do not scale this drawing. All dimensions must be checked/ verified on site. If in doubt ask.
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

DMRB - Ghost Island Junction
 Speed Limit is 60mph.
 Design Speed is 100kph.

a) Turning Length = 10m
 b) Deceleration Length = 80m
 c) Through Lane Width = 3.5m
 d) Turning Lane Width = 3.5m

Direct Taper = 25m
 2% on 'up' gradient
 Taper for Ghost Island is 1:30

Right Visibility Splay 2.4m x 215m

Right Visibility Splay Tangent to Edge of Carriageway 2.4m x 215m

Extent of Existing Fence

Extent of Existing Barrier

Left Visibility Splay Tangent to Edge of Carriageway 2.4m x 215m

Left Visibility Splay 2.4m x 215m

P1	21.10.22	Preliminary Issue	AB	MA
Rev	Date	Details of issue / revision	Drw	Rev

Issues & Revisions

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Client
Frontier Estates

Project Title
Furto Pits, Stratford, Milton Keynes

Drawing Title
Proposed Site Access Junction - Priority 'T' Junction

Drawn:	A Bilkhu	Reviewed:	M Addison
BWB Ref:	NTS2917	Date:	08.03.23
Scale@A1:	1:1000		

Drawing Status
PRELIMINARY

Project - Originator - Zone - Level - Type - Role - Number	Status	Rev
FUP-BWB-GEN-XX-RP-TR-102	S2	P1



- 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

P1	03.05.23	Preliminary Issue	AB	MA
Rev	Date	Details of issue / revision	Drw	Rev

Issues & Revisions

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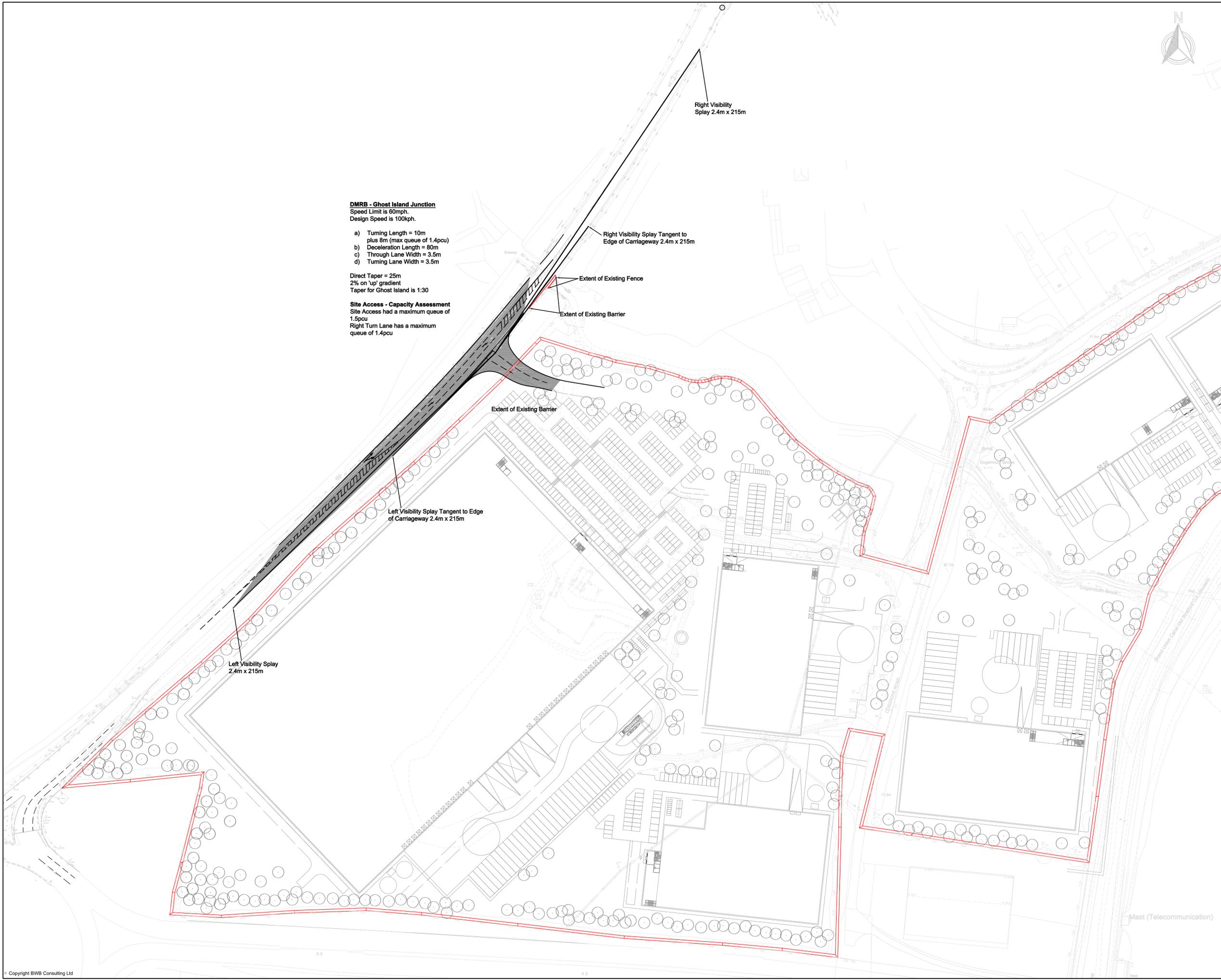
Project Title
Furto Pits, Stratford, Milton Keynes

Drawing Title
Proposed Site Access Junction - Priority 'T' Junction - Two Lane Option

Drawn:	A Bilkhu	Reviewed:	M Addison
BWB Ref:	NTS2917	Date:	03.05.23
Scale@A1:	1:1000		

Drawing Status
PRELIMINARY

Project - Originator - Zone - Level - Type - Role - Number	Status	Rev
FUP-BWB-GEN-XX-RP-TR-104	S2	P1



DMRB - Ghost Island Junction
Speed Limit is 60mph.
Design Speed is 100kph.

- a) Turning Length = 10m plus 8m (max queue of 1.4pcu)
- b) Deceleration Length = 80m
- c) Through Lane Width = 3.5m
- d) Turning Lane Width = 3.5m

Direct Taper = 25m
2% on 'up' gradient
Taper for Ghost Island is 1:30

Site Access - Capacity Assessment
Site Access had a maximum queue of 1.5pcu
Right Turn Lane has a maximum queue of 1.4pcu



- Notes**
1. Do not scale this drawing. All dimensions must be checked/ verified on site. If in doubt ask.
 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

P2	20.04.23	JUNCTION LAYOUT AMENDED TO ADDRESS	AB	MA
P1	27.01.22	Preliminary Issue	AB	MA
Rev	Date	Details of issue / revision	Drw	Rev

Issues & Revisions

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Client
Frontier Estates

Project Title
Furto Pits, Stratford, Milton Keynes

Drawing Title
Proposed Site Access Junction - Signalised Priority 'T' Junction

Drawn:	A Bilkhu	Reviewed:	M Addison
BWB Ref:	NTS2917	Date:	08.03.23
Scale@A1:	1:1000		

Drawing Status
PRELIMINARY

Project - Originator - Zone - Level - Type - Role - Number	Status	Rev
FUP-BWB-GEN-XX-RP-TR-101a	S2	P2

215m Forward Visibility to Signal Head

DMRB - CD 109 Highway Link Design
Speed Limit is 60mph.
Design Speed is 100kph.
Horizontal Curvature - Desirable Radius with Superelevation 5% = 720m
Direct Taper = 25m
Taper for Ghost Island is 1:30

ATTACHMENT C

FOOTPATH STRATEGY



ATTACHMENT D

MULTI-MODAL ASSESSMENT



QS701EW - Method of travel to work

Source ONS Crown Copyright Reserved [from Nomis on 29 June 2023]
Population All usual residents aged 16 to 74
Units Persons

2011													
Northampton													
value													
Method of Travel to Work	All categories: Method of travel to work	Work mainly at or from home	Underground, metro, light rail, tram	Train	Bus, minibus or coach	Taxi	Motorcycle, scooter or moped	Driving a car or van	Passenger in a car or van	Bicycle	On foot	Other method of travel to work	Not in employment
Rural Urban													
Total	155,682	3,966	109	1,836	7,449	569	539	69,580	7,853	2,775	11,602	514	48,890
Urban (total)	154,962	3,924	109	1,829	7,437	568	537	69,171	7,837	2,765	11,578	513	48,694
Urban major conurbation	0	0	0	0	0	0	0	0	0	0	0	0	0
Urban minor conurbation	0	0	0	0	0	0	0	0	0	0	0	0	0
Urban city and town	154,962	3,924	109	1,829	7,437	568	537	69,171	7,837	2,765	11,578	513	48,694
Urban city and town in a sparse setting	0	0	0	0	0	0	0	0	0	0	0	0	0
Rural (total)	720	42	0	7	12	1	2	409	16	10	24	1	196
Rural town and fringe	249	10	0	1	7	0	1	168	7	5	3	1	46
Rural town and fringe in a sparse setting	0	0	0	0	0	0	0	0	0	0	0	0	0
Rural village	471	32	0	6	5	1	1	241	9	5	21	0	150
Rural village in a sparse setting	0	0	0	0	0	0	0	0	0	0	0	0	0
Rural hamlet and isolated dwellings	0	0	0	0	0	0	0	0	0	0	0	0	0
Rural hamlet and isolated dwellings in a spar	0	0	0	0	0	0	0	0	0	0	0	0	0

In order to protect against disclosure of personal information, records have been swapped between different geographic areas. Some counts will be affected, particularly small counts at the lowest geographies

Total					7,449	569	539	69,580	7,853	2,775	11,602	514		100,881
					7.4%	0.6%	0.5%	69.0%	7.8%	2.8%	11.5%	0.5%	77.9%	
Assumed Multi-Modal Trip Generation														
AM Peak Hour (08:00-09:00)					30	2	2	280	32	11	47	2		406
PM Peak Hour (17:00-18:00)					27	2	2	248	28	10	41	2		360
Revised Multi-Modal Trip Generation					0.0%	0.7%	0.6%	81.9%	9.2%	2.0%	5.0%	0.5%		
AM Peak Hour (08:00-09:00)						3	3	333	38	8	20	2		406
PM Peak Hour (17:00-18:00)						2	2	295	33	7	18	2		360
Increase in Car/Van Trips														
AM Peak Hour (08:00-09:00)									53					
PM Peak Hour (17:00-18:00)									47					

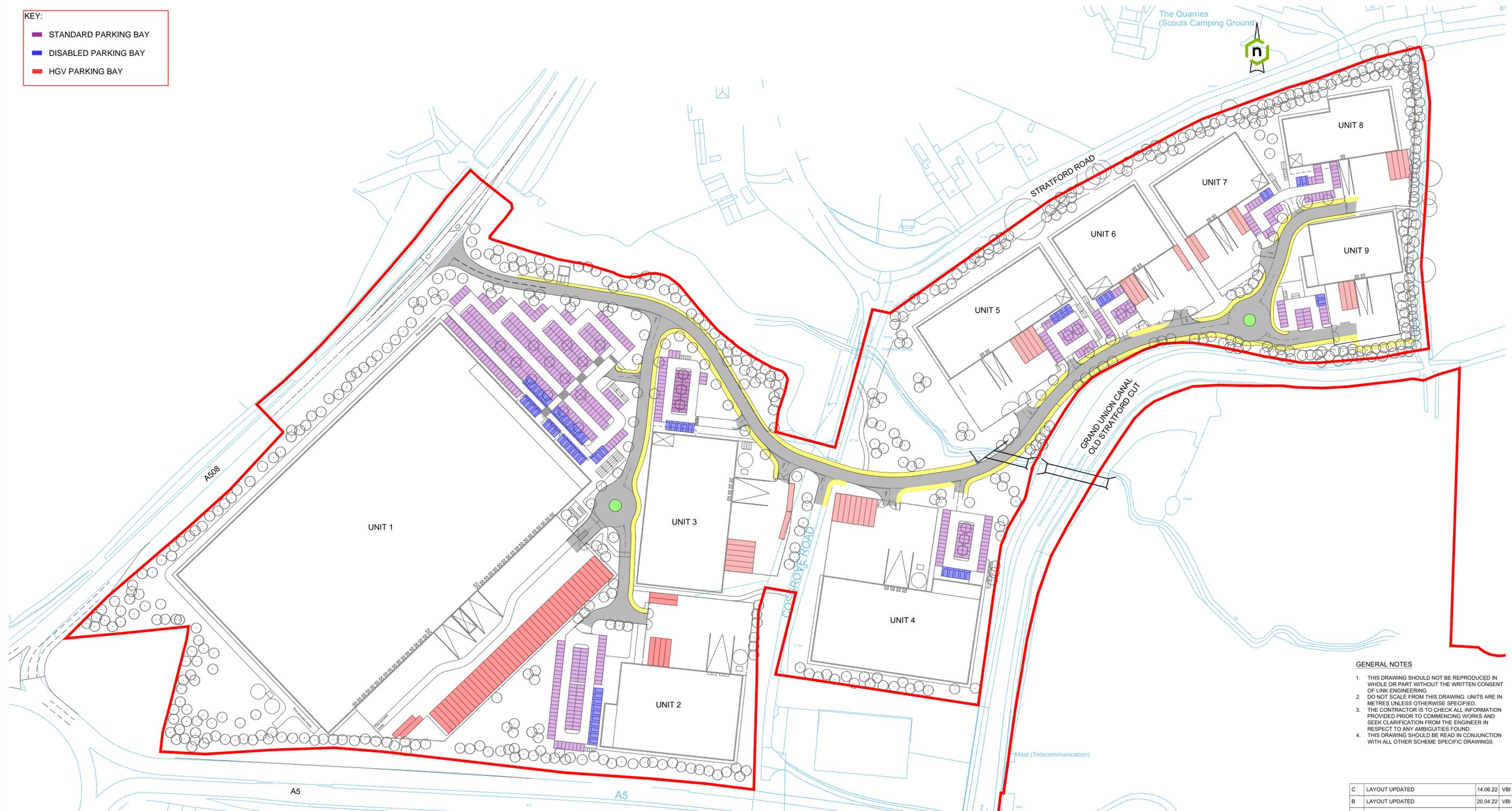
ATTACHMENT E

CAR PARKING REVIEW



KEY:

	STANDARD PARKING BAY
	DISABLED PARKING BAY
	HGV PARKING BAY



- GENERAL NOTES**
1. THIS DRAWING SHOULD NOT BE REPRODUCED IN WHOLE OR PART WITHOUT THE WRITTEN CONSENT OF LINK ENGINEERING.
 2. DO NOT SCALE FROM THIS DRAWING. UNITS ARE IN METRES UNLESS OTHERWISE SPECIFIED.
 3. THE CONTRACTOR IS TO CHECK ALL INFORMATION PROVIDED PRIOR TO COMMENCING WORKS AND SEEK CLARIFICATION FROM THE ENGINEER IN RESPECT TO ANY AMBIGUITIES FOUND.
 4. THIS DRAWING SHOULD BE READ IN CONJUNCTION WITH ALL OTHER SCHEME SPECIFIC DRAWINGS.

C	LAYOUT UPDATED	14.06.22	VBI
B	LAYOUT UPDATED	20.04.22	VBI
A	LAYOUT UPDATED	12.04.22	JNG
-	INITIAL ISSUE		JNG
Rev.	Amendments	Date	By

KEY

	CARRIAGEWAY
	FOOTWAY
	VERGE
	DEVELOPMENT BOUNDARY

Client
FRONTIER ESTATES LTD


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Project
LP265 - FRONTIER PARK

Drawing
**PLANNING
GENERAL ARRANGEMENT**

Scale @ A1 1:1250	Drawn JNG	Checked NHM	Rev B
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FILE GEN: XX-DR-CE-000
STATUS: PLANNING (S)

