

SPOKEN STATEMENT – Melissa Shearer

1. My name is Melissa Shearer, and I am employed at Environment Canterbury as Senior Environmental Advisor for Rivers. I have the responsibility and oversight for ensuring compliance with Resource Consents and Permitted Activity conditions along with the Hazardous Substances and New Organisms Act 1996 regulations and the Health and Safety at Work Act 2015 regulations.
2. It is my role to provide objective advice and direction to operational staff within the Rivers Section regarding good environmental practice for the application of herbicides to waterways. This has included establishing the processes that are in place presently to ensure that herbicide applications are thoroughly planned and executed in a manner that ensures risks of harm to the environment and people are minimised.
3. My evidence provides an overview of the environments within which herbicide application occurs, which includes braided rivers, smaller creeks and streams and drainage networks. I have provided detail on the most sensitive sites within or adjacent to these already sensitive environments, including:
 - Surface water intakes for domestic supply, stock water, irrigation and other agricultural uses
 - Community drinking water supply abstraction points and protection zones
 - Sites of significance to Māori
 - Dwellings, schools and recreational areas
 - Fish spawning habitats of significance, and critical habitats of certain freshwater species
 - Organic farming operations
 - Wetlands
 - Long-tailed bat habitats
 - Areas of indigenous vegetation
 - Apiary sites
 - Bird nesting habitats
4. In conjunction with the evidence of Mr David Aires, who has explained the importance of the use of herbicides to maintain the assets within flood protection schemes, I have also described the how, when, where and what of the herbicide applications.
5. Herbicides, namely formulations of glyphosate and triclopyr plus spray adjuvants, may be applied by a number of different methods, including knapsacks, vehicle mounted spray guns, and aerially via helicopters or UAV (drones).
6. Herbicide applications are for the purpose of removing extensive nuisance weed infestations where those infestations can reduce the flow carrying capacity of a waterway, can damage or interfere with flood protection assets, or are contributing to biodiversity loss or degradation in the natural character and functioning of waterways.

7. The timing of any herbicide application is dependent on a number of factors, and seeks to strike a balance between the effectiveness of the herbicide on treating a plant to kill it and avoiding negative impacts on the myriad of values associated with waterways (such as those sensitive sites I have noted).
8. I have specifically covered the measures adopted to minimise the risk of drift of herbicides away from the target application areas, given spray drift poses a significant risk to terrestrial and aquatic ecology, human health and public use of waterways.
9. In recognition of the risks of herbicide use, the Council is committed to reducing the reliance on herbicides for weed control through time. I have outlined this commitment in my evidence, and how it is intended to demonstrate that commitment in the proposed Agrichemical Strategic Management Plan.
10. Whilst acknowledging this commitment, I accept and understand that herbicide use must remain as a 'tool in the toolbox' given the well-established understanding of herbicides being the most cost-effective management tool at the scale of management required by the Council's operations. I believe that this tool can be used safely and effectively when used in accordance with the processes outlined in the "Work Planning and Delivery" section of my evidence.
11. When it has been determined that spraying is the most appropriate method for the control of a weed infestation, then a detailed job planning process is followed to ensure that risks (from an environmental, operator and public safety and asset protection perspective) associated with that operation are identified, and steps put in place to manage those risks and minimise any potential effects.
12. As outlined in my evidence, herbicide application operations are risk assessed and informed by the following documents and methods. Some of these documents have been provided as attachments to my evidence to provide some insight into the detail contained within these documents:
 - Canterbury Regional Defences Against Water and Drainage Schemes Code of Practice*
 - Rivers Section Environmental Guide*
 - Current consent conditions
 - Spray Handbook (internal and contractors versions)*
 - Conditions of EPA and HSNO approval on specific substances
 - Agrichemical label requirements
 - Searches of GIS databases for mapped ecological information and locations of sensitive sites within spray reaches
 - The outcomes of consultation and engagement with iwi and stakeholders on proposed spray operations
 - The 'spray calendar' for timing
 - Site inspections (on foot or aerial inspections) to determine extent of weed growth and identify sensitive sites or habitats to avoid
 - Local knowledge of our staff

- Environment Canterbury's internal wetland ID guide (this has been completed since lodging the applications)*
- As proposed in our AEE, the Strategic Agrichemical Management Plan will also form part of this suite of guidance material
- The proposed organic farming operations database – a database of organic operations that we will map and work with in the future through notifications, alternative weed control methodologies, setbacks etc.

Note: the * denotes which documents have been provided with my written evidence

13. An example of a "Contractor Statement of Works" has been provided as an example for the Hearing Commissioners to demonstrate how the planning that goes into an herbicide operation is distilled into what the contractor, or operator holding the spray gun, is provided with. It is my view that what our staff and contractors do on site with the information and instruction provided to them is ultimately of the most importance.
14. All staff and contractors hold the appropriate qualifications and participate in ongoing education and awareness of the values associated with waterways.
15. There is an established programme of internal auditing of herbicide operations to ensure works are being done as planned. This auditing is carried out by myself, or others in similar roles, and is complimented by an existing regime of water quality monitoring. The results of the monitoring completed to date have been provided with my evidence.
16. My evidence concludes by commenting on the conditions as proposed in the s.42A Officers Report, from an operational impact and compliance/enforceability perspective. I generally accept the intent of many of these conditions but have concerns around how they can practically be implemented in the real world, and how compliance can be demonstrated or monitored.
17. I would like to thank the Hearing Commissioners for their time in reading my evidence and supporting material, I appreciate it was a lot to get through. I welcome any questions from the Pannel on my evidence.

