

SCHEDULE 1

WETLAND MANAGEMENT AREAS

1.1 INTRODUCTION

Wetlands have been identified as nationally threatened ecosystems that have been reduced significantly from their former extent. Wetlands are characterised as being permanently or intermittently wet areas of shallow water, with land/water margins that support a natural ecosystem of predominantly indigenous plants and animals that are adapted to wet conditions.

The wetlands listed in this schedule are identified in the Plan as Wetland Management Areas.

This schedule has been compiled from existing information on significant freshwater wetlands in the Auckland Region identified in publicly available documents and existing databases. These information sources include:

- Auckland Department of Conservation Management Strategy;
- Department of Conservation Sites of Special Wildlife Interest Database (sites of outstanding, high, moderate-high or moderate ranking);
- WERI (Wetlands of Ecological and Representative Importance) database
- Regional and District Plans, including Appendix B of the Auckland Regional Policy Statement;
- Protected Natural Area Programme survey reports;
- Local reports such as Waiheke Island Sites of Significance.

These reports contain maps of wetlands which should be used to determine the exact boundaries of those wetlands identified in Plan Map Series 1.

The schedule reflects the range of wetland types in the Auckland Region, including raupo, cabbage tree, flax, and rush and sedge swamps, kahikatea swamp forest, wetlands associated with lakes, streams and volcanic systems, and wetlands associated with freshwater-estuarine ecological sequences. The schedule contains a number of wetlands that are associated with natural lakes. The wetlands associated with these lakes have been identified separately for their ecological and wildlife values. The schedule also contains freshwater wetlands that are associated with significant estuarine ecosystems such as the Kaipara, Waitemata and Manukau Harbours.

Schedule - 1

SCHEDULE OF WETLAND MANAGEMENT AREAS

Number	Wetland Name	Ecological Values
<i>Kaipara Ecological Region</i>		
222	Okahukura Peninsula Wetland	Swamp vegetation, cabbage tree, manuka, rushes and sedges. Ecological sequence from marine to freshwater. Threatened species.
809	Tapora Coast	Rich variety of habitats including freshwater wetlands. Of national and international significance.
208	Tapora Golf Course Wetland	Freshwater wetland formed by sand dunes. Raupo, <i>Baumea</i> , threatened birds
221	Gum Store Creek Freshwater Wetland	Mangroves, mudflats, sand banks, freshwater wetland, rich assemblage of habitats.
211	Hiki Creek Scenic Reserve	Raupo and cabbage tree swamp on flood plain on lower slopes of area of broadleaved podocarp forest
201	Hiki Stream Wetland	Raupo swamp with bordering manuka scrub. Threatened species
241	Papakanui Wetlands	Wetlands in the area have rich botanical associations and are of national significance. Rich diversity of bird life and vegetation
242	Waionui Inlet	An important estuarine habitat with succession of plant communities between tidal flats, freshwater wetlands and dune areas. Threatened wetland birds.
254	Lagoon Rd Wetland and Lake	Baumea, raupo, cabbage tree, manuka with buffer of kanuka. Habitat for threatened birds
261	South Head Swamp	Raupo- <i>Schoenoplectus</i> reedland
830	Kaukapakapa River	Scattered hill forest grading into alluvial areas of kaihikatea, cabbage tree, flax and native sedges and rushes, which grades into salt marsh and mangroves. Four main areas of wetland occur along river edges and associated tributaries.
<i>Kaipara Dune Lakes</i>		
Extensive system of lakes that provide habitat for a number of threatened wildlife species. These lakes are dynamic and continually changing in size and extent. The schedule includes the following lakes.		
318	Lake Kuwakatai	Lake with flax, raupo, <i>Schoenoplectus</i> sedgeland

Number	Wetland Name	Ecological Values
470	Lake Okaihau	Lake with swamp areas dominated by raupo, with flax, <i>Juncus</i> spp. and <i>Cyperus ustulatus</i> . Swamp is contiguous with coastal forest. A valuable area for wildlife.
372	Lake Kereta	Lake with raupo reedland
387	Lake Karaka South (1a)	Lake with swamp vegetation
391	Lake Karaka South (2)	Lake with <i>Juncus-Cyperus ustulatus</i> rush-sedgeland
802	Lake Karaka South (3)	Lake with <i>Juncus-Cyperus ustulatus</i> rush-sedgeland
803	Lake Karaka Wetlands	Lake with <i>Juncus-Cyperus ustulatus</i> rush-sedgeland
824	Lake Karaka south - unnamed lake 4b	Lake with <i>Juncus-Cyperus ustulatus</i> rush-sedgeland
416	Lake Otakanini Topu South	Lake with swamp vegetation
302	Lake Ototoa	Lake with <i>Schoenoplectus</i> reedland
804	Hedley's Lake 1	Lake with swamp vegetation
808	Lake Piripoua (South)	Lake with <i>Juncus</i> rushland
825	Lake Te Kanae	Lake with swamp reedland
826	Lake Kowhai	Lake with reedland
827	Lake Poutoa	Lake with <i>Cyperus ustulatus-Carex virgata-Juncus</i> sedgeland
392	Loop Rd Closed Game Area	Threatened wetland birds
404	Otakanini Topu Wetland	Diversity of wetland birds
418	Fordyce Rd Swamp	Raupo- <i>Baumea-Schoenoplectus</i> reedland. Threatened species. High bird diversity
373	Kaikore Creek Wetland	Raupo- <i>Schoenoplectus</i> reedland. Habitat for wetland
427	Bradley Rd Swamp	Large swamp with diverse vegetation communities. Manuka, cabbage tree, flax, hangehange, <i>Coprosma</i> , <i>Hebe</i> , raupo, <i>Carex</i> , <i>Juncus</i>
348	Waioneke Head Swamp	Vegetation sequence from swamp to scrub, threatened bird species
359	Webber's Swamp (1)	Threatened bird species
353	Webber's Swamp Remnants (2)	Three small remnants. Threatened species.
369	Wilson's Road Swamp	Threatened species habitat
464	Okiritoto Wetland	Large swamp. Diverse habitats. Nesting area
480	Taiapa Rd Bush and	Habitat for threatened bird species

Schedule - 1

Number	Wetland Name	Ecological Values
	Wetland	
<i>Rodney Ecological District</i>		
41	Tomarata Lake and Wetland	Raupo, <i>Baumea</i> swamp, <i>Empodisma</i> peat swamp. Threatened birds
34 & 28	Spectacle Lake & Slipper Lake	Dune impounded lakes with freshwater wetland margin. Part of series of dune lakes in Pakiri.
24	Little Shag Lake	Lake with sedgeland border. Regenerating forest on margins.
25	Te Arai Point Little Lake	Dune lake surrounded by shrubland. Wetland birds
220	Christian Bay Wetland	Flax, raupo, rushes and sedges, threatened bird species
177	Omaha Kahikatea Forest	Rare intact sequence from salt marsh to forest. Only example of coastal kahikatea forest on sand in region. Threatened birds
96	Pakiri Valley Swamp Forest	Remnant kahikatea wetland. Intact ecotone
159 & 164	Wayby Wetland	Raupo, kahikatea swamp. Threatened birds
342	Strakas Dam	Artificial dam with wetland vegetation, threatened birds
389	Te Haruhi Bay Swamp	Raupo swamp in gully surrounded by regenerating forest. Threatened birds
810	Araparera Freshwater Wetland	Raupo-rush-flax swamp. Threatened birds
811	Ingelton Road wetland	Swamp bordered by bush
409	Peak Road Swamp	Raupo, flax, manuka. Threatened birds
<i>Waitakere Ecological District</i>		
492	Constable Road Swamp	Long strip of raupo. Threatened birds
478	Goldies Bush Swamp	Small raupo swamp with kanuka margins. Threatened bird habitat
563	Pararaha Swamp and Stream	Relatively large area of raupo, flax, rushes and sedges. Threatened species
529	Piha Stream Swamp	Raupo swamp. Threatened bird habitat
573	Taranaki Bay Swamp	Part of dune lake system at foot of coastal hills. Threatened bird species
504 & 509	Te Henga Dunes and Lakes	Large area of sand dunes with several dune impounded lakes. Sequences from raupo reedland to cabbage tree to young kauri forest. Incl. Lakes Kawaupaka and Wainamu

Number	Wetland Name	Ecological Values
509	Lake Kawaupaka	One of few dune lakes in region surrounded by native forest. Threatened birds Wetland is located on margins of lake, which is also identified as a Natural Lake Management Area
504	Lake Wainamu	Deep dune lake in vegetated catchment. Threatened birds. Freshwater fish
571	Ohaka Head lake	Dune lake. Threatened birds
828	Te Henga Wetland	Largest freshwater swamp in mainland of region. High diversity of vegetation and wildlife species. Threatened species.
576	Whatipu Sands	Extensive area of vegetated sand flats, containing freshwater and saline wetlands, impounding a stretch of cliffs.
<i>Tamaki Ecological District</i>		
450	Lake Pupuke	Small areas of raupo and rushes. Wetland birds Wetland is located on margins of Lake, which is also identified as an Urban Lake Management Area [E509/04/106 Watercare Services Ltd]
812	Soldiers Bay	Ecological sequence from mangroves- sand flats-shell bank-salt marsh-freshwater swamp.
813	Chelsea reservoir	Wetland vegetation on margins of reservoirs including <i>Eleocharis sphacelata</i> .
814	Western Springs	Wetland vegetation associated with lake, including <i>Carex secta</i> swamp
815	Tahuna-Torea	Complex of marine, intertidal, freshwater and terrestrial habitats.
816	Onehunga Springs	Groundwater springs with wetland features. Below One tree Hill lava flows.
817	Crater Hill Lake and wetland	Volcanic explosion crater with freshwater lake and wetland vegetation.
819	Puhinui Reserve	Coastal manuka, flax, cabbage tree, swamp coprosma in association with extensive shoreline saltmarsh
<i>Waiheke Island - Inner Gulf Islands</i>		
481	Awaawaroa Bay	Vegetation sequence from mangrove-saltmarsh-freshwater wetland. Large number of wading birds.
452	Awaawaroa Stream Wetlands	One of best raupo wetlands in island. Threatened birds
469	Putiki Bay	Ecological sequence from saline to freshwater wetlands. Threatened birds

Schedule - 1

Number	Wetland Name	Ecological Values
487	Rocky Bay Wetland	One of best saline and freshwater wetlands on island. Vegetation sequence. Threatened birds
482	Te Matuku Bay	The most important wader habitat on island. Best vegetation sequence from saline-freshwater-terrestrial on island. Threatened birds.
820	Ponui Island	Freshwater wetlands in gully systems. Threatened birds
<i>Great Barrier Island</i>		
108	Blackwells Creek	Tidal stream and wetlands. Threatened birds
101	Claris South Swamp	Manuka, raupo, tall sedge. Threatened birds
97	Grandstand Swamp	Freshwater swamp enclosed with manuka. Threatened birds
74	Kaitoke Swamp	Most significant and largest freshwater wetland in region. Vegetation sequences. Threatened species. Internationally significant.
111	Sugarloaf Creek (Medlands Beach North Creek)	Freshwater and tidal stream and wetlands. Threatened birds.
120	Oruawharo Stream	Stream margins, rushes, sedges, manuka, threatened birds
22	Mabeys Road Swamp	Raupo surrounded by manuka. Once more extensive. Threatened birds.
7	Mabey's Farm Stream	Tidal stream with wetland vegetation. Threatened birds
3	Motairehe Bay and Swamp	Tidal stream linking with freshwater swamp. Threatened birds
10	Whangapoua Estuary	One of least modified estuaries in NZ. Sequence from saline-freshwater wetland-manuka scrub. High bird species richness. Internationally significant
54	Awana Stream	Stream margins, kanuka, manuka, threatened birds
37	Harataonga Stream	Threatened birds
150	Tryphena Stream	Tidal stream. Threatened birds
<i>Awhitu Ecological District</i>		
591	Boiler Gully Swamp	Raupo, swamp maire, manuka. Intact forest-wetland sequences. Threatened bird habitat.
691	Lake Whatihua	Raupo, rushes and sedges. Threatened birds.

Number	Wetland Name	Ecological Values
635 & 640 & 642	Pehiakura Lakes	Two lakes with raupo, <i>Baumea</i> . Wetland birds
612	Awhitu Regional Park Wetlands	Saline-freshwater wetland sequences. Threatened birds.
581	Big Bay Estuary & wetland	Manuka swamp in association with estuarine ecosystem. Threatened birds
650	Lake Pokorua	Largest dune lake on peninsula. Significant wetland vegetation. Threatened birds
<i>Manukau Ecological District</i>		
653	Patumahoe Road Swamp	Diverse habitat. Raupo, <i>Carex</i> .
616	Don Urquarts Swamp	Raupo swamp. Threatened bird habitat
627	Whangapouri Pond	Raupo swamp. Wetland bird habitat.
821	Kidd Road Wetland	Raupo swamp. Threatened bird habitat.
829	Hunter Rd Wetland	Raupo, flax, <i>Carex secta</i> , kahikatea wetland. Threatened bird species
<i>Hunua Ecological District</i>		
823	Hattaway Raupo	Dense raupo backing onto mangrove saltmarsh. Wildlife habitat.
597	Hunua Road Dam (Hay's Creek Reservoir)	Wetland bird habitat
562	Harrison's Flax Swamp	Flax swamp. Wetland plant diversity. Threatened birds.
559	Sharpe's Raupo	Long thin raupo swamp. Wetland bird, habitat
588	Oram's Road Wetland	Best lowland raupo, kiokio wetland in district. Threatened birds.
822	Whakatiwai Wetlands	Coastal cabbage tree-raupo-sedge wetland vegetation associated with gravel ridges.

SCHEDULE 2

AQUIFER WATER AVAILABILITIES & LEVELS

AQUIFER WATER AVAILABILITIES

(See Map Series 2)

Aquifer	Water availability (m³/year)
Orewa Waitemata	858,000
Whangaparaoa Waitemata	528,000
Tomarata Waitemata	638,000
Omaha Waitemata	105,000
Kumeu Waitemata	1,559,000
Western Springs Volcanic	9,600,000
Onehunga Volcanic	8,468,000
Mt Wellington Volcanic	6,570,000
Mt Richmond Volcanic	880,000
Manukau City Waitemata	660,000
Franklin Kaawa	
Pukekohe Kaawa	1,860,000
Karaka Kaawa	617,000
Pukekohe West Kaawa	1,780,000
Waiau Pa Kaawa	1,560,000
Waiuku Kaawa	2,450,000
Bombay - Drury Kaawa	718,000
Clevedon East Waitemata	379,400
Clevedon West Waitemata	964,400
Franklin Volcanic	
Pukekohe Central Volcanic	856,000
Pukekohe South Volcanic	650,000
Pukekohe West Volcanic	420,000
Pukekohe North Volcanic	420,000

AQUIFER GROUNDWATER LEVELS

Aquifer	Level (metres above mean sea level)	Location
Omaha Waitemata	3.25 (for any 11 months of the year)	Bore 25, Point Wells Rd
Waiwera Geothermal	0.5 averaged over any consecutive 12 months.	ARC beachfront Deep Bore No. 74
Parakai Geothermal	2.5 averaged over any consecutive 12 months.	ARC Deep Bore No. 86

SCHEDULE 3

INDUSTRIAL OR TRADE PROCESSES

Explanation:

1. *The 'Activity Area' is the area of land, where a particular Industrial or Trade Process is being undertaken, that may contribute to the quantity or quality of contaminant discharges associated with that activity.*
[E508/04/19, 38 Ports of Auckland, E479/04/38 Contact Energy Ltd, E483/04/13 DB Breweries Ltd]

The calculation of the Activity Area shall be based upon the following:

- *Exclusion of all areas that discharge into an authorised trade waste system;*
[E508/04/38 Ports of Auckland]
 - *Exclusion of landscaping areas that are not used for or affected by the activity;*
 - *Inclusion of all roofed areas where contaminants generated by the activity have the potential to contaminate roof stormwater;*
 - *Inclusion of all roofed areas that contribute to the total volume of contaminated stormwater runoff that needs to be treated (e.g. a clean roof area that combines with contaminated runoff before treatment onsite);*
 - *Inclusion of all outdoor storage areas of materials and/or products (including occasional or temporary use of areas such as parking spaces);*
[E474/04/02 Golden Bay Cement]
 - *Inclusion of all outdoor areas where materials and/or products are handled or processed;*
[E474/04/02 Golden Bay Cement]
 - *Inclusion of the area at risk from failure of the largest unbunded container used for the activity.*
2. *Where an Industrial or Trade Process listed in Schedule 3 does not have any Activity Area calculated using the provisions listed above, and does not discharge any contaminants, the Industrial or Trade Process is deemed to be Moderate Risk for the purposes of this Plan.*
[E474/04/03 Golden Bay Cement, E484/04/07 W Stevenson & Sons Ltd, E485/04/10 Shell New Zealand Ltd, Mobil Oil New Zealand Ltd, Caltex New Zealand Ltd, BP Oil New Zealand Ltd, Wiri Oil Services Ltd, E488/04/10 Transpower New Zealand Ltd, E508/04/39 Ports of Auckland, E479/04/39 Contact Energy Ltd]

3. *Activities not identified as moderate or high risk in Schedule 3: Industrial or Trade Processes must meet the conditions of Permitted Activity Rule 5.5.14, otherwise they will be assessed under Controlled Activity Rules 5.5.17 if lawfully established at the time of Plan notification or under Discretionary Activity Rule 5.5.19.*

Note: m² figures refer to total site area

[E484/04/08 W Stevenson & Sons Ltd, E485/04/16 Shell New Zealand Ltd, Mobil Oil New Zealand Ltd, Caltex New Zealand Ltd, BP Oil New Zealand Ltd, Wiri Oil Services Ltd, E488/04/14 Transpower New Zealand Ltd, E508/04/40 Ports of Auckland, E479/04/40 Contact Energy Ltd]

Schedule - 3

Process	Description of Trade or Industry	Moderate Risk Activity Area (Permitted Activity)	High Risk Activity Area Requires Resource Consent)
Agricultural support industries	Inorganic fertiliser manufacture, storage or handling	1,000m ² to 5,000m ²	More than 5,000m ²
Animal feedstuffs	Stock food manufacture storage or handling	1,000m ² to 5,000m ²	More than 5,000m ²
	Pet food manufacture	1,000m ² to 5,000m ²	More than 5,000m ²
Chemical and associated product manufacturing	Batteries		Any size
	Cosmetics, toiletry, soap and other detergents		More than 5,000m ²
	Explosives and pyrotechnics		More than 1000m ²
	Fungicides, herbicides, pesticides, timber preservatives and related products		Any size
	Industrial gas	Less than 5,000m ²	More than 5,000m ²
	Medicinal, pharmaceutical or veterinary products	1,000m ² to 5,000m ²	More than 5,000m ²
	Paint, pigment, inks and dyes	1,000m ² to 5,000m ²	More than 5,000m ²
	Polishes, adhesives or sealants	1,000m ² to 5,000m ²	More than 5,000m ²
	Solvents	1,000m ² to 5,000m ²	More than 5,000m ²
	Synthetic Resins	1,000m ² to 5,000m ²	More than 5,000m ²
		Acids, alkalis or heavy metals	
	Other Chemical Products (e.g. plastic manufacturing)	1,000m ² to 5,000m ²	More than 5,000m ²
Commercial livestock processing industries	Slaughter	1,000m ² to 5,000m ²	More than 5,000m ²
	Manufacture, store or handle products derived from animal slaughter (e.g. gelatin, fertiliser or meat products)	1,000m ² to 5,000m ²	More than 5,000m ²
	Scouring or carbonising greasy wool or fleeces	Less than 1,000m ²	More than 1,000m ²
	Tanneries or Fellmongeries		Any size
	Rendering or fat extraction		Any size
Electronics	Circuit board manufacturing (excluding assembly only)		Any size
Food or beverage	Bakery products manufacturing	1,000m ² to 5,000m ²	More than 5,000m ²

Schedule - 3

Process	Description of Trade or Industry	Moderate Risk Activity Area (Permitted Activity)	High Risk Activity Area Requires Resource Consent)
manufacturing or handling			[E483/04/16 DB Breweries Ltd]
	Bakery product handling	More than 1000m ²	
	Beverages or malt product manufacturing	1,000m ² to 5,000m ²	More than 5,000m ²
	Beverages or malt product handling	More than 1,000m ²	
	Flour mill or cereal foods	1,000m ² to 5,000m ²	More than 5,000m ²
	Meat and meat product manufacture (including fish)	1,000m ² to 5,000m ²	More than 5,000m ²
	Meat product handling (including fish)	More than 1000m ²	
	Oil or fat product manufacturing or handling	1,000m ² to 5,000m ²	More than 5,000m ²
	Processed dairy foods manufacturing	1,000m ² to 5,000m ²	More than 5,000m ²
	Processed dairy foods handling	More than 1,000m ²	
	Vineyards or wine manufacturing	1,000m ² to 5,000m ²	More than 5,000m ²
	Other foodstuffs manufacturing	1,000m ² to 5,000m ²	More than 5,000m ²
	Other foodstuffs handling	More than 1,000m ²	
Research or defence	Research establishments	More than 1,000m ²	
	Naval and airforce defence activities		More than 1000m ²
Machinery or equipment manufacturing	Industrial machinery or equipment	1,000m ² to 5,000m ²	More than 5,000m ²
	Motor vehicles or parts	1,000m ² to 5,000m ²	More than 5,000m ²
	Other machinery or equipment	1,000m ² to 5,000m ²	More than 5,000m ²
Metal product manufacturing	Sheet and structural metal products	More than 1,000m ²	
Motor Vehicle services facilities [E485/04/15 Shell New Zealand Ltd, Mobil Oil New Zealand Ltd, Caltex New Zealand Ltd, BP Oil New Zealand Ltd, Wiri Oil Services Ltd]	Service stations with contaminant (stormwater) treatment [E485/04/14 Shell New Zealand Ltd, Mobil Oil New Zealand Ltd, Caltex New Zealand Ltd, BP Oil New Zealand Ltd, Wiri Oil Services Ltd]	Less than 5,000m ²	More than 5,000m ²
	Service stations without contaminant (stormwater) treatment [E485/04/14 Shell New Zealand Ltd, Mobil Oil New Zealand Ltd, Caltex New Zealand Ltd, BP Oil New Zealand Ltd, Wiri Oil Services Ltd]		Any size

Schedule - 3

Process	Description of Trade or Industry	Moderate Risk Activity Area (Permitted Activity)	High Risk Activity Area Requires Resource Consent)
	Mechanical servicing of motor vehicles	Any size	
Non-metallic mineral product manufacturing	Cement, lime, plaster and concrete products		More than 5,000m ²
	Concrete batching plants (ready mixed concrete)		Any size
	Glass	Less than 5000m ²	More than 5,000m ²
Metal processing, metallurgical works or metal finishing	Metal plating, anodising or polishing		Any size
	Metal blasting or coating (excluding spray painting)	Less than 1000m ²	More than 1000m ²
	Refinement of ores	1,000m ² to 5,000m ²	More than 5,000m ²
	Processing of metals (e.g. smelting, casting)	1,000m ² to 5,000m ²	More than 5,000m ²
Petroleum or coal product manufacturing	Bitumen/asphalt premix or hot mix	Less than 1000m ²	More than 1000m ²
	Coal products	1,000m ² to 5,000m ²	More than 5,000m ²
	Petroleum refining	1,000m ² to 5,000m ²	More than 5,000m ²
	Petroleum hydrocarbon, oil or grease manufacturing	Less than 1,000m ²	More than 1,000m ²
Power	Electrical substations ¹	1,000m ² to 5,000m ²	More than 5,000m ²
	Gas, coal or petrochemical power generation	1,000m ² to 5,000m ²	More than 5,000m ²
Product storage or handling centres	Bulk chemicals	1,000m ² to 5,000m ²	More than 5,000m ²
	Bulk hydrocarbons (non-service station)	1,000m ² to 5,000m ²	More than 5,000m ²
Recycling, recovery, reuse or disposal	Automotive dismantling		Any size
	Batteries		Any size
	Chemicals		Any size
	Crushing, grinding or separation works (other than sand, gravel, rock or mineral) (e.g. slag, road base, demolition material)	Less than 5,000m ²	More than 5,000m ²
	Hazardous materials storage or treatment		Any size
	Landfills		Any size

Schedule - 3

Process	Description of Trade or Industry	Moderate Risk Activity Area (Permitted Activity)	High Risk Activity Area Requires Resource Consent)
	Metals (crushing, grinding, sorting or storage)	Less than 1,000m ²	More than 1,000m ²
	Non-metal recycling (e.g. composting, glass, paper or paper board)	1,000m ² to 5,000m ²	More than 5,000m ²
	Oil, petroleum hydrocarbon wastes	Less than 1,000m ²	More than 1,000m ²
	Chemical containers cleaning reconditioning, or recycling	Less than 1,000m ²	More than 1,000m ²
	Sewage solids treatment or storage facilities		Any
	Tyres		More than 1,000m ²
	Waste transfer stations		Any size
Rubber industries	Tyre manufacturing or retreading	1,000m ² to 5,000m ²	More than 5,000m ²
	Synthetic rubber manufacturing	1,000m ² to 5,000m ²	More than 5,000m ²
Transport and related activities	Boat or ship construction, repair or maintenance	1,000m ² to 5,000m ²	More than 5,000m ²
	Bus Depots		More than 5,000m ²
	Commercial airports [E505/04/15, E505/04/16 Auckland International Airport Ltd]		More than 1,000m ²
	Heliports		More than 1,000m ²
	Marinas [E508/04/42 Ports of Auckland]	Any size	
	Road freight transport depot (non-chemical) with mechanical servicing	More than 1,000m ²	
	Road freight transport depot (bulk chemical)	Less than 1,000m ²	More than 1,000m ²
	Railway workshops or refueling depots	1,000m ² to 5,000m ²	More than 5,000m ²
	Shipping container reconditioning	More than 1,000m ²	
	Shipping loading/unloading [E508/04/41 Ports of Auckland]		More than 5,000m ²
	Truck refueling facilities (non-service station) with contaminant (stormwater) treatment	Less than 1,000m ²	More than 1,000m ²
	Truck refueling facilities (non-service station) without contaminant (stormwater) treatment		Any size

Schedule - 3

Process	Description of Trade or Industry	Moderate Risk Activity Area (Permitted Activity)	High Risk Activity Area Requires Resource Consent)
Wood or paper product storage, manufacturing or fabrication [E532/04/21 Carter Holt Harvey Ltd]	Log storage yards (outside of forested areas)	Less than 5,000m ²	More than 5,000m ²
	Plywood or veneer manufacturing	1,000m ² to 5,000m ²	More than 5,000m ²
	Particle board or other wood panel manufacturing	1,000m ² to 5,000m ²	More than 5,000m ²
	Pulp, paper or paper board manufacturing	1,000m ² to 5,000m ²	More than 5,000m ²
	Timber treatment		Any size
	Treated timber storage	Less than 5 1,000m ²	More than 5 1,000m ²
Sewage treatment and handling	Sewage treatment plants	1,000m ² to 5,000m ²	More than 5,000m ²
	Sewage solids storage	1,000m ² to 5,000m ²	More than 5,000m ²

1. Electrical substations that contain 1,000 litres or less of oil, are not considered Industrial or Trade Process sites for the purposes of the Plan.

SCHEDULE 4

NATURAL LAKE MANAGEMENT AREAS

[Note all text in this schedule is new]

Map Series 1 Identification (Wetland Number)	Lake Name	Map Series 1 Location	Ecological Values and Water Quality
34	Lake Spectacle	1	Has the worst water quality of the seven lakes monitored by the ARC, consistent with its location entirely within a pastoral catchment. Suffers regular blooms of algae, particularly during summer. A narrow fringe of vegetation exists around the margin comprising raupō, tall spike sedge, mingimingi and swamp kiokio. Provides a refuge and feeding habitat for resident and itinerant waterfowl.
28	Slipper Lake	1	Connected to Lake Spectacle by a drainage canal, with similar water quality. Prevalent algal blooms occur during summer. Some wetland vegetation occurs around the margin, which provides habitat for wetland birds
41	Lake Tomarata	1	A small dune lake with extensive wetland areas along its north, west and southern shores. Water quality is moderate compared to other lakes the ARC monitors, though may be deteriorating. Raupo dominates the marginal vegetation with sedges, rushes and the umbrella fern found within the wetland. Provides a refuge and feeding habitat for resident and itinerant waterfowl
302	Lake Ototoa	9	Has the best water quality of the seven lakes monitored by the ARC. The lakes supports dense beds of native submerged aquatic plants dominated by Chara sp. Marginal emergent vegetation is diverse with three Baumea species dominating. Large populations of dwarf inanga and bullies are present in the lake.
318	Lake Kuwakatai	9 & 14	Has very poor water quality typical of a shallow waterbody located within a pastoral catchment. The weed hornwort dominates the aquatic plant communities and many exotic fish are present, including koi carp. Provides a refuge and feeding habitat for resident and itinerant waterfowl.
825	Lake Te Kanae	14	No information available
372	Lake Kereta	14	A small turbid dune lake with poor water quality. High faecal bacteria counts indicate stock access to the water and large populations of resident waterfowl, including swans. The weed hornwort dominates the aquatic plant communities and many exotic fish are present.
No wetland	Lake Paekawau	22	A small lake located near Muriwai Beach. Little information exists.
470	Lake Okaihau	22 & 28	Also located near Muriwai Beach. Some historic information available.

Schedule – 4

828	Lake Te Henga	28	Located within the Te Henga Wetland, likely existing due to an impoundment of the river system.
504	Lake Wainamu	28	Water quality has undergone recent deterioration following the loss of submerged aquatic plants in the mid 1990's. A large amount of its catchment is native forest. Exotic fish are present including goldfish, perch, tench, rudd and catfish. A colony of black shag are also present.
509	Lake Kawaupaka	28	A small lake located entirely within a forested catchment. Water quality has declined recently following the introduction of exotic plants and fish during the past thirty years. A large colony of black shag are present.
635	Pehiakura Lake	43 & 47	No information available.
650	Lake Pokorua	43 & 47	A small dune lake located on the Awhitu Peninsula. Three threatened bird species are found at the lake, the Australasian bittern, New Zealand dabchick and the North Island fernbird. Waterfowl present include NZ scaup, paradise shelduck, black swan and shoveller duck. Other wetland, forest and coastal bird species present include: mallard duck, little shag, white fronted tern, black backed gulls, black shag, white faced heron, pukeko, harrier hawk and grey warbler.
691	Lake Whatihua	47	No information available

The above listed lakes are identified as Natural Lake Management Areas. The management area includes the area of water within the lake itself and a 50 metre buffer surrounding the lake edge. This buffer distance is measured landward from the Mean Annual Water Level.

Many of these lakes also contain wetlands around their margins which are identified in Schedule 1: Wetland Management Areas. The relevant Wetland Management Area number is listed in Column 1.

The Plan Maps (Map Series 1) also identify other lakes and waterbodies in the Auckland Region for information purposes and to provide geographic markers. They are not Natural Lake Management Areas and are shown as a different colour on the Plan Maps.

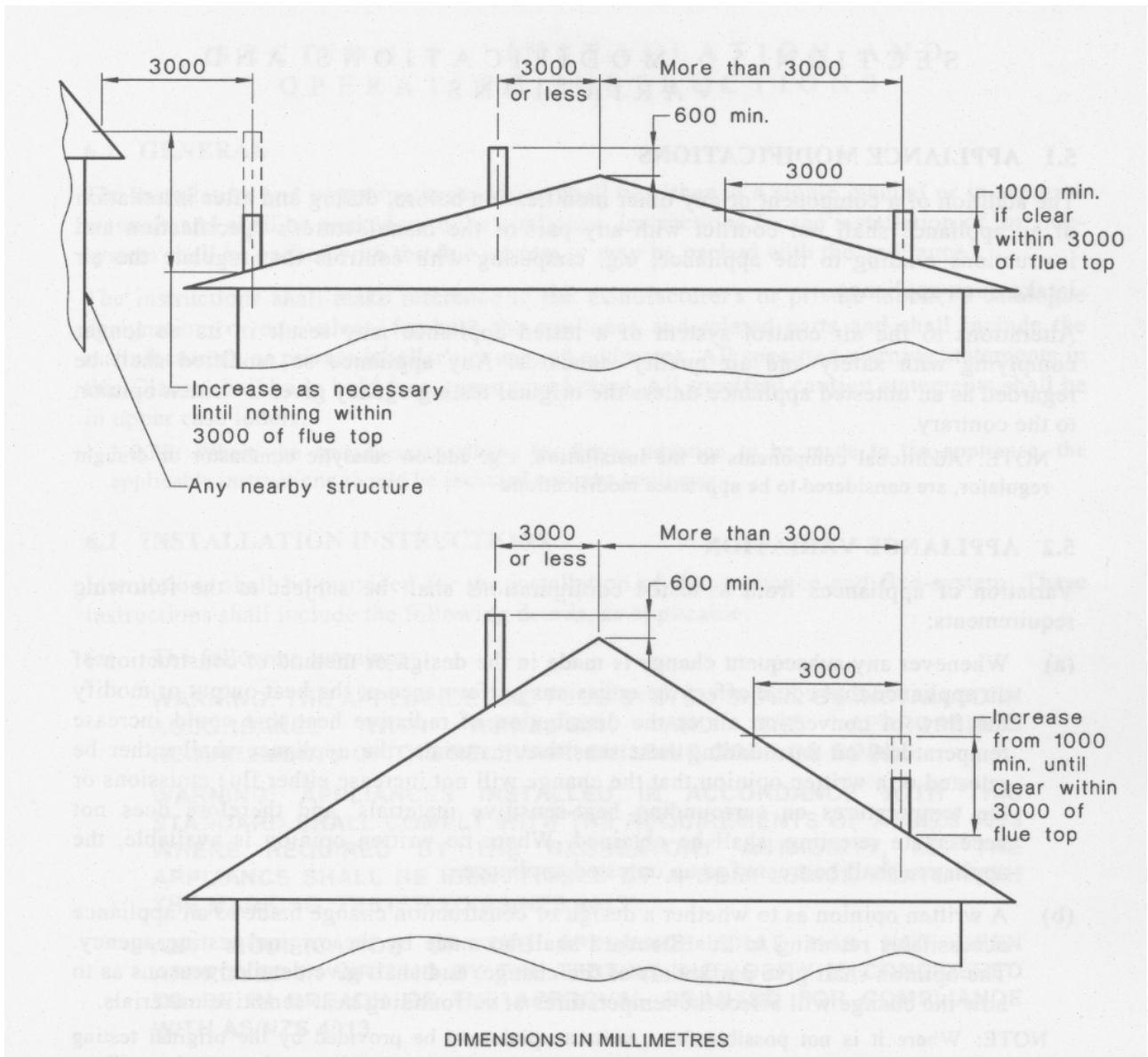
SCHEDULE 5

SUGGESTED AGRICHEMICAL SPRAY PLAN

Name: (landowner/occupier)	*Intended/approximate date/s or period of spray application:
*Spray area location (indicate on map):	*Name of Agrichemical Applicator Contact details (Ph.) GROWSAFE® Certification status: Certification current Yes No
*Agrichemical to be used: (a) Chemical (b) Trade name (c) Specific hazard (e.g. bee toxicity)	Crop and Target of use: (e.g. pest, disease, weed, parasite)
Application rate/dosage: (a) Chemical: (b) Total volume (kg or litres per hectare):	*Application method:
Additives used:	Weather conditions required for application: (wind speed, direction, relative humidity)
*Sensitive areas: (location map of application area, nature and location of sensitive area (including roads used by school children)):	*Names and contact details of those to be advised of spraying:
Strategies to avoid contamination of sensitive areas (e.g. specific application techniques, buffer zones, observing/attending boundaries)	
Weather conditions that increase potential drift hazard to identified sensitive areas:	Contingency plans for timetabling changes/any adverse events

SCHEDULE 6

MINIMUM HEIGHT OF FLUE SYSTEM EXIT DESCRIBED BY RULE 4.5.5*



*Figure reproduced with permission from Standards New Zealand.

SCHEDULE 7

HAZARDOUS AIR POLLUTANTS

Hazardous air pollutants include those substances listed in Section 112 (b) (1) of the United States Clean Air Act (1990)* and the following:

- Radioactive, carcinogenic, teratogenic, or mutagenic substances;
- Antimony, arsenic, beryllium, cadmium, lead, mercury, thallium, selenium, uranium, and their compounds;
- Boron, chromium, cobalt, copper, magnesium, manganese, nickel, potassium, sodium, tellurium, tin, vanadium, zinc, and their compounds;
- Dust containing asbestos, quartz, or other of the pneumoconioses inducing or asthmagenic substances;
- Dusts, and fumes, containing metallic elements;
- Dusts, and fumes, containing organic and inorganic materials including fertilisers, cement, coke, coal, soot, carbon, tars, wood, fibres, and pathogenic substances;
- Sulphur, sulphur oxides, sulphur oxy acids, carbon di-sulphide, hydrogen sulphide, di-sulphides, poly-sulphides, mercaptans, and other acidic, toxic, or odorous sulphur compounds;
- Nitrogen oxides, nitric acid, ammonia, and hydrazine, and their compounds, volatile amines, cyanides, cyanates, di-isocyanates or other toxic or odorous compounds of nitrogen;
- Fluorine, chlorine, bromine, iodine, and their compounds;
- Phosphorus, and its oxides, acids, and organic compounds;
- Alkyl, carbonyl, and other toxic organo-metal compounds;
- Hydrocarbons, and their partially oxidised or halogenated derivatives, particularly acrolein, esters of acrylic acid, formaldehyde, and volatile carboxylic acids, and anhydrides, and industrial solvents; and
- Ozone and carbon monoxide.

*Hazardous air pollutants listed in Section 112 (b) (1) of the US Clean Air Act (1990) include:

Chemical Abstracts Service Number	Pollutant
75-07-0	Acetaldehyde
60-35-5	Acetamide
75-05-8	Acetonitrile
98-86-2	Acetophenone
53-96-3	2-Acetylaminofluorene
107-02-8	Acrolein
79-06-1	Acrylamide
79-10-7	Acrylic acid
107-13-1	Acrylonitrile
107-05-1	Allyl chloride
92-67-1	4-Aminobiphenyl
62-53-3	Aniline
90-04-0	o-Anisidine
71-43-2	Benzene

Schedule 7

92-87-5	Benzidine
98-07-7	Benzotrichloride
100-44-7	Benzyl chloride
92-54-4	Biphenyl
117-81-7	Bis(2-ethylhexyl)phthalate (DEHP)
542-88-1	Bis(chloromethyl) ether
75-25-2	Bromoform
109-99-0	1,3-Butadiene
156-62-7	Calcium cyanamide
105-60-2	Caprolactam
133-06-2	Captan
63-25-2	Carbaryl
75-15-0	Carbon disulfide
56-23-5	Carbon tetrachloride
463-58-1	Carbonyl sulfide
120-80-9	Catechol
133-90-4	Chloramben
57-74-9	Chlordane
7782-50-5	Chlorine
79-11-8	Chloroacetic acid
532-27-4	2-Chloroacetophenone
108-90-7	Chlorobenzene
510-15-6	Chlorobenzilate
67-66-3	Chloroform
107-30-2	Chloromethyl methyl ether
126-99-8	Chloroprene
1319-77-3	Cresol/cresylic acid (mixed isomers)
95-48-7	o-Cresol
108-39-4	m-Cresol
106-44-5	p-Cresol
98-82-8	Cumene
	2,4-D (2,4-Dichlorophenoxyacetic acid) (including salts and esters)
72-55-9	DDE (1,1-dichloro-2,2-bis(p-chlorophenyl) ethylene)
334-88-3	Diazomethane
132-64-9	Dibenzofuran
96-12-8	1,2-Dibromo-3-chloropropane
84-74-2	Dibutyl phthalate
106-46-7	1,4-Dichlorobenzene
91-94-1	3,3'-Dichlorobenzidine
111-44-4	Dichloroethyl ether (bis[2-chloroethyl]ether)
542-75-6	1,3-Dichloropropene
62-73-7	Dichlorvos
111-42-2	Diethanolamine
64-67-5	Diethyl sulfate
119-90-4	3,3'-Dimethoxybenzidine
60-11-7	4-Dimethylaminoazobenzene
121-69-7	N,N-Dimethylaniline
119-93-7	3,3'-Dimethylbenzidine
79-44-7	Dimethylcarbamoyl chloride
68-12-2	N,N-Dimethylformamide
57-14-7	1,1-Dimethylhydrazine
131-11-3	Dimethyl phthalate
77-78-1	Dimethyl sulphate 4,6-Dinitro-o-cresol (including salts)
51-28-5	2,4-Dinitrophenol
121-14-2	2,4-Dinitrotoluene
123-91-1	1,4-Dioxane (1,4-Diethyleneoxide)
122-66-7	1,2-Diphenylhydrazine
106-89-8	Epichlorohydrin (1-Chloro-2,3-epoxypropane)
106-88-7	1,2-Epoxybutane

Schedule 7

140-88-5	Ethyl acrylate
100-41-4	Ethylbenzene
51-79-6	Ethyl carbamate (Urethane)
75-00-3	Ethyl chloride (Chloroethane)
106-93-4	Ethylene dibromide (Dibromoethane)
107-06-2	Ethylene dichloride (1,2-Dichloroethane)
107-21-1	Ethylene glycol
151-56-4	Ethyleneimine (Aziridine)
75-21-8	Ethylene oxide
96-45-7	Ethylene thiourea
75-34-3	Ethylidene dichloride (1,1-Dichloroethane)
50-00-0	Formaldehyde
76-44-8	Heptachlor
118-74-1	Hexachlorobenzene
87-68-3	Hexachlorobutadiene
	1,2,3,4,5,6-Hexachlorocyclohexane (all stereo isomers, including lindane)
77-47-4	Hexachlorocyclopentadiene
67-72-1	Hexachloroethane
822-06-0	Hexamethylene diisocyanate
680-31-8	Hexamethylphosphoramide
110-54-3	Hexane
302-01-2	Hydrazine
7647-01-0	Hydrochloric acid (Hydrogen chloride [gas only])
7664-39-3	Hydrogen fluoride (Hydrofluoric acid)
123-31-9	Hydroquinone
75-59-1	Isophorone
108-31-6	Maleic anhydride
67-56-1	Methanol
72-43-5	Methoxychlor
74-83-9	Methyl bromide (Bromomethane)
74-87-3	Methyl chloride (Chloromethane)
71-55-6	Methyl chloroform (1,1,1-Trichloroethane)
78-93-3	Methyl ethyl ketone (2-Butanone)
60-34-4	Methylhydrazine
74-88-4	Methyl iodide (Iodomethane)
108-10-1	Methyl isobutyl ketone (Hexone)
624-83-9	Methyl isocyanate
80-62-6	Methyl methacrylate
1364-01-4	Methyl tert-butyl ether
101-14-4	4,4'-Methylenebis(2-chloroaniline)
75-09-2	Methylene chloride (Dichloromethane)
101-68-8	4,4'-Methylenediphenyl diisocyanate (MDI)
101-77-9	4,4'-Methylenedianiline
91-20-3	Napthalene
98-95-3	Nitrobenzene
92-93-3	4-Nitrobiphenyl
100-02-7	4-Nitrophenol
79-46-9	2-Nitropropane
684-93-5	N-Nitroso-N-methylurea
62-75-9	N-Nitrosomorpholine
56-38-2	Parathion
82-68-8	Pentochloronitrobenzene (Quintobenzene)
87-86-5	Pentachlorophenol
108-95-2	Phenol
106-50-3	p-Phenylenediamine
75-44-5	Phosgene
7803-51-2	Phosphine
7723-14-0	Phosphorus
85-44-9	Phthalic anhydride
1336-36-3	Polychlorinated biphenyls (Aroclors)

Schedule 7

1120-71-4	1,3-Propane sultone
57-57-8	Beta-Propiolactone
123-38-6	Propionaldehyde
114-26-1	Propoxur (Baygon)
78-87-5	Propylene dichloride (1,2-Dichloropropane)
75-56-9	Propylene oxide
75-55-8	1,2-Propylenimine (2-Methylaziridine)
91-22-5	Quinoline
106-51-4	Quinone (p-Bezonquinone)
100-42-5	Styrene
96-09-3	Styrene oxide
1746-01-6	2,3,7,8-Tetrachlorodibenzo-p-dioxin
79-34-5	1,1,2,2-Tetrachloroethane
127-18-4	Tetrachloroethylene (Perchloroethylene)
7550-45-0	Titanium tetrachloride
108-88-3	Toluene
95-80-7	Toluene-2,4-diamine
584-84-9	2,4-Toluene diisocyanate
95-53-4	0-Toluidine
8001-35-2	Toxaphene (chlorinated camphene)
120-82-1	1,2,4-Trichlorobenzene
79-00-5	1,1,2-Trichloroethane
79-01-6	Trichloroethylene
95-95-4	2,4,5-Trichlorophenol
88-06-2	2,4,6-Trichlorophenol
121-44-8	Triethylamine
1582-09-8	Trifluralin
540-84-1	2,2,4-Trimethylpentane
108-05-4	Vinyl acetate
593-60-2	Vinyl bromide
75-01-4	Vinyl chloride
75-35-4	Vinylidene chloride (1,1-Dichloroethylene)
1330-20-7	Xylene (mixed isomers)
95-47-6	o-Xylene
108-38-3	m-Xylene
106-42-3	p-Xylene

Antimony Compounds
 Arsenic Compounds (inorganic including arsine)
 Beryllium Compounds
 Cadmium Compounds
 Chromium Compounds
 Cobalt Compounds
 Coke Oven Emissions
 Cyanide Compounds¹
 Glycol ethers²
 Lead Compounds
 Manganese Compounds
 Mercury Compounds
 Fine Mineral fibres³
 Nickel Compounds
 Polycyclic Organic Matter⁴
 Radionuclides (including Radon)⁵
 Selenium Compounds

NOTE: For all listings above which contain the word "Compounds" and for glycol ethers, the following applies: Unless otherwise specified, these listings are defined as including any unique chemical substance that contains the named chemical (i.e. antimony, arsenic, etc.) as part of that chemical's infrastructure.

¹X'CN where X=H' or any other group where a formal dissociation may occur. For example, KCN or Ca(CN)₂.

²R-(OCH₂CH₂)_n-OR'

where

n=1,2 or 3

R = alkyl C7 or less

or R= phenyl or alkyl substituted phenyl

R'=H, or alkyl C7 or less or ester, sulphate, phosphate, nitrate, sulphonate

³Includes mineral fibre emissions from facilities manufacturing or processing glass, rock, or slag fibres (or other mineral derived fibres) of average diameter 1 micrometre or less.

⁴Includes substituted and/or unsubstituted polycyclic aromatic hydrocarbons and aromatic heterocyclic compounds, with two or more fused rings, at least one of which is benzenoid (i.e., containing six carbon atoms and is aromatic) in structure. Polycyclic Organic Matter is a mixture of organic compounds containing one or more of these polycyclic aromatic chemicals. Polycyclic Organic Matter is generally formed or emitted during thermal processes including:

- incomplete combustion,
- pyrolysis,
- the volatilization, distillation or processing of fossil fuels or bitumens or
- the distillation or thermal processing of non-fossil fuels.

⁵A type of atom which spontaneously undergoes radioactive decay.

SCHEDULE 8

SITES AND AREAS OF SPECIAL VALUE TO TANGATA WHENUA

This Schedule is yet to be prepared in accordance with Method 2.3.5.2.