



Technical Note

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Land at Woodgate Centre, Woodgate

20-061-016 Rev -

Response to WSCC Highways Comments

December 2021

Rev	Issue Purpose	Author	Checked	Reviewed	Approved	Date
-	Final	GPW/MN	SW	SW	GAC	09/12/2021

1 Introduction

- 1.1.1 This note has been prepared following receipt of the West Sussex County Council Highways (WSCC) consultation response letter dated 24th November 2021 in relation to planning application reference AL/1072/21/PL.
- 1.1.2 The note responds to the WSCC summary list of 6 items listed within the conclusion, although matters raised within the main body of the text have been checked and responded to. The WSCC letter is provided within **Appendix A** for reference.

2 Item 1 -

2.1 Site access additional information

WSCC Comment, the client to provide:

“a formal design check of proposed right hand turning facility

a plan showing queues on Woodgate Road when railway crossing gates are down and swept-path diagrams at junction with cars parked at the junction

a plan showing how southbound cyclists will be able to leave the carriageway of the A29 and join the off-road cycle way”

Response

- 2.1.2 It is noted that the junction and shared cycle/footway have been through an independent Stage 1 Safety Audit previously provided to the highway authority, together with a Designers Response. That said, drawing 20-061-039 (**Appendix B**) shows the dimensioning achieved by the right turn lane design, it also highlights the references from CD123 where the required values are obtained. All values meet the minimum requirements.
- 2.1.3 This is covered in more detail below (paragraphs 3.1.4 to 3.1.10), however drawing 20-061-040 (**Appendix C**) provides an indication of how Woodgate Road will operate in the circumstances detailed.
- 2.1.4 Drawing 20-061-014 to revision J (**Appendix D**), has been updated to provide a dropped kerb to allow cyclists from the north to join the cycle route. This has been positioned between the level crossing and the private drive opposite the Prince of Wales. This revision also removes the northbound cycle route north of the level crossing as requested by WSCCH, under their point 5.

3 Item 2

3.1 Transport modelling – replies to the two points raised.

WSCC Comments (from within the main text):

“The CHA largely accepts the modelling scenarios and resultant impacts as set-out above. However, there are two areas requiring some additional information:

1. Within the Table above for the '2024 Do Minimum - Existing Layout' the delay figure of 0.24s is shown. However, based on the previous (existing) and proposed with development scenarios -side, this figure looks to be possibly incorrect. Applicant to check this and reply.
2. The modelling does not show resultant traffic queues at the junction of Woodgate Road and Lidsey Road when railway gates are down - i.e., queuing within Woodgate Road and how vehicles would pass one-another within the first section of Woodgate Road at and just beyond the junction when gates are down based on the proposed traffic figures. Applicant to provide, please. A plan should also be provided to illustrate this as well (to include parked vehicles on Woodgate Road where they park at present (particularly those close to the junction) and swept-path diagrams of cars passing cars)."

Sub item 1 Response

- 3.1.2 The 2024 Do Minimum AM peak delay output for the Woodgate Road arm has been corrected from that reported previously as shown in the table below.

Table 3.1: A29/Woodgate Road – 2024 Interim Year Assessments

Arm/Movement	AM Peak			PM Peak		
	RFC	Queue (PCU)	Delay (s)	RFC	Queue (PCU)	Delay (s)
2021 – Present Day (proxy)						
Woodgate Road	0.16	0.2	13.11	0.08	0.1	11.97
A29 Lidsey Road	0.01	0.0	7.02	0.03	0.0	7.71
2024 Do Minimum – Existing Layout						
Woodgate Road	0.24	0.3	16.72	0.11	0.1	12.82
A29 Lidsey Road	0.18	0.6	4.80	0.06	0.1	4.58
2024 Do Something (with BEW Development) – proposed layout						
Woodgate Road	0.51	1.0	28.10	0.24	0.3	17.37
A29 Lidsey Road	0.04	0.0	7.73	0.05	0.1	8.03

- 3.1.3 Notwithstanding the highlighted change above, the conclusions drawn from the capacity assessments at this junction remain unchanged from those presented previously.

Sub item 2 Response

- 3.1.4 WSCC have requested that the potential worst-case impacts of queuing vehicles on Woodgate Road be considered for periods when the level crossing gates to the north are closed to traffic. The Woodgate Level crossing is located approximately 125m to the north of the A29 Lidsey Road/Woodgate Rd junction.
- 3.1.5 It is understood that on-street parking regularly occurs on Woodgate Road near to the junction with Lidsey Road. The following sets out a worst-case estimate of queueing vehicles on Woodgate Road during periods when the level crossing is down and an illustration of how Woodgate Road would operate during these periods.
- 3.1.6 It should be noted that current and anticipated levels of queuing on the southern approach to the level crossing extend beyond the junction with Woodgate Road. As such it is anticipated that vehicles would be largely prevented from either entering or exiting Woodgate Road during these periods; although some vehicles from the south could potentially bypass the queue in the absence of opposing traffic.
- 3.1.7 Observations of the operation of the level crossing indicate that the gates are down and prevent traffic movements for between approximately 2 and 2.5 minutes on each occurrence during the AM and PM peaks. Considering the estimated traffic generation from the proposed development on Woodgate Rd, the quantum of traffic departing onto Woodgate Rd is 58 in the AM peak and 29 in the PM peak. This equates to an average of 1 vehicle per minute in the AM peak and 0.5 per minute in the PM peak.
- 3.1.8 Based upon the above it is estimated that during the periods when the level crossing gates are down and vehicles are prevented from exiting Woodgate Road, an average of 2 vehicles would be added onto Woodgate Road. Acknowledging that trip departure profiles from residential developments are rarely uniform it is considered that, as an absolute worst case, a maximum of 5 vehicles might be added onto Woodgate Road during these periods. The likelihood of this is negligible. And if this does occur it would mean the queuing on the A29 would extend so far back past the Woodgate Road junction that it would not be possible to undertake the right turn manoeuvre in any case.
- 3.1.9 An indication of how Woodgate Road might operate in these circumstances in terms of interaction with opposing and parked vehicles is shown on drawing 20-061/040, contained in **Appendix C**.

- 3.1.10 In conclusion, it is anticipated that a slight increase in queuing on Woodgate Road may occur due to the inability of vehicles to exit the road to the north during periods when the level crossing is closed. It is considered that Woodgate Road would still maintain an operational state during these periods, however, it is also highlighted that these are temporary conditions and queueing vehicles would disperse relatively quickly once the level crossing is re-opened.

4 Item 3

4.1 Public transport strategy

“In addition to the improvements set-out above re. stops, shelters, real-time passenger information etc., a public transport service strategy is awaited from the applicant demonstrating what the overall strategy for the BEW development is and how The Woodgate Centre development will be contributing to that. The CHA acknowledges that the transport consultant working on behalf of the applicant is currently engaging with local public transport providers in order to inform this.”

Response

- 4.1.1 The discussions are still on going and we will provide an update in due course.

5 Item 4

5.1 Internal cycle infrastructure

“The above comments are noted. However, while the route does appear to provide priority access for users it would seem preferable to have it continue on the northern side of the main spine road serving the site, thereby providing continuity from Woodgate Road where the shared-use path is found on the northern side of the road. And, having it on the northern side would mean that it crosses fewer crossovers and junctions.”

Response

- 5.1.1 Following discussions with the urban designer for the scheme we can confirm that the possibility of providing the cycle route on the north side was considered at the time of preparation of the internal layout. Unfortunately, due to constraints related to existing tree preservation. Correspondence related to this is attached at **Appendix E**. In summary, there are a number of trees and their associated root protection zones alongside the public open space. Please note, this correspondence also covers the comments on the Car Club detailed under point 6 below.

6 Item 5

6.1 Road Safety Recommendations

“Specifically with regard to item 2.2 in the Road Safety Audit, the CHA still considers that the audit team recommendation of terminating the route south of the railway crossing be pursued for the reasons already given (please see WSCC response dated 17th September 2021). Should the applicant disagree with this then a formal ‘Exception’ would need to be considered by the CHA.”

Response

- 6.1.1 As highlighted above we have taken on board the recommendation to remove the cycle route north of the level crossing, this is shown on drawing 20-061-14 revision J, within **Appendix D**.

7 Item 6

7.1 Reply to Travel Plan comments

“The above is largely accepted. However, there are two areas that would benefit from improvement:

- 1. Enforcement/repeat measures - Stronger commitment to enforcement measures is required in any final plan.*
- 2. Car club - Although the development site is on the threshold of whether a car club would be viable, the site does form part of the overall BEW Strategic Location. Therefore, when additional dwellings are added as they will be when further development comes on-stream, the viability of such a club becomes far more realistic. Therefore, it is recommended that the site retains space for, say, future parking spaces for car club vehicles and makes a proportionate contribution towards a future car club to be delivered by developers.”*

Sub item 1 response

- 7.1.1 It is noted that a stronger commitment to enforcement measures has been suggested. This commitment can be dealt with via condition. As such it is not intended to alter the travel plan further.

Sub item 2 response

- 7.1.2 As the potential for a Car Share club is a future aspiration, it is suggested that the use of visitor spaces would be appropriate for conversion to car share club spaces in the future. Largely as these will be within the highways authority's control. Discussions with the urban designer have confirmed that the best location for these would be the proposed visitor parking adjoining the central proposed public open space. Correspondence with respect to this attached at **Appendix E**. The summary of the reply is that there is no urban design reason why they couldn't. In addition, there is no reason why the highway authority couldn't allocate any of the spaces within the adopted highway to be used by future use for car club vehicle.
- 7.1.3 With regards to a suitable contribution, as this is an aspirational opportunity this it is therefore felt it can be secured through the Section 106 agreement as part of the sustainable travel contributions. Rather than alter the travel plan further.

8 Conclusion

- 8.1.1 Having received the letters dated 24th November from West Sussex County Highways Department we have systematically replied to the points raised. With the exception of the response to the public transport strategy, believe the above addresses the final reasonable requirements of the proposed development in terms of highways and transport. With respect to the planning application.

Appendix A WSCC letter (dated 24th November 2021)

WEST SUSSEX COUNTY COUNCIL CONSULTATION

TO:	Arun District Council FAO: James Cross
FROM:	WSCC - Highway Authority
DATE:	24 November 2021
LOCATION:	Woodgate Centre Oak Tree Lane Chichester PO20 3GU
SUBJECT:	AL/107/21/PL Demolition of the Woodgate Centre buildings (including 3 No. residential dwellings) & the construction of 180 No. residential dwellings with the creation of new vehicular access with footways and cycleways, ancillary road infrastructure, emergency access arrangements, associated parking, public open space, including children's play space, landscape planting, surface water attenuation & drainage & other associated infrastructure. This site is in Cil Zone H SP2, BEW Strategic Site and is not CIL Liable. Additional information received
DATE OF SITE VISIT:	10 th September 2021
RECOMMENDATION:	More Information Required
S106 CONTRIBUTION TOTAL:	£ See below for current breakdown.

This is the second WSCC Highways (CHA) response to the above planning application for demolition of the Woodgate Centre buildings (including 3 No. residential dwellings) and the construction of 180 No. residential dwellings with the creation of new vehicular access with footways and cycleways, ancillary road infrastructure, emergency access arrangements, associated parking, public open space, including children's play space, landscape planting, surface water attenuation and drainage and other associated infrastructure.

In its previous response to the LPA dated 17 September 2021, the CHA requested that the following additional information (in black text) be provided. Text in *red italic* alongside are the replies from the applicants with comments in *blue text* alongside the latest CHA comments in response to those:

1. Access and off-site highways works – demonstration how works comply with relevant design standards and guidance.

The provision of the 2.5m wide footway cycleway would be provided within the existing footway/verge along Woodgate Road, this will require a minor alteration to the junction with Lidsey Road which now also incorporates a new right turn lane. This will then extend along the A29 corridor, north terminating just before the junction with Hook Lane as a 3m shared cycle/footway, before directing cyclists

onto the main carriageway.

It is noted that WSCC require further information on how current cycle path guidance is being achieved and LTN 1/20 is quoted. It is generally accepted that LTN 1/20 is an important document to utilise in the production of cycle infrastructure. There are however two further guidance documents that are relevant to this location. That being Sustrans guidance 'section 7 geometric design' (Appendix C) which allows an absolute minimum width of 2.5m and the current local WSCC guidance, Cycling Design Guide Aug 2019 (Appendix D). This guidance is considered the most relevant of all three guidance documents as it also deals with the actual need for a cycleway.

The above is noted. However, the useable width of the path will be reduced by the presence of walls, fences, street lighting and vegetation along parts of Woodgate Road and might not be fully compliant with guidance contained in LTN 1/20. Re-locating some of the street lighting columns onto the southern side of Woodgate Road might assist this to some extent. The LPA should also note that provision of the 2.5m-wide shared footway/cycleway alongside the flank wall of No. 4 Woodgate Road will possibly require the complete removal of the foliage (hedge) running alongside the garden of property to achieve the desired width.

With regard to the design of the right hand turning works at the junction of Woodgate Road with A29 Lidsey Road, the applicant has not provided an account of how this meets the requirements of DMRB. This is still required in order to be able to consider the design components of the proposed arrangement.

The applicant also needs to show how southbound cyclists will be able to leave the carriageway of the A29 to join the off-road shared foot and cycle way.

2. Foot and cycle bridge to eastern-side of development site - Confirmation that this will be delivered by the applicant and when.

The delivery of the pedestrian and cycle bridge across the river will be secured through a S106 agreement with funding being provided by the two developers at each end of the bridge. The works will be undertaken once both developers have gained a suitable planning permission and both developments proceed. Although the S106 is still in draft the following summary is proposed:

- The planning application will set out the safeguarding land which is sufficient to deliver the bridge and any ancillary works that may be required in accordance with an E-W Link Specification Document which includes plans, drawings and costings relating to the E-W Link Works;*
- The Owners covenant with Arun District Council and West Sussex County Council that land to which the East-West Link is to be delivered will be safeguarded for the specific purpose of the bridge and any ancillary works that may be required;*
- The owners shall pay a proportional contribution towards the construction costs of the bridge;*
- The Owner shall permit the County Council, District Council and/or any person nominated by the County Council or the District Council to enter onto the Safeguarded Land for the purposes of carrying out the E-W Link Works.*

With regard to the E-W link and bridge that would be required, the CHA would

require the developer and/or adjacent developers to construct this at a specified time (likely concurring when developments both sides of the river are at a stage requiring the link). The CHA would not construct it. An appropriate mechanism for securing this and its implementation would need to be included in any S106 Agreement forming part of any planning permission for The Woodgate Centre site. Given the above, it might also require the adjacent developer/s to be party to the S106 Agreement too. For avoidance of doubt, the CHA has not checked the construction details of the bridge - this might be undertaken at the point of submission of detailed plans post-planning or other future date. Therefore, the applicant should not consider that any construction details submitted so far would be acceptable.

3. Plan showing how the site will connect to other sites within the adjacent BEW Strategic Land Allocation with regard to non-motorised provision.

As requested, please find attached at Appendix G a plan showing how this site connects, for pedestrians and cyclists, to the wider BEW masterplan. This is also provided on the LANDARB Solutions drawing LAS103-05 within Appendix H. That identifies on site foot/cycleways to the site boundary.

The above is noted. The CHA recommends that no ransom strips (or similar) are retained so as to enable easy and uninterrupted connections when neighbouring developments come to fruition.

4. Details of public transport provision and associated service improvements and infrastructure contributions.

The developer is offering to upgrade the existing bus stops nearest the site. Again, this will be secured by the section 106 or 278 agreement. If these stops are upgraded by others due to their obligations coming forward first. It would be unreasonable to redirect such funds elsewhere as sustainable transport has already been allowed for under the remaining BEW contributions which are still under discussion between the planning authority and Stagecoach. And the Travel Plan provided.

In addition to the improvements set-out above re. stops, shelters, real-time passenger information etc., a public transport service strategy is awaited from the applicant demonstrating what the overall strategy for the BEW development is and how The Woodgate Centre development will be contributing to that. The CHA acknowledges that the transport consultant working on behalf of the applicant is currently engaging with local public transport providers in order to inform this.

5. Provide drawing of revised off-site cycle works.

Drawing 16-021-014 Rev H within Appendix F provides enhanced details of the off-site cycle works.

Refer section 2.12 above for further explanation.

Please see comments made in point 1 above. Please also note the Road Safety Audit recommendation about curtailing the route on the western side of A29 Lidsey Road.

6. Consideration of changes to foot and cycle infrastructure **within the development and how that meets the requirements of LTN 1/20.**

Alterations have been made to the main east/west spine road to attempt to reduce traffic speeds. Via the inclusion of raised tables at each junction that also facilitate the smooth flow of pedestrians and cyclists. In addition, footways have been extended into the shared surfaces. For continuity.

- *The above, has provided on the revised ECE Architecture Drawing 6781-PL-02 and Land Arb Solutions Drawing LAS103/05 Rev E provided within Appendix H.*
- *These cycle/footways related to the highway infrastructure adhere to LTN 1/20 by, but not limited to, meeting these requirements:*
- *Coherent, connecting the current A29 to the wider BEW development;*
- *Direct, connects the site access to the cycle link to the east broadly along the desire line, with the cycle route appearing to have priority over the roads;*
- *Safe, off-road cycle route for those not confident to cycle along the main site road (even though this would be suitable for most people);*
- *Comfortable, the route is envisaged to be fairly flat and with few road crossings;*
- *Attractive. The route passes near the liner park within the site as well as connecting onto the Rife Valley Park.*

Cycle/Footways, that pass through the open space from west to east and then north to south will include a 3m shared leisure cycleway footway together with footways to form a leisure network to the boundaries. This will be constructed of sustainable breed and gravel with timber edging. Thus, enabling future connections to any potential offsite leisure routes.

The above comments are noted. However, while the route does appear to provide priority access for users it would seem preferable to have it continue on the northern side of the main spine road serving the site, thereby providing continuity from Woodgate Road where the shared-use path is found on the northern side of the road. And, having it on the northern side would mean that it crosses fewer crossovers and junctions. Final details of road markings, signage, tactile paving, corduroy paving etc. are not currently shown. These would need to form part of any detailed submission and/or S38 submission.

7. Provision of a further response to the Road Safety Audit 'Log' (Designer's Response).

Drawing 16-021-014 Rev H within Appendix F, provided for point 5 above incorporates the designers responses that was provided within the RSA appended to the TA, this includes noting that the cycleway is a minimum of 2.5m rather than a fixed width. Likewise, set back from the junction of Hook Lane, dropped kerbs have been provided to allow cycles to join the carriageway as well as providing an advisory on carriageway cycle lane to highlight the joining of cyclists to the carriageway.

Specifically with regard to item 2.2 in the Road Safety Audit, the CHA still considers that the audit team recommendation of terminating the route south of the railway crossing be pursued for the reasons already given (please see WSCC response dated 17th September 2021). Should the applicant disagree with this then a formal 'Exception' would need to be considered by the CHA. Comment about 2.5m being

a minimum rather than fixed width for the route is noted.

8. Modelling of existing and interim (pre-A29) scenarios + details of existing uses and comparisons with the proposed development in traffic-terms.

Present Day Network Assessment.

WSCC has requested that a present-day assessment of network operating conditions is provided. For the purposes of this assessment the junctions assessed for capacity within the submitted TA have been adopted as an appropriate study area. The exception to this is the A29/CALA Homes Site Access Junction which is a proposed scheme and as such is not currently present on the network. The junctions assessed for present day operation are as follows:

- 1. A29/Woodgate Road*
- 2. A29/Hook Lane*
- 3. A29/Nyton Road triangular junction*
- 4. A29/B2233 War Memorial Roundabout with Barnham Road*
- 5. Woodgate Road Level Crossing*

The methodology used to derive 2021 traffic flows was agreed with WSCC in the absence of observed traffic data on the network. This approach utilises the 2017 Base SATURN transport model with appropriate growth factors applied to provide proxy 2021 Present Day traffic flows on the network.

TEMPro is an industry standard approach to derive traffic growth rates based on the effects of demographic changes and land use. This software includes assumptions on development forecasts which form part of the 'Planning data' within the software, which is generally provided by the local planning authority based on known site allocations and expected growth projections. The TEMPro software uses this information to localise growth forecast for particular road types, based on national forecasts from the National Transport Model (NTM).

Growth factors have been derived from TEMPro/NTM for Arun district and all road types for 2017-2021 for both weekday peak periods, to inform the present-day assessments.

A summary of the growth factors applied to the 2017 base model traffic is provided in the Table below:

Road Category		2017-2021	
		AM Peak	PM Peak
Urban	All Road Types	1.059	1.057

The above junctions have been assessed for capacity following the same approach adopted within the TA using industry standard software PICADY and ARCADY as appropriate. The assessment results are summarised below, and the full assessment output reports are provided at Appendix I.

PRESENT DAY 2021 (PROXY) FLOWS.

A29/Woodgate Road Junction.

The existing layout is a simple priority T-junction with Woodgate Road as the minor arm.

Arm/Movement	AM Peak			PM Peak		
	RFC	Queue (PCU)	Delay (s)	RFC	Queue (PCU)	Delay (s)
2021 – Present Day (proxy)						
Woodgate Road	0.16	0.2	13.11	0.08	0.1	11.97
A29 <u>Lidsey Road</u>	0.01	0.0	7.02	0.03	0.0	7.71

The assessment outputs indicate that the junction currently operates comfortably within capacity during peak highway conditions.

A29/Hook Lane Junction.

This is a simple priority T-junction to the north of the Woodgate level crossing. Hook Lane to the east forms the minor arm of the junction and the A29 heading north to south forms the major road.

Arm/Movement	AM Peak			PM Peak		
	RFC	Queue (PCU)	Delay (s)	RFC	Queue (PCU)	Delay (s)
2021 – Present Day (proxy)						
Hook Lane	0.23	0.3	13.17	0.26	0.4	12.18
A29 <u>Lidsey Road North</u>	0.09	0.2	5.28	0.07	0.1	4.37

The assessment outputs indicate that the junction currently operates comfortably within capacity during peak highway conditions.

A29/B2233 Nyton Road Junction.

This junction is made up of three linked priority junctions between the A29 Nyton Road, A29 Westergate Road and B2233 Nyton Road in the centre of Westergate village. For ease of reference, these three linked junctions are referred as eastern, southern, and western junctions.

A29/Nyton Road (East) – Present Day Assessment:

Arm/Movement	AM Peak			PM Peak		
	RFC	Queue (PCU)	Delay (s)	RFC	Queue (PCU)	Delay (s)
2021 – Present Day (proxy)						
A29 Nyton Road South	-	0.0	0.00	-	0.0	0.00
B2233 Nyton Road West	-	0.7	10.50	-	1.0	10.24
A29 Nyton Road East	-	11.7	40.94	-	1.1	3.86

A29/Nyton Road (South) – Present Day Assessment:

Arm/Movement	AM Peak			PM Peak		
	RFC	Queue (PCU)	Delay (s)	RFC	Queue (PCU)	Delay (s)
2021 – Present Day (proxy)						
A29 Westergate Road (S)	-	0.0	0.00	-	0.0	0.00
B2233 North	-	0.3	12.43	-	0.8	13.73
A29 Nyton Road North	-	0.0	0.00	-	0.0	0.00

B2233/Nyton Road (West) – Present Day Assessment:

Arm/Movement	AM Peak			PM Peak		
	RFC	Queue (PCU)	Delay (s)	RFC	Queue (PCU)	Delay (s)
2021 – Present Day (proxy)						
B2233 Nyton Road East	-	0.0	0.00	-	0.0	0.00
B2233 South	-	0.5	8.93	-	0.4	7.55
B2233 Nyton Road West	-	0.5	3.81	-	1.4	8.39

The assessment outputs above indicate that the junctions currently operate within capacity during peak highway conditions. Only the A29 Nyton Road East arm of the Eastern junction observes more than minimal queueing with a queue of approximately 11 vehicles during the AM peak.

A29 War Memorial Roundabout.

This junction is a three-arm roundabout between Nyton Road to the west, Barnham Road to the east and Fontwell Avenue to the northeast. There are two entry lanes on the approach from Nyton Road arm and the remaining two arms (Barnham Road and Fontwell Avenue) are one lane entries.

Arm/Movement	AM Peak			PM Peak		
	RFC	Queue (PCU)	Delay (s)	RFC	Queue (PCU)	Delay (s)
2021 – Present Day (proxy)						
Barnham Road	0.52	1.1	5.70	0.43	0.8	4.84
Nyton Road	0.54	1.2	4.24	0.46	0.9	3.60
Fontwell Avenue	0.89	6.8	50.07	1.50	194.4	1113.55

The assessment outputs above indicate that the junction currently operates over capacity on the Fontwell Avenue arm during the PM peak period. This results in significant queueing and delay on this arm.

Woodgate Level Crossing Assessment.

The Woodgate level crossing is located approximately 130m north of the junction between the A29 and Woodgate Road. It has been assessed using LinSig software, as agreed with WSCC as part of pre-app scoping, which is considered an appropriate tool for modelling conflicting movements by signal control.

The typical level crossing open and closure durations and frequencies are based on traffic survey observations that were provided as part of the approved adjacent Wings Nursery site's TA (ADC reference: AL/32/19/OUT).

In the AM peak, the crossing closed 8 times, resulting in a typical cycle of 307 seconds with the barriers open to traffic and 123 seconds with the barriers closed to allow trains to pass. This has been modelled in LINSIG as a 450 second signal cycle, including 10 second inter-green periods at the start and end of the barrier closure.

Similarly in the PM peak, the crossing closed 9 times, resulting in a typical cycle of 222 seconds with the barriers open to traffic and 158 seconds with the barriers closed. This has been modelled in LINSIG as a 400 second signal cycle, with the same 10 seconds inter-green periods.

Woodgate crossing – Present Day Assessment:

Arm/Movement	AM Peak			PM Peak		
	DoS	Mean Max Queue (PCU)	Av. Delay Per PCU (s/PCU)	DoS	Mean Max Queue (PCU)	Av. Delay Per PCU (s/PCU)
2021 – Present Day (proxy)						
A29 Lidsey Road (N)	35.5%	24.7	31.7	61.2%	49.9	63.7
A29 Lidsey Road (S)	45.4%	37.8	34.8	41.7%	31.8	53.7

The assessment outputs indicate that the level crossing observes some significant queuing of between 25 and 50 vehicles during peak highway periods.

2024 Interim Year Assessment.

An interim year assessment has been requested and following discussions a combined Year of Opening/Interim year of 2024 was agreed. The methodology was agreed in advance with WSCC and was based upon the use of available SATURN transport model scenarios for the forecast year 2023.

The approach to the 2024 interim year assessment as agreed is summarised as follows:

- Interim year traffic models developed representing 2024 Do Minimum scenario (without the proposed development) and 2024 Do Something scenario (with the proposed development);
- The 2024 models will be developed based on the 2023 model which includes Phase 1 of the new committed A29 link. This link is anticipated to be open by 2024;
- The 2024 With Development scenario will assume full build out of the application site development;
- Background traffic growth to be applied for the period 2023-2024;
- The model will incorporate traffic associated with the revised list of committed developments; and
- Traffic data from the model will be used to inform detailed junction assessments at agreed locations and also where there is an increase in traffic due to the development of over 30 vehicles.

The committed developments that are expected to be complete by 2025 and therefore accounted for in the 2024 Interim Year Model are summarised in the Table below:

Address*	Complete by 2025	Accounted for in 2023 model
Land west of Hook Lane <u>Aldingbourne</u>	10	300
Land at Bridge Cottage and The Old Cottage <u>Lidsey Rd</u>	27	0
Land north of Lees Yard, <u>Lidsey Road</u>	38	0
<u>Nyton Nursery Nyton Road, Westergate</u>	68	0
Wings Nursery, <u>Lidsey Road</u>	55	0
Land at <u>Nyton Rd, Northfields Ln and Fontwell Ave</u>	167	268
Land to south of <u>Barnside, Hook Lane</u>	14	0
Land North of Barnham Road (East of Collins Close) (Former Eastergate Fruit Farm)	38	60
Pollards Nursery, Lake Lane (aka Eric Wall Nursery)	107	73
1 Northfields Cottages, <u>Fontwell Avenue</u>	42	0

*Extracted from QDBrun Report

The applicant should note that Land at Bridge Cottage and The Old Cottage, Lidsey Road, does not have planning permission. However, part of the land is

within the BEW Strategic Allocation which might account for the number of dwellings stated.

It should be noted that for some locations the 2023 model accounted for more completions than are currently anticipated by 2025. The trip rates used to determine the number of trips generated are as reported in the TA and shown in the following table:

	AM Peak		PM Peak	
	Depart	Arrive	Depart	Arrive
Trip Rates	0.324	0.124	0.161	0.312

Background growth between 2023 and 2024 was applied derived from TEMPro and the growth factors used are shown in the table below:

	AM Peak		PM Peak	
	Origin	Destination	Origin	Destination
2023-2024 Factors	1.0077	1.0075	1.0076	1.0077

Traffic turning movements were extracted from the 2024 Do Minimum and 2024 Do Something (with development) models to inform localised junction capacity assessments for the locations assessed within the TA.

The results of the junction assessments for the 2024 Interim year with and without development are summarised in the following tables alongside the results from the 2021 Present Day assessment, where applicable. The full assessment output reports are provided at Appendix J found in the TA.

A29/Woodgate Road Junction.

Arm/Movement	AM Peak			PM Peak		
	RFC	Queue (PCU)	Delay (s)	RFC	Queue (PCU)	Delay (s)
2021 – Present Day (proxy)						
Woodgate Road	0.16	0.2	13.11	0.08	0.1	11.97
A29 <u>Lidsey Road</u>	0.01	0.0	7.02	0.03	0.0	7.71
2024 Do Minimum – Existing Layout						
Woodgate Road	0.24	0.3	0.24	0.11	0.1	12.82
A29 <u>Lidsey Road</u>	0.18	0.6	4.80	0.06	0.1	4.58
2024 Do Something (with BEW Development) – proposed layout						
Woodgate Road	0.51	1.0	28.10	0.24	0.3	17.37
A29 <u>Lidsey Road</u>	0.04	0.0	7.73	0.05	0.1	8.03

Within the Table above for the '2024 Do Minimum – Existing Layout' the delay figure of 0.24s is shown. However, based on the previous (existing) and

proposed with development scenarios either-side, this figure looks to possibly be incorrect. Applicant to check this and reply.

The above assessment outputs indicate that the junction is forecast to operate comfortably within capacity during peak highway conditions in 2024 both with and without the development.

A29/Hook Lane Junction.

Arm/Movement	AM Peak			PM Peak		
	RFC	Queue (PCU)	Delay (s)	RFC	Queue (PCU)	Delay (s)
2021 – Present Day (proxy)						
Hook Lane	0.23	0.3	13.17	0.26	0.4	12.18
A29 <u>Lidsey Road North</u>	0.09	0.2	5.28	0.07	0.1	4.37
2024 Do Minimum						
Hook Lane	0.42	0.8	20.28	0.47	0.9	18.43
A29 <u>Lidsey Road North</u>	0.12	0.3	4.90	0.06	0.1	4.58
2024 Do Something (with BEW Development) – proposed layout						
Hook Lane	0.47	0.9	22.37	0.62	1.6	27.12
A29 <u>Lidsey Road North</u>	0.12	0.3	4.97	0.06	0.1	4.59

The above assessment outputs indicate that the junction is forecast to operate comfortably within capacity during peak highway conditions in 2024 both with and without the development.

A29/CALA Homes Site Access.

Arm/Movement	AM Peak			PM Peak		
	RFC	Queue (PCU)	Delay (s)	RFC	Queue (PCU)	Delay (s)
2024 Do Minimum						
CALA Homes Access	0.05	0.1	13.49	0.02	0.0	11.41
A29 North	0.09	0.1	8.25	0.12	0.2	7.43
Meadow Way	0.32	0.5	15.62	0.19	0.2	9.99
A20 South	0.01	0.0	7.24	0.02	0.0	7.71
2024 Do Something (with BEW Development) – proposed layout						
CALA Homes Access	0.05	0.1	13.50	0.02	0.0	11.44
A29 North	0.08	0.1	8.21	0.12	0.2	7.43
Meadow Way	0.32	0.5	15.64	0.19	0.2	9.99
A20 South	0.01	0.0	7.24	0.02	0.0	7.72

The above assessment outputs indicate that the proposed junction arrangement is forecast to operate comfortably within capacity during peak highway conditions in 2024 both with and without the development.

A29/B2233 Nyton Road Junctions.

A29/Nyton Road (East) – 2024 Interim Year Assessments:

Arm/Movement	AM Peak			PM Peak		
	RFC	Queue (PCU)	Delay (s)	RFC	Queue (PCU)	Delay (s)
2021 – Present Day (proxy)						
A29 Nyton Road South	-	0.0	0.00	-	0.0	0.00
B2233 Nyton Road West	-	0.7	10.50	-	1.0	10.24
A29 Nyton Road East	-	11.7	40.94	-	1.1	3.86
2024 Do Minimum						
A29 Nyton Road South	-	0.0	0.00	-	0.0	0.00
B2233 Nyton Road West	-	0.8	10.42	-	0.9	10.30
A29 Nyton Road East	-	15.8	51.15	-	1.2	3.94
2024 Do Something (with BEW Development)						
A29 Nyton Road South	-	0.0	0.00	-	0.0	0.00
B2233 Nyton Road West	-	0.7	10.73		1.1	10.16
A29 Nyton Road East	-	13.4	50.56		1.1	3.75

A29/Nyton Road (South) – 2024 Interim Year Assessments:

Arm/Movement	AM Peak			PM Peak		
	RFC	Queue (PCU)	Delay (s)	RFC	Queue (PCU)	Delay (s)
2021 – Present Day (proxy)						
A29 Westergate Road (S)	-	0.0	0.00	-	0.0	0.00
B2233 North	-	0.3	12.43	-	0.8	13.73
A29 Nyton Road North	-	0.0	0.00	-	0.0	0.00
2024 Do Minimum						
A29 Westergate Road (S)	-	0.0	0.00	-	0.0	0.00
B2233 North	-	0.3	13.72	-	0.7	13.38
A29 Nyton Road North	-	0.0	0.00	-	0.0	0.00
2024 Do Something (with BEW Development)						
A29 Westergate Road (S)	-	0.0	0.00	-	0.0	0.00
B2233 North	-	0.3	13.57	-	0.7	14.16
A29 Nyton Road North	-	0.0	0.00	-	0.0	0.00

B2233/Nyton Road (West) – 2024 Interim Year Assessments:

Arm/Movement	AM Peak			PM Peak		
	RFC	Queue (PCU)	Delay (s)	RFC	Queue (PCU)	Delay (s)
2021 – Present Day (proxy)						
B2233 Nyton Road East	-	0.0	0.00	-	0.0	0.00
B2233 South	-	0.5	8.93	-	0.4	7.55
B2233 Nyton Road West	-	0.5	3.81	-	1.4	8.39
2024 Do Minimum						
B2233 Nyton Road East	-	0.0	0.00	-	0.0	0.00
B2233 South	-	0.5	8.74	-	0.5	8.10
B2233 Nyton Road West	-	0.4	4.15	-	1.3	8.63
2024 Do Something (with BEW Development)						
B2233 Nyton Road East	-	0.0	0.00	-	0.0	0.00
B2233 South	-	0.4	8.90	-	0.3	7.81
B2233 Nyton Road West	-	0.5	4.30	-	1.3	8.67

The above assessment outputs indicate that the existing junctions are forecast to operate comfortably within capacity during peak highway conditions in 2024 both with and without the development.

A29 War Memorial Roundabout.

Arm/Movement	AM Peak			PM Peak		
	RFC	Queue (PCU)	Delay (s)	RFC	Queue (PCU)	Delay (s)
2021 – Present Day (proxy)						
Barnham Road	0.52	1.1	5.70	0.43	0.8	0.43
Nyton Road	0.54	1.2	4.24	0.46	0.9	0.46
Fontwell Avenue	0.89	6.8	50.07	1.50	194.4	1.50
2024 Do Minimum						
Barnham Road	0.51	1.1	5.91	0.39	0.6	4.8
Nyton Road	0.52	1.1	3.96	0.46	0.9	3.47
Fontwell Avenue	0.85	5.0	37.01	1.09	37.3	199.48
2024 Do Something (with BEW development)						
Barnham Road	0.51	1.1	5.91	0.38	0.6	4.69
Nyton Road	0.52	1.1	3.98	0.46	0.9	3.47
Fontwell Avenue	0.85	5.2	37.01	1.15	50.0	265.75

The above assessment outputs indicate that the junction is forecast to continue to operate over capacity on the Fontwell Avenue arm during the PM peak in 2024 both with and without the development. The operation of the junction is improved when compared with the 2021 Present Day assessment.

The relative impact of the development proposals is considered to be minor. With negligible increases in RFC and queues with the exception of the already over capacity Fontwell Avenue arm, which is forecast to observe an increase in RFC of 0.06 in the PM peak. With the AM peak being within capacity.

Woodgate Level Crossing Assessment.

Arm/Movement	AM Peak			PM Peak		
	DoS	Mean Max Queue (PCU)	Av. Delay Per PCU (s/PCU)	DoS	Mean Max Queue (PCU)	Av. Delay Per PCU (s/PCU)
2021 – Present Day (proxy)						
A29 Lidsey Road (N)	35.5%	24.7	31.7	61.2%	49.9	63.7
A29 Lidsey Road (S)	45.4%	37.8	34.8	41.7%	31.8	53.7
2024 Do Minimum						
A29 Lidsey Road (N)	49.5	39.4	36.6	63.6	53.1	65.2
A29 Lidsey Road (S)	46.2	38.9	35.1	50.0	40.6	57.3
2024 Do Something (with BEW development)						
A29 Lidsey Road (N)	50.1	40.3	36.8	67.3	58.1	67.8
A29 Lidsey Road (S)	49.4	43.0	36.3	51.9	42.9	58.3

The above assessment outputs indicate that the level crossing will continue to operate with similar levels of queuing during highway peak periods in 2024 both with and without the development. The relative impact of the development proposals is minor, however, with increases in queues of between 1 and 5 vehicles across both peaks.

Summary of transport impact.

A 2021 Present Day and comparative 2024 Interim Year (with and without development) scenario assessments have been undertaken following the methodologies agreed in advance with WSCC.

The 2021 Present Day assessment indicates that prior to the implementation of the proposed development that all junctions but the A29 War Memorial roundabout currently operate within theoretical capacity. The Fontwell Avenue arm only of the above junction is shown to operate over capacity during the weekday PM peak. Furthermore, the Woodgate Rd level crossing is shown to operate with queues during both peak periods.

The assessments of an interim year of 2024 both with and without the proposed development show consistently that the relative traffic impacts of the application site are negligible or minor at worst.

It is considered that the absolute impacts in 2024 with the development in place are not sufficiently significant or severe in the context of the NPPF as to require

interim mitigation in advance of the delivery of the proposed new link road beyond Phase 1 which has is assumed to be place by the year of assessment.

As demonstrated within Chapter 6 of the TA, the forecast situation of the study area network in 2038 with the development in place is generally improved through the delivery of the new A29 link road, which the proposed development will contribute towards. As such it is concluded that the relative impacts of the development within both the 2024 interim year and 2038 horizon year are minor and non-severe in the context of the NPPF.

The CHA largely accepts the modelling scenarios and resultant impacts as set-out above. However, there are two areas requiring some additional information:

1. Within the Table above for the '2024 Do Minimum – Existing Layout' the delay figure of 0.24s is shown. However, based on the previous (existing) and proposed with development scenarios either-side, this figure looks to be possibly incorrect. Applicant to check this and reply.
2. The modelling does not show resultant traffic queues at the junction of Woodgate Road and Lidsey Road when railway gates are down – i.e. queuing within Woodgate Road and how vehicles would pass one-another within the first section of Woodgate Road at and just beyond the junction when gates are down based on the proposed traffic figures. Applicant to provide, please. A plan should also be provided to illustrate this as well (to include parked vehicles on Woodgate Road where they park at present (particularly those close to the junction) and swept-path diagrams of cars passing cars).

9. Cycle parking – visitor provision to be shown on a plan.

ECE Architecture Drawing 6781-PL-02, within Appendix H also provided for point 6 above indicates the location of additional unallocated visitor cycle parking (12 Sheffield stands).

With regards to EV parking, it is confirmed that passive EV charging provision will be provided throughout in accordance with ADC parking standards in order to future-proof the development.

The above comments are noted. Parking (car, EV, cycle etc.) can be secured by planning condition.

10. Travel Plan – revised version required with additional measures included.

The monitoring fee of £3,500 is agreed and is anticipated to be secured via the S106 agreement.

The Travel Plan has been updated to reflect the comments received from WSCC. The below provides signposts to the changes in the Travel Plan together with the paragraph reference (in brackets):

- *Inclusion of a target 10% reduction in single occupancy car trips (4.2.4);*
- *Monitoring surveys (following TRICS SAM) are to be done and secured in the S106 (6.1.6 and 6.2.4);*
- *A £500 audit fee for WSCC per survey will be secured through the s106 (6.1.6);*

- *A TP coordinator should be appointed and WSCC advised of their contact details (5.3.3);*
- *A welcome pack is to be provided which will include travel vouchers with a minimum value of £150 per dwelling and information on where these can be redeemed (5.3.7);*
- *The Travel Plan Coordinator is to contact the local bus companies to negotiate potential incentives to travel by bus (5.2.8);*
- *Various contact details for organisations provided to aid in the development of the travel plan and the welcome pack (5.3.11);*
- *Details of what should be included in the travel information provided to residents (5.3.9);*
- *Infrastructure for EV charger points (3.4.3) in line with current LPA policy;*
- *The TP coordinator should promote national awareness events, as listed (5.3.4)*
- *Enforcement and potential additional measures to be provided (6.3.1)*
- *Infrastructure works as part of the BEW site to be secured as part of the S106 (7.1.3)*

Although requested no allowance has been made for a car share club. This is considered to be unviable for a development of this size and location.

The above is largely accepted. However, there are two areas that would benefit from improvement:

1. Enforcement/repeat measures - Stronger commitment to enforcement measures is required in any final plan.
2. Car club - Although the development site is on the threshold of whether a car club would be viable, the site does form part of the overall BEW Strategic Location. Therefore, when additional dwellings are added as they will be when further development comes on-stream, the viability of such a club becomes far more realistic. Therefore, it is recommended that the site retains space for, say, future parking spaces for car club vehicles and makes a proportionate contribution towards a future car club to be delivered by developers.

Conclusion.

Additional information and/or clarification of some of the points made above is still required. Summary as follows:

1. Site access additional information – Applicant to provide:
 - a formal design check of proposed right hand turning facility
 - a plan showing queues on Woodgate Road when railway crossing gates are down and swept-path diagrams at junction with cars parked at the junction
 - a plan showing how southbound cyclists will be able to leave the carriageway of the A29 and join the off-road cycle way
2. Transport modelling – replies to the two points raised.
3. Public transport strategy.
4. Internal cycle infrastructure – consideration of changing route from south-side of road to north side of road.
5. Road safety audit recommendation 2.2.

6. Reply to Travel Plan comments.

When replies to the above are available then please re-consult.

Thank you.

Tim Townsend
West Sussex County Council – Planning Services

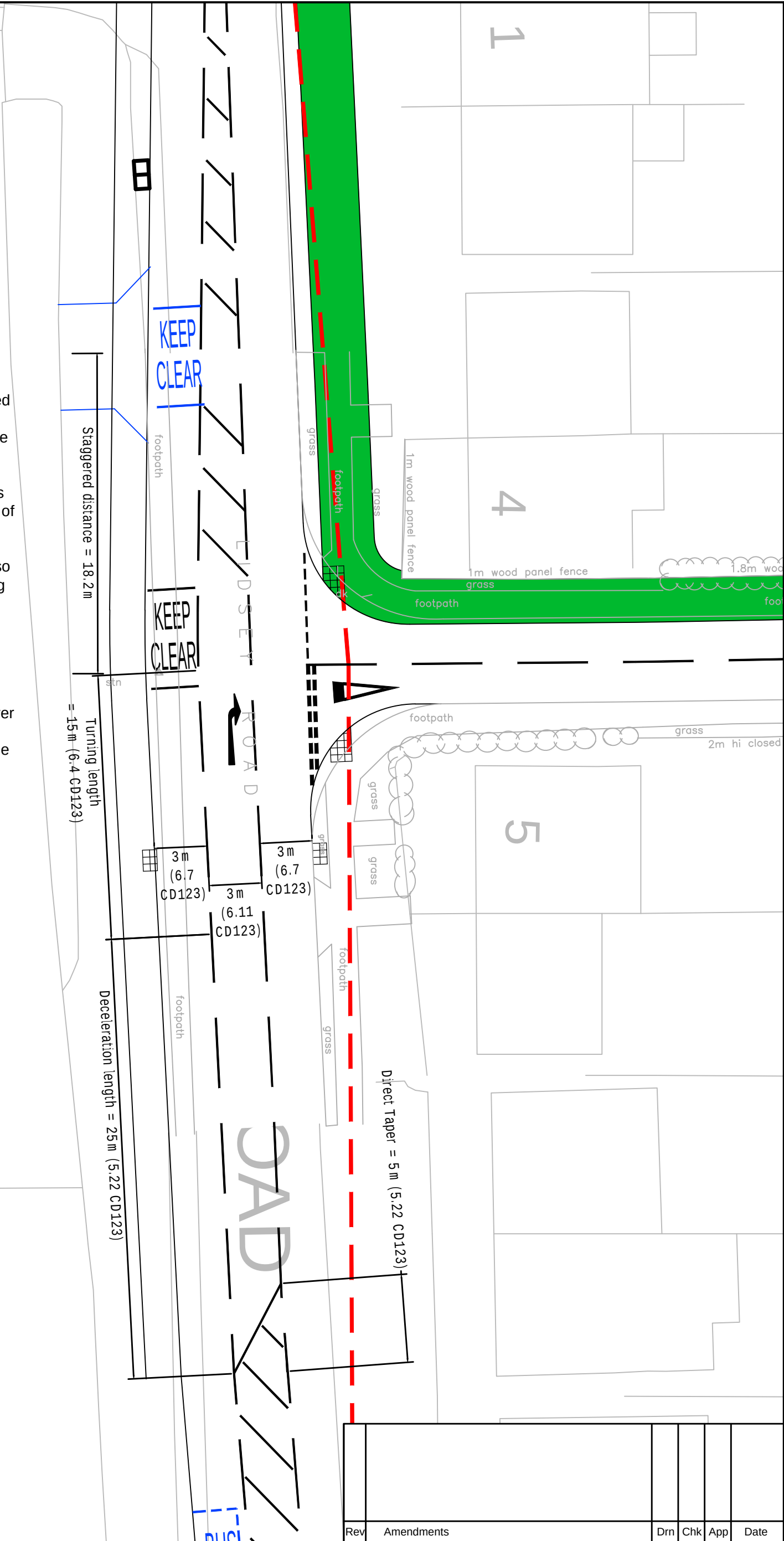
Appendix B Drawing 20-061-039



Taper length (measured as 60m) based on the requirement for a minimum 1:20 taper, based on the current 1/2 road width (3.4m) and design width (9m) which would require a length of 52m

DMRB minimum stagger distance is 50m, this is "based on the distance required for manoeuvring the 18.35m drawbar trailer combination design vehicle between the two minor roads, and shall be provided on all new staggered junctions, including the upgrading of rural crossroads" (quote from TD42/95 as this information is no longer included within CD123). This is not the sort of vehicle which is likely to ever be undertaking the manoeuver between the two junctions (the northern junction being one which serves just 10 dwellings), also as the developer hasn't shown refuse tracking entering the site; even a refuse vehicle isn't expected to make such a manoeuver.

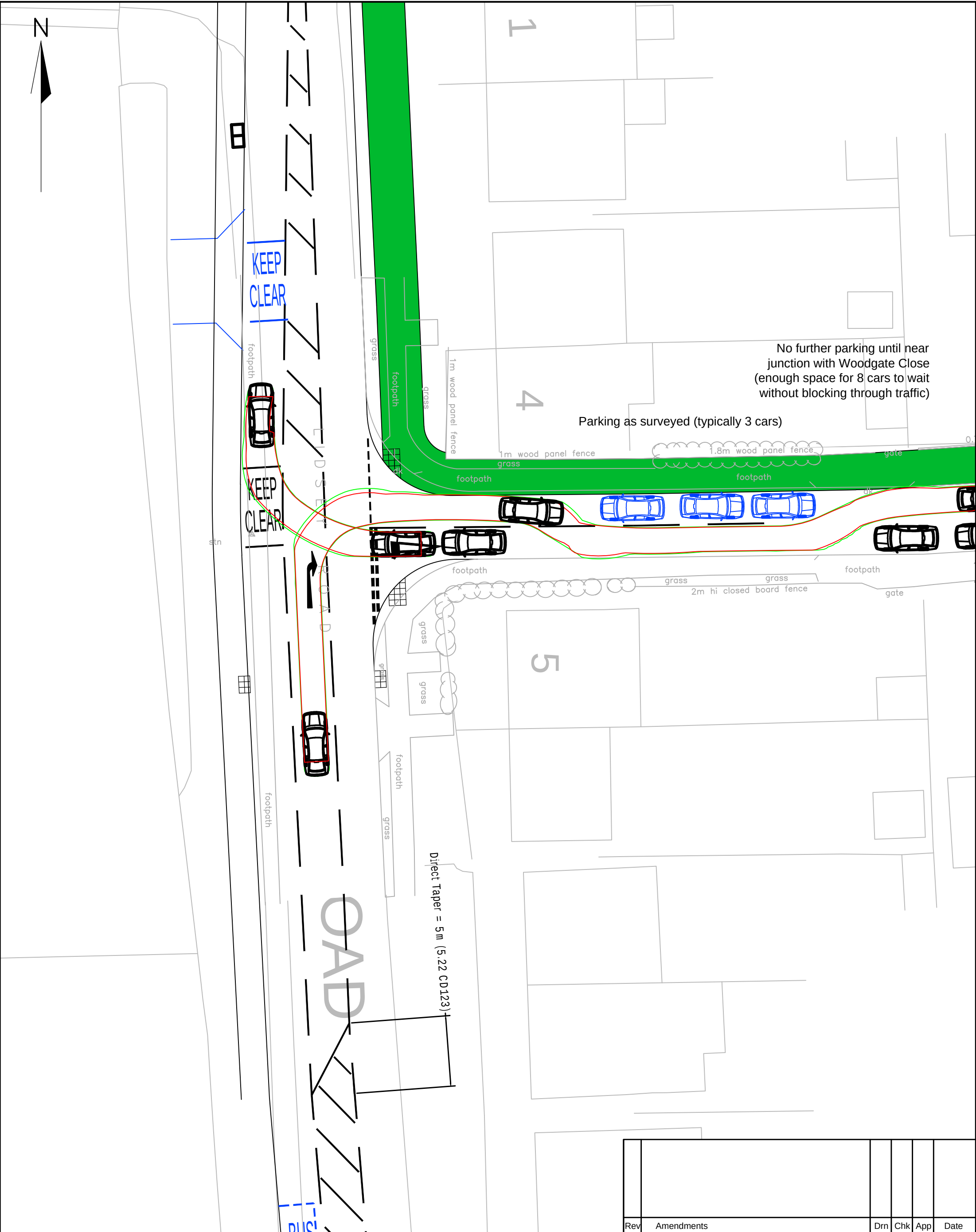
Minimum turn length is listed as 10m in DMRB, however 15m has been shown at this stage to position the uncontrolled pedestrian crossing point to be outside the deceleration length



Rev	Amendments	Drn	Chk	App	Date

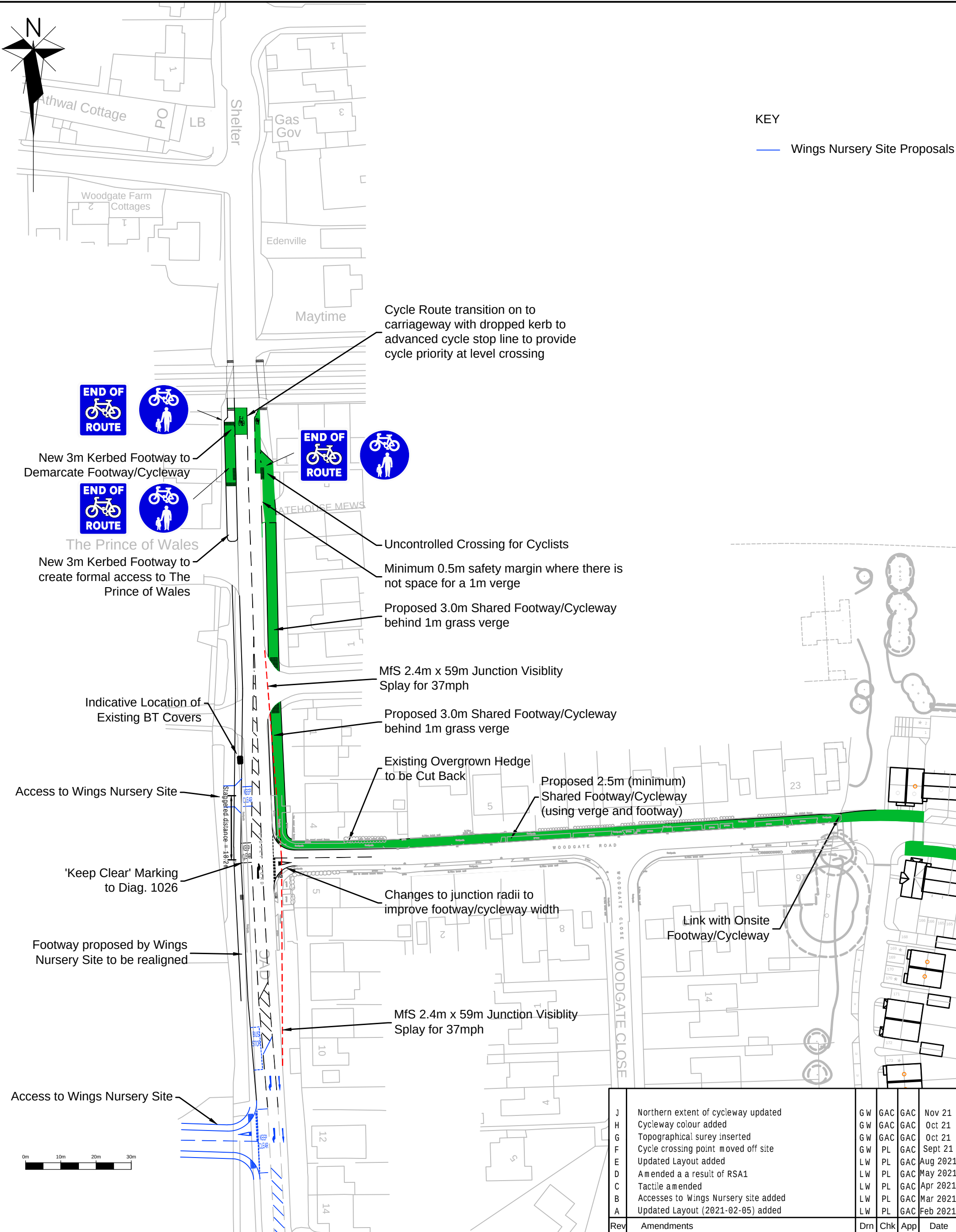
Charles & Associates ☒ Issued by ☐ Landmark House Station Road Hook Hampshire RG27 9HA 01256 630420 ☐ Park House, Park Farm East Malling Trust Estate Bradbourne Lane Aylesford, Kent ME20 6SN 01732 448120	Job Title		Scale		Date		Designed	
	Land East of Woodgate Lane		1:250		Nov 21		GPW	
	Drawing Title		Drawn		Checked		Approved	
Client		Pye Homes		Job No		Drawing No		Rev
				20-061		20-061-039		-

Appendix C Drawing 20-061-040



Charles & Associates	Issued by ☒	Landmark House Station Road Hook Hampshire RG27 9HA 01256 630420	Job Title Land East of Woodgate Lane		Scale 1:250	Date Nov 21	Designed GPW	
	☐	Park House, Park Farm East Malling Trust Estate Bradbourne Lane Aylesford, Kent ME20 6SN 01732 448120	Drawing Title Plan showing tracking during barrier closures		Drawn GPW	Checked SW	Approved GAC	
			Client Pye Homes		Job No 20-061	Drawing No 20-061-040		Rev -

Appendix D Drawing 20-061-014 J



KEY
Wings Nursery Site Proposals

J	Northern extent of cycleway updated	GW	GAC	GAC	Nov 21
H	Cycleway colour added	GW	GAC	GAC	Oct 21
G	Topographical surey inserted	GW	GAC	GAC	Oct 21
F	Cycle crossing point moved off site	GW	PL	GAC	Sept 21
E	Updated Layout added	LW	PL	GAC	Aug 2021
D	Amended a a result of RSA1	LW	PL	GAC	May 2021
C	Tactile amended	LW	PL	GAC	Apr 2021
B	Accesses to Wings Nursery site added	LW	PL	GAC	Mar 2021
A	Updated Layout (2021-02-05) added	LW	PL	GAC	Feb 2021
Rev	Amendments	Drn	Chk	App	Date

Charles & Associates

Issued by

☒

Landmark House

Station Road

Hook

Hampshire

RG27 9HA

01256 630420

☐

Park House, Park Farm

East Malling Trust Estate

Bradbourne Lane

Aylesford, Kent ME20 6SN

01732 448120

Job Title

Land East of Woodgate Lane

Drawing Title

Proposed Site Access and Cycle Connection

Client

Pye Homes

Scale

1:1000

Drawn

LEW

Job No

20-061

Date

Jan 21

Checked

PL

Drawing No

20-061-014

Designed

LEW

Approved

GAC

Rev

J

ARUN DISTRICT COUNCIL AL/107/21/PL

Appendix E Email from architect

Graham Wickenden

From: Luke
Sent: 26 November 2021 17:21
To: Graham
Subject: RE: Woodgate

Hi Grham

Response in blue below:

Kind Regards,

Luke Torres RIBA ARB
Architect

ECE Architecture

ECE are proud to announce that Lady Bee Enterprise Centre has been awarded a RIBA South East Award. Read more [here](#).



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From: Graham
Sent: 26 November 2021 10:53
To: Luke
Subject: Woodgate

Dear Luke

Further to our telephone conversation can you provide us with the justification as to why the cycle route is on the south side of the road (item 7 on the attached response from WSCC), which we believe is related to the TPO trees in the public open space.

We are not able to route the 3m cycle path on the northern side of the access drive due to the RPAs of the trees in the central open space. These trees are subject to a TPO (map attached) and the tree office has specified from the outset within the pre-application response that they would not accept any encroachment into the RPA.

Also as discussed they are looking for a car club space (point 2 of item 10), which we would envisage would be one of the adopted visitor spaces, most likely fronting the public open space so that it is visible to most users of the site and those passing through the site, are there any architectural reasons why this maybe an issue?

[No issue from an architectural perspective here](#)

Many thanks

Graham Wickenden

Senior Engineer

ddt.

Website **LinkedIn**

Hampshire.

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