

Client Store Property Investments Ltd
Project Brook Lane, Rustington
Element Ref Site Access Roundabout
Drawing ref 10D
Design Speed 30mph (60kph)

Mini-Roundabout Junction Design Check
TD 54/07

		Eastern Arm			Southern Arm		Western Arm	
<i>Para</i>	Design Standard / Guidance	Design Complies Y/N	Design Checker Comment	Designer's Comment	Design Checker Comment	Designer's Comment	Design Checker Comment	Designer's Comment
6.1	The inscribed circle diameter (ICD) of a mini-roundabout is the diameter of the largest circle that can be inscribed within the junction kerbs. The maximum ICD of a mini-roundabout is 28m. Above this dimension, a normal roundabout can accommodate the largest design vehicle and must be used. For further guidance see TD 16 (DMRB 6.2.3).	Y	20m ICD provided		20m ICD provided		20m ICD provided	
6.7	When diagram 602 is used, it must be accompanied by diagram 1023 and by the give way marking to diagram 1003.	Y	Diagram 602 not used		Diagram 602 not used		Diagram 602 not used	
6.8	The following requirements together determine the location of the white circle as illustrated in Figures 6/2 and 6/3: (i) It must be as large as practicable up to a maximum of four metres diameter and positioned using the inside of the swept path of cars. (ii) The centre of the design vehicle path must be at least 1 metre from kerbs, the perimeter of the white circle, and from any road marking separating opposing traffic.(iii) A minimum design vehicle path radius of 6 metres, at the centre of the path, must be allowed for right turns. For this radius the vehicle path should be widened to 3m at the apex of the turn. (iv) For mini-roundabouts with two or three entry lanes (although three lane entries are not recommended, see paragraph 2.12), the width of the circulatory carriageway must be sufficient to enable cars to travel two abreast around the white circle.	Y	The white circle is provided at 4m diameter		The white circle is provided at 4m diameter		The white circle is provided at 4m diameter	
6.9	TSRGD regulation 16(1) requires that a vehicle proceeding through the junction must keep to the left of the white circle, unless the size of the vehicle or the layout of the junction makes it impracticable to do so. Therefore, the white circle must be sized and located so that drivers of light vehicles are not encouraged to drive on it or pass on the wrong side of it when negotiating the junction.	Y	No comments required		No comments required		No comments required	
6.17	The visibility distance 'D', as shown in Figure 6/5 and Table 6/1, is the minimum sight distance required by a road user approaching the roundabout at a distance 'F' from the give way line. 'D' is measured from the centre of the offside approach lane to the nearside carriageway edge of the arm to the right. It enables the driver of an entering vehicle to observe vehicles coming from the right before they reach the conflict point. Distance 'D' varies with the 85th percentile 'dry weather' approach speed 70m before the give way line on the arm to the right and the 'gap acceptance time' as determined in paragraph 6.16. See TA 22 (DMRB 5.1.4) for guidance on speed measurement	Y	No comments required		No comments required		No comments required	
6.18	The visibility distance 'D' must be provided within the whole of the visibility envelope between driver's eye heights of 1.05m and 2.0m at the centre of the offside approach lane to object heights between 0.26m and 2.0m at the nearside edge of the arm to the right.	Y	No comments required		No comments required		No comments required	
6.19	The give way marking (to diagram 1003.3) used at mini-roundabouts requires road users to give way to circulating traffic at or immediately beyond the line. The 'F' distance in Figure 6/5 must be a minimum of 9m, so that the first two vehicles in the approach queue have visibility of traffic coming from the arm on the right, but see paragraphs 6.20 and 6.21.	Y	No comments required		No comments required		No comments required	
6.20	In difficult circumstances, the 'F' distance in Figure 6/5 for an arm may be taken as a relaxation from 9m to 4.5m, providing that the maximum peak hour entry flow on the arm is less than 300 veh/hr. In exceptionally difficult circumstances, a relaxation to 2.4m (absolute minimum) is permissible, as it enables a road user who has reached the give way line to see approaching vehicles without encroaching past the give way line. This will, however, allow only one vehicle at a time to enter safely and requires following drivers to be prepared to stop and look. An 'F' dimension of 2.4m must only be used on an arm with a maximum peak hour entry flow of 300 veh/ hr or less and where there is no entry arm to the left (see paragraph 6.6). In such cases the mandatory give way markings and upright sign (diagrams 1003, 1023 and 602) must be used to require road users to give way to circulating traffic at the line.	N/A	No comments required		No comments required		No comments required	
6.22	The Stopping Sight Distance 'E' in accordance with Table 6/2 and Figure 6/5 must be provided within the whole of an envelope between eye heights of 1.05m and 2.0m at the centre of the path of an approaching vehicle to object heights of 0.26m to 2.0m at the give way line.	Y	No comments required		No comments required		No comments required	

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6.25	A kerbed splitter island must be provided where, without it, vehicles would encounter an easier path if they were to pass on the wrong side of the white circle.	Y	No comments required		No comments required		No comments required	
6.28	Kerbed islands provided to assist crossing pedestrians must be located within 20m of the give way line at the nearest point. Pedestrian facilities located more than 20m from the junction may be too far from the desire line, which may cause pedestrians not to use the facility. Pedestrian facilities located over 60m from a mini-roundabout perform independently of the junction.	Y	No comments required		No comments required		No comments required	
6.29	The minimum requirement for road markings on the approaches to kerbed physical islands is to provide warning lines to diagram 1004 (see Chapter 5, paragraph 4.23 of the Traffic Signs Manual). However, if a kerbed island is at risk of being overrun by approaching, circulating or exiting vehicles, it must be positioned at least 0.5m clear of any vehicle swept path.	N	Swept path plots provide less than 0.5m clearance to islands	Islands could be changed to thermoplastic if required	Swept path plots provide less than 0.5m clearance to islands	Islands could be changed to thermoplastic if required	No comments required	No comments required
6.32	The minimum lane width permitted at the give way line is 3.0m, except at a two lane approach where the minimum lane widths can be reduced to 2.5m, provided heavy goods vehicles and buses do not frequently use the entry. The maximum lane width at the give way line for a single lane entry is 4.0m	N	5.3m lane entry width exceeds the 4m maximum width at the give way line	The width at the give way line, as a result of the flare, is required to accommodate swept path plots	3.7m lane entry width	No comments required	4.3m lane entry width exceeds the 4m maximum width at the give way line	The width at the give way line, as a result of the flare, is required to accommodate swept path plots
6.33	At an entry with two or three lanes (although three lane entries are not recommended, see paragraph 2.12), no more than one lane must be marked as being for a given exit arm, such that traffic going ahead or turning proceeds in single file (see Figure 6/4). No more than two lanes must be provided at an intermediate give way line between double mini-roundabouts.	N/A	No comments required		No comments required		No comments required	
6.36	Typically the give way line (to diagram 1003.3) is placed on the circumference of the largest circle that can be inscribed within the junction kerbs. However, where the swept path of the largest design vehicle likely to use the junction crosses the inscribed circle, the give way markings for the affected arms must be moved back such that they are not crossed by the outside edge of the swept path. Where mandatory give way markings (to diagram 1003) are used (see Figure 6/5 and paragraph 6.7), they should be placed in a straight line at right angles to the vehicle path with no part of the marking inside the outer edge of the swept path of the largest design vehicle circulating past the entry.	N/A	No comments required		No comments required		No comments required	