E37. Genetically modified organisms

[CIV-2016-404-002299: Federated Farmers of New Zealand Incorporated]

E37.1. Background

The outdoor use of genetically modified organisms has the potential to cause adverse effects on the environment, the economy and social and cultural wellbeing. The objectives and policies seek to protect the community and receiving environment from risks associated with genetically modified organisms. The application of a precautionary approach to the outdoor use, storage, cultivation, harvesting, processing or transportation of genetically modified organisms in Auckland means that:

- the outdoor release of a genetically modified organism is prohibited (this is to avoid the risk that significant adverse environmental effects will arise, including adverse effects on the economy, community and/or Mana Whenua resources and cultural heritage values); and
- outdoor field trialling of a genetically modified organism (with prior approval of the Environmental Protection Authority (EPA)) is a discretionary activity.

Pastoral farming, dairying, horticulture and forestry are important land uses in Auckland and are significant contributors to the local and regional economy. Aquaculture is also a growing primary industry in New Zealand. Therefore there is a range of outdoor genetically modified organisms that genetically modified organism developers could consider using in Auckland, including genetically modified food crops, trees, animals, aquaculture products and pharmaceutical crops. The potential for adverse effects, including accidental contamination, resulting from the outdoor use of genetically modified organisms poses a risk to the community and environment. By specifying classes of genetically modified organisms and applying standards to the outdoor use of genetically modified organisms, the risks associated with their use, storage, cultivation, harvesting, processing or transportation can be reduced.

Within Auckland, this will involve managing and limiting the outdoor use of genetically modified organisms. Further, rules and controls will be used to mitigate any adverse effects associated with contamination by genetically modified organisms beyond the subject site, thereby reducing the risks to the community, environment and economy. Accidental or unintentional migration of genetically modified organisms that result in genetically modified organism contamination and subsequent clean up and remediation can be expensive. The Council therefore requires a genetically modified organism consent holder to meet all potential costs associated with the activity and will secure long term financial accountability through appropriate standards and bonding requirements.

The Environmental Protection Authority is not obliged to set monitoring requirements as part of its approval process, and can only require monitoring where it is relevant to assessing environmental risk. Under section 35 of the Resource Management Act 1991, the Council has a duty to monitor, which can be expensive. Requiring a genetically modified organism consent holder to meet the costs of monitoring, via consent conditions, ensures the costs are met by the consent holder, rather than the community.

The resource consent status indicates the levels of risk considered acceptable by the community for that particular genetically modified organism activity and class.

Genetically modified medical applications involving the use of viable and/or non-viable genetically modified organisms (including EPA approved releases, vaccines and medical research) are permitted under this Plan. Genetically modified medical applications are also regulated by other legislations, including the Hazardous Substances and New Organisms Act 1996 (HSNO), the Medicines Act 1981 and by the Ministry of Health.

The use of genetically modified veterinary vaccines is a permitted activity where the vaccines are non-viable, or if viable, their administration is a specific delivery dose supervised by a veterinarian. Any other use of viable genetically modified veterinary vaccines is a discretionary activity. Non-viable genetically modified veterinary vaccines tend not to persist in the environment, appear to be low risk and are difficult to monitor, making control by the Plan less appropriate. Viable genetically modified veterinary vaccines can have higher risks if their administration is not supervised or controlled by a veterinarian. An example is a viable genetically modified veterinary vaccine distributed by way of edible food or edible plants, which cannot be supervised by a veterinarian, and which may present higher risks to the environment and to the health and safety of people. In this circumstance the Council will have the discretion to require controls or to decline an application. The Council will also be able to respond quickly if there are compelling reasons for its use to benefit human or animal health and welfare. It is generally expected that if a discretionary activity consent is granted, it would apply as a consent for the use of the viable genetically modified veterinary vaccine on any land in the region, noting that specific conditions such as exclusions of specified areas may apply.

Approval from the Environmental Protection Authority is required as a precondition for all applications for resource consent. The duration of any consent granted will be aligned with the Environmental Protection Authority approval terms.

E37.2. Objective [rcp/dp]

[The regional coastal plan [rcp] provisions (for activities or resources in the coastal marine area) are not operative until the Minister of Conservation has formally approved the regional coastal plan part of the Auckland Unitary Plan.]

(1) The environment, including people and communities and their social, economic and cultural well-being and health and safety, is protected from potential adverse effects associated with the outdoor use, storage, cultivation, harvesting, processing or transportation of genetically modified organisms.

E37.3. Policies [rcp/dp]

[The regional coastal plan [rcp] provisions (for activities or resources in the coastal marine area) are not operative until the Minister of Conservation has formally approved the regional coastal plan part of the Auckland Unitary Plan.]

(1) Adopt a precautionary approach by prohibiting the outdoor release of a genetically modified organism, and by making outdoor field trialling of a genetically modified organism and the use of viable genetically modified veterinary vaccines not of a specific dose and supervised by a veterinarian a discretionary activity.

(2) Provide for the use of Environmental Protection Authority approved non-viable and/or viable genetically modified medical applications (including genetically modified vaccines) as a permitted activity.

(3) Require that the holder of a resource consent granted for the outdoor field trialling of a genetically modified organism is financially accountable (to the extent possible) for any adverse effects associated with the activity, including clean-up costs and remediation, including through the use of bonds.

(4) Require outdoor field trialling of genetically modified organisms to avoid, as far as can reasonably be achieved, risks to the environment or to the mauri of flora and fauna or to the relationship of Mana Whenua with flora and fauna from the use, storage, cultivation, harvesting, processing or transportation of a genetically modified organism.

(5) Require all monitoring costs to be met by the consent holder.

(6) Require that the outdoor use of genetically modified organisms does not result in migration of genetically modified organisms beyond the area designated by:

(a) ensuring adequate site design, construction and management techniques;

(b) preventing the escape of genetically modified organisms from transporting vehicles or vessels; and

(c) ensuring all heritable material is removed upon the conclusion of the activity.

(7) Adopt an adaptive approach to the management of the outdoor use, storage, cultivation, harvesting, processing or transportation of a genetically modified organism through periodic reviews of these plan provisions, particularly if new information on the benefits and/or adverse effects of a genetically modified organism activity becomes available.

(8) Require, where appropriate, more stringent measures than those required under the provisions of the Hazardous Substances and New Organisms Act 1996 to manage potential risks.

E37.4. Activity table

Table E37.4.1 Activity table specifies the activity status of the use of genetically modified organisms on land pursuant to section 9(3) of the Resource Management Act 1991 and the activity status of works, occupation and activity in the coastal marine area pursuant to sections 12(1), 12(2) and 12(3) of the Resource Management Act 1991.

Table E37.4.1 Activity table [rcp/dp]

[The regional coastal plan [rcp] provisions (for activities or resources in the coastal marine area) are not operative until the Minister of Conservation has formally approved the regional coastal plan part of the Auckland Unitary Plan.]

Activity		**Activity status**
(A1)	Research and trials within contained laboratories involving the use of genetically modified organisms, medical	P

	applications involving the use of viable and/or non-viable genetically modified organisms (including genetically modified vaccines), veterinary applications involving the use of non-viable genetically modified organisms and any other genetically modified organism release or use not specifically provided for or prohibited	
(A2)	Genetically modified organism field trials on land and within the coastal marine area and any structure intended to house, or otherwise contain, plants and animals which are associated with the conducting of genetically modified organism field trials	D
(A3)	The use of any viable genetically modified veterinary vaccine of a specific dose supervised by a veterinarian	P
(A4)	The use of any viable genetically modified veterinary vaccine not otherwise provided for	D
(A5)	Genetically modified organism releases – food-related on land and within the coastal marine area and any structure intended to house or otherwise contain plants and animals which are associated with outdoor genetically modified organisms releases, except as specifically provided for	Pr
(A6)	Genetically modified organism releases – non food-related on land and within the coastal marine area and any structure intended to house or otherwise contain plants and animals which are associated with outdoor genetically modified organism releases, except as specifically provided for	Pr

E37.5. Notification

(1) Any application for resource consent for the following activities must be publicly notified:

(a) genetically modified organism field trials on land and within the coastal marine area and any structure intended to house or otherwise contain plants and animals which are associated with the conducting of genetically modified organism field trials; or

(b) the use of any viable genetically modified veterinary vaccine not otherwise provided for.

(2) Any application for resource consent for an activity listed in Table E37.4.1 Activity table and which is not listed in E37.5(1) above will be subject to the normal tests for notification under the relevant sections of the Resource Management Act 1991.

(3) When deciding who is an affected person in relation to any activity for the purposes of section 95E of the Resource Management Act 1991 the Council will give specific consideration to those persons listed in Rule C1.13(4).

E37.6. Standards

All activities listed as a discretionary activity in Table E37.4.1 Activity table must comply with the following discretionary activity standards. These standards are in addition to any controls/conditions imposed by the Environmental Protection Authority.

E37.6.1. Approvals

(1) All genetically modified organism discretionary activities must:

(a) have the relevant approval from the Environmental Protection Authority; and

(b) be undertaken in accordance with Environmental Protection Authority approval conditions for the activity.

E37.6.2. Bond requirements

(1) The Council requires the holder of a resource consent for an activity involving the use of a genetically modified organism to provide a bond in respect of the performance of any one or more conditions of the consent, including conditions relating to monitoring required of the genetically modified organism activity (prior to, during and after the activity), and that this bond be available to pay or reimburse any costs incurred by, or on behalf of, the Council to avoid, remedy or mitigate any adverse environmental effects and any other adverse effects to, or on, third parties (including economic effects), that become apparent during the exercise or after the expiry of the consent.

(2) The exact time and manner of implementing and discharging the bond will be decided by, and be executed to the satisfaction of, the Council.

(3) All of the following matters will be considered when determining the amount and type of the bond:

(a) what adverse effects could occur and the potential significance, scale and nature of those effects, notwithstanding any measures taken to avoid those effects;

(b) the degree to which the consent holder for the activity has sought to avoid those adverse effects, and the certainty associated with whether the measures taken will avoid those effects:

(c) the level of risk associated with any unexpected adverse effects from the activity;

(d) the likely scale of costs associated with remediating any adverse effects that may occur;

(e) the timescale over which effects are likely to occur or arise; and

(f) the extent of monitoring that may be required in order to establish whether an adverse effect has occurred or whether any adverse effect has been appropriately remedied.

E37.6.3. Monitoring

(1) A discretionary activity for a genetically modified organism may require monitoring during, and beyond, the duration of consent. Monitoring is to be carried out by either the Council, or the consent holder, with appropriate reporting procedures to the relevant regulatory authority.

(2) A monitoring strategy for a discretionary activity for a genetically modified organism can include all of the following matters:

(a) inspection schedules for the site, storage areas and equipment (daily, weekly, monthly, events based);

(b) testing of procedures (e.g. accidental release response);

(c) training programmes for new staff, and updates for existing staff;

(d) audits of sites and site management systems; and

(e) sample testing of plants, soils and water in neighbouring properties or localities for the presence of migrated genetically modified organisms.

E37.6.4. Reporting

(1) Reporting requirements by the consent holder must be stipulated in the consent conditions.

E37.7. Assessment – controlled activities

There are no controlled activities in this section.

E37.8. Assessment – restricted discretionary activities

There are no restricted discretionary activities in this section.

E37.9. Special information requirements

(1) An application for:

(a) the use of any viable genetically modified veterinary vaccine not otherwise provided for; or

(b) for genetically modified organism field trials on land and within the coastal marine area and any structure intended to house or otherwise contain plants and animals which are associated with the conducting of genetically modified organism field trials

must be accompanied by all of the following:

(i) evidence of approval from the Environmental Protection Authority for the specific genetically modified organism for which consent is sought;

(ii) details of the proposed containment measures for the commencement, duration and completion of the proposed activity;

(iii) details of the species, its characteristics and lifecycle, to which the genetically modified organism activities will relate;

(iv) research on adverse effects to the environment and economy associated with the activity should genetically modified organisms escape from the activity area, and measures that will be taken to avoid, remedy or mitigate such effects;

(v) evidence of research undertaken that characterises and tests the genetically modified organisms, and the certainty associated with the accuracy of that information;

(vi) a management plan outlining on-going research and how monitoring will be undertaken during, and potentially beyond, the duration of consent;

(vii) details of areas in which the activity is to be confined; and

(viii) a description of contingency and risk management plans and measures.