

# **CATEGORY 6: ENVIRONMENT**

## **BATCH 1**

Bev Mcshea

**From:** Submissions  
**Sent:** Tuesday, 10 February 2015 10:50 a.m.  
**To:** Administration Support  
**Subject:** FW: All New Zealand Councils  
**Attachments:** NZCouncils2015.pdf; 2015CouncilsAppendix.pdf

**Follow Up Flag:** Follow up  
**Flag Status:** Flagged

**Categories:** Bev, Submissions, Long Term Plan 2015

-----  
**From:** Customer Service Team  
**Sent:** Tuesday, February 10, 2015 10:49:28 AM  
**To:** Submissions  
**Subject:** FW: All New Zealand Councils  
**Auto forwarded by a Rule**

---

**From:** Jean Anderson [<mailto:jean.anderson@clear.net.nz>]  
**Sent:** Tuesday, 10 February 2015 10:42 a.m.  
**To:** [mailroom@nrc.govt.nz](mailto:mailroom@nrc.govt.nz); [ask.us@fndc.govt.nz](mailto:ask.us@fndc.govt.nz); [council@kaipara.govt.nz](mailto:council@kaipara.govt.nz); [mailroom@wdc.govt.nz](mailto:mailroom@wdc.govt.nz); [info@arc.govt.nz](mailto:info@arc.govt.nz); [enquiry@aucklandcouncil.govt.nz](mailto:enquiry@aucklandcouncil.govt.nz); [Fdc\\_info@franklin.govt.nz](mailto:Fdc_info@franklin.govt.nz); [info@envbop.govt.nz](mailto:info@envbop.govt.nz); [info@tauranga.govt.nz](mailto:info@tauranga.govt.nz); [kaweraudc@kaweraudc.govt.nz](mailto:kaweraudc@kaweraudc.govt.nz); [info@odc.govt.nz](mailto:info@odc.govt.nz); [mail@rdc.govt.nz](mailto:mail@rdc.govt.nz); [info@swktodc.govt.nz](mailto:info@swktodc.govt.nz); [general@taupo.govt.nz](mailto:general@taupo.govt.nz); [customercare@wbopdc.govt.nz](mailto:customercare@wbopdc.govt.nz); [information@whakatane.govt.nz](mailto:information@whakatane.govt.nz); [info@ew.govt.nz](mailto:info@ew.govt.nz); [info@hcc.govt.nz](mailto:info@hcc.govt.nz); [info@hauraki-dc.govt.nz](mailto:info@hauraki-dc.govt.nz); [info@mpdc.govt.nz](mailto:info@mpdc.govt.nz); [info@otodc.govt.nz](mailto:info@otodc.govt.nz); [info@ruapehudc.govt.nz](mailto:info@ruapehudc.govt.nz); [Customer.services@tcdc.govt.nz](mailto:Customer.services@tcdc.govt.nz); [publicenquiries@waide.govt.nz](mailto:publicenquiries@waide.govt.nz); [info@waipadc.govt.nz](mailto:info@waipadc.govt.nz); [info@waitomo.govt.nz](mailto:info@waitomo.govt.nz); [waitomodc@waitomo.govt.nz](mailto:waitomodc@waitomo.govt.nz); [gdc@gdc.govt.nz](mailto:gdc@gdc.govt.nz); [info@trc.govt.nz](mailto:info@trc.govt.nz); [enquiries@npdc.govt.nz](mailto:enquiries@npdc.govt.nz); [contact@stdc.govt.nz](mailto:contact@stdc.govt.nz); [stratforddc@stratford.govt.nz](mailto:stratforddc@stratford.govt.nz); [info@hbrc.govt.nz](mailto:info@hbrc.govt.nz); [info@chbdc.govt.nz](mailto:info@chbdc.govt.nz); [council@hdc.govt.nz](mailto:council@hdc.govt.nz); [info@napier.govt.nz](mailto:info@napier.govt.nz); [info@tararoadc.govt.nz](mailto:info@tararoadc.govt.nz); [administrator@wairoadc.govt.nz](mailto:administrator@wairoadc.govt.nz); [info@gw.govt.nz](mailto:info@gw.govt.nz); [contact@huttcity.govt.nz](mailto:contact@huttcity.govt.nz); [uhcc@uhcc.govt.nz](mailto:uhcc@uhcc.govt.nz); [Kapiti.council@kapiticoast.govt.nz](mailto:Kapiti.council@kapiticoast.govt.nz); [enquiries@pcc.govt.nz](mailto:enquiries@pcc.govt.nz); [info@wellington.govt.nz](mailto:info@wellington.govt.nz); [mdc@mstn.govt.nz](mailto:mdc@mstn.govt.nz); [administrator@swdc.govt.nz](mailto:administrator@swdc.govt.nz); [help@horizons.govt.nz](mailto:help@horizons.govt.nz); [enquiries@horowhenua.govt.nz](mailto:enquiries@horowhenua.govt.nz); [public@mdc.govt.nz](mailto:public@mdc.govt.nz); [info@pncc.govt.nz](mailto:info@pncc.govt.nz); [info@rangdc.govt.nz](mailto:info@rangdc.govt.nz); [info@ruapehudc.govt.nz](mailto:info@ruapehudc.govt.nz); [wdc@wanganui.govt.nz](mailto:wdc@wanganui.govt.nz); TDC (main email address); Council Enquiries (Enquiry); [mdc@marlborough.govt.nz](mailto:mdc@marlborough.govt.nz); [info@wrc.govt.nz](mailto:info@wrc.govt.nz); [Info@bdc.govt.nz](mailto:Info@bdc.govt.nz); [info@greydc.govt.nz](mailto:info@greydc.govt.nz); [council@westlanddc.govt.nz](mailto:council@westlanddc.govt.nz); [ecinfo@ecan.govt.nz](mailto:ecinfo@ecan.govt.nz); [info@ashburtondc.govt.nz](mailto:info@ashburtondc.govt.nz); [info@ccc.govt.nz](mailto:info@ccc.govt.nz); [info@hurunui.govt.nz](mailto:info@hurunui.govt.nz); [kdc@kaikoura.govt.nz](mailto:kdc@kaikoura.govt.nz); [info@mackenzie.govt.nz](mailto:info@mackenzie.govt.nz); [admin@selwyn.govt.nz](mailto:admin@selwyn.govt.nz); [Enquiry@timdc.govt.nz](mailto:Enquiry@timdc.govt.nz); [office@wmk.govt.nz](mailto:office@wmk.govt.nz); [council@waimatedc.govt.nz](mailto:council@waimatedc.govt.nz); [csunit@waitaki.govt.nz](mailto:csunit@waitaki.govt.nz); [info@cic.govt.nz](mailto:info@cic.govt.nz); [info@orc.govt.nz](mailto:info@orc.govt.nz); [info@codc.govt.nz](mailto:info@codc.govt.nz); [Help.desk@cluthadc.govt.nz](mailto:Help.desk@cluthadc.govt.nz); [dcc@dcc.govt.nz](mailto:dcc@dcc.govt.nz); [services@qldc.govt.nz](mailto:services@qldc.govt.nz); [service@es.govt.nz](mailto:service@es.govt.nz); [emailsdcc@southlanddc.govt.nz](mailto:emailsdcc@southlanddc.govt.nz); [info@goredc.govt.nz](mailto:info@goredc.govt.nz); [service@icc.govt.nz](mailto:service@icc.govt.nz); [info@cdc.govt.nz](mailto:info@cdc.govt.nz)  
**Subject:** All New Zealand Councils

Mayors, Councillors and CEOs of all Regional, District and City Councils in New Zealand,  
cc Members of Local and Community Boards

#### Submission to Council's Future Community and Regional Plans

We ask that you accept and consider the attached as a submission, with feedback, when establishing your planning and budgeting documents.

We also ask recipients to distribute to members of your local and community boards. Thank you.

Jean Anderson  
for Physicians and Scientists for Global Responsibility  
+64 7 576 5721  
PO Box 8188  
TAURANGA 3145

Physicians and Scientists for Global Responsibility is a Charitable Trust established to provide independent scientific assessment and advice on matters relating to genetic engineering and other scientific and medical matters.

# PSGR

## Physicians and Scientists for Global Responsibility

New Zealand Charitable Trust

Formerly Physicians and Scientists for Responsible Genetics New Zealand

---

PO Box 8188  
TAURANGA 3145

+64 7 576 5721  
[roberta@clear.net.nz](mailto:roberta@clear.net.nz)  
[www.psgr.org.nz](http://www.psgr.org.nz)

10 February 2015

Mayors, Councillors and CEOs of all Regional, District and City Councils in New Zealand,  
cc Local and Community Boards, and CEOs and Board Members of all District Health Boards

### **Submission to Councils Future Community and Regional Plans**

The Trustees of PSGR thank Council for their response to previous correspondence.

We ask that you accept and consider the following as a submission, with feedback, when establishing your planning and budgeting documents and in so doing support a sustainable future for your district and a healthy community, and in doing this draw support from members of District Health Boards and Community and Local Boards.

Physicians and Scientists for Global Responsibility is a Charitable Trust established to provide independent scientific assessment and advice on matters relating to genetic engineering and other scientific and medical matters.

We accept many Councils have already taken steps to meet public demand in matters of genetically engineered organisms released into the environment and thank them for doing so. While other Councils leave such concerns to central government, it is important to consider the impacts at local levels extending beyond the timeframes and jurisdiction of central government authorities like the Environmental Protection Authority.

In meeting their duty of care, the work undertaken by the Northland and Auckland Councils forming the Inter-Council Working Party (ICWP)<sup>1</sup> provides experience and guidance for all New Zealand Councils. The ICWP sought legal advice and Council members have placed or are in the process of placing precautionary statements in their Plans to protect their communities and regions.

The ICWP work has highlighted the shortcomings in the HSNO Act including a lack of strict liability to moderate commercial risk taking and no mandatory requirement for the EPA to take a precautionary approach to experiments and release outdoors of transgenic organisms. We note that legal representatives of companies submitting against council controls in regional plans claim the opposite is the case, but they provide no reference to show any requirement for the EPA to take a precautionary approach.

---

<sup>1</sup> <http://www.fndc.govt.nz/your-council/meetings/record-of-meetings/2012-archived/2012-08-30-council-record-of-meeting/2012-08-30-Council-4.3-Inter-Council-Working-Party-on-Genetically-Modified-Organisms.pdf>



The ICWP commissioned an independent poll which showed how necessary was Council input.<sup>2</sup> In December 2013 community opinion was confirmed when a national poll by Colmar Brunton, undertaken for Pure Hawke's Bay, showed 79% of New Zealanders support Councils being able to use the RMA to protect farmers, exporters and their residents from the long-term unmanaged and known and unknown risks of genetically engineered organisms. Risks include exposure to increasingly more toxic chemicals.<sup>3</sup>

Reports from qualified bodies on transgenic organisms include New Zealand's own McGuinness Institute, a privately funded, non-partisan think tank working for a sustainable future, contributing strategic foresight through evidence-based research and policy analysis.<sup>4</sup> Ten years after the New Zealand moratorium on genetic engineering ended a McGuinness Institute study suggests it is time for it to be reinstated and time for a strategy to benefit the economy as a producer of food free of transgenic DNA for the world market. The Institute found that despite huge investment in experiments on transgenic plants and trees, there has been little benefit and significant economic risk incurred. Protecting the value of New Zealand's status as a producer of safe, high quality food, is of national strategic importance. The benefits are equally relevant for regional economic development and public health.

When the Bay of Plenty Regional Council placed a precautionary statement on genetic engineering in their long-term plans, an appeal lodged by Scion (NZ Forest Research Institute) went to the Environment Court. The Court decision released on 18 December 2013<sup>5</sup> allowed the BOP RC to retain reference to transgenic organisms in its Regional Policy Statement. The Court's decision sets a precedent. It clearly indicates that the Resource Management Act can be used to manage such activities in the Bay of Plenty region and it will also assist any future case in front of the Environment Court on this emerging issue. Communities and industries in the Bay can now work towards the inclusion of stricter rules in their District and City Plans to protect and keep their 'GE-free' environment status and marketing advantage. The Regional Policy Statement includes a policy directive to apply a Precautionary Approach to activities that have scientific uncertainty and where there is a serious risk of irreversible adverse effects. This can apply to the use of transgenic organisms in the BOP environment.

The Environment Court recognised the community concerns regarding the outdoor use of transgenic organisms. It also indicated in its decision that the Council may propose more directive regulation in the future, including policies, objectives, and methods. These regulations would come as a result of further investigation, via a Section 32 report, showing that transgenic organisms are elevated to a matter of regional significance. The Court decision will also encourage New Zealand Councils to take steps to protect their communities in a similar manner.

Local government's role is to work in service to the public interest of present and future generations. Local government responsibility encompasses the environmental and social spheres in their regions. The precautionary approach as discussed here speaks to this responsibility in regards to new technologies such as any proposal to release transgenic organisms.

Read the legal opinion by Dr Roydon Somerville QC on 'Managing Risks Associated with Outdoor Use of Genetically Modified Organisms' (January 2013) on <http://www.wdc.govt.nz/PlansPoliciesandBylaws/Plans/Genetic-Engineering/Documents/Proposed-Plan-Change/Legal-Opinions-combined.pdf> and a statement from Dr Kerry Grundy, ICWP Convener on [www.rmla.org.nz/upload/files/obiter/jurisdiction\\_of\\_councils\\_to\\_regulate\\_gmos\\_under\\_the\\_rma\\_-\\_dr\\_k\\_grundy.pdf](http://www.rmla.org.nz/upload/files/obiter/jurisdiction_of_councils_to_regulate_gmos_under_the_rma_-_dr_k_grundy.pdf).

<sup>2</sup> <http://www.wdc.govt.nz/PlansPoliciesandBylaws/Plans/Genetic-Engineering/Pages/default.aspx>.

<sup>3</sup> <http://purehawkesbay.org/overwhelming-support-for-local-decisions-on-gm-free-status-national-poll/>

<sup>4</sup> [http://mcguinnessinstitute.org/Site/Publications/Project\\_Reports.aspx](http://mcguinnessinstitute.org/Site/Publications/Project_Reports.aspx). 'An Overview of Genetic Modification in New Zealand 1973-2013: The first forty years' published in August 2013.

<sup>5</sup> <http://www.boprc.govt.nz/media/321876/environment-court-decision-18-dec-2013-env-2012-339-000041-part-one-section-17.pdf>

The ability to manage activities can be hindered by a lack of understanding about environmental processes and the effects of activities. Therefore, an approach which is precautionary but responsive to increased knowledge is required. It is expected that a precautionary approach would be applied to the management of natural and physical resources wherever there is uncertainty, including scientific, and a threat of serious or irreversible adverse effects on the resource and the built environment. It is important that any activity which exhibits these constraints is identified and managed appropriately. Although those intending to undertake activities seek certainty about what will be required of them, when there is little information as to the likely effects of those activities, public authorities are obliged to consider such activities on a case-by-case basis. Such consideration could be provided for in regional and district plans, through mechanisms such as zoning or rules enabling an assessment of effects through a resource consent process, or through other regulation such as bylaws. Any resource consent granted in such circumstances should be subject to whatever terms and conditions and/or reviews are considered necessary to avoid significant adverse effects on the environment and protect the health and safety of people and communities.<sup>4</sup>

With the protection of a precautionary statement, Council can oversee and control for any transgenic content in feed coming into their region and in foods sold in eating establishments. Those involved could be asked to supply test results that prove that their product does not compromise food and environmental safety before their product is allowed to be imported into regions under Council's jurisdiction. For example, with strict control of food safety of restaurants, etc., Council can use testing to show that feeding glyphosate-contaminated feed has or has not contaminated food supplies such as dairy and meat products with glyphosate or with fragments of transgenic DNA. Establishing or negating risk, Council can ban any product that creates any unacceptable risk to food and environmental safety. A regional strength would be being able to advertise a guarantee of products free of genetically engineered organisms in your jurisdiction. (See page 9 of attached document on feed imports.)

PSGR advises against the release of transgenic organisms. Should any approvals be made against this advice by New Zealand's EPA leading to the release of transgenic organisms, PSGR supports the following additional protocols:

- Making any outdoor experiments or field trials approved by the EPA a discretionary activity subject to stringent local additional conditions, particularly those not required under the Hazard Substances and New Organisms (HSNO) Act;
- Applicants paying a substantial bond and being held fully accountable for any necessary remediation and other costs;
- Establishing stringent on-going monitoring of releases by independent scientists. Under the HSNO Act, the EPA ceases to have responsibility or jurisdiction over an approved release of a transgenic organism once that new organism ceases to be considered as such. Little or no further attention or testing by an independent body applies.

Such requirements are needed to protect New Zealand's:

- Biosecurity;
- Unique biodiversity;
- Producers and exporters of primary products from agriculture, horticulture, beekeeping, viticulture, silviculture and forestry, and its gardeners;

- Food sovereignty;
- Heritage seeds;
- Growing domestic and export organic industry;
- Environment and economy as a whole;
- Public health from the proven and potential risks posed by releasing genetically engineered organisms into the environment.

It is important to realise that irrespective of planned changes to the RMA announced by government and seeking to prevent council oversight of genetically engineered organisms, other policy and legislative action is required.

A further concern is that if the Trans-Pacific Partnership Agreement (TPPA) includes allowing biotechnology companies such as Monsanto to sell their transgenic seeds in New Zealand with, as suggested, penalties for refusing to do so, this country would lose its GE free status. This is in opposition to the wishes of the majority of the public, and would damage exports, tourism and our 100% Pure New Zealand reputation.

Transgenic applications in agriculture have made the problems of industrial monoculture cropping worse and do not support a sustainable agriculture and food system with broad societal benefits. The technologies have been employed in ways that reinforce problematic industrial approaches to agriculture.

Policy decisions about the use of genetic engineering technologies are too often driven by public relations campaigns run by the biotechnology industry, rather than by what science tells us about the most cost-effective ways to produce abundant food and preserve the health of farmland.

PSGR acknowledges there may be potential benefits from genetic engineering technology and supports continued advances in molecular biology, which is the underlying science, when fully contained, supervised use of genetically engineered technology is for the furtherance of ethical science. We are critical of the business models and regulatory systems that have characterized early applications of the various transgenic technologies involved.

PSGR does not gain an advantage in trade competition.

PSGR urges all Councils to apply strong precautionary policies on genetically engineered organisms for Unitary, Local and Regional plans to meet your duty of care to your community and to protect district environments. We also call on Councils and District Health Boards to be cognisant of the risks of genetically engineered organisms in terms of human health. We ask that the information here and attached be taken into account for current and future considerations to manage any potential release of genetically engineered organisms in the environment in your region.

Please consider this correspondence as a formal submission to your plans. We wish to be kept informed of the process of submissions and outcomes. In general we do not wish to appear to speak to the submission at hearings, although we are open to invitation by Councils and District Health Boards to address representatives on genetic engineering when required and feasible.

We suggest your Council appoint a contact representative with whom we can work more closely, and to whom we can supply further information and/or answer questions from Council.

We look forward to your response.

Jean Anderson

on behalf of the Trustees of Physicians and Scientists for Global Responsibility New Zealand Charitable Trust

Paul G Butler, BSc, MB, ChB, Dip.Obst. (Auckland), FRNZCGP, General Practitioner, AUCKLAND

Jon Carapiet, BA(Hons), MPhil. Senior Market Researcher, AUCKLAND

Bernard J Conlon, MB, BCh, BAO, DCH, DRCOG, DGM, MRCGP (UK), FRNZCGP  
General Practitioner, ROTORUA

Elvira Dommissie BSc (Hons), PhD, Mus.B, LTCL, AIRMTNZ, Scientist, Crop & Food Research Institute  
(1985-1993), working on GE onion programme, CHRISTCHURCH

Michael E Godfrey, MBBS, FACAM, FACNEM  
Director, Bay of Plenty Environmental Health Clinic, TAURANGA

Elizabeth Harris, MBChB, Dip Obs, CNZSM., CPCH, CNZFP; DMM, FRNZCGP  
General Practitioner, KUROW

Frank Rowson BVetMed MATAMATA

Peter R Wills, BSc, PhD, Associate Professor, University of Auckland, AUCKLAND

Damian Wojcik, BSc, MBChB, Dip. Religious Studies, Dip.Obst., DCH, FRNZCGP, FIBCMT (USA), FACNEM,  
Master Forensic Medicine (Monash), Director and founder of the Northland Environmental Health Clinic,  
WHANGAREI

Jean Anderson, Businesswoman retired, TAURANGA.

Ends

## Why New Zealand should not release genetically engineered organisms into the environment

NB genetic engineering, genetic modification and transgenic are synonymous  
Only a very small percentage of biotechnology is given to genetic engineering

### What is genetic engineering and what problems does the technology present?

The application of genetic engineering technology alters the DNA of a living organism in ways which are much more radical than what occurs due to the generally incremental, slow processes of natural evolution. It does this in a way that is inevitably disruptive to some degree as a result of the essentially random insertion of transgenic (or cisgenic) DNA into the functional DNA of a host organism. It may cause noticeable changes in the appearance of the organism and/or differences in the biochemistry and physiology of the organism. These changes are unpredictable and may result in the production of new proteins within the transgenic organism with potential toxic effects,<sup>1</sup>

The insertion of more than one sequence of DNA in a transgenic plant is described as 'gene stacking' or 'pyramided' traits. Stacking has been found to cause unexpected effects, including synergistic effects, which are not investigated in regulatory authorisations.<sup>2</sup>

When transgenic organisms are released into the environment transgenes can be transferred to other organisms so that the engineered characteristics spread through the eco-system in compatible host plants. For example, farmers in the US face having to eradicate weed species that have developed herbicide-resistant traits, including some with resistance to multiple herbicides. These so-named 'superweeds' can grow aggressively and out-compete transgenic crops, and now infest large tracts of agricultural land. The over-application of herbicides and pesticides in general and to transgenic herbicide-resistant crops has increased substantially the volume of agricultural chemicals used and this has aided in the development of weeds resistant to those chemicals.

The Australian government has committed AUD\$15.3 million over four years to establish a comprehensive National Weeds and Productivity Research Programme to reduce the impact of invasive plants such as weeds contaminated with novel DNA.<sup>3</sup> Weeds already cost Australia over AUD\$4 billion/pa for control and in lost production.<sup>4</sup>

Wild radish (*Raphanus raphanistrum*) costs the Australian grain industry AUD\$140 million/pa.<sup>5</sup> Britain's advisory committee on releases to the environment (ACRE) identified wild radish, wild turnip, hoary mustard, brown mustard and wild cabbage as species from which hybrids could form with transgenic canola/rapeseed varieties. In one field trial plot, 46% of seeds in a wild turnip plant were found to be contaminated with transgenic DNA.<sup>6</sup>

Wild radish, wild turnip and wild cabbage grow in New Zealand. New Zealand already has 'superweeds' caused by the over application of the herbicide, glyphosate.<sup>7</sup>

Biotechnology companies reason the solution is to genetically engineer crops that are resistant to chemicals more toxic than those currently used. Such applications will further contaminate weed species with DNA that will resist those chemicals which will fail to kill those weeds. Resistant weeds can occur in all parts of the environment, especially in fields of crops and roadsides.

<sup>1</sup> Other official definitions of genetic engineering technology include <http://www.csiro.au/Outcomes/Food-and-Agriculture/WhatIsGM.aspx>, [http://www.who.int/topics/food\\_genetically\\_modified/en/](http://www.who.int/topics/food_genetically_modified/en/) and [http://ec.europa.eu/food/food/biotechnology/index\\_en.htm](http://ec.europa.eu/food/food/biotechnology/index_en.htm).

<sup>2</sup> 'Failure to yield - Evaluating the Performance of Genetically Engineered Crops' - Union of Concerned Scientists [http://www.ucsusa.org/sites/default/files/legacy/assets/documents/food\\_and\\_agriculture/failure-to-yield.pdf](http://www.ucsusa.org/sites/default/files/legacy/assets/documents/food_and_agriculture/failure-to-yield.pdf)

<sup>3</sup> [http://www.daff.gov.au/natural-resources/invasive/national\\_weeds\\_productivity\\_research\\_program](http://www.daff.gov.au/natural-resources/invasive/national_weeds_productivity_research_program)

<sup>4</sup> <http://www.csiro.au/en/Outcomes/Safeguarding-Australia/Aust-Weed-Management.aspx>

<sup>5</sup> [http://www.daff.gov.au/natural-resources/invasive/national\\_weeds\\_productivity\\_research\\_program](http://www.daff.gov.au/natural-resources/invasive/national_weeds_productivity_research_program)

<sup>6</sup> [www.guardian.co.uk/science/2003/jul/10/qm.sciencenews](http://www.guardian.co.uk/science/2003/jul/10/qm.sciencenews)

<sup>7</sup> <http://www.3news.co.nz/Weeds-herbicide-resistance-a-big-concern/tabid/1160/articleID/280328/Default.aspx> .

In the Application from Dow Agroscience for its Enlist Duo product resistant to 2,4-D and glyphosate<sup>8</sup> the company stated that tens of millions of acres of US farmland are infested with glyphosate resistant weeds and the problem has grown worse every year. (NB 2,4-D is an ingredient in Agent Orange.)

Transgenic crops are also being released to resist 2,4-D and dicamba (a herbicide in the 2,4-D family), HPPD-inhibiting herbicides, and glyphosate and AL (GAT).<sup>9</sup> Scientists confirm transfer to weeds and other species of these novel DNA sequences is inevitable. For a graph of the 'Increase in Unique Resistant Weed Cases for the USA' see page 6 on <http://www2.epa.gov/sites/production/files/2014-11/documents/enlist-duo-technical-briefing-cbi-redacted.pdf>.

Developers claims transgenic crops benefit farmers. A film released in October 2013 shows a study on the socio-economic impacts of transgenic corn on the lives and livelihoods of US farmers after over 10 years of commercial growing. Farmers explain how they became indebted because of the rising cost of transgenic seed and the increasing cost and quantity of inputs used such as herbicides.<sup>10</sup> View another released 14 June 2011.<sup>11</sup>

The United Nations International Assessment of Agricultural Knowledge, Science and Technology for Development (IASSTD) is a large, comprehensive study. It supports the premise that transgenic crops could threaten food security.<sup>12</sup>

## 1 Genetic engineering in the New Zealand environment

### 1.1 Genetically engineered trees

Significantly and of much concern to PSGR was the approval<sup>13</sup> for the New Zealand Forest Research Institute, trading as Scion, to plant *pinus radiata* with a number of engineered traits. The premise was that the trees would largely be engineered using what is commonly termed 'terminator' technology, making them sterile and thus not able to flower or replicate. The variants of terminator technology offer no absolute guarantee of sterility. The traits can break down and the trees revert to flowering. Genes can spread horizontally in soil bacteria, fungi and other organisms in the extensive root system of forest trees. There could be long-term impacts on soil biota and fertility. Trees that do not flower and fruit cannot provide food for the organisms that feed on pollen, nectar, seed and fruit; thus essential pollinating insects may not be available, especially for beekeepers, horticulturalists and crop growers.

Wilding pines are already invasive in many parts of New Zealand and herbicide-resistant pines could lead to wilding pines becoming 'super' weeds. Conventional *pinus radiata* seeds are viable "at least up to twenty-four years"<sup>14</sup> and distance is no guarantee of safety from contamination. Singh et al (1993)<sup>15</sup> found pollen from pine trees had travelled over 600 kilometres. It would need a failure rate of only a part of a percent for transgenes in tree pollen to contaminate other trees, potentially at great distances, in ways that could not easily be monitored.

The risks of releasing transgenic DNA are environmental and economic. Terminator technology has attracted a voluntary moratorium from many countries because of the risks involved. The effect on New Zealand's reputation overseas and our export markets of using terminator technology would be damaging.

### 1.2 Genetically engineered ryegrass

New Zealand scientists are running experiments with transgenic rye grass overseas. Dr Michael Dunbier of AgResearch claims the benefits of transgenic grasses outweigh the potential negative responses. Confusion has entered the debate by the use of the term "cisgenic"; a form of genetic engineering that uses genes from a single species.<sup>16</sup>

<sup>8</sup> Registration of Enlist Duo™ Herbicide, 15 October 2014 <http://www2.epa.gov/ingredients-used-pesticide-products/registration-enlist-duo>

<sup>9</sup> [www.soils.wisc.edu/extension/wcmc/2012/ppt/Davis\\_2.pdf](http://www.soils.wisc.edu/extension/wcmc/2012/ppt/Davis_2.pdf)

<sup>10</sup> Ten years of failure: farmers deceived by GM corn, Masipag 12 June 2014, [http://www.grain.org/bulletin\\_board/entries/4958-ten-years-of-failure-farmers-deceived-by-gm-corn](http://www.grain.org/bulletin_board/entries/4958-ten-years-of-failure-farmers-deceived-by-gm-corn)

<sup>11</sup> GM Crops Farmer to Farmer [https://www.youtube.com/watch?feature=player\\_embedded&v=jEX654gN3c4](https://www.youtube.com/watch?feature=player_embedded&v=jEX654gN3c4)

<sup>12</sup> [www.agassessment.org/docs/SCReport.English.pdf](http://www.agassessment.org/docs/SCReport.English.pdf)

<sup>13</sup> PSGR submission to the Environmental Risk Management Authority, now the jurisdiction of the EPA: [www.psgr.org.nz/index.php?option=com\\_content&view=article&id=80:submission-on-application-erma200479-to-field-test-in-containment-pinus-radiata&catid=24:environmental-risk-management&Itemid=39](http://www.psgr.org.nz/index.php?option=com_content&view=article&id=80:submission-on-application-erma200479-to-field-test-in-containment-pinus-radiata&catid=24:environmental-risk-management&Itemid=39)

<sup>14</sup> 'The Fire Pines', Richard Warren and Alfred J Fordham, <http://arnoldia.arboretum.harvard.edu/pdf/articles/1040.pdf>

<sup>15</sup> G Singh et al., "Pollen-rain from vegetation of North-west India." *New Physiologist* 72, 1993, pp. 191-206.

<sup>16</sup> NZ scientists running GM field trials, 1 September 2012, *New Zealand Herald*, [http://www.nzherald.co.nz/business/news/article.cfm?c\\_id=3&objectid=10830932](http://www.nzherald.co.nz/business/news/article.cfm?c_id=3&objectid=10830932)

A key question is, are there potential benefits to introducing transgenic ryegrass? The facts suggest not. For our neighbour, Australia, ryegrass (*Lolium rigidum*) is a problematic weed.

The country's first glyphosate-resistant weed was annual ryegrass (*Lolium rigidum*) which emerged in 1996 in the State of Victoria.<sup>17</sup> Commercial herbicide-resistant cotton was grown there in 1996 and may have contributed the resistance trait. Since 1996, glyphosate-resistance has been confirmed in eight other weed species. In 2013, the Australian Glyphosate Sustainability Working Group supported by the Grains Research and Development Corporation, confirmed the first case of glyphosate plus paraquat resistance in a weed species in Western Australia.<sup>18</sup>

Across Australia, resistance has been found in broadacre cropping, chemical fallow, winter and summer grains and irrigated crops. Ryegrasses and tall fescue occur as typical weed species in riparian zones in rural and urban areas, affecting horticulture, tree crops, vine and vegetable crops, driveways, fence lines and crop margins, around buildings, irrigation channels and drains, waterways, wetlands, airstrips, railways, roadsides, floodplains, and public areas. In New Zealand, contamination by glyphosate-resistant DNA would cause like damage.

The Department of Primary Industries, State of Victoria, has published an overview of baseline biological information relevant to the risk assessment of genetically engineered forms of ryegrass species released into the Australian environment.<sup>19</sup> It states that Italian ryegrass, perennial ryegrass and tall fescue are "highly outcrossing, wind pollinated species" and all three are listed as weeds in native and agricultural ecosystems throughout Australia. Extensive gene flow can occur of viable and non-viable material, and dispersal of pollen can be "forward, backward and upward". Pollen clouds can rise high into the atmosphere, move with wind patterns and be re-deposited in times of calm weather.<sup>20</sup> It is conceivable that pollen could move significant distances from the source, and studies have shown that the amount of pollen dispersed/deposited does not always decrease with increasing distance from a source.<sup>17</sup>

Grass seeds are also capable of germination after passing through the digestive systems of grazing animals. Viable seeds of perennial ryegrass, Italian ryegrass and tall fescue have been recovered from faeces 12-24 hours after feeding. Seeds of Italian and perennial ryegrass were found transported in sheep wool, the perennial ryegrass seeds still found after 1-2 months. Moving such stock would increase the risk of spreading contaminated material. Viable Italian ryegrass seeds have also been found in the faeces of European hares showing wild animals assist in seed dispersal, as do birds, irrigation water, storm water runoff and human traffic.

Seed persists in soil, dormancy time varying. A New South Wales study of tall fescue and perennial ryegrass showed 14 months after seed production the seed bank contained 14% perennial ryegrass and 10% tall fescue seed. Under controlled conditions, seeds of tall fescue and Italian ryegrass maintained germination ability for at least 12 months. Researchers found that the likelihood of weediness is increased by the intentional introduction of plants. *Lolium* species have many weedy characteristics and are capable of adapting rapidly to their environment, producing large amounts of seed which are easily dispersed.

The ryegrasses in general are significant weeds among wheat crops worldwide. Italian ryegrass can be a difficult-to-control contaminant in turf-grass farms and cause decreased marketability of cool-season sod. New Zealand growers produce ryegrass/fescue turf for use in lawns, sports, parks and reserves, racecourses, vineyards and orchards. If sods were contaminated, they could spread transgenic traits throughout the country. Volunteer tall fescue growing near certified seed production enterprises requires control measures to prevent contamination of the seed. (See next page).

Seed production for overseas sales is a big export earner for New Zealand. The New Zealand Grain & Seed Trade Association (NZGSTA<sup>21</sup>) website says: "Many New Zealand-bred cultivars, especially ryegrass, tall fescue and clover species, are commercially adopted in other countries. Pasture seed has traditionally been the mainstay of New Zealand seed exports," and goes to over 60 countries. Statistics New Zealand figures show their value continues to rise.

---

<sup>17</sup> *Sydney Morning Herald*, 8 May 2012.

<sup>18</sup> See more at: <http://www.grdc.com.au/Media-Centre/Media-News/National/2013/11/Paraquat-and-glyphosate-resistant-ryegrass-a-wake-up-call#sthash.YehKdqZM.dpuf>

<sup>19</sup> 'The Biology of *Lolium multiflorum* Lam. (Italian ryegrass), *Lolium perenne* L. (perennial ryegrass) and *Lolium arundinaceum* (Schreb.) Darbysh (tall fescue)', #AG1241; 1 May 2008 Version. Australian Government Office of the Gene Technology Regulator <http://www.ogtr.gov.au>.

<sup>20</sup> A report in the *Hawkes Bay Times* (October 2003) described how an experienced pilot, flying "in a thermal at 7000 feet altitude over a corn field that was being harvested" was "surrounded by corn husks that were being sucked up by the thermal."

<sup>21</sup> <http://www.nzgsta.co.nz/>



Herbage seed from rye grass, clover and other grasses accounted for 53 per cent of total seed exports by value and Australia, the largest market, accounts for 16 per cent of total shipments.<sup>22</sup>

NZGSTA general manager, Thomas Chin, is reported to have said New Zealand is “a world leader in seed multiplication and its strong export performance is consistent with the Government's business growth agenda and its goal to increase the ratio of exports to GDP from the current 30 per cent to 40 per cent by 2025.”

Seed and grain production for export is based in the temperate plains of the east coast of both islands. New Zealand does not need transgenic pasture grasses potentially destroying this valuable industry and other agribusinesses by contaminating agricultural land.

### 1.3 More on genetically engineered crops

It is reported that four international biotechnology companies control over 50% of the global market; companies involved in the development of transgenic seed crops and in producing herbicides. Monsanto, the US-based multinational agricultural biotechnology corporation, is a leading producer of Roundup, their proprietary herbicide with glyphosate as its active ingredient. In 2003, Monsanto also produced over 90 percent of the transgenic seeds planted globally.

Transparency Market Research (<http://www.transparencymarketresearch.com/>) has estimated the global glyphosate herbicides market was valued at US\$5.46 billion in 2012 and predicts it to reach US\$8.79 billion by 2019. In 2012, transgenic crops accounted for 45.2% of the total glyphosate demand and glyphosate demand for conventional crops has been increasing substantially as a result of the growth in unsustainable agricultural practices globally.<sup>23</sup> Such transnational companies hold enormous sway in decisions made by governments and regulatory authorities.

Gene flow is a natural phenomenon not unique to transgenic crops. It can occur via pollen, seed and vegetative propagules. Gene flow from transgenic glyphosate-resistant crops can result in the transgene entering the DNA of other crops or weeds and which may negatively impact markets. Gene flow can also produce glyphosate-resistant plants that may interfere with weed management systems.<sup>24</sup> Gene flow via pollen and seed from glyphosate-resistant canola and creeping bentgrass fields has been documented and the presence of the transgene responsible for glyphosate resistance has been found in commercial seed lots of canola, corn and soybeans.

When a weed crossbreeds with a farm-cultivated relative and acquires new genetic traits – including engineered DNA that make it more hardy – the hybrid weed can pass the traits on to future generations. The result may be very hardy, hard-to-kill weeds. Farmers in the US have seen the significant impact of transgenic DNA outcrossing to weed species and contamination of large tracts of land by those weed species. In 2012, 49% of US farmers reported they had glyphosate-resistant weeds on their farm, up from 34% in 2011. Regular surveys indicate that the rate at which glyphosate-resistant weeds are spreading is gaining momentum; increasing 25% in 2011 and 51% in 2012. Not only are glyphosate-resistant weeds spreading geographically, the problem is also intensifying with multiple species now resistant on an increasing number of farms.<sup>25</sup>

If introduced, experience overseas shows transgenic crops will contaminate and potentially destroy our valuable agri-business. In meeting their duty of care, the work undertaken by some local Councils on behalf of farmers and other ratepayers and residents in their region has highlighted the shortcomings in the HSNO Act, including a lack of strict liability and no mandatory requirement for the EPA to take a precautionary approach to outdoor transgenic organisms' experiments and releases, nor to monitor releases.

### 1.4 Genetic engineering – would it be a good thing for New Zealand agriculture?

The New Zealand Government is seen as maintaining one of the most comprehensive and rigorous approval regimes for genetically engineered organisms in the world. To date, several contained trials have been conducted, but no organization has submitted an application for a conditional or full-scale release of a transgenic organism.<sup>26</sup> In the two decades since transgenic crops were released for commercial crops, New Zealand's regulatory authorities – initially the

<sup>22</sup> <http://www.stuff.co.nz/business/farming/cropping/9695230/Seed-exports-rise-in-value>

<sup>23</sup> See the full report on [www.transparencymarketresearch.com](http://www.transparencymarketresearch.com) and <http://www.transparencymarketresearch.com/glyphosate-market.html>

<sup>24</sup> 'Gene flow from glyphosate-resistant crops', Mallory-Smith and Zapiola, *Pest Manag Sci.* 2008 Apr; 64(4):428-40. doi: 10.1002/ps.1517. <http://www.ncbi.nlm.nih.gov/pubmed/18181145>

<sup>25</sup> <http://farministrynews.com/ag-technology-solution-center/glyphosate-resistant-weed-problem-extends-more-species-more-farms>



Environmental Risk Management Authority (ERMA) and latterly Environmental Protection Authority (EPA) – have approved experiments. There followed a succession of non-starters, failed experiments and breaches of controls, which have been reviewed in the report of the McGuinness Institute on transgenics in New Zealand over four decades. The independent 2013 Report recommends a moratorium on commercial release based on the evidence.<sup>26</sup>

An application for contained experiments with transgenic wheat made by Monsanto read: “Application for approval to field test (including large scale fermentation) in containment any genetically modified organism under Section 40 of the Hazardous Substances and New Organisms Act 1996.”<sup>27</sup> Monsanto proposed to import and field test eleven new organisms as defined by its Roundup Ready® transgenic wheat (*Triticum aestivum*) tolerant to glyphosate. The wheat test plots were to be isolated from other crops by a 6-metre border planted to non-transgenic wheat which isolation barrier, said the application, is expected to minimize the spontaneous release of transgenic wheat pollen outside of the test plots.

AgResearch, a Crown Research Institute (CRI), has had approvals from ERMA (now EPA) to conduct research on transgenic cows, goats and mice. In June 2010, it and a subsidiary company announced they can improve white clover (*Trifolium repens*) to give grazing animals a higher intake of protein and reduce methane emissions. The Pastoral Genomics Research Consortium, a research consortium for forage enhancement through biotechnology, is researching a cisgenics approach to develop perennial ryegrasses that are drought resistant and reduce animal methane emissions. The use of a range of genetic engineering techniques brings risks that are not mitigated by describing an organism as 'cisgenic'.

*Organic New Zealand*<sup>27</sup> reported that CRIs have approvals for thousands of indoor laboratory experiments to create transgenic animals and plants. AgResearch has approval to engineer a wide range of forage legumes, grasses and vegetable plants in laboratory containment and glasshouses. In 2001 a HortResearch trial in Kerikeri on tamarillos genetically engineered to be resistant to mosaic virus ended after the Royal Commission on Genetic Modification recommended post-trial monitoring. In 2003, the Forest Research Institute, trading as Scion, gained approval to field trial transgenic pine and spruce trees carrying reproductive-altering and herbicide-resistant traits. In 2004, Crop and Food, with a subsidiary of Monsanto, Seminis, gained approval for a transgenic onion field trial. The onions were infested with thrips and the bulbs did not store well. The trial ended early. A 2006 application for garlic, onions, leeks and other alliums is on hold. In 2007, Crop and Food, now part of Plant and Food, received approval to trial transgenic brassicas (cauliflower, broccoli, cabbage, kale) that would produce an insecticide (Cry) gene. This trial breached regulatory controls after only four months when a flowering plant was discovered from unchecked regrowth. The breach was so serious that the CRI and MAF-Biosecurity NZ closed down the trial site.

No transgenic organisms from the foregoing experiments have been approved for release into the environment.<sup>28</sup>

## 2 What are the results of growing transgenic crops for two decades?

### 2.1 Field trial sites of transgenic canola in Tasmania

Monsanto Australia and Aventis (now Bayer CropScience) conducted field trials of transgenic canola in Tasmania in the late 1990s and 2000. In 2001, the Tasmanian Government decided to pursue agriculture free of genetically engineered organisms. The Office of the Gene Technology Regulator advises canola seeds can be viable for up to 16 years.<sup>29</sup> A Swedish study confirmed Tasmania's experience, finding transgenic canola seed can remain viable in the wild even 10 years after release.<sup>30</sup> Management issues of the 57 Tasmanian sites included seed persistence.

Regular audits of sites have taken place. In May 2013, 53 sites were inspected, four having canola volunteers. In 2008, volunteers were found at twelve of the 53 sites,<sup>31</sup> twelve different sites to the 2013 audit. An audit in May 2014 showed volunteer canola plants at three former trial sites.<sup>32</sup> Over half the 2013 sites had not involved recent soil disturbance and

<sup>26</sup> [http://mcguinnessinstitute.org/Site/Publications/Project\\_Reports.aspx](http://mcguinnessinstitute.org/Site/Publications/Project_Reports.aspx). 'An Overview of Genetic Modification in New Zealand 1973-2013: The first forty years' published in August 2013.

<sup>27</sup> <http://organicnz.org.nz/node/571>

<sup>28</sup> <http://www.epa.govt.nz/new-organisms/popular-no-topics/Pages/GM-field-test-crop-and-ornamental-plants.aspx>

<sup>29</sup> Former GE Canola Trial Sites Audit Reports, Dept Primary Industries <http://www.dpipwe.tas.gov.au/internnsf/WebPages/CART-6795X9?open>

<sup>30</sup> 'Long-term persistence of GM oilseed rape in the seedbank', D'Hertefeldt T et al, *Biol Lett.* 23 June 2008; 4(3): 314–317.

[www.ncbi.nlm.nih.gov/pmc/articles/PMC2610060/](http://www.ncbi.nlm.nih.gov/pmc/articles/PMC2610060/).

<sup>31</sup> <http://safefoodfoundation.org/contamination-from-field-trials-in-tasmania/>

it is acknowledged that these will have dormant canola seed in the soil that will not germinate until soil disturbance takes place. During audits, nearby roadsides and other areas are inspected to ensure containment is being achieved. Germinating canola volunteers not located would provide further potential contamination.

This management protocol has been strengthened with a recent decision for an indefinite moratorium on the release of transgenic organisms into the environment to protect Tasmania's brand and export economy.<sup>33</sup> Australian farmers growing conventional canola regularly secure a higher price for their crops. A list of countries that ban transgenic crops and/or require food labelling for any transgenic element can be found on <http://naturalrevolution.org/list-of-countries-that-ban-gmo-crops-and-require-gf-food-labels/>.

## 2.2 US farmers are using more hazardous pesticides to fight contaminated weeds

Dr Charles Benbrook is a research professor at the Centre for Sustaining Agriculture and Natural Resources at Washington State University. In a recent study, he found genetically engineered crops have led to an increase in overall pesticide use by 404 million pounds from the time they were introduced in 1996 through to 2011. This has aided in the appearance of the so called 'superweeds': *"Contrary to often-repeated claims that today's genetically-engineered crops have, and are reducing pesticide use, the spread of glyphosate-resistant weeds in herbicide-resistant weed management systems has brought about substantial increases in the number and volume of herbicides applied. If new genetically engineered forms of corn and soybeans tolerant of 2,4-D are approved, the volume of 2,4-D sprayed could drive herbicide usage upward by another approximate 50%."*<sup>34</sup>

## 3 Genetically engineered crops vs conventional non-transgenic crops

The loss of genetic diversity is an acknowledged fact in commercially important crops. Despite crops being bred for superior resistance, the current practice of genetic uniformity and monoculture increases the possibility of pests and diseases evolving to overcome a host plant's resistance.

Transgenic crops were introduced with promises that they would overcome many of today's agricultural problems. However, scientists cannot easily quantify the exact effect/s novel organisms will have when released into the environment; each one may differ to the next. Genes move naturally within a species, by seed dispersal and pollination, a basic biological principle of plant evolution facilitated by insects, wind, animals, humans and other factors. The ecological risks in releasing transgenic plants include non-target effects of a crop and transgenic DNA escaping into wild populations.<sup>35</sup>

An estimated 90 percent of transgenic crops grown worldwide are glyphosate resistant.<sup>36</sup> US Department of Agriculture data show glyphosate-based herbicide use increased 6,504% 1991-2010. In a survey of growers, Farm Chemicals International confirmed (February 2013):<sup>37</sup>

- 61.2 million US crop acres have glyphosate-resistant weeds, nearly double the 2010 number;
- 49% of growers had glyphosate-resistant weeds on farms in 2012, up from 34% in 2011;
- 92% of growers in Georgia have glyphosate-resistant weeds;
- from 2011 to 2012 the acres with resistance almost doubled in Nebraska, Iowa and Indiana;
- total resistant acres increased by 25% in 2011 and 51% in 2012;
- more farms had at least two resistant species on their farm - in 2010 12%, in 2012 27%.

Graphs 15, 16 and 17 on the International Survey of Herbicide-Resistant Weeds illustrate the spread of glyphosate-resistant weeds since the introduction of transgenic crops. Click on <http://www.weedscience.org/summary/home.aspx> and scroll down to click on 'PowerPoint Charts Available for Download – December 6th 2014'.

---

<sup>32</sup> Dept Primary Industries, Parks, Water & Environment – Biosecurity Tasmania.

<http://dpi.pwe.tas.gov.au/Documents/GM%20Canola%20Former%20Trial%20Sites%20Audit%20Report%20May2014.pdf>

<sup>33</sup> <http://www.abc.net.au/news/2014-01-09/tasmania27s-gmo-ban-extended-indefinitely/5192112>

<sup>34</sup> <http://www.nlpwessex.org/docs/benbrook.htm>.

<sup>35</sup> 'Ecological effects of transgenic crops and the escape of transgenes into wild populations', Pilson D and Prendeville, H, Annu. Rev. Ecol. Evol. Syst. 2004. 35:149–74

<http://fbae.org/2009/FBAE/website/images/PDF%20files/Imporatant%20Publication/ecological%20effects%20of%20transgenes.pdf>

<sup>36</sup> Powles (2008) Glyphosate: a once-in-a-century herbicide, Pest Manag Sci 64: 319-325

<sup>37</sup> <http://www.farmchemicalsinternational.com/crop-inputs/herbicides/glyphosate-resistance-spreads-in-the-u-s/> 5 February 2013

Herbicide-resistance is not confined to glyphosate-based herbicides. One study predicts total herbicide use in the US will rise from around 1.5 kilograms per hectare in 2013 to more than 3.5 kilograms per hectare in 2025 as a direct result of growing transgenic crops, and that the new technologies will also lose their effectiveness.<sup>38</sup> As indicated, the increase in herbicide-resistant weeds species has led to the development of GE crops and weeds that are resistant to more toxic herbicides such as 2,4-D.

In August 2012, conventional farmer, Bob Mackley, spoke in New Zealand about transgenic crops and their effects in his native Australia. He reported that many farmers have suffered significant losses as a result of transgene contamination of their conventional crops, and legislation favours seed companies, not farmers. Legally without the means to protect his livelihood, Mackley has been forced to time his plantings to avoid contamination from transgenic crops grown by a neighbour. His is a critical balance between profit or contamination and loss.

Most growers in Australia are GE-free and support the GE Crops Free Areas Act 2003 which came into currency in 2014. They want the biotechnology industry to pay its way, with a Farmer Protection Fund levying 50cents/kg on seed sales so growers are compensated for losses from GE contamination. GE-free canola premiums are up to \$40/tonne.<sup>39</sup>

US farmers growing transgenic corn say they now face a future of lower prices and higher inputs. The trend is to abandon transgenic seed because non-GE crops are more productive and profitable.<sup>40</sup>

There already exist effective, sustainable solutions to the problems that this novel technology claims to address; for example, conventional plant breeding, helped by safe modern technologies like gene mapping and Marker Assisted Selection. MAS moves complex traits into new crop varieties using genetic information and conventional breeding, raising fewer safety issues than transgenic crops and respecting species barriers. It is more acceptable to shoppers and faster to market. MAS continues to outperform genetically engineered crops in producing high-yield, drought-tolerant, and pest- and disease-resistant plants that can meet present and future food needs.<sup>41 42</sup>

Key markets want foods free of novel DNA, a requirement driven by the demands of well-informed and discerning consumers from China, Japan, Europe, the US and elsewhere. The global market for foods and beverages produced without the use of any transgenic ingredient/s has led many leading international food companies such as Unilever, Nestlé, and Coca-Cola to introduce or be developing non-GE versions of their products to meet the demands of consumers who do not want transgenes in their food.<sup>43</sup> Global sales of non-GE food and beverage products are predicted to double to US\$800 billion by 2017.<sup>44</sup>

## 4 Genetically engineered crops and human health

Consumers in the US have been ingesting significant quantities of foods containing novel DNA since the introduction of transgenic crops on a commercial basis in the mid 1990s. About 94 percent of US soybean farmers and 72 per cent of corn farmers use Roundup Ready (glyphosate-resistant) crops. Soy and corn go into a substantial range of food products, along with transgenic canola and cottonseed.<sup>45</sup> In addition, animals fed glyphosate-resistant crops bio-accumulate<sup>46</sup> glyphosate and/or glyphosate metabolites, adding to the human end user intake.

Glyphosate-resistant transgenic crops especially represent a large percentage of the transgenic seed market; for example, in the US alone, nearly 93 percent of soybeans and 80 percent of corn came from Monsanto's RoundupReady seeds in 2009.<sup>47</sup> Glyphosate is the active ingredient in Roundup and many proprietary herbicides and since the introduction in the mid-1990s of glyphosate-resistant crops on a commercial basis its use has increased many-fold.

---

<sup>38</sup> Mortensen et al, *BioScience* 62, 75–84 (2012).

<http://www.jstor.org/discover/10.1525/bio.2012.62.1.12?uid=3738776&uid=2129&uid=2&uid=70&uid=4&sid=21103352335931>

<sup>39</sup> Gene Ethics Oz

<sup>40</sup> <http://modernfarmer.com/2013/12/post-gmo-economy/>.

<sup>41</sup> 'An evidence-based examination of the claims made for the safety and efficacy of genetically modified crops' (June 2012) Earth Open Source <http://earthopensource.org/index.php/reports/58>

<sup>42</sup> Gene Ethics News | December 2014

<sup>43</sup> <http://www.packagedfacts.com/Non-GMO-Foods-7822141/>.

<sup>44</sup> [www.environmentalleader.com/2013/11/12/non-gmo-food-market-to-hit-800-billion-by-2017/](http://www.environmentalleader.com/2013/11/12/non-gmo-food-market-to-hit-800-billion-by-2017/); [www.globalresearch.ca/american-farmers-abandoning-genetically-modified-seeds-non-gmo-crops-are-more-productive-and-profitable/5366365](http://www.globalresearch.ca/american-farmers-abandoning-genetically-modified-seeds-non-gmo-crops-are-more-productive-and-profitable/5366365); Global Research, 27 Jan 2014 [offthegridnews.com](http://offthegridnews.com).

<sup>45</sup> [http://www.soyconnection.com/soyfoods/product\\_overview.php](http://www.soyconnection.com/soyfoods/product_overview.php)

<sup>46</sup> <http://extoxnet.orst.edu/tibs/bioaccum.htm>, <http://www.saferchemicals.org/resources/chemicals/pbts.html>

<sup>47</sup> <http://www.foodandwaterwatch.org/factsheet/monsanto-a-corporate-profile/>

The negative impacts of glyphosate ingestion on humans manifest slowly over time by damaging cellular systems, playing a part in most common diseases and conditions allied with a Western diet, including gastrointestinal disorders, obesity, diabetes, heart disease, depression, autism, infertility, cancer and Alzheimer's disease.<sup>48</sup>

A huge increase in the prevalence of chronic diseases in the US has been reported over the past 20 years. For a 2014 study, US government databases were searched for transgenic crop data, glyphosate application data and disease epidemiological data. Correlation analyses were then performed on 22 diseases in these time-series data sets. While correlation is not proof of certain cause, the researchers produced graphs suggesting a connection between the introduction of genetically engineered crops on a commercial basis and increases in those diseases.<sup>49</sup>

A 2013 study detected glyphosate in 43.9 percent of human urine samples taken from participants living in urban areas in 18 European countries.<sup>50 51</sup> When diets favoured organic produce humans excreted significantly less glyphosate. The levels in urine of generally healthy humans were significantly lower than levels in a comparative chronically diseased population.

In the 1970s, glyphosate was identified as a chelator of minerals, a compound that combines with other minerals making them available only under certain conditions. Studies show plant uptake systems are susceptible to the chelating effects of glyphosate<sup>52</sup> which will affect the quality of crops and grasses, as well as making them more susceptible to pathogens.

One study<sup>53</sup> hypothesizes glyphosate mixed with hard water forms a complex with heavy metals like cadmium, resulting in its accumulation in the body. The study proposed a link between chronic kidney disease and glyphosate. Chronic kidney disease of unknown origin (CKDu) is increasingly common in poor farming communities in some developing countries. Identified in the mid-1990s, CKDu is estimated to afflict 15 percent of working age people in northern Sri Lanka alone: 400,000 patients with an estimated death toll of 20,000.

There remains no official monitoring of effects on the human population of ingesting transgenic foods and consumers have no official notification of the risks related to commercial transgenic crops. With US consumers increasingly growing aware of the potential results of ingesting transgenic DNA, the fastest growing sector in its grocery industry is for foods free of transgenes, that sector now estimated to be at close to one third of the total market. This is the result of consumer pressure, and from medical professionals recommending foods free of transgenes with consequent improved health for patients.<sup>54</sup> New Zealand is still well-positioned to help meet that demand for GE-free food.

## 4.1 Genetically engineered organisms - no proof of safety for consumers or farmers

The 2014 'Hot Debate' at Lincoln University, featured six experts representing those proposing and those against the release of into the environment of genetically engineered organisms. Panel members Dr Jon Hickford and Dr Tony Connor, proponents of the technology, stated transgenic foods were safe to eat. They were asked (a) could they provide 10 human studies to support this statement, and (b) would they also advise where the diagnostic tools are available for health professionals to identify if transgenic foods in the human diet are contributing or not to illnesses. Drs Hickford and Conner admitted there are no safety studies nor are there any diagnostic tools for monitoring public health impacts of transgenic foods.<sup>55</sup>

Because of the controversy that follows the safety issues an extensive three-year study is to ask, *Is genetically engineered food and associated pesticides safe for human health?* Launched on 12 November 2014, it is the largest ever, independent safety study on transgenic foods.<sup>56</sup>

<sup>48</sup> 'Glyphosate's Suppression of Cytochrome P450 Enzymes and Amino Acid Biosynthesis by the Gut Microbiome: Pathways to Modern Diseases', Samsel et al, Entropy 2013, 15(4), 1416-1463; doi:10.3390/e15041416 <http://www.mdpi.com/1099-4300/15/4/1416>

<sup>49</sup> 'Genetically engineered crops, glyphosate and the deterioration of health in the United States of America', Swanson et al, Journal of Organic Systems, 9(2), 2014, [http://www.organic-systems.org/journal/92/JOS\\_Volume-9\\_Number-2\\_Nov\\_2014-Swanson-et-al.pdf](http://www.organic-systems.org/journal/92/JOS_Volume-9_Number-2_Nov_2014-Swanson-et-al.pdf)

<sup>50</sup> 'Determination of Glyphosate residues in human urine samples from 18 European countries', carried out by Medical Laboratory Bremen, Germany, [http://www.foeeurope.org/sites/default/files/glyphosate\\_studyresults\\_june12.pdf](http://www.foeeurope.org/sites/default/files/glyphosate_studyresults_june12.pdf).

<sup>51</sup> [http://www.foeeurope.org/sites/default/files/press\\_releases/foee\\_1\\_introducing\\_glyphosate.pdf](http://www.foeeurope.org/sites/default/files/press_releases/foee_1_introducing_glyphosate.pdf)

<sup>52</sup> Roemheld et al., 2005; Neumann et al., 2006; Eker et al., 2006

<sup>53</sup> 'Glyphosate, hard water and nephrotoxic metals: are they the culprits behind the epidemic of chronic kidney disease of unknown etiology in Sri Lanka?' Jayasumana C1, Gunatilake S2, Senanayake P3. Int J Environ Res Public Health. 2014 Feb 20;11(2):2125-47. doi: 10.3390/ijerph110202125. <http://www.ncbi.nlm.nih.gov/pubmed/24562182>

<sup>54</sup> <http://www.aemonline.org/gmopost.html>.

<sup>55</sup> <http://www.scoop.co.nz/stories/PO1404/S00063/myths-revealed-about-safety-of-ge-food.htm>.

<sup>56</sup> <http://www.gmwatch.org/index.php/news/archive/2014/15753-largest-international-study-into-safety-of-gm-food-launched-by-russian-ngo>



Rats are to be fed Monsanto RoundUp Ready corn and glyphosate, which the corn is engineered to resist and which is widely used in growing such crops. The use of the herbicides to which transgenic crops are resistant has increased many-fold since their introduction in the mid-1990s and there is a notable lack of published, peer-reviewed independently sourced data on their safety and on the increased use of the herbicides. For the most part, biotechnology companies carried out safety studies and those claimed 'no health risk'. Government regulators have not required evidence of long-term safety. This study should fill that gap. The experiment will be conducted in Western Europe and Russia and have no input from biotechnology corporations or the anti-genetic engineering movement.

In *Alliance for Bio-Integrity et al v Shalala* (1998) over 44,000 pages of files produced at the direction of the Court by the US Food and Drug Administration (FDA) revealed it had declared genetically engineered foods to be safe despite its own experts disagreeing, and that it falsely claimed a broad scientific consensus supported its stance. Internal memoranda and reports disclosed agency scientists repeatedly cautioned that foods produced through recombinant DNA technology (genetically engineered organisms) entail different risks than do their conventionally produced counterparts and that this was consistently disregarded when FDA policy was written in treating transgenic foods the same as conventional ones.<sup>57</sup>

In taking this stance, the agency violated the US Food, Drug and Cosmetic Act in allowing transgenic foods to be marketed without testing on the premise that they are 'generally recognized as safe' (GRAS) by qualified experts. The consensus of scientists working for the FDA was that transgenic foods were inherently risky, and might create hard-to-detect allergies, poisons, gene transfer to gut bacteria, new diseases, and nutritional problems. They urged rigorous long-term tests.<sup>44</sup> The FDA has admitted to being directed "to foster" the biotech industry. After two decades of growing transgenic crops on a commercial-scale results to the environment and consumers unknowingly ingesting transgenes are becoming obvious.

## **5 New Zealand exports – are we 100% Pure Clean Green New Zealand?**

The Parliamentary Commissioner for the Environment, Dr Jan Wright, says New Zealand urgently needs a National Environmental Reporting Act if it is to maintain its clean green image. The act would provide for regular national environmental reporting in line with other OECD nations, New Zealand being the only OECD country not doing so.<sup>58</sup>

One of New Zealand's export strengths is being able to guarantee products free of genetically engineered organisms. New Zealand's position as a provider of clean, GE-free, and safe food is a significant economic and marketing point of difference. In the task of lifting exports above commodity status, there is added value in food safety, natural, uncontaminated foods, and sustainable, ethical production. One of the major emerging growth sectors in US grocery is Non-GEO food; as stated, close to one third of the market.

Exclusion of GE crops now advantages New Zealand and assists in increasing exports to markets wanting products free of transgenic DNA and in supplying new markets. Our regulatory system has protocols in place aimed at protecting these exports. For example, exported meat has to comply with the standards applying to cadmium levels in liver or kidney, particularly from animals older than three years.<sup>61</sup> Because of the known chelating qualities of glyphosate, growing glyphosate-resistant transgenic crops could increase the cadmium presence in animal feed. Cadmium levels can affect stock grazed on transgenic crop stubble and the mineral may be present in imported animal feed.

Genetically engineered soy enters through New Zealand's seaports, mainly from Argentina. The large poultry industry in the Waikato and elsewhere uses transgenic feed and our substantial dairy industry spreads poultry manure on mainly dairy farms at 1-2 tonnes/hectare as a fertiliser. Any glyphosate-resistant gene would contaminate the environment and the milk as will the glyphosate-based herbicide contained therein. The spreading of manure then provides the opportunity to widely distribute any potentially viable transgenic material and associated chemical residues. Currently, transgenic crops are included in near 200,000 tonnes of feed imported into New Zealand annually. These imported feeds are only tested for non-viability of transgenic crops with no quality reassurance on purity. The reported practice is that loads are largely assessed visually rather than tested in a laboratory. Neither the glyphosate content, nor other toxic ingredients in glyphosate-based herbicides are tested for and the Ministry for Primary Industries confirmed they will not be in the immediate future. Thus New Zealand is at risk potentially from both the transgenic content and the glyphosate-based herbicide residues contained in the feed, the levels of which are also not monitored.

---

<sup>57</sup> Alliance for Bio-Integrity <http://www.biointegrity.org/list.htm>.

<sup>58</sup> <http://www.pce.parliament.nz/media/media-releases/our-clean-green-image-at-risk-says-commissioner>

It was a Norwegian study that investigated contamination levels and nutritional contents of three varieties of lowa-grown soybeans<sup>59</sup> - Roundup Ready soybeans, conventional soybeans grown using Roundup herbicide, and organic soybeans, grown without agricultural chemicals. On average transgenic soy contained 11.9 parts per million (ppm) of glyphosate; the highest level 20.1 ppm. No residues of either kind were found in the conventional and organic varieties. In a 2012 nutritional analysis of transgenic corn 13 ppm of glyphosate were found, compared to none in non-GEO corn. In an article for *The Ecologist* two of the study's researchers pointed out that these levels are actually double or more of what the developer of Roundup Ready transgenic crops, Monsanto, has referred to as "extreme levels."

The question has to be asked, why is New Zealand importing any product likely to be contaminated with novel DNA and glyphosate when there are countries exporting conventional crops? Brazilian feed is free of transgenes, and there is enough to meet demand and an increasing supply. Soya production in China and India is 100% non-transgenic.

A recent privately tested sample of soy meal imported into New Zealand revealed 3.4 parts per million glyphosate and 1.4 parts per million AMPA (aminomethylphosphonic acid), the primary degradation product of glyphosate in plants, soil, and water. Stock fed such feed will ingest any viable transgenes that escape scrutiny, and pesticide residues, and can potentially pass the effects on to humans ingesting their meat or milk products.<sup>3</sup> That such feed is not adequately tested or labelled undermines the integrity of the New Zealand food system and consequently its export reputation.<sup>60</sup>

Russia recently announced it will not allow any seed or food containing transgenes into Russia, that the country has the land to grow its own conventional, organic foods, as does New Zealand. The Technical Expert Panel of India's Supreme Court has also backed an indefinite moratorium on GEOs. Japan opposes transgenic crops, although canola imported from Canada has led to transgenic volunteers growing wild around Japanese ports and roads leading to major food oil processing companies. Ireland bans all GE crops. Austria, Hungary, Greece, Bulgaria and Luxembourg have bans on the cultivation and sale of GEOs. Germany bans the cultivation or sale of GE maize. In France public demand has successfully kept transgenic crops out of the country. Madeira has a countrywide ban on GE crops. Switzerland banned all GE crops, animals, and plants on its fields and farms in a public referendum in 2005, extended to 2013, and further extended to December 2017.<sup>61</sup> Californian counties Mendocino, Trinity and Marin have banned GE crops, and a number of US States are working towards at least adequate labelling to give consumers a choice.<sup>62 63</sup>

Alongside banning transgenic crops, countries are banning glyphosate, as evidence grows that it is not safe as was conveniently assumed by regulators and industry. Glyphosate is the active ingredient in Monsanto's proprietary herbicide, Roundup®, and an ingredient in proprietary brands marketed by Bayer, Dow, Zeneca and other transnational companies.<sup>64</sup> With an estimated 90 percent of transgenic crops grown worldwide being glyphosate-resistant, the trait has transferred to weeds, with glyphosate-resistant weeds now located in 18 countries. These have had particularly significant impacts in the US, Australia, Brazil, Argentina and Paraguay.<sup>65</sup>

Glyphosate-resistance has been confirmed in several New Zealand locations, the cause here given as "over application" of the herbicide.<sup>66</sup>

---

<sup>59</sup> 'Compositional differences in soybeans on the market: Glyphosate accumulates in Roundup Ready GM soybeans', Böhna et al, Food Chemistry, Volume 153, 15 June 2014, Pages 207–215doi:10.1016/j.foodchem.2013.12.054

<http://www.sciencedirect.com/science/article/pii/S0308814613019201>

<sup>60</sup> In New Zealand, the maximum concentrations of a residue (MRLs) - resulting from the registered use of an agricultural or veterinary chemical legally permitted or recognised as acceptable in or on a food, agricultural commodity, or animal feed - are established by the Agricultural Compounds and Veterinary Medicines Group (ACVMG) within the NZ Food Safety Authority. There is no glyphosate MRL for maize currently listed in the MRL Standard; however, there is a provision for residues of up to 0.1 mg/kg for agricultural compound/food combinations not specifically listed. The Standard does recognise Codex standards for imported food. The Codex MRL for glyphosate in maize is 5 mg/kg (the residue definition only includes parent glyphosate). Under Food Standards ANZ, the current ADI for glyphosate of 0.3 mg/kg body weight per day set in 1985<sup>60</sup> based on the no observed effect level (NOEL) of 30 mg/kg bw/day, the highest dose tested in a two year study on rats, and using a 100-fold safety factor (10-fold intra and interspecies safety factors). There is currently no ADI for NAG, AMPA or N-acetyl AMPA. The FAO estimate of acceptable daily intake for humans is 0-0.3 mg/kg bw (sum of glyphosate and AMPA) (1986) <http://www.fao.org/docrep/w8141e/w8141e0u.htm>

<sup>61</sup> <http://www.gmo-free-regions.org/gmo-free-regions/switzerland.html>

<sup>62</sup> <http://naturalrevolution.org/list-of-countries-that-ban-gmo-crops-and-require-ge-food-labels/> 19 June 2013

<sup>63</sup> <http://www.gmo-free-regions.org/>

<sup>64</sup> <http://en.wikipedia.org/wiki/Glyphosate>.

<sup>65</sup> International Survey of Herbicide Resistant Weeds [www.weedscience.org/graphs/soagraph.aspx](http://www.weedscience.org/graphs/soagraph.aspx) (2013).

<sup>66</sup> <http://www.far.org.nz/index.php/media/entry/glyphosate-resistance-confirmed-in-new-zealand>.

A January 2014 Press Release from the biotechnology company, Dow AgroSciences<sup>67</sup>, stated new data “indicate an astonishing 86 percent of corn, soybean and cotton growers in the South (*of the US*) have herbicide-resistant or hard-to-control weeds on their farms. The number of farmers impacted by tough weeds in the Midwest ... now tops 61 percent. Growers need new tools to address this challenge.” The “new tools” are their transgenic crops and associated more toxic agricultural proprietary chemicals.

Growing transgenic crops would have negative impacts on the New Zealand environment, agricultural industries and on exports and tourism. Conventional and organic farmers in New Zealand already achieve premiums for non-transgenic food products. If New Zealand grew genetically engineered crops, many export markets would be adversely affected. (NB As an example, see grain and seed exports page 4.)

## 5.1 Remaining ‘GE free’

The Inter-Council Working Party (ICWP) sought legal advice and has placed precautionary statements in their Plans to protect their communities and regions. An ICWP-commissioned independent poll showed how necessary this was. See this on <http://www.wdc.govt.nz/PlansPoliciesandBylaws/Plans/Genetic-Engineering/Pages/default.aspx>.

Community opinion was confirmed in December 2013 when a national poll by Colmar Brunton, undertaken for Pure Hawke’s Bay, showed 79% of New Zealanders support Councils being able to use the RMA to protect farmers, exporters and their residents from the long-term unmanaged and unknown risks of genetically engineered organisms. The risks include exposure to increasingly more toxic chemicals.<sup>68</sup>

The UN’s science-based International Assessment of Agricultural Knowledge, Science and Technology for Development (IAASTD) states mixed approaches to agriculture, not transgenic monocultures, are needed to feed future generations. Systems should enhance sustainability and maintain productivity in ways that protect the natural resource base and ecological provisioning of agricultural systems.<sup>69</sup>

Reports from qualified bodies on transgenic organisms include New Zealand’s own McGuinness Institute, a privately funded, non-partisan think tank working for a sustainable future, contributing strategic foresight through evidence-based research and policy analysis.<sup>26</sup> Ten years after the New Zealand moratorium on genetic engineering ended, an Institute study suggests it is time for it to be reinstated and time for a strategy to benefit the economy as a producer of food free of transgenic DNA for the world market. The Institute found that despite huge investment in experiments on transgenic plants and trees, there has been little benefit and significant economic risk incurred. Protecting the value of New Zealand’s status as a producer of safe, high quality food, is of national strategic importance.

The ‘United Nations Conference on Trade and Development Review 2013 - Make agriculture truly sustainable now for food security in a changing climate’<sup>70</sup> states:

“Developing and developed countries alike need a paradigm shift in agricultural development: from a ‘green revolution’ to a ‘truly ecological intensification’ approach. This implies a rapid and significant shift from conventional, monoculture-based and high external-input-dependent industrial production towards mosaics of sustainable, regenerative production systems that also considerably improve the productivity of small-scale farmers. We need to see a move from a linear to a holistic approach in agricultural management, which recognizes that a farmer is not only a producer of agricultural goods, but also a manager of an agro-ecological system that provides quite a number of public goods and services (e.g. water, soil, landscape, energy, biodiversity, and recreation).”

An evidence-based examination of the claims made for the safety and efficacy of transgenic crops was published in June 2012 [http://earthopensource.org/files/pdfs/GMO\\_Myths\\_and\\_Truths/GMO\\_Myths\\_and\\_Truths\\_1.3b.pdf](http://earthopensource.org/files/pdfs/GMO_Myths_and_Truths/GMO_Myths_and_Truths_1.3b.pdf).

See also FAQ on Genetic Engineering [http://www.psg.org.nz/index.php?option=com\\_content&view=article&id=54&Itemid=25](http://www.psg.org.nz/index.php?option=com_content&view=article&id=54&Itemid=25) and an overview on Glyphosate <http://www.psg.org.nz/glyphosate/finish/8-uncategorised/16-glyphosate/0>.

---

<sup>67</sup> <http://www.agriculture-xprt.com/news/dow-agrosciences-statement-about-usda-announcement-regarding-draft-environmental-impact-statement-fo-409452>

<sup>68</sup> <http://purehawkesbay.org/overwhelming-support-for-local-decisions-on-gm-free-status-national-poll/>

<sup>69</sup> <http://www.greenpeace.org/belgium/PageFiles/16954/iaastd-recommendations.pdf>

<sup>70</sup> [http://unctad.org/en/PublicationsLibrary/ditcted2012d3\\_en.pdf](http://unctad.org/en/PublicationsLibrary/ditcted2012d3_en.pdf).

## 5.2 Future agricultural planning for New Zealand

Plant breeding largely favours varieties determined by the vested interest providing funding rather than on end user safety and choice. A current favourite is genetic engineering technology which includes the development of transgenic food crops, and many of these food crops are resistant to herbicides, especially glyphosate. Important points are that:

- (a) Such crops substantially increase the amount of herbicide applied to the crop;
- (b) The novel DNA giving herbicide-resistance has transferred to an increasing number of major weed species in areas growing transgenic crops;
- (c) This has made glyphosate in particular ineffectual on those resistant weeds; and
- (d) Weed species now require more toxic chemicals to achieve eradication.<sup>35</sup>

Glyphosate-resistance has already been identified in several locations in New Zealand, the cause being given as 'over application'.<sup>71</sup> On experience overseas, growing transgenic glyphosate-resistant crops would increase that considerably.

Two studies give further evidence-based reasons for New Zealand farmers taking a precautionary approach and not adopting genetically engineered crops and thus releasing novel DNA into the environment, particularly those crops using glyphosate-based herbicides<sup>72</sup>:

- Thirty dairy cows from each of eight Danish dairy farms were investigated and all were found to excrete glyphosate in their urine. The study demonstrated that glyphosate is toxic to the normal metabolism of dairy cows.<sup>73</sup> The likely source of the glyphosate would be animal feed containing transgenic food and/or feed crops, and residual glyphosate from spraying. (N.B. See page 8 - glyphosate found in human urine.)
- Glyphosate enhances the growth of aflatoxin-producing fungi, lending an explanation for the substantial increase in fungal toxins now found in corn grown in the US<sup>74</sup>; the USDA indicating in 2012 that 88 percent of US corn/maize grown was transgenic. Most would be glyphosate resistant, thus increasing the potential for large areas of corn crops to be affected.<sup>75</sup>

Aflatoxins affect grains, oilseeds and tree nuts, among other crops. Contamination of grains by aflatoxins threatens human and livestock health, and international trade. The UN Food and Agriculture Organisation estimates 25% of the world food crops are affected annually. Crop loss due to such contamination costs US producers over US\$100 million/year on average.<sup>76</sup> Tate & Lyle, a British maker of sweeteners and starches, has said quality problems with US corn, primarily due to aflatoxin, were forcing changes to the firm's buying programme.<sup>77</sup>

Thousands of conventional crop varieties have been lost since the introduction of agrichemicals and monoculture practices, including transgenic food crops since the mid 1990s.<sup>78</sup> Changes in genetic structure can be long term and affect several generations. No insurer will cover the complex and long-term risks, this fact alone reason for precaution.

If transgenic crops are introduced into New Zealand, many of our farmers growing premium quality and organic crops stand to lose their livelihoods. There will follow, as it has in other countries, inadvertent contamination of non-transgenic crops and grasses, resulting in extortionist claims from the seed producers for farmers to compensate them for harbouring – be it unwillingly and unknowingly – crops contaminated with patented novel DNA. Farmers have no legal protection against this and insurance protection is not available. The end result for many has been financial ruin.<sup>79</sup>

<sup>71</sup> <http://www.far.org.nz/index.php/media/entry/glyphosate-resistance-confirmed-in-new-zealand>.

<sup>72</sup> The active ingredient in the commonly applied herbicide, Roundup. Glyphosate-resistant crops are largely RoundupReady.

<sup>73</sup> 'Field Investigations of Glyphosate in Urine of Danish Dairy Cows', Krüger et al., J Environ Anal Toxicol 2013, 3:5, <http://dx.doi.org/10.4172/2161-0525.1000186>

<sup>74</sup> Carla L Barberis, Cecilia S Carranza, Stella M Chiacchiera, Carina E Magnoli. Influence of herbicide glyphosate on growth and aflatoxin B1 production by *Aspergillus section Flavi* strains isolated from soil on in vitro assay. J Environ Sci Health B. 2013 ;48(12):1070-9. PMID: 24007484

<sup>75</sup> 'Influence of herbicide glyphosate on growth and aflatoxin B1 production by *Aspergillus section Flavi* strains isolated from soil on in vitro assay', Barberis et al, J Environ Sci Health B. 2013; 48(12): 1070-9. doi: 10.1080/03601234.2013.824223; <http://www.ncbi.nlm.nih.gov/pubmed/24007484>.

<sup>76</sup> <http://www.icrisat.org/aflatoxin/aflatoxin.asp>.

<sup>77</sup> Reuters, 'Tate & Lyle says aflatoxin in U.S. corn complicates grain sourcing', 8 November 2012

<sup>78</sup> Int Fed of Red Cross and Red Crescent Societies, <http://www.ifrc.org/PageFiles/89755/Photos/307000-WDR-2011-FINAL-email-1.pdf>.

<sup>79</sup> Report 'Seed Giants vs US Farmers' <http://www.centerforfoodsafety.org/reports/1770/seed-giants-vs-us-farmers>



## 6 Concluding

Tasmanian Deputy Premier, Bryan Green, said the State's "island status and our biosecurity system mean that our food and agricultural industries are well placed to take advantage of the State's GE-free status."<sup>80</sup>

New Zealand's island status offers the same advantages. This country should reject growing transgenic food or feed crops, trees and grasses; in fact, any release into the environment of genetically engineered organisms. Transgenes released into the environment have the potential to invade and damage the biological infrastructure of New Zealand's primary industry sectors and our unique biodiversity. As has been shown overseas, once released into the environment, transgenes will spread and potentially contaminate irreversibly native and domestic gene-stocks alike.

### 6.1 Supporting ethical science

PSGR acknowledges there may be potential benefits of genetic engineering technology and supports continued advances in molecular biology, which is the underlying science, in containment. We are critical of the business models and regulatory systems that have characterized early applications of the various technologies involved.

Transgenic applications in agriculture have made the problems of industrial monoculture cropping worse and do not support a sustainable agriculture and food system with broad societal benefits. The technologies have been employed in ways that reinforce problematic industrial approaches to agriculture.

Policy decisions about the use of genetic engineering technologies are too often driven by public relations campaigns run by the biotechnology industry, rather than by what science tells us about the most cost-effective ways to produce abundant food and preserve the health of farmland.

We offer these following ideas for policy makers on what they should do to best serve the public interest:

- Expand research funding for public crop breeding programmes, so that a broad range of non-transgenic varieties remain available;
- Expand public research funding and incentives to further develop and adopt agro-ecologically based farming systems;
- Take steps - such as changes in patent law - to facilitate independent scientific research on the risks and benefits of genetic engineering technology / genetically engineered organisms;
- Take a more rigorous, independently verified approach to transgenic product approvals, so that products do not come to market until their risks and benefits are understood through non-biased review;
- Support food labelling laws that require foods containing transgenic-derived ingredients to be clearly identified as such, so that consumers can make informed decisions about supporting transgenic applications in agriculture.

PSGR supports fully contained, supervised use of genetically engineered technology for the furtherance of science.

PSGR does not gain an advantage in trade competition.

**Compiled by Physicians and Scientists for Global Responsibility New Zealand Charitable Trust  
January 2015**

**PO Box 8188  
TAURANGA 3145  
[www.psgr.org.nz](http://www.psgr.org.nz)**

---

<sup>80</sup> <http://www.theguardian.com/world/2014/jan/09/tasmania-gm>

**For background and further information please refer to the following:**

- Testimony to Northland Regional Council 21 June 2013 <http://www.psgr.org.nz/testimonies>
- Letters to New Zealand Councils and to members of Federated Farmers to be found on [www.psgr.org.nz](http://www.psgr.org.nz) > home page > letters.
- Frequently Asked Questions on Genetic Engineering [www.psgr.org.nz/index.php?option=com\\_content&view=article&id=54&Itemid=25](http://www.psgr.org.nz/index.php?option=com_content&view=article&id=54&Itemid=25)
- Frequently Asked Questions on Glyphosate <http://www.psgr.org.nz/glyphosate/finish/8-uncategorised/16-glyphosate/0>

Environment Court Decision November 2013

<http://www.boprc.govt.nz/media/321876/environment-court-decision-18-dec-2013-env-2012-339-000041-part-one-section-17.pdf>

Bay of Plenty Regional Council vs Scion

<http://www.boprc.govt.nz/media/321876/environment-court-decision-18-dec-2013-env-2012-339-000041-part-one-section-17.pdf>

Inter-council Working Party on GMO Risk Evaluation and Management Options

<http://www.wdc.govt.nz/PlansPoliciesandBylaws/Plans/Genetic-Engineering/Documents/GE-Reports/Letter-to-Minister-re-GMO-Survey.pdf>

Whangarei District Council on Genetic Engineering

[www.wdc.govt.nz/PlansPoliciesandBylaws/Plans/Genetic-Engineering/Pages/default.aspx#Expand](http://www.wdc.govt.nz/PlansPoliciesandBylaws/Plans/Genetic-Engineering/Pages/default.aspx#Expand)

Far North District Council on Genetically Modified Organisms / Genetic Engineering

<http://www.fndc.govt.nz/services/environmental-policy-and-forward-planning/the-far-north-district-plan/genetically-modified-organisms-gmo#a2>

Hasting District Council on Genetic modification <http://www.hastingsdc.govt.nz/geneticmodification>

Pure Hawke's Bay National Poll, posted 2 December 2013

<http://purehawkesbay.org/overwhelming-support-for-local-decisions-on-gm-free-status-national-poll/>

Radio NZ News - 79% want councils to have power over GM crops – 2 December 2013

[www.radio.nz.co.nz/news/national/229508/79-percent-want-councils-to-have-power-over-gm-crops-poll](http://www.radio.nz.co.nz/news/national/229508/79-percent-want-councils-to-have-power-over-gm-crops-poll)

Genetic Engineering and Sustainable Agriculture – New Zealand

<http://www.greenpeace.org/new-zealand/en/campaigns/genetic-engineering/>

The Sustainability Council of New Zealand <http://www.sustainabilitynz.org/council.asp>

GE Free New Zealand [www.gefree.org.nz/](http://www.gefree.org.nz/)

**See also**

GM Watch - GM Contamination Register <http://www.gmcontaminationregister.org/>

The ETC Group – 'Who Owns Nature' <http://www.etcgroup.org/content/who-owns-nature>

The International Survey of Herbicide Resistant Weeds on <http://www.weedscience.org/In.asp> nd

Up-to-date list of herbicide-resistant weeds on <http://www.weedscience.org/summary/MOASummary.asp>

Seeds Of Death, Full Movie <https://www.youtube.com/watch?v=eUd9rRSLY4A> May 24, 2013

The socio-economic effects of GMOs Hidden costs for the food chain' December 2010, Friends of the Earth Europe.

[http://www.foeeurope.org/sites/default/files/publications/FoEE\\_Socio\\_economic\\_effects\\_gmos\\_0311.pdf](http://www.foeeurope.org/sites/default/files/publications/FoEE_Socio_economic_effects_gmos_0311.pdf)

## Appendix 1

Because of the disproportionate influence of 'big business' in governmental decision-making, policies have largely favoured the interests of industry, often with a seeming disregard for the wishes or safety of private citizens and the environment. This situation has given rise to strong public reaction and the need for controls outside of Regulatory Authorities to protect the interests of local communities and future generations.

On 12 November 2014, an Open Letter from those in North America with direct experience of the commercial release of genetically engineered organisms was released on line to the UK and Europe, and published in *The Ecologist*.<sup>81</sup> Their first-hand experience should influence decisions made in other jurisdictions including in New Zealand. They said:

We are writing as concerned American citizens to share with you our experience of genetically modified (GM) crops and the resulting damage to our agricultural system and adulteration of our food supply. In our country, GM crops account for about half of harvested cropland. Around 94% of the soy, 93% of corn (maize), and 96% of cotton grown is GM.[i]

The UK and the rest of the EU have yet to adopt GM crops in the way that we have, but you are currently under tremendous pressure from governments, biotech lobbyists, and large corporations to adopt what we now regard as a failing agricultural technology.

Polls consistently show that 72% of Americans do not want to eat GM foods and over 90% of Americans believe GM foods should be labelled.[ii] In spite of this massive public mandate, efforts to get our federal[iii] and state[iv] governments to better regulate, or simply label, GMOs are being undermined by large biotech and food corporations with unlimited budgets[v] and undue influence.

As you consider your options, we'd like to share with you what nearly two decades of GM crops in the United States has brought us. We believe our experience serves as a warning for what will happen in your countries should you follow us down this road.

### Broken promises

GM crops were released onto the market with a promise that they would consistently increase yields and decrease pesticide use. They have done neither.[vi] In fact, according to a recent US government report, yields from GM crops can be lower than their non-GM equivalents.[vii]

Farmers were told that GM crops would yield bigger profits too. The reality, according to the United States Department of Agriculture, is different.[viii] Profitability is highly variable, while the cost of growing these crops has spiraled.[ix]

GM seeds cannot legally be saved for replanting, which means farmers must buy new seeds each year. Biotech companies control the price of seeds, which cost farmers 3-6 times more than conventional seeds.[x] This, combined with the huge chemical inputs they require, means GM crops have proved more costly to grow than conventional crops.

Because of the disproportionate emphasis on GM crops, conventional seed varieties are no longer widely available leaving farmers with less choice and control over what they plant.[xi]

Farmers who have chosen not to grow GM crops can find their fields contaminated with GM crops as a result of cross pollination between related species of plants[xii] and GM and non-GM seeds being mixed together during storage.

Because of this our farmers are losing export markets. Many countries have restrictions or outright bans on growing or importing GM crops[xiii] and as a result, these crops have become responsible for a rise in trade disputes when shipments of grain are found to be contaminated with GM organisms(GMOs).[xiv]

The burgeoning organic market here in the US is also being affected. Many organic farmers have lost contracts for organic seed due to high levels of contamination. This problem is increasing and is expected to get much bigger in the coming years.

<sup>81</sup> [http://www.theecologist.org/blogs\\_and\\_comments/commentators/2632105/living\\_with\\_gmos\\_a\\_letter\\_from\\_america.html](http://www.theecologist.org/blogs_and_comments/commentators/2632105/living_with_gmos_a_letter_from_america.html)

## Pesticides and superweeds

The most widely grown types of *GM* crops are known as 'Roundup Ready' crops. These crops, mostly corn and soy, have been genetically engineered so that when they are sprayed with the herbicide Roundup - the active ingredient of which is glyphosate - the weeds die but the crop continues to grow.

This has created a vicious circle. Weeds have become resistant to the herbicide, causing farmers to spray even more. Heavier use of herbicides creates ever more "superweeds" and even higher herbicide use.

A recent review found that between 1996 and 2011, farmers who planted Roundup Ready crops used 24% more herbicide than non-*GM* farmers planting the same crops.[xv]

If we remain on this trajectory with Roundup Ready crops we can expect to see herbicide rates increase by 25% each year for the foreseeable future.

This pesticide treadmill means that in the last decade in the US at least 14 new glyphosate-resistant weed species have emerged[xvi], and over half of US farms are plagued with herbicide-resistant weeds.[xvii]

Biotech companies, which sell both the *GM* seeds and the herbicides,[xviii] have proposed to address this problem with the creation of new crop varieties that will be able to withstand even stronger and more toxic herbicides such as 2,4-D and dicamba.

However it is estimated that if these new varieties are approved, this could drive herbicide use up by as much as 50%.[xix]

## Environmental harm

Studies have shown that the increased herbicide use on Roundup Ready crops is highly destructive to the natural environment. For example, Roundup kills milkweeds, which are the key food source for the iconic Monarch butterfly[xx] and poses a threat to other important insects such as bees.[xxi]

It is also damaging to soil, killing beneficial organisms that keep it healthy and productive[xxii] and making essential micronutrients unavailable to the plant.[xxiii]

Other types of *GM* plants, which have been engineered to produce their own insecticide (e.g. "Bt" cotton plants), have also been shown to harm beneficial insects including green lacewings[xxiv], the *Daphnia magna* waterflea [xxv] and other aquatic insects,[xxvi] and ladybugs (ladybirds).[xxvii]

Resistance to the insecticides in these plants is also growing[xxviii], creating new varieties of resistant "superbugs" and requiring more applications of insecticides at different points in the growth cycle, for instance on the seed before it is planted.[xxix] In spite of this, new Bt varieties of corn and soy have been approved here and will soon be planted.

## A threat to human health

*GM* ingredients are everywhere in our food chain. It is estimated that 70% of processed foods consumed in the US have been produced using *GM* ingredients. If products from animals fed *GM* feed are included, the percentage is significantly higher.

Research shows that Roundup Ready crops contain many times more glyphosate, and its toxic breakdown product AMPA, than normal crops.[xxx]

Traces of glyphosate have been found in the breastmilk and urine of American mothers, as well as in their drinking water.[xxxi] The levels in breastmilk were worryingly high - around 1,600 times higher than what is allowable in European drinking water.

Passed on to babies through breastmilk, or the water used to make formula, this could represent an unacceptable risk to infant health since glyphosate is a suspected hormone disrupter.[xxxii] Recent studies suggest that this herbicide is also toxic to sperm.[xxxiii]

Likewise, traces of the Bt toxin have been found in the blood of mothers and their babies.[xxxiv]

GM foods were not subjected to human trials before being released into the food chain and the health impacts of having these substances circulating and accumulating in our bodies are not being studied by any government agency, nor by the companies that produce them.

Studies of animals fed GM foods and/or glyphosate, however, show worrying trends including damage to vital organs like the liver and kidneys, damage to gut tissues and gut flora, immune system disruption, reproductive abnormalities, and even tumors.[xxxv]

These scientific studies point to potentially serious human health problems that could not have been anticipated when our country first embraced GMOs, and yet they continue to be ignored by those who should be protecting us.

Instead our regulators rely on outdated studies and other information funded and supplied by biotech companies that, not surprisingly, dismiss all health concerns.

## **A denial of science**

This spin of corporate science stands in stark contrast to the findings of independent scientists.

In fact, in 2013, nearly 300 independent scientists from around the world issued a public warning that there was no scientific consensus about the safety of eating genetically modified food, and that the risks, as demonstrated in independent research, gave "serious cause for concern".[xxxvi]

It's not easy for independent scientists like these to speak out. Those who do have faced obstacles in publishing their results, been systematically vilified by pro-GMO scientists, been denied research funding, and in some cases have had their jobs and careers threatened.[xxxvii]

## **Control of the food supply**

Through our experience we have come to understand that the genetic engineering of food has never really been about public good, or feeding the hungry, or supporting our farmers. Nor is it about consumer choice. Instead it is about private, corporate control of the food system.

This control extends into areas of life that deeply affect our day-to-day well-being, including food security, science, and democracy. It undermines the development of genuinely sustainable, environmentally friendly agriculture and prevents the creation of a transparent, healthy food supply for all.

Today in the US, from seed to plate, the production, distribution, marketing, safety testing, and consumption of food is controlled by a handful of companies, many of which have commercial interests in genetic engineering technology.

They create the problems, and then sell us the so-called solutions in a closed cycle of profit generation that is unequalled in any other type of commerce.

We all need to eat, which is why every citizen should strive to understand these issues.

## **Time to speak out!**

Americans are reaping the detrimental impacts of this risky and unproven agricultural technology. EU countries should take note: there are no benefits from GM crops great enough to offset these impacts. Officials who continue to ignore this fact are guilty of a gross dereliction of duty.

We, the undersigned, are sharing our experience and what we have learned with you so that you don't make our mistakes.

We strongly urge you to resist the approval of genetically modified crops, to refuse to plant those crops that have been approved, to reject the import and/or sale of GM-containing animal feeds and foods intended for human consumption, and to speak out against the corporate influence over politics, regulation and science.

If the UK and the rest of Europe becomes the new market for genetically modified crops and food our own efforts to label and regulate GMOs will be all the more difficult, if not impossible. If our efforts fail, your attempts to keep GMOs out of Europe will also fail.



*If we work together, however, we can revitalize our global food system, ensuring healthy soil, healthy fields, healthy food and healthy people.*

Recommended reading: Bt in organic farming and GM crops - the difference

<http://www.gmwatch.org/latest-listing/40-2001/1058-bt-in-organic-farming-and-gm-crops-the-difference->

## References

- i Adoption of Genetically Engineered Crops in the US 1996-2014 - Recent Trends in GE Adoption, United States Department of Agriculture (USDA), July 2014, <http://www.ers.usda.gov/data-products/adoption-of-genetically-engineered-crops-in-the-us/recent-trends-in-ge-adoption.aspx#.U9aA4fldUz0>
- ii Consumer Support for Standardization and Labeling of Genetically Engineered Food 2014 Nationally-Representative Phone Survey, Consumer Reports@ National Research Center Survey Research Report, [https://consumersunion.org/wp-content/uploads/2014/06/2014\\_GMO\\_survey\\_report.pdf](https://consumersunion.org/wp-content/uploads/2014/06/2014_GMO_survey_report.pdf); see also Brinkerhoff N, Americans overwhelmingly want GMO labelling...until big companies pour money into election campaigns, AllGov News, January 7, 2014 <http://www.allgov.com/news/where-is-the-money-going/americans-overwhelmingly-want-gmo-labeling-until-big-companies-pour-money-in-election-campaigns-140107?news=852102>
- iii GE Food Labelling: States Take Action, Fact Sheet, Center for Food Safety, June 2014, [http://www.centerforfoodsafety.org/files/ge-state-labeling-fact-sheet-620141\\_28179.pdf](http://www.centerforfoodsafety.org/files/ge-state-labeling-fact-sheet-620141_28179.pdf)
- iv *ibid*
- v Jargon J and Berry I, Dough Rolls Out to Fight 'Engineered' Label on Food, Wall Street Journal, October 25, 2012, <http://online.wsj.com/news/articles/SB10001424052970203400604578073182907123760>
- vi Benbrook C. Evidence of the magnitude and consequences of the Roundup Ready soybean yield drag from university-based varietal trials in 1998: Ag BioTech InfoNet Technical Paper Number 1. Sandpoint, Idaho; 1999, <http://www.mindfully.org/GE/RRS-Yield-Drag.htm>; see also Elmore RW, Roeth FW, Nelson LA, et al. Glyphosate-resistant soybean cultivar yields compared with sister lines. *Agron J*. 2001;93:408-412; see also Ma BL, Subedi KD. Development, yield, grain moisture and nitrogen uptake of Bt corn hybrids and their conventional near-isolines. *Field Crops Res*. 2005; 93: 199-211; see also Bennett H. GM canola trials come a cropper. *WA Business News*. <http://www.wabusinessnews.com.au/en-story/1/69680/GM-canola-trials-come-a-cropper> January 16, 2009; see also Gurian-Sherman D. Failure to yield: Evaluating the performance of genetically engineered crops. Cambridge, MA: Union of Concerned Scientists; 2009. Available at: [http://www.ucsusa.org/assets/documents/food\\_and\\_agriculture/failure-to-yield.pdf](http://www.ucsusa.org/assets/documents/food_and_agriculture/failure-to-yield.pdf)
- vii Genetically Engineered Crops in the United States, USDA, Economic Research Services, February 2014 <http://www.ers.usda.gov/publications/err-economic-research-report/err162.aspx#.U7vzi7Hrzbx>
- viii Fernandez-Cornejo J, Wechsler S, Livingston M, Mitchell L. Genetically engineered crops in the United States. Washington, DC: US Department of Agriculture; 2014. Available at: [http://www.ers.usda.gov/publications/err-economic-research-report/err162.aspx#.U0P\\_qMfc26x](http://www.ers.usda.gov/publications/err-economic-research-report/err162.aspx#.U0P_qMfc26x)
- ix Fernandez-Cornejo J, McBride WD. The adoption of bioengineered crops. Agricultural Economic Report No. 810. Washington, DC: US Department of Agriculture; 2002, <http://www.ers.usda.gov/publications/aer810/aer810.pdf>; see also Gómez-Barbero M, Rodríguez-Cerezo E. Economic impact of dominant GM crops worldwide: A review. European Commission Joint Research Centre: Institute for Prospective Technological Studies; 2006, <http://ftp.jrc.es/EURdoc/eur22547en.pdf>; see also Benbrook CM. Impacts of genetically engineered crops on pesticide use in the United States: The first thirteen years. Washington, DC: The Organic Center; 2009. Available at: [http://www.organic-center.org/reportfiles/13Years20091126\\_FullReport.pdf](http://www.organic-center.org/reportfiles/13Years20091126_FullReport.pdf); see also Howard P. Visualizing consolidation in the global seed industry: 1996-2008. *Sustainability*. 2009; 1: 1266-87; see also Neuman W. Rapid rise in seed prices draws US scrutiny, *New York Times*, March 11, 2010, [http://www.nytimes.com/2010/03/12/business/12seed.html?\\_r=1](http://www.nytimes.com/2010/03/12/business/12seed.html?_r=1).
- x Benbrook CM. The magnitude and impacts of the biotech and organic seed price premium. Washington, DC: The Organic Center; 2009. Available at: [http://www.organic-center.org/reportfiles/Seeds\\_Final\\_11-30-09.pdf](http://www.organic-center.org/reportfiles/Seeds_Final_11-30-09.pdf)
- xi Roseboro K, The GMO Seed Monopoly: Reducing Farmer's Seed Options, *Organic Connections*, 16 April 2013 <http://organicconnectmag.com/wp/the-gmo-seed-monopoly-reducing-farmers-seed-options/#.UW6i4LVlIfY>
- xii D'Hertefeldt T, Jørgensen RB, Pettersson LB. Long-term persistence of GM oilseed rape in the seedbank. *Biol Lett*. 2008;4:314-317; see also Gilbert N. GM crop escapes into the American wild. *Nature*. 2010. Available at: <http://www.nature.com/news/2010/100806/full/news.2010.393.html>; see also Black R. GM plants "established in the wild", *BBC News*, August 6, 2010, <http://www.bbc.co.uk/news/science-environment-10859264>.
- xiii The Cartagena Protocol on Biosafety to the Convention on Biological Diversity. <http://bch.cbd.int/protocol/default.shtml>; see also GMO-Free Europe, <http://www.gmo-free-regions.org>
- xiv Technical consultation on low levels of genetically modified (GM) crops in international food and feed trade, Food and Agriculture Organization of the United Nations, Rome, Italy March 21-22, 2014, [http://www.fao.org/fileadmin/user\\_upload/agms/topics/LLP/AGD803\\_4\\_Final\\_En.pdf](http://www.fao.org/fileadmin/user_upload/agms/topics/LLP/AGD803_4_Final_En.pdf)
- xv Benbrook CM, Impacts of genetically engineered crops on pesticide use in the US - the first sixteen years, *Environmental Sciences Europe*, 2012; 24: 24 doi:10.1186/2190-4715-24-24
- xvi USDA 2014, op cit
- xvii The Rise of Superweeds - and What to Do About It, Union of Concerned Scientists, Policy Brief, December 2013, [http://www.ucsusa.org/assets/documents/food\\_and\\_agriculture/rise-of-superweeds.pdf](http://www.ucsusa.org/assets/documents/food_and_agriculture/rise-of-superweeds.pdf)
- xviii Superweeds - How biotech crops bolster the pesticide industry, *Food & Water Watch*, July 2013 [http://documents.foodandwaterwatch.org/doc/Superweeds.pdf#\\_ga=1.262673807.2090293938.1404747885](http://documents.foodandwaterwatch.org/doc/Superweeds.pdf#_ga=1.262673807.2090293938.1404747885)
- xix Benbrook CM, 2012, *ibid*
- xx Brower LP, Decline of monarch butterflies overwintering in Mexico: is the migratory phenomenon at risk?, *Insect Conservation and Diversity*, Volume 5, Issue 2, pages 95-100, March 2012, <http://onlinelibrary.wiley.com/doi/10.1111/j.1752-4598.2011.00142.x/full>
- xxi Garcia, MA and Altieri M, Transgenic Crops: Implications for Biodiversity and Sustainable Agriculture. *Bulletin of Science, Technology & Society*, 2005; 25(4) 335-53 DOI: 10.1177/0270467605277293; see also Haughton, A J et al Invertebrate responses to the management of genetically modified herbicidetolerant and conventional spring crops. II. Within-field epigeal and aerial arthropods. *Philosophical Transactions of the Royal Society of London B*, 2003; 358: 1863-77; see also Roy, DB et al Invertebrates and vegetation of field margins adjacent to crops subject to contrasting herbicide regimes in the Farm Scale Evaluations of genetically modified herbicide-tolerant crops, *Philosophical Transactions of the Royal Society of London B*, 2003; 358: 1879-98.
- xxii Glyphosate herbicide affects belowground interactions between earthworms and symbiotic mycorrhizal fungi in a model ecosystem. *Nature Scientific Reports*, July 9, 2014, 4: 5634, DOI: doi:10.1038/srep05634; Citizens Concerned About GM, Suffocating the soil: An "unanticipated effect" of GM crops, 15 March 2013, <http://www.gmeducation.org/environment/p207351-suffocating-the-soil-an-unanticipated-effect-of-gm-crops.html>
- xxiii Tapesser B et al, Agronomic and environmental aspects of the cultivation of genetically modified herbicide-resistant plants A joint paper of BfN (Germany), FOEN (Switzerland) and EAA (Austria), Bonn, Germany 2014, <http://www.bfn.de/fileadmin/MDb/documents/service/skript362.pdf>.
- xxiv Tapesser B et al, 2014, op cit
- xxv Tapesser B et al, 2014, op cit
- xxvi Rossi-Marshall EJ et al, Toxins in transgenic crop byproducts may affect headwater stream ecosystems, *PNAS*, 2007, 104(41): 16204-16208, <http://www.pnas.org/content/104/41/16204.abstract>

- xxvii Tapesser B et al, 2014 op cit; see also Schmidt JEU, Braun CU, Whitehouse LP, Hilbeck A: Effects of activated Bt transgene products (Cry1Ab, Cry3Bb) on immature stages of the ladybird *Adalia bipunctata* in laboratory ecotoxicity testing, *Arch Environ Contam Toxicol* 2009, 56:221-228, <http://link.springer.com/article/10.1007%2Fs00244-008-9191-9>.
- xxviii Gassmann AJ et al, Field-evolved resistance by western corn rootworm to multiple *Bacillus thuringiensis* toxins in transgenic maize, *Proc Natl Acad Sci*, 2014 ; 111(14): 5141-46, <http://www.pnas.org/content/111/14/5141>; see also Letter from 22 Members and Participants of North Central Coordinating Committee NCCC46 and Other Corn Entomologists to US EPA, March 5, 2012, [http://www.biosicherheit.de/pdf/aktuell/12-03\\_comment\\_porter\\_epa.pdf](http://www.biosicherheit.de/pdf/aktuell/12-03_comment_porter_epa.pdf) ; see also Huang F et al, Resistance of sugarcane borer to *Bacillus thuringiensis* Cry1Ab toxin, *Entomol Exp Appl*, 2007; 124: 117-23, <http://onlinelibrary.wiley.com/doi/10.1111/j.1570-7458.2007.00560.x/abstract;jsessionid=77E6295826AFA053813D7CFD5A1C15DB.f01t01?deniedAccessCustomisedMessage=&userIsAuthenticated=false> ; see also Tabashnik BE, et al, Insect resistance to Bt crops: Evidence versus theory, *Nat Biotechnol*, 2008; 26: 199-202, <http://www.cof.orst.edu/cof/teach/agbiotox/Readings%202008/TabashnikBtResistInsects-NatBiotech-2008.pdf>.
- xxix Leslie TW, Biddinger DJ, Mullin CA, Fleischer SJ. Carabidae population dynamics and temporal partitioning: Response to coupled neonicotinoid-transgenic technologies in maize, *Env Entomol*, 2009; 38: 935-43; see also Gurian-Sherman D. Genetically engineered crops in the real world - Bt corn, insecticide use, and honey bees. The Cornucopia Institute, January 13, 2012. <http://www.cornucopia.org/2012/01/genetically-engineered-crops-in-the-real-world-bt-corn-insecticide-use-and-honey-bees>
- xxxBohn T et al, Compositional differences in soybeans on the market: Glyphosate accumulates in Roundup Ready GM soybeans, *Food Chemistry*, 2014 ; 153: 207-15;
- xxxiGlyphosate testing report: Findings in American mothers' breast milk, urine and water. Mom's Across America, April 7, 2014, [http://d3n8a8pro7vnm.cloudfront.net/yesmaam/pages/774/attachments/original/1396803706/Glyphosate\\_Final\\_in\\_the\\_breast\\_milk\\_of\\_American\\_women\\_Draft6\\_.pdf?1396803706](http://d3n8a8pro7vnm.cloudfront.net/yesmaam/pages/774/attachments/original/1396803706/Glyphosate_Final_in_the_breast_milk_of_American_women_Draft6_.pdf?1396803706)
- xxxii Gasnier C, et al, Glyphosate-based herbicides are toxic and endocrine disruptors in human cell lines, *Toxicology*, 2009; 262: 184-91. doi:10.1016/j.tox.2009.06.006; see also Hokanson R, et al, Alteration of estrogen-regulated gene expression in human cells induced by the agricultural and horticultural herbicide glyphosate, *Hum Exp Toxicol*, 2007; 26: 747-52. doi:10.1177/0960327107083453; see also Thongprakaisang S, et al, Glyphosate induces human breast cancer cells growth via estrogen receptors, *Food Chem Toxicol*, 2013; 59: 129-136. doi:10.1016/j.fct.2013.05.057.
- xxxiii Cassault-Meyer E et al, An acute exposure to glyphosate-based herbicide alters aromatase levels in testis and sperm nuclear quality, *Environmental Toxicology and Pharmacology*, 2014; 38(1): 131-40.
- xxxiv Aris A and Leblanc S, Maternal and fetal exposure to pesticides associated to genetically modified foods in Eastern Townships of Quebec, Canada, *Reproductive Toxicology*, 2011; 31(4): 528-533.
- xxxvFagan F et al, Chapter 3 - Health Hazards of GM Foods and Chapter 4 - Health Hazards of Roundup and glyphosate, in *GMO Myths & Truths: An evidence-based examination of the claims made for the safety and efficacy of genetically modified crops and foods*, Earth Open Source, 2nd Ed, 2014
- xxxviStatement: No scientific consensus on GMO safety, European Network of Scientists for Social and Environmental Responsibility, October 21, 2013, <http://www.ensser.org/increasing-public-information/no-scientific-consensus-on-gmo-safety>.
- xxxviiSmith, J, GMO Researchers Attacked, Evidence Denied, and a Population at Risk, *Global Research*, September 19, 2012 <http://www.globalresearch.ca/gmo-researchers-attacked-evidence-denied-and-a-population-at-risk/5305324>; see also Waltz E, GM crops: Battlefield, *Nature*, 2009; 461, 27-32 doi:10.1038/461027a; see also Woodward L, Muzzled by Monsanto, *Citizens Concerned About GM*, May 4, 2014, <http://www.gmeducation.org/blog/p217611-muzzled-by-monsanto.html>

Ends

RECEIVED

17 MAR 2015

Submission 5  
Cat. 6

Nelson City Council Public Consultation Submission form

The Nelson City Council wants your opinion.  
Please tell us what you think.

NELSON CITY COUNCIL  
COUNCIL SERVICE

Office Use Only

Please type or print clearly. Remember to read the submission writing guidelines (over) before starting.

Submission Number	
File Ref	INITIALS

Name Mark & Cindy Steele

Daytime phone 5489545, 0211746017

Address 5 Miro Street, Nelson

Organisation represented (if applicable) \_\_\_\_\_

Do you wish to be heard in support of your submission?  YES  NO # of pages

\_\_\_\_\_ If you do not tick a box we will assume you do not wish to be heard.

Public information

Submissions to Council consultation are public information. Your submission will be included in reports, which are available to the public and the media.

The consultation/proposal my submission relates to:

Nelson's Air Plan Review.

My submission is:

\* Clean air burning woodfires should be allowed. We've fully insulated and double glazed our home. We did have a woodburner which was dangerous and old, so we discarded it when we first moved in. Wanted to put a woodburner back in, but was told that there was no proof that there was one there. Even with photographic proof and the fact that there is still a chimney. Therefore we had to put a heat pump in. It stopped working last winter and we were told that there aren't any spare parts for heat pumps after 5 years (from purchase). To me that is uneconomical and wasteful. Instead you will allow fossil fuel burners (gas/diesel) which the process to get them out of ground is far more damaging than a log burner that produces carbon (carbon cycle) which helps trees grow. You are thinking too small. You need to start thinking globally and not just locally. You are putting the problem in someone else's back yard. <sup>PTO</sup>

Date 17/3/15

Signature [Signature]

Help with making a submission overleaf...



Nelson City Council  
te kaunihera o whakatū

PO Box 645 • Nelson 7040 • 03 546 0200  
www.nelsoncitycouncil.co.nz

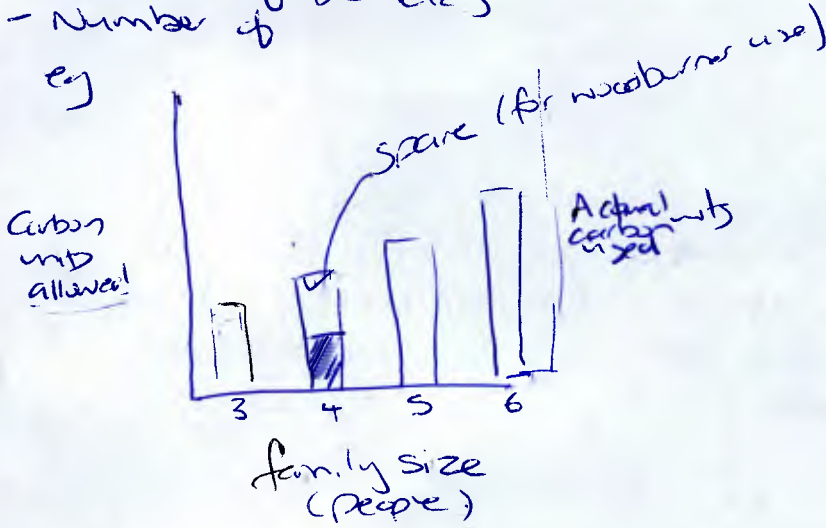


- Where does the waste go from heat pumps when they die
- ~~We shouldn't have to put~~
- the energy required to generate electricity for all these heat pumps will always outweigh a simple steel log burner.  
(Construction of hydro station)  
upgrade of transmission lines to cater for ~~extra~~ power
- Because we cannot afford to heat our home with the methods you approve we are forced to use a panel heater and our power bill has more than doubled  
We do not want to purchase another heat pump that will only last 5 years, ~~instead~~ only heat two rooms. When a woodburner costs about the same and lasts ~~for~~ five times longer.
- How many people are really outside in winter when the air quality is not the best??
- You are punishing a lot of the families who are trying to do right by the city. We:
  - only have one car & walk/bike whenever we can
  - Have solar water heating

perhaps you should look at a total carbon emission for each house hold.

- Number of people
- Number of vehicles
- Number of

eg



Bev Mcshea

---

**From:** Submissions  
**Sent:** Sunday, 5 April 2015 11:33 a.m.  
**To:** Administration Support  
**Subject:** FW: Consultation Document Submission

**Categories:** Bev, Long Term Plan 2015

-----  
**From:** Council Enquiries (Enquiry)  
**Sent:** Sunday, April 05, 2015 11:32:32 AM  
**To:** Submissions  
**Subject:** Consultation Document Submission  
**Auto forwarded by a Rule**

**Name:**  
Juergen Gmeinder

**Organisation represented (if applicable):**  
**Address:**  
36 Montreal Road

**Daytime phone:**  
9276156

**Email:**  
[juergenandanja@aol.com](mailto:juergenandanja@aol.com)

**Do you wish to speak in support of your submission at the public hearings?**  
No

**If yes, would you like to attend an evening session?**  
No

**My submission is: (please ensure you clearly state the issue or project (s) you are submitting about):**  
Noise reduction on Sundays and Public Holydays. Power tools e.g. chainsaws, weed eater etc. should be not allowed to use on these days. On weekdays that sort of noise should be restricted to a certain time.  
Secondly the problem with air pollution is in my neighbourhood not the woodburners but the people. For example I got three neighbours of whom one burns his plastic and other rubbish in the garden and the other two are burning wet wood and their chimneys were smoking badly all winter last year. All of that will not change if air pollution laws are not rigorously enforced.

**Would you like to upload a file in support of your submission?**  
**How did you find out about the Consultation Document and Council's 10 Year Plan?**  
**Would you like to be contacted by email with future Council feedback opportunities?**  
No

# **CATEGORY 6: ENVIRONMENT**

## **BATCH 2**

07 APR 2015

Dorothy-Rose Pallesen  
Flat 1/110 Nile Street 7010 Nelson.  
Phone 5467353

NELSON CITY COUNCIL  
Customer Service

To Whom it may concern,

*Mayor Rachel Reece*

In our Nelson Community there are at over 850 people at risk of being chemically poisoned by RoundUp daily. The Chemical involved is 'Glyphosate'. Why is it still being used by a City Council contractor to kill weeds on our roads?

Why also are restaurants being allowed to use GM foods that severely affect folk for several days? A list of foods that affect people can be found on the following Website which is also very much of interest to women in the early stages of pregnancy. Several restaurants in the city, even roast vegs in canola and most of the fish and chip shops also use it.

As well as making the susceptible people tired for days the following will show you how it all affects unborn children.

<http://www.scribd.com/doc/5277946/Roundupandbirthdefectsv5>

The foods I find that affect me most in restaurants are canola and soya oils but there are others too. Read the list on the website.

Dorothy-Rose Pallesen.

*Dorothy-Rose Pallesen*

Bev Mcshea

---

**From:** Submissions  
**Sent:** Friday, 10 April 2015 7:27 a.m.  
**To:** Administration Support  
**Subject:** FW: Consultation Document Submission

**Follow Up Flag:** Follow up  
**Flag Status:** Completed

**Categories:** Bev, Long Term Plan 2015

-----  
**From:** Council Enquiries (Enquiry)  
**Sent:** Friday, April 10, 2015 7:27:08 AM  
**To:** Submissions  
**Subject:** Consultation Document Submission  
**Auto forwarded by a Rule**

**Name:**  
Graeme O'Brien

**Organisation represented (if applicable):**  
Resident

**Address:**  
129a Waimea Rd

**Daytime phone:**  
022-1942-516

**Email:**  
[graemebegood@gmail.com](mailto:graemebegood@gmail.com)

**Do you wish to speak in support of your submission at the public hearings?**  
Yes

**If yes, would you like to attend an evening session?**  
Yes

**My submission is: (please ensure you clearly state the issue or project (s) you are submitting about):**

My submission is concerning the EECA Energywise program.  
I feel that the subsidizing of insulation for landlords assets is not an appropriate use of public money. This subsidy should only be made available to residents who are living in their first home or for residents under a specified income.  
If council feels that there is a need to insulate landlords assets for the wellbeing of the tenants that are suffering from respiratory illnesses from living in damp homes then a local WOF program should be implemented to check the homes these people are living in.  
If a home fails a WOF then options should be open to the landlord to remedy the problem through council initiatives that are not at the ratepayer's expense.  
This could be set up as with the Clean Heat Warm Homes Program that was offered to the residents with the phase out of wood burners.  
A loan should be made at a rate that covers costs and does not profit the council. This should also be case for all targeted rates that are offered to the residents for the general good of the city and the

people.

If the landlord refuses to upgrade the house to a safe livable standard then the tenants should receive assistance to change houses to a WOF compliant house and the house in question be blacklisted as unlivable in winter until required changes are made.

I wish to ask how can council justify forcing people to upgrade their heating source through law changes and then imposing targeted rate loans at higher than market interest rates on some of the most vulnerable people in our community but give free insulation to the most affluent in our community?

The subsidizing of improving assets for landlords who will ultimately make a very healthy profit from their asset from public money leaves one wondering if cronyism is not alive and well in our politics, both at central & local government levels.

Below is from the NCC website.

Free insulation

Warm Up New Zealand: Healthy Homes projects provide free ceiling and underfloor insulation for low-income households occupied by people with health needs related to cold, damp housing.

Availability will be through regional projects.

Home owners or tenants may be eligible if they have a Community Services Card and the house is occupied by someone under 17 years or over 65 years.

In some regions, such as Nelson, people will be referred to the programme by the health sector if they are at risk from illness linked to cold, damp housing - e.g. a respiratory condition.

Funding is limited in all areas. Although insulation will be free for eligible homeowners and tenants, landlords of the eligible tenants may be asked to make a contribution.

Clean Heat Warm Homes Programme

People affected by the Council's burner controls were eligible for financial assistance up until their burners were phased out under the Clean Heat Warm Homes scheme. Now that the phase out dates have passed, funding under this scheme is longer available.

**Would you like to upload a file in support of your submission?**

**How did you find out about the Consultation Document and Council's 10 Year Plan?**

**Would you like to be contacted by email with future Council feedback opportunities?**

Yes



# NELSON CITY COUNCIL PUBLIC CONSULTATION SUBMISSION FORM

**WE WANT YOUR OPINION.  
PLEASE TELL US WHAT YOU THINK.**

Please type or print clearly. Remember to read the submission writing guidelines before starting.

Name Belinda Hannen Organisation represented (if applicable) \_\_\_\_\_  
Address 41 Dodson Vly Rd / Atawhai / Nelson  
Daytime phone 03 545 1004 Email \_\_\_\_\_

Do you wish to be heard in support of your submission?  Yes  No # of pages \_\_\_\_\_  
If you do not tick either, we will assume you do not wish to be heard.  
If yes, would you like to attend an evening session?  Yes  No

**Public information:** All submissions (including the names and contact details of submitters) are public information and will be available to the public and media in various reports and formats including on the Nelson City Council website. Personal information will also be used for administration relating to the subject matter of submissions. Submitters have the right to access, or correct any personal information included in any reports, information or submissions.

My submission is: as follows, I have been meaning to mention before  
I would like to see our heritage trees and  
fauna in the York valley walkway to be  
protected more from pests like possums, rats  
stoats, weasels and to have pest proof  
fencing of these ~~heritage~~ trees especially.  
I know people like to walk their dogs  
here but I would like to see no dogs (inside fenced  
area)  
allowed as there could be kiwi's living  
under the roots etc. This I feel is paramount  
importance as birds that are native could  
be on the come back. This is an area that  
could be studied etc in the future and is  
the jewel in the crown of Nelson City!  
\*Ultimately wheelchair access as well / area,  
would be gr8.

Please attach additional sheets if needed.

Date 1-4-2015 Signature Belinda Hannen

Office Use Only	
Submission Number	
File Ref	Initials

The brook sanctuary is all well and good but  
the heritage trees we have will die unless  
they have their birds back. I have seen  
the sun come up on the boulder bank and

I have seen the clouds forming only in the small  
native pockets up behind Nelson. We need more  
native behind Nelson.

Bev Mcshea

---

**From:** Submissions  
**Sent:** Friday, 10 April 2015 11:25 a.m.  
**To:** Administration Support  
**Subject:** FW: Consultation Document Submission

**Categories:** Bev, Long Term Plan 2015

-----  
**From:** Council Enquiries (Enquiry)  
**Sent:** Friday, April 10, 2015 11:25:00 AM  
**To:** Submissions  
**Subject:** Consultation Document Submission  
**Auto forwarded by a Rule**

**Name:**

Kelly brydon

**Organisation represented (if applicable):**

**Address:**

250 lud valley road, Hira, nelson

**Daytime phone:**

0211282830

**Email:**

[bellybons@hotmail.com](mailto:bellybons@hotmail.com)

**Do you wish to speak in support of your submission at the public hearings?**

No

**If yes, would you like to attend an evening session?**

**My submission is: (please ensure you clearly state the issue or project (s) you are submitting about):**

Kia Ora

I am writing this in support of the 'nelson nature' submission from forest and bird.

This believe this proposal will be wonderful for our beautiful City and the natural world that shares it with us.

Kind regards

Kelly brydon

**Would you like to upload a file in support of your submission?**

**How did you find out about the Consultation Document and Council's 10 Year Plan?**

Forest and bird email

**Would you like to be contacted by email with future Council feedback opportunities?**

No



# NELSON CITY COUNCIL PUBLIC CONSULTATION SUBMISSION FORM

**WE WANT YOUR OPINION.  
PLEASE TELL US WHAT YOU THINK.**

*Please type or print clearly. Remember to read the submission writing guidelines before starting.*

Name Jess I White Organisation represented (if applicable) MHSS  
Address 88 ATAWHAI DRIVE  
Daytime phone                      Email                     

Do you wish to be heard in support of your submission?  Yes  No # of pages                       
*If you do not tick either, we will assume you do not wish to be heard.*

If yes, would you like to attend an evening session?  Yes  No

**Public information:** All submissions (including the names and contact details of submitters) are public information and will be available to the public and media in various reports and formats including on the Nelson City Council website. Personal information will also be used for administration relating to the subject matter of submissions. Submitters have the right to access and correct any personal information included in any reports, information or submissions.

My submission is: that the DCC in this city should have a look at the grounds in and around the Nelson Court House. Quite a few trees need attending to and more planted please. The half dead tree is an eye sore to the new head of the courthouse, THIS should be bled low and replaced as a bitaw. Many people would like this and make Nelson a more beautiful place for the next generation  

Thank You

*Please attach additional sheets if needed.*

Date	Signature
------	-----------

Office Use Only	
Submission Number	
File Ref	Initials

ENV Page 37

Bev Mcshea

---

**From:** Submissions  
**Sent:** Friday, 10 April 2015 3:06 p.m.  
**To:** Administration Support  
**Subject:** FW: Consultation Document Submission

**Categories:** Bev, Long Term Plan 2015

-----  
**From:** Council Enquiries (Enquiry)  
**Sent:** Friday, April 10, 2015 3:05:52 PM  
**To:** Submissions  
**Subject:** Consultation Document Submission  
**Auto forwarded by a Rule**

**Name:**  
Sue Hallas

**Organisation represented (if applicable):**  
**Address:**  
65 Brooklands Rd, Atawhai, Nelson

**Daytime phone:**  
03 545 0294

**Email:**  
[seahallas@gmail.com](mailto:seahallas@gmail.com)

**Do you wish to speak in support of your submission at the public hearings?**  
No

**If yes, would you like to attend an evening session?**  
No

**My submission is: (please ensure you clearly state the issue or project (s) you are submitting about):**  
I fully support the Council's desire and intention to look after the biodiversity under its jurisdiction and applaud the creation of "Nelson Nature". I support it's inclusion in our city's Long Term Plan.

**Would you like to upload a file in support of your submission?**  
**How did you find out about the Consultation Document and Council's 10 Year Plan?**  
Live Nelson, Forest and Birds

**Would you like to be contacted by email with future Council feedback opportunities?**  
No

Bev Mcshea

**From:** Submissions  
**Sent:** Sunday, 12 April 2015 8:17 a.m.  
**To:** Administration Support  
**Subject:** FW: Consultation Document Submission

**Categories:** Long Term Plan 2015, Bev

-----  
**From:** Council Enquiries (Enquiry)  
**Sent:** Sunday, April 12, 2015 8:17:23 AM  
**To:** Submissions  
**Subject:** Consultation Document Submission  
**Auto forwarded by a Rule**

**Name:**

Elizabeth A Bryant

**Organisation represented (if applicable):**

**Address:**

49 Motueka Quay, Motueka 7120

**Daytime phone:**

03 5285212

**Email:**

[tonyandbeth@ihug.co.nz](mailto:tonyandbeth@ihug.co.nz)

**Do you wish to speak in support of your submission at the public hearings?**

No

**If yes, would you like to attend an evening session?**

**My submission is: (please ensure you clearly state the issue or project (s) you are submitting about):**

My submission is to support the 'Nelson Nature' programme- protecting the environment.

'Nature' is vanishing faster than is generally recognized. With this programme of protection put in place the important remaining life- sustaining heritage could be better cared for.

Nowadays much of the general populace is out of touch with environment and how to care for it, so that such administration for its protection needs to be put in place.

Well done Nelson City Council for this 'Nelson Nature' initiative.

The biodiversity forum, which is a treasure of NCC, is to be congratulated for putting this programme together.

**Would you like to upload a file in support of your submission?**

**How did you find out about the Consultation Document and Council's 10 Year Plan?**

it is that time of the year.

**Would you like to be contacted by email with future Council feedback opportunities?**

No

Bev Mcshea

---

**From:** Submissions  
**Sent:** Sunday, 12 April 2015 10:02 a.m.  
**To:** Administration Support  
**Subject:** FW: Consultation Document Submission

-----  
**From:** Council Enquiries (Enquiry)  
**Sent:** Sunday, April 12, 2015 10:02:11 AM  
**To:** Submissions  
**Subject:** Consultation Document Submission  
**Auto forwarded by a Rule**

**Name:**  
Fran Mitchell

**Organisation represented (if applicable):**  
**Address:**  
18 Mill Street, Maitai, Nelson 7010

**Daytime phone:**  
021 027-99129

**Email:**  
[fran.mitchell@vodafone.co.nz](mailto:fran.mitchell@vodafone.co.nz)

**Do you wish to speak in support of your submission at the public hearings?**  
No

**If yes, would you like to attend an evening session?**  
No

**My submission is: (please ensure you clearly state the issue or project (s) you are submitting about):**  
I fully support the proposed Nelson Nature programme.

**Would you like to upload a file in support of your submission?**  
**How did you find out about the Consultation Document and Council's 10 Year Plan?**  
Through Forest and Bird

**Would you like to be contacted by email with future Council feedback opportunities?**  
No

Bev Mcshea

---

**From:** Submissions  
**Sent:** Sunday, 12 April 2015 10:14 a.m.  
**To:** Administration Support  
**Subject:** FW: Consultation Document Submission

-----  
**From:** Council Enquiries (Enquiry)  
**Sent:** Sunday, April 12, 2015 10:14:06 AM  
**To:** Submissions  
**Subject:** Consultation Document Submission  
**Auto forwarded by a Rule**

**Name:**  
Neil Whittaker

**Organisation represented (if applicable):**  
**Address:**  
5 Richmond Ave , Nelson

**Daytime phone:**  
5468190

**Email:**  
[njrecw@gmail.com](mailto:njrecw@gmail.com)

**Do you wish to speak in support of your submission at the public hearings?**  
No

**If yes, would you like to attend an evening session?**  
No

**My submission is: (please ensure you clearly state the issue or project (s) you are submitting about):**  
I support the Nelson Nature plan great vision, thanks

**Would you like to upload a file in support of your submission?**  
**How did you find out about the Consultation Document and Council's 10 Year Plan?**  
**Would you like to be contacted by email with future Council feedback opportunities?**  
No

Bev Mcshea

---

**From:** Submissions  
**Sent:** Sunday, 12 April 2015 5:58 p.m.  
**To:** Administration Support  
**Subject:** FW: Consultation Document Submission

**Categories:** Long Term Plan 2015, Bev

-----  
**From:** Council Enquiries (Enquiry)  
**Sent:** Sunday, April 12, 2015 5:57:53 PM  
**To:** Submissions  
**Subject:** Consultation Document Submission  
**Auto forwarded by a Rule**

**Name:**  
Adrian FAULKNER

**Organisation represented (if applicable):**  
**Address:**  
16 Albert Road, Stepneyville, NELSON.

**Daytime phone:**  
548 3914

**Email:**  
[mandala@inspire.net.nz](mailto:mandala@inspire.net.nz)

**Do you wish to speak in support of your submission at the public hearings?**  
No

**If yes, would you like to attend an evening session?**  
**My submission is: (please ensure you clearly state the issue or project (s) you are submitting about):**  
I assert that NCC is fundamentally obliged to improve the level of stewardship of the region's natural environmental qualities. I fully support the objects of the NCC document NELSON NATURE.

**Would you like to upload a file in support of your submission?**  
**How did you find out about the Consultation Document and Council's 10 Year Plan?**  
FOREST and BIRD membership.

**Would you like to be contacted by email with future Council feedback opportunities?**  
Yes

# **CATEGORY 6: ENVIRONMENT**

## **BATCH 3**

# NELSON CITY COUNCIL PUBLIC CONSULTATION SUBMISSION FORM

**WE WANT YOUR OPINION.  
PLEASE TELL US WHAT YOU THINK.**

*Please type or print clearly. Remember to read the submission writing guidelines before starting.*

Name RICHARD RAINE & NIKKI COOPER Organisation represented (if applicable) \_\_\_\_\_  
Address OAKLANDS, 467 SUFFOLK RD STOKES  
Daytime phone 5477591 Email \_\_\_\_\_

Do you wish to be heard in support of your submission?  Yes  No # of pages \_\_\_\_\_  
*If you do not tick either, we will assume you do not wish to be heard.*

If yes, would you like to attend an evening session?  Yes  No

RECEIVED  
13 APR 2015

**Public information:** All submissions (including the names and contact details of submitters) are public information and will be available to the public and media in various reports and formats including on the Nelson City Council website. Personal information will also be used for administration relating to the subject matter of submissions. Submitters have the right to access and correct any personal information included in any reports, information or submissions.

My submission is: "TIMES RUNNING OUT"

FOR A NUMBER OF YEARS I'VE WATCHED THE DETERIORATION OF FIFESHIRE ROCK AND AM VERY CONCERNED WE WILL LOSE OUR ICONIC LANDMARK IF SOMETHING IS NOT DONE URGENTLY. THE COUNCIL SPENDS MONEY ON "MAN MADE" WORKS OF ART WHEN WE ALREADY ARE SO LUCKY TO HAVE SUCH A PROMINENT AND HISTORICAL FEATURE AS FIFESHIRE ROCK. I'M SURE WITH MODERN TECHNOLOGY THE EROSION COULD BE STABILIZED USING REINFORCING AND FERRO CEMENT. I HOPE FUTURE GENERATIONS WILL BE ABLE TO APPRECIATE YOUR RESTORATIVE WORK.

*Please attach additional sheets if needed.*

Date

9-4-15

Signature

### Office Use Only

		Submission Number	
File Ref		Initials	



Bev Mcshea

---

**From:** Submissions  
**Sent:** Tuesday, 14 April 2015 11:41 a.m.  
**To:** Administration Support  
**Subject:** FW: Consultation Document Submission

**Follow Up Flag:** Follow up  
**Flag Status:** Completed

**Categories:** Bev, Long Term Plan 2015

-----  
**From:** Council Enquiries (Enquiry)  
**Sent:** Tuesday, April 14, 2015 11:40:49 AM  
**To:** Submissions  
**Subject:** Consultation Document Submission  
**Auto forwarded by a Rule**

**Name:**

Diane Lookamn

**Organisation represented (if applicable):**

**Address:**

#63 Green acres Rd. Nelson, 7081

**Daytime phone:**

N/A

**Email:**

[dianelookman@gmail.com](mailto:dianelookman@gmail.com)

**Do you wish to speak in support of your submission at the public hearings?**

No

**If yes, would you like to attend an evening session?**

No

**My submission is: (please ensure you clearly state the issue or project (s) you are submitting about):**

i support B & B's Nelson Nature Plan to invest in biodiversity.

**Would you like to upload a file in support of your submission?**

**How did you find out about the Consultation Document and Council's 10 Year Plan?**

**Would you like to be contacted by email with future Council feedback opportunities?**

No

Bev Mcshea

---

**From:** Administration Support  
**Subject:** FW: Submission Nature Nelson

---

**From:** [eck.ru@ihug.co.nz](mailto:eck.ru@ihug.co.nz) [mailto:[eck.ru@ihug.co.nz](mailto:eck.ru@ihug.co.nz)]  
**Sent:** Tuesday, 14 April 2015 4:03 p.m.  
**To:** Council Enquiries (Enquiry)  
**Subject:** Submission Nature Nelson

I strongly support the proposal to fund Nature Nelson!

Regards

Eckart Runge

18 Whiting Dr, Wakefield 7025

# **CATEGORY 6: ENVIRONMENT**

## **BATCH 4**

Bev Mcshea

---

**From:** Submissions  
**Sent:** Saturday, 18 April 2015 11:44 a.m.  
**To:** Administration Support  
**Subject:** FW: Consultation Document Submission

**Follow Up Flag:** Follow up  
**Flag Status:** Completed

**Categories:** Bev, Long Term Plan 2015

-----  
**From:** Council Enquiries (Enquiry)  
**Sent:** Saturday, April 18, 2015 11:43:34 AM  
**To:** Submissions  
**Subject:** Consultation Document Submission  
**Auto forwarded by a Rule**

**Name:**  
Trevor James

**Organisation represented (if applicable):**  
**Address:**  
7e Kakenga Rd, Stoke

**Daytime phone:**  
5438562

**Email:**  
[gwynfaniwa@woosh.co.nz](mailto:gwynfaniwa@woosh.co.nz)

**Do you wish to speak in support of your submission at the public hearings?**  
No

**If yes, would you like to attend an evening session?**  
No

**My submission is: (please ensure you clearly state the issue or project (s) you are submitting about):**

My Family fully support 'Nelson Nature' formulated under the Nelson Biodiversity Forum. We would like to see this fully funded. We hope to see ongoing support for the Brook Sanctuary, Paremata Flats, Wakapuaka Sandflats and other key biodiversity projects. The tidegate under Boulder Bank Drive should allow a lot more natural tidal flow into Wakapuaka Sandflats. More work needs to be done to treat contaminants flushed into streams from urban catchments eg wetlands and swales as well as ensuring fish passage up and down all waterways.

**Would you like to upload a file in support of your submission?**  
**How did you find out about the Consultation Document and Council's 10 Year Plan?**  
**Would you like to be contacted by email with future Council feedback opportunities?**

Yes

Bev Mcshea

---

**From:** Submissions  
**Sent:** Sunday, 19 April 2015 8:17 p.m.  
**To:** Administration Support  
**Subject:** FW: Consultation Document Submission

**Follow Up Flag:** Follow up  
**Flag Status:** Completed

**Categories:** Bev, Long Term Plan 2015

-----  
**From:** Council Enquiries (Enquiry)  
**Sent:** Sunday, April 19, 2015 8:16:54 PM  
**To:** Submissions  
**Subject:** Consultation Document Submission  
**Auto forwarded by a Rule**

**Name:**  
Scott Smithline

**Organisation represented (if applicable):**  
**Address:**

29 Hillwood Drive

**Daytime phone:**  
5452036

**Email:**  
[moorea@xtra.co.nz](mailto:moorea@xtra.co.nz)

**Do you wish to speak in support of your submission at the public hearings?**

No

**If yes, would you like to attend an evening session?**

No

**My submission is: (please ensure you clearly state the issue or project (s) you are submitting about):**

I wish to applaud NCC for embracing the Nelson Nature programme

**Would you like to upload a file in support of your submission?**

**How did you find out about the Consultation Document and Council's 10 Year Plan?**

Forest and Bird

**Would you like to be contacted by email with future Council feedback opportunities?**

Yes

Bev Mcshea

---

**From:** Submissions  
**Sent:** Monday, 20 April 2015 3:55 p.m.  
**To:** Administration Support  
**Subject:** FW: Consultation Document Submission

**Follow Up Flag:** Follow up  
**Flag Status:** Completed

**Categories:** Bev, Long Term Plan 2015

-----  
**From:** Council Enquiries (Enquiry)  
**Sent:** Monday, April 20, 2015 3:55:18 PM  
**To:** Submissions  
**Subject:** Consultation Document Submission  
**Auto forwarded by a Rule**

**Name:**  
Andrew (Andy) Dennis

**Organisation represented (if applicable):**  
Forest and Bird

**Address:**  
118 Rutherford Street, Nelson 7010

**Daytime phone:**  
548-7537

**Email:**  
[andydennis@xtra.co.nz](mailto:andydennis@xtra.co.nz)

**Do you wish to speak in support of your submission at the public hearings?**  
No

**If yes, would you like to attend an evening session?**

**My submission is: (please ensure you clearly state the issue or project (s) you are submitting about):**

As a member of the committee of the Nelson (and later Nelson/Tasman) Branch of the Royal Forest and Bird Protection Society and (among other things) author of the Forest and Bird application for the Horoirangi Marine Reserve I strongly support the funding allocated to Nature Nelson in the draft Long Term Plan (that is for \$500,000 for the present year rising to \$717,000 for the year 2018/2020.  
C

**Would you like to upload a file in support of your submission?**

**How did you find out about the Consultation Document and Council's 10 Year Plan?**

Via both Forest and Bird and NCC contacts (e.g. I live in the same house as long time NCC councillor Derek Shaw.

**Would you like to be contacted by email with future Council feedback opportunities?**

Yes

Bev Mcshea

---

**From:** Submissions  
**Sent:** Tuesday, 21 April 2015 1:21 p.m.  
**To:** Administration Support  
**Subject:** FW: submission to Long Term Plan  
**Attachments:** Nelson CC.pdf

**Follow Up Flag:** Follow up  
**Flag Status:** Completed

**Categories:** Bev, Long Term Plan 2015

-----  
**From:** Anke Nieschmidt[SMTP:ANKE.NIESCHMIDT@ENVIROSCHOOLS.ORG.NZ]  
**Sent:** Tuesday, April 21, 2015 1:20:31 PM  
**To:** Submissions  
**Subject:** submission to Long Term Plan  
**Auto forwarded by a Rule**

Kia ora

Please find attached a submission from The EnviroSchools Foundation to Nelson City Council's draft Long Term Plan 2015-2025.

Kind regards  
Anke

Anke Nieschmidt  
EnviroSchools Programme and Projects Coordination  
The EnviroSchools Foundation  
PO Box 4445 Hamilton  
Lockwood Building, 293 Grey Street  
Hamilton East  
07 9597321 x 30  
0210322474

## Submission to Draft Long Term Plan Nelson City Council 2015-25

**Name:** The Enviroschools Foundation **Contact person:** Kristen Price, Operations Manager

**Postal Address:** PO Box 4445, Hamilton, 3247 **Physical Address:** Lockwood House, 293 Grey Street, Hamilton

**Phone:** 07 959 7321 **Email:** kristen.price@enviroschools.org.nz

We do NOT wish to speak to this submission

### Recognising your support for the Enviroschools Programme

We would like to acknowledge Nelson City Council (NCC) for supporting young people in your region to be part of the Enviroschools network over the last decade.

The Enviroschools Programme is a nationwide action-based education programme where young people plan, design and implement sustainability projects and become catalysts for change in their communities. Enviroschools was originally developed in the late 1990's by councils in Waikato as a non-regulatory tool and has now been adopted by 51 councils, including most of the larger councils and two-thirds of the total sector.

The programme is managed nationally by The Enviroschools Foundation (a charitable trust). The Foundation has funding from the Ministry for the Environment and works closely with the Department of Conservation. Regional implementation of Enviroschools is through partnerships with Local Government and other community agencies. This multi-sector collaboration has enabled nearly 1,000 schools and early childhood education (ECE) centres to now be involved – representing 30% of the school sector and 5% of the large early childhood sector. There is a solid network of 22 enviroschools in your region (52 % of all schools and 19 % of all early childhood centres).

This submission encourages NCC to maintain its involvement in Enviroschools along with the other regional partner agencies – Nelson Tasman Kindergarten Association.

### Highlights from recent programme evaluation

The Enviroschools Foundation has been working with a team of external evaluators to quantify the actions undertaken and record the beneficial outcomes of the programme observed by schools and ECE participating in Enviroschools. In late 2014 a nationwide survey of all Enviroschools was conducted as part of the evaluation process. The survey is very robust, with a 73% response rate and highlights include:

- *Wide participation* - Schools were equally able to participate in the Enviroschools Programme across all deciles, sectors and regions.
- *All age groups (early childhood, primary and secondary) are taking environmental action* – across a wide variety of areas including waste, water, biodiversity, food production, energy and eco-building.
- *Community collaboration*- Enviroschools fosters significant community collaboration, creating leadership pathways for students and real connections to families, outside agencies and communities.
- *Biodiversity projects are well developed, with clear links to community* – 96% of respondents had biodiversity projects with 86,859 trees planted in 2014 (86% of which were native trees).
- *Successful water projects* – Three quarters of Enviroschools (75%) are undertaking a range of actions for water quality and conservation, including 19,264 meters of riparian planting in 2014.
- *Zero Waste* – Almost all Enviroschools (100%)<sup>1</sup> are taking actions to reduce waste.

<sup>1</sup> Due to rounding - of 688 schools surveyed, 686 are taking actions to reduce waste.



- *Food production* – Most Enviroschools (97%) are growing and harvesting produce from their gardens/trees for cooking, selling and gifting.
- *Enviroschools is contributing to a range of other outcomes* including citizenship, health, cultural understanding, motivated learners and community participation.
- *Depth of practice is related to the extent of outcomes* - Results showed that the depth of practice increases with the length of time a school or ECE centre is involved in Enviroschools. Nearly two thirds of participating schools/centres (62%) report 'quite well developed' or 'deep embedded' practice. Further, the survey results show a clear link between depth of practice and the extent to which the programme is contributing to outcomes. This reinforces the value of the long-term approach of the Enviroschools Programme.

"The strength of Enviroschools lies in the collaborations and multiple relationships that have been established and continue to be nurtured through its model of facilitated, networked and distributed leadership, engaging communities, schools and other stakeholders in action aimed at creating sustainable communities." *The evaluators, Kinnect Group*

### **Name change for The Enviroschools Foundation**

---

During April 2015 the name of our organisation is changing from The Enviroschools Foundation to Toimata Foundation. The new name will take effect fully on 1 May 2015. The two programmes currently supported by the Foundation, Te Aho Tū Roa and Enviroschools, are retaining their current names, logos and identities. We are writing to the Mayor/Chair and Chief Executive of all our partner councils in the week of 20<sup>th</sup> April with more information about this change.

### **Conclusion**

---

The Enviroschools Programme has a proven track record of being an effective approach for engaging schools and communities in environmental and social action.

With the backbone support of The Enviroschools Foundation, and a network of councils around the country, the programme catalyses learning and action among thousands of young people, their families and communities from early childhood to secondary school. By connecting and coordinating resources and people, openly building and sharing knowledge across communities, widespread action is enabled on a broad scale.

As a funder, the partnership with Enviroschools provides NCC with multiple points of leverage across the Nelson community, extending the possible impact of its funding beyond what might be expected with a more traditional approach.

In closing, we would like to acknowledge the excellent job that Lindsey Fish does as Regional Coordinator of the Enviroschools Programme in Nelson.

Bev Mcshea

---

**From:** Submissions  
**Sent:** Thursday, 23 April 2015 2:55 p.m.  
**To:** Administration Support  
**Subject:** FW: Consultation Document Submission

**Follow Up Flag:** Follow up  
**Flag Status:** Completed

**Categories:** Bev, Long Term Plan 2015

-----  
**From:** Council Enquiries (Enquiry)  
**Sent:** Thursday, April 23, 2015 2:55:10 PM  
**To:** Submissions  
**Subject:** Consultation Document Submission  
**Auto forwarded by a Rule**

**Name:**

Mirdza and David Palmer

**Organisation represented (if applicable):**

**Address:**

Villa 197, Summerset in the Sun, 16 Sargeson St, Stoke, Nelson 7011

**Daytime phone:**

03 5452102

**Email:**

[davidmirdzapalmer@gmail.com](mailto:davidmirdzapalmer@gmail.com)

**Do you wish to speak in support of your submission at the public hearings?**

No

**If yes, would you like to attend an evening session?**

**My submission is: (please ensure you clearly state the issue or project (s) you are submitting about):**

We wholeheartedly support the Council's initiative in enhancing the environment and biodiversity of natural areas under its jurisdiction. We would feel that the perceived value of the envisaged work would be significantly enhanced if the parallel increase in carbon sequestration which will result were to be emphasized. It is our belief that central government itself, will only take effective responsibility for reducing fossil fuel consumption if there is a grass root surge in public support for counteracting climate change.

**Would you like to upload a file in support of your submission?**

**How did you find out about the Consultation Document and Council's 10 Year Plan?**

Information circulated by Ian Price on behalf of The Royal Forest and Bird Society of NZ

**Would you like to be contacted by email with future Council feedback opportunities?**

Yes

**Bev Mcshea**

---

**From:** Submissions  
**Sent:** Thursday, 23 April 2015 4:01 p.m.  
**To:** Administration Support  
**Subject:** FW: Consultation Document Submission

**Follow Up Flag:** Follow up  
**Flag Status:** Completed

**Categories:** Bev, Long Term Plan 2015

-----  
**From:** Council Enquiries (Enquiry)  
**Sent:** Thursday, April 23, 2015 4:01:09 PM  
**To:** Submissions  
**Subject:** Consultation Document Submission  
**Auto forwarded by a Rule**

**Name:**

Peter Williams

**Organisation represented (if applicable):**

**Address:**

57 Tui Glen Rd Nelson

**Daytime phone:**

5450141

**Email:**

[williams2@clear.net.nz](mailto:williams2@clear.net.nz)

**Do you wish to speak in support of your submission at the public hearings?**

No

**If yes, would you like to attend an evening session?**

No

**My submission is: (please ensure you clearly state the issue or project (s) you are submitting about):**

I would just like to voice my support for the Nelson Nature plan which will help make Nelson an even better place to live

**Would you like to upload a file in support of your submission?**

**How did you find out about the Consultation Document and Council's 10 Year Plan?**

Council Newsletter

**Would you like to be contacted by email with future Council feedback opportunities?**

No

Bev Mcshea

---

**From:** Submissions  
**Sent:** Thursday, 23 April 2015 7:51 p.m.  
**To:** Administration Support  
**Subject:** FW: Consultation Document Submission  
**Attachments:** Seagrass-monitoring-plan.doc

**Follow Up Flag:** Follow up  
**Flag Status:** Completed

**Categories:** Bev, Long Term Plan 2015

-----  
**From:** Council Enquiries (Enquiry)  
**Sent:** Thursday, April 23, 2015 7:50:45 PM  
**To:** Submissions  
**Subject:** Consultation Document Submission  
**Auto forwarded by a Rule**

**Name:**  
Moyang Li

**Organisation represented (if applicable):**  
**Address:**  
98 Halifax East, The wood, Nelson 7010

**Daytime phone:**  
0224397493

**Email:**  
[moyang.malinda.li@gmail.com](mailto:moyang.malinda.li@gmail.com)

**Do you wish to speak in support of your submission at the public hearings?**  
No

**If yes, would you like to attend an evening session?**  
**My submission is: (please ensure you clearly state the issue or project (s) you are submitting about):**  
seagrass monitoring plan

**Would you like to upload a file in support of your submission?**  
Seagrass-monitoring-plan.doc - [Download File](#)

**How did you find out about the Consultation Document and Council's 10 Year Plan?**  
**Would you like to be contacted by email with future Council feedback opportunities?**  
Yes

Dear Sir or Madam,

Thank you for your time.

I am a PhD candidate through the University of Auckland, now doing my project in Cawthron Institute. Seagrass meadows are valuable ecosystem component in terms of biodiversity and fishery. But they are vulnerable to anthropogenic disturbances such as sediment and nutrient loads. As the increasing of human coastal and estuarine activities, they are declining worldwide. However, there is a knowledge gap about the status of seagrass beds in Nelson. Although one part of my PhD project on seagrass ecology will be conducted in Nelson Bays, I propose a long-term coastal environment monitor program including seagrass monitoring. The following is a part of my research proposal which may be of interest.

Cheers,

Moyang

**Name** **Moyang Li**

**Project title** **The resilience of seagrass habitats to sedimentation and eutrophication**

**Main Supervisor** **Dr Louis Tremblay**

### **Background**

Seagrasses are marine angiosperms living in coastal ecosystems of all continents except Antarctica (Green and Short, 2003). There are about 59-72 seagrass species worldwide (Green and Short, 2003, Short et al., 2011). Arguments exist over the total species number because seagrasses are defined by their unique ecological niche rather than a single evolutionary origin, also because physical and genetics taxonomy are not always mutually consistent. *Zostera muelleri* is the only New Zealand native seagrass species previously referred to as *Z. capricorni* or *Z. novazelandica* (Les et al., 2002, Jones et al., 2008). *Z. muelleri* is a relatively small plant compared with its oversea counterparts. *Z. muelleri* has "thin, olive-green, ribbon-like leaves" typically c. 10 cm long and 0.1-0.4 cm wide (Matheson et al., 2009). Like other seagrass species, it is modular plants composed of ramet units including rhizomes, leaves, roots, and sometimes (approx. 10% possibility) flowers and fruits (Hemminga and Duarte, 2000). Also it mainly reproduces by vegetative propagation of rhizomes (Inglis, 2003).

Seagrass meadows are regarded as among the most productive aquatic ecosystems and provide various ecological (Barbier et al., 2011) and social-economical (Cullen-Unsworth et al., 2013) services. They generate substantial primary production, support complex food webs and detrital food chains, play an important role in carbon sequestration thus help mitigate climate change, modify water currents, filter and deposit sediment and nutrient, provide shelter and nursery habitats, and interact with other critical habitats including salt marshes, mangroves and coral reefs. Based on their ecosystem service of nutrient cycling, the value of worldwide seagrass beds has been evaluated at US\$19,002 ha<sup>-1</sup>yr<sup>-1</sup> (Costanza et al., 1998). Due to global seagrass loss, up to 299 Tg carbon yr<sup>-1</sup> could be released from the estimated 4.2 to 8.4 Pg carbon seagrass carbon pool (Fourqurean et al., 2012). In tropic Indonesia, seagrass meadows are of food security importance, with seagrass associated fauna supporting no less than half of the fish based food and accounting for 54% to 99% of daily protein intake (Unsworth et al., 2014). At subtropical Gran Canaria (eastern Atlantic), the commercial contribution of seagrass meadows has been estimated at US\$110.77 ha<sup>-1</sup>yr<sup>-1</sup> as nursery

grounds of five commercial interest fish species (Tuya et al., 2014). In subtropical and temperate southern Australia, seagrass habitats enhance recruitment of 12 commercially important fish species by  $0.98 \text{ kg m}^{-2}\text{yr}^{-1}$ , which is equivalent to up to US\$ 189,222  $\text{ha}^{-1}\text{yr}^{-1}$  (Blandon and zu Ermgassen, 2014).

Seagrass meadows are also very important ecosystems in New Zealand coastal and estuarine environment. They provide habitats and food for important endemic species such as crab *Macrophthalmus hirtipes* (Woods and Schiel, 1997). They support a larger extent of abundance and biodiversity (Battley et al., 2011) than purely sedimentary habitats (mud and sand) (De Juan and Hewitt, 2011, Morrison et al., 2014) and other vegetative habitats. In the Matapouri Estuary, the biodiversity of benthic macro-invertebrates in seagrass beds is the highest, among six distinctive habitats including seagrass beds, mangroves, channels, banks and sand flats (Alfaro, 2006). They significantly reduce current velocities and stop finer sediment from resuspending (Heiss et al., 2000). As habitat-forming species, seagrasses have the potential to increase the juvenile fish abundance of important commercial species (Parsons et al., 2014, Parsons et al., 2013).

Large-scale seagrass losses have been reported worldwide (Lotze et al., 2006, Gibson et al., 2007), despite important services of seagrass beds at home and abroad. Globally, 29% of known seagrass area has disappeared and seagrass meadows have declined continuously at a rate of  $7\% \text{ yr}^{-1}$  since 1990 (Waycott et al., 2009). Up to 14% of all seagrass species are at elevated risk of extinction and three of them are endangered (Short et al., 2011). Actually if *Z. muelleri* is also included, International Union for the Conservation of Nature (IUCN) Red List “Endangered” species add up to four Matheson et al. (2011). Although only a handful of cases have been published, it is undeniable that seagrass meadows in some important areas of New Zealand have been or are declining (Inglis, 2003, Turner and Schwarz, 2006). In Tauranga Harbour, one site of this study, seagrass meadows have declined by 34% and 90% of the seagrasses in subtidal areas have disappeared between 1959 and 1996 (Park, 1999).

Seagrass beds are often “simultaneously influenced by multiple stressors at different temporal and spatial scales” (Orth et al., 2006). Natural causes resulting in seagrass declines include wasting disease (Renn, 1936), overgrazing (Thomsen et al., 2012) and extreme climatic events (Welsh, 2000, Chisholm et al., 1997). Anthropogenic pressure include pollution (sediment, nutrient, herbicide, heavy metal, etc.), physical damage (Lewis and Devereux, 2009), invasion of introduced species (Williams, 2007), global climate change (Koch et al., 2013, Short and Neckles, 1999). Among all stress contributors, increasing sediment (Cabaço et al., 2008) and nutrient loads (Short and Wyllie-Echeverria, 1996, Burkholder et al., 2007) are believed to be major causes of the most cases worldwide.

The increasing sediment and nutrient input are believed to be responsible for most of the seagrass losses in New Zealand, although black swan grazing has also been proposed in some areas (Dos Santos et al., 2012, Dos Santos et al., 2013, McGlathery, 2001). Anthropogenic sediment input increase is a serious problem in coastal environment management of New Zealand. It causes seagrass losses and leads to the spread of mangroves in North Island (Lovelock et al., 2007), which further displace valuable habitats including seagrass beds. Although eutrophication can contribute to seagrass loss, previous studies showed that seagrasses sometimes respond positively to nutrient addition (van Lent et al., 1995, Udy and Dennison, 1997, Kelaher et al., 2013), similar to Dos Santos’s unpublished research conducted in Tauranga Harbour (Dos Santos, 2011) where severe seagrass losses happened. This indicated that seagrass *per se* is not enough as an indicator of seagrass ecosystem health.



The mechanisms by which anthropogenic sediment and nutrient affect seagrass beds and associated fauna and flora are not fully characterised *in situ*. Specifically, only a few studies on seagrass ecology of the Nelson Bays region have been reported. Most of these studies were conducted in western Golden Bay (McGlathery, 2001), especially Farewell Spit (Battley et al., 2011), whereas no study in Tasman Bay has been published. The present study was proposed based on the above research gaps and merits. Seagrass response to different levels of anthropogenic sediment and nutrient disturbances will be surveyed in natural conditions in Nelson Bays. By differentiating the effect of sediment and nutrient, the influence of eutrophication and siltation on seagrass will be evaluated and compared with each other, which can probably provide critical information to coastal & estuarine management.

### **Aims and objectives**

The objective of the research is to investigate the role of key sediment attributes and nutrient enrichment on seagrass habitats. The following hypotheses will be tested:

H<sub>0</sub>: sediment condition has influential effect on seagrass health more so than the enrichment of nutrient;

H<sub>0</sub>: there is an increase in seagrass, macroalgae and algal epiphytes biomass when exposed to nutrient enrichment;

H<sub>0</sub>: there is a switch in community dominance from perennial seagrasses to dominance by fast-growing opportunistic macroalgae at high level of nutrient enrichment;

H<sub>0</sub>: macrofaunal biodiversity, nutrient cycling and the provision of nursery habitats are higher in seagrass beds than in macroalgal dominated habitats;

H<sub>0</sub>: the loss of seagrass habitats affects ecosystem service delivery.

### **Research Design**

A 2-year long-term baseline seagrass ecology survey will be conducted in Nelson bays. The response of seagrass and associated organisms to nutrient and sediment will be studied in a general seagrass ecology survey.

#### **Study site**

Nelson Bays, including Golden Bay and Tasman Bay, are located near the northwest corner of South Island and are important economic and cultural resources for the region. Among the seagrass beds along Nelson Bays coastal line (Jawad et al., 2000), those at Farewell Spit, Collingwood and Motueka are pristine (McGlathery, 2001, Battley et al., 2011), whereas those at Marahau and Nelson Haven are subjected to different levels of anthropogenic impacts (Pergent-Martini et al., 2006). Five to seven intertidal sites with different levels of anthropogenic disturbances will be selected as study sites. In these sites, general seagrass ecological survey will be conducted every summer, winter and November between 2015 and 2017. At each site, three parallel transects will be laid at low tide from shoreward to seaward seagrass meadows (Dos Santos, 2011). Transect length and distance between transects will be decided according to "the specific seagrass extent at each site" (Dos Santos, 2011). Five sampling points with equal distance will be divided along each transect.

#### **Field observation and sampling**

Photographs of plots will be taken before routine maintenance or sampling to identify any large mobile epibenthos & macroalgae and to estimate seagrass & macroalgae coverage. Benthic chambers will be used when sampling or maintaining the plots to monitor porewater nutrient levels. *Z. muelleri* leaves will be marked using marking method for mono-meristematic leaf-replacing growth form (Short and Duarte, 2001) in order to calculate plastochrone interval (P<sub>L</sub>, P<sub>S</sub> and P<sub>R</sub>). Photosynthetic characteristics of seagrasses will be assayed *in situ* using rapid light curve (RLC) of portable diving pulse amplitude modulated (Diving-PAM) (Beer et al., 1999, Schwarz, 2004, Ralph

and Gademann, 2005). Shoot density and canopy height will be measured according to Duarte and Kirkman (2001).

In Tauranga Harbour, each plot will be sampled randomly before first fertilisation (April 2015), in winter (July 2015), in summer (January 2016) and in peak seasons of macroalgae (October-November 2015). In Nelson Bays, each sampling point will be sampled in winter (July 2015 & 2016), in summer (January 2016 & 2017) and in peak seasons of macroalgae (October-November 2015 & 2016). Each sample includes a 13 cm in diameter by 15 cm in depth core for infauna; a 50 × 50 cm quadrat for plants; and a surface sediment core for sediment. In Tauranga Harbour, after sampling, sediment cores from nearby non-experimental area will be used to refill all the holes in plots. For plant quadrats (alternatively a quarter of the quadrat), seagrass plants including rhizomes and roots (depth up to 8 cm) will be excavated carefully with scissors; roots will be rinsed carefully to get rid of sediments; algal epiphytes will be removed from leaves of randomly chosen seagrass; entire seagrass plants, macroalgae and epiphytes will be preserved in 90% ethanol and return to laboratory for later analysis.

#### Laboratory processing

Epiphytes will be identified into taxonomy groups. Leaf parameters (length, width, area, etc.) of the original seagrass shoots will be measured so that epiphyte biomass can be standardised as dry weight per 10 square centimetres of leaf area. Macroalgae and loose algae will be identified and their biomass will be measured.

Seagrass growth, areal production will be calculated as:

New leaf production = new leaf since marking /shoot

$P_L$  = number of days since marking /new leaf production

$P_S$  = number of days since marking /new shoot production

$P_R$  = number of days since marking /new rhizome production

Leaf growth = leaf weight / $P_L$  (g dry wt/ shoot·day)

Whole plant growth = areal leaf growth + areal stem growth + areal root growth + areal rhizome

Seagrasses above- & below-ground biomass, macroalgae and algal epiphyte biomass will be measured after drying at 60°C until constant weight. Seagrass, macroalgae and epiphytes biomass will be calculated as:

Biomass = dry weight of the sample / quadrat area (g dry wt /m<sup>2</sup>)

Sediment cores of infauna will be sieved through a 0.5 mm mesh in order to determine macrofaunal composition quantitatively. Sediment grain size and Chl<sub>a</sub> content of surface sediment cores will be measured (Ellis et al., 2013). And salinity, NO<sub>3</sub>-N, NH<sub>4</sub>-N and PO<sub>4</sub>-P of porewater will be measured in laboratory.

Timeline of research

	2014		2015												2016												2017							
	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT										
<b>Ecological survey in Nelson Bays</b>																																		
Experiment preparation																																		
Experiment set up and sampling																																		
Laboratory analysis of samples																																		
Data analysis and write up of paper																																		
<b>Thesis write up and defence</b>																																		

## References

- ALFARO, A. C. 2006. Benthic macro-invertebrate community composition within a mangrove/seagrass estuary in northern New Zealand. *Estuarine, Coastal and Shelf Science*, 66, 97-110.
- BARBIER, E. B., HACKER, S. D., KENNEDY, C., KOCH, E. W., STIER, A. C. & SILLIMAN, B. R. 2011. The value of estuarine and coastal ecosystem services. *Ecological Monographs*, 81, 169-193.
- BATTLE, P., MELVILLE, D., SCHUCKARD, R. & BALLANCE, P. 2011. *Zostera muelleri* as a structuring agent of benthic communities in a large intertidal sandflat in New Zealand. *Journal of Sea Research*, 65, 19-27.
- BEER, S., VILENKIN, B., WEIL, A., VESTE, M., SUSEL, L. & ESHEL, A. 1999. Measuring photosynthetic rates in seagrasses by pulse amplitude modulated(PAM) fluorometry. *Marine Ecology Progress Series*, 174, 293-300.
- BLANDON, A. & ZU ERMGASSEN, P. S. 2014. Quantitative estimate of commercial fish enhancement by seagrass habitat in southern Australia. *Estuarine, Coastal and Shelf Science*, 141, 1-8.
- BURKHOLDER, J. M., TOMASKO, D. A. & TOUCHETTE, B. W. 2007. Seagrasses and eutrophication. *Journal of Experimental Marine Biology and Ecology*, 350, 46-72.
- CABA O, S., SANTOS, R. & DUARTE, C. M. 2008. The impact of sediment burial and erosion on seagrasses: a review. *Estuarine, Coastal and Shelf Science*, 79, 354-366.
- CHISHOLM, J. R. M., FERNEX, F. E., MATHIEU, D. & JAUBERT, J. M. 1997. Wastewater discharge, seagrass decline and algal proliferation on the côte d'Azur. *Marine Pollution Bulletin*, 34, 78-84.
- COSTANZA, R., D'ARGE, R., GROOT, R. D., FARBER, S., GRASSO, M., HANNON, B., LIMBURG, K., NAEEM, S., O'NEILL, R. V. & PARUELO, J. 1998. The value of the world's ecosystem services and natural capital.
- CULLEN-UNSWORTH, L. C., NORDLUND, L. M., PADDOCK, J., BAKER, S., MCKENZIE, L. J. & UNSWORTH, R. K. 2013. Seagrass meadows globally as a coupled social–ecological system: Implications for human wellbeing. *Marine pollution bulletin*.
- DE JUAN, S. & HEWITT, J. 2011. Relative importance of local biotic and environmental factors versus regional factors in driving macrobenthic species richness in intertidal areas. *Marine Ecology Progress Series*, 423, 117-129.
- DOS SANTOS, V. M. 2011. *Impact of black swan grazing and anthropogenic contaminants on New Zealand seagrass meadows*. Doctor of Philosophy, The University of Waikato.
- DOS SANTOS, V. M., MATHESON, F. E., PILDITCH, C. A. & ELGER, A. 2012. Is black swan grazing a threat to seagrass? Indications from an observational study in New Zealand. *Aquatic Botany*, 100, 41-50.
- DOS SANTOS, V. M., MATHESON, F. E., PILDITCH, C. A. & ELGER, A. 2013. Seagrass resilience to waterfowl grazing in a temperate estuary: A multi-site experimental study. *Journal of Experimental Marine Biology and Ecology*, 446, 194-201.
- DUARTE, C. M. & KIRKMAN, H. 2001. Chapter 7 - Methods for the measurement of seagrass abundance and depth distribution. In: SHORT, F. T. & COLES, C. A. S. G. (eds.) *Global Seagrass Research Methods*. Amsterdam: Elsevier Science.
- ELLIS, J., CLARK, D., HEWITT, J., TAIAPA, C., SINNER, J., PATTERSON, M., HARDY, D., PARK, S., GARDNER, B., MORRISON, A., CULLIFORD, D., BATTERSHILL, C., HANCOCK, N., HALE, L., ASHER, R., GOWER, F., BROWN, E. & MCCALLION, A. 2013. Ecological Survey of Tauranga Harbour. Prepared for Manaaki Taha Moana, Manaaki Taha Moana Research Report No. 13. Cawthron Report No. 2321.
- FOURQUREAN, J. W., DUARTE, C. M., KENNEDY, H., MARB, N., HOLMER, M., MATEO, M. A., APOSTOLAKI, E. T., KENDRICK, G. A., KRAUSE-JENSEN, D. & MCGLATHERY, K. J. 2012. Seagrass ecosystems as a globally significant carbon stock. *Nature Geoscience*, 5, 505-509.
- GIBSON, R., ATKINSON, R. & GORDON, J. 2007. Loss, status and trends for coastal marine habitats of Europe. *Oceanography and Marine Biology: an annual review*, 45, 345-405.

- GREEN, E. P. & SHORT, F. T. 2003. *World atlas of seagrasses*, Univ of California Press.
- HEISS, W. M., SMITH, A. M. & PROBERT, P. K. 2000. Influence of the small intertidal seagrass *Zostera novazelandica* on linear water flow and sediment texture.
- HEMMINGA, M. A. & DUARTE, C. M. 2000. *Seagrass ecology*, Cambridge University Press.
- INGLIS, G. 2003. Seagrasses of New Zealand. *World atlas of seagrasses: present status and future conservation*. University of California Press, Berkeley, California, 148-157.
- JAWAD, J. T., LOMBANA, A. V., MOORE, K. A. & RHODE, J. M. 2000. A review of issues in seagrass seed dormancy and germination: implications for conservation and restoration. *Mar Ecol Prog Ser*, 200, 277-288.
- JONES, T. C., GEMMILL, C. E. & PILDITCH, C. A. 2008. Genetic variability of New Zealand seagrass (*Zostera muelleri*) assessed at multiple spatial scales. *Aquatic Botany*, 88, 39-46.
- KELAHER, B. P., VAN DEN BROEK, J., YORK, P. H., BISHOP, M. J. & BOOTH, D. J. 2013. Positive responses of a seagrass ecosystem to experimental nutrient enrichment. *Mar Ecol Prog Ser*, 487, 15-25.
- KOCH, M., BOWES, G., ROSS, C. & ZHANG, X. H. 2013. Climate change and ocean acidification effects on seagrasses and marine macroalgae. *Global change biology*, 19, 103-132.
- LES, D. H., MOODY, M. L., JACOBS, S. W. & BAYER, R. J. 2002. Systematics of seagrasses (Zosteraceae) in Australia and New Zealand. *Systematic Botany*, 468-484.
- LEWIS, M. A. & DEVEREUX, R. 2009. Nonnutrient anthropogenic chemicals in seagrass ecosystems: Fate and effects. *Environmental Toxicology and Chemistry*, 28, 644-661.
- LOTZE, H. K., LENIHAN, H. S., BOURQUE, B. J., BRADBURY, R. H., COOKE, R. G., KAY, M. C., KIDWELL, S. M., KIRBY, M. X., PETERSON, C. H. & JACKSON, J. B. 2006. Depletion, degradation, and recovery potential of estuaries and coastal seas. *Science*, 312, 1806-1809.
- LOVELOCK, C. E., FELLER, I. C., ELLIS, J., SCHWARZ, A. M., HANCOCK, N., NICHOLS, P. & SORRELL, B. 2007. Mangrove growth in New Zealand estuaries: the role of nutrient enrichment at sites with contrasting rates of sedimentation. *Oecologia*, 153, 633-641.
- MATHESON, F., DOS SANTOS, V., INGLIS, G., PILDITCH, C., REED, J., MORRISON, M., LUNDQUIST, C., VAN HOUTE-HOWES, K., HAILES, S. & HEWITT, J. 2009. New Zealand seagrass - General Information Guide. *NIWA Information Series No. 72*.
- MATHESON, F. E., LUNDQUIST, C. J., GEMMILL, C. E. C. & PILDITCH, C. A. 2011. New Zealand seagrass—More threatened than IUCN review indicates. *Biological Conservation*, 144, 2749-2750.
- MCGLATHERY, K. J. 2001. MACROALGAL BLOOMS CONTRIBUTE TO THE DECLINE OF SEAGRASS IN NUTRIENT-ENRICHED COASTAL WATERS. *Journal of Phycology*, 37, 453-456.
- MORRISON, M. A., LOWE, M. L., GRANT, C., SMITH, P. J., CARBINES, G., REED, J., BURY, S. J. & BROWN, J. 2014. Seagrass Meadows as Biodiversity and Productivity Hotspots. Ministry for Primary Industries.
- ORTH, R. J., CARRUTHERS, T. J., DENNISON, W. C., DUARTE, C. M., FOURQUREAN, J. W., HECK, K. L., HUGHES, A. R., KENDRICK, G. A., KENWORTHY, W. J. & OLYARNIK, S. 2006. A global crisis for seagrass ecosystems. *Bioscience*, 56, 987-996.
- PARK, S. G. 1999. *Changes in abundance of seagrass (Zostera spp.) in Tauranga Harbour from 1959-96*, Environment BOP.
- PARSONS, D. M., MIDDLETON, C., SMITH, M. D. & COLE, R. G. 2014. The influence of habitat availability on juvenile fish abundance in a northeastern New Zealand estuary. *New Zealand Journal of Marine and Freshwater Research*, 1-13.
- PARSONS, D. M., MORRISON, M. A., THRUSH, S. F., MIDDLETON, C., SMITH, M., SPONG, K. T. & BUCKTHOUGHT, D. 2013. The influence of habitat structure on juvenile fish in a New Zealand estuary. *Marine Ecology*, 34, 492-500.
- PERGENT-MARTINI, C., BOUDOURESQUE, C.-F., PASQUALINI, V. & PERGENT, G. 2006. Impact of fish farming facilities on *Posidonia oceanica* meadows: a review. *Marine Ecology*, 27, 310-319.

- RALPH, P. J. & GADEMANN, R. 2005. Rapid light curves: a powerful tool to assess photosynthetic activity. *Aquatic Botany*, 82, 222-237.
- RENN, C. E. 1936. The Wasting Disease of *Zostera marina*. I. A Phytological investigation of the diseased plant. *Biological Bulletin*, 148-158.
- SCHWARZ, A. M. 2004. Contribution of photosynthetic gains during tidal emersion to production of *Zostera capricorni* in a North Island, New Zealand estuary. *New Zealand Journal of Marine and Freshwater Research*, 38, 809-818.
- SHORT, F. T. & DUARTE, C. M. 2001. Chapter 8 - Methods for the measurement of seagrass growth and production. In: SHORT, F. T. & COLES, C. A. S. G. (eds.) *Global Seagrass Research Methods*. Amsterdam: Elsevier Science.
- SHORT, F. T. & NECKLES, H. A. 1999. The effects of global climate change on seagrasses. *Aquatic Botany*, 63, 169-196.
- SHORT, F. T., POLIDORO, B., LIVINGSTONE, S. R., CARPENTER, K. E., BANDEIRA, S., BUJANG, J. S., CALUMPONG, H. P., CARRUTHERS, T. J., COLES, R. G. & DENNISON, W. C. 2011. Extinction risk assessment of the world's seagrass species. *Biological Conservation*, 144, 1961-1971.
- SHORT, F. T. & WYLLIE-ECHEVERRIA, S. 1996. Natural and human-induced disturbance of seagrasses. *Environmental conservation*, 23, 17-27.
- THOMSEN, M. S., WERNBERG, T., ENGELEN, A. H., TUYA, F., VANDERKLIFT, M. A., HOLMER, M., MCGLATHERY, K. J., ARENAS, F., KOTTA, J. & SILLIMAN, B. R. 2012. A meta-analysis of seaweed impacts on seagrasses: generalities and knowledge gaps. *PLoS One*, 7, e28595.
- TURNER, S. & SCHWARZ, A.-M. 2006. Management and conservation of seagrass in New Zealand: an introduction. *Science for Conservation*, 264, 1-90.
- TUYA, F., HAROUN, R. & ESPINO, F. 2014. Economic assessment of ecosystem services: Monetary value of seagrass meadows for coastal fisheries. *Ocean & Coastal Management*.
- UDY, J. W. & DENNISON, W. C. 1997. Growth and physiological responses of three seagrass species to elevated sediment nutrients in Moreton Bay, Australia. *Journal of Experimental Marine Biology and Ecology*, 217, 253-277.
- UNSWORTH, R. K., HINDER, S. L., BODGER, O. G. & CULLEN-UNSWORTH, L. C. 2014. Food supply depends on seagrass meadows in the coral triangle. *Environmental Research Letters*, 9, 094005.
- VAN LENT, F., VERSCHUURE, J. M. & VAN VEGHEL, M. L. 1995. Comparative study on populations of *Zostera marina* L.(eelgrass): in situ nitrogen enrichment and light manipulation. *Journal of Experimental Marine Biology and Ecology*, 185, 55-76.
- WAYCOTT, M., DUARTE, C. M., CARRUTHERS, T. J., ORTH, R. J., DENNISON, W. C., OLYARNIK, S., CALLADINE, A., FOURQUIREAN, J. W., HECK, K. L. & HUGHES, A. R. 2009. Accelerating loss of seagrasses across the globe threatens coastal ecosystems. *Proceedings of the National Academy of Sciences*, 106, 12377-12381.
- WELSH, D. T. 2000. Nitrogen fixation in seagrass meadows: Regulation, plant-bacteria interactions and significance to primary productivity. *Ecology Letters*, 3, 58-71.
- WILLIAMS, S. L. 2007. Introduced species in seagrass ecosystems: Status and concerns. *Journal of Experimental Marine Biology and Ecology*, 350, 89-110.
- WOODS, C. & SCHIEL, D. R. 1997. Use of seagrass *Zostera novazelandica* (Setchell, 1933) as habitat and food by the crab *Macrophthalmus hirtipes* (Heller, 1862)(Brachyura: Ocypodidae) on rocky intertidal platforms in southern New Zealand. *Journal of Experimental Marine Biology and Ecology*, 214, 49-65.



Bev Mcshea

---

**From:** Submissions  
**Sent:** Thursday, 23 April 2015 8:28 p.m.  
**To:** Administration Support  
**Subject:** FW: Consultation Document Submission

**Follow Up Flag:** Follow up  
**Flag Status:** Completed

**Categories:** Bev, Long Term Plan 2015

-----  
**From:** Council Enquiries (Enquiry)  
**Sent:** Thursday, April 23, 2015 8:28:22 PM  
**To:** Submissions  
**Subject:** Consultation Document Submission  
**Auto forwarded by a Rule**

**Name:**  
Emily King

**Organisation represented (if applicable):**  
**Address:**  
91 Princes Drive, Britannia Heights

**Daytime phone:**  
021 024 02472

**Email:**  
[emilyking1980@hotmail.com](mailto:emilyking1980@hotmail.com)

**Do you wish to speak in support of your submission at the public hearings?**  
No

**If yes, would you like to attend an evening session?**  
**My submission is: (please ensure you clearly state the issue or project (s) you are submitting about):**  
I just want to say that I'm fully in support of the Nelson Nature council initiative. I think it's great that the council is being proactive in this area and realising they could do more.

**Would you like to upload a file in support of your submission?**  
**How did you find out about the Consultation Document and Council's 10 Year Plan?**  
Emailed by a friend

**Would you like to be contacted by email with future Council feedback opportunities?**  
Yes

Bev Mcshea

---

**From:** Submissions  
**Sent:** Thursday, 23 April 2015 8:36 p.m.  
**To:** Administration Support  
**Subject:** FW: Consultation Document Submission

**Follow Up Flag:** Follow up  
**Flag Status:** Completed

**Categories:** Bev, Long Term Plan 2015

-----  
**From:** Council Enquiries (Enquiry)  
**Sent:** Thursday, April 23, 2015 8:35:46 PM  
**To:** Submissions  
**Subject:** Consultation Document Submission  
**Auto forwarded by a Rule**

**Name:**

Judith anne Burke

**Organisation represented (if applicable):**

**Address:**

14 Freyberg Ave, Stoke

**Daytime phone:**

035472885

**Email:**

[judyburke@kinect.co.nz](mailto:judyburke@kinect.co.nz)

**Do you wish to speak in support of your submission at the public hearings?**

No

**If yes, would you like to attend an evening session?**

**My submission is: (please ensure you clearly state the issue or project (s) you are submitting about):**

I support Councils initiative of Nelson Nature.

**Would you like to upload a file in support of your submission?**

**How did you find out about the Consultation Document and Council's 10 Year Plan?**

Friend,

**Would you like to be contacted by email with future Council feedback opportunities?**

Yes

Bev Mcshea

---

**From:** Submissions  
**Sent:** Thursday, 23 April 2015 9:42 p.m.  
**To:** Administration Support  
**Subject:** FW: Earthbound Investments - Submission - 2015 - 2025 strategic plan  
**Attachments:** scan.pdf; PastedGraphic-4.pdf

**Follow Up Flag:** Follow up  
**Flag Status:** Completed

**Categories:** Bev, Long Term Plan 2015

-----  
**From:** Sean Stayner[[SMTP:SEANS@SYNERGISTICMANAGERS.COM](mailto:SMTP:SEANS@SYNERGISTICMANAGERS.COM)]  
**Sent:** Thursday, April 23, 2015 9:40:55 PM  
**To:** Submissions  
**Subject:** Earthbound Investments - Submission - 2015 - 2025 strategic plan  
**Auto forwarded by a Rule**

Please see attached submission

Regards

Sean Stayner

Sean Stayner | Managing Director  
[Synergistic Manufacturing Systems Pty Ltd](http://www.synergisticmanufacturingsystems.com)  
P.O.Box 140  
Cleveland  
QLD 4163  
Australia  
M +61448100693  
F +61738214843  
[www.synergisticmanagers.com](http://www.synergisticmanagers.com)

# NELSON CITY COUNCIL PUBLIC CONSULTATION SUBMISSION FORM

**WE WANT YOUR OPINION.  
PLEASE TELL US WHAT YOU THINK.**

*Please type or print clearly. Remember to read the submission writing guidelines before starting.*

Name: **Sean Stayner** Organisation: **Earthbound Investment 2002 Ltd**

Address: **P.O. Box 140 Cleveland Qld 4163**

Daytime Phone: **+61 448 100 693** Email: **[Seans@synergisticmanagers.com](mailto:Seans@synergisticmanagers.com)**

Do you wish to be heard in support of your submission: **Yes; by Skype if possible**

If yes would you like to attend the evening session: **No**

**Public information:** All submissions (including the names and contact details of submitters) are public information and will be available to the public and media in various reports and formats including on the Nelson City Council website. Personal information will also be used for administration relating to the subject matter of submissions. Submitters have the right to access and correct any personal information included in any reports, information or submissions.

## EXECUTIVE SUMMARY

This submission is in reference to the "Nelson long term plan 2015 – 25" and relates to the absence of direction for Hira in this planning process. Hira has appeared in previous plans ever since it was transferred from the Waimea district into the Nelson district in the 1990's.

This submission is intended to highlight how the Nelson region could be missing out on a significant opportunity in the next decade to grow, in an eco-sustainable way, and showcase the application of the unique environmental conscience of the people of the Nelson region.

For growth in the Nelson there are limited options when compared to other regions. However there is an opportunity to take advantage of a once in a generation phenomenon with the upcoming retirement of a large number of "Baby Boomers" over the next decade. Nelson has historically been an attractive option for retirees who are capital rich.

Hira is an option to meet the growth over the next decade. Further to this are options to make something that will be uniquely Nelson and draw international attention for innovation in eco-living. For this to happen I need the council's intended direction in this area.



## Earthbound Investments 2002 Ltd

### SCOPE

This submission is in reference to the “Nelson long term plan 2015 – 25” and is intended as a submission to this proposed plan by Earthbound Investment 2002 Ltd.

### BACKGROUND

Earthbound Investment 2002 Ltd owns the property DP 303486 situated opposite to the shop and garage, and St Johns Church in Hira. Since 1994 I have been active in supplying submissions for the resource management plans in Hira.

### SUBMISSION

#### Overview

As a part of this public consultation submission I have read through the consultation document and the Nelson 2060 - the vision. I am impressed with Mayor Rachel Reese’s overview, it is concise and clearly maps the next ten years of council commitment and the constraints.

However for the first time Hira does not appear in the plan. I want to give some back ground into this to build an understanding of why I am so insistent about development in this area.

In 1996 the thinking of the council was: -

*“Hira is identified as being a potential village due to location of community facilities there such as service activities, schooling and a church. The issue of potential conflict with the State Highway would need to be addressed. While no village exists at the time this plan was drafted a village is anticipated. The expectation is that such a village will relate to its environment in form and style, and be unique, not simply an extension of a suburb of Nelson.”*

I would suggest that the last sentence is an impressive sentence for 20 years ago. I see that as well as the existing community facilities the area now has lot 1 DP 14909 (769 Hira Road) put aside for services, clearly a good strategic purchase.

#### Why Hira?

I was back in Nelson recently and was surprised at the amount of urban sprawl. Stoke has reached Richmond and the Stoke valleys are filling up now. Hira has also grown rapidly, when I moved to Hira in 1986 the Lud and Teal Valleys were mostly wholly owned and farmed by the Frost families. Now these valleys have all been subdivided up into lifestyle blocks and in many cases chopped up again from the original subdivisions.



In the interests of any community there needs to be a village or nucleolus. Without this nucleolus the councils concern from 20 years ago “*an extension of a suburb of Nelson*” has become a reality.

I believe that it is with a village development at Hira that creates the biggest opportunity for the Nelson City Council both in growth and alignment with the vision. Hira is a “clean slate” and any development will be funded, in most part, by the developers of the area.

The Nelson City Council is running a city that was established in 1841 with all the inherited issues that come from 174 years of development. In the strategic plan much of the proposed infrastructure projects are remedial works and upgrades on storm water drainage, water mains and waste sewerage. Although totally necessary they are hardly projects that will define a decade of Nelson’s development toward the vision.

#### A Decade of Growth for Nelson?

Nelson has some significant challenges and limitations for growth in medium manufacturing and light industrial industries. Further to this are the limitations on the extent to acceptable urban sprawl in Stoke. However if any city does not have growth then there will be hardship during cyclic downturns.

Nelson has one significant core strength, the ability to attract retirees from major centers. This is the decade of the “Baby Boomer”, a phenomenon that will not repeat to this extent in any other decade. These retirees are very capital wealthy due to the unprecedented rise in property values in the major centers. Many of these people are looking to retire where the ongoing cost of living is lower throughout their retirement years.

With utilities costs being a major issue for retirees this is the area where growth in eco subdivisions will be found. Nelson is uniquely poised to cater to this new and sustainable future opportunity.

#### The Eco Subdivision

In the last year there has been a number of breakthrough technologies entering commercialization in Australia, the US and the UK. These are technologies that will make sustainable eco-living economic and a possibility. The issues is these are available within the councils ten-year plan.

I am aware of these opportunities because I own a company that works with research and development companies to bring these products to commercialization by arranging finance, building manufacturing facilities and marketing these products.

With sustainable alternate energy solutions there has been one missing link. Up until now it has been possible, and economic, to generate electricity using photovoltaic cells (solar panels), wind generators, and biogas generators from anaerobic digesters (modern sewerage treatment plants). The missing link was the ability to store this energy efficiently and release it on demand. This has been resolved and is coming into commercialization. (<http://www.viznenergy.com>).

Electrical storage will allow for a community to generate power into a collective storage system and be self-sufficient. Should there need to be demand for power

from outside the system, this can come from night rate power, meaning one town has only one connection fee and there will never be a power cut.

I won't go into the options for potable water and cover the "off the shelf" solutions for sewerage and grey water treatment. Suffice to say these would present the same eco-sustainable footprint.

#### The 2060 vision applied

The overriding theme of the feedback from the focus groups in the 2060 vision is sustainability, alternative energy and balance with the environment. In this upcoming decade there are some really exciting developments in environmental sustainability.

The actual application of energy sustainability is very workable when a subdivision is new. However it is currently cost prohibitive to remove existing domestic housing infrastructure and retrofit these systems. The best chance to demonstrate sustainability with the environment is in a new township. I don't know of any other area in the Nelson district where this would be possible except for Hira.



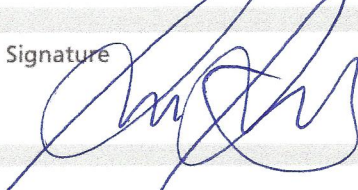
**CONCLUSION**

I am looking for direction from the Nelson City Council on where they want to go with Hira. There was initial direction as indicated above in 1996 and there has been commitment to land for infrastructure, however after 20 years I have no clear idea of what the long term plan is for Hira. This is the decade to build a plan and set a new standard for what a eco-subdivision of the future will look like. This is the decade where there will be retirees with the capital to take on this new style of modern eco-living.

I am not asking for the approval to subdivide I am only asking that something be included in the plan to allow for some direction in relation to what I have presented above. Failing to allow for something that resembles the concept above in the next decade will ensure that Nelson is a distant follower in sustainability, not a leader.

Nelson is a small district in a small country. However there is an opportunity to be a world trailblazer in eco-living. In the coming decade there are both people with available capital and a drive by these people to fund a cost effective retirement. It is not about whether it is possible, it is about whether the council have the foresight to move toward their vision and include this in the ten-year plan.

Please attach additional sheets if needed.

Date	Signature
23 / 4 / 15	

Office Use Only			
		Submission Number	
File Ref		Initials	

Bev Mcshea

---

**From:** Submissions  
**Sent:** Friday, 24 April 2015 8:45 a.m.  
**To:** Administration Support  
**Subject:** FW: Consultation Document Submission

**Follow Up Flag:** Follow up  
**Flag Status:** Completed

**Categories:** Bev, Long Term Plan 2015

-----  
**From:** Council Enquiries (Enquiry)  
**Sent:** Friday, April 24, 2015 8:45:21 AM  
**To:** Submissions  
**Subject:** Consultation Document Submission  
**Auto forwarded by a Rule**

**Name:**

Didi Bleinagel

**Organisation represented (if applicable):**

**Address:**

670 Atawhai Cresent, Atawhai, Nelson, 7010

**Daytime phone:**

0212583379

**Email:**

[d\\_arrived@yahoo.co.nz](mailto:d_arrived@yahoo.co.nz)

**Do you wish to speak in support of your submission at the public hearings?**

No

**If yes, would you like to attend an evening session?**

**My submission is: (please ensure you clearly state the issue or project (s) you are submitting about):**

I fully support the Council initiative of Nelson Nature. It's amazing and I am so happy about it.

**Would you like to upload a file in support of your submission?**

**How did you find out about the Consultation Document and Council's 10 Year Plan?**

Forest and Bird Society

**Would you like to be contacted by email with future Council feedback opportunities?**

Yes

Bev Mcshea

---

**From:** Submissions  
**Sent:** Friday, 24 April 2015 10:53 a.m.  
**To:** Administration Support  
**Subject:** FW: Consultation Document Submission

**Follow Up Flag:** Follow up  
**Flag Status:** Completed

**Categories:** Bev, Long Term Plan 2015

-----  
**From:** Council Enquiries (Enquiry)  
**Sent:** Friday, April 24, 2015 10:53:26 AM  
**To:** Submissions  
**Subject:** Consultation Document Submission  
**Auto forwarded by a Rule**

**Name:**

Jenny North

**Organisation represented (if applicable):**

Agriculture New Zealand - teaching courses in native revegetation and organics

**Address:**

12 Seafield Terrace, The Glen, Nelson

**Daytime phone:**

035450188

**Email:**

[livinglandscapes65@gmail.com](mailto:livinglandscapes65@gmail.com)

**Do you wish to speak in support of your submission at the public hearings?**

No

**If yes, would you like to attend an evening session?**

**My submission is: (please ensure you clearly state the issue or project (s) you are submitting about):**

I would like to applaud Nelson City Council for putting the Nelson Nature programme together, and wholeheartedly support this proposal. Nelsons biodiversity is a hugely valued asset, which has relied on many volunteers to help protect it. This proposal will inject fresh energy and enthusiasm in those of us wanting to enhance our native environment, knowing there is Council support to help make biodiversity projects a long term success.

**Would you like to upload a file in support of your submission?**

**How did you find out about the Consultation Document and Council's 10 Year Plan?**

the paper

**Would you like to be contacted by email with future Council feedback opportunities?**

Yes

Bev Mcshea

---

**From:** Submissions  
**Sent:** Friday, 24 April 2015 11:15 a.m.  
**To:** Administration Support  
**Subject:** FW: Consultation Document Submission

**Follow Up Flag:** Follow up  
**Flag Status:** Completed

**Categories:** Bev, Long Term Plan 2015

-----  
**From:** Council Enquiries (Enquiry)  
**Sent:** Friday, April 24, 2015 11:14:39 AM  
**To:** Submissions  
**Subject:** Consultation Document Submission  
**Auto forwarded by a Rule**

**Name:**  
Cedric Woods

**Organisation represented (if applicable):**  
**Address:**  
Dunedin (but a recent visitor to Nelson)

**Daytime phone:**  
03-4780-953

**Email:**  
[drcedric@gmail.com](mailto:drcedric@gmail.com)

**Do you wish to speak in support of your submission at the public hearings?**  
No

**If yes, would you like to attend an evening session?**  
**My submission is: (please ensure you clearly state the issue or project (s) you are submitting about):**

SUPPORTING BIODIVERSITY.  
Having seen the support NCC is giving to ongoing Biodiversity projects (and having a scientific interest in Ecology and Global Conservation), I wish to congratulate NCC and to suggest that this initiative can be promoted as a most important example of what is needed worldwide.  
Congratulations to Brook Waimarama too for their leadership.

**Would you like to upload a file in support of your submission?**  
**How did you find out about the Consultation Document and Council's 10 Year Plan?**  
Google search

**Would you like to be contacted by email with future Council feedback opportunities?**  
No

# **CATEGORY 6: ENVIRONMENT**

## **BATCH 5**



**NELSON CITY COUNCIL**  
**PUBLIC CONSULTATION**  
**SUBMISSION FORM**

NELSON CITY COUNCIL  
Customer Service

**WE WANT YOUR OPINION.  
PLEASE TELL US WHAT YOU THINK.**  
*Please type or print clearly. Remember to read the submission writing guidelines before starting.*

Name Sally Warren Organisation represented (if applicable) \_\_\_\_\_  
Address 85 Cleveland Tce Nelson  
Daytime phone 8466637 Email sallywarren@hotmail.co.nz

Do you wish to be heard in support of your submission?  Yes  No # of pages \_\_\_\_\_  
*If you do not tick either, we will assume you do not wish to be heard.*

If yes, would you like to attend an evening session?  Yes  No

**Public information:** All submissions (including the names and contact details of submitters) are public information and will be available to the public and media in various reports and formats including on the Nelson City Council website. Personal information will also be used for administration relating to the subject matter of submissions. Submitters have the right to access and correct any personal information included in any reports, information or submissions.

My submission is: in support of the Council's proposal to fund Nelson Nature. Their support of the Brook Sanctuary has been vital as this will be a huge addition to the pleasures of Nelson. There could be support for the trapping groups and continuing support of planting in various areas is a huge plus.

Please attach additional sheets if needed.

Date 24/4/2015 Signature Sally A. Warren

Office Use Only			
		Submission Number	
File Ref		Initials	

**From:** [Submissions](#)  
**To:** [Administration Support](#)  
**Subject:** FW: Submission attached  
**Date:** Friday, 24 April 2015 3:44:37 p.m.  
**Attachments:** [3518\\_001.pdf](#)

---

-----  
**From:** Margaret Cotton[SMTP:MARGARET@NRE.CO.NZ]  
**Sent:** Friday, April 24, 2015 3:44:29 PM  
**To:** Submissions  
**Subject:** Submission attached  
**Auto forwarded by a Rule**

**NELSON CITY COUNCIL**  
**PUBLIC CONSULTATION**  
**SUBMISSION FORM**

**WE WANT YOUR OPINION.  
PLEASE TELL US WHAT YOU THINK.**  
*Please type or print clearly. Remember to read the submission writing guidelines before starting.*

Name Margaret Cotton Organisation represented (if applicable) \_\_\_\_\_  
Address 122 Emano St Nelson  
Daytime phone 3430576 Email mcotton@orion.net.nz

Do you wish to be heard in support of your submission?  Yes  No # of pages 1  
*If you do not tick either, we will assume you do not wish to be heard.*  
If yes, would you like to attend an evening session?  Yes  No

**Public information:** All submissions (including the names and contact details of submitters) are public information and will be available to the public and media in various reports and formats including on the Nelson City Council website. Personal information will also be used for administration relating to the subject matter of submissions. Submitters have the right to access and correct any personal information included in any reports, information or submissions.

My submission is: I am opposed to the ncc funding five hundred thousand rate payers dollars, a year on Waimarama Sanctuary under the umbrella of biodiversity, whilst people in low income areas will be freezing cold this winter as they are not allowed logburners and struggle to pay for electricity to heat their homes adequately, people in Victory area could be flooded out due to inadequate storm water system, the Womans Refuge is in dire straits for funding - yet the ncc supports its clique group with huge unwarranted funding coming from rate payers many who struggle to

*Please attach additional sheets if needed.*

even pay their rates. This is wrong!

Date

24/4/15

Signature

M Cotton

Office Use Only			
		Submission Number	
File Ref		Initials	



**Bev Mcshea**

---

**From:** Submissions  
**Sent:** Friday, 24 April 2015 5:12 p.m.  
**To:** Administration Support  
**Subject:** FW: Consultation Document Submission  
**Attachments:** 20150424-EECA-submission-to-Nelson-City-Council-proposed-2015-25-Long-Term-Plan.pdf

**Follow Up Flag:** Follow up  
**Flag Status:** Completed

**Categories:** Long Term Plan 2015, Bev

-----  
**From:** Council Enquiries (Enquiry)  
**Sent:** Friday, April 24, 2015 5:11:51 PM  
**To:** Submissions  
**Subject:** Consultation Document Submission  
**Auto forwarded by a Rule**

**Name:**  
Alison Johnson

**Organisation represented (if applicable):**  
EECA

**Address:**  
PO BOX 388

**Daytime phone:**  
044702206

**Email:**  
[alison.johnson@eeca.govt.nz](mailto:alison.johnson@eeca.govt.nz)

**Do you wish to speak in support of your submission at the public hearings?**  
Yes

**If yes, would you like to attend an evening session?**  
No

**My submission is: (please ensure you clearly state the issue or project (s) you are submitting about):**  
Energy efficiency

**Would you like to upload a file in support of your submission?**  
20150424-EECA-submission-to-Nelson-City-Council-proposed-2015-25-Long-Term-Plan.pdf -  
[Download File](#)

**How did you find out about the Consultation Document and Council's 10 Year Plan?**  
Via the web

**Would you like to be contacted by email with future Council feedback opportunities?**  
Yes



## Submission on the proposed Nelson City Council Long Term Plan 2015-25

**To:** Nelson City Council  
**Submitter:** The Energy Efficiency and Conservation Authority (EECA)  
**Postal Address:** 44 The Terrace, (PO Box 388), Wellington  
**Attention:** Alison Johnson  
**Phone number:** 04-470-2206  
**Email:** Alison.Johnson@eeca.govt.nz

### Submission

1. This submission relates to:  
The Nelson City Council 2015-25 Long Term Plan Consultation Document
2. The Energy Efficiency and Conservation Authority (EECA) wishes to be heard in support of its submission.
3. EECA wishes to commend Nelson City Council on its participation in the Voluntary Targeted Rates scheme and for providing a community Eco Design Advisor.
4. EECA proposes that the Nelson City Council support greater energy efficiency and renewable energy initiatives in Council operations and in the wider community. Specifically, EECA proposes that Council focus on:
  - reducing Council and community energy use;
  - increasing the share of renewable energy used; and
  - improving energy efficiency performance.
5. EECA urges Council to support the *Warm Up New Zealand: Healthy Homes* programme for retrofitting low income, high-health needs homes with insulation.
6. EECA's reasons for making this submission are as follows:
7. **EECA's role:** The Energy Efficiency and Conservation Authority (EECA) promotes energy efficiency, energy conservation and the use of energy from renewable sources.
8. The uptake of insulation provides significant benefits to your community in terms of warmer, drier homes, job creation, improved health outcomes, enhanced air quality, and the ability for the elderly to "age in place".
9. When it comes to low income and high-health-needs households, the Government is focused on meeting the needs of this group through its \$100 million Warm Up New Zealand: Healthy Homes programme. Administered by EECA, this scheme is targeted at low income homeowners or tenants who have a EECA submission to the Nelson City Council Long Term Plan 2015-2025

Community Service Cards, whereby the Government works with community trusts and commercial service providers to provide insulation 100% free. For this sector the Government provides 60% of the cost of insulating a house built prior to the year 2000, with energy trusts and community groups working in partnership with service providers to provide the remaining 40%.

10. The Healthy Homes programme builds on the work of the previous programme Warm Up New Zealand: Heat Smart. As a result of both programmes to date, 277,155 low income and high-health-needs households across New Zealand now have insulation. Since the programmes began, in the Nelson City region there are 3,714 households with insulation that have benefited from this 100% funding for insulation.
11. **In conclusion:** The Nelson City Council is a role model for the wider community and could encourage further Corporate energy efficiency initiatives. EECA asks Council to assist the community to install energy efficiency measures by providing support for the *Warm Up New Zealand: Healthy Homes* programme. This would provide your community with another way of meeting their insulation requirements and can offer a multiplicity of benefits, including warmer, healthier homes, enhanced resource management as well as local jobs.
12. In addition, improving the management of Council's energy resources will contribute towards supporting the growth and development of the community.
13. Details of the benefits of installing insulation are provided in Attachment A and further examples of energy management opportunities are provided in Attachment B for your consideration.

**Signed:**



Robert Linterman  
General Manager  
Residential Programme  
EECA



Bill Hewitt  
Local Government Advisor  
Residential Programme  
EECA

## Attachment A: Benefits of insulation in residential homes

### How installing insulation can benefit your community

Insulating homes can provide multiple benefits to your community. These benefits include:

- **Job creation/economic growth:** This is because insulation is a labour-intensive process, and companies tend to employ and up skill local labour to meet demand.
- **Warmer, drier, healthier homes:**
  - Cold, damp homes mean more problems like asthma in children and adults, and so resolving the causes of this problem through insulation and improved heating creates positive health outcomes.
  - Warmer, drier homes can result in fewer hospital admissions<sup>1</sup>.
  - Warmer drier homes can also improve productivity through reduced days off work, and reduced days off school.
- **Insulation helps to reduce energy bills**  
A well-insulated house requires less heating. This can reduce energy costs for householders.
- **Increased potential for older people to “age in place”**  
A well-insulated and heated house can allow for older people to live in their homes for longer, and with better health. This reduces hospital and rest homes costs, and also builds more resilient communities.
- **Improved health for homeowners:**  
An independent survey (Motu Report 2011) has demonstrated that the insulation programme shows a cost-benefit ratio of 5:1 – with the majority of the benefits coming from improvements in health and wellbeing.

---

<sup>1</sup> These health-related benefits have been verified by the Wellington School of Medicine. EECA submission to the Nelson City Council Long Term Plan 2015-2025

## Attachment B: Further energy management opportunities

EECA encourages councils to consider the full range of energy management opportunities available in the area, as the availability of renewable energy, energy efficiency and energy conservation projects is specific to each region.

Energy conservation seeks to avoid wasting energy. Energy efficiency is about using less energy to achieve the same result, or greater results from the same amount of energy. Both result in energy savings.

### EECA measures available to support local government action:

- EECA's transport programme provides information and guidance through:
  - information for motorists on how to drive more fuel efficiently;
  - vehicle fuel economy labels - EECA administers the vehicle fuel economy label, which helps people make an informed decision about the vehicles they are considering buying;
  - fuel efficient tyres - helping consumers identify tyres that meet standards for both fuel efficiency and braking in the wet;
  - heavy vehicles - EECA works to improve the fuel efficiency of the heavy vehicle fleet;
  - renewable transport energy - EECA has developed a range of information about biofuels for industry and consumers, including sustainability information. Electric vehicles present an opportunity to make use of New Zealand's highly renewable electricity for transport. EECA provides advice on electric vehicles to consumers through the ENERGYWISE website.
- EECA's business programme BUSINESS™, provides information and guidance to councils to reduce energy costs through:
  - managing premises.
  - buying and operating equipment.
  - encouraging staff to be energy efficient.
  - managing vehicle use.
  - renewable energy use, such as solar energy for swimming pool heating.
- EECA's consumer programme, ENERGYWISE™, provides information for motivating change in the community, so residents can make the most of energy efficiency, energy conservation and renewable energy opportunities.
- Funding has been designed specifically for government organisations, for example, Crown loans are available for implementing energy projects such as energy efficient space heating and lighting.
- Case studies and regional energy strategies assist with the identification and use of renewable energy resources including geothermal heat. This includes information on the factors that determine how much of these renewable resources captured, such as:
  - technical potential - how much of the resource can be viably utilised given current technologies
  - economic potential - how much of the technical potential is viable at sufficiently low cost.

*For more information, please contact EECA's Local Government Adviser, Residential Programme, Alison Johnson on [Alison.Johnson@eeeca.govt.nz](mailto:Alison.Johnson@eeeca.govt.nz) or 04-470-2206 or Relationship Manager Advisor Residential Programme, Bill Hewitt on [Bill.Hewitt@eeeca.govt.nz](mailto:Bill.Hewitt@eeeca.govt.nz) or phone 027-420-5419*

**From:** [Submissions](#)  
**To:** [Administration Support](#)  
**Subject:** FW: Consultation Document Submission  
**Date:** Friday, 24 April 2015 7:38:24 p.m.  
**Attachments:** [Nelson-City-Council-submission.docx](#)

---

-----  
**From:** Council Enquiries (Enquiry)  
**Sent:** Friday, April 24, 2015 7:38:16 PM  
**To:** Submissions  
**Subject:** Consultation Document Submission  
**Auto forwarded by a Rule**

**Name:**  
Ian Price

**Organisation represented (if applicable):**

**Address:**  
2/7 Ajax Ave Nelson 7010

**Daytime phone:**  
0272879203

**Email:**  
ian.price@xtra.co.nz

**Do you wish to speak in support of your submission at the public hearings?**  
No

**If yes, would you like to attend an evening session?**

**My submission is: (please ensure you clearly state the issue or project (s) you are submitting about):**

Nelson City Council

Submission on the Consultation Document for Nelson Long Term Plan 2015/25

Submission to the Long Term Plan 2015/25

- I wish to register my support for the decision by Nelson City Council (NCC) to develop a new plan within the draft development plan to better protect and enhance the Nelson region's natural environment called 'Nelson Nature'.
- I fully endorse the decision by Council through 'Nelson Nature' to align itself strongly with the Nelson Biodiversity Forum's objectives outlined in the 'Nelson Biodiversity Strategy'
- I fully endorse and support the ten 'separate projects' as defined in 'Nelson Nature'  
Paremata Flat Reserve Cable Bay  
Paremata Flat Reserve's ecological and community values features prominently within
- Nelson Biodiversity Forum's strategy
- Ten 'separate projects' as defined in Nelson Nature
- NCC internal biodiversity prioritisation project of all land under NCC ownership (Paremata Flat Reserve was given the highest ranking).

As a community not for profit organisation, Nelson Tasman Forest and Bird in undertaking

- the ecological restoration of Council owned Paremata Flat Reserve has to date;
- Invested \$131,700.00 (at the completion of the project will be close on \$185/190,000
  - Contributed over 6400 volunteer hours (if we price this out at a modest \$20 per hour would come to another \$128,000)
  - An investment of close on \$300/350,000 at the completion of the project by a not for profit organisation for the benefit of the rate payers of Nelson and giving tangible meaning to the principles of 'Nelson Nature'
  - Investment from Nelson City Ratepayers through Council has been \$2500 plus two public BBQ'S and some rabbit control product.

As the project coordinator it is my personal view support towards Forest and Bird and their efforts with the ecological restoration of NCC council owned Paremata Flat Reserve by NCC has been wanting. It is my personal view; political expediency has been to the forefront when NCC has developed policy management for Paremata Flat Reserve.

Paremata Flat Reserve has been defined by Council as an Esplanade, Scenic and Recreational Reserve, Councillors and NCC staff have indicated to me that the ratepayers of Nelson through NCC do not purchase land for the purpose of a private individual to lease a reserve for grazing.

In regards Paremata Flat Reserve my submission is;

- Under the Long Term Plan 2015/25 integrity is given to Paremata Flat Reserve through implementing the principles of the Esplanade, Scenic and Recreation Reserve Management Plans by removing all grazing stock and electric fences from the Reserve.

2.

- Developing a Landscape plan that gives meaning to the principles of a recreation reserve for the benefit of all Nelson Residents.
- Look to enhance the native ecology along the Maori Pa road reserve between Maori owned Uri O Te Wai (Paremata supporters manage both weed and pest control on Uri O Te Wai) and Paremata Flat Reserve to give greater value to the principles of an ecological corridor between these two very unique and now nationally rare low land native ecosystems.

Summary

In order to advance the principles espoused by NCC through 'Nelson Nature' and to foster wider public 'buy in' to the ten 'separate projects' as defined in 'Nelson Nature', NCC must show leadership by implementing the principles, as defined in 'Nelson Nature' on NCC owned and managed land .

Limited to nonexistent weed management on Council owned land (e.g. Grampians and Centre of NZ) leaves Council open to contempt when presenting to the general public a proposal as defined under 'Nelson Nature' through the Long Term Plan 2015/25.

Ian Price

2/7 Ajax Ave Nelson

ian.price@xtra.co.nz

**Would you like to upload a file in support of your submission?**

Nelson-City-Council-submission.docx - [Download File](#)

**How did you find out about the Consultation Document and Council's 10 Year Plan?**

word of mouth

**Would you like to be contacted by email with future Council feedback opportunities?**

No

Nelson City Council

Submission on the Consultation Document for Nelson Long Term Plan 2015/25

### **Submission to the Long Term Plan 2015/25**

- I wish to register my support for the decision by Nelson City Council (NCC) to develop a new plan within the draft development plan to better protect and enhance the Nelson region's natural environment called 'Nelson Nature'.
- I fully endorse the decision by Council through 'Nelson Nature' to align itself strongly with the Nelson Biodiversity Forum's objectives outlined in the 'Nelson Biodiversity Strategy'
- I fully endorse and support the ten 'separate projects' as defined in 'Nelson Nature'

### **Paremata Flat Reserve Cable Bay**

Paremata Flat Reserve's ecological and community values features prominently within

- Nelson Biodiversity Forum's strategy
- Ten 'separate projects' as defined in Nelson Nature
- NCC internal biodiversity prioritisation project of all land under NCC ownership (Paremata Flat Reserve was given the highest ranking).

As a community not for profit organisation, Nelson Tasman Forest and Bird in undertaking the ecological restoration of Council owned Paremata Flat Reserve has to date;

- Invested \$131,700.00 (at the completion of the project will be close on \$185/190,000
- Contributed over 6400 volunteer hours (if we price this out at a modest \$20 per hour would come to another \$128,000)
- An investment of close on \$300/350,000 at the completion of the project by a not for profit organisation for the benefit of the rate payers of Nelson and giving tangible meaning to the principles of 'Nelson Nature'
- Investment from Nelson City Ratepayers through Council has been \$2500 plus two public BBQ'S and some rabbit control product.

**As the project coordinator it is my personal view support towards Forest and Bird and their efforts with the ecological restoration of NCC council owned Paremata Flat Reserve by NCC has been wanting. It is my personal view; political expediency has been to the forefront when NCC has developed policy management for Paremata Flat Reserve.**

Paremata Flat Reserve has been defined by Council as an Esplanade, Scenic and Recreational Reserve, Councillors and NCC staff have indicated to me that the ratepayers of Nelson through NCC do not purchase land for the purpose of a private individual to lease a reserve for grazing.

In regards Paremata Flat Reserve my submission is;

- Under the Long Term Plan 2015/25 integrity is given to Paremata Flat Reserve through implementing the principles of the Esplanade, Scenic and Recreation Reserve Management Plans by removing all grazing stock and electric fences from the Reserve.



2.

- Developing a Landscape plan that gives meaning to the principles of a recreation reserve for the benefit of all Nelson Residents.
- Look to enhance the native ecology along the Maori Pa road reserve between Maori owned Uri O Te Wai (Paremata supporters manage both weed and pest control on Uri O Te Wai) and Paremata Flat Reserve to give greater value to the principles of an ecological corridor between these two very unique and now nationally rare low land native ecosystems.

### **Summary**

In order to advance the principles espoused by NCC through 'Nelson Nature' and to foster wider public 'buy in' to the ten 'separate projects' as defined in 'Nelson Nature', NCC must show leadership by implementing the principles, as defined in 'Nelson Nature' on NCC owned and managed land .

Limited to nonexistent weed management on Council owned land (e.g. Grampians and Centre of NZ) leaves Council open to contempt when presenting to the general public a proposal as defined under 'Nelson Nature' through the Long Term Plan 2015/25.

Ian Price

2/7 Ajax Ave Nelson

[ian.price@xtra.co.nz](mailto:ian.price@xtra.co.nz)

**From:** [Submissions](#)  
**To:** [Administration Support](#)  
**Subject:** FW: Consultation Document Submission  
**Date:** Sunday, 26 April 2015 1:19:43 p.m.

---

-----  
**From:** Council Enquiries (Enquiry)  
**Sent:** Sunday, April 26, 2015 1:19:36 PM  
**To:** Submissions  
**Subject:** Consultation Document Submission  
**Auto forwarded by a Rule**

**Name:**

Janette Vervoorn

**Organisation represented (if applicable):**

**Address:**

25 Richmond Avenue, Nelson

**Daytime phone:**

027 5489256

**Email:**

janette.vervoorn@xtra.co.nz

**Do you wish to speak in support of your submission at the public hearings?**

No

**If yes, would you like to attend an evening session?**

**My submission is: (please ensure you clearly state the issue or project (s) you are submitting about):**

I strongly support the Nelson Nature programme and the projects listed.

**Would you like to upload a file in support of your submission?**

**How did you find out about the Consultation Document and Council's 10 Year Plan?**

Forest and Bird email

**Would you like to be contacted by email with future Council feedback opportunities?**

Yes

**Bev Mcshea**

---

**From:** Submissions  
**Sent:** Sunday, 26 April 2015 3:42 p.m.  
**To:** Administration Support  
**Subject:** FW: Consultation Document Submission  
**Attachments:** Sub-Nelson-LTP-Nelson-Bio-Forum-final.docx

**Follow Up Flag:** Follow up  
**Flag Status:** Completed

**Categories:** Long Term Plan 2015, Bev

-----  
**From:** Council Enquiries (Enquiry)  
**Sent:** Sunday, April 26, 2015 3:42:09 PM  
**To:** Submissions  
**Subject:** Consultation Document Submission  
**Auto forwarded by a Rule**

**Name:**  
Peter Lawless

**Organisation represented (if applicable):**  
Nelson Biodiversity Forum

**Address:**  
PO Box 303 Nelson 7040

**Daytime phone:**  
021894363

**Email:**  
thelawlessedge@gmail.com

**Do you wish to speak in support of your submission at the public hearings?**  
Yes

**If yes, would you like to attend an evening session?**  
No

**My submission is: (please ensure you clearly state the issue or project (s) you are submitting about):**

Submission of the Nelson Biodiversity Forum on the Nelson Long Term Plan

1 INTRODUCTION

The Nelson Biodiversity Forum is a group of 26 member organisations that work together to identify and align actions to improve Biodiversity in the Nelson area.

The Nelson Biodiversity Strategy is a non-statutory document initiated and developed by the Forum. The purpose of this Strategy is to create a biologically rich and sustainable future for Nelson through aligned action on biodiversity. The Strategy was initially adopted by Council in May 2007. It was reviewed in 2009 and 2013, and the most recent revision was received positively by Council in 2014.

The Strategy outlines 34 priority actions for the Forum to address, with the key focus areas for 2013 to 2016 of:

A. Getting effective action to sustain the environmental health of Tasman Bay.

- B. Pursuing ecological restoration of the Maitai River and its riparian margins.
- C. Protecting and restoring existing alluvial, riparian and coastal ecosystems focusing special attention on the Whakapuaka Valley and Delaware Bay.
- D. Promoting public awareness of biodiversity in Nelson City and integrating biodiversity priorities into the ongoing development of the city.

The Nelson Biodiversity Forum therefore supports the proposals in the Council's consultation document to increase funding for biodiversity in the region through its Nelson Nature programme. We recognise it affirms the Council's commitment to maintain and protect indigenous biodiversity as required under the Resource Management Act (i.e. sections 30(1)(ga) and 31(1)(b)(iii)).

We request to be heard in support of this submission.

## 2 TERRESTRIAL BIODIVERSITY IN NELSON

Over time, indigenous biodiversity in Nelson has been severely depleted and compromised. Further biodiversity loss is widely unacceptable, and the loss diminishes the sense of place and heritage experienced by citizens. As can be seen in the graphic below that was produced to support the original development of the Nelson Biodiversity Strategy almost all native vegetation has been lost from the coastal flats and lowland hills where most of the people live.

However, elements of great value remain even in these depleted forests:

- Nelson still retains some significant tracts of coastal and lowland forest (unlike many cities)
- special vegetation types of matai–black beech forest and tanekaha–southern rata forest
- 17 species of nationally threatened plants
- national stronghold for several species including shovel mint and mineral belt endemics
- species limits and northern elements including southern limits for North Island species (tanekaha, pukatea, kohekohe, tawa, black maire) and western limits for Sounds species (ramarama, leafless bushlawyer)
- the special environments of the mineral belt and limestone belt ecosystems .

The overall conclusion in 2006 was that, if Nelson is to support national priorities for protecting and restoring its native ecosystems, it should focus its efforts on the lower elevation rolling hills and flats.

The trends predicted in 2006 remain relevant in 2015:

- decrease in the rate of natural area loss
- increase in number of restoration initiatives
- increase in legal protection for biodiversity
- regional extinctions of native species
- increased number of nationally and regionally endangered species and communities
- attrition and loss of natural and semi-natural areas
- increase in natural area fragmentation where development is occurring and reduction in fragmentation where regeneration is left to continue
- decrease in natural area buffering from the working landscape around the city margins, but increased buffering in rural landscapes where regeneration continues
- decrease in natural area structural diversity and species diversity, e.g. lowland old growth forest gone
- increase in extent and number of weed & animal pest species
- decrease in natural area quality and integrity due to weeds and animal pests.

The priorities and funding for Nelson Nature proposals which are set out in the discussion document are a sensible response to these trends and observations. The Forum acknowledges the work of the Council staff in working through these matters with us in preparing the proposals. We affirm the approach that builds on the work of the community, including the creation of a halo of restoration and protection around the Brook Waimarama Sanctuary.

## 3 FRESHWATER BIODIVERSITY IN NELSON

In 2006 we stated:

Many freshwater systems in Nelson are degraded. The most degraded rivers and streams are those in the urban area, especially small streams in the Stoke, Bishopdale, Atawhai and the Glen. Conversely the rivers and streams with the highest water and habitat quality are in the rural areas, with the

upstream sites being less impacted than downstream.

Since that time the Council has made significant progress in its work on freshwaters, particularly on the Mahitahi/Maitai River. The general level of degradation of the urban waterways has not however been reversed although some initial work has been done with addressing fish passage barriers. The work completed by the Council in further fish surveys confirms our general conclusions of that time: In summary, Nelson freshwater ecosystems are under increasing pressure as the human population grows. We have drained and developed almost all our freshwater wetlands but retain much of the biodiversity in our streams and rivers. With careful management many of the smaller streams and wetlands could be restored and the life supporting capacity of our larger rivers sustained.

We therefore support the proposals to focus on the health of our streams and rivers and reducing impacts on their indigenous biodiversity values and fish populations.

#### 4 MARINE BIODIVERSITY IN NELSON

In 2014 Chris Cornelisen (Cawthron Institute) summarized the situation of Tasman Bay thus:

- Natural shellfish populations and the scallop fishery have collapsed in both Tasman and Golden Bay

- Insufficient tools exist to adequately assess contamination risk[s] of expanding shellfish aquaculture areas – closures are frequent and in some cases semi-permanent. The industry is reluctant to expand until this can be remedied.

- Contamination of bathing beaches, customary shellfish harvest areas, etc.

- Reduction in water quality (e.g. persistent near-bottom turbidity layer).

- Degraded estuaries and associated habitats.

- Large uncertainty remains amongst stakeholders as to the factor(s) driving environmental change in the Bays and the steps required to reverse the trend.

Representation have been made to the Council from 2009 seeking support to engage with these issues. To date, despite some conscious efforts, little progress has been made. We note that in the current discussion document and Council budgets no provision has been made to further engage with other Councils and stakeholders on these issues. Although we are that matters relating to the health of Tasman Bay are integrally connected with other Councils, it is still a matter that we would wish addressed within the life of the Long Term Plan. To leave it out of the Plan does not accord with the Forum's priorities as supported by the Council when it endorsed the 2013 revision of the Nelson Biodiversity Strategy. This set as the number one priority for the coastal and marine environment: Leading stakeholders and institutions to develop integrated management of greater Tasman Bay in a way that sustains or enhances its biological diversity and protects sensitive habitats, biological communities and species.

We therefore request that the Council takes this into account and makes specific budgetary provision for engaging with the marine biodiversity issues of its region.

#### 5 CONCLUSION

The Nelson Biodiversity Forum applauds the initiatives of the Nelson City Council to engage on matters of natural biodiversity in its region and supports the priorities and funding given to terrestrial and freshwater ecosystems. We note, however, that these are not matched in dealing with the marine environment and ask that this be corrected.

Peter Lawless

For Nelson Biodiversity Forum

**Would you like to upload a file in support of your submission?**

Sub-Nelson-LTP-Nelson-Bio-Forum-final.docx - [Download File](#)

**How did you find out about the Consultation Document and Council's 10 Year Plan?**

From Council staff

**Would you like to be contacted by email with future Council feedback opportunities?**

Yes

# Submission of the Nelson Biodiversity Forum on the Nelson Long Term Plan

## 1 INTRODUCTION

---

The Nelson Biodiversity Forum is a group of 26 member organisations that work together to identify and align actions to improve Biodiversity in the Nelson area.

The Nelson Biodiversity Strategy is a non-statutory document initiated and developed by the Forum. The purpose of this Strategy is to create a biologically rich and sustainable future for Nelson through aligned action on biodiversity. The Strategy was initially adopted by Council in May 2007. It was reviewed in 2009 and 2013, and the most recent revision was received positively by Council in 2014.

The Strategy outlines 34 priority actions for the Forum to address, with the key focus areas for 2013 to 2016 of:

- A. Getting effective action to sustain the environmental health of Tasman Bay.
- B. Pursuing ecological restoration of the Maitai River and its riparian margins.
- C. Protecting and restoring existing alluvial, riparian and coastal ecosystems focusing special attention on the Whakapuaka Valley and Delaware Bay.
- D. Promoting public awareness of biodiversity in Nelson City and integrating biodiversity priorities into the ongoing development of the city.

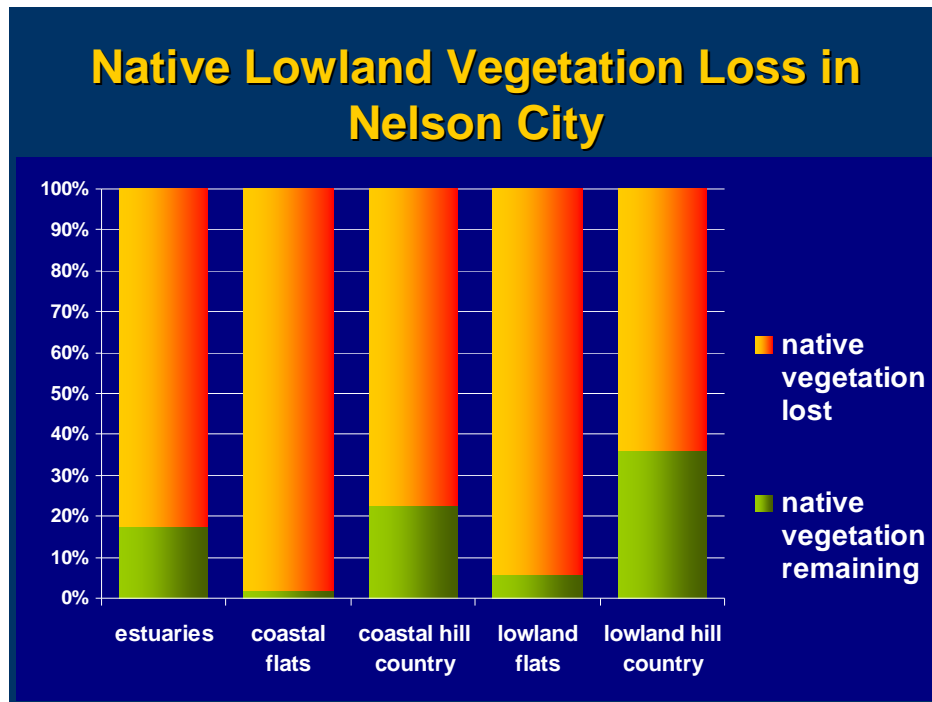
The Nelson Biodiversity Forum therefore supports the proposals in the Council's consultation document to increase funding for biodiversity in the region through its Nelson Nature programme. We recognise it affirms the Council's commitment to maintain and protect indigenous biodiversity as required under the Resource Management Act (i.e. sections 30(1)(ga) and 31(1)(b)(iii)).

We request to be heard in support of this submission.

## 2 TERRESTRIAL BIODIVERSITY IN NELSON

---

Over time, indigenous biodiversity in Nelson has been severely depleted and compromised. Further biodiversity loss is widely unacceptable, and the loss diminishes the sense of place and heritage experienced by citizens. As can be seen in the graphic below that was produced to support the original development of the Nelson Biodiversity Strategy almost all native vegetation has been lost from the coastal flats and lowland hills where most of the people live.



However, elements of great value remain even in these depleted forests:

- *Nelson still retains some significant tracts of coastal and lowland forest (unlike many cities)*
- *special vegetation types of matai-black beech forest and tanekaha-southern rata forest*
- *17 species of nationally threatened plants*
- *national stronghold for several species including shovel mint and mineral belt endemics*
- *species limits and northern elements including southern limits for North Island species (tanekaha, pukatea, kohekohe, tawa, black maire) and western limits for Sounds species (ramarama, leafless bushlawyer)*
- *the special environments of the mineral belt and limestone belt ecosystems<sup>1</sup>.*

The overall conclusion in 2006 was that, if Nelson is to support national priorities for protecting and restoring its native ecosystems, it should focus its efforts on the lower elevation rolling hills and flats.

The trends predicted in 2006 remain relevant in 2015:

- *decrease in the rate of natural area loss*
- *increase in number of restoration initiatives*
- *increase in legal protection for biodiversity*
- *regional extinctions of native species<sup>2</sup>*
- *increased number of nationally and regionally endangered species and communities*

<sup>1</sup> Shannel Courtney quoted in the technical report that supported the formation of the Nelson Biodiversity Strategy in 2006

<sup>2</sup> Such as results of bat surveys which have recorded no bats within the city boundary.



- *attrition and loss of natural and semi-natural areas*
- *increase in natural area fragmentation where development is occurring and reduction in fragmentation where regeneration is left to continue*
- *decrease in natural area buffering from the working landscape around the city margins, but increased buffering in rural landscapes where regeneration continues*
- *decrease in natural area structural diversity and species diversity, e.g. lowland old growth forest gone*
- *increase in extent and number of weed & animal pest species*
- *decrease in natural area quality and integrity due to weeds and animal pests.*

The priorities and funding for Nelson Nature proposals which are set out in the discussion document are a sensible response to these trends and observations. The Forum acknowledges the work of the Council staff in working through these matters with us in preparing the proposals. We affirm the approach that builds on the work of the community, including the creation of a halo of restoration and protection around the Brook Waimarama Sanctuary.

### 3 FRESHWATER BIODIVERSITY IN NELSON

---

In 2006 we stated:

*Many freshwater systems in Nelson are degraded. The most degraded rivers and streams are those in the urban area, especially small streams in the Stoke, Bishopdale, Atawhai and the Glen. Conversely the rivers and streams with the highest water and habitat quality are in the rural areas, with the upstream sites being less impacted than downstream.*

Since that time the Council has made significant progress in its work on freshwaters, particularly on the Mahitahi/Maitai River. The general level of degradation of the urban waterways has not however been reversed although some initial work has been done with addressing fish passage barriers. The work completed by the Council in further fish surveys confirms our general conclusions of that time:

*In summary, Nelson freshwater ecosystems are under increasing pressure as the human population grows. We have drained and developed almost all our freshwater wetlands but retain much of the biodiversity in our streams and rivers. With careful management many of the smaller streams and wetlands could be restored and the life supporting capacity of our larger rivers sustained.*

We therefore support the proposals to focus on the health of our streams and rivers and reducing impacts on their indigenous biodiversity values and fish populations.

### 4 MARINE BIODIVERSITY IN NELSON

---

In 2014 Chris Cornelisen (Cawthron Institute) summarized the situation of Tasman Bay thus:

- *Natural shellfish populations and the scallop fishery have collapsed in both Tasman and Golden Bay*

- *Insufficient tools exist to adequately assess contamination risk[s] of expanding shellfish aquaculture areas - closures are frequent and in some cases semi-permanent. The industry is reluctant to expand until this can be remedied.*
- *Contamination of bathing beaches, customary shellfish harvest areas, etc.*
- *Reduction in water quality (e.g. persistent near-bottom turbidity layer).*
- *Degraded estuaries and associated habitats.*
- *Large uncertainty remains amongst stakeholders as to the factor(s) driving environmental change in the Bays and the steps required to reverse the trend.*

Representation have been made to the Council from 2009 seeking support to engage with these issues. To date, despite some conscious efforts, little progress has been made. We note that in the current discussion document and Council budgets no provision has been made to further engage with other Councils and stakeholders on these issues. Although we are that matters relating to the health of Tasman Bay are integrally connected with other Councils, it is still a matter that we would wish addressed within the life of the Long Term Plan. To leave it out of the Plan does not accord with the Forum's priorities as supported by the Council when it endorsed the 2013 revision of the Nelson Biodiversity Strategy. This set as the number one priority for the coastal and marine environment:

*Leading stakeholders and institutions to develop integrated management of greater Tasman Bay in a way that sustains or enhances its biological diversity and protects sensitive habitats, biological communities and species.*

We therefore request that the Council takes this into account and makes specific budgetary provision for engaging with the marine biodiversity issues of its region.

## 5 CONCLUSION

---

The Nelson Biodiversity Forum applauds the initiatives of the Nelson City Council to engage on matters of natural biodiversity in its region and supports the priorities and funding given to terrestrial and freshwater ecosystems. We note, however, that these are not matched in dealing with the marine environment and ask that this be corrected.

Peter Lawless  
For Nelson Biodiversity Forum

**From:** [Submissions](#)  
**To:** [Administration Support](#)  
**Subject:** FW: Consultation Document Submission  
**Date:** Monday, 27 April 2015 11:58:16 a.m.

---

-----  
**From:** Council Enquiries (Enquiry)  
**Sent:** Monday, April 27, 2015 11:58:12 AM  
**To:** Submissions  
**Subject:** Consultation Document Submission  
**Auto forwarded by a Rule**

**Name:**

Derek G Walker

**Organisation represented (if applicable):**

-

**Address:**

160 Lud Valley, RD1 Nelson 7071

**Daytime phone:**

0279517251

**Email:**

alison.derek.nz@gmail.com

**Do you wish to speak in support of your submission at the public hearings?**

No

**If yes, would you like to attend an evening session?**

No

**My submission is: (please ensure you clearly state the issue or project (s) you are submitting about):**

In support of the The Nelson Biodiversity Strategy 2014, and Nelson Nature - the Biodiversity Management Programme initiated by Council and supported by the Nelson Biodiversity Forum. As a qualified conservation professional and a temporary employee with DOC on the Great White Butterfly Eradication project, I have observed the degraded condition of the various native vegetation communities and the threats from pest plant and animal species throughout Nelson city and its surroundings taking in the entire NCC region. I therefore believe that this fund is essential and very timely, if we are to be able to economically restore the natural environment of Nelson.

**Would you like to upload a file in support of your submission?**

**How did you find out about the Consultation Document and Council's 10 Year Plan?**

Through the Nelson Botanical Society.

**Would you like to be contacted by email with future Council feedback opportunities?**

Yes

Cat. 6  
Submission 362

# NELSON CITY COUNCIL PUBLIC CONSULTATION SUBMISSION FORM

**WE WANT YOUR OPINION.  
PLEASE TELL US WHAT YOU THINK.**  
*Please type or print clearly. Remember to read the submission writing guidelines before starting.*

Name Julie McIntock Organisation represented (if applicable) \_\_\_\_\_

Address Cable Bay RD1 Nelson 7071

Daytime phone 545 0989 Email \_\_\_\_\_

Do you wish to be heard in support of your submission?  Yes  No # of pages 1  
*If you do not tick either, we will assume you do not wish to be heard.*

If yes, would you like to attend an evening session?  Yes  No

**Public information:** All submissions (including the names and contact details of submitters) are public information and will be available to the public and media in various reports and formats including on the Nelson City Council website. Personal information will also be used for administration relating to the subject matter of submissions. Submitters have the right to access and correct any personal information included in any reports, information or submissions.

My submission is: \_\_\_\_\_

I support the proposal to fund the  
10 point plan of Nelson Nature  
as part of the Long Term Plan.

*Please attach additional sheets if needed.*

Date 23/4/15

Signature J McIntock

Office Use Only			
		Submission Number	
File Ref		Initials	

**From:** [Submissions](#)  
**To:** [Administration Support](#)  
**Subject:** FW: Consultation Document Submission  
**Date:** Monday, 27 April 2015 1:13:55 p.m.

---

-----  
**From:** Council Enquiries (Enquiry)  
**Sent:** Monday, April 27, 2015 1:13:51 PM  
**To:** Submissions  
**Subject:** Consultation Document Submission  
**Auto forwarded by a Rule**

**Name:**

Fiona Shaw

**Organisation represented (if applicable):**

**Address:**

56 Kanuka Rise, RD1 Nelson

**Daytime phone:**

027 630 7487

**Email:**

shawsnz@xtra.co.nz

**Do you wish to speak in support of your submission at the public hearings?**

No

**If yes, would you like to attend an evening session?**

**My submission is: (please ensure you clearly state the issue or project (s) you are submitting about):**

Nelson Nature

I am very encouraged to see the aims of Nelson Nature and support these and the allocation of funds to this biodiversity management programme. Having been working on the Great White Butterfly eradication for 3 years now and visiting properties from Glenduan to Richmond I am concerned about the prevalence of weeds in our neighbourhoods and the future cost to the department of conservation, and the loss of biodiversity if nothing is done.

Maintaining the new plantings with weed control is critical for the public involved in the plantings, acknowledging that council is behind revegetation efforts. I look forward to seeing progress in Nelson Nature's ten projects and commend the decision to put funding into managing and enhancing biodiversity.

**Would you like to upload a file in support of your submission?**

**How did you find out about the Consultation Document and Council's 10 Year Plan?**  
through live Nelson

**Would you like to be contacted by email with future Council feedback opportunities?**

No

**From:** [Submissions](#)  
**To:** [Administration Support](#)  
**Subject:** FW: Consultation Document Submission  
**Date:** Monday, 27 April 2015 1:19:24 p.m.  
**Attachments:** [Submission-to-LTP.doc](#)

---

-----  
**From:** Council Enquiries (Enquiry)  
**Sent:** Monday, April 27, 2015 1:19:19 PM  
**To:** Submissions  
**Subject:** Consultation Document Submission  
**Auto forwarded by a Rule**

**Name:**  
Alison McLeish

**Organisation represented (if applicable):**

**Address:**  
20 Valley Heights Road, Stepneyville, Nelson

**Daytime phone:**  
03 548 9998

**Email:**  
alison.mcleish@gmail.com

**Do you wish to speak in support of your submission at the public hearings?**  
No

**If yes, would you like to attend an evening session?**

**My submission is: (please ensure you clearly state the issue or project (s) you are submitting about):**  
Inner city living

**Would you like to upload a file in support of your submission?**  
Submission-to-LTP.doc - [Download File](#)

**How did you find out about the Consultation Document and Council's 10 Year Plan?**  
NCC publications

**Would you like to be contacted by email with future Council feedback opportunities?**  
Yes

## **HOUSING**

### Inner City Living Housing

I strongly support any initiatives Council has to permit and encourage the development of attractive and affordable, inner city housing. These should not just be for the aging population, but be community developments, catering for all age groups, promoting vibrant and healthy social groupings. Older people have much to offer young families and we should be encouraging less isolation and more supportive communities.

I would urge the Council to take a bold step and insist that all the car sales and associated motor trade yards and sites are removed from the inner city. Those that patronise them clearly have cars and can travel to industrial areas on the edge of the city for their needs. These prime areas in Rutherford and Halifax Streets could then be transformed into attractive and livable areas used 24/7 and not just a series of concrete yards only used during working hours.

Associated with this approach I would like to see the Council have a CBD plan, which has more control of types of build, colour schemes, etc. We need to avoid anymore hideous developments such as Sussex Mews (ugly and far too expensive).



**Bev Mcshea**

---

**From:** Submissions  
**Sent:** Monday, 27 April 2015 1:39 p.m.  
**To:** Administration Support  
**Subject:** FW: Consultation Document Submission  
**Attachments:** Nelson-Long-Term-Plan-sub-2015.doc

**Follow Up Flag:** Follow up  
**Flag Status:** Completed

**Categories:** Bev, Long Term Plan 2015

-----  
**From:** Council Enquiries (Enquiry)  
**Sent:** Monday, April 27, 2015 1:39:03 PM  
**To:** Submissions  
**Subject:** Consultation Document Submission  
**Auto forwarded by a Rule**

**Name:**

Debs Martin and Julie McLintock

**Organisation represented (if applicable):**

Royal Forest & Bird Protection Society of NZ Inc

**Address:**

PO Box 266, Nelson 7040 and PO Box 7126, Nelson

**Daytime phone:**

027 684 0599 or 03545-0989

**Email:**

[d.martin@forestandbird.org.nz](mailto:d.martin@forestandbird.org.nz)

**Do you wish to speak in support of your submission at the public hearings?**

Yes

**If yes, would you like to attend an evening session?**

No

**My submission is: (please ensure you clearly state the issue or project (s) you are submitting about):**

Please see attached document

**Would you like to upload a file in support of your submission?**

Nelson-Long-Term-Plan-sub-2015.doc - [Download File](#)

**How did you find out about the Consultation Document and Council's 10 Year Plan?**

Through Nelson Biodiversity Forum

**Would you like to be contacted by email with future Council feedback opportunities?**

Yes

**Nelson City Council Long Term Plan  
Submission  
by  
Royal Forest and Bird Protection Society NZ (Inc)  
Regional Office and Nelson/Tasman Branch**

Contact People: Debs Martin, Regional Conservation and Volunteer Manager  
PO Box 266, Nelson 7040

Phone: 027-684-0599

Email: [d.martin@forestandbird.org.nz](mailto:d.martin@forestandbird.org.nz)

Julie McLintock, Chairperson  
P O Box 7126, Nelson 7040

Phone: 03 545 0989

Email: [nelsontasman.branch@forestandbird.org.nz](mailto:nelsontasman.branch@forestandbird.org.nz)

The Royal Forest and Bird Protection Society Incorporated (“Forest & Bird”) has campaigned for more than 90 years for the protection of New Zealand's native species and the habitats on which they depend. New Zealanders in branches nationwide belong to Forest & Bird, supporting the Society's objectives of secure protection for native species, ecosystems, and landforms.

Within the bounds of Nelson City Council we have 464 members.

The constitutional purpose of Forest & Bird is:

*“To take all reasonable steps within the power of the Society for the preservation and protection of the indigenous flora and fauna and natural features of New Zealand, for the benefit of the public including future generations.”*

We thank Nelson City Council for the opportunity to submit on the Long Term Plan.

We would like to be heard in support of our submission and prefer a daytime hearing slot.

*Our submissions are:*

**1. Nelson Nature**

We support the inclusion of Nelson Nature in the Long Term Plan with the funding as allocated.

*Reason for our submission:*

Forest & Bird is a founding member of the Nelson Biodiversity Forum and partner to the Strategy. We have been involved in the discussions with Nelson City Council over the development of the Nelson Nature proposal and the strategising around prioritisation of biodiversity work in the city boundaries.

The professional expertise of the group that helped inform Nelson City Council was very high and involved scientists from research institutions and independent ecologists, as well as iwi and representatives of community groups including Forest & Bird and Federated Farmers.

It is very pleasing to see that the Council is taking its obligations to protect biodiversity seriously into the future. Nelson prides itself on its natural environment, and is a draw-card for residents and visitors to the region.

## **2. Wakapuaka Sandflats (including Council and Wildlife Reserves)**

We seek that sufficient funds are allocated within the Long Term Plan (and ensuing Annual Plans) to address the need to return fish spawning to the Todd Valley and Hillwood Streams as a matter of priority (this is indicated in NN priority 4 – Rural Waterways).

Additionally, Council should allocate sufficient funds to support Forest & Bird's longer term goal of restoring a semblance of tidal processes to the Wakapuaka Sandflats.

*Reason for our submission:*

Forest & Bird has been working closely with the City Council over the past few years to help restore habitat in the area of the Wakapuaka Sandflats, and specifically to restore habitat in the Wakapuaka Wildlife Reserve.

The tidal flapgates and culverts on Boulder Bank Drive currently block fish passage to streams, namely the Hillwood and Todd Valley Streams. As part of the wider work on restoring the habitat, we propose that fish passage barriers should be removed as soon as possible as is provided for under Nelson Nature priority 4 work on Rural Waterways.

Fish passage barriers are contrary to Part 2, section 5 of the RMA, as well as Objective A1 of the National Policy Statement for Freshwater Management 2014.

In the longer term, we hope to work with Council to restore tidal flows to the Wakapuaka Sandflats. We understand this is a separate work stream that Council advise us is underway and this should be provided for in the Long Term Plan.

Julie McLintock  
Branch Chairperson  
20 April 2015

Debs Martin  
Regional Manager  
20 April 2015

**From:** [Submissions](#)  
**To:** [Administration Support](#)  
**Subject:** FW: Consultation Document Submission  
**Date:** Monday, 27 April 2015 1:39:19 p.m.

---

-----  
**From:** Council Enquiries (Enquiry)  
**Sent:** Monday, April 27, 2015 1:39:15 PM  
**To:** Submissions  
**Subject:** Consultation Document Submission  
**Auto forwarded by a Rule**

**Name:**

Andrew High

**Organisation represented (if applicable):**

**Address:**

43 brook street

**Daytime phone:**

5394519

**Email:**

ali.birtwistle@me.com

**Do you wish to speak in support of your submission at the public hearings?**

No

**If yes, would you like to attend an evening session?**

No

**My submission is: (please ensure you clearly state the issue or project (s) you are submitting about):**

I am very concerned about out-of-town retail developments such as the one proposed for near mitre10. This sort of development often kills town centres. In nelsons' case, the vibrant and appealing town centre is what attracts people to live here and visit from elsewhere. Please, please take steps to prevent the death of nelson CBD.

**Would you like to upload a file in support of your submission?**

**How did you find out about the Consultation Document and Council's 10 Year Plan?**

Web site

**Would you like to be contacted by email with future Council feedback opportunities?**

No

**From:** [Submissions](#)  
**To:** [Administration Support](#)  
**Subject:** FW: Consultation Document Submission  
**Date:** Monday, 27 April 2015 2:00:44 p.m.

---

-----  
**From:** Council Enquiries (Enquiry)  
**Sent:** Monday, April 27, 2015 2:00:37 PM  
**To:** Submissions  
**Subject:** Consultation Document Submission  
**Auto forwarded by a Rule**

**Name:**

Alison Arron

**Organisation represented (if applicable):**

n/a

**Address:**

78 Quebec Road, Nelson

**Daytime phone:**

027 644 1650

**Email:**

alisona@ts.co.nz

**Do you wish to speak in support of your submission at the public hearings?**

No

**If yes, would you like to attend an evening session?**

**My submission is: (please ensure you clearly state the issue or project (s) you are submitting about):**

I support the Council initiative of Nelson Nature.

**Would you like to upload a file in support of your submission?**

**How did you find out about the Consultation Document and Council's 10 Year Plan?**

media, word of mouth

**Would you like to be contacted by email with future Council feedback opportunities?**

Yes

**Bev Mcshea**

---

**From:** Submissions  
**Sent:** Monday, 27 April 2015 6:21 p.m.  
**To:** Administration Support  
**Subject:** FW: Consultation Document Submission  
**Attachments:** NCC-Long-term-Plan-submission-WHH-NT-Steering-Com-27April2015.pdf

**Follow Up Flag:** Follow up  
**Flag Status:** Completed

**Categories:** Bev, Long Term Plan 2015

-----  
**From:** Council Enquiries (Enquiry)  
**Sent:** Monday, April 27, 2015 6:21:02 PM  
**To:** Submissions  
**Subject:** Consultation Document Submission  
**Auto forwarded by a Rule**

**Name:**  
Bill Dahlberg

**Organisation represented (if applicable):**  
Warmer Healthier Homes Nelson Tasman, steering committee

**Address:**  
C/O NTHT PO Box 140, Nelson 7040

**Daytime phone:**  
03.548 7023 or 0274 674 100

**Email:**  
[billdahlberg@xtra.co.nz](mailto:billdahlberg@xtra.co.nz)

**Do you wish to speak in support of your submission at the public hearings?**  
Yes

**If yes, would you like to attend an evening session?**  
No

**My submission is: (please ensure you clearly state the issue or project (s) you are submitting about):**  
To support the NCC project as outlined on page 19 of the Consultation Document for Nelson Long term Plan 2015 2025. The Community Assistance Fund - A more targeted approach will also release \$100,000 in the first year of the plan for council to work in partnership with TCCT (the Warmer Healthier Homes Nelson Tasman) in assisting (Nelson) homeowners to improve insulation and heating.

**Would you like to upload a file in support of your submission?**  
NCC-Long-term-Plan-submission-WHH-NT-Steering-Com-27April2015.pdf - [Download File](#)

**How did you find out about the Consultation Document and Council's 10 Year Plan?**  
Paper and councilors

**Would you like to be contacted by email with future Council feedback opportunities?**

Yes

# NELSON CITY COUNCIL PUBLIC CONSULTATION SUBMISSION FORM

**WE WANT YOUR OPINION.  
PLEASE TELL US WHAT YOU THINK.**  
*Please type or print clearly. Remember to read the submission writing guidelines before starting.*

Name Bill Dahlberg Organisation represented (if applicable) Warmer Healthier Homes - Nelson Tasman Steering Committee  
Address 9- NHTT PO Box 140, Nelson 7040  
Daytime phone 03-548 7023 Email 0274 674 100

Do you wish to be heard in support of your submission?  Yes  No # of pages 6  
*If you do not tick either, we will assume you do not wish to be heard.*  
If yes, would you like to attend an evening session?  Yes  No

**Public information:** All submissions (including the names and contact details of submitters) are public information and will be available to the public and media in various reports and formats including on the Nelson City Council website. Personal information will also be used for administration relating to the subject matter of submissions. Submitters have the right to access and correct any personal information included in any reports, information or submissions.

My submission is: To support the NCC project as outlined on page 19 of the Consultation Document for Nelson Long Term Plan 2015-25


The Community Assistance Fund - A more targeted approach will also release \$100,000 in the first year of the plan for council to work in partnership with TCCT (The Warmer Healthier Homes Nelson Tasman) (project manager Nelson Tasman Housing Trust) in assisting (Nelson) homeowners to improve insulation and heating.

In partnership with WHH-NT project the NCC \$100,000 can be leveraged upto a total of \$250,000 to retro-fit nearly 100 homes. A second part of the project is partnership with the Health sector.

Please find attached documents to explain the project, introduction and background, Summary of partnerships, referral pathways summary 2014/15 project update, 2015/16 project proposal, present development

Please attach additional sheets if needed.

Date 27/4/15

Signature 

Office Use Only			
		Submission Number	
File Ref		Initials	



## Warmer Healthier Homes Programme — Nelson Tasman

### Introductory background

Preparation for this project began in July 2013 following the release of the Government's policy intent on warm homes initiatives. The Nelson Trustees for the Canterbury Community Trust (TCCT) considered the Nelson Tasman region would benefit from a project utilising the Government funding agency Energy Efficiency and Conservation Authority (EECA). Nelson has a history of retrofits on existing older housing stock over the last ten years.

The TCCT wished to use some of the Special Fund that the Trust had allocated to the region in response to the Christchurch earthquake to help local people with their housing needs. In particular there was a desire to help as many households as possible in the region and it was felt that a Warmer Healthier Homes programme to retrofit the many cold, damp houses in the region would be a good use of these funds.

Accordingly a meeting was held between the local TCCT trustees Bill Dahlberg, Max Spence and the Nelson Marlborough District Health Board CEO Chris Fleming in July 2013 to discuss a possible project. The NMDHB had previously joint funded a successful EECA funded programme to retrofit 500 homes in partnership with the Nelson Tasman Housing Trust in 2006-2009. The NMDHB agreed to provide in-kind support for this new programme, should funding from TCCT and EECA eventuate.

Further meetings took place in August and September between TCCT and the Nelson Tasman Housing Trust (NTHT) to scope the project and discuss how it would be managed. NTHT approached Paul Brockie in September to discuss the possibility of Absolute Energy's involvement in the project. Absolute Energy already had a contract with EECA to retrofit fifteen houses in Motueka and they were approached as a local market leader in this field.

Meetings also took place between NTHT and the NMDHB to discuss identifying households with high health needs who could benefit from the proposed retrofit programme. Representatives from the Nelson Bays Primary Health Organisation also took part in these discussions. A target of 200 possible households in two years was agreed on the basis that the budget would support about 100 retrofits per year. NMDHB and NBPH went on to develop the methodology outlined in the community engagement strategy in this proposal.

A steering group was formed in September 2013 of senior representatives of the main partners and has met on a monthly basis since September 2014. To maximise resources the steering committee is working in conjunction with the Warm Up New Zealand: Healthy Homes programme.

The project was underway by February 2014 and in August that year the steering group was delighted that the first retrofit of a Nelson/Tasman home was underway. By April 2015, 48 homes have been retrofitted, with a further 61 homes awaiting installation. The project is on target to retrofit more than 140 homes by 30 June 2015.

Steering Group members are:

**The Canterbury Community Trust:** Bill Dahlberg and Sarah-Jane Weir (Nelson Tasman Trustees)  
**Nelson Marlborough District Health Board:** Bronwyn White, Peter Burton (Service Director)  
**Nelson Tasman Housing Trust:** Keith Preston (Director); Simon Morris (Administration Manager)  
**Contractor - Absolute Energy:** Paul Brockie (Managing Director); Tanya McDonald (Admin Manager)  
**Nelson City Council:** Richard Popenhagen (Eco Design Advisor)

## Warmer Healthier Homes Steering Group - Summary of relationships

### 1. WHH Steering Committee members

- The Canterbury Community Trust (“TCCT”) – Nelson Trustees
- Nelson Marlborough District Health Board (“NMDHB”)
- Nelson Tasman Housing Trust (project Manager)
- Absolute Energy (the Contractor)
- Nelson City Council (“NCC”)

### 2. Groups/entities engaged in ongoing discussion

- EECA – Energy Efficiency and Conservation Authority
- NMDHB - CEO
- TCCT – Chief Executive
- NCC – Mayor and Council Management
- Tasman District Council (“TDC”) - Mayor and Council Management
- NCC/TDC Kaumatua – Andy Joseph

### 3. Present discussion groups as project expands

- TCCT - Marlborough Trustees
- Marlborough District Council (“MDC”) – Mayor
- NMDHB Board

### 4. Future intentions

- The steering committee (with the support of EECA) will highlight the positive outcomes and achievements of the WHH project.
- On the back of these achievements, there is intention to approach other funders as the project develops in the second and third years.

## WHH Steering Group – referral pathways summary

The Warmer Healthier Homes Steering Group is utilising two pathways for referrals into the scheme. The first referral pathway is through the health sector. The second pathway is outside of the health sector. We have called the second pathway 'regular sector' referrals. The following is an overview of the two referral pathways.

### 1. Health Sector Referrals

The key features of this Warmer Healthier Homes Nelson Tasman working with the Warm-up New Zealand, Healthy Homes programme are:

- Prioritised for people with respiratory related conditions identified via Nelson Hospital and Primary Care health professionals.
- Project scope currently limited to households in the Nelson or Tasman regions.
- The current estimated number of houses per year in 2014/15 is approximately 110 houses.

The justification for this prioritised approach is as follows:

- The association between housing related health conditions, low income and poor housing conditions is well documented.
- Evidence indicates that interventions such as ceiling and underfloor insulation which improves the warmth of the home can lead to health improvements, especially when these interventions are targeted to those with inadequate warmth and respiratory related conditions.

We know that people with the highest health needs are:

- Unlikely to be the quickest, if ever, to pick up the phone to self-refer for such a project.
- They are also likely to be sleep deprived.
- Have experienced reductions to income.
- May be crowding into rooms because they cannot use their bedroom due to mould and damp.
- The children are likely to be missing days off school and parents off work due to ill health and are likely to struggle to afford to keep their home warm.

In order to ensure that those with the highest health needs do not miss out, we have opted to run this project as an invite only, rather than a self-referral programme.

### 2. Regular Sector Referrals

The key features of this Warmer Healthier Homes Nelson Tasman working with the Warm-up New Zealand, Healthy Homes programme are:

- Prioritised for people identified in conjunction with the Steering Committees Advisor Referral Panel.
- Project scope currently limited to households in the Nelson or Tasman regions.
- The current estimated number of houses per year in 2014/15 is approximately 50 houses (30 in the Nelson region, and 20 in the Tasman region).

The justification for this prioritised approach is as follows:

- The association between housing related health conditions, low income and poor housing conditions is well documented.
- Evidence indicates that interventions such as retrofitting ceiling and underfloor insulation which improves the warmth of the home can lead to health improvements, especially when these interventions are targeted to those with inadequate warmth and respiratory related conditions.
- The WHH Steering Committee, Advisory Panel are invited groups from within the community that are involved in the housing, health and service sector. These groups are well positioned to identify and refer clients who would benefit most from this programme.

In order to ensure that those with the highest needs do not miss out, we have opted to run this project as an invite only, rather than a self-referral programme.

WHH Steering Group - 2014/2015 Project Update - April 2015

**1. Administration - funded by TCCT:**

Total allocation	\$25,000
Allocated to date	\$13,936
Balance remaining	\$11,064

**2. Health targeted homes (TCCT-EECA funded project):**

Allocations	TCCT	EECA	Landlord contributions	Total	Target # Homes
Total allocation	\$110,000	\$165,000	\$2,800	\$277,800	112
Allocated to date	\$66,553	\$99,30		\$166,384	68
Balance remaining	\$43,446	\$65,169		\$108,616	44

**House referrals TCCT-EECA Project :**

<b>Target number of homes</b>	<b>112</b>
Clients Referred To Scheme	95
<i>Comprised of:</i>	
Number of void referrals (can't do anything etc)	6
Actual installs to date	48
Work in progress	41
<b>Remaining referrals required to meet June 2015 Target:</b>	<b>23</b>

*Note: TCCT Funding yet to be allocated to the scheme (held by NTHT) - additional to above figs: \$15,000*

**3. Regular Sector Referrals (NCC-EECA funded project):**

Allocations	NCC	EECA	Landlord contributions	Total	Target # Homes
Total allocation	\$40,000	\$30,000		\$70,000	30
Allocated to date	\$2,327	\$4,003		\$6,330	4
Balance remaining	\$37,673	\$25,997		\$63,670	26

*Note: NCC \$40,000 funding was available from April 2015*

**House referrals TCCT-EECA Project :**

<b>Target number of homes</b>	<b>30</b>
Clients Referred To Scheme	20
<i>Comprised of:</i>	
Number of void referrals (can't do anything etc.)	0
Actual installs to date	0
Work in progress	20
<b>Remaining referrals required to meet June 2015 Target:</b>	<b>10</b>

**4. Regular Sector Referrals (TCCT-EECA funded project):**

Allocations	TCCT*	EECA	Landlord contributions	Total	Target # Homes
Total allocation	\$20,000	\$30,000		\$50,000	18
Allocated to date	\$0	\$0		\$0	0
Balance remaining	\$20,000	\$30,000		\$50,000	18

\*Steering committee funding required to match EECA's allocation: \$20,000

<b>Remaining referrals required to meet June 2015 Target:</b>	<b>18</b>
---	-----------

## WHH Steering Group - 2015/2016 Funding Summary

### 1. Summary of proposed third party funding

Confirmed funding		Value	Due Date
The Canterbury Community Trust (TCCT) Nelson/Tasman		\$150,000	30/4/2015
The Canterbury Community Trust (TCCT) Marlborough (to be ratified)		\$50,000	30/4/2015

Unconfirmed funding	Notes	Value	Due Date
Nelson City Council	Awaiting review of draft LTP	\$100,000	Mid 2015
Tasman District Council	In discussion with council	TBC	TBC
Marlborough District Council	In initial discussions with council	TBC	Mid 2015
NMDHB – Nelson	In positive discussion with CEO	TBC	Mid 2015
NMDHB – Tasman	In positive discussion with CEO	TBC	Mid 2015
NMDHB – Marlborough	In positive discussion with CEO	TBC	Mid 2015

### 2. Leverage of proposed third party funding and proposed EECA funding

The EECA funding ratio in 2014/2015 was 60:40. A funding ratio of 50:50 is proposed for 2015/2016

### 3. Targeted funding

Total potential health-targeted third party funding for the 2015/2016 year is \$275,000. Total potential non-health targeted funding is \$225,000. Therefore, 55% of total funding will be allocated for health-targeted retrofits. 45% will be allocated towards non-health-targeted retrofits. There may be some cross-over between the two categories, however this cross-over will be limited.

### 4. Target Number of homes

Assuming a 50:50 funding ratio between EECA and Third Party funders, the potential target number of insulation retrofits is as follows:

- Confirmed Funding plus matching EECA funding: 140 to 160 homes
- Unconfirmed Funding plus matching EECA funding: 220 to 240 homes
- **Total potential target number of houses for 2015/2016: 360 to 400 homes**

### 5. 2015/2016 potential project outcomes

*The Steering Committee is under discussion with the existing and new partnership groups. The challenge for all involved is making a commitment without the certainty of other funder outcomes while we work through discussions with senior management and boards. This is the same challenge as 2014/15 starting the project which exceeded the initial targets. The first group to put their money on the table for the second year of this project is the TCCT with another \$150,000. The steering group remains positive about the 2015/2016 outcomes and the impact on our communities.*

Bill Dahlberg; on behalf of the WHH NT Steering Committee.

**From:** [Submissions](#)  
**To:** [Administration Support](#)  
**Subject:** FW: Consultation Document Submission  
**Date:** Monday, 27 April 2015 7:34:08 p.m.

---

-----  
**From:** Council Enquiries (Enquiry)  
**Sent:** Monday, April 27, 2015 7:34:05 PM  
**To:** Submissions  
**Subject:** Consultation Document Submission  
**Auto forwarded by a Rule**

**Name:**

Jean Edwards

**Organisation represented (if applicable):**

**Address:**

23 Rangiora Terrace

**Daytime phone:**

5464543

**Email:**

jean@thinkshop.org

**Do you wish to speak in support of your submission at the public hearings?**

No

**If yes, would you like to attend an evening session?**

No

**My submission is: (please ensure you clearly state the issue or project (s) you are submitting about):**

Re WOODFIRES and pollution emissions: I STRONGLY SUPPORT ALLOWING all residents to use woodburners as long as they meet specific current standards( EG.CHCH emissions standards). Also, that Council stockpile cut wood from Council-removed/pruned trees, for Community Services to deliver to the needy.

**Would you like to upload a file in support of your submission?**

**How did you find out about the Consultation Document and Council's 10 Year Plan?**

Nelson Mail, and internet

**Would you like to be contacted by email with future Council feedback opportunities?**

Yes

## Submission to the Nelson Long Term Plan: 2015-2025

27 April 2015

RECEIVED

28 APR 2015

**From: Friends of the Maitai**

NELSON CITY COUNCIL  
Customer Service

Prepared by: Tom Kennedy and other members of the Hub (steering committee)

Email: [tnak@xtra.co.nz](mailto:tnak@xtra.co.nz)

### Submission:

- The plan should include reference to Project Maitai/Mahitahi and its continuation and importance in maintaining and improving a major public asset; i.e. Maitai/Mahitahi River.
- The plan should reflect the commitment to making the Maitai/Mahitahi swimmable and safe and a healthy environment for the natural freshwater aquatic wild life it must support.
- The funding level for Project Maitai/Mahitahi should be no less than what was originally allocated.

### Introduction:

Friends of the Maitai is a group of citizens that came together about two years ago to encourage action over the state of the Maitai River, in particular high levels of cyano bacteria and associated risks to public health.

Since then we have formed a number of interest groups and have been active in riparian planting, SOE monitoring, fish surveys (including Inanga), media releases, creation of a web site, education programs, collaboration with Nelson City Council and Project Maitai/ Mahitahi, and collaboration with forestry companies . We are a member of the Nelson Biodiversity Forum.

We have a monthly Hub meeting where representatives from each interest group meet to discuss policy, strategy and action.

### Background discussion:

- We would firstly like to acknowledge the Councils initiative in launching Project Maitai/Mahitahi and support the continuation of initiatives in engaging citizens in educated consultation and involvement.
- We find the process used with Council's Consultation Document for Nelson's LTP 2015-25 unclear. It is written as though it is a complete long term plan, and therefore should include all important items, but we have also been told by Council officers that it isn't trying to include existing major commitments (because they are business as usual ), just changes. This is confusing, and may result in important existing commitments being removed from the LTP as a result of misunderstanding. We have chosen to assume that Project Maitai/Mahitahi needs to be restated. We believe that this would be better way to create a complete and clear LTP.
- The LTP does make reference to Nelson Nature (Biodiversity Management Programme initiated by Council) in terms of its Environmental responsibilities. However there is no specific reference to Project Maitai/Mahitahi or the Maitai River in this document, hence



our concern that it should be highlighted similar to the Gondola and Brook Waimarama Sanctuary projects.

- Over the past 20 years there have been many reports , scientific research papers, commissioned studies and documentation of the impact of human activities on our streams and rivers but we are still seeing the gradual decline in the health of these ecosystems.
- Nelson is fortunate in having the Cawthron Institute to take on specific studies relating to the Maitai River and Dam. Because the Dam and forestry activities have dominated middle catchment land use over the past 30 years there has been significant changes in the health of the river during this time. A number of excellent reports highlight these issues.
- Friends of the Maitai acknowledge Councils initiatives to date in addressing the issues and would like to support further action in transferring the aims and goals in LTP and Nelson Nature to specific conditions for compliance in Consents issued for Dam operations and Forestry activities.

### References:

1. *The impact of the Maitai Dam on river health relative to other catchment pressures: A Review.* Cawthron Institute , Report No. 2371 August 2013.
2. *Review of forestry impacts upon sediment yield and aquatic ecosystems.* NIWA Client Report-043 May 2004

**From:** [Submissions](#)  
**To:** [Administration Support](#)  
**Subject:** FW: Consultation Document Submission  
**Date:** Tuesday, 28 April 2015 9:44:27 a.m.  
**Attachments:** [NCC-LTP-2015-2025.docx](#)

---

-----  
**From:** Council Enquiries (Enquiry)  
**Sent:** Tuesday, April 28, 2015 9:44:24 AM  
**To:** Submissions  
**Subject:** Consultation Document Submission  
**Auto forwarded by a Rule**

**Name:**  
Ray Curtis

**Organisation represented (if applicable):**  
Rasamibe Co Ltd

**Address:**  
C/- Staig & Smith Ltd, PO Box 91, Nelson 7040

**Daytime phone:**  
03 545 6883

**Email:**  
jane@staigsmith.co.nz

**Do you wish to speak in support of your submission at the public hearings?**  
Yes

**If yes, would you like to attend an evening session?**  
No

**My submission is: (please ensure you clearly state the issue or project (s) you are submitting about):**

Is in relation to the York Valley Landfill and contaminated soils

**Would you like to upload a file in support of your submission?**  
NCC-LTP-2015-2025.docx - [Download File](#)

**How did you find out about the Consultation Document and Council's 10 Year Plan?**

**Would you like to be contacted by email with future Council feedback opportunities?**  
No

**NELSON CITY COUNCIL  
LOCAL GOVERNMENT ACT  
SUBMISSION ON THE DRAFT LONG TERM PLAN 2015-2025**

To: LTP Submissions  
Nelson City Council  
PO Box 645  
**Nelson 7040**

Submitter: Rasamibe Co Ltd (Mr R Curtis)

Dated: this 28<sup>th</sup> day of April 2015



.....  
(Signed by the Applicant's authorised agent)

**Address for Service:** Staig & Smith Ltd  
PO Box 913  
NELSON 7040  
Attn: Jane Bayley  
Email: [jane@staigsmith.co.nz](mailto:jane@staigsmith.co.nz)  
Phone: (03) 545 6883

## **1.0 Introduction**

The Submitter, Mr Ray Curtis of Rasamibe Co Ltd, obtained subdivision consent in May 2003 to create 64 residential sections over a number of stages, being Kendall View and Lassen Place, Stoke. Whilst all sections have been created, around 50 have been built upon.

Recently, a purchaser of one of the vacant allotments sought building consent from NCC and was advised that a detailed site investigation of the land was required under the provisions of the *National Environmental Standard for Assessing and Managing Contaminants in Soil to Protect Human Health* as the Council had recently registered the subdivision area as being a potential HAIL site due to past use of chemicals (hazardous substances) in horticultural activities.

The purchaser undertook a detailed site investigation which confirmed that the previous orcharding operations had left residual heavy metals in the soil, to such a level that the site was considered contaminated for residential activities and that mitigation, through removal of soil was required.

Due to the timing of the NES, both the subdivision and any existing houses do not trigger the requirements of the NES, however new houses on the vacant allotments will require an assessment under the NES, and mitigation being undertaken to bring the soils to 'residential' standards.

The Submitter therefore proceeded to investigate the remaining sections which he still has for sale, and confirmed that removal of soil was also required for these sites to meet with residential health standards.

Upon approach to the various landfill sites, the Submitter was advised the cost of dumping soils which do not meet the 'residential health guidelines', as being \$114 per tonne of soil at York Valley Landfill.

Given the requirements of the NES, it is expected that more subdividers and property owners who wish to build a new dwelling or addition will be required to mitigate their soils to ensure it complies with the residential health standards, which will place more demand on the Councils' landfills.

The Submitter also notes that with the recent NCC/TDC Joint Solid Waste Initiative, the number of landfills available for accepting such materials is further limited by the closure of Eves Valley Landfill.

## **2.0 Submission**

### *Schedule of Charges for Rubbish collection and disposal*

The LTP advertises that it has a schedule of charges for Council's operations. The Submitter could not find within the supporting documents advertised with the LTP, the schedule of charges for Rubbish collection and disposal.

The Submitter seeks confirmation as to the Discharge Rates for York Valley, to be referenced into the Schedule of Charges.

### *Internal efficiency of resources within the landfill*

The Submitter accepts that the Council operate the landfill as a user pays operation, however seeks that Council review the cost of dumping soils that do not meet with the residential health standards. These soils are usually still suitable for other purposes, such as commercial or industrial soils.

The Submitter considers that the Council is able to manage the landfill in such a manner as to be able to utilise these soils as capping layers within the landfill. Thus reducing the overall operational budget of the landfill, and therefore reducing the cost which should be forwarded to the user.

The Submitter therefore seeks that NCC seek to reduce the amount it costs to dump residentially contaminated soils within the Landfill(s).

### *Specific landfill site for 'residentially' defined contaminated soils*

The *National Environmental Standard for Assessing and Managing Contaminants in Soil to Protect Human Health* requires an assessment of soils at the time of land use change (for instance building on an empty section or potentially extending an existing dwelling), or subdivision.

When soils are found to not meet with residential health standards, mitigation must occur. Whilst it is possible to potentially mix soils to reduce levels of contamination, this is not a preferred method when it comes to building sites, as it makes foundations more difficult.

As such, developers are tending towards stripping the contaminated soils, and taking them to an approved landfill site.

The Submitter therefore would expect a greater demand being placed on Council's landfill resource as a result of the need to mitigate contaminated soils.

With the recent NCC/TDC Joint Solid Waste Initiative, the number of landfills available for accepting such materials is further limited by the closure of Eves Valley Landfill and the acceptance of such material from the Tasman District.

The Submitter seeks that NCC and TDC consider a specific landfill site for 'residentially' defined contaminated soils, with a reduced cost to discharge.

### **3.0 Relief Sought**

The Submitter seeks confirmation as to the Discharge Rates for York Valley, to be referenced into the Schedule of Charges.

In particular, the Submitter seeks that NCC seek to reduce the amount it costs to dump residentially contaminated soils within the Landfill(s).

The Submitter also seeks that NCC and TDC review their operations to use 'residentially' contaminated soils to act as a capping material, for improved efficiency of the landfill, and to reduce the overall operating budget of the landfill.

The Submitter seeks that NCC and TDC consider a specific landfill site for 'residentially' defined contaminated soils, with a reduced cost to discharge.

### **4.0 Hearing**

The Submitter wishes to be heard in respect of this Submission.

**DATED this 28<sup>th</sup> day of April 2015**



---

Signed by the Submitters (or their authorised agent)

**From:** [Submissions](#)  
**To:** [Administration Support](#)  
**Subject:** FW: Consultation Document Submission  
**Date:** Tuesday, 28 April 2015 10:33:39 a.m.  
**Attachments:** [NCC-LTP-2015-Submission-FINAL.pdf](#)

---

-----  
**From:** Council Enquiries (Enquiry)  
**Sent:** Tuesday, April 28, 2015 10:33:36 AM  
**To:** Submissions  
**Subject:** Consultation Document Submission  
**Auto forwarded by a Rule**

**Name:**

Hudson Dodd

**Organisation represented (if applicable):**

Brook Waimarama Sanctuary Trust

**Address:**

PO Box 744, Nelson 7040

**Daytime phone:**

03 546 2422

**Email:**

hudson.dodd@brooksanctuary.org

**Do you wish to speak in support of your submission at the public hearings?**

Yes

**If yes, would you like to attend an evening session?**

No

**My submission is: (please ensure you clearly state the issue or project (s) you are submitting about):**

Brook Waimarama Sanctuary

**Would you like to upload a file in support of your submission?**

NCC-LTP-2015-Submission-FINAL.pdf - [Download File](#)

**How did you find out about the Consultation Document and Council's 10 Year Plan?**

From Council Staff Officers

**Would you like to be contacted by email with future Council feedback opportunities?**

Yes





27 April 2015

**SUBMISSION TO:  
NELSON CITY COUNCIL DRAFT LONG TERM PLAN 2015-2025**

---

The Brook Waimarama Sanctuary Trust staff, trustees, and volunteers would like to acknowledge and thank Nelson City Council for its strong on-going support and recognition of the Brook Waimarama Sanctuary as a regionally important project. The Trust appreciates the opportunity to submit comments on Council's draft Long Term Plan.

The Brook Waimarama Sanctuary Trust as an organisation is regional in scope. The Trust's strategic partners include organisations operating across the Nelson/Tasman region, including the Department of Conservation (DOC), the Nelson Marlborough Institute of Technology (NMIT), and local iwi.

In summary, the project brings significant benefits to the Nelson/Tasman region including:

- The sanctuary is poised to become a major regional visitor attraction, providing a reason to stay an extra night in Tasman and Nelson, with associated tourism economic multiplier impacts.
- The fenced sanctuary will act as a bird nursery increasing native birdlife through the forested corridors along the city backdrop and foothills, into the communities of Nelson, Stoke, Richmond, and through the wider region. The sanctuary will help support other regional pest control programmes and wildlife reintroduction programmes.
- The sanctuary is already providing an important educational role for local schools, with over 130 school group visits from throughout the region totalling over 3,500 children each year. Our aim is to become a premier site for all levels of education and research, through collaborative programming with strategic partners including NMIT and DOC.
- The sanctuary has presented regional businesses opportunities for tendered contracts associated with fence construction and other projects, and in the future those related to facilities development and tourism opportunities. Many of the region's businesses directly support the project through one time or on-going in kind contributions or sponsorships.

### **OPERATIONAL GRANT**

The Trust appreciates the Council's on-going support in the form of an annual operational grant, and believes this is an appropriate form of support for this popular community initiative and represents very good value to Council, contributing to the cost of maintaining the Council owned site and developing sanctuary infrastructure. Activity that the Council grant contributes to includes the development of walking and vehicle tracks, transport costs, plant and animal pest control, administration time, volunteer coordination, and other operational expenses associated with the development, maintenance and enhancement of the sanctuary in the Brook Conservation Reserve.

We request a similar level of funding as was allocated in the 2012-22 LTP be maintained in the 2015-25 LTP as an annual contribution to the project, adjusted annually for inflation at a rate of 2.5% from ~\$69,000 in 2015-16 to ~\$87,000 in 2024-25.

### **BROOK RECREATION RESERVE MANAGEMENT PLAN**

The Trust supports Council's decision to undertake a comprehensive planning approach to the future of the Brook Recreation Reserve. The Trust looks forward to submitting to the formal public consultation phase of this planning process, and, depending on the outcome of the planning process,

The Brook Waimarama Sanctuary Trust | PO Box 744 | Nelson | New Zealand  
info@brooksanctuary.org.nz | www.brooksanctuary.org.nz | 03 546 2422

would welcome the opportunity to play an active role in the future management of the site. The Trust also looks forward to the anticipated opportunity to relocate the Brook Conservation Education Centre to a portion of the reserve, with the goal of continuing this nationally significant joint initiative between the Trust, Nelson Marlborough Institute of Technology and the Department of Conservation.

## **HISTORIC STRUCTURES IN SANCTUARY SITE**

The Trust is cognisant that the heritage preservation community recognises the historic dams, weirs and associated waterworks structures in the sanctuary site as significant heritage features—some dating from the 1860's, making them among the oldest pakeha-built structures in Aotearoa New Zealand. The Trust therefore recognises an inherent cultural value to the preservation of some of these structures, as well as value to the sanctuary specifically as an additional area of interest for the sanctuary as a visitor attraction.

The Trust is also cognisant of the ongoing deleterious effects of the elements—especially Brook Stream flood events—on these structures. Under the Trust's lease with Council for the sanctuary site (33-year lease from July 2014) there is no provision for the maintenance of these structures by Council as landowner. During the period of the Trust's activities on the site, we have witnessed significant deterioration of some of these structures. The Trust therefore commissioned a conservation plan for the structures by independent conservator, Ian Bowman, in 2012 and provided this plan to Council in the interest of furthering efforts toward conservation. The Trust's volunteers have worked to uncover and make safe the silt chambers associated with the 1868 Weir under supervision of archaeologist, Amanda Young, and with a small grant from the Canterbury Community Trust, but with other funding fully committed the Trust's opportunities for furthering historic preservation are very limited.

The Trust submits to Council that it has a public obligation to undertake some repairs and maintenance of these structures to maintain their heritage value for posterity. While the Bowman report makes a case for a uniform approach to conserving the various structures, and the maintenance of them collectively as a single site, the Trust believes some of the structures hold more heritage value than others. Specifically the stone weirs and associated settling chambers, walls and stairways would seem to hold the highest historical value. In contrast the historic valley floor pedestrian bridge across the Brook Stream (sometimes known as the Railway Iron Bridge) offers less heritage value, as its main historic element - railway irons reused from the Dun Mountain Railway - are covered in concrete and not visible.

The Trust therefore requests that Council allocate sufficient funds in the LTP to undertake meaningful assessment and maintenance of key heritage structures in the sanctuary site. We suggest the following allocations would be reasonable:

2015-16	Peer Review of Bowman Conservation Plan: \$10,000
	Assessment of historic structures and recommendations for maintenance: \$10,000
2016-2025	Annual maintenance budget for sundry works on historic structures: \$30,000 p.a.

Regarding the historic valley floor pedestrian bridge, the Trust is pleased the funding previously allocated in the 2014-15 Annual Plan for a planned upgrade to this bridge has been carried forward in the draft LTP. We understand from Council staff officers that the planned upgrade budget of \$54,000 would replace the existing bridge deck, and agree this is a desirable outcome.

The Trust further submits that the user group for the Brook Valley track has changed since this budget figure was arrived at, with plans for significantly increased usage now becoming a reality due to increased sanctuary visitation. The Trust has investigated options for limiting the number of visitors on the bridge at any one time, but has found no viable solution. There are significant health and safety implications of not being able to restrict the number of people using the bridge, especially with the increasing number of groups visiting the site. Therefore we request that the bridge upgrade be planned

The Brook Waimarama Sanctuary Trust | PO Box 744 | Nelson | New Zealand  
info@brooksanctuary.org.nz | www.brooksanctuary.org.nz | 03 546 2422

to accommodate the sanctuary's projection of 30,000 visitors p.a., with an attendant increase in bridge loading from the current 2 persons to a minimum of 12 persons. This will likely require a more robust bridge deck replacement than originally envisioned, and potentially other structural work. Therefore a budget figure of \$90,000 is indicated and requested by the Trust.

## **NELSON NATURE**

The Trust wishes to congratulate Council on its proposal in the draft LTP to allocate \$500,000 p.a. on biodiversity restoration projects in the Nelson region—collectively termed Nelson Nature. We see this as a positive initiative for the people of Nelson, and an appropriate expenditure by Council to fulfil its statutory obligation to maintain and enhance indigenous biodiversity.

Specifically the project called Nelson Halo is planned to leverage the expected biodiversity gains of the sanctuary project to the wider region, which is an appropriate and affirming way to safeguard and amplify Council's significant investment in the sanctuary project. The Trust looks forward to collaborating with Council, the Department of Conservation, and the other community groups doing plant and animal pest control in the Nelson region to accomplish unprecedented biodiversity conservation gains for the region.

The Trust further submits that Council should consider retiring a 25.5ha management block currently used for timber production adjacent to the sanctuary on the south slope of Fringed Hill between Bullock and Cummins Spurs (Stand 21.04 in Sec 22 SQ 18 NL 39/13). This block is planned to be harvested prior to construction of the pest-proof fence on that portion of the sanctuary perimeter adjacent to The Classic track, which is the planned access track for the timber harvest operation. It is anticipated that any future harvests of this block would be deemed problematic once the fence is completed. As a consequence we recommend that the site not be replanted in exotic plantation species but planted with eco-sourced native bush seed stock from the Brook Valley or be allowed to regenerate naturally as future wildlife habitat.

Furthermore we believe that the growing of non-native tree farms and the regular disturbance regimes associated with timber harvest are not compatible with the goals of the Nelson Nature and in particular Nelson Halo projects adjacent to the Sanctuary. We understand that Council is currently undertaking a review of its plantation forestry blocks with a view to retiring some of the current blocks following the harvest of the current crop where it is unviable and/or inappropriate to replant them in exotic species. We submit that this review should plan for corridors of native forest within the Halo extending into the city and towards Stoke and Richmond and into the conservation land of Mt Richmond Conservation Area.

## **THANKS**

The Trust is extremely grateful for the ongoing support and commitment shown by Nelson City Council in strongly supporting the Brook Waimarama Sanctuary project. We also thank Council staff for their work with us over the past year.

## **OPPORTUNITY TO BE HEARD**

The Trust requests the opportunity to be heard in support of this submission.



Hudson Dodd  
General Manager

The Brook Waimarama Sanctuary Trust | PO Box 744 | Nelson | New Zealand  
[info@brooksanctuary.org.nz](mailto:info@brooksanctuary.org.nz) | [www.brooksanctuary.org.nz](http://www.brooksanctuary.org.nz) | 03 546 2422

**From:** [Submissions](#)  
**To:** [Administration Support](#)  
**Subject:** FW: Long term plan submission  
**Date:** Tuesday, 28 April 2015 3:27:04 p.m.  
**Attachments:** [NLONGTERMPAN combined submission 28.04.15.pdf](#)

---

-----  
**From:** Lindsay Wood[SMTP:THE.WOODS@XTRA.CO.NZ]  
**Sent:** Tuesday, April 28, 2015 3:22:38 PM  
**To:** Lindsay Wood (External); Submissions  
**Subject:** RE: Long term plan submission  
**Auto forwarded by a Rule**

Dear NCC,

Late this morning I emailed a submission on the Long Term Plan, but noted (see email below) that there was a formatting issue. I have since corrected that and attach a revised version accordingly. I also lodged a hard copy in case there was a problem with the email, and so that can in now be disregarded.

While I hope this version makes the compilation of your documents easier I also understand if it is inadmissible as technically it is timed-out. The only changes are that the modified formatting seems to have added an extra page (number of pages on the cover sheet have been updated in the attached), and I happened to notice some typos within the bold paragraph on page 8, and corrected those. The two versions are shown below with the changed text highlighted in the second version. I trust you will agree that there has been no change in intent or meaning beyond clarifying the second clearly erroneous date.

Thanks and regards,

Lindsay Wood.

**The primary response sought in the Long Term Plan, is a major commitment by Council to equip Nelson properly address major issues, such as those identified above, in the *next* 2018-20128 Long Term Plan.**

**The primary response sought in the Long Term Plan, is a major commitment by Council to equip Nelson **to** properly address major issues, such as those identified above, in the *next* 2018-**2028** Long Term Plan.**

---

**From:** Lindsay Wood [mailto:the.woods@xtra.co.nz]  
**Sent:** 28 April 2015 11:39 a.m.  
**To:** 'submissions@ncc.govt.nz'  
**Subject:** Long term plan submission

I have pleasure in attaching my submission.

Unfortunately the formatting has not come through as expected. I am happy to lodge a better-formatted version if this is acceptable after closing.

Thanks ,

Lindsay Wood.

NELSON LONG TERM PLAN 2015-2025 (“LTP”)  
including the Infrastructure Strategy 2015-2045

---

**Submission by Lindsay Wood**  
**10 Braemar Place,**  
**NELSON SOUTH 7010**  
**Tel 021 522 148**  
**Email [the.woods@xtra.co.nz](mailto:the.woods@xtra.co.nz)**

**24/04/2015**

I do wish to be heard in support of this submission.

Number of pages:11

Thank you for the real privilege of being able to submit on the Long Term Plan 2015-2025. Thank you also for what I know is an enormous commitment of time not, only in developing the consultation documents, but also in considering the myriad submissions that I expect will be received.

I also wish to compliment council's administrative staff on their first class approach to answering queries. At all times they were positive, went out of their way to be helpful, and conveyed the strong sense that they were intent on making the consultation process a success.

This submission comprises the following sections:

- Summary of Key Issues
- What happened to "Nelson 2060: Framing Our Future?"
- Properly Considering Climate, Ocean and Fossil Fuel changes
- The Imperative to Reduce Fossil Fuel use.
- Freeing us from Absolute Dependence on a Growth Economy
- What is Sought in this Submission

## SUMMARY OF KEY ISSUES

Having observed Nelson’s councillors and officers in action on several occasions, it comes as no surprise that the consultation documents for the Long Term Plan 2015 - 2025 in the main do an excellent job integrating numerous diverse issues in a well-considered way.

Additionally the proposal takes some important steps down the path of environmental responsibility, and seeks to temper creative vision with fiscal prudence.

It is also fitting that the documents promote qualities such as creativity, stewardship, prudence and vision as characterising the Nelson identity.

In the context of this seemingly well-informed and responsible approach, it jars that in a few most important respects the consultation documents are enigmatic and quite out of keeping with the appealing image we have of ourselves. This risks the council team and the citizens of Nelson being cast together in a light that is very much at odds with the notion of Nelsonians as being enlightened and caring.

If this situation is accidental, as I fervently hope it is, then there is a straight forward remedy. If, however, it is not accidental, then a very much wider debate has been bypassed, and needs to be conducted before the proposed LTP is adopted.

These important matters are:

- The selective approach the documents take to heeding the widely consulted and far-reaching 50-year vision for our city captured in “Nelson 2060: Framing Our Future”.
- The troubling silence of the documents on the severe economic and social upheavals likely to accompany climate, ocean, and fossil fuel changes – and especially the very real prospect of conversion to a low-fossil-fuel economy within the life of the infrastructure strategy.
- A similar silence on the ethical imperatives to reduce our community’s greenhouse gas emissions.

A common theme of these is what seems avoidance of widely accepted views on the true state of our environment and on the urgency of decisive action on related matters. There also seems an LTP planning blind spot as to the ominous implications of these for all facets of our society.

Provided Council is of a mind to rectify these serious shortcomings, the remedy is simple, robust and can readily marry with the timeline for completion of the LTP. (See further below for an explanation.)

A further key issue is:

- Whether total reliance on a growth economy is prudent, and whether we should be exploring options for alternative ways of sustaining a healthy economy.



This might seem heretical, and there is no doubt that economic growth underpins our present approach to business and finance, but there are compelling reasons to gain an understanding of alternatives, and what would be required if we found we needed to transition to one of them. These reasons include:

The axiom that growth cannot be unending in a finite world, and thus raising the questions whether, in long term planning, consideration should be given to how we recognise, and prepare for, conditions that signify the end of viable growth.

That there is evidence that many of the resources that have underpinned historical growth might, indeed, be at the end of a viable growth state (e.g. some fisheries; accessible oil; agricultural phosphates).

That changes in our patterns of energy use (voluntary or forced) indicate we might struggle to sustain the level of activity we presently have, and predicate against ongoing growth.

#### WHAT HAPPENED TO “NELSON 2060: FRAMING OUR FUTURE “?

**“Nelson 2060” is, and should remain, the touchstone for our community’s future development.** It is a highly significant document, being the product of extensive consultation with significant expert review and, at the time of the last LTP, was in essence a 50-year strategic plan for Nelson.

It accepted practice for such strategic documents to be periodically strengthened through proper review and updating. It is thus concerning that, instead, the current LTP process dilutes and partially disregards “Nelson 2060”.

Council’s own website describes “Nelson 2060” as a vision of “where we want to be in the future,” and it is no accident that “Nelson 2060” was adopted by Council for incorporation into the 2012-2022 LTP. Hence the hope that it *is* accidental that key elements of “Nelson 2060” have slipped off the LTP radar. Otherwise the enigmatic nature of their omission is all the more serious, and all the more unflattering for Nelson, because the omission would then imply that :

Council believes a 10 year LTP should prevail over a 50 year strategic vision, or

the 2012 values and vision of the people of Nelson have so changed in 2015 that much of “Nelson 2060” should be disregarded, or

the inclusion of “Nelson 2060” as part of the previous LTP was an aberration that needed to be reversed, or

“Nelson 2060” is unworthy of the normal review and updating for such strategic documents (a double irony, of course, during the periodic review and updating of the Long Term Plan!).

None of the above 4 alternatives are acceptable, and the very least Nelsonians deserve are the reinstatement of “Nelson 2060” as a core document of the LTP, sound processes for its review and for the downstream inclusion of its goals in LTPs, and an explanation in of any alternative approach taken by Council on this matter.

Page 46 of “Nelson 2060” includes a vision statement which sets the bar at the highest level in environmental matters (“ecologically exemplary”). By way of example, the currently proposed LTP’s silence on fossil fuel abatement is in serious conflict with this vision.

Pages 12 to 33 outline ten goals that underpin the vision. Of these, 3, 5, 6, and 8 relate directly to environmental sustainability, and 4, 7 and 10 deal with related fields. However the proposed LTP 2015-2025 is silent on Goal 5 (becoming readily adaptable) and Goal 6 (moving away from fossil fuels), and fails to address many of the facets of the other Goals.

## PROPERLY CONSIDERING CLIMATE, OCEAN AND FOSSIL FUEL CHANGES

It is especially concerning that on these matters the consultation documents have been based on narrow and quite selective sources– especially the Ministry for the Environment guideline <http://www.mfe.govt.nz/climate-change/adapting-climate-change/adapting-sea-level-rise> - when they should be wide and all-encompassing. As such the consultation documents are unduly limited in their consideration, and fall short not only of prudent strategic planning, but also of the formal obligations of council in this is important regard. These obligations are set out in the local Government Act and include (my emphasis)

### **11A Core services to be considered in performing role**

- In performing its role, a local authority must have particular regard to the contribution that the following core services make to its communities:
  - (a) network infrastructure:
  - (b) public transport services:
  - (c) solid waste collection and disposal:
  - *(d) the avoidance or mitigation of natural hazards:*
  - (e) libraries, museums, reserves, and other recreational facilities and community amenities.

In defining “Natural Hazards”, the LGA adopts the same meaning as in the Resource Management Act, which is

- **natural hazard** means any atmospheric or earth or water related occurrence (including earthquake, tsunami, erosion, volcanic and geothermal activity, landslip, subsidence, sedimentation, wind, drought, fire, or flooding) the action of which adversely affects or may adversely affect human life, property, or other aspects of the environment

While the current consultation documents identify some measures to respond to sea level rise and to increasingly severe weather events, the responses to the more serious consequences (such as inundation of The Wood or Tahunanui) are complacent, general, and lacking any real sense of grasping the issues related to such catastrophic events. (e.g. p 11 of the Infrastructure Strategy: “No Nelson City Council infrastructure assets require further consideration in the period until the next strategy review (2018)” and the casual and sweeping generality that mitigation strategies will be “a combination of phased retreat, relocation and protection”).

There are, however, other environmental and energy issues that have massive social and economic implications for communities the world over, and the consultation documents are silent on these. These issues include:

- EROEI: Our society’s extreme dependence on fossil fuel (and oil especially), makes us especially vulnerable to the ongoing decline in “EROEI” (energy returned on energy invested). Study of dropping EROEI highlights how our current economy and lifestyle are hugely dependent on “discretionary energy” (what is left after we have used the energy needed to obtain our fuel in the first place, and then to run our essential services).

As the world runs out of easily-extracted oil, the energy costs of extracting less accessible oil dramatically reduce the discretionary energy available, and could well place us all in an “energy poverty” situation with many hardships that parallel those accompanying financial poverty.

This is a very real threat to our entire wellbeing, potentially biting within the 10 year period of the proposed LTP.

For more information on this serious, but less-well-known, threat, refer to (for example)

*Tim Morgan (as head researcher at international finance house Tullett Prebon); “Insight 9. Perfect Storm. Part 5. The Killer Equation.”*

<http://ftalphaville.ft.com/files/2013/01/Perfect-Storm-LR.pdf>

*Professor Susan Krumdieck, University of Canterbury School of Engineering.*

<https://www.youtube.com/watch?v=M9YRNqewGIY> and

<https://www.youtube.com/watch?v=3ccV1GubXJA>

- Atmospheric warming causing considerable shifts in climate as well as weather, changing the viability of many ecosystems and with potentially profound effects on agriculture, forestry, viticulture, pest and disease management and the like.

For example it is possible that the Nelson region will experience the sort of shifts in winegrowing that are forecast for Europe, such as by M Moriondo

and others in “*Projected Shifts in Wine Regions Response to Climate Change*”  
[http://www.sou.edu/assets/envirostudies/gjones\\_docs/Moriondo\\_etal\\_Climatic\\_Change\\_2013.pdf](http://www.sou.edu/assets/envirostudies/gjones_docs/Moriondo_etal_Climatic_Change_2013.pdf)

- Ocean warming and acidification: this has potentially profound effects on our marine-based industries may already be associated with the current bad season and staff layoffs being experienced by parts of the shellfish industry, and could have far-reaching consequences not only for the fishing and shellfish industries but also for the associated supporting business infrastructure. In parts of the world acidification has already caused severe problems. (refer <http://grist.org/food/2011-08-17-the-great-oyster-crash/> and many others).

## THE IMPERATIVE TO REDUCE FOSSIL FUEL USAGE

There is overwhelming evidence that the consumption of fossil fuels is a major contributor to global warming through the massive cumulative release of greenhouse gases. There is escalating evidence of the consequences of this, from the inundation of Pacific Islands, to the greatest wave of mass-extinctions since the dinosaurs. And there are clarion cries from responsible people and organisations around the world to halt the use of fossil fuels as rapidly as is humanly possible.

In this context, and especially as Goal Six of “Nelson 2060” focuses on moving away from fossil fuel usage, it is astonishing and embarrassing that the current LTP consultation documents are completely silent on this important issue. Even though we are a small regional economy, our bit does count. After all, the very problem from fossil fuel usage is the result of the accumulation of billions of small emissions.

In a moral sense the use of fossil fuels is in a similar category to once-accepted activities such as slavery and the trade in endangered species.

I find it bordering on the obscene that our proposed LTP has chosen to ignore this seminal and widely understood moral imperative.

On a more pragmatic note, Nelson is especially vulnerable to the consequences of global warming and thus, even out of pure self-interest, we should be taking whatever steps we can to avoid exacerbating the problem.

## FREEING US FROM TOTAL DEPENDENCE ON A GROWTH ECONOMY.

Challenging our dependence on a growth economy is nothing new – the seminal (and much-maligned) 1972 book “Limits To Growth” was a milestone in that. However arguments to at least better understand the alternatives are ever more compelling. Many of these are encapsulated in EROEI theory (refer examples cited above) and a 2008 CSIRO study has validated almost all of the dire and “discredited” predictions of “Limits to Growth”.

In response to my direct inquiry Dr. Krumdieck (an expert on EROEI - see above) responded:

“You want to make a submission that says that you want Nelson to take a long-term view, yes?”

In the past so far, cities and companies and national governments have taken on debt to invest in new infrastructure, on the assumption that there would be future growth that would produce larger revenue streams in the future so that the debt can be serviced. Now that we are basically at the peak in everything, future growth cannot be counted on to justify more debt for infrastructure. The only way to service debt will be to generate savings from here forward. So any investments now can't be in things that commit the economy to spending more on the energy or resources - especially imported oil

And councils should definitely not be spending any money on new parking or airports or new roads. ”

No doubt the above information is unpalatable, but it is from an authoritative source. We are clearly not in a position to instantly decouple from a growth-based economy. However the least we should as prudent planners is to take stock of the implications if that prophecy proves to be correct, and consider what our options might then be.

#### WHAT IS SOUGHT

As mentioned at the outset, provided Council is moved to address the oversight of the crucial matters described above have, then, the remedy is straight forward and robust. This remedy is not a “Get out of jail free” card, however, as it comes with a serious price tag (say \$1,500,000), but in terms of the LTP obligations of financial prudence, this price represents an investment of astonishingly good value.

**The primary response sought in the Long Term Plan, is a major commitment by Council to equip Nelson to properly address major issues, such as those identified above, in the *next* 2018-2028 Long Term Plan.**

This will entail:

1. Appointing a well-resourced and competent team to obtain, analyse and evaluate available information, to consider in depth its implications for the Nelson Region, and to make recommendations to Council on a prudent response. This will notionally need to be completed by late 2016 to enable due consideration and then incorporation in the LTP 2018-2028
2. To engage with Nelson’s citizens and stakeholders in terms of “Nelson 2060” with a view to updating that document and promoting discussion of, and assimilating, relevant findings from 1 above.

3. Fostering an environment of informed debate within Council itself and also in the broader community so that when it is necessary to deliberate on potentially difficult decisions, there is a suitably prepared environment to face up to those choices.

This process is so fundamentally important to the wellbeing of Nelson in the future that team tasked with seeing it through must be exclusively focussed on this matter and not an existing team that has this added to its brief.

In terms of the suggested funding for this project, the notional \$1,500,000 mentioned above is an approximate allowance for two full-time staff for three years plus a range of other disbursements, consultation etc. While some may baulk at the figure of \$1.5 m I suggest that this is seen in comparison with, say, the \$500,000 allocated for a single rugby game, or the other sums described in the consultation documents for a range of other activities.

In pragmatic terms, \$1.5 m over 3 years is equivalent to approximately 3 cups of coffee per Nelsonian per year.

Whichever way it is viewed, this is a meagre price to ensure that these portentous decisions are well-made in terms of some of the biggest issues ever to face our region.

Additionally, I most strongly consider Council should ensure this LTP incorporates a strong commitment to seek ways to rapidly reduce our usage of fossil fuels in the Council activities specifically and also in the community at large, and that this is supported by an ongoing programme of active engagement of all of the council team in seeking ways to achieve that.

Finally, I urge council to also set in train a process to evaluate the implications of our commitment to a growth economy. This could, for example, take the form of a lesser version of that described just above in regard to environmental and fossil fuel issues, also with a view to reflecting the outcomes in the next LTP.

Thank you.

Fig. 5.14: High EROEI

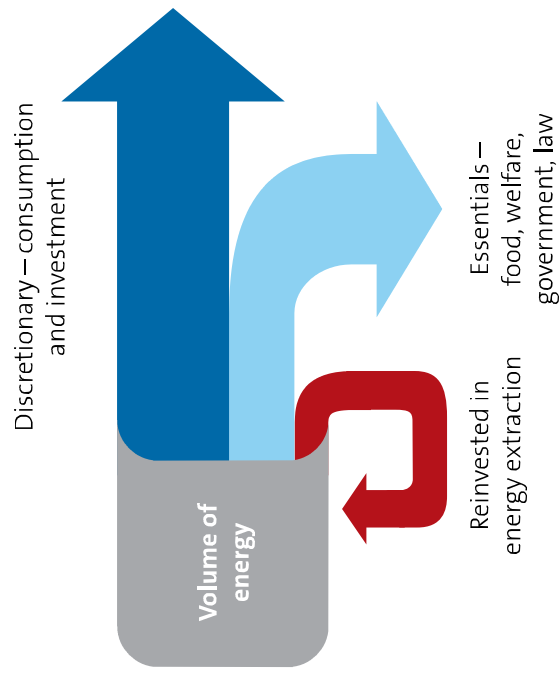
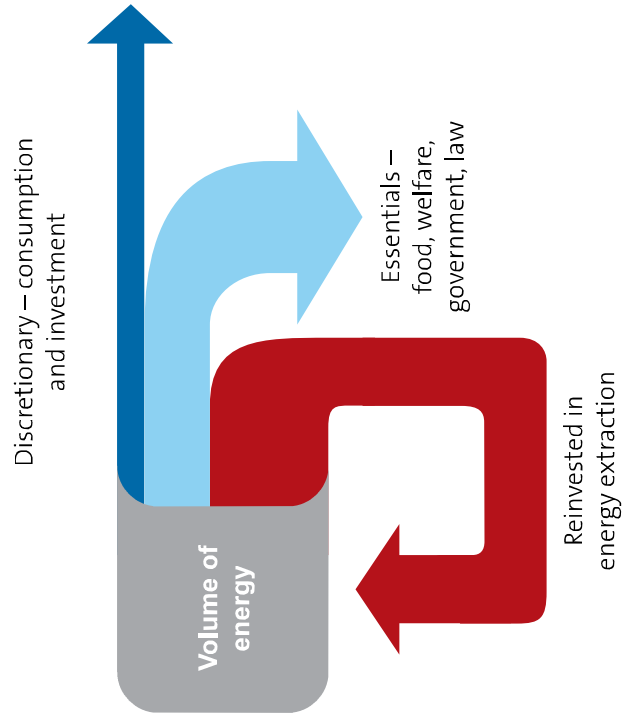
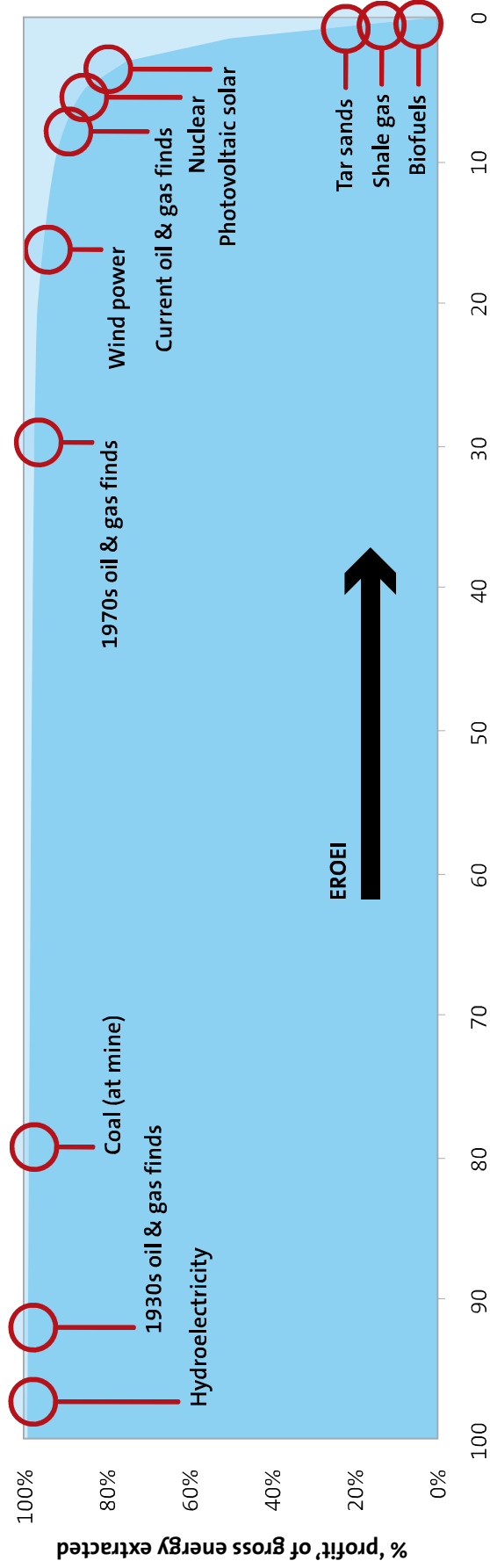


Fig. 5.15: Low EROEI



\* Source: Tullett Prebon estimates, see text

Fig. 5.12: EROEI and energy sources\*



\* Source: Tullett Prebon, see text



**Natascha Van Dien**

---

**From:** Submissions  
**Sent:** Tuesday, 28 April 2015 11:04 a.m.  
**To:** Administration Support  
**Subject:** FW: Submission to NCC LTP 2015-2025  
**Attachments:** Submission to NCC LTP 2015 - 2025.pdf

**Follow Up Flag:** Follow up  
**Flag Status:** Completed

**Categories:** Natascha, Bev, Long Term Plan 2015

-----  
**From:** Teresa Eddy[SMTP:TERESA@EDA.CO.NZ]  
**Sent:** Tuesday, April 28, 2015 11:04:06 AM  
**To:** Submissions  
**Cc:** Bill Findlater  
**Subject:** Submission to NCC LTP 2015-2025  
**Auto forwarded by a Rule**

Good morning,

Please find attached a submission from EDA to NCC for LTP 2015-2025.

Kind regards

**Teresa Eddy**  
Office Manager



PO Box 370  
Millers Acre Centre  
39 Halifax Street  
Nelson  
Tel 03 545 6858  
**DDI 03 923 2052**  
email [teresa@eda.co.nz](mailto:teresa@eda.co.nz)  
[www.eda.co.nz](http://www.eda.co.nz)

This e-mail message, together with any attachments, is for the intended recipient only and may not be disclosed to any other person. If you are not the intended recipient and you have received or seen this message through an error, please notify the sender immediately and delete the email from your system. Unauthorised use or disclosure of the message, or the information it contains, may be unlawful.



P.O. Box 370,  
Nelson 7040,  
New Zealand

Telephone: +64 3 545 6858  
Email: [info@eda.co.nz](mailto:info@eda.co.nz)  
Web: [www.eda.co.nz](http://www.eda.co.nz)

29 April 2015

Thank you for the opportunity to submit to the Nelson City Council Long Term Plan 2015 – 2025.

The Nelson Regional Economic Development Agency (EDA) wishes to comment on the following points:

- The EDA believes Nelson City Council (NCC) should continue to support Tasman District Council (TDC) in its planning for the Waimea Community Dam.

Two Economic Assessment Reports commissioned by the EDA demonstrate significant potential economic benefit to the region that could result with a guarantee of water availability. The reports indicate a negative effect to the region if a dam is not constructed.

The document, Regional Prosperity, the Economic Development Strategy for the Nelson Tasman Region released in 2014 recommends the initiative:

*Advance the construction of the Waimea Dam*

*The dam is vital to the region's economic future. If it does not proceed, current water allocations to rural and industrial users across Waimea Plains and Richmond will need to be reduced, which will result in a significant impact on the regional economy.*

- The EDA commends NCC for its continued support of economic development for the region and for its desire to improve regional economic outcomes.
- The EDA supports NCC's bid to host a match in the 2017 British and Irish Lions Tour.

Yours faithfully

Bill Findlater  
Chief Executive

**Natascha Van Dien**

---

**From:** Submissions  
**Sent:** Tuesday, 28 April 2015 1:31 p.m.  
**To:** Administration Support  
**Subject:** FW: Submission on Long Term Plan 2015-25  
**Attachments:** Submission on Consultation Document for Nelson Long Term Plan 2015-25.pdf

**Importance:** High

**Follow Up Flag:** Follow up  
**Flag Status:** Completed

**Categories:** Natascha, Melissa, Long Term Plan 2015

-----  
**From:** Lionel Solly[SMTP:LSOLLY@DOC.GOV.NZ]  
**Sent:** Tuesday, April 28, 2015 1:30:39 PM  
**To:** Submissions  
**Subject:** Submission on Long Term Plan 2015-25  
**Importance:** High  
**Auto forwarded by a Rule**

A submission by the Minister of Conservation is attached. I apologise for missing the 12 o'clock deadline; I hope it's not too late to be considered.

Regards

**Lionel Solly**  
Ranger, Partnerships - *Kaitiaki Manutātaki*  
Department of Conservation - *Te Papa Atawhai*  
DDI: +64 3 546 3162 | VPN: 5062

**Whakatū/Nelson Office**  
Monro State Building, 186 Bridge Street, Nelson 7010 | Private Bag 5, Nelson 7042

**Conservation for prosperity *Tiakina te taiao, kia puawai***

**[www.doc.govt.nz](http://www.doc.govt.nz)**

Caution - This message and accompanying data may contain information that is confidential or subject to legal privilege. If you are not the intended recipient you are notified that any use, dissemination, distribution or copying of this message or data is prohibited. If you received this email in error, please notify us immediately and erase all copies of the message and attachments. We apologise for the inconvenience. Thank you.



SAG-03-61-02  
DOC-2223394

28 April 2015

Consultation  
Nelson City Council  
PO Box 645  
Nelson 7040

By email: [submissions@ncc.govt.nz](mailto:submissions@ncc.govt.nz)

Dear Sir or Madam

**Consultation Document for Nelson's Long Term Plan 2015-2025**

On behalf of the Minister of Conservation (the Minister) I thank the Nelson City Council for the opportunity to submit on the Consultation Document for Nelson's Long Term Plan 2015-2025 (the Consultation Document).

Submissions on the Consultation Document are appended to this letter.

The Minister does not wish to be heard. However, if you wish to discuss any of the submission points, prior to any hearing, please contact Lionel Solly in the first instance on 546 3162 or [lsolly@doc.govt.nz](mailto:lsolly@doc.govt.nz).

Yours faithfully

Mark Townsend  
Conservation Services Manager, Motueka  
Pursuant to delegated authority

Encl.

## Local Government Act 2002

To: Nelson City Council

Submission on: Consultation Document for Nelson's Long Term Plan 2015-2025

Name: Minister of Conservation

Pursuant to section 83 of the Local Government Act 2002, I, Mark Townsend, Conservation Services Manager, acting upon delegation from the Minister of Conservation, make the following submissions in respect of the above.

---

### Issue 4 Partnerships

#### Nelson Nature

I support Council's proposals for the Nelson Nature Biodiversity Management Programme, and the funding allocated for this programme.

I also support the separate submission lodged by the Nelson Biodiversity Forum in respect of this matter.

The Department of Conservation (DOC) has engaged with Council, both as a member of the Nelson Biodiversity Forum and separately, to help develop the Nelson Nature programme. The projects that are included in the programme have emerged from that process, support the objectives and priorities identified in the Nelson Biodiversity Strategy, and will have significant benefits for Nelson's biodiversity. I commend Council for its initiative and commitment in advancing this ambitious programme of work.

I understand that Nelson Nature (and the associated funding) is separate from, and additional to, the Project Maitai/Mahatahi programme that was initiated last year; and that the draft Long Term Plan also makes provision for continued funding of Project Maitai/Mahatahi.

I support continued funding for projects to improve the health of the Maitai River, as provided for under Project Maitai/Mahitahi; and again commend Council for taking the lead on this work. The Nelson Biodiversity Strategy identifies "*Pursuing ecological restoration of the Maitai River and its riparian margins*" as one of the four highest priorities for action in 2013-2016.

DOC will continue to work with Council to provide advice and support for the Nelson Nature Biodiversity Management Programme, and Project Maitai/Mahitahi, as individual projects are developed and implemented.

I also encourage Council to consider opportunities for collaboration with DOC more generally, particularly in respect of matters relating to natural heritage, historic heritage, and outdoor recreation.

Areas of actual (current) or potential (future) collaboration include:

- (i) Plant and animal pest control, both on and off on public conservations lands and waters;
- (ii) Biosecurity planning and management (including incursion response);
- (iii) Biodiversity monitoring and reporting;
- (iv) Provision of advice and support for community conservation groups and the public generally;
- (v) Conservation education and advocacy activities, e.g. bird aversion training for dogs in areas where vulnerable species (e.g. weka) are present;
- (vi) Provision of 'Open Space' and facilities (e.g. tracks, toilets, huts and campsites) that offer a range of outdoor recreational opportunities.

Some of these opportunities for collaboration will flow from the Nelson Nature programme. Others may best be explored at regional scale with Tasman District Council (as already occurs in respect of the Regional Pest Management Strategy), iwi, and other strategic partners.

---

## **Issue 5 Strong Economy**

### Waimea Community Dam

One of the core objectives of the Waimea Community Dam (the Dam) is to augment river flows in the Waimea River. The augmented flows will lead to:

- (i) Protection (and enhancement) of instream ecological values by maintaining habitat availability throughout the Wairoa/Waimea Rivers at or above the level that would be expected without any water abstractions in most years;
- (ii) A net benefit to most fish species (including eels, torrentfish, koaro, upland bully and trout) and food producing habitat in response to increased minimum flows in the waterways below the Dam; and
- (iii) Improvement of the fishery values and recreational opportunities in the Waimea River.

Specifically, the Dam will provide for an improved minimum flow of 1100 l/sec in the Waimea River at Appleby, and an increase in the security of that minimum flow. This minimum flow will facilitate the enhancement of the instream ecological values by increasing the available habitat.

DOC has been represented on the Waimea Water Augmentation Committee (WWAC) since WWAC was formed in 2003. As a member of WWAC, DOC has participated in the collaborative process that has led to this proposal, and supports the Dam in principle.

Nevertheless, I acknowledge that the Dam raises significant challenges in respect of affordability and funding. These are rightly matters for Council and the community to decide through this consultation on the draft Long Term Plan for 2015-2025.

I do not wish to be heard in support of this submission.

Dated at Nelson this 28<sup>th</sup> day of April 2015



Mark Townsend  
Conservation Services Manager, Motueka  
North & Western South Island Region

Acting pursuant to delegated authority

Address for service: Department of Conservation  
Whakatū / Nelson Office  
Private Bag 5  
Nelson 7042

Attn: Lionel Solly

## **Appendix 1 Information about public conservation lands and waters in Nelson**

The Department of Conservation (DOC) administers approximately 14 per cent of the total land area of Nelson City. Areas administered by DOC include Mt Richmond Forest Park, the Boulder Bank Scenic Reserve, Cable Bay Recreation Reserve and Albion Square Historic Reserve. DOC also administers the Horoirangi Marine Reserve, between Glenduan and Cable Bay.

These areas have significant natural and/or cultural heritage values; are used and valued for a range of recreational activities; provide many indirect but economically and socially important benefits; and are important elements of Nelson's landscape.

In managing these areas DOC appreciates the positive and constructive relationship it has with Nelson City Council. DOC also welcomes Council's ongoing support for, and commitment to, the Nelson Biodiversity Strategy and associated Biodiversity Forum. DOC is keen to maintain and strengthen its relationship with Council, and to explore further opportunities for collaboration that deliver better conservation and recreation outcomes within Nelson City, and the region as a whole.



**Natascha Van Dien**

---

**From:** Submissions  
**Sent:** Tuesday, 28 April 2015 3:27 p.m.  
**To:** Administration Support  
**Subject:** FW: Submission to the LTP  
**Attachments:** NCC\_LTP submission.docx

**Importance:** High

**Follow Up Flag:** Follow up  
**Flag Status:** Completed

**Categories:** Natascha, Melissa, Long Term Plan 2015

-----  
**From:** Customer Service Team  
**Sent:** Tuesday, April 28, 2015 3:26:29 PM  
**To:** Submissions  
**Subject:** FW: Submission to the LTP  
**Importance:** High  
**Auto forwarded by a Rule**

---

**From:** Emma Thompson - etc. communications [<mailto:emma@etcnz.nz>]  
**Sent:** Tuesday, 28 April 2015 3:05 p.m.  
**To:** Council Enquiries (Enquiry)  
**Subject:** Submission to the LTP  
**Importance:** High

Hi <<...>>

Please find attached a submission to the LTP.

Kind regards

Emma

[www.etcnz.nz](http://www.etcnz.nz)

Level 1, 58 Buxton Square, Nelson

Day: 03 545 6122

After hours: 03 546 9877

Mobile: 021 190 1533

*Great things happen from Nelson!*

**SUBMISSION: Nelson City Council LTP 2015/25**

**From etc communications ltd**

Level 1, 58 Buxton Square, Nelson

03 545 6122

---

**5. Strong Economy**

**Economic Development Services**

Like Council, etc communications ltd believes Nelson is the best place in New Zealand to do business and raise a family. We want more New Zealand and international families to know this too, so that our economy can grow in order for us to provide more for our residents; greater community good, greater sustainability, more choices, more vibrancy, and more opportunities.

In order to achieve growth, etc communications believes in a joined up approach with the right investment, and so supports the review of Nelson Tasman Tourism and the Nelson Regional Economic Development and can see great merit in these organisations being brought together.

Rather than follow how others do it, with the current CCO review, we now have the perfect chance for Nelson to create an innovative model that is right for our unique region. Now is the time to create an economic development / recruitment strategy that supports both our traditional and young industries, and provides a platform so we are ready to grow the currently unknown sectors when they emerge in the future. (By recruitment strategy we mean a targeted plan to more proactively encourage businesses to relocate here, choose Nelson services and products, as well as continuing the current destination marketing activities).

Meanwhile, at a recent conference in Auckland (Project 15), the very clear message was that New Zealand was in danger of being left behind through poor digital infrastructure and a lack of understanding about digital education. This is also very true of Nelson. The spirit behind Gigatown Nelson shows we have a huge desire to leverage the infrastructure once it is here, but we still have a long way to go to build the capability of Nelsonians to truly harness technologies. We believe:

- ❖ The facilitation role for the work needed sits best with the EDA in the form of a private/public partnership with Council support.
- ❖ Investment is made in a part time or full time FTE charged with driving the region's digital strategy (see Whanganui District Council as an example)

Meanwhile, the change in Auckland's ethnic population mix means Nelson needs to rethink how we are talking to Auckland, if we are to continue to sell our products, services and destination to the residents of New Zealand's biggest city. The 2013 Census shows that 23% of Auckland's population is Asian, while Statistics New Zealand predicts Auckland will be home to 65% of New Zealand's Asian population in 2021. We believe:

- ❖ The EDA continues to be the best regional agency to continue to open the door into China for Nelson businesses, and to work with Auckland's Asian communities to do the same, and this work requires ongoing funding from and collaboration with Council.

The evolving media sector has also started to impact Nelson, as media groups change their strategies to focus on content, rather than news. Without our inspirational business stories being proactively told within and beyond our borders, our 'share of voice' will be diminished.

For example, Nelson is building to become an even greater aviation hub, our engineering and marine clusters are proving to be inventive and world-class, Innovate has now started operations out of the NMIT, the Gigatown Nelson campaign shook out some inspiring leaders in the digital space, greater inroads into international export markets have been made... and more.

We are doing many incredible things in this region that we feel are important to make some noise about! If no-one outside of our region hears about Nelson, they will not come here or do business here. An initial strategy for this has been created and is ready for implementation. We believe:

- ❖ It is crucial that the EDA, in partnership with the business sector and our leading organisations, such as the Cawthron and NMIT, drives strategic communications to reach families (for inward migration) and businesses (for uptake of products and services). This project, again, requires investment if it is to make a difference.
- ❖ It is likewise important that the years of marketing done by Nelson Tasman Tourism does not lose momentum, or else our regional competitors, who are very competitive, will take our share of tourists.

This submission briefly raises just a few contextual elements within which Nelson does business. These alone, we believe, mean that Nelson needs to think digital in everything we do, we need to continue to actively implement a strategy to support organisations wanting to do business in China and in Auckland, and we need to increase our own communications into our key markets – on behalf of both the business and tourism sectors.

In summary, etc communications supports Council's continued funding of economic development and destination marketing at the same level as last year through a new dynamic organisation charged with actioning the necessary strategies that ensure we don't lose our place.

etc communications does not support the combination of Uniquely Nelson into this new organisation, as its mandate does not fit with that of the others, which have broader regional purposes.

*Disclaimer: Over the years etc communications has worked with both Nelson Tasman Tourism and the Regional Nelson Economic Development Agency. Consultancy director, Emma Thompson is also an honorary Board Member of Uniquely Nelson.*

**Natascha Van Dien**

---

**From:** Submissions  
**Sent:** Tuesday, 28 April 2015 3:42 p.m.  
**To:** Administration Support  
**Subject:** FW: So sorry it's a bit late - but fingers crossed you will still consider my submission...  
Many thanks!

**Follow Up Flag:** Follow up  
**Flag Status:** Completed

**Categories:** Natascha, Sophie, Long Term Plan 2015

-----  
**From:** Louise Douglas[SMTP:LOUISEDOUGLAS@MAC.COM]  
**Sent:** Tuesday, April 28, 2015 3:41:44 PM  
**To:** Submissions  
**Subject:** So sorry it's a bit late - but fingers crossed you will still consider my submission... Many thanks!  
**Auto forwarded by a Rule**

**Subject: Your Draft Long Term Plan Submission**

Thank you for your submission. If you have indicated you wish to speak to your submission we will make contact with you before 6th May 2015 (at the latest), to arrange a time. If you have any questions, please contact Elly Fleming [Elly.Fleming@ncc.govt.nz](mailto:Elly.Fleming@ncc.govt.nz)

**Name:**

Louise Douglas

**Organisation represented (if applicable):**

**Louise Douglas Jewellery**

**Address:**

117 Nile Street

**Daytime phone:**

744 3143

**Email:**

[lou@louisedouglas.com](mailto:lou@louisedouglas.com)

**Do you wish to speak in support of your submission at the public hearings?**

No

**If yes, would you like to attend an evening session?**

No

**My submission is: (please ensure you clearly state the issue or project (s) you are submitting about):**

I have concerns about the proposed big box retail development next to Mitre10. I worry it will have a huge impact on our town centre. Our vibrant and appealing town centre is what attracts people to live here and visit. We need protect this vital asset and not "sell out" to large corporations while our local and creative businesses are fighting to stand out and keep downtown unique and interesting. I lived in The USA for over 15 years and a town like ours is a very scarce sight. Many say it's because Walmart builds on the fringe of these struggling towns and kills the centre. We are already seeing some signs of this in Nelson since the opening of Kmart.

Good luck and my many thanks.

**Would you like to upload a file in support of your submission?**

No

**How did you find out about the Consultation Document and Council's 10 Year Plan?**

Web site

**Would you like to be contacted by email with future Council feedback opportunities?**

Yes

# NELSON CITY COUNCIL PUBLIC CONSULTATION SUBMISSION FORM

**WE WANT YOUR OPINION.  
PLEASE TELL US WHAT YOU THINK.**

Please type or print clearly. Remember to read the submission writing guidelines before starting.

28 APR 2015

NELSON CITY COUNCIL  
Customer Service

Name Marty Miller Organisation represented (if applicable) me  
Address PO Box 5091 Port Nelson 7043  
Daytime phone 022 011 8991 Email marty.miller22@gmail.com

Do you wish to be heard in support of your submission?  Yes  No # of pages 1  
*If you do not tick either, we will assume you do not wish to be heard.*

If yes, would you like to attend an evening session?  Yes  No

**Public information:** All submissions (including the names and contact details of submitters) are public information and will be available to the public and media in various reports and formats including on the Nelson City Council website. Personal information will also be used for administration relating to the subject matter of submissions. Submitters have the right to access and correct any personal information included in any reports, information or submissions.

My submission is: Hello - Thank you for the opportunity to make a submission.

I bicycle daily from Poynters Cross into the CBD and return.

I notice varying amounts of litter along the footpath and street. When it rains, like during this past weekend, the litter is washed away down into the storm drains. Most often, the various bottles, aluminum cans and fast food packaging clog or get caught on the storm water grates - They jam up with organic debris - the ability of the stormwater to drain away. Also the litter that is washed away sometimes ends up on Tahunanui Beach & other world known local beaches

Please attach additional sheets if needed.

Date 28/4/15  
Signature Marty Miller  
1130 hrs

Office Use Only	
File Ref	Submission Number
Page	Initials
ENV	135

# NELSON CITY COUNCIL PUBLIC CONSULTATION SUBMISSION FORM

**WE WANT YOUR OPINION.  
PLEASE TELL US WHAT YOU THINK.**

*Please type or print clearly. Remember to read the submission writing guidelines before starting.*

Name CARL HORN Organisation represented (if applicable) —

Address 2-9 ABRAHAM HEIGHTS, NELSON

Daytime phone 539-1108 Email carl.horn.nelson@gmail.com

Do you wish to be heard in support of your submission?  Yes  No # of pages 3

If you do not tick either, we will assume you do not wish to be heard. **ONLY IF COUNCIL WISHES TO QUESTION ME**  
If yes, would you like to attend an evening session?  Yes  No

**Public information:** All submissions (including the names and contact details of submitters) are public information and will be available to the public and media in various reports and formats including on the Nelson City Council website. Personal information will also be used for administration relating to the subject matter of submissions. Submitters have the right to access and correct any personal information included in any reports, information or submissions.

My submission is: \_\_\_\_\_

PLEASE SEE ATTACHED SUBMISSION.

RECEIVED

29 APR 2015

NELSON CITY COUNCIL

*Please attach additional sheets if needed.*

Date

28 APR '15

Signature

Carl Horn

Office Use Only			
		Submission Number	
File Ref		Initials	

SUBMISSION to the NELSON CITY COUNCIL  
about its LONG TERM PLAN 2015 – 2025

**SUBMISSION**

to the

**NELSON CITY COUNCIL**

about its

**LONG TERM PLAN 2015 – 2025**

As a resident and a ratepayer, I appreciate this opportunity to provide my comments about the Nelson City Council's Long Term Plan for the years 2015 to 2025.

**GROWTH**

The Mayor, in her foreward, states:

*"We are indeed fortunate to live in an attractive, growing region that people are proud to call home."*

I am compelled to immediately respond to the word "growing". Its use in this context undoubtedly refers not to sustainable prosperity, not to territorial growth, but to population growth and especially economic growth.

Economic growth is inextricably linked to population growth. Nelson experienced such growth during the 19<sup>th</sup> and 20<sup>th</sup> centuries. But now, considering the geography of Nelson and the current distribution and density of its population, I have a strong suspicion that the attractiveness of Nelson as a place to call home is now becoming increasingly inversely proportional to the size of the population. Attracting more people won't make Nelson a more pleasant place to live. On the contrary, a continuously increasing population will make Nelson continuously less attractive as a place to live. I am sure that there are no Nelsonians who would be happy to import the congestion of Auckland.

What we should be seeking is sustainable prosperity. The Framing Our Future document gives an insight into how Nelsonians would like Nelson to look in the future.

Carl Horn  
539-1108  
[carl.horn.nelson@gmail.com](mailto:carl.horn.nelson@gmail.com)

27 April 2015

Page 1 of 3



SUBMISSION to the NELSON CITY COUNCIL  
about its LONG TERM PLAN 2015 – 2025

Economic growth and prosperity are not synonymous. As Naomi Klein states on page 91 of her recent book, "This Changes Everything: Capitalism vs. The Climate":

*"We will need comprehensive policies and programs that make low-carbon choices easy and convenient for everyone. Most of all, these policies need to be fair, so that the people already struggling to cover the basics are not being asked to make additional sacrifice to offset the excess consumption of the rich. That means cheap public transit and clean light rail accessible to all; affordable, energy-efficient housing along those transit lines; cities planned for high-density living; bike lanes in which riders aren't asked to risk their lives to get to work; land management that discourages sprawl and encourages local, low-energy forms of agriculture; urban design that clusters essential services like schools and health care along transit routes and in pedestrian-friendly areas; programs that require manufacturers to be responsible for the electronic waste they produce, and to radically reduce built-in redundancies and obsolescences."*

I like to think that the Nelson City Council will do its best to take Nelson into a sustainable zero-carbon-emissions future with growing sustainable prosperity, not just 'business as usual'.

## **CLIMATE CHANGE**

I am dismayed to find no reference in the Consultation Document to the mitigation of climate change.

The Mayor, in her foreward, states:

*"We can't stop the extreme weather events hitting us – but we can be better prepared."*

I agree that it certainly seems that world governments are unlikely to prevent a significant increase in global temperatures with the dire consequences to our world's climate. But that's not to say the Nelson City Council can't do anything.

I support much effort and funds being allocated to preparing for a significant rise in sea level and an increasing number of weather events. This activity will be as important, if not more important, than many of the

SUBMISSION to the NELSON CITY COUNCIL  
about its LONG TERM PLAN 2015 – 2025

other Council activities, like footpaths, the quality of our roads, and sports grounds.

In this context, having studied the recent book "This Changes Everything: Capitalism vs. The Climate" by Naomi Klein, a history and analysis of climate change, I recommend that the Council purchase a sufficient number of Naomi Klein's "This Changes Everything" to give a copy to each Councillor and each Head of Department, and to provide a sufficient number of copies for all staff to borrow. I consider this book to be essential reading for all those making and administering public policy.

I strongly recommend that the Council consider the climate change consequences of every decision it makes, and that it act in a conservative manner with high regard to the principle of precaution.

For example, tourism is a luxury, not an essential activity. Because it contributes to global fossil carbon emissions, especially if the tourists are from overseas, I strongly recommend that Nelson reduce its promotion of tourism to zero during the next five years.

## LAND USE

Because the production of food will become increasingly critical as climate change and other pressures affect agriculture, I strongly recommend that the Council prohibit the use of the remaining arable land in its jurisdiction for anything other than agriculture, certainly not for housing development or any other kind of development. That should take effect immediately.

I will leave this submission at that, mainly because of lack of time.

Sincerely,



Carl Horn  
2 - 9 Abraham Heights  
Nelson  
New Zealand  
7010

64-3-539-1108 (home)  
64-21-293-4090 (mobile)  
[carl.horn.nelson@gmail.com](mailto:carl.horn.nelson@gmail.com)

Carl Horn  
539-1108  
[carl.horn.nelson@gmail.com](mailto:carl.horn.nelson@gmail.com)

27 April 2015

Page 3 of 3

RECEIVED

28 APR 2015

Submission 554  
Cat 6

Nelson City Council Public Consultation Submission form

The Nelson City Council wants your opinion.  
Please tell us what you think.

NELSON CITY COUNCIL  
Customer Service

Please type or print clearly. Remember to read the submission writing guidelines (over) before starting.

Office Use Only			
		Submission Number	
File Ref		INITIALS	

Name Marty Miller

Daytime phone 022 011 8881 martymiller22@gmail.com

Address PO Box 5091 Port Nelson 7043

Organisation represented (if applicable) \_\_\_\_\_

Do you wish to be heard in support of your submission?  YES  NO # of pages

\_\_\_\_\_ If you do not tick a box we will assume you do not wish to be heard.

Public information

Submissions to Council consultation are public information. Your submission will be included in reports, which are available to the public and the media.

The consultation/proposal my submission relates to:

Have your Say

My submission is:

I bicycle across the Court Down Halifax Street parking lot on a daily basis on my journey to the RCC library (contiguous).

There is always a large amount of litter that originates from C-Downs area of responsibility - the parking lot & loading bays.

I have, quite often, seen the litter blow away in all directions - according to the prevailing wind.

Sometimes this litter ends up in the Maitai River.

I have never seen a C-Down employee picking up litter! What can we do?

Date 28/4/15  
1145hrs

Signature Marty Miller

Help with making a submission overleaf...



PO Box 645 • Nelson 7040 • 03 546 0200  
www.nelsoncitycouncil.co.nz

1063272 • May 2013

# NELSON CITY COUNCIL PUBLIC CONSULTATION SUBMISSION FORM

**WE WANT YOUR OPINION.  
PLEASE TELL US WHAT YOU THINK.**

*Please type or print clearly. Remember to read the submission writing guidelines before starting.*

Name JUNE MARIE ORR Organisation represented (if applicable) \_\_\_\_\_

Address 14 TAUPATA STREET, STOKE, NELSON 7011

Daytime phone 03 5473022 Email \_\_\_\_\_

Do you wish to be heard in support of your submission?  Yes  No # of pages \_\_\_\_\_  
*If you do not tick either, we will assume you do not wish to be heard.*

If yes, would you like to attend an evening session?  Yes  No

**Public information:** All submissions (including the names and contact details of submitters) are public information and will be available to the public and media in various reports and formats including on the Nelson City Council website. Personal information will also be used for administration relating to the subject matter of submissions. Submitters have the right to access and correct any personal information included in any reports, information or submissions.

My submission is: IS TO HAVE A COMPLETE BAN ON THE USE OF FIREWORKS BY THE GENERAL PUBLIC IN OUR REGIONS. GUY FAWKES IS AN ARCHAIC PRACTICE AND IS BANNED IN MOST PARTS OF AUSTRALIA. IN PAST YEARS FIREWORKS HAVE CONTINUED FOR WEEKS AFTER THE 5TH. OF NOVEMBER. THERE ARE NOW MORE BUILDINGS IN CLOSE PROXIMITY TO EACH OTHER AND THE LETTING OFF OF FIREWORKS IN BACKYARDS, FRONT GARDENS, WHATEVER IS NO LONGER SAFE. ADVERSE EFFECTS... FIRES, ACCIDENTS (HOSPITAL ADMISSIONS) ANIMALS PERTRIIFIED, ALSO THE WILD LIFE, BIRDS ETC. MY SISTER WAS ATTENDING TO HER HORSES AT 88 VANEY WHEN HER HORSES WERE SPOOKED BY FIREWORKS.

*Please attach additional sheets if needed.*

Date 27/4/2015

Signature J. Orr

Office Use Only	
RECEIVED	
28 APR 2015	
NELSON CITY COUNCIL	
File Ref	Initials

2

LUCKILY THAT TIME MY SISTER WAS NOT INJURED.  
THE HEALTH OF SOME PEOPLE IS AFFECTED, ANXIETY,  
SLEEP DEPRIVATION AND ANXIETY OF POSSIBLE HOUSE FIRES

THE HAZARDOUS SUBSTANCES AND NEW ORGANISMS  
ACT. (HSNO ACT) AMENDMENTS WERE MADE IN 2007  
WHICH INCLUDED REDUCING THE SALE PERIOD TO  
THREE DAYS AND LIMITING THE NOISE LEVEL  
OF FIREWORKS.

THE NEW ZEALAND BILL OF RIGHTS SHOULD  
INCLUDE THOSE WHO WANT THE BANNING  
OF FIREWORKS.

A PUBLIC DISPLAY AT A VENUE LIKE THE  
OPERA IN THE PARK WHERE PROPER SAFETY  
IS CARRIED OUT, COULD BE AN ALTERNATIVE.

JUNE MARIE ORR  
14 TAUPATA ST.,  
STOKE,  
NEHSON 2011