

# HAWKE'S BAY REGIONAL COUNCIL

## MAORI COMMITTEE

Monday 15 February 2016

### Subject: CURRENT FORESTRY MANAGEMENT PRACTICES

#### Reason for Report

1. The purpose of this paper is to provide background information to inform a discussion relating to actual and perceived issues and effects of forestry on the environment and communities within Hawke's Bay.

#### Background

2. Since the 1960s significant areas of plantation forest have been planted by the Crown and other entities on highly erodible land classes in Hawkes Bay. Land price and regulation have tended to push forestry toward land types which are steeper and more susceptible to erosion.
3. The Crown has subsequently sold many of its forests into private ownership and in some instances Maori have reclaimed ownership through the Deed of Treaty Settlement process and now lease this land to other forestry entities. Today various Hawke's Bay forests are in iwi ownership.
4. Forests established during the 1980s and 1990s are currently being harvested and we are facing some actual and perceived effects on our environment and communities. These effects are due to the legacy of very steep, highly erodible land which was planted. This land is also prone to risks from extreme weather events.
5. Council is considering how we will manage the current risks and plan strategically for a further forestry cycle.

#### Kopuawhara Catchment

6. On the 23 May 2015 a rain fall event in the Wharerata Ranges in the Gisborne District, recorded rainfall of 105 mm in 24 hours and 52 mm across two hours – a 1:20 year event. Windblown pines, forestry slash, other woody debris and sediment were mobilised, ending up on the Kopuawhara flats, and on the nearby beaches resulting in impacts on infrastructure and social structures within the Hawke's Bay region.
7. The Gisborne District Council requires forestry companies to apply for resource consent for harvesting of plantation forests. Depending of the type of land to be harvested (based on a land overlay rating) the activity status ranges from controlled to discretionary for non-compliance with conditions.
8. As part of the post event monitoring, Gisborne District Council staff looked at compliance with resource consents issued for forestry activities in the source catchment and found that in the affected areas, compliance in relation to the resource consents had been good and industry best practice followed.
9. Juken NZ limited (the forest owner) has since agreed to fund the cleanup in the Hawke's Bay region from the rain event that caused damage at Kopuawhara.

#### Issues of concern

- 9.1. Clear fell harvesting on steep and erosion prone sites.
- 9.2. Wood waste (slash) management.
- 9.3. Mid-slope failure

10. Forestry typically operates in an approximately 27 year cycle from planting to harvest. During this time many operational activities are undertaken that have no significant impacts on the environment or our communities. The ecosystem services of biodiversity, water quality and soil erosion mitigation are significant, but not generally overtly apparent and so are easily dismissed.
11. The key forestry activities of concern are during the harvest cycle when clear felling of trees takes place. Harvesting can generate ongoing issues regarding the management of wood waste.
12. In some cases wood waste is uneconomical to remove as smaller diameter and shorter material is generally un-merchantable and this may be retained in the forest or distributed across the harvested site.
13. There are a broad range of approaches to the management of wood waste in the region, with some companies choosing to remove more waste from harvested sites than others. This variability in approach depends on options for sale or disposal of this material, and on individual company policy.
14. Mid slope failure is common in steeper Hawke's Bay hill country. Mid slope failure occurs when existing conditions of geology and slope combine with rain events and woody debris is carried into waterways. Such failures have the ability to transport wood waste as woody debris from harvest sites downslope with considerable force. It is important to recognise that the mobilisation of woody debris is triggered by inevitable natural phenomena.
15. The forestry industry has made ongoing improvements to practices around harvest wood waste over the past 30 years and promotes continual development of best practice. Landing and roading failures are now relatively uncommon as a source of woody debris due to improved forest engineering and harvest practices.
16. As forest harvest operations on steep lands have proceeded, the issue of sediment and mobilised woody debris deposition into waterways, onto floodplains and ultimately the coastal environment have become of increasing concern, particularly in heavy rain events. These impacts are well recognised by the forestry industry.
17. Such events have occurred several times in the Kopuawhara Catchment, the most recent in May 2015. As other steep lands (especially Classes 7 & 8) are harvested these concerns are expected to continue.

### **Key effects associated with forest harvest activities**

- 17.1. Sedimentation
- 17.2. Mobilisation of Woody debris
- 17.3. Erosion
- 17.4. Increased evapotranspiration rates
18. For the majority of the forestry cycle, well planned and executed plantation forest provides significant environmental services. Forestry provides habitat for our flora and fauna, mitigates erosion, reduces sediment entering our waterways (improving water quality) and moderates water quantity.
19. There is a public perception that any wood in waterways is a significant negative impact of forestry. It is important to recognise that wood alone generally has minor actual environmental issues associated with it. While the physical nuisance of woody debris can have significant impacts on downstream infrastructure and communities, its importance as a pollutant is low, relative to sediment.
20. The adverse effects on communities arising from woody debris in waterways relate largely to impacts on settlement patterns and the development of infrastructure on flood plains. Historical development decisions have placed communities and infrastructure in

sites that are prone to flooding which in turn has exacerbated the adverse effects resulting from woody debris in waterways.

21. Some wood in waterways and beaches offers ecological benefits for aquatic biodiversity and improved habitat. In the past when Hawke's Bay was fully forested there would have been heavy loading of woody debris in streams and on beaches.
22. Plantation forests can reduce the amount and degree of erosion by intercepting rainfall, increasing evapotranspiration rates and reinforcing soils through the root network. About 25% of a tree's mass is underground. Good forestry practice can reduce the risk of soil erosion that may follow harvesting, particularly when followed by storm events.
23. The level and extent of erosion that results from the removal of trees is dependent on a number of factors including the tree species, the area felled, the method of felling, the implementation of other forestry management techniques used to minimise runoff and erosion and the underlying geology.

### **The Pakuratahi-Tamingimangi Landuse Study**

24. The Pakuratahi – Tamingimangi Landuse Study Report (ISBN 1-877405-05-01) compared the sediment yields from two catchments, the first in pasture and the second with forestry cover. The Study found that forestry had the lowest overall yield of sediment even when the sediment discharge during harvest was taken into account. The environmental benefits of forestry lead to improved water quality relative to farmland over a 27 year rotation, but with a period of increased sedimentation at harvest. The study showed a net water quality benefit relative to farming over the life of the forest. These catchments represent difficult and erodible Hawkes Bay hill country.
25. Sixty four percent (approximately 900,000ha) of the region's rural land is classed as erodible to highly erodible hill country. Of this, approximately 300,000ha is under a land use that is likely to exceed the sustainable capacity of the soil. The Pakuratahi Project recognised that commercial forestry is a sustainable land use.

### **National Environmental Standard for Plantation Forestry (NES-PF)**

26. On 17th June 2015, the Ministry for Primary Industries released a discussion document containing a draft NES-PF. Submissions on the draft NES-PF closed on 11th August 2015. The discussion document proposed an NES-PF to cover the whole plantation forest cycle and included draft activity-specific rules that are intended to provide certainty for local authorities, forest owners and communities.
27. The NES-PF would prescribe technical standards, methods or requirements for plantation forestry. An NES takes immediate effect and may be absolute, effectively overriding affected rules of a plan. Local authorities cannot have plan rules that are more lenient than the NES and may only include more stringent controls through rules if the NES provides for this. Any rules that duplicate or conflict with the provisions of a NES must be removed from a plan. This must be done as soon as practicable after the NES comes into effect without using the Schedule 1 process.
28. Council broadly supported the intent of the draft NES-PF but made specific comments on how the draft NES-PF relies heavily on the preparation and monitoring of various plans for different activities without providing councils with an ability to assess whether such plans adequately address the risks and to not approve them where they don't.

### **Regional Plans and Strategies**

29. Forestry is seen as a key resource management tool to mitigate soil loss in landscapes that are highly susceptible to erosion. Relative to some other land uses forestry also provides further key environmental services such as carbon sequestration, improved water quality and enhanced biodiversity.
30. The Hawke's Bay Land and Water Management Strategy (LAWMS) provides direction and a common focus for the management of land and water for improved economic and

environmental outcomes. It recognises that development potential and pressures vary across the region, as do the values associated with the land, rivers, lakes and wetlands. This implies that different responses are required according to local conditions.

31. The loss and degradation of soils in Hawke's Bay's hill country, particularly in northern and coastal areas, is considered to be a regionally significant issue in the Regional Resource Management Plan (RRMP). While there is a natural rate of erosion under natural vegetation, accelerated erosion due to the removal of natural forest and pasture establishment, and aggravated erosion due to inappropriate land management practices are of most concern.
32. Currently there are no rules specifically managing 'plantation forestry' in the RRMP or the Regional Coastal Environment Plan (RCEP). Instead generic rules apply to forestry activities, for example; vegetation clearance, and generic rules on discharges of contaminants –to land/water. Appendix One contains a detailed description of the Hawke's Bay regulatory framework for plantation forestry.

### **East Coast Hill Strategy**

33. HBRC is currently undertaking work towards an East Coast Hill Country Strategy which will consider in part the environmental and economic sustainability of further development or retirement of the East Coast's hill country, and forestry is likely to be a significant element of that strategy.
34. Research has not yet been done on the overall impact of forestry on steep land with very thin soils, and a key question is whether the benefits still outweigh the costs – and whether forestry on a 20-30 year rotation is sustainable in class 7 and 8 land.

### **Hawke's Bay Forestry Group**

35. Forestry is a leading primary sector in Hawke's Bay and will continue to grow. Forestry is the largest primary sector exporting out of the Port of Napier.
36. Established in 2002, the Group represents significant forest ownership in Hawke's Bay. The Hawke's Bay Forestry Group - the local sector organisation - accounts for over 100,000 of the 134,000 hectares of plantation forest. The membership is around 10 companies and includes the Hawke's Bay Regional Council.
37. The Group appointed CEO Keith Dolman in 2015 to lead its commitment to community, environment, best practice and career aspects of forestry.

### **Looking forward**

38. There is no quick fix solution to the adverse effects of forestry (sedimentation and the downstream impacts of woody debris on infrastructure) due to the current land types and weather risks that apply where forestry is conducted. However HBRC is undertaking a series of interventions to mitigate adverse impacts going forward. These interventions include:
  - 38.1. Working with industry and in particular the Hawke's Bay Forestry Group to identify and promote best practice;
  - 38.2. A strategic policy response which will be driven out of the East Coast Hill Country Strategy;
  - 38.3. Working with forestry companies and landowners to identify and promote the retirement of steep hill country;
  - 38.4. Developing forestry as part of the toolbox for sustainable land use and resilient communities in erodible Hawke's Bay hill country;
  - 38.5. Proactively interfacing with industry by employing a forestry professional;
  - 38.6. Pursuing appropriate outcomes through participation in forestry environmental activity at a local and national level.

38.7. Engaging in the submission process relating to implementation of the NES for plantation forestry.

### **Decision Making Process**

39. Council is required to make every decision in accordance with Part 6 Sub-Part 1, of the Local Government Act 2002 (the Act). Staff have assessed the requirements in relation to this item and have concluded that, as this report is for information only and no decision is to be made, the decision making provisions of the Local Government Act 2002 do not apply.

### **Recommendation**

1. That the Maori Committee receives the “***Current Forestry Management Practices***” report.

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### **Attachment/s**

There are no attachments for this report.