

Kirklees Highways Development Management comments

2021/62/92086/W – Erection of 270 residential dwellings and associated infrastructure and access

Land at Bradley Villa Farm, Bradley Road, Bradley, Huddersfield, HD2 2JX

Context and Proposal

This is a full Planning Application for the development of 270 residential dwellings on land between Bradford Road and Bradley Road, Bradley, Huddersfield.

It is noted that Transport Assessment and Travel Plan documentation has been submitted in support of this application, as per pre-application advice provided by Kirklees HDM. This is part of Local Plan Site Allocation HS11 (total/max.1,958 dwellings). 1,460 of these dwellings are programmed for build-out before the end of the Local Plan period (2031).

Access

It is proposed to take vehicular access via an existing opening off the eastern side of the A641 Bradford Road via a new junction incorporating a right-turn ghost lane to facilitate right-turn vehicular manoeuvres into the site (not possible at present due to the central reserve). In accordance with the broader Masterplan, there is a vehicular connection proposed to the wider HS11 site, to the east of this development site. Through the site, a new primary road corridor (spine road) would be created, forming a 6.75m wide carriageway with a 3m cycleway along the northern edge and a 2m wide footway to the south.

It is noted that the spine road would extend up to the eastern boundary to provide a future connection with the wider HS11 site. Where the future vehicular connection would be temporarily stopped up, a temporary turning head should be proposed and secured accordingly via a submitted drawing. This does not presently appear to be proposed and hence, please request such.

In further details, it is noted that the development would be served by a priority junction onto the A641 Bradford Road, situated at an existing access point between residential dwellings, some 170m north of the Bradley Bar roundabout.

The proposed site access junction is presented on a Transport Assessment drawing (Appendix H) and permits left-in and left-out movements from the dual carriageway as well as a right-turn in through the creation of a gap in the central reserve.

It is proposed that right turn movements out of the site are not permitted and drivers wishing to travel northbound on Bradford Road towards Brighouse would be required to turn left and U-turn at the Bradley Bar roundabout which 150m away.

It is stated that approximately 8% of development trips would perform this U-turn manoeuvre.

In summary the proposed Bradford Road/Site Access junction comprises:

- 6.75m carriageway on Site Access;
- 2.0m footway to southern side of the Site Access;
- 3.0m shared footway/cycleway to northern side of the Site Access;
- Pedestrian crossing facilities on the Site Access comprising a central refuge island, dropped crossings and tactile paving;
- Pedestrian facilities across Bradford Road comprising staggered dropped crossings and tactile paving;
- 3.0m right turning lane on Bradford Road;
- 6.7m to 6.5m northbound and southbound through lanes on Bradford Road; and
- 2.4 x 120m visibility splays in accordance with the 40mph speed limit.

This should be subject to a full Road Safety Audit (Stages 1-4) and would form a future Section 278 Application/Agreement for off-site highways works. The submitted drawing should be secured by an appropriate planning condition, as should the Stage 1-4 Road Safety Audit. This is discussed in more detail, later.

It is noted that a secondary (emergency only) access is proposed to connect to Bradley Road, via Shepherds Thorn Lane and detailed within the TA on page 21 and Appendix I. This should also be secured by a planning condition and a detailed (referenced) engineering drawing to ensure it is implemented.

Existing Highway Conditions

The site is situated on land to the east of A641 Bradford Road and to the north of A6107 Bradley Road (some 3.8km north of Huddersfield and 2.4km south of Brighouse).

A6107 Bradley Road is a lit single carriageway, which runs east to west from its signalised junction with A62 Leeds Road and B6118 Colne Bridge Road for approximately 2.6km where it meets A641 Bradford Road at a four-arm roundabout known as Bradley Bar Roundabout (to the southwest of the site).

In the vicinity of the site, Bradley Road is approximately 11m wide with 3.5m wide grass verges and 2.5m wide footways to both flanks. It is subject to a 40mph speed limit, with the exception of a 30mph limit in the vicinity of All Saints High School opposite the site.

To the east of the site, Bradley Road forms a signalised T-junction with Dyson Wood Way, which serves Bradley Business Park.

The A641 runs between Bradford and Huddersfield on a north-south alignment. Along the western boundary of the Site the A641 is known as Bradford Road and forms a lit dual carriageway subject to a 40mph speed limit.

North of its junction with Dorchester Road, Bradford Road is subject to a 50mph speed limit as it crosses over the M62 and becomes Huddersfield Road on its approach to the Toothill Lane/Woodhouse Lane (crossroad) junction.

Collision analysis

Personal injury collision data was obtained for the highway network in the vicinity of the Site for the most recently available five-year period prior to the end of January 2021. The study

area included the main corridors of Bradley Road, Bradford Road, Fixby Road and A62 Leeds Road. Collision data for Junction 25 of the M62 was also obtained.

In summary there have been a total of 149 personal injury collisions across the large study area; 128 of which have been classified as slight in severity, 19 as serious and there have been two collisions that resulted in a fatal injury.

Pedestrian and Cycle Facilities

Footways that are approximately 2.5m wide are provided on both flanks of Bradley Road in the vicinity of the site. 1.6m wide footways are provided on Bradford Road segregated from the carriageway by circa 2.0m wide grass verges.

A pedestrian refuge island is provided opposite All Saints Catholic College within Bradley Road and dropped crossings are provided across all arms of Bradley Bar Roundabout.

There is a series of existing public rights of way in the vicinity of the site and these are detailed within the TA. On-road cycle lanes are located along Bradley Road between Bradley Bar Roundabout and A62 Leeds Road.

Pedestrian/cycle access would be provided from the proposed vehicular junction onto the A641 Bradford Road. This junction also provides uncontrolled pedestrian crossing facilities across the arm of the Site Access in the form of a central refuge island, dropped crossings and tactile paving – (presented on a drawing in TA Appendix H).

Additionally:

- A 3.5m wide pedestrian/cycle only link to Bradley Road would be provided utilising the existing Shepherds Thorn Lane corridor (as shown on the drawing in Appendix I and in Image 3.2);
- A second pedestrian connection would be provided from the site further north along the adopted Shepherds Thorn Lane, providing access over the M62 towards Woodhouse via a footbridge; and
- Numerous pedestrian routes would be provided throughout the site including footways either side of the spine road.

It is important that all this improvement/mitigation is secured by planning condition (with linked 1:200 engineering drawings) and is clearly referenced via the S106 Heads of Terms, subject to future planning consent.

Kirklees HDM is concerned at the lack of existing (or proposed) formal pedestrian crossing facilities on the A641 Bradford Road. This is formed of a 40mph road with 2 north-bound lanes and 2 south-bound lanes.

Passengers alighting buses at the north-bound bus stop would have to cross 4 lanes of (40 mph) traffic. They may be weighed down with shopping bags, have small children to hold onto, using a pushchair or be disabled and reliant on a mobility scooter. There are serious concerns that vulnerable road users would be at serious risk when crossing the A641, particularly in low light or inclement weather conditions.

HDM has concluded that the provision of dropped kerbs and tactile paving (with a central refuge) does not form mitigation that sufficiently addresses these concerns. It is therefore requested that the application team explores the provision of a signal-controlled pedestrian

crossing at a suitable location that facilitates a pedestrian desire line between the site access and the north-bound, Bradford Road bus stop.

Trip Generation and Development Impact on the Local Highway Network

Trip rates were agreed at pre-application and TA Scoping stages and appear acceptable, as follows:

Time Period	Vehicular Trip Rates (per dwelling)		
	Arrivals	Departures	Total
AM Peak 08:00-09:00	0.150	0.429	0.579
PM Peak 17:00-18:00	0.402	0.146	0.548

This results in the following AM and PM peak (two-way) flows:

Time Period	Vehicular Trip Generations (tested for 280 units)		
	Arrivals	Departures	Total
AM Peak 08:00-09:00	42	120	162
PM Peak 17:00-18:00	112	41	153

The full development allocation is likely to generate a total of 1,134 (AM) and 1,073 vehicular trips respectively:

Time Period	Vehicular Trip Generations (tested for 1,958 units)		
	Arrivals	Departures	Total
AM Peak 08:00-09:00	294	840	1,134
PM Peak 17:00-18:00	787	286	1,073

Assessment Methodology

The applicant has assessed the impact of 280 dwellings as the Bradley Villa Farm phase of development of the total allocation for 1,958 dwellings (allocated housing site: HS11 in the Kirklees Local Plan).

The following scenarios are considered:

- 2018/2019 Survey;
- Base Years of 2029 and 2034 including committed development and background traffic growth;
- Interim Design Year (2029) includes base traffic flows with the addition of the Bradley Villa Farm phase of traffic; and
- Full Design Year (2034) includes base traffic flows with the addition of the total allocation traffic.

Each development scenario was tested for both the weekday AM and PM peak hours.

Operational assessments of the junctions on the surrounding network have been undertaken with the addition of planned / committed development traffic.

It is noted that the following committed developments/associated traffic flows have been included in the assessment and this is welcomed/acceptable:

- Gernhill Avenue, Fixby (ref: 2018/62/92055/W) – 252 dwellings;
- Tithe House Lane, Bradley (ref: 2018/49/93965/W) – 105 dwellings;
- Land between Dewsbury Road and New Hey Road in Rastrick, Calderdale (ref: 19/00628/FUL) – 267 dwellings;
- Woodhouse Garden Suburb, Rastrick, Calderdale – 1,257 dwellings;
- Thornhills Garden Suburb, Brighouse, Calderdale – 1,998 dwellings;
- Clifton Business Park, Brighouse, Calderdale (ref: 20/01354/LAA) – employment uses;
- Dyson Wood Way, Bradley (ref: 2018/62/91432/W) – employment uses;
- Land to east of Netheroyd Hill Road, Cowcliffe – 68 dwellings;
- Land north of Ashbrow Road, Brackenhall (ref: 2019/62/92940/W) – 161 dwellings;
- Former Cooper Bridge Waste Water Treatment Works, Leeds Road – employment; and
- Land at Slipper Lane and Leeds Road, Mirfield – 166 dwellings and employment uses.

Meanwhile, it is noted that baseline conditions also include highway improvements regarding the A62/A644 (Wakefield Road) Link Road Scheme (Cooper Bridge).

Junction Assessment

Detailed capacity assessments of the following junctions have been completed and presented in the supporting Transport Assessment:

- Junction Ref 1: A6107 Fixby Road/A6107 Bradley Road/A641 Bradford Road (existing roundabout);
- Junction Ref 2: A6107 Bradley Road/Dyson Wood Way (existing signals);
- Junction Ref 3: A6107 Bradley Road/Oak Road (existing priority);
- Junction Ref 10: A641 Bradford Road/Long Hill Road (existing priority);
- Junction Ref 11: A641 Bradford Road/ASDA Access (existing roundabout); and
- Junction Ref A: A641 Bradford Road/Site Access (proposed priority).

It is noted that the Transport Assessment concludes that none of the existing junctions would operate in excess of capacity in the baseline scenario.

It is stated that there would be modest increases in congestion and delay at several junctions within the study area as a result of the completed development. It is noted that the addition of the proposed development traffic causes the operation of Bradley Bar Roundabout to worsen (in excess of the operational capacity) and that mitigatory measures would be required – as per the comment under Infrastructure Requirements set out below.

At other junctions located further away from the site the proposed development traffic impact is reduced and diluted as the traffic disperses through the network. As such it is considered that the magnitude of the effect of development traffic overall across the highway network is minor adverse.

Infrastructure Requirements

At pre-application stage, the council emphasised how infrastructure requirements and delivery development of the HS11 site would require significant infrastructure to render the site ready to take development, to support development during its operational phase, and to mitigate its impacts.

The spine road through the development (and therefore the specification of the HS11 spine road connecting with Bradford Road), should be as follows:

The specification of the spine road within the site should be designed as a residential connector street (Type A) within Kirklees (adopted SPD) Highway Design Guide, with a cross section of:

- 3m shared footway/cycleway;
- 2m verge;
- 6.75m carriageway;
- 2m verge; and
- 3m shared footway/cycleway.

In terms of highways, it was previously advised that infrastructure-related works and provisions would, or may, include the provision of new roads and junctions, signalisation works, new cycle routes, new footways and footpaths (and diversions and improvements to existing footpaths). Temporary, between-phase infrastructure may also be required, as may off-site infrastructure works.

Emphasis was made regarding how crucial it is that these infrastructure requirements are identified at an early stage and that forthcoming submissions must ascertain what is required, when these works and provisions are required (phased delivery of some works may be appropriate), their costs, and who would be responsible for their delivery.

Awareness was also drawn to the fact that the council (as landowner) had commissioned WSP to assess the infrastructure needs of the HS11 site.

Cooper Bridge Improvement Scheme

The Local Plan Allocation of HS11 states that “the spine road through the site should be linked to the Bradley Relief Road that is part of TS1, LP19. The Council will monitor the implementation of the early phases of delivery to manage the options and need for strategic intervention in advance of the 750th dwelling”.

Further details of the council’s current preferred option for the Cooper Bridge improvement scheme can be found at the following link:

[A62 to Cooper Bridge Corridor Improvement Scheme | Your Voice \(westyorks-ca.gov.uk\)](https://www.westyorks-ca.gov.uk/a62-to-cooper-bridge-corridor-improvement-scheme-your-voice)

The scheme is being promoted by several Local Highway Authorities including Kirklees as well as the West Yorkshire Combined Authority (WYCA).

An earlier option for the scheme is presented in a TA drawing (Appendix K).

While the scheme has secured public funding through the West Yorkshire Transport Fund, it is noted that the Council have also been collecting private sector contributions in line with

their 2007 SPD1 document *Negotiating Financial Contributions for Transport Improvements (Leeds Road, Huddersfield)*.

There is a requirement for the HS11 sites to contribute to the Cooper Bridge scheme, mindful of a funding shortfall and the cumulative impact of 1,958 dwellings on the local highways network and this important local highway intervention, with respect to delivering infrastructure to properly supporting local housing growth spanning the duration of the local plan.

A figure of **£3,064** per unit would be therefore appropriate/applicable under the Heads of Terms/Section 106 Agreement. For this planning application, that financial contribution would total **£827,280**.

This funding would be used to mitigate the impact of this planning application at the following location, as concluded by the WSP report.

Bradley Bar Roundabout

Bradley Bar roundabout would reach its saturation limit after the addition of only 200 dwellings during the AM peak hour and, therefore, no further development can be accommodated at Bradley Park beyond 2024 without the introduction of off-site highway mitigation measures.

A preliminary mitigation scheme has been developed (by WSP) which includes increased entry widths and effective flare lengths on each approach arm. It is, therefore, considered that the implementation of a mitigation scheme of this nature would be required to be implemented after delivery of 200 dwellings to ensure the continued acceptable operation of this intersection beyond 2024.

Additionally, and for the purposes of completeness with respect to the infrastructure requirements of the wider HS11 site, the WSP report also highlights the following:

A6107 Bradley Road / Tithe House Way

The A6107 Bradley Road / Tithe House Way Priority T-Junction would reach its saturation limit during the AM peak hour, after delivery of between 500-600 dwellings and, therefore, no further development can be accommodated beyond 2028 without the implementation of highway mitigation measures.

WSP has developed a preliminary signalised T-Junction mitigation scheme for A6107 Bradley Road / Tithe House Way, which would be required to be implemented after the delivery of 500 dwellings to ensure the continued acceptable operation of this intersection beyond 2028.

The upgraded intersection is forecast to reach its new saturation limit between 900-1,000 dwellings in the AM and PM peak hours.

Sustainable Transport

Bus

The view of WYCA must be sought. However, HDM's view is as follows.

There are bus stops on either side of Bradford Road, just north of the proposed site's primary vehicular access point. Regular (approximately 4/hour) bus services operate from these stops including:

- 349 Bradley to Halifax
- X49 Huddersfield to Brighouse
- 363 Huddersfield to Bradford Interchange
- X63 Huddersfield to Bradford Interchange

Brighouse Bus Station is approximately 2.5km from the site with regular services to Leeds, Huddersfield, Bradford, Halifax, Dewsbury and Elland.

It is noted that the existing stops on both the eastern and western sides of the A641 Bradford Road lacks bus stop clearways, shelter and real-time information.

Whilst Kirklees HDM have sought the view of WYCA, no response has been received to date. However, it is requested that the applicant makes an appropriate (Section 106 secured) contribution to improving both bus stops and provides the mitigation as detailed above.

The provision of additional pairs of bus stops along the spine road corridor (which routes through the centre of the proposed BVF Phase Site and the full HS11 allocation) is proposed. Officers were unable to establish exactly where these would be sited. The location of these should be confirmed.

As an aside, officers would be interested in better understanding which bus routes/services would serve the spine road and if this has been assessed by WYCA.

Rail

The nearest railway station to the site is at Deighton, some 2.5km to the southwest. This station provides access to Northern and TransPennine Express services providing regular connections to Huddersfield, Dewsbury, Batley, Manchester, Leeds, York and Hull.

Brighouse railway station is approximately 2km from the site with regular direct trains to Leeds, Huddersfield, Bradford and Wigan.

Deighton railway station is approximately 2km from the site with local services on the Huddersfield Line and an hourly TransPennine service between Leeds and Manchester.

Electric Vehicle (EV) Charging

EV charging points are proposed throughout the development, as set out on the EV charging plan. It is noted that charging points would be either:

- Externally mounted to houses;
- Internally mounted; or
- On mounting post adjacent to parking bays.

EV charging should be secured by a planning condition and cross-referenced to the submitted EV drawing submitted in support of this application.

Construction Access Strategy

During the construction of this phase, it is noted that a Construction Management Plan (CMP) would be implemented which would address any potential impacts arising from the development and ensure that the site operates efficiently and safely.

It is stated that the CMP will address construction hours of operation, treatment of delivery vehicles (wheel washing requirements, sheeting etc) and access routes to/from the site.

With regard to the latter point construction traffic access would be via the A641, Bradford Road. The impact of construction traffic on the local highway network would be minimised as much as possible.

With respect to the volume of traffic generated during the construction phase this would be substantially less than the development traffic generation of the site once it is occupied, particularly during peak periods.

HDM advises that a CMP be secured by planning condition and that additionally, a specific planning condition is secured relating to:

- Wheel washing facilities; and
- Carriageway and footway condition survey (pre- and post-construction).

Section 38 comments

Site Access

- Bradford Road where the access is to be formed off is a dual carriageway that is divided by a central reserve (verge area). At the location of the proposed access the speed limit of Bradford Road is 40mph;
- The site access is indicated to be served by a ghost island access. A complete proposal is required for our review;
- The proposed ghost island must comply with DMRB, CD 123 Geometric design of at grade priority and signal-controlled junctions;
- The ghost island shall be subject to Section 278 technical approval in due course;
- The site access will be required to be in a form of a simple junction with corner radii of 6m minimum;
- The required visibility tangent of $x=2.4m$ by $y=90m$ must be satisfied;
- The sight stopping distance/ forward distance of 90m from Bradford Road (northbound/southbound) to where the proposed site access junction would be sited needs to be demonstrated and satisfied;
- The site access must have a corner radii of 6m minimum. If the Kirklees Council refuse vehicles struggles to negotiate the junction, then the corner radii must be increased to 10m;

The proposed access is in close proximity to existing private driveways. This can result in the increased likelihood of collisions and some form of speed reduction measures along Bradford Road should be considered to mitigate this concern;

Site Layout

i. Provision of visitor bays must be to a ratio of 1:4 to the total number of dwellings proposed. Hence, a minimum of 68 spaces are required, where currently no sufficient provisions are made;

ii. All visitor parking bays need to be parallel to the proposed internal roads that should be ideally created as lay-bys and staggered across the overall development area;

iii. The main internal road alignment into the site seems jagged in places and has very tight centreline alignment - this is unacceptable. A minimum 20m centreline radius on the internal road should be used to ensure refuse swept paths of refuse vehicles are not compromised. It is noted that this requirement would not be complied with near plot 135;

iv. Note all footways are required to be 2.0m width. Current proposals need to be amended to suit;

v. Carriageways should be 5.5m width.

vi. Any bell mouths formed off this road should be staggered 25m apart and have visibility splay tangent with a y distance of 25m and x distance of 2.4m. Current proposals may need to be amended to suit if they do not comply;

vii. All corner radii are required to be 6m minimum to assist with refuse swept path movements, this is to also to be required at all proposed turning head areas;

viii. Vertical speed control features (e.g., speed tables) are discouraged. However, if proposed these should be less than 60m apart for them to be effective;

ix. All roads are required to have forward visibility of 25m throughout and especially around bends. Visibility envelopes around bends are required to be illustrated to ensure any proposed plots do not interfere. Initially, a sight stopping distance of 25m is to be used but can be relaxed to 23m if it impacts a proposed plot location. Current proposals need to be amended to suit;

x. Private land for plot 35 may be required to be included in the forward visibility tangent. This needs to be checked and proposals modified accordingly;

xi. All areas required for visibility must be included in the adoptable carriageway. Any areas of visibility that fall within private driveways and gardens are not acceptable and proposals should be amended to suit;

xii. Any shared surfaces are required to be 5.5m with a 0.6m hard margin on either side. This may should be amended on the current proposals;

xiii. Where on-street parking is envisaged, swept path analysis is required to demonstrate if the Kirklees Refuse Vehicle can manoeuvre through;

xiv. No swept path analysis (SPA) drawings have been provided for our assessment for the development layout. The current development proposal shown strongly indicates issues with refuse vehicle manoeuvrability;

xv. SPA is required on all turning head areas and severe bends to optimise their size in relation to refuse vehicle movements;

xvi. On all turning heads it is required to demonstrate using swept path analyses that when manoeuvring, Refuse Collection Vehicles shall be able to travel at a minimum speed of 5 km/h. In other words, drivers shall not need to stop to adjust the steering while stationary before setting off again. The Kirklees vehicle parameters are set out in Table 1 of Emergency Access, Waste Management, Servicing and Deliveries - April 2020 (version 1): -

- Length – 11.85 m
- Width – 2.50 m (including wing mirrors)
- Width when loading – 4.10 m
- Working height – 6.00 m
- Turning circle (wall to wall) – 22.07 m (diameter)
- Turning circle (between kerbs) – 17.88 m (diameter)
- Gross vehicle weight – 32 t

xvii. Bin collection points need to be shown, as they are required to assess if the refuse vehicle can effectively access them with the adoptable Section 38 carriageway area;

xviii. Around tight bends in the carriageway consideration should be given to making provisions for overrun areas or localised carriageway widening where required following SPA checks;

xix. To transition from the widened existing tarmacked road to the proposed Section 38 block paved road a ramp should be introduced that should be no steeper than 1:12;

xx. The footway around the turning head areas made of standard carriageway construction should be 2.0m wide. Where a turning head area is made of block paved construction, then a proposed 0.6m hard margin must be provided instead of a footway;

xxi. Around bends SPA for two normal size vehicles being able to cross each other in the contraflow direction needs to be demonstrated too;

xxii. Around tight bends in the carriageway consideration should be given to making provisions for overrun areas or localised carriageway widening;

xxiii. New 2-to-3-bedroom dwellings within Kirklees must provide 2 no. off-street car parking spaces, with 4+ bedroom dwellings providing 3 no. off-street car parking spaces. Any new 1–2-bedroom apartments must provide 1 space, where 3+ bed providing 2 no. spaces. One cycle space per unit is recommended;

xxiv. With regards to the vertical design of the proposed roads, the following needs to be complied with:-

- Given the significant level differences, roads with intermittent 1:10 longitudinal gradients can be considered for adoption. A road with 1:10 gradient throughout would not be acceptable as it prejudices against users with disabilities.
- At internal junctions 15m from the tie-in to the main road channel will need to have a maximum gradient of 1:25 to avoid grounding issues for vehicular users;
- While proposing longitudinal gradients it must be noted that given the above gradients up to 5% (1:20) are generally considered acceptable for pedestrians, including wheelchair users. Gradients over 2.5% (1:40) might be impassable for

some manual wheelchair users. On gradients of 8% (1:12.5) or above, the physical effort of getting up the slope would be too much for many wheelchair users and there would be a risk of some wheelchairs toppling over. Slopes exceeding 10% (1:10) might prove impassable to many non-wheelchair users;

- It is advised that a minimum K value of 3 should be used. Minimum curve length of 20m should be used throughout;
- On footpaths and cycle paths, crossfall should usually be 2.5% (1:40). This provides a good balance between the need to remove surface water and the needs of users. Crossfalls steeper than about 3% (1:33.3) can be uncomfortable to walk on and, where the slope runs towards a road, can be dangerous, as wheeled users tend to edge down the crossfall. Accordingly, 3% is the desirable maximum crossfall. However, it will generally be necessary to increase crossfalls at vehicle crossings and similar. In these situations, the crossfall may be increased to an absolute maximum of 5% (1:20) providing that the increase is minimized, the risks are adequately assessed, and any necessary mitigation measures are implemented;
- At slopes of 10% or over, separate off-carriageway facilities for pedestrians should be provided. These shall be to an independent vertical alignment to the adjacent carriageway to reduce the maximum gradient required. Level 'landings' at spacing appropriate to the gradient and handrails shall be provided for pedestrians. Consideration shall be given to the provision of parallel, alternative routes utilising steps to reduce local gradients; and
- Shared spaces should have a gradient not steeper than 1:20. If this cannot be achieved then a separate footway along the shared space should be provided in addition.

Other Items for Consideration

- i. For a full application site contours, plot finished floor levels and proposed road contours/road long sections are necessary for officers' full assessment. Complete information was not made available on this occasion;
- ii. Details of proposed surface finishes have not been provided for comment. From the block plan it is assumed that the main residential road will be block paved;
- iii. A Stage 1 Road Safety Audit with designers' comments is required. The Audit must comply with GG119 and an audit brief must be approved beforehand;
- iv. Landscaping plans must be provided to ensure proposed trees do not impact on necessary highway visibility. All proposed trees need to be assessed and relocated to be placed outside of any required visibility splay/envelopes;
- v. Note highway drains over 900mm diameter within the proposed Section 38 corridor are not acceptable to Kirklees. Hence, culverts within the Section 38 highway corridor should be avoided, when trying to divert the existing stream;
- vi. Any proposed combined cycle route will need to be 3m wide. There seems to be no provision for cyclist within the development – the proposals need to be amended to accommodate minimum requirements in accordance with LTN 1/20 Cycle Infrastructure Design.

Bridges and Structures

The following conditions are recommended:

- 1) Before the development commences a scheme detailing the location and cross sectional information together with the proposed design and construction details for all new retaining walls/ building retaining walls adjacent to the proposed adoptable highways shall be submitted to and approved by the Highway Authority in writing. The approved scheme shall be implemented prior to the commencement of the proposed development and thereafter retained during the life of the development.
- 2) Before the development commences a scheme detailing the location and cross sectional information together with the proposed design and construction details for all new surface water attenuation tanks/pipes/manholes located within the proposed highway footprint shall be submitted to and approved by the Highway Authority in writing. The approved scheme shall be implemented prior to the commencement of the proposed development and thereafter retained during the life of the development. See <https://www.kirklees.gov.uk/beta/regeneration-and-development/highways-guidance-and-standards.aspx> for further details.

Notes:

All new storm water attenuation tanks/pipes/culverts with internal diameter/ spans exceeding 0.9m must be located off the adoptable highway. Any decision to locate these facilities within the adoptable highway footprint must be accompanied with a full risk evaluation report with particular reference to their proposed inspection, structural assessment and maintenance regime in compliance with the CDM Regulations 2015 requirements.

The adopting authority (i.e. Yorkshire Water) will also be required to produce and submit a legally binding agreement to the Highway Authority explicitly stating that they will be fulfilling their obligations in relation to the systematic and cyclical inspection and structural assessment of any attenuation structure located within the highway footprint, in full compliance with CS450 - Inspection of Highway structures.

Furthermore, all new precast pipes/ culverts/storage tanks proposed for use within the footprint of an adoptable highway must comply with the Specification for Highway Works (SHW-Series 500 or 2500) and must be accredited with a BBA (The British Board of Agrément Roads and Bridges) or HAPAS (Highway Authority Product Approval Scheme) or equivalent certificate.

(Condition 2 should only be included if the provision of a storm water attenuation facility is conditioned by the LLFA).

End.
AP.
12/07/2021.