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Lower Gascoyne Management Strategy

REVIEW OF SOIL CONSERVATION LEGISLATION: CARNARVON HORTICULTURAL AREA



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Lower Gascoyne Management Strategy

**REVIEW OF SOIL CONSERVATION LEGISLATION:
CARNARVON HORTICULTURAL AREA**

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December 2002

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PROJECT DESCRIPTION

The Carnarvon horticultural area has suffered considerable erosion damage following flooding of the Gascoyne River. Factors contributing to the erosion include a move to greater vegetable production, the carrying out of unauthorised earthworks and general confusion about the laws that apply to land management and erosion control.

With this context, the purpose of this report is:

- *to clarify the laws applying to erosion control in the Carnarvon horticultural area;*
- *to identify the public authorities with management responsibility for erosion control; and*
- *to suggest a model by which erosion controls and management responsibilities can be conducted in a more coordinated and efficient manner.*

The report will also look at non-regulatory opportunities to encourage the adoption of sustainable management practices – recognising that a ‘carrot and stick’ approach is likely to yield the best results.

Note that this report focuses on land degradation in the form of erosion. Other forms of environmental harm (for example, contamination caused by chemical use) are not considered, although some of the general principles may be relevant.

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EXECUTIVE SUMMARY

1. Background

The Carnarvon horticultural area suffered significant damage following the flooding of the Gascoyne River in March 2000. In addition to damage to buildings and infrastructure, many thousands of tonnes of fertile alluvial soil was washed away. Future losses of this scale are unsustainable, and risk permanently damaging the resource base upon which both industry and the natural environment relies.

A number of land use practices have contributed to erosion damage within the horticultural area. These include:

- Removal of native vegetation and ground cover;
- Shift from tree crops to vegetable production;
- Unregulated construction of fences, levee banks and other earthworks; and
- Unregulated use of public lands in sensitive areas.

In response to the flood damage, the local community has sought to identify mechanisms to minimise future losses. One of these mechanisms is the better understanding and enforcement of relevant land conservation laws. The principle purpose of this report is therefore to identify the relevant laws and the public authorities responsible for their administration. This review will extend to examining the limitations of the regulatory model and recommending options for adapting the laws to local conditions, and ensuring a better mix of both 'carrots and sticks'.

2. Legislative controls on land degradation

There are a number of laws applying to land degradation in Western Australia. These laws are administered by several different public authorities. This division of responsibilities reflects the history of natural resource management legislation in Australia, where the environment was seen as capable of being divided into its component parts. Accordingly, separate laws were developed to cover minerals, native species, water use and land uses. This division of legal control largely remains to this day, with resultant confusion over the roles and responsibilities of different public authorities.

The discussion that follows identifies existing legal mechanisms for controlling land degradation. These laws are divided into two categories – those laws which are currently in use and those that could be used in the future. These will be examined in turn.

2.1 Existing legal controls for preventing erosion

(a) *Notice of intent to clear land*

An owner or occupier proposing to clear land must notify the Commissioner of Soil and Land Conservation at least 90 days before commencing the clearing vegetation if:

- The area to be cleared is over 1 hectare;
- There will be a change in use of the land (for example, changing the use from native vegetation to crops);
- The land is not within a controlled country area water catchment; and
- The clearing is not for the purpose of taking trees for firewood, posts or timber.

Changes announced to the *Environmental Protection Act 1986* mean anyone unlawfully clearing land after 26 June 2002 may be ordered to revegetate that area. The offender may

also face a charge of causing environmental harm, where the maximum penalty is proposed to be \$1 million.

(b) Soil conservation notices

Where the Commissioner of Soil and Land Conservation is concerned that land degradation (salinity, flooding, erosion, eutrophication) is likely to result from any agricultural practice or land clearing proposal, a soil conservation notice can be issued to prevent that practice from continuing.

Notices can direct a person to refrain from certain conduct, or to take steps to prevent land degradation occurring. This may include ordering a person to alter his or her land use practices to address an erosion risk.

(c) Interference or obstruction of a watercourse

It is an offence for a person to obstruct or interfere with a watercourse in a proclaimed area or irrigation district without approval.

(d) Controls on 'developments' under town planning schemes

The Carnarvon Shire's town planning scheme requires a person to obtain approval before commencing a development. A 'development' includes a material change in the use of the land or engineering works affecting the existing topography of the land. Special provisions apply to land uses and developments which may contribute to damage by flooding.

(e) Environmental assessment of significant proposals

A development that appears likely to have a significant effect on the environment must be referred to the Environmental Protection Authority (EPA) for an environmental impact assessment. If the proposal is approved, it may be subject to stringent environmental conditions.

Additional controls apply for development proposals that are likely to have a significant impact on a matter of national environmental significance, including World Heritage Areas and listed threatened species.

(f) Unlawful interference with Crown land

A person commits an offence by clearing, enclosing, cultivating or allowing stock to graze on Crown land without approval. 'Crown land' is defined as any land other than freehold land.

It is also an offence for a person to:

- to kill or injure native flora from Crown land without a licence from the Department of Conservation and Land Management (CALM); or
- to sell native flora taken from private land without a licence from CALM.

Higher penalties apply for taking *rare or endangered* species.

2.2 Options for improving environmental regulation

(a) Regulations to control land use practices

Regulations may be made under the *Soil and Land Conservation Act 1945* to control certain activities within a land conservation district. Regulations made under this power can place restrictions on the use of any land for agricultural or pastoral purposes.

(b) Levies to fund land conservation works

A soil conservation rate or service charge can be imposed on land within a land conservation district.

Funds raised through a rate or service charge can be used for a number of things, including the construction of soil conservation works to benefit the district.

A differential rate or service charge can be applied to provide an incentive for landowners to adopt sustainable land management practices.

(c) Controls on private levees

By-laws may be made to regulate or control the erection of levee banks.

The Water and Rivers Commission can direct that works that contravene the by-laws be removed at the expense of the owner or occupier of the land. If the offender refuses to comply with a direction, the Commission may enter the land and undertake the work, and recover the cost from the offender.

(d) Environmental conditions on water licences

In considering applications for licences to take water, the Commission is to have regard to all matters that it considers relevant, including whether the proposed taking and use of water is ecologically sustainable and environmentally acceptable. It is possible this power could be used to require landholders to adopt sustainable land management practices before a water licence is granted.

(e) Environmental protection policies

Environmental Protection Policies (EPPs) can be made for the protection of any portion of the environment or the prevention, control or abatement of pollution. This would include an EPP being developed for the protection of riverine environments, such as the lower Gascoyne River.

(f) Notices to landholders to control erosion

A local government may give a person who is the owner or occupier of land written notice requiring the person to:

- Repair any damage caused to a public place that is local government property;
- Ensure that rubbish or disused material is removed from land;
- Take specified measures for preventing or minimising sand drifts that are likely to adversely affect other land;
- Take specified measures for preventing or minimising:
 - (a) danger to the public; or
 - (b) damage to property,which might result from cyclonic activity.

(g) Covenants, conditions and warnings on freehold title

The Minister for Lands may place a *covenant* on any land before it is alienated (that is, sold to a private purchaser). A covenant is a legal obligation formally registered on the title to land. A covenant may make place restrictions on the way in which that land is used.

The Minister for Lands may also transfer Crown land in fee simple subject to such conditions concerning the use of the land as the Minister determines.

Finally, the Minister may endorse on the certificate of title of land a statement warning of hazards or other factors affecting, or likely to affect, the use or enjoyment of that land. This could include a warning that the land is in a floodway or is liable to inundation.

(h) Control of introduced plants

The Agriculture Protection Board can declare species of plants to be 'declared'. In making a declaration, the Board assigns a category to the species, which stipulates how the plant in question is to be managed.

In addition, local governments may introduce local laws for the control of 'pest plants' within their district. Local laws can be made to declare a pest plant where the plant is likely to adversely affect the value of property in the district or the health, comfort or convenience of the inhabitants of the district.

(i) Control of vehicles

The creation of unauthorised tracks along sensitive areas of the floodplain has caused erosion within the horticultural area. One option for controlling this activity is to declare certain parts of the floodplain to be 'prohibited' areas in respect to vehicular movement.

3. Limitations of the regulatory approach

The above laws provide a comprehensive (if perhaps complicated) regime for regulating most activities which may contribute to land degradation in Carnarvon. However, laws can only go part of the way to achieving sustainable land management outcomes. The limitations of the regulatory or 'command and control' model are considered below.

3.1 Cost of enforcing environmental laws

The cost of enforcing land use laws can be considerable. This includes investigating complaints, identifying the alleged offender, gathering evidence, obtaining legal advice, seeking settlement with the alleged offender, and (if necessary) taking a prosecution to court.

Public authorities do not have unlimited resources to devote to law enforcement activities. Rather, priorities may be set, which sees more serious breaches prosecuted, whilst less serious breaches are not. In determining whether or not to devote scarce resources to law enforcement activities, the public authority may take into account:

- The magnitude of the harm caused by the breach, including harm to others;
- The willingness of the alleged offender to cease or correct the wrongful activity;
- The likelihood of the action being successful;
- Consequences of not taking action (for example, whether it will encourage greater disobedience); and
- Whether taking action would serve as a useful deterrent to others.

It may be difficult therefore for enforcement authorities to take action against small or medium-sized enterprises – especially where their individual contribution to environmental harm is small.

3.2 Lack of adequate 'carrots and sticks'

Allied to the previous point, people are less likely to comply with the law where:

1. Compliance costs are high and rewards low;
2. Consequences of not obeying the law are minor or non-existent; and
3. No action is taken against people ignoring the law.

Accordingly, a modern regulatory system should include appropriate 'carrots' and 'sticks' to ensure people doing the right thing are rewarded for their effort, and those who are not are appropriately penalised.

One method of encouraging adoption of more sustainable land use practices is through the development of a voluntary industry 'code of practice', backed by a complementary regulatory regime. The Department of Agriculture is currently developing best management practices for the horticulture industry in Carnarvon, and it is recommended these form the basis of an industry code of practice. Once the code of practice has been developed, it could be independently approved by the Department of Environmental Protection (DEP) in accordance with proposed changes to the *Environmental Protection Act*. The approved code of practice can then be used to 'leverage' the following outcomes:

Linking government approvals with industry code of practice

Landholders implementing an approved code of practice should be rewarded with reduced compliance burdens. As an example, applicants for water licences who have adopted the code of practice may be exempt from having to submit a full proposal in support of their application. Conversely, landholders that have not adopted the code may be asked to submit full details on the proposed use of the water to ensure appropriate environmental measures are taken into account.

Enforcement of codes of practice through soil conservation notices

Once an approved code of practice is adopted by the industry, non-compliance could form the basis of enforcement action. For example, the Commissioner of Soil and Land Conservation could issue a soil conservation notice requiring a landholder to implement the terms of a code of practice to address an erosion risk.

Environmental harm and approved codes of practice

Where a code or practice is approved by the Department of Environmental Protection, it becomes a defence to a charge of causing environmental harm under proposed changes to the *Environmental Protection Act*. This means that anyone adopting an approved code cannot be charged if their activities cause environmental harm. As the penalties for causing serious environmental harm are up to \$1 million, there is a significant incentive for landholders to adopt an approved code.

Rate relief

Landholders managing their land in accordance with the terms of an approved code of practice could receive a discount on rates imposed under the *Soil and Land Conservation Act* or *Local Government Act*.

Supply chain pressure - government purchasing

The State Government, through hospitals, schools and prisons purchases large quantities of fresh produce every year. Purchasing guidelines could be amended to require government departments to source purchases of fruit and vegetables from accredited producers.

Flood restoration works

Landholders who contribute to erosion damage through inappropriate land uses should not be rewarded with taxpayer-funded rehabilitation works following a flood event. This practice rewards bad land management, and acts as a significant disincentive for landholders to adopt more sustainable practices.

4. Recommended model for Carnarvon

The above options are examples of the way in which a more progressive regulatory system can be implemented in Carnarvon. Importantly, such a system can largely be implemented without having to amend existing laws.

The following recommendations should guide the development of a more effective land management regime within the Carnarvon area:

1. Develop code of practice for sustainable land use

Best management practices (BMPs) for horticultural land use being developed by the Department of Agriculture should be approved by the Department of Environmental Protection (DEP) as an industry 'code of practice'. The approval of the code by the means that anyone adopting the code would have a defence to any 'environmental harm' caused by their land use.

2. Local land use regulations

Regulations can be developed under the *Soil and Land Conservation Act 1945* which could place restrictions on land use within areas susceptible to erosion. As an example, the regulations could prohibit the growing of anything other than tree crops within defined floodways.

3. Planning controls for floodways

The Shire of Carnarvon's town planning scheme should prohibit/regulate use of land within floodways and flood storage zones in accordance with the recommendations made in the *Carnarvon Floodplain Management Study*.

4. Landcare levies for funding rehabilitation works

A compulsory landcare levy could be raised to provide funds to undertake land conservation works within the district. Funds could be used for rehabilitation works, or to promote the development and implementation of a code of practice (including assisting growers understand the code and implement it on their land).

5. Link code of practice to soil conservation notices

The Commissioner of Soil and Land Conservation can issue a soil conservation notice to a landholder to prevent land degradation being caused. It is possible the Commissioner could require the landholder adopt an approved code of practice to address a land degradation risk.

6. Controls on erecting levee banks

Flood protection by-laws should be introduced to control the construction, use and removal of private levees within the lower Gascoyne River.

7. Guidelines for proper use of the river bed and banks

It is an offence to interfere or obstruct with the bed or banks of the Gascoyne River. The Water and Rivers Commission should publish guidelines on the application of this law to clarify landholder's responsibilities.

8. Linking water licences with approved code of practice

The potential for water licenses to be linked to the adoption of an approved code of practice should be explored, as this would provide a tangible incentive for landholders to adopt more sustainable land management practices.

9. Illegal rubbish dumping

The Shire of Carnarvon should monitor and take action to ensure rubbish is not disposed of in the river or other public or private lands.

10. Illegal use of Crown land

The correct boundaries of Crown lands need to be identified and action taken against landholders illegally occupying or developing Crown land.

11. Conditions on title to land

Ensure the titles of new releases of land subject to flooding contain legally enforceable conditions stipulating the use to which that land may be put.

12. Protection of native plants and animals

Details of local declared rare flora should be made known, and protection measures incorporated into the code of practice.

13. Control of pest plants

Shire of Carnarvon could introduce local laws requiring environmental weeds to be controlled on land within the Carnarvon horticultural area. Management measures could be incorporated into the code of practice.

14. Restrictions on motor vehicle use

Declare the river and associated reserves to be prohibited areas for motor vehicle use.

15. Environmental impact assessments

Ensure all major development proposals impacting on the local environment or on any matter of national environmental significance are referred for appropriate environmental impact assessment.

16. Link government purchasing with code of practice

Link government purchasing of fruit and vegetables to code of practice.

17. Remove incentives that promote bad management practices

Link access to free erosion rehabilitation with land use practices, such as adoption of the code of practice.

5. Conclusion

The Carnarvon horticultural industry is well placed to implement a progressive regulatory regime to encourage the adoption of sustainable management practices. The regulatory tools either currently exist or will be established by mid-2003. Adopting this approach, positive outcomes will include greater ownership of environmental problems by local landholders; reduction in land degradation; greater incentives for complying with the law and lower law enforcement costs.

1. BACKGROUND

1.1 Carnarvon horticultural area

The Carnarvon horticultural area is located near the mouth of the Gascoyne River, approximately 900 kilometres north of Perth. The horticultural area extends from the town of Carnarvon inland for approximately 19 kilometres. The area is well suited to semi-intensive horticultural production, given its sub-tropical climate, relative proximity to the Perth market, availability of fresh groundwater supplies and relatively fertile alluvial soils along the lower reaches of the river.¹

Main production crops in the area are bananas, mangoes, grapes, citrus and a range of vegetables including tomatoes and capsicum. Being a particularly dry area, water for irrigation is drawn from an aquifer under the normally dry riverbed. The aquifer is recharged during river flows. Water use is regulated by licences issued by the Water and Rivers Commission.²

The value of Carnarvon's horticultural production in 2000 was approximately \$36 million. Vegetable production has increased markedly in recent years, and now accounts for approximately 70% of total production. Most of the production is to supply the Perth market, although there is an increasing trend to supply out of season produce to the Eastern States and overseas markets.³ There are plans to expand the horticultural area inland.⁴

Carnarvon is also the major commercial centre for the Gascoyne/Murchison pastoral region and contains important areas of natural heritage, including Ningaloo Reef to the north, Kennedy Range to the east, and the Shark Bay World Heritage Area, the boundary of which commences in waters a short distance to the south of the town.⁵

1.2 Flooding in the Gascoyne River

The Gascoyne River catchment is the largest in Western Australia, covering some 72,000 square kilometres.⁶ For a catchment of this size, flooding is a normal occurrence, particularly in the delta at Carnarvon. Major floods in March 1999 and March 2000 resulted in significant erosion within the horticultural area, with economic losses being estimated at around \$20 million.⁷

Rehabilitation of the flood damage in 2000 was from soil taken from Brickhouse Station. Reserves of suitable 'replacement' soils are limited, so it is important for the future of the industry that further erosion losses are minimised.⁸

¹ *Horticulture in the Gascoyne Region*, Kesi Kesavan, Department of Agriculture, Carnarvon, December 2001, page 1.

² *Rights in Water and Irrigation Act 1914*, section 26D.

³ *Horticulture in the Gascoyne Region*, Kesi Kesavan, Department of Agriculture, Carnarvon, December 2001, pages 1-2.

⁴ Pers comm Karen White, Department of Agriculture, Carnarvon, November 2002.

⁵ Legal controls are in place to prevent damage to World Heritage Areas, and these could be relevant to land management issues in the Carnarvon horticultural area, particularly in regards to chemical contamination and sedimentation that may affect the Shark Bay area: *Environment Protection and Biodiversity Conservation Act 1999* (Cwth). See discussion below at paragraph 3.6.6.

⁶ *Benefits of Flood Mitigation in Australia*, page 21, Bureau of Transport and Regional Economics, Canberra, May 2002.

⁷ Pers comm, Rick Bretnell, Water and Rivers Commission, Perth, October 2002.

⁸ *Lower Gascoyne River: Action Plan (Draft)*, Nicole Siemon, April 2001, paragraph 4.3.3.

1.3 Practices contributing to erosion

The draft *Carnarvon Floodplain Management Study* identified two major factors contributing to the erosion risk in the horticultural area: earthworks and land management practices.⁹

1.3.1 Obstructions and earthworks

Construction of fences, private levees and other earthworks has the potential to alter the flow characteristics of floodwaters, leading to increased turbidity and erosion.

1.3.2 Cultivation practices

Cultivation of flood-prone land for vegetable production offers little protection from the rapid movement of water during a flood. By contrast, tree crops incorporating appropriate ground cover species have the potential to slow the movement of floodwater, and thus reduce the severity of erosion.

Banana plantations also pose a risk of erosion, as their density can impede the flow of floodwaters, concentrating water flows on surrounding land. This can increase the risk of erosion on other land.¹⁰

1.3.3 Other damaging practices

The following activities also contribute to erosion damage within the horticultural area:

- The removal of native vegetation from flood-prone land, especially adjacent to the river banks;
- Inappropriate construction of private irrigation works on the banks and in the bed;
- Uncontrolled sand extraction from the river bed;
- Illegal developments within the river reserve and other Crown land;
- Rubbish dumping in the bed and floodways;
- Weed infestation; and
- Uncontrolled development of access tracks along the river foreshore and banks.¹¹

1.4 Roles and responsibilities of public authorities

There are a large number of laws applying to the management of erosion within the Carnarvon horticultural area. These laws are administered by a number of different authorities, leading to confusion over roles and responsibilities. Thus, a key purpose of this report is to identify relevant laws, clarify management responsibilities and recommend reforms where necessary. Refer to Chapter 3 for the review of relevant laws.

⁹ *Carnarvon Floodplain Management Study*, draft report, Sinclair Knight Merz, October 2002, paragraph 7.3.

¹⁰ *Flooding of the Gascoyne River at Carnarvon: Recommendations from the Carnarvon Farm Recovery Committee*, David Parr, August 2000.

¹¹ *Lower Gascoyne River: Action Plan (Draft)*, Nicole Siemon, April 2001, Chapter 4 and 5.

1.5 Motivators for sustainable production

There are a number of motivators for landholders to adopt sustainable land use practices:

- Community pressure for industry to improve environmental standards;
- Direct cost of replacing lost soil and productive capacity;
- Market trends, especially growing consumer demand for sustainably produced primary products;
- Supply chain pressure, with supermarkets and wholesalers increasingly demanding quality assurance systems;
- Financial rewards for producing sustainable products for developing markets; and
- Fear that without improvement in standards, regulations will become more onerous.

One method industry can use to improve environmental performance is to develop and encourage the adoption of *best management practices* for that industry. Over time, the adoption of these standards by industry participants might be used to underpin a formal accreditation system. Accredited participants might secure additional markets and obtain higher returns for their products, thus providing an economic incentive for other producers to improve their standards.

Government too benefits from an industry voluntarily adopting higher environmental standards. The advantages of self-regulation include greater ownership of environmental problems by industry, better matching of the law to the industry or region, and reduced compliance and enforcement costs.¹²

¹² 'Environmental Regulation and Cleaner Production Partnerships with Small and Medium Sized Enterprises: A Case Study', *Environmental Planning Law Journal*, Neil Gunningham and Darren Sinclair, August 2001.

2. COMMON LAW AND LAND DEGRADATION

2.1 General principles

The common law (or 'judge made law') derives from the English legal system received in Australia upon European settlement. Common law is developed by the courts over many years, having regard to earlier judgments (or 'precedents') on similar subject matter.

The common law is primarily directed at protecting private as distinct from public interests. It is therefore of somewhat limited application in addressing environmental damage, unless a complainant can show some special form of injury or affection.¹³ The common law can also be over-ridden by statutes (that is, Acts passed by Parliament). Accordingly, many common law rules are now replaced by statute. For example, the right to pollute the land has been removed by legislation that makes causing pollution unlawful.¹⁴

In spite of the superiority of statute law, the common law remains relevant for managing 'cross-boundary' disputes between neighbours. This includes legal liability for damage caused by erosion, an issue that is relevant to Carnarvon.

2.2 Erosion controls under the common law

2.2.1 Types of action available

Where a person undertakes activities that interfere with or cause damage to neighbouring land, the affected person may have a remedy under the common law. There are three common law *causes of action* that could form the basis of a legal proceeding:

1. **Trespass** – the act of intentionally or negligently entering or remaining on, or directly causing physical matter to come into contact with land in the possession of another person.¹⁵
2. **Nuisance** – the protection from unreasonable interferences with a person's land or use and enjoyment of their land (for example, by physical injury to the land caused by the act of a neighbour).
3. **Negligence** – the protection from the negligent acts of a neighbour.¹⁶

Special considerations apply to acts of controlling floodwaters, and these will be considered separately.

2.2.2 Erosion caused by floodwaters

2.2.2.1 What are 'floodwaters'?

In this section, we are dealing with waters that overflow from the banks of a watercourse in times of flood. This is a common occurrence in Carnarvon, and is the principal cause of most erosion damage in the horticultural area. Damage caused by floodwater must be distinguished with other forms of water flow, such as stormwater flowing across the land surface after heavy rain; ordinary stream flows; water flowing through artificial channels or pipes and water coming from the ocean as a result of storm surges, tsunami or the tides. The courts have applied different rules in respect to these different types of water flows. In

¹³ This is referred to as 'standing' to sue.

¹⁴ *Environmental Protection Act 1986*, section 49. This section makes it an offence for a person to cause pollution on any land.

¹⁵ *The Law of Landcare in Western Australia*, Second Edition, Jean-Pierre Clement et al, 2001, at page 29.

¹⁶ For more detail on these causes of action, refer to *The Law of Landcare in Western Australia Second Edition*, Perth 2001, at Chapter 2.

this section, discussion is limited to the bursting of water from the banks of a natural watercourse.

2.2.2.2 The 'common enemy' rule

There is a line of authority that says floodwater is the *common enemy* against which a landholder has the right of reasonable self-defence.¹⁷ An English court described the principle as follows:

[T]he law allows what I may term a kind of reasonable selfishness in such matters . . . The flood is a common enemy against which every man has a right to defend himself. And it would be most mischievous if the law were otherwise, for a man must then stand by and see his property destroyed out of fear lest some neighbour might say 'You have caused me an injury.'¹⁸

This principle has been applied in many subsequent cases. So, in a case concerning the erection of embankments that prevented a gravel pit being inundated by floodwaters, the court held:

Every owner of land is entitled, provided he acts with reasonable care and skill, and provided he uses only reasonable and usual means for that purpose, to do what is necessary to protect himself or protect his land against damage by anticipated flood.¹⁹

Similarly, the Courts have held landholders were entitled to pen back floodwaters coming on to their land from a river, even though it caused damage to structures on adjoining land.²⁰

The common enemy rule is not without criticism. The following extract from a New Zealand case provides a useful critique:

To lay down [a] rule based on the 'common enemy' doctrine would not only authorise banks but ditches or any other mode of defence, and enable a riparian proprietor by those means to reclaim land always previously affording a course for ordinary floodwaters by casting those waters on his neighbour on the lower level regardless of the damage he does. The result might well be that, in order to reclaim from the effects of flood a thousand acres in the upper reaches of the river, two thousand acres of good land in the lower parts might be permanently deteriorated or destroyed.²¹

Like all common law principles, the common enemy rule may be over-ridden by statute.

2.2.2.3 Water flowing in defined flood channels

There is an exception to the common enemy rule in the case of floodwaters moving in a defined channel, as distinct from those spreading out over the land in a diffuse state.

In the leading case, the owner of land built a mound across a flood channel next to a river. The effect of the mound was to prevent water flowing through the flood channel during times of flood.²² The Court found that the mound improperly diverted floodwater from its accustomed course, and an injunction was granted to prevent any further erections.²³

¹⁷ The use of the term 'common enemy' seems to be derived from *R. v. Commissioners of Sewers Pagham* (1828) 8 B&C 355 per Lord Tenterden CJ at 361.

¹⁸ *Nield v. London & North West Railway* (1874) LR 10 Ex 4 per Bramwell B at page 7.

¹⁹ *Maxey Drainage Board v. Great Northern Railway Company* (1912) 106 LT 429 per Lush J at page 430.

²⁰ *Trafford v. The King* (1832) 8 Bing 204.

²¹ *Gerrard v. Crowe* [1918] NZLR 323, per Hosking J (dissenting) at page 352.

²² *Menzies v. Breadalbane* (1828) 3 Bligh NS 414, at page 416.

²³ *Menzies v. Breadalbane* (1828) 3 Bligh NS 414, at page 423. A difficulty in this case is the reference to floods associated with river flow in 'autumn, winter and the spring'. This may suggest that the case simply relates to flows of a normal watercourse, rather than floodwaters *per se*. The 'channel' referred to may

In a subsequent case, landholders erected banks to block floodwaters coming onto their land from a river. In so doing, the floodwaters were prevented from taking a course under a large culvert, instead being forced upstream, where they escaped through a smaller aqueduct under a canal system. The arch of the smaller aqueduct was insufficient to handle the increased flow, and it was damaged. In finding that the landholders were entitled to erect the embankments to protect their own land, the Court noted that there was no evidence the floodwaters followed a particular course or channel prior to the banks being erected.²⁴

A leading New Zealand case concerned the erection of banks to exclude floodwaters coming from the Oreti River.²⁵ At trial, the judge found that the floodwaters from the river did not flow in any defined course, but simply spread over the country and found their way back to the river at different points to the south of the plaintiff's land.²⁶ The New Zealand Court of Appeal found that in the absence of a defined flood channel, the embankments were lawful even though they caused injury to the neighbouring landholder.²⁷ The decision was affirmed on appeal to the Privy Council.²⁸

The distinction between floodwaters flowing through a defined flood channel and those inundating the country in a diffuse manner has been approved in Australia.²⁹

2.2.2.4 Summary

A landholder has the right to erect barriers to contain floodwaters ('the common enemy') even if that causes damage to a neighbour, provided the work:

- (a) is carried out in a reasonable manner;
- (b) is reasonably necessary for the protection of his or her land;
- (c) does not obstruct a defined 'flood channel';³⁰ and
- (d) complies with any statutory controls applying to that land use (see below).

As the following sections will show, the common enemy rule has probably been replaced by statute law in Carnarvon. Even if it does still have application, it is limited to areas outside defined floodways.

3. STATUTORY CONTROLS ON LAND DEGRADATION

3.1 Overview

There is no single law that applies to managing the impacts of flooding and land management of flood-prone land in WA. Rather, the law is contained in a number of different statutes administered by a number of different public authorities. This experience reflects the history of natural resources legislation in Australia – where governments have tended to divide the environment into 'easy-to-manage segments' – being water, native species, rural

simply be a higher 'bed' of the existing watercourse, and which only flows seasonally, but nonetheless within the banks of the watercourse.

²⁴ (1832) 8 Bing 204 at 211.

²⁵ *Gerrard v. Crowe* [1918] NZLR 323.

²⁶ *Gerrard v. Crowe* [1918] NZLR 323, per Sim J at page 325.

²⁷ *Gerrard v. Crowe* [1918] NZLR 323, at p 345.

²⁸ *Gerrard v. Crowe* [1921] 1 AC 395.

²⁹ *Gartner v. Kidman* (1962) 108 CLR.

³⁰ The legal distinction between waters flowing in a defined channel and those spreading out in a diffuse manner is eloquently summarised in the following passage: 'The principles which prevent interference with floodwater when a part of a rushing torrent . . . do not apply with equal force to water when it is spread out over the face of the country in such a way as to have lost its power to maintain a continued flow. By keeping these forms distinct, and considering in every case to which of them a particular decision applies, most of the seeming conflict in the authorities disappears', *Farnham on Waters*, 3rd edition, page 2562.

land, town land, and mining land.³¹ This can lead to duplication, lack of integration, and (as appears to be the case in Carnarvon) confusion over the roles and responsibilities of different government authorities.

With that background in mind, this Chapter will review the principal statutes relevant to erosion control, viz:

- Soil and Land Conservation Act 1945;
- Water legislation (being the Rights in Water and Irrigation Act 1914, Water and Rivers Commission Act 1995, Water Agencies (Powers) Act 1984, and the Waterways Conservation Act 1976);
- Planning legislation (being the Town Planning and Development Act 1928 and the Western Australian Planning Commission Act 1985);
- Environmental Protection Act 1986.

Relevant provisions of other WA and Commonwealth legislation will also be considered, including:

- *Local Government Act 1995*;
- *Land Administration Act 1997*;
- *Wildlife Conservation Act 1950*;
- *Agriculture and Related Resources Protection Act 1976*;
- *Control of Vehicles (Off-Road Areas) Act 1978*;
- *Environment Protection and Biodiversity Conservation Act 1999 (Cwth)*.

The implications of these Acts will be considered in turn.

3.2 Soil and Land Conservation Act 1945

3.2.1 Purpose of the Act

The *Soil and Land Conservation Act 1945* ('the SLC Act') is the primary statute directed at preventing land degradation in Western Australia. 'Land degradation' is defined to include soil erosion, salinity, eutrophication and flooding.³²

3.2.2 Administration of the Act

The SLC Act is administered by the Minister for Agriculture³³ and the Commissioner of Soil and Land Conservation ('the Commissioner').³⁴ The Act also establishes advisory bodies, being the Soil and Land Conservation Council³⁵ and Land Conservation District Committees (LCDCs).³⁶

The general functions of the Commissioner include:

- (a) the prevention and mitigation of land degradation;

³¹ Professor David Farrier, 'Integrated management of land and water? Planning and project approvals under the White Paper on NSW water management legislation', Conference Proceedings, 1st Australasian Natural Resources Law and Policy Conference, Canberra, March 2000, at page 156.

³² *Soil and Land Conservation Act 1945*, section 4.

³³ *Soil and Land Conservation Act 1945*, section 5.

³⁴ *Soil and Land Conservation Act 1945*, section 7. The Commissioner is an employee of the Department of Agriculture.

³⁵ *Soil and Land Conservation Act 1945*, section 9.

³⁶ *Soil and Land Conservation Act 1945*, sections 22 and 23.

- (b) the promotion of soil conservation;³⁷
- (c) the encouragement of landholders and the public generally to use land in a way that will reduce the effects of land degradation; and
- (d) the education of landholders and the public generally in the objects and practice of soil conservation.³⁸

The Soil and Land Conservation Council comprises representatives of public authorities, industry groups and the community. The Council is an advisory body to the Minister for Agriculture, and has a number of functions including reporting to the Minister on the condition of soil and land resources and to coordinate, monitor, and review soil and land conservation programs and activities.³⁹

LCDCs are local advisory bodies, the main role of which is to provide a mechanism for implementation of land conservation programs at local level. LCDCs are established by the Governor to manage particular land conservation districts.⁴⁰ Functions include managing projects for preventing land degradation and developing programs for soil and land conservation within its district.⁴¹ There are over 140 LCDCs in Western Australia. The Carnarvon horticultural area is within the boundaries of the Carnarvon LCDC (see Figure 3.1).

3.2.3 Erosion controls under the Soil and Land Conservation Act

3.2.3.1 Soil conservation notices

The Commissioner may issue a soil conservation notice where land degradation is likely to result from (among other things) any agricultural or pastoral land use, or the failure by a person to take adequate precautions to prevent or control soil erosion, salinity or flooding.⁴²

A soil conservation notice may direct the person bound by it to:

- (a) adopt or refrain from adopting any agricultural or pastoral methods;⁴³
- (b) refrain from clearing any land;
- (c) refrain from destroying, cutting down or injuring any tree, shrub, grass or other plant on any land;
- (d) take such action as is specified in the notice for preventing the erosion, drift or movement of sand, soil, dust or water on or from any land;
- (e) any other matter incidental to the foregoing.⁴⁴

Thus, the Commissioner may issue a soil conservation notice to a landholder engaging in land use practices which are likely to lead to erosion. In the context of the Carnarvon

³⁷ 'Soil conservation' means the application to land of cultural, vegetational and land management measures, either singly or in combination, to attain and maintain an appropriate level of land use and stability of that land in perpetuity and includes the use of measures to prevent or mitigate the effects of land degradation: *Soil and Land Conservation Act 1945*, section 4.

³⁸ *Soil and Land Conservation Act 1945*, section 13.

³⁹ *Soil and Land Conservation Act 1945*, section 16. Note that the role of the Council has largely been assumed by the Natural Resources Management Council – a non-statutory body established to advise the Minister for the Environment on natural resources policy. As a result, the Soil and Land Conservation Council has a reduced role and is proposed to be abolished with the passage of the *Agriculture Management Bill* in the next 12 months.

⁴⁰ *Soil and Land Conservation Act 1945*, section 23.

⁴¹ *Soil and Land Conservation Act 1945*, section 24.

⁴² *Soil and Land Conservation Act 1945*, section 32(1).

⁴³ 'Agricultural and pastoral methods' are not defined in the Act, but it would likely extend to horticultural activities: see definition of 'agricultural' in the *Agriculture Act 1988*, section 3.

⁴⁴ *Soil and Land Conservation Act 1945*, section 32(2).

horticultural area, this may extend to authorising the Commissioner to issue a notice to prevent a land owner from growing vegetables on land within a floodway where that activity poses a land degradation risk.

It is an offence to ignore a soil conservation notice – maximum penalty \$3,000.⁴⁵

⁴⁵ *Soil and Land Conservation Act 1945*, section 35. Note also that section 40(5) of the *Sentencing Act 1995* states that 'except where a statutory penalty is expressly provided for a body corporate, a body corporate that is convicted of an offence the statutory penalty for which is or includes a fine is liable to a fine of 5 times the maximum fine that could be imposed on a natural person convicted of the same offence.' There is no express penalty for a body corporate under the SLC Act. This effectively means that the monetary penalty for a body corporate for failing to comply with a soil conservation notice could be a maximum fine of \$15,000 (that is, \$3,000 x 5).



Figure 3.1. Carnarvon land conservation district.

Law reform - Agriculture Management Bill

The Department of Agriculture is currently developing the *Agriculture Management Bill*. It is proposed that a number of existing statutes (including the *Soil and Land Conservation Act 1945*) will be incorporated into the Bill.

The Bill proposes to include a specific provision authorising the Commissioner to issue a soil conservation notice where a land use practice does not comply with an industry code of practice. This will encourage adoption of voluntary measures to achieve sustainable land management objectives.

The Bill is expected to be presented to Parliament in autumn 2003.¹

3.2.3.2 Notice of intent to clear land

An owner or occupier proposing to clear more than one hectare of land is required to give the Commissioner 90 days notice before the commencement of the clearing. This does not apply to clearing which does not change the use of the land, or clearing of trees for firewood, posts or timber.²

Failure to notify the Commissioner is an offence, and is liable to a fine of \$2,000.³

Law reform - Environmental Protection Amendment Bill 2002

The notice of intent to clear provisions under the *Soil and Land Conservation Regulations 1992* are proposed to be repealed with the passage of the *Environmental Protection Amendment Bill 2002*. The new laws will require a permit to be obtained for most proposals to clear. Applications for permits will be lodged with the Department of Environmental Protection (DEP). Penalties for illegal clearing will increase from \$2,000 under the current regulations to a maximum \$500,000 under the new laws.⁴

Note also that anyone unlawfully clearing land after 26 June 2002 may be ordered to revegetate that area once the Bill becomes law.

3.2.3.3 Regulations to control land use practices

Regulations may be made under the SLC Act controlling land uses within a land conservation district. Regulations can be made for the following purposes:

- (a) prohibiting or controlling the lighting of fires;
- (b) regulating or prohibiting the clearing, destruction of, or interference with vegetation;
- (c) prohibiting or regulating any change in the use of any land;
- (d) restricting or regulating the use of any land for agricultural or pastoral purposes;
- (e) requiring a person to take action to prevent land degradation or promote soil conservation.⁵

The penalty for failing to comply with the provisions of such a regulation is a maximum fine of \$2,500.⁶

¹ Pers comm, Andrew Watson, Deputy Commissioner, Soil and Land Conservation, Perth, November 2002.

² *Soil and Land Conservation Regulations 1992*, regulation 4.

³ *Soil and Land Conservation Regulations 1992*, regulation 4.

⁴ *Environmental Protection Amendment Bill 2002*, clause 51C.

⁵ *Soil and Land Conservation Act 1945*, section 22(2).

⁶ *Soil and Land Conservation Act 1945*, section 22(4).

To date, the power to make regulations under the SLC Act has only been used on one occasion – to control land clearing within the Bruce Rock Land Conservation District.⁷

Subject to the agreement of the Minister for Agriculture, regulations could be introduced within the Carnarvon Land Conservation District to restrict or regulate the use of flood-prone land (for example, restricting vegetable production or banana plantations on floodways).

3.2.3.4 Soil conservation rates and service charges

The Minister, acting on the recommendation of an LCDC, may impose a soil conservation rate or service charge within a land conservation district.⁸

Funds raised through a rate or service charge can be used for a number of things, including:

- (a) the construction of soil conservation works to benefit the district;
- (b) the payment to an owner or occupier of land in the district of a proportion of the cost of soil conservation works constructed on the land;
- (c) the promotion of soil conservation in the district;
- (d) research into soil conservation measures/practices relevant to the district; and
- (e) the demonstration in the district of soil conservation techniques.

The Minister may impose a *differential* rate or service charge in respect of different classes of land in the district.⁹ It is possible for a differential rate or service charge to be applied in a way which acts as an incentive for land owners to adopt sustainable land management practices.¹⁰

Example of how an incentive-based rating scheme might work in Carnarvon

Table 3.1 shows how a service charge proposal might be used to raise funds for a soil conservation project, whilst at the same time rewarding landholders who have improved their land management practices. In this example, all land within the Carnarvon Land Conservation District is subject to the charge, including town land. Landholders voluntarily adopting an approved code of practice are rewarded for their efforts by receiving a lower rate than other landholders.

⁷ *Soil and Land Conservation (Clearing Control) Regulations 1991.*

⁸ These rates should not be confused with rates raised by local government under the *Local Government Act 1995*: see *Soil and Land Conservation Act 1945*, section 25A.

⁹ *Soil and Land Conservation Act 1945*, section 25A(4) and (5).

¹⁰ The possibility of using differential levies as a means of encouraging sustainable land management practices was identified in *The Salinity Strategy*, State Salinity Council, March 2000, para 6.4.4.1.

Table 3.1. Soil conservation service charge – incorporating incentives for adoption of best management practices

Land use zone	Description of management practice	Number of rateable properties ¹¹	Amount of service charge	Total
Intensive horticulture zone	Landholder has adopted and implemented industry code of practice	70	\$25	\$1,750
	Landholder has not adopted or implemented industry code of practice	200	\$100	\$20,000
All other zones	All	1500	\$15	\$22,500
Total		1770		\$44,250

Implementing a rating scheme along these lines would provide an incentive for plantation owners to adopt land management practices which best suit the land in question. Funds raised by the rate or service charge could be used to undertake soil conservation programs within the district (such as rehabilitation works within the plantation area). In addition, the money raised could be used to leverage matching funds from Commonwealth environment programs, such as the Natural Heritage Trust.

Where such a scheme is contemplated, care would need to be taken to ensure the process is administratively workable. For example, there is little point classifying land according to the type of crop growing if this is liable to change at short notice (for example, a banana plantation can be removed and replaced with vegetables in a short period of time). Similarly, such a proposal should avoid the need to undertake audits of land uses, as this will be costly, cumbersome, and may lead to complaints from landholders about perceived 'red tape'.

In districts where rates or service charges have been implemented, funds raised have been applied to pay for tree planting programs and to pay for wages of a project officer employed by the LCDC.¹²

3.2.4.5 Conservation covenants and agreements to reserve

An owner of land may enter into an agreement with Commissioner to set that land aside for the protection and management of vegetation. This agreement can either be in the form of a *conservation covenant* (which is irrevocable for its term) or an *agreement to reserve* (which can be revoked by agreement between the parties).¹³ A covenant or agreement under the SLC Act is binding on the parties to it, and on any future owner of the land where there is a memorial on the property title.¹⁴

At present, a conservation covenant and agreement to reserve are limited to the 'protection and management of vegetation'. It may not be possible therefore for an agreement to be entered into to prevent erosion on a floodplain, unless the purpose is for the protection or management of vegetation.¹⁵

¹¹ Details of the number of rateable properties within the Carnarvon Shire were provided by Steve Thompson, Shire of Carnarvon, December 2002. Note that the actual figures used are simply used as a guide.

¹² Four LCDCs are currently raising a rate or service charge: Katanning, Cunderdin, Toodyay and Pithara-Dalwallinu.

¹³ *Soil and Land Conservation Act 1945*, section 30B.

¹⁴ *Soil and Land Conservation Act 1945*, section 30C.

¹⁵ Other options for implementing a conservation covenant include those administered by the National Trust and the Department of Conservation and Land Management.

Law reform - Agriculture Management Bill

Conservation covenants may be extended to cover not only vegetation management, but other land conservation purposes.

3.2.4.6 Compulsory acquisition - soil conservation reserves

The Commissioner may recommend to the Minister that Crown or private land be set aside as a soil conservation reserve.¹⁶ For private land, the reserve would be created through compulsory acquisition under the terms of the *Land Administration Act 1997*.¹⁷

Once created, a soil conservation reserve is under the control and management of the Minister, and the Minister is required to manage the reserve in such manner as will best conserve the reserve and prevent damage to other land.¹⁸

In practical terms, soil conservation reserves are unlikely to be a solution to soil erosion problems in the Carnarvon horticultural area due to the cost of purchasing private property. There may be extreme cases however where compulsory acquisition is warranted, and this could be done under the auspices of the *Soil and Land Conservation Act*.¹⁹

3.2.4 Summary - Soil and Land Conservation Act

1. The SLC Act is the primary statute dealing with erosion (and flooding) in Western Australia.
2. Agricultural land use practices causing erosion can be prohibited or regulated under the terms of a soil conservation notice. Such a notice can require the landholder to refrain from that practice or to adopt an alternative land use practice.
3. Proposals to clear more than one hectare of land must be referred to the Commissioner 90 days before commencing work. Failure to notify an intent to clear may result in the offender being ordered to revegetate the land under changes announced to the *Environmental Protection Act 1986*.
4. Subject to the agreement of the Minister and Governor, special regulations dealing with erosion could be applied within the Carnarvon land conservation district. Such regulations could specify the type of land use practices to be adopted in defined flood channels.
5. A 'rating' scheme could be applied under the Act to provide an incentive for landholders to adopt sustainable land management practices. Funds raised by the rate could be used to fund soil conservation programs within the horticultural area.
6. Agreements can be entered between the Commissioner and landholders with respect to the management and protection of vegetation, although it is questionable whether this would extend to agreements for the sustainable management of the land *per se*. This may be remedied with the passage of the *Agriculture Management Bill*.
7. Land can be compulsorily acquired and set aside for soil conservation purposes.

¹⁶ *Soil and Land Conservation Act 1945*, section 26(1).

¹⁷ *Soil and Land Conservation Act 1945*, section 26(2).

¹⁸ *Soil and Land Conservation Act 1945*, section 27.

¹⁹ The *Land Administration Act 1997* could also be used as a basis to compulsorily acquire land and set it aside for land conservation purposes.

3.3 Water legislation

3.3.1 Purpose of the water legislation

The *Rights in Water and Irrigation Act 1914* ('the RIWI Act') is the principal Act controlling the taking, use and management of water resources in Western Australia. The long title to the Act states:

An Act relating to rights in water resources, to make provision for the regulation, management, use and protection of water resources, to provide for irrigation schemes, and for related purposes.

'Water resources' are defined to include:

- (a) watercourses and wetlands together with their beds and banks;
- (b) other surface waters; and
- (c) aquifers and underground water.²⁰

In relation to watercourses, the objects of the Act are:

- (a) to provide for the sustainable use and development of water resources, and for the protection of the environment;
- (b) to promote the orderly, equitable and efficient use of water resources;
- (c) to foster consultation with members of local communities and to enable them to participate in administration; and
- (d) to assist the integration of the management of water resources with the management of other natural resources.²¹

Some definitions under the *Rights in Water and Irrigation Act 1914*

What are 'watercourses'?

Under the Act, 'watercourse' means:

- (a) any river, creek, stream or brook in which water flows;
- (b) any collection of water (including a reservoir) into, through or out of which any thing coming within paragraph (a) flows;
- (c) any place where water flows that is prescribed by local by-laws to be a watercourse, and includes the bed and banks of any thing referred to in paragraph (a), (b) or (c).²²

This definition of watercourse includes:

- (a) a flow of water even though it is only intermittent or occasional;
- (b) a river, creek, stream or brook that is wholly or partially diverted from its natural course; and
- (c) a river, creek, stream or brook that may have been artificially improved or altered.²³

What is the 'bed' of a watercourse?

The 'bed' of a watercourse means the land over which normally flows, or which is normally covered by, the water thereof, whether permanently or intermittently; but does not include land from time to time temporarily covered by the floodwaters of such watercourse or wetland and abutting on or adjacent to such bed.²⁴

What are the 'banks' of a watercourse?

'Banks' are not defined in the Act, but can be said to be 'the elevations of land which confine the waters in their natural channel when they rise to their highest and do not overflow the banks.'²⁵ It should be noted that the definition of 'bed' under the Act could be interpreted as inclusive of the 'banks'.

²⁰ *Rights in Water and Irrigation Act 1914*, section 2.

²¹ *Rights in Water and Irrigation Act 1914*, section 4.

²² *Rights in Water and Irrigation Act 1914*, section 3(1).

²³ *Rights in Water and Irrigation Act 1914*, section 3(2).

Other statutes relevant to aspects of water management in rural Western Australia include the *Water Agencies (Powers) Act 1984*, the *Waterways Conservation Act 1976*, and the *Water and Rivers Commission Act 1995*, the *Land Drainage Act 1925* and the *Country Areas Water Supply Act 1947*.

3.3.2 Administration of the water legislation

Management of the RWI Act is vested in the Water and Rivers Commission²⁶ under the direction of the Minister for Water Resources.²⁷ The functions of the Commission include undertaking, coordinating and managing activities and projects for the conservation, management or use of water resources; and for developing plans for and providing advice on flood management.²⁸

The RWI Act also provides for the establishment of water resources management committees ('local committees'), whose role includes providing advice to the Commission on matters relevant to the use and management of water resources within their districts.²⁹ Local committees also have role in advising the Minister in respect of the development of local by-laws under the Act,³⁰ which includes by-laws for the regulation and control of flood protection levees.³¹

The Water Corporation also has certain functions under the RWI Act, principally in relation to water supply works within irrigation districts.³²

3.3.3 Ownership of water resources

The right to the use and flow, and to the control of the water in any watercourse, wetland or underground water source, vests in the Crown except as appropriated under the RWI Act or another written law.³³ In effect, this means that water in a river belongs to the Crown until it is lawfully acquired by a person (for example, under the terms of a water licence). Water that is not in a watercourse, wetland or underground source of supply continues to vest in the owner or occupier of the surface of the land. This would include storm water and run-off.³⁴

The vesting of water resources in the Crown effectively extinguishes common law riparian rights to the use and control of waters in a watercourse. However, the RWI Act establishes a form of 'statutory' riparian rights which are similar in form to the common law rights which it replaces.³⁵

The controls on the use of water under the RWI Act vary depending on whether the land in question is within an *irrigation district* or *proclaimed area*. Special controls apply in these

²⁴ *Rights in Water and Irrigation Act 1914*, section 2(1).

²⁵ *Howard v. Ingersoll* (1851) 17 Ala. 781: see *Wisdom's Law of Watercourses*, William Howarth, 5th edition, 1992, at pages 12 to 13.

²⁶ *Water and Rivers Commission Act 1995*, section 10(1).

²⁷ *Water and Rivers Commission Act 1995*, section 14.

²⁸ *Water and Rivers Commission Act 1995*, section 10(2).

²⁹ *Rights in Water and Irrigation Act 1914*, sections 26GK and 26GM.

³⁰ *Rights in Water and Irrigation Act 1914*, section 26N(2).

³¹ *Rights in Water and Irrigation Act 1914*, section 26P. See para 3.3.4.3 below.

³² *Rights in Water and Irrigation Act 1914*, section 33.

³³ *Rights in Water and Irrigation Act 1914*, section 5A.

³⁴ *The Law of Landcare in Western Australia*, Second Edition, Jean-Pierre Clement et al, 2001, at pages 105 to 106.

³⁵ These rights concern the entitlement to the use of water for domestic purposes, watering stock and similar purposes. For more information on rights to use water, refer to *The Law of Landcare in Western Australia*, Chapter 4.

areas.³⁶ The Carnarvon horticultural area is within both an irrigation district and proclaimed area.³⁷

3.3.4 Erosion controls under the water legislation

3.3.4.1 Interference or obstruction of a watercourse

It is an offence for a person to obstruct or interfere with a watercourse in a proclaimed area or irrigation district without approval of the Water and Rivers Commission or under authority of another Act.³⁸ The maximum fine is \$10,000.³⁹

The Commission has the power to direct any person who has been convicted of an offence of interfering with a watercourse to carry out such works and take such other measures for the purpose of restoring the bed or banks of the watercourse.⁴⁰

This provision would prevent a person from deepening a watercourse, extracting sand from the bed of a watercourse, removing vegetation from the watercourse or its banks, or from placing any form of obstruction across the watercourse. The provision would generally not prevent irrigation works provided they do not cause damage or pose an obstruction risk to the beds or bank.⁴¹ If in doubt, it is recommended that advice be sought from the Commission. This is especially important with the proposed introduction of 'environmental harm' offences, where the maximum penalty for illegally causing harm is \$1 million.

3.3.4.2 Environmental considerations for water licences

In considering applications for licences to take water, the Commission is to have regard to all matters that it considers relevant, including whether the proposed taking and use of water is:

- ecologically sustainable;
- environmentally acceptable;
- in keeping with a relevant local by-law or management plan; or
- consistent with planning instruments, policies of other government agencies or any intergovernmental agreement or arrangement.⁴²

Remember also that one of the objects of the Act in respect to watercourses is "to assist the integration of the management of water resources with the management of other natural resources."⁴³ It is likely therefore that the Commission has the power to place conditions on any licence to take water, including conditions relating to a wide range of environmental values.⁴⁴

³⁶ *The Law of Landcare in Western Australia*, Second Edition, Jean-Pierre Clement et al, 2001, Chapter 4.

³⁷ Carnarvon Irrigation District established 23 March 1962 (p761-762); Gascoyne River surface water area established 30 September 1960 (p3024); and the Carnarvon ground water area established 16 April 1987 (p1364).

³⁸ *Rights in Water and Irrigation Act 1914*, sections 17, 18 and 25.

³⁹ *Rights in Water and Irrigation Act 1914*, section 72.

⁴⁰ *Rights in Water and Irrigation Act 1914*, section 17(6).

⁴¹ Pers comm, Claire Thorstenson, Water and Rivers Commission, Carnarvon, November 2002.

⁴² *Rights in Water and Irrigation Act 1914*, Schedule 1, clause 7.

⁴³ See paragraph 3.3.1.

⁴⁴ Conditions can be made in relation to the use, management, protection and enhancement of any water resource and its ecosystem or the environment in which the water resource is situated; or for the removal of works, structures and equipment: see *Rights in Water and Irrigation Act 1914*, Appendix to Schedule 1, clauses 2 and 8.

3.3.4.3 Flood protection by-laws

The RIWI Act allows by-laws to be made to control the construction of flood protection levees.⁴⁵ The maximum penalty for failing to comply with such a by-law is up to \$5,000 plus a maximum daily fine of \$500 whilst the offence continues.⁴⁶

These by-laws may confer on the Commission powers to direct that works that contravene the by-laws be removed at the expense of the owner or occupier of the land.⁴⁷ If the offender refuses or fails to comply with a direction, the Commission may enter the land, undertake the work, and recover the cost from the offender.⁴⁸

It is questionable whether a by-law that purports to regulate the use of *existing* levees would be enforceable. This is because of the presumption that a law will not be deemed to operate retrospectively unless it is expressly stated to do so. The High Court has described the rule as follows: 'a statute ought not be given a retrospective operation where to do so would affect an existing right or obligation unless the language of the statute expressly or by necessary implication requires such construction.'⁴⁹

At the time of writing, there were no flood protection by-laws in place.⁵⁰

3.3.4.4 Water management plans

The Commission may prepare regional, sub-regional or local management plans for the purpose of managing specific water resources.⁵¹ The purposes of the three types of plans are as follows:

- **Regional plans** – set out the matters that are to guide the general management of water resources in the region to which it applies, in relation to:
 - (a) the definition of water resource values, including environmental values, and the protection of those values;
 - (b) the use of water resources; and
 - (c) the integration of water resources planning and management with land use planning and management.⁵²
- **Sub-regional plans** – set out particular matters that are to guide the management of water resources in the sub-region to which it applies, including:
 - (a) how the investigation and development of water resources are to be facilitated;
 - (b) how rights in respect of water are to be allocated to meet various needs, including the needs of the environment;
 - (c) the matters that will be taken into account by the Commission in considering applications, renewals or transfers of licences;
 - (d) the Commission's assessment of:
 - (i) the capacity of water sources to provide water at sustainable levels of use; and

⁴⁵ *Rights in Water and Irrigation Act 1914*, section 26P(a).

⁴⁶ *Rights in Water and Irrigation Act 1914*, section 26P(b).

⁴⁷ *Rights in Water and Irrigation Act 1914*, section 26P(c).

⁴⁸ *Rights in Water and Irrigation Act 1914*, section 26P(c).

⁴⁹ *Rodway v The Queen* (1990) 169 CLR 515 per Mason CJ, Dawson, Toohey, Gaudron and McHugh JJ at para 4. See also *Interpretation Act 1984*, section 37.

⁵⁰ Pers comm Rod Baryard and Ron Sheppard, Water and Rivers Commission, October/November 2002.

⁵¹ *Rights in Water and Irrigation Act 1914*, sections 26GU and 26GV.

⁵² *Rights in Water and Irrigation Act 1914*, section 26GW.

- (ii) the environmental impact of developing those sources; and
 - (e) the strategies that will be adopted or developed to implement the plan.⁵³
- **Local plans** – set out particular matters that are to guide the management of water resources in the area or areas to which it applies, including:
 - (a) how rights in respect of water are to be allocated, and water may be taken and used, to meet various needs including the needs of the environment;
 - (b) the matters that will be taken into account by the Commission in considering applications, renewals or transfers of licences; and
 - (c) the nature and extent of the delegated authority that will be conferred on a relevant water resources management committee.⁵⁴

As mentioned above, the Commission is required to take into account the terms of a management plan before issuing a licence to take water.⁵⁵

The Commission is currently developing a local water management plan for the lower Gascoyne River, which is expected to be finalised in early 2003. It will include provisions for maintaining a water level regime to protect the riparian vegetation.⁵⁶

3.3.4.5 General by-laws for controlling activities on floodplains

In addition to the specific power to create by-laws for flood works, it is possible that by-laws can be made to control activities that interfere with the objects of the RIWI Act.⁵⁷ This includes the power to make by-laws with respect to the construction, provision, maintenance, repair and removal of works relating to water resources.⁵⁸ Such a by-law could be used (in conjunction with planning instruments) to control the erection of pumping works within the bed of the Gascoyne River.

Other general regulation and by-law making powers can be found in the *Water Agencies (Powers) Act 1984*.⁵⁹

3.3.4.6 Waterway conservation areas

The *Waterways Conservation Act 1976* was enacted to 'make provision for the conservation and management of certain waters and of the associated land and environment.'⁶⁰ Under the Act, the Governor acting on the recommendation of the Environmental Protection Authority, can declare any area of the State containing one or more rivers, inlets or estuaries to be a

⁵³ *Rights in Water and Irrigation Act 1914*, section 26GX.

⁵⁴ *Rights in Water and Irrigation Act 1914*, section 26GY. Management plans take effect once they are approved by the Minister and published in the *Government Gazette*: sections 26GZE and 26GZF.

⁵⁵ *Rights in Water and Irrigation Act 1914*, Schedule 1, clause 7.

⁵⁶ Pers comm Phillip Kalaitzis, Water and Rivers Commission, November 2002.

⁵⁷ *Rights in Water and Irrigation Act 1914*, section 26L.

⁵⁸ *Rights in Water and Irrigation Act 1914*, section 26L(3)(a).

⁵⁹ *Water Agencies (Powers) Act 1984*, section 37. Note also that under the *Waterways Conservation Act 1995*, a local government can adopt local laws for the purposes of that Act: section 56. See discussion at para 3.3.4.6.

⁶⁰ *Waterways Conservation Act 1976*, long title.

waterway management area.⁶¹ Five management areas have been created under the Act.⁶² The Gascoyne River is not within a management area.⁶³

It is an offence to do any of the following things within a management area:

- (a) put any mud, earth, gravel, litter or other matter into any waters;
- (b) construct or use any drain designed to discharge directly or indirectly into any waters;
- (c) disturb the bed, banks, or foreshore of any waters so as to endanger the stability of any part of the banks or foreshore or vegetation;
- (d) excavate or dig channels in any part of the bed of any, whether or not that part is then covered by water; and
- (e) construct any groyne, breakwater, or other structure intended to impede or alter the flow of any waters.⁶⁴

A local government may make local laws for carrying into effect the provisions of the *Waterways Conservation Act* within its district.⁶⁵ Importantly, this power does not appear to be limited to declared management areas.⁶⁶ Accordingly, a local government may create local laws which place restrictions on land uses likely to cause environmental damage to a watercourse and its associated land. In the Carnarvon context, it may be possible for the Carnarvon Shire to introduce a local law controlling vegetable cultivation in flood relief channels, on the grounds that such a land use could prejudice the conservation of the lower Gascoyne River system.⁶⁷

However where a local law is inconsistent with the terms of a town planning scheme, the town planning scheme will prevail.⁶⁸

The *Waterways Conservation Act* is proposed to be repealed. It is therefore unlikely its provisions will be extended to Carnarvon.⁶⁹

3.3.4.7 *Special controls in the Carnarvon Irrigation District*

As mentioned, the Carnarvon horticultural area is within an irrigation district. The creation of a district is largely for the purpose of controlling access to and use of water for agricultural purposes, and to protect Water Corporation infrastructure. There are additional controls on injuring or interfering with the banks or Crown land adjacent to the banks of any watercourse. Penalty for failing to comply with this provision is a maximum fine of \$2,000.⁷⁰

⁶¹ *Waterways Conservation Act 1976*, section 10. A management area can include the land associated with the particular watercourse in order satisfactorily to achieve the control needed for the conservation and management of the waters by reason of the contour of that land or its use, proximity or other relevant circumstance.

⁶² Peel Harvey; Leschenault Estuary and rivers, Albany harbour and rivers, Avon River, Wilson Inlet and rivers.

⁶³ The *Waterways Conservation Act 1976* is proposed to be repealed. Accordingly, it is unlikely that its provisions will be extended to apply to the Gascoyne River: pers comm Ron Shepherd, Water and Rivers Commission, November 2002.

⁶⁴ *Waterways Conservation Regulations 1981*, regulation 8.

⁶⁵ *Waterways Conservation Act 1976*, section 56.

⁶⁶ *Waterways Conservation Act 1976*, section 55(1)(b).

⁶⁷ It is not known whether any local laws have been implemented under the *Waterways Conservation Act 1976*. Caution needs to be exercised in pursuing any such approach, as the Act is not clearly drafted, and the purposes for which local laws can be implemented is somewhat ambiguous.

⁶⁸ *Town Planning Regulations 1967*, Appendix B, para 1.8. Such an inconsistency may arise where the local law purports permit only tree crops to be grown on flood-prone land, contrary to the land use permitted under the Shire of Carnarvon's *Town Planning Scheme No. 10*. See further discussion on land use planning in section 3.4.3.

⁶⁹ Pers comm, Ron Shepherd, Water and Rivers Commission, November 2002.

⁷⁰ *Carnarvon Irrigation District By-Laws 1962*, by-law 10.

3.3.4.8 Civil remedy for causing 'degradation'

A person taking or using water from a water resource without taking all reasonable steps to minimise degradation can be subject to civil proceedings by a person directly affected.⁷¹

It is possible this provision could be applied in circumstances where a person (in taking water from a river) unreasonably damages the banks of the river, resulting in increased erosion to another property during a flood event. That being said, the normal evidentiary burdens would apply, and the person complaining of the damage would need to establish that the actions of the defendant caused the subsequent damage.

3.3.4 Summary - Water legislation

1. It is an offence for a person to obstruct or interfere with a watercourse in a proclaimed area. This provision relates only to the bed and banks of a watercourse, and not to any associated flood channels.
2. Licences to take water may include provisions relating to the protection and enhancement of any water resource and its ecosystem.
3. Flood protection by-laws can be created controlling the erection or removal of diversion banks and levees outside the bed and banks of a watercourse. To date, no such laws have been introduced.
4. Water management plans can be put into place for guiding developments within particular regions, sub-regions or local areas. These plans are binding to the extent that they require the Commission to take them into account when considering licence applications. A local plan is proposed for Carnarvon in 2003.
5. Other by-laws and regulations could be introduced controlling activities that may interfere with floodways, but again, no such laws have been introduced to date.
6. Special controls for land and waters subject to the operation of the *Waterways Conservation Act* could be used to control land use practices that contribute to the damage of the riverine environment.
7. Overall, whilst the water legislation can control particular aspects of erosion resulting from flooding, it is not apt to regulate land management practices generally.

3.4 Planning legislation

3.4.1 Purpose of the legislation

The State's planning regime is administered through two Acts – the *Town Planning and Development Act 1928* ('the TP&D Act') and the *Western Australian Planning Commission Act 1985* ('the WAPC Act').⁷²

In general terms, the planning legislation requires anyone commencing a development to obtain planning approval – usually from the local government.

The TP&D Act authorises the development of *town planning schemes* by local government. Once approved, town planning schemes have the force of law and are the principal mechanism by which land use is regulated within individual local government districts. Despite their name, town planning schemes can apply to both urban and rural land.

⁷¹ *Rights in Water and Irrigation Act 1914*, section 5E.

⁷² The long title to the *Town Planning and Development Act 1928* states 'An Act relating to the planning and development of land for urban, suburban, and rural purposes.' Similarly, the long title to the *Western Australian Planning Commission Act 1985* states: 'An Act to establish a body with responsibility for urban, rural and regional land use planning and land development and related matters in the State, and for connected purposes.'

The WAPC Act is primarily directed at State (as distinct from local) planning issues. Among other things, the Act authorises the development of *regional planning schemes* which have the force of law for a particular region. Such schemes may encompass a number of local government areas.⁷³

An important characteristic of planning statutes is that they are directed towards addressing land use problems and conflicts in advance. As such, they are not well suited to addressing problems arising from *existing* land uses. Whilst existing land uses can be subject to controls under planning schemes, the imposition of such controls may give rise to a liability to pay compensation.

3.4.2 Administration of the planning legislation

The planning legislation is within the portfolio of the Minister for Planning and Infrastructure.

Local governments are responsible for preparing or amending town planning schemes within their respective districts.⁷⁴ Town planning schemes vary between local governments, but most impose a system of land use zoning and establish an approval process for developments.

Planning policy at the State level is vested in the Western Australian Planning Commission ('the Commission'). Specific functions of the Commission include:

- to advise the Minister on town planning schemes and amendments to those schemes;
- to prepare a planning strategy for the State as a basis for coordinating and promoting regional land use planning;
- to prepare regional planning schemes as may be necessary for the effective planning and coordination of land use and land development for any part of the State outside the metropolitan region;
- to provide advice and assistance to any body or person on land use planning and land development and in particular to local governments in relation to local planning schemes and policies and their planning and development functions.⁷⁵

3.4.3 Erosion controls under the planning legislation

3.4.3.1 Town planning schemes

Town planning schemes may be made:

... with respect to any land with the general object of improving and developing such land to the best possible advantage, and of securing suitable provision for traffic, transportation, disposition of shops, residence, factory and other areas, proper sanitary conditions and conveniences, parks, gardens and reserves, and of making suitable provision for the use of land for building or other purposes and for all or any of the purposes provisions, powers or works contained in the First Schedule.⁷⁶

The First Schedule to the TP&D Act lists the matters over which town planning schemes can be made, including:

⁷³ The *Peel Region Scheme* has recently been announced, covering the City of Mandurah and the Shires of Murray and Waroona. This Scheme will be discussed in greater detail in para 3.4.3.4.

⁷⁴ *Town Planning and Development Act 1928*, sections 6 and 7.

⁷⁵ *Western Australian Planning Commission Act 1985*, section 18(1).

⁷⁶ *Town Planning and Development Act 1928*, sections 6(1).

- Zoning of the scheme area for various types, kinds or classes of land use, including areas for agricultural or rural use or for protection of the environment or landscape or to provide for waterway development.
- Conservation of the natural beauties of the area, including lakes and other inland waters, banks of rivers, foreshores of harbours, and other parts of the sea, hill slopes and summits, and valleys.
- The preservation of particular trees or trees of a particular species.
- Any matter necessary or incidental to town planning or housing.⁷⁷

More than one town planning scheme can apply within a local government district.⁷⁸

Most town planning schemes use zoning to classify different types of land within the area covered by the scheme. The scheme will specify what land uses can be carried out within a particular zone, and whether that land use requires any special approval. For example, the Shire of Carnarvon's town planning scheme 10 states that 'kennels' are a prohibited land use within the *intensive horticulture zone*, whilst a 'hazardous industry' may be carried out with the approval of council after a public consultation process.⁷⁹

Town planning schemes using a zoning system are to also include a *local planning strategy*. The contents of a local planning strategy must:

- (a) set out the long-term planning directions for the local government;
- (b) apply State and regional planning policies; and
- (c) provide the rationale for the zones and other provisions of the Scheme.⁸⁰

Failure to comply with a provision of a scheme is an offence, punishable by a maximum fine of \$50,000 with a maximum daily penalty of \$5,000.⁸¹

Government departments and local governments undertaking public works are not required to obtain approval for that work under a town planning scheme.⁸²

A local government may be liable to pay compensation where a town planning scheme prohibits wholly or partially the continuance of any non-conforming use of that land.⁸³ A *non-conforming use* 'means a use of land which, though lawful immediately prior to the coming into operation of a town planning scheme, is not in conformity with any provision of [the new] scheme.'⁸⁴

The Shire of Carnarvon's town planning schemes will be considered in section 3.4.4.

⁷⁷ *Town Planning and Development Act 1928*, First Schedule, clauses 10, 11, 11A and 28.

⁷⁸ *Town Planning and Development Act 1928*, section 6(3).

⁷⁹ Scheme Text, *Town Planning Scheme 10*, Shire of Carnarvon, paragraph 4.2.1. See full discussion on the Shire's town planning regime at 3.4.4 below.

⁸⁰ *Town Planning Regulations 1967*, regulation 12A.

⁸¹ *Town Planning and Development Act 1928*, section 10(4).

⁸² *Town Planning and Development Act 1928*, section 32. Note however that this exemption does not apply in metropolitan region scheme area: *City of Bayswater v. Minister for Family and Children's Services*, unreported, WA Supreme Court (WASC 151), 1 June 2000. See also *Metropolitan Region Town Planning Scheme Act 1959*, section 3.

⁸³ *Town Planning and Development Act 1928*, section 12(2a)(b)(ii). See also *Wines v. Shire of Harvey*, unreported, Supreme Court of WA (WASCA 39), 28 February 2000.

⁸⁴ *Town Planning and Development Act 1928*, section 12(2a)(a).

3.4.3.2 Special control areas under town planning schemes

The content of new or amended town planning schemes must be consistent with the terms of the *Model Scheme Text* ('MST').⁸⁵ Under the MST, a scheme may include provision for *special control areas*. These areas set out particular provisions which may apply in addition to the zone requirements.⁸⁶

Special control areas can be created to address issues such as landscape values, airport environs, bushfire prone land, flood-prone land, industry buffers, and special character areas where particular provisions are to apply.⁸⁷

3.4.3.3 Uniform general local laws

The Governor may make local 'town planning' laws on matters including:

- Classification or zoning the area for agricultural or rural use and for any other general or particular purposes and prohibiting in any of these zones any use of land of or for a general or particular nature or purpose.
- Prohibiting any district or part of it from being used for any purpose other than that for which it has been classified.
- Providing for the authority or authorities responsible for carrying the town planning local laws into effect and enforcing their observance.⁸⁸

As is the case for local laws made under the *Local Government Act*, where a local law is inconsistent with a town planning scheme, the terms of the town planning scheme will prevail.⁸⁹

3.4.3.4 Regional planning schemes

The Commission may prepare a regional planning scheme for the effective planning and coordination of land use and development for any part of the State outside the metropolitan region. Regional schemes bind the Crown.⁹⁰

Matters which can be included in a regional planning scheme are the same matters that can be dealt with under a town planning scheme. This includes the power to provide for planning, replanning or reconstructing the whole or any part of the particular region.⁹¹

Once approved, regional planning schemes are legally binding. Where a local government's town planning scheme is inconsistent with a regional scheme:

- (a) the regional scheme is to prevail over the local government scheme to the extent of that inconsistency; and
- (b) the local government must (within 90 days of the regional scheme coming into effect) prepare a new or amend its existing town planning scheme to make it consistent with the regional scheme.⁹²

⁸⁵ *Town Planning Regulations 1967*, regulation 11(1) and Appendix B.

⁸⁶ *Town Planning Regulations 1967*, Appendix B.

⁸⁷ *Planning Bulletin No. 35*, Western Australian Planning Commission, November 1999. See also discussion below on special control areas within the Shire of Carnarvon's proposed *Town Planning Scheme 12*.

⁸⁸ *Town Planning and Development Act 1928*, section 31 and Schedule 2.

⁸⁹ *Town Planning and Development Act 1928*, section 31(2).

⁹⁰ *Western Australian Planning Commission Act 1985*, section 37M.

⁹¹ *Western Australian Planning Commission Act 1985*, section 37M.

⁹² *Western Australian Planning Commission Act 1985*, section 18(1c).

There are presently two regional planning schemes in operation in Western Australia. One covers the Perth metropolitan area⁹³ and the other has recently been established in the Peel Region (that is the City of Mandurah and the Shires of Murray and Waroona).⁹⁴

Peel Region Scheme

The purposes of the Peel Region Scheme are to:

- provide for the protection of land for regional transport, conservation, recreation and public uses;
- provide for the zoning of land for living, working and rural land uses;
- provide an opportunity for the formal environmental assessment of regional planning proposals and provide increased certainty to such proposals;
- provide a mechanism for certain developments of regional significance, and development in areas of regional significance, to be considered and approved by the Commission.⁹⁵

The Peel Region Scheme includes a Floodplain Management Policy.⁹⁶ The Floodplain Management Policy was created in response to increased development pressures on land along the Murray and Serpentine Rivers.

The objects of the Policy are:

- to identify land at risk of flooding;
- to assist in the protection of life, property and community infrastructure from flood hazard;
- to assist the natural flood carrying capacity of floodplains by ensuring any use or development maintains the free passage and temporary storage of water; and
- to ensure flood considerations are taken into account in preparing and amending town and regional planning schemes.⁹⁷

The Policy is not binding on the Commission, although it is required to take it into account when making determinations under the Scheme.⁹⁸ Local governments must also take the Policy into account when considering development applications on relevant land.⁹⁹

The Policy is primarily concerned with building and subdivision controls as distinct from particular types of land uses. Nonetheless, it is a useful guide to the types of policies that can be used to underpin the statutory controls under a town or regional planning scheme.

3.4.3.5 Regional planning control areas

If the Commission considers that any land situated in a region to which a regional planning scheme applies may be required for (among other things) waterways, the Commission may seek the approval of the Minister declare that land to be a regional planning control area.¹⁰⁰ A regional planning control area can apply for a period of up to five years.¹⁰¹ The *Peel*

⁹³ *Metropolitan Region Town Planning Scheme Act 1959.*

⁹⁴ *Peel Region Scheme 2002, clause 3.*

⁹⁵ *Peel Region Scheme 2002, clause 5.*

⁹⁶ *Peel Region Scheme Floodplain Management Policy, WAPC, October 2002.*

⁹⁷ *Peel Region Scheme Floodplain Management Policy, WAPC, October 2002, section 4.0.*

⁹⁸ *Peel Region Scheme 2002, clause 34.*

⁹⁹ *Peel Region Scheme Floodplain Management Policy, WAPC, October 2002, section 5.0.*

¹⁰⁰ *Western Australian Planning Commission Act 1985, section 37B and Schedule 2.*

¹⁰¹ *Western Australian Planning Commission Act 1985, section 37B(3).*

Region Scheme introduces a control area to protect for water catchments within the Peel region.¹⁰²

A person must not commence or carry out development in a regional planning control area without the approval of the Commission. Penalty for failing to obtain approval is a maximum fine of \$50,000 with a maximum daily penalty of \$5,000.¹⁰³

3.4.3.6 *Regional improvement plans*

The Commission may recommend to the Minister that land subject to a regional planning scheme should be subject to a regional improvement plan, for the purpose of (among other things) the rehabilitation of the land. If approved by the Minister and Governor, land may be acquired for the purposes of implementing the plan.¹⁰⁴

3.4.3.7 *Special planning legislation*

Special legislation can be implemented to progress particular redevelopment initiatives. Examples of such legislation include redevelopment of former industrial areas such as East Perth, Subiaco and Midland.¹⁰⁵ Special legislation has also been made for the Swan Valley, Hope Valley and Armadale.¹⁰⁶

3.4.3.8 *Non-binding planning instruments*

In addition to legally binding town and regional planning schemes, the planning legislation also permits the making of non-binding planning instruments which are designed to guide planning decisions. Whilst they do not have legal force, they are required to be taken into account when town and regional planning schemes are being developed.

The policies include:

- *Statements of planning policy* – a statement of planning policy (SPP) may make provision for any matter which may be the subject of a town planning scheme, although the primary focus will be on broad issues of planning and facilitating the coordination of planning throughout the State.¹⁰⁷ In preparing or amending a town planning scheme, a local government must 'have regard' to a statement of planning policy.¹⁰⁸ Refer to the two SPPs below.
- *State planning strategy* – the State planning strategy is intended as the basis for coordinating and promoting regional land use planning and land development and for the guidance of Government departments and instrumentalities and local governments on those matters.¹⁰⁹ There is no requirement for a local government to adhere to the State planning strategy, but it may provide guidance.
- *Other policies and guidelines* – the Commission issues a number of general policies and guidelines on a range of planning matters. Local government can itself prepare policies on planning issues under a town planning scheme.

¹⁰² *Peel Region Scheme 2002*, Part 5.

¹⁰³ *Peel Region Scheme 2002*, Part 5.

¹⁰⁴ *Western Australian Planning Commission Act 1985*, section 371.

¹⁰⁵ *East Perth Redevelopment Act 1991*, *Subiaco Redevelopment Act 1994*, *Midland Redevelopment Act 1999*.

¹⁰⁶ *Swan Valley Planning Act 1995*, *Hope Valley-Wattleup Redevelopment Act 2000*, *Armadale Redevelopment Act 2001*.

¹⁰⁷ *Town Planning and Development Act 1928*, section 5AA.

¹⁰⁸ *Ibid*, section 7(5). Note also section 53 of the Act requires the Appeal Board to have regard a statement of planning policy in determining an appeal.

¹⁰⁹ *Western Australian Planning Commission Act 1985*, section 18(1)(b).

Agricultural and Rural Land Use Policy - SPP 11 (March 2002)

The objectives of this Policy are to protect agricultural land resources from incompatible land uses and to carefully manage natural resources by (among other things) integrating land, catchment and water resource management requirements with land use planning controls.¹¹⁰

Under the Policy, local governments are required to identify and zone appropriately, areas of natural resources which require protection from incompatible development.¹¹¹

Specific aspects of the Policy of relevance to Carnarvon include:

- **Land degradation** – town planning schemes may contain provisions that restrict land clearing and promote revegetation in areas identified in the local planning strategy as requiring remediation from land degradation.¹¹²
- **Floodplain controls** – town planning schemes should require planning approval to construct a building or to construct or carry out works, including a single dwelling, rural sheds, solid fences, landfill, clearing and excavation, for land within a floodplain.¹¹³

Draft Environment and Natural Resources Policy (November 2001)

This Policy identifies a number of policy measures aimed at better protecting the State's natural resources. Relevant aspects of the draft Policy include:

- **Water quality** – recognise the need for adequate development setbacks for waterways to maintain or improve natural drainage function, protect wildlife habitats and landscape values, lessen erosion of banks, including retention or replacement of riparian vegetation.¹¹⁴
- **Flooding** – consider flood risk by identifying floodways and land affected by 1 in 100 year flood events and avoid intensifying the potential for flooding as a result of inappropriately located land uses and development.¹¹⁵
- **Biodiversity** – ensure any changes in land use or development does not adversely impact, directly or indirectly, on areas of high biodiversity or conservation value.¹¹⁶

3.4.4 Shire of Carnarvon planning controls

3.4.4.1 Overview

The Shire of Carnarvon has three town planning schemes:

- *Town planning scheme 6* covers the Fascine residential estate adjacent to the town centre;

¹¹⁰ *Agriculture and Rural Land Use Statement of Planning Policy (SPP 11)*, WAPC, March 2002.

¹¹¹ *Agriculture and Rural Land Use Statement of Planning Policy (SPP 11)*, WAPC, March 2002, paragraph 6.3.

¹¹² *Agriculture and Rural Land Use Statement of Planning Policy (SPP 11)*, WAPC, March 2002, paragraph 5.4.2(ii).

¹¹³ *Agriculture and Rural Land Use Statement of Planning Policy (SPP 11)*, WAPC, March 2002, paragraph 5.4.4.

¹¹⁴ *Draft Environment and Natural Resources Policy*, WAPC, November 2001, paragraph 5.2.

¹¹⁵ *Draft Environment and Natural Resources Policy*, WAPC, November 2001, paragraph 5.2.

¹¹⁶ *Draft Environment and Natural Resources Policy*, WAPC, November 2001, paragraph 5.5.

- *Town planning scheme 10* controls developments within the Carnarvon town centre and horticultural region;
- *District planning scheme 11* applies to all land in the Shire outside the area covered by schemes 6 and 10 (which is almost entirely rural land).¹¹⁷

The Shire is currently developing a new town planning scheme to replace the above schemes. The new scheme is expected to be finalised in 2003.¹¹⁸

3.4.4.2 *Development controls under town planning scheme 10*

The Shire's town planning scheme 10 ('the Scheme') states that:

Except as hereinafter provided, no development including material change in the use of the land or engineering works affecting the existing topography of the land, shall be carried out within the Scheme Area without the prior consent of the Council.¹¹⁹

Development is defined to mean 'the use (including a material change in use) or development of any land and includes the erection, construction, alteration or carrying out as the case may be, of any building, erection, excavation or other works on any land.'¹²⁰

The Scheme lists the matters the Shire Council is required to consider in determining a development application, including 'the extent to which any development is vulnerable to flooding or obstructive to the movement of floodwaters'.¹²¹

The Scheme identifies a number of classes of development which can be undertaken without approval of Council (referred to as 'permitted development'):

- replacement, maintenance or repair by government entity of equipment used to provide public services;
- maintenance or repair of any building where no structural works or changes to physical appearance;
- activities or works which lie within the definition of 'development', but which are necessary for the continuation of the primary use of that land;
- changes in use of land and buildings for which approval is not required under the Scheme.¹²²

The Scheme identifies zones which specify permitted and prohibited land uses.¹²³ Like most town planning schemes in Western Australia, the Carnarvon Scheme adopts the following use classifications:

¹¹⁷ Pers comm, Steve Thompson, Shire of Carnarvon, June 2002.

¹¹⁸ *Town Planning Scheme 12* is currently being assessed by the Environmental Protection Authority under Part IV of the *Environmental Protection Act 1986*: pers comm, Steve Thompson, Shire of Carnarvon, October 2002. The contents of the draft scheme will be discussed further below.

¹¹⁹ Scheme Text, *Town Planning Scheme 10*, Shire of Carnarvon, paragraph 2.1.1.

¹²⁰ Scheme Text, *Town Planning Scheme 10*, Shire of Carnarvon, page 50.

¹²¹ Scheme Text, *Town Planning Scheme 10*, Shire of Carnarvon, paragraph 2.3.1(xi).

¹²² Scheme Text, *Town Planning Scheme 10*, Shire of Carnarvon, paragraph 2.6.1.

¹²³ Scheme Text, *Town Planning Scheme 10*, Shire of Carnarvon, Part 4.

Classification	Description
P	Means the use is permitted provided it complies with the relevant standards and requirements laid down in the Scheme and all conditions (if any) imposed by the Council in granting Planning consent
AA	Means the Council may, at its discretion, permit the use
SA	Means the Council may, at its discretion, permit the use after notice of the application has been given in accordance with clause 4.3 of the Scheme
IP	Uses in respect of which Planning Approval will not be granted by the Council unless it can be satisfied that the proposed use will be incidental to the predominant use of the land as may be determined by the Council
-	Uses which are not permitted under the Scheme.

Special provisions apply to land uses and developments which, in the opinion of Council, are exposed to or may contribute to damage by flooding.¹²⁴ The Scheme also identifies *floodways* where development applications are to be determined in accordance with guidelines established by the Water and Rivers Commission.¹²⁵ Identification of these floodways was through a flood management study undertaken in the early 1980s.¹²⁶

The Scheme also identifies *reserved land* – being land set aside for parks and recreation, public purposes or communications.¹²⁷ A person must not carry out any development on reserved land (including the erection of a boundary fence) without obtaining development approval.¹²⁸

Finally, the Scheme allows for the making of policies to guide the Council in determining development applications.¹²⁹ These policies are not binding, but Council is required to take them into account before determining a development application.¹³⁰ Policies have been created in respect of intensive horticulture and plantations,¹³¹ and land being made available for intensive horticulture on McGlades Road.¹³²

3.4.4.3 *Development controls in the intensive horticultural zone*

The *intensive horticulture zone* extends from the town approximately 19 kilometres inland from the mouth of the Gascoyne River.¹³³ This zone covers the plantation areas on either side of the river.

¹²⁴ Scheme Text, *Town Planning Scheme 10*, Shire of Carnarvon, paragraph 6.8.1.

¹²⁵ Scheme Text, *Town Planning Scheme 10*, Shire of Carnarvon, paragraph 6.8.3.

¹²⁶ *Gascoyne River Flood Management Strategy Report*, Sinclair Knight, October 1981. This report identified three types of floodways. Floodways with moderate to severe impacts have been identified in the Scheme maps: see Scheme Report, *Town Planning Scheme 10*, Shire of Carnarvon, pages 3 and 21.

¹²⁷ Scheme Text, *Town Planning Scheme 10*, Shire of Carnarvon, paragraph 3.1.

¹²⁸ Scheme Text, *Town Planning Scheme 10*, Shire of Carnarvon, paragraph 3.2.

¹²⁹ Scheme Text, *Town Planning Scheme 10*, Shire of Carnarvon, paragraph 8.8.1.

¹³⁰ Scheme Text, *Town Planning Scheme 10*, Shire of Carnarvon, paragraph 8.8.4.

¹³¹ Policy Statement No. 1, *Town Planning Scheme 10*, Shire of Carnarvon, page 68.

¹³² Policy Statement No. 8, *Town Planning Scheme 10*, Shire of Carnarvon, pages 81-82. See discussion below.

¹³³ Scheme Report, *Town Planning Scheme 10*, Shire of Carnarvon, page 38.

The object of the intensive horticulture zone is to preserve the area for horticultural use.¹³⁴ To this end, most developments within the zone are prohibited, or require special approval. The only 'permitted' uses within the zone (that is, uses which do not require approval of the Shire Council) are the construction of a single dwelling or carrying out intensive horticultural activities.¹³⁵

'Intensive horticulture' is defined under the Scheme to mean:

agricultural practices which are carried out with the aid of techniques including water reticulation to render the land capable of sustaining a considerably greater number of stock, higher crop yields, or different types of crops without the aid of those techniques.¹³⁶

'Agricultural practices' are not defined in the Scheme, but would include activities normally associated with agricultural production, such as mechanical cultivation of the soil, application of chemicals, harvesting and so on. The definition would probably exclude earthworks associated with levees or other flood defence mechanisms, as these works are not related to the primary activity of agriculture.

Controls on earthworks

As mentioned at the beginning of this report, the *Carnarvon Floodplain Management Study* identifies earthworks and land management practices as significant contributors to erosion damage in the Carnarvon horticultural area.¹³⁷

The definition of development in the Scheme expressly includes 'engineering works affecting the existing topography of the land'.¹³⁸ It is likely this definition is sufficient to encompass the erection of levees and other earthworks.

As mentioned, earthworks in the form of levees or other flood defence mechanisms are unlikely to come within the definition of 'intensive horticulture' under the Scheme. Similarly, such earthworks are unlikely to be exempt from development approval on the basis that they are incidental to the primary land use, as they are carried out to protect the land from flooding, not as a cultivation technique *per se*.

Accordingly, the erection of levees or the undertaking of other activities which effect the topography of the land within the intensive horticulture zone will generally require development approval. Failure to obtain development approval is an offence, and is subject to a penalty of \$50,000.¹³⁹ The Shire may also (after giving 28 days written notice) remove any work which has been commenced or continued contrary to the terms of the Scheme.¹⁴⁰

Prosecutions for a breach of the TP&D Act must be commenced within 12 months from the time when the matter of complaint arose.¹⁴¹ However, where the offence is 'continuing', proceedings may be commenced at any time while the offence continues.¹⁴²

¹³⁴ Scheme Report, *Town Planning Scheme 10*, Shire of Carnarvon, page 38.

¹³⁵ Scheme Text, *Town Planning Scheme 10*, Shire of Carnarvon, pages 17-20.

¹³⁶ Scheme Text, *Town Planning Scheme 10*, Shire of Carnarvon, page 54.

¹³⁷ See paragraph 1.3 above.

¹³⁸ Scheme Text, *Town Planning Scheme 10*, Shire of Carnarvon, paragraph 2.1.1.

¹³⁹ *Town Planning and Development Act 1928*, section 10; Scheme Text, *Town Planning Scheme 10*, Shire of Carnarvon, paragraph 8.2.2.

¹⁴⁰ *Town Planning and Development Act 1928*, section 10; Scheme Text, *Town Planning Scheme 10*, Shire of Carnarvon, paragraph 8.3.

¹⁴¹ *Justices Act 1902*, section 51.

¹⁴² Continuing offences are specifically recognised under the *Town Planning and Development Act 1928*: section 10(4). Whether a particular development is continuing or not is considered in the following judgement: 'The question whether the offence which has been committed is a continuing offence, or one which was committed once and for all at a specified time, depends upon consideration of the language of the Act in question. Some offences once committed are complete and concluded and exist only in the past.'

Land use practices

The second significant contributor to erosion damage during floods is cultivation practices – particularly the cultivation of floodways for vegetable production.

Land within the intensive horticulture zone is intended to be used for intensive horticultural purposes. Cultivation of land for vegetables would clearly come within the description of an ‘intensive horticultural activity’. Accordingly, approval is not required to grow vegetables within that zone. Once a land use is lawfully established under the Scheme, no further approvals are required except where there is a change of land use or where the Scheme is amended, and the existing use is prohibited.¹⁴³

Whilst the Scheme places special controls on developments within flood-prone land,¹⁴⁴ these provisions do not permit the Council to control activities that are already approved under the Scheme. Accordingly, these special controls have limited application to existing land uses in the intensive horticulture zone.

The Scheme also includes a policy which purports to establish guidelines about the manner in which horticultural activities are to be carried out on the south side of McGlades Road.¹⁴⁵ For example, the Policy states that ‘the land shall only be used for growing tree crops’.¹⁴⁶ It is doubtful this policy could be used to prevent vegetables being grown on the land, as the zoning of the land for intensive horticulture expressly authorises such a land use.¹⁴⁷

In light of the above, the Scheme is not suited to controlling particular horticultural practices on land within the intensive horticulture zone.

Opening up new horticultural land within the Shire would require subdivision approval from the WA Planning Commission, environmental impact assessment by the Environmental Protection Authority and possible approval by the Federal Environment Minister among others. Assuming this process is successful, then new developments need to comply with the terms of the Scheme. Conditions relating to flood protection could be included on any approval, for example by restricting the use of flood-prone land to tree crops.¹⁴⁸ Conditions could also be placed on the title to the land – see paragraph 3.6.2.2 for further information.

Other offences, however, are continuing offences and are committed day by day so long as the state of affairs which is forbidden continues to exist, and the person responsible for creating that state of affairs is liable day by day for those offences. The test, it seems to me, is one which was prescribed in *Ellis v Ellis*, by Sir Francis Jeune, who said: ‘The test whether an offence is to be treated in law as continuous is, I think, whether its gravamen is to be found in something which the offender can, at will, discontinue.’: *Sloggett v Adams* (1953) 70 WN (NSW) 206 per Street CJ at page 208. In a NSW case, the failure of a company to repair a leak in a containment lagoon which allowed effluent to escape into the environment was a continuing offence (*CSR Ltd v. Environmental Protection Authority* [2000] NSWCCA 373 (20 September 2000)). Similarly, the Supreme Court of Western Australia has found that the keeping of 20 disused railway carriages on land contrary to the terms of a town planning scheme was a continuing development within the meaning of the TP&D Act (*Daniele v Shire of Swan* [1998] WASCA 308 (11 November 1998), esp 1pp J.).

¹⁴³ If a prohibited use was lawful prior to the new scheme coming into force, compensation will be payable by the local government: see *Town Planning and Development Act 1928*, section 12(2a).

¹⁴⁴ Scheme Text, *Town Planning Scheme 10*, Shire of Carnarvon, paragraph 6.8.1.

¹⁴⁵ Policy Statement No. 8, *Town Planning Scheme 10*, Shire of Carnarvon, pages 81-82.

¹⁴⁶ Policy Statement No. 8, *Town Planning Scheme 10*, Shire of Carnarvon, clause 4(5).

¹⁴⁷ A similar conclusion has been reached by the Shire of Carnarvon: see Item WPS 3.11, Carnarvon Shire Council minutes, 26 June 2002.

¹⁴⁸ The prospect of new land being developed for horticultural purposes in the region is likely to be limited by available water supplies: see Local Planning Strategy, *Draft Town Planning Scheme 12*, Shire of Carnarvon, para 5.3.

3.4.3.3 Reform of Carnarvon's planning scheme

The Shire of Carnarvon is developing town planning scheme 12 ('Scheme 12') which will replace schemes 6, 10 and 11. The new scheme is intended to apply to the entire area of the Shire, and is modelled on the requirements of the Model Scheme Text.¹⁴⁹

Scheme 12 incorporates a local planning strategy which sets out the 'strategic vision, policies, objectives and proposals for land use within the scheme area.'¹⁵⁰ Features of Scheme 12 which are relevant to management of land use within flood affected areas include:

- **special control areas – relief floodways:** relief floodways are identified as being necessary to effectively pass floodwaters during major river flows. The Scheme states that 'planning approval is required for the use or development of any land [within a relief floodway] including a single house';¹⁵¹
- **effect of the proposal on natural environment:** in considering an application for development approval, the local government is to have due regard to the impacts on the natural environment;¹⁵²
- **land subject to flooding:** in considering an application for development approval, the local government is to have due regard to whether the land is subject to flooding.¹⁵³

It is interesting to note that the Local Planning Strategy contemplates special control areas to limit the use and development of relief floodways to plantation crops only.¹⁵⁴ This implies that existing land uses (for example, vegetable growing in the horticultural/intensive agriculture zone) could be regulated or prohibited through the creation of the special control area. However, for the reasons discussed earlier, the creation of a special control area will not regulate pre-existing land uses, as these are assumed to be permitted under the non-conforming use provisions of the Scheme. If non-conforming use rights were removed by the special control area, then compensation may be payable for any loss in value.¹⁵⁵

3.4.5 Summary - town planning legislation

1. An effective town planning scheme is important for controlling developments which are likely to cause erosion on floodways.
2. Planning instruments cannot prohibit pre-existing land uses on floodways without creating potential liability for compensation. This may be beyond the capacity of local government to fund.
3. Town planning schemes do not bind the Crown or local government in respect to public works.
4. The Carnarvon Scheme could be used to regulate the erection of levees within the intensive horticulture zone, but it is doubtful it could be used to regulate land management practices (such as growing of vegetables on floodways).
5. A regional planning scheme could be considered with respect to developments on a floodway, but as is the case for town planning schemes, it cannot impede pre-existing land uses without raising potential liability for removing existing rights.
6. Planning laws will be most significant for new developments on the Gascoyne River, in particular the opening up of new areas to horticultural development east of the existing horticulture zone.

¹⁴⁹ A town planning scheme is required to be prepared in accordance with the Model Scheme Text: see *Town Planning Regulations 1967*, regulation 11(1) and Appendix B.

¹⁵⁰ *Draft Local Planning Strategy*, Shire of Carnarvon, paragraph 1.2. 'Local planning strategies' are required to be prepared with every new town planning scheme: see *Town Planning Regulations 1967*, regulation 12A.

¹⁵¹ Scheme Text, *Draft Town Planning Scheme 12*, Shire of Carnarvon, para 6.3.2.

¹⁵² Scheme Text, *Draft Town Planning Scheme 12*, Shire of Carnarvon, para 10.2(l).

¹⁵³ Scheme Text, *Draft Town Planning Scheme 12*, Shire of Carnarvon, para 10.2(m).

¹⁵⁴ *Draft Local Planning Strategy*, Shire of Carnarvon, page 19.

¹⁵⁵ Scheme Text, *Draft Town Planning Scheme 12*, Shire of Carnarvon, para 4.8(a). Given the value of, and cash flow generated by, vegetable crops, restrictions on vegetable growing may have a significant impact on property value and income. See also comments on financial assistance to growers in the *Draft Carnarvon Floodplain Management Study*, Sinclair Knight Merz, October 2002, page 90.

3.5 Environmental Protection Act 1986

3.5.1 Purpose of the Act

The *Environmental Protection Act 1986* ('the EP Act') has a number of objects, including 'the conservation, preservation, protection, enhancement and management of the environment.'¹⁵⁶ *Environment* means 'living things, their physical, biological and social surroundings, and interactions between all of these.'¹⁵⁷

Whilst the Act is primarily directed towards protection of the environment from polluting activities, it is also relevant to environmental damage generally – including destruction of native vegetation. Reforms to widen the scope of the Act are currently before Parliament, and these will be considered separately below.

3.5.2 Administration of the Act

The EP Act is within the portfolio of the Minister for Environment and Heritage. The Act is administered by the Department of Environmental Protection.¹⁵⁸ The Act also establishes an independent Environmental Protection Authority ('EPA'). The EPA's functions include:

- to conduct environmental impact assessments;
- to consider and initiate the means of protecting the environment and the means of preventing, controlling and abating pollution;
- to advise the Minister on environmental matters generally, including the environmental protection aspects of any proposal or town planning scheme;
- to prepare, and seek approval for, environmental protection policies;
- to publish guidelines to assist planners, builders, engineers or other persons in undertaking their activities in such a way which minimises the effect on the environment.¹⁵⁹

The EP Act binds the Crown, and is intended to be paramount over other statutes in the case of inconsistency.¹⁶⁰

3.5.3 Erosion controls under the Environmental Protection Act

3.5.3.1 Environmental impact assessment

The EPA has a statutory role to assess the environmental impacts of major development proposals. A proposed activity that appears likely, if implemented, to have a significant effect on the environment, must be referred to the EPA by a *decision-making authority*.¹⁶¹ A decision-making authority means a public authority empowered to make a decision in respect of any proposal.¹⁶²

Once a proposal has been referred to the EPA, a decision-making authority is prevented from making any decision that could have the effect of allowing the proposal to be

¹⁵⁶ *Environmental Protection Act 1986*, long title.

¹⁵⁷ *Environmental Protection Act 1986*, section 3(1) and (2).

¹⁵⁸ Note that the Department of Environmental Protection and Water and Rivers Commission are proposed to be amalgamated to form the Department of Environment, Water and Catchment Protection ('DEWCP').

¹⁵⁹ *Environmental Protection Act 1986*, section 16.

¹⁶⁰ *Environmental Protection Act 1986*, sections 4 and 5.

¹⁶¹ *Environmental Protection Act 1986*, section 38.

¹⁶² *Environmental Protection Act 1986*, section 3(1). As a general rule, proposals that are subject to approval under a town planning scheme that has been assessed by the EPA are not subject to formal environmental impact assessments: see section 48l. 'Assessed scheme' includes a town planning scheme that has been assessed under Part IV of the Act (see paragraph 3.5.3.2 below).

implemented until the EPA advises that it is not assessing the proposal or until it is approved by the Minister.¹⁶³

The Minister may approve a proposal with conditions.¹⁶⁴ A proponent who fails to abide by those conditions commits an offence and is liable to a fine of \$125,000 for an individual and \$250,000 for a body corporate.¹⁶⁵

The usefulness of the environmental impact assessment process for existing land uses is limited. This is because, like planning controls, the environmental impact assessment process generally relates only to new developments. Whilst the process will be critical for any expansion of the horticultural area, it is not suited to control existing land uses.

3.5.3.2 Assessment of town planning schemes

When a local government prepares or amends a town planning scheme, it must refer the scheme to the EPA for assessment.¹⁶⁶ Upon receipt of a referral, the EPA may assess or decline to assess the scheme.¹⁶⁷

If the EPA conducts a formal assessment of the scheme, it reports to the Environment Minister on the relevant environmental issues and the conditions (if any) it recommends be included in the scheme.¹⁶⁸

Once an assessed scheme is operational, proposals that are likely to have a significant effect on the environment will be assessed by the local government in accordance with the terms of the assessed scheme.¹⁶⁹ This avoids the need for the proposal to be referred to the EPA, unless the proposal is of such a nature or scale that its effects were not considered as part of the original assessment of the scheme.¹⁷⁰

3.5.3.3 Environmental protection policies

Environmental Protection Policies (EPPs) can be made for the protection of any portion of the environment, or for the prevention, control or abatement of pollution.¹⁷¹ This would likely include protecting certain sensitive areas from environmental harm, such as lakes and wetlands.¹⁷² Protection of riverine environments may also come within the ambit of an EPP.

An EPP can include provisions to:

- identify the boundaries of the area, and the portion of the environment, to which the policy applies;
- identify and declare the beneficial uses to be protected under the policy; and specify the environmental quality objectives to be achieved and maintained by means of the policy.¹⁷³

¹⁶³ *Environmental Protection Act 1986*, section 41.

¹⁶⁴ *Environmental Protection Act 1986*, section 45(5).

¹⁶⁵ *Environmental Protection Act 1986*, section 47(1); Schedule 1, Part 1.

¹⁶⁶ *Town Planning and Development Act 1928*, section 7A1.

¹⁶⁷ *Environmental Protection Act 1986*, section 48A(1).

¹⁶⁸ *Environmental Protection Act 1986*, section 48D. Once the conditions are agreed between the Environment Minister and Planning Minister, the conditions on the scheme are published: section 48F.

¹⁶⁹ *Environmental Protection Act 1986*, section 48I.

¹⁷⁰ *Environmental Protection Act 1986*, section 48(3).

¹⁷¹ *Environmental Protection Act 1986*, section 26.

¹⁷² *South West Agricultural Land Wetlands Policy 1997*, and the *Swan Coastal Plain Lakes Policy*.

¹⁷³ *Environmental Protection Act 1986*, section 35(2).

EPPs have the force of law, and can establish penalties for offences.¹⁷⁴ The process for creating an EPP requires considerable consultation.¹⁷⁵

3.5.3.4 Licences and works approval

The EP Act provides for certain *premises* to be licensed because of their potential to cause pollution.¹⁷⁶ Examples of the types of premises that are required to be licensed include:

- Cattle feedlots of 500 animals or more situated less than 100 metres from a watercourse and on which the number of cattle per hectare exceeds 50; and
- Intensive piggeries with pens housing more than 1,000 animals.¹⁷⁷

The activities regulated under this part of the EP Act are directed at controlling polluting activities. They do not control activities that may cause non-chemical degradation, such as erosion, salinity and land clearing. As such, they are of little relevance in the context of erosion controls in the Carnarvon horticultural area.

¹⁷⁴ *Environmental Protection Act 1986*, section 35(1).

¹⁷⁵ The steps that have to be gone through include advertising, seeking comments, re-advertising after receiving comments, referring proposal to the Minister, Minister seeking comments and the Minister approving the draft, which is then subject to disallowance in Parliament: *Environmental Protection Act 1986*, sections 26 to 32.

¹⁷⁶ *Environmental Protection Act 1986*, section 35(1).

¹⁷⁷ *Environmental Protection Regulations 1987*, Schedule 1.

Reforms to the *Environmental Protection Act*

Parliament is considering a number of important amendments which will significantly broaden the scope of the *Environmental Protection Act*. At the time of writing, the proposals had passed the Legislative Assembly and are awaiting passage through the Upper House.

Environmental harm offences

It is proposed to introduce two new offences of causing *material* or *serious* environmental harm. These offences expand the scope of the EP Act from pollution to more general environmental damage. A person will have a defence to a charge of causing environmental harm where the activity complained of was approved under a written law or complies with an accredited 'code of practice'. Penalties of up to \$1 million will apply.¹⁷⁸

Clearing permits

Anyone proposing to clear native vegetation will require a permit from the Department of Environmental Protection unless the clearing is subject to an exemption. This will replace the existing notice of intent provisions administered by the Commissioner of Soil and Land Conservation. Penalties for illegal clearing increase from \$2,000 to \$500,000 and will include orders to rehabilitate areas illegally cleared.¹⁷⁹

Note that anyone 'illegally' clearing after 26 June 2002 may be ordered to revegetate the land once the new laws come into effect – this provides a significant incentive for anyone proposing to clear land to comply with the current laws.

Environmental protection policies

The power to implement EPPs will be widened so that they can apply generally throughout the State.

Environmental impact assessment

The environmental impact assessment process is to be refined. An important change makes it an offence for a person to proceed with a development whilst it is being assessed by the EPA.¹⁸⁰

3.5.4 Summary - Environmental Protection Act

1. The EP Act is the key statute for controlling pollution and for assessing the environmental impacts of major development proposals.
2. Like the planning laws, the environmental impact assessment provisions of the EP Act are primarily directed towards controlling new developments rather than pre-existing land uses.
3. It is likely any proposal to expand the horticultural zone to Rocky Pool or elsewhere in the catchment will be the subject of an environmental impact assessment process by the EPA.
4. An Environmental Protection Policy could be developed to protect environmental values in the lower Gascoyne River, although the creation of EPPs is time consuming.
5. Amendments to the Act, and in particular the creation of offences for causing serious or material environmental harm, will strengthen the Act's ability to control a wider range of activities, including activities that may lead to land degradation in the form of erosion.

¹⁷⁸ *Environmental Protection Amendment Bill 2002*, clauses 50A and 50B.

¹⁷⁹ *Environmental Protection Amendment Bill 2002*, clause 51C.

¹⁸⁰ *Environmental Protection Amendment Bill 2002*, clause 41A.

3.5 Other legislation

3.6.1 Local Government Act 1995

3.6.1.1 Local laws

Local government has the power to make local laws prescribing all matters that are required or are necessary or convenient for it to perform any of its functions under the *Local Government Act* ('the LG Act').¹⁸¹ The *general function* of local government is to provide for the good government of persons in its district. A liberal approach is to be taken to the construction of the scope of this general function.¹⁸²

Local government may make local laws for carrying into effect the provisions of the *Waterway Conservation Act 1976*.¹⁸³ This may extend to creating local laws which place restrictions on land uses which, in the opinion of the local government, are likely to cause environmental damage to a watercourse and its associated land. It is important to note however that where a local law is inconsistent with the terms of a town planning scheme, the town planning scheme will prevail.¹⁸⁴ In basic terms, this means that a local law could not be made which purports to place controls on land use inconsistent with the terms of a town planning scheme. By way of example, it is lawful within the Carnarvon *intensive horticulture zone* for a person to use the land for 'intensive agriculture' (which is broadly defined). A local law which attempts to restrict the use of that land to growing trees is likely to infringe the town planning scheme, and thus be held to be invalid.¹⁸⁵

Local laws are unlikely therefore to provide a suitable mechanism through which to control land management practices causing erosion and other forms of land degradation.

3.6.1.2 Notices to landholders

A local government may give a person who is the owner or occupier of land written notice requiring the person to:

- repair any damage caused to a public place that is local government property;
- ensure that rubbish or disused material is removed from land;
- take specified measures for preventing or minimising sand drifts that are likely to adversely affect other land;

¹⁸¹ *Local Government Act 1995*, section 3.5. Note also that local government can make local laws pursuant to a power conferred on it by any other Act (e.g. power to make local laws about 'pest plants' under the *Agriculture and Related Resources Protection Act 1976*).

¹⁸² *Local Government Act 1995*, section 3.1. In *Bunbury-Harvey Regional Council v. Giacci Bros Pty Ltd*, unreported, 15 September 2000, WASC 223, Hasluck J, commenting on the powers of a local government under the *Local Government Act*, stated: 'The general rule is that the powers of a statutory body are circumscribed by the statute governing its activities. Its powers are limited to what is expressly stated in the relevant legislation, or is necessarily and properly required for carrying into effect the purposes for which the body was established, or which may be fairly regarded as incidental to, or consequential upon, those things which the legislature has authorised. What the statute does not expressly or impliedly authorise is taken to be prohibited. If the subject matter of a contract is beyond the scope of the constitution of a statutory body, it is *ultra vires*: *Attorney-General & Ephram Hutchings v Great Eastern Railway Co* [1880] 5 AC 473. Various decided cases suggest that **what is regarded as necessary or as incidental to a designated function will be viewed liberally**: see *Commonwealth and the Postmaster General v The Progress Advertising and Press Agency Co* (1910) 10 CLR 457 per Higgins J, at 469.' (emphasis added).

¹⁸³ *Waterways Conservation Act 1976*, section 56.

¹⁸⁴ *Town Planning Regulations 1967*, Appendix B, para 1.8.

¹⁸⁵ This view is fortified when it is noted that compensation is payable when town planning schemes alter the rights of people in respect of the use of their land: section *Town Planning and Development Act 1928*. It would be inconsistent with this provision if local government could avoid payment of compensation by introducing *de facto* planning laws through a local law.

- take specified measures for preventing or minimising
 - danger to the public; or
 - damage to property which might result from cyclonic activity.¹⁸⁶

It is possible these notice provisions provide local government with a limited basis to control land use practices which are likely to lead to land degradation. However, the powers are narrowly expressed, and may not be sufficient to authorise action where the damage is caused by flooding. For example, a court might conclude that the use of the expression 'sand drift' suggests that the power to issue a notice is limited to erosion caused by wind rather than by the movement of water. This may be the case even where the erosion is caused by flooding following a cyclone, as again the power to issue a notice may be read in the context of direct wind damage rather than subsequent flooding.

It is an offence not to comply with a notice – a maximum fine of \$5,000 applies, together with a daily penalty of \$500.¹⁸⁷ Where a person fails to comply with a notice, the local government may undertake the works itself and claim the cost of doing so from the person served with the notice.¹⁸⁸

3.6.1.3 Regulations to protect watercourses and prevent erosion

Regulations may be made for:

- regulating or preventing the alteration, obstruction of, or interference with any watercourse that is local government property;¹⁸⁹ and
- for preventing or minimising sand drifts on land that are likely to adversely affect other land.¹⁹⁰

'Local government property' means anything, whether land or not, that belongs to, or is vested in, or under the care, control or management of, the local government.¹⁹¹

In the Carnarvon context, the reserve forming the banks of the Gascoyne River is vested in the Shire of Carnarvon.¹⁹² Accordingly, it is 'local government property' for the purposes of the *Local Government Act*. This means regulations could be introduced to regulate or prevent interference with the bed or banks of the river.¹⁹³

Regulations may also be introduced for preventing or minimising sand drift. It would appear that this power is limited to erosion caused by movement of the wind as distinct from waters.¹⁹⁴ Accordingly, this power is probably of limited value in the context of flood damage in the Carnarvon horticultural area.¹⁹⁵

¹⁸⁶ *Local Government Act 1995* section 3.25(1); Schedule 3.1, clauses 3, 5A, 6, 10.

¹⁸⁷ *Local Government Act 1995* sections 3.25(6) and 9.14.

¹⁸⁸ *Local Government Act 1995* section 3.26.

¹⁸⁹ *Local Government Act 1995* Schedule 9.1, clause 9.

¹⁹⁰ *Local Government Act 1995* Schedule 9.1, clause 12.

¹⁹¹ *Local Government Act 1995* section 1.4.

¹⁹² Pers comm George Poppas, Department of Land Administration, October 2002.

¹⁹³ The term 'watercourse' is not defined in the *Local Government Act 1995*. The general definition used in the water legislation is therefore likely to apply, and this is limited to the bed and banks of the watercourse – not associated flood channels (see *Rights in Water and Irrigation Act 1914*, section 3). It is doubtful however that this would extend to damage caused to the floodplain itself, as such land does not fall within the definition of 'watercourse'.

¹⁹⁴ *Local Government Act 1995* Schedule 9.1, clause 12. The heading to this clause is titled 'Wind erosion and sand drifts'. It is likely therefore that water erosion is not within the scope of the power.

¹⁹⁵ It may nevertheless be relevant for controlling wind erosion problems within the Shire, for example at Pelican Point west of the town.

3.6.1.4 Flood works by local government

Local government may (without consent) enter private land and undertake earthworks for preventing or reducing flooding.¹⁹⁶ Compensation may be payable where the local government exercises this power and causes damage to the landholder.¹⁹⁷

3.6.1.5 Use of local government lands

A local government may (subject to the nature of the land and subject to the approval of the relevant Minister) do any of the following things with respect to land under its control:

- Grant licences for the depasturing of animals on that land; and
- Grant licences for the removal of any sand, gravel, or other earth or mineral, and for cutting and removing wood.¹⁹⁸

Local government is also responsible for controlling and managing any thoroughfare, bridge, jetty, drain, or watercourse belonging to the Crown, and which is not vested in any other person.¹⁹⁹

The general power to control and manage public lands provides a basis upon which local laws or regulations could be enacted prescribing activities that directly or indirectly affect those lands.²⁰⁰

3.6.2 Land Administration Act 1997

3.6.2.1 Interference with Crown land

It is an offence for a person to do any of the following things without approval from the Minister for Lands:

- construct a road or track on Crown land;
- clear, enclose, cultivate or allow stock to graze on Crown land;
- excavate Crown land;
- collect, drill for, or take water from, Crown land;
- remove from Crown land any plant (whether alive or dead); or
- deposit or leave any thing of any kind on Crown land.

'Crown land' is defined as any land other than freehold land.²⁰¹

The penalty for this offence is a maximum fine of \$10,000 and, in the case of an offence of a continuing nature, to a daily penalty of \$200.²⁰²

In the Carnarvon context, activities that could be caught by this provision include:

- construction of tracks or removal of vegetation on the river reserve without approval;
- cultivation of Crown land for horticulture without approval;

¹⁹⁶ *Local Government Act 1995*, section 3.27; Schedule 3.2.

¹⁹⁷ *Local Government Act 1995*, section 3.22.

¹⁹⁸ *Local Government Act 1995*, section 3.54, applying section 5 of the *Parks and Reserves Act 1895*.

¹⁹⁹ *Local Government Act 1995*, section 3.53.

²⁰⁰ This is in addition to the development controls applying to 'reserved land' under the Shire of Carnarvon's town planning scheme 10: see para 3.4.4.2.

²⁰¹ *Land Administration Act 1997*, section 3.

²⁰² *Land Administration Act 1997*, section 267(2). Prosecution for an offence under this section can be commenced at any time within 10 years of from the time when the matter of complaint arose: see section 267(4).

- running stock on Crown land without approval.

It should be noted that the law relating to 'adverse possession' does not apply to Crown land – that is, it is not possible for a person to acquire title to Crown land by maintaining unbroken possession.²⁰³

3.6.2.2 *Covenants and conditions on freehold title*

The Minister for Lands may place a *covenant* on any land before it is alienated (that is, sold to a private purchaser).²⁰⁴ A covenant is a legal obligation formally registered on the title to the land.

A covenant can be positive or restrictive, and may make provision in respect of:

- the use of land;
- the requirement that land is not to be built on except in accordance with that covenant; and
- the requirement that land or a specified feature of that land be protected, preserved, conserved, maintained, enhanced, restored or kept in its natural or existing state.²⁰⁵

A covenant is binding on the owner of the land, and any successors in title so long as it remains registered on the title. It may also provide that the matter the subject of the covenant be performed to the satisfaction of a public authority or local government.²⁰⁶ Failure to perform a function under a covenant may result in an action in damages or specific performance.

In addition to the covenanting power, the Minister for Lands may transfer Crown land in fee simple subject to such conditions concerning the use of the land as the Minister determines.²⁰⁷

The power of the Minister to enter into such covenants, or to prescribe conditions on the use of land may be important for any future expansion of the horticultural area in Carnarvon. Conditions on title could be used to provide a legally enforceable mechanism to control land use practices on flood-prone land.²⁰⁸

3.6.2.3 *Warnings on the title of freehold land*

With the consent of the freehold owner, the Minister may endorse on the certificate of title a statement warning of hazards or other factors affecting, or likely to affect, the use or enjoyment of that land.²⁰⁹ This could include a warning that the land is in a floodway or is liable to inundation.

²⁰³ *Limitation Act 1935*, section 36.

²⁰⁴ *Land Administration Act 1997*, section 15(1).

²⁰⁵ *Land Administration Act 1997*, section 15(4) and (7).

²⁰⁶ *Land Administration Act 1997*, section 15(6).

²⁰⁷ *Land Administration Act 1997*, section 75.

²⁰⁸ The Crown land south of McGlades Road was converted to freehold prior to the introduction of the *Land Administration Act 1997*. As such, there was arguably no power for the Minister for Lands to impose enforceable restrictions on the use of that land: pers comm George Poppas, Department of Land Administration, October 2002.

²⁰⁹ *Land Administration Act 1997*, section 17.

3.6.3 Wildlife Conservation Act 1950

3.6.3.1 Controls on taking protected flora

All flora native to the State is 'protected' under the *Wildlife Conservation Act 1950*. It is an offence:

- to take native flora from Crown land without a licence from CALM;²¹⁰ or
- to sell native flora taken from private land without a licence from CALM.²¹¹

Penalty for this offence is a fine of \$4,000 for each species taken.²¹² To 'take' includes to gather, pluck, cut, pull up, destroy, dig up, remove or injure the flora or to cause or permit the same to be done by any means.²¹³ It may also be possible for a person to be prosecuted for damaging vegetation which is a habitat for native animals.²¹⁴

These provisions do not prevent an owner or occupier of land from removing native vegetation from their land without a licence *provided* the vegetation is not sold or declared to be rare or endangered (see below). Note however that clearing of more than 1 hectare of land may require the person to notify the Commissioner of Soil and Land Conservation.²¹⁵

3.6.3.2 Controls on taking rare or endangered flora

The Minister for the Environment may declare any class or description of native flora to be specially protected where that species is likely to become extinct or is rare or otherwise in need of special protection.²¹⁶ Approval is required from the Minister before a rare or endangered species is taken.²¹⁷ Penalty for illegally taking rare or endangered flora is a maximum fine of \$10,000.²¹⁸

3.6.4 Agriculture and Related Resources Protection Act 1976

3.6.4.1 Control of introduced plants

The *Agriculture and Related Resources Protection Act 1976* ('the ARRPA Act') has as an object the management, control and prohibition of certain plants for the protection of agriculture and related resources.²¹⁹ The Act is primarily focused on plants that pose a threat to agriculture, rather than to the environment generally.

Under the Act, the Agriculture Protection Board can declare species of plants to be 'declared'.²²⁰ In making a declaration, the Board assigns a category to the species, which stipulates how the particular plant is to be managed.²²¹ The management categories specify whether:

²¹⁰ *Wildlife Conservation Act 1950*, section 23B.

²¹¹ *Wildlife Conservation Act 1950*, section 23D.

²¹² *Wildlife Conservation Act 1950*, section 26. See *Russell v. Pennings* where the Supreme Court of Western Australia held that a person who cleared an unmade road reserve of native vegetation in order to gain access to his property acted illegally and was liable to a penalty: 12 April 2001, WASCA 115.

²¹³ *Wildlife Conservation Act 1950*, section 6.

²¹⁴ *Ibid*, where 'to take' in relation to any fauna, includes 'to kill or capture any fauna by any means or to disturb or molest any fauna by any means'. Whilst 'habitat' is not expressly mentioned, it is possible that the words 'damage' or 'molest' include interferences with the habitat of a native animal.

²¹⁵ See paragraph 3.2.3.2 above.

²¹⁶ *Wildlife Conservation Act 1950*, section 23F(2).

²¹⁷ *Wildlife Conservation Act 1950*, section 23F(4).

²¹⁸ *Wildlife Conservation Act 1950*, section 23F(6).

²¹⁹ *Agriculture and Related Resources Protection Act 1976*, long title.

²²⁰ *Agriculture and Related Resources Protection Act 1976*, section 35.

²²¹ *Agriculture and Related Resources Protection Act 1976*, section 36.

- the introduction and movement of the plant is prohibited;
- the plant should be eradicated;
- the numbers or distribution of the plant should be reduced; or
- the plants should be prevented from spreading beyond the places in which they already occur.²²²

Under the Act, landholders (which includes government and local government bodies) must control declared plants in relation to their land.²²³

In Carnarvon, the growth of exotic species (such as tamarisk) may contribute to erosion problems within the floodplain.²²⁴ Declaration of this species under the ARRP Act may encourage landholders (whether public or private) to control the species in respect to their land. Where a landholder does not control the plant, legal action may be taken against that person.²²⁵

3.6.4.2 Pest plants

Under the ARRP Act, local governments may introduce local laws for the control of 'pest plants' within its district.²²⁶ Local laws can be made to declare a pest plant where in the opinion of the local government, the plant is likely to adversely affect the value of property in the district or the health, comfort or convenience of the inhabitants of the district.²²⁷

It is possible such a local law could be introduced by the Shire of Carnarvon to control plants posing an environmental threat within the horticultural area.

3.6.5 Control of Vehicles (Off-Road Areas) Act 1978

3.6.5.1 Control of vehicular movement on sensitive land

The creation of unauthorised tracks along sensitive areas of the Gascoyne River floodplain may be a significant contributor to erosion damage.²²⁸ An option for controlling this activity is to declare certain parts of the floodplain to be 'prohibited' to vehicular movement.²²⁹ A declaration can apply to private land without the consent of the owner, but the Minister can only take such action where it is in the public interest to do so, having regard to:

- (a) the need to provide for the protection of livestock or the preservation of any wildlife or flora;
- (b) the environmentally sensitive nature of the land or things growing on the land;
- (c) the proximity of any land used for residential purposes, or for purposes likely to be incompatible with the use of vehicles in the vicinity; or
- (d) the provisions of any town planning scheme.²³⁰

²²² *Agriculture and Related Resources Protection Act 1976*, section 36(3).

²²³ *Agriculture and Related Resources Protection Act 1976*, sections 39, 42 and 49.

²²⁴ *Lower Gascoyne River Action Plan*, Nicole Simon, April 2001, para 5.7.

²²⁵ *Agriculture and Related Resources Protection Act 1976*, e.g. section 52 allows the Board to enter private land, carry out the work, and recover cost from the owner or occupier, although this does not apply to Crown land.

²²⁶ *Agriculture and Related Resources Protection Act 1976*, Part IX.

²²⁷ *Agriculture and Related Resources Protection Act 1976*, section 110.

²²⁸ *Draft Carnarvon Floodplain Management Study*, Sinclair Knight Merz, October 2002, page 89.

²²⁹ *Control of Vehicles (Off-road Areas) Act 1978*, section 16.

²³⁰ *Control of Vehicles (Off-road Areas) Act 1978*, section 16(5).

Such a declaration does not prevent the owner or occupier of that land from using vehicles on the land.²³¹

3.6.6 Environment Protection and Biodiversity Conservation Act 1999 (Cth)

3.6.6.1 Proposals impacting on matters of national environmental significance

The *Environment Protection and Biodiversity Conservation Act 1999* ('the EPBC Act') came into operation in July 2000. One of its main features is to provide a mechanism for the Commonwealth to assess development proposals that are likely to have a significant impact on a *matter of national environmental significance*.

The current list of matters of national environmental significance are:

- World heritage areas;
- Wetlands of international significance (Ramsar wetlands);
- Listed threatened species and communities;
- Listed migratory species;
- Nuclear actions; and
- Commonwealth marine areas (that is, areas outside State waters).²³²

Triggers for the EPBC Act relevant to Carnarvon include:

- Shark Bay World Heritage Area;
- 17 threatened species (including the loggerhead turtle and the western spiny-tailed skink);
- 20 migratory species (including white-bellied sea eagle and the little curlew); and
- 43 marine protected species (including the southern giant petrel and the Shark Bay sea snake).²³³

The Shark Bay World Heritage Area is a significant trigger for the EPBC Act. This is so even though the World Heritage Area boundaries do not include the town of Carnarvon, as offsite impacts can still be the subject of legal action. In a recent Federal Court case, an injunction was granted restraining a lychee farmer from using electrified netting to kill flying foxes near the Wet Tropics World Heritage Area in Queensland. At the time, the flying fox was not a listed threatened species. However, the Court found that the long-term impact of the netting would be to significantly reduce the number of flying foxes in the World Heritage Area. As such, the erection of the netting was an action that was required to be referred to the Federal Environment Minister for assessment. The injunction was granted to prohibit the netting until such time as the farmer obtained approval from the Environment Minister.²³⁴

Before implementing a proposal that is likely to have a significant impact on a matter of national environmental significance, the proponent must refer the matter to the Federal

²³¹ *Control of Vehicles (Off-road Areas) Act 1978*, section 16(4) and (4a).

²³² *Environment Protection and Biodiversity Conservation Act 1999*, Part 3, Division 1.

²³³ Information on listed species was obtained from a search conducted on Environment Australia's Interactive Map facility at <http://www.ea.gov.au/epbc/interactivemap/index.html>. The search was conducted on 28 October 2002 and took in the Carnarvon townsite, coastal waters and inland along the Gascoyne River to a point east of the North West Coastal Highway traffic bridge.

²³⁴ *Booth v. Bosworth* [2001] FCA 1453 (17 October 2001) per Branson J. Note that the flying fox in question has now been added as a vulnerable species under the EPBC Act: *EPBC Act Administrative Guidelines on Significance - Supplement for the Spectacled Flying-fox*, November 2002.

Environment Minister for assessment.²³⁵ Failure to make a referral is an offence, and the offender is liable to a civil penalty of \$550,000 for an individual or \$5.5 million for a body corporate.²³⁶ Injunctions can also be sought by any person to restrain a breach of the Act.²³⁷

Note that the Western Australian and Commonwealth Governments have recently signed a *bilateral agreement* which means that the assessment processes under the EPBC Act will not apply to an action in Western Australia that has been assessed by the WA Environmental Protection Authority at the level of Public Environmental Review (PER) or Environmental Review and Management Program (ERMP).²³⁸ The final decision on the proposal will still be left to the Federal Environment Minister.

Developments in Carnarvon that *may* require referral to the Commonwealth under the provisions of the EPBC Act include:

- Construction of a levee system which significantly alters the flow characteristics of the Gascoyne at times of flood, and which may impact upon the World Heritage Area or threatened species;²³⁹ and
- Expansion of the horticultural area east along the Gascoyne River to the extent that such development impacts upon species or ecosystems that are listed as threatened.

3.6.7 Summary - other legislation

1. Local laws could be introduced controlling land use practices within the Carnarvon horticultural area, although such local laws will generally be subservient to the terms of the town planning scheme.
2. The Shire of Carnarvon can issue notices to landholders to repair damage to local government property, to remove rubbish from land and to take steps to prevent damage from erosion or cyclonic activity.
3. Conditions or covenants can be placed on the title to new releases of land which restrict the use to which the land can be put (for example, limitations on the uses of land in a floodway).
4. It is an offence to clear or cultivate Crown land without approval from the Shire, CALM, and/or DOLA.
5. Declared plants and animals must be controlled by the landholder.
6. Areas of Crown or private land can be declared to be prohibited to vehicles.
7. Proposals which are likely to have a significant impact on a 'matter of national environmental significance' must be referred to the Federal Environment Minister for assessment and approval before being commenced.

²³⁵ *Environment Protection and Biodiversity Conservation Act 1999*, section 68. Note however that referral to the Commonwealth is not required where the action is already approved by the Minister, or is otherwise exempted: see *The Law of Landcare in Western Australia*, page 176.

²³⁶ *Environment Protection and Biodiversity Conservation Act 1999*, section 12(1).

²³⁷ *Environment Protection and Biodiversity Conservation Act 1999*, section 475.

²³⁸ The bilateral agreement was entered into on 16 August 2002 and will come into effect when changes to the *Environmental Protection Act 1986* come into effect. For further information, see *Commonwealth Environmental Impact Assessment Fact Sheet*, Environmental Defender's Office (WA), November 2002.

²³⁹ The *Carnarvon Floodplain Management Study*, Sinclair Knight Merz, October 2002, proposes to divert large quantities of floodwaters south of Brown Range to discharge in the ocean in the vicinity of Oyster Creek/Massey Bay. This area is adjacent to the northern boundary of the Shark Bay World Heritage Area, and would thus require referral to the Commonwealth if the adverse impacts are likely to be significant.

3.7 Other Australian States

3.7.1 Introduction

It is useful to briefly review the approaches to regulating flood damage in New South Wales and Victoria.

3.7.2 New South Wales

3.7.2.1 Policy and legislative framework

The New South Wales Government has developed a Flood-prone Land Policy which has as its primary objective:

to reduce the impact of flooding and flood liability on individual owners and occupiers of flood-prone property, and to reduce private and public losses resulting from floods, utilising ecologically positive methods wherever possible.²⁴⁰

In addition to the Policy, a *Floodplain Management Manual* has been prepared to guide strategic decision making processes with respect to floodplain management.²⁴¹

Major reforms to the State's water legislation occurred at the end of 2000 through the passage of the *Water Management Act 2000*. This Act establishes statutory planning mechanisms for waterway management, which will be discussed below.

3.7.2.2 Development controls generally

As in Western Australia, local government has primary responsibility for land use planning and management in New South Wales. Matters a local government must take into account when considering development applications include:

- the provisions of any environmental planning instrument or development control plan;
- the likely impacts of that development, including environmental impacts on both the natural and built environments, and social and economic impacts in the locality;
- the suitability of the site for the development; and
- the public interest.²⁴²

Most local governments in NSW have incorporated floodplain risk management plans into their respective environmental planning instruments.²⁴³

3.7.2.3 Water management plans

Under the *Water Management Act*, *water management plans* ('WMPs') can be created for in respect to certain water management areas.²⁴⁴ Such plans are prepared by the water management committee for the area in accordance with terms of reference set by the Minister.²⁴⁵

²⁴⁰ *Flood-prone Land Policy*, NSW Government, 2001.

²⁴¹ *Floodplain Management Manual: The Management of Flood Liable Land*, NSW Government, January 2001, paragraph 3.3.1.

²⁴² *Environmental Planning and Assessment Act 1979* (NSW), section 79C.

²⁴³ *Floodplain Management Manual: The Management of Flood Liable Land*, NSW Government, January 2001, Appendix I, paragraph I-1.

²⁴⁴ *Water Management Act 2000* (NSW), Part 3.

²⁴⁵ *Water Management Act 2000* (NSW), section 15.

WMPs are statutory instruments, and can be developed on any aspect of water management – including environmental protection and floodplain management.²⁴⁶ In this regard, WMPs can include provisions:

- identifying zones in which development should be controlled in order to minimise any threat to the floodplain management provisions of the plan;
- identifying development that should be controlled in any such zone and the manner in which any such development should be controlled;
- to which State agencies and local authorities (including local councils) should be subject when taking action and making decisions concerning any such development; and
- requiring the Minister's concurrence to the granting of any development consent.²⁴⁷

Importantly, these environmental protection provisions must be included in a *regional environmental plan* within six months of the creation of the WMP.²⁴⁸ A regional environmental plan is made under the *Environmental Planning and Assessment Act* and prevails over any local government local environmental plan²⁴⁹ made before or after the regional environmental plan.²⁵⁰ This requirement ensures these aspects of WMPs are legally enforceable through the planning system.

When exercising functions under the *Water Management Act*, the Minister must take all reasonable steps to give effect to the provisions of any WMP. In addition, a public authority exercising its functions must have regard to the provisions of any WMP to the extent to which they apply to that public authority.²⁵¹

Outside of management areas, the Minister may publish a plan.²⁵² Such a plan has the same effect as a WMP and must include any provisions required in WMP.²⁵³

3.7.2.4 *Development controls on designated floodplains*

In rural areas declared to be floodplains under the *Water Act 1912*, the Department of Land and Water Conservation ('DLWC') is responsible for approving *controlled works*.²⁵⁴

Controlled works include:

- (a) an earthwork, embankment or levee that is situated, or proposed to be constructed, on land that is within a floodplain; or
- (b) an earthwork, embankment or levee, wherever situated or proposed to be constructed; that:
 - (i) affects or is reasonably likely to affect the flow of water to or from a river or lake; and
 - (ii) is used or is to be used for, or has the effect or likely effect of, preventing land from being flooded by water.²⁵⁵

²⁴⁶ *Water Management Act 2000* (NSW), Part 3, Divisions 5 and 7.

²⁴⁷ *Water Management Act 2000* (NSW), section 34.

²⁴⁸ *Water Management Act 2000* (NSW), section 46.

²⁴⁹ A local environmental plan is equivalent to town planning schemes in Western Australia.

²⁵⁰ *Water Management Act 2000* (NSW), section 46; *Environmental Planning and Assessment Act 1979* (NSW), Part 3, Division 3.

²⁵¹ *Water Management Act 2000* (NSW), sections 48 and 49.

²⁵² *Water Management Act 2000* (NSW), section 50.

²⁵³ *Water Management Act 2000: What it means for NSW*, Department of Land and Water Conservation, Sydney NSW, January 2001, at page 11.

²⁵⁴ *Floodplain Management Manual: The Management of Flood Liable Land*, NSW Government, January 2001, paragraph 3.3.1.

In making a decision with respect to a controlled work within a floodplain, the DLWC is to have regard to a number of matters, including:

- the contents of any relevant floodplain management plan or any other relevant Government policy;
- the need to maintain the natural flood regimes in wetlands and related ecosystems and the preservation of any habitat, animals (including fish) or plants that benefit from periodic flooding;
- the effect or likely effect of a controlled work on the passage, flow and distribution of any floodwaters;
- the effect or likely effect of a controlled work on existing dominant floodways or exits from floodways; and
- the protection of the environment.²⁵⁶

3.7.2.5 *Special controls on 'waterfront land'*

If a 'controlled activity' is proposed on *waterfront land*, an approval is required under the *Water Management Act*.²⁵⁷

Controlled activities are:

- the construction of buildings or carrying out of works;
- the removal of material or vegetation from land by excavation or any other means;
- the deposition of material on land by landfill or otherwise; or
- any activity that affects the quantity or flow of water in a water source.²⁵⁸

'Waterfront land' is defined as the land 40 metres on either side of the highest banks of any river, including the bed of the river.²⁵⁹

It is an offence to carry out a controlled activity on waterfront land except in accordance with an approval.

3.7.2.6 *Water investment trust fund*

The *Water Management Act* establishes a Water Investment Trust to collect and administer funds from sources including levies on water users.²⁶⁰ One of the objects of the Trust is 'the restoration and rehabilitation of water sources and their dependent ecosystems'.²⁶¹ The Trust may provide a useful means of raising funds that can be used to provide incentives to encourage adoption of sustainable land use practices.

²⁵⁵ *Water Act 1912* (NSW), section 165A.

²⁵⁶ *Water Act 1912* (NSW), section 166C.

²⁵⁷ *Water Management Act 2000* (NSW), section 344.

²⁵⁸ *Water Management Act 2000* (NSW), section 4 and Schedule 9. See also *Rivers and Watercourses: Fact Sheet 27*, Environmental Defender's Office (NSW), January 2001.

²⁵⁹ *Water Management Act 2000* (NSW), section 4 and Schedule 9. See also *Rivers and Watercourses: Fact Sheet 27*, Environmental Defender's Office (NSW), January 2001.

²⁶⁰ *Water Management Act 2000* (NSW), Chapter 8, Part 3.

²⁶¹ *Water Management Act 2000* (NSW), section 380.

3.7.3 Victoria

3.7.3.1 Planning processes

As in Western Australia and New South Wales, local government is responsible for local planning in Victoria.

Under the State's planning laws, restrictions are placed on developments within floodplains through a number of planning instruments (known as Victoria Planning Provisions or VPPs). The most relevant of the VPPs for flood management include the State Planning Policy Framework (SPPF), and the zones and overlays specifically designed to address flooding, viz:

- Urban Floodway Zone – applies to flooding in urban areas (high risk);
- Floodway Overlay – applies to flooding in both rural and urban areas (lower risk);
- Land Subject to Inundation Overlay – applies to mainstream flooding in rural and urban areas, generally for areas having less flood risk than for the above zones.²⁶²

VPPs apply to all flood-prone land (being either a 1 in 100 year flood or as determined by the relevant floodplain management authority).

3.7.3.2 Catchment Management Authorities

The *Water Act 1989* (Vic) establishes statutory bodies called Catchment Management Authorities ('CMAs').²⁶³ There are presently nine CMAs across rural Victoria.²⁶⁴

One of the functions of a CMA is to manage floodplains, and in particular to:

- declare flood levels and flood fringe areas;
- control developments that have occurred or that may be proposed for land adjoining waterways;
- develop and implement plans and to take any action necessary to minimise flooding and flood damage;
- provide advice about flooding and controls on development to local councils, the Secretary to the Department of Infrastructure and the community.²⁶⁵

A person must not undertake works or erect structures that may have the effect of controlling, concentrating or diverting floodwater or stormwater in a declared floodplain without approval from the CMA.²⁶⁶

In addition to controlling developments within floodplains, CMAs may give notice and enter private land to remove any works or structures that:

- (a) are within an area liable to flooding or a floodway area; and
- (b) existed at the time of the declaration of the area liable to flooding or of the floodway area.²⁶⁷

The owner of the land may appeal against the notice, and may be awarded compensation.²⁶⁸

²⁶² *Floodplain Management Principles and Methods*, Monash University,

²⁶³ *Water Act 1989* (Vic), section 98(1)(ab).

²⁶⁴ *Victoria Resources Online*, Department of Natural Resources and Environment, October 2002. The Port Phillip Catchment and Land Protection Board is responsible for the management of catchments within the Melbourne metropolitan region and its rural fringe.

²⁶⁵ *Water Act 1989* (Vic), section 202.

²⁶⁶ *Water Act 1989* (Vic), section 208.

²⁶⁷ *Water Act 1989* (Vic), section 209.

4. BUILDING AN EFFECTIVE REGULATORY FRAMEWORK

4.1 Introduction

As the previous Chapter demonstrates, there is no shortage of laws directed at controlling land degradation in Carnarvon. However, the mere existence of these laws does not guarantee that they will be effective in controlling land degradation. Rather, there is a need to develop a more adaptive regulatory system – one which maintains strong penalties for unlawful conduct, but which also rewards positive conduct and encourages landholders to be responsible for their impacts on the environment.

4.2 Guiding principles for floodplain management

The objectives of best practice floodplain management in Australia are to:

- limit to acceptable levels the effect of flooding on the well-being, health and safety of flood-prone individuals and communities;
- limit to acceptable levels the damage caused by flooding to private and public property;
- ensure that the natural function of the floodplain – to convey and store floodwaters during a flood – is preserved and where necessary enhanced, along with any associated flood dependent ecosystems; and
- encourage the planning and use of floodplains as a valuable and sustainable resource capable of multiple, but compatible, land uses of benefit to the community.²⁶⁹

4.3 Special considerations for floodplain management in Carnarvon

The *Carnarvon Floodplain Management Study* recommends the introduction of improved regulatory controls to combat erosion caused by earthworks and land use practices. In this regard, the Study recommends two levels of planning control:

1. flood storage zones (slower moving waters); and
2. floodway zones (rapidly moving waters).

These zones will be considered in the following Table.

Table 4.1 Recommended land use in flood-prone areas – Carnarvon Floodplain Management Strategy²⁷⁰

Land use activity	Flood storage zone	Floodway zone
Earthworks	Approval required	Approval required
Levees/embankments	Approval required	Prohibited
Landfill	Approval required subject to compensating storage being identified elsewhere	Prohibited
Buildings	Approval required	Prohibited
Horticultural activities	Vegetable cultivation should be restricted to low velocity areas	Vegetable production should be restricted Bananas restricted

²⁶⁸ *Water Act 1989* (Vic), section 210.

²⁶⁹ *Floodplain Management in Australia: Best Practice Principles and Guidelines*, ARMCANZ, Canberra 2000, at para 1.5.

²⁷⁰ *Carnarvon Floodplain Management Study*, draft report, Sinclair Knight Merz, October 2002.

4.4 Meeting the cost of law enforcement

Enforcement of regulations requires the use of limited public resources. These costs can be significant, including:

- cost of establishing laws (development of proposal by public authority, community consultation process, Parliamentary debate);
- cost of educating the community about the law;
- cost of identifying and investigating breaches of the law (responding to complaints, site inspections, reports, interviews); and
- cost of prosecuting unlawful conduct (lawyer and court fees, preparation of evidence, arranging witnesses).

As such, it may only be possible for public authorities to take legal action in respect to serious breaches of a law. This tendency may be exacerbated in isolated areas where staff numbers are low and where the 'offenders' are relatively small in size, and individually do not present a significant contributor to land degradation.

Alternative methods of law enforcement – which may include enforceable 'industry self-regulation' standards – are recommended for the Carnarvon area. This could be done in partnership with relevant public authorities to ensure the process has some independence and rigour.

4.5 Incentives and deterrents

Allied to the above point, people are less likely to comply with the law where:

1. Compliance costs are high and rewards are low;
2. Consequences of not obeying the law are minor or non-existent; and
3. No action is taken against people ignoring the law.

Accordingly, a modern regulatory system should include appropriate 'carrots' and 'sticks' to ensure people doing the right thing are rewarded for their effort, and those who are not are appropriately penalised.

One method of encouraging the adoption of more sustainable land use practices is through the development of a voluntary industry 'code of practice', backed by a complementary regulatory regime. The Department of Agriculture is currently developing best management practices for the horticulture industry in Carnarvon, and it is recommended these form the basis of an environmental code of practice. Once the code of practice has been developed, it could be independently approved by the Department of Environmental Protection (DEP) in accordance with proposed changes to the *Environmental Protection Act*. The approved code of practice can then be used to 'leverage' the following outcomes:

Linking government approvals with industry code of practice

Landholders implementing an approved code of practice should be rewarded with reduced compliance burdens. As an example, applicants for water licences who have adopted the code of practice may be exempt from having to submit a full proposal in support of their application. Conversely, landholders that have not adopted the code may be asked to submit full details on the proposed use of the water to ensure appropriate environmental measures are taken into account.

Enforcement of codes of practice through soil conservation notices

Once an approved code of practice is adopted by the industry, non-compliance could form the basis of enforcement action. For example, the Commissioner of Soil and Land

Conservation could issue a soil conservation notice requiring a landholder to implement the terms of a code of practice to address an erosion risk.

Environmental harm and approved codes of practice

Where a code or practice is approved by the Department of Environmental Protection, it becomes a defence to a charge of causing environmental harm under proposed changes to the *Environmental Protection Act*. This means that anyone adopting an approved code cannot be charged if their activities cause environmental harm. As the penalties for causing serious environmental harm are up to \$1 million, there is a significant incentive for landholders to adopt an approved code.

Rate relief

Landholders managing their land in accordance with the terms of an approved code of practice could receive a discount on rates imposed under the *Soil and Land Conservation Act* or *Local Government Act*.

Supply chain pressure - government purchasing

The State government, through hospitals, schools and prisons purchases large quantities of fresh produce every year. Purchasing guidelines could be amended to require government departments to source purchases of fruit and vegetables from accredited producers.

Flood restoration works

Landholders who contribute to erosion damage through inappropriate land uses should not be rewarded with tax-payer funded rehabilitation works following a flood event. This practice rewards bad land management, and acts as a significant disincentive for landholders to adopt more sustainable practices.

The above options are examples of the way in which a more progressive regulatory system can be implemented in Carnarvon. Importantly, such a system can largely be implemented without having to amend existing laws.

Case study – Cleaner production partnership: vegetable growers and the EPA, Western Port, Victoria²⁷¹

The Victorian Vegetable Growers Association (VVGGA) entered into a 'cleaner production partnership' with the Victorian Environmental Protection Authority (EPA) in order to improve the industry's environmental image. Specific objectives of the partnership were to:

- Better understand the real impacts of market gardens on the environment;
- Increase grower awareness of their environmental responsibilities;
- Provide a venue for growers to demonstrate good environmental performance;
- Reduce compliance costs; and
- Satisfy regulators and the community generally that the vegetable industry is environmentally aware and responsible.

The VVGGA asked the EPA to be a partner in the project to provide credibility and independence to the outcomes.

It is expected that the project will develop a set of environmental management guidelines to guide responsible management practices. It is possible these guidelines could be used to form an industry code of practice (compliance with which would satisfy all environmental regulatory requirements).

Possible outcomes from the partnership include:

- Development of a two-tiered environmental management system (EMS) whereby the first tier is set at a more practical level suitable for the majority of growers, while the second tier is more rigorous and suited to industry leaders. Growers adopting a formal and independently accredited environmental management system could market their produce under an industry 'green logo'.
- More targeted use of the 'carrot and stick' – growers who voluntarily undertake the self auditing processes will be exempt from routine inspection, whilst those who do not will be subject to more formal regulatory intervention; and
- Harnessing supply chain pressure – supermarkets and wholesalers should be encouraged to source supply from accredited producers, thus increasing the pressure for all growers to conform to the industry standards.

²⁷¹ This case study is taken from an article by Neil Gunningham and Darren Sinclair 'Environmental Regulation and Cleaner Production Partnership with Small and Medium Sized Enterprises: A Case Study', *Environmental and Planning Law Journal*, August 2001, page 369.

5. RECOMMENDED MODEL FOR CARNARVON

In this section, the options for regulating different types of land use will be examined. These options have been developed having regard to:

- recommendations of the Carnarvon Floodplain Management Strategy;
- guiding principles for floodplain management in Australia;
- existing powers, roles and responsibilities of public authorities;
- enforcement costs; and
- the need to incorporate better incentives into the regulatory framework.

The 17 options are listed below. Full details on each option, including the authority responsible for implementation, are provided in Appendix 1.

1. Develop code of practice for sustainable land use

Best management practices (BMPs) for horticultural land use being developed by the Department of Agriculture should be approved by the Department of Environmental Protection (DEP) as an industry 'code of practice'. The approval of the code by the means that anyone adopting the code would have a defence to any 'environmental harm' caused by their land use.

2. Local land use regulations

Regulations can be developed under the *Soil and Land Conservation Act 1945* which could place restrictions on land use within areas susceptible to erosion. As an example, the regulations could prohibit the growing of anything other than tree crops within defined floodways.

3. Planning controls for floodways

The Shire of Carnarvon's town planning scheme should prohibit/regulate use of land within floodways and flood storage zones in accordance with the recommendations made in the *Carnarvon Floodplain Management Study*.

4. Landcare levies for funding rehabilitation works

A compulsory landcare levy could be raised to provide funds to undertake land conservation works within the district. Funds could be used for rehabilitation works, or to promote the development and implementation of a code of practice (including assisting growers understand the code and implement it on their land).

5. Link code of practice to soil conservation notices

The Commissioner of Soil and Land Conservation can issue a soil conservation notice to a landholder to prevent land degradation being caused. It is possible the Commissioner could require the landholder adopt an approved code of practice to address a land degradation risk.

6. Controls on erecting levee banks

Flood protection by-laws should be introduced to control the construction, use and removal of private levees within the lower Gascoyne River.

7. Guidelines for proper use of the river bed and banks

It is an offence to interfere or obstruct with the bed or banks of the Gascoyne River. The Water and Rivers Commission should publish guidelines on the application of this law to clarify landholder's responsibilities.

8. Linking water licences with approved code of practice

The potential for water licences to be linked to the adoption of an approved code of practice should be explored, as this would provide a tangible incentive for landholders to adopt more sustainable land management practices.

9. Illegal rubbish dumping

The Shire of Carnarvon should monitor and take action to ensure rubbish is not disposed of in the river or other public or private lands.

10. Illegal use of Crown land

The correct boundaries of Crown lands need to be identified and action taken against landholders illegally occupying or developing Crown land.

11. Conditions on title to land

Ensure the titles of new releases of land subject to flooding contain legally enforceable conditions stipulating the use to which that land may be put.

12. Protection of native plants and animals

Details of local declared rare flora should be made known, and protection measures incorporated into the code of practice.

13. Control of pest plants

Shire of Carnarvon could introduce local laws requiring environmental weeds to be controlled on land within the Carnarvon horticultural area. Management measures could be incorporated into the code of practice.

14. Restrictions on motor vehicle use

Declare the river and associated reserves to be prohibited areas for motor vehicle use.

15. Environmental impact assessments

Ensure all major development proposals impacting on the local environment or on any matter of national environmental significance are referred for appropriate environmental impact assessment.

16. Link government purchasing with code of practice

Link government purchasing of fruit and vegetables to an approved code of practice.

17. Remove incentives that promote bad management practices

Link access to taxpayer-funded erosion rehabilitation to landholders adopting sustainable land use practices, such as adoption of the code of practice.

6. CONCLUSION

The regional, national and even global consequences of our present modes of production and consumption guarantee that if we do not rapidly refocus our goals, future welfare will decline as our environments degenerate. We need to understand the geological, climatic and biological processes that interacted to shape this land and its inhabitants before we can disentangle the factors that threaten our future from among those that make up our complex societies. Only with this understanding will we find Australia's unique identity, the real nature of the land that underpins and sustains us.²⁷²

Australia contains some of the oldest and most infertile soils found anywhere in the world. Only 6% of the land area is arable, and large parts of the landscape are affected by salt or acidity.²⁷³ As such, it is vital that these resources are managed in a sustainable way.

The Carnarvon horticultural area has experienced significant environmental degradation in recent years. This damage is not limited to erosion, but extends to biodiversity loss, chemical contamination of land and water, and potential salinisation of groundwater resources. With the move to more intensive land use practices in the area, the environmental threats are increasing rather than diminishing. Failure to adopt higher environmental standards will almost certainly impact upon the economic viability of the industry – both in terms of lowered productivity through loss of fertile soils and loss of market share as consumers and supply chains shift demand to food and fibre produced from sustainable sources.

But with threats come opportunities. This report has identified a number of options for improving the sustainable management of the region's natural resources through a more progressive use of existing regulatory tools.

The Department of Agriculture is developing 'best management practices' for horticultural land within the district. These guidelines should form the basis for the development of an industry code of practice. This code could be formally approved by the Department of Environmental Protection and then used to underpin a more flexible and incentive-based regulatory model. Growers adopting the approved code could obtain accreditation for their products, entitling them to market their produce under a regional brand that may (for example) capitalise on the region's major environmental attractions. Conversely, growers failing to adopt the code could find themselves subject to increased regulatory supervision, as well as being exposed to potential \$1 million fines where their land management practices cause environmental harm.

The adoption of a regulatory regime underpinned by appropriate best management principles has the potential to significantly enhance the sustainable management of Carnarvon's natural resources, as well as capitalizing upon marketing opportunities presented by the growing environmental awareness of consumers.

Jean-Pierre Clement
31 December 2002

²⁷² *From Plesiosaurs to People: 100 Million Years of Environmental History*, Australia: State of the Environment Technical Series, Department of the Environment, Canberra, 1998.

²⁷³ *A Full Repairing Lease*, Industry Commission Report No 60, Canberra, 1998, at page 25.

Appendix 1. Options for regulating erosion in Carnarvon

No.	Option description	Relevant power	Lead	Partners
1.	(a) Best management practices (BMPs) for horticultural land use be developed. (b) BMPs are accredited as an approved 'Code of Practice'.	<i>Environmental Protection Act 1986</i> , section 122A (proposed); <i>Agriculture Act 1988</i> , section 10; <i>Soil and Land Conservation Act 1945</i> , sections 13 and 14.	DAWA/ CSLC DEP	LCDC CGA LGMS
2.	Develop and implement local land conservation regulations which may (for example) place restrictions on land use within areas susceptible to erosion (for floodways).	<i>Soil and Land Conservation Act 1945</i> , section 22.	LCDC/ DAWA	Minister for Ag Shire LGMS
3.	Amend town planning scheme to prohibit/regulate use of land within floodways and flood storage zones in accordance with <i>Carnarvon Floodplain Management Study</i> .	<i>Town Planning and Development Act</i> , sections 6 & 7; Carnarvon Town Planning Scheme 12 (proposed)	Shire	WRC DAWA LCDC LGMS
4.	Raise a soil conservation rate or service charge within the Carnarvon land conservation district (LCD) to fund employment of officer to oversee implementation of the Code of Practice.	<i>Soil and Land Conservation Act</i> , sections 24 and 25A.	LCDC	DAWA Shire CGA LGMS
5.	Soil conservation notices be used to complement the Code of Practice, whereby landholders failing to meet the standards of the Code could be required to improve their management practices.	<i>Soil and Land Conservation Act</i> , sections 32; <i>Environmental Protection Act</i> , section 122A (proposed).	DAWA/ CSLC	DEP LCDC LGMS Shire
6.	Develop 'flood protection by-laws' to control the construction, use and removal of private levees within the lower Gascoyne River.	<i>Rights in Water and Irrigation Act 1914</i> , section 26P	WRC	LCDC Shire CGA LGMS
7.	Develop and publish guidelines on what can and cannot be done within the bed and banks of the Gascoyne River.	<i>Rights in Water and Irrigation Act 1914</i> , sections 17, 18 and 25.	WRC	LGMS LCDC Shire CGA
8.	Investigate potential for water licences to include environmental conditions linked to the Code of Practice.	<i>Rights in Water and Irrigation Act 1914</i> , Appendix to Schedule 1, cl 2 and 8.	WRC	DAWA LCDC LGMS Shire
9.	Monitor and take action to ensure rubbish is not disposed of in the river or other public or private lands.	<i>Local Government Act 1995</i> , section 3.25	Shire	LGMS LCDC CGA
10.	Identify correct boundaries of Crown land and take action against landholders illegally occupying or developing Crown land.	<i>Land Administration Act 1997</i> , section 267; <i>Town Planning and Development Act 1928</i> , section 10; <i>Wildlife Conservation Act 1950</i> , section 23B	Shire DOLA CALM	LCDC LGMS DAWA
11.	Ensure new releases of land subject to flooding contain legally enforceable conditions on the uses to which that land may be put.	<i>Land Administration Act</i> , sections 15 and 75.	DOLA	Shire DAWA LCDC LGMS WRC
12.	Publish a local list of rare and endangered species of flora and fauna to raise public awareness about local biodiversity.	<i>Wildlife Conservation Act</i> , section 23F.	CALM	LGMS WRC Shire
13.	Develop and implement local law controlling pest plants within the river reserve and on adjacent private land	<i>Agriculture and Related Resources Protection Act 1976</i> , Part IX	Shire	LCDC LGMS DAWA

Appendix 1 continued ...

No.	Option description	Relevant power	Lead	Partners
14.	Declare the river and associated reserves to be prohibited areas for motor vehicle use	<i>Control of Vehicles (Off Road Areas) Act 1978</i> , section 16	Shire	LGMS DOLA
15.	Ensure all major development proposals impacting on the local environment or on any matter of national environmental significance are referred for appropriate environmental impact assessment.	<i>Environmental Protection Act 1986</i> , section 38; <i>Environment and Biodiversity Conservation Act 1999</i> , Chapter 2.	EPA Federal Environ. Minister	All decision making bodies
16.	Link government purchasing of fruit and vegetables to Code of Practice	<i>State Supply Commission Act 1991</i> , section 5.	State Supply Commission	DAWA DEP
17.	Link access to free erosion rehabilitation to land use practices, such as adoption of the Code of Practice	N/A	Treasury DAWA	DEP WRC Shire

Glossary

CALM	Department of Conservation and Land Management
CGA	Carnarvon Growers Association
CSLC	Commissioner of Soil and Land Conservation
DAWA	Department of Agriculture, Western Australia
DEP	Department of Environmental Protection
DOLA	Department of Land Administration
EPA	Environmental Protection Authority
LCDC	Carnarvon Land Conservation District Committee
LGMS	Lower Gascoyne Management Strategy
Shire	Shire of Carnarvon
WRC	Water and Rivers Commission