

# Dust Management Policy (#4116)

Adopted: June 2014

## Background

Dust nuisance has always been an issue in rural areas of the Far North. However, as the volume of wood being harvested has increased in the Far North, so have the number of complaints of dust nuisance on un-sealed roads from adjoining properties.

Increased logging truck movements on unsealed roads is impacting adjacent residents, affecting their health as well as general quality of life; for example, dust on washing lines, roof dust contaminating water supplies, and dust inside homes.

Historical solutions such as applying used-waste oil are no longer environmentally acceptable. There are new products on the market but they are more expensive. Any surface treatment is temporary and repeat applications are necessary.

There has been a demand from residents to seal road frontages to reduce dust nuisance. Sealing is an expensive option both in terms of capital outlay and the on-going cost of maintaining small sections of sealed road outside of the main sealed road network.

This issue is not confined to the Far North, and Northland Regional Council (NRC) has developed a Dust from Unsealed Roads Mitigation Strategy (dust mitigation strategy) that provides standard criteria to prioritise affected sites and a toolbox of mitigation options.

This strategy is a short term response to existing dust nuisance issues and a long term solution is being progressed through the development of a Northland Forestry Route Management Strategy to support an application to central government for additional funding.

The purpose of this policy is to support the Council in allocating funding to address the worst affected homes with a clear and consistent method that identifies health risk priority areas and potential mitigation options.

Reducing the effects of dust nuisance will require on-going collaboration with the forestry industry. The funds available in any one year will only address the worst impacted homes and help is required from the industry to support appropriate driver behaviour.

## Definitions

**PM<sub>10</sub>** – Particle is a collective term used to describe dust, fume, smoke, mist or fog, and particles less than 10 microns are called PM<sub>10</sub>. These particles are small enough to inhale and are responsible for respiratory problems including coughs, chronic bronchitis, exacerbations of asthma and post-neonatal respiratory mortality. Results of PM<sub>10</sub> testing will be provided by Northland Regional Council

## Objective

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Health impacts and nuisance to adjoining properties from traffic on un-sealed roads is minimised as a result of the community, industry and the Council working together to implement affordable solutions.

## Policies

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1. Council will use the policy criteria to assess the priority for each site as a health issue and/or a nuisance or other issue and allocate a numerical weighting representing the severity of each criteria measured.
2. The Council will prioritise affected areas that have health issues by allocating a weighted weighting score if a PM<sub>10</sub> dust particle level is recorded in close proximity e.g. 1.0m from the front of the house.
3. The Council will seek to maximise the number of houses by clustering them for inclusion in a larger scale site assessment.
4. The Council will develop a three year program of mitigation works using the most cost effective method that can be achieved within the available Dust Mitigation funding for the term of the harvest.
5. The Council will re-assess the program if new sites are identified that are a higher priority and this may result in some existing sites being relegated down the list of priority.
6. The Council will use road user management tools such as speed restriction and if practicable an alternative route as soon as health issues or dust nuisance has been identified.
7. The Council will support requests from the property owners under Policy # 4112- Community Initiated Infrastructure – Road Contribution Policy should a property owner and /or high road users fund the balance. Council's contribution will not come from dedicated Dust Mitigation budgets.
8. Council will continue to investigate methods that will provide greater control over the effects of forestry activity on roads such as resource consent conditions or bylaws that provide greater control over traffic.
9. The Council will develop an alliance agreement with the Northland Wood Council members that will include:
  - a. Quarterly meetings with FNDC, WDC, KDC and NRC
  - b. Discussion of areas of common strategic interest including:
    - i. social assessment at existing and new harvest sites
    - ii. Support for temporary speed restrictions
    - iii. Advocating to members for alternative routes.
    - iv. Other dust mitigation methods
  - c. Promote the use of technology such as GPS data
  - d. Keep the Council informed of new harvest sites and harvest periods

10. The Council will actively encourage the community to:
  - a. apply water to the road surface to reduce dust nuisance if practicable
  - b. invest in windbreaks/landscaping to reduce wind speeds and minimise dust where appropriate
  - c. have an EECA Healthy Home assessment including consideration of the installation of water supply filter and/or positive pressure roof cavity ventilation system.
11. should these methods be determined to benefit the home owner, the Council may provide a level of subsidy of up to \$3,000.

## Procedures

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1. Council staff will assess all roads that are currently being used by forest traffic against the criteria to develop a road priority list.
2. Sites will be identified and prioritised by:
  - a. Health criteria: Residential houses where the standard for PM<sub>10</sub> is exceeded 1m from the house.
  - b. Nuisance and other criteria
    - number of occupied dwellings e.g. milking sheds, pack houses, homes
    - access to public facilities
    - deposition of dust
    - total suspended particles
    - total traffic volume and number/percentage of heavy vehicles in 24 hour period
    - duration of problem each day and for what period of time [months or years]
    - seasonality of problem
3. Due to the scale of the problem and the limited funds available to address the issue, affected sites will be prioritised by assessing each site as a health issue and/or a nuisance or other criteria and then prioritise each site by allocating a numerical weighting representing the severity of each criteria measured.
4. Council will ask NRC to test these sites to determine if the standard for PM<sub>10</sub> is exceeded. NRC will fund this from their budgets.
5. Any sites with a PM<sub>10</sub> dust particle level will receive an additional 100 points as a positive weighting.
6. Council staff will cluster as many houses as practicable in each site assessment to maximise the homes that might benefit from the mitigation work.
7. Council staff will assess the highest priority sites to determine the most cost effective method/or methods over the life of the harvest to reduce dust and the options will consider road surface treatments, road user management and adjoining property enhancements.
8. This list will be developed so that a 3 year program can be adopted by Council that can be implemented within the available budget.
9. Council will identify sites of dust nuisance and:
  - a. Investigate if a more direct route to the sealed network is available that should be used even if it might be longer.
  - b. Investigate if speed restrictions need to be imposed.

- c. Contact the Northland Wood Council and/or the local forestry contractor to advise them that dust is a nuisance and an alternative route must be used and/or implement voluntary speed restrictions.
- d. Contact Northland Wood Council should this collaborative approach not work and introduce formal traffic control measures and issue drivers not abiding by the speeds with infringement notices.

10. The most cost effective methods below will be used to develop any mitigation works program:

- a. Road Surface Treatments:
  - Full seal extension
  - Seal road frontage
  - Apply an approved dust suppression product
  - Water the road
  - Treat the road surface
- b. Road Users Management:
  - Reduce traffic by using an alternative route
  - Reduce speed
- c. Adjoining Property Enhancements:
  - Slow the wind – planting of shelter belts
  - Reduce dust entering the home and water supply

11. Community development staff will help property owners that wish to have an EECA Healthy Home assessment and provide assistance with funding and/or subsidy applications.

## Appendix A – Site Scoring – Dust Management

| Road Name      | houses/km | PM10 and PM2.5 test | Dust Deposition | Traffic Volume | % Heavy traffic | Duration and seasonality | Total Score |
|----------------|-----------|---------------------|-----------------|----------------|-----------------|--------------------------|-------------|
| Princes Street |           |                     |                 |                |                 |                          |             |
|                |           |                     |                 |                |                 |                          |             |
|                |           |                     |                 |                |                 |                          |             |
|                |           |                     |                 |                |                 |                          |             |

The scoring will be based on the following ranges:

| Criteria                             | 1     | 2      | 3       | 4       | 5    |
|--------------------------------------|-------|--------|---------|---------|------|
| Houses/km                            | 1-5   | 6-10   | 11-15   | 15-20   | >20  |
| PM <sub>10</sub>                     |       |        |         |         |      |
| Dust Deposition                      |       |        |         |         |      |
| Number of vehicles/day               | 0-50  | 51-100 | 101-200 | 201-500 | >500 |
| % Heavy vehicles                     | 0-20  | 20-40  | 40-60   | 60-80   | >80  |
| Duration of Harvest                  | 0-1yr | 1-2yr  | 2-3yr   | 3-5yr   | >5yr |
| No. of public facilities on the road | 0     | 1      | 2       | 3       | 4    |

Highlighted data needs to be confirmed by technical qualified person