

The Struggle for Landcare in South Australia

The Story Behind Soil Conservation and the
Quest for Natural Resource Management
1939 – 2004

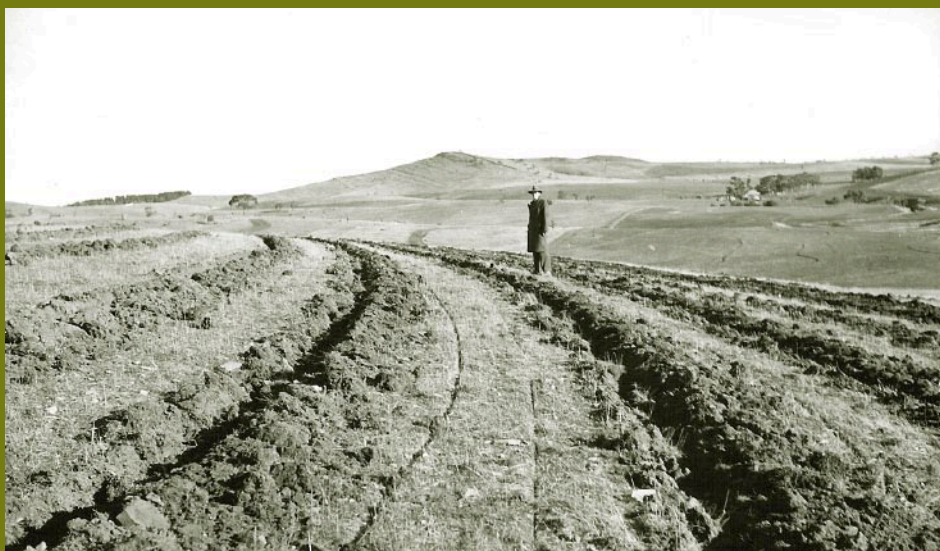
Arthur F. Tideman



Government
of South Australia

Department of Water,
Land and Biodiversity
Conservation





The construction of contour banks on cropping lands and contour furrows on land too steep for cropping has been two underlying operations in the quest for better soil care.

The Struggle for Landcare in South Australia

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Department of Water Land and Biodiversity Conservation

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Preface

Just before I retired in 1991 my colleagues on the Advisory Committee on Soil Conservation asked me to capture the history of the soil conservation movement in South Australia, then 50 years old.

At that time the Advisory Committee had been largely instrumental in engineering new legislation, the *Soil Conservation and Landcare Act 1989*, which would see the birth of its successor, the Soil Conservation Council. Hopefully, this would more effectively capture the needs of soil and landcare into the 21st century. The committee members at that time were keen to ensure that the very significant achievements of the past were not lost.

The result was a small booklet, 'Half a Century of Soil Conservation', which recorded the history that had grown out of the environmental concerns of the 1920s and the 1930s. It demonstrated, much to the surprise of many active environmentalists of the 1990s, that over that half century tremendous gains had been made by the landowners themselves to protect their soil resource.

The booklet did not attempt to present detailed records, but relied greatly on the memories of people who had been involved in the outstanding events of those years. This publication has continued in the same vein.

At the time of preparing the history, I had been associated with the advisory committee for more than 30 years, firstly as a field officer and finally as chairperson. Consequently, it was relatively easy for me to compile the story having ready access to two historical summaries. The first Soil Conservator, Mr Bob Herriot, published an assessment of the work in hand in 1951 and then, 28 years later Mr Matheson, the Executive Secretary of the Advisory Committee published a second historical review.

The Soil Conservation Council, which replaced the Advisory Committee operated for 15 years. In that time it had to deal with increasingly complex land degradation issues such as soil salinity and acidity, new agricultural technology and a wide range of new interest groups outside the farming communities who saw themselves as stakeholders. This inevitably drew the Council into the wider issues of resource management, particularly water conservation and pest plant and animal control. Despite this ever increasing workload the Council followed the tradition of the Soil Conservation Advisory Committee and never lost sight of working with the landowners, to solve problems.

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To deal efficiently with the wider issues of resource management the South Australian Parliament passed the *Natural Resources Management Act* in its final form on 20 July 2004. This led to the replacement of the Soil Conservation Council with the Natural Resources Management Council.

Roger Wickes, who fulfilled the responsibility of Soil Conservator during the life of the Council had found *Half a Century of Soil Conservation* a helpful reference and was anxious to add the achievements of the Council in an up-dated publication for future reference.

That task has fallen to me. A task more difficult than the first time round because, in my retirement, I have not been intimately involved in the day to day activities. I am therefore greatly indebted to the members of Council and the staff in the Department of Water, Land and Biodiversity Conservation. In particular to Peter Butler, Kevin Gogler, Bill Davies, Iain Grierson, Paul Moran and Roger Wickes who added valuable details to the chapters covering the work of the council.

I also wish to acknowledge the assistance given by Grant Lomman who provided additional statistics and supported the production of this book and to Bernard O'Neil who gave historical and editorial services.

Arthur F Tideman

Adelaide

2006

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Chapter 1

In the Beginning

The need for measures to encourage the conservation of soils in South Australia was initiated by farmers through their Central Agricultural Bureau at the turn of the 20th century. Their immediate concern was wind erosion created by extensive overgrazing.

It was 20 years before legislation addressed this problem by the proclamation of the *Sand Drift Act 1923*. Although it was a piecemeal attempt to deal with particular complaints, it was nevertheless a great step forward. Among other things, this legislation gave private landowners power to take action against their neighbours if their land was threatened by drifting sand. These powers however, were restricted to proclaimed areas in the Murray Mallee, Eyre Peninsula and on Upper Yorke Peninsula. We shall see later that those areas became the nucleus for soil conservation districts that were developed by the Advisory Committee on Soil Conservation.

The disasters largely created by wheat/fallow rotations and overgrazing of the 1930s forced more attention by farmers and agriculturalists on soil conservation.

In 1936 a special meeting of agricultural ministers from the states and the Commonwealth decided that each state should form a committee, in conjunction with the Council for Scientific and Industrial Research, to assess the problem and make recommendations.

The South Australian committee consisted of Mr Spafford - Director of Agriculture (Chairman), Professor Richardson - (Director of the Waite Agricultural Research Institute), Mr Rogers - (Conservator of Forests), Mr McGilp - (a member of the Pastoral Board) and Mr Johnson - (Engineer for Water Supply).

With the exception of Professor Richardson who was replaced by Dr Trumble, Head of Agronomy Department, at the Waite Agricultural Research Institute, these men were appointed to the first Advisory Committee on Soil Conservation.

The Spafford committee reported to the State Government in 1938. The report drew particular attention to wind erosion in the pastoral areas and suggested that flora and fauna reserves be established where necessary to prevent further erosion.

The report also emphasised the seriousness of water erosion in the cereal belt between Gawler and Hawker, and recommended that three technical advisers be immediately appointed in the Department of Agriculture to help landowners protect their soils.

The Spafford committee also recommended the formation of a conservation service, independent of existing government agencies, to implement their recommendations, but this was never acted upon. In its place the Government created an Advisory Committee on Soil Conservation with Spafford as chairman.

The recommendations of this committee formed the basis of soil conservation legislation introduced into the South Australian Parliament in 1939.

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Chapter 2

The Legislation of 1939

The Soil Conservation Bill was introduced into the House of Assembly in the South Australian Parliament by the Commissioner of Crown Lands, R J Rudall on 10 August 1939.

The measures presented in the bill were debated over four months during which the Minister of Agriculture, Arthur Blesing, showed surprising indifference – considering, especially, the state of soil degradation in his own district.

The bill proposed that a part-time advisory committee on soil conservation be established to advise the Minister. The membership was not specified but vigorously debated in both Houses with a final stipulation that two members should have practical pastoral experience.

The proposed legislation had three major operational powers. One enabled land to be resumed or acquired to establish reserves to protect the soil. Another gave the Minister the power to issue a person with a soil order directing land-use measures for soil protection or to carry out engineering works. The third major clause gave powers to prohibit the destruction of trees, including trees on roadsides.

The Leader of the Opposition, R S Richards, said his party offered no opposition to this much-needed measure, ‘to remedy an evil of which everyone is aware’.

There was one member of the House of Assembly, Mr Thompson, the Member for Semaphore, who expressed doubts about the practicability of the proposed measures. Considering the state of wind erosion in the Murray Mallee, he argued that the government would need to acquire the whole region and place it under a vegetation reserve if the intention of the Act was to be achieved.

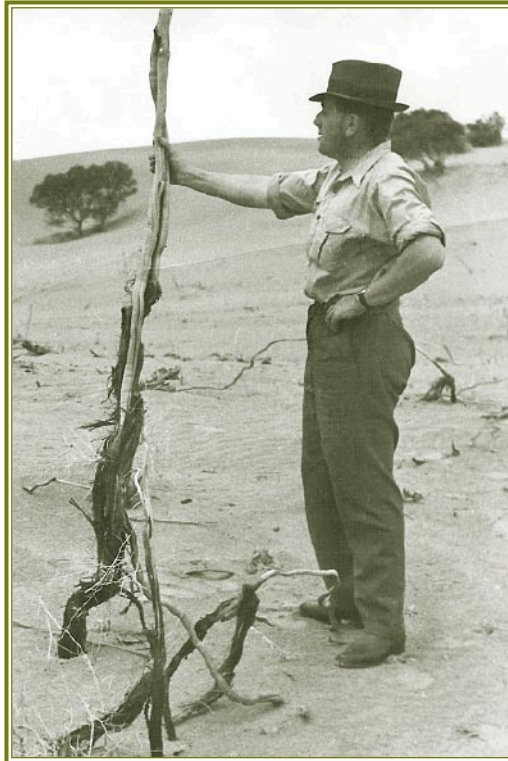
From the beginning of the debate the Commissioner argued that the legislation, ‘should not be seen to be wedded to any particular department’, but would best be administered by the Department of Agriculture. The House of Assembly challenged this view. Because erosion was believed to be largely in the pastoral areas, members argued that the problem could be best dealt with by the Pastoral Board and the Land Board under the administration of the Department of Lands.

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The Commissioner countered those arguments by emphasising the seriousness of water erosion in the agricultural areas and by emphasising the technical skills available in the Department of Agriculture. He advised Parliament, 'When it is realised how much the State is served by agricultural inspectors who come directly under the Department of Agriculture it will be seen that there is a great deal to be said for the work being administered by the Department'.

Some weeks later, following a conference of the Houses, it was decided to leave the final decision to Cabinet, which chose the Department of Agriculture.

History proved that decision to be a very important one, and we can be thankful to the persistence of Mr Rudall who so wisely argued against his own portfolio. It enabled the Advisory Committee on Soil Conservation to develop a very sound technical base for soil conservation locked into the agricultural research and extension programs of the Department of Agriculture rather than being dependent on the resources of the Lands Department which had to concentrate on land tenure and measurement and, later, land development.



The Soil Conservation Act 1939 passed both Houses of Parliament on 30 November 1939.

Mr R.I. Herriot,
the first Soil
Conservator.

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Chapter 3

Early Meetings of the Advisory Committee on Soil Conservation

As evidence of the initial high status afforded to the Advisory Committee on Soil Conservation by the Government, the first meeting on 15 March 1940 was held in the office of the Minister of Agriculture and chaired by the Director of Agriculture, Mr Spafford (pictured).

All the facilities of that office were made available to the Committee, including the Minister's Secretary, L S Smith, whose position in those days was a senior public service appointment.

Those attending the first meeting were:

W J Spafford, (Chairman), Director of Agriculture

H J Copley, landowner with pastoral experience

C F G Johnson, District Engineer, Northern Water District, Engineering and Water Supply Department



C R Kelly, landowner from Giles Corner

J N McGilp, Pastoral Board

G J Rogers, Conservator of Forests

Dr H C Trumble, Professor of Agronomy, University of Adelaide

L S Smith (Secretary).

After the committee members had been informed that they would receive a sitting fee of one guinea (£1.1.0) a day, a policy decision was made that, 'The Committee should work on the lines of the education of landholders, rather than on compulsory prevention'. This policy was not varied throughout the life of the Committee and the council that followed. Despite the considerable powers of the two acts on the statutes over that time, legal action was only rarely taken, (see chapter 6).

The Committee then took the first step to implement that policy. It recommended the appointment of three advisers to work directly

under the control of the Director of Agriculture to assist landowners to adopt the best measure for soil erosion control.

These appointments were at first vetoed by Premier, Sir Thomas Playford, who was by then facing the serious implications of the war. He believed the Act could simply be put into effect using staff already employed in the Department of Agriculture and the Lands Department.

After persistent representations by the Advisory Committee the first appointment, the Soil Conservator, Mr Bob Herriot, began duties a year later, in March 1941. Strangely, he was not invited to assist the committee at meetings until April 1944.

Despite the status of the Committee and the initial urgency of soil degradation perceived by Parliament, the Advisory Committee could move only slowly through a mountain of routine matters during its first five years. The restrictions imposed by the war curtailed travelling and dried up funds for resuming eroded lands and taking other initiatives, this was despite strong recommendations to Parliament by A W Christian MP to increase expenditure, and a resolution for more resources carried at the State Labor Party Conference in 1943.

Initially, the Committee set about rescuing the towns of Farina, Parachilna and Port Augusta from sand drift. They bought and distributed fencing materials and negotiated directly with landowners.

They also set aside reserves for soil conservation, approved share farming agreements with farmers on Eyre Peninsula and inspected various projects in the field.

In 1943 the Committee negotiated amendments to the Act which gave the Minister and the Committee wider powers and qualified the restrictions to stock travelling on reserves.

In September 1944 the Committee decided to divest the routine field operations to the control of the Soil Conservator and limit its activities to the development of policies. This decision, and the Committee's decision to allow Herriot to attend meetings, heralded a surge of activity which, with the lifting of war time constraints, enabled considerable advances in erosion control to be achieved.



Horse teams scooping sand from South Australian railway lines.

One of the first activities of the Advisory Committee on Soil Conservation was to rescue the railway lines in South Australia from drifting sand. In 1943, £20,000 was spent scooping sand using horse teams. In 1944, 160 sites were identified on the Murray Mallee lines alone where £750 was allocated for clearing operations and £500 granted to landowners to sow rye to stabilise the drifts.

For seven years the Committee provided financial assistance for adjoining landowners to sow cereal rye to stabilise the sand. This cost only £2216 and popularised cereal rye for drift control throughout South Australia.

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Chapter 4

Soil Conservation Boards

Early in 1945 the Advisory Committee on Soil Conservation set about seeking further amendments to the Act to emulate development in the United States where it was believed that soil erosion had largely been controlled as a result of setting up local community groups to influence landowners.

Bob Herriot, now in a position to influence the Committee at its meetings and strongly supported by Mr Kelly and Dr Trumble, was able to convince the Committee of the merits of such a system.

On 15 November 1945 the Minister of Agriculture, George Jenkins introduced a bill to amend the Act in the House of Assembly.

Referring to the serious incidence of erosion in the State he said, 'If I am the humble instrument through which something can be accomplished to arrest the very sad state of affairs which exists over a large part of South Australia, then I will feel that my association with this House over a fairly long period has not been entirely in vain.'

The Minister explained that the object of the bill was to set up improved

administration machinery to deal with the problem of soil erosion.

'It is desirable', he said, 'that the administrative arrangements for dealing with the problem should be decentralised, not only to relieve the pressure of work in Adelaide but to stimulate and increase local interest'.

Towards this end the bill provided for the proclamation of soil conservation districts to be created on the favourable petition of 60% of landowners living in the area. These districts were to be administered by boards of three to seven landowners nominated by the Advisory Committee. In local government areas at least one member had to be a councillor.

The duties of the boards were:

- to foster local interest in soil conservation by lectures, demonstrations, conferences and discussions;
- to collect information as to soil erosion and soil conservation within its district;
- to make any investigations requested by the Minister or the Committee;

- to make reports and recommendations on soil erosion and soil conservation; and
- to make orders under the Act.

Applications for soil conservation orders could also be made to the Advisory Committee by the Minister, land holders affected or local committees that were formed to carry out particular tasks ordered by the boards.

Some members of both Houses expressed doubts that board members, who had to live in soil conservation districts, would take action against their neighbours, and cited the failure of the control of noxious weeds.

The Minister believed that the board members' effectiveness would be assured because they would be in the best position to influence their neighbours by education and example. Members would be appointed on merit by the Advisory Committee to ensure they would not be discouraged by the fear of being voted out.

During the long debate in which members for the most part eloquently supported the bill, the Minister awarded the rabbit 'full bad marks'. 'I admit', he said, 'that the presence of the rabbit makes it extremely difficult to correct the injury which has been done by soil erosion.'

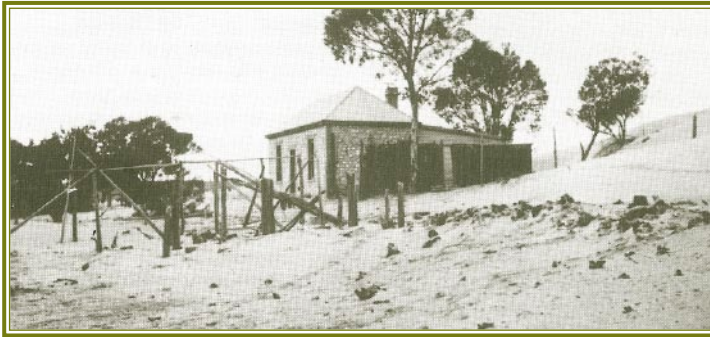
Again and again those same sentiments were expressed by soil board members over the following years.

Only two members of Parliament expressed doubts during the debate on the amendments. Arthur Blesing contended that soil erosion was outside the control of the landowner and therefore the extra machinery of boards was not necessary. E W Castine opposed the very basis of erosion control on his knowledge that water flowed uphill. 'Contour ploughing', he told Parliament, 'is supposed to assist in the prevention of soil erosion but I think it only diverts the natural course of water. Often after heavy rains it is found that a gutter is formed when one did not exist previously, and contour ploughing assists this'.

Still under the chairmanship of Mr Spafford and with the original membership largely intact, except for Mr Johnson who had died suddenly in 1943, the advisory committee set about the business of improving landholders' involvement in soil conservation. It had largely handed over its field operations to Bob Herriot and his emerging Soils Branch in the Department of Agriculture.

Initially, interest came from all quarters but the requirement of the Act for a favourable petition to be signed by 60% of those occupiers of land (including those in townships) gradually brought the development of boards to a standstill. To achieve a petition in a district required door-knocking by technical officers who were just not available.

In 1951, six years after the Act had been amended, Herriot reported to the Advisory Committee that only three boards had been formed – Upper Eyre Peninsula (1947), Murray Mallee (1948) and the Murray Plains (1949). He brought forward evidence of the urgent need to establish further boards in East Broughton, West Broughton, Light, Yorke Peninsula and the Southern Hills.



When the Murray Mallee Soil Conservation District was formed in 1948 scenes depicted in these photographs were still common in the region. Homes and roads were threatened by drifting sand.

In his report to the Committee he recommended that the *Soil Conservation Act* be amended again to allow a group of 25 to 60 farmers to petition the Advisory Committee, which would then be required within 30 days to arrange a public meeting in the proposed districts, at which opinions could be assessed. If the opinion was judged favourable the Advisory Committee, he believed, should then be able to take statutory steps to define the district and conduct a poll to constitute the district. He suggested the soil conservation district should be formed if a majority of those who voted agreed to its formation.

The appointment of two further boards, the West Broughton and the Yorke Peninsula Boards, was completed in 1954. Twenty nine years went by before another board was formed.

In 1960, nearly a decade after Herriot's lament to the Advisory Committee, the Act was amended to enable soil conservation districts to be promoted, formed and petitioned more easily. An amendment excluded people in townships from the requirement to obtain 60% of landowners to formally sign for a district to be formed.

It was to be another 18 years before this cumbersome mechanism for forming districts by petition was finally abandoned.

The 1978 amendments placed the initiative for the creation of districts with the Minister who was able to obtain consent for proposed districts from district councils as well by his direct reference to landholders.

By this time Herriot had well and truly moved on. In 1955 he was promoted to Chief of the Division of Extension Services in the Department of Agriculture, and later to Deputy Director.

Despite the Committee's new dynamic chairman, Dr Allan Callaghan, who was appointed in 1949, and an influx of new members, the mood for forming boards to achieve increased interest in soil conservation had passed by.

This does not mean that the soil conservation movement stagnated. The five districts and boards that had been formed covered at least one-third of the highly erodable agricultural areas of the State and they were carefully nurtured and constantly supported by the Committee. Once a year the committee members visited at least two of the boards to encourage their field demonstrations and operations, and from 1972 to 1985 the chairman of each board was invited to Advisory Committee meetings as an observer.

At the beginning of the 1980s the Committee, with strong executive support from Bill Matheson who had

been appointed secretary in 1976, sensed that their time was again appropriate to expand and strengthen the soil conservation board system, the foundations for which had been laid in 1945. Several factors had set the scene. The Federal Government had provided, since the 1975-76 financial year, interim funding for soil conservation projects in South Australia and had indicated that it would enter into agreement with the states to fund a National Soil Conservation Program over a five-year period. South Australia anticipated at least \$200,000 for the 1980/81 financial year.

Secondly, the conservation movement in the community was becoming more and more vocal, demanding better landcare from farmers and graziers. This had raised landowners' fears that the management of their land might be dictated by others and they were, therefore, very receptive to embracing the soil conservation legislation which provided a mechanism for self-regulation through boards. The fears of landholders in the pastoral areas were reinforced by discussions associated with the introduction of a new act for the pastoral region.

In this climate the Advisory Committee, at first under the chairmanship of Peter Barrow and from 1983, Arthur Tideman, began an active program to revitalise existing boards and to encourage

the formation of soil conservation districts across the State.

Boards were provided with budgets and encouraged to develop field projects to be funded through the National Soil Conservation Program. Procedures were developed to appoint members to the new boards and to re-appoint board members after each three-year period of appointment. These procedures ensured that all land managers in the district had equal opportunity to gain appointment and that membership was not restricted to those directly involved in primary production. The procedures also encouraged more active participation by the local government representatives on the boards.

The first success came in 1983 when the Hummocks Soil Conservation District was constituted.

Then, in 1985, the Lower Eyre Peninsula District was formed, followed by the Lower North in 1986 and Central Eyre Peninsula in 1987.

During this period and through to 1990, when the last meeting of the Committee was held, members attended six-weekly meetings and gave a great deal of personal time in the field to fulfil the expectation of landowners who were suddenly keen to constitute districts and form boards.

Much was left to individual committee members because departmental staff support was greatly reduced in this period following resignations for overseas contract work and especially after Matheson retired as secretary.

On 30 August 1988 the committee participated in an historical event when it attended the inaugural meeting of the Northern Flinders Ranges Soil Conservation Board at Leigh Creek. This was the first soil conservation board meeting to be held in pastoral areas in the State and the first board with membership representing all major land managers in the proclaimed district, including National Parks and Wildlife Service and the Electricity Trust of SA. It was a triumph especially for committee member Bill McIntosh who had worked hard with the United Farmers and Stockowners Association Executive Officer, Denys Slee, to convince the pastoralists involved.

Success followed success. Four other districts were constituted in 1988 - Goyder, Southern Hills, Kangaroo Island and Central Flinders. In 1989 the Gawler Ranges and Marla Oodnadatta Soil Conservation Districts were formed. Finally, before the Committee handed over its duties in March 1990 to the council proclaimed under the new legislation, five other districts had been formed, namely Kingoonya, Marree, Coorong and Districts, Far West Coast and

North East Pastoral. (Details of the sequence of formation of boards in South Australia is listed in Appendix V).

One might ask why the soil conservation board system in South Australia was only active in five districts for 30 years.

John Bradsen, Senior Lecturer at Law at the University of Adelaide, in his report for the National Soil Conservation Program on Soil Care Legislation in Australia (1988) believes the adoption of the United States soil conservation model to be the reason for the slow uptake. This allowed soil conservation measures to be optional for the landowner on his or her property, ensuring the supremacy of individual rights over the public interest. It was not an option in the acts of the South Australian Parliament developed to control and eradicate unwanted plants and animals, and these board systems flourished during the 1970s and 1980s with important community benefits.

This option was eventually removed with the addition of the Section 13a of the *Soil Conservation Act* in an amendment made in 1984, which stated:

It is the duty of an owner of land (which includes an occupier) to take reasonable precautions to prevent the occurrence of soil erosion on the land.

There were, however, other reasons why the board system was not expanded for so long. The Department of Agriculture's Soil Branch activities were diversified into wider research fields, which diverted limited resources. Soil fertility and nutrient balance, land capability and crop modelling, irrigation, tillage systems and effluent disposal are a few examples.

The development of initiatives by other departmental sections also diverted resources from the soil conservation programs. However, many of those, such as farm management and

pasture extension, the development of grain legume crops and better rotations and fertiliser use, directly added to the sustainability of agriculture.

Despite the 30-year period when soil conservation programs were given low priority, all was not lost by any means. The deep gutters and numerous rills in the paddocks of the wheat belt mostly healed and disappeared, only to be replaced by the recognition of the more insidious forms of land degradation, such as soil salinity and acidity.

Table I: Summary of Work Programs 1945 – 1990

	Contour Banking (ha)	Contour Furrowing (ha)	Farm Plans (No.)	Scrub Inspections (ha)
1945-50	14,351	1,287	50	No records
1950-60	36,779	13,354	154	1,287,482
1960-70	48,519	7,702	196	624,019
1970-80	80,013	1,776	23	293,239
1980-90	92,712	12,000 *	21	220,787**
Total	272,374	36,119	444	2,425,527

* Estimate Only

** The scrub inspections for erosion control ceased in 1985 when the *Native Vegetation Management Act* was proclaimed.

Table II: Comparative Expenditure on Soil Conservation

State	Expenditure on Soil Conservation Expressed as a Percentage of Agricultural Production
South Australia	0.13%
Tasmania	0.21%
Queensland	0.23%
Victoria	0.25%
Western Australia	0.26%
New South Wales	0.44%
Northern Territory	2.8%

(These data were prepared for the Advisory Committee on Soil Conservation in December 1987).

Chapter 5

Vegetation Retention

When the Soil Conservation Bill was before Parliament in 1939 many members emphasised the need to retain trees and to initiate reafforestation programs to protect the soil from erosion.

The Member for Unley, Sir John McLeay, praised the specific clause in the bill which aimed to protect the vegetation on roadsides. 'The beauty of roadsides', he said, 'needed protection from wanton lopping and destruction of trees'. He gave high praise to a community group who called themselves the 'Utility Services' and who were successfully coordinating tree planting.

Early meetings of the Advisory Committee considered many aspects of tree planting and vegetation retention. Small enclosures were created by the Committee, which paid for the fencing and the labour involved, at various sites in the pastoral areas to demonstrate the protection that could be provided to the soil. Later, demonstrations using contour furrows were established to show that overgrazed areas could be revegetated with perennial bushes such as bluebush and the saltbushes.

Surprisingly, four nurseries, managed by the South East Drainage Board to provide trees to control drift on coastal lands and around the lakes at the mouth of the River Murray and in grazing areas, were funded by the committee at an initial cost of £105.

After the Second World War both the State and Commonwealth Governments encouraged landowners in many ways to take up the challenge of feeding the world, and vast areas of natural vegetation began to be cleared at a rapid pace. The Advisory Committee, with great foresight, anticipated the inherent dangers in any upsurge in land development, and when the *Soil Conservation Act 1939* was amended in 1945 it included their recommendation that a provision be added which required that persons intending to clear vegetation must give three months notice in writing to the Soil Conservator.

The requirement to inspect vegetation before clearing created an enormous workload for soils officers in the Department of Agriculture. The inspections peaked in the early 1950s and continued unabated until 1956 when this work began to taper off.

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Guided by aerial photographs, officers walked or drove 4-wheel drive vehicles through areas proposed for clearing and assessed the potential of the soils to erode. Areas where the soils were deep sand or where sand hills would easily drift if cleared, were reserved and the landowners advised.

There is no doubt that this work initially had a tremendous influence on the protection of the light mallee soils on Eyre Peninsula in particular and on the sandy soils in the Murray Mallee and the Upper South East.

Besides the physical protection this work gave to more than 2.4 million ha of land, it provided the soil officers with valuable contacts. Owners were contacted at the time of the inspection, which inevitably led to discussions about soil management to prevent erosion, the importance of

medics and superphosphate, the techniques of pasture establishment and many other topics. It opened the door for valuable technology transfer and led to applied research programs. For example, the information gained by Reg French from these inspections largely enabled him to produce a valuable soils map of the Eyre Peninsula.

Unfortunately, inherent problems in this program, which became evident as early as the mid 1950s, were never adequately assessed or acted upon by the Advisory Committee. Gradually, because the soil officers never had the time to follow up and ensure that the reserved areas were protected and because the reserves bound only persons who were the owners at the time the inspections were made and not entered on the titles to the land, the vegetation was whittled away.



Aerial photograph taken south-east of Kimba on Eyre Peninsula in May 1959, showing drifting sections of sandhills cleared of vegetation.

Many reserves were destroyed by overgrazing, or a bid to control rabbits, or to simply clear the vegetation in the belief that they could keep the country stable without these annoying strips of vegetation. These loopholes were closed when the Act was amended in 1978, but by then it was too late.

Besides requiring landowners to give notice before clearing vegetation, the Act also gave the minister powers under Clause 13 (1) to serve a notice preventing the removal of trees, shrubs or plants for erosion control. For example, Minister Pearson, in 1958, issued a notice that had for 30 years protected the foreshore vegetation in the Hundred of Waterhouse near Robe. When the notice expired, there was further agitation for the vegetation's removal for the development of holiday homes.

While the need to control wholesale clearing of vegetation on private properties was clearly seen as an important soil conservation issue by the Advisory Committee, roadside vegetation was not given the same emphasis.

At a committee meeting in 1944 Rogers, Conservator of Forests and a committee member from its inception, supported submissions made by the Loxton District Council and the Commissioner of Highways that such authorities should be able to clear roadside vegetation without reference

to the Minister of Agriculture as the *Soil Conservation Act 1939* required. He claimed the current requirement was an 'embarrassment to the Soil Conservator'.

The Advisory Committee agreed and used its influence to have the requirement to seek permission from the Minister of Agriculture to destroy roadside vegetation removed when the Act was amended in 1945. Local government was given the authority.

The preservation of roadside vegetation was then virtually forgotten during the next 20 years when the development of better roads and other infrastructure across the State was seen to be of paramount importance. The tide was not to turn until 1964 when the Fauna and Flora Advisory Committee formed a Roadside Vegetation Subcommittee. This subcommittee became a direct advisory committee to the first Minister for Environment and Conservation, Glen Broomhill, in 1971.

By the late 1970s there was widespread agreement in the community that there was an urgent need to conserve remaining areas of uncleared native vegetation.

In response to that concern the Government, in 1980, introduced a Heritage Agreement Scheme that provided incentives for landowners to protect and manage important areas of native vegetation.

In the wake of this it came as a great shock to the farming community when, on 12 May 1983, without warning, the Government introduced regulations under the *Planning Act* that inserted the statement, 'the clearance of any tree, shrub or plant of a species indigenous to South Australia would comprise development.'

Clearance was therefore effectively defined as a change in land use that required planning approval from the South Australian Planning Commission.

With only a few hours notice the Advisory Committee on Soil Conservation was divested of direct responsibility for vegetation retention after 50 continuous years, but – significantly – the requirement to take potential soil erosion hazard into account when assessing clearance proposals was preserved in the new regulations, along with new provisions preventing clearance where it might contribute to flooding or soil salinisation. The net effect was a strengthening of landcare provisions in relation to land clearance, as well as the introduction of new biodiversity conservation principles.

Over the next two years in excess of a thousand applications for clearance were submitted by landowners, fearing increasing restrictions would prevent development of their farms and threaten their viability for the next generation.

The applications were processed for the Planning Commission by officers of the Vegetation Retention Unit of the then Department of Environment and Planning, but the large number created a considerable backlog and this, along with the absence of compensation to farmers who were refused permission to clear, caused widespread resentment.

After a legal challenge, culminating in the High Court of Australia, it was clear that, while the community supported the preservation of native vegetation, it could not be achieved effectively without compensation. This was arranged through an extension of Heritage Agreements that provided compensation and fencing and other financial incentives to manage vegetation that was not approved for clearance. The legislative provision for this was a new *Native Vegetation Management Act 1985*, that was proclaimed on 21 November 1985.

With that Act in place the relevant clauses covering vegetation retention were removed from the *Soil Conservation Act* but the Soil Conservation Advisory Committee and the subsequent Council never forgot the fact that vegetation and soil care were inevitably linked. Tree planting became the foundation on which landcare was nurtured under the direction of the Soil Conservation Council.

Under the *Native Vegetation Management Act*, the Native Vegetation Authority was established, a body representing key stakeholder interests, which engineered a significant shift in clearance approvals. With compensation now available, less than 4% of the areas applied for clearance were approved, whereas under the pre-compensation regulations farmers were frequently given approval to clear up to half of the areas for which they applied. Environmentalists argued these steps were necessary in view of increased salinity and the fact that, despite community concerns, more than 640,000 ha had been cleared in the previous decade.

To ease the pain for farmers, 764 Heritage Agreements covering 550,000 ha were negotiated under this Act at a total cost of \$73 million and South Australia boasted the largest area of private land under long-term conservation in the Commonwealth.

The next step, now far removed from the requirements of the 50- year-old *Soil Conservation Act*, was the proclamation of the *Native Vegetation Act, 1991*. This marked the end of the provision of compensation, those farmers intending to clear having by now applied for and received eligible payments, but Heritage Agreements continue to be taken up, with up to 30 or so being written per annum on a voluntary basis.

The 1991 Act emphasised biodiversity and extended the control of clearance to include scattered trees. In 2002 it was amended to formally bring to an end all broad-scale vegetation clearance across the State, although that had virtually been the case since the late 1980s.

Where had these developments left those who had been and those who continue to be associated with the soil conservation movement, its council, technical officers, soil board members and landowners? While they have continued to strongly support native vegetation retention and tree planting some were concerned that legally based processes administered by the State Environment Department lacked community and landowner involvement, involvement which had been carefully nurtured, mainly through the soil conservation boards, the Agricultural Bureau movement and the agricultural extension programs over the previous half century.

The *Native Vegetation Act, 1991* recognised this and each clearance proposal required a comment from the soil conservation board covering the area to be cleared. This comment was focussed on landcare provisions, but the introduction of the *Natural Resources Management Act, 2004* means the comment now includes all natural resource issues.

Chapter 6

From Orders to Plans and Tribunals

The *Soil Conservation Act 1939* introduced far-reaching measures to enforce the protection of the soil. Under the Act, land could be resumed or acquired to establish conservation reserves or the Minister could, by order, direct persons to take management measures or carry out works on the land.

In 1945 the Minister's power to issue soil conservation orders was transferred to boards and the Soil Conservator. Orders could be applied for by the Minister, and local committees set up by boards or affected neighbouring land-holders.

The orders issued by boards could only be on a provisional basis and had to be confirmed by the Advisory Committee on Soil Conservation.

Once an order was in place, the committee could carry out any soil conservation measure if the owners or occupiers defaulted, and if the costs could not be recovered they remained a charge against the land.

Only 14 orders were confirmed in the life of the Advisory Committee. Some were resolved reasonably effectively when the landholders were willing to learn or lucky seasonal conditions

occurred, but other cases became sorry drawn-out sagas from which important lessons emerged.

It is interesting to follow the course of one of these orders that was originally applied for by the Minister of Agriculture in January 1956 to control sand drift on Lake Albert Station at Meningie. Issues associated with this order were considered, often at length, at 23 consecutive meetings of the Committee between 1956 and 1971.

The Committee confirmed the provisional order after a full-day field inspection. It was varied in 1957, lifted in 1958, renewed in 1959 after the Murray Mallee Board had issued a provisional order, partially discharged in 1963 and never fully resolved before the property was sold in 1971.

At critical times throughout this 15 year period the property was visited and assessed by a series of experienced soils officers from the Department of Agriculture. Their input began in 1958 when large-scale cereal rye establishment trials over an area of more than 50 ha were conducted as an incentive to the owners. In later years Murray Mallee Board members made yearly visits.

Many excuses for the long drawn-out attempts to stabilise the area appear in the minutes of the committee meetings. At first there was the owner's reluctance, ignorance, hurt pride and lack of money. The Committee tried hard and eventually gained his confidence. They initially gave him and his legal representative an opportunity to confront the committee at a lengthy hearing. They offered incentives but found rabbits and drought as excuses for progress. Reading between the lines, committee members and supporting staff gradually developed an air of inevitability, and embraced bad luck.

What are the lessons to be learnt? Why were such glaring examples of land degradation left unresolved for so long despite the extensive legal powers available? When the Murray Mallee Board was given the power to take out orders it did just that. That brought the seat of action closer to the landowner but to get results the Board had to beg and borrow resources, hire contractors or plead with the landowner. To undertake timely action the Board needed its own financial resources, which were never made available. (By comparison, using their own resources, Animal and Plant Control Boards in South Australia had a high rate of success if landowners ignored advice and legal notices.)

Secondly, management at a distance by the Advisory Committee or the

board members was ineffective. Events passed by without action. Management of the property must be built more effectively into the legal order with an enforceable farm plan based on achievable standards accepted publicly by the surrounding community. A lesson was learnt.

The *Soil Conservation and Land Care Act 1989*, placed responsibility on the soil conservation boards for taking action to rectify unwarranted erosion. Board members always tried to firstly obtain results through personal advice: face to face with the land manager before resorting to legal processes. The Soil Conservation Council could only provide support.

But, as in the past, the issue of soil conservation orders proved difficult. Often technical expertise was needed which was beyond board members and they were placed under personal pressure when finally the board had to take legal action against a community member.

In 1995 when the Act was reviewed the role of the boards was changed. While encouraged to make personal contact with the landowner involved the Soil Conservator was appointed to undertake the action supported by special evidence gathering expertise from within government and technical soil management expertise available to the Soil Conservator from departmental sources.

When the Soil Conservation and Land Care Bill was being considered by the South Australian Parliament. It insisted that land owners should have the right of appeal and a tribunal was written into the Act. Only one appeal was heard during the 15 year life of that act. Many cases were resolved by personal negotiations, a measure of the excellent community respect and interactions that the board and soils officers achieved.

7

Chapter 7

The Birth of Landscape Care Legislation

After 40 years of service the Advisory Committee on Soil Conservation at the beginning of the 1980s was given badly needed encouragement by an increasing trickle of support from the wider community.

The Commonwealth Government had committed funds and established the National Soil Conservation Program (\$280,000 was made available to South Australia in 1981). This had forced the State Government's hand to guarantee its funding, and the two sources together had allowed a new emphasis to be developed with additional staff to undertake catchment projects involving local communities. By late 1982, eight projects had been established, including the Magpie Creek Project, which attracted a great deal of interest.

This new mood, with Commonwealth support, was reinforced by a Senate Inquiry into National Resources, the Boulderstone Report, and the development of a National Conservation Strategy.

New committee members in 1982 and then in 1985 under the chairmanship of firstly Peter Barrow and then Arthur Tideman rallied to the cause, and members became involved in many public meetings to encourage the formation of new soil conservation districts (outlined in detail in Chapter 4).

Early in this period of the Committee's work it became evident that the soil conservation legislation, which had by then been proclaimed and amended over a period of 40 years, had outlived its effectiveness mainly because it did not embrace forms of land degradation other than wind and water erosion. Increasing salinity, for example, had emerged as a problem. The legislation also did not enable forward planning and land management to be enforced. It was too reactive, allowing boards to take action only after the damage had been done.

Proposals to renew the legislation were discussed informally by the Committee at a meeting with the Minister of Agriculture, Brian Chatterton, during March 1983.

He encouraged the Committee to proceed, emphasising the need for wide community involvement. The committee initially considered the possibility of basically changing the legislation to enable land management boards to be formed rather than continuing with the soil conservation board system. It was envisaged that this step would involve the amalgamation of the Animal and Plant Control Boards with the Soil Conservation Boards and perhaps others such as the Water Resources Advisory Committees and the fire prevention groups. This proposal was canvassed at a number of meetings involving members of current boards, the Land Use Committee of the United Farmers and Graziers and the Local Government Association. The idea proved too radical, and at its meeting on 6 October 1983 the Advisory Committee decided not to follow that policy.

Meanwhile, Bill Matheson, the secretary, had compared the South Australian legislation with up-dated West Australian and New South Wales acts and prepared a discussion paper covering proposals for new legislation. This was considered at the July 1984 meeting when a subcommittee, consisting of Messrs Harris and Blesing and convened by Matheson, was appointed to prepare the principles and guidelines for further consideration.

This became the task of the renewed Advisory Committee that consisted of Arthur Tideman (Chairman) and Don Blesing, Peter Day, Bill McIntosh and Professor Malcolm Oades, who had all been reappointed, and two new members, Mr 'Bazz' Walton, a property owner from the northern Eyre Peninsula, and Andrew Lothian, a representative from the Department of Environment and Planning.

In March 1986 the following guidelines for the new legislation were distributed widely:

- Legislation should embody all land in the State, both private and public, including all tenures and users and all forms of land degradation.
- Be under the general direction and control of the Minister of Agriculture.
- Establish a Soil Conservation Commission consisting of land users and representatives of groups interested in land management, both government and non-government. This commission should be empowered to advise the Minister on policy issues of its own volition and on matters referred to it by the Minister.
- The legislation should provide for wide community participation in soil and land conservation boards made up of representatives of the local communities and serviced

by technical officers from the Department of Agriculture or other departments where appropriate.

- Ensure that the soil and land resources of the State are managed in a way that guarantees their long-term stability and productivity by encouraging the development of an ethic in which prime responsibility for protecting the soil is accepted by the land user.
- Provide a mechanism that effectively prevents the misuse or abuse of soil and land resources by a landowner and, when cooperation and consultation fail, makes provision for correction of the problem and recovery of the costs.
- Legislation should make provision for cost-sharing arrangements by land users and all levels of government for mitigating and reclaiming soil and land degradation in watersheds.
- Require regional, catchment and individual farm management planning as the basis for soil conservation and land management activity. Provide a mechanism by which new conservation farming technology can be integrated into the Department of Agriculture extension program, involving soil nutrition, crop husbandry and land management.

- Provide for research into the causes, effects and mitigation of soil and land degradation, including off-farm effects of soil and land degradation such as flooding, salinity and pollution.

These guidelines were welcomed and generally supported by the soil conservation boards, the United Farmers and Stockowners and the Local Government Association, and from within government agencies by the Land Resources Management Standing Committee.

Encouraged, the Committee approved a paper prepared by the chairman, titled 'Proposals for New Conservation Legislation', at the January meeting in 1987. The detailed proposals in the paper had been canvassed with John Bradsen, Senior Lecturer in Law at the University of Adelaide, who made valuable inputs, particularly to ensure that the responsibilities of landowners and the Government were stated clearly and separately. At this time the Advisory Committee believed that the proposals would be readily accepted and that a bill could be introduced into Parliament in the spring session. However, this was not to be. Presented with the details contained in the paper, various interested parties raised queries and objections about which the Advisory Committee had to explain, negotiate and compromise at innumerable special meetings and at regular

committee meetings, now held at a six-weekly interval.

The Director-General of Agriculture, Dr John Radcliffe, and members of his professional staff raised concerns about the resources needed to develop district plans and individual property plans and to fund the proposed commission and its independent staff. They also felt there needed to be a direct link between the boards and the authority proposed to administer the legislation.

Fortunately, the vastly increased Commonwealth and State funding, which had increased to more than \$2.5 million by the time the legislation was introduced to Parliament in late 1989, delayed the funding fears, and a direct link with the boards was achieved by allowing members to elect a representative to the Soil Conservation Council.

A deeper departmental concern that the proposed commission would go its own way without heeding agricultural priorities was harder to resolve. The Advisory Committee felt strongly that an independent authority was essential to satisfy the concern of the conservation movement and the legally based arguments submitted by Bradsen. They claimed that after nearly 50 years of operation the Advisory Committee on Soil Conservation, operating with Department of Agriculture resources

and with a chairman provided by the same department, have proved to be largely a puppet of that agency which had a charter for productivity and not environmental sustainability.

A special minute supporting the case for an independent commission and support staff was sent by the Advisory Committee to the Minister. Eventually, a compromise was adopted. A council was proposed with an independent chairman, along the same lines as the Water Resources Council, which had been operating successfully for a number of years.

Representation on the proposed council was a serious point of contention from the beginning. Every interested group lobbied for a representative. The advisory committee originally recommended a commission of five, conceded eight, but by the time the legislation was proclaimed the council was constituted with a potentially unwieldy membership of 12 people.

Changes in the ministry, the retirement of Bill Matheson, who had been the executive secretary for nearly 12 years, and the subsequent resignation of other senior staff in the Department that had left the Committee with few resources at this critical time, further delayed submission of the proposals to Government.

After collating wide-ranging comments on 'The proposals for the new soil conservation legislation, the Committee held a two-day meeting in September 1987 at which the proposals were redrafted and sent to Minister Kym Mayes seeking his approval for a Cabinet submission to be prepared requesting the preparation of a bill by Parliamentary Counsel.

While these developments to renew the 1939 legislation were slowly evolving, the Committee worked hard to renew the profile for soil conservation and support the soil conservation boards and regional Department of Agriculture staff that worked closely with the boards. During September 1986, for example, the Committee conducted the Jubilee Soil Conservation Week centred at Clare. During the build-up to that week's activities, in the State's sesquicentenary year, a Soil Conservation Farm of the Year competition was conducted throughout the State. All committee members were involved in the selection process, which created a great deal of interest with prizes totalling \$30,000.

The Advisory Committee also concentrated on involving the conservation movement in its activities, especially for the development of the new legislation and in setting priorities for soil conservation.

Much closer working relationships were achieved after committee members led a bus tour of leading conservationists through the cereal belt and into pastoral areas during August 1988 to show them the progress of many projects aimed at better landcare.

The year of 1988 proved to be a watershed year for the Advisory Committee – and a very busy year, too.

Fortunately, the lack of staff resources to support the Advisory Committee and manage the rapidly increasing interest in landcare measures was corrected, firstly with the appointment of Roger Wickes as the new Soil Conservator to replace Reg French who had retired. Roger Wickes was also appointed Chief of the Soil and Water Management Branch of the Department of Agriculture. Other new staff appointed to the branch, especially Bob Christiansen, Andrew Johnson, Noel Pedersen and Jeff Tregenza, were also made available to work with the Committee and the rapidly expanding board system and to help develop a Green Paper for another, but more formal, round of community consultations on the proposed legislation.

The release of the Green Paper in February 1989 created a great deal of interest. Its clarity and logical presentation promoted informed debate that was, in general, most supportive.

It clearly spelled out the objectives of the proposed legislation, which had now been in the making for six years. These can be summarised as follows:

- To recognise that the land and its soil, vegetation and water constitute the most important natural resource of the State and that conservation of that resource is crucial to the welfare of everyone.
- To recognise that degradation of the land has occurred to a significant extent and that some degradation is still occurring, and that Government, industry and the community at large must work together to prevent or minimise further degradation and rehabilitate degraded land.
- To establish a system ensuring
 - i. the regular and effective monitoring and evaluation of the condition of the land;
 - ii. the early identification of degradation of the land and the causes of that degradation;
 - iii. the development, implementation and enforcement of plans for preventing or minimising further degradation and for rehabilitating degraded land.
- To involve the community as widely as possible in the administration of the Act and in programs designed to conserve or rehabilitate land.

The proposed act also identified that it is the duty of an owner of land to take all reasonable steps to prevent degradation of the land.

When the Advisory Committee discussed the general reaction of the community to the proposed legislation with its new Minister, Lynn Arnold, on 20 June 1989, members were well satisfied that their basic concept of legislation to cover all forms of soil degradation and which was based on planning at the community level, had been accepted by the government and that its introduction into Parliament was in very capable and enthusiastic hands.

It was then only a matter of time before the Soil Conservation and Land Care Bill was prepared in July 1989 and before the Act was assented to on 29 October 1989. On 2 November 1989, just two days before Parliament was prorogued the date of operation of the *Soil Conservation and Land Care Act* was set to be 15 March 1990.

Members of the Government and the opposition strongly supported the basic concepts in the proposed legislation despite the 34 amendments, which were made. These were minor, except for the provision that an appeal tribunal be formed.

The end of the 'new beginning' for the Advisory Committee came on 19 January 1990, when the last meeting was held. It was the 143rd meeting of the Committee, 26 of which were conducted by the final membership over a three-year period.

At the meeting members put the final document together to hand over to the new Council and then retired, contented that the best legislation available in Australia was now in place.

Members could also rest easy knowing that the legislation was backed by a National Soil Conservation Strategy and a Decade of Landcare during which the Commonwealth provided \$320 million. South Australia's share of this amount, together with State funding, exceeded \$6 million annually. Separate funding of \$500,000 from the Commonwealth was allocated to support 28 Landcare group projects.

Chapter 8

The Council of Twelve

Although the Advisory Committee on Soil Conservation had operated for 50 years with a membership of seven, chaired by a government employee, Parliament insisted that the replacement Soil Conservation Council, established under the *Soil Conservation and Land Care Act, 1989*, be constituted with 12 members.

Times had changed. The council needed to be community driven, hence, although the Minister for Primary Industries could nominate a person of wide soil conservation and land management experience as chairperson, the Act excluded a public service employee for that position. And in keeping with community expectations at least two members had to be women (and to be fair, at least two members had to be men).

Acknowledging the wide interest in community conservation the Act also required the Minister to select a representative of the Conservation Council of South Australia.

In recognition of the need for landowners' insights the United Farmers and Stockowners Association of South Australia was invited to nominate four members, one

with experience in pastoral land management, one horticulturalist, one experienced in dry land cropping and grazing, and the fourth to be experienced in intensive agriculture in high rainfall country. This weighting of four agriculturalists was treated suspiciously by those in the community keenly interested in 'conservation'.

Chairpersons of the soil conservation boards were required to nominate a council member, the Pastoral Board was given membership and so were four people in the public service including an educator and soil scientist.

The Act provided council members with deputies and sitting and membership fees and dire consequences for using their authority inappropriately should there be conflicting interests.

The *Soil Conservation and Land Care Act 1989* intended that all council meetings should be open to the public. With that in mind, Bob Christiansen, who had acted as secretary to the Advisory Committee on Soil Conservation and was then appointed Executive Officer of the new Council, placed an announcement in *The Advertiser* on 15 June 1990.

It advised that the first meeting of Council would be held in five days time in the boardroom of the Department of Agriculture at 25 Grenfell Street, Adelaide. Despite the invitation and the importance of the occasion, there was no response. Indeed only one person attended during the decade and more of meetings that followed.

The first meeting of the new Soil Conservation Council was held on the 20 June 1990, with the following people appointed by the Governor for a term of three years. Neil Smith (chairperson), Professor Malcolm Oades and Bill McIntosh from the old Advisory Committee; Glyn Webber, Nicholas Newland, Peter Norman, Kent Martin, Paul Brown, John Bradsen and Mike Kluge, and two women members Mary Crawford and Anne Stimson. The final member of the council was the Soil Conservator Roger Wickes.

The statutory role of the Soil Conservation Council was to:

- Approve district plans for the soil conservation boards in operation;
- Monitor and evaluate the condition of the land in the State;
- Develop sound strategies for land conservation and rehabilitation;
- Promote the principles that land must be used within its capabilities, and
- Promote community awareness of issues relating to soil conservation.

The financial budget for the council and boards was \$92,233 for the 1989/90 financial year and was to be met by State funds. However, the 1989/90 annual report for the Soil Conservation Council pointed out that with the increased membership of the council compared to the previous advisory committee and an anticipated increase in activities within the district soil conservation board system in relation to District and property planning, a considerable increase in the amount of State funding would be required for the next financial year. This was provided. The financial allocation for 1990/91 was increased to \$235,172. New boards such as Central and Northern Hills and Western Eyre Peninsula were created increasing the total number of boards to 24.

Members of the previous Advisory Committee on Soil Conservation attended the first meeting to explain their philosophies and the aims of their committee. The Minister of Agriculture, Lynn Arnold, also attended. He expressed appreciation for the work carried out by the Advisory Committee and thanked members of the new Soil Conservation Council for accepting the challenge facing them with the administration of the new legislation.

Chapter 9

New Age Conservation

Once established, the Soil Conservation Council planned its strategies to achieve the outcomes needed to fulfil the requirements of the *Soil Conservation and Land Care Act 1989*. It was clear that the concept of using land within its capability had to be the beginning and end. The community had to be made aware of what that meant and what was required in practice and so community involvement had to be paramount. The Council knew there were technical aids to help, such as district and property management plans, and that the difficult processes of monitoring and assessing the ongoing care of the soil would be needed. Soil salinity had to be taken into account adding to the strategies.

Fortunately the Landcare movement, described in chapter 11 was taking rural and even some urban communities by storm and would prove to be a very significant help.

This chapter follows the fortunes of soil care in South Australia as Council's endeavours unfolded, skilfully supported by technical officers in the various Government agencies and in the universities.

Right from the beginning Council enthusiastically embraced the development of district plans for agricultural and pastoral areas across the State. These established guidelines were considered best practice for managing the land according to its capability. A team led by David Maschmedt determined the land capability and the maps produced were used as the basis of district plans.

In the agricultural areas the West Broughton Soil Conservation Board and the Murray Mallee Board, had operated for half a century. They were the first to complete their district plans under the guidance of Soils Officer, Glenn Gale.

District planning was extended to the pastoral areas. Newly formed boards developed these plans, but not without suspicion in some cases that this Government initiative could take the management of their properties out of their hands and jeopardise their privacy. But when it was seen that they offered resources and insights, which they could use to enhance their own management they became readily accepted.

The Pastoral Board approved the plans and then relied on them to inform the pastoralists to help them make better management decisions on their properties.

As time went on and more district plans were completed and original ones updated they became more holistic as a better understanding of the interactions of farming practice, feral animal and pest plant management, and biodiversity were learnt and incorporated into the planning.

The development of this new-age conservation required a steep learning curve for board members and landowners. Towards that end a series of fact sheets, outlining the best land management practices for the rural industries in the planned district, were prepared and widely distributed.

Some land managers found the emphasis on district plans too prescriptive and encouraged their boards to use the term Land Management Guides. Others saw the plans as exercises in mapping and just another government requirement to justify funding. Despite these doubts the processes of developing district plans, with landowners involved, continued and by the mid 1990s plans for the 27 districts had been completed, assembled and published on the Internet.

From the district plans landowners were encouraged to take the principles and practices prescribed in them through their front gate and develop property management plans for their families. They were able to examine the physical aspects of their properties and reorganise their farming within the capability of the land, taking into account such features as soil type and depth, fertility levels and the steepness of paddocks. Degradation could then be addressed. It soon became obvious that such physical plans had to be related to the business as a whole and so technical assistance from a specially formed land management group, led by David Heinjus, was made available to incorporate economic and social factors.

The Soils Branch in the Department of Agriculture in the 1950s and 1960s had offered property management plans, then called farm plans. Limited numbers were developed by field officers without sophisticated mapping and were offered to the landowners. The 1990s property management plans involved sophisticated land capability maps with the landowners fully involved. The plans were also locked into issues which needed attention and coordination with other properties in the district such as salinity, pest plant and feral animal control.

These advances could not have been made without the Council involving communities to make their boards viable and to finalise a statewide network from where the leadership for land care could be found.

When the Council took office there were 21 boards in place, 12 of which were in embryonic stages. By the mid 1990s the State was covered by 27 boards, all busily engaged in community involvement, particularly developing their district plans and managing budgets.

Roger Wickes, the Soil Conservator, led this intensive board building. It began on Kangaroo Island where a group of farmers had decided themselves to form a board. Wickes only had to attend one meeting there to explain the aims and responsibilities of a board and it became a reality.

The campaign was not always so easy. Wickes, with voluntary helper, Mike Kluge and Paul Brown, made many trips to the far West Coast explaining the advantages of boards. At a public meeting near Ceduna they thought all was lost when a community leader suddenly stood up and convinced those assembled to take control of their own destiny rather than be told what to do by the 'greenies'. Two boards were formed. One inside local government and the other outside.

Even before boards were formed across the Mount Lofty Ranges and in the South East the process was well underway in the pastoral areas with great success despite doubts about the distances and property confidentialities. Through the leadership of Doug Lillicrapp, Bill McIntosh, Jack Spiers and Richard Warwick, seven soil conservation boards were formed. This gave pastoralists a point of community representation to engage with many organisations and authorities such as the Animal and Plant Control Commission, the Pastoral Board, opal miners and funding bodies under the Commonwealth and State governments.

The Mount Lofty Ranges are a complex area because of the diversity of people and industries in the region. Three boards were formed with programs based on water catchment areas. Small farmers and absentee landowners in the ranges manage most of the land that is at high risk of degradation. When the government ceased to provide free extension services to small farmers, the boards commenced a program to train them in land management. With help from the boards these landowners now have the resources at their disposal to manage their land sustainably.

The last area to form soil conservation boards was in the South East because land degradation issues were not so obvious there. However, after several public meetings, boards were formed to concentrate on major issues of soil acidity, dryland salinity, native vegetation management and non-wetting sands.

The only areas that were then not covered by soil conservation boards were the Aboriginal lands in the northwest and the precious stone fields around Coober Pedy. Once Aboriginal communities were made aware of the help available and with the interest they have in the care of their lands they formed a Natural Resources Management Board area under the terms of the *Natural Resources Management Act 2004*.

The Parliament, under the terms of the *Soil Conservation and Land Care Act 1989*, required the Council to report the condition of the soil each year; how well land owners and boards were managing its care considering the vagaries of the seasons. Council certainly knew the importance of monitoring as the basis to assess and redirect programs if necessary and construct budgets. But affordable and meaningful monitoring was easier said than done.

A subcommittee of the Council was formed to concentrate on finding ways to monitor soil condition.

At first, boards were asked to get each member at the monthly meetings to report for their district the extent and location of soil wind and water erosion or the potential for erosion based on existing soil cover. Boards were then asked to collate their information and send it to the Council, which then endeavoured to form a statewide picture as seasonal conditions unfolded. These reports proved to lack consistency and were too subjective.

A much better approach was developed by Andy McCord, an officer of the Department of Primary Industries and Resources (the updated Department of Agriculture), who set about collecting key data to establish the soil loss risk. He and his colleagues surveyed approximately 5500 sites on transects across the agricultural areas, four times a year in October, March, May and through seeding, usually in June.

This sequence was used to give a measure of the land at risk of erosion as paddocks were prepared for cropping. Areas under long fallow were particularly targeted. The survey measured the soil cover and the slope and deduced the risk of water and wind erosion across Lower, Mid and Upper Northern agricultural districts, the Murray Lands, Eyre Peninsula and the Upper and Mid South East.

In this way an eye has been kept on about 8 million ha of a total of 10.2 million ha of arable farmland in South Australia.

Realistically, to assess 5500 sites over such a large area meant that the McCord monitoring program had to be conducted from vehicles, hence it became known as the 'windscreen survey'. Because seasonal weather has such a strong influence on the erosion risk this survey is still going on today.

Cropping will never eliminate all erosion risk. The survey has revealed that there is a still significant area in South Australia where the risk is high for periods as long as 60 days. It should be possible to reduce this by half, particularly as minimum tillage technology is now available. This technology, using environmentally safe herbicides and seeding machinery, which accurately places the seed and fertiliser in the soil with little disturbance, is now being used by many farmers to achieve minimum erosion risk.

The Soil Conservation Council has watched and helped these developments with great satisfaction.

A remote sensing project, led by Mark Thomas, is being explored to hopefully augment the windscreen survey.

In pastoral areas erosion monitoring is equally important. By remote sensing and detailed photo point observations, station owners have been given valuable information they have never had thereby enabling them to better control their grazing management and consequent soil protection.

All this work has placed South Australia in a strong position to monitor and evaluate the condition of the State's natural resources and the new Natural Resources Management Council has been given a strong foundation on which to move forward into its wider role.

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Chapter 10

Salinity

During the 50-year life of the Soil Conservation Advisory Committee described in previous chapters, there were very few references to dry land salinity in the minutes of the meetings. Nevertheless it was growing insidiously into a serious problem the magnitude of which was becoming recognised by the time the advisory committee was replaced by the council in 1989.

These concerns were well placed. By the year 2000 dry land salinity was recognised as a national problem with the Prime Minister, John Howard, calling for action.

To measure the problem, a National Land and Water Resources Audit carried out in 2000 reported that approximately 330,000 ha of agricultural land in South Australia had succumbed to salinity and a further 190,000 ha were at risk if no action was taken within 50 years.

The problem was a legacy of past over clearing of vegetation allowing unused water in the soil to percolate to lower areas carrying salt on the way. When it surfaced it often left a white saltpan and areas of unproductive sea barley grass.

Since the 1950s, field officers in the Department of Agriculture had tried to advise farmers who were most affected, offering salt tolerant plants and methods of keeping vulnerable sites covered with vegetation to slow evaporation.

In 1989, the then Department of Agriculture, took the first formal steps to tackle the problem. The Dry Land Salinity Committee was appointed with Roger Wickes, then Chief of the Soil and Water Conservation Branch, as chairperson. The Committee comprised representatives from relevant government agencies, the Flinders University, the Adelaide University and the CSIRO. A year later a technical strategy to address dry land salinity in South Australia was released, the first of a series.

With the support of the Minister of Agriculture, Lynn Arnold, the response was impressive. The agencies on the Committee provided resources while soil conservation boards and land care groups were able to direct their efforts to field projects. After nearly seven years work the Committee, then led by Phil Cole, published a comprehensive report, *Dry Land Salinity in South Australia*.

After the alarming result of the national audit carried out in 2000, the Soil Conservation Council, with strong public support, assumed leadership for the management of the problem and the responsibility for developing an updated strategy. The outcome was the South Australian Dry Land Salinity Strategy launched by Rob Kerin, Premier, in November 2001.

The release of the strategy was most opportune. It ensured the South Australian projects were well funded from the National Action Plan for Salinity and from the Natural Heritage Trust. To keep abreast of these rapid developments the Soil Conservation Council, in its management role, appointed the South Australian Dry Land Salinity Committee at the beginning of 2002 with Rob Smyth, a farmer and a member of council, as chairperson. Members were drawn from interested farmer groups, the Department of Primary Industries and Resources, the Department of Environment and Heritage, the University of Adelaide and from the Murray Darling Association, an important addition, recognising the increasing salinity in that river system so critical to South Australia's well being.

By 2001, after a decade of co-ordinated work, the scene had also been set nationally with South Australia playing a prominent role through Cole's influence on the Productive Use of Saline Land group (PUSL), which had worked through the Australian Plant Production Committee. National workshops had been held every 12 or 18 months in venues across Australia to study salinity management. These workshops had been open to all interested parties and representatives from the Landcare movement, government agencies and agribusiness had attended.

With the formation of the Natural Resources Management Council the Soil Conservation Council has handed on its responsibilities proud that so much has been achieved but aware that so much is still to be done.

11

Chapter 11

The Landcare Movement

Landcare had its beginnings in the early 1980s through farmer groups and keen individual families in Western Australia and Victoria who were concerned passionately about their environments. Specifically, these volunteers began tackling soil, wind and water erosion and salinity by organising tree planting and information field days.

The movement rapidly spread to South Australia. In 1988 the Department of Agriculture, appreciating the significance of these grass-root initiatives, commenced Operation Landcare under the guidance of Cicely Bungey and Landcare officers. Cicely later won the affectionate title of the 'Mother of Landcare'.

Many local groups commenced with active help from Bruce Munday and the Department of Agriculture. Annual conferences, which regularly attracted as many as 250 delegates did much to consolidate the movement.

South Australia appointed the first Landcare Management Committee in Australia. Mrs Barbara Hardy, the well known evangelist for

environmental care was appointed chairperson and held the first meeting in August 1989.

The Governor of South Australia, Her Excellency, Dame Roma Mitchell AC, OBE, showed great interest and agreed to be Patron.

In 1994 the Committee was renamed, The South Australia Landcare Committee with the aim, 'to encourage community wide networks to increase awareness, understanding and involvement in Landcare.'

At the national level the Australian Soil Conservation Council, with representatives from each state and territory declared the 1990s, 'The Decade of Landcare'.

To encourage the movement the Commonwealth Government offered its support by establishing Landcare Australia Limited and pledged \$1.5 million for its operation.

The Landcare committee readily embraced the Commonwealth initiative and in 1991 issued plans constructed on the basis of 69 submissions from individuals, organised groups and various government authorities.

At the community level, only eight Landcare groups directly participated. The government agencies, familiar with the necessary paperwork, dominated the process. The Decade of Landcare plans failed the many small groups who wanted to facilitate their specific land degradation projects.

Fortunately, group activity was able to move on without reliance on the decade plans because of the strong community-South Australian Government partnership forged by Landcare officers and the support of funding.

Soon after the beginning of formal management of Landcare in South Australia, there were 32 active groups with budgets totalling \$400,000. They were supported by Landcare officers and soil conservation staff in the regions.

Within five years 243 Landcare groups had been formed with a membership of 7000 people. An additional 70 groups had voluntarily formed to care for national parks.

Landcare groups were busily organising field days, farm walks and programs with school children to publicise land and water management by tree planting, revegetation projects, soil care and gully erosion measures.

According to a survey at the time these activities attracted about 9000 observers annually over and above the membership.

At the height of the movement's activity in the decade, more than 2000 Landcare groups were operating across Australia involving nearly 30% of farming communities. The Department of Primary Industries and Energy in Canberra claimed that 'The Landcare movement is undoubtedly the most exciting and significant development in land conservation in Australia'.

Although landcare activities were far outshining the work of the soil conservation boards, the boards were happy to offer help and encouragement to the enthusiastic groups in their districts and, with a practiced eye to monitor progress. Regular workshops with the boards and their reports aided the Soil Conservation Council to set funding priorities.

Many Landcare groups and individual land carers became state and national winners of Landcare awards.

12

Chapter 12

Towards Natural Resource Management

Review of Reviews

Five years after the *Soil Conservation and Land Care Act 1989* commenced, it was rightfully claimed by Council, board members and staff that an historical leap forward had been made for the protection of South Australia's natural resources.

Section 21(2) of the Act required land care effectiveness and progress to be reported and tabled in Parliament before June 1996. This was in contrast to the *Soil Conservation Act 1939* which had never been reviewed by Parliament during its 50-year operation: during that time it had been neglected politically and the soil work lacked resources.

During the 1990s there were strong community demands for public service accountability as a result of the collapse of the State Bank of South Australia.

Under these circumstances the Soil Conservation Council wisely commenced its review early and allocated ample resources to ensure

that a Green Paper was ready by August 1995. Surprisingly, this review proposed 42 amendments of which the most radical was a provision for the collection of rates for funding programs identified in the boards' 3-year programs. This was obviously an attempt to match the advantages held by the Animal and Plant Control Boards whose funding was based on 4% of local government revenue in rural areas.

The Green Paper was distributed to some 850 individuals and organisations including members of the soil conservation and the animal and plant control boards, members of Parliament, local government authorities, government agencies, other statutory authorities, Landcare groups and interested individuals.

A disappointing 58 responses were received of which only half came from boards and district councils. Undaunted, two senior staff members, Mary-Anne Young and Greg Cock analysed the responses.

They reported proposed minor amendments, such as extending the review period of the district plans from three to six years. The proposal to collect rates to fund conservation projects was firmly rejected, together with the proposed requirement for Boards to include the monitoring and assessment of land condition to establish much needed benchmarks for the district plans.

Significantly, this review did not address the possibility of amalgamating the soil conservation boards and the animal and plant control boards. This proposal, still seen to be radical at that time, had been under consideration by some bureaucrats for 15 years. It eventually became the basis for integrated land management legislation still nearly a decade away. Aware of this proposal the Soil Conservation Council and the Animal and Plant Control Commission began sharing information and encouraging their boards to hold joint meetings.

Although the animal and plant control boards had very significant advantages in terms of specific resources and staff provided by matching local and State government funds, only a few soil conservation boards were tempted. At this time they feared amalgamation would lead to punitive policies to enforce land care measures. It was argued that pest control was more easily defined

within a legal framework whereas soil conservation orders needed to take account of a wide range of management strategies. Therefore, it was argued, the order needed to be negotiated, often through peer pressure, rather than a legal notice. On that basis there was a reluctance to pursue a union despite the material advantages that the soil conservation boards would gain.

After satisfying Parliament that a review had been undertaken the process was moved on to drafting amendments to the legislation to be ready by November 1997.

Before any action could be taken, however, the government and its agencies moved towards integrating the natural resource management acts, including those covering soil conservation and animal and plant control. This development at the time was encouraged at the national level by the Standing Committee on Agriculture and Resource Management which, in 1992, had released a strategy for ecologically sustainable development which advocated natural resource management boards. Understandably, planning to introduce the amending legislation was put on hold.

The board system was performing well. Over the seven years to this time they had become the envy of authorities in other states despite having to cope with many changes.

Landcare groups were undertaking roles, which needed soil conservation board supervision and support. Catchment water management boards had been formed. The Natural Heritage Trust had been a Federal initiative, which had introduced new pathways towards soil conservation and land management. Regional development boards had been formed within an amalgamated local government structure. Most importantly, farming technology and the management of farming businesses was rapidly changing.

Aware of these complex, interacting developments and working in the environment of the new level of accountability, the Soil Conservation Council and Roger Wickes, the Soil Conservator, had no alternative but to examine in depth the functions and processes in operation under the 1989 Act. A review of the review was commenced. In November 1999, after a decade of operation, another background paper, 'Building On Foundation' was distributed.

In the middle of the following year, June 2000, after 19 Board member workshops had been organised by Greg Cock to gain their views on the suggestions in the background paper, he reported an important shift in their thinking. In general, board members now believed it was time for new, integrated, regional approaches to land management as a whole with supporting integrated legislation.

This finding was consistent with the views of most Landcare groups.

The perceived need for boards 'to move into wider land management roles' was surprising in that the workshops identified that the members themselves were struggling, not only to find the time necessary to attend board meetings and field activities, but also to grasp the political processes and the legal and funding issues and to manage the expectations of their communities.

Cock warned that there would need to be thorough training of board and council members, as well as strategic planning and monitoring if the proposed integrated resource management approach was to be achieved.

At a soil conference of soil conservation board chairpersons in 2000, some doubts and uncertainties about the now strong moves towards integrated natural resource management surfaced. The boards were finding that landowners, who were failing to manage their soils in a sustainable way, were not responding to peer pressure. They were therefore concerned about enforcing the Act and were looking for someone else 'to wield the big stick'. They were also concerned that district plans which had required tremendous effort to produce were having limited use in the community.

The plans were not linked to local government planning.

Despite these concerns at the community level, a government steering committee was appointed with representatives from the Departments of Premier and Cabinet, Environment, Heritage and Aboriginal Affairs, and Primary Industries and Resources. A discussion paper was prepared and distributed as early as August 1998.

The positive responses prompted Cabinet, early in 1999 to approve the preparation of an integrated Natural Resource Management Bill. The move towards integrating the measures to control soil degradation and pest animals and plants and to manage water catchments had climaxed. Other forms of land management would be integrated at a later stage.

But that was not to be the end of the reviews despite this significant decision. Nine months later, the Statutory Authorities Review Committee, chaired by Legh Davis MLC, was appointed 'to examine the roles and relationships between the soil conservation boards and the animal and plant control boards and other groups which have a primary interest in the natural environment with particular reference to the effectiveness and efficiency of operations of these bodies'.

The committee interviewed 96 witnesses and received 85 written submissions.

Little was added to the cause by its report to Parliament in April 2001. It was noted that the previous decade had seen a dramatic increase in interest and awareness of environmental issues and a strong shift towards amalgamated land management. Many witnesses who came before the Committee had publicly opposed amalgamation of the soil conservation and the animal and plant control boards when the proposal was first aired in the Green Paper of 1995 but they now believed that integration was desirable.

One witness, John Chappel, (Executive Officer of the Pastoral Board) told the Review Committee:

There is scope to integrate all the authorities. Most important, we must reduce the burden on the community, particularly the rangeland communities where they have to travel hundreds of kilometres to attend meetings. We have the Natural Heritage Trust Panel, soil boards and all sorts of programs supporting sustainable industries, rural action plans and so on. It's driving people mad!

The Committee praised the degree of community involvement in the review processes, strongly supported amalgamations and recommended a further review of natural resources management arrangements in five years and that water resource management be incorporated into the legislation at a later date.

The government agencies involved were now able to continue with greater certainty. A draft integration bill was prepared, which was simple enough. It did not aim to replace existing legislation but sought to provide an overarching framework for the management of natural resources in South Australia. In the lead up to the 2002 State election this legislative initiative lapsed.

But, by this time, the die had well and truly been cast. All the stakeholders in natural resources management were seeking a simpler, more integrated and effective framework that considered environmental, social political and economic needs. At that time, there were 64 boards, (eight catchment water management boards,

29 animal and plant control boards and 27 soil conservation boards) overseeing natural resource issues under three separate acts.

To further complicate the picture eight non-statutory Interim Natural Resource Management (INRM) groups had been established and were actively in the process of drawing up operational plans and investment strategies¹. Their particular aim was to gain Commonwealth funding which emphasised regional approaches to landcare. The Commonwealth was suspicious of the traditional South Australian board system that had worked well.

In August 2002 an Interim Natural Resources Management Council was appointed with Dennis Mutton as its chairperson. Mutton had retired recently as the CEO of the Department of Primary Industries and Resources. This administrative body began the final build-up to new legislation designed to amalgamate the water, soil, and animal and plant control elements of natural resources management.

¹ The Interim Natural Resources Management Groups were:-

1. Aboriginal Lands
2. Eyre Peninsula
3. Kangaroo Island
4. Mt Lofty Ranges and the Greater Adelaide Region
5. Northern and Yorke Agricultural District
6. Range Lands
7. South East
8. SA Murray-Darling Basin

In November 2002 a discussion paper was released and debated at more than 100 meetings followed by a further 67 meetings during the first months of 2003 within all eight INRM board regions.

This was only the beginning of community consultation seeking consensus on possible legislation.

A Natural Resources Management Bill followed swiftly. This attracted frantic public scrutiny during July and August 2003: more than 1500 comments were received. Ultimately, the majority strongly supported an integrated approach, but it was necessary to modify the bill.

After a formal conference at which the bill was discussed the INRM Council handed it to the Minister for the Environment and Conservation, the Honourable John Hill on 23 October. The Minister received independent advice from bodies such as the Local Government Association, the South Australian Farmers Federation, environmental and statutory bodies.

Rarely had proposed legislation been more widely scrutinised and influenced by the public of South Australia.

Parliament undertook an exhaustive debate. The process spread over six months and more than 100

amendments were made before the legislation was passed on 20 July 2004, 15 years after the need to amalgamate natural resource management was first explored at an official level.

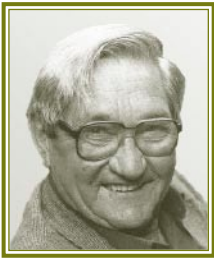
Amendments made in the Parliament concentrated on the methods of appointing regional NRM boards, the terms of office for those administering the new legislation and the consultation process before appointments were made. The main thrust of the legislation remained intact, that is delivering an integrated and transparent natural resources management system to ensure resource sustainability in South Australia. The National Landcare Program, the Natural Heritage Trust and the National Action Plan for Salinity and Water Quality were some of the sources of funds available to support this legislation.

This innovative environmental legislation continued a South Australian tradition of more than 150 years: South Australia had introduced the first weed control legislation in Australia, *The Thistle Act* in 1852.

This first landmark Act was followed by other Australian legislative firsts: the *Rabbit Destruction Act 1875* and the soil conservation legislation, *The Sand Drift Act 1923*.

Profiles

The Hon C R (Bert) Kelly, CMG – A Foundation Committee Member



‘Bert’ Kelly is better known as a past Member of the House of Representatives where for 19 years (1958-77) he carried out a battle

against a high tariff system and the concealed abuses of power on the wharves, coastal shipping and in the bulk handling of grain. He became Minister of Works and then was Minister for the Navy, (1968-69).

Well known throughout the Agricultural Bureau Movement (he served on the Advisory Board of Agriculture for 17 years with two terms as chairman) and owner of the ‘Merrindie’ property at Tarlee, he served on the Advisory Committee on Soil Conservation for nearly 20 years before his parliamentary career began.

I called to see him at his home during March 1990 and asked him about his involvement with the Advisory Committee. He told me that his interest in soil conservation began in 1937 when his father, on returning to visit the farm from his Tariff Board

duties in Melbourne, told him to get on and do something about the gutters in the fallow paddocks. He advised Bert to read a pamphlet prepared by a New South Wales Department of Agriculture officer and available through the Bank of NSW. This led Bert to construct contour banks laboriously using an ‘A’ frame and a level. This exercise was so successful that he became determined to explore every avenue of landcare.

I was surprised that he recalled little detail of the meeting-by-meeting activities of the Committee. Instead, he said, his role was to help to get the technical information needed to stop water and wind erosion across to farmers and not get involved in other details. ‘So I became active when the Committee influenced Bob Herriot’s appointment and recommended resources to establish the Soils Branch. I was also very involved when the Wanbi Research Station was formed from badly eroded land that had been resumed by the Committee’.

During the early days of his Advisory Committee service he found he was a gifted writer. So through his pen he took every opportunity to get a soil conservation message to the community.

In 1945 he was invited to write a weekly column in the Stock and Station Journal, which he called 'Dave's Diary'. In his recent book, *Merrindie, A Family's Farm*, he wrote, 'it began as a way of amusing myself but quickly became a tool for influencing people who did not read the *Journal of Agriculture* or attend Agricultural Bureau Meetings'. In short, it was pitched at a pretty low level.

Two columns from Dave's Diary, which appeared in 1945 illustrate his unique contribution to the Committee's mission. (Clarkson was Dave's neighbour who was always trying to get the conservation message across.)

Friday, 24 August. Clarkson told me yesterday that he was expecting the Soil Conservator (Mr Herriot) up today and he would bring him over after dinner. So I spent part of the morning practising what I would say to him. I was going to point out that the farm belonged to me (or, at least, to the banker and me), and I would treat it as I liked. I wasn't going to be rude to the chap, but all the same, I was going to make it pretty plain that I didn't hold with these new-fangled ideas about soil erosion. After dinner I walked across to meet Clarkson and Mr Herriot as they walked across Clarkson's flat paddock, having a look at the damage that had been done.

Mr Herriot gave me the impression that he was real pleased to see me – in fact, had been wanting to meet me for years. And how was the family? And the crops? And wasn't the weather a cow? And what a fine looking dog. Before long I found myself thinking that he wasn't a bad kind of a coot. Then we wandered around Clarkson's flat and my bare hill where the water runs from and we talked about this and that, and Mr Herriot was always asking my opinion, in the most pleasant way, and before long I was calling him Bob, and he was calling me Dave. Then a dreamy look came into his eye, and he started talking about whether I thought any of the boys were going to be farmers. I said I thought they wouldn't have enough brains to be anything else. Then he kind of suggested that we parents (and he's a father too) had a duty to our children, and "I suppose you would say so Dave, old chap, that your duty to your children would be to leave your farm in good order, so your kids would have a chance." Of course, when he put it like that I had to agree. Then he got talking about how some farmers didn't seem to have my ability to see things in that light, and how some were selfish and others were ignorant. I felt quite indignant with them. After a while I asked him in to afternoon tea, and he got talking to Mary about scones and kids, and had a cup of tea in the kitchen, and played with the kids.

Mary was fairly purring. Then he said, 'That's rather a bare hill over by Clarkson's Dave. You ought to be able to grow more on it than you are doing'. I said I had been meaning to do something about it for years, but didn't know how to start. So we walked back over it and scratched around to see how deep the soil was, and then he said he must be going. So I asked him to come back soon, and we'd have another yarn about it. He said he would after he had time to have a think over the problem.

All this time Clarkson had been keeping well in the background, which was just as well, because I didn't want him putting his bib in. But he didn't seem at all surprised about how things were going. I have an idea something like this happened to him once.

Anyhow, old Bob is going to come back soon, and we are going to draw out a plan (that will make 'Grandpa' happy) to stop the water running off that bare hill onto Clarkson's flat.

So I went home fairly oozing virtue, and patted the kids' heads, and told them I was going to see that they got a decent chance. And Mary said, 'What a nice man, Dave, and so fond of the children too. I hope you are going to do what he says'.



Contour bank being constructed on Mr W S Kelly's property at Giles Corner in 1940.

**Thursday,
30 August.**

Bob Herriot called in again today, and he had another look at my bare hill.

You remember I said it was too stony to cultivate. It is not stony all over, but had

ridges of stone too close together for easy working. Well, we decided that I would sow with grasses the country that I could get a combine over properly, some time next year. We would run a series of contour furrows around the hill, so as to stop the water running off. I wasn't quite sure what contour furrows were, but didn't like to tell Mr Herriot this, so waiting 'til this evening, when I rang Clarkson, and he said that they were just single plough furrows ploughed around the hill on the level. Then Mr Herriot said that I ought to be prepared to top-dress the pasture every year, and that he could help me to get an allotment of super for this.

The Struggle for Landcare in South Australia

I started to tell him that I didn't hold with putting super on top of the ground – it should be put in the ground; but just as I was getting my argument going Mr Herriot said; 'Yes, it was funny the ideas of some of those old-fashioned farmers had'. That rather knocked me, so I just gave in quietly. Then we started talking about what kind of pasture we ought to plant. He kept asking me what I thought, which was rather awkward, because the only grass I know well is barley grass, because the seeds of that stick in my socks in the late spring. I said, after a bit of pressing, that I always thought that lucerne would do well in the district.

That isn't quite true, because, Clarkson has been trying to get me to sow lucerne for years, but I have always said that mine was a wheat farm.

But I couldn't very well say, 'What about sowing some barley grass?' to Mr Herriot, could I? He thought that we could try some lucerne but it ought to be sown in the spring, because of the lucerne flea, and it was too late to

prepare the ground for lucerne this year. Anyhow, we decided to cultivate the arable portions to be ready to sow some grasses next autumn, and in the meantime he will do some more thinking. He's a terrible bloke for 'thinking', I don't hold with too much of it myself.

Then he went in and had some afternoon tea. He had remembered the names of the kids, so Mary fairly plied him with hot scones. Then he told Mary all about what we were going to do. Mary tried to look intelligent, and said that we ought to ask her cousin, young Fred, who is studying Agricultural Science at university, to come up for his holidays, as he might be able to teach me a bit about grasses. That's the last straw. Young Freddie! Cripes, he's only about 19, and now he's coming up to help me run the farm! At present I've got Mary, Clarkson, the banker, my new book, Mr McLachlan, Bob Herriot and 'Grandpa' helping me, and now I'm going to have young Freddie. Cripes!



Seeding rye on Wanbi

Mr R I (Bob) Herriot – The first Soil Conservator



I visited Mr Bob Herriot, South Australia's first Soil Conservator, at his home during February 1990.

I reminded him that it was more than three decades since he actively worked for the soil conservation movement in South Australia. (Herriot started work as the Soil Conservator on 1 January 1941. He was promoted to Chief, Division of Extension Services in the Department of Agriculture in 1955.) He brushed that comment aside and with his voice as penetrating and his statements as forceful as when I first knew him as a Soils Cadet in 1950, he clearly recalled the tasks he faced and the issues of the day.

'The information I used was not new but my application of that information to alleviate wind and water erosion was seen to be very radical by most of the farming community and even some members of the Advisory Committee on Soil Conservation.

'I insisted that soil degradation was an agronomic and social problem not an engineering problem.

'I also strongly believed that if we were going to work with people we had to involve them.

'That is why I recommended in about 1944 that the Act be amended enabling soil conservation districts to be formed and administered with statutory back-up by the landowners themselves.'

I asked him why the resulting amendments allowed boards to be established but made their formation very difficult because they could be established only after a favourable petition from 60% of the landowners in the proposed district had been submitted to the Government.

'It was because the Advisory Committee and the Minister, who was most indifferent, wanted to be sure that farmers were not forced to accept these measures to protect their soil'. 'After all, measures which introduced contour banks and claimed that paddocks with a slope greater than 10% should not be cropped were radical at that time.

'We struggled to form soil conservation districts. It took five years to establish the Murray Mallee, Murray Plains and Upper Eyre Peninsula Boards even though we were able to transpose the districts formed under the Sand Drift Act.'

I reminded him that in 1951 he recommended to the Advisory Committee that the Act be amended again to free up the procedures necessary to form districts.

'Yes', he said, 'they didn't listen'.

And indeed they didn't! It was nine years before his recommended amendments were made to the Act and nearly 40 years before the State was adequately covered by soil conservation districts.

Herriot also met opposition from within his own department. He told me how he submitted a farm plan to improve the soil management of the badly eroded Turretfield Research Centre at Rosedale:

'It sat on desks for two years before there was reluctant action.

'One eroded hill that I recommended be taken out of cultivation was dubbed 'Herriot's Hill.

'The less conservative members of the Advisory Committee on Soil Conservation gave me strong support. (He fondly referred to Bert Kelly and Hugh Trumble.)

'I attracted a wonderful team of hard-working agricultural scientists around me and the Soil Branch gradually changed the thinking about soil conservation. By the mid 1960s agricultural practices had well and truly turned the corner so far as wind and water erosion was concerned, but by then I was busy doing other things.'

Mr Michael 'Mike' Kluge – The Khaki Greenie



Born and bred at Claypans, 40 km east of Mannum on the River Murray, Michael Kluge (Mike) was motherless at four,

an orphan at 11, and a farmhand at 13. At 59 he was awarded the McKell Medal in 1992 for his contributions to the promotion of soil conservation. An award which, one might say, is the Nobel Prize of Australian soil conservation.

What made this man a Mallee icon in his lifetime? I asked him that question in 2004 when we met in the Lutheran Retirement Village at Murray Bridge. We just had time to talk before his afternoon farm and community commitments.

He said it was his love for the soil, which he felt for, being lost forever as it blew around and away from him on his 6 km walk to school. His youthful passions to turn paddocks into firm, fertile lands grew with him and never left him.

A shearer at 17 and then, at 21 (1954) he made his first investment, an outlay of £300 to own a farm. Since that first purchase in 1954 he has acquired five largely run down, adjoining properties totalling 4000 ha which he and his family gradually turned into the firm, fertile lands of the dreams from his youth. The dreams made real, despite rabbits, drought, cereal root diseases,

weeds and his time-consuming community responsibilities.

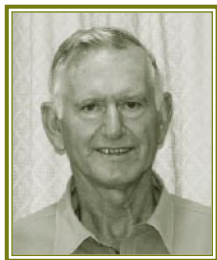
His Mallee farm changed from the three bag crops he first harvested with a 9-foot stripper pulled by five horses to a 2 tonne per ha minimum tillage crops he is harvesting profitably today. He predicts a long-term sustainable future having learnt, as he says, that fertility is the problem – not rainfall.

Mike has not kept his passions and dreams to himself. Along the way he has been a close ally of the Department of Primary Industries and Resources SA and associated agricultural research institutions, participating in their field trials and listening and learning at the Agricultural Bureau meetings and field days.

He served 18 years as a member of the Murray Mallee Soil Conservation Board and then, at the State level, on the Soil Conservation Advisory Committee and its successor, the Soil Conservation Council for 10 years. During that service he helped spread the soil conservation board system throughout South Australia. He was a frequent ambassador on Eyre Peninsula where many landowners have learnt to respect his advice.

As a churchman and a family man, a sustainable farmer, local government councillor, committee man and community volunteer, the people and the soils of the Mallee have much to thank Mike, the Khaki-Greenie.

Mr Roger Nield – The best Landcarer in the Nation



At Mangalo, in the hills 20 km north of Cleve on Eyre Peninsula, Roger Nield recalls the crows following the plough after the land was first

opened up 50 years ago. But they did not do so for long. The worms and other moving soil life, food for the crows, disappeared as excessive cultivation of the day turned the soil to concrete, sealed the surface and excluded the worms. The crows did not bother to turn up. Nield was left with a massive soil erosion problem.

His two properties, now totalling 2840 ha, have 80 km of contour banks, trees and shrubs revegetating critical areas for soil protection and stock shelter, 50,000t of stones removed, new dams, strategic fencing for salinity control, stubble retention and no-till technology. This has nurtured his soil back to a 'living mass', and as Nield says, 'the crows are back'.

The introduction of lupins, peas and canola, later lambing in August and weed and insect control makes his property, Campoona Hills, a complex business operation requiring skilful management now shared by Roger's wife, Margaret, their son Ricky and daughter-in-law, Kathy, and grandson, Joel.

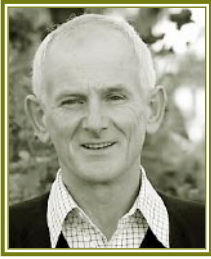
His family support has given time for Nield to undertake an incredible range of volunteer conservation activities across South Australia and in Canberra. Over a period of 40 years, he served on 19 committees assisting soil protection and better farm management. Up until 2000 alone he has served as a member of the Soil Conservation Council and as a member of its Soil Monitoring Committee. Directly serving the Landcare movement, he worked on the Eastern Eyre Peninsula Landcare Management Committee, served as a member of his local Mangalo-Campoona Landcare Group and was on the State committee which has organised the annual Landcare conferences.

Adding to his practical community work in the field he has sealed his experience by completing, in 2003, an Advanced Diploma in Agriculture (Rural Business Management) and the Advanced Diploma of Conservation and Land Management.

The Nield family's contributions have not gone unnoticed. In 1994 they won the State Ibis Award, 1995 the State Roundup Landcare Primary Producers Award and in 2004, Roger was acclaimed the National Individual Landcare Award Winner.

Roger Nield surely holds a unique place in the history of the soil conservation and landcare movements in South Australia.

Bill And Jane McIntosh - Gum Creek Station



From their homestead at Gum Creek Station, Bill and Jane McIntosh command majestic views of the Flinders Ranges and the

Great Wall of China, a spectacular range to the east.

To the south, Adelaide is seven hours away by car. To the north, a 20-minute dirt road drive reaches Blinman, the region's fading social centre.

With keen social and environmental concerns, Bill and Jane are never idle. Almost weekly they drive to Adelaide or Port Augusta and beyond so that Bill can fulfil his community responsibilities, which stretch across South Australian agricultural areas and into the outback.

After a tiring day, for Bill, as chairperson of the Soil Conservation Council, Jane will often drive into the night dodging kangaroos, to arrive at Gum Creek at 3 am, enabling them to check their flocks as the day unfolds. A loaded trailer behind adds strain to the journey as they bring necessary equipment to their property and even building materials that Bill needs to renovate the public library in Blinman.

Gum Creek Station is living proof of the McIntosh commitment to the sustainable care of their fragile environment.

Looking out from the cairn on Mt Emily at the northern tip of the Great Wall of China, a remarkable geological feature on their station, is lasting evidence of Bill's efforts to control rabbits which are a constant threat to the vegetation, opening the soil to wind and water erosion.

More than 15 years ago, Bill set about eradicating rabbits from one of their huge paddocks, by ripping warrens, thereby destroying the rabbits' homes. Finding all the warrens and achieving a 100% kill required weeks and weeks of bone-crushing tractor work. That paid off. Looking north from the cairn one can easily see the rabbit-proof fence line separating the red-barren rabbit grazed lands from the new re-vegetated paddock still rabbit free. This is startling proof that the McIntosh commitment to the care of their environment is far from being all talk. Furthermore, Bill has taken on the task of managing the control of the wheel-cactus threatening the Flinders Ranges.

Since the early 1980s Bill has voluntarily served on 16 different organisations involved with natural resources management, rural community development planning and social welfare.

The Struggle for Landcare in South Australia

From this service he has gained unique knowledge of all the legislation covering landcare and outback operations. Landowners throughout South Australia respect Bill and Jane McIntosh.

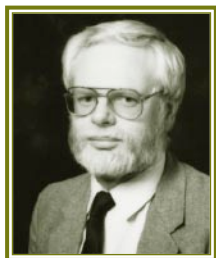
Bill was appointed to the Soil Conservation Advisory Committee in 1986 and played a valuable role in establishing new soil conservation boards. New legislation replaced the Advisory Committee with the Soil Conservation Council. Bill continued his soil conservation services on that council for 14 years and acted as chairperson for eight years while the natural resources management legislation was developed.

Concurrently, Bill has been a member of the Outback Areas Community Development Trust since 1988 and acted as its chairperson for eight years.

He has served on the Pastoral Taskforce of the South Australian Farmers' Federation.

Anyone can share Bill and Jane's hospitality and enthusiasm for a sustainable lifestyle on their property by participating in their eco-tourism centre, which offers superb holidays in comfortable accommodation at their homestead site in the shadow of the Flinders Ranges.

Mr Roger Wickes – The Soil Conservator with a 21st century mission



Before Roger Wickes was appointed Soil Conservator in 1988 he had been well groomed. Years of study and two career steps in the South

Australian Department of Agriculture had given him a sound agricultural science background, training in policy development and management skills.

He began his career in the Department as a cadet in 1967, graduated in agricultural science and later proved his scientific ability by completing a Master of Agricultural Science degree. He specialised in agronomy and worked for a decade at the Northfield Research Centre on the nutrition and growth of dairy calves.

Roger's career changed direction in 1980 when he was appointed into the Department's Policy Unit where he proved his talents developing policy, co-ordinated research and prepared applications for external funding. Work in the unit developed his management skills, which he later ably used as Soil Conservator for 18 hectic years of service.

While working in the Policy Unit he became involved in the National Soil Conservation Program which attracted

funding for South Australian projects. That triggered his interest in the soil conservation movement and another career step was taken.

He was appointed Chief of the Soil and Water Conservation Branch and was appointed Soil Conservator. Little did he realise at that time how demanding and interesting the job would be and how many technical developments he would need to master and embrace.

It all began towards the end of the 1980s when Roger took up the challenge of the new activities initiated by the introduction of the *Soil Conservation and Land Care Act 1989*. The Advisory Committee appointed under the previous Act (chapter 7) had been active in appointing soil conservation boards. Roger took up the cause with enormous energy, travelling throughout the State and by the middle 1990s he had enabled the Council to complete a network of 27 boards, which covered the State.

Roger realised that the community had to be very actively involved if the requirements of the new Act was to be met. To do that he championed strategies based on 'land capability', a concept which was built into district plans developed by the boards with technical help and with their community members providing their views and experiences. Land used within its capability for sustained productivity without risking soil and water erosion or increased salinity then real progress could be achieved.

His team of professional officers rallied around him and developed land capability maps, which greatly aided the process and later, with property management plans focused the strategies on individual farms and their economic performance.

While these initiatives were being put in place Roger assisted with the development of the *Pastoral Land Management and Conservation Act 1989* and was appointed a member of the Pastoral Board. This was a critical move enabling him to encourage the integration of the work of the soil conservation boards in the pastoral areas with the Pastoral Board.

Drought on Eyre Peninsula, increasing concerns about soil salinity, which became a national priority requiring agronomic solutions, issues of drainage, particularly in the South East and wet land management and protection led Roger into wider responsibilities as the decade of the 90s progressed.

And his responsibilities did not remain in South Australia. He became involved at the national level with the development of a drought policy. He also represented the State on the working party of the agricultural component of Prime Minister Howard's initiative for ecologically sustainable development. In that capacity his hands-on experience in winning community involvement and project management in the South Australian soil conservation movement influenced the National programs.

Some years before Roger's career locked into conservation and sustainable agriculture there had been a move to amalgamate the soil conservation boards with the animal and plant control boards, which had a long history of successful community involvement controlling feral animals and weeds, other important arms of land care.

In 1994, Roger took up the task of marrying these two systems with the release of a discussion paper. The move was rejected by the boards and local governments but that did not defeat him. Quiet planning, telling arguments and a willing staff eventually achieved amalgamation under the terms of a new act, the *Natural Resources Management Act 2004* which also involved water resource management. A decade of hard work became the peak of Roger's career.

The associated development of the Natural Heritage Trust and the National Action Plan on Salinity and Water Quality jointly funded by the State and Commonwealth governments helped focus this natural resource legislation at a regional level and helped strengthen the introduction of the 2004 Act.

In May 2006 a hundred guests gathered at Roger Wickes' retirement dinner to celebrate his enormous contribution towards the adoption of a community based land care system in Australia.

Mrs Mary Crawford – A different viewpoint



Mary Crawford is one of those people who seem to be able to accomplish numerous tasks effortlessly all at once. Not only is she currently

involved in a pastoral farming enterprise based at Yankalilla, but she also has had a major impact in community environmental issues.

Mary began her initial involvement whilst chairing the Inman Valley-Torrens Valley Landcare Group. At this time she was an active member of the Landcare Consultative Committee and the Youth Conservation Project Board at Victor Harbor. In the mid 1990s she increased her environmental involvement with appointments to the Mt Lofty Ranges Catchment Advisory Committee, firstly as a nominee of the Soil Conservation Council and then as a Ministerial appointment. At this time she was also a prominent member of the Inman River Catchment Steering Committee and the Mt Lofty Ranges and Greater Adelaide Integrated Natural Resources Management Group.

Mary Crawford's very long and very strong affinity and commitment for the land and soil conservation led her to be involved with the Southern Hills

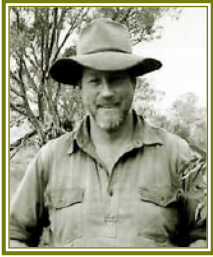
Soil Conservation Board firstly as the vice-chairperson (1989–95) then as the chairperson (1995–98), and again as vice-chairperson (1998–2005).

It is hard to believe that with all of these time commitments Mary could fit any more into her busy life but she has also held a Ministerial appointment on the Soil Conservation Appeals Tribunal (1999–2006), was chairperson of the Normanville Resource Centre Management Committee, and has been chairperson of the Bungalo Restoration Steering Committee.

Her passion for the care of soils notwithstanding, Mary has also been interested in the broader aspects of natural resources management by helping with the Southern Emu Wren recovery team and holding a Ministerial appointment to the Fleurieu Consultative Committee.

Mary's long-term goal is to continue to work in an environment, 'which provides me with opportunities to promote integrated natural resource management and to provide land managers with the skills to implement best practice across South Australia and to continue to improve my skills and my knowledge in order to increase my effectiveness in raising awareness of the importance of our environment.'

Mr Joe Keynes – A Board Chairperson



Joe Keynes, a fifth generation owner at Keyneton Station didn't really think the property was at risk. His forebears had worked

the property to the best of their knowledge within the land's capability aiming to hand on viable assets to the children and to their children.

Joe had accepted that stewardship and worked hard addressing best management practices particularly managing the pastures to ensure year round weed free cover. He had cared for remnant vegetation and even fenced in the creeks to prevent bank erosion and stop stock polluting the water.

His journey, serving on a soil conservation board is a story of participation in the unfolding landcare processes outlined in previous chapters. A story that can be matched by many other voluntary board members.

Joe was appointed to the Murray Plains Soil Conservation Board in 1986, initiated by Hugh Glastonbury, a keen member. By taking Joe to places where roads had been smothered by drifting soil he was able to convince

Joe of the important role that had been played by the board in addressing past wind erosion issues through programs which had educated land owners.

Joe was very impressed but he felt his own management problems were not related. As a grazier from the eastern Mt Lofty Ranges his property was largely safe from erosion, particularly wind erosion which had devastated the Murray Plains.

A joint inspection of the Tungillo district with the Murray Plains and Northern Hills Conservation Boards, members examined pockets of dry land salinity. During the tour Joe became aware that there was evidence of the same problem appearing in his district. And so, encouraged by Bruce Munday, a keen proponent of the Landcare Movement, he became involved in the North Rhine Landcare Group which began addressing salinity problems through a range of projects on members properties.

Step followed step in Joe's conservation involvement. He was appointed chairperson of the Murray Plains Board. He helped create the district plan, which documented all the land management issues and defined appropriate management guidelines. A 3-year action plan followed and the property plans, which moved the focus from soil conservation to sustainable production.

Another forward move had to be made when the 3-year action plan needed resourcing. A regional approach was required which brought together Joe's board with the Coorong District and the Murray Mallee Boards. From these three boards the Soil Boards CARE Committee was formed, under the chairmanship of Mike Kluge, which managed the first regional soil conservation program in South Australia. This regional approach identified the highest priority, dry land salinity in the Coorong District, which was having almost catastrophic impact.

Finally the natural resources management board system has been established, which has expanded Joe's vision of land care at Keyneton to sustainable regional management. He states 'I am fortunate to have been involved with some of the truly great soil conservation leaders over the years. If we can build on their vision, I am confident that the integrated management of our natural resources will also incorporate better management of our soils.

Appendix I:

Chairpersons and Members who served the Advisory Committee on Soil Conservation

Chairpersons	
W J Spafford	1940 – 1949
A R Callaghan	1949 – 1959
A G Strickland	1959 – 1969
A J K Walker	1970 – 1971
P M Barrow	1971 – 1982, 1985
A F Tideman	1982 – 1984, 1986 – 1990

Members	
K P J Barley	1971 – 1975
A R Bartholomaeus	1948 – 1967
B H Bednall	1947 – 1971
D I Blesing	1979 – 1990
O Bowden	1959 – 1962
G W Cant	1960 – 1967
H J CopleyJ	1940 – 1947
P R Day	1985 – 1990
C M Donald	1954 – 1971
J R Dridan	1943 – 1958
R A Everett	1967 – 1971
P E Geytenbeck	1979 – 1985
C R Harris	1978 – 1985
W G Inglis	1976 – 1978

Members (...cont.)	
C G F Johnson	1940 – 1942
C R Kelly	1940 – 1959
M Kluge	1988 – 1990
J M McGilp	1940 – 1956
W R McIntosh	1985 – 1990
M E McTaggart	1972 – 1985
G P H Melville	1956 – 1959
N P Newland	1986 – 1990
J M Oades	1985 – 1990
J S O'Shaughnessy	1967 – 1979
H W Petras	1969 – 1982
J P Quirk	1976 – 1979
J A Richards	1972 – 1985
G I Rodger	1940 – 1956
G P Roe	1961 – 1971
E A Rollbusch	1958 – 1969
J Thomas	1971 – 1974
H C Trumble	1940 – 1952
M J Walton	1983 – 1988

Appendix II:

Soil Conservators and Secretaries of the Advisory Committee on Soil Conservation

Soil Conservators	
R I Herriot	1945 – 1956
J A Beare	1956 – 1976
R J French	1976 – 1988
R B Wickes	1988 – 2005

Secretaries	
L S Smith	1940
H N Bishop	1940 – 1947
L King	1947 – 1954
P F Pollnitz	1954 – 1958
S T North	1958 – 1965
H C Matthews	1965 – 1971
J S Potter	1971 – 1976
W E Matheson	1976 – 1987
B G Lay	1987 – 1988
C M Auricht	1988
I R Tonkin	1988
A W Johnson	1988 – 1989
R L Christiansen	1989 – 1990

Appendix III:

Chairpersons and Members who served the Soil Conservation Council

Chairpersons	
N M Smith	1990 – 1996
W R McIntosh	1996 – 2005

Members	
P Alexander	2004-2005
A Alston	1991-1996
J Bradsen	1990-1993
J Bromell	1994-1996
P Brown	1990-1993
G F Butler	1991-2005
M A Crawford	1990-1996
H Ellison	2000-2001
M Good	2002-2005
I Grierson	1997-2005
J A Gemmell	1997-1999
C Harris	1999-2003
C Hazel	1991-1999
A Holmes	1994-1998
J L Keynes	2000-2005
M Kluge	1990-1996
M Lewis	1992-1993
S Mann	1997-2003

Members (...cont.)	
N K Martin	1990-1999
N Newland	1990-1994
R E Nield	1997-2005
P Norman	1990-1994
M Oades	1990-1993
S A Oldfield	1997-2005
Y Smith	2002-2005
R N C Smyth	2000-2005
A Stimson	1990-1991
G Webber	1990-1993
S West	1999-2001
R B Wickes	1990-2005
E Young	1995-1998

Appendix IV:

Soil Conservators and Executive Officers who served the Soil Conservation Council

Soil Conservators	
R B Wickes	1990-2005

Executive Officers	
R L Christiansen	1990-1991
B Gardner	1992
K Gogler	1993-1994
C Bungey	1995-1996
G A Lomman	1996-2001, 2003-2005
C Neuhofer	2000
A Catford	2001
M Low	2001-2003

Appendix V:

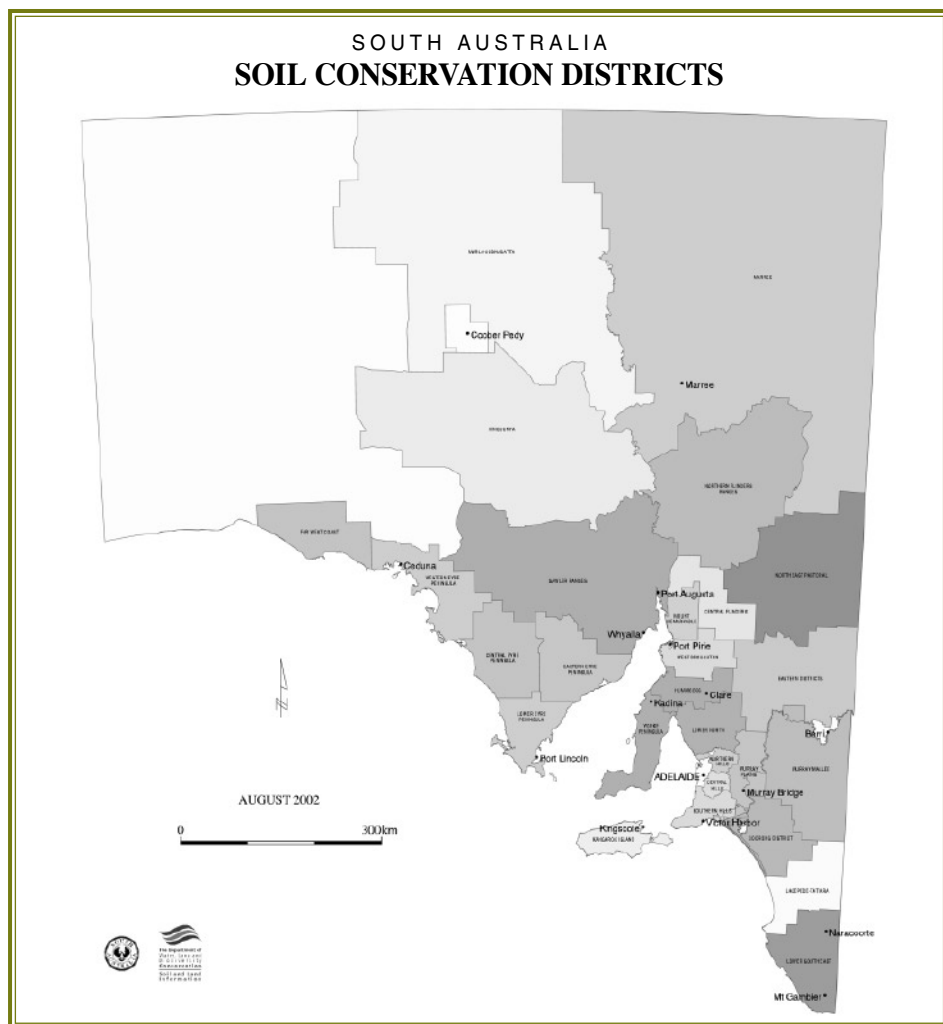
The Formation of Soil Conservation Districts

The establishment of soil conservation districts in South Australia	
1947	Upper Eyre Peninsula (<i>Became Eastern Eyre Peninsula District in 1987</i>)
1948	Murray Mallee
1949	Murray Plains
1952	Yorke Peninsula
1954	West Broughton
1983	Hummocks
1985	Lower Eyre Peninsula
1986	Lower North
1987	Central Eyre Peninsula Eastern Eyre Peninsula
1988	Goyder (<i>subsequently became part of Mt Remarkable Soil Conservation Board in 2001</i>) Southern Hills Kangaroo Island Northern Flinders Central Flinders
1989	Gawler Ranges Marla – Oodnadatta
1990	Kingoonya Marree Coorong & Districts (<i>became Coorong District when realigned with local government boundaries</i>) Far West Coast North East Pastoral Lower South East Lacapede-Tatiara

Central Hills
Northern Hills
Western Eyre Peninsula
Eastern Districts

2001

Mt Remarkable (resulting from realignment of boundaries for Central Flinders and Goyder Soil Conservation Boards)



NOTE: These boundaries remained until the Boards were dissolved.

Appendix VI:

The Last Chairpersons of the Soil Conservation Boards

Roger Scholz	Chairperson	Central Eyre Peninsula SCB
Richie Paynter	Chairperson	Central Flinders Ranges SCB
Stewart Fraser	Chairperson	Central Hills SCB
Allan Piggott	Chairperson	Coorong & Districts SCB
David Lindner	Chairperson	Eastern Districts SCB
Geoff Bammann	Chairperson	Eastern Eyre Peninsula SCB
Peter Polkinghorne	Chairperson	Far West Coast SCB
Andrew Smart	Chairperson	Gawler Ranges SCB
Millie Nicholls	Chairperson	Hummocks SCB
Bill Roper	Chairperson	Kangaroo Island SCB
John Read	Chairperson	Kingooonya SCB
Peter Ridgway	Chairperson	Lacepede-Tatiara SCB
Freeman Puckridge	Chairperson	Lower Eyre Peninsula SCB
Robert Tilley	Chairperson	Lower North SCB
Nicholas Hunt	Chairperson	Lower South East SCB
Digby Giles	Chairperson	Marla-Oodnadatta SCB
Ken Ogilvy	Chairperson	Marree SCB
Barry Mudge	Chairperson	Mt Remarkable SCB
Neville Wurst	Chairperson	Murray Mallee SCB
Peter Dabinett	Chairperson	Murray Plains SCB
Maurice Francis	Chairperson	North East Pastoral SCB
John Mengersen	Chairperson	Northern Flinders Ranges SCB
Wes Seeliger	Chairperson	Northern Hills SCB
Peter Michelmore	Chairperson	Southern Hills SCB
Philip Johns	Chairperson	West Broughton SCB
Peter Kuhlmann	Chairperson	Western Eyre Peninsula SCB
Marie Holliday	Chairperson	Yorke Peninsula SCB

Appendix VII:

First members of the New Natural Resources Management Boards

Adelaide and Mt Lofty Ranges
Yvonne Sneddon
Anita Aspinall
Wayne Cornish
Mark Searle
Lynette Crocker
David Hall
Roy Blight
Penny Paton
Jason Kuchel

Alinytjara Wilurara
Charlie Jackson
Frank Young
Marilyn Ah Chee
George Cooley
Fabien Peel
Jeffrey Queama
Hughie Windlass
Debra Haseldine
Donald Fraser

Eyre Peninsula
Brian Foster
Evelyn Poole
Sandra Mccallum
Tony Irvine
Peter Treloar
Jim Pollock
Cecilia Woolford
Sean O'Brien
Hadyn Davey

Kangaroo Island
Janice Kelly
Joanne Davidson
Roslyn Willson
Graham Allison
Charles Bell
David Ball
Graham Smith
Fraser Vickery
Toni Duka (Ms)

Northern and Yorke

Mervyn Lewis

Catherine Love

Phyllis Robinson

Helen Thomas

Malcolm Byerlee

Kerry Ward (Mr)

Richard Wilkinson

Neville Wilson

Marcus Strudwicke

SA Murray Darling Basin

David Wotton

Joanne Pfeiffer

Joe Keynes

Frances Simes

David Ingerson

William Paterson

Elizabeth Nicholls

Dianne Davidson

Derek Walker

SA Arid Lands

Christopher Reed

Dr Carolyn Ireland

Maree Morton

Katherine Moseby

Frederick Tanner

Geoffrey Mills

Bill McIntosh

Trevor Whitelaw

Brenton Arnold

South East

David Geddes

Dianne Ashby

Pip Rasenburg

Jim Osborne

Richard Vickery

Louise Stock

Christine Johnson

Robert Mock

Dale Lewis

First Natural Resources Management Council (Appointed April 2005)

Dennis Mutton (Chair)

Sybella Blencowe

Jay Hogan

John Legoe

Karina Lester

Kent Martin

Vicki-Jo Russell

Sharon Starick

Paul Woodland

