BEFORE THE ENVIRONMENT COURT **ENV-2012-339-00041**
TAURANGA

IN THE MATTER	of the Resource Management Act 1991 (the Act)
AND	
IN THE MATTER	of an appeal under clause 14 Schedule 1 of the Act on the Proposed Bay of Plenty Regional Policy Statement
BETWEEN	**NZ Forest Research Institute Limited (Scion)**
	Applicant
AND	**Bay of Plenty Regional Council**
	Respondent

STATEMENT OF EVIDENCE OF WARREN PARKER ON BEHALF OF NZ FOREST RESEARCH INSTITUTE LIMITED (SCION)

19 JULY 2013

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INTRODUCTION

Qualifications and experience

1 I am Warren Parker, the Chief Executive Officer of New Zealand Forest Research Institute Limited ("**Scion**"), the appellant in this case.

2 Scion is a Crown Research Institute established under the Crown Research Institutes Act 1992. Our shareholders are the Minister of Science and Innovation and the Minister of Science.

3 Under sections 4 and 5 of the Crown Research Institutes Act Scion has a statutory obligation to conduct research for the benefit of New Zealand.

4 Crown Research Institutes are aligned with specific industry sectors or research areas. In Scion's case we are the designated Crown Research Institute for the forestry sector and forestry related research (which extends to wood processing, land use, biomaterials derived from wood etc). Scion, within its Ministerially approved Statement of Core Purpose has a mandate to safeguard forestry and the forestry sector in New Zealand and to sustainably improve the value and productivity of New Zealand's forest sector.

5 Scion's main campus is situated in Rotorua in the Bay of Plenty Region. Nearly all of our personnel reside in the region in close proximity to both Scion's campus and the forests. As a good corporate citizen of New Zealand, Scion would not do or advocate for anything that is likely to cause harm to our own people or the environment in which we live and work.

6 Scion provides fee for service science services to industry but also conducts central government research programmes and technology development. Scion has a firm focus on sustainability and conservation of the environment and is independently certified through the Enviro-Mark Programme for this.

7 Further, by way of example, in addition to our work certifying the sustainability of forests, conducting life cycle analyses and developing decision making tools regarding sustainable land and resource use, our current suite of technologies include:

(a) Biofuels from softwoods - liquid fuels from renewable biomass to substitute fossil fuels;

(b) Wood-polymer composites – reinforced polymers to replace plastics and environmentally harmful products such as glass fibre by utilising wood fibres as a reinforcing agent and partial substitute for fossil fuel derived polymers. The research currently also involves using recycled polymers and biopolymers such as polylactic acid and polyhydroxyalkanoate – plastics generated from biological sources) to a produce a 100% green product that can be used in place of fossil and synthetic products in appliances, vehicles, hardware items and building materials;

(c) Municipal and industrial solid organic waste destruction, preventing landfilling of harmful, voluminous and leachable waste while converting toxic and pathogen carrying waste into clean and valuable chemical feedstocks;

(d) Bioadhesives – substitutes for formaldehyde containing resins used in wood panel production but made entirely from wood extracts and agricultural waste products;

(e) Biofoams – a biobased substitute for expanded polystyrene for use in packaging and furniture.

8 It is my firm belief that Scion has not only well established environmental credentials in the way it operates but also is a national leader in the development of environmentally friendly technologies and practices and Scion has applied these practices over an extended period of time.

9 Scion's views on the importance of GMOs to New Zealand are shared by others. Attached as Appendix A are letters of support from Federated Farmers, Timberlands, the Forest Owners Association and Graeme Milne, Chairman of Synlait, giving evidence in a personal capacity. Between agriculture and forestry a large part of the economy of the BOP region is represented.

10 Scion will make no private gain from this appeal or its outcomes. Scion brings this appeal in order to meet its statutory duty to benefit New Zealand to meet our mandate to protect and advance forestry in New Zealand and to ensure, compliant with the 2002 recommendations of the Royal Commission on Genetic Modification that future options are preserved.

INVOLVEMENT IN THE REGIONAL POLICY STATEMENT

11 Upon the release of the Bay of Plenty Regional Council's proposed Regional Policy Statement ("**RPS**"), Scion made submissions and subsequently filed this appeal in regard to parts of the proposed RPS that we believed in one aspect did not relate to Resource Management Issues and in a second aspect was fundamentally anti-science and absurd.

12 We also had concerns that Council was not applying resource management considerations as required by the Resource Management Act but were making politically convenient moves in response to activity by a small but organised ground of proponents from outside the region and apparently aided by the personal viewpoints of individuals the Council's officialdom.

13 The original wording of the provisions of concern in the proposed RPS were as follows:

> Policy IR 1B Applying a precautionary approach to managing natural and physical resources – Apply a precautionary approach to the management of the natural and physical resources, where there is scientific uncertainty and/or a threat of serious or irreversible adverse effects on the resource and the built environment. Such activities should be classified as discretionary or non-complying activities in regional and district plans.
>
> Part One Section 1.7 Precautionary approach – 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. 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. In regional and district plans, such activities should be provided for as discretionary or non-complying. Any resource consent granted in such circumstances should be subject to whatever terms and conditions are necessary to avoid significant adverse effects on the environment.
>
> The existence of genetically modified organisms in the environment has generated community concern. Of particular concern is the placement and location of trial and containment facilities. The Bay of Plenty Regional Council promotes a precautionary approach to the release control and use of genetically modified organisms within the region. The precautionary approach is a necessary response to unresolved issues of potential liability, environmental risks, economic costs and cultural and social effects. The Hazardous Substances and New Organisms Act 1996 contains specific legislation for managing genetically modified organisms. These legislative

> functions are carried out by the Environmental Protection Authority. Current legislation may be inadequate to manage potential adverse effects from the use of genetically modified organisms in the region.

14 Scion believes these provisions would have been read together and resulted in restrictive provisions is district plans.

15 Scion was concerned about the provisions on a number of grounds including:

(a) Because science by its nature will always involve uncertainty and use of resource, Policy IR 1B effectively prohibits science in the Bay of Plenty region or at best requires a resource consent before anyone in the region does anything involving science.

(b) Because with no evidential basis it attempts to discredit specialist national legislation and legislative tribunals;

(c) Because it bases its rationale on matters that are not resource management issues such as potential liability;

(d) That it makes numerous factual errors and assumptions such as the lack of knowledge when in fact they had the scientific information and knowledge before them;

(e) That by including genetic modification in paragraph 2 of section 1.7 as the sole example it implies, contrary to the scientific evidence, that genetic modification is an emerging technology carrying particular risks and that there is lack of knowledge regarding it. This is contrary to reality. Genetic modification is now an established technology and a known quantity around the world with millions of hectares in open production. Further it wrongly implies that GMOs are particularly risky even when assessed on a case by case basis in accordance with the Hazardous Substances and New Organisms Act's thorough application, controlled trialling and de-risking process. It implies that information and knowledge about genetic modification is not available when in fact such information is readily available. Scientific papers were presented en masse to Council. The World Health Organization and the Food and Agriculture Organization of the United Nations have concluded that there is no scientific evidence that the application of GM technology has resulted in substantial human health effects or environmental problems.

16 Scion believes the Regional Council has been disproportionately influenced by a small number of well organised activist groups from outside of the region spreading fear and misinformation.

17 Scion was also concerned about the provision because it believes that the effect of the proposed RPS is that territorial authorities will introduce duplicate regulatory barriers that will effectively eliminate GMOs and GMO capability from the region and, in the forestry sector, from the whole of New Zealand. A regional decision could have serious economic and environmental consequences nationally as will be detailed later in our evidence and Scion believes the procedural barriers will prevent us from complying with our mandate and our statutory duty. Scion operates nationally and for the national benefit. If different regional councils each have different regulatory requirements, a single research programme may need different design and management in each region making any research impracticable.

18 Any duplication in regulatory compliance will almost certainly prevent research regarding GMOs by Scion or use of GMOs in the forestry sector in New Zealand. While the duplication may appear to be procedural only, the cost and time implications are likely to be a complete barrier. Reasons for this include tight constraints on science resourcing and the dis-proportionate investment of resources into EPA applications when the application outcomes risk being later overturned by one of several non-expert regional groups hearing the same submissions. Further based on current experience, the regional group such as a district or regional Council is likely to have been a submitter to the national EPA process and therefore has the potential to install themselves as an effective appellant body to the tribunal to which they were previously a submitter, even though they are likely to have less capability to critically evaluate the technical information than the national expert panel.

19 The requirements of complying with duplicate and possibly multiple duplicate regulatory regimes and subsequent multiple appeals and the associate time delays and uncertainty would also be incompatible with science funding terms – research funding would be consumed by multiplied legal costs and research contracts would expire before they could be used for applied research. Proponents of the RPS provisions have openly stated that this is the intent and the goal of the

provisions is to preclude research under field containment and any subsequent commercial use.

20 The proposed RPS will have the practical effect of eliminating genetic modification capability from Scion after the end of the next research funding cycle. Scion is the only research organisation in New Zealand with in-depth expertise in commercial forestry. In New Zealand only the 4 Crown Research Institutes aligned with the primary sector currently have these capabilities (and associated necessary infrastructure and approvals) in regard to plants and there is only a small degree of overlap between their respective capabilities.

21 The regional and district councils where the other CRIs operate are currently being subjected to the same heavy lobbying by the same interest groups and if they succeed in one or more of these regions then New Zealand are likely to lose not only productivity gains from our major primary industries but also unnecessarily increase the risk of major productivity loss and extinctions.

22 As a result of the mediation process Council have eliminated the attack on the Environmental Protection Authority ("**EPA**") and the Hazardous Substances and New Organisms Act ("**HSNO Act**"), reduced the scope of and partially rationalised the ban on science, and removed some factual errors. Scion understands that the Council will formally indicate what wording it is now proposing in its evidence in chief. However, Scion is still of the view that the manner by way of the wording and the scheme of the relevant provisions, results in the Council they continuing to have maintained a number of positions and assumptions that are contrary to the scientific evidence and as a result, are continuing to promote duplication of regulatory processes by unqualified bodies in order to deal with risks and lack of knowledge that the evidence shows does not exist.

23 Scion's view is that not only that Council does not have the evidence to substantiate their stance, it is also contrary to the Resource Management Act. Collectively, the consequences of these provisions would set in train consequences that are potentially serious and significant for New Zealand.

BENEFITS AND NEEDS FOR GM TECHNOLOGY

24 If the proposed RPS proceeds, the consequence is likely to be not only the cessation of future trials but also the

disappearance or reduction of capability in this science field and the loss of investor confidence in New Zealand as a country within which to conduct science. The consequence of that may be fewer options to protect Kauri or Manuka or other species from disease and biosecurity incursions and loss of production in commercial species - pine trees, kiwifruit being two currently being embattled by serious diseases.

25 In subsequent evidence from Scion scientists Scion will clarify what GMOs are and are not, and explain the potential benefits and need for such technology is explained.

26 In this evidence references will be made to native trees. We would like to make it clear that Scion is not advocating for the genetic modification of native trees. Any initiative in this regard will have to come from kaitiaki and the community. At present many of these people are opposed to genetic modification of native trees and Scion respects their positions. But we do consider such an initiative to be quite possible due to extinction risk to taonga (such as the present threat of Kauri dieback disease (PTA) to Kauri) and other native species (such as myrtle rust to Manuka) caused by pathogens and the possibility, based on international experience and success stories, that genetic modification may be the only effective solution in some cases.

27 Genetic modification of native trees involves significant issues relating to the whakapapa and so it is not something that Scion should lead but we do believe it is our statutory obligation to maintain capability to provide such solutions if they are required in the national interest or sought as a solution of last resort by mana whenua.

28 Scion is the sole research organisation in New Zealand dedicated to forestry and probably the only organisation with the range of capabilities from conventional tree breeding to genetic modification to biosecurity and specialist infrastructure such as afield trial containment area that is at present capable of addressing a number of the threats. The BOPRC decision by preventing Scion from fulfilling its mandate will have ramifications far beyond the Bay of Plenty Region.

29 Scion sees this as a very good reason why the BOPRC should recognise that a national framework is the appropriate mechanism for managing GMOs.

CURRENT REGIME EPA / HSNO

30 The Environmental Protection Authority already applies the precautionary approach to genetically modified organisms and applies one of the most comprehensive and conservative regimes in the world.

31 The EPA applies rigorous controls to any trials and to date have only approved one genetically modified organism for open release (the equine flu vaccine). The EPA applies a de-risking process that deems an organism coming out the other end of the process as having a positive risk-benefit equation.

32 An example of an EPA determination is attached as Appendix B and it can be seen from this that they require that a trial poses no significant risk to the environment. It can also be seen and the resources in the vicinity, including relevant factors such as sustainable forestry certifications, like sustainable forests, that the informed consent of mana whenua are all considered. Trialis required, that location is determined and that extensive protective controls and monitoring are prescribed.

33 The Ministry for the Environment is responsible for any clean-ups in the event of a breach. There have been breaches in the past but none of these have resulted in damage and none have required the intervention of local territorial authorities.

34 The HSNO Act while having a different focus provides fully for environmental (including resources) and cultural considerations and is conducted in an open forum where interested parties can and do present their submissions and the decisions are appealable to the High Court. In Scion's experience with EPA applications, Council and the same interest groups that are involved in the present case can and consistently do make the same submissions to the EPA.

35 The degree of similarity between and the considerations required by the relevant provisions of the HSNO Act (ss. 4 to 8) and the Resource Management Act (ss.5 to 8) is almost total. The only substantive differences are things like "protection of historic heritage from inappropriate subdivision", "the maintenance of amenity values", "the efficiency of the end use of energy" and "the enhancement of public access to waterways" in the RMA and the requirement under the HSNO Act that the EPA consider New Zealand's international obligations. None of the additional RMA matters are relevant to GMOs. Both require consideration of the environment, resources, health and safety, cultural issues, the Treaty of

Waitangi, the value of ecosystems, the safeguarding of ail, water, soil and ecosystems. As stated previously the EPA are required by s.7 of the HSNO Act to apply the precautionary approach. This demonstrates that any regulation by Council will be nothing more than duplication. In addition to this the HSMO Act provides specific powers of inspection and enforcement.

36 The HSNO Act provides for penalties and liabilities on a strict liability basis exceeding those provided for in the Resource Management Act.

CONCLUSIONS AND CLOSING REMARKS

37 In summary, although the proposed RPS will directly only result in procedural and cost implications, the practical effect will be absolute and cause the loss of important scientific capability and outcomes and this could have serious consequences for New Zealand's economy and environment.

38 The Council's conclusions on risk and lack of knowledge are contrary to the scientific evidence.

39 Genetic Modification is now an established technology and a known quantity and is being used without controls over millions of hectares of land worldwide. The World Health Organization and the Food and Agriculture Organization of the United Nations have concluded that there is no scientific evidence that the application of GM technology has resulted in substantial human health effects or environmental problems.

40 Throughout the submissions, appeal and mediation process the Council have at no stage provided us with any evidence that GMOs are a resource management issue. The Council's consistent message is that the reason for the provisions in the proposed RPS is that "some people have expressed concern".

Warren Parker

19 July 2013

APPENDIX A

LETTERS OF SUPPORT

APPENDIX B

EXAMPLE EPA DETERMINATION