

Gisborne District Transitional Regional Plan

As amended by Plan Change 1 2002



Under section 86A of the RMA, Council can still give weight to the objectives and policies that are proposed for deletion, shown as ~~strike throughs~~ until the freshwater plan becomes operative. This does not apply to the rules.

Transitional Regional Plan

~~The following instruments constitute the Transitional Regional Plan (TRP) for the Gisborne District pursuant to section 368 Resource Management Act 1991:~~

~~It should be noted that for the purposes of this plan reference to the Board's district refers to the Gisborne District and reference to the Poverty Bay Catchment Board, Poverty Bay Regional Water Board, East Cape Catchment Board and East Cape Regional Water Board refers to the Gisborne District Council.~~

~~Part E relates to transitional policies of the National Policy Statement for Freshwater Management, which takes effect from 01 July 2011. These policies were inserted by resolution of Council on 28 July 2011, pursuant to Section 55(2) of the Resource Management Act 1991.~~

Table of Contents

PART A:	1
1.0 — EXISTING TAKING OF AGRICULTURAL WATER AS AT 1/3/69 (EXCEPT FOR IRRIGATION)	1
2.0 — EXISTING UNPOLLUTED DISCHARGES OF WATER AS AT 1/3/69	1
3.0 — TAKING OF WATER FOR AERIAL SPRAYING	1
4.0 — TAKING OF WATER FOR SPRAYING	1
5.0 — DRAINAGE OF EXCAVATIONS FOR PUBLIC WORKS,	3
6.0 — STORMWATER DISCHARGE	3
7.0 — TAKING OF WATER FOR BRIDGE, CULVERT, HIGHWAY AND ROAD CONSTRUCTION PURPOSES	4
8.0 — LAND DRAINAGE DISCHARGES	4
9.0 — THE TAKING, USING AND DISCHARGE OF NATURAL WATER	5
10.0 — THE DISCHARGE OF WASTE	6
11.0 — MINOR USES OF GROUNDWATER	6
12.0 — TAKES FROM DAMS	6
PART B	8
1.0 — GENERAL.....	9
1.2 — <i>Interpretation</i>	9
2.0 — WATERCOURSES.....	10
2.1 — <i>Maintenance of Watercourses</i>	10
4.0 — DAMS	11
4.1 — <i>Construction</i>	11
5.0 — UNDERGROUND WATER	12
5.1 — <i>Making, Altering or Installing Bores</i>	12
5.2 — <i>Records</i>	12
5.3 — <i>Inspection of Bore</i>	12
5.4 — <i>Fitting of Apparatus</i>	12
5.5 — <i>Control of Wasteful Use</i>	13
5.6 — <i>Maintenance</i>	13
PART C	15
SECTION 1: — PUMPING TEST SPECIFICATIONS	15
1.0 — SCOPE	15
2.0 — REASON FOR TESTING	15
3.0 — TYPES OF PUMP TESTING	15
4.0 — MEASUREMENTS REQUIRED	16
5.0 — METHODS OF DISCHARGE MEASUREMENT	16
6.0 — METHODS AND RATES OF WATER LEVEL MEASUREMENT	17
7.0 — OTHER RECORDS	18
8.0 — PUMPING METHODS	18
9.0 — DISPOSAL OF PUMPED WATER	18
10.0 — LENGTH OF PUMP TEST	18
11.0 — WHEN TO PUMP TEST	19
12.0 — REPORTING OF RESULTS	20
13.0 — CONDUCT OF THE PUMP TEST	20

SECTION TWO: WATER QUALITY SAMPLING AND ANALYSIS SPECIFICATIONS	21
1.0 SCOPE	21
2.0 WATER QUALITY SAMPLING	21
3.0 WATER QUALITY ANALYSIS	21
PART D	23
BORE CONSTRUCTION SPECIFICATIONS	23
1.0 SCOPE	23
2.0 BORE PERMITS	23
3.0 BORE RECORDS AND SAMPLES	23
4.0 BORE CONSTRUCTION PROCEDURES	23
5.0 BORE CASING SELECTION AND INSTALLATION PROCEDURE	24
6.0 BORE GROUTING	24
7.0 BORE SCREEN SELECTION AND INSTALLATION PROCEDURE	24
8.0 FILTER PACK SELECTION AND EMPLACEMENT PROCEDURE	24
9.0 BORE PLUMBNESS AND ALIGNMENT	25
10.0 BORE DEVELOPMENT	25
11.0 PUMP TESTING	25
12.0 BORE DISINFECTION	25
13.0 WATER QUALITY SAMPLING AND ANALYSIS	26
14.0 INSPECTION REQUIREMENTS	26
15.0 BORE ABANDONMENT	26
PART E	28
1.0 WATER QUALITY – POLICY A4	28
2.0 WATER ALLOCATION – POLICY B7	29

Under section 86A of the RMA, Council can still give weight to the objectives and policies that are proposed for deletion, shown as ~~strike throughs~~ until the freshwater plan becomes operative. This does not apply to the rules.

Part A:

~~General Authorisations in accordance with Section 22 of the Water and Soil Conservation Act, 1967 passed by the Poverty Bay Catchment Board and Regional Water Board:~~

~~1.0 Existing Taking of Agricultural Water as at 1/3/69¹ (except for irrigation)~~

~~Pursuant to Section 22 of the Water and Soil Conservation Act 1967, the taking of natural water for agricultural purposes including the use of Water for cooling purposes, or washing down milking sheds, the use of natural water for insecticide, fungicide, weedicide or silvicide spraying; but excluding the use of water for the spray or flood irrigation of pasture, crops, commercial or market gardens and orchards, that was taking place throughout the Board's district before the 1st day of March 1969, be authorised, such authorisation to remain in force at the pleasure of the Poverty Bay Regional Water Board.~~

~~2.0 Existing Unpolluted Discharges of Water as at 1/3/69²~~

~~Pursuant to Section 22 of the Water and Soil Conservation Act, 1967; all existing discharges of water from agricultural drains, tile or pipe drains, rural stormwater outlets and all culverts into natural watercourses that were taking place throughout the Board's district before the 1st day of March 1969, be authorized, provided they do not contain pollutants, animal or other wastes; such authorisations to remain in force at the pleasure of the Poverty Bay Regional Water Board.~~

~~3.0 Taking of Water for Aerial Spraying³~~

~~Pursuant to and in exercise of the powers conferred upon it by Section 22 of the Water and Soil Conservation Act 1967, the Poverty Bay Catchment Board as the Regional Water Board, hereby authorises all licensed operators of the Aviation Industry Association of New Zealand Incorporated to take natural water within the Board's district for aerial spraying purposes; such authorization to remain in force at the pleasure of the Poverty Bay Regional Water Board and is subject to cancellation in whole or in part if¹ and whenever the public interest or other reason so requires.~~

~~4.0 Taking of Water for Spraying⁴~~

~~Pursuant to and in exercise of the powers conferred upon it by Section 22 of the Water and Soil Conservation Act 1967, the Poverty Bay Catchment Board as the Regional Water Board, hereby authorizes the taking of natural water within the Board's district for insecticide, fungicide, pesticide, weedicide or silvicide spraying purposes applied from the ground, provided that the substances used for the above purposes and their method of application conforms to the requirements of¹ the Agricultural Chemical Regulations~~

¹ Signed By E.K Wilson (Secretary) 13/3/69

² Signed By E.K Wilson (Secretary) 13/3/69

³ Signed By E.K Wilson (Secretary) 9/8/73

⁴ Signed By E.K Wilson (Secretary) 11/10/73

~~1968 and of any other Act or Regulation at present in force or that may be later brought into effect.~~

~~Such authorisation to remain in force at the pleasure of the Poverty Bay Regional Water Board and is subject to cancellation in whole or in part if and whenever the public interest or other reason so requires.~~

5.0 ~~Drainage of Excavations for Public Works~~⁵,

~~Pursuant to Section 22 of the Water and Soil Conservation Act 1967, the Poverty Bay Catchment Board, exercising its powers, functions and duties as a Regional Water Board, hereby authorizes the taking and discharging of¹ underground water into water courses for the purpose of artificially lowering the ground water level to carry out the drainage of excavations required for public works.~~

~~This Authorisation may be cancelled wholly or in part at any time if and when the public interest so requires.~~

6.0 ~~Stormwater Discharge~~⁶

~~Pursuant to Section 22 of the Water and Soil Conservation Act 1967, the Poverty Bay Catchment Board, exercising its powers, functions and duties as a Regional Water Board, hereby authorises the discharge of stormwater within the region of the Poverty Bay Catchment District subject to the restrictions and conditions stated hereunder.~~

Conditions

- ~~(a) Any discharge made under this Authorisation shall be for the purpose of discharging stormwater, substantially free of pollutants, arising from land, roofs, pavements or streets by pipe or open drain into a natural watercourse and which natural watercourse is the natural receiver of surface drainage from those areas.~~
- ~~(b) Any discharge made under this Authorisation shall at all times be substantially free from suspended solids, grease and oils.~~
- ~~(c) Should, as a result of any discharge made under this Authorization, any detriment or damage result to property, assets or other interests of any other party, that can reasonably be shown to have resulted from such a discharge, then the person or persons responsible for having made the discharge shall carry out at his or their expense such remedial or restorative works as the Board may require to minimise or restore the detriment or damage caused by the discharge.~~
- ~~(d) Any discharge made under this Authorisation from any residential, commercial or industrial subdivision requiring and given approval by a Local Authority, shall for the purposes of Condition (c) be considered to have been made by that Local Authority.~~

⁵ Signed By E.K Wilson (Secretary) 11/3/76

⁶ Signed By E.K Wilson (Secretary) 11/3/76

Restrictions

~~(a) This Authorization does not permit:~~

- ~~(i) the discharge of stormwater from surfaces used for the holding of stock or for the bulk storage of materials or chemicals which when mixed with natural water are likely to make that water unpalatable or unsafe for consumption by farm animals or harmful to natural aquatic life.~~
- ~~(ii) the discharge of stormwater into a natural watercourse the channel of which does not flow through and discharge into the sea wholly within the same Local Authority's region.~~
- ~~(iii) the diversion of stormwater across the boundary between the regions of Local Authorities.~~

~~(b) This Authorisation may be cancelled wholly or in part at any time if and whenever the public interest so requires.~~

7.0 Taking of Water for Bridge, Culvert, Highway and Road Construction Purposes⁷

~~Pursuant to Section 22(1) of the Water and Soil Conservation Act 1967, the Poverty Bay Regional Water Board authorises the taking of natural water for the purpose of constructing, reconstructing, repairing or maintaining bridges, culverts, highways and roads within the region of the Poverty Bay Catchment District provided that:~~

- ~~(1) The taking of such natural water does not substantially reduce the availability or quality of natural water downstream of the site of taking or extraction.~~
- ~~(2) No person shall exercise the rights conferred by this authorisation so as to adversely affect any land owned or occupied by another person, without that other person's consent.~~
- ~~(3) In the exercise of the rights conferred by this authorisation all possible measures shall be taken to avoid the contamination of natural water from concrete mixing or highway foundation operations.~~

~~This Authorisation may be cancelled wholly or in part at any time if and whenever the public interest so requires.~~

~~PUBLIC NOTICE is also hereby given that on 14 April 1977 the Board cancelled its General Authorisation dated 10 July 1969 authorising existing discharges in accordance with permits issued by the Pollution Advisory Council, into the portion of the OHIWA HARBOUR lying within the Board's District.~~

8.0 Land Drainage Discharges

~~Pursuant to Section 22 of the Water and Soil Conservation Act 1967 the Poverty Bay Catchment Board exercising its powers, functions and duties as a Regional Water Board hereby authorises the discharge of stormwater from land within the region of the Poverty Bay Catchment District subject to the restrictions and conditions stated hereunder:-~~

⁷ Signed By E.K Wilson (Secretary) 16/4/77

Conditions

~~Any discharge made under this authorisation shall be for the purpose of discharging by gravity, stormwater and sub-surface water, substantially free of pollutants, animal or other wastes, from land, from agricultural surface drains, tile or pipe drains, rural stormwater outlets and culverts into a natural or artificial watercourse which is the natural receiver of surface drainage from the area drained.~~

~~(a) Should, as a result of any discharge made under this authorisation, any detriment or damage result to property, assets or other interests of any other party that can reasonably be shown to have resulted from the discharge then the person or persons responsible for having made the discharge shall carry out at his or their expense such remedial or restorative works as the Board may require to minimise or restore the detriment or damage caused by the discharge.~~

~~(b) No person shall exercise the "Rights" conferred by this Authorisation so as to adversely affect any land owned or occupied by another person without that other person's consent.~~

~~This Authorisation may be cancelled wholly or in part at any time if and whenever the public interest so requires.~~

9.0 The taking, using and Discharge of Natural Water⁸

~~Take notice that the East Cape Regional Water Board has resolved pursuant to, and in exercise of the powers conferred on it by Section 22 of the Water and Soil Conservation Act 1967 (and amendments) to hereby authorise the following takings and discharges of natural water and discharges of waste into natural water subject to the conditions hereunder stated.~~

~~These authorisations apply to the whole or such parts as specified, of the East Cape Catchment District. They may be modified in all or part, any one or all cancelled at any time if and whenever the public interest so requires.~~

Water Resources Investigations

~~The taking, using or discharging of natural water or the discharge of waste water onto or into the ground or into natural water in association with engineering sub-surface investigations provided that:~~

~~(i) The taking of natural water does not significantly reduce the availability or quality of natural water downstream of the site of taking or abstraction.~~

~~(ii) The exercise of Rights conferred by this authorisation are to be in compliance with the requirements of any By-laws, of the East Cape Regional Water Board pursuant to Section 4 of the Water and Soil Conservation Amendment Act 1973, that may be operative.~~

~~(iii) The Regional Water Board is notified 7 days prior to any use authorised pursuant to this authorisation.~~

⁸ Signed By NB Roe, (Secretary) 17/12/88

~~(iv) No person shall exercise the right conferred by this authorisation so as to adversely affect any land owned or occupied by another person, without that other persons consent~~

~~10.0 The Discharge of Waste⁹~~

~~Take notice that the East Cape Regional Water Board has resolved pursuant to, and in exercise of the powers conferred on it by Section 22 of the Water and Soil Conservation Act 1967 (and amendments) to hereby authorise the following takings and discharges of natural water and discharges of waste into natural water subject to the conditions hereunder stated.~~

~~These authorisations apply to the whole or such parts as specified, of the East Cape Catchment District. They may be modified in all or part, any one or all cancelled at any time if and whenever the public interest so requires.~~

~~The Discharge of Waste Water from Reticulated Water Supplies~~

~~The discharge of natural water containing waste from a Local Authority reticulated water supply for the purpose of maintenance works or scouring provided that:~~

- ~~(i) The discharge will not cause any flooding, erosion or adverse effects.~~
- ~~(ii) The local authority shall notify the Regional Water Board of any events that do occur that are authorised pursuant to this authorisation forthwith.~~

~~11.0 Minor Uses of Groundwater¹⁰~~

~~Public Notice is hereby given that the Gisborne District Council has resolved pursuant to, and in exercise of the powers conferred upon it by Section 22 of the Water and Soil Conservation Act 1967 and Amendments, to hereby authorise the following taking of natural water.~~

~~These authorisations apply to the whole of the Gisborne District. They may be modified in all or part, cancelled at any time if and whenever the public interest so requires.~~

~~The taking of groundwater in the Gisborne District from an individual bore, or a series of interconnected wellpoints where the total daily take is less than 10 cubic metres of water per day.~~

~~Note this general authorisation does not negate the requirement for a bore permit for the construction of a new bore or wellpoints.~~

~~12.0 Takes from Dams¹¹~~

~~Public Notice is hereby given that the Gisborne District Council has resolved pursuant to, and in exercise of the powers conferred upon it by Section 22 of the Water and Soil Conservation Act 1967 and Amendments, to hereby authorise the following taking of natural water.~~

⁹ Signed By NB Roe, (Secretary) 17/12/88

¹⁰ Signed By A F Armstrong (Manager Environment & Planning) 7/7/90

¹¹ Signed By A F Armstrong (Manager Environment & Planning) 7/7/90

~~These authorisations apply to the whole of the Gisborne District. They may be modified in all or part, cancelled at any time if and whenever the public interest so requires.~~

~~The taking of natural water from Dams in the Gisborne District that do not Dam a river or stream and are filled by catchment run off.~~

~~Note this general authorisation does not negate the requirement for a water right to dam a river or stream or to take natural water for the purpose of filling any dam.~~

Part B

East Cape Catchment Board and Regional Water Board Bylaws

The East Cape Catchment Board and Regional Water Board acting in exercise and pursuance of the powers and authorities vested in it by Sections 149 and 150 of the Soil Conservation and Rivers Control Act 1941, Section 34A of the Water and Soil Conservation Act 1967, Section 4 of the Water and Soil Conservation Amendment Act 1973 and all powers and authorities enabling it to do so, hereby makes or revokes by way of Special Order the following Bylaws:

1. — To revoke the Poverty Bay Catchment Board Bylaws 1947, parts I — IX which came into force on 30 October 1947 together with the amendments to Bylaws 20 to 33 (inclusive) which came into force on 30 November 1949.
2. — To make the East Cape Catchment Board and Regional Water Board Bylaws 1980 by the adoption of New Zealand Standards 9203:1979 Model Bylaw for the Catchment Authorities Regional Water Boards, Chapter 1, 2, 3.1, 4, 5.1 to 5.6, 5.8, 6 as scheduled hereunder:

Chapter 1 : General

- 1.1 — Deleted
- 1.2 — Interpretation

Chapter 2 : Watercourses

- 2.1 Maintenance of Watercourses
- 2.2 Deleted
- 2.3 Deleted
- 2.4 Deleted
- 2.5 Deleted
- 2.6 Obstructions
- 2.7 Miscellaneous

Chapter 3

Deleted.

Chapter 4 : Dams

- 4.1 — Construction

Classes of Dams

Class 1 dams shall be structures not greater in height from base to crest than 3.5m impounding not more than 10,000 m³ from a catchment of not more than 10 hectares.

Class 2 dams shall be structures greater in height from base to crest than 3.5 m but not greater in height from base to crest than 4.5 m impounding more than 10,000 m³ but not more than 20,000 m³ from a catchment of more than 10 hectares but not more than 25 hectares.

Class 3 dams shall be all other dams constructed of whatever material.

Chapter 5 : Underground Water

- 5.1 — Making, Altering or Installing Bores
- 5.2 — Records
- 5.3 — Inspection of Bore
- 5.4 — Fitting of Apparatus
- 5.5 — Maintenance
- 5.6 — Deleted

Chapter 6

Deleted

~~The foregoing Bylaws were duly made by Special Order at a special meeting of the East Cape Catchment Board and Regional Water Board held in the Cook County Council Chambers, 389 Gladstone Road, Gisborne on the 11th day of November 1980 and confirmed at an ordinary meeting of the said Board on the 9th day of December 1980 and ordered to come into force on the 17th day of December 1980.~~

~~REFER EAST CAPE CATCHMENT BOARD AND REGIONAL WATER BOARD ADMINISTRATION FILE 2/6 FOR ORIGINAL DOCUMENT.~~

1.0 — GENERAL

1.2 — Interpretation

1.2.1 — In this bylaw, unless the context otherwise requires:

AUTHORITY means East Cape Catchment Board and Regional Water Board.

CLEANSE means the cleansing of a watercourse, and includes the removal of any plants, debris, or any other obstruction whatsoever that detracts from the efficiency of the watercourse.

CROSSING means any bridge, ford, conduit or other structure over, through or under a watercourse but shall not include a fence or any crossing over any road water table or any kerb or channel on a public road.

DAM means a structure for controlling the flow of a river or stream or impounding natural water where the maximum water level will be above the original ground surface at any point but does not include a Stopbank or other channel training work.

DEFENCE AGAINST WATER includes any dam, weir, bank, carriageway, groyne or reservoir, and any structure or appliance of any kind which has or may have the effect of stopping, diverting, controlling, restricting, or otherwise regulating the flow or spread or rate of fall, in or out of a watercourse, of waters, including flood waters.

DISTRICT means the district, area or region of the Authority as defined in its particular empowering legislation.

FLOODWAY means every watercourse, and land over which flood waters are intended or expected to pass from time to time.

LIVESTOCK includes any horse, cattle, beast, ass or mule, goat, sheep, pig, or deer.

MAKE, in relation to any bore in section 5, includes drill, dig, bore or construct.

~~**NOTICE** means a notice made and delivered in accordance with section 164 of the Soil Conservation and Rivers Control Act 1941.~~

~~**OCCUPIER** means the inhabitant occupier of any land and if there is no such person then the owner in fee simple of the land and includes the Crown where there is no inhabitant occupier of any land owned by the Crown.~~

~~**PERMITS** mean a permit in writing.~~

~~**REPAIR** means the restoration of the efficiency of a watercourse or defence against water.~~

~~**RESTRICTED BURNING AREAS** means the areas in the Authority's district where the control of lighting fires is necessary to prevent or check erosion or to promote soil conservation.~~

~~**VEGETATION** includes any trees, shrubs, plants or grasses.~~

~~**WATER RIGHT** means any right in respect of natural water granted or authorized pursuant to the Water and Soil Conservation Act 1967.~~

2.0 WATERCOURSES

WATERCOURSE includes every river, stream, passage, and channel on the ground whether natural or not through which water flows whether continuously or intermittently in a defined course; but does not include any piped water supply, tunnel, conduit, aqueduct, or water race forming part of the reticulation of or for any water supply area or water race district or irrigation district or any water table on a public highway which is for the sole purpose of controlling the run—off from the carriageway.

2.1 Maintenance of Watercourses

- 2.1.1 Subject to the provisions of section 143 of the Soil Conservation and Rivers Control Act 1941, clauses 2.1.1 to 2.1.4 hereof shall apply to all watercourses in the district, including those where control is vested in the Authority pursuant to section 130 of the Soil Conservation and Rivers Control Act 1941 or pursuant to any other Act, but shall not apply in respect of those watercourses included in the First Schedule to this bylaw.
- 2.1.2 Every owner or occupier of land in the district through which a watercourse flows shall at all times keep the watercourse cleansed, maintained, and repaired to the satisfaction of the Authority and if he fails to do so the Authority may, by notice in writing, require such owner or occupier so to do.
- 2.1.3 Where by or under clause 2.1.2 any owner or occupier is required to cleanse, maintain, or repair any watercourse and, after notice in writing requiring him so to do, makes default in complying with the notice within the time specified in the notice in that behalf, or if no such time is specified, then within a reasonable time, does not proceed with the work, then the Authority may, if it thinks fit, either itself or acting by or through its agents cleanse or repair all or any part or parts of such watercourse.

2.1.4 The Authority may recover from the owner or occupier the reasonable costs of carrying out any such works as aforesaid as a debt due and payable on demand by the owner or occupier to the Authority and in default of such payment the costs shall be recoverable by the Authority from the owner or occupier in any court of competent jurisdiction.

2.6 Obstructions

2.6.1 No person shall, without the written consent of the Authority, obstruct or damage any watercourse, or obstruct the flow of flood waters therein, or impede the maintenance of the watercourse or floodway.

2.7 Miscellaneous

2.7.1 No person shall without the written consent of the Authority take or drive or cause or permit to be taken or driven any livestock, motorized vehicles or machinery on any flood control stopbank or other defence against water where in the opinion of the Authority that action could cause damage to the stopbank or other defence against water.

2.7.2 The Authority may from time to time by public notice prohibit any access to or passing over any part of a watercourse under its control for the protection of that part of the watercourse.

4.0 Dams

4.1 Construction

~~4.1.1 Every person who wishes to construct a dam in the district shall advise the Authority in writing of his intention.~~

~~4.1.2 For the purpose of this bylaw dams constructed for the regulation of water shall be divided into three classes. The Authority shall determine in all cases into which class the proposed dam falls:~~

~~Class 1: Dams shall be structures not greater in height from base to crest than 3.5m impounding not more than 10,000m³ from a catchment of not more than 10 hectares.~~

~~Class 2: Dams shall be structures greater in height from base to crest than 3.5 m but not greater in height from base to crest than 4.5 m impounding more than 10,000 m³ but not more than 20,000 in³ from a catchment of more than 10 hectares but not more than 25 hectares.~~

~~Class 3: Dams shall be all other dams constructed of whatever material.~~

~~4.1.3 Class 1 dams shall not require approval by the Authority unless:~~

~~(a) A water right is required; or~~

~~(b) There is in the opinion of the Authority a risk to life property~~

~~Class 2 dams shall conform to such standards as may be required by the Authority. Class 3 dams shall be designed and the construction supervised by a registered engineer.~~

~~4.1.4 In the case of class 2 and class 3 dams, construction shall not commence until authorised in writing by the Authority and the Authority shall have regard for any necessary water rights, town and country planning consents and building permits.~~

~~4.1.5 The owner or occupier shall keep all dams and associated structures in a good state of repair to the satisfaction of the Authority.~~

~~4.1.6 The granting of approval by the Authority for the construction of a dam in the terms of this bylaw shall not absolve applicants from any obligation under the Fish Pass Regulations 1947 or any other statutory or regulatory requirement.~~

5.0 UNDERGROUND WATER

5.1 Making, Altering or Installing Bores

~~5.1.1 No person shall make or alter or cause or allow to be made or altered any bore without first obtaining a permit to do so from the Authority.~~

~~5.1.2 Every application for a permit shall be in writing in the form set out in the Third Schedule to this bylaw.~~

~~5.1.3 The Authority may issue a permit subject to such conditions or restrictions relating to the location, dimension, depth and lining of the bore as the Authority thinks fit or decline to issue a permit.~~

~~5.1.4 Every holder of a permit or of a written dispensation under this bylaw shall produce the same for inspection when required to do so by the Authority.~~

5.2 Records

~~5.2.1 Every person who makes or maintains a bore shall keep such records as the Authority may require and shall provide information therefrom to the Authority upon request.~~

~~5.2.2 Bore hole records shall contain such information as the Authority may require and shall include the items and be in the form set out in the Fourth Schedule to this bylaw.~~

~~5.2.3 Every person having in his possession any records concerning the making, maintenance or operation of bores pursuant to clause 5.2.1 shall allow the Authority or any person duly authorized by the Authority to have free access thereto and to take copies of or extracts from such records.~~

5.3 Inspection of Bore

~~5.3.1 Every person having control of a bore shall allow the Authority to have reasonable access thereto for the purposes of inspecting the bore and the material taken therefrom and to take a specimen of any such material or of the water from the bore.~~

5.4 Fitting of Apparatus

~~5.4.1 Every person having control of a bore shall purchase, fit to the bore, and maintain in proper working order such measuring or recording apparatus as the Authority may require.~~

5.5 — Control of Wasteful Use

~~5.5.1 — No person having control of a bore shall allow underground water to run to waste or to be used in an inefficient manner and shall furnish each bore or bores with effective valves and fittings which shall be protected from damage and maintained in good working order.~~

5.6 — Maintenance

~~5.6.1 — Every person having control over a bore shall keep it in good order~~

~~5.6.2 — Every person having control of a bore that is not in use for the purpose of taking water therefrom shall seal it, and keep it sealed in such a manner as to prevent the entry or escape at any level to the satisfaction of the Authority~~

~~5.6.3 — Where the Authority considers it is necessary to remove or seal or fill part or all of a bore, the Authority may by notice in writing to the person having control of that bore direct what action must be taken to remedy the situation and advise that person of the reasons for such action.~~

FIRST SCHEDULE

~~Maintenance of Watercourses~~

~~List of watercourses not included in Clause 2.1 of this bylaw~~

~~NIL~~

SECOND SCHEDULE

~~Vegetation~~

~~List of watercourses not included in Clause 2.5 of this bylaw~~

~~NIL~~

Part C:

~~Water Bore Pumping Test and Water Quality Sampling and Analysis Specifications.
(March 1989)~~

~~SECTION 1: Pumping Test Specifications~~

~~1.0 SCOPE~~

~~This specification outlines the minimum standards for pump testing water bores and reporting test results for water bores situated in the East Cape Catchment Board and Regional water Board district.~~

~~2.0 REASON FOR TESTING~~

~~2.1 A pump test shall be performed in a production water bore to estimate the aquifer transmissivity and aquifer storage coefficient and the specific capacity of the bore. The bore efficiency may also be determined.~~

~~2.2 A pump test must be performed if a new bore requires a water right.~~

~~3.0 TYPES OF PUMP TESTING~~

~~3.1 The two most common methods of pump testing are outlined below. In general these will be the only testing methods acceptable to the Board. If the production bore being tested is unable to be tested by one of these methods, other means of testing must first be approved by the Board.~~

~~3.2 The testing described below allows useful measurements to be obtained from the production bore and any nearby observation bores. An observation bore is a bore that is also monitored while the production bore is being pumped. It may include other users' bores.~~

~~3.3 Constant Discharge Tests~~

~~A constant discharge test is one in which the bore is pumped for a certain length of time at a constant rate. Water level measurements are taken at varying time intervals during the period of the test. The best constant discharge tests have at least the following characteristics:~~

- ~~i) Water level measurements are taken at observation bores in addition to levels at the pumped bore.~~
- ~~ii) The bore is pumped at a rate greater than or equal to that required for the production flowrate.~~
- ~~iii) Water level measurements are continued when the pump is switched off at the same intervals as those made when the pump was first started.~~
- ~~iv) The discharge rate is kept constant during the entire period of the pump test. Normal flow variations should be no more than +/- two percent~~

~~3.4 Step Drawdown Tests~~

~~Step drawdown tests are those in which the bore is pumped at different rates (steps) during the period of the test. Measurements are taken at varying intervals, with the most intensive rate being just after the beginning of each step. The best step drawdown tests have the following characteristics:~~

- ~~i) The bore is pumped in five steps. If the planned production flowrate is Q then the steps are 1.25 Q, 1.0 Q, 0.75 Q, 0.5 Q, 0.25 Q.~~
- ~~ii) Water level measurements are taken at other (observation) bores in addition to those in the pumped bore during the drawdown part of the test.~~
- ~~iii) The discharge rate is kept consistent during each step in the pump test. Normal flow variations should be no more than +/- two percent.~~
- ~~iv) The discharge should be recorded at the same time as the water level measurement.~~

4.0 MEASUREMENTS REQUIRED

~~4.1 There are a number of measurements common to all pump tests which must be recorded. The three most common are time of measurement, water level and flowrate. For pump tests that are longer than twelve hours records of other pumping in the area, air pressure changes, amount of rainfall, tide times, floods and other phenomena likely to affect the bore water levels should be kept. The easiest method of recording all the information is in tabular form. This information should be kept together with other records for the bore.~~

~~4.2 The exact time of each measurement should be noted. All time measurements should be synchronised with a master watch or clock. Watch accuracy should be to within one minute in 24 hours.~~

5.0 METHODS OF DISCHARGE MEASUREMENT

~~5.1 The rate of discharge of the pump can be measured by using an in-line flow meter, an orifice weir, a weir box, or a container of a known size. Instruments used for measuring the flowrate should be accurate to within +/- five percent of the actual flow.~~

~~5.2 The in-line flow meter should be installed according to the manufacturer's instructions. It must always be running full to read correctly. Most meters show the total flow pumped on a counter. In this case the total pumped at, say, one minute intervals should be noted. Use the difference to calculate the flowrate.~~

~~5.3 An orifice weir is a pipe with an accurately machined orifice plate through which the water is discharged into the atmosphere. Just upstream of the plate the pressure head is measured and related to a calibration table for the particular plate. This table may be obtained from a textbook.~~

~~5.4 A weir box works similarly. The water level above the weir notch is measured at the weir in the box. This level indicates a particular discharge depending on the type of weir used. Tables are available from textbooks.~~

5.5 Using a container works like the flow meter method. Measure the time it takes to fill the container, say a 200 litre drum, and then calculate the flowrate.

6.0 METHODS AND RATES OF WATER LEVEL MEASUREMENT

6.1 The static water level is best measured by an electric plumb bob. This is normally a ribbon tape similar to TV wire; but less susceptible to stretching; with a battery and a light, ammeter, or buzzer attached to make a circuit. When the bared ends touch water the circuit is completed. Normally the tape is marked off, and the depth to water level can be read off at the measurement point on the bore head.

6.2 Measurement of the static water level should be to within an accuracy of +/- five percent or +/- 2 mm whichever is smaller. The bore must be pumped in such a way that the water level can be measured in the pumped bore.

6.3 The water level must be measured frequently near the beginning of a test, with intervals decreasing as the test continues. The recommended intervals for the pumped bore and observation bores are as follows:

TABLE ONE
Recommended Intervals for Measuring Drawdown and Recovery
In The Pumped Bore During a Pump Test

Time Since Start or End of Test in Minutes	Time Intervals Between Measurements (Minutes)
0—10	0.5—1
10—15	1
15—60	5
60—300	30
300—1440	60
1440—end of test	480 (8 hours)

TABLE TWO
Recommended Intervals for Measuring Drawdown
in the Observation Bores During a Pump Test

Time Since Start or End of Test in Minutes	Time Intervals Between Measurements (Minutes)
0—60	2
60—120	5
120—240	10
240—360	30
360—1440	60
1440—end of test	480 (8 hours)

~~6.4 — Ensuring that measurements are made at exactly the right time interval is not as important as noting the exact time of the measurement.~~

~~7.0 — OTHER RECORDS~~

~~7.1 — Some bore water levels are affected by other atmospheric and climatic conditions. Some of these conditions include air pressure, tide times, daily rainfall, river levels or the water level in a nearby drain. As well as noting this information water levels in the pumped bore must also be recorded.~~

~~7.2 — It is good practice to note the conditions for some days before and after the pump test. This information can be important as the length of the pump test increases. Sometimes corrections must be made to the water level data. Prior to pump testing bores must be shut down for a period of not less than 24 hours.~~

~~7.3 — Bores used for the test should be shut down and levels measured for some days prior to the test.~~

~~8.0 — PUMPING METHODS~~

~~8.1 — The methods used for pumping or adding water to the production bore shall not prevent the static water level in the bore being measured.~~

~~9.0 — DISPOSAL OF PUMPED WATER~~

~~9.1 — The water pumped from a bore during a pump test must be allowed to flow off site in a safe and efficient manner. If the pump test is being conducted in an unconfined aquifer the waste water must not be allowed to drain back into the aquifer.~~

~~9.2 — In general water should be discharges to waste over 200 metres from the test site in an unconfined aquifer. In a confined aquifer water should be piped to waste at least 100 metres from the test site~~

~~10.0 — LENGTH OF PUMP TEST~~

~~10.1 — Ideally, pumping tests should be continued until equilibrium is reached, that is, until the cone of depression stabilises. This means that the water levels in the observation bores and the pumped bore are steady or fluctuate around a steady average figure. In practice this is rarely possible.~~

~~10.2 — In confined aquifers, the cone of depression spreads rapidly because no actual dewatering takes place; only a pressure reduction is occurring outward from the bore. Thus, 24 hours is usually sufficient to record enough reliable data for confined aquifers. Aquifers shallower than 20 metres below ground surface should be pumped for up to 72 hours. Many of these shallow artesian aquifers may be connected to water table aquifers overlying them.~~

- 10.3 To gain enough information for unconfined aquifers, 72 hours are usually required to dewater the materials within the cone of depression, because of the slow downward percolation of water in many stratified deposits. This time can be reduced if equilibrium conditions are established before 72 hours have elapsed.
- 10.4 In general, pumping should not be stopped early because the limited data may not reveal the true extent of the aquifer. This condition will usually be relaxed if the water level has stabilised.
- 10.5 Listed below are the time requirements for pump testing. Water level recovery must be measured for the same period of time, once the pumping is complete.

TABLE THREE:
Length of Pump Testing Required for Different Water Uses

Water Use	Bore Depth	
	0–20m	>20m
Stock/Domestic	4 hours	4 hours
Horticultural	72 hours	24 hours
Municipal/Community/Industrial	7 days	7 days

- 10.6 Stock or domestic use is generally less than 100 m³/day, horticultural use is usually less than 1000 m³/day while municipal, industrial and community uses are usually greater than 1000 m³/day.
- 10.7 Municipal water supply requirements may often dictate substantially longer testing (eg months in the case of towns or cities). For stock or domestic use the quantities of water required are usually so small that drawdown may have stabilised after two or three hours of pumping.

11.0 WHEN TO PUMP TEST

- 11.1 The best time to pump test is when no other bores in the area which would affect the water level in the production bore are pumping. If other bores are pumping in the area, it may be possible to have them pumped at a constant rate for the entire length of the pump test. Measurements can then be corrected for the effect caused by others pumping. If other pumping cannot be controlled, the test should only be run when the other pumping does not affect the bore being tested.
- 11.2 A new bore should not be pump tested until it has been completely developed. Development is generally regarded as complete when water pumped from the bore is relatively sand free. Often bores are tested before development is complete, which will make the results of a pump test worthless. During the development phase of bore construction measurements can be made at nearby bores. These may indicate which ones are affected and could be used as observation bores during the pump test.

~~11.3 It is most important to have information about water levels for some days before and after ('background measurements') the pump test. This data will allow corrections to be made to measurements recorded during the pump test. The time and date that the measurement is made should also be recorded.~~

~~12.0 REPORTING OF RESULTS~~

~~12.1 Results shall be reported to the Regional Water Board at least in tabular and graphical format. Tables shall include the time and date of all measurements. Results in computer readable format may be acceptable. Graphs shall be labelled showing what each axis represents.~~

~~12.2 Analysis of results shall be according to standard aquifer pump test analysis methods. The analysis methods shall be noted in the report.~~

~~12.3 The report shall include the name of the analyst, a site description, location plan, pumping conditions together with details of the equipment used for the test.~~

~~13.0 CONDUCT OF THE PUMP TEST~~

~~13.1 The Board shall be given at least 24 hours notice of the start of the test. An officer of the Board may view the arrangements for a pump test.~~

~~13.2 Results from pump tests which have not met any or some of these specifications may not be accepted by the Board.~~

SECTION TWO: ~~Water Quality Sampling and Analysis Specifications~~

1.0 ~~SCOPE~~

- 1.1 ~~This specification outlines the minimum standards for the collection of samples of underground waters for chemical and bacteriological analysis. The minimum standards required for these analyses are also covered in this specification.~~
- 1.2 ~~Water samples are analysed to aid in aquifer identification and to determine the degree of pollution of underground water. Samples taken some time apart can indicate whether water quality is improving or not.~~

2.0 ~~WATER QUALITY SAMPLING~~

- 2.1 ~~Sampling shall be carried out in accordance with procedures laid down by the laboratory conducting the water quality analyses.~~
- 2.2 ~~In general the bore should have water discharged to waste equivalent to at least one casing volume before a sample is taken. Up to 20 times the volume of water able to be stored in the bore should be discharged before the sample is taken, although this may not always be practicable. The casing volume is the volume contained in the bore between the water surface and the bottom of the lowest screen.~~
- 2.3 ~~In the table following this specification a guide is provided to show the volume of water stored in casings of particular diameters and lengths.~~

3.0 ~~WATER QUALITY ANALYSIS~~

- 3.1 ~~Water quality analyses shall be carried out by a TELARC approved laboratory using standard methods.~~
- 3.2 ~~As a condition of a water right application for a take from a new bore two samples must be analysed. The first sample shall be taken just after the start of a pump test being performed to the Board's specification. The second shall be taken just before the completion of the same pumping test.~~
- 3.3 ~~The following parameters shall be reported for water samples from bores requiring a water right:~~
- ~~Bacteriological analyses:~~
- ~~→ Total and Faecal coliforms~~
- ~~Chemical analyses:~~
- ~~→ PH, temperature, conductivity, total dissolved solids, calcium and magnesium hardness, total iron, chlorides, sulphates, nitrates, dissolved oxygen, dissolved carbon dioxide, manganese, alkalinity, ammonia, dissolved reactive phosphorous.~~
- 3.4 ~~Any analysis shall show who collected the sample at the bore head and who conducted the chemical and bacteriological analysis.~~

Bore Depth	25	50	75	100	125	150	175	200	225	250	275	300	325	350
5	2	10	22	39	61	88	120	157	199	245	297	353	415	481
10	5	20	44	79	123	177	241	314	398	491	594	707	830	962
15	7	29	66	118	184	265	361	471	596	736	891	1060	1244	1443
20	10	39	88	157	245	353	481	628	795	982	1188	1414	1659	1924
25	12	49	110	196	307	442	601	785	994	1227	1485	1767	2074	2405
30	15	59	133	236	368	530	722	942	1193	1473	1782	2121	2489	2886
35	17	69	155	275	430	619	842	1100	1392	1718	2079	2474	2904	3367
40	20	79	177	314	491	707	962	1257	1590	1963	2376	2827	3318	3848
45	22	88	199	353	552	795	1082	1414	1789	2209	2673	3181	3733	4330
50	25	98	221	393	614	884	1203	1571	1988	2454	2970	3534	4148	4811
55	27	108	243	432	675	972	1323	1728	2187	2700	3267	3888	4563	5292
60	29	118	265	471	736	1060	1443	1885	2386	2945	3564	4241	4977	5773
65	32	128	287	511	798	1149	1563	2042	2584	3191	3861	4595	5392	6254
70	34	137	309	550	859	1237	1684	2199	2783	3436	4158	4948	5807	6735
75	37	147	331	589	920	1325	1804	2356	2982	3682	4455	5301	6222	7216
80	39	157	353	628	982	1414	1924	2513	3181	3927	4752	5655	6637	7697
85	42	167	376	668	1043	1502	2044	2670	3380	4172	5049	6008	7051	8178
90	44	177	398	707	1104	1590	2165	2827	3578	4418	5346	6362	7466	8659
95	47	187	420	746	1166	1679	2285	2985	3777	4663	5643	6715	7881	9140
100	49	196	442	785	1227	1767	2405	3142	3976	4909	5940	7069	8296	9621
105	52	206	464	825	1289	1856	2526	3299	4175	5154	6237	7422	8711	10102
110	54	216	486	864	1350	1944	2646	3456	4374	5400	6534	7775	9125	10583
115	56	226	508	903	1411	2032	2766	3613	4572	5645	6831	8129	9540	11064
120	59	236	530	942	1473	2121	2886	3770	4771	5890	7127	8482	9955	11545
125	61	245	552	982	1534	2209	3007	3927	4970	6136	7424	8836	10370	12026
130	64	255	574	1021	1595	2297	3127	4084	5169	6381	7721	9189	10784	12507
135	66	265	596	1060	1657	2386	3247	4241	5368	6627	8018	9543	11199	12989

INSTRUCTIONS FOR USE

The top line shows the diameter of the bore in millimetres. The first column shows the depth of the bore in metres.

Where the intersection of the column showing diameter and the row showing depth meet is the volume of the bore casing in litres.

For water quality sampling the bores should have at least one casing volume removed before a sample is taken. Ideally up to 20 times the volume of the bore should be discharged before the sample is taken, although this may not be practically possible.

PART D:

Water Bore Construction Specifications (March 1989)

BORE CONSTRUCTION SPECIFICATIONS

1.0 SCOPE

- 1.1 This specification outlines the minimum construction and reporting standards for water bores in the East Cape Catchment Board and Regional Water Board district.
- 1.2 It must be noted that there may be additional reporting requirements if the use of the bore requires a water right.

2.0 BORE PERMITS

- 2.1 A bore permit issued by the Regional Water Board shall be required before the drilling of water supply bores may commence. The permit shall be available for inspection by authorised Board staff.

3.0 BORE RECORDS and SAMPLES

- 3.1 A written bore log shall be supplied to the Board on completion of drilling operations. Logs of partially completed holes should also be supplied. The bore log shall record the materials penetrated to the nearest 100 millimetres.
- 3.2 A casing and screen location record shall be supplied with the bore log. This record shall show the dimensions of each casing and screen section and the location of packers, plugs and seals.
- 3.3 Bore logs should be supplied to the Board even when insufficient water is available for the required purposes. This will help the Board build up a record of the geology of different parts of its area.
- 3.4 The results of any other tests on the aquifer formation or the groundwater shall be supplied to the Board. Such testing may include:-
 - ▶ Water quality analyses
 - ▶ Geophysical logging
 - ▶ Particle size analyses
 - ▶ Pumping tests
- 3.5 Samples of the strata encountered may also be supplied to the Board. Samples should be completely and accurately identified with a label. The location of the bore, the depth from which the sample was taken, the thickness of the material that it represents, and its sequence in the bore log shall be noted on the label.
- 3.6 All logs provided shall be signed and dated by the person who performs the logging.
- 3.7 A properly completed New Zealand Water Bore Data Form shall be supplied for the bore.

4.0 BORE CONSTRUCTION PROCEDURES

- 4.1 — ~~All bores shall be constructed in accordance with modern trade practice.~~
- 4.2 — ~~The construction of the bore shall not allow the leakage of water from one water bearing formation to another. In practice this will mean that some form of grouting will be required to prevent water leakage between water bearing layers at different levels.~~
- 4.3 — ~~The construction of the bore shall not allow surface water to enter the bore via the bore lining. In practice this requirement will mean that a concrete pad, which slopes away from the bore liner, shall be installed at the bore head.~~
- 4.4 — ~~Flood waters and ponded surface waters must be prevented from entering the bore liner. A cap which prevents the ingress of water may be fitted to the bore liner. An alternative method is to allow sufficient liner to extend above the highest known or estimated flood level in the location of the bore.~~
- 4.5 — ~~The bore liner at the bore head shall prevent the egress of water if the bore is a flowing artesian bore.~~

5.0 — BORE CASING SELECTION and INSTALLATION PROCEDURE

- 5.1 — ~~Casings shall be selected and installed so as to prevent collapse of the bore during the design life of the bore.~~
- 5.2 — ~~In general steel casing shall be joined by either welding or threaded and coupled joints in accordance with modern trade standards.~~

6.0 — BORE GROUTING

- 6.1 — ~~In artesian conditions suitable grouting shall be performed to prevent water leakage between geological formations. Water leakage between water bearing formations is not acceptable.~~
- 6.2 — ~~When conditions become sub-artesian in some deeper aquifers the possibility exists that water may leak from the higher aquifers into the lower aquifers. Suitable grouting shall be performed to prevent this possibility.~~
- 6.3 — ~~In practice these requirements will mean that grouting must be performed from the confining layer immediately above the water bearing layer which is being tapped up to ground surface.~~

7.0 — BORE SCREEN SELECTION and INSTALLATION PROCEDURE

- 7.1 — ~~An appropriate screen shall be selected and installed.~~
- 7.2 — ~~The selection procedure will take into account the amount of water required, the composition of the formation from which water is being extracted, the likely yield of the formation, and the quality of the water in the formation.~~

8.0 — FILTER PACK SELECTION and EMPLACEMENT PROCEDURE

8.1 ~~If required, an appropriate filter pack shall be selected and placed in position. This procedure will take into account the amount of water required, the composition of the formation from which water is being extracted, the depth of the bore and the method of bore construction.~~

9.0 BORE PLUMBNESS and ALIGNMENT

9.1 ~~During construction the bore must be kept vertical and straight within practical limits. A reasonable standard of vertical deflection is one percent. Often the type of pump to be installed will require different standards of plumbness and alignment.~~

9.2 ~~As an example, in a bore 25 metres deep a one percent vertical deflection will mean that the bottom of the bore will be 250 millimetres off centre compared with the top of the bore.~~

10.0 BORE DEVELOPMENT

10.1 ~~The development of the bore shall remove silts, clays, and residual drilling fluid from the face of the bore and from the aquifer.~~

10.2 ~~The bore shall be developed to provide maximum specific capacity.~~

11.0 PUMP TESTING

11.1 ~~If the bore is to be used for purposes that require a water right to be issued, a pump test shall be carried out that meets the requirements of the Board's pumping test specifications.~~

11.2 ~~Listed in Table One (below) are the recommended time requirements for pump testing. Water level recovery should be measured for the same period of time, once the pumping is complete. Changes may need to be made to these recommended pumping times in individual circumstances.~~

TABLE ONE

Time Requirements for Pump Testing in the East Cape Regional Water Board Area.

Water Use	Bore Depth	
	0 – 20m	>20m
Stock/ Domestic	4 hours	4 hours
Horticultural	72 hours	24 hours
Municipal/ Community/ Industrial	7 days	7 days

12.0 BORE DISINFECTION

~~12.1 The disinfection of a bore for the purposes of maintaining or improving the yield shall be carried out in such a manner as to prevent harmful amounts of chemicals entering the groundwater in the vicinity.~~

~~12.2 The disinfection of a bore after drilling is completed must be carried out to prevent contamination of lower aquifers by bacteria from other sources, e.g. drill rods, soil, drilling fluid.~~

13.0 WATER QUALITY SAMPLING and ANALYSIS

~~13.1 If the bore is to be used for purposes that require a water right to be issued, a water quality test shall be carried out that meets the requirements of the Board's water quality testing specifications.~~

~~13.2 Any water quality sampling and analysis should be carried out in accordance with the Regional Water Boards specifications for sampling of bore waters.~~

14.0 INSPECTION REQUIREMENTS

~~14.1 The Board shall be given 24 hours notice of commencement of the bore construction.~~

~~14.2 A representative of the Board may require to be present to observe that the grouting of the bore is satisfactorily performed.~~

~~14.3 All bores shall allow for access by Regional Water Board staff to measure water levels and obtain water samples.~~

~~14.4 All bores that are sub-artesian shall have a 25 millimetre diameter inspection hole fitted at the bore head, which shall allow unobstructed access for a probe to measure the water level in the bore.~~

~~14.5 14.5 All bores that are continuously flowing artesian shall be capped to prevent wastage of water. The cap shall have an access socket fitted which shall allow the fitting of a pressure gauge or piezometer tube for the measurement of the water pressure.~~

~~14.6 Bores that are flowing artesian for part of the year and sub-artesian at other times shall have fittings installed as set out in sections 14.2 and 14.3 above.~~

15.0 BORE ABANDONMENT

~~15.1 The bore shall be filled and sealed in such a manner as to prevent accidents and to prevent it from acting as a conduit through which water may travel and/or mix with water from other geological formations.~~

~~15.2 In general, the following procedure must be followed where a bore is to be abandoned.~~

~~15.3 Any casing and screen that is not salvaged shall be perforated with a casing ripper. The upper 1.5 metres of casing shall be completely removed from the borehole.~~

~~15.4 The bore shall be sealed by concrete, cement grout, or neat cement and shall be placed from the bottom upwards by a suitable method.~~

~~15.5 The upper 1.5 metres shall be filled with topsoil from the surrounding area.~~

PART E:

~~National policy statement for freshwater management, transitional policies 01 July 2011 and amended policy A4 1 August 2014~~

~~1.0 WATER QUALITY – POLICY A4~~

~~1.1 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.~~

~~1.2 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 health of people and communities as affected by their secondary contact with fresh water; and~~
- ~~b. the extent to which it is feasible and dependable that any more than minor adverse effect on the health of people and communities as affected by their secondary contact with fresh water resulting from the discharge would be avoided.~~

~~1.3 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 freshwater.~~

~~1.4 Paragraph 1 of this policy does not apply to any application for consent first lodged before the National Policy Statement for Freshwater Management took effect on 1 July 2011.~~

~~1.5 Paragraph 2 of this policy does not apply to any application for consent first lodged before the National Policy Statement for Freshwater Management 2014 takes effect.~~

~~2.0 WATER ALLOCATION – POLICY B7~~

~~2.1 When considering any application the Council must have regard to the following matters:~~

- ~~a. the extent to which the change would adversely affect safeguarding the life-supporting capacity of freshwater 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 freshwater and of any associated ecosystem resulting from the change would be avoided.~~

~~2.2 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 freshwater 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 freshwater, 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).~~

~~2.3 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.~~