

Appendix 3.45.3

NATURAL ENVIRONMENT ISSUES AND APPROACHES PAPER

5.0 Attachments

- Attachment 1: Resource Management Act 1991 – Sections 30 and 31
- Attachment 2: National Policy Statement for Freshwater Management 2011 and the Implications for Auckland Council (Agenda item to the Environment and Sustainability Forum on 21 June 2011)
- Attachment 3: Proposed National Policy Statement on Indigenous Biodiversity
- Attachment 4: Air Quality Management in Auckland (Agenda item to the Environment and Sustainability Forum on 19 July 2011)
- Attachment 5: Auckland Regional Plan: Air, Land and Water
Permitted Activity Rules 7.5.1, 7.5.14, 7.5.29 and 7.5.35

Attachment 1 – Resource Management Act 1991 – Sections 30 and 31

30 Functions of regional councils under this Act

- (1) Every regional council shall have the following functions for the purpose of giving effect to this Act in its region:
- (a) the establishment, implementation, and review of objectives, policies, and methods to achieve integrated management of the natural and physical resources of the region:
 - (b) the preparation of objectives and policies in relation to any actual or potential effects of the use, development, or protection of land which are of regional significance:
 - (c) the control of the use of land for the purpose of—
 - (i) soil conservation:
 - (ii) the maintenance and enhancement of the quality of water in water bodies and coastal water:
 - (iii) the maintenance of the quantity of water in water bodies and coastal water:
 - (iiia) the maintenance and enhancement of ecosystems in water bodies and coastal water:
 - (iv) the avoidance or mitigation of natural hazards:
 - (v) the prevention or mitigation of any adverse effects of the storage, use, disposal, or transportation of hazardous substances:
 - (ca) the investigation of land for the purposes of identifying and monitoring contaminated land:
 - (d) in respect of any coastal marine area in the region, the control (in conjunction with the Minister of Conservation) of—
 - (i) land and associated natural and physical resources:
 - (ii) the occupation of space in, and the extraction of sand, shingle, shell, or other natural material from, the coastal marine area, to the extent that it is within the common marine and coastal area:
 - (iii) the taking, use, damming, and diversion of water:
 - (iv) discharges of contaminants into or onto land, air, or water and discharges of water into water:
 - (iva) the dumping and incineration of waste or other matter and the dumping of ships, aircraft, and offshore installations:
 - (v) any actual or potential effects of the use, development, or protection of land, including the avoidance or mitigation of natural hazards and the prevention or mitigation of any adverse effects of the storage, use, disposal, or transportation of hazardous substances:
 - (vi) the emission of noise and the mitigation of the effects of noise:
 - (vii) activities in relation to the surface of water:
 - (e) the control of the taking, use, damming, and diversion of water, and the control of the quantity, level, and flow of water in any water body, including—
 - (i) the setting of any maximum or minimum levels or flows of water:
 - (ii) the control of the range, or rate of change, of levels or flows of water:
 - (iii) the control of the taking or use of geothermal energy:
 - (f) the control of discharges of contaminants into or onto land, air, or water and discharges of water into water:
 - (fa) if appropriate, the establishment of rules in a regional plan to allocate any of the following:
 - (i) the taking or use of water (other than open coastal water):
 - (ii) the taking or use of heat or energy from water (other than open coastal water):
 - (iii) the taking or use of heat or energy from the material surrounding geothermal water:
 - (iv) the capacity of air or water to assimilate a discharge of a contaminant:
 - (fb) if appropriate, and in conjunction with the Minister of Conservation,—
 - (i) the establishment of rules in a regional coastal plan to allocate the taking or use of heat or energy from open coastal water:
 - (ii) the establishment of a rule in a regional coastal plan to allocate space in a coastal marine area under [Part 7A](#):
 - (g) in relation to any bed of a water body, the control of the introduction or planting of any plant in, on, or under that land, for the purpose of—
 - (i) soil conservation:
 - (ii) the maintenance and enhancement of the quality of water in that water body:
 - (iii) the maintenance of the quantity of water in that water body:
 - (iv) the avoidance or mitigation of natural hazards:
 - (ga) the establishment, implementation, and review of objectives, policies, and methods for maintaining indigenous biological diversity:
 - (gb) the strategic integration of infrastructure with land use through objectives, policies, and methods:
 - (h) any other functions specified in this Act.

- (2) A regional council and the Minister of Conservation may perform the functions specified in subsection (1)(d) to control the harvesting or enhancement of aquatic organisms to avoid, remedy, or mitigate—
- (a) the effects on fishing and fisheries resources of occupying a coastal marine area for the purpose of aquaculture activities;
 - (b) the effects on fishing and fisheries resources of aquaculture activities.
- (3) However, a regional council and the Minister of Conservation must not perform the functions specified in subsection (1)(d)(i), (ii), or (vii) to control the harvesting or enhancement of aquatic organisms for the purpose of conserving, using, enhancing, or developing any fisheries resources controlled under the [Fisheries Act 1996](#).
- (4) A rule to allocate a natural resource established by a regional council in a plan under subsection (1)(fa) or (fb) may allocate the resource in any way, subject to the following:
- (a) the rule may not, during the term of an existing resource consent, allocate the amount of a resource that has already been allocated to the consent; and
 - (b) nothing in paragraph (a) affects [section 68\(7\)](#); and
 - (c) the rule may allocate the resource in anticipation of the expiry of existing consents; and
 - (d) in allocating the resource in anticipation of the expiry of existing consents, the rule may—
 - (i) allocate all of the resource used for an activity to the same type of activity; or
 - (ii) allocate some of the resource used for an activity to the same type of activity and the rest of the resource to any other type of activity or no type of activity; and
 - (e) the rule may allocate the resource among competing types of activities; and
 - (f) the rule may allocate water, or heat or energy from water, as long as the allocation does not affect the activities authorised by [section 14\(3\)\(b\) to \(e\)](#).

S31 Functions of territorial authorities under this Act

- (1) Every territorial authority shall have the following functions for the purpose of giving effect to this Act in its district:
- (a) the establishment, implementation, and review of objectives, policies, and methods to achieve integrated management of the effects of the use, development, or protection of land and associated natural and physical resources of the district;
 - (b) the control of any actual or potential effects of the use, development, or protection of land, including for the purpose of—
 - (i) the avoidance or mitigation of natural hazards; and
 - (ii) the prevention or mitigation of any adverse effects of the storage, use, disposal, or transportation of hazardous substances; and
 - (iia) the prevention or mitigation of any adverse effects of the development, subdivision, or use of contaminated land;
 - (iii) the maintenance of indigenous biological diversity;
 - (c) [Repealed]
 - (d) the control of the emission of noise and the mitigation of the effects of noise;
 - (e) the control of any actual or potential effects of activities in relation to the surface of water in rivers and lakes;
 - (f) any other functions specified in this Act.
- (2) The methods used to carry out any functions under subsection (1) may include the control of subdivision.

Report Name: National Policy Statement for Freshwater Management 2011 and the Implications for Auckland Council

File No.: CP2011/03413

Executive Summary

The Government released the National Policy Statement (NPS) for Freshwater Management 2011 on 12 May 2011. This report outlines the requirements of the NPS and the implications for Auckland Council.

Recommendation/s

- a) That the report be received.
- b) That the Water Team, Environmental Strategy and Policy Department, update the Forum on key policy issues as the implementation of the NPS for Freshwater Management is progressed.
- c) That a copy of the report and resolutions be forwarded to the Local Boards for their information.
- d) That the Local Boards are requested to indicate whether they wish to be involved in any ongoing work and, if so, where their interest lies.

Background

This report follows on from the previous report presented at the May Forum. The NPS for Freshwater Management was issued on 12 May 2011 and will take effect on 1 July 2011. It is an important part of the wider Fresh Start for Freshwater reform package. It is being progressed (alongside the irrigation fund and the assistance fund for freshwater clean-ups) as part of the first tranche of that broader work programme to help clarify the regulatory framework for the reform package as a whole.

The effect of the NPS is that decision-makers are required to have specific regard to the management of freshwater as a matter of national significance in their regional policy statements, regional and district plans, and day-to-day resource management activities, such as considering resource consent applications.

It sets a consistent national regulatory framework to ensure there are clear limits to govern the allocation of water and management of water quality.

Requirements of the NPS for Freshwater Management

Water Quality

The NPS sets two objectives for water quality:

Objective A1: To safeguard the life-supporting capacity, ecosystem processes and indigenous species including their associated ecosystems of freshwater, in sustainably managing the use and development of land, and of discharges of contaminants.

Objective A2: The overall quality of freshwater within a region is maintained or improved while:

- a) protecting the quality of outstanding freshwater bodies;

- b) protecting the significant values of wetlands; and
- c) improving the quality of freshwater in water bodies that have been degraded by human activities to the point of being over-allocated.

In order to meet these objectives the NPS requires:

Policy A1: The establishment of freshwater objectives and the setting of freshwater quality limits for all bodies of freshwater in the region; and the establishment of methods (including rules) to avoid over-allocation.

Policy A2: Where water bodies do not meet the freshwater objectives set out in Policy A1, targets are to be specified and methods implemented (regulatory and/or non-regulatory) to assist the improvement of water quality in those water bodies to meet the targets within a defined timeframe.

Policy A3: The imposition of conditions on discharge permits to ensure the limits and targets specified pursuant to Policy A1 and Policy A2 can be met; and, where permissible, making rules requiring the adoption of the best practicable option to prevent or minimise any actual or likely adverse effect on the environment of any discharge of a contaminant into freshwater, or onto or into land in circumstances that may result in that contaminant (or, as a result of any natural process from the discharge of that contaminant, any other contaminant) entering freshwater.

Policy A4: Sets out the transitional policy to be applied when considering any application for a discharge from 1 July 2011 until any changes to regional plans under Schedule 1 to give effect to Policy A1 and Policy A2 have become operative.

Water Quantity

The NPS sets four objectives for water quantity:

Objective B1: To safeguard the life-supporting capacity, ecosystem processes and indigenous species including their associated ecosystems of freshwater, in sustainable managing the taking, using, damming, or diverting of freshwater.

Objective B2: To avoid any further over-allocation of freshwater and phase out existing over-allocation.

Objective B3: To improve and maximise the efficient allocation and efficient use of water.

Objective B4: To protect significant values of wetlands.

In order to meet these objectives the NPS requires:

Policy B1: The establishment of freshwater objectives and the setting of environmental flows and/or levels for all bodies of freshwater (except ponds and naturally ephemeral water bodies).

Policy B2: Making or changing regional plans to provide for the efficient allocation of freshwater to activities, within limits set to give effect to Policy B1.

Policy B3: Making or changing regional plans to state criteria by which applications for approval of transfers of water take permits are to be decided, including to improve and maximise the efficient allocation of water.

Policy B4: Identifying methods in regional plans to encourage the efficient use of water.

Policy B5: Ensuring that no decision will likely result in future over-allocation – including managing freshwater so that the aggregate of all amounts of freshwater in a water body that are authorised to be taken, used, dammed or diverted – does not over-allocate the water in the water body.

Policy B6: Setting a defined timeframe and methods in regional plans by which over-allocation must be phased out, including by reviewing water permits to help ensure the total amount of water allocated in the water body is reduced to the level set to give effect to Policy B1.

Policy B7: Sets out the transitional policy to be applied when considering any application that involves any taking, using, damming or diverting of freshwater or draining of any wetland from 1 July 2011 until any changes to regional plans under Schedule 1 have become operative.

Integrated management

The NPS sets to improve the integrated management of freshwater and the use and development of land in whole catchments, including the interactions between freshwater, land, associated ecosystems and the coastal environment. It requires making or changing regional policy statements so that the integrated management of the effects of the use and development of land on freshwater, including encouraging the co-ordination and sequencing of regional and/or urban growth, land use and development and the provision of infrastructure, is provided for.

Tangata whenua roles and interests

The NPS requires reasonable steps to be taken to: (a) involve iwi and hapu in the management of freshwater and freshwater ecosystems in the region; (b) work with iwi and hapu to identify tangata whenua values and interests in freshwater and freshwater ecosystems in the region; and, (c) reflect tangata whenua values and interests in the management of, and decision making regarding, freshwater and freshwater ecosystems in the region.

Timeframe for implementation

The NPS is to be implemented as promptly as is reasonable in the circumstances, and so it is fully completed no later than 31 December 2014.

However, where the Council is satisfied that this timeframe is impracticable for a policy to be fully implemented by 31 December 2014, the Council may implement it by a programme of defined time-limited stages by which it is to be fully implemented by 31 December 2030.

Any programme of time-limited stages is to be formally adopted by the Council by 11 November 2012, and publicly notified. An annual public report on progress is then required.

Implications for Auckland Council

The existing regulatory framework does not set any standards, limits or targets for freshwater and so this NPS is a fundamental change to the existing situation.

The NPS requires a series of work to be undertaken, including:

- the classification of all water bodies in the region
- determining agreed values for freshwater
- setting water quality and quantity standards, limits and targets
- developing methods and tools to enable the standards, limits and targets to be met
- developing policy to ensure the integrated management of freshwater, land use and development within catchments.

These are major work areas that have been identified in the Air Land Water Coastal Unit's draft Strategy and Workplan.

In terms of fully implementing the requirements of the NPS there are two options:

- 1) undertake variation(s) to the Auckland Regional Plan: Air, Land and Water
- 2) incorporate all requirements into the Unitary Plan

Given the timing of the Unitary Plan and the timeframe of 31 December 2014 for implementing the NPS, it is unlikely that the Council will be able to fully implement all the requirements via the first notified version of the Unitary Plan. This is due to the considerable amount of work that is required in order for the Council to classify its water bodies and to set standards, limits and targets. The Council will therefore need to formally adopt a programme of staged implementation and publicly notify the programme by 11 November 2012.

Significance of Decision

The activities detailed in this report do not trigger the Significance Policy.

Local Board Views

Local Boards have not been consulted on this matter as it is for information only and no policy decision is required. It is recommended that the report be forwarded to the Local Boards asking if they wish to be directly involved in any future policy work on this issue.

Financial and Resourcing Implications

This work forms part of the day-to-day business of the Environmental Strategy and Policy Department and as such there are no financial implications.

Legal and Legislative Implications

The implementation of a NPS is mandatory, as set out in section 55 of the Resource Management Act.

There are two policies (A4 and B7) that must be incorporated into the existing Auckland Regional Plan: Air, Land and Water immediately. These policies serve as transitional policies for consent processing purposes until such time as any amendments to regional plans to give effect to Policies A1, A2, B1, B2 and B6 become operative.

The NPS must be fully implemented by 31 December 2014, or if this is impracticable, a programme of staged implementation must be formally adopted to enable full implementation by 31 December 2030.

To enable full implementation, regional plans must be made or amended.

Implementation Issues

Implementation of the NPS requires a number of policies to be developed for incorporation into regional plans. The Environmental Strategy and Policy Department's Water Team will need to be mindful of the timeframes for the development of the Unitary Plan or for any variations to the Auckland Regional Plan: Air, Land and Water.

Attachments

National Policy Statement for Freshwater Management 2011.

Signatories

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National Policy Statement for Freshwater Management 2011

Issued by notice in the Gazette on 12 May 2011

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Preamble

Fresh water is essential to New Zealand's economic, environmental, cultural and social well-being. Fresh water gives our primary production, tourism, and energy generation sectors their competitive advantage in the global economy. Fresh water is highly valued for its recreational aspects and it underpins important parts of New Zealand's biodiversity and natural heritage. Fresh water has deep cultural meaning to all New Zealanders. Many of New Zealand's lakes, rivers and wetlands are iconic and well known globally for their natural beauty and intrinsic values.

The Treaty of Waitangi (Te Tiriti o Waitangi) is the underlying foundation of the Crown–iwi/hapū relationship with regard to freshwater resources. Addressing tāngata whenua values and interests across all of the well-beings, and including the involvement of iwi and hapū in the overall management of fresh water, are key to meeting obligations under the Treaty of Waitangi.

All New Zealanders have a common interest in ensuring the country's freshwater lakes, rivers, aquifers and wetlands are managed wisely.

New Zealand faces challenges in managing our fresh water to provide for all of the values that are important to New Zealanders. The quality, health, availability and economic value of our fresh waters are under threat. These challenges are likely to increase over time due to the impacts of climate change.

To respond effectively to these challenges and issues we need to have a good understanding of our freshwater resources, the threats to them and provide a management framework that enables water to contribute both to New Zealand's economic growth and environmental integrity and provides for the values that are important to New Zealanders.

This national policy statement sets out objectives and policies that direct local government to manage water in an integrated and sustainable way, while providing for economic growth within set water quantity and quality limits. The national policy statement is a first step to improve freshwater management at a national level.

Setting enforceable quality and quantity limits is a key purpose of this national policy statement. This is a fundamental step to achieving environmental outcomes and creating the necessary incentives to use fresh water efficiently, while providing certainty for investment. Water quality and quantity limits must reflect local and national values. The process for setting limits should be informed by the best available information and scientific and socio-economic knowledge.

Once limits are set, freshwater resources need to be allocated to users, while providing the ability to transfer entitlements between users so that we maximise the value we get from water. Where water resources are over-allocated (in terms of quality and quantity) to the point that national and local values are not met, we also need to ensure that over-allocation is reduced over agreed timeframes.

Given the vital importance of freshwater resources to New Zealand and New Zealanders, and in order to achieve the purpose of the Resource Management Act 1991 (the Act), the Crown recognises there is a particular need for clear central government policy to set a national direction, though the management of the resource needs to reflect the catchment-level variation between water bodies and different demands on the resource across regions. This includes managing land use and development activities that affect water so that growth is achieved with a lower environmental footprint.

The New Zealand Coastal Policy Statement 2010 addresses issues with water quality in the coastal environment. The management of coastal water and fresh water requires an integrated and consistent approach.

National values of fresh water

Water is valued for the following uses:

- domestic drinking and washing water
- animal drinking water
- community water supply
- fire fighting
- electricity generation
- commercial and industrial processes
- irrigation
- recreational activities (including waka ama)
- food production and harvesting eg, fish farms and mahinga kai
- transport and access (including tauranga waka)
- cleaning, dilution and disposal of waste.

There are also values that relate to recognising and respecting fresh water's intrinsic values for: safeguarding the life-supporting capacity of water and associated ecosystems; and sustaining its potential to meet the reasonably foreseeable needs of future generations. Examples of these values include:

- the interdependency of the elements of the freshwater cycle
- the natural form, character, functioning and natural processes of water bodies and margins, including natural flows, velocities, levels, variability and connections
- the natural conditions of fresh water, free from biological or chemical alterations resulting from human activity, so that it is fit for all aspects of its intrinsic values
- healthy ecosystem processes functioning naturally
- healthy ecosystems supporting the diversity of indigenous species in sustainable populations
- cultural and traditional relationships of Māori with fresh water
- historic heritage associations with fresh water
- providing a sense of place for people and communities.

All the values in both lists are important national values of fresh water.

Review

The Minister for the Environment intends to seek an independent review of the implementation and effectiveness of this national policy statement in achieving all its objectives and policies and in achieving the purpose of the Act, no later than five years after it comes into force. The Minister shall then consider the need to review, change or revoke this national policy statement. Collection of monitoring data to inform this review will begin at least two years prior to the review.

This preamble may assist the interpretation of the national policy statement.

Title

This national policy statement is the National Policy Statement for Freshwater Management 2011.

Commencement

This national policy statement will take effect on 1 July 2011.

Interpretation

In this national policy statement:

“**Efficient allocation**” includes economic, technical and dynamic efficiency.

“**Environmental flows and/or levels**” are a type of limit which describes the amount of water in a body of fresh water (except ponds and naturally ephemeral water bodies) which is required to meet freshwater objectives. Environmental flows for rivers and streams must include an allocation limit and a minimum flow (or other flow/s). Environmental levels for other bodies of fresh water must include an allocation limit and a minimum water level (or other level/s).

“**Freshwater objective**” describes the intended environmental outcome(s).

“**Limit**” is the maximum amount of resource use available, which allows a freshwater objective to be met.

“**Over-allocation**” is the situation where the resource:

- a) has been allocated to users beyond a limit or
- b) is being used to a point where a freshwater objective is no longer being met.

This applies to both water quantity and quality.

“**Outstanding freshwater bodies**” are those water bodies with outstanding values, including ecological, landscape, recreational and spiritual values.

“**Target**” is a limit which must be met at a defined time in the future. This meaning only applies in the context of over-allocation.

Terms given meaning in the Act have the meanings so given.

A. Water quality

Objective A1

To safeguard the life-supporting capacity, ecosystem processes and indigenous species including their associated ecosystems of fresh water, in sustainably managing the use and development of land, and of discharges of contaminants.

Objective A2

The overall quality of fresh water within a region is maintained or improved while:

- a. protecting the quality of outstanding freshwater bodies
- b. protecting the significant values of wetlands and
- c. improving the quality of fresh water in water bodies that have been degraded by human activities to the point of being over-allocated.

Policy A1

By every regional council making or changing regional plans to the extent needed to ensure the plans:

- a. establish freshwater objectives and set freshwater quality limits for all bodies of fresh water in their regions to give effect to the objectives in this national policy statement, having regard to at least the following:
 - i. the reasonably foreseeable impacts of climate change
 - ii. the connection between water bodies
- b. establish methods (including rules) to avoid over-allocation.

Policy A2

Where water bodies do not meet the freshwater objectives made pursuant to Policy A1, every regional council is to specify targets and implement methods (either or both regulatory and non-regulatory) to assist the improvement of water quality in the water bodies, to meet those targets, and within a defined timeframe.

Policy A3

By regional councils:

- a. imposing conditions on discharge permits to ensure the limits and targets specified pursuant to Policy A1 and Policy A2 can be met and
- b. where permissible, making rules requiring the adoption of the best practicable option to prevent or minimise any actual or likely adverse effect on the environment of any discharge of a contaminant into fresh water, or onto or into land in circumstances that may result in that contaminant (or, as a result of any natural process from the discharge of that contaminant, any other contaminant) entering fresh water.

Policy A4 and direction (under section 55) to regional councils

By every regional council amending regional plans (without using the process in Schedule 1) to the extent needed to ensure the plans include the following policy to apply until any changes under Schedule 1 to give effect to Policy A1 and Policy A2 (freshwater quality limits and targets) have become operative:

-
- “1. When considering any application for a discharge the consent authority must have regard to the following matters:*
- a. the extent to which the discharge would avoid contamination that will have an adverse effect on the life-supporting capacity of fresh water including on any ecosystem associated with fresh water and*
 - b. the extent to which it is feasible and dependable that any more than minor adverse effect on fresh water, and on any ecosystem associated with fresh water, resulting from the discharge would be avoided.*
- 2. This policy applies to the following discharges (including a diffuse discharge by any person or animal):*
- a. a new discharge or*
 - b. a change or increase in any discharge –*
of any contaminant into fresh water, or onto or into land in circumstances that may result in that contaminant (or, as a result of any natural process from the discharge of that contaminant, any other contaminant) entering fresh water.
- 3. This policy does not apply to any application for consent first lodged before the National Policy Statement for Freshwater Management takes effect on 1 July 2011.”*

B. Water quantity

Objective B1

To safeguard the life-supporting capacity, ecosystem processes and indigenous species including their associated ecosystems of fresh water, in sustainably managing the taking, using, damming, or diverting of fresh water.

Objective B2

To avoid any further over-allocation of fresh water and phase out existing over-allocation.

Objective B3

To improve and maximise the efficient allocation and efficient use of water.

Objective B4

To protect significant values of wetlands.

Policy B1

By every regional council making or changing regional plans to the extent needed to ensure the plans establish freshwater objectives and set environmental flows and/or levels for all bodies of fresh water in its region (except ponds and naturally ephemeral water bodies) to give effect to the objectives in this national policy statement, having regard to at least the following:

- a. the reasonably foreseeable impacts of climate change
- b. the connection between water bodies.

Policy B2

By every regional council making or changing regional plans to the extent needed to provide for the efficient allocation of fresh water to activities, within the limits set to give effect to Policy B1.

Policy B3

By every regional council making or changing regional plans to the extent needed to ensure the plans state criteria by which applications for approval of transfers of water take permits are to be decided, including to improve and maximise the efficient allocation of water.

Policy B4

By every regional council identifying methods in regional plans to encourage the efficient use of water.

Policy B5

By every regional council ensuring that no decision will likely result in future over-allocation – including managing fresh water so that the aggregate of all amounts of fresh water in a water body

that are authorised to be taken, used, dammed or diverted – does not over-allocate the water in the water body.

Policy B6

By every regional council setting a defined timeframe and methods in regional plans by which over-allocation must be phased out, including by reviewing water permits and consents to help ensure the total amount of water allocated in the water body is reduced to the level set to give effect to Policy B1.

Policy B7 and direction (under section 55) to regional councils

By every regional council amending regional plans (without using the process in Schedule 1) to the extent needed to ensure the plans include the following policy to apply until any changes under Schedule 1 to give effect to Policy B1 (allocation limits), Policy B2 (allocation), and Policy B6 (over-allocation) have become operative:

- “1. *When considering any application the consent authority must have regard to the following matters:*
 - a. *the extent to which the change would adversely affect safeguarding the life-supporting capacity of fresh water and of any associated ecosystem and*
 - b. *the extent to which it is feasible and dependable that any adverse effect on the life-supporting capacity of fresh water and of any associated ecosystem resulting from the change would be avoided.*
2. *This policy applies to:*
 - a. *any new activity and*
 - b. *any change in the character, intensity or scale of any established activity –*
that involves any taking, using, damming or diverting of fresh water or draining of any wetland which is likely to result in any more than minor adverse change in the natural variability of flows or level of any fresh water, compared to that which immediately preceded the commencement of the new activity or the change in the established activity (or in the case of a change in an intermittent or seasonal activity, compared to that on the last occasion on which the activity was carried out).
3. *This policy does not apply to any application for consent first lodged before the National Policy Statement for Freshwater Management takes effect on 1 July 2011.”*

C. Integrated management

Objective C1

To improve integrated management of fresh water and the use and development of land in whole catchments, including the interactions between fresh water, land, associated ecosystems and the coastal environment.

Policy C1

By every regional council managing fresh water and land use and development in catchments in an integrated and sustainable way, so as to avoid, remedy or mitigate adverse effects, including cumulative effects.

Policy C2

By every regional council making or changing regional policy statements to the extent needed to provide for the integrated management of the effects of the use and development of land on fresh water, including encouraging the co-ordination and sequencing of regional and/or urban growth, land use and development and the provision of infrastructure.

D. Tāngata whenua roles and interests

Objective D1

To provide for the involvement of iwi and hapū, and to ensure that tāngata whenua values and interests are identified and reflected in the management of fresh water including associated ecosystems, and decision-making regarding freshwater planning, including on how all other objectives of this national policy statement are given effect to.

Policy D1

Local authorities shall take reasonable steps to:

- a. involve iwi and hapū in the management of fresh water and freshwater ecosystems in the region
- b. work with iwi and hapū to identify tāngata whenua values and interests in fresh water and freshwater ecosystems in the region and
- c. reflect tāngata whenua values and interests in the management of, and decision-making regarding, fresh water and freshwater ecosystems in the region.

E. Progressive implementation programme

Policy E1

- a. This policy applies to the implementation by a regional council of a policy of this national policy statement.
- b. Every regional council is to implement the policy as promptly as is reasonable in the circumstances, and so it is fully completed by no later than 31 December 2030.
- c. Where a regional council is satisfied that it is impracticable for it to complete implementation of a policy fully by 31 December 2014, the council may implement it by a programme of defined time-limited stages by which it is to be fully implemented by 31 December 2030.
- d. Any programme of time-limited stages is to be formally adopted by the council within 18 months of the date of gazetting of this national policy statement, and publicly notified.
- e. Where a regional council has adopted a programme of staged implementation, it is to publicly report, in every year, on the extent to which the programme has been implemented.

Proposed National Policy Statement on Indigenous Biodiversity

Preamble

This national policy statement sets out the objective and policies to manage natural and physical resources so as to maintain indigenous biological diversity (biodiversity) under the Resource Management Act 1991 (“the Act”).

New Zealand has a unique natural heritage. Our land is young and geologically unstable. It has been separated from other major land masses for some 80 million years. In this isolation and geological instability our ecology has evolved to be genuinely unique. We have high endemism (species found nowhere else on the planet) and, in the absence of land mammals, such distinct ecosystems that New Zealand has been described as the closest scientists will come to studying life on another planet.

Yet in just 700 to 800 years, humans have wrought huge change through our use of land and other natural resources, and through our introduction (deliberate or otherwise) of exotic species that have become pests outside their natural environments.

As a consequence, many indigenous species have been lost and many that remain are now highly vulnerable and may also be lost unless we intervene to protect them from the many threats they face. We do this because biodiversity plays an important part in the quality of our environment and in the social, economic, and cultural well-being of New Zealand.

However, maintaining our biodiversity is one of our greatest environmental challenges. In 2000, a national strategy (prepared in accordance with the International Convention of Biological Diversity) identified, and sought to respond to, a decline in indigenous biodiversity. Government responses to the decline have been many and varied. One was to strengthen the Act’s (and thereby local authorities’) role in biodiversity protection. Delivering on that role has, however, proved challenging for local authorities for the following reasons:

- areas and habitats of indigenous species occur on private land and there can be tensions between the aspirations of private landowners for land use and development and the need to protect those areas habitats
- ecosystems are not always confined to definable sites; maintaining indigenous biodiversity requires more than the protection of sites of especially high biodiversity value
- the need to have regard to biodiversity is pervasive. Biodiversity will be relevant in the exercise of a wide range of functions under the Act
- there is a specific function within the Act for both regional councils and territorial authorities to maintain indigenous biological diversity. This is the only function within the Act that has embedded within it an objective (“maintain”)
- the costs of protecting areas and habitats are local and often specific to an individual yet the benefits are local, regional and national
- the distribution of remaining indigenous vegetation and habitat types the responsibility for maintaining biodiversity does not fall uniformly across all regions and districts
- although there is a specific function within the Act, responses under the RMA are just part of a wider programme of actions by both public and private entities engaged in funding and managing protection, restoration, and recovery programmes

- overall success is reliant on the goodwill and sympathetic management of the many private landowners on whose properties indigenous species and ecosystems remain. That needs to be remembered in the way we manage for biodiversity under the Act.

This national policy statement seeks to:

1. bring more clarity to the role of local authorities in biodiversity management under the RMA than may be apparent on the face of the Act itself
2. support the existing good work of local authorities to date and secure the gains made in terms of regional and local planning responses
3. encourage local authorities that operate below best practice to enhance their efforts by introducing a “bottom-line” category of site whose values are to be recognised and protected through the RMA
4. help decision-makers appropriately balance the protection of biodiversity, the interests and values of tangata whenua, the rights and responsibilities of landowners and the broader national interests that may be at stake in future resource management decision-making.

In pursuing these aims, the national policy statement seeks to strengthen the contribution that the RMA makes to “halting the decline”. Importantly though, there will be areas and habitats significant under section 6(c) that are not identified using the criteria promoted by this national policy statement. Sites valued for conservation in a more general sense, sites valued for landscape, amenity or cultural reasons or sites already identified by virtue of existing criteria for section 6(c) matters may be examples.

This national policy statement does not serve to limit section 6(c) but rather to make clear that at least one of the reasons an area or habitat may be significant is for its contribution to maintaining biodiversity and to ensure that the most critical areas and habitats are recognised. This national policy statement should not though be read as implying that local authorities cannot go further in their identification and protection of sites should they so wish.

This national policy statement also seeks to recognise the traditional relationship developed over centuries of close interaction by Māori with New Zealand’s indigenous biodiversity. It also acknowledges the role that Māori have as kaitiaki who are involved in all aspects of biodiversity management including conservation, customary and commercial uses. The recognition of the above will assist in developing stronger working relationships between the Crown and Māori.

The national policy statement is to be applied by decision-makers under the Act. The objective and policies are intended to guide decision-makers in drafting plan provisions that recognise and protect biodiversity values, and in making decisions under the Act in respect of activities that may affect indigenous biodiversity.

However, the national policy statement is not meant to be a substitute for, or prevail over, the Act’s statutory purpose or the statutory tests already in existence. Further, the national policy statement is subject to Part 2 of the Act.

For decision-makers under the Act, the national policy statement is intended to be a relevant consideration to be weighed along with other considerations in achieving the sustainable management purpose of the Act.

This preamble may assist the interpretation of the national policy statement, where this is needed to resolve uncertainty.

Pursuant to section 46 of the Resource Management Act 1991 the Minister for the Environment proposes the following National Policy Statement –

1. Title

This National Policy Statement is the Proposed National Policy Statement on Indigenous Biodiversity.

2. Commencement

This national policy statement comes into force on the 28th day after the date on which it is notified in the Gazette.

3. Interpretation

In this National Policy Statement, unless the context otherwise requires –

Act means the Resource Management Act 1991.

Biodiversity has the same meaning as biological diversity as included in the Act.

Biodiversity values means those attributes of an ecosystem that determine an area or habitat's importance for the maintenance of biodiversity nationally. Biodiversity values include species composition, habitat structure and ecosystem function.

Biodiversity offset means measurable conservation outcomes resulting from actions which are designed to compensate for more than minor residual adverse effects on biodiversity, where those effects arise from an activity after appropriate prevention and mitigation measures have been taken. The goal of biodiversity offsets is to achieve no net loss and preferably a net gain of biodiversity on the ground with respect to species composition, habitat structure and ecosystem function.

Community means a group of organisms growing or living together in a given area.

Customary use means, according to tikanga, the extractive use of indigenous plants or animals by tangata whenua for traditional uses including food gathering, carving, weaving, and rongoa (traditional medicine).

Ecosystem means an ecological community together with its environment, functioning as a unit; an interacting system of living parts and non-living parts such as sunlight, air, water, minerals and nutrients.

Habitat means the area or environment where an organism or ecological community lives or occurs naturally for some or all of its life cycle or as part of its seasonal feeding or breeding pattern.

Indigenous species means a species or genetic variant found naturally in New Zealand, including migrant species visiting New Zealand on a regular or irregular basis.

Indigenous vegetation means any local indigenous plant community through the course of its growth or succession consisting primarily of native species and habitats normally associated with that vegetation type, soil or ecosystem or having the potential to develop these characteristics. It includes vegetation with these characteristics that has been regenerated with human assistance following disturbance or as mitigation for another activity, but excludes plantations and vegetation that have been established for commercial harvesting.

Land environment means a region or area classified under the Land Environments of New Zealand system.

Matter has the same meaning as defined in section 141 of the Act.

Provisions means objectives, policies, methods, rules or ancillary information (such as criteria) included within a regional policy statement or district or regional plan.

Restoration and enhancement means the active intervention and management of degraded biotic communities, landforms and landscapes in order to restore biological character, ecological and physical processes.

Maintenance means ‘no net loss’ as achieved by the protection of existing areas and habitats and/or the restoration and enhancement of areas and habitats as may be required through biodiversity off-sets or other initiatives.

No net loss means no overall reduction in:

- a. the diversity of (or within) species
- b. species’ population sizes (taking into account natural fluctuation), and long-term viability
- c. area occupied and natural range inhabited by species
- d. range and ecological health and functioning of assemblages of species, community types and ecosystems.

Public conservation land refers to land administered by the Department of Conservation for whatever purpose. It excludes land administered under conservation legislation by other parties.

Threatened species means a species facing a very high risk of extinction in the wild and includes nationally critical, nationally endangered and nationally vulnerable species as identified in the New Zealand Threat Classification System lists.

At risk means a species facing a longer-term risk of extinction in the wild (either because of severely reduced or naturally small population size or because the population is declining but buffered by either a large total population or a slow rate of decline) as identified in the New Zealand Threat Classification System lists.

Any term or expression that is not defined in this National Policy Statement, but that is defined in the Act, has the meaning given to it by the Act.

4. Application

This national policy statement applies to land owned by any person except that it does not apply to public conservation land.

This national policy statement does not apply to the coastal marine area. Biodiversity in the coastal marine area should be managed in accordance with relevant policies of the New Zealand Coastal Policy Statement.

This national policy statement is not intended to be a statement of all that is required in order to fulfil obligations under section 6(c) of the Act. Instead it requires the recognition that at least one of the reasons an area or habitat may be significant for the purposes of section 6(c) is for its contribution to maintaining biodiversity.

5. Matter of national significance

The matter of national significance to which this national policy statement applies is the need to maintain New Zealand's indigenous biological diversity.

6. Objective

To promote the maintenance of indigenous biological diversity by protecting areas of significant indigenous vegetation and significant habitats of indigenous fauna, and to encourage protection and enhancement of biodiversity values more broadly while:

- supporting best practice of local authorities
- recognising the positive contribution of landowners as guardians/kaitiaki of their land
- recognising that the economic, social and cultural well-being of people and communities depends on, amongst other things, making reasonable use of land.

7. Policies

POLICY 1

For the purpose of this national policy statement, an area of significant indigenous vegetation or a significant habitat of indigenous fauna is an area or habitat whose protection is important for the maintenance of indigenous biological diversity.

POLICY 2

In considering the effects of any matter, local authorities shall, in addition to any area of significant indigenous vegetation or a significant habitat of indigenous fauna identified in, or by, provisions of any relevant regional policy statement, or regional or district plan, regard the following as significant indigenous vegetation or significant habitat of indigenous fauna:

- a. the naturally uncommon ecosystem types listed in Schedule One
- b. indigenous vegetation or habitats associated with sand dunes
- c. indigenous vegetation or habitats associated with wetlands

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- d. land environments, defined by Land Environments of New Zealand at Level IV (2003), that have 20 per cent or less remaining in indigenous vegetation cover
 - e. habitats of threatened and at risk species.

POLICY 3

Any regional policy statement notified after the date on which this national policy statement takes effect, shall, in addition to any other provisions it has or is required to have relating to section 6(c) of the Act, include criteria for the identification of areas of significant vegetation and significant habitat of indigenous fauna that include, as a minimum, the areas and habitats identified in Policy 2a–d.

POLICY 4

District plans and any relevant regional plans shall identify, using (where practical) maps and/or schedules, areas of significant indigenous vegetation and significant habitats of indigenous fauna. In identifying these areas, decision-makers must include in their plans the criteria of the relevant regional policy statement and, within five years of this national policy statement taking effect, the criteria of Policy 2a–d (to the extent that these may be broader in scope than those of the relevant regional policy statement) and 2e (to the extent that existing information enabling the application of this criteria is available).

For the purpose of this policy, a relevant regional plan is a regional plan that controls activities that could adversely affect areas of significant vegetation and significant habitat of indigenous fauna.

POLICY 5

In addition to the inclusion in plans of any other provisions that the plan has or is required to have relating to section 6(c) of the Act, local authorities must manage the effects of activities through district and relevant regional plans (or be satisfied that the effects are managed by methods outside of district or regional plans) to ensure ‘no net loss’ of biodiversity of areas of significant indigenous vegetation and significant habitats of indigenous fauna by:

- a. avoiding adverse effects
- b. where adverse effects cannot be avoided, ensuring remediation
- c. where adverse effects cannot be remedied, ensuring mitigation
- d. where adverse effects cannot be adequately mitigated, ensuring any residual adverse effects that are more than minor, are offset in accordance with the principles set out in Schedule 2.

For the avoidance of doubt, in accordance with the principles of Schedule 2, there are limits to what can be offset because some vegetation or habitat and associated ecosystems, is vulnerable or irreplaceable. In such circumstances off-setting will not be possible and local authorities will need to take full account of residual adverse effects in decision-making processes.

POLICY 6

To promote the maintenance of biodiversity outside of identified areas of significant indigenous vegetation and significant habitats of indigenous fauna, and to support the

resilience and viability of populations and species assemblages within identified areas and habitats, decision-makers should:

- a. recognise the contribution that all remaining areas of indigenous vegetation make to the maintenance of indigenous biodiversity and encourage the retention of as many elements as possible
- b. recognise the full range of potential adverse effects on indigenous biodiversity including, but not limited to, population fragmentation, degradation of non-living components (eg, water and soil), interruption to breeding cycles and migratory pathways, and increased exposure to invasive introduced plant and animal species that pose a threat to indigenous biodiversity.
- c. encourage the retention of existing vegetation, whether indigenous or not (but not including recognised pest plants), that provides:
 - i. habitat for indigenous species
 - ii. seasonal food sources for indigenous species
 - iii. ecological linkage between areas and habitats identified in accordance with Policy 4
 - iv. a buffer to indigenous vegetation for areas and habitats identified in accordance with Policy 4
- d. when the retention of existing vegetation and habitat will not achieve sustainable management, encourage measures that mitigate and offset adverse effects on indigenous species during, and subsequent to, removal or modification of that vegetation or habitat through harvest or clearance or other activity that may threaten the survival of affected species populations
- e. encourage the planting of naturally occurring, locally sourced indigenous species and the creation of habitats for indigenous species as well as plant and animal pest control
- f. encourage the establishment of additional indigenous riparian vegetation as a means of increasing connectivity and enhancing freshwater habitat for indigenous species
- g. ensure human-made structures do not adversely impact on indigenous species by interfering with their natural migratory movements
- h. consider both regulatory incentives (such as bonus development rights in exchange for protection and enhancement of vegetation and habitats) and non regulatory incentives, (such as technical advice and practical help) to support and encourage landowners to make appropriate land management decisions.

POLICY 7

To recognise and provide for the role of tangata whenua as kaitiaki, when developing and implementing regional policy statements and regional and district plans local authorities shall provide for:

- a. tangata whenua values and interests to be incorporated in to the management of biodiversity
- b. consultation with tangata whenua regarding the means of protecting and enhancing areas and habitats identified in accordance with Policy 4 that have particular significance to tangata whenua
- c. active involvement of tangata whenua in the protection of cultural values associated with indigenous biological diversity
- d. customary use of indigenous biodiversity according to tikanga.

POLICY 8

During the development of biodiversity-related provisions of regional policy statements, district plans and relevant regional plans (including prior to notification), local authorities will consult with, and provide reasonable opportunity for, the input of:

- a. those whose properties would be affected by the proposed plan
- b. the public
- c. tangata whenua.

Schedule 1: Naturally uncommon ecosystems

Tentative 'common' name	Definition (ie, diagnostic classifiers) and notes	Vegetation structure
Coastal systems		
Dune deflation hollow	Raw/sand/depression/excessive drainage/coastal	Open land
Shell barrier beaches	Raw/shells/plain/coastal	Grassland, herbfield
Coastal turf	Raw/atmospheric salinity/coastal, extreme exposure	Open land, herbfield
Stony beach ridges	Raw-recent/gravel-cobbles/beach ridge/coastal	Scrub, shrubland, open land
Shingle beaches	Raw-recent/gravel-cobbles/beach/coastal	Open land
Coastal rock stacks	Raw/silicic-intermediate and mafic bedrock/tor/coastal	Open land, herbfield, lichenfield, shrubland
Coastal cliffs on calcareous rock	Raw/calcareous rock/cliffs/coastal	Open land, lichenfield, herbfield, scrub, shrubland tussockland
Ultramafic sea cliffs	Raw/ultramafic/cliffs/coastal	Scrub, herbfield, lichenfield, open land
Coastal cliffs: quartzose, acidic and basic	raw/quartzose, acidic or basic rock/cliffs/coastal	open land, lichenfield, herbfield, scrub, shrubland tussockland
Marine mammal influenced sites	Seabirds and marine mammals-trampling and grazing/coastal	Open land – forest
Inland and alpine systems with raw or recent soils		
Screes of calcareous rock	Raw/calcareous/gravel-cobbles/talus/ (excessive drainage – near permanently saturated; inland-alpine)	Open land
Recent lava flows (<1000 years)	Raw/silicic-intermediate (volcanic)/ boulders-bedrock (numerous landforms)	Scrub, shrubland, treeland, forest, herbfield, mossfield, open land
Old tephra (>500 years) plains (= frost flats)	Silicic-intermediate (volcanic)/ depression/seasonally fluctuating water table/inland, >200 frost days year	Shrubland, scrub, tussockland
Frost hollows	Terrace/>200 frosts per annum	Shrubland, scrub
Cliffs, scarps and tors of mafic rock	Raw/mafic/cliff, scarp and tor/inland-alpine	Open land, herbfield, tussockland, shrubland
Calcareous cliffs, scarps and tors	Raw/calcareous/cliff, scarp and tor/ inland-alpine	Open land, herbfield, tussockland, shrubland
Inland outwash gravels	Raw-recent/silicic/sand-boulders/ plain/inland	Open land, herbfield, treeland
Braided riverbeds	Raw-recent/ sand-boulders/plain/ periodically flooded (see Johnson and Gerbeaux, 2004, p56)	Open land, herbfield
Sandstone erosion pavement	Raw/quartzose sandstone/bedrock/ hillslope, hillcrest	Open land
Recent volcanic debris landforms: dunes	Raw/acidic rock (volcanics)/sand/dune	Open land
Recent volcanic debris landforms: lava flows, boulderfields, debris flows and tephra	Raw/acidic rock (volcanics)/silt-sand-gravel-cobbles-boulders-bedrock-talus	scrub, shrubland, treeland, forest, herbfield, mossfield, lichenfield, open land

Cliffs, scarps and tors: quartzose to acidic	Raw/quartzose or acidic rock/bedrock/cliff, scarp and tor/inland-alpine	open land, herbfield, tussockland, shrubland
Ultrabasic landforms (incl. hills, cliffs, scree, boulderfields)	Ultrabasic rock/inland	open land, lichenfield, herbfield, tussockland, shrubland, forest (very limited extent)
Boulderfields of selected rock types (acidic and calcareous)	Raw/acidic or calcareous rock/boulders/talus	open land, lichenfield, shrubland
Limestone erosion pavements	Raw/limestone/bedrock/hillslope, hillcrest/(alpine)	Open land
Other inland systems		
Inland saline (salt pans)	Groundwater salinity/semi arid/depression (see also Johnson and Gerbeaux, 2004, pp 20, 22)	Herbfield, grassland
Leached terraces	Overmature/sand-gravel/terrace-plain/inland	Open land, herbfield, shrubland
Cloud forest	High cloud cover (<1500 sunshine hours and >200 rain days per annum)/inland	Forest
Geothermal systems		
Heated ground (dry)	Geothermal-excessive heat	Open land, mossfield, shrubland, scrub
Hydrothermally altered ground (now cool)	Geothermal-acid soils, toxic elements	Open land, shrubland, scrub
Acid rain systems	Geothermal-acid rain	Open land, scrub, treeland, forest
Fumeroles	Geothermal-superheated steam/acid rain/depression	Open land, shrubland
Geothermal streamsides	Geothermal-excessive heat/near permanently saturated (but water table not high)	
Subterranean or semi-subterranean		
Sinkholes	Raw/limestone, marble, dolomite/doline	Open land, shrubland, tussockland, flaxland
Cave entrances	Raw/limestone, marble, dolomite/cave entrance	Open land, herbfield

Schedule 2: Principles to be applied when considering a biodiversity offset

1. **No net loss:** A biodiversity offset should be designed and implemented to achieve in situ, measurable conservation outcomes which can reasonably be expected to result in no net loss and preferably a net gain of biodiversity.

The offset design will demonstrate that:

- a. the key biodiversity components affected by the activity are identified, and an explanation provided as to how this was done, the basis for doing so, and how the key biodiversity components have been included in the offset design
- b. the anticipated losses of biodiversity at the site of the activity and the anticipated gains at the offset site have been calculated to determine "no net loss" and preferably "net gain" and documented
- c. appropriate measures/metrics that address the quality and quantity of biodiversity have been identified and used in the loss-gain calculations
- d. a suitable basis for assessing a 'like-for-like-or-better' approach to equivalence has been identified and used for the offset design
- e. any temporal loss of biodiversity between the time of the project's impact and the time the offset will mature has been considered and addressed
- f. intended conservation outcomes for biodiversity components within the offset are explicitly described
- g. uncertainty and risk is explicitly built into the loss-gain calculations.

2. **Additional conservation outcomes:** A biodiversity offset should achieve conservation outcomes above and beyond results that would have occurred if the offset had not taken place. Offset design and implementation should avoid displacing activities harmful to biodiversity to other locations.

The offset design will demonstrate that:

- a. conservation gains have been predicted without the offset project ("without-offset") and with the offset, and on this basis, evidence is provided to show that the anticipated conservation outcomes would not have occurred without the offset.

3. **Adherence to the mitigation hierarchy:** A biodiversity offset is a commitment to compensate for significant residual adverse impacts on biodiversity identified after appropriate avoidance, minimisation and on-site rehabilitation measures have been taken according to the mitigation hierarchy.

The offset design must demonstrate:

- a. how the activity addresses direct and indirect effects on specific components of biodiversity by:
 - i. avoidance measures
 - ii. minimisation measures
 - iii. on-site rehabilitation measures

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- b. that the biodiversity offset only addresses the residual effects of the activity, namely those effects left after all the appropriate avoidance, minimisation and rehabilitation actions have been taken.
4. **Limits to what can be offset:** There are situations where residual effects cannot be fully compensated for by a biodiversity offset because the biodiversity affected is vulnerable or irreplaceable.

These situations will be demonstrated when:

- a. a comprehensive assessment has been undertaken to determine whether, and if so which, highly vulnerable and irreplaceable biodiversity components are present and are affected by the activity. In determining when offsetting is not appropriate local authorities should have regard to whether the vegetation or habitat:
 - i. represents a non-negligible proportion of what remains of its type
 - ii. is now so rare or reduced that there are few options or opportunities for delivering the offset
 - iii. is securely protected and in good condition so there is little opportunity to offset the biodiversity components in a reciprocal manner
 - iv. is threatened by factors that cannot be addressed by the available expertise.

If there are residual effects on biodiversity that are not, or seem likely not, to be capable of being offset, any measures taken to address them, by way of environmental compensation or otherwise, should not be considered to be a biodiversity offset for the purposes of Policy 3.

5. **Landscape context:** A biodiversity offset should be designed and implemented in a landscape context to achieve the expected measurable conservation outcomes taking into account available information on the full range of biological, social and cultural values of biodiversity and supporting an ecosystem approach.

The offset design will demonstrate that:

- a. it contributes to and complements biodiversity conservation priorities/goals at the landscape and national level.
6. **Long-term outcomes:** The design and implementation of a biodiversity offset should be based on an adaptive management approach, incorporating monitoring and evaluation, with the objective of securing outcomes that last at least as long as the project's impacts and preferably in perpetuity.

The offset design will demonstrate that:

- a. management arrangements, legal arrangements (eg, covenants) and financial arrangements (eg, bonds) are in place that allow the offset to endure as long as the effects of the activity, and preferably in perpetuity
- b. a biodiversity offset management plan is prepared and implemented which:
 - i. contains specific, measurable and time-bound targets for the biodiversity offset
 - ii. predicts when no net loss/net gain will be achieved
 - iii. provides mechanisms for adaptive management of the offset, using the results of periodic monitoring and evaluation against identified milestones to determine whether the offset is on track and rectify if necessary

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- iv. establishes roles and responsibilities for managing, governing, monitoring and enforcing the offset
 - c. where milestones are not achieved, an analysis is undertaken to identify the causes of non-achievement and to revise the offset management plan to avoid similar occurrences
 - d. a decision-making process has been established to correct problems that arise and enable adaptive management of the biodiversity offset for the timeframe over which the offset's measurable conservation outcomes will be achieved and maintained.
 7. **Transparency:** The design and implementation of a biodiversity offset, and communication of its results to the public, should be undertaken in a transparent and timely manner.

Air Quality Management in Auckland

File No.: CP2011/04339

Executive Summary

This report provides background information and accompanies a presentation to be made to the Environment and Sustainability Forum on air quality management in Auckland. The purpose of the presentation is to set out the main issues in Auckland with regard to air quality and highlight the key concerns. The report and presentation are also intended to be a precursor to a subsequent report which will outline recommended options for reducing air pollution. Additional information is also included in the Air Land Water Coastal (CLAW) Strategy and Workplan 2011/2012, also being presented at this Forum meeting.

For the urban area of Auckland in 2006, the health costs of air pollution from all sources are estimated to be at least \$727 million per annum. This health burden ranges from 1.16 million days being lost due to illness or poor health, through to approximately 730 premature deaths each year. The key sources of air pollution in Auckland are domestic heating, transport and industry. Of these, domestic home heating is the greatest contributor to particulate matter overall, but has received the least attention in terms of emissions reduction measures. It is also a source that the Council can control as part of its functions and duties. Therefore, domestic heating is an area that needs greater targeting by Council in order to improve air quality in the region and ensure the region meets the government's National Environmental Standards for Air Quality. The subsequent report to follow later in 2011 will set out a range of options for reducing emissions from domestic heating and a recommended approach that officers will seek endorsement of.

Recommendation

That the report be received.

Background

Key Drivers

Ensuring that Auckland has clean air is a key component of achieving the Mayor's vision of Auckland as "the world's most liveable city", a place that has improving quality of life and puts children and young people first.

Degraded air quality has adverse impacts on human health, ecosystems and amenity values. There are costs associated with poor air quality and, therefore, financial benefits to maintaining clean air. Currently, health impacts from the levels of pollution in Auckland place a significant financial burden on individuals and the government (ultimately funded by taxpayers) in terms of health costs.

Actions to reduce emissions of air quality contaminants generally also have positive benefits in reducing CO₂ emissions and mitigating against climate change. Therefore, working to reduce emissions of air contaminants will have co-benefits in contributing to the achievement of the Mayor's greenhouse gas emission reduction target.

Additionally, Auckland's economy depends upon it being perceived as a great place to visit, live and work and this is highly influenced by our clean, green image, of which good air quality is a key contributor.

Issues and Challenges for Auckland

Air quality is a cross-cutting issue for the Auckland region as air quality is impacted on by many of the activities that Aucklanders do – the products they buy, the way they heat our homes, the way they travel.

The management of air quality is primarily a two-faceted approach that focuses on reducing emissions of air pollution and reducing the exposure of communities to this pollution, both of which can deliver improved outcomes in terms of health and quality of life, and reduced health costs.

Air quality does not only deal with harmful pollutants and health effects, however. People may also experience nuisance problems caused by dust, smoke or odour. This is particularly an issue on the rural/urban and industrial/residential fringe. With infill development, inner city apartments and rural-residential development reverse sensitivity has increasingly become an issue. Reverse sensitivity describes the effect whereby a new activity is established near to an existing activity, and then people associated with the new activity complain about the effect of the existing activity. For example, a house being built near a farm that creates odour with the home occupants subsequently complaining about the smell from the farm.

Many of the issues around air quality in Auckland can be addressed through effective land use and transport planning and the way that our city and homes are designed. Some of the key issues and challenges related to air quality in Auckland are set out below:

- Home Energy Use
A large number of homes in Auckland are cold, damp and energy consumptive. 60% of Auckland homes were built before 1978 (before the first insulation standard was

introduced). Older homes are more likely to be cold, damp, mouldy, lack sun and have high emitting heating devices, (e.g. open fires) and poor insulation. For houses with solid fuel burning this leads to more use of those appliances to keep warm, and therefore greater emissions.

- Urban Form and Transport
Auckland has high levels of car ownership, a sprawling urban form and low levels of public transport usage, although this is increasing. Historically there has been insufficient integration between land use and transport, and development has been designed around and dominated by the car.
- Growing Vehicle Numbers and Use
There have been improvements in vehicle and fuel technology, and vehicles now have to meet minimum emission standards that are becoming progressively tighter. These factors will gradually reduce the emissions per vehicle. However, this reduction is being offset by the growth in vehicle numbers, increased number of kilometres driven and the increasing age of the vehicle fleet. In addition, Auckland has the one of the largest per capita ownership rates of private vehicles in the world with approximately 744,000 motor vehicles registered in the Auckland region. Our per capita emissions are also therefore very high.
- Rural Lifestyle
There has been continuing rural fragmentation with larger farms subdivided into lifestyle blocks and rural-residential sites. The urbanisation of the rural environment can impinge on the ability of rural activities to operate through the creation of issues of reverse sensitivity.
- Industrial Land Provision
There is a need to ensure that there is an adequate supply of land in suitable locations provided for industrial activities that will not lead to exposure and reverse sensitivity issues.
- Mixed Use Development
Provision of mixed use development whilst it achieves objectives around integrating transport and land use and minimising the need to travel, has caused problems in some locations with unintended consequences occurring due to incompatible activities being located in proximity to each other (e.g. schools or childcare centres in or near industrial zones).

Statutory Responsibilities

As a unitary authority, the Auckland Council has statutory requirements under the Resource Management Act and needs to fulfil the requirements of both a territorial authority and a regional council. The Council gives effect to its responsibilities under the RMA through the Auckland Regional Plan: Air, Land and Water, Regional Policy Statement, and district plans. Other statutory documents (e.g. the Regional Land Transport Strategy) that take into account effects on air quality are also prepared by the Council.

Additionally, the Council is required to meet national standards and regional targets for air quality in Auckland. In 2004, the government introduced the National Environmental Standards for Air Quality (AQNES). The AQNES prohibits certain activities and sets ambient (outdoor) air quality standards for some pollutants (PM₁₀, NO₂, O₃, SO₂ and CO) that are required to be met in all parts of New Zealand.

The primary purpose of the ambient air quality standards is to provide a guaranteed level of protection for the health of all New Zealanders. In Auckland, the standards for particulate matter of less than ten microns (PM₁₀) are regularly exceeded. This is a concern, as PM₁₀ is associated with adverse health impacts.

The government has recently adopted amendments to the AQNES which was set out in an earlier report to the Environment and Sustainability Forum in March 2011. Through the amendment process, the Ministry for the Environment signaled its intention to investigate adopting a national standard for PM_{2.5}, (particulate matter of 2.5 microns or less) which is likely to be developed in 2012. This is in recognition of the international focus moving towards PM_{2.5} due to the more damaging health effects of these finer particles. The finer particles can lodge deep into the lungs and include a variety of hazardous air pollutants attached to the particles. PM_{2.5} has been identified as an issue in the Auckland region. Regional Air Quality Targets are set out within the Auckland Regional Plan: Air, Land and Water and Auckland regularly fails to meet the target for PM_{2.5}, with 3 – 4 exceedences per year measured from 2005-2010.

What is the Air Quality Like in Auckland?

Air quality in the Auckland region is assessed through ongoing monitoring of pollutants and visibility. There are 15 monitoring sites which have been selected to represent a variety of pollutant sources and exposures. Monitoring sites are located in a mix of locations; urban, rural, industrial and near busy roads.

Levels of particulate matter in Auckland's air regularly exceed standards and guidelines including the government's National Environmental Standards for Air Quality. Nitrogen oxides also exceed standards and guidelines from time to time. In the Auckland urban area, air quality has failed to meet acceptable standards on average 16-17 times per year from 2005-2010. Auckland also suffers from a visible 'smoggy' brown haze on average 30 days a year. Other guidelines and targets are at risk of being exceeded, such as the arsenic, benzene and benzo(a)pyrene guidelines. This means that the air in Auckland is impacting on the health of its residents.

In order to meet these standards and targets and protect the amenity values of the city and the health of Aucklanders, the Council needs to take further action on reducing air pollution in the Auckland region.

Health Impacts of Auckland's Air Quality

Of all the gases and air pollutants in Auckland's air, the fine particle levels are currently of most concern and cause the worst health problems. The relationship between levels of PM₁₀ and excess death rates has been confirmed in 90 USA cities, 37 European cities and 8 Asian cities over the past decade. Hundreds of studies have confirmed links to various health effects and premature death. These studies have been extensively reviewed and the evidence supporting these relationships is overwhelming. Health effects have also been observed below guideline levels. The evidence is widely accepted as irrefutable by medical and air quality professionals around the world.

The presence of fine particles in air is linked to sickness and hospitalisation due to a wide range of health effects, including respiratory symptoms (coughing, wheezing, reduced lung function), bronchitis, chronic obstructive pulmonary disease, lung cancer, heart attacks, arteriosclerosis, strokes, high blood pressure, and asthma.

For the urban area of Auckland in 2006, the health costs of air pollution from all sources are estimated to be at least \$727 million per annum. This health burden results from effects ranging in severity from 1.16 million days being lost due to illness or poor health – especially in the young, the elderly, and people with heart disease, respiratory disease, asthma and bronchitis – through to at least 730 Aucklanders dying prematurely each year. The cost estimates for the entire region (including areas outside of urban centres) are even greater.

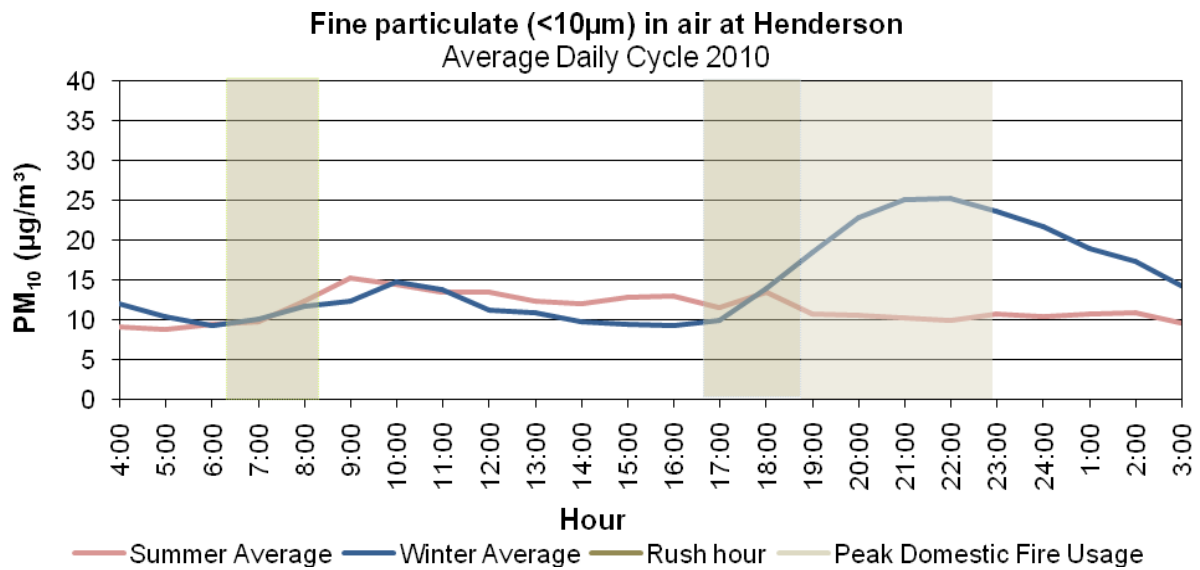
Asthmatics are particularly sensitive to air pollution and Auckland has the second highest rate in the world (behind the UK), with a prevalence of one child in four (25 per cent) and one adult in six (17 per cent). Asthma is the most common cause of hospitalisation in children and rates have more than doubled in the past 30 years. The cost of asthma in New Zealand is conservatively estimated at \$825 million per year, with \$125 million from direct medical expenses and \$700 million due to disability and premature deaths.

Although concentrations of some contaminants in the region are improving, others have levelled off or may even be increasing. Auckland is currently home to more than a third of New Zealand's population. Based on current projections, the region's population is estimated to increase from 1.3 million to 2.3 million people by 2051. One of the principal challenges posed by this expected population growth will be to minimise the effects of chronic air pollution as the number of people potentially exposed increases.

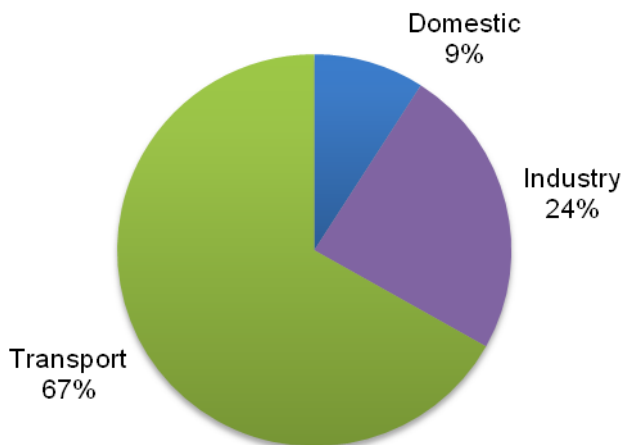
Sources of Emissions

In Auckland there are three main anthropogenic (human made) sources of air pollution - industry, transport and domestic heating. The transport sector is the predominant contributor to air pollution when taking into account all contaminants. However, in relation to particulate matter, which is the main issue for Auckland in terms of risk to health, domestic fires make the largest contribution to particulate matter emissions on an annual basis.

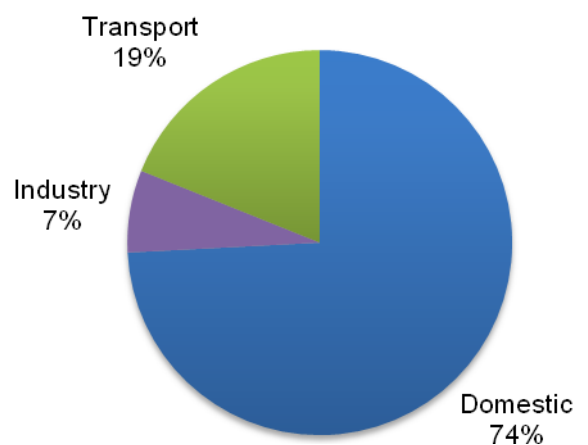
There is a large difference in levels of emissions in summer versus winter, with levels of PM₁₀ almost four times higher in winter than summer due to the emissions from domestic heating, as shown in the graphs below:



PM₁₀ (2006 Summer)
Total = 5.3 tonnes/day

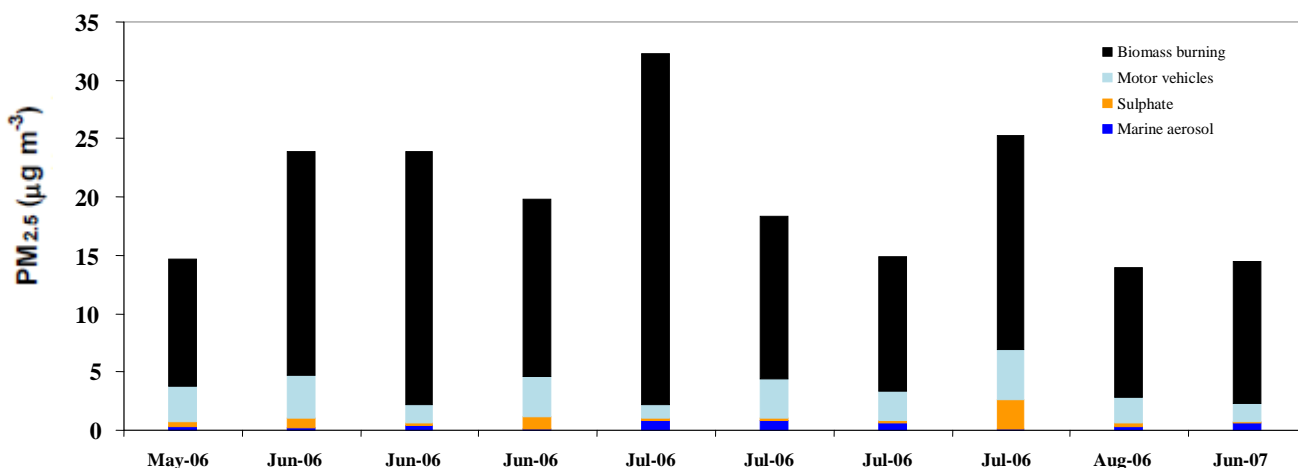


PM₁₀ (2006 Winter)
Total = 18.4 tonnes/day



It should be noted that on an annual basis the contributions of the three sources to PM₁₀ levels are comprised as follows: industry 14%, transport 37%, and domestic heating 49%.

The Council has undertaken monitoring work called “source apportionment” which measures the contribution of different sources of particulate matter, both natural and anthropogenic. This monitoring shows that on higher pollution days the most significant contributor to particulate levels was usually home heating (shown as biomass burning in the figure below).



Source contributions to peak Partisol PM_{2.5} concentrations at Kingsland

Since 2005, industry PM₁₀ emissions are estimated to have reduced by almost 10% and transport and domestic heating emissions are estimated to have reduced by 8% and 22% respectively. The reason that reductions are likely to have occurred without significant policy intervention from the Council is that in the case of transport, the government has continued to tighten fuel specifications, which means that fuel is less polluting over time and more modern (less polluting) vehicles are slowly replacing older vehicles. There is also a trend towards people heating their homes with electricity or gas. In the case of industry, technologies are improving and so some industrial processes are less polluting than in the past, and there have also been some industrial premises that have ceased operations recently.

Fortunately some emissions reductions have been achieved in recent years, however, emissions need to reduce more dramatically in order for the National Environmental Standards to be met and the health of Aucklanders protected, particularly as with increasing population growth, more people will be exposed to poor air quality. This means that further action needs to be taken to reduce air pollution in the Auckland region, particularly emissions of PM₁₀ from home heating.

National Standards for Air Quality

The Auckland urban airshed had an average of 5 exceedences of the standard occurring per year from 2005-2010, but the standard only allows for one exceedence per year. The difference in summer versus winter emissions affects exceedences, with more occurring in winter as seen in the table below:

Season	No. of exceedences of AQNES (2005 – 2010)
Spring	9
Summer	4
Autumn	5
Winter	14

The government has set a timeline whereby Auckland needs to achieve a maximum of one exceedence per year by 1 September 2016, a level that we are currently not on track to deliver.

The Ministry for the Environment is in the process of developing an AQNES compliance strategy for councils. This sets out the obligations that councils have in terms of demonstrating that they are taking steps to meet the standards (if they are in breach of the standards). Though the mechanisms to be used by the Ministry are not yet defined, they have clearly signalled their intention to apply increasing pressure to councils that are not making sufficient efforts to meet the standards. There are likely to be additional reporting requirements for councils that breach the standard and therefore the Auckland Council will need to be able to demonstrate that it is taking steps to improve air quality in the region.

Initiatives Taken

Over the last decade there have been various initiatives taken by both regional and central government to address air quality. The following sets out the initiatives that have been taken to reduce emissions from transport, domestic heating and industry:

1. Transport

Cleaner fuels

- Banning lead in petrol
- Reducing sulphur in petrol and diesel
- Reducing benzene in petrol

Cleaner vehicles

- Restricting the age of used imports
- Requiring all light and heavy duty vehicles to meet emission standards
- 10 second rule
- 5 second WOF visible smoke check
- Vehicle scrappage trial
- Exhaust emissions rule

Awareness raising

- 0800 Smokey campaign
- On road testing

Demand management

- School and workplace sustainable travel initiatives
- New Zealand Transport Strategy
- Regional Land Transport Strategy
- Regional Growth Strategy
- Public and sustainable transport investment:
 - North Shore busway
 - Park and Ride
 - Britomart
 - Train network expansion and upgrades
 - High Occupancy Vehicle lanes
 - Cycle lanes

Other

- Ramp metering on motorways

-
- Working with Auckland Transport (formerly ARTA) to reduce emissions from buses

2. Domestic Heating

Regulation

- Auckland Regional Plan: Air, Land and Water
 - restricts installation of new appliances to those that meet an emissions limit of 4g/kg (excluding rural areas). This effectively bans new open fires or solid fuel burners that use coal in the urban area
 - banning burning of “treated” wood/waste
 - banning burning of “dirty” fuels, e.g. coal with sulphur content > 0.5wt% or wood with moisture content >25%
- Air Quality National Environmental Standards
 - requiring all new woodburners installed anywhere on properties up to 2 hectares (20,000 m²) in size, to emit no more than 1.5 g PM₁₀ per kg fuel

Education

- Education campaign with information pamphlets distributed with best practice advice on woodburner operation, domestic fire rules and health benefits from insulation
- National list of authorised woodburners

Incentive scheme

- Retrofit Your Home programme
- WarmUp New Zealand programme – government home insulation and clean heat retrofit scheme

3. Industry

Regulation

- Continued application of best practicable option through consenting
- Total site emissions capped through consent condition

Policy

- Preliminary scoping of industrial emissions “cap” methodology
- AQNES offset requirements for new industry (to be implemented in future by Council)

Air Quality Current Work

The following sets out the key work that the Air Quality Policy team is involved with in 2011 to manage air quality in Auckland and meet our statutory obligations. Further detail on other work is set out in the CLAW Strategy and Workplan 2011/2012, which is being presented at this Forum meeting.

Domestic Fire Emissions

In light of the significant contribution that domestic heating plays in particulate emissions, more effort needs to be directed towards reducing these emissions. As set out above, winter emissions of PM₁₀ and PM_{2.5} are almost four times higher than summer levels due to domestic heating, and many of the exceedences of the standard occur in winter. This

means that if the Council is going to reduce pollution and health costs and meet standards and guidelines, tackling domestic heating emissions must be a priority.

There are a number of policy options for reducing domestic heating emissions which have been identified through looking at best practice and successful initiatives in other regions. Officers will be testing these options through a cost benefit analysis process in order to establish a preferred course of action.

Auckland Plan

The Auckland Plan will, to a certain extent, lock in the future air quality for Auckland. A key determinant of future air quality in the region will be the way that growth in the region is accommodated. Cleaner fuels and cleaner vehicles are not enough to address transport emissions. It is necessary for the distance travelled in vehicles to decrease (measured as vehicle kilometres travelled (VKT)). Currently, VKT in Auckland continues to rise on an annual basis. This is despite an increasing modal shift from the private car to public transport and active transport modes.

A compact city scenario is likely to reduce the emissions from transport through a reduction in VKT, whereas greenfield growth on the periphery of the urban area would be likely to give rise to increasing transport emissions. Effort is being made by officers through the spatial plan process to highlight the policy direction that will need to be taken to ensure that air quality in Auckland does not deteriorate through a continued increase in emissions.

Unitary Plan

The Air Quality Policy team is analysing the different approaches that have been used to manage air quality through land use planning by the legacy territorial authorities in their District Plans. They will be looking to identify what constitutes best practice and to have this approach incorporated into the Unitary Plan. Particular areas of concern, which will be sought to be addressed through the development of the Unitary Plan, are issues of exposure and reverse sensitivity.

Conclusion

The key sources of air pollution in Auckland are domestic heating, transport and industry. Approximately half of all particulate emissions on an annual basis arise from Auckland residents burning wood to heat their homes. Levels are sufficiently high that Auckland fails to meet the government's national environmental standards for air quality (for PM₁₀) and the Council's own regional targets for PM_{2.5}, both of which were set to protect human health. The health costs of particulate pollution levels in Auckland are estimated to cause over 700 premature deaths per year and over \$700 million dollars in health costs. Therefore, due to the significant part that these emissions play in adverse health effects, smoggy air and exceeding the government's standard, reducing these emissions should be targeted as a priority.

Decision Making

This report does not trigger the Significance Policy and, as the report and presentation are for information purposes, there will not be impacts on the community arising from the report.

Significance of Decision

This report does not trigger the Significance Policy and as the report is for information purposes, there will not be impacts on the community arising from the report.

Consultation

No consultation has been undertaken in relation to this report as it is for information purposes only.

Local Board Views

The Local Boards have been sent a copy of this report and presentation. Their views have not been sought, however, due to the report being for information purposes and no policy decision is required.

Financial and Resourcing Implications

There are no financial implications arising from this report.

Legal and Legislative Implications

There are no legal implications. There are legislative implications, as the Council is required to manage air quality under the government's National Environmental Standards for Air Quality (AQNES). The AQNES requires that certain standards are met for air contaminants. The Auckland urban region exceeds the standard for particulate matter at times. Developing options to reduce emissions of particulate matter with the aim of meeting the AQNES will enable the Council to fulfil its statutory obligations under the AQNES.

Implementation Issues

There are no implementation issues associated with this report.

Attachments

There are no attachments for this report.

Signatories

Author	Kristen Webster, Principal Specialist Air Quality	
Authorisers	Janet Petersen, Acting Manager Air Land Water Coastal	
Authorisers	Ludo Campbell-Reid, Manager Environmental Strategy and Policy	
Authorisers	Roger Blakeley, Chief Planning Officer	

Permitted Activity Rule 7.5.1

The use, erection, reconstruction, placement, alteration, extension, removal or demolition of any structure or part of any structure in, on, under or over the bed of a Intermittent stream, and the repair and maintenance of the structure, and any associated bed disturbance or deposition, and any associated diversion of water is a Permitted Activity, if it complies with the following conditions.

- (a) The structure shall not cause the flooding of neighbouring private properties;
- (b) The activity shall not cause more than minor bed erosion, scouring or undercutting immediately upstream or downstream.
- (c) Any discharge of sediment directly associated with the activity shall be minimised by the use of best practice erosion and sediment control measures;
- (d) The mixing of construction materials (such as concrete), or the refuelling or maintenance of equipment associated with the activity shall not occur in the wetted cross section bed of the watercourse and shall use best practice methods to avoid the discharge of contaminants into any lake or to the river or stream.

Permitted Activity Rule 7.5.14

Any disturbance, removal, damage or destruction of any exotic or indigenous plant, or part of any plant, or the habitats of any such plants, or of animals, or any excavation, drilling or tunnelling or other disturbance in, on, or under the bed of a Intermittent stream is a Permitted Activity, if it complies with the following conditions:

- (a) The activity shall not result in an increase to existing flood levels on land or structures other than that owned or controlled by the person undertaking the activity;
- (b) The activity shall not cause more than minor bed erosion, scouring or undercutting immediately upstream or downstream of the works;
- (c) Any discharge of sediment directly associated with the activity shall be minimised by the use of best practice erosion and sediment control measures;
- (d) The mixing of construction materials (such as concrete), or the refuelling or maintenance of equipment associated with the activity shall not occur in the wetted cross section bed of the watercourse and shall use best practice methods to avoid the discharge of contaminants into the river or stream;

Permitted Activity Rule 7.5.29

The deposition of soil, rock or other cleanfill material in, on or under the bed of an Intermittent stream is a Permitted Activity if it complies with the following conditions:

- (a) the activity shall not result in an increase to existing flood levels on land or structures other than that owned or controlled by the person undertaking the activity;
- (b) the activity shall not cause more than minor bed erosion, scouring or undercutting immediately upstream or downstream of the works;
- (c) Any discharge of sediment directly associated with the activity shall be minimised by the use of best practice erosion and sediment control measures.

Permitted Activity Rule 7.5.35

The construction and use of any new reclamation or drainage of the bed of an Intermittent stream or the reconstruction, alteration, removal or demolition of an existing reclamation or drained area affecting any Intermittent stream is a Permitted Activity.