

Council
04/12/2016



LATE ITEM: Unsealed road renewal strategy

Department | Engineering

Author | Jamie Cox

Attached is a late item concerning "Unsealed roads renewal strategy" not included in the Agenda.

Recommendation | *That in accordance with Section 46A (7) of the Local Government Official Information and Meetings Act 1987 the item "Unsealed roads renewal strategy" be considered given the item had not come to hand at the time of Agenda compilation and consideration of this matter is required now in order to respond within the timeframe allowed.*

Signatories | Author: J Cox

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Approved by: F Power

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Title: Unsealed road renewal strategy

Department	Engineering
Author	Jamie Cox
Contact Officer	
1. Purpose	1.1 To inform elected members of the current road renewal strategy
Recommendation	The Engineering Manager RECOMMENDS that Council direct the road renewal strategy development .
2. Background	<p>2.1 A forward works programme is developed for Councils roads based on maintenance history, complaints, safety deficiency data and recommendations linked with level of service eg traction and dust impacts</p> <p>2.2 In order to better understand the dust impacts associated with our unsealed roads, a matrix has been developed which considers the impacts on resident dwellings who are clustered around unsealed roads</p> <p>2.3 The roading department has an asset management strategy for unsealed road which allows to invest the annual depreciation money set aside for renewals of the pavement. This money is eligible for a subsidy at our financial assistance rate (FAR) of 68%</p> <p>2.4 Generally this money is utilised in the metal replacement programme for the unsealed roads however in specific cases, we have been able to justify installing a seal coat after the metal renewal programme.</p> <p>2.5 This treatment is justified by calculating the cost over time to construct and maintain the road section in an unsealed state versus the cost over time to construct and maintain the road section in a sealed state – In specific instances where high maintenance costs associated with traction grading and metal loss or dust treatment admixture application is required, a positive benefit cost ratio justification can be argued</p> <p>2.6 This strategy directly links to the community outcome to provide a safe and integrated transport system.</p> <p>2.7 Recently the council received a petition in support of sealing Kiwi Road. This lead to a review of the current strategy and criteria used to prioritise and justify road sealing.</p>
3. Strategy	3.1 NZTA has an allocation for seal extensions however; it is unlikely to be approved as it is not currently supported by the

Government Policy Statement on Land Transport 2015 which drives funding allocations by the Agency (NZTA).

- 3.2 WDC has historically justified road sealing through renewal expenditure based on a positive benefit cost ratio (BCR).
- 3.3 Proposed road sealing sites are sections of road that are identified due to traction issues, high maintenance costs, safety or dust impacts.
- 3.4 The following elements are currently analysed when prioritising dust impacts:

Dust nuisance matrix of scoring weightings and factors						
Proximity	Speed	Volumes	Environment	%HCV	No. houses	Growth Potential
<20m	200	High 50	>200vpd 150	V. Exposed 150	>10% 2	0 1
20-50m	50	Med 20	100-200 50	Exposed 100	5 - 10% 2	1 1
50-100m	10	Low 10	20-100 20	Sheltered 50	<5% 1	2 2
>100m	1	V. Low 1	<20vpd 10	V. Sheltered 10		3 3
						4 4
						5 5
						6 6
						15 15
						20 20

$$\text{SCORE} = \{([\text{Envi.} + \text{Proximity} + \text{Traffic Vol.} + \text{Speed}] \times \text{HCV})\} \times [(\text{Houses}) / \text{Length}] / 1000 + \text{Growth Pc}$$

3.4.1 Economic Assessment -Seal extensions are unlikely to proceed if a positive BCR is not realised. The BCR is calculated by analysing:

- the vehicle operating cost before/after the seal extension
- cost of construction works plus the difference in maintenance costs over a 30yr period
- safety benefits being assessed and valued

Growth potential – this criterion has been recently developed and directly relates to economic development. Consideration is given to

- the likely change in vehicle counts if the road is sealed
- economic growth potential associated with the road sealing.

3.5 The prioritisation matrix generates a score for each section of road that has been identified as impacted by dust nuisance.

3.6 It has been suggested that a criterion be installed in the prioritisation matrix which puts a priority on urbanisation and effectively will include a preference on urban versus rural areas for the limited funds available.

Another point to consider is whether our Village CBA's are also

considered in this new criteria system
Another option is to consider a priority be given to linkage roads that improve connectivity of communities.
A further option is to prioritise roads which are highlighted as reliable bypass options in GPS software

5. Options

- 4.1 The options identified are:
 - a. Status quo
 - b. Amend the prioritisation matrix based on an urbanisation criterion
 - c. Direct staff to consider other criteria
 - d. Workshop the matrix options with staff
- 4.2 It is the authors opinion that as long as a logical process is followed consistently that Council should feel free to adopt whatever criteria they agree upon
- 4.3 The preferred option is d

**What is the cost?
Appendices**

It costs approx. \$150k/km for a road sealing programme.

Confirmation of statutory compliance

Current prioritisation matrix
Prioritisation matrix with urbanisation criteria
In accordance with section 76 of the Local Government Act 2002, this report is approved as:

- a. containing sufficient information about the options and their benefits and costs, bearing in mind the significance of the decisions; and,
- b. is based on adequate knowledge about, and adequate consideration of, the views and preferences of affected and interested parties bearing in mind the significance of the decision.

Signatories

Author: J Cox

Approved by: F Power



