

# Water Sharing Plan for the Stuarts Point Groundwater Source 2003 (2002 SI 1034)

[2002-1034]



New South Wales

## Status Information

### Currency of version

Historical version for 1 July 2004 to 9 December 2004 (accessed 2 June 2024 at 22:56)

Legislation on this site is usually updated within 3 working days after a change to the legislation.

### Provisions in force

The provisions displayed in this version of the legislation have all commenced.

### Notes—

- **See also**  
[Statute Law \(Miscellaneous Provisions\) Bill \(No 2\) 2004](#)
- **Note**  
In incorporating the amendments made by the *Water Management (Minister's Plans) Order No 2 of 2004*, published in Gazette No 110 of 1.7.2004, p 5072, changes have been made to the numbering of some of the provisions to maintain appropriate numerical or alphabetical order.

### Authorisation

This version of the legislation is compiled and maintained in a database of legislation by the Parliamentary Counsel's Office and published on the NSW legislation website, and is certified as the form of that legislation that is correct under section 45C of the [Interpretation Act 1987](#).

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# Water Sharing Plan for the Stuarts Point Groundwater Source 2003 (2002 SI 1034)



New South Wales

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# Water Sharing Plan for the Stuarts Point Groundwater Source 2003 (2002 SI 1034)



New South Wales

## Part 1 Introduction

### 1 Name of Plan

This Plan is the *Water Sharing Plan for the Stuarts Point Groundwater Source 2003* (hereafter **this Plan**).

### 2 Nature and status of this Plan

- (1) This Plan is made under section 50 of the *Water Management Act 2000* as amended (hereafter **the Act**).
- (2) This Plan covers the core provisions of section 20 of the Act for water sharing, and additional provisions of section 21 of the Act, and other relevant matters.

### 3 Date of Commencement

This Plan takes effect on 1 July 2004, and ceases 10 years after that date.

### 4 Waters to which this Plan applies

- (1) The area in respect of which this Plan is made is that area of land within the Mid North Coast Water Management Area known as the Stuarts Point Groundwater Source (hereafter **this groundwater source**) as shown in Schedule 2.

#### Note—

The Mid North Coast Water Management Area is shown on the map in Appendix 1.

- (2) The water in this groundwater source includes all water contained in the Pleistocene age sand formations below the land surface, but does not include the basement rock.

### 5 Interpretation

- (1) Terms that are defined in the Act have the same meaning in this Plan and the effect of these terms may be explained in Notes.
- (2) Additional terms to those identified in subclause (1) are defined in Schedule 1.

(3) Notes in the text of this Plan do not form part of this Plan.

(4) Schedules to this Plan form part of this Plan.

(5) Appendices to this Plan do not form part of this Plan.

## **6 Inspection of detail maps**

Maps referred to in this Plan may be inspected at the locations listed in Appendix 2.

## **7 Effect on licences, authorities and permits under the [Water Act 1912](#)**

(1) This Plan applies from the date of commencement to those matters that are administered under the Act at that time.

(2) This Plan applies to other matters from the date the relevant provisions of the Act are commenced.

### **Note—**

To the extent possible, the rules embodied in this Plan will apply to matters administered under the [Water Act 1912](#) in the interim.

## **8 State Water Management Outcomes Plan**

(1) This Plan is consistent with the State Water Management Outcomes Plan (hereafter **SWMOP**) in accordance with section 16 (1) (a) of the Act.

(2) Schedule 3 identifies the SWMOP targets applicable to this Plan and how this Plan contributes to those targets.

### **Note—**

The SWMOP applying at the commencement of this Plan is that gazetted on 20 December 2002 under section 6 of the Act.

# **Part 2 Vision, objectives, strategies and performance indicators**

## **9 Vision, objectives, strategies and performance indicators**

This Part is made in accordance with section 35 (1) of the Act.

## **10 Vision**

The vision for this Plan is to address the water needs of the whole Stuarts Point/Fishermans Bend/Grassy Head community, and to ensure the environment receives the necessary water quality and quantity to maintain, or re-establish where necessary, healthy functioning ecosystems.

## **11 Objectives**

The objectives of this Plan are to:

- (a) ensure no long-term lowering of groundwater levels to maintain the highest possible quality through the management of groundwater extraction,
- (b) provide secure, potable water supplies for the village of Stuarts Point and surrounding districts, by managing extractions,
- (c) preserve forest, wetland, woodland and heath ecosystems that occur on the sand plain around Stuarts Point, by ensuring groundwater extractions do not cause water levels in the area to fall below the natural tolerance levels of these vegetation communities,
- (d) preserve estuarine ecosystems that require groundwater inputs, such as sea grasses and salt marshes, by ensuring groundwater extractions do not cause a significant reduction in the amount of groundwater being discharged to the estuary,
- (e) ensure salt water from the Macleay Arm and estuary, which adjoins this groundwater source does not contaminate the fresh groundwater, by limiting extractions,
- (f) ensure extractions are managed so that groundwater is available to contribute to the inundation of potential acid sulphate soils,
- (g) maintain basic rights for property owners in the village of Stuarts Point and surrounding areas, without compromising the health of this groundwater source,
- (h) recognise and protect Aboriginal heritage sites and values in water access licensing decisions,
- (i) provide opportunities for local irrigation industries, including Aboriginal developments, to access water from the Stuarts Point Groundwater Source,
- (j) manage extractions in order to maintain the beneficial use categories of the Stuarts Point Groundwater Source, and
- (k) ensure that water in this groundwater source is maintained at the highest possible quality by limiting extractions around contamination sources.

## **12 Strategies**

The strategies of this Plan are to:

- (a) establish environmental water rules and manage access to groundwater consistent with those rules,
- (b) establish rules for the protection of basic landholder rights,
- (c) establish an extraction limit for this groundwater source, taking into account the requirements of the environment,
- (d) establish rules for granting of access licences,



- (e) establish rules for determining the groundwater available from time to time under access licences,
- (f) establish water allocation account management rules,
- (g) establish rules for minimising any local impacts of groundwater extraction on the environment, groundwater quality, and between users,
- (h) establish the access licence dealing rules, and
- (i) establish the conditions that will apply to all access licences and water supply work (bore) approvals.

### **13 Performance indicators**

For the purpose of section 35 (1) (b) of the Act, the following indicators are to be used to determine the performance of this Plan against its objectives:

- (a) change in groundwater extraction relative to the extraction limit,
- (b) change in climate adjusted groundwater levels,
- (c) change in water levels adjacent to identified high priority groundwater dependent ecosystems,
- (d) change in groundwater quality,
- (e) change in economic benefits derived from groundwater extraction and use,
- (f) extent to which domestic and stock rights requirements have been met,
- (g) extent to which local water utility requirements have been met,
- (h) extent to which native title rights requirements have been met, and
- (i) extent of recognition of spiritual, social and customary values of groundwater to Aboriginal people.

#### **Note—**

Appendix 3 details the objectives to which these performance indicators relate and the proposed methods for assessing these indicators.

## **Part 3 Basis for water sharing**

### **14 Basis for water sharing**

This Part is made in order to give effect to section 5 (3) of the Act, and in accordance with sections 20 (2) (c) and 21 (e) of the Act.

## **15 Climatic variability**

- (1) This Plan recognises climatic variability and therefore that the level of natural recharge to this groundwater source will vary.
- (2) To give effect to subclause (1), this Plan has provisions that manage:
  - (a) the sharing of water in this groundwater source within the limits of water availability on a long-term average basis, and
  - (b) water extraction to enable the protection of groundwater dependent ecosystems and the water quality of this groundwater source.

## **16 Recharge**

For the purposes of section 5 (3) of the Act, the overall basis for water sharing in this Plan is the average annual recharge to this groundwater source, estimated to be 7,032 megalitres per year (hereafter ML/yr).

## **Part 4 Environmental water provisions**

### **17 Environmental water provisions**

This Part is made in accordance with sections 5 (3) and 8 (1), 8 (2) and 20 (1) (a) of the Act.

### **18 Planned environmental water**

#### **Note—**

It is anticipated that the planned environmental water provisions in this Part and management of local impact provisions in Part 10 of this Plan will also protect Aboriginal heritage sites and values of this groundwater source (see clause 11 (h)).

This Plan establishes the following planned environmental water rules:

- (a) the long-term average storage component of this groundwater source minus the basic landholder rights extraction, is reserved for the environment, and
- (b) 45% of the average annual recharge established in clause 16 will be reserved for the environment.

### **19 Planned environmental water**

At the commencement of this Plan, there is no water committed for specified environmental purposes in accordance with section 8 (1) (b) of the Act.

### **20 Adaptive environmental water**

- (1) At any time an access licence holder may, by a process determined by the Minister, commit all or part of their licence as adaptive environmental water.

- (2) The conditions of the commitment specified in subclause (1):
  - (a) are to be established by the Minister,
  - (b) are to be specified on the access licence, and
  - (c) shall be such as to ensure that there is a contribution to the objectives of this Plan.
- (3) At the commencement of this Plan there are no access licences committed to an environmental purpose in accordance with section 8 (1) (c) of the Act.

## **Part 5 Basic landholder rights**

### **21 Basic landholder rights**

- (1) This Part is made in accordance with sections 5 (3) and 20 (1) (b) of the Act.
- (2) If a landholder is unable to exercise their basic landholder rights due to interference of their supply by extraction authorised by access licences:
  - (a) the landholder's affected water supply work (bore) may be replaced or deepened to ensure continuing access to water for basic landholder rights, or
  - (b) basic rights water may be supplied by alternative means during critical times.
- (3) The Minister may impose a charge on access licence holders in this groundwater source under section 114 of the Act, as a contribution to the costs of activities or works associated with subclause (2).

#### **Note—**

The Minister may issue an Order under section 328 of the Act to restrict the exercise of basic landholder rights from this groundwater source to protect the environment, for reasons of public health, or to preserve existing basic landholder rights.

### **22 Domestic and stock rights**

#### **Note—**

It is not recommended that the water from this groundwater source be consumed without prior treatment. Land use activities may have polluted the groundwater in some areas.

- (1) At the commencement of this Plan the water requirements of holders of domestic and stock rights are estimated to be a total of 75 ML/yr.
- (2) This Plan recognises that the exercise of domestic and stock rights may increase during the term of this Plan.

#### **Note—**

Increase in use of domestic and stock rights may occur as a result of an increase in the number of landholdings overlying this groundwater source, or as a result of the increase in the exercise of basic landholder rights by existing landholders.

## 23 Native title rights

- (1) At the commencement of this Plan there are no holders of native title rights and therefore the water requirements for native title rights are estimated to be a total of 0 ML/yr.
- (2) This Plan recognises that the exercise of native title rights may increase during the term of this Plan.

### Note—

Increase in native title rights may occur as a result of the granting of native title rights under the Commonwealth's [Native Title Act 1993](#).

## Part 6 Bulk access regime

### 24 Bulk access regime

- (1) This Part is made in accordance with section 20 (1) (d) of the Act.
- (2) This Plan establishes a bulk access regime for the extraction of water under access licences in this groundwater source having regard to:
  - (a) the environmental water provisions established under Part 4 of this Plan,
  - (b) the requirements for basic landholder rights identified under Part 5 of this Plan, and
  - (c) the requirements for water for extraction under access licences identified under Part 7 of this Plan.
- (3) The bulk access regime established in subclause (2):
  - (a) recognises the effect of climatic variability on the availability of water as provided for under Part 3 of this Plan,
  - (b) establishes rules according to which access licences are granted as provided for in Part 8 of this Plan,
  - (c) recognises and is consistent with limits to the availability of water as provided for in Part 9, Division 1 of this Plan,
  - (d) establishes rules according to which available water determinations are to be made as provided for in Part 9 Division 2 of this Plan,
  - (e) establishes rules according to which access licences are managed as provided for in Part 10 of this Plan, and
  - (f) establishes rules with respect to the priorities according to which access licences are to be adjusted as a consequence of any reduction in the availability of water as provided for in Parts 9 and 10 of this Plan.

## **Part 7 Requirements for water for extraction under access licences**

### **25 Estimate of water requirements**

- (1) This Part is made in accordance with section 20 (1) (c) of the Act.
- (2) At the commencement of this Plan, the requirements identified for water for extraction under access licence within this groundwater source is estimated to be 1,601.5 ML/yr.
- (3) Subclause (2) includes local water utility access licences of 300 ML/yr in this groundwater source, being for the Stuarts Point township and surrounding districts.

**Note—**

Subclauses (2) and (3) represent the total volumes specified on access licences in this groundwater source. It is not a commitment to supply that water.

- (4) This Plan recognises that the total requirements for water for extraction under access licences within this groundwater source may change during the term of this Plan as a result of:
  - (a) the granting, surrender or cancellation of access licences,
  - (b) the variation of local water utility access licences under section 66 of the Act, or
  - (c) the volumetric quantification of the share entitlement of existing access licences that are currently non-volumetric.

## **Part 8 Rules for granting access licences**

### **26 Rules for granting access licences**

- (1) This Part is made in accordance with sections 20 (2) (b) and 63 of the Act, having regard to the limits to water availability in this groundwater source and the need to protect groundwater dependent ecosystems and groundwater quality.
- (2) Access licences may be granted in this groundwater source subject to any embargo on the making of applications for access licences made under Chapter 3 Part 2 Division 7 of the Act.
- (3) The Minister should declare an embargo on the making of applications for access licences in this groundwater source, other than access licences of the following kinds:
  - (a) local water utility access licences,

**Note—**

Pursuant to sections 66 (3) and 66 (4) of the Act, the Minister may vary a local water utility's licence at 5 yearly intervals, or on application of the local water utility where there is a rapid growth in population.

- (b) aquifer (Aboriginal cultural) access licences,
  - (c) aquifer (Aboriginal commercial) access licences,
  - (d) licence applications lodged as a result of a Ministerial approved access licence amnesty completed before 1 July 2003, or
  - (e) a specific purpose access licences for which applications are provided for under the regulations in accordance with section 61 (1) (a) of the Act.
- (4) Subclauses (3) (b), (3) (c) and (3) (d) should no longer apply when the total share components of access licences in this groundwater source exceeds the extraction limit established at clause 28.
- (5) In applying for a new access licence, the applicant must establish the purpose and circumstances relating to that access licence, and that the share and extraction component sought will be the minimum required to meet that purpose and circumstance.
- (6) Subclause (5) does not apply to a new access licence arising from:
- (a) section 61 (1) (c), of the Act, where the right has been acquired by auction, tender or other open market process, or
  - (b) an access licence dealing.
- (7) Access licences granted under this Part cannot be extracted through a water supply work (bore) located in areas where the extraction authorised by the licence, plus the full extraction authorised by existing access licences through water supply works (bores) located in the area, and the exercise of basic landholder rights, are likely to cause an adverse local impact as outlined in Part 10 Division 2 of this Plan.
- (8) If an access licence share component applied for is significant as determined by the Minister on the basis of the particular aquifer characteristics, the application will not be granted until a water supply work (bore) approval has been granted and the work constructed.
- (9) Once the water supply work (bore) is constructed and the results of a pumping test or its equivalent are supplied by the applicant, in the required form and to the specification of the Minister, the access licence may be granted.
- (10) The share component of the access licence granted under subclause (9) will be the proportion of the share component sought that the water supply work (bore) is capable of extracting without adverse local impact as outlined in Part 10 Division 2 of this Plan.
- (11) (Repealed)

## **27 Aboriginal assessment of new access licences**

- (1) The Minister will seek the views of the Kempsey Local Aboriginal Land Council in relation to the impact on significant Aboriginal sites of new access licence applications and appropriate mitigation measures.
- (2) In the event of an application for an aquifer (Aboriginal commercial) access licence, the Minister will seek the views of the Aboriginal Reference Group as to the benefit derived from the proposed application. Where an Aboriginal Reference Group has yet to be established, the advice of the Kempsey Local Aboriginal Land Council will be sought.

## **Part 9 Limits to the availability of water**

### **Division 1 Long-term average extraction limit**

#### **28 Long-term average extraction limit**

- (1) This Division is made in accordance with sections 20 (2) (a) of the Act.
- (2) The long-term average extraction limit for this groundwater source is the recharge established in clause 16, minus the proportion of recharge reserved as planned environmental water in clause 18, and is 3,868 ML/yr.

### **Division 2 Available water determinations**

#### **29 Available water determinations**

- (1) This Division is made in accordance with section 20 (2) (b) of the Act.
- (2) In making an available water determination under section 59 of the Act, the Minister should consider the following rules:
  - (a) water extraction in this groundwater source will be monitored each water accounting year to determine if any growth in volumes extracted is occurring above the extraction limit in clause 28, based on comparison of the extraction limit against the average extraction within the groundwater source over that year and the preceding 2 years.

**Note—**

A water accounting year is defined in clause 34 (3).

- (b) if water that, pursuant to an access licence, is committed as adaptive environmental water to be left in the aquifer for environmental purposes, then for the purpose of subclause (a), the extraction will be assumed to be 100% of the available water determination,
- (c) if water that, pursuant to an access licence, is committed as adaptive

environmental water to be extracted for environmental purposes, then for the purpose of subclause (a), the extraction will be that measured through the approved water supply work (bore),

- (d) if the 3 year average of extraction in this groundwater source exceeds the long-term average extraction limit established in clause 28 by 5% or greater, the available water determination for the following water accounting year for aquifer access licences in the groundwater source should be reduced by an amount that is assessed necessary by the Minister to return subsequent total water extraction to the long-term average extraction limit,
- (e) if the 3 year average of extraction in this groundwater source is less than 95% of the long-term average extraction limit established in clause 28, then the available water determination for aquifer access licences in the groundwater source shall be increased to such an extent as to allow extraction to increase to the extraction limit,
- (f) notwithstanding subclause (e), the available water determination for aquifer access licences should not exceed 100% of the aquifer access licence share components,
- (g) the available water determination calculated in accordance with this clause will apply to all access licences excepting local water utility and domestic and stock access licences and will be the same percentage for all access licences to which it applies, and
- (h) a separate available water determination will be made for local water utility and domestic and stock access licences, and subject to section 60 of the Act, this shall be 100% of the access licence share component.

## **Part 10 Rules for managing access licences**

### **Division 1**

#### **30 Rules for managing access licences**

This Part is made in accordance with sections 20 (2) (b), 21 (a) and 21 (c) of the Act, having regard to:

- (a) the environmental water rules established in Part 4 of this Plan,
- (b) requirements for water to satisfy basic landholder rights identified in Part 5 of this Plan, and
- (c) requirements for water for extraction under access licences in Part 7 of this Plan.



## **Division 2 Water allocation account management**

### **31 Water allocation account management**

This Division is made in accordance with sections 20 (2) (b) and 21 (c) of the Act.

### **32 Water allocation accounts**

In accordance with section 85 of the Act, a water allocation account shall be established for each access licence in this water source.

**Note—**

Water allocations may be assigned to, or from, these accounts by a water allocation assignment made under section 71T of the Act, where these are allowed under rules specified in Part 11 of this Plan.

### **33 Accrual of water allocations**

Water allocations will be accrued into water allocation accounts each year in accordance with the Minister's available water determinations as specified in clause 29 of this Plan.

### **34 Annual accounting for water extraction**

- (1) Water taken from this groundwater source will be accounted for at least annually.
- (2) Water extracted by a water supply work (bore) nominated by an access licence is taken to be extracted and will be periodically debited against the access licence water allocation account.
- (3) A water accounting year shall be the 12 month period commencing 1 July.
- (4) In any one water accounting year, subject to local impact management restrictions arising from Part 10, Division 2 of this Plan, water taken from this groundwater source under an aquifer access licence may not exceed a volume consisting of:
  - (a) 100% of the access licence share component,
  - (b) plus any water allocations assigned from another licence under section 71T of the Act in that year,
  - (c) plus any water allocations re-credited in accordance with section 76 of the Act in that year, and
  - (d) minus any water allocations assigned to another licence under section 71T of the Act in that year.
- (5) Water allocations cannot be carried over in a water allocation account from one water accounting year to the next.
- (6) A water allocation account shall remain at or above zero at all times.

## **Division 3 Management of local impact**

### **35 Management of local impact**

This Division is made in accordance with sections 21 (a) of the Act.

### **36 Extraction interference between neighbouring bores**

To minimise interference between authorised extraction the following rules will apply to new access licences in this groundwater source:

- (a) extraction pursuant to an access licence authorised to extract more than 20 ML/yr will not be permitted from a water supply work (bore) within 400 metres of a water supply work (bore) authorised to extract more than 20 ML/yr under another access licence,
- (b) notwithstanding the provisions of subclause (a), the Minister may, upon application by an access licence holder, vary the distance restrictions specified in subclause (a) if satisfied that the cumulative impact on local groundwater levels will be minimal, and
- (c) subclause (a) does not apply to extraction under access licences existing at 1 January 2003.

**Note—**

The intention of this clause is to minimise the impact of extraction under new access licences on extraction under existing access licences.

### **37 Water level management**

- (1) The Minister may declare that, in order to protect water levels within this groundwater source, local access rules are to apply in a defined area known as a local impact area.
- (2) If water levels in any part of this groundwater source have declined to such an extent that adverse impact is occurring, or is likely to occur, extraction from all water supply works (bores) nominated by an access licence within a local impact area declared under subclause (1) will be restricted to such an extent and for such time as is required to reinstate water levels to such a degree as to mitigate or avoid that impact.

**Note—**

This provision recognises that in some locations, at certain periods of high groundwater demand, critical water level declines may occur, and that additional extraction limitations may be required. The Department of Land and Water Conservation will identify monitoring bores, specify the target levels (in consultation with stakeholders), and determine the method for specifying an affected area.

### **38 Water quality management**

- (1) The beneficial uses of this groundwater source are:
  - (a) raw water for drinking, and

(b) ecosystem protection,

based on the Australian and New Zealand Environment and Conservation Council *Water Quality Guidelines 2001*, and the National Health and Medical Research Council *Raw Water for Drinking Purposes Guidelines 1996*.

- (2) Pursuant to subclause (1), water quality decline will be deemed unacceptable if extraction is likely to cause water quality to decline to a lower beneficial use class.

**Note—**

It is not recommended that the groundwater from this water source be consumed without prior treatment. Land use activities may have polluted the groundwater in some areas.

- (3) The Minister may declare that, in order to protect water quality within this groundwater source, local access rules are to apply in a defined area known as a local impact area.
- (4) If water quality declines are resulting from extraction, extraction from all water supply works (bores) within a local impact area declared under subclause (3) nominated by an access licence will be restricted to such an extent and for such time as required to halt that decline, or restore the beneficial use of this groundwater source.
- (5) Construction of a new water supply work (bore) will not be permitted:
- (a) within 100 metres of a contamination source, unless the proponent can demonstrate to the Minister's satisfaction that a lesser distance will result in no more than minimal harm to this groundwater source, and that extraction will not impact on the environment or cause a threat to public health as advised by the Minister for Health, or
  - (b) within a greater distance than in subclause (a) nominated by the Minister in order to ensure that no more than minimal harm will occur to this groundwater source, and that extraction will not impact on the environment or cause a threat to public health as advised by the Minister for Health.
- (6) An existing water supply work (bore) within 100 metres of a contamination source will be able to continue extraction of groundwater at levels equivalent to 2003 access licence share components, subject to any restrictions arising from subclause (4).
- (7) Extraction of groundwater from a new water supply work (bore) nominated by an access licence, between 100 and 200 metres of a contamination source, will require:
- (a) an application to the Minister by the licence holder providing evidence that no drawdown of the watertable within 100 metres of the contamination source will occur,
  - (b) the Minister to assess the application as adequate, and

(c) the Minister to approve the application.

(8) Schedule 4 lists contamination sources in this groundwater source.

(9) Subclauses (5), (6) and (7) may be applied by the Minister in relation to contamination sources not on Schedule 4, based on the results of a site inspection or other relevant information provided to the Minister.

(10) Pursuant to section 45 (1) (b) of the Act, the Minister may vary Schedule 4 by inclusion or deletion of a contamination source based on the results of a site inspection or other relevant information provided to the Minister on that contamination source.

**Note—**

Schedule 4 is only to be used in relation to the granting of access licences and water supply work (bore) approvals under the [Water Management Act 2000](#).

### **39 Protection of groundwater dependent ecosystems**

(1) Extraction of groundwater from a new water supply work (bore), and any increase in extraction authorised from an existing water supply work (bore), is excluded within:

(a) 40 metres of high priority groundwater dependent ecosystems depicted in Schedule 2 and listed in Schedule 5, for those exercising basic landholder rights, or

(b) 100 metres of high priority groundwater dependent ecosystems shown in Schedule 2 and listed in Schedule 5, for all other access licences.

(2) Construction of a new water supply work (bore) nominated by an access licence within 100 to 200 metres of any high priority groundwater dependent ecosystems as shown in Schedule 2 and listed in Schedule 5 must:

(a) not drawdown groundwater levels, greater than natural fluctuations, at the high priority groundwater dependent ecosystem, and

(b) not drawdown groundwater levels, greater than 1.5 metres at a distance of 100 metres from the high priority groundwater dependent ecosystem.

(3) This clause does not apply to a water supply work (bore) that is constructed for monitoring purposes, or other water supply works (bores) that are replaced as a part of routine maintenance.

### **40 Extraction restrictions**

The Minister may, in the event of local impact restrictions arising from this Part, impose, by Order, a reduction in annual, quarterly, monthly or weekly extraction rates from water supply works (bores) in the affected area.

#### **41 Group registration**

This Plan allows for the formation of a group of access licences with respect to the sharing of local impact restrictions arising from this Division, subject to the following rules:

- (a) the group register will be maintained by the Minister,
- (b) holders of access licences must make a request to the Minister to form a group,
- (c) total extraction by all access licences within a group will be assessed as a whole against their combined restricted extraction and must not exceed that amount,
- (d) no access licence holder within the group may extract more than is permitted by Division 1 of this Part, in any one water accounting year as a result of participation in a group,
- (e) an access licence holder may apply to be removed by the Minister from the group and the extraction by the group will be reduced by the extraction restriction of that licence holder,
- (f) an access licence holder may apply to be added by the Minister to the group and the combined restricted extraction of the group will be increased by the extraction restriction of that licence holder, and
- (g) the Minister reserves the right to remove a licence holder from a group where that individual causes the group extraction limit to be exceeded, or to dissolve a group where its members exceed their combined extraction restriction.

#### **42 Infrastructure failure**

- (1) The operational rules relating to local impact management may rely on water levels at specified monitoring bores.
- (2) In the event of a monitoring bore failure the Minister may:
  - (a) continue with the current access rules until the monitoring bore is reinstated,
  - (b) adjust the current access rules based on climatic conditions and any other monitoring bore information, until the monitoring bore is reinstated, or
  - (c) rely on another monitoring bore in the area to provide information.

### **Part 11 Access licence dealing rules**

#### **43 Access licence dealing rules**

- (1) This Part is made in accordance with section 20 (1) (e) of the Act and with the Minister's access licence dealing principles gazetted on 27 December 2002 under section 71Z of the Act.

- (2) Applications for access licence dealings may be granted subject to the Minister's access licence dealing principles gazetted from time to time under section 71Z of the Act and the rules in this Part.

**Note—**

There are a number of mechanisms within the Act, called access licence dealings, to change either the ownership of all or part of an access licence, or the location within a water source at which all or part of the share and extraction components of access licences can be exercised. These dealings are governed by the principles in section 5 of the Act, Minister's access licence dealing principles, and the rules in this Part.

**Note—**

Where there is an inconsistency between access licence dealing rules established in this Plan and Minister's access licence dealing principles gazetted subsequent to the commencement of this Plan, section 71Z of the Act provides for the access licence dealing rules in this Plan to prevail.

#### **44 Rules relating to constraints within a groundwater source**

- (1) This clause applies to any relevant dealings under sections 71D, 71F, and 71J of the Act, and section 71T of the Act with respect to water allocation assignments within this groundwater source.
- (2) Dealings are prohibited under this clause if:
  - (a) any of the access licences or water allocations involved are not within this groundwater source, or
  - (b) the dealing would result in the total extraction under access licences through nominated works in the area, plus basic landholder rights extraction, causing adverse local impact in accordance with Part 10 Division 2 of this Plan.

#### **45 Rules for change of water source**

- (1) This clause relates to dealings under section 71R of the Act.
- (2) Dealings under section 71R of the Act that change the water source to which an access licence applies are prohibited in this groundwater source.

#### **46 Rules for conversion of access licence category**

- (1) This clause relates to dealings under section 71O of the Act.
- (2) Dealings that result in conversion of an access licence of one category to an access licence of another category are prohibited in this groundwater source.

#### **47 Rules for interstate access licence transfer**

- (1) This clause relates to dealings under section 71U of the Act.
- (2) Dealings that result in an interstate access licence transfer into or out of this groundwater source are prohibited.

#### **48 Rules for water allocation assignments between water sources**

- (1) This clause relates to dealings under section 71T of the Act, in relation to water allocation assignments between water sources.
- (2) Dealings that assign water allocations between access licences in other water sources and access licences in this groundwater source are prohibited.

#### **49 Rules for interstate assignment of water allocations**

- (1) This clause relates to dealings under section 71V of the Act.
- (2) Dealings that result in an interstate assignment of water allocations to or from this groundwater source are prohibited.

### **Part 12 Mandatory conditions**

#### **50 Mandatory condition on access licences**

This Part is made in accordance with sections 17 (c) and 20 (2) (c) of the Act.

#### **51 Access licences**

- (1) All access licences shall have mandatory conditions to give effect to the provisions of this Plan in relation to the following:
  - (a) the specification of share components of the licences,
  - (b) the specification of extraction components of the licences,
  - (c) the requirement that all extraction under access licences will be subject to the available water determinations,
  - (d) the requirement that all extraction under access licences will be subject to any local impact management restrictions established in this Plan,
  - (e) the requirement that all extraction under access licences will be subject to the account management rules established in this Plan,
  - (f) the taking of water in accordance with the access licence will only be permitted if the resulting debit from the access licence water allocation account does not exceed the volume of water allocation remaining in the account, and
  - (g) any other conditions required to implement the provisions of this Plan.
- (2) All local water utility access licences shall have mandatory conditions that only allow the taking of water for the exercise of a water supply function of the local water utility or for other such purpose provided for under the Act.
- (3) All aquifer (Aboriginal cultural) access licences shall have mandatory conditions that

only allow the taking of water by Aboriginal persons or communities for personal, domestic and communal purposes including the purposes of drinking, food preparation, washing, manufacturing traditional artefacts, watering domestic gardens, cultural teaching, hunting, fishing, and gathering, and for recreational, cultural and ceremonial purposes.

## **52 Mandatory conditions on water supply work (bore) approvals**

All approvals for a water supply work (bore) to which this Plan applies shall have mandatory conditions in relation to the following:

- (a) the water supply work (bore) is only to be constructed by a driller licensed under section 349 of the Act,
- (b) the water supply work (bore) must comply with drilling standards as specified by the Minister,
- (c) construction of a water supply work (bore) must prevent contamination between aquifers through proper bore construction,
- (d) a water supply work (bore) approval holder must ensure decommissioning procedures comply with applicable standards as specified by the Minister,
- (e) new or replacement water supply work (bore) to access water for basic rights will be required, as a condition of approval, to be constructed to sufficient depth to maintain access to the water source for the life of the work,
- (f) the water supply work (bore) approval holder is, within 2 months of completion, or after the issue of the approval if the water supply work (bore) is existing, to provide the Minister with:
  - (i) details of the work on the prescribed form,
  - (ii) a plan showing accurately the location of the work in relation to portion and property boundaries, and
  - (iii) details of any water analysis and/or pumping tests required by the Minister,
- (g) if during the construction of the water supply work (bore), saline or contaminated water is encountered above the producing aquifer, such water is to be sealed off by:
  - (i) inserting the appropriate length(s) of casing to a depth sufficient to exclude the saline or contaminated water from the work, and
  - (ii) placing an impermeable seal between the casing(s) and the walls of the bore hole from the bottom of the casing to ground level, as specified by the Minister,
- (h) if a water supply work (bore) is abandoned, the water supply work (bore) approval holder is to:



- (i) notify the Minister that the work has been abandoned, and
- (ii) seal off the aquifer by backfilling the work to ground level after withdrawing the casing (lining), as aspecified by the Minister,
- (i) an extraction measurement device shall be installed and maintained on each water supply work (bore) used for extraction of water under an access licence, and such devices shall be of a type and shall be maintained in a manner which is acceptable to the Minister,
- (j) a water supply work (bore) must comply with the relevant local impact management rules in Part 10 of this Plan,
- (k) notwithstanding the available water determination, it is the responsibility of the water supply work (bore) approval holder to ascertain from the Minister whether or not there are in place any local impact restrictions before commencing to take water from this groundwater source,
- (l) extraction under an access licence through the approved water supply work (bore) is only authorised with respect to the access licences specified on the water supply work (bore) approval,
- (m) a water supply work (bore) approval holder must supply to the Minister on request, and to the required standards, a report pertaining to the quality of the water obtained from the water supply work (bore), and
- (n) any other conditions required to implement the provisions of this Plan.

**Note—**

It is recommended that the Minister also apply conditions to water use approvals requiring the supply of information on an annual basis on types and areas of irrigated crops.

## **Part 13 Monitoring and reporting**

### **53 Monitoring**

The monitoring of the performance indicators specified in clause 13 shall be undertaken by the Minister.

**Note—**

Review and Audit of this Plan

In accordance with section 43A of the Act, the Natural Resources Commission must undertake a review of this Plan prior to any decision to extend its term or to make a new plan. The review must consider the extent to which the Plan's water sharing provisions have contributed to achieving or not achieving the relevant natural resource management standards and targets in the catchment management area (as referred to in section 5 of the [Catchment Management Authorities Act 2003](#)).

When undertaking this review the Natural Resources Commission is required to call for public submissions. The Commission will take into consideration any submission received as well as any other relevant State-wide or

regional government policies or agreements that apply to the catchment management area.

In accordance with section 44 of the Act, this Plan will be audited at intervals of no more than five years, for the purpose of ascertaining whether its provisions are being given effect to. This audit is to be carried out by an audit panel appointed by the Minister in consultation with the water management committee, where one exists.

**Note—**

Implementation Program

In accordance with section 51 of the Act, the Minister may establish an Implementation Program that sets out the means by which the provisions of this Plan are to be achieved.

It is proposed that the Minister establish an Implementation Program for this Plan. Pursuant to section 51 (5) of the Act, the Implementation Program is to be reviewed annually by the Minister to determine whether it is effective in implementing this Plan.

The results of the review of the Implementation Program are included in the annual report for the Department.

## Part 14 Amendment of this Plan

### 54 Amendment of this Plan

- (1) This Part is made in accordance with section 45 (1) (b) of the Act.
- (2) This Plan can be amended in accordance with clause 38 in respect to contamination sources.

## Dictionary

The following definitions apply to this Plan in addition to the definitions set out in the Act:

**abandoned** refers to a water supply work (bore) that is no longer being used.

**available water** in relation to a water management area or water source, is the water that is available in that area or water source in accordance with an available water determination that is in force in respect of that area or water source.

**available water determination** is a written Order by the Minister as to the availability of water for the various categories of access licence in relation to a specified water management area or water source.

**Note—**

An available water determination gives rise to a water allocation that is credited to a water allocation account for each licensed holder.

**basement rock** is a general term for solid rock that lies beneath soil, loose sediments, or other unconsolidated material.

**component** see [share component](#).

**contamination sources**, relates to human activities that have resulted in the presence of a substance in the groundwater source at a concentration above that at which the substance is normally present, and at a level that presents a risk of harm to human health or reduces the beneficial use of a

groundwater source.

**Note—**

Contamination sources can arise from a range of industrial and other land based activities. The impact of some activities will be temporary, while others pose a risk over a much longer timeframe. In some instances, particularly when the land use has involved hazardous substances, the source may be threatening to humans, or may affect the current or future beneficial uses of the groundwater source. Determining in any particular case whether or not contamination presents a significant risk of harm can be complex and difficult. It involves considerations such as the type, nature, quantity and concentration of contaminants, how they manifest themselves and the nature of their impact in the particular groundwater source. It also involves broader questions such as the current use of the groundwater source, who might be exposed to the contamination under that use, and whether they would be exposed.

**drawdown** refers to a lowering of the piezometric surface. Natural drawdown may occur due to seasonal climatic changes. Groundwater pumping may also result in seasonal and long-term drawdown.

**extraction limit** is the amount, on average, of the long-term average annual recharge and storage that can be extracted each water accounting year.

**groundwater** is water that occurs beneath the ground surface in the saturated zone.

**groundwater dependent ecosystems** are ecosystems which have their species composition and natural ecological processes to some extent determined by groundwater.

**monitoring bore** refers to a bore constructed for the purpose of measuring water levels and/or taking samples for water quality analysis.

**piezometric surface** is a surface that represents the level to which water will rise in cased bores.

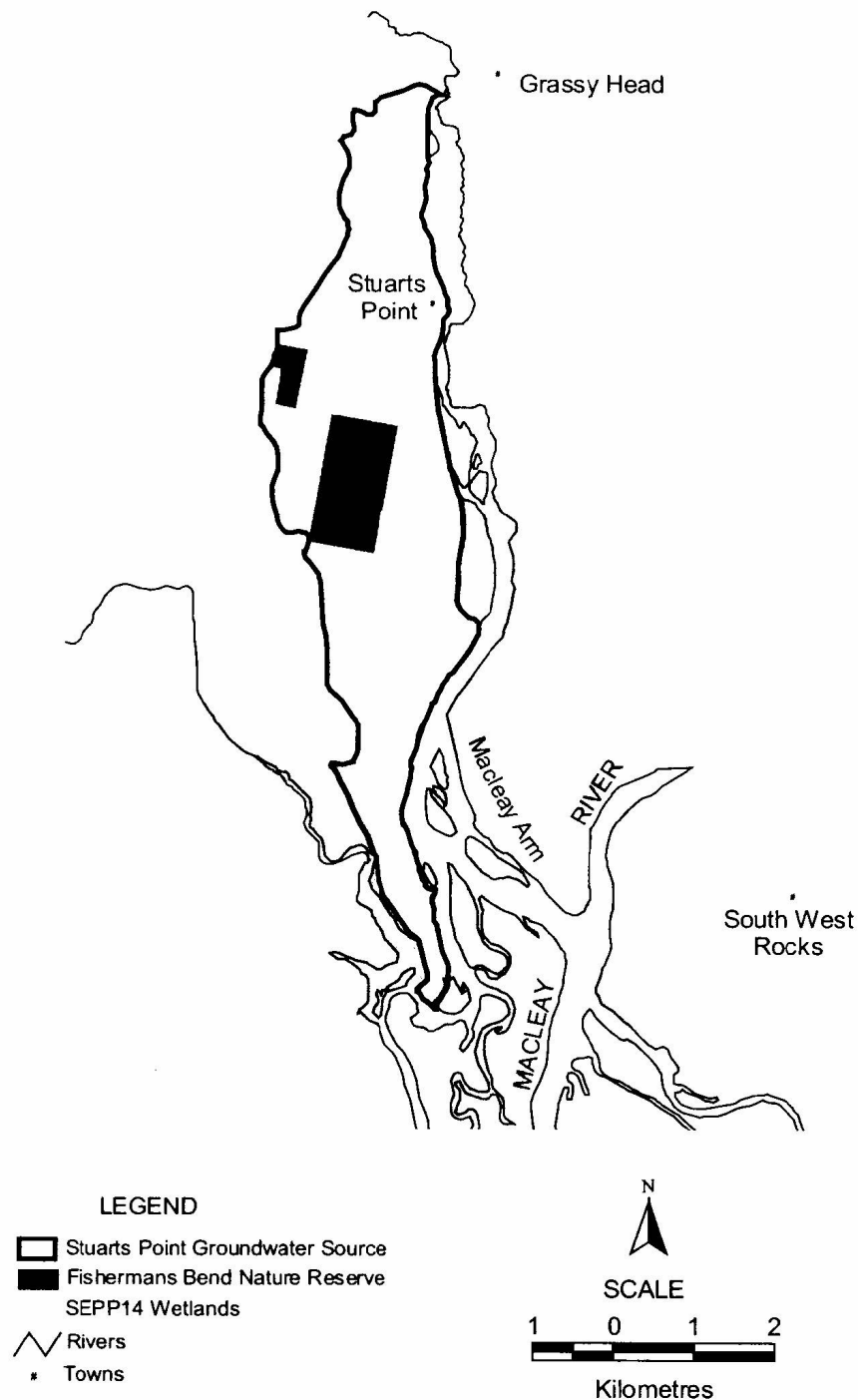
**Pleistocene age sand formations** are siliceous sand dunes likely to be formed by wave action and aeolian reworking on a rapidly prograding shore with a large sand supply, periodically cut during storms, and subsequently forming parallel ridges up to 40 metres depth.

**recharge** is the addition of water, usually by infiltration, to an aquifer.

**share component** is the share component of an access licence.

**watertable** is the upper surface of an unconfined aquifer.

## Schedule 2 Stuarts Point Groundwater Source



## Schedule 3 Contribution to targets in the State Water Management Outcomes Plan

Levels of assessed contribution:

FULL—contributes to target in full

HIGH—while not fully contributing to target is a good level of contribution

PARTIAL—goes some way to the target

LOW—only small degree of contribution

Relevant target	Level of contribution	Comments
<p><b>Target 1e</b> The long term average annual extractions for groundwater limited (or being phased down) to an ecologically sustainable level (the Sustainable Yield) as determined by detailed assessment of each groundwater source and consultation with the relevant management committee. In the absence of such an assessment, the following to apply: 100 percent of average annual recharge for a groundwater source where there is no significant ecosystem dependency; 70 percent of average annual recharge where there is significant ecosystem dependency</p>	FULL	<ul style="list-style-type: none"> <li>This Plan clearly sets out the Sustainable Yield, or extraction limit, as 55% of estimated recharge</li> </ul>
<p><b>Target 1f</b> Rules for adjustments to future available water determinations in the event that the extraction limits are exceeded, clearly prescribed in consultation with the relevant management committee, and acted upon</p>	FULL	<ul style="list-style-type: none"> <li>Rules set out in Part 9 of this Plan</li> <li>This Plan sets out the planned environmental water as 45% of estimated recharge</li> </ul>
<p><b>Target 2</b> All water management plans incorporating mechanisms to protect and restore aquatic habitats, and the diversity and abundance of native animals and plants, with particular reference to threatened species, populations and communities and key threatening processes</p>	HIGH	<ul style="list-style-type: none"> <li>Part 10 of this Plan sets out the extraction rules to limit local environmental impact of extraction with 100 metre buffer around contaminated sources</li> <li>Part 10 of this Plan identifies high priority groundwater dependent ecosystems (GDEs) and prohibits any increase in <a href="#">Water Sharing Plan for the Stuarts Point Groundwater Source 2003</a> Page 29 extraction within 100 metres</li> <li>Part 10 of this Plan sets out local management rules to address water quality including avoiding saline intrusion damaging GDEs</li> </ul>

<p><b>Target 5</b> Access rights for water access licensees clearly and legally specified in terms of share and extraction components</p>	<p>HIGH</p>	<ul style="list-style-type: none"> <li>• This Plan establishes a transparent extraction limit and allocation rules</li> <li>• This Plan establishes a licence embargo with limited exemptions</li> <li>• The nature of local extraction rules (Part 10 of this Plan) means that future access rights will not be exclusive but affected by the location and cumulative demand of other works and licences with existing bores will have priority over licences requiring new bores</li> </ul>
<p><b>Target 6a</b> The total volume of water specified on access licences reduced over the term of a water sharing plan to no more than 125% of the Sustainable Yield</p>	<p>FULL</p>	<ul style="list-style-type: none"> <li>• The total licensed entitlement for the aquifer is less than 125% of Sustainable Yield</li> <li>• This Plan provides general market opportunity</li> </ul>
<p><b>Target 7</b> Mechanisms in place to enable Aboriginal communities to gain an increased share of the benefits of the water economy</p>	<p>HIGH</p>	<ul style="list-style-type: none"> <li>• This Plan allows for applications for new access licences for cultural and Aboriginal commercial use</li> <li>• The Government has also established other mechanisms outside of the water sharing plans to comply with this target</li> </ul>
<p><b>Target 10</b> Degree of connectivity between aquifers and rivers assessed, and zones of high connectivity mapped to enable baseflows to the river to be maintained or improved</p>	<p>PARTIAL</p>	<ul style="list-style-type: none"> <li>• In clause 11, objective (d) relates to discharge to the estuary and this Plan assumes that by limiting extraction to 55% of recharge, discharge to the estuary will be maintained</li> <li>• Types of groundwater dependent ecosystems have been mapped, but ecological water requirements are not known</li> </ul>
<p><b>Target 11</b> Groundwater dependent ecosystems identified and mapped for all priority aquifers, and the ecological water requirements assessed to enable local groundwater extraction rates and/or Sustainable Yields to be reviewed</p>	<p>HIGH</p>	<ul style="list-style-type: none"> <li>• This Plan sets out extraction rules to limit local environmental impact of extraction on ecosystems</li> <li>• Part 10 of this Plan identifies high priority groundwater dependent ecosystems with rules to protect them</li> </ul>
<p><b>Target 12</b> Measures in place in all water sources subject to a gazetted water sharing plan to protect domestic and stock rights from the impact of other water access and use</p>	<p>HIGH</p>	<ul style="list-style-type: none"> <li>• This Plan identifies volumes necessary to meet domestic and stock requirements</li> <li>• This Plan limits extraction to 55% of recharge which should protect access for basic rights</li> <li>• Local management rules reduce the risk of contamination of water supplies</li> </ul>

**Target 13** The knowledge sharing, training and resources necessary to ensure that Aboriginal people have the capacity to be effectively involved in water management identified and addressed

PARTIAL

- Aboriginal community representatives have been involved in the development of this Plan
- Other capacity building/workshopping has been undertaken with the local Aboriginal communities
- This Plan provides for the Local Aboriginal Land Council to provide advice on any impact of new licences
- This Plan does not address specific Aboriginal cultural or traditional requirements but has identified dependent ecosystems of particular importance

**Target 14** Water sources, ecosystems and sites of cultural or traditional importance to Aboriginal people identified, plans of management prepared, and measures put in place to protect and improve them

HIGH

- The Aboriginal community representatives did not nominate any Aboriginal cultural issues that relate to groundwater management
- The aquifer lies adjacent to Clybucca historic site but management of the aquifer should have no impact
- Part 10 of this plan does provide extraction limits and local management rules that should assist in protecting Local Aboriginal Aboriginal values
- This Plan provides for the Local Aboriginal Land Council to provide advice on any impact of new licences

**Target 16a** All share components of access licences tradeable

FULL

- Part 11 of this Plan provides for trading of access licences

**Target 16d** Reduced conversion factors only applied when necessary to offset increased losses associated with water supply delivery

FULL

- This Plan does not impose any reduction factors

**Target 16e** Any unassigned access rights identified and clear mechanisms established for their future assignment

FULL

- The rules for granting of new licences are set out in Part 8 of this Plan and these rules nominate priority of applications

**Target 16f** Zones established where necessary for environmental protection and limits/constraints on water dealings in them made explicit

PARTIAL

- This Plan does not establish zones as this is not considered necessary for this aquifer
- This Plan does, however, establish access licence dealing rules that limit the movement of licences or allocations into areas where there may be local impact

**Target 35** All management plans incorporating water quality objectives that have considered Government approved Interim Environmental Objectives, the current Australian and New Zealand Environment and Conservation Council Guidelines and the recommendations of relevant Healthy Rivers Commission Inquiries

HIGH

- This Plan includes a general water quality objective and water quality related objectives for saline intrusion [clause 11 (e)], acid sulphate soils [clause 11 (f)] and contamination [clause 11 (k)]
- This Plan recognises the beneficial use as raw water for drinking purposes and ecosystem protection

**Target 38** Aquifer water quality vulnerability zones mapped and extraction limits reviewed to reduce the risk of lateral intrusion of poor quality water

PARTIAL

- No vulnerability mapping of this water source is referenced
- This Plan sets rules for managing the movement of water from contamination sources

## Schedule 4 Contamination sources

Contamination sources in the Stuarts Point Groundwater Source are:

- the old (now converted to a “Water Transfer Station”) Stuarts Point rubbish tip, and
- all septic tanks within this water source.

### Note—

The contamination sources listed in this Schedule may change during the period of this Plan. The District Office of the Department of Land and Water Conservation, shown in Appendix 2, should be contacted for a current list.

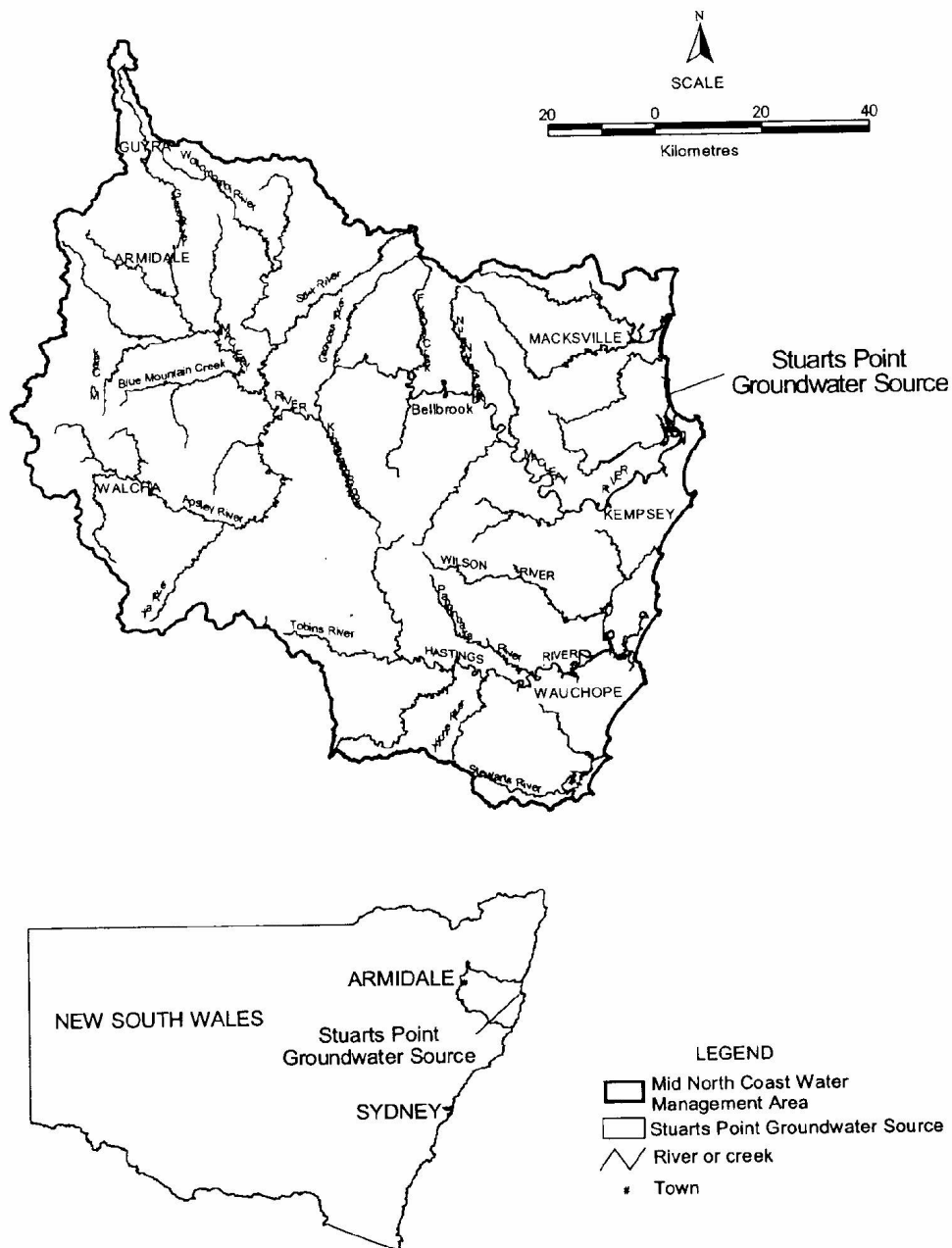
## Schedule 5 High priority groundwater dependent ecosystems

High priority groundwater dependent ecosystems in the Stuarts Point Groundwater Source are:

- Fisherman’s Bend Nature Reserve, and
- SEPP 14 coastal wetlands.



## Appendix 1 Mid North Coast Water Management Area



## Appendix 2 Location of maps

The maps in relation to this Plan may be inspected at:

Regional Office  
Department of Land and Water Conservation  
40 Victoria Street  
GRAFTON NSW 2460

District Office  
Department of Land and Water Conservation  
Elbow Street  
WEST KEMPSEY NSW 2440

## Appendix 3 Performance indicators

### Performance indicators for the Stuarts Point Groundwater Source Water Sharing Plan

Performance indicator	Related objective	As measured by	Commentary
(a) Change in groundwater extraction relative to the extraction limit.	All	<ul style="list-style-type: none"> <li>Average annual extraction volume for the groundwater source as a percentage of the extraction limit (commonly known as the Sustainable Yield).</li> </ul>	<ul style="list-style-type: none"> <li>Plan provisions will set the mechanism to remain within the Sustainable Yield over the long-term.</li> </ul>
(b) Change in climate adjusted groundwater levels.	11 (a) 11 (c) 11 (f)	<ul style="list-style-type: none"> <li>Average annual frequency and duration (in days) of water level drawdown below pre-plan baseline.</li> <li>Density of extraction in critical areas.</li> </ul>	<ul style="list-style-type: none"> <li>Note that water levels will fluctuate with climate and resultant variable recharge. Some level declines will be expected during dry times, just as level rises are expected during wetter periods.</li> </ul>
(c) Change in water levels adjacent to identified high priority groundwater dependent ecosystems.	11 (c)	<ul style="list-style-type: none"> <li>Identification of groundwater high priority dependent ecosystems (GDEs).</li> <li>Assessment of the adequacy of buffer zones or local impact restrictions by comparison of water levels in or near high priority GDEs compared to plan baseline.</li> </ul>	<ul style="list-style-type: none"> <li>High priority groundwater dependent ecosystems are identified in Schedule 5 of this Plan.</li> </ul>
(d) Change in groundwater quality.	11 (a) 11 (b) 11 (e) 11 (i) 11 (j) 11 (k)	<ul style="list-style-type: none"> <li>Trends in selected water quality parameters at selected monitoring bores that are likely to be affected by groundwater extraction.</li> </ul>	<ul style="list-style-type: none"> <li>Note that many water quality issues are a function of contamination by land based activities, rather than extraction.</li> </ul>

(e) Change in economic benefits derived from groundwater extraction and use.	11 (b) 11 (g) 11 (i)	<ul style="list-style-type: none"> <li>• Change in regional gross margins.</li> <li>• Change in unit price of water transferred.</li> </ul>	<ul style="list-style-type: none"> <li>• Note that there are many factors affecting economic status of a region, for example commodity prices, other sources of water (ie surface water) etc.</li> <li>• Assessment undertaken as part of plan performance monitoring will make assumptions to attempt to identify the impact of the plan's provisions.</li> </ul>
(f) Extent to which domestic and stock rights requirements have been met.	11 (g)	<ul style="list-style-type: none"> <li>• Monitor increase in applications for water supply work (bore) approvals.</li> <li>• Number of reports of interference between high yield extraction and domestic and stock bores, or number of domestic and stock bores deepened.</li> <li>• Assess frequency and duration of water level drawdown below critical thresholds.</li> </ul>	<ul style="list-style-type: none"> <li>• Domestic and stock usage figures in water sharing plans are estimated (not actual use).</li> <li>• Increases in licences may be due to past unlicensed works.</li> </ul>
(g) Extent to which local utility requirements have been met.	11 (b) 11 (j)	<ul style="list-style-type: none"> <li>• Monitor increase in access by local water utilities.</li> <li>• Monitor impact of interference between high yield extraction and local water utility extraction.</li> <li>• Monitor increase in applications for water supply work (bore) approval applications for native title basic rights.</li> </ul>	
(h) Extent to which native title rights requirements have been met.	11 (g) 11 (i) 11 (j)	<ul style="list-style-type: none"> <li>• Number of reports of interference between high yield extraction and native title rights holders, or number of bores deepened.</li> <li>• Assess frequency and duration of water level drawdown below critical thresholds.</li> </ul>	

(i) Extent of recognition of spiritual, social and customary values of groundwater to Aboriginal people.	11 (h)	<ul style="list-style-type: none"><li>• Assessment of amount and type of information collected to identify the range of values of water to Aboriginal people.</li><li>• Number of referrals to Kempsey Local Aboriginal Land Council.</li></ul>	<ul style="list-style-type: none"><li>• The collection of information on the values associated with water is considered the first step in addressing the objects of the Act.</li><li>• It would be expected that at the end of five years there should be relevant information collected for each water source, as a minimum requirement.</li></ul>
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**Appendix 4 (Repealed)**