

SECTOR 3 NOTH OF MAZENGARB, WEST OF EW

NZS 6806 – Assessment matrix

Impact key	Potential effects of noise mitigation option
+++	significant positive effects
++	moderate positive effects
+	minor positive effects
0	insignificant (no effects)
-	minor adverse effects
--	moderate adverse effects
---	significant adverse effects

A brief description of the basis for each rating should be added in the spaces below the ratings.

Assessment Criteria	Responsible	Option 1	Option 2	Issues/Risks
Compliance with NZS 6806 noise criteria, and requirement for building-modification measures	Acoustics	+++	+	
		All in Cat A	6 in Cat A, 2 in Cat B	
Effect of changes to the existing noise environment	Acoustics	-	--	
		Average increase of 4 dB, highest 6 dB	7 dB average increase, highest 9 dB	
Achievement of the NZS 6806 structural mitigation performance standards	Acoustics	++	-	
		4 dB average structural mitigation	2 dB average structural mitigation	
Value for money, including maintenance costs and consideration of benefit cost analysis	Acoustics	++	0	
		BCR 1.3	BCR 1.9	
Difference in cost compared to Transit's	Acoustics	---	N/A	

Assessment Criteria	Responsible	Option 1	Option 2	Issues/Risks
Guidelines (criteria for NZTA internal monitoring purposes)		197% compared with Transit Guidelines		
Compliance with relevant safety standards and guidelines	Roading	0	0	
	Structures	0	0	
Constructability/technical feasibility	Roading	0	0	
	Structures	-1	0	
	Construction	0	0	
Availability of sufficient land for construction and maintenance and the extent to which NZTA would need to acquire land, or interests in land	NZTA	0	0	
Potential effects on known heritage or cultural values	Cultural	?	?	No cultural rep present
The extent to which the mitigation option promotes integration and establishes visual coherence and continuity in form, scale and appearance of structures and landscape proposals along the route	Visual / landscape	-2	-1	
Road users' views to the surrounding landscape and key features/ locations in particular	Visual / landscape	-1	0	

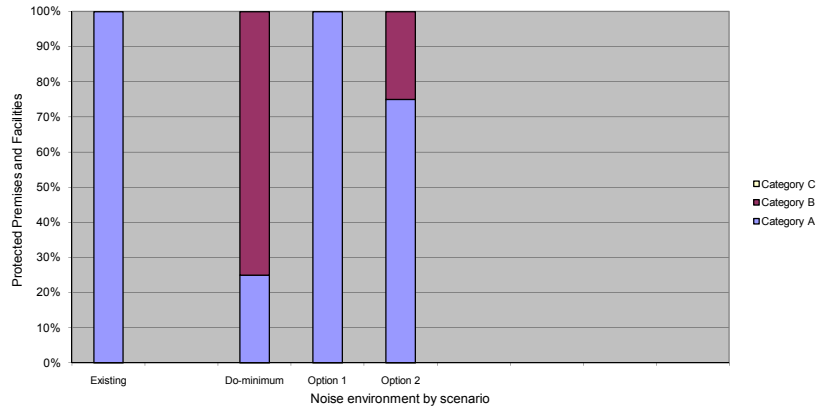
Assessment Criteria	Responsible	Option 1	Option 2	Issues/Risks
Maintenance or enhancement of visual amenity for surrounding residents	Visual / landscape	-1	0	
Utilisation of materials that reflect the character of the location	Visual / landscape	0	0	
Maintenance or enhancement of the convenience and attractiveness of pedestrian and cycle networks	Urban design	-1	0	
Impacts (land take, amenity and usability) on community facilities (reserve, school, playground, playing field, etc)	Urban design	0	0	Long wall could impact on mountain bike park but not a big concern.
Public safety and security	Urban design	-1	0	
Potential effects on areas of significant indigenous vegetation and significant habitats of indigenous fauna	Ecology	0	0	
Potential flooding effects	Hydrology	-1	0	
Resource efficiency (including avoidance of waste)	Sustainability	-1	0	More materials required for Option1.

Final comment : Option 1 preferred acoustic option. Benefits outweigh other (non-acoustic) considerations.

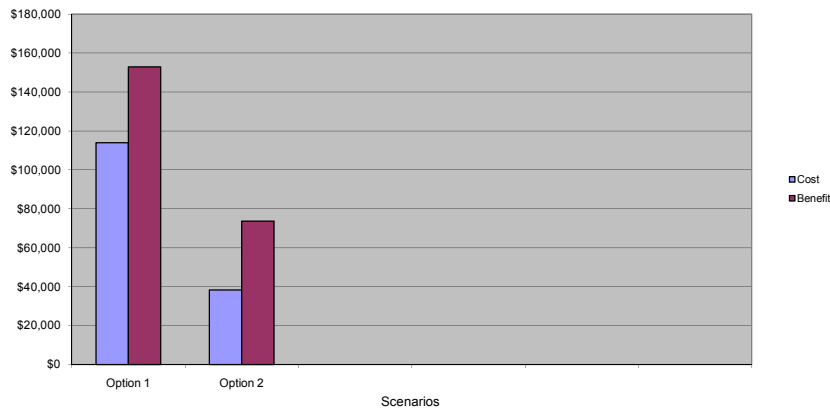
Project				
M2PP				
Sector 3 North of Mazengarb West of EW				
Protected Premises and Facilities				
	Existing	Do-minimum	Option 1	Option 2
Category A	8	2	8	6
Category B	0	6	0	2
Category C	0	0	0	0
Total	8	8	8	8
Benefit-Cost Ratio				
			Option 1	Option 2
	Cost		\$114,000	\$38,400
	Benefit		\$152,902	\$73,651
	BCR		1.34	1.92
	Transit		197%	0%
	Structural		4.4 dB	2.4 dB

Graphs

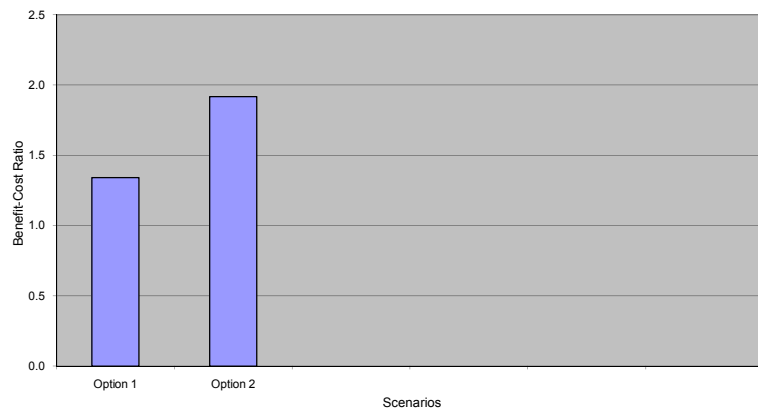
Sector 3 North of Mazengarb West of EW



Sector 3 North of Mazengarb West of EW



Sector 3 North of Mazengarb West of EW



Project: M2PP
Area: Sector 3 North of Mazengarb West o
AADT: 2,000 to 75,000 vehicles per day
 More than 75,000 vehicles per day
Transit: (option to comply with Transit's Guidelines)

Protected Premises and Facilities		Reformat	New	Altered	Preferred Mitigation Option	
Street address	Floor	New or Altered	Existing L _{Aeq(24h)} dB	Do-minimum L _{Aeq(24h)} dB	Option 1 L _{Aeq(24h)} dB	Option 2 L _{Aeq(24h)} dB
Mazengarb Rd 323	2. Floor	New	45	58	54	57
Mazengarb Rd 333	1. Floor	New	45	58	53	56
Mazengarb Rd 339A	1. Floor	New	45	60	56	58
Mazengarb Rd 339B	1. Floor	New	45	60	54	55
Mazengarb Rd 339C	1. Floor	New	45	62	56	57
Mazengarb Rd 345	1. Floor	New	45	57	54	57
Ratanui Rd 60A	1. Floor	New	45	59	55	59
Ratanui Rd 60B	1. Floor	New	45	56	52	55

Noise level
dB LAeq(24h)

- ≤ 57 Category A
- 57 < ≤ 64 Category B
- 64 < Category C



Legend

- Cadastral bdy
- Traffic line
- Road surface
- Bridge
- Bridge barrier
- Bund crown
- Noise barrier

Initials: SW
Date: 18/8/2011
Calculation No: 401

A3 Scale 1:2500
0 12.5 25 50 75 100 m

MARSHALL DAY
Acoustics

Mackays to Peka Peka

MACKAYS TO PEKA PEKA EXPRESSWAY
Sector 3
North of Mazengarb Road, west of Expressway
Do-minimum Scenario

NOISE PREDICTION
SCENARIOS
SHEET 41 OF 75

Document Set:
M2PP-AEE-DWG

Drawing No.:
EN-NV-060

Noise level
dB LAeq(24h)

- ≤ 57 Category A
- 57 < ≤ 64 Category B
- 64 < Category C



Legend

- Cadastral bdy
- Traffic line
- Road surface
- Bridge
- Bridge barrier
- Bund crown
- Noise barrier



Initials: SW
Date: 18/8/2011
Calculation No: 402

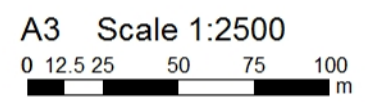


**MACKAYS TO PEKA PEKA EXPRESSWAY
Sector 3
North of Mazengarb Road, west of Expressway
Mitigation Option 1**

NOISE PREDICTION
SCENARIOS
SHEET 42 OF 75

Document Set:
M2PP-AEE-DWG

Drawing No.:
EN-NV-061



Noise level
dB LAeq(24h)

- ≤ 57 Category A
- 57 < ≤ 64 Category B
- 64 < Category C



Initials: SW
Date: 18/8/2011
Calculation No: 403

MARSHALL DAY
Acoustics

Mackays to Peka Peka

**MACKAYS TO PEKA PEKA EXPRESSWAY
Sector 3**

**North of Mazengarb Road, west of Expressway
Mitigation Option 2 (Noise Guidelines)**

NOISE PREDICTION
SCENARIOS
SHEET 43 OF 75

Document Set:
M2PP-AEE-DWG

Drawing No.:
EN-NV-062

A3 Scale 1:2500
0 12.5 25 50 75 100 m