

WEST SUSSEX COUNTY COUNCIL CONSULTATION

TO:	Arun District Council FAO: Claire Potts
FROM:	WSSC - Highway Authority
DATE:	11 February 2022
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:	10th September 2021
RECOMMENDATION:	No Objection (subject to suitable S106 and conditions)
S106 CONTRIBUTION TOTAL:	SEE BELOW (NON-HIGHWAYS INFRASTRUCTURE LIST AND FINANCIAL AMOUNTS TO BE PROVIDED SEPARATELY)

This is the third WSSC 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 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* are the replies from the applicants to the first CHA response with comments in *blue text* the CHA response to those. Comments in *green italic text* are latest CHA comments in response to Technical Note 20-61-016 (no revision) dated December 2021 produced by Charles Associates, the transport consultants working on behalf of the applicants. This response should be read alongside both previous CHA responses:

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 design appears to meet the objectives of the appropriate DMRB standard (CD 1.23). Should the development proposal be approved the design will undergo a further detailed check as part of a S278 Agreement.

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.

This is now shown on Drawing No. 20-61-014 Revision J. The CHA also notes that some other changes have been made (namely an advance stop line for cycles in the NB direction and an exit point and approach lane for cyclists to join the proposed shared foot/cycleway on the eastern-side of the road). As these haven't been considered through the Stage 1 Road Safety Audit (RSA) process they will be subject to scrutiny (and possibly changes) through the S278 Design Checking and Stage 2 RSA processes should planning permission be granted for the development.

The LPA is also advised to consult Network Rail given that the changes shown are immediately adjacent to the railway crossing.

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 in detail. Therefore, the applicant should not consider that any construction details submitted so far would be acceptable. Detailed assessment would be undertaken at the point of submission of detailed plans post-planning or other future date. However, some points of principles are set out below.

In its consideration of the foot/cycle bridge, WSCC has numbered the structure WSCC ref: 3528, 'Woodgate Footbridge'. The CHA ask that the applicant use this referencing from here onwards (the name is less important, but the reference number is essential).

With regards to the principle and format of the structure, the principle of the structure is acceptable subject to the final version being suitable for joint walking and cycling. An AIP will be required in due course, but until such a point the developer / designer should consider the following broad guidance points for the detailed design:

- 1. The clear width of the structure must be carefully considered in conjunction with guidance given in LTN 1/20.*

2. *Bearings and expansions joints are to be avoided wherever possible as these add to WSCC maintenance burden that will otherwise need to be reflected in the commuted sum.*
3. *Paintwork is to be avoided wherever possible as this also adds to the WSCC maintenance burden that will otherwise need to be reflected in the commuted sum. Materials with none or negligible maintenance liabilities are preferred such as concrete, weathering steel, galvanised steel, FRP etc.*

No further CHA comment other than to reiterate that the bridge (with design and delivery thereof by developer/s) must be secured in a S106 Agreement.

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.

No further comment required from CHA.

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.

It is essential that the site delivers a proportional contribution to both public transport service improvements and associated public transport infrastructure improvements that align with Arun DC Planning Policy and aims and desires of public transport providers which must assist with the delivery of the overall BEW Strategic Allocation.

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.

The applicant has now curtailed the route and this is shown on Drawing No. 20-61-014 Revision J. The CHA also notes that some other changes have been made (namely an advance stop line for cycles in the NB direction and an exit point and approach lane for cyclists to join the proposed shared foot/cycleway on the eastern-side of the road). As these haven't been considered through the Stage 1 Road Safety Audit (RSA) process they will be subject to scrutiny (and possibly changes) through the S278 Design Checking and Stage 2 RSA processes should planning permission be granted for the development.

The LPA is also advised to consult Network Rail given that the changes shown are immediately adjacent to the railway crossing.

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.

The consultant has replied saying that following discussions with the urban designer, a route along the northern-side of the access road was considered. However, due to constraints related to tree preservation and root protection the route is provided alongside the south-side of the access road. Comments made previously about road markings, tactile and corduroy paving etc., are still applicable and would need to form part of any detailed design stage - be that S38 or if the road is to be private.

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.

The applicant has now curtailed the route and this is shown on Drawing No. 20-61-014 Revision J. This is now shown on Drawing No. 20-61-014 Revision J. The CHA also notes that some other changes have been made (namely an advance stop line for cycles in the NB direction and an exit point and approach lane for cyclists to join the proposed shared foot/cycleway on the eastern-side of the road). As these haven't been considered through the Stage 1 Road Safety Audit (RSA) process they will be subject to scrutiny (and possibly changes) through the S278 Design Checking and Stage 2 RSA processes should planning permission be granted for the development.

An updated RSA Log has been prepared and the CHA and designer are finalizing comments within it. In accordance with DMRB requirements, a copy of the FINAL version must be kept on the LPA files.

The LPA is also advised to consult Network Rail given that the changes shown are immediately adjacent to the railway crossing.

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 Lidsey Road	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 Lidsey Road North	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 Aldingbourne	10	300
Land at Bridge Cottage and The Old Cottage Lidsey Rd	27	0
Land north of Lees Yard, Lidsey Road	38	0
Nyton Nursery Nyton Road, Westergate	68	0
Wings Nursery, Lidsey Road	55	0
Land at Nyton Rd, Northfields Ln and Fontwell Ave	167	268
Land to south of Barnside, Hook Lane	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, Fontwell Avenue	42	0

*Extracted from ODBrun 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 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	0.24	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

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.

This has now been corrected to 16.72.

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 Lidsey Road North	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 Lidsey Road North	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 Lidsey Road North	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. As stated previously in this response, this figure has now been corrected.*
- 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).*

The applicant acknowledges that on-street parking regularly occurs on Woodgate Road near to the junction with Lidsey Road. In their assessment, the applicant has considered 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.

They also have 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 they anticipate 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.

The applicant's assessment and associated observation 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.

Based upon the above, the applicant estimates 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, the applicant considers that, as an absolute worst case, a maximum of 5 vehicles might be added onto Woodgate Road during these periods. They consider the likelihood of this happening 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.

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 of the Technical Note.

With regard to the War Memorial Roundabout, should planning permission be granted and the development planned for first occupation prior to Phase 1 of the A29 realignment, provision should be made in a S106 Agreement for possible improvements at the roundabout to accommodate the additional traffic generated by the proposal.

3. 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.

No further comment required from CHA.

4. 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. *The applicant has replied saying that such measures can be secured by planning condition. However, in accordance with approved WSCC Travel Plan policy, a FINAL Travel Plan and its associated monitoring fee will need to be secured by S106 Agreement.*
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. *With regard to locations for future car club spaces, the principle of using some of the on-street visitor spaces is acceptable to the CHA. However, this would only be possible (for the on-street spaces) if the internal estate roads are to be offered for adoption under S38. Should the roads remain private (including the parking spaces), then agreement to use spaces would need to be secured with the developer at this planning stage. Comment about proportional contribution noted.*

Other matters.

Road adoption – Should any of the internal estate roads in the development be put forward for adoption, they will need to meet the CHA's standard details and specifications. Details can be found on the WSCC website. For roads designed as shared-surfaces, the road surface should be constructed in blockwork and be in a contrasting material to other road surfaces that it joins to.

Conclusion.

WSCC as local Highway Authority considers that the above highway technical matters have been concluded to its satisfaction. As such, it raises 'No Objection' to the proposal subject to the following:

S106 Agreement (to secure):

1. Highways access and associated works including cycle path works
2. Walking and cycle route and bridge over Lidsey Rife – To be delivered by applicant
3. Bus service and associated infrastructure improvements - proportional contribution towards overall public transport requirements for BEW
4. (Provision for) A29/B2233 War Memorial roundabout interim junction improvement (only necessary if A29 Realignment phase 1 is not implemented)
5. Travel Plan
6. Travel Plan Monitoring Fee of £3,500
7. Car club (proportional contribution to and spaces)

Proportional financial contributions towards strategic infrastructure as set-out in the Apportionment Study*, namely:

1. A29 re-alignment
2. A259 corridor improvements (Bognor Regis to Littlehampton)
3. A259 Oyster Catcher improvements
4. A27/Fontwell East RBT improvements
5. A27/Nyton Road improvements

6. Barnham Village Centre improvements

*(*Current Apportionment Study value at the date of this response is £14,461.00 per-dwelling (180 x £14,461.00= £2,602,980.00). This may be subject to change up until the point of concluding the S106 Agreement).*

And Infrastructure Delivery Plan (IDP) requirements (again, proportional contributions and based on latest cost estimates):

1. Cycle links BEW to SDNP – £824,400 – so $\frac{£824,400}{3000} = £274.80$ per-dwelling x 180 = £49,464
2. Barnham – Tangmere cycle route – estimated cost £1,500,000 – so $\frac{£1,500,000}{3000} = £500$ per-dwelling x 180 = £90,000
3. Barnham to Bognor Regis cycle route – estimated cost £1,150,000 – so $\frac{£1,150,000}{3000} = £383$ per-dwelling x 180 = £68,940
4. B2233 footway imps – estimated cost £1,500,000 – so $\frac{£1,500,000}{3000} = £500$ per-dwelling x 180 = £90,000
5. Creation of a dedicated NMU grade-separated railway crossing to provide a safe connection between sections of the proposed Rife Valley Park – proportional contribution required from all development sites (COSTS AWAITED).
6. Creation of a dedicated NMU grade-separated railway crossing to provide a safe crossing of the Barnham-Bognor branch line linking various PRoW - proportional contribution required from all development sites (COSTS AWAITED)
7. Additional cycle parking Barnham Station – estimated cost - £35,000 – so $\frac{£35,000}{3000} = £11.66$ x 180 = £2,098.80

(PLEASE NOTE: All calculations above based on approved Local Plan Number of 3000 homes which is the number tested in highway terms. The LPA will, of course, consider other competing issues and form their own view about what number to base contributions on. Please also note that monetary values subject to change prior to signing of S106 Agreement).

Conditions:

1. Access

No part of the development shall be first occupied until such time as the vehicular access serving the development has been constructed in accordance with the details shown on the approved drawing.

Reason: In the interests of road safety.

2. Emergency Access

No part of the development shall be first occupied until the emergency vehicular and foot and cycle access onto Oak Tree Lane has been constructed in accordance with plans to be submitted and approved by the LPA. The access once constructed shall thereafter be used by emergency vehicles, pedestrians, and cyclists only.

Reason: To ensure that the emergency and sustainable access is suitable for its intended purpose.

3. Car parking spaces

No dwelling shall be first occupied until the car parking serving the respective dwelling has been constructed in accordance with the approved site plan. Once provided the spaces shall thereafter be retained at all times for their designated purpose.

Reason: To provide car-parking space for the use

4. *EVC Parking Spaces*

No part of the development shall be first occupied until Electric Vehicle Charging spaces have been provided in accordance with plans and details to be submitted to and approved by the Local Planning Authority.

Reason: To provide EVC charging points to support the use of electric vehicles in accordance with national sustainable transport policies

5. *Cycle parking*

No dwelling shall be first occupied until covered and secure cycle parking spaces serving the respective dwelling have been provided in accordance with plans and details to be submitted to and approved by the Local Planning Authority.

Reason: To provide alternative travel options to the use of the car in accordance with current sustainable transport policies.

6. *Access Road*

No part of the development shall be first occupied until the road(s), footways, and casual parking areas serving the development have been constructed in accordance with the approved plans.

Reason: To secure satisfactory standards of access for the proposed development.

7. *Construction Management Plan*

No development shall take place, including any works of demolition, until a Construction Management Plan has been submitted to and approved in writing by the Local Planning Authority. Thereafter the approved Plan shall be implemented and adhered to throughout the entire construction period. The Plan shall provide details as appropriate but not necessarily be restricted to the following matters:

- the anticipated number, frequency and types of vehicles used during construction,
- the method of access and routing of vehicles during construction,
- the parking of vehicles by site operatives and visitors,
- the loading and unloading of plant, materials and waste,
- the storage of plant and materials used in construction of the development,
- the erection and maintenance of security hoarding,
- the provision of wheel washing facilities and other works required to mitigate the impact of construction upon the public highway (including the provision of temporary Traffic Regulation Orders),
- details of public engagement both prior to and during construction works.

Reason: In the interests of highway safety and the amenities of the area.

Informatives:

Section 59 of the 1980 Highways Act - Extra-ordinary Traffic

The applicant is advised to enter into a Section 59 Agreement under the 1980 Highways Act, to cover the increase in extraordinary traffic that would result from construction vehicles and to enable the recovery of costs of any potential damage that may result to the public highway as a direct consequence of the construction traffic. The Applicant is advised to contact the Highway Officer [REDACTED] in order to commence this process.

Works within the Highway – Implementation Team

The applicant is required to obtain all appropriate consents from West Sussex County Council, as Highway Authority, to cover the off-site highway works. The applicant is requested to contact The Implementation Team Leader [REDACTED] to commence this process. The applicant is advised that it is an offence to undertake any works within the highway prior to the agreement being in place.

Provision of Adoptable Highway

The applicant is required to enter into a legal agreement with West Sussex County Council, as Highway Authority, should they wish to offer any internal roads for adoption or other infrastructure being offered to the Highway Authority under S38 of the Highways Act 1980. The applicant should contact the Implementation Team Leader [REDACTED] to commence this process. The applicant is advised that any works commenced prior to the S38 agreement being in place are undertaken at their own risk.

Temporary Works Required During Construction

The applicant is advised of the requirement to enter into early discussions with and obtain the necessary licenses from the Highway Authority to cover any temporary construction related works that will obstruct or affect the normal operation of the public highway prior to any works commencing. These temporary works may include, the placing of skips or other materials within the highway, the temporary closure of on-street parking bays, the imposition of temporary parking restrictions requiring a Temporary Traffic Regulation Order, the erection of hoarding or scaffolding within the limits of the highway, the provision of cranes over-sailing the highway.

Temporary Developer Signage

The applicant is advised that the erection of temporary directional signage should be agreed with the Local Traffic Engineer prior to any signage being installed. The applicant should be aware that a charge will be applied for this service.

Temporary directional signs to housing developments (Major apps only 10 units +)

The applicant is advised that they must apply and obtain approval from West Sussex County Council as Highway Authority for all temporary directional signs to housing developments that are to be located on the highway. Further details of the process and how to apply are available here

<https://www.westsussex.gov.uk/roads-and-travel/information-for-developers/temporary-development-signs/#overview>

Structures Check

The applicant is advised that the proposed structures are, at an appropriate time, required to be subject to the Technical Approval process as specified within BD 2/12 of the Design Manual for Roads and Bridges. The applicant should contact the WSCC Structures team to commence this process when ready. The applicant should note that

the failure to obtain TA may prevent the future adoption of the structure as public highway or incur additional works to bring the works up to a suitable standard.

Thank you.

Tim Townsend
West Sussex County Council – Planning Services