

Recommended BORR North/Central Interchanges Chris Mitchell Planning and Development Manager





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Options Assessment Process

	IDENTIFY OPTIONS
Stage 1	SHORTLIST OPTIONS Review the options against fatal flaw criteria, including: Project objectives Engineering, environmental, social and economic constraints Options that do not meet the fatal flaw criteria are eliminated, leaving a shortlist of viable options
Stage 2	DEVELOP ASSESSMENT CRITERIA The criteria cover the range of relevant issues, including technical, environmental, social and economic factors. MEIGHT ASSESSMENT CRITERIA Criteria are weighted by the project team in consultation with the Main Roads Project Advisors. The weightings at the overall criteria level are equal across all criteria. ANALYSE OPTIONS Analyse each option against the assessment criteria, using data and information provided by the anorcepitiet considire members of the
	information provided by the appropriate specialist members of the project team The analysis for some criteria is based on quantitative assessments, whilst others require a qualitative assessment undertaken through a workshop with the appropriate team members. MULTI-CRITERIA ANALYSIS The criteria weightings are overlaid over the analysis of the options using a multi-criteria analysis approach
Stage 3	RECOMMEND PREFERRED OPTION The Project Steering Committee reviews the outcomes and decides whether to endorse the preferred option for each interchange



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Stage 1 Shortlist Criteria

- Suitability and all movements provided
- Engineering unsafe / not feasible or appropriate
- Economic cost prohibitive (e.g. systems interchange)



Stage 2 – Multi Criteria Assessment

- Assessment developed to integrate social, economic and environmental considerations
- Criteria based on project objectives, IA objectives and IPT objectives
- Twenty eight sub-criteria developed based on likely points of differences
- Sub-criteria weighted by Main Roads and BORR IPT team
- Additive weighting method used to rank each option





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Northern Interchange (Paris Road – Clifton Road)





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BORR Northern Interchange

- Key Objectives •
 - Free flow access to Bunbury
 - Paris Road to be connected to Clifton Road
 - Not preclude the future Perth to Bunbury Fast Rail
- Interchange treated as split interchange between Paris Road/Clifton • Road and Raymond Road











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Paris – Clifton Option 3 Preferred







Northern Interchange – Recommended Option

- Recommended interchange option is Option 3 (loop with Paris-Clifton connected)
- Achieves free flow bypass
- Maintains connectivity between Paris Rd and Clifton Rd and also from Paris Rd to Forrest Highway
- Minimises impact to remnant vegetation and has the least fragmentation to potential western ringtail possum habitat, Banksia Woodland TEC and potential black cockatoo habitat
- Achieves the best network performance out of the three options





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Raymond Road Interchange

Raymond Interchange Option 1 Dumbbell Preferred



Raymond Option 2 Modified Dumbbell





Raymond Rd Interchange – Recommended Option

- Recommended option is the Dumbbell Interchange (Option 1)
- Minimal points of difference between two options
- Dumbbell option suits the anticipated dominant traffic movements
- Similar social impacts
- Marginally lower overall project costs (construction, WOLCC & land acquisition)





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Waterloo Interchange (future industrial precinct)

Waterloo Option 1







RINGROAD

ST HELENA ROAD

HARRIS ROAD



Waterloo Option 2

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Waterloo Option 3 Preferred





Waterloo Interchange – Recommended Option

- Recommended interchange is the Grade Separated Roundabout (Option 3)
- Minor points of differences between the three options
- Suits the dominant traffic movements
- Safe interchange form as angle of conflicts are controlled
- Larger radii than dumbbell interchange allows for better for operational suitability for freight vehicles





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Willinge Drive (Port Access Road) Interchange

Willinge Option 1





Willinge Option 2





Willinge Option 3 Preferred







Willinge Interchange – Recommended Option

- Recommended interchange option is the Grade Separated Roundabout Option (Option 3)
- Safe interchange form as angle of conflicts are controlled
- Larger radii than dumbbell interchange allows for better for operational suitability for freight vehicles
- Traffic performance comparable with other interchange options