# **Jacobs**

### **Meeting Minutes**

Level 8, 1 Grey Street, PO Box 10-283 Wellington, 6143 New Zealand T +64 4 473 4265 F +64 4 473 3369 www.jacobs.com

Subject Weigh Right MCA Workshop

**Project** Weigh Right

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Minutes

Prepared by Kate McNab Phone No. 04 978 9508

**Location** Jacobs Wellington, Kea Room **Date/Time** January 28, 2020

Participants Simon Ingamells, Senior Civil Engineer (Jacobs), Louis Bargh, Senior Civil Engineer (Jacobs),

Andrew Henderson, Principal Planner (Jacobs), Errol Ritson, Senior Safety Engineer (NZ Transport Agency), Steve Donaldson, Senior Property Consultant (The Property Group), Graham Taylor, Principal Project Manager (NZ Transport Agency), Bruce Walton, Regional Transport Lead (Jacobs), Ashley Rideout, Project Manager (Jacobs), Kate McNab, Graduate Planner (Jacobs), Deepak Rama, Principal Transport Planner (NZ Transport Agency),

Jonathan Gulland, Senior Property Acquisition Manager (NZ Transport Agency), Ulvi Salayev,

Project Delivery Manager (NZ Transport Agency)

Facilitator Robert Schofield, Principal Planner (Boffa Miskell)

#### Notes

**1** 8.30am – 10.30am

Introduction to the Weigh Right Programme

- Objectives
- Vehicle Screening Systems
- Commercial Vehicle Safety Centres

Introduction to Multi-Criteria Analysis

- MCAs are a tool used to select the best site out of multiple options, and to demonstrate to Council and the public the rationale for site selection
- It is better for MCAs to be simple rather than complicated. They must be easily understood by everyone. If there is too many criteria or it is too technical, an MCA is less useful
- MCAs can be challenged where assumptions are inconsistently applied or unclear, and where weightings are not applied objectively
- MCAs can also be used to inform and drive the mitigation of any adverse environmental and social effects

Introduction to the Shortlisted Site Options

Break for Morning Tea



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#### 2 10.30am – 11.30am

#### **Design Requirements**

Louis Bargh of Jacobs presented his assessment, emphasizing his focus on technical design requirements rather than cost considerations. His assessment considered the following criteria:

- VSS Operation (Maximum Gradient and Minimum Sight Distance)
- VSS Implementation (Conflict with Existing Services)
- CVSC Route (Distance of Diversion and Complexity of Navigation)
- CVSC Feasibility (Size of available land, difficulty of providing access point, interface with strategic assets, flood risk)

#### **Changes to Scores:**

	Site H		Site I		Site J(2)		Site L	
VSS Operation	1	1	1	1	1	1	1	1
VSS Implementation	-2	0	-2	0	-2	0	-2	0
CVSC Route	-1	3	1	2	2	1	0	0
CVSC Feasibility	-2	-2	2	2	2	2	-3	-3

There was some discussion around the maximum gradient for the VSS. The VSS has never been tested in conditions outside of the guidance recommendations. It would affect the accuracy of the screening, but by how much is not known. Nor are the implications for police enforcement known.

There was also some discussion about the Mackays Crossing underpass, and whether two-way truck movements are possible. Given the carriageway width of a minimum of 3.2 metres per lane, it was decided that two-way movements under the underpass is possible for the majority of heavy motor vehicles.

Changes to VSS Implementation scores: Primary reason for the initial score of negative 2 was the scoring criteria, "Significant interfaces with other schemes", particularly interface with the Transmission Gully for construction and operations within their extent of works. This score was discussed with workshop participants and the view from NZTA and other participants was that this type of interface is routine, readily able to be worked through and also more of a cost component than a technical component. It was agreed to remove this as a scoring criteria, with the result that the score was increased to zero. Note it was not scored higher as some challenges remain particularly some interface with First Gas, KiwiRail and power, as well as overhead structures being required.

CVSC Route, Site H - Original scoring was on the basis (as discussed previously with NZTA) that vehicles travelling northbound would be diverted to the south to avoid two-way passage of heavy vehicles through the Mackays underpass. With reference to the commentary under Site I, during the workshop it was agreed that that this diversion was not necessary. Maximum diversion reduced from 4.1 km to 0.8 km and base score changed from minus 1 to 3 based on scoring criteria.



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CVSC Route, Site I - Original scoring was on the basis that is was not desirable to have two-way passage of heavy vehicles through the Mackays underpass; one point had been deducted because this was more difficult to avoid in this scenario. A further point had been deducted due to the additional movements and constraint of the existing rail level crossing. The base score before these deductions was three due to the short diversion and simple navigation. The suitability of the underpass for two-way heavy vehicles was discussed at the workshop and it was agreed that this was in fact less of a concern due to widths being reasonable, and the assumed total 8-10 vehicles per hour (not all of which would use the underpass) making these incidences infrequent in any case. This was therefore removed as a scoring criterion for all options. In this instance the score increases from 1 to 2 due to the issue of the level crossing remaining.

CVSC Route, Site J(2) - Discussed and on reflection, and based on the revised assumptions for Site H, agreed that the navigation for this option is not significantly better than the other options and does not warrant an increase from the base score of one.

#### **3** 11.30am – 12.30pm

#### **Cost to Construct**

Simon Ingamells presented his assessment, emphasizing his focus on cost considerations. It was noticed that ease of access had been assessed by Louis and by Errol, so that criteria was deleted. It was also decided to delete Simon's assessment of land purchase, as that had also been covered by Jonathan and Steve.

#### **Changes to Scores:**

	Site H		Site I		Site J(2)		Site L	
New structures	-2	-2	3	3	3	3	3	3
Changes to existing roads	-2	-2	3	1	3	2	3	2
Earthworks	-2	-2	3	-3	3	3	3	-3
Contaminated soil Remediation	3	3	-2	-2	1	1	1	1
Service Diversion	-1	-1	0	0	0	0	-1	-2

- 1) Score change for Site I "Changes to Existing Roads" from 3 to 1 due to need of improvements to road (e.g. physical islands to direct traffic), some changes to railway level crossing to accommodate two-way truck movements.
- 2) Score change for Site I "Earthworks Required" from 3 to -3 due to records of up to 5m of soft material in the area that will require removal.
- 3) Score change for Site J(2) "Changes to Existing Roads" from 3 to 2 to be more consistent with the score for Site I as changes to existing roads are similar.
- 4) Score change for Site L "Changes to Existing Roads" from 3 to 2 score was changed as it was determined that some work would be required on State Highway 1 to provide for the access.



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- 5) Score change for Site L "Earthworks Required" from 3 to -3 due to KCDC contours confirming up to 7m level drop across the site, needing large earthworks to create a flat site.
- 6) Score change for Site L "Major Service Diversion" from -1 to -2 due to gas transmission running parallel to SH1 at access point, will be specific engineering requirements to bridge over.

#### 4 12.30pm – 1.30pm

Safety

Errol Ritson presented his assessment.

#### **Changes to Scores:**

	Site H		Site I		Site J(2)		Site L	
AADT and heavy vehicle %	3	0	3	0	3	0	3	0
Crash History	3	-1	3	-1	3	-1	3	-1
Ease of Access from Highway	1	1	-3	-3	2	2	-1	-1
Vulnerable Users	-3	-3	-1	-1	-2	-1	-1	-2
Environment	1	1	-1	-1	2	2	2	2
Geometry	2	2	-1	-1	2	2	2	-1
Risk Factors	-3	-2	-3	-3	-1	-1	-2	-2

As the AADT and percentage of heavy vehicles is the same for all the sites, it was decided that it was more appropriate to score this category as neutral so as not to skew the scoring. The use of AADT as a criteria was questioned, as the number of vehicle movements is a contextual factor that is only relevant insofar as it interacts with the road environment and proposed access. Overall, it was decided that it is a relevant figure to consider, and that the best course of action is to keep the criteria to show that it has been considered, but to score all sites as 0 so that the results are not affected by that criteria.

It was agreed that any crash history is negative, and that the best possible score for that criteria is 0.

The proposed location of the access at Site L relative to the Paekākāriki Interchange was looked at more closely. Minimum distances would not be achieved, so the score for Geometry was lowered to reflect this.

The vulnerable users scores for Sites J(2) and L were swapped as it was determined that there is likely to be less vulnerable users near site J(2) than Site L.

The Risk Factors score for Site H was raised relative to Site I as it is left-turn in only. Break for Lunch

5 2pm – 3pm Property Purchase





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#### **Changes to Scores:**

	Site H		Site I		Site J(2)		Site L	
Title raised/Gazettal	3	3	3	3	3	3	3	3
Māori Reservation	3	3	3	3	3	3	3	3
Māori Freehold	3	3	3	3	3	3	3	3
Crown land	2	2	2	2	3	3	3	3
Encumbrances and notations	-1	-1	-2	-2	-1	-1	-1	-1
Number of owners / interest holders	3	-1	-1	-2	3	2	3	3
Government or private	3	3	3	3	3	3	3	3
Owner type	0	0	0	0	3	3	3	3
Motivation	-1	-1	-1	-3	3	3	3	3
Hardship	-2	-2	-2	-2	3	3	3	3
History and Context	0	0	-2	-2	-1	3	-2	3
Political or Ministerial approval	-3	-2	-3	-3	3	3	3	3
Owner representation	0	0	0	0	3	3	3	3
Agreement of other interest holders	-1	-1	-2	-2	-1	-1	-2	-2
Multiple decision makers	-2	-2	-2	-2	2	2	2	2
Compulsory acquisition (PWA)	-3	-3	-3	-3	3	3	3	3
Negotiated acquisition	0	0	0	0	3	3	3	3
Land value	-2	-2	-2	-2	-1	-1	-2	-2
Administrators costs related to acquisition	1	1	-1	-1	3	3	3	3
Crown costs to acquire	-1	-1	-1	-1	3	3	3	3

The scores for Number of owners and interest holders were changed as follows: Site H – Score reduced to reflect the involvement of the Ministry of Conservation, iwi and recreational interests.

Site I – Score reduced to reflect the same interests as for Site H, but with the additional GWRC management layer.





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Site J(2) reduced to reflect the Transmission Gully project team within NZTA as an interest holder to consider.

Due to the location and characteristics of Site I and Site H, the Motivation score for Site I was reduced. It is highly unlikely that the Minister for Conservation would be motivated to sell Site I to the NZ Transport Agency.

The History and Context scores for Sites J(2) and L were increased as both of the sites are owned by the Crown and already gazetted for Roading Purposes as part of Transmission Gully.

The Political or Ministerial approval score for Site H was increased in order to be more consistent with the score for Site I. It was decided that, due to the locations and characteristics of the sites, while Site H does require ministerial approval, approval would be more likely to be forthcoming, and easier to achieve, for Site H than for Site I.

#### Break for Afternoon Tea

**6** 3pm – 3.30pm

Planning

#### **Changes to Scores:**

	Site H		Site I		Site J(2)		Site L	
Coastal Environment	2	2	-1	-1	-1	-1	-1	-1
Waterbody Matters	2	2	-1	-1	-1	-1	-2	-2
Flora / Fauna	1	1	-1	-1	-1	-1	-2	-2
Cultural Values	1	1	-1	-1	-1	-1	-2	-2
Natural Hazards	-1	-1	1	1	1	1	-1	-1
Amenity	-3	-3	-2	-2	3	3	-1	-1
Regional Consenting – Operational Stormwater	0	0	-1	-1	0	0	0	0
Regional Consenting – Operational Wastewater	0	0	0	0	0	0	0	0
Regional Consenting – Operational Greywater	0	0	0	0	0	0	0	0
Regional Consenting – Earthworks	0	0	0	0	0	0	0	0
Hazards- Gas Main	-1	-1	0	0	0	0	0	-1
KCDC Policy Framework	-1	-1	-2	-2	-1	-1	-1	-1

The gas main being located across Site L had not been picked up in Andrew's assessment. The score for Site L was therefore lowered to reflect the fact that approval from FirstGas would be required.



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7	Review of Results
	All experts agreed that overall, Site J(2) has come out on top.
8	Scenarios for Sensitivity Testing
	The following scenarios and weightings to be applied to the results were agreed by the group.
	Baseline Weightings:  20% Design Requirements  20% Cost  20% Property Purchase  20% Safety  20% Planning  Scenario 1 (Emphasis on Safety and Environmental Considerations) Weightings:  20% Design Requirements  5% Cost  10% Property Purchase  35% Safety
	30% Planning  Scenario 2 (Emphasis on Safety and Design Requirements) Weightings:
	30% Design Requirements 5% Cost 10% Property Purchase 35% Safety 20% Planning
	Scenario 3 (Emphasis on Cost and land Purchase) Weightings:
	10% Design Requirements 35% Cost 30% Property Purchase 20% Safety 5% Planning
	Scenario 4 (Emphasis on Cost and land Purchase) Weightings:
	5% Design Requirements 35% Cost 30% Property Purchase 20% Safety 10% Planning



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It was agreed that Ashley Rideout would finish the work on the spreadsheet and produce a sheet for each of the scenarios.