

**IN THE MATTER** of the Resource Management Act 1991

**AND**

**IN THE MATTER** of Proposed Plan Change 18 of the Far North District  
Plan

**AND**

**IN THE MATTER** of Proposed Plan Change 131 of the Whangarei District  
Plan

**JOINT HEARING OF SUBMISSIONS BY COMMISSIONERS OF THE FAR  
NORTH AND WHANGAREI DISTRICT COUNCILS**

---

**EVIDENCE OF VERNON RICHARD CROSS WARREN  
ON BEHALF OF  
SOIL & HEALTH ASSOCIATION OF NEW ZEALAND INCORPORATED AND  
14 OTHER SUBMITTERS**

**DATED: 24 May 2016**

---

## SUMMARY OF EVIDENCE

- a) In relation to Jurisdiction, I rely on the Environment Court decision in *Federated Farmers of New Zealand v Northland Regional Council* [2015] EnvC 89. In addressing the GMO topics and issues I have relied on provisions of the Resource Management Act 1991 (the Act, or RMA) and resource management principles.
- b) There is potential for GMOs to benefit mankind. However, there is scientific uncertainty, strong community concern from a cultural and effects point of view, a risk of GMO escape into the general environment leading to significant environmental, economic social and cultural adverse effects. Some effects may be irreversible.
- c) There is a community as well as an RMA expectation that in such circumstances a precautionary approach should be taken in the District Plan provisions.
- d) Potential effects of outdoor use of GMOs is one of low probability but significant adverse effects on the environment and fall within the definition of effect under s.3 of the Act.
- e) The range of potential adverse effects arising from outdoor use of GMOs would be contrary to Part 2 of the Act including:
  - Both the enabling and management of effects parts of the definition of sustainable management in s.5;
  - Sections 7(b), (f) and 7(g)
- f) A precautionary approach to GMOs will assist the Councils in fulfilling their functions under s31 of the Act because potential adverse effects can be of district (as well as regional) significance. A balanced and integrated approach to the management of effects of the use, development and protection of district will be assisted by a precautionary approach and will help to ensure that district land use patterns and resources including organic production are properly taken into account.

g) For these reasons, the proposed provisions of the District Plans in relation to the outdoor use of GMOs is considered to be an appropriately precautionary approach including:

- The context (FNDP) and description and expectations (WDP) provide a balanced summary of the potential benefits and risks of GMO use and the expected results of the proposed regulation set out in the PCs.
- The objectives and policies present a balanced view of risk, and provide for adaptive responses to allow for changes in science and information levels over time, but cautiously reducing risk in the present.
- The proposed rules are supported as appropriate implementation of the objectives and policies; and
  - making release of GMOs for outdoor use a prohibited activity is supported;
  - provision for bonds to make consent holders be financially responsible for monitoring and any adverse effects is strongly supported particularly since the economic cost of adverse effects could be very high and should not be borne by third parties;
  - However, for the use of GM vaccines to be a permitted activity there should be permitted activity performance standards to avoid accidental contamination. Some performance standards are suggested.

h) Overall, the PCs not only represent sound resource management practice, but also align with strongly expressed community views as recorded in the Colmar Brunton 2009 survey.

## **INTRODUCTION**

1. My name is Vernon Richard Cross Warren and I am Managing Director of Planning Network Services Limited.

### **Qualifications and experience**

2. I hold the qualifications of MA (Hons) (Massey), DIP T&RP (Melbourne), and am a full member of the Planning Institute of Australia, the New Zealand Planning Institute, and the Property Institute of New Zealand. My 50 plus years of planning experience have been divided between the public and private sectors in Australia and New Zealand. In Australia I held the position of Director of Strategic Planning (State Planning Policy and Regional Planning) with the Town & Country Planning Board of the State of Victoria. In New Zealand, from mid 1980 to August 1989, I held the post of Director of Planning & Community Development with the Auckland City Council. Since then I have been in private practice as the founding principal of Planning Network Services, now a Limited Company.
3. In 2001 the New Zealand Planning Institute presented me with its Distinguished Service Award.
4. My planning experience has encompassed all facets of Regional Policy and District Plan preparation and administration, and includes a wide scope of small and large-scale activities from residential to education, commercial and industrial, mining, rural and coastal developments. I am experienced in all stages of plan preparation and resource consent processes, and the preparation of assessments of effects on the environment.
5. As Director of Planning (Strategic) for the Town & Country Planning Board of Victoria, I drafted and processed to approval 10 State Statements of Planning Policy including for sensitive environmental management areas such as the lignite rich Latrobe Valley and the Gippsland Lakes.
6. Since 1989 I have advised The National Trading Company of New Zealand Limited (“**NTC**”) and its parent company, Foodstuffs (Auckland) Limited on numerous

developments in the company's Auckland region (Taupo and northwards) preparing applications and assessments of effects in that regard. For NTC, I have prepared District Plan changes and have given advice from submissions to Environment Court hearings with respect to The Auckland Regional Policy Statement and the Auckland Region Growth Strategy, and most of the District Plans in the Auckland region, and many subsequent plan changes.

7. Since 1992 I have also been the principal resource management advisor to The Warehouse Group Limited and have been responsible for preparation of applications and assessments of effects for most of their new developments throughout New Zealand since that time.
8. My experience has included providing advice to a range of iwi organisations including to Tainui, Ngapuhi and Ngai Tahu.
9. For the former Auckland City Council and subsequently for private sector clients, I have provided detailed advice, reporting and evidence with respect to a range of public works and designation procedures.

#### **CODE OF CONDUCT**

10. I have read the Environment Court Code of Conduct for expert witnesses and agree to comply with it.
11. I confirm that the topics and opinions addressed in this statement are within my area of expertise except where I state that I have relied on the evidence of other persons. I have not omitted to consider materials or facts known to me that might alter or detract from the opinions I have expressed.

#### **SCOPE OF CONSULTANCY AND PREPARATION OF EVIDENCE**

12. I have been retained by the Soil and Health Association of New Zealand Incorporated (“**SHANZ**”) and other parties listed at the end to prepare a statement of evidence about the provisions for genetically modified organisms (**GMOs**) in Plan Change 18

to the Far North District Plan and Plan Change 131 to the Whangarei District Plan. (“**the District Plans**”) This is part of wider resource management advice I am providing to SHANZ in relation to several Regional Policy Statements and District Plans.

13. In preparing this evidence, I have read and considered the Council evidence of:
- Professor Jack Heineman
  - Dr John Small and
  - Dr Kerry James Grundy
14. I have read and considered the submissions in opposition to the PCs
15. I have also considered the evidence of other witnesses for the Soil and Health Association of New Zealand.

#### **RESOURCE MANAGEMENT ISSUES**

16. In this statement I address the following issues:
- a) Do GMOs present potential risks that fall within the definition of effects on the environment under section 3 of the Resource Management Act 1991 (“**the Act**” or “**RMA**”)?;
  - b) Consideration of GMOs in relation to the purpose and principles of the Act;
  - c) Is the release, control and use of GMOs an appropriate matter for inclusion in the District Plans?;
  - d) Does application of a precautionary approach in the Unitary Plan serve an appropriate and valid resource management purpose?; and
  - e) Appropriateness of the provisions for GMO use contained in the District Plans.

17. In addressing these topics, I rely on the Environment Court decision in *Federated Farmers of New Zealand v Northland Regional Council* [2015] EnvC 89. I do not address jurisdictional issues but focus on appropriateness of the approach to GMO use as a regional and district planning topic from a resource management principles point of view.

### **POTENTIAL ENVIRONMENTAL RISKS FROM RELEASE OF GMOS**

18. Before addressing the topic of risk, I wish to state that in my opinion the development and use of GMOs has the potential to achieve significant benefits for mankind. That, however, does not alter and cannot be an offset to consideration of risk and the need to apply a precautionary approach to the development, location and management of GMO usage. In that respect, it is no different to resource management responsibilities which apply to the use and development of any other natural and physical resources.
19. Potential risks are of four main kinds:
- a) biological or ecosystem harm;
  - b) commercial harm by way of adverse effects on organic certification (including a requirement to be GMO free) of current and future farming enterprise and/or an adverse impact on wider agricultural brands;
  - c) loss of access to markets; and
  - d) conflict with community perceptions and preferences in relation to environmental management.
20. No matter how carefully conditions of consent for release of GMOs are crafted, there inevitably remains a risk, even if small, that conditions may be breached by poor

management, human error, acts of nature such as severe storms and even the sabotage of particular projects.

21. There is a rapidly growing sector of organically certified agriculture and horticulture. It is crucial to these enterprises that there be no breach of the strict conditions on which certification relies. There is a risk that GMOs could escape into those certified environments and enterprises by a variety of means, not least by pollen drift.
22. There is also a potential risk that escape of GMOs from a controlled environment would attract widespread publicity. Any such publicity of control breaches or even public criticism of a lack of an appropriate precautionary approach carries with it a significant risk of damage to 'brand New Zealand' or even particular organic farming sectors on the international stage.
23. The last but important category of risk concerns effects on community perceptions and preferences. In my opinion, the extent to which community perceptions and preferences on resource management matters are taken account of in planning documents has an impact on the well-being of people and communities of the kinds identified in the definition of sustainable management in section 5 of the Act. In my opinion there is a community expectation (as well as an RMA one) that a precautionary approach will be taken to any activity where there is uncertainty about environmental risks.

#### **RMA DEFINITION OF EFFECTS**

24. I consider that, notwithstanding current regulatory control of GMOs, there is a high degree of uncertainty as to their potential adverse effects. Although the risk may be of low probability, any adverse effects could have a high potential impact on the environment.
25. In my opinion, this potential level of risk and impact falls properly within the definition of effect in section 3 of the Act and is therefore an appropriate matter for consideration by regional and district councils in carrying out their functions under the Act.

## PURPOSE AND PRINCIPLES OF THE ACT

26. In my opinion, the potential type of environmental risks and effects rising from GMO use relate strongly to the purpose and principles of the Act.
27. These kinds of environmental effects, whether on an individual or nearby properties or of wider effect would have an adverse impact on the economic and cultural well-being, and potentially health and safety, of people and communities. This would run counter to the first part of the definition of sustainable management under section 5 of the Act.
28. Likewise, such effects if not properly mitigated would run counter to the strictures of section 5(2)(a), (b) and (c). For example:
  - Contamination of an area through the unmanaged escape of GMOs so that such areas could not be certified as organic would not sustain potential of those natural resources to meet the reasonably foreseeable needs of future generations;
  - If unpredicted adverse effects of GMOs harmful to life did occur the life supporting capacity of air, water, soil, and ecosystems would be imperilled rather than safeguarded;
  - If any of the low probability adverse effects of unmanaged or escaped GMOs occur they would not have been avoided and may not be able to be satisfactorily remedied or mitigated.
29. Similarly, such adverse effects would be counter to the matters set down in sections 7(b) and (f) of the RMA and would not have particular regard to section 7(g).
30. In my opinion such potential conflict with the purpose and principles of the Act render the subject of potential adverse effects arising from the release and location of GMOs into the environment a proper matter for consideration by district councils in exercising their functions under the Act.

## DISTRICT COUNCIL FUNCTIONS

31. I refer particularly to the functions of territorial authorities (includes district councils) set out in section 31(1)(a) and (b).
32. In my opinion, integrated management of the effects of the use, development or protection of natural and physical resources of the district cannot be achieved, if the location and potential effects of GMO use or release are not addressed. Where potential adverse effects are well known, specific direction can be given about the management, location and distribution of land use activities.
33. In the case of GMOs, there is uncertainty about the probability or degree of risk of adverse effects. Nevertheless, it is quite clear that potential effects extend well beyond property or two. The potential for whole communities and whole industries to be affected makes this a matter of district as well as regional significance.
34. In addition, there is no current control over where projects involving GMOs could be located within the district. Regulation under HSNO does not include, for example, taking into account locations where organically certified agricultural activities are already established or which could have a high potential for expansion of organic activity. Identification of the value of land resources within the region for organic or biodynamic agricultural activity and their protection from the uncertainty and risks associated with the use of GMOs is in my opinion an important and valid matter for the Far North and Whangarei District Councils in the discharge of their district resource management functions.
35. I note that section 30(1)(b) refers particularly to the potential effects of the use, development or protection of land which are of regional significance. In my opinion promotion and use of a precautionary approach in relation to the location, release, control and use of GMOs on a regional basis is not only appropriate but also a useful technique to assist regional councils and carry out their functions.

## PROPOSED DISTRICT PLAN PROVISIONS

36. In this part of my evidence, I will refer to the Council's tracked change version of the PCs attached as **Annexure A** to this statement. I note that there are differences in format between PC18 and PC131. For convenience I will use the numbering system

of PC 18 but will cross refer to PC131 for some comments. I will also refer to the additions requested by SHANZ.

### **Promotion of the precautionary approach in the district plans**

37. The objectives and policies of any District Plan provide the foundation for the Plan rules. It is important that the suite of district plan objectives and policies is both comprehensive and balanced in relation to matters of district resource management significance. In my opinion, this must include GMO use as a significant district wide resource management issue.
38. GMO projects require approval from the Environmental Protection Authority (“EPA”). This consenting process gives particular attention to the technical aspects of managing an individual project. It does not, however involve:
  - consideration of district distributions of GMOs projects;
  - consideration of the need to protect areas of particular value for organic farming;
  - consideration of the preferences of a district community; or
  - integration of the management of the effects of the use or development of natural and physical resources on a district basis
39. Nor is the EPA tasked with monitoring the distribution of GMO projects and district effects. It is simply required to take into account the provisions of regional and district plans.
40. Hence, I consider it to be particularly important that the subject of GMOs and the taking of a precautionary approach be included within regional and district planning documents. This would ensure that the comprehensive approach required by the RMA is properly undertaken.
41. For these reasons, I consider that the references to a precautionary approach in 19 Context, 19.3.1 objective and 19.4 Policy 1 are appropriate and I support them.

42. In paragraph 15 above, I referred to the prospect that the development and use of GMOs has potential to achieve significant benefits for mankind subject to a precautionary approach to the risks which stem from scientific and management uncertainty.
43. I acknowledge that over time, there is potential for areas of uncertainty to be resolved and the benefits of GMO use to be redefined – one way or the other.
44. For that reason, I support the inclusion of “*to adopt an adaptive approach*” in proposed Policy 19.4.6. This signals on-going review of the science, effects and benefits of GMO use – and could result in more stringent or more liberal or varied conditions of use.
45. Use of the plan change process is important because community and economic sector views should also be taken into account before any liberalisation or tightening of GMO rules in the District Plans.

#### **19 Context and 19.2 Environmental outcomes expected**

46. I agree with the summary of potential adverse effects from the outdoor use of GMOs, highlighting lack of information, scientific uncertainty and, in particular, the potential for adverse effects to be irreversible.
47. In relation to potential adverse effects, I note that in relation to most GMOs, once they have been released into the environment, they would be very difficult if not impossible to eradicate. In the case of a food product GMO, the “GE free” status of the district would probably be lost permanently along with the market advantages of that status.
48. All three of the stated categories of risk (in PC131) are important. There is also a widespread community interest in protecting against the effects of outdoor GMO use. To a degree, community concerns may be seen as esoteric compared to a scientific approach advocated by GMO use supporters. None-the-less community views are important and it must be remembered that the RMA definition of ‘environment’ includes people and communities while the s5 definition of sustainable management

is strongly oriented to enabling people and communities to provide for their well-being.

49. In my opinion therefore, the inclusion of community views and preferences is an essential part of resource management analysis and practice.
50. Particular note should be taken of the results of the 2009 Colmar Brunton Survey. For example:
  - 74% favour Council having a role in regulating the use of GM plants and animals;
  - 55% want all types of GMO plants and animals prohibited, and a further 26% under the same question want Council to make users legally responsible for harm;
  - 56% think NZ should only produce GM free food and 62% think that the option for GM production in the future should be left open
51. I also note with strong support the anticipated result No 2 ensuring financial accountability of GMO users.
52. Any approval of outdoor use of GMO activity will carry with it a strong monitoring requirement, the cost of which should be borne by the consent holder. Of greater importance, the financial burden should contamination of other properties occur could be very high. The costs of remediation (if possible) and damage to affected activities and enterprises should also be borne by the GMO consent holder.
53. To link back to the duties of the Councils under s31 of the Act I support the relief sought by SHANZ to add a new anticipated result #5 as follows.

*Integrated management of effects on the environment including an integrated approach to all GMO proposals in relation to the effects of those activities on natural and physical resources.*

### 19.3 Objectives and 19.4 Policies

54. For all the reasons set out in this statement, in the s.32 documents and in the context statement of the PCs, I consider that the objectives and policies in these sections are a sound response to the current state of knowledge and risk of the release and use of GMOs. and in particular:

- require a precautionary approach to be taken;
- makes release of a GMO a prohibited activity and Field trials a discretionary activity;
- requires a GM resource consent holder to be financially responsible – while the risks may be said to be low, the financial consequences of contamination are potentially enormous and this is a risk that should not be borne by affected persons;
- adopts an adaptive approach which will allow advances in knowledge to be taken account of and signals future reviews of provisions;

55. However, and to reinforce the information requirements and part of the underlying rationale and purpose of these GMO provisions, I support the inclusion of two additional policies as requested by SHANZ

*To ensure that the location of a proposed GMO activity does not have potential to adversely affect existing or potential organic farming activities including market recognition and public perception of an area as GMO free.*

*To ensure that potential adverse effects on areas of significant ecological value and/or sensitivity are avoided.*

56. Inclusion of these policies will recognise the two activities and resources most vulnerable to adverse effects from release or outdoor trialling of GMOs.

#### **Rules: Activity Status: Permitted activities (19.6.1)**

57. In my opinion, the activity status provisions of 19.6.1, 19.6.2 and 19.6.3 are an appropriate response to the objectives and policies discussed above.

58. In the notified version, I had a reservation about the provision for use of GMO veterinary vaccines as a permitted activity without any permitted activity standards. This concern is partly assuaged by the requirement that viable genetically modified vaccines to be a permitted activity must have a specific delivery dose and be supervised by a veterinarian.
59. Use of viable GM vaccines does carry risk of contamination through, for example unmanaged excreta and spread by human feet and contact with other animals.
60. I consider that there should be permitted activity performance standards for the use of viable GM vaccines along the following lines:
- a) Administration of GM vaccines shall be carried out within an enclosure;
  - b) Treated animals shall be quarantined for a minimum of three days;
  - c) Animal excreta during quarantine shall be collected and treated prior to disposal.

## **Discretionary activities 19.6.2**

### **Genetically modified organisms field trials 19.6.2.1**

61. Given the precautionary approach, I support discretionary activity status for GMO field trials. However, I consider that the application information requirements (d) should be expanded by the addition of the following:

*This research is to include (but not be limited to) identification of the location and vulnerability of existing and potential organic farming activities and areas potentially significant for the development of organic farming which lie within the geographical range of potential harmful effects from the proposed GMO activity.*

62. Potential adverse effect on organic farming is one of the key adverse effects to be considered. Explicit requirement to research this topic will make the provision clearer and provide certainty for this important community and sector of the economy.

**Bond requirements 19.6.2.2**

63. I consider that this bond requirement is one of the most important provisions of the PCs. A meaningful bond may well be very high. However:

- potential adverse effects on third parties such as organic producers, who would not be in a position to protect their enterprise against damage, are also very high;
- If there is risk that the GE free status of an area or district could be lost, this should be taken into account;
- Potential for temporary or permanent damage to the value of an area of ecological significance should also be factored into bond requirements

**Prohibited activities 19.6.3**

64. As a planner, I am reluctant to support prohibited activity status for an activity unless:

- There is a potential risk to human health and safety that cannot be avoided with certainty;
- There is uncertain knowledge about potential adverse effects but such effects could be significant and affect social cultural and economic wellbeing of whole communities; or
- There is a clearly expressed wish of a majority of the district community that a particular activity be prohibited.

65. In my opinion, at least the last two bullet points apply to the outdoor release of GMOs (except as provided for as permitted or discretionary activities). The proposed prohibited activity status is well justified by the precautionary approach and would better promote sustainable management of resources as defined in part 2 of the Act.

## CONCLUSION

66. In summary, I conclude that:

- a) The release and use of GMOs into the environment may present a relatively low risk, but also has a potential for high adverse effect on the environment. Such effects could be of regional and district significance and include significant adverse effects on the social, cultural and economic, well-being of people and communities:
- b) These potential adverse effects conflict with the purpose and principles of the Act;
- c) Application of a precautionary approach to the management of such potentially high risks is the best available resource management technique;
- d) To address the potential adverse effects on the environment of GMOs in the District Plans will assist the Councils to carry out their functions under the RMA;
- e) Consideration of the location and distribution of projects involving GMOs on a district wide basis, together with protection of rural resources with high potential for organic or biodynamic farming, is an important resource management matter for consideration by district councils in carrying out their functions under the RMA; and
- f) The proposed district plan provisions with respect to GMO use at all levels from objectives and policies to rules are balanced, essential and accord with sound resource management principles.

**Dated: 25 May 2016**

**VERN WARREN**