Jacobs Design Check

## **Reduced Standards Summary**

Project Name	M2 Junction 1
Project Number	B2432000
Client	National Highways

Standards					Location					Description			WebDAS Data (DMRB checksheets only)		
Reference	Discipline	Type of reduced standard	Standard	Clause	General Location (Location 1)	Detailed Location (Location 2)	Chainage Start	Chainage End	Title	Details of Reduced Standard	Notes	DAS Ref	Submission Date	Approval Date	
HGN001	HIGHWAYS	Departure from standards	CD122	3.12	Junction 1 SB Merge - Option 1	Junction 1 SB Merge - Option 1			Layout Selection Lane Reduction	The traffic flows provided requires a design of 5 upstream/ downstream lanes. Only 4 lanes have been provided.	N/A				
HGN002	HIGHWAYS	Departure from standards	DMRB CD-122 MERGE DESIGN	3.21	Junction 1 SB Merge - Option 1	SB Merge			Geometric Features	Reduced Value for the following features  Nose Ratio - 1:28  Entry Taper - 155m  Nose length- 85m					
HGN003	HIGHWAYS	Departure from standards	DMRB CD-122 MERGE DESIGN	5.8	Junction 1 SB Merge - Option 1	SB Merge			Near Straight	A near straight has been provided at a length of 70m, 85m is required.					
HGN004	HIGHWAYS	Departure from standards	DMRB CD-122 MERGE DESIGN	4.2	Junction 1 SB Merge - Option 1	SB Merge			Weaving Length	The weaving length from the Junction 1 SB merge to Junction 2 diverge is approximately 700m.	This is an existing arrangement, and only Junction 1 is to be upgraded as part of the works.				
HGN005	HIGHWAYS	Departure from standards	DMRB CD-109 CD-127 LINK DESIGN	2.10	Junction 1 SB Merge - Option 1	Mainline SSD			Reduced SSD on Mainline	The existing mainline SSD is a departure from standards, as a minimum of 215m is achieved.	,				
HGN006	HIGHWAYS	Departure from standards	DMRB CD-109 CD-127 LINK DESIGN	2.30	Junction 1 SB Merge - Option 1	SB Merge - Mainline			Hard Strip instead of Hard Shoulder	The hard strip remains beyond the the length of the nose for approximately 340m and does not transition over the nose.					
HGN007	HIGHWAYS	Relaxation from standards	DMRB CD-122 MERGE DESIGN	5.17	Junction 1 SB Merge - Option 1	SB Connector Road			Hard Strip on Connector Road	The requirement of the cross section is MG2C, which requires a 3.30m hard shoulder.  Hard Strip provided 1.0m.					
HGN008	HIGHWAYS	Relaxation from standards	DMRB CD-122 MERGE DESIGN	5.17	Junction 1 SB Merge	SB Connector Road			Hard strip on Connector Road	The requirement of the cross section is MG2C, which requires a 3.30m hard shoulder.  Hard Strip provided 1.0m.					
HGN009	HIGHWAYS	Departure from standards	DMRB CD-122 MERGE DESIGN	4.2	Junction 1 SB Merge	SB Mainline			Existing Weaving Length	The weaving length from the Junction 1 SB merge to Junction 2 diverge is approximately 700m.	This is an existing arrangement, and only Junction 1 is to be upgraded as part of the works.				
HGN010	HIGHWAYS	Relaxation from standards	DMRB CD-109 CD-127 LINK DESIGN	2.10	Junction 1 SB Merge - Option 2	Mainline			Reduced Radius on Mainline	A radius of 720m has been implemented on the mainline. This is one step below the desirable minimum.					
HGN011	HIGHWAYS	Departure from standards	DMRB CD-109 CD-127 LINK DESIGN	4.12	Junction 1 SB Merge - Option 2	Mainline			Transition Curves	Transition curves are not provided in the design.					
HGN012	HIGHWAYS	Departure from standards	DMRB CD-109 CD-127 LINK DESIGN	2.10	Junction 1 SB Merge - Option 2	Mainline SSD			Reduced SSD on Mainline	The mainline has a minimum SSD of 190m. The required SSD is 295m.					
HGN013	HIGHWAYS	Departure from standards	DMRB CD-109 CD-127 LINK DESIGN	2.1/ 2.30	Junction 1 SB Merge - Option 2	SB Merge - Mainline			Cross Section	The lane 2 width is 3.65m in the D4M cross section.  The hard strip remains beyond the the length of the nose for approximately 330m and does not transition over the nose.					
HGN014	HIGHWAYS	Departure from standards	DMRB CD-122 DIVERGE DESIGN	3.26	Junction 1 - NB Diverge Option1	NB Diverge			Downstream Lane Reduction	The required layout based on a mainline traffic flow of 5820 required 4 lanes downstream.	This is an existing layout and has not been amended.				
HGN015	HIGHWAYS	Departure from standards	DMRB CD-122 DIVERGE DESIGN	3.31	Junction 1 - NB Diverge Option1	NB Diverge			Nose Ratio	Nose ratio is 1:13, which is a departure. The required is 1:15.	This is an existing nose ratio alignment.				
HGN016	HIGHWAYS	Departure from standards	DMRB CD-122 DIVERGE DESIGN	5.8	Junction 1 - NB Diverge Option1	NB Diverge			Near Straight	No near straight has been provided beyond the nose.	This is an existing arrangement				
HGN017	HIGHWAYS	Relaxation from standards	DMRB CD-122 DIVERGE DESIGN	5.17	Junction 1 - NB Diverge Option1	NB Diverge			NB Connector Road	A cross section of 9.3m has been provided, but a MG2E is required with a hard shoulder.	This is an existing connector road.				
HGN018	HIGHWAYS	Departure from standards	DMRB CD-122 DIVERGE DESIGN	5.14	Junction 1 - NB Diverge Option1	NB Connector Road			Connector Road SSD	51m SSD has been implemented but 160m is required.	This is an existing connector road.				
HGN019	HIGHWAYS	Departure from standards	DMRB CD-122 DIVERGE DESIGN	4.2	Junction 1 - NB Diverge Option1	NB Mainline			Weaving Length	Approximately 1.6km is provided for the weaving length. 3Km is required.	This is an existing arrangement.				
HGN020	HIGHWAYS	Relaxation from standards	DMRB CD-109 CD-127 LINK DESIGN	2.10	Junction 1 - NB Diverge Option1	NB Diverge			Diverge Lane SSD	An SSD of 270m is provided for the diverge lane, 295m is required. This is a relaxation against table 3.5.	This is an existing junction.				
HGN021	HIGHWAYS	Departure from standards	DMRB CD-122 DIVERGE DESIGN	5.14	Junction 1 - NB Diverge Option 2	NB Connector Road			Connector Road SSD	51m SSD has been implemented but 160m is required.	This is an existing connector road.				
HGN022	HIGHWAYS	Departure from standards	DMRB CD-122 DIVERGE DESIGN	4.2	Junction 1 - NB Diverge Option 2	NB Mainline			Weaving Length	Approximately 1.6km is provided for the weaving length. 3Km is required.	This is an existing arrangement.				
HGN023	HIGHWAYS	Departure from standards	DMRB CD-122 DIVERGE DESIGN	3.26	Junction 1 - NB Diverge Option 2	NB Diverge			Downstream Lane Reduction	The required layout based on a mainline traffic flow of 5820 required 4 lanes downstream.	This is an existing layout and has not been amended.				
HGN024	HIGHWAYS	Relaxation from standards	DMRB CD-109 CD-127 LINK DESIGN	2.10	Junction 1 - NB Diverge Option 2	NB Diverge			Reduced SSD	An SSD of 241m is provided for the diverge lane, 295m is required. This is a relaxation against table 3.5.					