

Highway Design Comments			
Comments provided by:	Shahzad Mirza		
Date:	Tuesday, 29 December 2020		
Planning Application No.	2020/94203	Planning Officer	Adam Walker
		Highway Officer	Mark Berry
		Applicant:	Rosie Carr
Planning Application Details:	<ul style="list-style-type: none"> <li>Proposed Residential Development On Land Off Leeds Road, Howden Clough, Birstall WF17 0HW</li> </ul>		
Reviewed Drawing Nos.	<ul style="list-style-type: none"> <li>RCLR-MWA-XX-XX-DR-A-0001-P01_ Location Plan</li> <li>RCLR-MWA-XX-XX-DR-A-0002-P01_ Topographical Survey</li> <li>RCLR-MWA-XX-XX-DR-A-0003-P02_ Proposed Site Layout</li> <li>RCLR-MWA-XX-XX-DR-A-0004-P01_ Proposed Site Layout-Presentation</li> <li>RCLR-MWA-XX-XX-DR-A-0006-P01_ Indicative Long Section and Street Scene</li> <li>E20/6960/01A_ Drainage Feasibility Plan</li> </ul>		

## 1. General

- i. Rosie Carr has submitted a pre-application enquiry for a residential development consisting of 30 new dwellings;

## 2. Site Access

- i. The site access is formed off Moat Hill Farm Drive, where the existing turning head is to be continued as an avenue with a ramp gate way feature leading into the proposed development area;
- ii. The existing Moat Hill Farm Drive carriageway is not intended to be modified as a part of the current proposals that results in a kink in the proposed tie-in avenue alignment as the required proposed Section 38 carriageway width needs to be accommodated. This arrangement is unacceptable, as localised carriageway widening would be necessary to westbound Moat Hill Farm Drive channel between the tie-in to the Section 38 and the existing corner radii of the turning head. This will widen the Moat Hill Farm Dive to the minimum required width eliminating this kink;
- iii. A second driveway access is proposed from Leeds Road that will act as an informal junction in the form of a driveway cross over. This is unacceptable for the following reasons and should be eliminated from future proposals:-
  - To regulate access and traffic into the development, a single point of access is always encouraged. By having access onto Leeds road a rat run feature is likely to be created for drivers who do not reside in the proposed development utilising it as shortcut onto Moat Hill Farm Drive;
  - This driveway access into the development is not adequately staggered away from Milroyd Crescent, where 43m minimum distance is necessary. This creates an accident hot spot as vehicles simultaneously exiting these junctions are highly likely to overshoot and impact on another.

### **3. Site Layout**

- i.** Provision of visitor bays must to a ratio of 1:4 to the total number of dwellings proposed. Therefore, provision for 8 no. bays needs to be made, where only 7 are proposed;
- 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;
- 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. In addition, this road is required to have forward visibility of 25m throughout and especially around bends. 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;
- vi.** All corner radii are required to be 6m minimum to assist with refuse swept path movements, this is to also required at the proposed turning head areas too;
- vii.** Vertical speed control features (e.g. speed tables) are discouraged- However, if proposed should be less than 60m apart for them to be effective;
- viii.** Visibility envelope 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 locations. Current proposals need to be amended to suit;
- ix.** 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;
- x.** Where on street parking is envisaged a swept path analysis is required to demonstrate that a Kirklees Refuse Vehicle can manoeuvre;
- xi.** 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;

- xii.** SPA are required on all turning head areas and severe bends to optimise their size in relation to refuse vehicle movements;
- xiii.** 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
- xiv.** Further to the review of drawing no. RCLR-MWA-XX-XX-DR-A-003-P2 there are certain specific issues identified that need to be eliminated in any future submissions, which are as follows:-
- A pinch point is proposed near plot no.18. This needs to be eliminated. 5.5m carriageway with 0.6m hard margin on either side should allowed for;
  - Visitor bays are proposed near plot no. 11 & 12. These should be relocated as they compromise the necessary turning head area;
- xv.** 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;
- xvi.** 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;
- xvii.** 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;
- xviii.** The footway around the turning head on a standard carriageway construction should be 2.0m wide. Where a turning heads in block paved construction areas are proposed then a 0.6m hard margin must be provided;

- xix.** The site fall from Moat Hill Farm Drive to Leeds Road at a slope of circa 1:12. Given this the proposed roads need to comply with the following:-
- 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 prejudice against disable 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.

#### **4. Other Issues**

- 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 avoided, when trying to divert the existing stream;
- vi.** Attenuation tank has been proposed in the Gables area. Please note that as this area serves over 5 plots it will ideally need to be adoptable standard. Having a structure/tank in this area that will need to be maintained by a third party and the designer would need to be considerate of this during the development of your detailed design. If a risk is identified with this structure being in adopted S38 corridor then this part of the proposed highway may need to be treated as privately managed;
- vii.** 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 to LTN 1/20 Cycle Infrastructure Design.