Kay Prendergast

From: Lake , Wayne (GROUP LEADER HDC) <WayneLake@barnsley.gov.uk>
Sent: 12 September 2023 15:46
To: Hyde , James (SPATIAL PLANNING PROJECT MANAGER)
Cc: HighwaysPlngApps
Subject: FW: 2022/0115 - Land north of Shaw Lane, Carlton, Barnsley, S71 3HH

Good afternoon James,

Re: 2022/0115 - Residential development of up to 215 dwellings with associated car parking/garages, landscaping, public open space including both equipped and non-equipped areas of play, SUDS and drainage, with details of a new vehicular access onto Shaw Lane (Outline with all matters reserved apart from means of access)

Many thanks for consulting Highways Development Control on the additional information submitted in respect of this application, covered by the Letter from Spawforths dated 2 June 2023.

Having reviewed this additional information, please find my latest comments in blue appended to my original comments below for ease of reference and a summary of the review and recommendation provided at the end of the consultation response.

Kind Regards

Wayne

From: Lake , Wayne (GROUP LEADER HDC) <WayneLake@barnsley.gov.uk>
Sent: 13 July 2022 13:22
To: Hyde , James (SPATIAL PLANNING PROJECT MANAGER) <JamesHyde@barnsley.gov.uk>
Cc: HighwaysPlngApps <HighwaysPlngApps@barnsley.gov.uk>
Subject: 2022/0115 - Land north of Shaw Lane, Carlton, Barnsley, S71 3HH

Good afternoon James,

Re: 2022/0115 - Residential development of up to 215 dwellings with associated car parking/garages, landscaping, public open space including both equipped and non-equipped areas of play, SUDS and drainage, with details of a new vehicular access onto Shaw Lane (Outline with all matters reserved apart from means of access)

Many thanks for consulting Highways Development Control in respect of this planning application.

The application seeks outline approval for a residential development of up to 215 dwellings with all matters reserved apart from means of access. The site forms part of the mixed use development allocation within the Local Plan under site plan policy MU3 which is mixed use for housing and green space with an indicative yield of 1683 dwellings. Within the MU3 policy the development has been the subject of a phased masterplan framework covering the entire allocation to ensure the development is brought forward in a coherent and comprehensive manner. The masterplan framework covering sites MU2 and MU3 was informed by a six week public consultation exercise and adopted by full Council on 25th November 2021. In addition to the masterplan framework a delivery strategy was produced which set out the roles and responsibilities of the various landowners and developers alongside BMBC as both the Local Planning Authority and Highway Authority. The issues considered within the delivery strategy being the planning and phasing strategy together with the infrastructure requirements and delivery. The delivery strategy sets out that it is expected that development will come forward in a series of phases and whilst it is noted that phases may not necessarily be delivered sequentially, the delivery of certain phases will be dependent upon the availability of infrastructure networks including highways to serve respective parts of the site.

This development parcel is identified as L11 and contained within Phase 3 of the phasing strategy. Within the strategy for Phase 3 is states "Due to congestion on the existing highway network, access needs to be secured off Royston Lane via the northern access road. This access road fits in with BMBC's wider strategic transport aspirations." However in order to secure access to Royston Lane, phased development of the parcels will require L12 to be brought forward in advance of L11 and as such this application is deemed to be premature seeking to gain access from Shaw Lane prior to the northern access being secured from Royston Lane.

This site was the subject to a pre-application enquiry for 200 dwellings and a response provided in October 2021. Due to the lack of information presented at that time HDC were unable to provide comment in detail on the proposals. However crucial advice to the request was that the development shall be designed and implemented in accordance with the Carlton masterplan framework, design code and with adherence to the delivery strategy, especially from a highways perspective in relation to the movement framework for highways and active travel. Whilst advice was provided in the response to agree the scope of the Transport Assessment at the earliest opportunity, no scope was provided / agreed prior to submission of the application.

The comments above remain applicable.

Notwithstanding the above it would be remiss not to comment on the submitted documentation. With reference to the submitted transport assessment (TA), this response focusses on the fundamentals of assessment and access proposals rather than the finer detailed elements of the application and operational analysis undertaken.

Transport Assessment

2.2.7 – Reference to junction arrangement being designed to current standard. Clarification is sought over which design standards are being referred to. Furthermore, no swept paths have been presented for the appropriate design vehicles noting that the masterplan framework details indicative bus routes through the site via the Shaw Lane / Royston Lane junctions.

The applicant has confirmed that MfS standards have been used in the junction design. Further comments are provided in respect of swept paths below.

2.3.4 – Reference to the applicant being committed to providing good pedestrian and cycle connections to link with the wider land allocations in Carlton. Whilst it is noted that the development proposals are in outline (except for access) the development of this land parcel as a first phase constrains the ability to provide these connections beyond the red line boundary. How is this to be addressed?

Whilst paragraphs 2.35 and 2.36 provide further detail and the masterplan has been updated, the site access deign now incorporates a Toucan crossing which is unacceptable as the crossing does not link to cycle facilities on the southern side of Shaw Lane. DfT Cycle Infrastructure Design LTN 1/20 reads at 10.4.17: Toucan crossings should be used where it is necessary to provide a shared facility, for example when there are space restrictions or **where there is a shared use path or area leading to the crossing.**

Furthermore, the Toucan crossing was highlighted as a problem within the road safety audit which reads: *"A Toucan crossing is being provided to the west of the proposed site access junction. This will provide a crossing for pedestrians and cyclists from the site to cross onto the southern footway along Shaw Lane. To the west of the toucan crossing the footway width reduces to as little as 700mm measured on site. This footway is insufficiently wide enough to accommodate both users without the potential for collisions between them."* However whilst the designers response refers to footway improvements to a minimum of 2m, the proposal does not include provision for cyclists, furthermore, how are on carriageway cyclists proposed to transfer to/from the carriageway? **This response is not considered acceptable.**

2.4.8 – Reference to the site being located close to existing cycle links and relatively high frequency bus route. The walk distance to existing bus infrastructure is some 1km from the site centroid. Furthermore, with reference to comments above, and whilst proximity to cycle links is noted, how are these connections to be made?

Section 2.47 and Appendix G referenced within this paragraph clearly demonstrates that the 3 direct cycle links cannot be completed / secured without land outside the applicants control and therefore the proposals are not considered to meet the NPPF 112 a and c.

Furthermore, the walk distances to public transport are far in excess of the 400m contained within nationally recognised guidance.

Building Sustainable Transport into New Developments (DfT, 2008) gives the following advice on pedestrian catchment areas: Walking neighbourhoods are typically characterised as having a range of facilities within 10 minutes' walking distance (around 800 metres). However, the propensity to walk or cycle is not only influenced by distance but also the quality of the experience; people may be willing to walk or cycle further where their surroundings are more attractive, safe and stimulating. Developers should consider the safety of the routes (adequacy of surveillance, sight lines and appropriate lighting) as well as landscaping factors (indigenous planting, habitat creation) in their design. The power of a destination determines how far people will walk to get to it. For bus stops in residential areas, 400 metres has traditionally been regarded as a cut-off point and in town centres, 200 metres (DOENI, 2000).

This is reinforced in Sustrans (2022) document Walkable neighbourhoods Building in the right places to reduce car dependency: which recommends accessibility standards of 400m to bus stops.

2.4.9 – Reference to junction design standards and safe access for all road users. Please note previous comments requesting details of design standards / swept path analysis. Furthermore, how has the safety of this junction been assessed for all modes? No Road Safety Audit accompanied the application.

Further comments in respect of the Road Safety Audit and Swept path analysis are provided below.

2.4.12 – Reference to the proposals providing the first stage of the link between Shaw Lane and Royston Lane. The masterplan framework and delivery strategy is clear in that the due to congestion on the existing highway network, access needs to be secured off Royston Lane via the northern access road. The first phase of the link road would therefore be the northern section link to Royston Lane.

This comment remains applicable.

Sections 3 onwards – It should be noted that as part of the pre-application response it was stated that the scope of the TA and TP be agreed with BMBC at the earliest opportunity, however the scope was not agreed prior to submission of the application.

3.3 – On what basis was the study area defined? This would have been agreed as part of the scoping exercise. Current adopted supplementary planning guidance provides the underlying thresholds of assessment. This includes any development generating 30 or more two-way vehicles movements in any hour and/or any development generating 100 or more two-way vehicle movements per day. Where there are no firm threshold figures within current TAG guidance for practitioners and appraisers, current policy conforms to the now withdrawn Department for Transport document Guidance on Transport Assessment. This is not purely used to determine the need for a transport assessment but should also be considered as the appropriate metric for determining network impact and therefore the need for individual junction assessment with the TA submission. Please clarify.

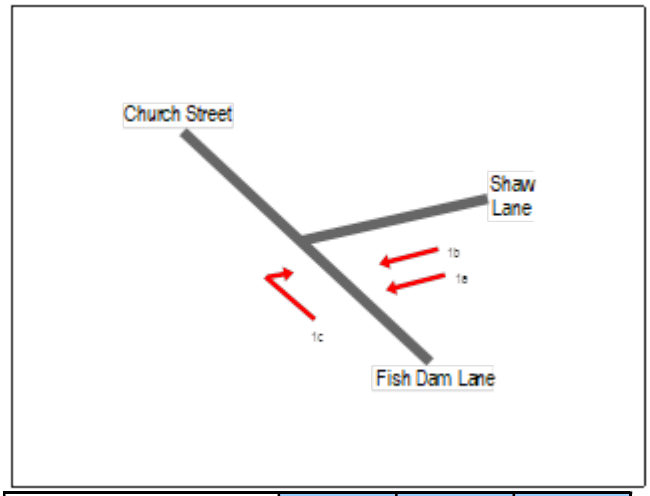
Clarification provided and accepted

3.4.2 – Whilst traffic count data was collected for the Arup Study, this was collected in June 2021, where car borne traffic was circa 90% of pre-covid levels (DfT stats) and given the previous counts were undertaken in 2018, up to date traffic count information will be required to establish the baseline traffic flows. These surveys are to also include queue length surveys to assist validation of the discrete junction modelling works.

Whilst it is acknowledged that surveys were undertaken in November 2022, no queue length survey data is included in the results included in Appendix C as requested. No validation of the base models has been undertaken against

observed queuing and therefore the modelling outputs cannot be relied upon. Also see previous comments on 3.4.8 below in respect of this.

3.4.8 – Notwithstanding comments made above in respect of new traffic count data requirements, queue length surveys undertaken in June 2021 at the B6132 Church Lane / Shaw Lane / Fish Dam Lane junction for the modelled period revealed the following queues:



TIME	1a	1b	1c
0745 - 0750	1	7	0
0750 - 0755	1	4	0
0755 - 0800	1	5	1
0800 - 0805	1	10	1
0805 - 0810	1	8	0
0810 - 0815	1	11	0
0815 - 0820	1	6	0
0820 - 0825	1	4	1
0825 - 0830	1	4	0
0830 - 0835	1	4	0
0835 - 0840	1	6	1
0840 - 0845	3	5	1
Hourly Average	**1.17**	**6.17**	**0.42**

TIME	1a	1b	1c
1600 - 1605	0	8	1
1605 - 1610	0	8	1
1610 - 1615	2	7	0
1615 - 1620	1	9	0
1620 - 1625	1	8	1
1625 - 1630	2	8	1
1630 - 1635	0	3	1
1635 - 1640	2	5	1
1640 - 1645	1	3	0
1645 - 1650	1	7	1
1650 - 1655	0	5	1
1655 - 1700	1	7	1
Hourly Average	**0.92**	**6.50**	**0.75**

3.4.8 – Table 3.1. the results shown in table 3.1 have been cross referenced with the model output results included in Appendix E. The output reports included the following warning: ***Data errors / warnings on model outputs in relation to vehicle mix – The HV% is zero for all movements / time segments. Vehicle mix matric should be completed whether working in PCU's or vehicles.*** This is because some parts of the model work in PCU and other parts use vehicles. If HV%ages are not included there is a risk that in particular queueing and delay results may not be accurate. This reinforces the need to ensure this data is included in the model and that queue length surveys are undertaken to ensure "base" models can be validated

3.4.9 – Please see comments on 3.4.8 above. Also Shaw Lane historically experiences significant queuing particularly in the evening peak and the queue length surveys undertaken in June 2021 at the B6132 Church Lane / Shaw Lane / Fish Dam Lane junction for the modelled period revealed the greater queueing predicted within the model. **As such the base model output results are not accepted.**

3.4.10 – Reference is made to the modelling of Fish Dam Lane / West Green Way / Industry Road roundabout. The roundabout is described as a roundabout with an ICD of approximately 25.3m with all approaches except from West Green Way having a speed limit of 30mph. However this is wrong. The ICD of the roundabout is circa 50m, almost double that which has been included in the model(See screenshot below). **Therefore the model results are inaccurate and cannot be accepted.**

Arms

Arm	Name	Description
1	Fish Dam Lane (N)	
2	West Green Way	
3	Fish Dam Lane (S)	
4	Industry Road	

Roundabout Geometry

Arm	V - Approach road half-width (m)	E - Entry width (m)	l' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Exit only
1	4.05	5.85	3.7	14.1	25.3	63.0	
2	3.46	5.50	8.1	19.3	25.3	34.0	
3	3.95	5.70	5.3	16.3	25.3	45.0	
4	4.00	4.80	2.1	24.0	25.3	47.0	

For a full review of the geometric data included within all of the modelled junctions a plan of each junction with dimensioned geometry is required.

3.4.11 and Table 3-2 – Notwithstanding the above again the base model has not been validated against observed queue length data. Furthermore table 3.2 have been cross referenced with the model output results included in Appendix E. The output reports included the following warning: ***Data errors / warnings on model outputs in relation to vehicle mix – The HV% is zero for all movements / time segments. Vehicle mix matric should be completed whether working in PCU's or vehicles.*** This is because some parts of the model work in PCU and other parts use vehicles. If HV%ages are not included there is a risk that in particular queueing and delay results may not be accurate. This reinforces the need to ensure this data is included in the model and that queue length surveys are undertaken to ensure "base" models can be validated

3.5 – Notwithstanding comments made above regarding study area, this analysis is based on the use of crashmap data. From the information presented, it appears to be a high level review. However a full assessment of all personal injury collision records are required to identify and discernible patterns in collision data that may be attributable to the highway environment or where there may be common causation factors. In addition, any additional critical locations on the highway network within the study area that demonstrate a poor accident history are to be identified and assessed. This is to determine if the proposed development will exacerbate existing problems and what highway mitigation works or traffic management measures would be required to mitigate the effects.

Full PIC data now included within the Transport Assessment covering the period 2017 to 2021.

Section 4 – Accessibility by sustainable modes
This section and summary concludes that a range of destinations are accessible from the site by walking, cycling and public transport. However this is based purely on measured distances from the site and no assessment has been undertaken to demonstrate the suitability of the highway and transport network to accommodate the increased level of trips by sustainable modes.

This comment remains applicable.

Furthermore, the walk distances to public transport are far in excess of the 400m contained within nationally recognised guidance. Building Sustainable Transport into New Developments (DfT, 2008) gives the following advice on pedestrian catchment areas: Walking neighbourhoods are typically characterised as having a range of facilities within 10 minutes' walking distance (around 800 metres). However, the propensity to walk or cycle is not only influenced by distance but also the quality of the experience; people may be willing to walk or cycle further where their surroundings are more attractive, safe and stimulating. Developers should consider the safety of the routes (adequacy of surveillance, sight lines and appropriate lighting) as well as landscaping factors (indigenous planting,

habitat creation) in their design. The power of a destination determines how far people will walk to get to it. For bus stops in residential areas, 400 metres has traditionally been regarded as a cut-off point and in town centres, 200 metres (DOENI, 2000).

This is reinforced in Sustrans (2022) document Walkable neighbourhoods Building in the right places to reduce car dependency: which recommends accessibility standards of 400m to bus stops.

The proposals are not considered to meet the NPPF 112 a and c.

5.1 – Please see previous comments

5.2.1 – Please see previous comments in respect of swept paths and safety audit.

The Road Safety audit report lists in Appendix A the schedule of documents provided to the audit team. No reference is made to swept path drawings and therefore it is considered that the audit team could not fully appraise the proposed junction arrangement. Further comment on Road Safety Audit below.

Section 5.2.1 states that the junction has been designed in accordance with the South Yorkshire Residential Design Guide and MfS. However this is not correct. The South Yorkshire Residential Design Guide states that the design vehicle should be able to turn without crossing into the opposing lane on the major arm when undertaking left in / left out manoeuvres and leave 0.5m clearance between vehicle body and carriageway edge on the minor arm. Swept paths demonstrate that this requirement has not been fulfilled. **Therefore the junction design is not acceptable.**

Comments on Swept path drawing for site access ref IPD-22-580-102

Viewpoint 1 (top left):
Design vehicle does not maintain 0.5m offset from nearside kerb on major or minor arm and crosses road centreline on minor arm leading to a potential conflict point
Design vehicle does not maintain 0.5m offset from nearside kerb on major or minor arm when undertaking the right out manoeuvre.

Viewpoint 2 (top right):
Design vehicle does not maintain 0.5m offset from nearside kerb on major or minor arm and crosses road centreline on minor arm leading to a potential conflict point
Design vehicle does not maintain 0.5m offset from nearside kerb on major or minor arm when undertaking the right out manoeuvre.

Viewpoint 3 (bottom left):
Design vehicle crosses centre line of major and minor arms when undertaking left out manoeuvre and does not maintain 0.5m offset from nearside kerb on major arm

Viewpoint 4 (bottom right):
Design vehicle does not maintain 0.5m offset from nearside kerb on minor arm when undertaking the right out manoeuvre.

5.2.2 - The survey recorded that the 85th percentile speeds of 41.5mph eastbound and 38.5mph westbound.
The toucan design omits information on how they will mitigate for the 40mph+ speeds. This would typically involve the inclusions of speed discrimination technology (such as SD Loops or placing the crossing under MOVA control).

No assessment of the inclusion of a Toucan crossing facility within the visibility splay has been provided.

5.2.3 – please provide details of the max achievable visibility splay.

5.2.5 – It should be noted that some on street parking is shown on the illustrative masterplan drawing ref P3921-Spa-XX-ZZ-00-M2 10-006, however in accordance with the South Yorkshire Residential Design Guide, where streets

are less than 6m in width, it is necessary to discourage footway parking by providing defined bays beyond the carriageway or by some other means.

It is noted that the illustrative masterplan included in Appendix G of the TA does not show on street parking, however comment remains applicable.

5.2.6 – see previous comments regarding swept path requirements.

Disagree with comment that "the site access can comfortably accommodate refuse and public service vehicles" See comments on 5.2.1 above. **Proposed design of site access is not acceptable.**

5.3 The proposal seeks to introduce a traffic signal arrangement as the junction of Church Street / Shaw Lane / Fish Dam Lane in order to mitigate junction capacity issues arising from development traffic. However it should be noted that this is not considered to be acceptable due to the following:

The existing buildings and boundary walls of surrounding properties restrict intervisibility at the junction. The design does not therefore conform to design standards .

Shaw Lane narrows to the east of the junction which may prevent larger vehicles from passing each other and therefore may result in issues with queuing etc at the junction.

The plan shows indicative primary signal head locations – this reduces the footway widths to circa 1.2m in some places. This is below the desirable minimum and provides constraint for those with reduced mobility, pushchairs etc as well potentially restricting safe access for maintenance etc.

Local accesses to properties, including the shared access to the two homes at the former pub and 2 Church Street, exit into the junction. These would need to be incorporated into the signal design.

Bus stops located close to the junction on the Shaw Lane and Fish Dam Lane approaches would need to be relocated.

Traffic signals at the junction may result in traffic queues in all directions, specifically long queues to the north extending into the heart of the conservation area around Stud Farm, Churchfield Gardens and St. John's Church, would introduce visual harm.

The necessary infrastructure (signal heads, control boxes, road markings etc.) would also introduce some minor harm to the setting of the conservation area.

To accommodate the alterations, there are a number of intervisibility issues caused by standing buildings or historic walls as well as areas of footpath that are quite narrow at certain pinch points (as noted above). The conservation officer would not support measures to alleviate these issues, such as removal of walls or structures that contribute to the conservation area.

5.3.1 – Comments on the design of the offsite highway works for the church street / Shaw Lane / Fish Dam Lane junction are included in Section 8 below

5.3.3 – **A toucan would not be accepted at this location.** The site does not have a continuous LTN1/20 specification cycle/footway on both sides of the road to continue and link up the route to other active travel routes or areas. Footway on southern side is proposed to be widened to 2m (not wide enough to be shared cycle/footway), but no details are provided as to where this route will link into or any further active travel provisions.

The plans showing the footway widening and carriageway narrowing are not accepted. No swept paths have been undertaken to demonstrate that the carriageway narrowing is acceptable from an operational perspective. Furthermore, these proposals were not included in the Stage 1 Road Safety Audit.

5.3.4 / 5.3.5 - The links to the existing TPT do not form part of this application. It is only proposed that the route will travel to the proposed development boundary only as it requires land outside the control of the applicant to facilitate such connectivity.

6.2 – Vehicular trip Generation
The dataset includes a selected survey undertaken on a Saturday which is not acceptable. Furthermore, whilst it is acknowledged within the TRICs good practice guide that there is a significantly higher correlation between location type and vehicle trip rates than there is between region and vehicular trip rates, I question the comparability of data from surveys undertaken in Munster, Greater Dublin and Ulster and request that these are also removed unless justification can be provided on comparability and filtering criteria used in data selection. Furthermore, in order to capture additional survey data it is suggested that the dwelling parameter range is extended below 200 units during the filtering process.

The dataset has been amended and considered acceptable.

Section 7 – Highway Impact Assessment
Given earlier comments no detailed comments are provided on this section.

Background Growth – There is a need to include actual committed development flows; Attention should be given to current TAG guidance where "It is important to give appropriate consideration to the cumulative impacts arising from other committed development (i.e. development that is consented or allocated where there is a reasonable degree of certainty will proceed within the next 3 years). At the decision-taking stage this may require the developer to carry out an assessment of the impact of those adopted Local Plan allocations which have the potential to impact on the same sections of transport network as well as other relevant local sites benefitting from as yet unimplemented planning approval". However given comments above regarding prematurity of the application no further detail in respect of committed development is given at this stage. This will be subject to change over time.

No committed developments have been included in the Highway Assessments, contrary to government guidance highlighted above and considered unacceptable. Future year assessments have been undertaken using Tempro growth only. It is cited that this is to avoid double counting of trips due to the site being allocated in the local plan. However given the scale of allocations in this area it is considered more appropriate to undertake a sensitivity test using allocations as committed developments with comparison to Tempro values in order to ensure most robust "predicted growth" is accounted for. See below.

7.3.2 - Whilst it is acknowledged that surveys were undertaken in November 2022, no queue length survey data is included in the results included in Appendix C as requested. No validation of the base models has been undertaken against observed queuing and therefore the modelling outputs cannot be relied upon.

7.3.5 / 7.36 – Whilst the B6132 / B6148 Royston crossroads does not experience 30 or more to way trips (table 7-2 and 7-3) given the sensitivity of this location and in accordance with DfT guidance there is a need to assess the cumulative impacts of development on the highway network. Although the developer has chosen to remove "The Wells" junction from the assessment process due to the assessment threshold of 30 or more tway way trips, this approach cannot be supported by HDC and require a full operational assessment of this junction.

Furthermore, given that this site forma part of the wider MU3 allocation, it is considered remiss of the consultant to wholly rely on Tempro background traffic growth as a standalone method of predicting / assessing future year network conditions. As stated above there's a need to undertake a sensitivity test comparing Tempro against local growth using Local Plan allocated sites as committed development namely: MU5; MU3; HS38; HS40; HS36; HS39 and HS35 in order to ensure most robust "predicted growth" and network conditions are accounted for.

It is extremely disappointing that whilst paragraph 1.2.1 of the TA refers to the preapplication process and to email correspondence in Appendix A it continues that's the TA has been prepared broadly in accordance with these principle. However it fails to recognise and heed the comments of the Highways Officers who clearly states *"A*

Transport Assessment and Travel Plan will be required to be submitted with any forthcoming application, the scope of which is to be agreed with BMBC at the earliest opportunity". If the scope of assessment been agreed, many of the issues highlighted throughout this review would have been addressed / overcome at an early stage.

Given the above and issues highlighted in respect of omission of queue length data / base model validation, geometric data errors, as well as non-design compliant proposals for the site access junction, I will not comment on the junction capacity modelling results further given that these items will impact on the modelling results presented rendering them inaccurate and not acceptable.

7.5.5 – 7.5.9 – Multiple comments throughout the document that state that the "existing highway infrastructure can accommodate the additional traffic", it is "within theoretical capacity" and the "negative impact is minimal and does not need to be mitigated". On this basis what is reason for the signalisation scheme?

7.5.7 – see earlier comments in respect of the proposed mitigation scheme.

Table 7-8 / 7.5.9 – Whilst this response is focussed on the fundamentals of assessment, it should be noted that junctions are deemed to have reached capacity when the practical reserve capacity (PRC) reaches zero. The PRC of a traffic signal junction is breached when the worst degree of saturation of any link exceeds 90% and therefore those results which surpass this threshold indicate that the junctions are operating over capacity.

7.6.6 - This would only leave some possible improvements to pedestrian safety. There are no PIC concerns at this junction at present. Do we have any projected pedestrian statistics to validate incorporating signalised pedestrian facilities? Noting that pedestrian facilities are only proposed on 2 of the 3 arms, do these match up to anticipated pedestrian routes? Why are pedestrian facilities planned on only 2 of the 3 arms, particularly when an "all-red" phase would be used?

Section 8 – See earlier comments in respect of the proposed mitigation scheme

Section 8 – **The proposed design of the offsite highway works for the Church Street / Shaw Lane / Fish Dam Lane has been assessed and in its current form is not acceptable to Highways officers.** A number of queries and concerns exist in respect of the information presented :

Very little other information provided so difficult to determine how feasible it would be to construct. Observations/basic queries based on drawings submitted:

- Are waiting restrictions being provided? If MOVA installed, no waiting and no loading restrictions on each approach to 100m would be required to protect induction loops and for visibility.
- Tactile paving for signalised crossing over Church Street on corner and appears to be positioned in middle of driveway on western side.
- No indication of signal pole positions. What footway widths have been maintained and do these meet the desirable minimum? For info, due to H&S issues, straight signal poles are required on all new sites which must be mounted in pole retention sockets at 700mm from the face of the kerb.
- No indication of any other equipment such as the controller, power supply, chambers/ducting. safe area for maintenance engineer parking, statutory undertakers' equipment, footway widths etc.
- How will private access with restricted visibility be catered for to safely enter junction?
- Do signal heads meet minimum visibility requirements on approaches?
- Does street lighting need upgrading in light of pedestrian crossing facilities?
- What is the uncontrolled crossing facility on Shaw Lane, around 90m from the Church Street junction?
- Does highlighted area show new carriageway surfacing extents? Presume this will be a higher PSV? BMBC, on the approach to all junctions with crossing facilities have 53m (from studs) of grey/black high friction surfacing. Has this been incorporated?
    - Bus stops are located on the approach (Shaw Lane) and exit (Fish Dam Lane) to the signals. These would need relocating away from the signals which could mean that stops are not in the most easily accessible locations.

8.2.4 – Refers to concerns raised by BMBC in respect of narrowing of Shaw Lane to the east of the junction with Church street and the impact this may have on the ability for vehicles to pass one another and cites on site measurements of 5.8m and Manual for streets Figure 7.1 which indicates a carriageways width of 5.5m is suitable for to HGV's to pass each other. However this taken out of context. Figure 7.1 provides a very simplistic image of relative carriageway widths and not reflective of the situation on Shaw Lane.

The context to Figure 7.1 reads "*Figure 7.1 illustrates what various carriageway widths can accommodate. They are not necessarily recommendations".*

Moreover, Figure 6.18 of MfS identifies the typical dimension of a lorry as being 3m wide (wing mirror to wing mirror).

Furthermore 7.2.1 reads *"The design of new streets or the improvement of existing ones should take into account the functions of the street, and the type, density and character of the development, and 7.2.2 reads " Carriageway widths should be appropriate for the particular context and uses of the street. Key factors to take into account include: • the volume of vehicular traffic and pedestrian activity; • the traffic composition; • the demarcation, if any, between carriageway and footway (e.g. kerb, street furniture or trees and planting); • whether parking is to take place in the carriageway and, if so, its distribution, arrangement, the frequency of occupation, and the likely level of parking enforcement (if any); • the design speed (recommended to be 20 mph or less in residential areas); • the curvature of the street (bends require greater width to accommodate the swept path of larger vehicles); and • any intention to include one-way streets, or short stretches of single lane working in two-way streets*

Given the above, and that the citing of Figure 7.1 is taken out of context this is not accepted by Highways Officers.

8.2.5/8.2.6 – This reads *"The intervisibility on the proposed mitigation now goes through either verge or footway in front of these pinch points. The vegetation around the brick wall to the north would need to be cut back flush to the wall."*

However, BMBC policy is to have stop lines located at 3.0m from studs (2.5m to primary pole), this is consistent across all new and upgraded sites across the Borough. Reducing to 1.7m would not be accepted.

8.12 / 8.3 – Junction capacity Modelling results are presented, however Lane saturation flows have been calculated from the Lanes geometry using Linsig software. Linsig has used sat flows of 1900 – 2046, which is high for this area, Barnsley typically around 1700PCU/hr range, very rarely will we see anything above 1800PCU/hr as such the Lane Saturation flows should be specified manually in accordance with the typical value of 1700PCU/hr or from actual observed / calculated data. The Linsig software user manual states:

Lane Saturation Flows can be specified manually or can be calculated from a Lane's geometry using the formulae published in the TRRL report RR67. Saturation flows are always specified in Passenger Car Units (PCU) in LinSig.

Although using saturation flows calculated from geometry may seem like an easy option, it is recommended that wherever possible at least a brief saturation flow survey is done for an existing junction. The RR67 formula, although a good starting point, does not allow for all significant factors when estimating saturation flow. For example, no allowance is made for regional variations in saturation flow leading to the same estimate for Central London and rural Lincolnshire. Additionally the data underlying RR67 was collected over 20 years ago and traffic conditions may well have changed significantly in the meantime. Before using saturation flows calculated from geometry in LinSig it is advisable to obtain and read RR67 and satisfy yourself that the methodology used is acceptable.

It is good practice to consult the Local Authority Traffic Signals Department for a junction's location as most will have considerable local knowledge as to what constitutes an acceptable estimate of saturation flow for similar junctions in the area.

If you choose to use RR67 saturation flows please bear in mind that as queue predictions are very sensitive to inaccurate saturation flows, the possibly small differences between estimated and true saturation flows can lead to potentially much more significant differences between modelled and surveyed queues.

Given the above, the predicted modelling results shown in Table 8-1 are not accepted.

8.2.6 / Swept Path Drawing IPD-22-580-104 – The swept paths presented rely on alterations to the relocation of existing road markings with lane narrowing to Church Lane / Fish Dam Lane in order to accommodate the turning manoeuvres of the design vehicle and it is clear that the abrupt change in alignment of lane demarcation on Fish Dam Lane does not provide for the natural path of vehicle travelling in south – north direction. Furthermore the swept paths are based on optimum pathways with minimum offsets to kerb lines and road centre lines and does is considered does not provide adequate safe passage for vehicles turning within the junction and therefore not accepted.

In addition the RSA identified problem 4 as *"There is a risk that left-turning HGVs from Shaw Lane could potentially conflict with queuing traffic along Fish Dam Lane, resulting in them encroaching onto the footway at the southeastern corner and potentially conflicting with pedestrians. Such a manoeuvre may result in injury to pedestrians or a collision with waiting vehicles." And recommended that "It is recommended that the designer carries out swept path analysis to ensure that the HGV turning manoeuvre can be accommodated within the carriageway and without encroaching into the northbound lane of Fish Dam Lane."*

The designers response stated that Swept path analysis of an Articulated 16.5m vehicle has already been undertaken on this junction. The swept paths can be found under drawing ref: IPD-22-580-104 which shows the vehicle can manoeuvre around the junction adequately."

Furthermore it does not appear from the information provided that the Road safety Audit team were provided with the swept path drawings following the drafting of the Road Safety Audit report review / comment. consideration.

Given the comments above, the highways officers review of the swept paths indicate that the design does not provide adequate safe passage for vehicles turning within the junction and therefore not accepted.

Road Safety Audit and Designers Response

The Road Safety Audit was undertaken without BMBC having the opportunity to review the brief or for BMBC (particularly a rep from Traffic) be invited to attend the RSA. As "overseeing organisation" there should have been the opportunity to review the brief and as such request "maintaining agent" representatives to be present. It is also noted that no Traffic Signals specialist advisor was included in the RSA team.

The RSA identified problem 4 as *"There is a risk that left-turning HGVs from Shaw Lane could potentially conflict with queuing traffic along Fish Dam Lane, resulting in them encroaching onto the footway at the southeastern corner and potentially conflicting with pedestrians. Such a manoeuvre may result in injury to pedestrians or a collision with waiting vehicles." And recommended that "It is recommended that the designer carries out swept path analysis to ensure that the HGV turning manoeuvre can be accommodated within the carriageway and without encroaching into the northbound lane of Fish Dam Lane."*

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Furthermore it does not appear from the information provided that the Road safety Audit team were provided with the swept path drawings for review / comment following the drafting of the Road Safety Audit report.

Not included as an identified problem, but no mention of the intervisibility problems created by the brick walls at the Shaw Lane/Fish Dam Lane signalised junction even though these are specifically shown on the drawing.

DMRB Standard GG119 January 2019 does not refer to designers response report. The correct term is "Road safety audit response report"

Problem 1: Unacceptable response. It offers no solution and passes the decision to BMBC. The Designer should take ownership of their design and provide an appropriate response/solution and advise the client/Overseeing Organisation/BMBC on what a solution could be. This response does not do that. What they've basically said is that "we know our design is wrong and unsafe but it's all we could do"….. That's not acceptable.

Problem 4 – See comments above

Problem 5: Their response actually raises a further safety issue. - Firstly, if cyclists do not have provision on the southern side, why is a toucan crossing being provided i.e. where are cyclists crossing to and from (they need an immediate destination on both sides of the road). How are on carriageway cyclists proposed to transfer to/from the carriageway? No provision made.

Section 5 - Conclusion states Waterman Aspen have produced a RSA1 – it was actually Pell Frischmann

GENERAL: The report does not follow the recommended layout in GG119 Appendix F which allows for comments by the design organisation and the overseeing organisation

Table F.4 Road safety audit decision log

RSA problem	RSA recommendation	Design organisation response	Overseeing Organisation response	Agreed RSA action
Insert the original problem from the RSA report.	Insert the original recommendation from the RSA report.	Insert the design organisation's response.	Insert the Overseeing Organisation's response.	Insert the design organisation's and the Overseeing Organisation's agreed action to the problem.

Summary following review of the application:

- The application is not in accordance with the masterplan framework / delivery strategy covering this application site.

- HDC cannot conclude that the traffic generated by the proposed development would not have a material and detrimental impact on the local highway network when considered in isolation or cumulatively with committed development. The modelling / network assessment work undertaken includes errors and omissions and cannot be accepted by Highways Development Control.

- Due to the scope of the Transport Assessment not being agreed with BMBC prior to first submission it is requested that the requirements highlighted in the response above are taken into consideration as part of any further submission.

- The site access junction from Shaw Lane has not been designed in accordance with the design requirements of the South Yorkshire Residential Design Guide and gives rise to road safety concerns.
    - The design therefore cannot be accepted by Highways Development Control.

- The application has not demonstrated that foot and cycle links provide appropriate levels of sustainable access to and from the site. The links shown to the TPT cannot be fully achieved without land outside the applicants control. Walk distances to public transport far exceed the 400m walk distance guidelines. The proposed footway widening along Shaw Lane cannot be accepted as presented (lack of information and road safety concerns with carriageway narrowing). The proposed Toucan crossing is not acceptable as the site does not have cycle/footway provision on both sides of the road to facilitate a continuous route. Consideration must be given, particularly in relation to:
    - NPPF 110 which states that

- appropriate opportunities to promote sustainable transport modes can be – or have been – taken up, given the type of development and its location
- in assessing specific applications for development, it should be ensured that safe and suitable access to the site can be achieved for all users
- NPPF 112 which states that applications for development should:
- give priority first to pedestrian and cycle movements, both within the scheme and within neighbouring areas; and second – so far as possible – to facilitating access to high quality public transport, with layouts that maximise the catchment area for bus or other public transport services, and appropriate facilities that encourage public transport use;
- address the needs of people with disabilities and reduced mobility in relation to all modes of transport

- The proposed design of the offsite highway works for the Church Lane / Shaw Lane / Fish Dam Lane has been assessed and in its current form the design is not acceptable and gives rise to road safety concerns.

- The Road Safety Audit undertaken did not include all changes to the highway network and was undertaken without BMBC having the opportunity to review the brief or for BMBC (particularly a rep from Traffic) be invited to attend the audit. Furthermore it does not appear from the information provided that the Road Safety Audit team were provided with the swept path drawings for review / comment before or following drafting of the Road Safety Audit report.

In light of the above, Highways Development Control cannot support the application and recommend refusal.

Kind Regards

Wayne

Wayne Lake MSc MCIHT
Group Leader - Highways Development Control
Transport
Growth and Sustainability
Barnsley Council

Telephone: 01226 772587
Email: waynelake@barnsley.gov.uk
Mail: PO Box 634, BARNSLEY. S70 9GG

*Sat Nav reference: S70 2DR