

Geometric Design Checks:

Proposed Roundabout A635, Goldthorpe

References: DMRB CD116 Rev 0 - July 2019 (this supersedes the withdrawn guidance in Vol. 6 TD16/07)
 Fore Drawings: Options 1.1 and 1.2
 Notes: CD 116 replaces TD 16/07, TD 54/07 and TD 51/17, and roundabout related parts to TD 50/04, TA 23/81, TA 78/97, TA 86/03 and TD 70/08. The full document has been re-written to make it compliant with the new Highways England drafting rules.

Roundabout Type: Normal

Date: 02 November 2021

Parameter	Variable	Paragraph	CD116 Requirement	Design Actual	Acceptable	Comments
ICD	D	3.1 to 3.5	D value between 28m and 100m	65.00	Yes	
Circulatory width	c	3.6 to 3.9	c value <15m	10.00	Yes	10m is specified by BMBC as a local requirement
A635 Arm W	e	3.6 to 3.9	Between 1.0 and 1.2 times entry width, excluding any overrun area	9.00	Yes	10m is specified by BMBC as a local requirement
A635 Arm E				9.00	Yes	10m is specified by BMBC as a local requirement
Proposed Access Rd Arm S				9.00	Yes	10m is specified by BMBC as a local requirement
Central island diameter	l	3.7	l value >4m	45.00	Yes	Includes maintenance strip of 1.5m
Central overrun area	b	3.8 to 3.9	To provide sufficient entry deflection for vehicles while still allowing large vehicles to circulate	0.00	Yes	
Entry width	e	3.11 to 3.15	e value 4.0m - 10.5m parameter range (practical limits for single carriageway approach)	9.00	Yes	
Arm 1				9.00	Yes	
Arm 2				9.00	Yes	
Approach half width	v	3.16 and Table B.2	v value 2.0m - 7.3m parameter range (practical limits)	7.30	Yes	
Arm 1				7.30	Yes	
Arm 2				7.30	Yes	
Entry lane alignment	L	3.18	Splitter island kerb (arc) must be tangential to central island when extended forward from give way line		Yes	
Arm 1					Yes	
Arm 2					Yes	
Flare length	l'	3.17	Single lane entries should be slightly flared to accommodate HGVs	13.49	Yes	
Arm 1				17.02	Yes	
Arm 2				17.22	Yes	
Entry angle	Φ	3.18	Φ value between 20 to 60 degrees	32.78	Yes	
Arm 1				33.85	Yes	
Arm 2				33.32	Yes	
Entry kerb radius	r	3.19	r value between 10m to 100m	29.00	Yes	
Arm 1				27.00	Yes	
Arm 2				28.00	Yes	
Entry path radius	length of a(entr)	3.20 to 3.26	a value ≤ 100m for 25m length	99.32	Yes	
Arm 1				96.08	Yes	
Arm 2				99.69	Yes	
Exit width	ew	3.28	ew values similar to entry width	5.55	Yes	
Arm 1				5.55	Yes	
Arm 2				5.55	Yes	
Exit taper	et	3.28	et values between 1:15 and 1:20	1:15	Yes	
Arm 1				1:15	Yes	
Arm 2				1:15	Yes	
Exit kerb radius	a(exit)	3.29	a values between 15m to 100m	50	Yes	
Arm 1				80	Yes	
Arm 2				80	Yes	
Visibility on Approach (DMRB Eye Height 1.05m, Target height 0.26m)	va	3.39	To be in accordance with CD109		Yes	
Arm 1					Yes	
Arm 2					Yes	
Visibility on Entry	ve	3.43	Visibility distance of 40m for ICD 40m to 60m roundabouts		Yes	Assume no construction on central island
Arm 1					Yes	Assume no construction on central island
Arm 2					Yes	Assume no construction on central island