

Williams River



**WILLIAMS RIVER CATCHMENT REGIONAL ENVIRONMENTAL PLAN
AND REGIONAL PLANNING STRATEGY**

Department of Urban Affairs and Planning

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Foreword

Craig Knowles

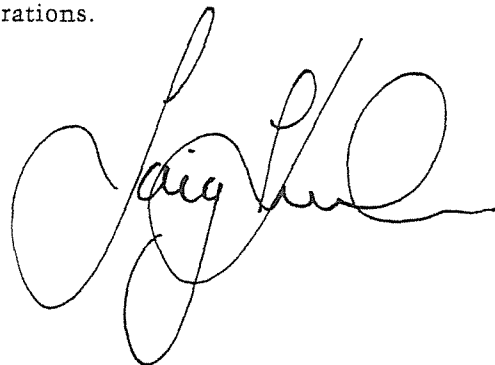
Minister for Urban Affairs and Planning
and Minister for Housing

The Williams River plays a vital role in the life of the Lower Hunter. As well as providing the drinking water for most of the population of the Lower Hunter, the catchment provides valuable recreation and tourism opportunities, supports an active farming community, and is home to a diverse ecosystem. All of these demands on the river need to be well understood and managed in an integrated way if the river is to be protected, its natural ecosystems sustained, and its value as a community resource retained.

This plan and strategy form part of a package which offers an innovative approach to environmental management that integrates traditional planning with catchment management initiatives, and promotes use of best practice for land management. This approach helps to implement the Government's Water Reform Package begun in 1995 aimed at ensuring the health and sustainability of NSW rivers.

Complementing this package is the Inquiry into the Williams River Catchment conducted by the Healthy Rivers Commissioner in 1996. The inquiry recognised and extended the work commenced here. The two initiatives together provide a comprehensive and consistent approach to more sustainable and integrated management of this important river catchment.

I commend the Williams River Catchment Regional Environmental Plan and Regional Planning Strategy as a comprehensive approach to managing the Williams River catchment in a sustainable way for present and future generations.



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Introduction

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This regional environmental plan and regional planning strategy are part of a package (see figure 1) which aims to protect water quality within the Williams River catchment, and to achieve sustainable land use over the long term.

The strategy should be read in conjunction with the plan which gives legal support to the strategy by ensuring its principles and guidelines are followed when plans are made and development applications considered.

Primarily, the plan works by altering the provisions of the local environmental plans to ensure that areas near the river banks are given extra protection; by ensuring that further intense development of Clarence Town and Seaham occurs only if there is reticulated sewerage available; and by providing a consistent set of provisions to guide further development of intensive agriculture within the catchment.

To assist landowners and decision makers in the implementation of these provisions, a comprehensive set of Best Practice Notes will be prepared and maintained under the guidance of the Hunter Catchment Management Trust. These notes will provide advice on good land management practices for the benefit of all who live, work and recreate within the catchment.



FIGURE 1. WILLIAMS RIVER CATCHMENT PACKAGE

Regional Environmental Study	<ul style="list-style-type: none">• Describes the catchment• Identifies the issues that affect water quality• Recommends actions needed to resolve these concerns
Regional Environmental Plan	<ul style="list-style-type: none">• Ensures future development is considered in terms of its effect on water quality• Gives special consideration to protecting the areas near the banks of rivers and streams• Gives legal support to the regional planning strategy, so that its total catchment management principles are incorporated into the planning process• Guides councils in local planning and development approval under the <i>Environmental Planning and Assessment Act 1979</i>
Regional Planning Strategy	<ul style="list-style-type: none">• Coordinates and guides the actions of government, councils, community groups and individuals to promote sustainable land management• Advises councils on strategic land use planning and development approval• Provides guidance for public authorities undertaking or approving activities, under Part 5 of the <i>Environmental Planning and Assessment Act 1979</i>
Best Practice Notes	<ul style="list-style-type: none">• Consist of a set of guidelines based on total catchment management principles and whole-farm planning• Pass on expert advice to benefit landowners and the catchment community• Increase understanding of the catchment and its natural processes• Offer practical advice on how to best carry out an activity to minimise negative effects• Promote individual responsibility and grass roots action• Are designed so that, over time, notes can be added and regularly updated

Part A. The Plan

Summary

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The natural resources of the catchment have the potential to be adversely affected by the activities of its many users. This regional environmental plan (REP), prepared under the *Environmental Planning and Assessment Act 1979*, can influence decisions on land use and environmental management, for example, when a council prepares a local environmental plan (LEP) or development control plan; when it considers a development proposal; or when a public authority plans an activity likely to affect the environment.

AIMS OF THE PLAN

The aims of the REP are to:

- protect and improve water quality in the Williams River
- promote sustainable use of land, water, vegetation and other natural resources
- coordinate decisions — by linking the REP to a regional planning strategy incorporating total catchment management (TCM) principles.

LAND TO WHICH THE PLAN APPLIES

The plan is to apply to the local government areas of Dungog and Port Stephens. The Williams River drainage catchment is an elongated area stretching from the Barrington Tops to Raymond Terrace, and includes the towns of Dungog, Clarence Town and Seaham.

HOW THE PLAN WILL WORK

The REP will amend the planning controls of Dungog Local Environmental Plan 1990 and Port Stephens Local Environmental Plan 1987 for land within the Williams River catchment.

It is intended that each council consider the potential for development that is proposed to significantly harm the water quality of the river, based on the guidelines in the *Williams River Catchment Regional Planning Strategy* and the best practice principles it contains for land management.⁽¹⁾

(1) *Williams River Catchment Regional Planning Strategy*, 1996, Department of Urban Affairs and Planning, Sydney.



If a development could result in increased stormwater run-off, erosion or sedimentation, or other significant pollution of the catchment's waterways, the council may require an application to be accompanied by an environmental management plan before it can consider granting consent.

Rural Development Controls

A new definition of '*intensive agricultural pursuit*' is introduced into Dungog and Port Stephens LEPs to ensure that a consistent approach is taken to this type of development within the catchment. This will mean consent from the council is needed for new horticultural activity or to establish a feedlot or milking shed. These uses are, therefore, distinguished from '*general agriculture*' and need to be assessed on their merits in relation to land management and water quality impacts.

The REP focuses on that part of the riverine corridor which is within 30 metres either side of the river or streams (both permanent and intermittent flows) shown as blue lines on the 1:25 000 topographic map sheets published by the Department of Land and Water Conservation. This is because this land acts as a 'buffer' between activities on the land and the water. If riverside vegetation is disturbed, it can accelerate the transfer of sediment and pollutants to the streams. Sustaining water quality depends highly on managing this riparian land.

With the exception of the following new provisions, the plan does not place any new obligations on landowners within the catchment, with regard to existing everyday farming activities which currently do not require approval from council, such as applying fertiliser, fencing, stabilising stream banks, or water extraction. Consent from council will be needed, however, for any development within 30 metres of the river, including subdivision, constructing or enlarging a building, clearing mature trees, building dams, or water-engineering works. (These provisions do not apply to fencing, revegetation or river management works as defined by this plan.)

An activity may be established if, after having been assessed against the principles and guidelines in the regional planning strategy, it is considered appropriate; that is, there are no significant problems of soil disturbance or erosion, habitat loss, or decline in water quality.

Apart from an amendment to State Environment Planning Policy No. 36 — Manufactured Home Estates, to prohibit the development of these estates within the area of the catchment above Seaham Weir, all other developments, including rural residential and any agricultural or forestry use, can be considered and approved in accordance with the existing LEPs — if they do not harm water quality.

Guidelines for establishing new rural residential settlements are contained in the *Williams River Catchment Regional Planning Strategy*. Council will need to prepare rural settlement strategies for closer rural settlement agreed to by the Department of Urban Affairs and Planning before further lands will be rezoned within the catchment for rural residential development.

Urban Development Controls

The *Williams River Catchment Regional Environmental Study* showed that phosphorus and bacterial pollution enter the river from inadequate on-site disposal of effluent, contributing to blue-green algae blooms and reduced water quality.⁽²⁾ The draft REP therefore proposes that in the residential zones of Dungog, Clarence Town and Seaham further residential subdivision and development be limited to areas that have reticulated water and sewerage services (presently only in Dungog); and that new dwellings on existing, unsewered lots be permitted only where proposals can demonstrate that there is a sufficient area of suitable soil to satisfactorily dispose of septic effluent on site.

This provision of the REP will replace prescribed minimum allotment sizes in the Dungog and Port Stephens LEPs. It is also proposed that unless reticulated water and sewerage services are available for Clarence Town and Seaham villages two or more dwellings on a single allotment will not be permitted. Reticulated water and sewerage means water and sewerage services which are part of a system provided or operated (or both) by the responsible water or sewerage authority for the particular area (being Dungog Shire Council or Hunter Water Corporation Limited).

These measures will serve to reduce water quality impacts from inadequately sewered urban areas.

(2) *Williams River Catchment Regional Environmental Study*, Department of Urban Affairs and Planning, Sydney, 1996.

Notes

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This section provides a clause-by-clause explanation of the Williams River Catchment Regional Environment Plan.

Clause 1

Gives the name of the plan.

Clause 2

Explains the purpose of the plan. The REP aims to bring about improvements to the environmental quality of the catchment.

Clause 3

Explains that the REP applies to the whole of the Williams River catchment, as shown on the REP map, and explains where copies of the map are kept.

Clause 4

Explains what changes the REP makes to existing planning provisions:

- subclause (1) amends State Planning Policy No. 4 to ensure that certain activities which are potentially polluting activities within 30 metres of the river and its tributaries are not exempted by that policy from a need to obtain development consent
- subclause (2) amends State Planning Policy No. 36 so that transportable dwellings and manufactured homes estates are not permissible in the catchment upstream of the Seaham Weir under the policy
- subclause (3) amends the Dungog Local Environmental Plan 1990 — the details of the changes are contained in Schedule 1
- subclause (4) amends the Port Stephens Local Environmental Plan 1987 — the details of the changes are contained in Schedule 2.

Clause 5

Explains who should use the REP and when. The aims and objectives outlined in clause 2 and the guidelines in the *Williams River Catchment*



Regional Planning Strategy must be taken into account when an LEP or development control plan is prepared and when a council or other 'consent authority' makes a decision on a development application. When a government agency decides on an activity which does not require development consent, the aims and objectives of the REP and the Regional Planning Strategy should be considered.

Schedule 1

This schedule details the changes to the main Dungog planning instrument resulting from the REP.

- Subclause (1) provides that existing definitions relating to intensive agricultural land uses cease to apply to the Williams River catchment portion of Dungog Shire.
- Subclause (2) provides new definitions, including for some agricultural land uses, so that intensive types of farming which might affect water quality of the river require consent in the rural zones.
- Subclause (3) enables the council to ask a person who wishes to develop land for a purpose requiring its approval to provide an environmental management plan. The council may refuse applications which it believes will have a significant adverse effect on the river's water quality. It also requires applications to be assessed against the REP's aims and objectives, and the regional planning strategy.
- Subclause (4) requires consent to be obtained for intensive agricultural pursuits (such as market gardening or viticulture) in rural residential or rural farmlet zones.
- Subclause (5) requires consent to be obtained for intensive agricultural pursuits in the rural environmental protection (flood liable land) zone.
- Subclause (6) requires any application for subdivision to create a dwelling site in any rural zone within the catchment to demonstrate to the council that the allotment has the adequate type of soil and physical arrangement to allow satisfactory on-site septic effluent disposal. Alternatively, an applicant must demonstrate to the council that adequate water and sewerage services will be available to the proposed allotment.
- Subclause (7) relates to land within 30 metres of the Williams River or any of its tributaries. Consent is required for proposals to erect or enlarge a building, destroy mature-sized trees unless they are dangerous or dying, construct dams, drainage works, levee banks or water storage areas, undertake subdivision or any other development or land use change. Such proposals, when located near a stream, have the potential to increase soil erosion, reduce stabilising vegetation or habitat, or in other ways impair water quality. (These provisions do not apply to fencing, revegetation or river management works—this may include tree removal or other work carried out in accordance with a permit issued by the Department of Land and Water Conservation—as defined by this plan.)
- Subclause (8) makes it clear that subclause 32(2) of the Dungog LEP 1990, which allows subdivision of land zoned Residential 2(a) without reticulated sewerage, does not apply to land within the Williams River Catchment.
- Subclause (9) inserts a new subclause for land within the Williams River Catchment which will allow subdivision of land zoned residential 2(a) only where reticulated sewerage is available.
- Subclause (10) makes it clear that the provisions of subclause 33(2) of the Dungog LEP 1990, which would exempt a new dwelling on an existing allotment from the need to comply with minimum lot size and reticulated sewerage requirements, does not apply to land within the Williams River Catchment.
- Subclause (11) preserves the ability for the council to approve dwellings in the residential 2(a) zone on allotments which are already in existence at the time the Williams River catchment REP comes into effect, but only if adequate on-site effluent disposal is provided.
- Subclause (12) similarly preserves the



council's ability to approve a dwelling on lots which were in existence when the Dungog LEP 1990 came into effect on 6 April 1990 subject to adequate on-site disposal being provided (that is, this clause ensures that the provisions of subclause (11) also apply to lots created prior to 6 April 1990).

- Subclause (13) prevents the approval of multiple dwellings (such as residential flat buildings and dual occupancy buildings) on a single residential 2(a) allotment in Clarence Town, unless adequate reticulated water and sewerage services will be available.

Schedule 2

This schedule details the changes to the main Port Stephens planning instrument (LEP) resulting from the REP.

- Subclause (1) provides that existing definitions relating to intensive agricultural land uses cease to apply to the Williams River catchment portion of Port Stephens Shire.
- Subclause (2) provides new definitions, including for some agricultural land uses, so that intensive types of farming which might affect water quality of the river require consent in the rural zones.
- Subclause (3) enables the council to ask a person who wishes to develop land for a purpose which requires its approval to provide an environmental management plan. The council may refuse applications which it believes will have a significant adverse effect on the river's water quality. It also requires applications to be assessed against the REP's aims and objectives, and the regional planning strategy.
- Subclause (4) requires consent to be obtained for subdivision of land in the Williams River catchment in order to construct a dwelling, only if council is satisfied that the allotment has the adequate type of soil and physical arrangement to allow satisfactory on-site septic effluent disposal. Alternatively, the applicant must satisfy council that adequate reticulated water and sewerage services will be available to the allotments.
- Subclause (5) relates to land within 30 metres of the Williams River or any of its tributaries. Consent is required for proposals to erect or enlarge a building; destroy mature-sized trees unless they are dangerous or dying; construct dams, drainage works, levee banks or water storage areas; and undertake subdivision or any other development or land use change. These proposals near streams have the potential to increase soil erosion, reduce stabilising vegetation or habitat, or in other ways impair water quality. (These provisions do not apply to fencing, revegetation or river management works—this may include tree removal or other work carried out in accordance with a permit issued by the Department of Land and Water Conservation—as defined by this plan.)
- Subclause (6) requires any subdivision for residential purposes within the Residential Village 'E' zone of Seaham to have reticulated water and sewerage services, and prevents the council from consenting to multiple dwellings, including residential flat buildings and dual occupancy buildings, on a single allotment in Seaham, unless it is satisfied reticulated water and sewerage services will be available.

The Instrument

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Williams River Catchment Regional Environmental Plan 1997

under the

Environmental Planning and
Assessment Act 1979

I, the Minister for Urban Affairs and Planning,
make the following regional environmental plan
under the *Environmental Planning and
Assessment Act 1979*. (N93/460)

Minister for Urban Affairs and Planning

Sydney,

1997



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Williams River Catchment Regional Environmental Plan 1997

1 Name of plan

This plan is *Williams River Catchment Regional Environmental Plan 1997*.

2 Explanatory notes

The table of contents and notes in this plan are explanatory notes and do not form part of this plan.

3 Aims and objectives

- (1) The aims of this plan are to protect and improve the environmental quality of the Williams River catchment through the management and use of the catchment's resources in an ecologically sustainable manner.
- (2) The objectives of this plan are:
 - (a) to promote sustainable use of land, water, vegetation and other natural resources within the Williams River catchment, and
 - (b) to promote the protection and improvement of the environmental quality of the catchment, and
 - (c) to establish a co-ordinated and consistent approach to the planning and management of the natural and built environment on a catchment-wide basis by linking the environmental planning system and total catchment management policies, programs and activities within the Williams River catchment through an endorsed catchment-wide regional planning strategy, and
 - (d) to provide for changes to occur in the use of land in a manner which protects the quality of the catchment's water resources.



4 Land to which this plan applies

This plan applies to land declared by the Minister to be a region under section 4 (6) of the *Environmental Planning and Assessment Act 1979*, being land that comprises the Williams River catchment within the local government areas of Port Stephens and Dungog, as shown on the map marked "*Williams River Catchment Regional Environmental Plan 1997*" (kept in the Newcastle office of the Department of Urban Affairs and Planning, and copies of which are kept in the offices of Dungog Shire Council and Port Stephens Council).

Note. This plan applies only to the parts of the Dungog and Port Stephens local government areas which are within the Williams River catchment as shown on a deposited map.

5 Relationship to other environmental planning instruments

(1) **Amendment of SEPP 4**

This plan amends *State Environmental Planning Policy No 4—Development Without Consent* by inserting after clause 4 (6) the following subclause:

- (7) Clause 10 does not apply to land to which *Williams River Catchment Regional Environmental Plan 1997* applies so as to allow a person to carry out, without development consent, works on or a use of land within 30 metres of the Williams River for the purposes of chemical, fuel or fertiliser storage, milking sheds, stables, chicken sheds, pig sties or the keeping of any other animal or organic materials.

(2) **Amendment of SEPP 36**

This plan amends *State Environmental Planning Policy No 36—Manufactured Home Estates* by inserting after item 9 of Schedule 2 (Categories of Excluded Land) the following item:

- 10 Land comprising the Williams River catchment upstream of the Seaham Weir.

In this item, *Williams River catchment* means the land shown on the map marked "*Williams River Catchment Regional Environmental Plan 1997*" (kept in the Newcastle office of the Department of Urban Affairs and



Planning, and copies of which are kept in the offices of Dungog Shire Council and Port Stephens Council) being the land from which surface water run-off resulting from rainfall flows directly or indirectly into the Williams River.

- (3) **Amendment of Dungog LEP 1990**
This plan amends *Dungog Local Environmental Plan 1990* as set out in Schedule 1.
- (4) **Amendment of Port Stephens LEP 1987**
This plan amends *Port Stephens Local Environmental Plan 1987* as set out in Schedule 2.

6 Guidelines for public authorities

- (1) The aims and objectives of this plan (as set out in clause 3) and the *Williams River Catchment Regional Planning Strategy* must be taken into account when:
- (a) a consent authority determines a development application for land in the Williams River catchment, or
- (b) a public authority proposes to carry out development which does not require development consent but has the potential to adversely affect the environmental quality of land, water, vegetation or other natural resources within the Williams River catchment.
- (2) Those aims and objectives, and that Strategy, should be take into account in the preparation of each environmental planning instrument and development control plan that applies to land in the Williams River catchment.
- (3) In this clause:

Williams River Catchment Regional Planning Strategy means the Regional Planning Strategy of the Department of Urban Affairs and Planning for the Williams River catchment (kept in the Newcastle office of the Department of Urban Affairs and Planning, and copies of which are kept in the offices of Dungog Shire Council and Port Stephens Council).



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- (4) This clause is not intended to create an offence against the Act.

Note. The *Williams River Catchment Regional Planning Strategy* must be taken into account when clause 6 of this plan applies, in addition to the aims and objectives of this plan. Sections 4.1 and 4.2 of the Strategy provide specific considerations for applicants, councils and other public authorities to guide the assessment and determination of development applications, the preparation of local environmental plans and development control plans, and consideration of the impact of development proposed by public authorities that does not require development consent.

Schedules 1 and 2 apply new definitions for intensive agricultural land uses in the Williams River catchment within both the Dungog and Port Stephens local government areas to ensure a consistent approach to land uses which may have potential to impact adversely on the catchment.



**Schedule 1 Amendment of Dungog Local
Environmental Plan 1990**

(Clause 5 (3))

[1] Clause 5 Definitions

Insert "(except in relation to land in the Williams River catchment)" after the defined terms quoted in the definitions of "**agriculture**", "**intensive agricultural pursuit**" and "**intensive animal husbandry**" in clause 5 (1).

[2] Clause 5 (1)

Insert in alphabetical order:

agriculture (in relation to land in the Williams River catchment) means the cultivation of crops, and the keeping and breeding of livestock, bees or poultry and other birds, for commercial purposes, but does not include an intensive agricultural pursuit.

intensive agricultural pursuit (in relation to land in the Williams River catchment) means the use of land for agricultural purposes which include market gardening, mushroom growing, fruit growing, flower growing, viticulture, milking in a shed designed for that purpose, aquaculture or intensive animal husbandry, but does not include the use of an animal boarding or training establishment or any cultivation or husbandry carried out mainly for the personal enjoyment or consumption of its produce by the owner or occupier of the land.

intensive animal husbandry (in relation to land in the Williams River catchment) means a building or place used for the commercial breeding, boarding or nurturing, by a feeding method other than natural grazing, of cattle, pigs, sheep, goats, poultry or other livestock and includes:

- (a) feed lots containing more than 5 cattle, and
- (b) piggeries containing more than 5 pigs, and
- (c) poultry farming establishments containing more than 20 birds.



reticulated water and sewerage means water and sewerage services which are part of a system provided or operated (or both) by the responsible water or sewerage authority for the particular area (being Dungog Shire Council or Hunter Water Corporation Limited).

Williams River means the Williams River and its tributaries (including any creek, stream or land along which water flows permanently or intermittently and which is so shown in respect of the land to which this plan applies on a 1: 25 000 topographic map issued by the Department of Land and Water Conservation).

Williams River catchment means the land shown on the map marked "*Williams River Catchment Regional Environmental Plan 1997*" (kept in the Newcastle office of the Department of Urban Affairs and Planning, and copies of which are kept in the offices of Dungog Shire Council and Port Stephens Council) being the land from which surface water run-off resulting from rainfall flows directly or indirectly into the Williams River.

[3] Clause 9 Zone objectives and development control table

After clause 9 (7), insert:

- (8) The Council may decline to grant consent for development until after it has considered an environmental management plan, if the proposed development is likely to result in increased stormwater run-off, erosion or sedimentation or other significant pollution within the Williams River catchment.
- (9) Except as otherwise provided by this plan, the Council must not grant consent to the carrying out of development on land within the Williams River catchment unless the Council is of the opinion that the carrying out of the development will not have a significant adverse effect on water quality in the Williams River.



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- (10) The Council, when determining a development application for a site area consisting of land in the Williams River catchment, must consider:
- (a) the aims and objectives of *Williams River Catchment Regional Environmental Plan 1997*, as set out in clause 3 of that plan, and
 - (b) the *Williams River Catchment Regional Planning Strategy*.

- (11) In this clause:

environmental management plan means a plan addressing potential environmental aspects of proposed development (to the extent relevant, in the opinion of the Council, to the particular proposal), including management of potential vegetation, erosion and sedimentation impacts and assessment of land and water capability (adopting a total water cycle management approach to water use and wastewater management).

Note. Refer to section 4.2.1 of the *Williams River Catchment Regional Planning Strategy* relating to General Strategies for Making Plans and Controlling Development.

Williams River Catchment Regional Planning Strategy means the Regional Planning Strategy of the Department of Urban Affairs and Planning for the Williams River catchment (kept in the Newcastle office of the Department of Urban Affairs and Planning, and copies of which are kept in the offices of Dungog Shire Council and Port Stephens Council).

Note. Clause 9 (8) enables Dungog Shire Council to decline granting consent to development applications until after the council has considered an environmental management plan, where considered necessary. Clause 9 (9) requires the council to refuse consent where development within the Williams River catchment is likely to have a significant adverse effect on river water quality. Clause 9 (10) requires assessment of development applications relating to land within the Williams River catchment against the aims and objectives of this regional plan and the regional planning strategy.



[4] **Clause 9, Table**

Insert in item 3 (Only with development consent) of the matter relating to Zones Nos 1 (c) and 1 (d) in alphabetical order the words "intensive agricultural pursuits within the Williams River catchment;".

[5] **Clause 9, Table**

Omit the word "Open" from item 3 (Only with development consent) of the matter relating to Zone No 7 (a).

Insert instead the words "Intensive agricultural pursuits within the Williams River catchment; open".

[6] **Clause 12 General considerations for development within rural zones**

Insert after clause 12 (3):

- (4) The Council may grant consent for a subdivision that will create an allotment of land within the Williams River catchment in a rural zone that the Council is satisfied will be used for the purpose of erecting a dwelling only if:
- (a) the allotment has an adequate area of suitable soils available for on-site septic effluent disposal located away from drainage lines and shallow or impervious soils, or
 - (b) arrangements that the Council considers adequate have been made for the land to be connected to reticulated water and sewerage services.

Note. Clause 12 (4) should be considered in the context of the provisions of sections 4.1 and 4.2 of the *Williams River Catchment Regional Planning Strategy* relating to closer rural settlement and rural buildings. Those provisions establish guidelines for effluent disposal standards, site selection and assessment criteria.



[7] Clause 12A

After clause 12, insert:

12A Development near river banks

- (1) Despite any other provision of this plan, a person must not, except with the consent of the Council, on land within 30 metres of a bank of the Williams River and within the Williams River catchment:
 - (a) erect a building (or alter or add to a building so as to enlarge or extend it), or
 - (b) destroy any tree (whether or not a native tree) that has a diameter of 15 centimetres or more at a height of 1.5 metres above the ground or that has crown spreads of 3 metres or more, unless the tree is dying or dead or has become dangerous, or
 - (c) construct dams, drainage works, levee banks or water storage areas, or
 - (d) carry out any other development.
- (2) Despite any other provision of this plan, a person must not, except with the consent of the Council, subdivide land within 30 metres of a bank of the Williams River and within the Williams River catchment.
- (3) The Council must not grant consent as referred to in subclause (1) or (2) unless, in the opinion of the Council, the destruction of any trees, or the subdivision or other development of the land, will be carried out in a manner which, in respect of that land and the adjacent land, does not result in a significantly increased risk of:
 - (a) soil erosion or other environmental degradation, or
 - (b) loss of vegetation or habitat, or
 - (c) disturbance of sodic or dispersive soils, or
 - (d) degradation of water quality or the quality of groundwater supplies.



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- (4) This clause does not apply to development for the purpose of fencing, revegetation or river management works.
- (5) In this clause, *river management works* means works carried out for the purpose of improving the river corridor of the Williams River in accordance with:
- (a) the conditions subject to which funding has been provided for the works by the Department of Land and Water Conservation, or
 - (b) a permit or other approval granted by the Director-General of that Department, or
 - (c) a Rivercare or Landcare plan or the like administered by the Hunter Catchment Management Trust.

[8] Clause 32 Subdivision of land within Zone No 2 (a)

At the end of clause 32 (2), insert:

This subclause does not apply to land within the Williams River catchment.

[9] Clause 32 (2A)

After clause 32 (2), insert:

- (2A) Despite any other provision of this plan, the Council may grant consent for a subdivision that will create an allotment of land within Zone No 2 (a) and the Williams River catchment that the Council is satisfied will be used for the purpose of erecting a dwelling only if:
- (a) the allotment will have an area of not less than 600 square metres and a frontage to a public road of not less than 20 metres, and
 - (b) arrangements that the Council considers adequate have been made for the land to be connected to reticulated water and sewerage services.



[10] Clause 33 Dwelling-houses within Zone No 2 (a)

Insert "and the land is not within the Williams River catchment" in clause 33 (1) (b) after the words "to the land".

[11] Clause 33 (1) (b)

At the end of the paragraph, insert:

, or

- (c) where no reticulated sewerage service is available to the land and the land is within the Williams River catchment—the land has an adequate area of suitable soils available for on-site septic effluent disposal located away from drainage lines and shallow or impervious soils.

[12] Clause 33 (2)

Omit the subclause. Insert instead:

- (2) Subclause (1) does not apply to an allotment of land in existence as a separate allotment at the appointed day unless the allotment is within the Williams River catchment.

[13] Clause 34A

After clause 34, insert:

34A Dwellings in Clarence Town

Despite any other provision of this plan, the Council must not consent to development for the purpose of two or more dwellings (whether attached or detached) on a single allotment of land within Zone No 2 (a) located within the township of Clarence Town and the Williams River catchment unless arrangements have been made that the Council considers adequate for the land to be connected to reticulated water and sewerage services.

Note. Multiple dwellings (such as residential flat buildings and dual occupancy buildings) on single residentially-zoned lots in Clarence Town will not be consented to unless adequate reticulated water and sewerage services can be arranged.



Schedule 2 Amendment of Port Stephens Local Environmental Plan 1987

(Clause 5 (4))

[1] **Clause 5 Definitions**

Insert "(except in relation to land in the Williams River catchment)" after the defined terms quoted in the definitions of "**agriculture**" and "**intensive animal husbandry**" in clause 5 (1).

[2] **Clause 5 (1)**

Insert in alphabetical order:

agriculture (in relation to land in the Williams River catchment) means the cultivation of crops, and the keeping and breeding of livestock, bees or poultry and other birds, for commercial purposes, but does not include an intensive agricultural pursuit.

intensive agricultural pursuit (in relation to land in the Williams River catchment) means the use of land for agricultural purposes which include market gardening, mushroom growing, fruit growing, flower growing, viticulture, milking in a shed designed for that purpose, aquaculture or intensive animal husbandry, but does not include the use of an animal boarding or training establishment or any cultivation or husbandry carried out mainly for the personal enjoyment or consumption of its produce by the owner or occupier of the land.

intensive animal husbandry (in relation to land in the Williams River catchment) means a building or place used for the commercial breeding, boarding or nurturing, by a feeding method other than natural grazing, of cattle, pigs, sheep, goats, poultry or other livestock and includes:

- (a) feed lots containing more than 5 cattle, and
- (b) piggeries containing more than 5 pigs, and
- (c) poultry farming establishments containing more than 20 birds.



reticulated water and sewerage means water and sewerage services which are part of a system provided or operated (or both) by the responsible water or sewerage authority for the particular area (being Hunter Water Corporation Limited).

Williams River means the Williams River and its tributaries (including any creek, stream or land along which water flows permanently or intermittently and which is so shown in respect of the land to which this plan applies on a 1: 25 000 topographic map issued by the Department of Land and Water Conservation).

Williams River catchment means the land shown on the map marked "*Williams River Catchment Regional Environmental Plan 1997*" (kept in the Newcastle office of the Department of Urban Affairs and Planning, and copies of which are kept in the offices of Dungog Shire Council and Port Stephens Council) being the land from which surface water run-off resulting from rainfall flows directly or indirectly into the Williams River.

[3] Clause 9 Zone objectives and development control table

After clause 9 (3), insert:

- (4) The council may decline to grant consent for development until after it has considered an environmental management plan, if the proposed development is likely to result in increased stormwater run-off, erosion or sedimentation or other significant pollution within the Williams River catchment.
- (5) Except as otherwise provided by this plan, the council must not grant consent to the carrying out of development on land within the Williams River catchment unless the council is of the opinion that the carrying out of the development will not have a significant adverse effect on water quality in the Williams River.



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- (6) The council, when determining a development application for a site area consisting of land in the Williams River catchment, must consider:
- (a) the aims and objectives of *Williams River Catchment Regional Environmental Plan 1997*, as set out in clause 3 of that plan, and
 - (b) the *Williams River Catchment Regional Planning Strategy*.

- (7) In this clause:

environmental management plan means a plan addressing potential environmental aspects of proposed development (to the extent relevant, in the opinion of the council, to the particular proposal), including management of potential vegetation, erosion and sedimentation impacts and assessment of land and water capability (adopting a total water cycle management approach to water use and wastewater management).

Note. Refer to section 4.2.1 of the *Williams River Catchment Regional Planning Strategy* relating to General Strategies for Making Plans and Controlling Development.

Williams River Catchment Regional Planning Strategy means the Regional Planning Strategy of the Department of Urban Affairs and Planning for the Williams River catchment (kept in the Newcastle office of the Department of Urban Affairs and Planning, and copies of which are kept in the offices of Dungog Shire Council and Port Stephens Council).

Note. Clause 9 (4) enables Port Stephens Council to decline granting consent to development applications until after the council has considered an environmental management plan, where considered necessary. Clause 9 (5) requires the council to refuse consent where development within the Williams River catchment is likely to have a significant adverse effect on river water quality. Clause 9 (6) requires assessment of development applications relating to land within the Williams River catchment against the aims and objectives of this regional plan and the regional planning strategy.



[4] Clause 11A

After clause 11, insert:

**11A Subdivision for the purpose of dwellings on land within
Zone No 1 (a) or 1 (g) in Williams River catchment**

Despite any other provision of this plan, the council may grant consent for a subdivision that will create an allotment of land within the Williams River catchment that the council is satisfied will be used for the purpose of erecting a dwelling only if:

- (a) the allotment has an adequate area of suitable soils available for on-site septic effluent disposal located away from drainage lines and shallow or impervious soils, or
- (b) arrangements that the council considers adequate have been made for the land to be connected to reticulated water and sewerage services.

Note. Clause 11A enables Port Stephens Council to consent to a subdivision to create allotments for the erection of dwellings, subject to there being an area for effluent disposal or a sewerage service connection which is satisfactory to the council. The Williams River Catchment Regional Planning Strategy (sections 4.1 and 4.2) provides best practice advice and criteria for the council and guidance as to what is a satisfactory on-site disposal system.

[5] Clause 22A

After clause 22, insert:

22A Development near river banks

- (1) Despite any other provision of this plan, a person must not, except with the consent of the council, on land within 30 metres of a bank of the Williams River and within the Williams River catchment:
 - (a) erect a building (or alter or add to a building so as to enlarge or extend it), or
 - (b) construct dams, drainage works, levee banks or water storage areas, or
 - (c) carry out any other development.



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- (2) Despite any other provision of this plan, a person must not, except with the consent of the council, subdivide land within 30 metres of a bank of the Williams River and within the Williams River catchment.
 - (3) The council must not grant consent as referred to in subclause (1) or (2) unless, in the opinion of the council, the subdivision or other development of the land, will be carried out in a manner which, in respect of that land and the adjacent land, does not result in a significantly increased risk of:
 - (a) soil erosion or other environmental degradation, or
 - (b) loss of vegetation or habitat, or
 - (c) disturbance of sodic or dispersive soils, or
 - (d) degradation of water quality or the quality of groundwater supplies.
 - (4) This clause does not apply to development for the purpose of fencing, revegetation or river management works.
 - (5) In this clause, *river management works* means works carried out for the purpose of improving the river corridor of the Williams River in accordance with:
 - (a) the conditions subject to which funding has been provided for the works by the Department of Land and Water Conservation, or
 - (b) a permit or other approval granted by the Director-General of that Department, or
 - (c) a Rivercare or Landcare plan or the like administered by the Hunter Catchment Management Trust.

Note. Clause 22A requires Port Stephens Council's consent for the erection or alteration of a building, for the construction of a dam or similar works, or for any other development within 30 metres of a bank of the Williams River (with the exception of river management works) and for the subdivision of any such land. Consent may be granted only if the council is of the opinion the development will not result in significant environmental risk or loss, or substantial water quality degradation.



[6] Clause 25A

After clause 25, insert:

25A Development in Seaham

- (1) Despite any other provision of this plan, the council may grant consent for a subdivision of land within Zone No 2 (e) located within the township of Seaham and the Williams River catchment that will create an allotment the council is satisfied will be used for the purpose of erecting a dwelling only if arrangements the council considers adequate have been made for the land to be connected to reticulated water and sewerage services.
- (2) Despite any other provision of this plan, the council must not consent to development for the purpose of two or more dwellings (whether attached or detached) on a single allotment of land within Zone No 2 (e) located within the township of Seaham and the Williams River catchment unless arrangements have been made for the land to be connected to reticulated water and sewerage services.

Note. Clause 25A requires any subdivision for residential purposes within the Residential Village "E" Zone at Seaham to have reticulated water and sewerage services which Port Stephens Council considers to be adequate, and prevents the council from consenting to multiple dwellings on a single allotment in Seaham, unless it is satisfied that reticulated water and sewerage services are to be available.

Part B. The Strategy

1. Objectives

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1.1 STRATEGY AIMS AND OBJECTIVES

The aims of this strategy are to:

- halt and reverse the decline in water quality in the Williams River catchment
- develop procedures for sustainable long-term management of the catchment.

The objectives of the strategy are to:

- develop policies and actions to better manage the impacts of existing development and land management practices
- establish principles to guide future development
- coordinate programs and actions, including community-based action
- complement the Williams River catchment regional environmental plan.

1.2 KEY TASKS AND APPROACH

The strategy's key tasks are to:

- improve coordination between stakeholders (mainly government agencies and the community) to achieve better management of the catchment
- improve knowledge of the environmental impact of activities on the catchment
- guide local environmental plan preparation and consent processes
- promote the development and use of best practice guidelines for land management.



WILLIAMS RIVER CATCHMENT REP AND REGIONAL PLANNING STRATEGY

This strategy is to be implemented using integrated catchment management which:

- involves a single agency coordinating the project, the Hunter Catchment Management Trust (HCMT)
- emphasises best practice
- is committed to shared aims and agreed responsibilities.

The HCMT, which is made up of government, council and community representatives, will monitor the action plan (see section 5, p. 51). The action plan will be implemented by relevant stakeholders. The roles of the HCMT and

stakeholders are discussed in more detail in section 4.4 (p. 49).

The strategy aims to build on existing structures and networks to strengthen and support community recognition of catchment management, and further promote the role of the community in leading a coordinated program of action. Water quality is the main issue: through their involvement, stakeholders will gain more awareness of how their current activities affect the catchment and how their action plan responsibilities (outlined in section 5) will improve the catchment.

2. The Strategy

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2.1 COMPONENTS OF THE STRATEGY

The strategy contains:

- best management principles — practical and technical advice for land users (section 4.1)
- principles for environmental planning — to guide all decisions and action in the catchment (section 4.2)
- strategies — to guide planning and approvals for future development and activities (section 4.3)
- an action plan — comprising the agreed task list for nominated stakeholders (section 5).

2.1.1 Legal Basis of the Strategy

The strategy is not a legal document but does have legal support from the *Williams River Catchment Regional Environmental Plan*. As a result, it *must* be considered by planning authorities, such as councils and government agencies, when they exercise responsibilities under the provisions of the *Environmental Planning and Assessment Act 1979* (EP&A Act).

The action plan in section 5 lists tasks to be undertaken by relevant stakeholders. Some tasks need legal enforcement from the regional environmental plan, as planning alone cannot achieve sustainable land management.

Most of the tasks do not require planning consent or other regulatory approval. They rely on approaches such as advice, education and self-regulation, which are discussed in section 4. These tasks aim to improve the way activities are carried out within the catchment by increasing knowledge, improving access to information about best practice and changing behaviour.



2.1.2 Coordination

Central to the successful implementation of the strategy are:

- the commitment of key accountable stakeholders to their responsibilities, as identified in the action plan
- the stakeholders recognising and supporting the Hunter Catchment Management Trust's central role in monitoring the action plan.

2.2 HOW AND WHEN IS THE STRATEGY USED?

This strategy will assist all people who:

- use, undertake an activity on, or carry out development on, land
- are responsible for approving, permitting or authorising a use, activity or development to be carried out within the catchment.

2.2.1 All Catchment Users

The strategy should be read by everyone who uses land or undertakes an activity within the catchment, whether or not that land use or activity requires a consent or approval from any authority. When approval is not required, the best management principles (section 4.1) and *Williams River Catchment Best Practice Notes* should be consulted for advice on measures to be taken to minimise possible environmental damage to the catchment.

When a person undertakes an activity for which planning approval is not required and which may affect the environment of the catchment, including:

- changing an existing activity or use of land
- preparing a policy (including local council policies)
- preparing a plan (including whole farm plans)
- allocating funding

the action plan (section 5), best management principles (section 4.1) and strategic considerations (section 4.2) should be considered. *The Williams River Catchment Regional Environmental Study* and *Williams River Catchment Best Practice Notes* should also be consulted to provide more detailed background and understanding of catchment issues.

2.2.2 Environmental Planning

When a council prepares a local environmental plan

The strategy must be considered when a council prepares a local environmental plan (LEP) for land

within the Williams River catchment. Section 4.1 of the strategy provides best management principles. Section 4.2 contains specific provisions which may be incorporated in the plan. This section also contains the strategic context for zoning and development control in relation to specific development types, such as rural residential development.

When a consent authority determines a development application

Before determining a development application, councils and other consent authorities should consider particular development strategies identified in section 4.2. This section provides principles for the catchment in relation to the likely impacts of various uses. It also refers to development performance standards. The *Williams River Catchment Best Practice Notes* will help the consent authority attach appropriate conditions to any consent issued.

When developers consider their sites

Section 4.2 includes additional information which may be required to accompany a development application to the consent authority. The *Williams River Catchment Best Practice Notes* will help developers determine the suitable use for a particular site and check that their development is in accordance with best practice.

When a public authority undertakes or approves an activity (Part 5 of the EP&A Act)

When considering the potential impact of a proposed development, a person or public authority intending to carry out or approve an activity under Part 5 of the Act should consider the aims and purpose of this strategy, the best management principles (section 4.1) and the *Williams River Catchment Best Practice Notes*.

Determining authorities should consult best management principles (section 4.1) and development considerations (section 4.2) when they carry out their environmental assessment functions under Part 5 of the Act for activities which may impact on the catchment, and when they consider the environmental impact of activities pursuant to sections 111 and 112 of the Act.

3. Water Quality

3.1 POLLUTION ISSUES

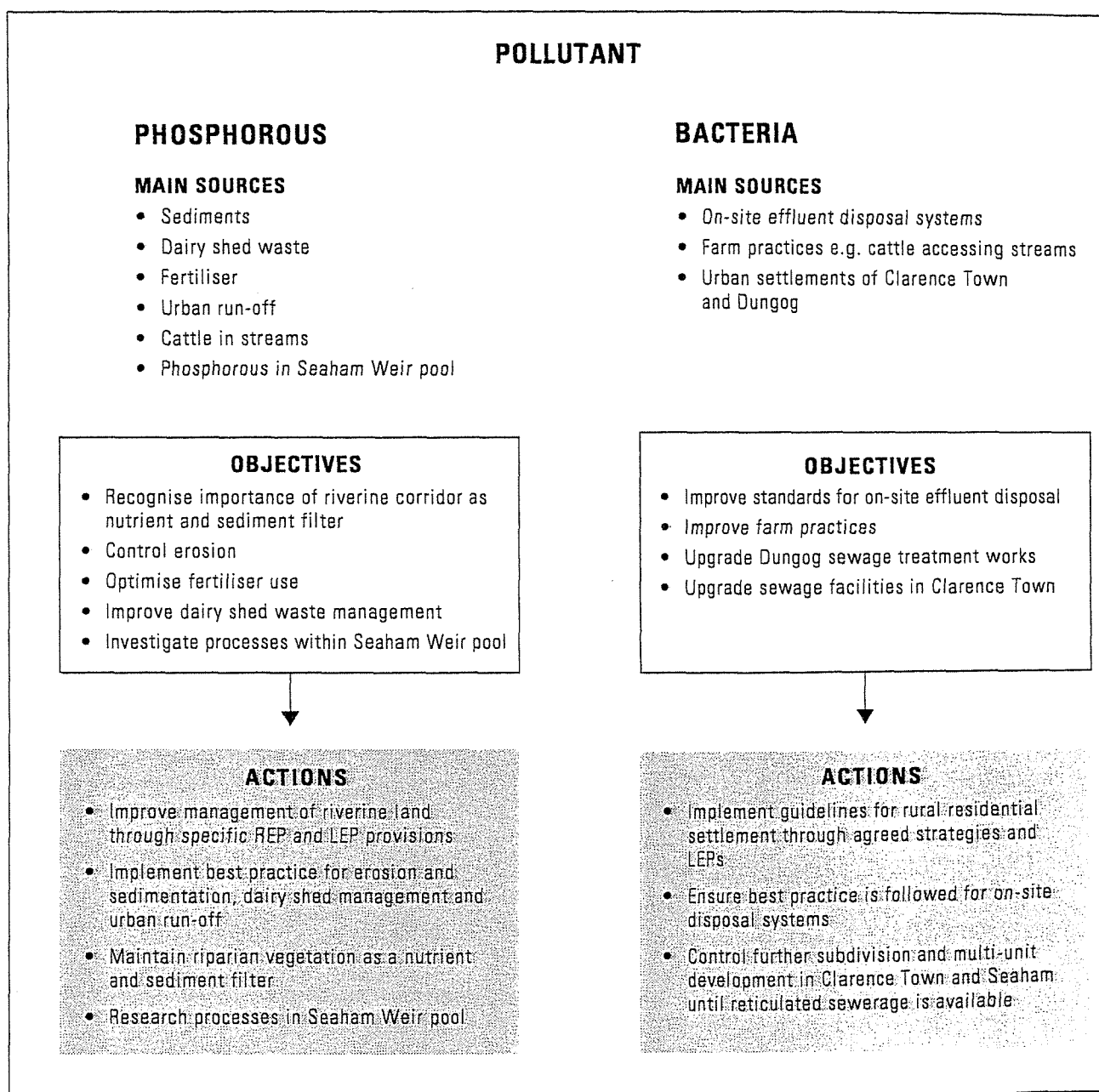
The Williams River catchment regional environmental study shows that both the river and its catchment are in relatively good condition. The catchment has not been greatly urbanised. The major activities are low intensity grazing and increasing rural residential settlement.

The principal water quality issues are the incidence of high phosphorus levels and bacterial pollution. High phosphorus levels lead to blue-green algae blooms in the Seaham Weir pool and Grahamstown Reservoir, and have short- and long-term implications for the urban water supply of the catchment. Bacterial pollution emanates from urban and rural residential settlement and agricultural practices. It is largely a result of inadequate effluent treatment and can impact on the use of the water system for recreational, agricultural and other purposes. (Discussion of these potential impacts can be found in the *Williams River Catchment Regional Environmental Study*.)

Pollution sources generally derive from activities located by the river. Phosphorus is produced from diffuse rather than particular sources and seems relatively uniform in its spread throughout the catchment. No sub-catchment of the river system seems to contribute greater quantities of phosphorus than another. By comparison, bacterial pollution is produced from both diffuse and particular sources. The diffuse sources are mainly agricultural activities and discharge from dispersed rural settlement, while the particular sources are largely the Dungog sewage treatment works and the unsewered residential settlement of Clarence Town. Figure 2 summarises the relationship between water quality indicators and the actions proposed to deal with water quality.



**FIGURE 2. RELATIONSHIPS BETWEEN MAJOR WATER QUALITY
THREATS AND KEY ACTIONS FOR THE CATCHMENT**





3.1.1 Phosphorus

The phosphorus problem is the most serious threat to the river's water supply function. Phosphorus naturally occurs in the catchment as a result of its geological characteristics.

During rainfall, phosphorus is transported into the river, and ultimately into the Seaham Weir pool. It is either washed into the river directly, or while bound to soil sediment created by soil erosion. Phosphorus bound with sediment is effectively stored in the Seaham Weir pool and, under certain conditions, released back into the water. Land management practices also contribute to build-up of phosphorus in the Seaham Weir pool.

Water cannot be transferred from Seaham Weir pool to Grahamstown Dam when phosphorus levels are high as, under certain conditions, high phosphorous levels lead to toxic algal blooms.

3.1.2 Bacterial Pollution

Bacterial pollution is closely linked to residential and rural residential development which is located by the river and has inadequate sewage treatment facilities. It is also caused by certain agricultural activities such as cattle accessing the river and streams. Bacterial pollution is of increasing concern for recreational users of the river who have direct contact with untreated water, and for some uses involving direct extraction from the river. It is not a concern for consumers of the drinking water supplied to the Lower Hunter population, as bacterial pollution is easily removed during the treatment process which occurs before the water is reticulated.

3.2 STRATEGIC PRIORITIES

The catchment is not being subjected to extraordinary pressures from development or agriculture, but is being affected by the cumulative impacts of many small land use decisions and practices. This highlights the need to integrate these separate, small decisions into a unified management structure with clear responsibilities and accountabilities.

To halt the decline in water quality, the immediate priority is to focus on improved management of the riverine corridor⁽³⁾, which is crucial in maintaining the health of the river. Significant benefits can be gained in the medium term by giving greater attention to the management of land in the riverine corridor. Tasks in the strategy's action plan (section 5) focus on management of lands in the riverine corridor to:

- minimise disturbance of river banks and riverine vegetation, including aquatic species
- minimise erosion and sedimentation of the river
- ensure that new development is appropriately located and has adequate sewage treatment.

The highest priority actions within the riverine corridor aim to reduce the transport of phosphorus and bacterial pollution to the river. These actions relate to:

- protecting, and replacing where necessary, riparian vegetation
- preventing nutrients and sediment (which carries nutrients) finding their way into the river system by creating adequate stormwater management measures and erosion and sedimentation controls
- minimising further erosion within the catchment
- optimising fertiliser use
- managing agricultural impacts by applying best management principles.

Other actions aim to avoid further bacterial pollution of the river by limiting further residential subdivision in Clarence Town and Seaham until reticulated sewage is available, and ensuring that unsewered dwellings are provided with adequate on-site disposal systems. The provision of reticulated sewage treatment systems for Clarence Town and Seaham and the upgrade of the Dungog sewage treatment works are also priorities identified in the action plan.

(3) For the purpose of the strategy, the riverine corridor refers to land within 100 metres of the Williams River and its tributaries.

4. Management

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4.1 BEST MANAGEMENT PRINCIPLES

The following best management principles (BMPs) should be consulted for advice on land use activities and water quality protection measures in the catchment. They should also be considered by any land manager, approval authority or other person undertaking an action within the catchment which could impact on its environment.

These BMPs act as strategic guidelines for local environmental plan preparation and for councils when assessing development applications (section 4.2). They also guide public authorities when they consider the potential impact of activities under Part 5 of the *Environmental Planning and Assessment Act 1979* and guide the development of best practice notes for the Williams River catchment.

4.1.1 General

A. *Vegetation Management*

Appropriate measures should be adopted to maintain and improve the natural vegetation within the corridor, along drains, roads and property boundaries, and on any development site. These measures may include vegetation management plans, tree preservation orders or other devices to protect existing native vegetation, and reforestation. Areas which have previously been totally or partially cleared should be revegetated when appropriate.

B. *Riverine Corridor*

In this strategy, the riverine corridor comprises all land within 100 metres of the river or streams. Within the riverine corridor, most development within 30 metres of the river requires development consent. Also within the riverine corridor:

- development should be compatible with the principal attributes of the corridor — this is primarily a naturally vegetated area of low intensity use where access to the river is controlled, disturbance of vegetation is minimised and ecological functions are recognised and maintained



- new non-agricultural uses should, whenever possible, be located outside the corridor
- where appropriate, measures should be taken to preserve and enhance the environment of the corridor through revegetating and stabilising river banks, and rehabilitating degraded sites.

C. Floodplains

The role of the floodplain in relation to the ecology of the riverine corridor and floodwater behaviour should be recognised and protected. Development on the floodplain should be avoided whenever possible but when permitted should be limited to uses which:

- are compatible with periodic inundation by floodwaters
- cannot be appropriately located on flood-free sites
- do not create an unacceptable pollution threat by giving sediment, nutrients and bacteria access to the river.

Any development approved on flood-prone land should be consistent with the *Floodplain Development Manual* (NSW Public Works, 1986) or its future equivalent.

D. Waterway Modification

This section includes activities ranging from drainage works and irrigation to water supply structures and river maintenance works. Relevant principles are:

- the flow of water in the river system should be managed by controlling extraction so that bio-systems indicative of a 'healthy' system are maintained at all times
- any activity should minimise the detrimental impacts on aquatic biodiversity
- any modification should not adversely impact on downstream flow or waterway characteristics
- disturbance of riverine corridor vegetation should be minimised
- flood mitigation and maintenance work to comply with DLWC's environmental guidelines.

E. Water Quality

The potential impact of land uses on the water quality of the river should be considered, particularly when that land is within the riverine corridor. Pollution of the river should be minimised, and when appropriate, reduced. Particular measures should be taken to minimise

quantities of sediment, nutrients (especially phosphorous) and bacterial pollution in the river.

F. Intensive Uses

Intensive uses, comprising intensive industrial development and designated development, should only be permitted when the development can demonstrate:

- that it needs to be located within the catchment
- its ability to operate in a manner which is consistent with the principles and objectives of this strategy.

G. Erosion and Sedimentation

Every reasonable effort should be made to minimise sediment in the river.

Erosion and sediment control plans should accompany all development applications and proposals for development under Part 5 of the EP&A Act, except when the council specifies classes of minor development where this requirement is unnecessary.

Areas of potential dry-land salinity as identified in *Soil Landscape Mapping* (Department of Conservation and Land Management, 1994) should be mapped and protected by retaining existing vegetation cover or reforestation. 1:4000 scale in soil landscape maps should be developed for future rural settlements.

H. Total Water Cycle Management

A total water cycle management approach should be used to guide the planning, design and assessment of all activities likely to impact on the water and water-related resources of the catchment. Consideration should be given to the need for activities to be accompanied by a total water cycle management study (which may include modelling of water flows and water quality impacts for different development and management options).

I. Cumulative Impact

The existing and potential cumulative impact of individual activities and land uses should be considered when the likely impact of a particular development or activity on the catchment is assessed. (Water monitoring actions will establish the baseline data for assessing the long-term potential cumulative impact of separate actions.)



4.1.2 Urban and Rural Settlement

A. Settlement

New settlement (including urban, closer rural, tourism and recreation, as well as expansion of existing urban areas) should, whenever possible, be located:

- where reticulated sewerage can be made available
- away from sodic or dispersive soils (soils not suitable for on-site effluent disposal as they have a low infiltration capacity)
- on flood-free land
- to avoid prime crop and pasture land
- in areas accessible to services and support facilities
- to facilitate public access to the river and its foreshores as a public resource
- to minimise subdivision of riparian land and avoid the creation of additional riparian rights as far as possible.

B. Closer Rural Settlement

Closer rural settlement should:

- proceed only in areas of appropriate land capability within localities chosen on sound planning principles
- not result in detrimental water quality impacts, including long-term cumulative impacts
- avoid land of known agricultural capability
- consider environmental objectives, such as maintaining rural landscapes, significant vegetation, flora and fauna habitat, and wildlife corridors.

C. New Dwellings (Urban)

New dwellings in residential areas (Seaham and Clarence Town) should be located and sited:

- to minimise adverse effects on water quality when on-site sewage disposal is provided
- to minimise disturbance of vegetation
- to minimise disturbance of soils
- above the 1% AEP (1 in 100 year) flood level.

D. Urban Land Use and Pollution Control

The main sources of pollution from urban land use are stormwater run-off, sewage and waste. Urban stormwater management plans should be prepared for settlement areas within the catchment. These plans should demonstrate how the flow of water can be retarded and retained, gross pollutants and sediments can be trapped, and opportunities can be initiated for the removal of nutrients and other pollutants.

E. Domestic On-site Effluent Disposal

When a new dwelling cannot be serviced by a reticulated sewerage system, an alternative on-site effluent disposal system must be provided. Installation of any on-site effluent storage, treatment and disposal system should:

- have regard to Australian Standard 1547-94 — *Disposal Systems for Effluent from Domestic Premises*
- be located away from drainage lines, shallow soils or sodic and dispersive soils
- have a disposal area large enough to cater for the quantity of wastewater produced
- be appropriately designed for the site conditions and type of development proposed, including an adequate tank size being provided for wastewater loads and shock loads
- be operated properly, including regular cleaning and maintenance of the tank or system — this may include a need to raise household awareness of necessary management practices such as products to be used in systems, water conservation and effluent re-use.

When assessing an application to install a septic tank or on-site domestic wastewater treatment, re-use or disposal system, consent authorities should consider the cumulative effect of the tank or system and other tanks or systems, on water quality in the catchment.

4.1.3 Rural Buildings, Dams and Clearing

A. Rural Buildings

New rural buildings (including dwellings and agricultural buildings on rural land) of any type should be located to:

- minimise adverse effects on water quality when on-site sewage disposal is necessary
- minimise the disturbance of vegetation and soils
- avoid locations having unsuitable soil conditions
- avoid land use conflicts or other impacts which may sterilise prime agricultural land outside the riverine corridor (or, where necessarily located by the river, be compatible with the principles for the riverine corridor).

B. Site Works

The removal or disturbance of soil should be carried out considering slope, soil characteristics, site hydraulics and rainfall, and whether the works are temporary or permanent. Surface



disturbance should be restricted to a minimum and should avoid steep slopes, watercourses and drainage lines. For example, roads, houses and other structures should be located to ensure that areas requiring shaping are minimised.

For more advice, refer to relevant design manuals and best practice notes on erosion and sediment control.

4.1.4 Intensive Agriculture

A. Agricultural Land

Development of prime crop and pasture land (that is, classified by NSW Agriculture as being land within Classes 1, 2 and 3) for non-agricultural purposes should be avoided.

When non-agricultural activities are approved on agricultural land, the potential impact of those activities on the quantity and quality of water for agricultural purposes should be considered, and the future capability of the land to be used for agricultural purposes should be preserved when possible.

B. Intensive Agricultural Pursuits

Intensive agricultural pursuits (as defined in the *Williams River Catchment Regional Environmental Plan*) should:

- avoid the riverine corridor and other locations which could adversely affect water quality
- control the discharge of liquid and solid wastes to minimise the impact on the environment
- avoid sites with inappropriate soil characteristics.

C. Forestry Operations

Forestry operations should:

- avoid unnecessary clearing and surface disturbance
- provide protective measures when soil regimes are exposed to erosion
- rehabilitate disturbed areas to minimise adverse effects.

D. Cultivation for Cropping

Cropping should be carried out:

- in accordance with land capability and using appropriate contour banking and drainage systems
- using conservation tillage principles with appropriate filter strips between cultivated areas and streambanks
- using appropriate crop rotations.

4.1.5 Tourism and Recreation

Tourism and recreation activities should:

- be based on the rural character and natural attributes of the area
- not detract from the dominant land use of agricultural activity, and avoid creating conflicts with existing agricultural activity
- not be detrimental to the water quality of the river
- reinforce and add to the natural landscape and scenic qualities of the catchment
- use existing villages as service centres.

4.1.6 Landfill and Extractive Industry

Landfill and extractive industry should:

- be limited in site area so that agricultural land resources are not unreasonably reduced
- not be detrimental to the water quality of the river
- minimise any necessary intrusion on the natural landscape and scenic qualities of the catchment
- be compatible with nearby land uses.

4.2 ENVIRONMENTAL PLANNING

In addition to the best management principles, the following strategies and considerations apply when a council prepares a local environmental plan (LEP), or a consent authority determines a development application, pursuant to the provisions of the EP&A Act.

4.2.1 General Strategies for Making Plans and Controlling Development

- (1) A draft LEP which will permit new development in the catchment should be prepared after consulting the *Williams River Catchment Regional Environmental Study*, the objectives of the *Williams River Catchment Regional Environmental Plan* and this strategy. The LEP should consider:
 - (a) likely sedimentation or increases in nutrient levels of the river associated with new development
 - (b) potential cumulative impacts on the water quality of the river.
- (2) When considering a development application for any purpose, the consent authority should consider the suitability and potential impact of the proposed development relative to:
 - its proximity to the riverine corridor
 - the soil type, the management of soil



disturbance and the minimisation of sedimentation impacts beyond the site

- the significance of native flora and fauna habitat
- its proximity to the 1% AEP (1 in 100 year) flood level
- stormwater and wastewater management measures
- where a proposed dwelling will not be serviced by reticulated sewage — the characteristics of the lot and the ability of the dwelling to be serviced by a domestic wastewater system designed and constructed in accordance with Australian Standard 1547-94 — *Disposal Systems for Effluent from Domestic Premises*.

- (3) Development consent should only be granted when the consent authority is satisfied that:
- (a) an adequate buffer will be maintained between the proposed development or activity and existing watercourses
 - (b) an adequate vegetation cover will be maintained or reinstated to minimise soil erosion
 - (c) adequate measures will be applied to minimise accretion of nutrients and pollution in the river
 - (d) potential adverse impacts on the riverine corridor and 1 in 100 year floodplain will be minimised
 - (e) adequate provision will be made to mitigate the potential for long-term adverse impacts on the environment arising from the development.
- (4) For the purpose of (2) and (3) above, the consent authority should consider the need for an environmental management plan to accompany the development application. An environmental management plan may incorporate one or more of the following:
- (a) a land capability study which establishes the suitability of the site for the proposed development
 - (b) a water capability study for those uses which will utilise the water resource, and a total water cycle management plan
 - (c) a vegetation management plan
 - (d) an erosion and sediment control plan
 - (e) a domestic wastewater management plan.

4.2.2 Specific Strategies for Making Plans and Controlling Development

The following objectives and strategies will guide the preparation of LEPs and consideration of development applications relating to specific activities and land uses. These policies must be considered in addition, and in relation, to other relevant principles and policies of this strategy to guide balanced decision-making.

Development control plans prepared by the Port Stephens Council or Dungog Council in relation to these specific land uses should also be consistent with the relevant objectives and principles of this section.

4.2.3 Closer Rural Settlement

Objective

To ensure that demand for population settlement is managed in a way which is consistent with the objectives for sustainable management of the catchment.

Strategies for LEP Preparation

A draft LEP for closer rural settlement should only be prepared in accordance with a strategy which has been agreed to by the council and the Department of Urban Affairs and Planning. An environmental study may be required to establish the strategic environmental, economic and social context for the preparation of the settlement strategy.

In preparing a strategy for closer rural settlement, the council should consider the *Williams River Catchment Regional Environmental Study*, the objectives of the *Williams River Catchment Regional Environmental Plan* and this strategy.

A closer rural settlement strategy should:

- (a) encourage development which creates new or expanded villages and discourages dispersed rural subdivision
- (b) reduce average lot sizes (as far as is consistent with on-site disposal standards) to minimise land take, pollution pressures and other environmental impacts, and increase the provision of various services
- (c) avoid subdivision which creates additional riparian rights which may rely solely on surface water access



- (d) avoid development or disturbance of areas of sodic or dispersive soils
- (e) avoid areas of potential dry-land salinity.

A draft LEP for closer rural settlement should be consistent with the agreed strategy for closer rural settlement and with the provisions of this strategy.

Development Consent Considerations

The consent authority should only consent to an application for subdivision or development of land for closer rural settlement when it is satisfied that the development will:

- (a) avoid creating additional riparian allotments
- (b) ensure that no new domestic wastewater treatment or disposal sites are established in the 1% AEP (1 in 100 year) floodplain
- (c) create allotments which avoid the need to locate dwellings within the riverine corridor.

4.2.4 Rural Buildings, Dams and Clearing

Objective

To ensure that development in rural areas is carried out to minimise the adverse effects on the environment of the Williams River catchment.

Strategies for LEP Preparation

A draft LEP should state that:

- (a) within the riverine corridor, all development located within 30 metres of the river must have development consent
- (b) clearing, farm dams, and new or replacement rural buildings (including a new dwelling, the replacement of an existing dwelling, or a dairy shed) located within the riverine corridor must have the consent of the consent authority.

4.2.5 Intensive Agriculture

Objective

To ensure that intensive agricultural pursuits minimise possible adverse effects on the environment of the Williams River catchment.

Strategies for LEP Preparation

Intensive agriculture should only be permitted when it:

- (a) avoids significant adverse impacts on the riverine corridor
- (b) is located on lands most suitable for that purpose, having regard to proper land capability assessment

- (c) avoids other locations which could result in adverse impacts on the river and the environment of the catchment.

Development Consent Considerations

When considering a development application for intensive agricultural pursuits, the consent authority should consider the best management principles contained in section 4.1 of this strategy and ensure that the development complies with relevant practice guidelines.

4.2.6 Tourism and Recreation

Objective

To ensure that visitor accommodation, tourist development and recreational facilities complement the primary agricultural functions of the valley and maintain water quality within the Williams River catchment.

Strategies for LEP Preparation

A draft LEP which provides for tourism, visitor accommodation or recreational facilities should require those uses to be developed (with development consent) in locations which:

- (a) have little potential conflict with adjacent rural agricultural uses
- (b) are situated within or by existing villages
- (c) can be connected to a reticulated sewerage system
- (d) are sited on areas of low agricultural potential
- (e) avoid locations which would involve disturbance of sodic or dispersive soils
- (f) if within the riverine corridor, have a legitimate need to utilise riparian land.

4.2.7 Landfill and Extractive Industry

Objective

To ensure that landfill and extractive industries are carried out, and access to important extractive resources is maintained, in a manner which minimises potential conflicts with agricultural activities and maintains water quality within the Williams River catchment.

Strategies for LEP Preparation

A draft LEP for landfill and extractive industry, including designated development within the terms of Schedule 3 of the EP&A Regulation 1994, should require that landfill and extractive industry:

- (a) be developed only with consent under the EP&A Act



- (b) be situated outside the riverine corridor, and located above the 1% AEP (1 in 100 year) flood level as far as possible and consistent with flood plain manual
- (c) avoids, as far as possible, land of high agricultural potential.

Development Consent Considerations

When considering a development application for a new or modified landfill site or an extractive industry, the consent authority should request an environmental management plan to be prepared which, in addition to the requirements of section 4.2.2 of this strategy, deals with:

- (a) compliance with relevant industry and government standards and guidelines, and in particular how to:
 - incorporate specific measures to avoid accretion of sediment in the river
 - avoid or minimise disturbance to native vegetation and flora
 - apply sedimentation and soil erosion controls to engineering works, and to where soils are bereft of vegetation or susceptible to erosion mechanisms
- (b) the suitability and potential impact of the proposed development relative to:
 - stormwater and wastewater management measures
 - leachate and run-off management criteria contained within any relevant practice guidelines
 - the ability of the site to be adequately rehabilitated at the cessation of the use.

4.3 THE TOTAL CATCHMENT MANAGEMENT (TCM) LINK AND OTHER APPROACHES

4.3.1 The TCM Connection

This strategy recognises the TCM process and integrates it into the formal planning system. The Williams River TCM Committee has built links with the rural community and groups such as Landcare and Rivercare, researched catchment issues, and developed a draft TCM strategy. This work and the committed work from the TCM 'movement' are vital resources for the catchment. Much of this work is contained in the *Williams River Catchment Regional Environmental Study* and the action plan in chapter 5 of this strategy. The work of the TCM Committee is central to the ongoing environmental program for the catchment and will be incorporated into the local planning and development approval processes.

The TCM Committee will continue to play a vital role in monitoring works programs and reviewing catchment priorities.

4.3.2 Community Action

This strategy is particularly concerned with harnessing the energy and skills of the community and acknowledging the important role the community will play or is currently playing in catchment management. Collectively, landowners and community groups have the most significant role to play within the catchment.

Direct community action includes:

- retaining native vegetation and fauna habitats
- adopting a whole property and catchment approach to property management
- using water wisely
- conserving energy
- reducing, re-using, recycling
- changing purchasing habits (for example, buying low phosphate detergents)
- conservation farming practices
- erosion and sediment control
- modifying leisure activities (for example, using only designated areas for boating, driving, hiking and other activities).

Indirect community action includes:

- lobbying decision-makers for better practices and assistance
- membership of community groups (for example, Landcare, Rivercare)
- attending meetings and other forums for public discussion (for example, the TCM Committee)
- contributing time or funds to develop and implement catchment strategies.

4.3.3 Agency Action and Support

The planning and implementation of land and water-related management strategies within the catchment will require ongoing commitment and support from all levels of government.

State Government action includes:

- adopting a whole-of-government approach to catchment management and planning
- supporting the role of the Hunter Catchment Management Trust (HCMT) as the appropriate peak body within the catchment
- ensuring interdepartmental coordination of land and water resource programs
- individual agency endorsement and



implementation of the relevant components of the action plan (section 5)

- contributing technical and other support to community groups and landowners
- fostering community awareness and providing educational material and services
- developing best management practices
- facilitating improved sewage treatment and disposal
- investigating and developing targets for nutrient reduction on a catchment basis
- recognising the monitoring role of the HCMT.

Local government action includes:

- pursuing initiatives to achieve upgraded sewage treatment and disposal facilities
- improving the management of sewerage systems (pipes, treatment and disposal facilities)
- implementing urban stormwater management practices
- finalising and implementing strategies for closer rural settlement
- participating in the activities of relevant community groups
- fostering community awareness and forming catchment care groups
- zoning areas to ensure natural and cultural heritage values are conserved and protected
- adopting a total catchment approach to developing relevant policies, procedures and field activities.

4.3.4 Awareness and Education

The importance of the Williams River catchment is acknowledged by many individuals, community groups and participating agencies. Its importance also needs to be communicated to the population of the Lower Hunter who either visit the area for recreational pursuits, or rely on its water supply. This will ensure that all users of the catchment are aware of how their activities may be modified to reduce the impact on the quality of the catchment and its resources.

Through the HCMT, local and State governments can develop and improve programs to raise community awareness of key issues. Some examples of programs are:

- producing and distributing brochures and other promotional, educational and informative material

- preparing or distributing best practice guidelines
- covering issues and strategy responses in the media
- providing schools programs (for example, Young Environmentalist Awards)
- producing and distributing newsletters to the catchment community
- giving presentations to public meetings
- providing regular reports on catchment management and planning activities to community groups and key individuals
- reporting on catchment activities and achievements annually.

4.3.5 Research and Monitoring

There are several areas which require further research or ongoing monitoring (as highlighted in the Williams River catchment regional environmental study). These include:

- ongoing water quality monitoring, particularly to identify pollution and nutrient sources
- a better understanding of the sources of phosphorus
- researching the processes operating within the Seaham Weir (currently under way)
- mapping native vegetation communities and conducting flora and fauna surveys (to better understand the natural values of the catchment environment, the activities likely to impact on those values and ways of best avoiding adverse impacts)
- continued monitoring of aquatic invertebrates, particularly at rock pool sites
- researching the impacts of stream bank erosion
- researching the processes and interactions involved in algal bloom development
- researching the role and function of the riparian zone within the catchment
- further researching environmental flow requirements (including downstream of the weir)
- providing a reliable monitoring procedure for implementing catchment strategies.

4.3.6 Incentives and Funding

Various potential sources of funding support components of the strategy. These include:

- the National Landcare Program
- budget allocations for specific government agency projects
- funding for specific projects of catchment



groups (for example, Environmental Restoration and Rehabilitation Trust grants, TCM Enhancement Program)

- taxation incentives for land and water management works
- Greening Australia
- the NSW LEAP program
- the Rural Assistance Authority
- the Rivercare Incentive Scheme
- estuary management program (DLWC)
- Natural Heritage Trust.

4.4 MONITORING AND REVIEW

4.4.1 Action Plan

The action plan which follows this section allocates responsibility for various tasks to specific government agencies. The chief executive officer of each agency has 'signed off' for their agency by accepting responsibility for their tasks. This process has publicly established a high level of commitment to the tasks as each agency is ultimately accountable for its performance and commitment to the community.

Each agency, and relevant community groups such as Landcare and Rivercare, will report annually to the HCMT on their progress in fulfilling their responsibilities during the year. This will be an open and accountable process.

The HCMT will compile these reports into an annual statement on the state of the river. This annual report will review progress on implementing the tasks in the strategy's action plan, examine remaining tasks and identify priority actions for the coming year (see figure 3).

The draft annual report will be made available for public comment. After considering all suggestions, the HCMT will publish a statement, which may take the form of a catchment program of actions and priorities for the coming year.

This process will:

- publicly identify the actions and priorities of agencies
- keep people informed of catchment issues as identified in the action plan and in other sources, including the councils' annual State of the Environment reports
- monitor the success of actions being taken through the action plan, and provide an up-to-date and relevant basis for decision-making

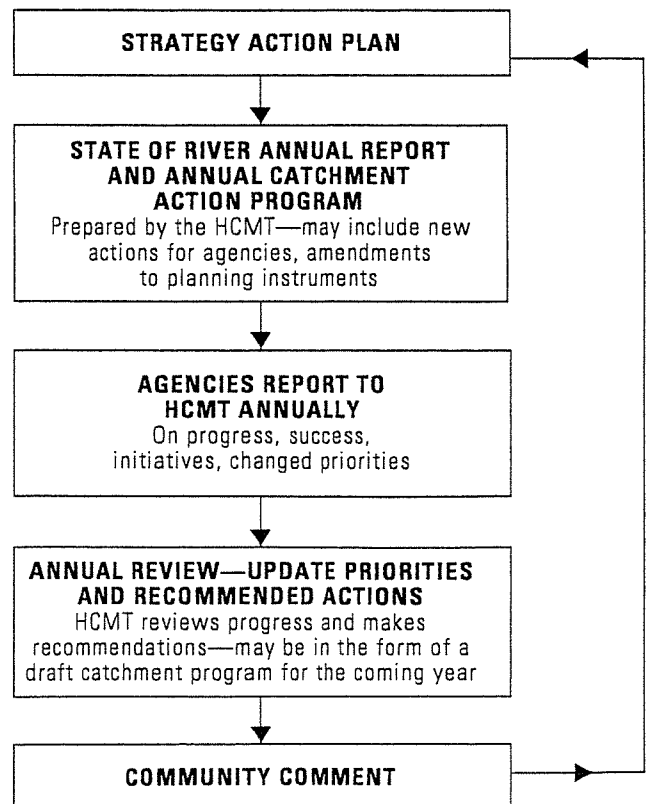
- allow priorities and tasks to be constantly revised to respond to new circumstances and improved knowledge of the catchment
- help to identify gaps in current best practice guidelines or the need for additional guidelines to be developed by particular agencies or through the HCMT.

This process will ensure that the strategy remains relevant, continues to grow in response to changing community needs, and requires all stakeholders to be publicly accountable for their responsibilities within the catchment.

4.4.2 Best Practice Notes

As an ongoing part of its monitoring role, the HCMT will oversee community action and agency programs within the catchment. This process will help identify the need for new best practice notes to be prepared, or the need for existing notes to be updated to reflect new knowledge or technologies. These notes will be integrated into the *Williams River Catchment Best Practice Notes*.

FIGURE 3. THE REPORTING PROCESS



5. Action Plan

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The action plan on the following pages allocates responsibilities for improving the environment of the catchment to various agencies.

For an explanation of the acronyms in the action plan, see the list of abbreviations on page 65.



5.1 IMPLEMENTATION

Policy Objectives for Actions and Tasks

- The strategy should be endorsed and supported as a whole-of-government document.
- Relevant information collected from research and investigations should be widely distributed.
- The strategy should be regularly reviewed and updated (5 year intervals).
- The progress of the strategy and performance of stakeholders should be monitored on an ongoing basis.

Action	Aims	Tasks	Stakeholder Accountable	Other Stakeholders Involved
A Implement and review Regional Planning Strategy for the catchment	<ul style="list-style-type: none"> • To protect and improve water quality • To establish a coordinated and consistent approach to planning • To promote ESD and TCM principles in land use decisions • To ensure flexibility and relevance when implementing the strategy 	<ul style="list-style-type: none"> • Monitor and prepare best practice notes • Implement provisions of REP • Monitor strategy implementation • Review local planning and development control processes • Review strategy after 5 years 	<p>HCMT</p> <p>Local councils HCMT</p> <p>Local councils</p> <p>DUAP</p>	<p>All relevant stakeholders</p> <p>All relevant stakeholders</p>
B Review Special Areas Regulation	<ul style="list-style-type: none"> • To protect and improve water quality • To complement the REP by providing controls for identified pollution sources not controlled by the REP or LEPs 	<ul style="list-style-type: none"> • Finalise review of Special Areas Regulation 	DLWC	HWC
C Responsible agencies endorse and support the strategy as a whole-of-government document	<ul style="list-style-type: none"> • To promote regional coordination and consistency in planning and management 	<ul style="list-style-type: none"> • Adoption of actions by relevant agencies • The strategy should be taken into account when: <ul style="list-style-type: none"> - a public authority or person proposes to carry out development which does not require development consent but which has the potential to adversely affect the environment - a council prepares a local policy pursuant to part 3 of section 7 of the <i>Local Government Act 1993</i> - a public authority considers or approves the carrying out of an activity within the meaning of Part 5 of the EP&A Act - the HCMT carries out a review or identifies further investigations, works or studies 	All relevant stakeholders	

Continued . . .



WILLIAMS RIVER CATCHMENT REP AND REGIONAL PLANNING STRATEGY

Action	Aims	Tasks	Stakeholder Accountable	Other Stakeholders Involved
<p>D Adopt a TCM approach to relevant policy development and works programs</p>	<ul style="list-style-type: none"> To promote sustainable use of the catchment's land, water and associated biological resources 	<ul style="list-style-type: none"> Include TCM objectives in council codes and policies Include TCM objectives in relevant government policies 	<p>Local councils All relevant stakeholders</p>	
<p>E Raise public awareness and profile of TCM</p>	<ul style="list-style-type: none"> To achieve community ownership of TCM approaches 	<ul style="list-style-type: none"> Implement a community education program on catchment issues and strategies Implement Williams River TCM report Consider circular F13 to councils regarding the relationship between planning and TCM, and adopt TCM objectives in council and agency works programs 	<p>HCMT HCMT Local councils</p>	
<p>F Facilitate the role of the HCMT in coordinating and managing actions and outcomes of all relevant stakeholders</p>	<ul style="list-style-type: none"> To ensure that the HCMT is responsible for managing the monitoring process To actively involve the community in the management of the catchment 	<ul style="list-style-type: none"> Oversee, report on and assist in coordination of catchment activities Develop a catchment works program to identify activities to be completed Prepare an annual State of the River Report Seek and negotiate increased funding to enable HCMT to undertake overseeing and monitoring role 	<p>HCMT HCMT HCMT HCMT</p>	<p>DLWC</p>



5.2 ENVIRONMENT

Policy Objectives for Actions and Tasks

- The riparian zone should be conserved and rehabilitated to minimise the adverse effects of uncontrolled access on the stability of stream and river banks and vegetation growth.
- Development of environmentally sensitive areas should be limited or prohibited.
- The natural environment should be conserved and protected wherever possible.
- The results of current and future research and surveys should be incorporated into management plans and taken into account in relevant management decisions when appropriate.
- The protection of aquatic fauna including native fish populations is dependent upon the existence and conservation of particular habitats, water quality and stream flow conditions.
- Biodiversity within the catchment should be conserved.
- Tree management should be incorporated as a land management issue in property plans and catchment planning.

Action	Aims	Tasks	Stakeholder Accountable	Other Stakeholders Involved
A Protect and restore riverine vegetation	<ul style="list-style-type: none"> • To stabilise stream banks • To reduce the velocity of flood waters • To conserve habitat diversity and ecological processes • To protect and enhance riparian environments 	<ul style="list-style-type: none"> • Control development within 30 m of a river or stream • Prepare a management plan for all publicly owned riparian land • Maintain existing vegetation cover • Establish vegetation cover wherever practical and appropriate along cleared stream and river banks 	Local councils, DLWC DLWC Landowners Landowners	DUAP, HCMT HCMT DLWC, local councils DLWC
B Protect existing native flora and fauna	<ul style="list-style-type: none"> • To conserve and enhance remnant vegetation • To conserve habitat diversity and ecological processes • To prevent widespread tree loss • To promote the role and significance of native vegetation 	<ul style="list-style-type: none"> • Locate and identify areas of significant remnant vegetation • Determine management requirements for existing vegetation • Encourage retention or re-establishment of tree cover • Control significant further clearing of rural areas • Prepare criteria and guidelines for LGA-based flora and fauna studies • Undertake LGA-based flora and fauna studies • Assist preparation and implementation of recovery plans for threatened species including identifying areas of critical habitat 	DLWC, HCMT DLWC DLWC Local councils NPWS Local councils NPWS	NPWS NSW Agriculture, State Forests, NPWS, HCMT State Forests, HCMT DLWC DLWC, NSW Agriculture, State Forests, HWC, councils, farmers

Continued . . .



WILLIAMS RIVER CATCHMENT REP AND REGIONAL PLANNING STRATEGY

Action	Aims	Tasks	Stakeholder Accountable	Other Stakeholders Involved
C Protect the landscape and scenic qualities of the catchment	<ul style="list-style-type: none"> To identify, maintain and enhance the visual resources of the catchment 	<ul style="list-style-type: none"> Identify features of high scenic value within crown and other public lands, and prepare management plans for these sites where relevant Assess the visual impact of development Ensure new utilities (e.g. power lines, pump houses, communications equipment) are planned to minimise impact on scenic and conservation values 	DLWC, local councils, State Forests Local councils Relevant service providers	NPWS
D Protect and restore significant wetlands	<ul style="list-style-type: none"> To identify, maintain and enhance the significant wetlands of the catchment 	<ul style="list-style-type: none"> Review and refine the original mapped boundaries of wetlands for statutory purposes under SEPP 14 — Coastal Wetlands Prepare an inventory of other wetlands in the catchment, including their values and status Prepare management plans for wetlands, as appropriate 	DUAP DUAP DLWC, local councils	Local councils, DLWC, WCC Local councils, DLWC, WCC NPWS, WCC
E Improve assessment of environmental impacts	<ul style="list-style-type: none"> To work towards a balanced and sustainable approach to land and water management To consider the cumulative impact of development 	<ul style="list-style-type: none"> Give greater consideration to the cumulative effects of individual developments Improve databases of existing conditions Undertake further research into and surveys of flora, fauna and other ecological values within the catchment Assess the value of decision support systems such as CMSS 	Local councils DLWC DLWC, local councils DLWC	DUAP, EPA, DLWC Local councils NPWS, HCMT, State Forests, State Fisheries HCMT
F Protect fish and fish habitat <i>(continued over)</i>	<ul style="list-style-type: none"> To conserve aquatic fauna and flora To accommodate modern fish management techniques To establish and maintain critical low environmental flow levels 	<ul style="list-style-type: none"> Prepare a fish habitat protection plan Investigate fish resources Monitor operation of the fishway in Seaham Weir Maintain Seaham Weir fishways in accordance with Seaham Weir Operation Plan 	NSW Fisheries NSW Fisheries NSW Fisheries HWC	Hunter Native Fish Inc EPA, HWC, DLWC DLWC

Continued . . .



Action	Aims	Tasks	Stakeholder Accountable	Other Stakeholders Involved
<p>(continued from previous page) F Protect fish and fish habitat</p>		<ul style="list-style-type: none">• Investigate the need for a fish bypass at Balickera Pump Station• Control water extraction during all flows including low flow periods• Investigate cost-benefit of carp control	HWC DLWC NSW Fisheries	NSW Fisheries, DLWC



5.3 LAND USE

Policy Objectives for Actions and Tasks

- Best practices in the management of stormwater and wastewater run-off should be implemented within the catchment.
- Erosion and sedimentation control measures should be encouraged as a matter of priority.
- The riparian zone should be conserved and rehabilitated to minimise the adverse effects of uncontrolled access on the stability of stream and river banks and vegetation growth.
- A 'whole of property' approach to land management should be adopted by landowners.
- Development of prime crop or pasture land for non-agricultural purposes is not consistent with the maintenance of agricultural potential and should be avoided.
- Rural residential and rural living development not connected to reticulated sewage treatment facilities should be able to dispose of all effluent wastes on-site.
- Subdivision of land outside existing urban areas should be based on agreed rural settlement strategies.
- Recreational planning should take into account catchment impacts.
- Intensive uses comprising industrial development and designated development (as per Schedule 3 of the EP&A Act) should only be permitted when the development can demonstrate both the appropriateness or necessity for the use to be located within the catchment, and the ability of the development to operate in a manner which is consistent with this strategy.
- The results of current and future research and surveys should be incorporated into management plans and taken into account in land management decisions when appropriate.

Action	Aims	Tasks	Stakeholder Accountable	Other Stakeholders Involved
A Develop rural settlement strategies	<ul style="list-style-type: none"> • To concentrate rural residential development in the Dungog, Clarence Town and Seaham areas • To ensure rural living opportunities are appropriately located to prevent ad hoc dispersal and protect the water resources of the catchment • To restrict inappropriate and unproductive subdivision of rural lands 	<ul style="list-style-type: none"> • Prepare rural settlement strategies and amend LEPs • Adopt development control plans • Prepare rural living siting and design guidelines • Develop rural subdivision controls which take into account catchment issues 	Local councils Local councils Local councils Local councils	DUAP DUAP DUAP
B Control and maintain on-site effluent disposal systems	<ul style="list-style-type: none"> • To minimise input of nutrients and other pollutants to the river system • To achieve sustainable servicing practices • To ensure on-site effluent systems are not located on flood prone land 	<ul style="list-style-type: none"> • Ensure all new lots are capable of containing and disposing of all effluent wastes on-site. All new on-site disposal systems should be located away from drainage lines, shallow soils or impervious soils. (Minimum lot sizes should not be relied upon when assessing a subdivision.) 	Local councils	NSW Health

Continued . . .



Action	Aims	Tasks	Stakeholder Accountable	Other Stakeholders Involved
		<ul style="list-style-type: none"> • Adopt AS1547 (1994) — Disposal Systems for Effluent from Domestic Premises as a basis pending further refinement of guidelines by the EPA • Prepare effluent disposal soil suitability maps for the catchment • Ensure regular monitoring of on-site effluent disposal systems 	<p>Local councils</p> <p>DLWC</p> <p>Local councils</p>	<p>EPA, HPHU</p> <p>EPA</p>
C Upgrade Dungog Sewage Treatment Works	<ul style="list-style-type: none"> • To eliminate discharges of effluent to the river • To increase the capacity for treatment of nutrients and pathogens 	<ul style="list-style-type: none"> • Investigate and design improved/enlarged sewage treatment facilities • Prepare submissions for grants/funding assistance • Investigate water re-use options 	<p>Dungog Council</p> <p>Dungog Council</p> <p>Dungog Council</p>	<p>PWS, EPA, DLWC, NSW Fisheries, HPHU</p> <p>EPA, DLWC, HPHU</p>
D Provide sewage treatment for Clarence Town and Seaham	<ul style="list-style-type: none"> • To minimise discharges of effluent to the river • To provide for the treatment of sewage wastes, particularly nutrients and pathogens 	<ul style="list-style-type: none"> • Investigate and design sewage treatment works • Prepare submissions for grants funding assistance 	<p>HWC</p> <p>Local councils</p>	<p>Local councils, PWS, EPA, DLWC, State Forests, HPHU</p>
E Control and manage wastewater run-off	<ul style="list-style-type: none"> • To minimise input of nutrients and other pollutants to the river system • To protect and enhance water quality 	<ul style="list-style-type: none"> • Prepare urban stormwater management plans for Dungog, Clarence Town and Seaham • Eliminate effluent from dairy sheds direct to watercourses • Prepare environmental management plans for all new subdivisions adopting a total water cycle approach including sediment and erosion control; minimisation of run-off; potential for water reuse; and design of appropriate treatment facilities 	<p>Local councils</p> <p>Farmers</p> <p>Developers/ local councils</p>	<p>EPA, DLWC</p> <p>EPA, DLWC, NSW Agriculture, NSW Dairy Farmers' Association, NSW Dairy Corporation</p> <p>EPA, DLWC, HPHU</p>

Continued . . .



WILLIAMS RIVER CATCHMENT REP AND REGIONAL PLANNING STRATEGY

Action	Aims	Tasks	Stakeholder Accountable	Other Stakeholders Involved
F Introduce a performance-based approach to residential development in the catchment	<ul style="list-style-type: none"> To achieve consistent planning controls for sustainable residential development To encourage higher densities in Dungog to ensure efficient use of land To provide for higher densities in Clarence Town and Seaham following provision of sewage treatment works in each location 	<ul style="list-style-type: none"> Review Dungog and Port Stephens LEPs Prepare urban development strategy for Dungog, Clarence Town and Seaham 	<p>Local councils</p> <p>Local councils</p>	<p>DUAP</p> <p>DUAP</p>
G Promote a whole-farm-planning approach for all rural properties within the catchment	<ul style="list-style-type: none"> To achieve sustainable agricultural land To reduce erosion sedimentation and nutrient input To assist farmers in identifying problems and applying simple but effective solutions 	<ul style="list-style-type: none"> Prepare whole-of-farm plans addressing where appropriate: <ul style="list-style-type: none"> dairy shed management stock movement irrigation drainage lines access to watercourses on-farm water storage fertiliser application river bank management planting of appropriate plants on effluent disposal areas Adopt conservation farming practices Prepare or distribute best practice notes on: <ul style="list-style-type: none"> cropping/horticulture livestock management pasture management fertiliser use Identify and map areas of: <ul style="list-style-type: none"> potential dryland salinity acid sulphate soils 	<p>Farmers</p> <p>Farmers</p> <p>Relevant agencies</p> <p>DLWC</p>	<p>DLWC, NSW Agriculture, EPA, NSW Dairy Farmers' Association, NSW Dairy Corporation</p> <p>NSW Agriculture, DLWC</p> <p>HCMT</p>
H Prepare a catchment recreation management and development plan	<ul style="list-style-type: none"> To reduce recreational conflict To identify appropriate locations and control measures for recreational activities To protect natural resource values and meet acceptable recreation demand 	<ul style="list-style-type: none"> Relevant factors to be resolved include the need to: <ul style="list-style-type: none"> maintain a range of recreational opportunities in the catchment make decisions on power boat activity consistent with government response to Healthy Rivers Commission Report <p><i>(continued over)</i></p>	<p>HCMT</p> <p>Relevant agencies</p>	<p>Local councils, NSW State Forests, NPWS, MSB, DLWC, HPHU, landowners, tourism and recreational groups</p>

Continued . . .



WILLIAMS RIVER CATCHMENT REP AND REGIONAL PLANNING STRATEGY

Action	Aims	Tasks	Stakeholder Accountable	Other Stakeholders Involved
	<ul style="list-style-type: none"> • To achieve sustainable recreational activities • To raise community awareness of the catchment's recreational resources and the need for appropriate use of them 	<ul style="list-style-type: none"> - manage and control recreational vehicles - provide toilet facilities with proper effluent disposal for designated camping areas - plan and control riparian recreational use - develop and promote codes of behaviour to encourage responsible recreational use of land and water resources • Involve key recreational groups in identifying: <ul style="list-style-type: none"> - significant recreational resources - impacts that may arise from use of these resources - management options to reduce impacts 		
I Prepare catchment erosion and sediment control plans	<ul style="list-style-type: none"> • To minimise sedimentation and erosion • To reduce nutrient input into the river system 	<ul style="list-style-type: none"> • Finalise draft policy for urban development • Prepare erosion and sediment control policy for rural development • Prepare and implement sediment plans/ rehabilitation plans for: <ul style="list-style-type: none"> - landfill sites - quarries, gravel and borrow pits - infrastructure provision - forestry - subdivision or siteworks - railway easements • Identify areas of erosion and prioritise remedial action 	HCMT, local councils HCMT, DLWC Landowners, relevant agencies DLWC	DLWC Local councils Local councils
J Review practice and procedures within State Forests	<ul style="list-style-type: none"> • To reduce the impact of forestry on water quality • To ensure best practices are adopted 	<ul style="list-style-type: none"> • Manage recreational vehicle use within State Forests • Ensure forestry operations and procedures do not increase erosion and sediment or nutrient inputs 	State Forests State Forests	EPA, DLWC EPA, DLWC

Continued . . .



WILLIAMS RIVER CATCHMENT REP AND REGIONAL PLANNING STRATEGY

Action	Aims	Tasks	Stakeholder Accountable	Other Stakeholders Involved
K Review practice and procedures in relation to track and road construction and maintenance	<ul style="list-style-type: none"> To reduce erosion and sedimentation To reduce disturbance to stream banks and beds and to riparian vegetation To ensure best practices are adopted 	<ul style="list-style-type: none"> Design, construct and maintain tracks and roads (sealed and unsealed) to avoid sediment input or run-off to streams New tracks or roads parallel to or close to streams should be avoided and crossings minimised 	<p>Local councils, landowners</p> <p>Local councils, landowners</p>	<p>DLWC</p> <p>DLWC</p>
L Implement appropriate development control	<ul style="list-style-type: none"> To minimise input of nutrients, sediments and other pollutants to the river system To provide for the orderly and efficient use of land To ensure satisfactory location of development To achieve consistent planning controls for sustainable development 	<ul style="list-style-type: none"> Consider matters raised in section 4.2 when drafting relevant LEPs and DCPs and when assessing development applications for land located within the catchment Implement REP 	<p>Local councils</p> <p>Local councils</p>	<p>DUAP</p> <p>DUAP, HCMT</p>
M. Control development which has a potential to reduce water quality	<ul style="list-style-type: none"> To maintain and protect water quality levels To work towards sustainable land use practices 	<ul style="list-style-type: none"> Require development consent for all land uses which can reduce water quality Prohibit development where impacts cannot be reasonably mitigated against Prohibit instream extraction of sand or gravel except for river maintenance 	<p>Local councils</p> <p>Local councils</p> <p>Local councils</p>	
N Protect cultural heritage resources	<ul style="list-style-type: none"> To determine likely occurrence of Aboriginal sites or places within the catchment To record and where relevant conserve cultural heritage resources 	<ul style="list-style-type: none"> Develop predictive model for determining occurrence of Aboriginal sites or places within the catchment Prepare guidelines to assist in the development of management plans for sites or places of significance 	<p>NPWS</p> <p>NPWS</p>	



5.4 WATER QUALITY

Policy Objectives for Actions and Tasks

- Water quality criteria for the catchment should be based on the premise that:
 - aquatic ecosystem protection is required within sub-catchments having high conservation values
 - the river is a source of drinkable water which also requires storage prior to distribution
 - the river is required for primary contact recreational uses.
- Criteria should be established for environmental flows and operational rules for consumers.
- Decisions relating to land use and management of the river should seek to reduce pollution and otherwise improve water quality. (The whole catchment should be considered in seeking solutions).
- Nutrient management strategies are required for the maintenance of water quality.
- Access by people and stock to rivers and streams should be managed to minimise adverse impacts on vegetation growth, bank stability and aquatic flora and fauna.
- The riverine landscape should be conserved and protected wherever possible.
- The results of current and future research and surveys should be incorporated into management plans and taken into account in water management decisions wherever appropriate.
- Water quality monitoring should be designed to expose trends in the cumulative impacts of land use changes.

Action	Aims	Tasks	Stakeholder Accountable	Other Stakeholders Involved
A Prepare a water management plan	<ul style="list-style-type: none"> • To guide water management decisions • To ensure adequate water supply for all identified uses, namely: <ul style="list-style-type: none"> - environment - recreation - drinking water - agricultural uses • To protect and enhance the ecology of rivers and streams 	<ul style="list-style-type: none"> • Complete investigations into environmental flow requirements • Implement water allocation plan to specify allocation rules • Require water management plans as a condition of new water licences • Investigate flushing of the Seaham Weir pool 	DLWC DLWC DLWC DLWC	HWC, EPA, HPHU HPHU HWC
B Initiate improved water monitoring and survey	<ul style="list-style-type: none"> • To gain a greater understanding of the aquatic ecosystem • To assist in the management of the river • To monitor changes in and cumulative impacts on water quality as they occur • To identify sources of nutrients and pollution 	<ul style="list-style-type: none"> • Review existing water quality monitoring and expand if necessary • Carry out event-based water quality sampling with results made available to the community • Accelerate research into suitable biological indicators (species or communities) of water quality 	DLWC HWC DLWC	HWC, EPA, HPHU HCMT, DLWC, HPHU EPA
C Initiate a groundwater monitoring program	<ul style="list-style-type: none"> • To gain a greater understanding of groundwater systems in the catchment 	<ul style="list-style-type: none"> • Undertake a watertable monitoring and assessment program • Survey current groundwater users to gain a better understanding of usage rates and extent of aquifers 	DLWC	HCMT, HPHU

Continued . . .



WILLIAMS RIVER CATCHMENT REP AND REGIONAL PLANNING STRATEGY

Action	Aims	Tasks	Stakeholder Accountable	Other Stakeholders Involved
D Minimise consumption of water	<ul style="list-style-type: none"> To work towards sustainable use of water To postpone the need for further increase of water storage facilities To educate the public in responsible water usage 	<ul style="list-style-type: none"> Continue to actively promote and encourage water conservation and re-use 	DLWC	DLWC, local councils, HPHU
E Initiate the protection and enhancement of the riverine corridor	<ul style="list-style-type: none"> To improve bank stability To reduce erosion and sedimentation of the river To reduce turbidity levels, particularly in periods of high flow To protect native vegetation and facilitate regrowth To manage human and stock access to rivers and streams 	<ul style="list-style-type: none"> Enforce regulations regarding power boat use on Seaham Weir pool Expand the Rivercare planning approach Prepare and circulate a list of appropriate species for river bank revegetation and stabilisation When appropriate, provide for stock watering and shade trees away from river and stream banks Identify locations where fencing of the river would be appropriate and desirable, or other access denial mechanisms Prepare grazing guidelines for riparian lands Review river channel maintenance programs and rehabilitation works Define prescribed streams within the catchment 	HWC, DLWC MSB DLWC HCMT Farmers Farmers, Landcare and Rivercare groups NSW Agriculture DLWC DLWC	HCMT DLWC NSW Agriculture, DLWC, State Forests, HCMT HCMT DLWC HCMT
F Develop a program of household awareness of water quality issues	<ul style="list-style-type: none"> To raise community awareness To reduce nutrient inputs from households To promote sustainable practices 	<ul style="list-style-type: none"> Implement a phosphorus awareness campaign, e.g.: <ul style="list-style-type: none"> use low phosphorus detergents control domestic animal pollution including dogs, horses and cattle wash cars on the lawn put no lawn clippings or garden refuse in drains 	HCMT	Local councils, EPA, DLWC, HWC, HPHU

Continued . . .



Action	Aims	Tasks	Stakeholder Accountable	Other Stakeholders Involved
<p>G Develop a program of rural land use awareness of water quality issues</p>	<ul style="list-style-type: none"> • To raise community awareness • To reduce nutrient inputs from rural sources • To promote sustainable practices 	<ul style="list-style-type: none"> • Implement a phosphorus awareness campaign to: <ul style="list-style-type: none"> - restrict livestock access to the river - protect riparian vegetation - use fertiliser appropriately - recycle/re-use rural waste 	<p>HCMT</p>	<p>Local councils, EPA, DLWC, HWC</p>
<p>H Establish water quality objectives for the Williams River</p>	<ul style="list-style-type: none"> • To seek agreement on water quality objectives for the minimum requirements of: <ul style="list-style-type: none"> - drinking water - ecological processes - primary recreational use • To facilitate appropriate public consultation • To complement the REP • To incorporate into redrafted Special Areas Regulation 	<ul style="list-style-type: none"> • Develop water quality objectives and management guidelines, giving the ANZECC guidelines local relevance 	<p>Healthy Rivers Commission</p>	<p>EPA, NPWS, DLWC, NSW Agriculture, NSW Fisheries, HPHU</p>

Abbreviations

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- ANZECC Australian and New Zealand Environment Conservation Council
- BMP Best management practice
- BPN Best practice note
- CMSS Catchment management support system
- CSIRO Commonwealth Scientific and Industrial Research Organisation
- DCP Development control plan
- DLWC Department of Land and Water Conservation
- DUAP Department of Urban Affairs and Planning
- EPA Environment Protection Authority
- EP&A Act *Environmental Assessment and Planning Act 1979*
- ESD Ecologically sustainable development
- HCMT Hunter Catchment Management Trust
- HPHU Hunter Public Health Unit
- HWC Hunter Water Corporation
- IQQM Integrated quality/quantity model
- LEP Local environmental plan
- LGA Local government area.
- MSB Maritime Services Board
- NPWS National Parks and Wildlife Service
- NSW LEAP New South Wales Local Environment Action Program
- PWS Public Works and Services Department
- REP Regional environmental plan
- SEPP 14 State Environmental Planning Policy No. 14 — Coastal Wetlands
- TCM Total catchment management
- WCC Wetlands Conservation Committee

Glossary

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Best practice notes Suggestions put into practice to lessen the impact of a development or activity on the environment. These are useful management tools rather than restrictions and can be both structural and procedural.

Development application An application made under the EP&A Act, to undertake development which requires consent. Development as defined in the Act includes not only the erection of a building on certain land, but the use or subdivision of that land.

Ecologically sustainable development (ESD) Using, conserving and enhancing the community's resources so that ecological processes on which life depends are maintained, and the total quality of life, now and in the future, can be increased.

Environmental impact statement (EIS) A document prepared by the proponent to present a case for the assessment of a proposal as part of the environmental impact assessment process required under the administration procedures in the Act.

Environmental Planning and Assessment Act 1979
The New South Wales legislation which requires the council (or other consent authority) to consider the impact of development on the environment and provides 'improved opportunity for public involvement and participation in environmental planning and assessment'.

Extractive industry Industry based on exhuming resources out of the ground, for example mining and quarries.

Fauna All animal life of a given time or place.

Flora All plant life of a given time and place.

Habitat The environment in which a plant or animal lives and often described in terms of its geography, climate and plant association.



Intensive agriculture A method of farming in which there are high inputs of capital and labour leading to high output in an area. The most intensive farming is generally confined to relatively small areas of land, as with cattle feedlots, market gardening or mushroom growing as defined in the Williams River catchment regional environmental plan.

Integrated resource management Management which concentrates on the links between water, land, vegetation, wildlife, and other resources. Such management focuses on ecological processes, typically the hydrological cycle, and recognises that particular resource uses have implications for interrelated resources and alternative uses.

Integrated Quantity/Quality Model (IQQM) A daily generalised integrated water quality/quantity simulation modelling suite suitable for water resources management and planning purposes at the river basin scale, and capable of addressing water quality and environmental issues.

Landfill Solid or liquid material disposed of by burial in the ground.

Leaching The process of removing nutrients or harmful elements from soil by percolation.

Local environmental plan A planning instrument prepared by council (as a draft LEP) to control development on land. These plans frequently introduce a change in zone for a particular area of land. The plan may affect one parcel of land or a locality or the entire local government area.

On-site effluent disposal systems Systems which treat and utilise domestic wastewater from a household completely within the boundary of the premises.

Regional environmental plan (REP) A planning instrument prepared by the Department of Urban Affairs and Planning and affecting a defined region of the State.

Riverine corridor For the purpose of this strategy, refers to the land within 100 metres of the river.

Salinisation The accumulation of salts in the soil to a level that causes soil degradation.

Sediment Soil particles of rock fragments transported and deposited by the action of rivers, glaciers, sea and wind.

Sedimentation The process which measures the rate of settling material deposited from water, ice or wind.

SEPP 14 — Coastal Wetlands Identifies wetlands along the NSW coastline and gives them an identification number. If any development is lodged with council in a designated wetland, the application must be accompanied by an EIS to examine the full environmental impacts.

Soil erosion The accelerated removal of soil through various processes such as wind and water, at a greater rate than it is formed.

Sodic soils Soils having a high erosion potential when their sub-surface is exposed to weathering through clearing or disturbance.

Sustainability The ability to maintain a high quality of life for all people both now and in the future, while ensuring the maintenance of the ecological process on which life depends, and continued availability of the natural resources needed. It is the ability to maintain a desired condition over time.

Total catchment management (TCM) The coordinated and sustainable use and management of land, water, vegetation and other natural resources on a water catchment basis to balance resource utilisation and conservation.

Whole-farm planning A way in which farmers can plan for future development on a property which avoids or minimises deterioration of resources, and helps to minimise costs and optimise yields. A way in which farmers can both increase productivity and conserve biological diversity through physical, financial and natural resource planning.

Whole-of-property approach See whole-farm planning.

Williams River catchment Land from which surface water run-off resulting from rainfall flows directly or indirectly into the Williams River.

