

Highway Design Comments			
<b>Comments provided by:</b>	Shahzad Mirza		
<b>Date:</b>	Thursday, 01 July 2021		
<b>Planning Application No.</b>	2021/62/92086/W	<b>Case Officer</b>	Victor Grayson
		<b>Highway Officer</b>	-
		<b>Applicant:</b>	Redrow Homes Yorkshire
<b>Planning Application Details:</b>	<ul style="list-style-type: none"> <li>Land at, Bradley Villa Farm, Bradley Road, Bradley, Huddersfield, HD2 2JX</li> </ul>		
<b>Reviewed Drawing Nos.</b>	<ul style="list-style-type: none"> <li>BVF-16-02-03_ Proposed Site Layout</li> <li>BVF-16-02-04_ Proposed Materials Plan</li> <li>BVF-16-02-05_ Proposed Boundary Treatment Plan</li> </ul>		

### 1. General

- i. Planning application for land at Bradley Villa Farm, Bradley Road, Bradley, Huddersfield, HD2 2JX for the erection of 270 residential dwellings and associated infrastructure and access;

### 2. Site Access

- i. 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;
- ii. The site access is indicated to be served by a ghost island access. A complete proposal is required for our review;
- iii. The proposed ghost island must comply with DMRB, CD 123 Geometric design of at-grade priority and signal-controlled junctions;
- iv. The ghost island shall be subject to Section 278 technical approval in due course;
- v. The site access will be required to be in a form of a simple junction with corner radii of 6m minimum;
- vi. The required visibility tangent of x=2.4m by y=90m must be satisfied;
- vii. 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;
- viii. 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;

- ix. 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;

### **3. 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 current 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 will not be complied with near plot no. 135;
- iv. Note all footways are required to be 2.0m width. Current proposals need to be amended to suit;
- v. The proposed main carriageway through the site 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 too;
- viii. Vertical speed control features (e.g., speed tables) are discouraged- However, if proposed 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 no. 135 is maybe 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 need to be amended on your 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 & 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 to road 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 disabled users.
  - At internal junctions 15m from the tie-in to the main road channel will 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 in 20) are generally considered acceptable for pedestrians, including wheelchair users, gradients over 2.5% (1 in 40) might be impassable for some manual wheelchair users. On Gradients of 8% (1 in 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 in 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 in 40). This provides a good balance between the need to remove surface water and the needs of users. Crossfalls steeper than about 3% (1 in 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 in 20) providing that the increase is minimized, the risks are adequately assessed, and any necessary mitigation measures are implemented;
  - 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;
- 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 too;

#### **4. 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 our 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 avoid, 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- proposals need to be amended to accommodate minimum requirements in accordance with LTN 1/20 Cycle Infrastructure Design.