

Nelson Arterial Traffic Study

Nelson Marlborough District health Board's Health Impact Assessment

October 2009 – November 2010

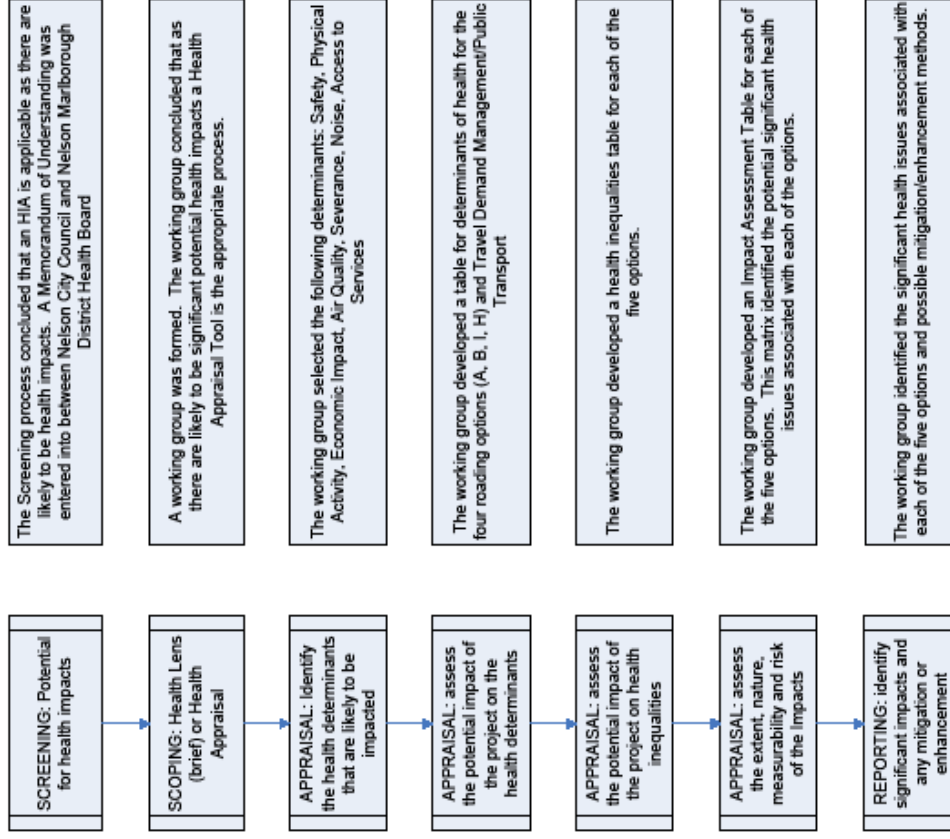
- The Nelson Marlborough District Health Board's Health Impact Assessment Team consists of the following active members:
- **Richard Butler: Nutrition Physical Activity Programme Manager**
- **Geoff Cameron: Senior Health Protection Officer**
- **Colleen Kem: Health Protection Officer Maori specific**
- **Dr Ed Kiddle: Medical Officer of Health**
- **Dr Al Norrish: Public Health Analyst**
- **Dr Jill Sherwood: Public Health Medical Specialist**
- **Les Milligan: Health Promotion Co-ordinator**

Memorandum of Understanding between Nelson Marlborough District Health Board and Nelson City Council: 25/10/2009

- The purpose of the engagement framework, as contained in this Memorandum of Understanding, is to ensure that the HIA is undertaken as a collaborative partnership between NCC and NMDHB.
- **Strategy Statement**
- Both NMDHB and NCC are focused on the wellbeing of the residents in their communities.
- **Principles**
- NCC and NMDHB will observe the following principles as foundations of the relationship:
 - *Integrity - Communication - Information - Enablement - Co-operation - Accountability - Respect - Innovation - Confidentiality –Review*
- While this MOU is for the duration of the Corridor Study it is envisaged that this project will create a platform for further collaborative work.

PROCESS FOR UNDERTAKING THE HEALTH IMPACT ASSESSMENT

Southern Corridor Health Impact Assessment Process



NELSON ARTERIAL TRAFFIC STUDY

In 2010, NCC commissioned a study with the objective of determining the best transport configuration between Annesbrook and the QEII / Haven Rd roundabouts that would improve the city as a whole in the long term.

NCC has engaged a team of consultants to undertake the ATS. The consultancy team, along with Council staff and a New Zealand Transport Agency (NZTA) representative, form the Decision Making Team for the study.

NMDHB is involved in the decision making team meetings, but has no vote thereby maintaining the independence of the HIA.

The ATS is being undertaken in four stages:

- 1 Evaluation of existing arterial traffic routes
- 2 Selection of best arterial route options
- 3 Evaluation of best arterial route options
- 4 Determination of preferred arterial transport configuration and comparison with existing arterial traffic routes

As part of the ATS, a Social Impact Assessment (SIA) was commissioned that parallels the HIA.

Nelson Marlborough District Health Board (NMDHB) is undertaking an **independent Health Impact Assessment (HIA)** on the Arterial Traffic Study (ATS) addressing the following:

- Positive health effects can be enhanced
- Negative health effects can be diminished or removed
- Health inequalities can be reduced

Community groups consulted (55)

24 hour Emergency Centre	Maori health providers
Automobile Association	Motel Association
Bicycle Nelson Bays	National Council for Women
Boathouse Society	Nellie Nightingale Library
Fire Service	Nelson Airport
Friends of Nelson Haven	Nelson Airport
Grey Power	Nelson City Council
Health providers	Nelson City Council - Community Policy and Planning
Heritage Advisory Group	Nelson City Council - Transport and Safety Co-ordinator
Hospital and St John Ambulance	Nelson Community and Whanau Group
Hospital and St John Ambulance	Nelson Cycle Trail Trust
Latitude Nelson	Nelson Forests Ltd
Local Iwi	Nelson Marlborough DHB
Nelson Multi-Cultural Centre	

Community groups consulted (55)

Nelson Multi-Cultural Centre	SBL Group
Nelson Region Economic Development Agency	Sustainable Transport Futures
Nelson Residents Association	Tahunanui Business Association
Nelson Tasman Chamber of Commerce	Tahunanui Community Centre
Nelson Tasman Civil Defence Emergency Management Group	Tasman District Council
Nelson Tasman Living Streets	Tasman Regional Sports Trust
Nelson Youth Council	Victory Community and Health Centre
Nelsust	Victory Residents Association
NZ Transport Agency	Waimea Road Business and Residents Association
Police	Walk Nelson Tasman
Port Nelson	Waterfront Association
Positive Aging Forum	Waterfront Redevelopment 2000 Trust
Road Transport Forum	Wheelchair users
	Y Kids

HEALTH DETERMINANTS

The following table describes the seven determinants used for this HIA:

Determinant	Description
Community Severance	Studies have demonstrated the links between strong social networks and health. Busy roads may disrupt these networks and sever communities. Widespread car use also results in fewer people interacting on the streets in the ways that pedestrians and cyclists are able to.
Safety	In 2006 23% of the deaths by injury in New Zealand were the result of road crashes. An analysis of the total cost of road injuries for 2008, which included treatment and rehabilitation, time off work and the human cost, totalled \$2.195 billion or 22.7% of the total cost of injuries. Perceptions of safety also have a significant bearing on people's behaviour.
Economic Impact	Where improved infrastructure such as roading supports local economic development, this may positively influence the health of the population through increased employment opportunity and income levels. However, should the cost of construction lead to significant increases in rates and rentals, then health may be adversely affected through reduced income available for health care as well as good diet, recreational physical activity, housing and other factors which determine health.

HEALTH DETERMINANTS

The following table describes the seven determinants used for this HIA:

Noise	<p>There are a number of effects on health and wellbeing resulting from noise including interference with speech communication (masking), sleep disturbance, physiological effects (heart rate, blood pressure, cardiovascular disease), mental health effects, the effects of noise on performance and annoyance</p>
Physical Activity	<p>The current advice is to achieve a minimum of 30 minutes moderate activity on at least five days of the week. Adults who are physically active have reduced risk of premature death and reduced risk of developing major chronic diseases such as coronary heart disease, stroke, diabetes and cancers.</p>
Access to Services	<p>Local road configuration may affect ease of physical access to health service facilities by personal vehicles, public transport, walking or emergency vehicles.</p>
Air Quality	<p>Vehicle engines produce a number of air pollutants that may pose risks to your health either as acute effects or through chronic exposure. These include Nitrogen oxides, Carbon monoxide, Volatile organic compounds (VOCs), Particulates (PM₁₀ and PM_{2.5}) and Ground-level ozone.</p>

Nelson Arterial Traffic Study References

Report/Document	Author/s	Date
Arterial Traffic Study: Contract for Professional Services: Contract 3222	Nelson City Council	October 2009
Arterial Traffic Study: Evaluation of Existing Arterial Traffic Routes: Stage 1 Report: Draft	MWH	March 2010
Arterial Traffic Study: Evaluation of Existing Arterial Traffic Routes: Stage 1 Report: Final Draft	MWH	April 2010
Arterial Traffic Study: Evaluation of Existing Arterial Traffic Routes: Stage 1B Report: Draft	MWH	April 2010
Arterial Traffic Study: Evaluation of Existing Arterial Traffic Routes: Stage 1 Report: Final	MWH	April 2010
Arterial Traffic Study: Evaluation of Existing Arterial Traffic Routes: Stage 1B Report: Draft for Comment	MWH	May 2010
Arterial Traffic Study: Evaluation of Existing Arterial Traffic Routes: Stage 1 Report: Final	MWH	April 2010
Arterial Traffic Study: Evaluation of Existing Arterial Traffic Routes: Stage 1B Report: Draft for comment	MWH	May 2010
Arterial Traffic Study: Evaluation of Existing Arterial Traffic Routes: Stage 1B Report: Final		April 2010

Nelson Arterial Traffic Study References

Report/Document	Author/s	Date
Arterial Traffic Study: Selection of Best Arterial Route Options: Stage 2 Report: Draft for comment	MWH	April 2010
Arterial Traffic Study: Selection of Best Arterial Route Options: Stage 2 Report: Final	MWH	May 2010
Arterial Traffic Study Reports, 1 and 2, released to the public(Overview)	Nelson City Council	10 June 2010
Arterial Traffic Study: Evaluation of Existing Arterial Traffic Routes: Stage 1B Report:	MWH	
Arterial Traffic Trends and Modelling of Future Traffic Demands	Nelson City Council	2010
Nelson Arterial Traffic Study: Long List of Options	Nelson City Council	2010
Long List of Options: Stage 3 Options	Nelson City Council	2010
Nelson Arterial Study: Preliminary Assessment to Develop a Base Scenario for Air Quality: Draft	MWH	March 2010
Nelson Arterial Study: Assessment of Noise Effects Existing Road Network: Draft	Malcolm Hunt Associates: Noise and Environmental Consultants	February 2010

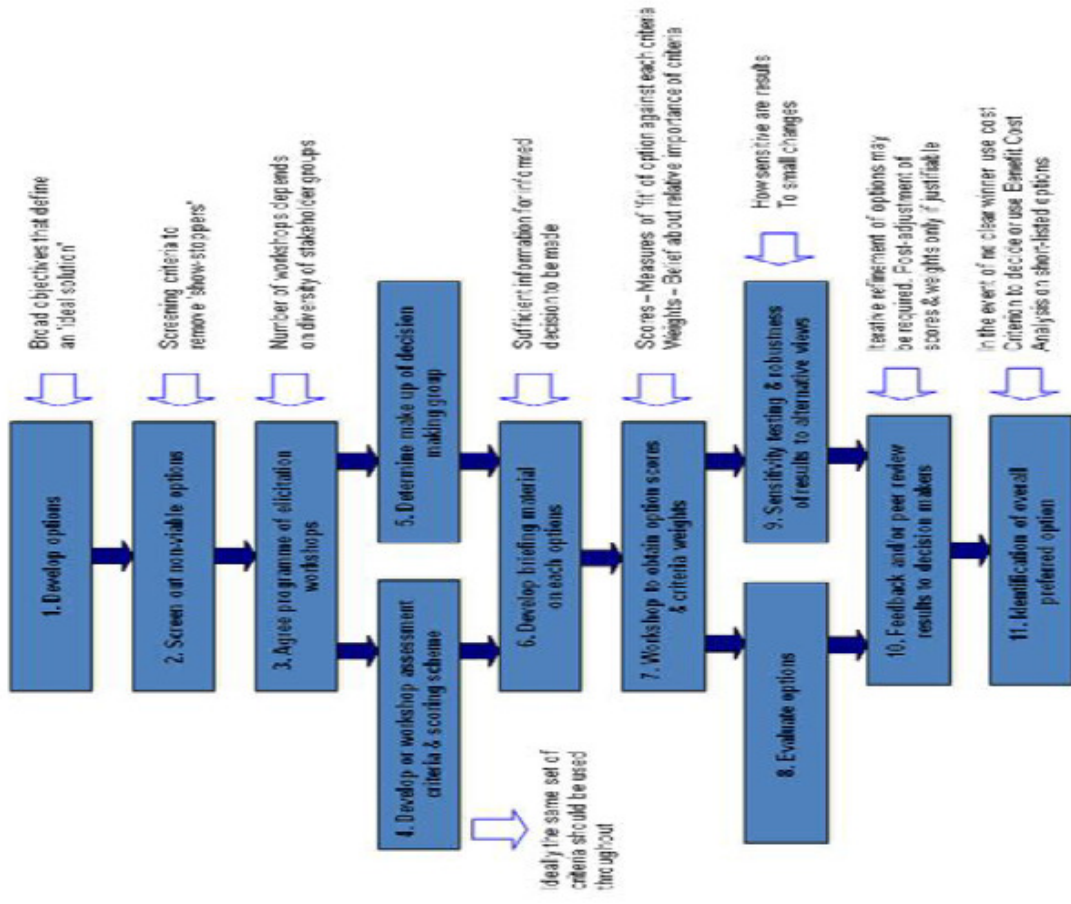
Nelson Arterial Traffic Study References

Report/Document	Author/s	Date
Nelson Arterial Traffic Study Stage 3: Assessment of Impacts of Four Preferred Options on Heritage Values	Amanda Young	July 2010
Nelson Arterial Traffic Study: TRACKS Traffic Modelling Results	MWH	August 2010
Nelson Arterial Traffic Study: Network Performance Summary Statistics	MWH	August 2010
Nelson Arterial Traffic Study: Project Estimates	MWH	August 2010
Arterial Traffic Study: Evaluation of Best Arterial Route Options: Draft for Comment	MWH	September 2010
Arterial Traffic Study: Evaluation of Best Arterial Route Options: Water Quality and Aquatic Ecology	David Cameron	July 2010
Nelson Arterial Traffic Study: Iwi Consultation	Juliet Westbury	July 2010
Nelson Arterial Study: Assessment of Route Options on the basis of Air Quality: Draft	Paul Helvdt	July 2010
Nelson Arterial traffic Study: Social Impact Assessment of Selected Options	Corydon Consultants Ltd	September 2010

Nelson Arterial Traffic Study References

Report/Document	Author/s	Date
Nelson Arterial Study: Assessment of Noise Effects Existing Road Network: Final	Malcolm Hunt Associates: Noise and Environmental Consultants	August 2010
Nelson Arterial Study: Assessment of Route Options on the basis of Air Quality: Draft	Paul Helvdt	September 2010
Economic Impacts of Nelson Arterial Road Improvement alternatives	Copeland M: Brown, Copeland and Co Ltd	September 2010
Cost Benefit Analysis	MWH	August 2010
Nelson Arterial Transport Study: Post-community workshop notes(1 th and 18 th August 2010	MWH/Corydon Consultants Ltd	August/September 2010
Stage 3 Initial Option Description and Modelling Results	MWH	30 July 2010
Nelson Arterial Traffic Study: Summary of Options for Consultation Purposes	MWH	June 2010
Environmental Case Report (Decision C(C35/2004):Sothern Link	Law Report/Original Judgement	March 2004
Nelson Arterial Traffic Study: Social Impact Assessment of Selected Options: Draft Report	Corydon Consultants Ltd	July 2010

The MCA Process



Multi-Criteria Analysis

Weighting

	Criterion	Weighting
1	Impacts on Cultural/Heritage values	
2	Impacts on Natural Environment	
3	Co-benefits	
4	City future	
5a	Impacts on Communities-Physical	
5b	Impacts on Communities-Social	
5c	Impacts on Communities-Economic	
6	Robustness/Future- proofing	
7	Degree of difficulty	
8	Economic Efficiency	

Multi-Criteria Analysis

Scoring System

1	Very low negative impacts or degree of difficulty, and/or very high benefits, in terms of the criterion
2	Minor negative impacts degree of difficulty, and/or high benefits, in terms of the criterion
3	Moderate negative impacts or degree of difficulty, and/or moderate benefits, in terms of the criterion
4	High negative impacts or degree of difficulty, and/or minor benefits, in terms of the criterion
5	Very high negative impacts or degree of difficulty, and/or nil or very low benefits, in terms of the criterion

SUMMARY OF IMPACTS

- 0 neutral/ no impact
- low negative impact
- moderate negative impact
- major negative impact
- + low positive impact
- ++ moderate positive impact
- +++ major positive impact

	Option A: Part time Clearways	Option B: Southern Arterial	Option H: SH6 Four Laning	Option I: Waimea/ Rutherford Four Laning	Public Transport/ Travel Demand Management
Community Severance					
Safety					
Economic Impact					
Noise					
Physical Activity					
Access to Health Services					
Air Quality					

Summary of Outcomes

Option	Health Impacts	Health Inequalities	Mitigation or Enhancement
A: Part time Clearways			
B: Southern Arterial			
H: Tahunanui Drive/ Rocks Road Four Lanes			
I: Waimea Rd / Rutherford St Four Lanes			
Public Transport/ Travel Demand Management			

Summary of Outcomes

- Negative
- Neutral impact
- Most impacts can be mitigated
- Not all impacts can be mitigated
- Increases inequalities
- Reduces inequalities
- Positive
- Could be enhanced by further investment in active transport

