BEFORE COMMISSIONERS APPOINTED BY THE WAIKATO DISTRICT COUNCIL

UNDER the Resource Management Act 1991

IN THE MATTER of a further submission on the proposed Waikato District Plan by the **LIFE SCIENCES NETWORK INCORPORATED** (further submission no. 1295)

LEGAL SUBMISSIONS ON BEHALF OF

LIFE SCIENCES NETWORK INCORPORATED

24 January 2020

1. INTRODUCTION AND SUMMARY

1.1 In 2001 the Royal Commission on Genetic Modification held a public inquiry into the use of genetic modification in New Zealand[1]. It's report and recommendations to the Government stated:

> Our conclusion is that New Zealand should keep its options open. It would be unwise to turn our back on the potential advantages on offer, but we should proceed carefully, minimising and managing risks. At the same time, continuation of the development of conventional farming, organics and integrated pest management should be facilitated.

1.2 Following the Royal Commission's report, the Government considerably strengthened the Hazardous Substances and New Organisms Act 1996 (HSNO) by introducing two amendments to the Act in 2002 and 2003 which implemented the Commission's recommendations.

1.3 The submitters who are seeking controls and prohibitions on genetically modified organism (GMOs) in the district plan have started from a fundamentally incorrect position. Effectively, they assume that the Royal Commission of Inquiry never happened and the HSNO Act does not exist.

1.4 The concerns the submitters raise are generally the same concerns that were raised before the Royal Commission. Those issues were considered by the Royal Commission, and both the Royal Commission and the Government were subsequently satisfied that appropriate decisions on the use

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[1] The terms of reference for the Royal Commission set out that the primary objective of the commission was to inquire into, investigate and report upon:

(1) the strategic options available to enable New Zealand to address, now and in the future, genetic modification, genetically modified organisms, and products; and

(2) any changes considered desirable to the current legislative, regulatory, policy or institutional arrangements for addressing, in New Zealand, genetic modification, genetically modified organisms, and products.

The Royal Commission was given twelve months to report, commencing its investigations in June 2000. The process lasted over fourteen months, and during that time the Commission received more than 10,000 written submissions.

and development of GMOs can be properly made by way of the Environmental Protection Authority making decisions under the HSNO Act.

1.5 Despite the submissions and evidence by original submitters, the HSNO Act does exist, and all applications for the development, use and release of GMOs need to be approved by the EPA. The only possibility for GMOs to be developed, used or released in the Waikato District is where that use has **already been approved by the EPA**. The question before you in this hearing is not what are the possible effects and risks of GMOs in a general sense (which is the question that applicants will need to address on an application to the EPA for approval), but rather, whether there are **residual or additional effects** which should be addressed by the district plan **following an approval by the EPA**.

1.6 While the Council has the legal ability (jurisdiction) to provide for the control of organisms which are GMOs in the District Plan, the question is whether the Council should regulate GMOs in the manner intended by the submitters.

1.7 The fundamental question is whether there are risks with GMO field trials and releases which can only be legally and properly addressed under the RMA, or whether the controls in HSNO are comprehensive and adequate. This question involves considering whether restrictive and prohibitive rules in the proposed district plan are **necessary, efficient and effective** for addressing any residual effects not considered by the EPA and (in the words of the Royal Commission) enabling GMO use while facilitating the development of conventional farming, organics and integrated pest management.

1.8 LSN's position is that any RMA controls on GMOs in the District Plan should only relate to those matters which are either:

(i) not legally able to be addressed/considered by the EPA under HSNO (so RMA controls are the only controls that can be applied); or

(ii) necessary at a district level in addition to considerations/controls by the EPA because the EPA cannot properly consider district or regional considerations.

1.9 The submissions and evidence by proponents for controls/bans on GMOs in the district:[2]

(i) fail to identify any issue with GMOs that is not able to be considered by the EPA; and

(ii) do not identify any valid reasons why there needs to be RMA controls on GMOs at the district level which duplicate HSNO controls by the EPA.

1.10 Consequently, the proposed RMA controls which duplicate the EPA's powers under HSNO fail the efficiency and effectiveness tests in s32 RMA.

1.11 The onus is on the proponents of bans/controls on GMOs under the RMA to demonstrate what issues need to be addressed under the RMA which cannot be addressed under HSNO. The submissions fail in that regard.

1.12 The outline s32 analysis prepared by Mr Willis for LSN (which relies on the scientific and economic evidence of the expert witnesses called by LSN) demonstrates that the option of not including provisions on GMOs in the district plan now is the best option and most effective and efficient in terms of the tests in s32.

1.13 If, contrary to the expert evidence, there arises in the future some urgent need to change that position in the district plan, the

[2] Summarised in paragraph 58 of the s42A report.

Council has the ability to seek that by way of an urgent plan change which takes effect from notification of that plan change.[3]

2. THE ROLE OF THE EPA AND THE OVERLAP WITH THE RMA

Jurisdiction under the RMA to consider GMOs

2.1 Submissions refer to the Federated Farmers Northland Regional Policy Statement case[4] as justification for the appropriateness of including provisions on GMOs in an RMA plan. That decision does not of itself, however, provide that justification.[5] The decision relates to an argument made by Federated Farmers that there was no jurisdiction under the RMA for district and regional councils to consider GMOs. Both the Environment Court and the High Court found that position to be incorrect, stating that councils do have jurisdiction under the RMA to include provisions on organisms which are GMOs.[6]

2.2 That outcome is not disputed. However, the issue here is not whether the council has the legal power to include such provisions. The question is whether it **should** include such provisions in the Waikato District Plan. The question of the appropriateness of actual provisions was not addressed at all in the Federated Farmers' decision – there was no evidence one way of the other, and that was not the question considered by the Court. As the Environment Court said:[7]

> [51] Essentially, the High Court found against excluding the jurisdiction of a local authority should it deem it appropriate <u>following an evaluation under s32 RMA</u>, to, for instance, identify areas more (or less) suited to the establishment of activities involving approved GMOs. For instance, regional authorities might, with community input, consider particular regional approaches acknowledging social,

[3] See the discusuion below in para 2.49
[4] Federated Farmers of New Zealand v Northland Regional Council [2015] NZEnvC 89.
[5] I appeared as counsel for Federated Farmers at the Environment Court.
[6] references
[7] In reference to the High Court decision in *Bleakley v Environmental Risk Management Authority* [2001] 3 NZLR 213 at [243].

economic and cultural wellbeing (amongst other things), somewhat beyond the more limited policy considerations for regulation of import and release of new organisms under HSNO. These aspects in s5 RMA are underpinned by the statutory requirements for preparing and publishing evaluation reports under s32, including by way of just one example, the requirement for assessment of benefits and costs of the environmental, economic, social, and cultural effects that are anticipated from the implementation of proposed provisions, including opportunities for economic growth and employment. [emphasis added]

2.3 This decision is not authority for the general proposition that GMO controls are appropriate in district and regional plans. While there might be jurisdiction to include such provisions, the critical question is whether in each particular case the controls proposed are appropriate in terms of s32. The Federated Framers' and Bleakely decisions don't assist us with that question.

2.4 In considering this question for the Waikato District Plan, the issue is whether there are residual or additional effects which should be addressed by the district plan following an approval by the EPA. Assuming the EPA has granted an approval (and assuming as we should that the EPA has discharged its statutory responsibilities legally and responsibly), there are two potential areas where a District Plan control might have scope to work:

(i) In the area of 'jurisdictional overlap'. That is, where both HSNO and RMA could address the issue or concern. In this context, the primary question for the Council under s32 RMA is whether it is effective or efficient to duplicate the controls available to the EPA under HSNO, given that HSNO is the specific statute designed to address the effects of GMOs. (It is LSN's position as I discuss below that all the concerns raised in the submissions fall into this category of 'jurisdictional overlap'). Moreover, the EPA applies expertise to decision-making on GMOs that is generally not available or applied at a district council level.

(ii) Where there is a valid residual risk which falls within the exclusive jurisdiction of the RMA (that is, where there is an effect HSNO cannot control). Here, the normal s32 tests of necessity, efficiency and effectiveness, and costs and benefits still apply.

2.5 If the Hearing Panel determines that there is a need for a RMA control and it meets the tests in s32, the question is what is the most appropriate form of such control. That includes consideration of activity status and whether control should be exercised now or later.

2.6 The first question, then, is to determine whether the issues and concerns raised by the submitters are within the scope of the HSNO Act controls, thereby bringing them into this area of 'jurisdictional overlap'.

The role and functions of the EPA

2.7 The EPA's functions relevant to GMOs include[8]:

(i) advising the Minister for the Environment on the extent of the compliance with the provisions of the Act and consistency of controls between the Act and those imposed on new organisms by other legislation;

(ii) monitoring the extent to which the Act reduces the adverse effects on the environment or people from new organisms;

(iii) overseeing enforcement of the Act; and

(iv) promoting public awareness of the adverse effects of new organisms, and the prevention and safe management of such effects.

2.8 While the predecessor to the EPA[9] was originally intended to be "a small body of expert decision makers … comprised of

[8] Environmental Protection Authority Act 2011 sections 11 and 13.

[9] The Environmental Risk Management Authority (ERMA). In 2011, ERMA was replaced by the EPA, established under the Environmental Protection Authority Act 2011. The EPA has a

persons with broad knowledge and the confidence of the community",[10] the EPA Act now requires the EPA to have collective knowledge of and experience in relation to matters relevant to its functions, that is, relating to governance procedures and organisational change, New Zealand's environmental management system, the links between the economy and environmental management, the Treaty of Waitangi and tikanga Māori, administration of environmental and risk management frameworks, and central government processes.

2.9 The EPA is required to have between six and eight members, including at least one member who has knowledge and experience relating to the Treaty of Waitangi and tikanga Māori.[11]

2.10 In making decisions under the HSNO Act the EPA must act in accordance with the Methodology Order[12], the purpose of which is "to promote rigour in decision making, consistency between decisions, and transparency". The Methodology Order sets our direction on a number of issues, including:

- role of the EPA;
- role of government and advisory committees;
- requirements for public notification of applications;
- use and evaluation of information by the EPA;
- evaluation of risks, costs and benefits of an application;
- consideration of submissions by the EPA;
- appointment of experts;

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wider jurisdiction than the former ERMA which goes beyond matters relating to hazardous substances and new organisms.

[10] Minister for the Environment New Zealand Parliamentary Debates — Hansard vol 544 at 4604, introductory speech, 8 November 1994.

[11] EPA Act, s 9(3).

[12] Hazardous Substances and New Organisms (Methodology) Order 1998 (SR 1998/217).

- decision-making framework, including direction on uncertainty, risk, costs and benefits; and

- presentation of decisions made by the EPA.

Can the EPA address the concerns raised by the submitters?

2.11 The s42A report summarises the expressed reasons for the submissions of those seeking controls on GMOs. In addition, the evidence for the proponents of controls/bans also raises additional issues. [13]

2.12 Attached to these submissions is a table which compares the relevant obligations, functions and powers of the EPA under the HSNO Act and Councils under the RMA. The purpose of the HSNO Act is "to protect the environment, and the health and safety of people and communities, by preventing or managing the adverse effects of hazardous substances and new organisms". That is understandably narrower in scope than the purpose of the RMA which is to "promote the sustainable management of natural and physical resources". But, in relation to GMOs, the question is whether the RMA has wider considerations than the HSNO Act. It is submitted that, at least in relation to the issues and concerns raised by submitters, the HSNO Act covers all of the issues of concern. That is, at least for the issues raised, they are all within the 'area of jurisdictional overlap' between the two Acts. In summary:

(i) HSNO has dual purposes: (1) protecting the environment; (2) protecting the health and safety of people and communities. 'Protecting' is not defined in either RMA or HSNO. However, there is no reason to give 'protecting' in HSNO a narrower definition than in the RMA. 'Environment' is widely defined (and in identical terms) in both the RMA and HSNO. Equally, there is no reason to give the HSNO definition a more restrictive meaning/scope than RMA. 'Environment' includes people and communities and

[13] See evidence of Gerard Willis Appendix 1.

includes economic and cultural conditions that affect people and communities. “Effects’ is defined in essentially identical terms in both Acts.

(ii) The EPA must recognise and provide for (a) the safeguarding of the life-supporting capacity of air, water, soil, and ecosystems; and (b) the maintenance and enhancement of the capacity of people and communities to provide for their own economic, social, and cultural well-being and for the reasonably foreseeable needs of future generations. HSNO’s requirement to recognise and provide for these two principles equates that with the meaning of sustainable management from the purpose of the RMA.

(iii) There are identical obligations to take into account the principles of the Treaty of Waitangi.

(iv) Under s7 HSNO, the EPA must “take into account the need for caution in managing adverse effects where there is scientific and technical uncertainty about those effects”. There is no equivalent provision in the RMA.

2.13 For each of these issues/concerns, the following tables consider the scope of the EPA’s powers under HSNO to address them, relative to the Waikato District’s powers under the RMA. The following section of these submissions comments on the validity of the concerns/expressed risks raised by submitters.

Table A: Issues identified in the s42A report

	Issue	LSN response[14]
A.1	GMO contamination may adversely affect economic wellbeing to the community, including losses to business, forestry and farming, loss of organic and GMO-free certification, loss of environmental branding, and loss of markets and premiums paid for GMO-free crops.	These issues must all be addressed by the EPA on an application under the HSNO Act. Economic wellbeing is an aspect of the environment (definition of 'environment' s2 HSNO). Protection of the environment is one of the purposes of the HSNO Act (s4). The EPA must recognise and provide for economic wellbeing (s5(b) HSNO). The EPA must also take into account the economic and related benefits and costs of using a particular GMO (section 6(e)). This is also a requirement of the Methodology Order (Clause 13). The obligations in HSNO include national and local issues – through the reference to 'people and communities', and the requirement in the Methodology Order (Clause 13(c) to take into account "the distributional effects of the costs and benefits over time, space, and groups in the community". There is therefore no reason to restrict the scope of HSNO to 'national' economic issues. The economic effect impact of a proposed use on communities within the Waikato District is as relevant as any effect on the national economy. Equally, under these provisions any effects on national and local/district organic or 'GE Free' activities or certification must be considered by the EPA.

[14] Also see the evidence of Gerard Willis Appendix 1.

Issue	LSN response[14]
A.2 Release of GMOs could adversely affect social and cultural wellbeing	Social and cultural wellbeing, including of the people and communities of the Waikato District must be recognised and provided for by the EPA (s5(b)). This is also as requirement under the Methodology Order (Clause 9(b)).
A.3 GMOs, once released into the environment, would be difficult, if not impossible, to eradicate	Section 37 of the HSNO Act and Clause 10 of the Methodology Order expressly require the EPA, when making a decision, to have regard to this matter when considering applications.
A.4 The risks outweigh the benefits, especially as expected benefits have not come to fruition.	Risks, costs and benefits, including at regional and district levels, are specifically provided for in Clauses 26 and 27(1) of the Methodology Order.
A.5 Integrated management and precautionary approach to GMOs under the RMA is the best available technique for managing potential adverse effects posed by GMOs on the environment and other land use activities.	The EPA is required to consider GMOs at both a national and regional/district level. The EPA must "take into account the need for caution in managing adverse effects where there is scientific and technical uncertainty about those effects" (s7 HSNO). There is no equivalent provision in the RMA.

	Issue	LSN response[14]
A.6	Overseas, GM crops have caused increased pesticide use on crops, with deleterious human health effects.	These are issues which are core considerations under HSNO (ss6, 36 HSNO and Clause 9 Methodology Order).
A.7	There is a risk of cross-contamination of non-GMO crops, causing conflicts between farmers.	This is also a key issue for the EPA when considering applications for a release of a GMO. The EPA is able to take into account local (district/regional) differences in climate, soil type, etc which may influence variations at a local level..[15]
A.8	Consumer resistance is high – there is a market premium for non-GMO produce.	These are economic issues (at a national and local level) which the EPA is required to have regard to.

[15]The EPA can impose conditions on a release which include "imposing any obligation to comply with relevant codes of practice or standards (for example, to meet particular co-existence requirements)", "requiring contingency plans to be developed to manage potential incidents", "limiting the proximity of the organism to other organisms, including those that could be at risk from the conditionally released organism" and "imposing obligations on the user of an approval, including levels of training or knowledge, limits on the numbers of users who may hold an approval, and the persons that they could deal with in respect of the organism" HSNO, s38D(1)

Issue	LSN response[14]
A.9 GMO contamination could have significant adverse effects on the mauri and tikanga of tangata whenua	There are identical requirements in HSNO and RMA to take into account the principles of the Treaty (s8 HSNO). ‘’Environment’ includes ‘cultural considerations’ in both Acts. The EPA must take into account “the relationship of Maori and their culture and traditions with their ancestral lands, water, sites, waahi tapu, valued flora and fauna, and other taonga: (s 6(d) HSNO and Clauses 9 and 25(2) of the Methodology Order). These requirements are as comprehensive as the similar requirements in the RMA, and they allow for regional and sub-regional differences in cultural values and effects to be taken into account by the EPA. The EPA’s document ‘Incorporating Māori perspectives in Decision Making’ makes that clear.[16] The relevant iwi management plans do not require the inclusion of controls on GMOs in the District Plan, but require the ability for iwi input into decisions regarding GMOs and [non-GMO] new organisms.[17] The requirement for public consultation for field trial and release applications provides this opportunity under HSNO.

[16] See rebuttal evidence of Dr Rolleston, para 4.3 and Appendix 1
[17] Evidence of Mr Willis, para 4.14

Table B: Additional concerns raised in evidence for the proponents of controls/bans

	Issue	LSN response
B.1	HSNO does not consider "the geographic distribution of GMO projects"	There is no restriction on the geographical scope of EPA's consideration. There is no reason to restrict the EPA to considering issues only at a 'national' level. The HSNO and Methodology Order provisions point to the need to consider effects on people and communities at all spatial scales.
B.2	HSNO does not consider "the need to geographically protect areas of particular value from GMO activities, such as sensitive farming practices (including organic farming, and all farming and forestry relying on a GE−free status, beekeeping etc".	As above.
B.3	HSNO does not consider "the preferences of a community"	It is unclear what this means. The EPA (like councils under the RMA) must make decisions based on evidence and in accordance with the relevant statutory criteria. The EPA is to consider all evidence out before it. Submissions on 'preferences' are important in understanding the weight to be accorded particular potential effects.

Issue	LSN response
B.4 HSNO does not consider “integration of the management of natural and physical resources, and the effects of GMO activities on natural and physical resources, on a geographic basis”.	As above.
B.5 “There is no mandatory requirement for the EPA to take a precautionary approach to the outdoor use of GMOs. The HSNO Act does not, therefore, provide a planning framework through which GMOs can be geographically, spatially or culturally managed in both an integrated and precautionary manner”.	Under s7 the EPA need only to take account of a precautionary approach, rather than give effect to or provide for. However, failure to apply it when necessary would be judicially reviewable (or challengeable on appeal to the High Court) and exercising caution is inherent in both HSNO and RMA. There is no RMA equivalent to s7 HSNO requiring a precautionary approach, so arguably the HSNO Act is a more cautious approach than the RMA.
B.6 “Consideration of the location and distribution of proposals involving GMOs on a district basis, together with protection of rural resources for organic, biodynamic or GE−free farming, forestry, beekeeping and other primary production activities, are important resource management matters that should be” controlled in the district plan.	These are all issues which can and should be addressed by the EPA under HSNO. The Methodology Order (Clause 13(c) requires the EPA to take into account “the distributional effects of the costs and benefits over time, space, and groups in the community”.

Issue	LSN response
B.7 "There is no provision under the HSNO Act for financial liability for GMO contamination resulting from the release of an approved GMO, meaning those causing harm may not be held liable.	There is strict liability for any breaches of HSNO controls. A bond may be imposed on a conditional release if the EPA considered that necessary (S38D(2) HSNO). The EPA's powers are the same as those of a Council imposing a bond condition on a consent under the RMA. The RMA therefore brings no additional benefit.
B.8 "Unregulated control of GMO's will directly impact on the integrity and market perception of organically certified products. This is a significant financial and enterprise risk for organic and GE free producers. Should GMO contamination occur and on a wider level, the "GE free" status of a district would likely be lost permanently along with the market advantages of that status".	In the context of this district plan, there is no unregulated use of GMOs. No GMO can be developed used or released unless it is approved under the rigorous HSNO regime. Economic effects and effects on markets for organic of non-GM products, including with Waikato District or the Waikato Region, is squarely within the function of the EPA.

Issue	LSN response
B.9 “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 potentially public criticism of a lack of an appropriate precautionary approach carries with it a significant risk of damage to both the 'New Zealand' brand and organic farming sectors on the international stage”.	These are also issues to which the EPA will have regard.
B.10 In terms of cultural effects “the management of GMOs and the potential effects they may generate is required at a district level to ensure the principle of being kaitiakitanga to all living things is adhered to”.	As above.

2.14 It is LSN's submission that all the issues raised by submitters as reasons for controls on GMOs in the District Plan, can and would be considered by the EPA under HSNO. They therefore all fall within the 'jurisdictional overlap' between the two Acts. Imposing controls or bans in the District Plan which duplicate controls under HSNO (effectively 'second guessing' the EPA) because some members of the community do not agree with the 'keeping options open' approach recommended by the Royal Commission and reflected in the scheme of the HSNO Act, or because some people disagree with the approach to risk assessment adopted by the EPA and mandated by the Government in the Methodology Order, is neither necessary, effective, nor efficient, and therefore fails the s32 RMA tests[18].

2.15 If the concern by submitters is that while the EPA has the jurisdiction and powers to address their concerns at a local or district level, it might neglect to do so, or not be aware of any pertinent local issues, then I submit the outcome is the same. [19]Here, we need to distinguish different types of potential GM use. If the potential use is in containment, then no local issues will apply that are not fully addressed by the EPA. That includes a field trial (which is a category of containment). Any local issues which are relevant to ensuring there is no release (eg local weather conditions) would be part of the consideration. By definition, a field trial is designed to prevent the release or escape of any GM material. Applications for field trials must be publicly notified[20] so local communities will be able to become involved.

2.16 If the application relates to a proposed release of a GMO, it is inevitable (at least over the term of this District Plan) that such an application will be the subject of considerable national interest, and it must be publicly notified. Any issues of concern

[18] See evidence of Gerard Will para 4.18.
[19] The evidence is that the EPA process is roobust and the controls as rigorous as anywhere – see Professor Allan's evidence para 5.16, Dr Conner's evidence para 24.
[20] HSNO, s53(1)(d)

to the people and communities of the Waikato District are highly likely to feature in submissions to the EPA on that application. As we have pointed out the EPA is bound to consider district issues which have been raised.

2.17 In summary, it is LSN's submission that all the issues or concerns raised as reasons for controls or bans on GMOs in the District Plan can legally be addressed by the EPA under HSNO. Duplication of the HSNO controls in the District Plan, particularly the prohibitive and unnecessarily restrictive controls sought by submitters fail the tests in s32.

Comments on the substance of the concerns raised

2.18 Having said that, this section of my submissions considers the merits of the reasons given by submitters for duplicating the HSNO controls. Are the concerns raised by submitters of such significance that, even when an application is considered and approved under the HSNO Act, they give rise to a valid residual effect which warrants additional controls by requiring some sort of land use consent from the Council in the District Plan, notwithstanding that duplication?

2.19 Here, again, it is critical to remember that the issue from a district planning perspective is not the generic risks of GMOs, but the **residual risks of GMOs once they have been approved by the EPA**.

2.20 In the submitters evidence and submissions, they have failed to make this distinction. Their evidence reads as if the HSNO Act does not exist. The issues/concerns are therefore generic in nature and create a false dichotomy – between 'unregulated' use of GMOs and regulation under the District Plan.

2.21 The unregulated development, use and release of GMOs is already banned. Like any technology, GM techniques could be abused, misapplied, or used unwisely. But that is what the HSNO Act is designed to avoid. It is LSN's submission that all of the reasons given by submitters that RMA controls are

necessary either lack scientific and economic validity, are overstated, or can be fully and properly addressed by the EPA under the HSNO Act (including potentially by the EPA declining an application).

Adverse effects of GMOs generally

2.22 The submitters raise a range of concerns about the effects of GMOs generally. The information they provide as a basis for these concerns is mostly sourced from popular media or social media articles or other persons.

2.23 Issues relating to scientific uncertainty and what the science says about the effects of approved uses of GM are addressed in the evidence of Dr Andrew Allan, Dr William Rolleston and Dr Tony Conner. In summary:

(i) The general scientific consensus of approved GM is that it is safe, as evidenced by the fact that internationally GM plants (or GMOs) are now 10% of planted arable land. These have improved the economies of regions and have not caused any scientifically credible measured increase in detrimental outcomes attributable to genetic modification per se. GM techniques have been used for over 30 years.[21]

(ii) Scientific bodies, societies and international regulatory bodies all recognise the importance of best practice risk assessment of GMOs. Ongoing safety of future GMOs (and other introduced organisms) depends on continued risk assessment, monitoring and testing, including continuing improvements with technologies for testing.[22]

(iii) Reports and studies suggesting health risks from GM crops have not withstood scientific scrutiny and have been discounted by science based regulators.[23]

[21] Evidence of Professor Allan, para 4.2
[22] Evidence of Professor Allan, para 5.15
[23] Evidence of Professor Allan, para 5.17

(iv) While there is not a complete and full consensus amongst scientists and other experts about what is an acceptable level of residual uncertainty and on the risk/safety of GMOs, there is nothing surprising in this. In most areas of science there is not a full consensus on all issues. But there is indeed a general consensus amongst experts that GMOs approved by scientifically based independent agencies using best practice risk assessment and management methodologies have acceptable levels of certainty and safety.[24]

Impacts on organic crops and the use of separation distances

2.24 Concerns are raised by submitters about potential 'contamination' of non-GM crops by approved GM crops, and the consequent loss of organic or 'non-GM' status. This issue is addressed in the evidence of Drs Conner and Rolleston. In summary:

(i) Coexistence of GM crops and non-GM/organic crops is possible and being practiced in countries which authorise the use of GMOs in agriculture. Segregation is best managed through voluntary or industry protocols.[25]

(ii) There are GM tolerance levels for international trade, labelling, certification (Non-GM project), and at customer level.[26]

2.25 Moreover, the position of the submitters that a 100% purity level for their organic or 'non-GM' crops should prevent the introduction of an approved (competing) GM crop risks being considered as a matter of trade competition.[27]

[24] Evidence of Professor Allan, para 5.21, Evidence of Dr Conner paras 19, 21, 31
[25] Evudence of Dr Rolleston paras 8.6 – 8.8, Evidence of Dr Conner para 30
[26] Evidence of Dr Rolleston paras 8.3- 8.5; Rebuttal evidence of Dr Rolleston paras 8.2, 8.5; Supplementary rebuttal evidence of Dr Rolleston section 2
[27] RMA, s 74(3)

Liability concerns

2.26 Concerns have been raised that "there is no provision under the HSNO Act for financial liability for GMO contamination resulting from the release of an approved GMO, meaning those causing harm may not be held liable".

2.27 One of the issues considered in the report of the Royal Commission on Genetic Modification was liability for damage caused by genetic modification. The Commission considered statutory liability, common law actions, and a range of approaches in overseas jurisdictions.[28] The Report concluded that the existing liability regime is adequate and that:

> The Commission considers it is unnecessary to recommend legislation providing special remedies for third parties, where they may have been affected by the release of a genetically modified organism. As technology advanced with ever-increasing pace throughout the 20th century, the common law (that is, law based on court decisions, as distinct from statute law) showed it was well able to mould new remedies for novel situations. Parliamentary intervention has rarely been needed in this area. From a legal liability perspective, we have not been persuaded there is anything so radically different in genetic modification as to require new or special remedies.

2.28 The Report went on to state:

> In making the recommendations below, we acknowledge the liability issues are difficult. In addition to the technical legal issues, other considerations require delicate balancing: on the one hand, protection of the public and the environment, and on the other the need, in the public interest, not to stifle innovation or drive away investors by imposing overly stringent conditions on research or economic activity. For these reasons, Government may wish to refer the liability issues to the Law Commission for more intensive study.

[28] Royal Commission on Genetic Modification Report of the Royal Commission on Genetic Modification (Wellington, 2001), ch 12.

2.29 In May 2002, the Law Commission issued a Study Paper on liability issues[29]. The question considered by the Law Commission was:

> [t]he adequacy of current statute and common law for dealing with issues of liability for loss from genetically modified organisms. If the current law is not considered adequate, what options exist for specific liability regimes and what are their advantages and disadvantages?

2.30 The Law Commission considered a range of possible alterations to the existing liability regime, including:

(i) creating a new strict liability tort;

(ii) creating new public law duties;

(iii) requiring insurance or a bond (or Environmental Risk Management Authority discretion to require insurance or bond); and

(iv) creating a compensation fund.

2.31 The Law Commission was of the view that the issues raised may not be unique to GMOs and concluded that any changes to the liability regime was a policy decision for the government should it be satisfied that GMOs are sufficiently different and need specific controls.[30]

2.32 The Government responded to the Royal Commission report and the Law Commission report, by enacting the Hazardous Substances and New Organisms Act Amendment Act 2003 (the Amendment Act) which made changes to the provisions in the HSNO Act relating to liability for damage. The 2003 Amendment Act inserted Part 7A into the HSNO Act, providing pecuniary penalties and civil liability for breaches relating to

[29] Law Commission Liability for Loss Resulting From the Development, Supply, or Use of Genetically Modified Organisms (NZLC SP 14, 2002).
[30] Law Commission's Report at para 55

new organisms.[31] The section introduces greater liability and harsher penalties for breaches of the HSNO Act.

2.33 If an activity breaches a statutory requirement for new organisms, the person responsible for the activity is strictly liable to anyone harmed by the activity. Under the pecuniary penalties and strict civil liability regime, liability can occur without fault, although certain defences are available. Any person will automatically be liable in damages for any loss or damage caused by any act or omission of the person breaching the Act, unless they can prove one of the listed defences applies.

2.34 Another key change made by the 2003 Amendment Act was to state that the civil burden of proof is required. Those prosecuting will have to prove the breach occurred on the balance of probabilities – a lesser standard than 'beyond reasonable doubt'.

2.35 The EPA may impose a bond in the event of damage caused by the authorised use of a GMO.[32] In one application relating to a field trial of *pinus radiata*,[33] ERMA (the predecessor to the EPA) took account of the containment regime, likelihood of a self-sustaining population, and the liability provisions, before deciding not to impose a condition requiring a bond be provided in the event of adverse effects occurring.

2.36 Under s314(1)(a)(ii) of the RMA any person may apply to the Environment Court for an enforcement order where a person is carrying out an activity (which would include the use of approved GMOs, including crops) that is, or is likely to be, "noxious, dangerous or objectionable to such an extent that it has or is likely to have an adverse effect on the environment". Such an enforcement order may "require a person to remedy or mitigate any adverse effect on the environment caused by or on

[31] Hazardous Substances and New Organisms Amendment Act 2003, ss 124A –124I.
[32] HSNO Act, s38D(2).
[33] Application Decision ERMA200479

behalf of that person",[34] and "require a person to pay money to or reimburse any other person for any actual and reasonable costs and expenses which that other person has incurred or is likely to incur in avoiding, remedying, or mitigating any adverse effect on the environment".[35] These enforcement sections of the RMA apply even where the activity in question is permitted under the relevant RMA plan.

2.37 The Biosecurity Act also provides for possible liability for approved uses of GMOs. If a regional council determines that an organism (including an approved GMO) has become a pest, it can prepare a pest management plan.[36] Failure to comply with a pest management plan can result in a compliance order being issued.[37]

2.38 As noted by the Royal Commission and the Law Commission, adverse effects arising from the authorised use of GMOs may also be able to be addressed through the common law remedies of nuisance, negligence, and the so-called 'rule in *Rylands v Fletcher'*.[38]

2.39 None of these options for liability arising from the authorised use of GMOs require there to be controls in the District Plan. The only possible advantage here of requiring a resource consent to be obtained would be to enable the Council to impose a condition requiring a bond. But the EPA already has that power.[39]

[34] RMA, s314(c)
[35] RMA s314(d)
[36] See evidence of Dr Rolleston section 9
[37] Biosecurity Act, s154
[38] Professor Stephen Todd. *Liability issues involved, or likely to be involved now or in the future, in relation to the use, in New Zealand, of genetically modified organisms or products.* Report to the Royal Commission 27 April 2001.
[39] See para 2.35

Is a precautionary approach inconsistent with 'keeping options open' on GMOs?

2.40 LSN's evidence is that controls in a district plan which unnecessarily duplicate those in HSNO have an adverse social and economic effect and are inconsistent with the Government's position of keeping options on GMOs open.[40]

2.41 LSN supports the use of a cautious or precautionary approach. Such an approach is required by HSNO[41] as is not inconsistent with keeping options open. Indeed, it is critical for the country's environmental, social, economic and cultural wellbeing that New Zealand's regulatory system remains robust, transparent and competently properly administered.[42] In her evidence, Ms Bleakley implies that the Environment Court has endorsed a reference to the precautionary approach to GMOs in the Bay of Plenty Regional Policy Statement and that "has not affected Scion's ability to conduct GM research".[43]

2.42 First, we don't actually know if that has been the case or not – it appears to simply be an assertion on Ms Bleakley's part. But, more importantly, the implication of the relevance of the Environment Court's decision is misleading. In its decision[44] the Environment Court separated the issues of directing that a precautionary approach be adopted by the Council where necessary and a statement on GMOs as an 'emerging issue'. [45] Importantly, because this statement did not form part of the

[40] Evidence of Professor Grimes, para vi, 48; Evidence of Dr Conner, paras 26-28;
[41] HSNO, s7
[42] Which is not to say that there are aspects of the existing HSNO Act that could not be improved.
[43] Evidence of Ms Bleakley para 7
[44] *NZ Forest Research Institute Ltd v Bay of Plenty Regional Council* [2013] NZEnvC 298
[45] That statement reads: "**Section 1.8 Emerging Issues**. 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 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. If this emerging issue is assessed to be of regional significance in the future, objectives and policies may be proposed using the process in Schedule 1 of the Act". (See para 29)

objective, policy and rule/method framework of the RPS it was not subject to the s 32 RMA requirement which would otherwise require assessment of whether the provisions are the most appropriate in achieving sustainable management.

2.43 In his evidence for the LSN, Mr Willis discusses the precautionary approach and distinguishes between precaution and risk.[46] Mr Willis' evidence is that it would be wrong to conclude that the RMA's definition of 'effect' allows for broader consideration than the HSNO's focus on a precautionary approach. Mr Willis' opinion is the broadly expressed 'precautionary approach' of the HSNO Act is the wider concept encompassing, as it does, both uncertainty caused by a lack of information and by the inherent uncertainty associated with statistical probability."

Relevance of RMA provisions in other RMA documents

2.44 The fact that some councils may have included GMO provisions in their district plans is not itself a reason why Waikato should take the same approach. For example, LSN was not a submitter before the Auckland Independent Hearings Panel so the Panel did not have the benefit of the evidence now before this panel. Waikato District Council must form its own view of the merits of the controls.

2.45 The Auckland Unitary Plan is not an appropriate starting point even if the Panel considers, contrary to LSN's case that controls are warranted.[47]

[46] Evidence of Mr Willis section 6

[47] See evidence of Mr Willis para 1.3(a) and section 5. The Auckland s32 analysis does not identify any credible potential adverse effect from a HSNO approved GMO. There is no basis to suggest that the Waikato District Plan should be consistent with Auckland because Bombay and Pukekohe are vegetable and crop growing areas and there is a potential for GMO to be used in these areas (s42A Report). Dr Conner's and Dr Rolleston's evidence about management by way of separation distances is to the contrary.

Imposing rules now in case they may be relevant and requiring a later private plan change application

2.46 It is suggested by submitters that it is appropriate to ban GMO releases in the plan now on the basis that there is unlikely to be any request for a release over the life of this plan, and that at a later date a proponent for a release can apply for a private plan change to allow for the possibility of a consent being obtained.

2.47 That suggestion is comprehensively refuted in the economic evidence of Dr Arthur Grimes.[48]

2.48 Importantly, if contrary to the expert evidence before you now, there arises in the future some urgent need to change the position in the district plan so that an EPA approved GMO should also be the subject of a resource consent application, there are processes open to the Council and there will be adequate time for those to occur. It should be noted that there is no need for the council to wait until the EPA delivers its decision before preparing for example an appropriate plan change.

2.49 If necessary, the Council can request the Environment Court to confirm that the plan change takes effect from notification of that plan change.[49]

2.50 The advantages of such an approach are that any specific district issues which cannot be addressed by the EPA will be properly identified so that appropriate provisions can be included in the plan (rather than the nebulous catch all ban approach proposed by submitters here), and it avoids the adverse effects of providing a ban now which are discussed by

[48] See especially paras 10 (vi) and (vii), 29 - 31

[49] RMA s 86D(2) states: A local authority may apply before or after the proposed plan is publicly notified under clause 5 of Schedule 1 to the Environment Court for a rule to have legal effect from a date other than the date on which the decision on submissions relating to the rule is made and publicly notified under clause 10(4) of Schedule 1. Which means that in this scenario there would be no possibility of a GMO approved by the EPA 'slipping through' the system and getting established before the Council can introduce appropriate rules in the District Plan.

Professor Grimes in his evidence. Such an approach remains a precautionary one, while avoiding unnecessary regulation and adverse economic and social effects.

3. SECTION 32 CONSIDERATIONS

3.1 While the onus is in the proponents of proposed GMO rules to at least establish a basis for what they seek, and they have not provided any planning justification for the provisions they seek, Mr Willis has provided an outline s32 analysis of the options available.[50]

3.2 Mr Willis considers and compares four options:

(i) Proposal 1: Rely on HSNO. Do not seek to control GMOs through the PWDP (essentially the same approach that has been in place in all previous generations of Waikato district plans and by far the majority of other district pans around the country).

(ii) Proposal 2: Rely on HSNO with a backstop strategy (identified as a method in the PWDP) of plan changes and/or requests to the Waikato Regional Council for a regional pest management plan under the Biosecurity Act should there be a likelihood of the EPA approving an organism for release that would be of particular concern to the Waikato district community.

(iii) Proposal 3: Introduce limited control under the district plan by way of a requirement for controlled activity consent for specific GMOs in some, or all of the district, where they may have a heightened risk that is not likely to be considered by the EPA.

(iv) Proposal 4: Introduce the heavy regulatory approach that prohibits outdoor release and requires discretionary consent

[50] Appendix 2 to his evidence, pages 29ff

for field trials as proposed by the pro GMO control submitters.

3.3 After undertaking his overview analysis, Mr Willis concludes that the proposal to control GMOs in the district plan as sought by the submitters is the least efficient and effective option in terms of s32; and the option of not controlling GMOs in the district plan is the most effective and efficient option.[51]

4. CONCLUSION

4.1 I submit that the restrictions and prohibitions on GMOs sought by submitters are unnecessary because the issues that are raised by the submitters duplicate the powers and function of the EPA, and they are inappropriate because not only do they ban release, they are a de facto ban on research and development of the technology across NZ. That is because controls which duplicate EPA functions stifle innovation and research and risk failing to keep New Zealand's options open on genetic technologies, without corresponding benefit.

Mark Christensen

Counsel for Life Sciences Network Inc

24 January 2020

[51] Evidence of Mr Willis, para 8.9 and Appendix 2 pages 37-38