

# Investigation into the remediation of the contaminated site at Mapua

Update Report

July 2010



Parliamentary Commissioner  
for the **Environment**  
Te Kaitiaki Taiao a Te Whare Pāremata

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## 1. Commissioner's comment

As Parliamentary Commissioner for the Environment I have various independent statutory functions under the Environment Act. One of these is to investigate environmental issues, processes, and public agencies.

In July 2008 I released a report, *Investigation into the remediation of the contaminated site at Mapua*, which looked at the clean up process undertaken at a five hectare Mapua site once regarded as New Zealand's most contaminated site.

## 2. Background

The investigation began as a result of letters received by the second Parliamentary Commissioner for the Environment, Dr Morgan Williams, in 2006.

The writers expressed their concern that the remediation of the old Fruitgrowers Chemical Company site at Mapua, which is in the middle of a village and adjacent to an estuary, was being poorly managed and that consequently the environment and the health of local residents and workers on the site were being damaged.

Dr Williams referred the concerns about the health of the residents and the health of the workers to the Ministry of Health and the Department of Labour respectively. Upon the appointment of the current Commissioner, the decision was taken to continue the investigation into the environmental aspects of the case.

## 3. Brief history of the Mapua site

From 1932 until 1988 various pesticides were manufactured and stored on the site. This had led to contamination of the soil, the groundwater, the Waimea inlet and the estuarine sediments. But in 1988 the pesticide plant closed and the site was "orphaned" as no party could be identified as having legal liability for the remediation.

In 1996, Tasman District Council took ownership of the site and began work on a containment plan.

Some time later the strategy was changed from containment to remediation and in 2001 the Council awarded a contract to a partnership of two companies – Thiess Services and Environmental Decontamination Ltd. (EDL) – under which Thiess provided the environmental experience and EDL provided the technology.

By mid 2004, this partnership had "broken down" and EDL signed a contract with the Ministry for the Environment (MfE) to complete the soil remediation part of the work.

## 4. Main findings of the investigation

The report, which was tabled in Parliament on 29 July 2008, found that the remediation was poorly managed and determined that to help reduce risks to people and the environment, a number of lessons needed to be drawn from the Mapua experience. These include the need for:

- robust decision-making
- clear separation of roles to avoid conflicts of interests, and management of such conflicts where they are unavoidable
- respect for, and appropriate use of, technical expertise.

Of particular concern is that it is entirely possible that dioxin was emitted, especially from September 2004 to November 2005, when the most contaminated soil was being treated. At times the air emission control system was not functioning. Because the monitoring was deficient it is not possible to assess how much dioxin may have been emitted.

The organochlorine pesticides in the soil have been reduced, but the use of a large quantity of an ecotoxic copper compound as a reagent should have been controlled. There was also a possible problem with mercury residue in the capping soil. The use of large amounts of urea as a reagent in the decontamination process left the risk of further nitrate contamination of the groundwater and thus the estuary.

## 5. Reaction to the report

The Mapua site was widely recognised as among the most contaminated in New Zealand and consequently the report attracted a lot of attention.

It was recognised by Hon Trevor Mallard (Minister of the Environment) when responding to the report's release, that it was important that lessons be learned from Mapua, with consideration to be given to the recommendations.<sup>1</sup>

The following month, former Environment Minister Simon Upton discussed the report in his newspaper column, "Why did ministry flout its own processes?": *"...The ministry appears to have had no understanding of appropriate roles and responsibilities and no technical competence to perform the role it took upon itself..."*<sup>2</sup>

In August, the Nelson Mail reported that *"Both Nelson MP Nick Smith and Greens co-leader Russel Norman say the ministry did not have the staff capable of running such a difficult project. Dr Smith questioned the wisdom of the ministry stepping in to take over after the original clean-up contractor, Thiess Services, abandoned the project in unexplained circumstances in 2004."*<sup>3</sup>

And in September 2008, John Key (then Leader of the Opposition), said when launching National's environment policy that: *"The need for an EPA is well-illustrated in last month's report on the Mapua toxic chemical site. The existing environmental agencies proved hopelessly ill-equipped to deal with the issues. The inherent conflict between their various roles resulted in the Government making serious breaches of resource consents"*.<sup>4</sup>

However not everyone welcomed the report. In an opinion piece in the Nelson Mail, Barry Carbon (Chief Executive of the Ministry for the Environment during most of the time the remediation took place), wrote *"...I have closely read the dreadful releases and reports of the Parliamentary Commissioner for the Environment... Though I am now a long way away from Mapua, I feel an obligation to the people of Mapua and the heroes that drove the clean-up to set the record straight... Now I am cast to defend good things, and the only way to do it is to show that the Emperor that is the PCE reports truly has no clothes..."*. [quotes conjugated and punctuation added].<sup>5</sup>

Such criticisms in the public domain were limited. Indeed, Barry Carbon appears to have been a lone voice.

Media coverage regarding the site has continued, prompted in part by the release of a report by the Ministry of Health. It is anticipated that the matter is not yet out of the public eye, with a report from the Department of Labour yet to come.<sup>6</sup>

## 6. Response to the Commissioner's recommendations

The Commissioner made eight recommendations in her report. The appendix contains all eight in full with an account of the responses to date.

The recommendations relate to the following themes.

- The Mapua site itself, for example, the potential contamination of soil and water with copper. (Recommendations 2, 4, 5, 6).
- The management and remediation of contaminated land sites in New Zealand, for example, a pool of skilled auditors. (Recommendations 1, 3, 8)
- The operational capability of the Ministry for the Environment. (Recommendation 7)

### **Recommendations relating to the Mapua site (recommendations 2, 4, 5 and 6)**

#### Recommendation 2:

The Minister for the Environment directs the Ministry for the Environment to complete the validation report no later than 31 October 2008, and have it reviewed by the site auditor no later than 31 December 2008.

**Response:** The site validation report was issued 19 December, 2008. The Site Auditor's Report (which includes a review of the site validation report) was published in June 2009<sup>7</sup>.

Recommendation 4:

Tasman District Council, as site owner, conduct further soil sampling across parts of the site zoned for residential development, to assess whether or not any residual mercury exceeds remedial criteria in the cover layer.

**Response:** Tasman District Council carried out an appropriate survey of the site for mercury in August 2008. It was found that mercury concentrations were within the guideline value for residential soils. The Commissioner wrote to thank the Council for their prompt response to her recommendation.

Recommendation 5:

The Site Auditor's review include an assessment of the probable environmental impacts of copper use in the remedial works at Mapua, and make recommendations as to any further studies, remedial actions or covenants that may be necessary to prevent further degradation of the estuary.

**Response:** MfE modified the scope of the Site Auditor's Report to include a specific assessment of the potential environmental effects resulting from the use of copper during the remediation. The Site Auditor concluded that potential phyto-toxic effects of copper on the part of the site designated as commercial and open space were manageable.

Recommendation 6:

The Minister for the Environment directs MfE to take further remedial action as advised by the Site Auditor, to ensure that groundwater and sediment impacted by contaminants from the Mapua site meet remedial criteria to the extent currently achievable, before May 2009.

**Response:** The Site Auditor's report was published at the end of June 2009 and contained eleven recommendations which included installing additional groundwater monitoring wells and continuing groundwater monitoring and refinement of the hydrological model, further monitoring of marine snails and sediments, soil gas sampling to be undertaken for ammonia, and quality assurance work on the soil data to be undertaken on the east side of the site. The report is reasonably comprehensive, and MfE have stated that they will implement all of the Site Auditor's recommendations.

## The management and remediation of contaminated land sites in New Zealand (recommendations 1, 3 and 8)

### Recommendation 1:

The Minister for the Environment establishes a mechanism for appointing a pool of independent, technically expert environmental auditors to assist with the management and remediation of contaminated land; and develops guidelines for when an accredited environmental auditor may be required, and the matters that such auditors may certify.

**Response:** There has been some recognition of the importance of skilled, technically capable practitioners. The draft National Environmental Standard (NES) for contaminated land (submissions closed in April 2010) calls for site investigation, remedial action, monitoring and management plans to be prepared by *“appropriately experienced and qualified practitioners”*. Presumably the same standard would be required of auditors, and some register of practitioners would still be necessary.

However in terms of the Mapua site, the Secretary for the Environment wrote in January 2009: *“...A formal auditing scheme was not considered appropriate due to the potential increase in the cost of investigation and remediation, impacts on already limited capability and capacity, and the potential for over conservative assessment...”*.<sup>8</sup>

### Recommendation 3:

The Minister for the Environment issues a short technical statement outlining the experience gained from the use of the MCD technology for remediating soil contaminated with OCPs for the benefit of future users of the technology.

**Response:** This recommendation appears unlikely to occur. In his January 2009 letter to the Commissioner, the Secretary for the Environment wrote: *“...In view of the fact that the technology is privately owned, the Minister is unlikely to release a technical statement regarding the use of the MCD technology...”*.

### Recommendation 8:

National and regional policy-makers recognise that a containment strategy for many contaminated sites may be optimal environmentally as well as financially.

**Response:** In his January 2009 letter to the Commissioner, the Secretary for the Environment wrote: *“...The Ministry recognises that a containment strategy for managing contaminated land may be appropriate in many cases. I will ensure that a containment strategy is fully considered in the assessment of remedial options for any future remedial projects managed by the Ministry...”*.

## The operational capability of the Ministry for the Environment (Recommendation 7)

### Recommendation 7:

If MfE is to perform operational functions, the Secretary for the Environment ensures that these functions are clearly defined and supported by the appropriate in-house technical capability.

**Response:** The Secretary for the Environment commissioned an independent report titled "Remediation of the FCC Mapua site: Review of the role and actions of the Ministry for the Environment" (released December 2008). In his January 2009 letter to the Commissioner, the Secretary for the Environment wrote: "...*Should the Ministry undertake any operational activities, appropriate in-house technical knowledge and expertise, if not already present in the Ministry, will be acquired as needed...*" [punctuation added]. In a press release on 31 July 2009, the Minister for the Environment, Hon Dr Nick Smith stated "...*the Ministry for the Environment will not take operational and project management responsibility for a clean up of any future contaminated site but instead contract this to properly qualified firms.*"

## 7. Other matters

During the Mapua remediation, Tasman District Council was not able to take direct enforcement action against MfE. On 10 February 2009, Chris Auchinvole MP asked in Parliament *“Has the Government considered the Parliamentary Commissioner for the Environment’s concerns in her report on the clean-up of the contaminated site at Mapua, where the previous Government breached conditions of the consents yet the council was powerless to act under the existing Resource Management Act?”*

Subsequently, when the Resource Management Act was amended in 2009, one of the amendments was to s4(5). The change means that although the immunity of the Crown itself continues, those that act on its behalf (eg MfE) can be prosecuted under the Act.

During the investigation the Commissioner became concerned about the contractual relationship and funding agreement between MfE and the Tasman District Council. For instance, the remediation works proceeded without the Mapua Financial Contribution Deed being signed. The Commissioner was particularly concerned that the effective taxpayer subsidy to Tasman ratepayers may well exceed 100%, and referred these matters to the Auditor General. The Auditor General decided not to investigate, stating that *“... the funding arrangement between central and local government in this case was a policy decision for the Government and not one that we have a mandate to comment on.”*<sup>9</sup>

## 8. Conclusion

No new evidence has been presented to me from any source, public or private, that would have justified changes to the initial report.

Work is currently underway on another major contaminated orphan site – the abandoned Tui mine on the slopes of Mt Te Aroha. The contract for the remediation is being managed by an experienced engineer in Environment Waikato. It is pleasing to see that the issues around conflict of interest and technical expertise that bedevilled the remediation at Mapua have been addressed.

Provided no further evidence of environmental impact regarding Mapua emerges, I consider my direct involvement in this matter to be concluded.

# Endnotes

- 1 Press release, 28 July 2008
- 2 Dominion Post, 12 August 2008
- 3 Nelson Mail, 16 August 2008
- 4 John Key, 6 September 2008, Speech to launch National Party Environment Policy, Waiheke Island
- 5 Nelson Mail, 27 September 2008
- 6 Nelson Mail, 11 June 2010
- 7 Proffitt, G. (2009) Audit of the Remediation of the former Fruitgrowers Chemical Company Site, Mapua. 30 June, 2009, PDP, Wellington.
- 8 Letter from the Secretary for the Environment to the Commissioner, 29 January 2009.
- 9 Letter from the Controller and Auditor-General to the Commissioner, 13 April 2010.