Appendix 6—South Australian Soil Surveys

I Overview

This appendix contains a comprehensive list of soil and land surveys relevant to South Australia. Section II summarises the work of the State Land and Soil Mapping Program (also see Introduction Sections A4, BI 3), and includes a list of available mapping themes as well as an overview of the methodology used. Section III lists other soil and land surveys and related work, and is based on a report compiled by Bill Matheson (former Senior Soils Officer with the SA Dept of Agric.) in 1980. A number of works not previously listed have been added, and the list has been revised and updated. [Of note is the addition of the SA Department of Agriculture series 'Agriculture in South Australia' (1965 and 1970), and the SA Department of Agriculture and Fisheries series of the same name (1975–78). Although not soil surveys, these works provide excellent overviews of land use and the general nature of land and soils on a district-by-district basis, and usually include a small-scale, generalised soil map. Generalised land use has not changed significantly in most areas since these works were published (particularly in drier areas or where irrigation is not an option). These references are marked with an asterisk (*) in Section III.]

Until about 1980, the Commonwealth Scientific and Industrial Research Organisation (CSIRO) Division of Soils, and its predecessor the Council for Scientific and Industrial Research (CSIR), had considerable involvement in soil and land survey work in this state. However, since that time, CSIRO involvement has been minimal, and South Australian Government involvement has increased, as evidenced by the major body of work produced via the State Mapping Program, of which the component relating to the categorisation and description of soil classes is presented in this book. [See Introduction Section BI for a region-by-region summary of soil survey work prior to the State Mapping Program, and for a summary of the outcomes and achievements of the mapping program itself.]

Consistent and seamless spatial information—describing land systems, soil landscapes and a range of land and soil attributes including soil classes—has been produced at intermediate levels of scale for all of South Australia's agricultural lands via the State Mapping Program. Many older surveys were used to varying degree for additional and background information, sometimes to assist with the formulation of concepts and descriptions, and very occasionally as a source of map unit boundaries. Works used to any significant extent are marked with a hash (#) in Section III. Geological maps from the Geological Survey of South Australia (Minerals and Energy Resources, various dates) were also widely consulted, but are not listed here.

The mapping from several of the South Australian Government surveys listed in Section III was incorporated into State Mapping Program coverages. However, map units used in this way were reinterpreted, and descriptions rewritten and expanded, particularly through the addition of land and soil attribute data. Surveys so used are marked with a double hash (##) in Section III.

Although many older surveys include mapping that has been superseded by the work of the State Mapping Program, often they still contain much useful information. Older surveys with mapping at larger (more detailed) scales than mapping program work, or in areas not covered by it, can be of great value because of the extra information provided. The areas of significance not mapped by the State Mapping Program are the arid areas (although some national-format attributes have been developed within refined land system boundaries—see <www.asris.csiro.au>) and the central part of the Adelaide metropolitan area.

The structure of the remainder of this appendix is given below.

II The State Land and Soil Mapping Program

1. Summary of methodology
2. Soil characterisation site investigations and Soil Pit Field Days
   - 2.1 Analyses
   - 2.2 The State Soil Archive
   - 2.3 Soil Pit Field Days
3. Mapping themes
   - 3.1 Baseline mapping themes and corresponding codes
4. Mapped areas by mapping region and mapsheet
   - 4.1 Eyre Peninsula
   - 4.2 Northern Agricultural Districts
   - 4.3 Yorke Peninsula
   - 4.4 Mount Lofty Ranges
   - 4.5 Kangaroo Island

III Other Soil and Land Surveys and Related Work

II The State Land and Soil Mapping Program

The State Land and Soil Mapping Program was funded by the Government of South Australia in partnership with the National Soil Conservation Program, the National Landcare Program, and the Natural Heritage Trust. Some later developments have been partly funded by the National Action Plan for Salinity and Water Quality, the Cooperative Research Centre for Plant-Based Management of Dryland Salinity, and the Australian Collaborative Land Evaluation Program. The bulk of the mapping and documentation, as well as the development of methodologies and concepts, occurred between 1986 and 2001. The State Mapping Program, however, had its beginnings in 1976 with soil survey and mapping work conducted by David Chittleborough, David Maschmedt and Malcolm Wright in the area defined by the proposed Monarto town site (Chittleborough et al. 1976), and by David Maschmedt in the area defined by the Monarto 1:50 000 scale mapsheet.

Comprehensive, consistent and seamless land and soil information has been developed by the State Mapping Program for the whole of South Australia's agricultural zone. Maintenance, development, interpretation and updating of this information are on-going.

1. Summary of Methodology

Maps and land descriptions were developed using 1:40 000 scale aerial photography, existing geology and soil maps, and data collected during field investigations. Field work has been conducted to determine the characteristics of the various soils, landforms and landscapes identified by stereoscopic interpretation of aerial photographs. Field assessments include descriptions of soils and corresponding sites. Morphological descriptions of soils have been made to depths of up to 200 cm, depending on the nature of the soil. Carbonates and pH have also been tested in the field. Most soil profiles have been classified according to *The Australian Soil Classification* (Isbell 1996, and later, 2002). Soil and site descriptions have been made in accordance with the standards set out in the *Australian Soil and Land Survey—Field Handbook* (McDonald et al. 1990).

Over 28 000 soils and corresponding sites have been described (including descriptions of vegetation). The characteristics of many more sites and landscapes have been observed and noted during field investigations, and on aerial photographs after stereoscopic examination. Laboratory analyses of pH, electrical conductivity and boron have been made on selected soil samples. Moreover, detailed chemical analyses have been conducted on horizon samples from almost 1000 soil characterisation sites from across Southern South Australia (see Section 2 below). Knowledge gained from data, field observations, as well as aerial photograph interpretation guided the formulation of land system and soil landscape boundaries and descriptions, as well as the development of land and soil attribute data—using criteria developed over the course of the mapping program in the case of state or standard format attributes (see Appendix 5; Maschmedt 2002), or criteria developed nationally in the case of national-format attributes (see Hall and Maschmedt 2008; McKenzie et al. 2005; <www.asris.csiro.au>). All spatial information is stored, accessed and analysed using GIS technology.

2. Soil Characterisation Site Investigations and Soil Pit Field Days

Almost 1000 soil characterisation sites have been fully described, photographed, sampled and chemically characterised. These data, as well as interpretations relating to land-use potential, land management and soil conservation, are available on CD and DVD (Soil and Land Information 2002a; Soil and Land Program 2007b). Soil characterisation sites provide a foundation of detailed soil chemical data for extrapolation to similar sites and materials, and so have greatly enhanced mapping and assessments of land and soil attribute features within soil landscape map units (see Appendix 5).

2.1 Analyses

Funding constraints only allowed for very few soil physical analyses, as these are generally very expensive and time consuming. However, core chemical analyses were performed on soil horizon samples from soil characterisation sites, and these were supplemented by additional analyses where required (e.g. extractable aluminium on strongly acidic soils). Most analytical work was conducted as part of a collaborative exercise between CSIRO Land and Water (formerly Division of Soils) and the State Land and Soil Mapping Program, at the CSIRO Analytical Services Laboratory, Waite Campus, Adelaide. The bulk of analyses performed after the end of the collaborative project with CSIRO in 1997 were conducted at the CSBP Soil and Plant Analysis Laboratory in Western Australia. Some early analyses were performed at the former State Chemistry Laboratory, while a few were carried out at the former Northfield Research Laboratory (SA Department of Agriculture). Up until 1997, fine carbonate content and saturation paste electrical conductivity analyses (ECe) were performed at the former Cleve Research Laboratory (SA Department of Agriculture, PISA and then PIRSA). Some analyses have also been carried out at the Analytical Crop Management Laboratory at the Loxton Research Centre (SA Department of Agriculture, PISA and now PIRSA). Several other laboratories also provided minor chemical analytical services.

A summary of chemical analyses performed on soil samples from individual soil horizons, including the main methods used, is given below:

- pH_{H_2O}

  [1:5 soil–water suspension.]
- pH_{CaCl_2}

  [1:5 soil–water suspension, with the addition of 0.5-molar $CaCl_2$ to bring to 0.01-molar $CaCl_2$.]
- *Electrical conductivity:* $EC_{1:5}$

  [1:5 soil–water suspension.]
- *Electrical conductivity: ECe*

  [Saturation paste extract method.]
- *Organic carbon content*

  [Heanes modified or unmodified Walkley and Black dichromate oxidation, especially where samples are high in carbonate and low in organic carbon—the quantity of chromic ions produced is proportional to the organic carbon oxidised and is measured colorimetrically. The high frequency induction furnace method, measuring CO_2 using an infrared detector, has been used on many acidic and neutral soils, and also on some samples containing carbonate, where the carbonate content of a subsample is determined by measuring CO_2 volume evolved on treatment with acid, with organic carbon content determined by the difference.]
- *Nitrate and ammonium nitrogen*

  [1:5 soil–2-molar KCl extracting solution, with the nitrate and ammonium nitrogen concentration of the extract measured colorimetrically and simultaneously using an auto analyser. Performed on a range of soils.]
- *Fine carbonate content*

  [Digestion with HCl and titration with NaOH. Also manometric measurement of CO_2 liberation after treatment with acid.]
- *Extractable phosphorus*

  [1:100 soil–0.5-molar pH 8.5 $NaHCO_3$ extracting solution—Colwell method. After filtering, the extract concentration of phosphate (PO_4^{3-}) is determined colorimetrically using the molybdate blue colour on an auto analyser.]

- *Extractable potassium*

  [The filtered extract from the phosphorus determination is diluted five times with water, and the potassium concentration determined using atomic absorption spectrophotometry (AAS).]

- *Extractable sulfur*

  [3:20 soil–0.25-molar KCl extracting solution at 40°C (Blair et al. 1991). Also 1:50 soil–0.01-molar pH 4.0 $Ca(H_2PO_4)_2$ extracting solution. The sulfur concentration of the extract is determined using inductively coupled plasma optical emission spectroscopy (ICPOES). Performed on a range of soils.]

- *Extractable boron*

  [1:2 soil–hot 0.01-molar $CaCl_2$ extracting solution, with the boron concentration of the extract determined using inductively coupled plasma optical emission spectroscopy (ICPOES) or colorimetrically.]

- *Chloride*

  [1:5 soil–water suspension extraction, with the chloride concentration of the extract determined using inductively coupled plasma optical emission spectroscopy (ICPOES) or colorimetrically. Performed on a range of soils.]

- *Exchangeable cations (Ca, Mg, Na, K)*

  [1:10 soil–1-molar pH 7 NH_4Cl extracting solution or 1:20 leaching for acidic and neutral soils; or 1-molar pH 8.5 NH_4Cl in 65% ethanol where soil pH_{H_2O} >7.4, with pretreatment for soluble salts. Also 1:10 soil–0.1-molar NH_4Cl and 0.1-molar $BaCl_2$ extraction of exchangeable bases. The calcium, magnesium, sodium and potassium concentrations of the extract or leachate are determined using atomic absorption spectrophotometry (AAS) or inductively coupled plasma optical emission spectroscopy (ICPOES).]

- *Cation exchange capacity*

  [As for exchangeable cations, followed by leaching with 1.5-molar KNO_3 and 0.25-molar $Ca(NO_3)_2$ and automated analysis of NH_4^+ and Cl^- ions in the leachate to determine cation exchange capacity.]

- *Trace elements (Cu, Fe, Mn, Zn)* $_{DTPA}$

  [1:2 soil–pH 7.3 DTPA extracting solution (0.005-molar DTPA, 0.01-molar $CaCl_2$ and 0.1-molar TEA), with the copper, iron, manganese and zinc concentrations of the extract determined using inductively coupled plasma optical emission spectroscopy (ICPOES) or atomic absorption spectrophotometry (AAS).]

- *Trace elements (Cu, Fe, Mn, Zn)* $_{EDTA}$

  [1:5 soil–0.02-molar pH 4.5 EDTA extracting solution, with the copper, iron, manganese and zinc concentrations of the extract determined using inductively coupled plasma optical emission spectroscopy (ICPOES) or atomic absorption spectrophotometry (AAS)—Greenhill (1985). Performed in place of DTPA analysis on many acidic soil samples.]

- *Extractable aluminium*

  [1:5 soil–0.01-molar $CaCl_2$ extracting solution (Bromfield 1987), with the aluminium concentration of the extract determined using inductively coupled plasma optical emission spectroscopy (ICPOES). Performed on many acidic soils, especially where strongly acidic.]

- *Exchangeable aluminium*

  [1:10 soil–1-molar KCl extracting solution, with the aluminium concentration of the extract determined via titration procedures. Also, 1:10 soil–0.1-molar NH_4Cl and 0.1-molar $BaCl_2$ extraction of exchangeable bases, with the aluminium concentration of the extract determined using inductively coupled plasma optical emission spectroscopy (ICPOES). Performed on some acidic soils, especially where strongly acidic.]

- *Reactive iron*

  [1:33 soil–0.2-molar pH 3.0 oxalate extracting solution (0.114-molar $(COONH_4)_2.H_2O$ and 0.086-molar $(COOH)_2.H_2O$), with the iron concentration of the extract determined using atomic absorption spectrophotometry (AAS). Performed on a range of soils. Especially diagnostic for ironstone soils as an indicator of phosphorus fixation.]

In addition, particle size analyses were performed on a small number of samples. Unless otherwise referenced, details of analytical methods are documented in Rayment and Higginson (1992).

2.2 The State Soil Archive

The State Soil Archive repository contains dried and ground samples from soil characterisation sites from across Southern South Australia. It houses over 6000 soil horizon samples from almost 1000 characterisation sites. These sites have been described and geo-referenced. [They have been geo-referenced using the Australian Geodetic Datum 1984 (AGD84) in conjunction with the Australian Map Grid 1984 (AMG84), and subsequently the Geocentric Datum of Australia 1994 (GDA94) in conjunction with the Map Grid of Australia 1994 (MGA94).] All samples have undergone comprehensive chemical analyses (see Section 2.1), and all corresponding soil horizons have had their morphology described in the field according to McDonald et al. (1990).

This repository is an important state asset. As time goes by, it should become increasingly important with respect to environmental monitoring and climate change studies. Samples have already been used to help develop new analytical techniques of soil testing. CSIRO Land and Water, with the assistance of funding provided by the Grains Research and Development Corporation (GRDC), has used State Soil Archive samples as standards in the development of Mid Infra Red (MIR) spectroscopy for soil testing. MIR spectroscopy will allow rapid and non-destructive prediction of a wide range of soil properties, and should greatly improve the capacity to monitor and assess the state of our natural resources.

2.3 Soil Pit Field Days

The vast majority of soil characterisation sites have been used as foci at Soil Pit Field Days, where soil morphological and chemical data have been presented to, and interpreted for, land managers and others, particularly in relation to land-use limitations and potential, as well as paddock and catchment level natural resource management. Over 200 Soil Pit Field Days have been held across Southern South Australia since 1990.

The authors of this book have been the compilers and predominant describers of soil and site information from characterisation sites. However, other professional and technical staff have made significant contributions to soil characterisation site investigations, in particular, the state government staff (PIRSA, DWLBC or former SA Department of Agriculture) listed below:

- Andy McCord
- Brian Hughes
- Peter Jeffery
- Melissa Cann
- Ken Wetherby
- Glenn Bailey
- Colin Cichon
- Tony Wilson.

The authors have also been the main protagonists of, and presenters at, Soil Pit Field Days: David Maschmedt has been the lead player at the majority of these events. In addition, a considerable number of individuals and groups have organised and promoted Soil Pit Field Days. This work includes liaising with farmers, selecting sites, arranging excavations and restoration of sites after the event, and, sometimes, addressing the gathering on the day as well. Of particular note are the regional state government professional staff (PIRSA or former SA Department of Agriculture) who organised a considerable number of these days:

- David Woodard
- Mary-Anne Young
- Brian Hughes
- Glenn Bailey
- Andrew Harding
- Melissa Cann
- Lyn Dohle
- Ken Wetherby.

A great number of other individuals have assisted with organisation of Soil Pit Field Days, have presented technical knowledge to field day gatherings, or have assisted with soil characterisation site investigations—in particular, those listed below. [Unless otherwise indicated, these are current or former state government professional and technical staff—mostly PIRSA or former SA Department of Agriculture.]

- Ross Britton

- Peter Butler
- Greg Cock
- Trevor Dillon
- Nick Dry (Phylloxera and Grape Industry Board of South Australia)
- Martyn England
- Peter Fairbrother
- Giles Forward
- Jenny Hanna
- Dr Wayne Hudnall (Louisiana State University, USA)
- Lian Jaensch (South Australian Wine Industry Council)
- Bruce Kennewell
- Geoff Kew
- Dale Lewis
- Hugh Longbottom
- Chris McDonough
- Jo Murphy
- Mark Power
- Tim Prance
- Chris Rudd
- Alan Spriggs
- Darryl Stevens (University of Adelaide)
- Jocelyn Thomas
- Jean Turner
- Peter Willmott
- Tom Yeatman.

A range of groups has instigated and supported Soil Pit Field Days, especially Natural Resources Management Region Boards, Soil Conservation District Boards, Community Landcare Groups, Agricultural Bureau Branches, industry groups and private consultancy groups.

Land managers have given tremendous support by providing access to farm land, permitting Soil Pit Field Day events on their properties, as well as assisting with site preparations, maintenance and restoration. They have also made valuable contributions by sharing their extensive knowledge of local land management and conditions.

3. Mapping Themes

A comprehensive set of baseline mapping themes has been developed for Southern South Australia via the State Land and Soil Mapping Program. Land system and soil landscape mapping form the spatial framework within which all other themes are described. Maps and data statistics based upon soil landscape map unit boundaries and map unit component proportions are available for over forty land and soil attribute themes. All themes are mapped at 1:100 000 or 1:50 000 scale, and are accessible at these or smaller scales.

3.1 Baseline Mapping Themes and Corresponding Codes

- Land systems
- Land types
- Soil landscapes
- Susceptibility to waterlogging (w)
- Depth to watertable (o)
- Waterholding capacity (m)
- Recharge potential (q)
- Water repellence (u)
- Surface soil condition—workability and seedling emergence (c)
- Subsoil structure—conditions for root growth (p)
- Depth to hard rock (xr)
- Depth to hardpan (xp)
- Inherent fertility (n)
- Toxic boron (t_B)—severity

- Toxic boron (t_B)—extent of high subsoil boron
- Toxic sodium (t_{NA})—severity
- Toxic sodium (t_{NA})—extent of high subsoil sodium
- Toxic aluminium (t_{AL})
- Surface soil acidity (h_A)
- Subsoil acidity (h_B)
- Surface soil alkalinity (i_A)
- Subsoil alkalinity (i_B)
- Acid sulfate soils (j)
- Surface carbonates (k_A)
- Subsoil carbonates (k_B)
- Salinity induced by watertable (s)—severity
- Salinity induced by watertable (s)—extent of patches of high to extreme salinity
- Dry saline land (v)—severity
- Dry saline land (v)—extent of patches of high salinity or 'magnesia' patches
- Scalding (z)
- Water erosion potential (e)
- Wind erosion potential (a)
- Mass erosion—gullying (g)
- Mass erosion—landslip (l)
- Rockiness (r)
- Exposure (y)
- Potential for flooding (f)
- Effective rootzone depth (d)
  —sensitive crops such as citrus and avocados (d_{CA})
  —intermediate crops such as stone fruits, almonds and pome fruits (d_{CB})
  —hardy crops such as grapevines and olives (d_{CC})
  —annual root crops such as potatoes, carrots and onions (d_{CD})
  —annual above-ground crops such as brassicas (d_{CE})
- Deep drainage (b)
- Surface soil texture
- Soil Groups
- Subgroup soils.

For a summary of classification criteria for each land or soil attribute see Appendix 5.

4. Mapped Areas by Mapping Region and Mapsheet

The mapsheets listed below are grouped by mapping region and cover the whole of South Australia's agricultural zone. This coverage, which excludes most islands (with the exception of Kangaroo Island and several others), includes seamless land system, soil landscape, and land and soil attribute mapping produced by the State Land and Soil Mapping Program.

The mapping of the moderate to lower rainfall areas is available at the scale of 1:100 000, whereas that of most of the higher rainfall districts (where land use is usually more intensive, or particular landscape patterns are more intricate), is available at the larger (more detailed) scale of 1:50 000. (To view mapping coverage see Introduction Map A 7.1.) Names are given of South Australian Government soil surveyors and pedologists who contributed to soil survey, land system and soil landscape map unit development, land system and soil landscape documentation in land system reports, as well as the development of soil class and other land and soil attribute data.

The 1:100 000 and 1:50 000 mapsheets listed are part of the Australian and South Australian Governments' Standard Topographic Map Series (Geoscience Australia and SA Dept for Environment and Heritage, respectively, various dates).

4.1 Eyre Peninsula

The whole of Eyre Peninsula has been mapped at 1:100 000 scale. Soil survey and land system–soil landscape map unit development:

- Brian Hughes
- Peter Jeffery
- Jenny Hanna
- Ken Wetherby.

Documentation and development of land and soil attribute data:

- David Maschmedt (all documentation)
- Brian Hughes.

4.1.1 1:100 000 Mapping—Mapsheets

- Barna
- Bookabie
- Buckleboo
- Cacuppa
- Carawa
- Charra
- Collinson
- Coorabie
- Coulta
- Cowell
- Cummins
- Cungena
- Damper
- Elliston
- Kalanbi
- Kimba
- Kopi
- Lincoln
- Middleback
- Minnipa
- Nuyts
- Penong
- Pilpuppie
- Pureba
- Radstock
- Sheringa
- Sinclair
- Spilsby
- Streaky Bay
- Talia
- Thevenard
- Tooligie
- Tumby
- Verran
- Wangary
- Wilton
- Wirrulla.

4.2 Northern Agricultural Districts

The whole of the Northern Agricultural Districts has been mapped at 1:100 000 scale. Soil survey and land system–soil landscape map unit development:

- David Maschmedt
- Bruce Billing
- Jenny Hanna
- James Hall.

Documentation and development of land and soil attribute data:

- David Maschmedt (Mid and Lower North)
- Bruce Billing (Upper North and adjacent pastoral areas)
- James Hall (part Wakefield mapsheet).

4.2.1 1:100 000 Mapping—Mapsheets

- Augusta
- Blyth
- Caroona
- Carrieton
- Clare
- Cultana
- Eudunda
- Florieton
- Hawker
- Jamestown
- Kapunda
- Orroroo
- Paratoo
- Pirie
- Quorn
- Wakefield
- Whyalla
- Wilmington.

4.3 Yorke Peninsula

The main part of Yorke Peninsula has been mapped at 1:100 000, and the lower part at 1:50 000 scale. Soil survey and land system–soil landscape map unit development:

- James Hall.

Documentation and development of land and soil attribute data:

- James Hall.

4.3.1 1:100 000 Mapping—Mapsheets

- Maitland
- Stansbury
- Turton
- Wallaroo
- Wardang.

4.3.2 1:50 000 Mapping—Mapsheets

- Althorpe
- Coonarie
- Corny Point
- Edithburgh
- Hillock
- Pondalowie
- Turton.

4.4 Mount Lofty Ranges

The whole of the Mount Lofty Ranges has been mapped at 1:50 000 scale. Soil survey and land system–soil landscape map unit development:

- David Maschmedt (undertook the vast majority of soil survey and mapping work)

- Colin Cichon
- John McDonald
- Peter Butler.

Documentation and development of land and soil attribute data:

- David Maschmedt.

4.4.1 1:50 000 Mapping—Mapsheets

- Adelaide
- Alexandrina
- Angaston
- Barossa
- Cape Jervis
- Echunga
- Encounter
- Gawler
- Goolwa
- Milang
- Monarto
- Noarlunga
- Onkaparinga
- Tepko
- Torrens Vale
- Vincent
- Willunga
- Yankalillia.

4.5 Kangaroo Island

The whole of the Kangaroo Island has been mapped at 1:50 000 scale. Soil survey and land system–soil landscape map unit development:

- James Hall (all map unit development)
- David Maschmedt.

Documentation and development of land and soil attribute data:

- James Hall.

4.5.1 1:50 000 Mapping—Mapsheets

- Borda
- Cassini
- Destrees
- Grainger
- Kingscote
- Penneshaw
- Seddon
- Snug Cove
- Stokes Bay
- Vennachar
- Vivonne
- Willoughby.

4.6 Murray Mallee and Upper South East

The whole of the Murray Mallee and Upper South East has been mapped at 1:100 000 scale. Soil survey and land system–soil landscape map unit development:

- Andy McCord (land system mapping—southern)

- Ken Wetherby (land system mapping—northern)
- David Maschmedt (land system and soil landscape mapping)
- Peter Jeffery (soil landscape mapping)
- Jenny Hanna (soil landscape mapping)
- Tony Wilson
- Colin Cichon
- James Hall
- David Chittleborough
- Peter Butler.

Documentation and development of land and soil attribute data:

- David Maschmedt (all attribute data development and the majority of the documentation)
- Andy McCord.

4.6.1 1:100 000 Mapping—Murray Mallee Mapsheets

- Mannum (eastern half)
- Mantung
- Mobilong (eastern half)
- Moorlands
- Moorook
- Morgan
- Parrakie
- Paruna
- Pinnaroo
- Renmark
- Swan Reach.

4.6.2 1:100 000 Mapping—Upper South East Mapsheets

- Cannawigara
- Coonalpyn
- Keith
- McCallum
- Meningie
- Santo
- Tintinara.

4.7 South East (Mid and Lower)

The whole of the Mid and Lower South East has been mapped at 1:50 000 scale. Soil survey and land system–soil landscape map unit development:

- Bruce Billing
- Melissa Cann.

Documentation and development of land and soil attribute data:

- Bruce Billing
- Melissa Cann.

4.7.1 1:50 000 Mapping—Mapsheets

- Beachport
- Benara
- Bool Lagoon
- Buffon
- Conmurra
- Duffield
- Frances
- Gambier
- Gyp Gyp

- Hatherleigh
- Hynam
- Jaffa
- Kalangadoo
- Kennion
- Keppoch
- Kingston
- Konetta
- Lucindale
- Marcollat
- Millicent
- Minecrow
- Monbulla
- Nangwarry
- Naracoorte
- Penola
- Robe
- Schank
- Struan.

5. Land and Soil Information on CD and DVD

A range of information developed via the State Land and Soil Mapping Program has been compiled on to CD and DVD for ease of use and access. This includes combined land system–soil landscape maps and map unit descriptions, land and soil attribute maps and data, soil characterisation site data, criteria for the assessment of agricultural land, as well as land and soil information in GIS format. For example:

2002 MASCHMEDT, D.J. Assessing Agricultural Land. Soil and Land Information, Dept of Water, Land and Biodiversity Conservation (DWLBC), South Australia [CD ROM]. [Classification criteria and descriptions for over 40 land and soil attributes and their derivatives, for example: watertable-induced salinity; soil acidity—topsoil and subsoil; water erosion potential; soil structure—topsoil and subsoil; etc. This document is also included on the Spatial Data and Land Resource Information CDs and the Land Resource Information DVD listed below.]

2002 SOIL & LAND INFORMATION. Atlas of Key Soil and Landscape Attributes of the Agricultural Districts of South Australia. Soil and Land Information, Dept of Water, Land and Biodiversity Conservation (DWLBC), South Australia [CD ROM]. [Broad-scale maps and data presented for over 40 land and soil attributes and derivatives covering the whole of the agricultural districts. Upgraded and simplified attribute data statistics are available on the Spatial Data CDs listed below.]

2002 SOIL & LAND INFORMATION. Soil Data Sheets. Soil and Land Information, Dept of Water, Land and Biodiversity Conservation (DWLBC), South Australia [CD ROM]. [Soil characterisation site and soil profile descriptions, with soil profile and landscape images, chemical analytical data for each soil layer, as well as interpretations relating to land-use potential, land management and soil conservation. These data, including additional sites characterised since 2002, are also available on the Land Resource Information CDs and DVD listed below.]

2004 SOIL & LAND INFORMATION. Land Resource Information—Central Districts [Mount Lofty Ranges and Kangaroo Island]; Eyre Peninsula; Murraylands [Murray Mallee and Upper South East]; Northern Agricultural Districts [including Yorke Peninsula]; and South East [Mid and Lower South East]. Soil and Land Information, Dept of Water, Land and Biodiversity Conservation (DWLBC), South Australia [5-set CD ROM]. [The contents of the 5 CDs, including upgraded data, were placed on to one DVD in 2007—see below.]

2005 SOIL & LAND PROGRAM. Land and Soil Spatial Data for Southern South Australia—GIS Format. Soil and Land Program, Dept of Water, Land and Biodiversity Conservation (DWLBC), South Australia [CD ROM]. [Revised with upgraded data in 2007—see below.]

2007 SOIL & LAND PROGRAM. Land and Soil Spatial Data for Southern South Australia—GIS Format. Soil and Land Program, Dept of Water, Land and Biodiversity Conservation (DWLBC), South Australia [CD ROM]. [A complete set of land and soil attribute data covering the whole of the agricultural areas—for the production of maps and the calculation of data statistics by GIS users.]

2007 SOIL & LAND PROGRAM. Regional Land Resource Information for Southern South Australia. Soil and Land Program, Dept of Water, Land and Biodiversity Conservation (DWLBC), South Australia [DVD ROM]. [1:100 000 and 1:50 000 land system–soil landscape maps, land system–soil landscape documentation, regional land and soil attribute maps, as well as soil characterisation site data.]

III Other Soil and Land Surveys and Related Work

Surveys and related works are listed from oldest to youngest under relevant headings. Several works are listed more than once because they relate to more than one heading. Surveys not listed are likely to be either student mapping exercises or uncompleted works.

1. Major Overviews of Soil and Land Survey Work in Australia

1970 TAYLOR, J.K. *The Development of Soil Survey and Field Pedology in Australia, 1927–67*. CSIRO, Melbourne.

1978 BECKETT, P.H.T. & BIE, S.W. *Use of Soil and Land-System Maps to Provide Soil Information in Australia*. CSIRO, Melbourne.

2. Soil and Land Classification, General Surveys and Related Works

1926 JACOBS, M.R. Soil Survey of Forest Areas in South Australia. *Proceedings of the Australasian Association for the Advancement of Science* **18**: 757.

1931 PRESCOTT, J.A. The Soils of Australia in Relation to Vegetation and Climate. CSIR Aust., Bull. No. 52. [Including *Soil Map of Australia—Showing Major Soil Zones*, at a scale of approximately 1 inch to 300 miles or 1:19 000 000, showing 10 generalised soil categories.]

1932 PRESCOTT, J.A. & PIPER, C.S. The Soils of the South Australian Mallee. *Transactions of the Royal Society of South Australia* **56**: 118–147.

1938 PIPER, C.S. The Red Brown Earths of South Australia. *Transactions of the Royal Society of South Australia* **62**(1): 53–100.

1944 PRESCOTT, J.A. A Soil Map of Australia. CSIR Aust., Bull. No. 177. [Accompanied by *Soil Map of Australia*, at a scale of approximately 1 inch to 160 miles or 1:10 000 000, showing 18 generalised soil categories.]

1946 CROCKER, R.L. Post-Miocene Climatic and Geologic History and its Significance in Relationship to the Genesis of the Major Soil Types of South Australia. CSIR Aust., Bull. No. 193.

1946 STEPHENS, C.G. Pedogenesis Following the Dissection of the Lateritic Regions in South Australia. CSIR Aust., Bull. No. 206.

1951 HERRIOT, R.I. Ten Years of Soil Conservation Activity in South Australia. *Journal of the Department of Agriculture, South Australia* (September 1951) **55**: 59–63.

1952 PRESCOTT, J.A. The Soils of Australia in Relation to Vegetation and Climate (2nd edn). CSIR Aust., Bull. No. 52. [Soils information and map as per the 1931 edition; only the vegetation map of Australia has been revised, albeit at a smaller scale.]

1953 STEPHENS, C.G. *A Manual of Australian Soils*. CSIRO, Melbourne.

1956 BEARE, J.A. Farm Planning in the Hilly Cereal Districts. *Journal of the Department of Agriculture, South Australia* (November 1956) **60**: 157–162. [Also published as SA Dept of Agric., Leaflet No. 21/56.]

1956 LEEPER, G.W. The Classification of Soils. *European Journal of Soil Science* **7**: 59–64.

1956 STEPHENS, C.G. *A Manual of Australian Soils* (2nd edn). CSIRO, Melbourne.

1956 TIVER, N.S. Deficiencies in South Australian Soils. SA Dept of Agric., Bull. No. 441. [Reprinted from the *Journal of the Department of Agriculture, South Australia* (October 1955) **59**: 100–113. Including the small-scale colour maps—*Soil Groups: South Australia excluding Lower S.E.* (covering the whole of the agricultural areas with the exception of the Lower South East) and *Soil Groups: Lower South East, S.A.*]

1957 STEPHENS, C.G. The Soils of South Australia. Chapter III in *South Australian Forestry Handbook*, SA Dept of Woods and Forests. [Including *Soil Map of South Australia*, at a scale of 1 inch to 96 miles or approximately 1:6 000 000, showing 18 generalised soil categories.]

1960 # BEARE, J.A., MATHESON, W.E., CLARKE, A.L., FRENCH, R.J., BAKER, R.M., RUSSELL, J.S. & BROOKER, M.I.H. Soils of South Australia's Farm Lands. Soil Conservation Branch, SA Dept of Agric., Bull. No. 461, 78 pp.

1960 NORTHCOTE, K.H. A Factual Key for the Recognition of Australian Soils (1st edn). CSIRO Div. of Soils, Divl Report 4/60.

1960 NORTHCOTE, K.H. Atlas of Australian Soils. Explanatory Data for Sheet 1: Port Augusta–Adelaide–Hamilton Area. CSIRO Aust. and Melbourne University Press. [Accompanying map published at 1:2 000 000 scale.]

1960–68 NORTHCOTE, K.H. with BECKMANN, G.G., BETTENAY, E., CHURCHWARD, H.M., VAN DIJK, D.C., DIMMOCK, G.M., HUBBLE, G.D., ISBELL, R.F., McARTHUR, W.M., MURTHA, G.G., NICOLLS, K.D., PATON,

T.R., THOMPSON, C.H. and WRIGHT, M.J. (CSIRO Div. of Soils) and WEBB, A.A. (Queensland Dept of Primary Industries). *Atlas of Australian Soils*. Sheets 1 to 10 with Explanatory Data. CSIRO Div. of Soils, CSIRO Aust. and Melbourne University Press.

1961 GIBBONS, F.R. Some Misconceptions about what Soil Surveys Can Do. *European Journal of Soil Science* **12**: 96–100.

1961 NORTHCOTE, K.H. Report on 7th Approximation Soil Classification System of the USDA. Australian Society of Soil Science, Pub. No. 1.

1961 STEPHENS, C.G. The Soil Landscapes of Australia. CSIRO Aust., Soil Pub. No. 18. [Including *Soil Map of Australia*, at 1:5 000 000 scale, showing 32 generalised soil categories.]

1962 STEPHENS, C.G. *A Manual of Australian Soils* (3rd edn). CSIRO, Melbourne. [Includes a bibliography of modern Australian soil surveys and related investigations.]

1963 ANON. Report on the Soil Classification Proposals of K.H. Northcote. Australian Society of Soil Science, Pub. No. 2.

1963 BLACKBURN, G. The Uses of Soil Classification and Mapping in Australia. In *Transactions of the Joint Meeting of Committees IV and V of the International Society of Soil Science, Palmerston North, New Zealand (1962)*, International Society of Soil Science with the New Zealand Soil Bureau, Lower Hutt, New Zealand, pp. 284–290.

1963 NORTHCOTE, K.H. The Factual Classification of Soils and its Use in Soil Research. In *Transactions of the Joint Meeting of Committees IV and V of the International Society of Soil Science, Palmerston North, New Zealand (1962)*, International Society of Soil Science with the New Zealand Soil Bureau, Lower Hutt, New Zealand, pp. 291–297.

1963 STEPHENS, C.G. Soil Types. In *Atlas of Australian Resources* (2nd Series), Div. of Nat. Mapping, Dept of Natural Resources, Canberra.

1963 STEPHENS, C.G. The 7th Approximation: its Application in Australia. *Soil Science* **96**: 40–48.

1964 BUTLER, B.E. Assessing the Soil Factor in Agricultural Production. *Journal of the Australian Institute of Agricultural Science* **30**: 232–240.

1964 NORTHCOTE, K.H. Some Thoughts Concerning Agronomy and Soil Classification. *Journal of the Australian Institute of Agricultural Science* **30**: 241–246.

1965 NORTHCOTE, K.H. A Factual Key for the Recognition of Australian Soils (2nd edn). CSIRO Div. of Soils, Divl Report 2/65.

1966 HALLSWORTH, E.G., STEPHENS, C.G. & NORTHCOTE, K.H. The Soils of Australia. In *Official Year Book of the Commonwealth of Australia—1966*, Commonwealth Bureau of Census and Statistics, now the Australian Bureau of Statistics, Canberra, Cat. No. 1301.0, pp. 873–897. [Including the map, *Soils of Australia*, showing eighteen soil zones, at approximately 1:17 000 000 scale.]

1967 MULCAHY, M.J. & HUMPHRIES, A.W. Soil Classification, Soil Surveys and Land Use. *Soils and Fertilizers, Harpenden* **30**: 1–8.

1968 FIRMAN, J.B. Soil Distribution—a Stratigraphic Approach. In *Transactions of the 9th International Congress of Soil Science* (Adelaide), Vol. 4, The International Society of Soil Science (J.W. Holmes, ed.), Angus and Robertson, Sydney, pp. 569–576.

1968 NORTHCOTE, K.H. *A Soil Map of South Australia*. Compiled by K.H. Northcote, CSIRO Div. of Soils, from Sheets 1 and 10 of the *Atlas of Australian Soils* (Northcote et al. 1960–68). [1:2 000 000 scale map prepared by D.A. Wright, CSIRO Div. of Soils, for the *South Australian Year Book—1969* (Aitchison 1969).]

1968 NORTHCOTE, K.H., ISBELL, R.F., WEBB, A.A., MURTHA, G.G., CHURCHWARD, H.M. & BETTENAY, E. Atlas of Australian Soils. Explanatory Data for Sheet 10: Central Australia. CSIRO Aust. and Melbourne University Press. [Accompanying map published at 1:2 000 000 scale.]

1968 # STACE, H.C.T., HUBBLE, G.D., BREWER, R., NORTHCOTE, K.H., SLEEMAN, J.R., MULCAHY, M.J. & HALLSWORTH, E.G. *A Handbook of Australian Soils*. Rellim Tech. Pubs, Glenside, South Australia. [To be accompanied by *A Soil Map of Australia*, at 1:10 000 000 scale, which was prepared by D.A. Wright, CSIRO Div. of Soils, and adapted by R.G. Campbell, G.D. Hubble, R.F. Isbell and K.H. Northcote from the *Atlas of Australian Soils* (Northcote et al. 1960–68). Soils are classified according to two schemes: the soil groups set out in the 'Handbook' and profile forms of the 'Factual Key' notation (Northcote 1965).]

1969 NORTHCOTE, K.H. The Soils of South Australia. In *South Australian Year Book—1969*, D.L.J. Aitchison (ed.), Commonwealth Bureau of Census and Statistics, now the Australian Bureau of Statistics, South Australian Office, pp. 21–31. [Including *A Soil Map of South Australia*, at 1:2 000 000 scale, which was compiled by CSIRO Div. of Soils, from Sheets 1 and 10 of the *Atlas of Australian Soils* (Northcote et al. 1960–68) and prepared by D.A. Wright, CSIRO Div. of Soils.]

1969 CHITTLEBOROUGH, D.J. Soil Classification—a Review. Soil Conservation Branch, SA Dept of Agric., Pub. S3/69.

1971 NORTHCOTE, K.H. *A Factual Key for the Recognition of Australian Soils* (3rd edn). Rellim Tech. Pubs, Glenside, South Australia.

1972 NORTHCOTE, K.H. & SKENE, J.K.M. Australian Soils with Saline and Sodic Properties. CSIRO Aust., Soil Pub. No. 27.

1973 # FIRMAN, J.B. Regional Stratigraphy of Surficial Deposits in the Murray Basin and Gambier Embayment. Geological Survey of South Australia, Report of Investigations No. 39.

1975 NORTHCOTE, K.H., HUBBLE, G.D., ISBELL, R.F., THOMPSON, C.H. & BETTENAY, E. *A Description of Australian Soils*. CSIRO Aust, 170 pp. [Includes *A Soil Map of Australia*, at 1:5 000 000 scale, which was adapted by R.G. Campbell, N.B. (Bruce) Billing, K.H. Northcote, G.D. Hubble, R.F. Isbell, C.H. Thompson and E. Bettenay from the *Atlas of Australian Soils* (Northcote et al. 1960–68).]

1975 # WETHERBY, K. & OADES, J.M. Classification of Carbonate Layers in Highland Soils of the Northern Murray Mallee, South Australia, and their Significance in Stratigraphic and Land Use Studies. *Australian Journal of Soil Research* **13**(2): 119–132.

1977 LAUT, P., HEYLIGERS, P.C., KEIG, G., LÖFFLER, E., MARGULES, C., SCOTT, R.M. & SULLIVAN, M.E. (compilers). *Environments of South Australia*. CSIRO Div. of Land Use Research, Canberra.

1978 BUTLER, B.E. & HUBBLE, G.D. The General Distribution and Character of the Soils in the Murray–Darling River System. *Proceedings of the Royal Society of Victoria* **90**: 149–156.

1978 NORTHCOTE, K.H. *Australia—Soil Resources—Based on Soil Properties that Affect Land Management*. [1:5 000 000 scale map compiled from *A Soil Map of Australia*, which accompanies *A Description of Australian Soils* by K.H. Northcote and others, CSIRO Aust., 1975. Produced for the topic, Soils, of the *Atlas of Australian Resources* (3rd Series), Div. of Nat. Mapping, Canberra.]

1979 # NORTHCOTE, K.H. *A Factual Key for the Recognition of Australian Soils* (4th edn—reprinted 1984). CSIRO. Rellim Tech. Pubs, Adelaide.

1980 # WETHERBY, K. Shallow Stratigraphy and Dry Land Use of the Northern Murray Mallee, South Australia. In *Aeolian Landscapes in the Semi-Arid Zone of South East Australia* (proceedings of a conference held on 17 and 18 October 1979 at Mildura, Victoria), R.R. Storrier and M.E. Stannard (eds), Australian Society of Soil Science, Riverina Branch, Wagga Wagga, pp. 179–196.

1982 SCOTT, R.M. *Environments of South Australia—Planners Atlas*. CSIRO Div. of Land Use Research and SA Dept of Environment and Planning.

1992 ISBELL, R.F. A Brief History of National Soil Classification in Australia since the 1920s. *Australian Journal of Soil Research* **30**(6): 825–842.

1996 # ISBELL, R.F. *The Australian Soil Classification*. Australian Soil and Land Survey Handbook Series, Vol. 4, CSIRO Publishing, Collingwood, Victoria.

1997 ISBELL, R.F., McDONALD, W.S. & ASHTON, L.J. *Concepts and Rational of the Australian Soil Classification*. Australian Collaborative Land Evaluation Program (ACLEP), CSIRO Land and Water, Canberra.

2002 # ISBELL, R.F. *The Australian Soil Classification—Revised Edition*. Australian Soil and Land Survey Handbook Series, Vol. 4, CSIRO Publishing, Collingwood, Victoria.

2004 McKENZIE, N., JACQUIER, D., ISBELL, R. & BROWN, K. *Australian Soils and Landscapes—an Illustrated Compendium*. CSIRO Publishing, Collingwood, Victoria.

3. Regional Surveys

3.1 Eyre Peninsula

1943 DOWNES, R.G. The Soils at Whyalla (South Australia) and their Suitability for Irrigation. CSIR Aust., Div. of Soils, Divl Report 14/43.

1943 STEPHENS, C.G. A Soil Survey of Blocks C, D, E, H, I, J, K, L, M, N, and O, Block 6A, Hundred of Wanilla. CSIRO Div. of Soils, Divl Report 22/43.

1944 STEPHENS, C.G. A Soil Survey of Blocks 5, 3W and 49, Hundred of Wanilla, South Australia. CSIRO Div. of Soils, Divl Report 3/44.

1946 CROCKER, R.L. An Introduction to the Soils and Vegetation of Eyre Peninsula, South Australia. *Transactions of the Royal Society of South Australia* **70**(2): 83–107.

1958 FRENCH, R.J. Soils of Eyre Peninsula—Part I (Lower Eyre Peninsula). *Journal of the Department of Agriculture, South Australia* (June 1958) **61**: 512–529.

1958 FRENCH, R.J. Soils of Eyre Peninsula—Part II (Eastern Eyre Peninsula). *Journal of the Department of Agriculture, South Australia* (July 1958) **61**: 579–594.

1958 FRENCH, R.J. Soils of Eyre Peninsula—Part III (Western Eyre Peninsula). *Journal of the Department of Agriculture, South Australia* (August 1958) **62**: 35–47.

1958 # FRENCH, R.J. Soils of Eyre Peninsula. SA Dept of Agric., Bull. No. 457, 53 pp. [This document is a compilation of the preceding three articles, but in addition includes *Soil Map of Eyre Peninsula*, at a scale of approximately 1:1 120 000.]

1963 SMITH, D.F. Plant Ecology of Lower Eyre Peninsula, South Australia. *Transactions of the Royal Society of South Australia* **87**(1): 93–118.

1965 * BICKNELL, K.G. Agriculture in South Australia—Lower and Eastern Eyre Peninsula. *Journal of the Department of Agriculture, South Australia* (June 1965) **68**: 350–364. [Featuring a land-use zone map and a map showing average annual rainfall isohyets. Also published as SA Dept of Agric., Leaflet No. 3788 F.]

1965 * MICHELMORE, W.A. Agriculture in South Australia—Upper Eyre Peninsula. *Journal of the Department of Agriculture, South Australia* (October 1965) **69**: 80–95. [Covering the upper West Coast and Far West Coast, and featuring a generalised soil map and a map showing average annual rainfall isohyets. Also published as SA Dept of Agric., Leaflet No. 3788 I.]

1970 * BICKNELL, K.G. Agriculture in South Australia—Lower and Eastern Eyre Peninsula. SA Dept of Agric., Extension Bull. No. 34.70, 20 pp. [Featuring a land-use zone map showing average annual rainfall at selected localities.]

1970 * HOLDEN, K.J. Agriculture in South Australia—Upper Eyre Peninsula. SA Dept of Agric., Extension Bull. No. 11.70, 28 pp. [Covering the upper West Coast and Far West Coast, and featuring a generalised soil map showing average annual rainfall at selected localities.]

1974 WOOD, R.M. A Land Description of Lake Gilles National Park. SA Dept of Agric., Land Description SB3.

1975 # DAVIES, W.J. A Land Description of the Carappee Conservation Park. Soil Conservation Branch, SA Dept of Agric. and Fisheries, Report SB4.

1975 KING, P.M. & ALSTON, A.M. A Survey of Soils near Wharminda and Stokes, Eyre Peninsula, South Australia. Soil Conservation Branch, SA Dept of Agric. and Fisheries, Special Land Description SB5.

c.1975 # WOOD, R.M. & DAVIES, W.J. A Description of the Land in the Hundred of Mortlock, County of Flinders, South Australia. Soil Conservation Branch, SA Dept of Agric. and Fisheries, *Special Land Description SB2*. [This report includes the soil map published in 1973 as *SA Dept of Agric., Land Description SB2*.]

1977 LAUT, P., HEYLIGERS, P.C., KEIG, G., LÖFFLER, E., MARGULES, C., SCOTT, R.M. & SULLIVAN, M.E. (compilers). *Environments of South Australia—Province 4 Eyre and Yorke Peninsulas*. CSIRO Div. of Land Use Research, Canberra.

1978 * CAWTHORNE, J. Agriculture in South Australia—Eastern Eyre Peninsula. SA Dept of Agric. and Fisheries, Bull. No. 10/78, 16 pp. [Featuring a land-use zone map showing average annual rainfall at selected localities, a map showing water resources and areas served by pipelines, and a soil map of Eyre Peninsula (a black-and-white, smaller scale reprint of the map featured in French (1958).]

1978 * HOLDEN, K. Agriculture in South Australia—Lower Eyre Peninsula. SA Dept of Agric. and Fisheries, Bull. No. 11/78, 16 pp. [Featuring a generalised soil map showing average annual rainfall at selected localities.]

1982 # WETHERBY, K.G., MOORE, S.D. & SINCLAIR, J.A. The Tod River Soil Survey. SA Dept of Agric., Tech. Paper No. 2.

1985 WRIGHT, M.J. Soils. Chapter 5 in *Natural History of Eyre Peninsula*, C.R. Twidale, M.J. Tyler and M. Davies (eds), Royal Society of South Australia, pp. 77–87.

1992 ## HUGHES, B.W. Land Systems, Soil-Landscapes, Land Classification and Erosion Risk Assessment of the Far West Coast District of South Australia. Submitted for the project component of Master of Agriculture, Soil Conservation, Dept of Soil Science, University of Adelaide.

1995 # JEFFERY, P. & HUGHES, B. Land Zones of Eyre Peninsula—Key Soils and Land Degradation of the Agricultural Region. Primary Industries South Australia.

3.2 Northern Agricultural Districts and Yorke Peninsula

1945 BUTLER, B.E. Report on the Soils of the High School Block, Nuriootpa, South Australia. CSIR Aust., Div. of Soils, Divl Report 12/45.

1945 NORTHCOTE, K.H. & SHEPHERD, J.H. Soil Survey of the Pekina Irrigation Area, Orroroo, South Australia. CSIR Aust., Div. of Soils, Divl Report 5/45.

1945 # STEPHENS, C.G., HERRIOT, R.I., DOWNES, R.G., LANGFORD-SMITH, T. & ACOCK, A.M. A Soil, Land Use and Erosion Survey of Part of County Victoria, South Australia. CSIR Aust., Bull. No. 188. [Corresponding map—*Soil Map: Hundreds of Caltowie, Yancya, Belalie, Whyte, Anne, Reynolds and Bundaleer, County of Victoria, South Australia*, at a scale of 1 inch to 1 mile, P.D. Hooper (delineator), CSIR Aust., Div. of Soils, 1942, with additional legend notes by R.I. Herriot, Soil Conservator, SA Dept of Agric., T.F.E. Moore, Govt Photolithographer, Adelaide—soil surveyors C.G. Stephens, R.G. Downes, T. Langford-Smith and A.M. Acock.]

1947 BLACKBURN, G. & BAKER, R.M. Reconnaissance of the Soils and Erosion of the Northern Marginal Lands of South Australia. CSIR Aust., Div. of Soils, Divl Report 4/47.

1948 JESSUP, R.W. A Vegetation and Pasture Survey of Countries Eyre, Burra and Kimberly, South Australia. *Transactions of the Royal Society of South Australia* **72**: 33–62.

1950 STEPHENS, C.G. The Soils of Lower Yorke Peninsula. CSIRO Div. of Soils, Divl Report 6/50.

1951 BLACKBURN, G. & BAKER, R.M. Survey of Soils, Land Use and Soil Erosion in the Northern Marginal Lands—Part I. *Journal of the Department of Agriculture, South Australia* (September 1951) **55**: 78–88.

1951 BLACKBURN, G. & BAKER, R.M. Survey of Soils, Land Use and Soil Erosion in the Northern Marginal Lands—Part II. *Journal of the Department of Agriculture, South Australia* (October 1951) **55**: 155–162.

1952 BLACKBURN, G. & BAKER, R.M. Survey of Soils, Land Use and Soil Erosion in the Northern Marginal Lands, South Australia. CSIRO Div. of Soils, Soils and Land Use Series No. 6.

1953 # BLACKBURN, G. & BAKER, R.M. Soils of Part of Southern Flinders Ranges, South Australia. CSIRO Aust., Soil Pub. No. 3. [Covering the same work as the previous three entries.]

1953 NORTHCOTE, K.H. Soil Reconnaissance of Proposed Experimental Pasture Plots in the Mid North, South Australia. CSIRO Div. of Soils, Tech. Mem. 13/53.

1954 DE MOOY, C.J. Soil Survey of Angaston Spot Area, Hundred of Moorooroo. CSIRO Div. of Soils, Tech. Mem. 10/54.

1954 MULCAHY, M.J. Soil Survey of Martindale Estate. CSIRO Div. of Soils, Divl Report 7/54.

1954 # NORTHCOTE, K.H., RUSSELL, J.S. & WELLS, C.B. Soils and Land Use in the Barossa District, South Australia. Zone I, the Nuriootpa Area. CSIRO Div. of Soils, Soils and Land Use Series No. 13.

1957 # NORTHCOTE, K.H. & DE MOOY, C.J. Soil and Land Use in the Barossa District, South Australia. Part A. The Angaston–Springton Area. Part B. The Tanunda–Trial Hill Area. CSIRO Div. of Soils, Soils and Land Use Series No. 22.

1959 # NORTHCOTE, K.H. Soils and Land Use in the Barossa District, South Australia, Tanunda–Williamston. CSIRO Div. of Soils, Soils and Land Use Series No. 32.

1959 # WELLS, C.B. Soils and Land Use in the Barossa District, South Australia, Greenock–Gomersal Area. CSIRO Div. of Soils, Soils and Land Use Series No. 30.

1965 * HALL, B.G. Agriculture in South Australia—the Upper North. *Journal of the Department of Agriculture, South Australia* (March 1965) **68**: 238–251. [Including the northern and northeastern parts of the Mid North, and featuring a generalised soil map and a map showing average annual rainfall isohyets. Also published as SA Dept of Agric., Leaflet No. 3788 C.]

1965 * WEBBER, G.D. Agriculture in South Australia—the Lower North. *Journal of the Department of Agriculture, South Australia* (April 1965) **68**: 282–299. [Including much of the Mid North, and featuring a generalised soil map and a map showing average annual rainfall at selected localities. Also published as SA Dept of Agric., Leaflet No. 3788 D.]

1965 * WINN, D.B. Agriculture in South Australia—Yorke Peninsula. *Journal of the Department of Agriculture, South Australia* (August 1965) **69**: 2–17. [Featuring a generalised soil map and a map showing average annual rainfall isohyets. Also published as SA Dept of Agric., Leaflet No. 3788 H.]

1968 # FRENCH, R.J., MATHESON, W.E. & CLARKE, A.L. Soils and Agriculture of the Northern and Yorke Peninsula Regions of South Australia. SA Dept of Agric., Special Bull. 1/68.

1970 * MICHELMORE, W.A. Agriculture in South Australia—the Lower North. SA Dept of Agric., Extension Bull. No. 13.70, 24 pp. [Including much of the Mid North, and featuring a generalised soil map showing average annual rainfall at selected localities.]

1970 * MOWATT, P.J. Agriculture in South Australia—the Upper North. SA Dept of Agric., Extension Bull. No. 12.70, 20 pp. [Including the northern and northeastern parts of the Mid North, and featuring a generalised soil map showing average annual rainfall at selected localities.]

1970 * WEBBER, G.D. & MATZ, N.R. Agriculture in South Australia—Yorke Peninsula. SA Dept of Agric., Extension Bull. No. 14.70, 24 pp. [Featuring a generalised soil map showing average annual rainfall at selected localities.]

1972 COPPI, J.A. A Soil Survey for Lucerne Growth at Hilltown, South Australia. CSIRO Div. of Soils, Tech. Mem. 29/72.

1974 # CHITTLEBOROUGH, D., MASCHMEDT, D. & WOOD, R.McR. Soils and Land Use of the Redcliff Point Area, South Australia. SA Dept of Agric., Specific Land Use Survey SS5.

1975 ## MATHESON, W.E. The Suitability of Land for Irrigation in Portion of the Northern Adelaide Plain, South Australia. SA Dept of Agric., Specific Land Use Survey SS10.

1975 RUDD, C.L. Nuriootpa Viticulture Station—Block B. SA Dept of Agric., Specific Land Use Survey SS8.

1977 LAUT, P., HEYLIGERS, P.C., KEIG, G., LÖFFLER, E., MARGULES, C., SCOTT, R.M. & SULLIVAN, M.E. (compilers). *Environments of South Australia—Province 4 Eyre and Yorke Peninsulas*. CSIRO Div. of Land Use Research, Canberra.

1977 LAUT, P., HEYLIGERS, P.C., KEIG, G., LÖFFLER, E., MARGULES, C., SCOTT, R.M. & SULLIVAN, M.E. (compilers). *Environments of South Australia—Province 5 Eastern Pastoral and Province 6 Flinders Ranges*. CSIRO Div. of Land Use Research, Canberra.

1981 BILLING, N.B. (Bruce). Palaeosols and Sediments of Upper Spencer Gulf, South Australia—Descriptions and Preliminary Interpretations. CSIRO Div. of Soils, Report No. 56.

1984 BILLING, N.B. (Bruce). Palaeosol Development in Quaternary Marine Sediments and Palaeoclimatic Interpretations, Spencer Gulf, Australia. *Marine Geology* **61**: 315–343.

1996 WELLS, C.B. The Patterns of Soils of the Flinders Ranges. Chapter 7 in *Natural History of the Flinders Ranges*, M. Davies, C.R. Twidale and M.J. Tyler (eds), Royal Society of South Australia, pp. 76–85.

3.3 Mount Lofty Ranges and Kangaroo Island

1918 TEALE, E.O. Soil Survey and Forestry Physiography of Kuitpo. Dept of Forestry, University of Adelaide, Bull. No. 6.

1931 TAYLOR, J.K. & O'DONNELL, J. The Soils of the Southern Portion of the Hundred of Kuitpo. *Transactions of the Royal Society of South Australia* **56**: 3–14.

1941 # BALDWIN, J.G. & CROCKER, R.L. The Soils and Vegetation of Portion of Kangaroo Island, South Australia. *Transactions of the Royal Society of South Australia* **65**(2): 263–275.

1941 CROCKER, R.L. The Soils and Vegetation of Portion of Kangaroo Island. CSIR Aust., Div. of Soils, Divl Report 1/41.

1944 NORTHCOTE, K.H. A Soil Survey of the Nyroca Stud Farm. CSIR Aust., Div. of Soils, Divl Report 13/44.

1945 BUTLER, B.E. Report on the Soils of the High School Block, Nuriootpa, South Australia. CSIR Aust., Div. of Soils, Divl Report 12/45.

1946 NORTHCOTE, K.H. A Fossil Soil from Kangaroo Island, South Australia. *Transactions of the Royal Society of South Australia* **70**: 294–296.

1946 PARLIAMENTARY COMMITTEE ON LAND SETTLEMENT. Progress (first) Report of the Parliamentary Committee on Land Settlement on Kangaroo Island Development. Crown Lands in the Hundreds of MacGillivray and Seddon (Settlement 'A'). SA Parliamentary Paper No. 77/46. [For relevant map see CSIR Aust., Bull. No. 233 (Northcote and Tucker 1948)—soil surveyors K.H. Northcote and J.H. Shepherd.]

1948 # NORTHCOTE, K.H. & TUCKER, B.M. A Soil Survey of the Hundred of Seddon and Part of the Hundred of MacGillivray, Kangaroo Island, South Australia. CSIR Aust., Bull. No. 233.

1948 SPECHT, R.L. & PERRY, R.A. Plant Ecology of Portion of the Mt Lofty Ranges. *Transactions of the Royal Society of South Australia* **72**(1): 91–132.

1949 PARLIAMENTARY COMMITTEE ON LAND SETTLEMENT. Second Report of the Parliamentary Committee on Land Settlement on Kangaroo Island Development. Crown Lands in the Hundred of Duncan (Settlement 'B'). SA Parliamentary Paper No. 79/49. [For relevant map see CSIRO Div. of Soils, Soils and Land Use Series No. 2 (Northcote 1949)—soil surveyor K.H. Northcote.]

1949 # NORTHCOTE, K.H. A Soil Survey and the Land Use Potential, Hundred of Duncan, Kangaroo Island, South Australia. CSIRO Div. of Soils, Soils and Land Use Series No. 2.

1950 # NORTHCOTE, K.H. A Soil Survey of Portion of the Hundred of Newland, Kangaroo Island, South Australia. CSIRO Div. of Soils, Divl Report 1/50.

1950 PARLIAMENTARY COMMITTEE ON LAND SETTLEMENT. Third Report of the Parliamentary Committee on Land Settlement on Kangaroo Island Development. Crown Lands in the Hundred of Newland (Settlement 'C'). SA Parliamentary Paper No. 69/50. [With accompanying soil map—soil surveyor K.H. Northcote. The same map can be found in CSIRO Div. of Soils, Divl Report 1/50 (Northcote 1950).]

1951 JACKSON, E.A. Report of an Inspection of the Soils at Oakbank Area School. CSIRO Div. of Soils, Tech. Mem. 9/51.

1952 # PARLIAMENTARY COMMITTEE ON LAND SETTLEMENT. Fourth Report of the Parliamentary Committee on Land Settlement on Kangaroo Island Development. Crown Lands in the Hundred of Ritchie and Part Hundred of McDonald (Settlement 'D'). SA Parliamentary Paper No. 70/52. [With accompanying soil map—soil surveyor G.O. McHugh; land surveyor B.H. Wright.]

1953 JACKSON, E.A. A Soil Survey at Mt Pleasant. CSIRO Div. of Soils, Tech. Mem. 7/53.

1953 JACKSON, E.A. A Soil Survey in the Mt Barker District, South Australia. CSIRO Div. of Soils, Tech. Mem. 5/53.

1953 JACKSON, E.A. A Soil Survey near Inglewood in the Mt Lofty Ranges, South Australia. CSIRO Div. of Soils, Tech. Mem. 6/53.

1953 JACKSON, E.A. A Soil Survey of Uraidla. CSIRO Div. of Soils, Tech. Mem. 4/53.

1953 # RIX, C.E. & HUTTON, J.T. Soil Survey of the Hundred of Kuitpo in the Mt Lofty Ranges of South Australia. SA Land Tax Dept and CSIRO Div. of Soils. SA Land Tax Dept, Bull. No. 1.

1954 DE MOOY, C.J. Soil Survey of the Angaston Spot Area, Hundred of Moorooroo, County Light, South Australia. CSIRO Div. of Soils, Tech. Mem. 10/54.

1954 DE MOOY, C.J. Soil Survey of the Springton Spot Area, Hundred of Jutland, County Sturt, South Australia. CSIRO Div. of Soils, Tech. Mem. 14/54.

1954 # NORTHCOTE, K.H., RUSSELL, J.S. & WELLS, C.B. Soils and Land Use in the Barossa District, South Australia. Zone 1, The Nuriootpa Area. CSIRO Div. of Soils, Soils and Land Use Series No. 13.

1954 # PARLIAMENTARY COMMITTEE ON LAND SETTLEMENT. Final (fifth) Report of the Parliamentary Standing Committee on Land Settlement on Kangaroo Island Development. Crown Lands in the Hundred of Gosse and North of Flinders Chase (Settlement 'E'). SA Parliamentary Paper No. 70/54. [With accompanying soil map—soil surveyor G.O. McHugh; land surveyor B.H. Wright.]

1957 # JACKSON, E.A. A Survey of the Soils and their Utilisation in Portion of the Mt Lofty Ranges, South Australia. CSIRO Div. of Soils, Soils and Land Use Series No. 21.

1958 BLACKBURN, G. Soil Mapping in the Mt Crawford Forest Reserve, South Australia. CSIRO Div. of Soils, Tech. Mem. 3/58.

1959 # LITCHFIELD, W.H. Soils of the Western Slopes of the Mt Lofty Ranges near Adelaide and Elizabeth, South Australia. CSIRO Div. of Soils, Divl Report 8/59.

1959 # NORTHCOTE, K.H. Soils and Land Use in the Barossa District, South Australia. The Tanunda–Williamstown Area. CSIRO Div. of Soils, Soils and Land Use Series No. 32.

1959 # WELLS, C.B. Soils and Land Use in the Barossa District, South Australia. The Greenock–Gomersal Area. CSIRO Div. of Soils, Soils and Land Use Series No. 30.

1964 BECKMANN, C.G. The Soils of Mt Crawford Forest. CSIRO Div. of Soils, Tech. Mem. 4/64.

1965 * GROSS, F.C. Agriculture in South Australia—the Central District. *Journal of the Department of Agriculture, South Australia* (November 1965) **69**: 116–130. [Including the Adelaide Plains, Mt Lofty Ranges and Kangaroo Island, and featuring a generalised soil map and a map showing average annual rainfall at selected localities. Also published as SA Dept of Agric., Leaflet No. 3788J.]

1965 LAING, D. Data on the Geomorphology and Soils of the Yundi Area, South Australia. CSIRO Div. of Soils, Divl Report 3/65.

1966 # WARD, W.T. Geology, Geomorphology and Soils of the S.W. Portion of County Adelaide, South Australia. CSIRO Aust., Soil Pub. No. 23.

1970 * GROSS, F.C. Agriculture in South Australia—the Central District. SA Dept of Agric., Extension Bull. No. 33.70, 20 pp. [Including the Adelaide Plains, Mt Lofty Ranges and Kangaroo Island, and featuring a land-use zone map showing average annual rainfall at selected localities.]

1972 # MAUD, R.R. Geology, Geomorphology and Soils of Central County Hindmarsh (Mt Compass, Milang), South Australia. CSIRO Aust., Soil Pub. No. 29.

1973 COPPI, J.A. A Soil Survey for Studies of an Almond Orchard in the Willunga District of South Australia. CSIRO Div. of Soils, Tech. Mem. 3/73.

1973 WRIGHT, M.J. Soils of the Mt Lofty Botanic Gardens, South Australia. CSIRO Div. of Soils, Tech. Paper No. 18.

1975 BILLING, N.B. (Bruce). Descriptions and Classification of Soils in the Upper Torrens River Catchment Area, Mt Lofty Ranges, South Australia. CSIRO Div. of Soils, Divl Report No. 8.

1977 * FAIRBROTHER, P.D. Agriculture in South Australia—the Central District. SA Dept of Agric. and Fisheries, Bull. No. 2/77, 20 pp. [Including the Adelaide Plains, Mt Lofty Ranges and Kangaroo Island, and featuring a land-use zone map showing average annual rainfall at selected localities.]

1977 HARTLEY, R.E.R. A Study of the Fleurieu Peninsula Coast—Erosion, Land Form, Vegetation and Land Use. Soil Conservation Branch, SA Dept of Agric. and Fisheries, Report SB6.

1977 LAUT, P., HEYLIGERS, P.C., KEIG, G., LÖFFLER, E., MARGULES, C., SCOTT, R.M. & SULLIVAN, M.E. (compilers). *Environments of South Australia—Province 3 Mt Lofty Block*. CSIRO Div. of Land Use Research, Canberra. [Includes Kangaroo Island.]

1978 FRENCH, R.J. et al. A Description of the Vineyard Resources of the Barossa Region of South Australia. Soil Conservation Branch, SA Dept of Agric. and Fisheries, Report S17/78.

1978 # MASCHMEDT, D.J. Preliminary Soil and Landform Investigations, District Council of Onkaparinga. Soil Conservation Branch, SA Dept of Agric. and Fisheries, Report S7/78.

1979 NORTHCOTE, K.H. Soils. Chapter 2 in *Natural History of Kangaroo Island*, M.J. Tyler, C.R. Twidale and J.K. Ling (eds), Royal Society of South Australia, pp. 39–46.

1980 DAVID, G.A. Land Capability Assessment of the Hundred of Kuitpo, Mount Lofty Ranges, South Australia. A thesis presented as partial fulfilment of the requirements of the Degree of Master of Environmental Studies, Centre for Environ-

mental Studies, University of Adelaide. [An assessment for a range of engineering, septic waste disposal, earth resource and recreational purposes of the soil map units of the map in Rix and Hutton (1953).]

1983 ## MASCHMEDT, D.J. *Soil Association Map—Milang, South Australia*. D.J. Woolman, Govt Printer, Govt of South Australia. [1:50 000 scale map with legend, general soil descriptions and explanatory notes.]

1985 ## MASCHMEDT, D.J. *Soil Landscape Map—Echunga, South Australia*. D.J. Woolman, Govt Printer, Govt of South Australia. [1:50 000 scale map with legend, general soil descriptions and explanatory notes—included with Maschmedt (1986).]

1985 ## MASCHMEDT, D.J. *Soil Landscape Map—Onkaparinga, South Australia*. D.J. Woolman, Govt Printer, Govt of South Australia. [1:50 000 scale map with legend, general soil descriptions and explanatory notes—included with Maschmedt (1987).]

1986 FIRMAN, J.B. (compiler). *Adelaide Region Palaeosols*. SA Dept of Mines and Energy, Geological Atlas Special Series, 1:250 000. [Map only.]

1986 # MASCHMEDT, D.J. Soils and Land Use Potential—Echunga 1:50 000 Map Sheet, South Australia. SA Dept of Agric., Tech. Paper No. 13. [Including 1:50 000 scale map with legend, general soil descriptions and explanatory notes.]

1987 # MASCHMEDT, D.J. Soils and Land Use Potential—Onkaparinga 1:50 000 Map Sheet, South Australia. SA Dept of Agric., Tech. Paper No. 16. [Including 1:50 000 scale map with legend, general soil descriptions and explanatory notes.]

3.4 Murray Mallee (including the Riverland)

1929 # TAYLOR, J.K. & ENGLAND, H.N. A Soil Survey of Block E (Renmark) and Ral-Ral (Chaffey) Irrigation Area. CSIR Aust., Bull. No. 42.

1932 # MARSHALL, T.J. & HOOPER, P.D. A Soil Survey of Blocks A, B, C, D and F, Renmark Irrigation District, South Australia. CSIR Aust., Bull. No. 56.

1932 # MARSHALL, T.J. & KING, N.J. Soil Survey of the Cadell Irrigation Area and New Era, South Australia. CSIR Aust., Bull. No. 62.

1935 # MARSHALL, T.J. & HOOPER, P.D. Soil Survey of the Berri, Cobdogla, Kingston and Moorook Irrigation Area and of the Lyrup Village District, South Australia. CSIR Aust., Bull. No. 86.

1940 MARSHALL, T.J. Soil Survey of the Murray View Estate. CSIR Aust., Div. of Soils, Divl Report 5/40.

1940 TAYLOR, J.K. Report on Lakes Merretti and Woolpoolool and Surrounding Country within the Murray Valley near Renmark, South Australia. CSIR Aust., Div. of Soils, Divl Report 7/40.

1941 # HERRIOTT, R.I. & JOHNSTON, E.J. A Soil Survey of the Waikerie Irrigation Area, South Australia. CSIR Aust., Bull. No. 141.

1941 MARSHALL, T.J. & DOWNES, R.G. Reconnaissance Soil Survey of Part of Loveday Division, Cobdogla Irrigation Area, South Australia. CSIR Aust., Div. of Soils, Divl Report 4/41.

1942 MARSHALL, T.J. & HOOPER, P.D. Reconnaissance Soil Survey of Part of Calperum Station, near Renmark, South Australia. CSIR Aust., Div. of Soils, Soil Report 2/42.

1943 HOOPER, P.D. & TAYLOR, J.K. The Soils of a Portion of Cobdogla Irrigation Area, South Australia. CSIR Aust., Div. of Soils, Divl Report 18/43.

1943 SMITH, R., HOOPER, P.D. & TAYLOR, J.K. Report on Area of Loxton Proposed for Irrigation. CSIR Aust., Div. of Soils, Divl Report 5/43.

1944 MARSHALL, T.J. Soil Survey of Block E, Berri Experimental Orchard. CSIR Aust., Div. of Soils, Divl Report 4/44.

1944 TAYLOR, J.K. Notes on Soils of Glossop High School Area—Blocks 254, 496, and 252 Bookamba. CSIR Aust., Div. of Soils, Divl Report 8/44.

1945 NORTHCOTE, K.H. Soil Survey of the Proposed Extension to the Ramco Division of the Waikerie Irrigation Area. CSIR Aust., Div. of Soils, Divl Report 8/45.

1945 STEWART, G.A. Soil Survey of an Area Adjacent to Blocks C and F, Renmark, Irrigation Area. CSIR Aust., Div. of Soils, Divl Report 23/45.

1945 STEWART, G.A. Soil Survey of Portion Ral-Ral Division of Chaffey Irrigation Area, South Australia. CSIR Aust., Div. of Soils, Divl Report 23/45.

1945 SHEPHERD, J.H. & TAYLOR, J.K. Progress Report on Soils of Portion of 'Calperum' Station and Part of Block B of Renmark Irrigation District. CSIR Aust., Div. of Soils, Divl Report 21/45.

1945 TAYLOR, J.K. Statement of an Area at Loxton, South Australia. Proposal for Irrigation Development. SA Parliamentary Paper No. 49/45, pp. 4–7 with map (Appendix A).

1945 TAYLOR, J.K. & HOOPER, P.D. Report on the Soils of the Lyrup Area, Sections 34, 35, 36, 37, 38, 39, 104 and 128 and Part of Lyrup Village District, Hundred of Paringa. CSIR Aust., Div. of Soils, Divl Report 6/45.

1946 TAYLOR, J.K. Soil Report on Part of New Era Area, Part Section F.N.W. Hundred of Cadell. CSIR Aust., Div. of Soils, Divl Report 18/46.

1947 NORTHCOTE, K.H. Soil Survey of a Proposed Extension to the Moorook Irrigation Area. CSIRO Div. of Soils, Divl Report No. 13/47.

1947 NORTHCOTE, K.H. & BLACKBURN, G. Soil Survey of a Proposed Extension to the Chaffey Irrigation Area. CSIR Aust., Div. of Soils, Divl Report 2/47.

1948 NORTHCOTE, K.H. Soils of the Proposed Extension to the Chaffey Irrigation Area. CSIRO Div. of Soils, Divl Report No. 13/48.

1949 NORTHCOTE, K.H. An Extension of the Cooltong Division, Chaffey Irrigation Area. CSIRO Div. of Soils, Tech. Mem. 8/49.

1949 NORTHCOTE, K.H. Loxton South Area. CSIRO Div. of Soils, Tech. Mem. 7/49.

1950 NORTHCOTE, K.H. Soils of the Proposed Extension the Cooltong Division of the Chaffey Irrigation Area. CSIRO Div. of Soils, Divl Report 9/50.

1951 McCRACKEN, S.R. A Geographical Survey of the Murray Mallee. In, Agricultural Bureau Conference Proceedings, SA Dept of Agric., pp. 1–8.

1951 NORTHCOTE, K.H. Proposed Extension to the Loxton Irrigation Area. CSIRO Div. of Soils, Tech. Mem. 1/57.

1951 NORTHCOTE, K.H. Reconnaissance Soil Survey of Sections 7, 7a, 7b and 8, Hundred of Murtho, South Australia. CSIRO Div. of Soils, Tech. Mem. 4/51.

1952 NORTHCOTE, K.H. Descriptive List of Soil Types in the Loxton Irrigation Area. CSIRO Div. of Soils, Tech. Mem. 8/52.

1952 NORTHCOTE, K.H. Reconnaissance of Part of Sections 39, 9, 8 and Section 14, Hundred of Murtho, South Australia. CSIRO Div. of Soils, Tech. Mem. 3/52.

1952 WELLS, C.B. Proposed Extension to the Loxton Irrigation Area. CSIRO Div. of Soils, Tech. Mem. 4/52.

1953 NORTHCOTE, K.H. Soil Survey of Parts of the Hundreds of Paringa and Gordon, County Alfred, South Australia. CSIRO Div. of Soils, Divl Report 8/53.

1965 * MOWATT, P.J. Agriculture in South Australia—the Murray Mallee. *Journal of the Department of Agriculture, South Australia* (May 1965) **68**: 318–332. [Featuring a map showing average annual rainfall isohyets. Also published as SA Dept of Agric., Leaflet No. 3788 E.]

1970 * HINCKS, A.E. Agriculture in South Australia—the Murray Mallee. SA Dept of Agric., Extension Bull. No. 32.70, 20 pp. [Featuring a generalised soil map showing average annual rainfall at selected localities.]

1972 BLACKBURN, G. & WRIGHT, D.A. Soil Survey of the Loxton Irrigation Area, South Australia. CSIRO Div. of Soils, Soils and Land Use Series No. 53.

1972 WETHERBY, K. Soil Survey of Block B, Loxton Research Centre. SA Dept of Agric., Specific Land Use Survey SS2.

1972 WETHERBY, K. & WATSON, K. Soil Features and Recommended Land Use, Section 516, Loxton Irrigation Area. SA Dept of Agric., Specific Land Use Survey SS1.

1973 WETHERBY, K.G. The Geology, Paleopedology, Soils and Land Use in the Northern Murray Mallee, South Australia. Submitted for the Degree of Master of Agricultural Science, Dept of Agricultural Biochemistry and Soil Science, Waite Agricultural Research Institute, University of Adelaide.

1973 # POTTER, J.S., WETHERBY, K.G. & CHITTLEBOROUGH, D.J. A Description of the Land in County Albert, County Alfred and Part of County Eyre, South Australia. SA Dept of Agric., Report L.D. 1. [Land system mapping and descriptions.]

1975 # WETHERBY, K. & OADES, J.M. Classification of Carbonate Layers in Highland Soils of the Northern Murray Mallee, South Australia, and their Significance in Stratigraphic and Land Use Studies. *Australian Journal of Soil Research* **13**(2): 119–132.

1976 WATSON, K., COLE, P., WOOD, R. and MORLEY, K. Soil Survey of Parts of the Kingston Irrigation Area, South Australia. Part 1—Method of Data Presentation. Soil Conservation Branch, SA Dept of Agric. and Fisheries, Specific Land Use Survey SS14.

1976 WATSON, K., COLE, P., WOOD, R. and MORLEY, K. Soil Survey of Parts of the Kingston Irrigation Area, South Australia. Part 2—Profile Description Sheets. Soil Conservation Branch, SA Dept of Agric. and Fisheries, Specific Land Use Suvey SS15.

1977 LAUT, P., HEYLIGERS, P.C., KEIG, G., LÖFFLER, E., MARGULES, C., SCOTT, R.M. & SULLIVAN, M.E. (compilers). *Environments of South Australia—Province 2 Murray Mallee*. CSIRO Div. of Land Use Research, Canberra.

1977 WETHERBY, K.G. Correlation of Quaternary Geological Formations and Land Description Units (Land Systems). Soil Conservation Branch, SA Dept of Agric. and Fisheries, Report S4/77. [Note: focusing on the Northern Murray Mallee.]

1978 * BULL, B. & SIMES, T. Agriculture in South Australia—the Northern Murray Mallee and Riverland. SA Dept of Agric. and Fisheries, Bull. No. 15/78, 14 pp. [Featuring a generalised soil map and a map showing reticulated and underground water supplies.]

1980 # WETHERBY, K. Shallow Stratigraphy and Dry Land Use of the Northern Murray Mallee, South Australia. In *Aeolian Landscapes in the Semi-Arid Zone of South East Australia* (proceedings of a conference held on 17 and 18 October 1979 at Mildura, Victoria), R.R. Storrier and M.E. Stannard (eds), Australian Society of Soil Science, Riverina Branch, Wagga Wagga, pp. 179–196.

1990 HOLLINGSWORTH, I.D. A Reconnaissance Soil Survey of the Chowilla Anabranch System of the River Murray in South Australia and New South Wales. SA Dept of Agric., Loxton Research Centre—prepared for the Murray Darling Basin Commission.

1995 # McCORD, A.K. A Description of Land in the Southern Mallee of South Australia. Primary Industries South Australia. [Land system mapping and descriptions.]

2004 OVERTON, I. & JOLLY, I. Integrated Studies of Floodplain Vegetation Health, Saline Groundwater and Flooding on the Chowilla Floodplain in SA. CSIRO Land and Water, Tech Report No 20/04. [An interpretation of the landform and soil mapping contained in Hollingsworth's 1990 soil survey (e.g. with regard to soil permeability) to assist with assessment of artificial wetland flooding.]

2005 HUGHES, B. Reconnaissance Soil Survey—Woolenook Bend, Mundik Creek and Pike River Flood Plains of the River Murray. Rural Solutions SA, Government of South Australia.

3.5 Lower Murray and Adjacent Areas

1884 TATE, R. Notes on the Physical and Geological Features of the Basin of the Lower Murray River. *Transactions of the Royal Society of South Australia* **7**: 24–26.

1931 TAYLOR, J.K. & POOLE, H.G. Report on the Soils on the Bed of Lake Albert, South Australia. *Journal of the CSIR Australia* **4**: 83–95.

1931 TAYLOR, J.K. & POOLE, H.G. A Soil Survey of the Lower Murray River. CSIR Aust., Bull. No. 51.

1938 CROCKER, R.L. & BUTLER, B.E. A Soil Survey of the Horticultural Portion of the Mypolonga Irrigation Area (A.S.). *Journal of the CSIR Australia* **11**: 143–150.

1941 DOWNES, R.G. & MARSHALL, T.J. *'Yalkurie' Map*. CSIR Aust., Div. of Soils. [Map only.]

1943 TAYLOR, J.K. Report on Proposed Area for Irrigation at Milang. CSIR Aust., Div. of Soils, Divl Report 13/43.

1946 JESSUP, R.W. Ecology of Area Adjacent to Lake Alexandrina with Special Reference to Edaphic Factors. *Transactions of the Royal Society of South Australia* **70**: 3–34.

1952 LITCHFIELD, W.H. A Reconnaissance Soil Survey of 'Campbell Park' Estate, Part Hundred of Baker, County Russell, South Australia. CSIRO Div. of Soils, Divl Report No. 3/52.

1953 NORTHCOTE, K.H. Soil Survey of Proposed Milang Demonstration Plot for Irrigation Crops. CSIRO Div. of Soils, Tech. Mem. 9/53.

1953 NORTHCOTE, K.H. Soil Survey of Sections of Hundred Brinkley, South Australia. CSIRO Div. of Soils, Tech. Mem. 15/53.

1954 WELLS, C.B. Soil Inspection of the Bed of the McFarlane Swamp, Hundred of Seymour, South Australia. CSIRO Div. of Soils, Tech. Mem. 9/54.

1955 WELLS, C.B. The Soils of the Bed of McFarlane Swamp, Hundred of Seymour, South Australia. CSIRO Div. of Soils, Divl Report 2/55.

1959 DE MOOY, C. Notes on the Geomorphic History of the Area Surrounding Lakes Alexandrina and Albert, South Australia. *Transactions of the Royal Society of South Australia* **82**: 99–118.

1959 # DE MOOY, C. Soils and Land Use around Lake Alexandrina and Lake Albert, South Australia. CSIRO Div. of Soils, Soils and Land Use Series No. 29.

1965 * WILLIAMS, S.G. Agriculture in South Australia—the Lower Murray Basin. *Journal of the Department of Agriculture, South Australia* (January 1965) **68**: 169–85. [Featuring a land-use zone map and a map showing average annual rainfall isohyets. Also published as SA Dept of Agric., Leaflet No. 3788 A.]

1970 * WILLIAMS, S.G. Agriculture in South Australia—the Lower Murray Basin. SA Dept of Agric., Extension Bull. No. 35.70, 24 pp. [Featuring a land-use zone map showing average annual rainfall at selected localities.]

1971 CHITTLEBOROUGH, D.J. A Description of Land in Parts of Hundreds of Bremer and Freeling. Soil Conservation Branch, SA Dept of Agric., Land Description SB1.

1972 # MAUD, R.R. Geology, Geomorphology and Soils of Central County Hindmarsh (Mt Compass, Milang), South Australia. CSIRO Aust, Soil Pub. No. 29.

1973 CHITTLEBOROUGH, D.J. Murray New Town Site Selection—a Preliminary Soil and Landform Survey. Soil Conservation Branch, SA Dept of Agric., Report SS3.

1974 # CHITTLEBOROUGH, D.J. & McCORD, A.K. The Potential of the Bremer River Valley near Callington, South Australia, as a Site for the Disposal of Sewage Effluent. SA Dept of Agric., Specific Land Use Survey SS6.

1974 CHITTLEBOROUGH, D.J. & WRIGHT, M.J. A Land Use Study for Urban Site Selection—Monarto, South Australia. *Australian Geographer* **12**(6): 543–550.

1974 MATHESON, W.E. Monarto Soil Investigations—First Report. Soil Conservation Branch, SA Dept of Agric., Specific Land Use Survey SS9.

1975 CHITTLEBOROUGH, D.J. & MASCHMEDT, D.J. Soils of the Monarto Town Site. Interim Report—South Western Section. SA Dept of Agric., Specific Land Use Survey SS12.

1975 # CHITTLEBOROUGH, D.J. & MASCHMEDT, D.J. Soil Survey of Section 113, Hundred of Monarto. Soil Conservation Branch, SA Dept of Agric., Report SS4.

1975 McCORD, A.K. Monarto Top Soil Survey—City Centre and Surrounds. SA Dept of Agric., Specific Land Use Survey SS13.

1976 ## CHITTLEBOROUGH, D.J., MASCHMEDT, D.J. & WRIGHT, M.J. Soils of the Monarto Town Site. SA Dept of Agric. and Fisheries and CSIRO Div. of Soils; Soil Conservation Branch, SA Dept of Agric. and Fisheries, Report SS16.

1978 * BROOKS, N. Agriculture in South Australia—the Lower Murray. SA Dept of Agric. and Fisheries, Bull. No. 9/78, 16 pp. [Featuring a land-use zone map and a map showing average annual rainfall at selected localities.]

1978 CHITTLEBOROUGH, D.J. Soil Variability Within Land Systems and Land Units at Monarto, South Australia. *Australian Journal of Soil Research* **16**: 137–155.

1986 FIRMAN, J.B. (compiler). *Adelaide Region Palaeosols*. SA Dept of Mines and Energy, Geological Atlas Special Series, 1:250 000. [Map only.]

3.6 South East

1917 DAVIE, L.S. Soils of South East, South Australia. *Journal of the Department of Agriculture, South Australia* (May 1917) **20**: 96–799.

1929 PRESCOTT, J.A. & PIPER, C.S. The Volcanic Soil of Mt Gambier, South Australia. *Transactions of the Royal Society of South Australia* **53**: 196–202.

1933 # TAYLOR, J.K. A Soil Survey of the Hundreds of Laffer and Willalooka, South Australia. CSIR Aust., Bull. No. 76.

1940 STEPHENS, C.G. The Soils of Forest Plantations of South-East, South Australia. CSIR Aust., Div. of Soils, Divl Report 2/49. [Also CSIR Aust., Div. of Soils, Soil Paper 132.]

1941 STEPHENS, C.G., CROCKER, R.L., BUTLER, B.E. & SMITH, R. A Soil and Land Use Survey of the Hundreds of Riddoch, Hindmarsh, Grey, Young and Nangwarry, County Grey, South Australia. CSIR Aust., Bull. No. 142.

1943 STEPHENS, C.G. Eight Mile Creek Swamp. *Transactions of the Royal Society of South Australia* **67**: 191–223.

1943 STEPHENS, C.G. The Pedology of a South Australian Fen. *Transactions of the Royal Society of South Australia* **67**(2): 62–67.

1943 STEPHENS, C.G. & EARDLEY, C.M. The Soils and Vegetation of Eight Mile Creek Swamp, South Australia. CSIR Aust., Div. of Soils, Divl Report 9/43. [Also CSIR Aust., Div. of Soils, Soil Paper 206.]

1944 CROCKER, R.L. Soil and Vegetation Relationships in the Lower South East of South Australia. *Transactions of the Royal Society of South Australia* **68**: 144–172.

1944 STEPHENS, C.G. A Soil Survey of F.R. No. 8 Hundred of Glen Roy, South Australia. CSIR Aust., Div. of Soils, Divl Report 2/44.

1945 STEPHENS, C.G. & BUTLER, B.E. Report on the Soils of Sections 335, 336, 346E, 346W, 348 and 340, Hundred of Kongorong, County Grey, South Australia. CSIR Aust., Div. of Soils, Divl Report 4/45.

1948 BLACKBURN, G. Soil Survey of Portion of Struan Estate, Hundreds Robertson and Joanna, County Robe, South Australia. CSIRO Div. of Soils, Divl Report 7/48.

1951 COALDRAKE, J.E. The Climate, Geology, Soils and Plant Ecology of Portion of County Buckingham (Ninety Mile Plain), South Australia. CSIRO Aust., Bull. No. 266.

1951 SPECHT, R.L. A Reconnaissance Survey of the Soils and Vegetation of the Hundreds of Tatiara, Wirrega and Stirling, County Buckingham. *Transactions of the Royal Society of South Australia* **74**(1): 79–107.

1952 BLACKBURN, G. The Soils of the Kingston–Avenue Drainage Area, South Australia. CSIRO Div. of Soils, Soils and Land Use Series No. 7.

1952 LITCHFIELD, W.H. A Reconnaissance Soil Survey of 'Campbell Park' Estate, Part Hundred of Baker, County Russell, South Australia. CSIRO Div. of Soils, Divl Report 3/52.

1953 BLACKBURN, G. & JACKSON, E.A. Report on the Soils of Parts of the Hundreds of Woolumbool and Lochaber, South Australia. CSIRO Div. of Soils, Divl Report 4/53.

1953 # BLACKBURN, G., LITCHFIELD, W.H., JACKSON, E.A. & LOVEDAY, J. A Survey of Soils and Land Use in Part of the Coonalpyn Downs, South Australia. CSIRO Div. of Soils, Soils and Land Use Series No. 8.

1954 # JACKSON, E.A. & LITCHFIELD, W.H. The Soils and Potential Land Use of Part of County Cardwell (Hundreds of Coombe and Richards) in Coonalpyn Downs, South Australia. CSIRO Div. of Soils, Soils and Land Use Series No. 14.

1954 STEPHENS, C.G. The Soils of a Fen in the Hundred of Caroline, County Grey, South Australia. CSIRO Div. of Soils, Tech. Mem. 7/54.

1955 BLACKBURN, G. & HUGHES, M.W. Soils Features in the Hundreds of Field and Colebatch, South Australia. CSIRO Div. of Soils, Tech. Mem. 8/55.

1956 TIVER, N.S. Deficiencies in South Australian Soils. SA Dept of Agric., Bull. No. 441. [Reprinted from the *Journal of the Department of Agriculture, South Australia* (October 1955) **59**: 100–113. Including the small-scale colour maps—*Soil Groups: South Australia excluding Lower S.E.* (covering the whole of the agricultural areas with the exception of the Lower South East) and *Soil Groups: Lower South East, S.A.*]

1959 # BLACKBURN, G. The Soils of County Grey, South Australia. CSIRO Div. of Soils, Soils and Land Use Series No. 33.

1959 # BLACKBURN, G. The Soils of the Tatiara District, South Australia—Hundreds of Tatiara and Wirrega. CSIRO Div. of Soils, Soil and Land Use Series No. 34.

1959 HUTTON, J.T., BLACKBURN, G. & CLARKE, A.R.P. Identification of Volcanic Ash in Soils in Mt Gambier. *Transactions of the Royal Society of South Australia* **82**: 93–98.

1964 # BLACKBURN, G. The Soil of Counties MacDonnell and Robe, South Australia. CSIRO Div. of Soils, Soils and Land Use Series No. 45.

1965 BLACKBURN, G., BOND, R.D. & CLARKE, A.R.P. Soil Development Associated with Stranded Beach Ridges in South-east South Australia. CSIRO Aust., Soil Pub. No. 22.

1965 * HAGERSTROM, R.C. Agriculture in South Australia—the Lower South-East. *Journal of the Department of Agriculture, South Australia* (February 1965) **68**: 200–214. [Featuring a generalised soil map and a map showing average annual rainfall isohyets. Also published as SA Dept of Agric., Leaflet No. 3788 B.]

1965 * MARRETT, P.L. Agriculture in South Australia—the Upper South-East—Counties Cardwell and Buckingham. *Journal of the Department of Agriculture, South Australia* (July 1965) **68**: 394–406. [Featuring a generalised soil map and a map showing average annual rainfall isohyets. Also published as SA Dept of Agric., Leaflet No. 3788 G.]

1970 * HAGERSTROM, R.C. Agriculture in South Australia—the Lower South-East. SA Dept of Agric., Extension Bull. No. 30.70, 20 pp. [Featuring a generalised soil map showing average annual rainfall at selected localities.]

1970 * MARRETT, P.L. Agriculture in South Australia—the Upper South-East. SA Dept of Agric., Extension Bull. No. 31.70, 20 pp. [Featuring a generalised soil map showing average annual rainfall at selected localities.]

1973 # FIRMAN, J.B. Regional Stratigraphy of Surficial Deposits in the Murray Basin and Gambier Embayment. SA Dept of Mines, Geological Survey of South Australia, Report of Investigations No. 39.

1974 BLACKBURN, G., COPPI, J.A. & THOMPSON, J. Soil Inspection Site of Forestry Rotation Experiment (E.P. 171), Tantanoola Forest Reserve, South Australia. CSIRO Div. of Soils, Tech. Mem. 40/74.

1975 * MARRETT, P.L. Agriculture in South Australia—the Lower South-East. SA Dept of Agric. and Fisheries, Special Bull. No. 10.75/1, 16 pp. [Featuring a generalised soil map showing average annual rainfall at selected localities and a map showing reticulated water supplies.]

1977 LAUT, P., HEYLIGERS, P.C., KEIG, G., LÖFFLER, E., MARGULES, C., SCOTT, R.M. & SULLIVAN, M.E. (compilers). *Environments of South Australia—Province 1 South East*. CSIRO Div. of Land Use Research, Canberra.

1977 * PRANCE, T. Agriculture in South Australia—the Upper South-East. SA Dept of Agric. and Fisheries, Bull. No. 13/77, 16 pp. [Featuring a generalised soil map and a map showing average annual rainfall isohyets.]

1978 MASCHMEDT, D.J. & MATHESON, W.E. The Suitability of Soils in the Mundulla District for Irrigated Market Gardening. Soil Conservation Branch, SA Dept of Agric. and Fisheries, Report S5/78.

1978 # WETHERBY, K.G. & ARMSTRONG, D.W. Soils of the Padthaway Irrigation Area. Soil Conservation Branch, SA Dept of Agric. and Fisheries, Report SS7.

1979 # BLACKBURN, G. & WRIGHT, D.A. Soil Mapping in County Cardwell, South Australia, 1933–1954. CSIRO Div. of Soils, Divl Report No. 37.

1982 ZIMMERMAN, D.L. & SEELIGER, M.T. Land Description of the South East Coast of South Australia. Soil Conservation Branch, SA Dept of Agric., Special Land Description SB7. [The corresponding eight 1:50 000 maps were published in 1979 in liaison with Coast Protection Division, SA Dept for the Environment, as *SA Dept of Agric., Report SB7*.]

1983 BLACKBURN, G. Soils. Chapter 5 in *Natural History of the South East*, M.J. Tyler, C.R. Twidale, J.K. Ling, and J.W. Holmes (eds), Royal Society of South Australia, pp. 39–48.

1992 LOWE, D.J. Profile Descriptions of Quaternary Basaltic Volcanogenic Soils of the Mt Gambier Area, Southeast South Australia. CSIRO Div. of Soils, Tech. Report 9/1992.

1994 BRYANNAH, M. & HERRMANN, T. Soils of the 'Willalooka' Area, Upper South East, South Australia. Primary Industries South Australia. A student project supported by the Land and Water Resources Research and Development Corporation and Primary Industries South Australia.

3.7 Pastoral Areas

1931 MURRAY, B.J. A Study of the Vegetation of the Lake Torrens Plateau. *Transactions of the Royal Society of South Australia* **55**(1): 90–112.

1936 RATCLIFFE, F.N. Soil Drift in the Arid Pastoral Areas of South Australia. CSIR Aust., Pamphlet 64.

1938 PRESCOTT, J.A. & SKEWES, H.R. An Examination of some Soils from the More Arid Regions of Australia. *Transactions of the Royal Society of South Australia* **62**(2): 320–341.

1940 CROCKER, R.L. A Report on a Reconnaissance Trip through the North-East Pastoral District in Connection with Soil Erosion and Pastoral Degeneration. CSIR Aust., Div. of Soils, Divl Report 1/1940.

1941 CROCKER, R.L. & SKEWES, H.R. The Principal Soil and Vegetation Relationships on Yudnapinna Station, North West, South Australia. *Transactions of the Royal Society of South Australia* **65**(1): 44–60.

1943 STEPHENS, C.G. Notes on the Soil and Vegetation of Warrambool Paddock, Mt Victor Station, Country Litton, South Australia. CSIR Aust., Div. of Soils, Divl Report 1/43.

1946 CROCKER, R.L. The Soils and Vegetation of the Simpson Desert and its Borders. *Transactions of the Royal Society of South Australia* **70**(1): 235–258.

1951 JESSUP, R.W. The Soils, Geology and Vegetation of North West, South Australia. *Transactions of the Royal Society of South Australia* **74**(2): 189–273.

1958 JACKSON, E.A. Soils and Hydrology at Yudnapinna Station, South Australia. CSIRO Div. of Soils, Soils and Land Use Series No. 24.

1958 NORTHCOTE, K.H. & HUTTON, J.T. Brief Comments on the Soils Seen on a Tour of the Northern Pastoral Areas of South Australia. CSIRO Div. of Soils, Tech. Mem. 1/58.

1960 NORTHCOTE, K.H. Atlas of Australian Soils. Explanatory Data for Sheet 1: Port Augusta–Adelaide–Hamilton Area. CSIRO Aust. and Melbourne University Press. [Accompanying map published at 1:2 000 000 scale.]

1960 PATTERSON, R.H. The Climate, Soils, Plant Ecology, Arboricultural Activities and Vegetative Development, Weapons Research Project Areas, North West Arid Interior, South Australia. Dept of Supply, Maribyrnong, Victoria.

1962 JACKSON, E.A. Soil Studies in Central Australia: Alice Springs–Hermannsburg–Rodinga Areas. CSIRO Aust., Soil Pub. No. 19.

1968 NORTHCOTE, K.H., ISBELL, R.F., WEBB, A.A., MURTHA, G.G., CHURCHWARD, H.M. & BETTENAY, E. Atlas of Australian Soils. Explanatory Data for Sheet 10: Central Australia. CSIRO Aust. and Melbourne University Press. [Accompanying map published at 1:2 000 000 scale.]

1970 GRANT, K. Terrain Classification for Engineering Purposes, Marree Area, South Australia. CSIRO Div. of Soils Mechanics, Tech. Paper No. 4.

1970 GRANT, K. Terrain Classification for Engineering Purposes, Kopperamanna, South Australia. CSIRO Div. of Soils Mechanics, Tech. Paper No. 5.

1970 GRANT, K. Terrain Classification for Engineering Purposes, Gason Area, South Australia. CSIRO Div. of Soils Mechanics, Tech. Paper No. 6.

1970 GRANT, K. Terrain Classification for Engineering Purposes, Pandie Pandie Area, South Australia. CSIRO Div. of Soils Mechanics, Tech. Paper No. 7.

1977 LAUT, P., HEYLIGERS, P.C., KEIG, G., LÖFFLER, E., MARGULES, C., SCOTT, R.M. & SULLIVAN, M.E. (compilers). *Environments of South Australia—Province 5 Eastern Pastoral and Province 6 Flinders Ranges*. CSIRO Div. of Land Use Research, Canberra.

1977 LAUT, P., HEYLIGERS, P.C., KEIG, G., LÖFFLER, E., MARGULES, C., SCOTT, R.M. & SULLIVAN, M.E. (compilers). *Environments of South Australia—Province 7 Western Pastoral*. CSIRO Div. of Land Use Research, Canberra.

1977 LAUT, P., HEYLIGERS, P.C., KEIG, G., LÖFFLER, E., MARGULES, C., SCOTT, R.M. & SULLIVAN, M.E. (compilers). *Environments of South Australia—Province 8 Northern Arid*. CSIRO Div. of Land Use Research, Canberra.

1980 WELLS, C.B. Soils at 28 Sites East and North of Woomera, South Australia: Profile Descriptions and Relationships, and the Impact of Wheeled and Tracked Vehicles. CSIRO Div. of Soils, Report No. 42.

1990 WRIGHT, M.J., FITZPATRICK, R.W. & WELLS, C.B. Soils. Chapter 4 in *Natural History of the North East Deserts*, M.J. Tyler, C.R. Twidale, M. Davies and C.B. Wells (eds), Royal Society of South Australia, pp. 61–74.

1996 WELLS, C.B. The Patterns of Soils of the Flinders Ranges. Chapter 7 in *Natural History of the Flinders Ranges*, M. Davies, C.R. Twidale and M.J. Tyler (eds), Royal Society of South Australia, pp. 76–85.

3.8 Metropolitan and Adjacent Areas

1934 ANON. St. Kilda Swamps. SA Parliamentary Paper No. 34.

1943 STEPHENS, C.G. A Soil Survey of Part Sections 445, 446, 447, 450 and 451, Hundred of Yatala County Adelaide, South Australia. CSIR Aust., Div. of Soils, Divl Report 4/43.

1946 TAYLOR, J.K. Soils of the Proposed Airport near West Beach, Adelaide. CSIR Aust., Div. of Soils, Divl Report 7/46.

1946 WOMERSLY, J.J. 'Graymore'. CSIR Aust., Div. of Soils, Soil Paper 318.

1947 AITCHISON, G.D. Soil Survey and Foundation Report of the Area at Clovelly Park, South Australia, for the War Service Homes Commission. CSIR Aust., Div. of Soils, Divl Report 32/47.

1947 AITCHISON, G.D. Soil Survey and Foundation Report of the South Australian Housing Trust Estate at Daws Road, Cudmore Park. CSIR Aust., Div. of Soils, Divl Report 22/47.

1947 AITCHISON, G.D. Surveys of Areas for the South Australian Housing Trust (a) at Hendon (Seaton Park), Adelaide, (b) at Vermont, Adelaide. CSIR Aust., Div. of Soils, Divl Report 15/47.

1947 AITCHISON, G.D. & BLACKBURN, G. Enfield North Estate of the South Australian Housing Trust. CSIR Aust., Div. of Soils, Divl Report 33/47.

1948 MARSHALL, T.J. A Soil Survey of an Area at Hectorville for the Housing Trust, South Australia. CSIRO Div. of Soils, Divl Report 15/48.

1950 AITCHISON, G.D. Domestic Building Foundations on the Shrinkable Clay Soils of the Suburbs of Adelaide. CSIRO Div. of Soils, Divl Report 5/50.

1951 LITCHFIELD, W.H. A Reconnaissance Soil Survey of South Australian Housing Trust Area, Hundred of Munno Para, County Adelaide, South Australia. CSIRO Div. of Soils, Divl Report 5/51. [Also CSIRO Div. of Soils, Tech. Mem. 7/51.]

1951 LITCHFIELD, W.H. Soil Survey of the Waite Agricultural Research Institute, Glen Osmond, South Australia. CSIRO Div. of Soils, Divl Report 2/51.

1951 LITCHFIELD, W.H. & JACKSON, E.A. The Soils of Windsor Garden Area, Hundred of Yatala, South Australia. CSIRO Div. of Soils, Tech. Mem. 10/51.

1952 AITCHISON, G.D. A Reconnaissance Soil Survey of the South Australian Housing Trust Area, Hundred of Munno Para, County Adelaide, South Australia. CSIRO Div. of Soils, Divl Report 5/51.

1954 AITCHISON, G.D., SPRIGG, R.C. & COCHRANE, G.W. *The Soils and Geology of Adelaide and Suburbs*. Geological Survey of South Australia, Bull. 32.

1954 JACKSON, E.A. & HOLMES, J.W. Distribution and Foundation Characteristics of the Rayleightown Housing Area near Adelaide. CSIRO Div. of Soils, Tech. Mem. 1/54.

1955 DE MOOY, C.J. & HUTTON, J.T. Soil Survey of Broadview Gardens Area, Hundred of Yatala, South Australia. CSIRO Div. of Soils, Divl Report 8/55.

1957 LITCHFIELD, W.H. Soil Survey and Foundation Report of Sections in Hundred of Munno Para, County Adelaide. CSIRO Div. of Soils, Tech. Mem. 7/57.

1957 WELLS, C.B. Second Interim Report on the Distribution and Morphology of the Soils at Elizabeth, South Australia. CSIRO Div. of Soils, Tech. Mem. 8/57.

1958 WELLS, C.B. Interim Report on the Soils at Elizabeth III—the Proposed Residential Area. CSIRO Div. of Soils, Tech. Mem. 8/58.

1958 WELLS, C.B. Interim Report on the Soils at Elizabeth IV—the Town Centre. CSIRO Div. of Soils, Tech. Mem. 9/58.

1959 BECKMAN, G.C. An Examination of Some Soils at 'Glenthorne' O'Halloran Hill, South Australia. CSIRO Div. of Soils, Tech. Mem. 5/59 and Tech. Mem. 42/66.

1959 # LITCHFIELD, W.H. Soils on the Western Slopes of the Mt Lofty Ranges near Adelaide and Elizabeth, South Australia. CSIRO Div. of Soils, Divl Report 8/59.

1961 WELLS, C.B. Soils at Elizabeth, South Australia. The Grid Survey. CSIRO Div. of Soils, Divl Report 4/61.

1965 WELLS, C.B. Patterns in Soil Geography in and near Adelaide. *Transactions of the Royal Society of South Australia* **89**: 117–123.

1966 HOLMES, J.W. Soils of the Northern Adelaide Plains. CSIRO Div. of Soils, Divl Report 16/66.

1966 WELLS, C.B. A Composite Map of the Soils of Metropolitan Adelaide. CSIRO Div. of Soils, Soils and Land Use Series No. 49.

1968 STEEL, R.D. & TAYLOR, J.K. Soils of the Athelstone–Gilles Plains–Modbury–Tea Tree Gully Area. SA Dept of Mines and Geol. Survey, Metropolitan Soil Map Series 1. [Also Geological Survey of South Australia, Geological Atlas 1:15 840 Series and Explanatory Notes 1.]

1969 FIRMAN, J.B. Stratigraphic Analysis of Soils near Adelaide, South Australia. *Transactions of the Royal Society of South Australia* **93**: 39–54.

1969 TAYLOR, J.K. Soils of the Glynde–Morialta–Erindale–Norton Summit Area. SA Dept of Mines and Geol. Survey, Metropolitan Soil Map Series 2. [Also Geological Survey of South Australia, Geological Atlas 1:15 840 Series and Explanatory Notes 2.]

1970 TAYLOR, J.K. Soils of the Unley–Beaumont–Belair–Brownhill Creek Area. SA Dept of Mines and Geol. Survey, Metropolitan Soil Map Series 3. [Also Geological Survey of South Australia, Geological Atlas 1:15 840 Series and Explanatory Notes 3.]

1970 TAYLOR, J.K. Soils of the Somerton–Marion–Brighton–Darlington–Blackwood Area. SA Dept of Mines and Geol. Survey, Metropolitan Soil Map Series 4. [Also Geological Survey of South Australia, Geological Atlas 1:15 840 Series and Explanatory Notes 4.]

1972 TAYLOR, J.K. *Soil Association Map of the Adelaide Region*. Geological Survey of South Australia, Geological Atlas 1:50 000 Series, Sheets 6628-III and 6528-II.

1974 TAYLOR, J.K., THOMPSON, J. & SHEPHERD, R.G. *The Soils and Geology of the Adelaide Area*. Geological Survey of South Australia, Bull. 46.

1975 ## MATHESON, W.E. The Suitability of Land for Irrigation in Portion of the Northern Adelaide Plain, South Australia. SA Dept of Agric., Specific Land Use Survey SS10.

1975 WETHERBY, K.G. & WATSON, K.A. A Description of the Soil on Block F18, Northfield Research Centre. SA Dept of Agric., Specific Land Use Survey SS11.

1976 NORTHCOTE, K.H. Soils. Chapter 3 in *Natural History of the Adelaide Region*, C.R. Twidale, M.J. Tyler and B.P. Webb (eds), Royal Society of South Australia, pp. 61–73.

1984 SIMS, G.C. (ed.). Regional Studies—Outer Adelaide. Part 13 in *South Australian Year Book—1984*. Australian Bureau of Statistics, South Australian Office. [Includes a section on soils, pp. 565–567.]

1986 FIRMAN, J.B. (compiler). *Adelaide Region Palaeosols*. SA Dept of Mines and Energy, Geological Atlas Special Series, 1:250 000. [Map only.]

1989 TAYLOR, J.K., SHEARD, M.J. & BOWMAN, G.M. *Soil Association Map of the Adelaide Region* (2nd edn). Geological Survey of South Australia, Geological Atlas 1:50 000 Series, Sheets 6628-III and 6528-II.

1994 SHEARD, M.J. & BOWMAN, G.M. *Soils, Stratigraphy and Engineering Geology of Near Surface Materials of the Adelaide Plains*. 3 Volumes. SA Dept of Mines and Energy, Report Book 94/9.