ATTACHMENTS

Ordinary Council Meeting
Under Separate Cover

Tuesday, 15 July 2025

Table of Contents

CONSERVATION MANAGEMENT PLAN

FOR THE EUSTON COURTHOUSE
39 MURRAY TERRACE, EUSTON

PREPARED FOR:
BALRANALD SHIRE COUNCIL
70 MARKET STREET (PO Box 120)
BALRANALD NSW 2715

PREPARED BY:
NOEL THOMSON ARCHITECTURE PTY LTD
20 CHURCHILL AVE, (PO BOX 5090)
WAGGA WAGGA NSW 2650

AUGUST 2024

ISSUE / DOCUMENT STATUS

Date	Issue	Issue / Record of Amendments	Authorised
March 2024	-	For Review	NT
August 2024	A	Issue for approval	NT

NOEL THOMSON ARCHITECTURE

Noel Thomson Architecture
PO Box 5090
Wagga Wagga
NSW 2650
Phone (02) 6926 3320
Fax (02) 6926 6011

Noel Thomson Architecture Pty Ltd
Nominated Architect: Noel Thomson 5869
ACN 077 973 623
ABN 82 077 973 623

TABLE OF CONTENTS

1. EXECUTIVE SUMMARY

Balranald Shire Council agreed to the preparation of the Conservation Management Plan for the "Euston Courthouse" in October 2022, and they provided funding for this Plan. Noel Thomson Architecture (NTA) was appointed as architect and heritage consultant for the Euston Courthouse Conservation Management Plan for future upgrading and conservation works.

Noel Thomson Architecture in preparing the Conservation Management Plan for the Euston Courthouse building at 39 Murray Terrace, Euston, attended the site in Late October 2022, held briefing session with Council Officer to obtain all relevant information so as to be able to formulate masterplan concept designs and scope of maintenance works for the Conservation Management Plan. Noel Thomson also took many photographs of the building's current condition and measured the building so as to be able to prepare Existing Conditions Plan and then Masterplan Options for the "Euston Courthouse" building.

This Conservation Management Plan is a Conservation Planning Document, which analyses the current context, condition, and management of the place [which has cultural significance] and provides conservation management policies and strategies for 'best practice' management for the "Euston Courthouse". The subject site - "Euston Courthouse" building is currently referenced as a heritage item (I6) "Courthouse", in the Balranald Local Environment Plan, 2010 – Schedule 5 Environmental Heritage.

The Conservation Management Plan (CMP) analyses the "Euston Courthouse" and grades the significance of spaces in accordance with Heritage NSW guidelines for developing Conservation Management Plan. From this and review of earlier 'Statement of Significance' for "Euston Courthouse" from the Balranald Shire Community Heritage Study, a new heritage assessment has been undertaken. A key component of this CMP is the conservation polices along with the management and maintenance policies and plans for "Euston Courthouse" with short term considerations, plans and checklist appended to this report. For the Management & Maintenance Plan and the Conservation / Maintenance Checklist refer to Appendix 4.

The guiding conservation policy is that "Euston Courthouse" shall be conserved and appropriately managed on an ongoing basis that respects its cultural and heritage significance for its continued use as a museum etc for the Euston Community. Importantly this CMP provides conservation policies (refer Section 6) that aim to improve the building and ensure that any change be consistent and sympathetic with the heritage significance of "Euston Courthouse" and its ongoing use.

Forming part of the Conservation Management Plan, the following tasks are to be undertaken in relation to "Euston Courthouse";

- Undertake a site visit of the property to record and review the issues
- Consult fully with Owners & Stakeholders in relation to the reporting and conservation polices.
- Investigate the history of the property, previous studies & related documents
- Complete the following tasks in relation to the CMP
  - Investigate the significance & prepare a current Statement of Significance in alignment with 'State Heritage Inventory' listing
  - Update the physical analysis & condition.
  - Provide Conservation Policies.
  - Provide proposed Conservation Management Plan for "Euston Courthouse."
  - Provide requirement for Maintenance Program / Schedule.
  - Provide Recommendations for future management, maintenance and conservation.

This Conservation Management Plan for "Euston Courthouse" should be adopted / endorsed, with review of this Plan within 10 years, or in the event of radical change to the property, or in ownership.

The main policy recommendations of this Conservation Management Plan are as follows;

- Burra Charter – Basis of Approach
- Control Change
- Management & Curtilage
- Services
- Safety Measures / Building Regulations

- Maintenance & Repairs
- Building Appearance & Form
- Intrusive Elements
- Conservation Advice & CMP Adoption
- Interiors
- Archaeology
- Adaptive Reuse & opportunities
- Significance and Conservation Funding
- LEP Requirements / Considerations

The Masterplanning section of the report identifies the constraints and opportunities, which arise as a result of the heritage significance of the "Euston Courthouse" and input from the building owner and stakeholders for the 'Conservation Management Planning' of the site. The "Euston Courthouse" is to be retained and upgraded in accordance with Conservation guidelines.

Following input, determine the best solutions for the future development of the "Euston Courthouse" and Building to meet anticipated future needs, particularly:

1. Provide accessible access to and within the building where possible and unisex accessible toilet facilities within the building

Note: For the Masterplan Concept Drawings incorporating above items refer to Appendix 3

Recommendation 1: is for the implementation of the Masterplanning works to the 'Final' design, noting that arrangements should be put in place to engage a full team of consultants with relevant experience, including heritage, services and structure consultants to assist in the preparation of tender / construction documentation.

Recommendation 2: is for the implementation of the Conservation Management Plan including the Masterplanning, Policy and Maintenance works and depending on funding approval undertake the upgrade and conservation works at the "Euston Courthouse" / Museum.

2. INTRODUCTION

2.1 Purpose

A Conservation Management Plan is a conservation planning document, which analyses the current context, condition, and management of the place [which has cultural significance], and provides conservation management policies and strategies for the 'best practice' management of the place taking into account client and 'external' requirements and current management structure for the "Euston Courthouse", Euston.

Balranald Shire Council agreed to the preparation of the Conservation Management Plan in September 2022 and they provided funding for this Plan.

Balranald Shire Council provided the following tasks to be undertaken in relation to the Conservation Management Plan for the Theatre Royal:

Tasks

1.1. Undertake a site visit to record and review the issues;

1.2. Consult fully with relevant Council Officers and Stakeholders, in relation to the project;

1.3. Investigate the previous studies & related documents;

1.4. Complete the following tasks in relation to the CMP

1.4.1 Obtain the physical analysis & condition.

1.4.2 Review evidence of potential significance and undertake analysis of evidence

1.4.3 Investigate the significance & prepare a current Statement of Significance.

1.4.4 Provide conservation policies.

1.4.5 Review the future uses after studying the constraints & opportunities.

1.4.6 Provide Conservation Management Plan options for the Euston Courthouse

1.4.7. Provide Recommendations for future management, maintenance and conservation.

Conservation Management Plan for: The Euston Courthouse building
Item Type: Built **Group:** Law and Order **Category:** Courthouse
Local Govt Area: Balranald
Address: 39 Murray Terrace, Euston NSW 2715
Statutory Address: Lot 59 DP 822092
Owner: Balranald Shire Council

PRESENT DAY EUSTON VILLAGE: Driving from Balranald, the Murray River irrigated farms begin near Euston. These Italian owned farms have mainly South-east Asian itinerant workers, with a few Korean and Seikh families, just as at Hillston and Mildura. About 300 people live in the village of Euston. There are also around 150 "grape block people" living in the surrounding irrigated farmlands. In contrast to the large Aboriginal population of its twin settlement across the river, Euston has a small Aboriginal population of locals. Lock 15 is the weir across the Murray River that enables local irrigation farming. It has some social significance for this reason and has previously been placed on the Council Plan heritage list. In 2013 it was in the process of being raised, to raise river levels for irrigation at Euston and to act as a detention basin to alleviate flood waters. This utilitarian concrete structure of recent origin and has little technical significance. It should not be included in a new local heritage list. Due to the high value product of table grapes grown in the Euston irrigation farms, the village has high potential for urban renewal and development investment. Euston's heritage showpiece is the old courthouse (the local police station is respectfully located at the rear). The courthouse has been acquired by council and provided as a facility to the local historical society. Euston Club, on the original Hotel site, is almost a twin settlement to the village of Euston. Gambling income from South-east Asian itinerant workers has combined with tax incentives for spending money on building improvements, to fund vast extensions. The Club runs poker machine parlours, bars, motel units and (soon) caravan areas. It has developed adjoining crown land into parking areas and a private riverside park (on crown land). The presence of irrigation farm money has been translated into some outstandingly high riverfront land prices at Euston. Robinvale is the Victorian twin settlement of Euston. It is a much bigger town. As soon as the Snowy Mountains Hydro Electric Scheme was finished, part of the Italian worker population moved to the irrigation areas. In places such as Robinvale they displaced the Australian soldier settlers. The irrigated town of Robinvale is the major

service centre with Mildura being the commercial regional centre. It is an urban renewal area rather than a heritage town, with big Pacific Islander, Italian and local Aboriginal population.

Fig. 1: SixMaps - aerial view of Euston Courthouse building and shops/offices – Murray Terrace, Euston

2.2 Heritage Significance

With reference to Heritage NSW "Assessing Heritage Significance" an item will be considered to be of State or Local heritage significance if, in the opinion of the Heritage Council of NSW, it meets one or more of the following criteria:

HISTORICAL: ***Criterion (a):*** *An item is important in the course, or pattern, of NSW's cultural or natural history (or the cultural or natural history of the local area).*

ASSOCIATIVE: ***Criterion (b):*** *An item has strong or special association with the life works of a person or group of persons, of important in NSW's cultural or natural history (or the cultural or natural history of the local area).*

AESTHETIC: ***Criterion (c):*** *An item is important in demonstrating aesthetic characteristics and/or a high degree of creative or technical achievement in NSW (or the local area).*

SOCIAL: ***Criterion (d):*** *An item has strong or special association with a particular community or particular community or cultural group in NSW (or the local area), for social, cultural or spiritual reasons.*

RESEARCH POTENTIAL: ***Criterion (e):*** *An item has the potential to yield information that will contribute to an understanding of NSW's cultural or natural history (or the cultural or natural history of local area).*

RARITY: ***Criterion (f):*** *An item possesses uncommon, rare or endangered aspects of the areas cultural or natural history (or the cultural or natural history of local area).*

REPRESENTATIVENESS: ***Criterion (g):*** *An item is important in demonstrating the principal characteristics of a class of NSW's cultural or natural places; or cultural or natural environments.*
- *or a class of local area's cultural or natural places; or cultural or natural environments.*

Statement of Significance:

This Statement of Significance is an extract from Balranald Shire Heritage Study Review 2013 prepared by Noel Thomson and Peter Kabaila.

Historical and aesthetic significance. Built 1883, this courthouse is historically associated with law enforcement at the busy river port of Euston in the 1850's to 1900. The attractive Victorian style building makes an important contribution to the street. Acquired by the Shire Council in the mid 1970's it has been provided to the local historical society for displays and public visitation.

Fig. 2: Street view of Euston Courthouse – Murray Terrace, Euston

2.3 Design Guide for Heritage

A number of documents guide the protection and development of heritage places in Australia.
The Burra Charter and associated publications provide the overall framework for all work on heritage places, while a range of reports, policies, and plans set the parameters for individual sites and projects.

The Burra Charter:
The Australia ICOMOS Charter for Places of Cultural Significance 2013 (Australia ICOMOS 2013) guides all heritage work in Australia and is endorsed by federal and state government heritage agencies and community organisations. The charter defines the basic principles and procedures to be followed in the conservation of heritage places through 34 articles. These are relevant to all types of built heritage.

The Illustrated Burra Charter: Good Practice for Heritage Places (Australia ICOMOS 2004) explains and expands on the ideas and principles of each article, and complements this with examples drawn from across Australia to illustrate the application of the particular article to real places.

The Burra Charter practice notes provide practical advice on the Burra Charter and its application. They cover a wide variety of topics, recognising that heritage is an increasingly diverse field.

Statement of significance:
A statement of significance summarises why a heritage place is important from a heritage viewpoint, based on the NSW Heritage Significance Criteria, and provides the context for any development or new work. It allows those responsible for managing the site to explore ways to use heritage significance in a positive way, while also outlining the constraints particular to the item or place.

Each aspect of significance leads to obligations and constraints that need to be considered when designing new work. If a statement of significance has not been prepared as part of the listing process, it is highly recommended that one is prepared for approval by the relevant consent authority.

The statement of significance is essential to developing a conservation management plan and preparing a heritage impact statement.

Conservation management plan:
A conservation management plan (CMP) guides the care and use of a heritage place, including any new development. It is organised into three main parts - investigation, assessment, and management; and should include the following:

- a clear statement of the significance
- identification of the constraints and opportunities that affect the place (including the owner's needs)
- policies as to which fabric, or elements, need to be conserved
- an outline of what can be changed if and where any new development occurs, and the parameters for such development or the degree of change that is permissible.

A CMP includes the statement of significance and conservation policy, and contains detail about achieving the future viability of the place and retaining the maximum heritage significance in future development proposals.

Further information:
Conservation Management Documents: Statement of Best Practice, Guidelines and Checklists on Conservation Management Plans and Other Management Documents (Heritage NSW: 2021) includes a model brief for a conservation management plan.

The Conservation Plan (7th edition, James Semple Kerr, 2013) outlines the logical processes of the Burra Charter, and how to prepare a conservation plan to guide and manage change to a heritage item appropriately.

Statement of heritage impact:
A statement of heritage impact (also known as a heritage impact statement) explains the impacts on heritage significance of any proposal to alter a heritage item or place, including carrying out work within an Heritage Conservation Area. It includes an explanation of how the proposed development will affect the heritage value of the place.

Further information: Statements of Heritage Impact (Heritage NSW: 1996; revised 2002 and 2022)

2.4 Background & Overview

The Balranald Shire Council acquired the Euston Courthouse building in the 1970's and its objective is to develop a conservation management plan to guide Council in appropriate resource allocation and work program to ensure the longevity of the building, including undertaking appropriate building inspection/s to understand the state of repair and prioritising a works plan.

It is noted that the Building is a listed heritage item (I6) in the Balranald Shire Council Local Environmental Plan 2010 – Schedule 5 Environmental heritage. Council expects the development of the conservation management plan to take inspiration from Heritage NSW's guidance documents on conservation management plans and conservation management strategies.

Council seeks to maintain the building within available resourcing and look to future funding opportunities to conserve and restore the building to continue the use of the much-loved public / historical building.

Balranald Shire Council engaged Noel Thomson Architecture in 2022 to prepare Conservation Management Plan for the Euston Courthouse with Noel Thomson visiting the site in late October 2022.

The Conservation Management Plan is to include the following sections;

1. Introduction
2. Analysis of Historical Significance
3. Analysis of Physical Evidence
4. Heritage Significance
5. Conservation Policy Development
6. Conservation Management Plan Documentation
7. Management Plan and Maintenance

2.5 Acknowledgments and Bibliography

This document has been prepared by Noel Thomson of Noel Thomson Architecture Pty Ltd with the assistance of;

- Balranald Shire Council Staff - Ray Mitchell
- Euston-Robinvale Historical Society Inc - Jim Holland & Bev Harbinson
- James Barnet - Chris Johnson, Patrick Bingham Hall, Peter Kohane
- Historic Courthouses of New South Wales - Peter Bridges
- Historic Courthouses of Victoria - Michael Challinger
- Historic and Heritage Court Houses in New South Wales - Lachlan Turner
- Balranald Shire Community Heritage Study 2006-2007 - Heritage Archaeology
- Balranald Shire Heritage Study 2013 - Noel Thomson and Peter Kabaila
- CSU Regional Archives - Magistrate & Police Records
- Trove website: https://trove.nla.gov.au/
- Euston History: https://www.robinvaleeuston.com/history-timeline/
- Heritage NSW: https://www.heritage.nsw.gov.au/search-for-heritage/publications-and-resources/

3. ANALYSIS OF HISTORICAL SIGNIFICANCE

3.1 Brief History of Euston / Robinvale

Balranald Shire is one of western New South Wales most important settlement areas and one of the few to have sites on the World Heritage List. The first recorded visitor to this area was Captain Sturt in his tour of exploration in 1830.

Edmund Morey, the first settler, left Lower Murrumbidgee Station, Canally, with an aboriginal, Bulla, a dray and stock and settled Euston Station in 1847. He was 17 years of age.

The name 'Euston' originated from 'Euston Hall', the home of the Earl of Grafton, Suffolk, England. Morey originally built a log cabin and some 40 years later build a spacious homestead. The original Euston run comprised some 2,000,000 acres.

Euston was originally known as 'Boomiaricool'. In 1865, Euston had a School. In the 1870's it was a thriving river port, visited by paddle steamers and barges. There was a Post Office, 2 stores, a police station with 2 policemen, a courthouse, a public hall, a "bond store", and a church. The Courthouse had a whipping post. There were also 2 hotels; the Royal was later owned by Reg Ansett (Ansett Airlines) and the Euston Club is built on the site of the original Shailers Hotel. The Punt at Euston was operating before 1866 when the first report of the town of Euston appeared in Bailliere's Gazetter. "On 1st May 1867 Euston became a link in the direct telegraph route of Sydney to Adelaide. The route came via Deniliquin, Moulamein and Balranald to Euston and went on through Wentworth to South Australia and Adelaide."

In 1876 the settlement at Euston was described in the following terms in an article 'The Riverine Trade (No. IV): Down the Murray', *The Argus* (newspaper, 5 February 1876, p. 9). "Euston is a crossing-place for sheep and cattle. There is a Custom-house officer here, though I should judge that his avocations were not of an extremely onerous nature, and the township also possesses a post and telegraph office. If the building can be taken as a type of the township, Euston has not a long life before it. The walls appear as if spilt apart by an earthquake. The hotels and about a dozen small houses constitute the remainder of the township."

Eventually the great Overland Telegraph through the Australian Centre (and notably Alice Springs) would be completed to Darwin to link by cable and land-wire to the centre of the Empire, London. There was a court house with a whipping post, police station, hotel, boiling down works and eucalyptus factory. The latter produced "Bosisto's Parrot Brand Eucalyptus". Euston was also a changing station for coaches. Charlie McMahon ran a passenger and mail coach from Swan Hill through Euston to Wentworth and Broken Hill. After the death of the river trade Euston went into economic decline but picked up when a bridge was built across the Murray River in 1924, connecting Euston to Robinvale on the Victorian side of the River. (2013 heritage study review)

Today; Euston is a small service centre on the banks of the Murray River. Typical of the prevailing agriculture of the Riverina, it is completely surrounded by vineyards. The township grew on the site of the Boomiarcool Station, established by the young Edmund Morey in 1846 at what was then the western limit of European settlement. This station grew to one million acres by 1946, by which time it was known as Euston, named after an estate in Suffolk, England. From the 1850s the land was devoted to wool production and the town developed as a river port with a wharf and ferry. It was also the site of a major river crossing and a punt was in service to carry supplies across the river. A considerable increase in trade resulted in a Customs House being established for stock movements and goods. During this period considerable pastoral development also took place, resulting in the establishment of a boiling-down works and wool-scouring plant. Euston Courthouse was established in the early 1850s. Most notable of Euston's industries was a Eucalyptus oil processing plant. Euston was proclaimed a town in 1885 although its economic status declined along with the river trade. The building of a railway and road traffic bridge across the Murray joining Robinvale in Victoria to Euston revitalised the town and after World War II, with the development of irrigation, the dry lands around Euston were transformed into a vast agricultural area. Vineyards and vegetable crops continue to be main economic mainstays in the area (2007 heritage study).

Timeline: Euston and Surrounds https://www.robinvaleeuston.com/history-timeline/

Prior to European settlement the area around Euston and Robinvale had been occupied by the Latje Late Aborigines for at least 30,000 years.

1830: Charles Sturt passed through the area on his expedition down the Murray River.
1836: Major Thomas Mitchell had passed through the area on the expedition known as "Australia Felix". The township grew on the site of the Boomiarcool station, established by seventeen-year-old Edmund Morey in 1846 at what was then the western limit of European settlement.
1847: John and Mary Grant took up a grant of 20 square miles (5,180 ha) on the Murray. They were able to provide the early paddle steamers with fresh vegetables. The area eventually became the town of Euston.
1853: William Randell in the paddle steamer Mary Ann and Captain Francis Cadell in the Lady Augusta reached Euston having travelled from the mouth of the Murray River.
1860s: The land was devoted to wool production and the town developed as a river port with a wharf, ferry, courthouse, police station, hotel, a boiling-down works, wool-scouring plant and Eucalyptus factory.
1865: Euston had a police station, a courthouse and a whipping post outside the Courthouse.
1883: The current Courthouse was built.
1885: Euston was proclaimed a town.
1924: The railway reached Robinvale.
1928: A construction of a railway and road traffic bridge across the Murray joining Robinvale in Victoria to Euston helped sustain the town.
1948: The huge Southern Cross windmill was erected.
2004: The NSW Road and Traffic Authority and VicRoad began construction of a new bridge across the Murray. It was finished in 2006.

Source: © Mrs Jenny Black

3.2 History of Euston Courthouse

Euston Courthouse is now the home of the Euston/Robinvale Historical Society, a group of volunteers dedicated to preserve the written, photographic and oral History of Euston, Robinvale and surrounding areas. The first Euston Courthouse was established in the early 1850's. In 1865, Euston had a Police Station, Courthouse and a Whipping Post on this site. In many rural townships the courthouse was often the most significant and utilised building in town. As populations grew, the courthouse gave towns an anchor point and sense of arrival as a town of significance.

Euston Court House was constructed in 1880 by builder F.M.H Parkes, with the design likely to be by the Colonial Architect James Barnet. The building was extended to the south by one room 3 in 1899 by Hocking Bros builder to the likely design of Government Architect W.L. Vernon. The building undertook various minor changes over the years when major renovations were undertaken to the Police residence in 1964. By 1978 the need for a new police station was established with design prepared by the Government Architect J.W Thomson, with the original 2 cells and exercise yard being demolished to allow for the construction and access to the new Police Station at the rear of the site completed in 1979.

The court proceeding were suspended in the mid 1980's with the Courthouse closed in 1989. The Euston Historical Society was established in 1981 which aim is to preserve the written and photographic history of Euston and Robinvale. Council having purchased the building c1990's this has provided the Society with a place to meet and prepare museum and historical displays in the building. RMS have established an office in the building which currently operates infrequently.

Trove / NLA articles on Euston Courthouse

The Hay Standard and Advertiser for Balranald, Wentworth, Maude.. Wed 7 Apr 1880 Page 6 EUSTON.
from our own correspondent March 28
As a proof of the importance of Euston, I notice that the Government have recently completed a very spacious and handsome court house, at an expense, I understand,
of some 300 pounds. The townspeople are also expecting to have a new school built, which is much required.

New South Wales Government Gazette (Sydney, NSW : 1832 - 1900)
Tue 7 Sep 1880 [Issue No.359] Page 4632 Government Gazette Notices

NOTICE is hereby given that a Court of Petty Sessions for the revision of the Electoral Roll for that portion of the Electoral District of Wentworth, which is included in the Police District of Euston, "will be holden at the Court-house, Euston, on Thursday, the 7th day of October next, at the hour of noon. Notices of claims and objections must be lodged with the undersigned on or before the 16th day of September next. Court-house, Euston, 26th August, 1880. WILLIAM JONES, Acting Clerk of Petty Sessions.

Government Gazette of the State of New South Wales (Sydney, NSW : 1901 - 2001)
Fri 6 Mar 1936 [Issue No.47] Page 1173 TENDERS.

Euston Police Station—Repairs and Renovations. Tenders. Specification, etc., at Police Station, Euston; Court-house, Balranald; and District Work Office, Hay.) quantities available.)
E. S. SPOONER, Minister for Works and Local Government

Fig. 3: c1905 the Euston Police Station and Courthouse, Euston NSW – Heritage Victoria

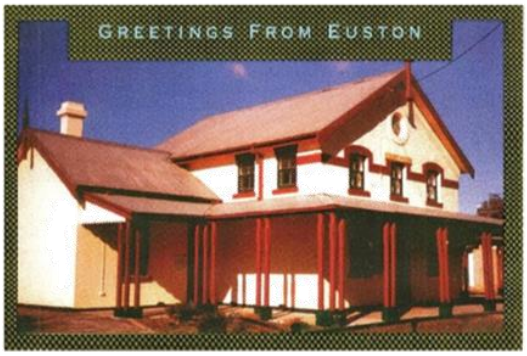
Timeline: Euston Courthouse

1880: The current Courthouse and Police Station was built, which consisted of Courtroom, Magistrates Office, Police Station & Police Residence, 2 cells and an exercise yard. Builder: F.M.H Parkes
1885: Euston was proclaimed a town.
1899: The additions at the south side Courthouse – one room was constructed which was later used as a Clinic. Builder: Hocking Bros
1936: Police Station forming part of the Courthouse complex had repairs and renovations undertaken.
1963 & 1968: Further repairs undertaken with cells and exercise yard still retained.
1978: Dept of Public Works prepares designs for new Police Station at the rear of the property – the cells and exercise yard demolished.
1979: The current Police Station to the rear of the property was built, with infill north verandah being removed/restored and painting of the Court building.
1981: Euston Historical Society was established to preserve the written and photographic history of Euston and Robinvale.
1984: Court proceedings held up
1989: The current Courthouse closed.
c1990's: Balranald Shire Council takes ownership of the Courthouse and with the assistance of the Euston Historical Society establishes a museum.
c2000: The Euston Courthouse undergoes further maintenance & renovations and painting of the Court building.

Historical Photographs

Euston Police Station / Courthouse c1936

Euston Courthouse - December 1966



Euston Courthouse Postcard c2000

Euston Courthouse 2004

Euston Courthouse c2009

Euston Courthouse c2020

Euston Courthouse / Museum – old court display c1990

Euston Courthouse / Museum – Nurses room display c1990

4. ANALYSIS OF PHYSICAL EVIDENCE

4.1 Definitions/Glossary of Heritage Terms

This section identifies and defines heritage terms used in the Burra Charter, the *Heritage Act* 1977

adaptation means modifying a ***place*** to suit compatible uses

alter in relation to a heritage item means to: make structural changes to the inside or outside of the heritage item or make non-structural changes to the detail, fabric, finish or appearance of the outside of the heritage item, including changes resulting from painting previously unpainted surfaces, providing that the same colour scheme and paint type is used.

compatible use means a use that involves no change to the culturally significant ***fabric***, changes which are substantially reversible or changes which require a minimal impact.

conservation means all the processes of looking after a place so as to retain its ***cultural significance***. It includes maintenance, and may according to circumstance, include ***preservation***, ***restoration***, ***reconstruction*** and ***adaptation*** and will commonly be a combination of more than one of these.

conservation management plan means a document prepared in accordance with the NSW Heritage Office guidelines which establish the heritage significance of an item, place or heritage conservation area, and identify conservation policies and management mechanisms that are appropriate to enable that significance to be retained.

cultural significance means aesthetic, historic, scientific, or social value for past, present or future generations.

curtilage means the area of land (including land covered by water) surrounding an item or area of heritage significance which is essential for retaining and interpreting its heritage significance.

demolish a heritage item or a building work, relic, tree or place within a heritage conservation area means wholly or partly destroy or dismantle the heritage item or building, work, tree or place.

environmental heritage means those places, buildings, works, relics, movable objects, and precincts, of State or local heritage significance.

fabric means all the physical material of the ***place***.

heritage item means : a, building, work, archaeological site or place specified in an inventory of heritage items that is available at the office of the council and the site of which is described in Schedule X (insert reference to the schedule of the plan containing a written description of heritage item sites) and shown (insert how it is shown, for example, by diagonal hatching) on the map marked "....."

heritage significance means historical, scientific, cultural, social, archaeological, architectural, natural or aesthetic value.

in the vicinity means surroundings, context, environment or vicinity of a heritage item

item means a place, building, work, relic, movable object or precinct.

local heritage significance means significance to an area in relation to the historical, scientific, cultural, social, archaeological, architectural, natural or aesthetic value of the item.

maintenance means the continuous protective care of the fabric, contents and setting of a place and is to be distinguished from repair. Repair involves ***restoration*** or ***reconstruction*** and should be treated accordingly.

material affectation means changes made to an item or place that will affect the heritage significance of that item or place and inclusive of more than just change to the fabric of that item or place.

movable object means a movable object that is not a relic.

place means an area of land, with or without improvements.

precinct means an area, a part of an area, or any other part of the State.

preservation means maintaining the fabric of a place in its existing state and retarding deterioration.

reconstruction means returning a place as nearly as possible to a known earlier state and is distinguished by the introduction of materials (new or old) into the fabric.

renovation in relation to a building or work means: the making of any structural changes to the outside of the building or work or the making of non -structural changes to the fabric or appearance of the outside

of the building or work, including changes that involve the repair, plastering or other decoration of the outside of the building or work.

restoration means returning the existing fabric of a place to a known earlier state by removing accretions or by assembling existing components without the introduction of new material.

setting means the area of influence or setting of a heritage item which may vary from the surrounding garden and fields of a country house to the pavement of an urban building.

State heritage significance means significance to the State in relation to the historical, scientific, cultural, social, archaeological, architectural, natural or aesthetic value of the item.

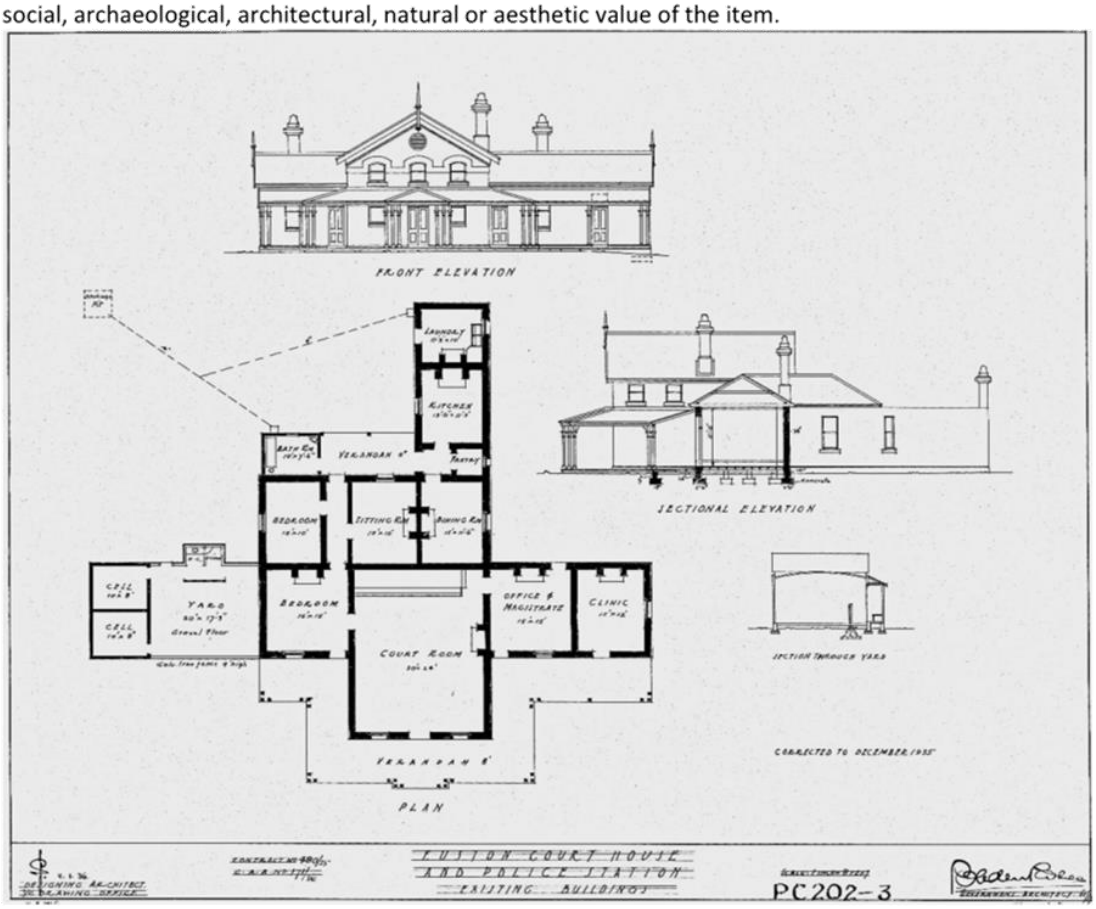


Fig 4: Early Government Architects Office Floor Plan - 1936

4.2 The Euston Courthouse - Building Condition

The condition of the building is fair with some signs of movement evident with cracking throughout the building and the southern end with evidence of 'rising damp' at internal and external wall areas.

The original c1880 front section of the building consists of former Courtroom, office for the Magistrate (now RMS) Clinic Room (south addition c1899), sitting room + 2 bedrooms (display rooms). The later added c1936 rear area consists of the bathroom, closed in verandah, dining (research room), kitchen and laundry + internal and external 'leanto' toilets.

The cell block and exercise yard have been removed c1978 for access to the new Police Station construction behind the Court House. The rooms remain relatively intact, however need building repairs, upgrading for access compliance issues and minor restoration so that the museum can operate with more functionality and better usage of rooms.

Structure stability & condition: The wall structure should be stable and structurally sound, however in several locations throughout the building deterioration (rising damp, blistering of paint & drumminess to plaster, etc) and movement/cracking are evident that require attention.

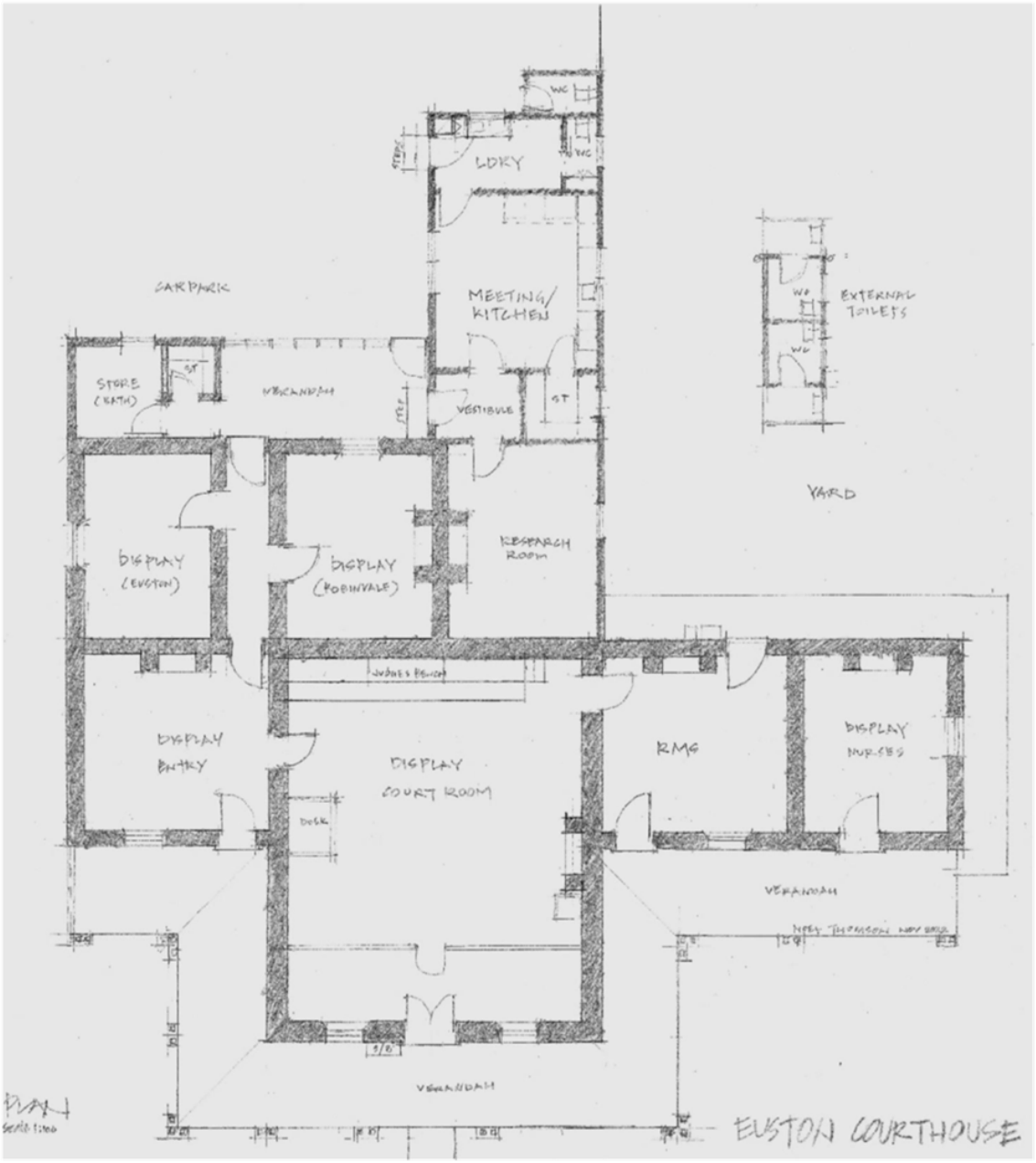


Fig 5: Existing Conditions Plan – Noel Thomson Architecture 2022

Note: Rising Damp and surface deterioration of bricks and render evident to walls in several locations – treatment required to address dampness; see "Salt Attack and Rising Damp" extract explaining rising damp below - refer Fig 6 and Appendix 5 for the complete technical guide.

Note: Cracking currently to brickwork / walls in several locations - repairs and monitoring required, with action for rectification either structural underpinning of footings or structural expanding resin injection under footings to stabilise the walls and restrict ongoing movement.

7 Rising damp

Figure 6 Section through a solid wall showing the path of rising damp which is caused by the suction of porous masonry. The pores effectively form a network of capillaries which draw soil moisture against gravity. Damp rises in the wall and eventually evaporates from the wall surfaces. As well as damaging masonry materials, the dampness may lead to fungal rot and insects (borers and termites) in the floor timbers. Today it is normal building practice to include a moisture barrier known as a damp-proof course (DPC) across the base of the wall below all floor timbers and at least 150 mm above ground level

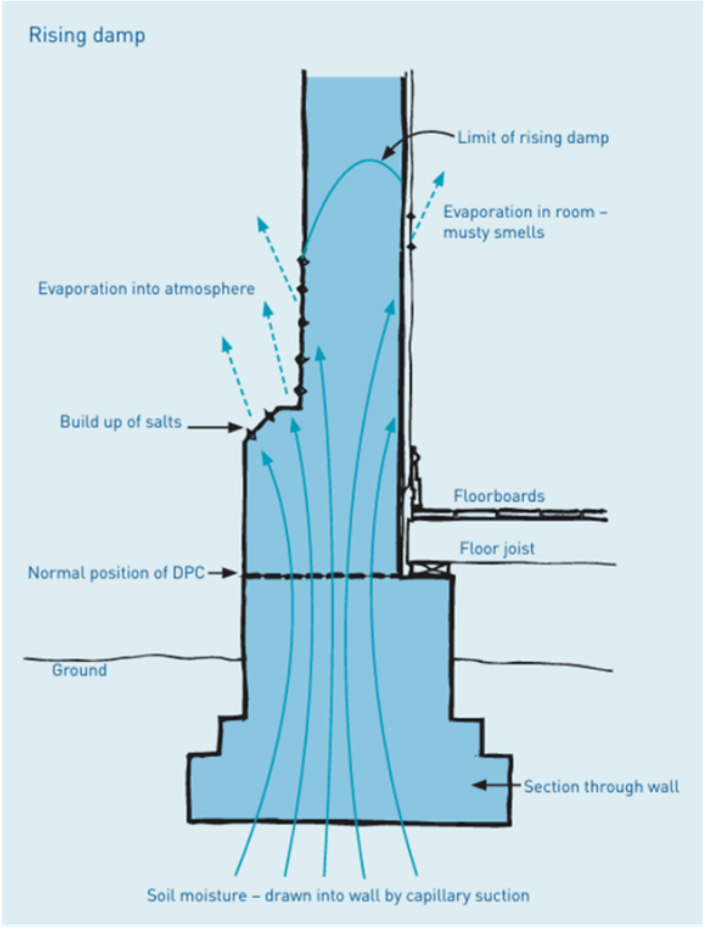


Fig 6: "Salt Attack and Rising Damp" – Technical Guide extract

Health & safety hazards: Flooring tiles to "Judges stage" and to rear Store / Bathroom contain 'asbestos'

North wall linings to back sunroom (infilled verandah) and internal and external to store/cupboard are 'Fibro' (contains asbestos) and check for deterioration of paint finish or lining.

Wall linings to airlock off kitchen & walls to kitchen above picture rail height + walls to pantry off kitchen are 'Fibro' (contains asbestos) and check for deterioration of paint finish or lining.

Wall and ceilings linings to back laundry & toilet are 'Fibro' (contains asbestos) and check for deterioration of paint finish or lining.

Note: for further information refer to Asbestos Inspection Report / Register dated 4 June 2019 (by All Clear Inspections) forming part of the Euston Courthouse - Management & Maintenance Plan – see Appendix 4.

Photographs of Building Issues

Evidence of rising damp at external wall

Evidence of rising damp at external wall

Evidence of rising damp at internal wall

Evidence of rising damp at internal wall

Evidence of movement cracking at internal wall

Evidence of movement cracking at internal wall

Evidence of deteriorated cladding at external wall

Evidence of deteriorated cladding at external wall

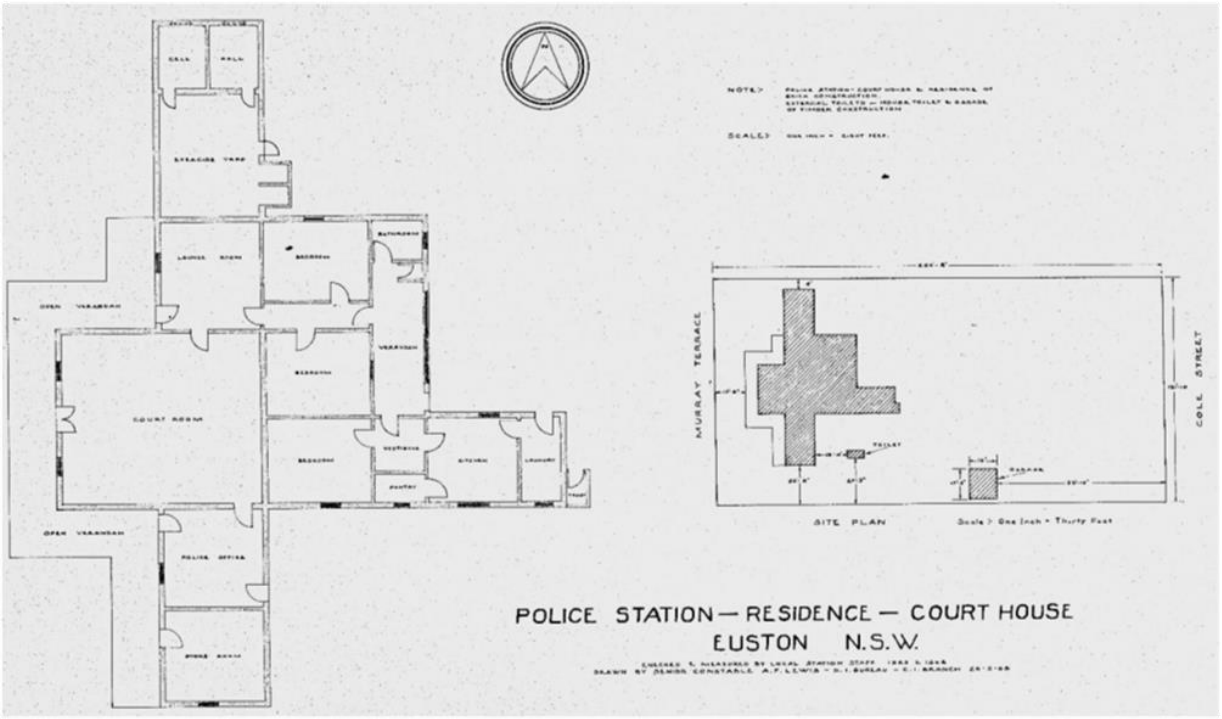


Fig 7: Euston Courthouse, Police Station + Residence – 1974

4.3 The Euston Courthouse - Recent Works

It is noted the cell blocks and exercise yard at the Euston Courthouse and Police Station were demolished in 1978/1979 to make way for new police station to the rear of the property and associated subdivision occurred.

Following the construction of the new Police Station the Public Works Department NSW proposed the demolition of the later added rear extensions (kitchen, laundry) and verandah and infill to front verandah – refer Fig 8 below.

The courthouse having been closed in 1989 was subsequently purchased by Balranald Shire Council with the building being home to the Euston / Robinvale Historical Society and is now known as the "Courthouse Museum"

The Euston Courthouse underwent some restoration and painting works in the early 2000s, noting the restoration of the front /north verandah back to its original condition (removal of infill section as proposed in the 1980s demolition plan) and painting in a new colour scheme undertaken.

There recently has been issues with 'rising damp' to the walls of the c1899 addition and some treatment has occurred to rectify the issue, with drainage addressed and a new concrete path laid at the south and east side of the building.

In 2019 a 'Hazardous Inspection' was undertaken at the former Courthouse building which identified several of concern from 'asbestos' flooring to linings at walls and ceiling in the rear c1935 constructed rooms (kitchen, laundry. Bathroom, Store & Pantry areas - refer to Asbestos Inspection Report / Register dated 4 June 2019 (by All Clear Inspections) forming part of the Euston Courthouse - Management & Maintenance Plan – see Appendix 4.

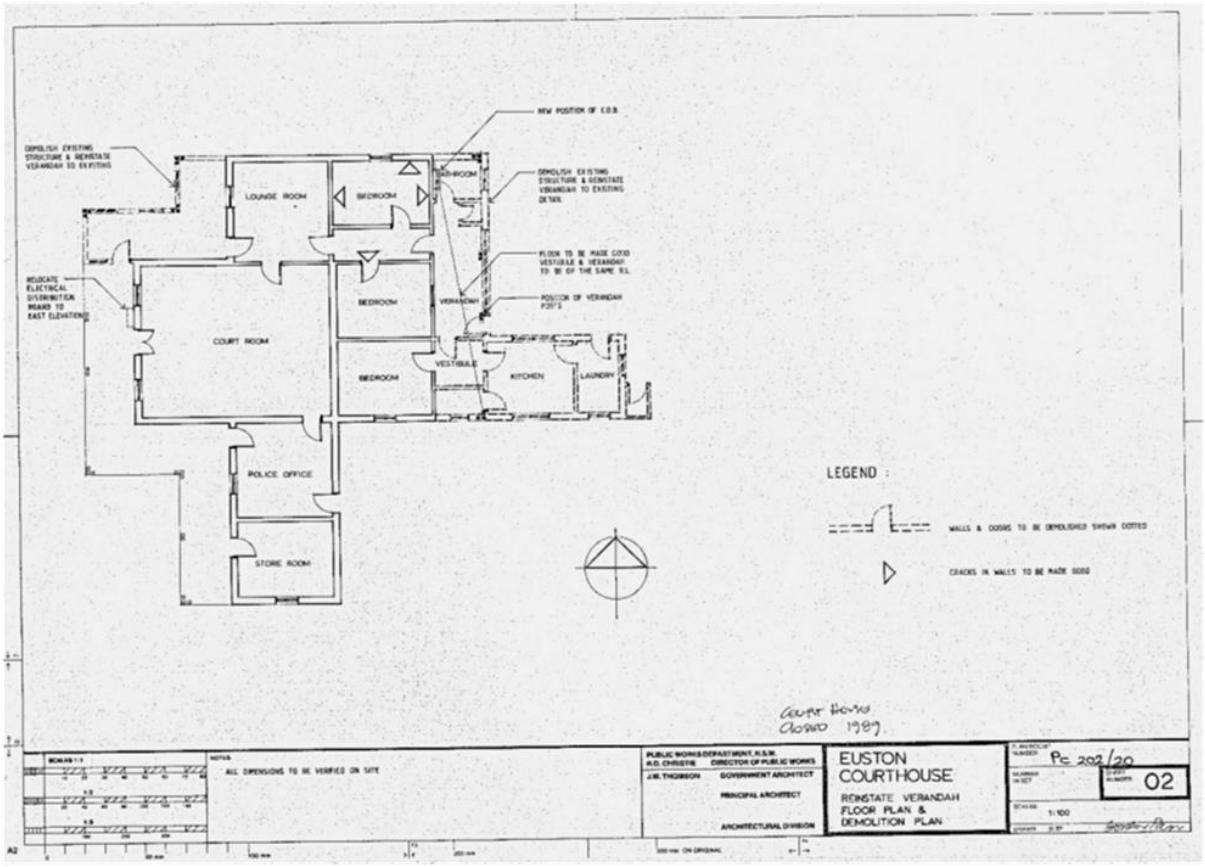


Fig 8: Euston Courthouse, Plan Station + Residence Demolition Plan 1989

5. HERITAGE SIGNIFICANCE

5.1 Current Status / Listings

Currently the Euston Courthouse is a Locally listed heritage item "Courthouse" (I6) which acknowledges this significance for the township. The listing description for the "Courthouse" appears in the Schedule of Environmental Heritage of the Balranald Local Environmental Plan 2010.

5.2 Statutory Heritage Lists

Only lists based on legislation have statutory standing in NSW. Heritage items with statutory protection include:

- items of local heritage significance listed on Schedules to Local Environmental Plans
- items of special significance to the people of NSW listed on the State Heritage Register
- NSW items on the Register of the National Estate (the Commonwealth has limited powers to restrict the actions of its agencies which affect these items).

Statutory lists of heritage items advise owners and the community of special places and objects which should be kept for future generations to appreciate and enjoy. Owners of items on these lists need to make an application to a consent authority, such as a local council or the Heritage Council, before they can make major changes. The consent authority has the responsibility of approving only those changes that respect the heritage significance of the item

Most of the items on local heritage schedules are of local heritage significance. But some items listed by local councils are also of State significance.

The State Heritage Register:

The State Heritage Register was created in April 1999 as a result of amendments to the Heritage Act, 1977. The Heritage Council seeks public comment before recommending the listing of items to the Minister for Urban Affairs and Planning. Listings are published in the Government Gazette.

5.3 Other Heritage Lists

The State Heritage Inventory already includes some cross-references to heritage items in New South Wales that are identified by organisations such as the National Trust, the Art Deco Society, the Institution of Engineers and the Royal Australian Institute of Architects.

In most cases these non-statutory lists cannot be used to control future changes to the items. Their value is to alert the community, local councils and the Heritage Council to significant items that may need to be listed on the State Heritage Register or Local Environmental Plans lists. The Courthouse building is **not listed** on the following heritage registers;

- Register National Trust of Australia (NSW)
- Register of the National Estate
- Royal Australian Institute of Architects - Register of Significant Buildings
- NSW Heritage State Heritage Register

5.4 The Burra Charter

The Burra Charter (2013) The Australia ICOMOS Charter for Places of Cultural Significance is used as a guideline in assessing heritage significance. The Burra Charter provides guidance for the conservation and management of places of cultural significance. The Charter sets a standard of practice for those who provide advice, make decisions, about, or undertake works to places of cultural significance, including owners, managers and custodians.

Article 26.1 of the Burra Charter states that:
"Work on a place should be preceded by studies to understand of the place which should include analysis of physical, documentary and other evidence, drawing on appropriate, knowledge, skills and disciplines."

Once the place has been studied, the cultural significance can be assessed. Article 1.2 of the Burra Charter defines ***cultural significance*** as the *"aesthetic, historic, scientific, social or spiritual value for past, present or future generations."*

5.5 Heritage NSW / Office Guidelines

The evaluation criteria for the assessment of cultural significance were developed by the NSW Heritage Council in association with amendments to the NSW Heritage Act 1977. They were developed with the goal of national consistency and community understanding and replaced the previously used ***State Heritage Inventory (SHI)*** assessment criteria. The ***State Heritage Register (SHR)*** criteria were gazetted followings to the Heritage Act and have been in force since April1999.

Assessment in this report has been made using these criteria for listing on the State Heritage Register. Criteria are outlined in the publication *Assessing Heritage Significance – Heritage Office 2001*. Under each section a place is assessed to be of **STATE** or ***LOCAL*** or **NO** heritage significance.

STATE: Of significance to the State of New South Wales

LOCAL: Of significance to the Local Government area

5.6 Grading of Significance

Grading reflects the contribution the element makes to the overall significance of the item. In accordance with the Heritage NSW Guidelines for Assessing Heritage Significance, the following five grades of significance have been defined.

Different components of a place may make a different relative contribution to its heritage value. Loss of integrity or condition may diminish significance. In some cases it may be useful to specify the relative contribution of an item or its components. While it is useful to refer to the following table when assessing this aspect of significance it may need to be modified to suit its application to each specific item.

Grading	Justification	Status
Exceptional	Rare or outstanding elements directly contributing to an item's local or state significance. High degree of intactness. Item can be interpreted relatively easily	Fulfils the criteria for local or state listing = 5
High	High degree of original fabric. Demonstrates a key element of the items significance. Alterations do not detract from significance.	Fulfils the criteria for local or state listing = 4
Moderate	Altered or modified elements. Elements with little heritage value, but which contribute to the overall significance of the item.	Fulfils the criteria for local or state listing = 3
Little	Alterations detract from significance. Difficult to interpret.	Does not fulfill the criteria for local or state listing = 2
Intrusive	Damaging to the item's heritage significance.	Does not fulfill the criteria for local or state listing = 1

Area	Photograph	Status / Rating
Main Facade of Courthouse – facing Murray Terrace	 	**5**

Southern wing / facade	  	4
East Wing / 1960's extension façade + toilets	  	3
East Wing / 1960's extension rear facade	  	3 / 4
Northern Wing / facade / verandah	  	4
Courthouse facade / verandah details	   	4
Couthouse facade / verandah details	   	4
Nurses Room	   	4
Court Room	  	4 / 5

Court room – details	   	4 / 5
Former Police Residence - Lounge room / entry / display	  	4
Former Police Residence - Bedroom - Robinvale Room	  	4
Former Police Residence - Bedroom - Euston Room	  	4
Former Police Residence - Hall & verandah (infilled)	   	2
Former Police Residence - Bathroom / Store	   	3
Former Police Residence - Bedroom / Research Room	  	3 / 4
Former Police Residence – Kitchen / Meeting Room	  	3

Former Police Residence – Laundry / Toilet	  	**3**
Outdoor Toilet	   	**2 / 3**

5.7 Assessment of Significance

With reference to Heritage NSW "Assessing Heritage Significance" the assessment of significance against Heritage NSW Criteria is as follows:

An item will considered to be of **STATE** or **LOCAL** heritage significance if, in the opinion of the Heritage Council of NSW, it meets one or more of the following criteria:

HISTORICAL:

Criterion (a): *An item is important in the course, or pattern, of NSW's cultural or natural history (or the cultural or natural history of the local area).*

The Euston Courthouse is of heritage significance to the people of Balranald Shire. It is representative of the law enforcement and civil services provided in the district for over 100 years until its closure in 1989.

ASSOCIATIVE:

Criterion (b): *An item has strong or special association with the life works of a person or group of persons, of important in NSW's cultural or natural history (or the cultural or natural history of the local area).*

The Euston Courthouse is important due to its 1880 design and probable association with colonial architect James Barnet and the design for the 1899 addition and likely association with government architect W.L Veron.

AESTHETIC:

Criterion (c): *An item is important in demonstrating aesthetic characteristics and/or a high degree of creative or technical achievement in NSW (or the local area).*

The Euston Courthouse has aesthetic significance due to its imposing 'Victorian' style facade with gable end and 3 arched windows and render band facing Murray Terrace and with its 'symmetrical' design by the highly regarded colonial architect of the period.

SOCIAL:

Criterion (d): *An item has strong or special association with a particular community or particular community or cultural group in NSW (or the local area), for social, cultural or spiritual reasons.*

The Euston Courthouse is important due to its association with current association with the Euston Historical Society, which started using the Court house from the mid 1980's as an archive for all the written and photographic history that the Society has collected over the years.

RESEARCH POTENTIAL:

Criterion (e): *An item has the potential to yield information that will contribute to an understanding of NSW's cultural or natural history (or the cultural or natural history of local area).*

The Euston Courthouse is home to the Euston Museum and encompasses a great variety of local history. A more formal detailing of this history, including a formal history of the Courthouse building including architect and builder, would be beneficial however new research opportunities are limited.

RARITY:

Criterion (f): *An item possesses uncommon, rare or endangered aspects of the areas cultural or natural history (or the cultural or natural history of local area).*

The item is not rare or unique to NSW but does form part of an important collection of NSW Government buildings.

REPRESENTATIVENESS:

Criterion (g): *An item is important in demonstrating the principal characteristics of a class of NSW's cultural or natural places; or cultural or natural environments.*

- *or a class of local area's cultural or natural places; or cultural or natural environments.*

The Euston Courthouse is representative of a good example of an early 19th Century New South Wales Courthouse.

5.8 "Euston Courthouse" Statement of Significance

The former "Euston Courthouse" building has historical and aesthetic significance. Built in 1880 to the probable design of colonial architect James Barnet, this courthouse is historically associated with law enforcement for over 100 years at the busy river port of Euston from the 1880's until its closure in 1989. The attractive 'Victorian' style building has aesthetic features and makes an important contribution to the street. Acquired by the Shire Council in c1990's, it has been provided as a meeting place for the local historical society and for their heritage displays and public visitation.

6. CONSERVATION POLICY DEVELOPMENT

INTRODUCTION:

The **guiding conservation policy** is that the Euston Courthouse shall be conserved and appropriately managed in a manner respecting its cultural & state heritage significance. That the features intrinsic to that heritage significance are conserved, and that change be consistent and sympathetic with the viable use or uses.

6.1 Burra Charter – Basis of Approach

POLICY 1.1

All conservation work and development will be carried out in accordance with the principles of The Australia ICOMOS charter for the conservation of places of cultural significance (the Burra Charter) in its current form.

POLICY 1.2

The statement of significance in this plan, together with any additional detailed research and assessments and scope of works, will guide future decisions and work on the place.

POLICY 1.3

Prior to undertaking work to any fabric on any building as having Significance, a statement of heritage impact consistent with NSW Heritage Manual procedures, shall be prepared which;

- Verifies the assessment of Significance through detailed investigation, recording and evaluation by conservation professional.
- Confirms the relevant policies applicable to the Significance and level of intervention proposed.
- Establishes a comprehensive specification applicable to the proposal, based on conservation policies from this Plan.

POLICY 1.4

All available documentary and physical evidence is to be reviewed as a guide, prior to any work being undertaken.

All work to be undertaken on the basis of known evidence. Conjecture, guesswork or prejudicial estimation is not acceptable.

POLICY 1.5

Retention, enhancement and retrieval of significant characteristics should be adopted as opportunities arise, after consideration of the changing needs and circumstances of the site and its users.

6.2 Control Change

POLICY 2.1

Ensure that sufficient consultation related to changes occurs between the stakeholders and Balranald Shire Council and Heritage NSW (as required).

POLICY 2.2

Ensure that changes provide for retention and enhancement of all significant fabric and items as identified in this Conservation Management Plan.

POLICY 2.3

Ensure that the Conservation Management Plan as referenced in this Conservation Management Plan is updated for any future works, then adopted and carried out in the recommended priority/staged order proposed.

POLICY 2.4

Ensure that all proposals are fully funded prior to works commencing on site.

POLICY 2.5

Ensure that all changes to the building have been vetted / approved by an experienced and professional conservation 'consultant' prior to any conservation works being undertaken.

POLICY 2.6

Prior to undertaking any changes or conservation works to the building ensure that approval for Works has been obtained from the NSW Heritage Council.

6.3 Management and Curtilage

POLICY 3.1

Centralise the management of the heritage place where possible. Establishment and implementation of a Management Structure for the Euston Courthouse in accordance with the below guidelines shall be undertaken as a priority. A Management Structure should be established that is capable of the following:

- Provide and manage levels of authority and responsibility for the stakeholders.
- Devise, implement and supervise conservation works / maintenance activities.
- Enhancing and develop the Cultural Significance of the site.
- Establishing visitor related activities which support appropriate interpretation and promotion.

POLICY 3.2

The curtilage for the site shall cover both the Euston Courthouse and the adjacent Police Station and Residence allotment, that form part of the original town survey allotment.

POLICY 3.3

Decisions must be made in the context of the use of the Euston Courthouse and the whole site and its significance. Efficient and appropriate use should be made of the Euston Courthouse and site/buildings, while also having regard to the amenity and value to the community.

6.4 Services

POLICY 4.1

Prior to the installation of new services, heritage architect/consultants opinion to be sort. New services should not generally be chased into brickwork or superimposed on fabric in visible locations while brackets; mountings and fixings should not damage significant fabric.

POLICY 4.2

All redundant services should be removed and the surrounding fabric made good, in particular where these services are exposed and visually intrusive,

POLICY 4.3

External lights should be in keeping with traditional fittings, of appropriate design and unobtrusive. Lighting levels should provide safety at night for attendance by historical members.

POLICY 4.4

Solar photovoltaic collectors if ever to be provided / considered for the building - the objective is to place these intrusive modern services onto roofs at the rear of the building where not visible from the street. This is a requirement so as to have NO impact on the heritage significance of the building.

POLICY 4.5

Any proposal for the installation of a new mechanical air conditioning system for the building has to be placed externally and internally where there is no visual impact.

6.5 Safety Measures / Building Regulations

POLICY 5.1

Conflicts between Fire Safety requirements and conservation recommendations should at first be referred to heritage architect/consultant and the 'Fire Advisory Panel' of Heritage NSW as appropriate.

POLICY 5.2

All works shall meet the performance requirements and provisions of the National Construction Code / Building Code of Australia for Fire, Egress, Disabled & Access and Essential Services, as administered by Balranald Shire Council.

POLICY 5.3

With the current occupation and the use of the building as a 'Museum' where entry by the public occurs, the building is to be brought up to 'standard' as per the 'Premises Standard' where disabled access and accessible amenities are required for the building. The access and amenities are to be in accordance with AS1428.1 "Design for access and mobility, Part 1: General requirements for access"

6.6 Maintenance and Repairs

POLICY 6.1

Undertake all tasks as set out in the Scope of Works for implementation in accordance with this Conservation Management Plan and with the minimum intervention in the significant fabric. Ensure that Balranald Shire Council approval is obtained prior to undertaking any works.

POLICY 6.2

Use of the Management and Maintenance Plan as advised by this Conservation Management Plan.

POLICY 6.3

As part of the 'Total Asset Management Planning', the owners/stakeholders (adopted Management Structure) shall include forecast expenditures sufficient for a five year Maintenance Plan.

POLICY 6.4

Consultants, staff and tradespeople must have appropriate qualifications for the tasks including sound conservation experience working on heritage buildings.

POLICY 6.5

In accordance with the "Burra Charter" Significant fabric must not be damaged by maintenance and repair activity. Trades will need to adhere to the conservation requirements for making good the surrounding materials and finishes if damaged.

POLICY 6.6

Roofs, awnings, gutters, box gutters downpipes and drains, weatherboards, brickwork & dampness are to be subject to regular inspection, repair and maintenance.

Note: Several lower brick walls are impacted by rising damp - further investigation and solutions are to be prepared for the works to address this issue with response to consider the impact on significant fabric.

POLICY 6.7

Health & safety hazards: There has been a Hazard Inspection Report undertaken that identifies certain materials / linings that contain asbestos:

- The asbestos containing materials marked as is in poor condition should be removed as a matter of importance due to their deterioration and potential for exposure.
- The asbestos containing material marked as is in fair condition should be stabilised and scheduled for removal during refurbishment.
- The asbestos containing material marked as in good can be left insitu and monitored regularly for any deterioration/damage and reassessed during future inspections

Note: for the Asbestos Inspection Report / Register dated 4 June 2019 (by All Clear Inspections) forming part of the Euston Courthouse - Management & Maintenance Plan

6.7 Building and appearance form

POLICY 7.1

Adaptation, which does not adversely affect the character and significance of the Euston Courthouse may be permitted within areas of building, however the following alterations may not be acceptable;

- The removal of primary internal walls
- New openings for doors and windows in significant rooms and external original walls
- Externally mounted plant and equipment
- Attached and exposed services and conduits
- Where there appears to be no feasible alternative for mechanical plant & equipment and exposed services, they should be accommodated and screened with a discrete envelope, painted in a similar colour to the surrounding material

POLICY 7.2

The Euston Courthouse building should retain its principal form including the floor layouts, roofs, mass, decoration, fenestration and access points. Work to areas of significance should be limited to preservation, restoration and reinstatement. All work, which could have a detrimental impact on the external form, is not acceptable.

POLICY 7.3
External materials, finishes and colour schemes for the Euston Courthouse building should be based on site investigation and scope of works. Prior to undertaking any changes to the external appearance Seek Council Approval

6.8 Intrusive Elements

POLICY 8.1
Intrusive elements, such as later added mechanical plant to the east side the "Euston Courthouse" building should be screened so as to eliminate or reduce their detrimental impact on the significance of the Theatre building.

POLICY 8.2
The making good of fabric associated with the removal of intrusive elements must be completed without further damage, and in a manner consistent with the Burra Charter principles of *restoration or reconstruction.*

6.9 Conservation Advice and CMP Adoptions

POLICY 9.1
The Conservation Management Plan is a guide for the future care and maintenance of the Theatre Royal. Experienced and professional conservation advice should be utilised for all conservation works.

POLICY 9.2
A comprehensive copy of all relevant archival materials should be assembled for reference use on site and stored in a secure manner at the Theatre Royal. A similar copy should be lodged with the Balranald Shire Council for reference and safe keeping. The following should be included;

- Copies of all drawings and plans
- Copies of all available photographs
- A copy of the Conservation Management Plan
- A copy of the Management and Maintenance Plan
- A copy of the Maintenance Plan / Checklist
- A copy of relevant records relating to building maintenance contractors and works.

POLICY 9.3
Masterplanning for the Euston Courthouse building and site elements has been prepared and form part of this Plan. Priority should be given to the documented works that are highlighted - Refer Appendix 3.

POLICY 9.4
A commitment is to be made to consult stakeholders and Balranald Shire Council in regard to the adequate care and maintenance of the Euston Courthouse building and site.

POLICY 9.5
The ICOMOS Burra Charter recommends that a Conservation Management Plan should contain provision for adoption and review. Balranald Shire Council to adopt this Conservation Management Plan. Review this plan within 10 years, or in the event of radical change to the Euston Courthouse building, or in ownership and major changes in use or circumstances. When the detailed design for the alterations to the components of the building are completed, seek Council approval

POLICY 9.6
On adoption / endorsement of this Conservation Management Plan, Balranald Shire Council shall make this Plan available to the general public and place a copy in the Balranald Library.

6.10 Interiors

POLICY 10.1
Ensure that all uses are sympathetic with the conservation of significant building fabric and finishes within the former Courthouse building.

POLICY 10.2
Where appropriate, reinstatement of significant items should be based on archival research and be consistent with the Burra Charter principles, in particular;

- Rear verandah

- Doors and windows
- Timber joinery - skirtings, architraves
- Light fittings and fixtures
- Ceilings and floors

6.11 Archaeology

POLICY 11.1
Where works are proposed which involve excavation, an archaeological assessment should be made to determine the possibility that relics may be revealed. This is particularly the case in the rear yard adjacent to the outdoor toilets.

POLICY 11.2
Where there is a possibility that relics may be exposed, specialist advice should be obtained from NSW Heritage, prior to the commencement of work. An Archaeological investigation should then be undertaken to assess, identify and record evidence of previous development.

POLICY 11.3
Where archaeological evidence is revealed at a works site, excavation should cease until advice has been obtained from a suitably qualified professional/archaeologist.

6.12 Adaptive Reuse and Opportunities

POLICY 12.1
Encourage and support research directed at increasing the knowledge and understanding of the significance of the Euston Courthouse at a local level (Euston/Balranald Community) and promote through the Balranald Tourist Information Centre and Balranald Shire Council. The following areas of research are worthy of detailed investigation;

- Detailed history of the establishment of the Euston Courthouse
- The operation of the Courthouse and it's standing within the community

POLICY 12.2
Support the development of temporary exhibitions, in conjunction with Policy 13.2 with the objective of attracting the support of the community.

POLICY 12.3
Maintain contact with 'Courthouses' and regional museums within the region to exchange information and skills related to the historic use of the site – Law & Order & Policing.

6.13 Significance and Conservation Funding

POLICY 13.1

Balranald Shire Council has noted the significance of the Euston Courthouse to the community with its heritage listing (item I6) "Courthouse" in the Schedule 5 Environmental Heritage of the Balranald Local Environmental Plan 2010.

POLICY 13.2
Secure ongoing funds to maintain the heritage building in the future for the project. Link conservation works and proposed new works together using conditions of approval, a heritage agreement, or another appropriate mechanism, so the conservation works are integral to the project.

Balranald Shire Council should pursue funding of the upgraded and conservation works for the Euston Courthouse and other issues raised in this Conservation Management Plan.

16.14 LEP Requirements / Considerations

POLICY 14.1
If/when the 'Works' to the heritage listed "Courthouse" are to be undertaken; with reference to the Balranald Local Environmental Plan - 2010, Clause 5.10 Heritage Conservation and the following sub-clauses would apply;

(1) Objectives
The objectives of this clause are as follows:
"(a) to conserve the environmental heritage of Balranald, and

(b) to conserve the heritage significance of heritage items and heritage conservation areas including associated fabric, settings and views,"

(2) Requirement for consent

Development consent is required for any of the following:

"(a) demolishing or moving any of the following or altering the exterior of any of the following (including, in the case of a building, making changes to its detail, fabric, finish or appearance):

(iii) a building, work, relic or tree within a heritage conservation area."

(3) When consent not required

"However, development consent under this clause is not required if—

(a) the applicant has notified the consent authority of the proposed development and the consent authority has advised the applicant in writing before any work is carried out that it is satisfied that the proposed development—

(i) is of a minor nature or is for the maintenance of the heritage item, Aboriginal object, Aboriginal place of heritage significance or archaeological site or a building, work, relic, tree or place within the heritage conservation area, and

(ii) would not adversely affect the heritage significance of the heritage item, Aboriginal object, Aboriginal place, archaeological site or heritage conservation area,"

(4) Effect on heritage significance

"The consent authority must, before granting consent under this clause in respect of a heritage item or heritage conservation area, consider the effect of the proposed development on the heritage significance of the item or area concerned. This subclause applies regardless of whether a heritage management document is prepared under subclause (5) or a heritage conservation management plan is submitted under subclause (6)."

(5) Heritage impact assessment

"The consent authority may, before granting consent to any development:

(a) on land on which a heritage item is situated, or

(b) on land that is within a heritage conservation area, or

(c) on land that is within the vicinity of land referred to in paragraph (a) or (b),

require a heritage management document to be prepared that assesses the extent to which the carrying out of the proposed development would affect the heritage significance of the heritage item or heritage conservation area concerned."

7 MASTERPLAN

INTRODUCTION:

This section of the report identifies the constraints and opportunities, which arise as a result of the heritage significance of the Euston Courthouse and input from stakeholders. The Euston Courthouse is to be retained and upgraded in accordance with Conservation guidelines and final 'Masterplan' drawing.

7.1 Preparation of a Masterplan

It is important that an in-principle agreement with the full range of stakeholders for the Euston Courthouse / Museum is reached for the preparation of a conservation management plan. Based on the appreciation of constraints and opportunities for the building and the operational aspects, this detailed conservation management plan is developed.

Refine all options for potential upgrade which is to include conservation practices for the former Euston Courthouse in the preparation of the Masterplan and if necessary set stages for the works to be undertaken. Complete all necessary consultations and prepare a 'Cost Plan' to prove the viability of the proposal and in seeking opportunities for grant funding.

Balranald Shire Council provided the following tasks to be undertaken in relation to the Conservation Management Plan and Masterplan for the Euston Courthouse;

1. Consult fully with relevant Council Officer's / Director and user groups of the 'Courthouse Museum'
2. Following consultations, determine the best solutions for the future development and upgrade of the Euston Courthouse to meet anticipated future needs, particularly:
   - 2.1 Provide for accessible amenities and disabled access to most parts of the building as part of the upgraded museum for a better experience by museum staff and the visiting public.
   - 2.2. address the building movement / cracking issues and the rising damp evident at walls throughout the building, addressing the deteriorated weatherboards that require replacement, addressing the 'hazardous materials' highlighted in the 2019 Inspection Report and the repainting of the building.

Noel Thomson prepared briefing notes from the site visit and instructions from Council officer where review of current museum operations undertaken and input into masterplanning was obtained. From this meeting an outline of opportunities and restraints were highlighted;

Priorities are to provide accessible entry and amenities to the building and address building movement and rising damp issues - see below;

1. The 'accessibility' to all areas of the building and the requirement for accessible toilet facilities to be provided within the building or as an extension.
2. Maintenance issues raised; need to address building movement / cracking, moisture / rising damp,
3. Paint the outside surfaces of the building in an appropriate colour scheme.

The initial Masterplan concept sketch options were prepared and form part of this Conservation Management Plan. Currently the building is operated as a museum for the front rooms and the rear area of the former police residence (kitchen, bedroom, laundry, etc) is used by historical society/museum members for research, meetings, ablutions, etc.

Noel Thomson Architecture has prepared Masterplan Concept Design – Final, with the basis of the design as outlined below;

1. The addition of a ramp to the front / main entry to the building / museum for access for people of all abilities.
2. The addition of a ramp for access by historical society/museum members for to the rear areas of the building where meetings and research are undertaken
3. The addition of new accessible amenities to the rear of the building, replacing the existing toilet for use by visitors and historical society/museum members
4. The highlighting of areas where building repairs and maintenance including areas of damaged masonry work due to movement, 'rising damp', deteriorated weatherboards, etc

Note: Refer to Fig 9 for the Masterplan Concept Sketch Drawing

Note: for all Masterplan Concept Sketch Drawing Options - Refer to Appendix 3.

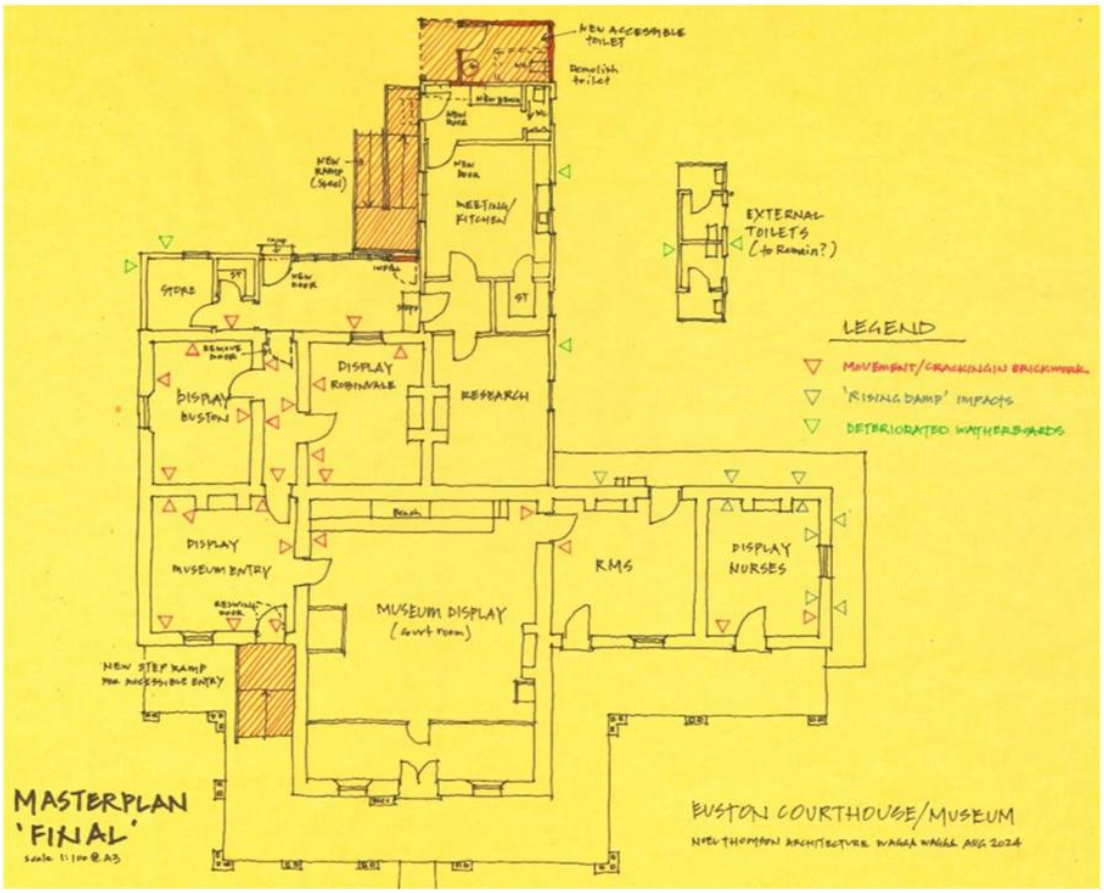


Fig. 9: Masterplan Final for the former Courthouse building – Noel Thomson Architecture 2024

Building Accessibility Requirements:

Legislative framework for Accessibility Requirements to Buildings include the;

- Disability Discrimination Act 1992 (DDA)
- NSW Anti Discrimination Act 1977
- Disability (Access to Premises – Buildings) Standards 2010
- National Construction Code 2022 (Vol 1 Building Code of Australia)
- Australian Standards, particularly ◦ AS1428.1 2009 as amended ◦ AS1428.4.1 2009 as amended

In accordance the above where Disability access to all buildings including heritage buildings is required, the provision for access must work within the principles of The Burra Charter for heritage conservation.

Therefore, the Masterplan Concept Sketch Drawing for the Museum (*former Courthouse building)* includes the following;

1. The addition of a ramp to the front/main entry to the building/museum for access for people of all abilities.
2. The addition of a ramp for access by historical society/museum members for to the rear areas of the building where meetings and research are undertaken
3. The addition of new accessible amenities to the rear of the building, replacing the existing toilet for use by visitors and historical society/museum members

For examples of similarly installed entry ramps, accessible steel ramps and accessible toilets refer Fig 10 photographs below;

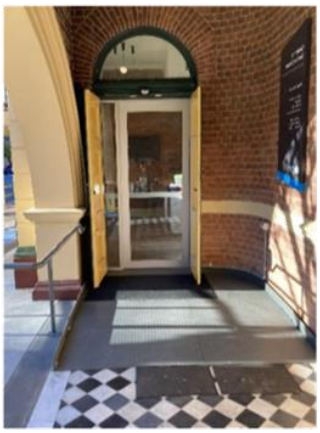


Fig 10: Steel overlay Ramp (Entry)

Accessible steel ramp (rear)

Accessible toilet (rear)

7.2 Implementation of a Masterplan

Arrangements should be put in place to engage consultants with relevant experience, including heritage, architectural, services and structural consultants to assist in the preparation of tender / construction documentation for the implementation of the Conservation Management Plan and Masterplan designs.

The cost of conserving the significant parts of the building, the provision of "accessibility" requirements and upgrade to the building and potential upgrading services to an acceptable standard is likely to be in excess of the available Council resources in the short term. As is often the case with projects such as these, staged implementation of the works is likely to be the adopted strategy.

In determining priorities, both cost and need have been considered. One of the major expenses will be the cost of providing the "accessibility" requirements. There may also be considerable costs in rectifying / addressing the building movement and rising damp issues.

High priority works are for the "accessibility" requirements and for the conservation / maintenance repairs which will assist in the long-term structural capability of the building. Medium priority works are for the 'restoration' of deteriorated cladding areas and the removal of any 'hazardous materials' and low priority work is the external painting in a new colour scheme. The works have been set out below in stages as the likelihood is that the works will be implemented progressively. Depending on the availability of funding, construction works could be staged as follows in order of priority as follows;

Stage 1: Investigate and review solutions for rising damp, seek quotes and install appropriate damp-proofing to address 'rising damp' issues

Stage 2: Install compliant accessible ramps to entry and rear areas and accessible toilet amenities to meet the requirements of NCC/BCA and AS1428.1.

Stage 3: Building repairs and maintenance including areas of damaged masonry work due to movement / cracking, window and cladding repairs and internal / external upgrades, etc

Stage 4: Removal of 'hazardous materials' including '*asbestos*' linings to walls and ceilings in the building

Stage 5: Further conservation works, building repairs and maintenance that that will enhance the internal and external areas of the building.

Paint the building internal and external surfaces as required.

Review roofing and guttering as per Management and Maintenance Plan.

8. MANAGEMENT AND MAINTENANCE PLAN

INTRODUCTION:

This section of the report identifies the management and maintenance tasks, which arise as a result of the heritage significance of the Theatre Royal. Guidelines are required to ensure the appropriate management, statutory approvals and maintenance tasks are followed.

8.1 Recommendation for works

The Euston Courthouse is to be retained and upgraded in accordance with Conservation guidelines.

Complete essential conservation works that are required to prevent further decay to the building fabric and establish clear management and operational guidelines for all contractors, staff and visitors, so that they are aware of the heritage value of the building/site.

8.2 Statutory Controls and Opportunities

Given the Euston Courthouse is Heritage Listed, as with all development, Council will require a Development Application and an application for a Construction Certificate for the proposed building works. In regards to a Development Application the works are to be fully described in a Heritage Impact Statement completed by a heritage architect/consultant. This is to ensure that the general character of the works are sympathetic with the significance of the building, and that the details for 'change' does not detract from the heritage architecture.

This Conservation Management Plan (CMP) may then be proposed to Balranald Shire Council as a document for consent, allowing for minor works, which are covered within the agreed CMP to be exempt from a continual approval process.

8.3 Management

Following the implementation of the proposed new Management Structure for the Euston Courthouse building, the adoption of this Conservation Management Plan is critical for the buildings ongoing management.

The policies in this Conservation Management Plan should direct and support all future decisions concerning the site including those involving restoration, reinstatement and new construction.

It is highly recommended that an experienced heritage architect/consultant be retained to consistently advise on conservation and development issues. This will ensure that documentation and proposed works are always based on sound advice, relative to the heritage significance of the Euston Courthouse and the statutory requirements and approvals.

8.4 Maintenance

The Conservation Management Plan lists the works, which may be defined as corrective maintenance. These items are designed to bring the building to an acceptable standard. This will apply to the building fabric and also to the appropriate character of the materials, finishes and workmanship. The Management & Maintenance Plan must then cover the following requirements;

- Planned maintenance: For example cleaning of roofs and gutters, deterring roosting pigeons, external painting, etc.
- Emergency corrective maintenance: For example health, safety and security issues.
- Maintenance tasks may be carried out by staff in some instances, but mostly by specialist contractors and tradespeople. It is essential that all personnel are familiar with the tasks and any specific requirements dictated by the heritage status of the materials and finishes.
- It is important that contractors involved with tasks such as air-conditioning and communications are aware of the heritage significance of the building to ensure that inappropriate works (materials and workmanship) are not undertaken.
- There are many examples, particularly on external elevations, where services have been fixed to walls. The first alternative should be to attempt a concealed route either on the inside or the

outside. Where this is not possible, screen the item / service with an appropriate material and colour. The screen is not to disguise or imitate but to reduce the visual impact of the object.

Recommendation is for the preparation of Management & Maintenance Plan and Maintenance Checklist documentation separate to this Conservation Management Plan.

Note: For documentation refer Appendix 4

Appendix 1 – Current Building Photographs

Appendix 2 – Existing Building Layout + Archival Drawings

Appendix 3 – Masterplan Drawings - Plan Layout

Appendix 4 – Management & Maintenance Plan and Maintenance Checklist

Appendix 5 – Salt Attack and Rising Damp - Technical Guide

NOEL THOMSON FRAIA
Architect and Heritage Consultant
Noel Thomson Architecture Pty Ltd

AUGUST 2024

APPENDIX 1 – CURRENT BUILDING PHOTOGRAPHS: 2022

EXTERNAL

1: Front/Murray St facade

2: O/A Building – west facade

3: Rear extension – south facade

4: Rear extension – south facade

5: View of deteriorated weatherboards

6: View of deteriorated weatherboards

7: View of window + weatherboards

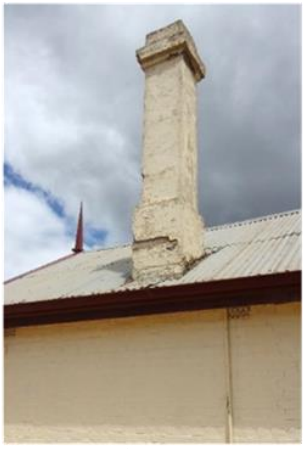
8: View of window + weatherboards

9: View of window + weatherboards

10: View of junction – b/w original + extension

11: View of junction – b/w original + extension

12: View of chimney



13: View of chimney

14: Original building – east facade

15: East facade showing 'rising damp'

16: East facade showing 'rising damp'

17: South facade showing 'rising damp'

18: South facade showing 'rising damp'

19: South facade showing 'rising damp'

20: West Facade – south wing

21: West facade + verandah

22: Main west facade

23: Main west facade + verandah

24: West facade north wing

25: West facade north wing + verandah

26: North facade – brcik + infill rear verandah

27: North + East facade - infill rear verandah

28: East facade infilled rear verandah

29: Junction between verandah + extension

30: View of rear extension

31: East view of rear extension + toilet

32: Rear outdoor toilet

33: Rear entry at verandah

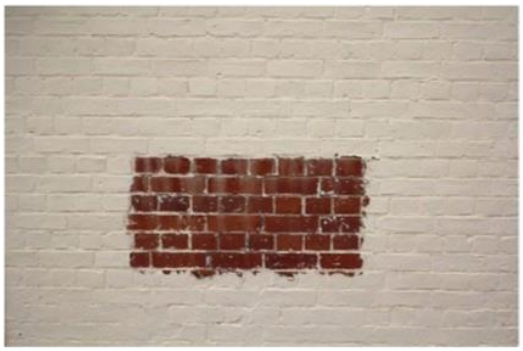
34: Deteriorated weatherboards north wall

35: Deteriorated weatherboards north wall

36: View of rear extension – infilled verandah

37: North facade - brickwork deterirated at base

38: North facade – brickwork + vent



39: North facade – paint removal test

40: View of verandah barge

41: West facade – entry to Museum

42: North Wall of Courtroom

43: Concrete paving at verandah

44: Concrete paving at verandah

45: North verandah - concrete

46: Later electrical SB

47: Original Courtroom entry

48: Concrete paving at verandah

49: Concrete paving at verandah

50: Concrete paving at verandah

51: South wall of Courtroom

52: Verandah post / path detail

53: Concrete paving at verandah

54: Door Detail

55: Window Detail

56: paving at South Side

57: Verandah post / plinth detail

58: Wall base detail

59: Wall base detail

60: External Toilet from west

61: External Toilet - south west view

62: External toilet north view

63: External toilet east view

64: External toilet west view

65: Deteriorated weatherboards

66: East toilet

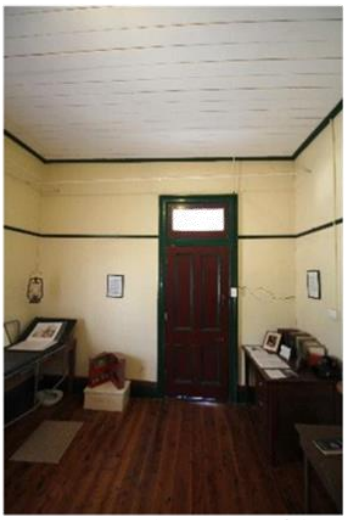
67: West toilet

68: Internal view toilet

INTERNAL

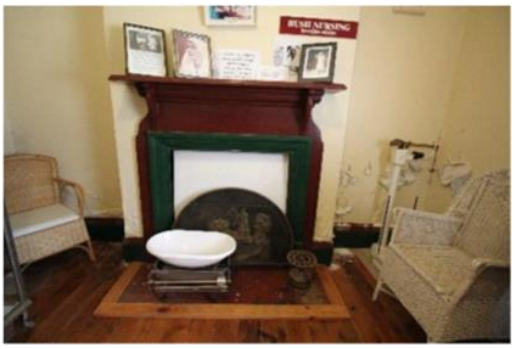
FORMER EUSTON COURTHOUSE – CONSERVATION MANAGEMENT PLAN 43

69: Nurses Display east wall / fireplace



70: Nurses Display west wall / door

71: Nurses Display south wall / window



72: Nurses Display fireplace

73: Nurses Display floor

74: Nurses display ceiling

75: Nurses display structural tie rod / cracking

76: Nurses display structural tie rod / cracking

77: Nurses display structural tie rod / cracking

78: Nurses Display 'Rising Damp' issues

79: Nurses Display 'Rising Damp' issues

80: Nurses Display 'Rising Damp' issues

81: Courtroom West wall / Entry

82: Courtroom West Wall "seating"

83: Courtroom West Wall "seating"

84: Courtroom South Wall/fireplace

85: Courtroom Dock

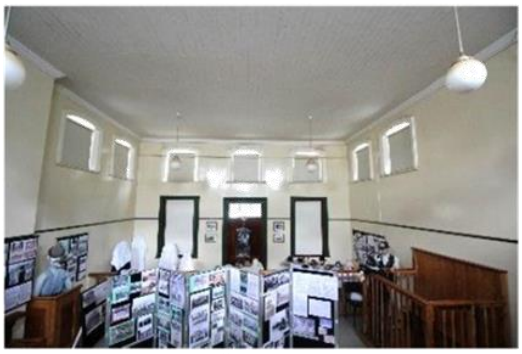
86: Courtroom + Judges bench

87: Courtroom door detail

88: Courtroom door detail

89: Courtroom + Judges bench

90: Courtroom + Judges bench


91: Courtroom – overall view


92: Courtroom ceiling north


93: Courtroom ceiling south


94: Courtroom fireplace


95: Entry Room – east wall/ fireplace


96: Entry room north wall


97: Entry Room south wall


98: Entry Room west/entry wall

99: Entry Room flooring

100: Entry Room fireplace

101: Hall door fanlight

102: Entry door Fanlight

103: Entry Room – cracking at walls

104: Entry Room – cracking at walls

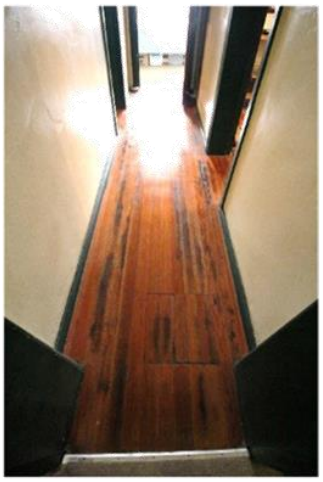
105: Entry Room – cracking at walls

106: Entry Room – cracking at walls

107: Entry Room – cracking at walls

108: Hall - east

109: Hall - west



110: Hall floor

111: Hall - cracking at walls

112: Hall - cracking at walls

113: Hall - cracking at walls

114: Euston Room – North wall/window

115: Euston Room – West wall

116: Euston Room - East Wall

117: Euston Room floor

118: Robinvale Room - south wall/fireplace

119: Robinvale Room n- orth wall/door

120: Robinvale Room - west wall

121: Robinvale Room - wast wall/window

122: Robinvale Room fireplace

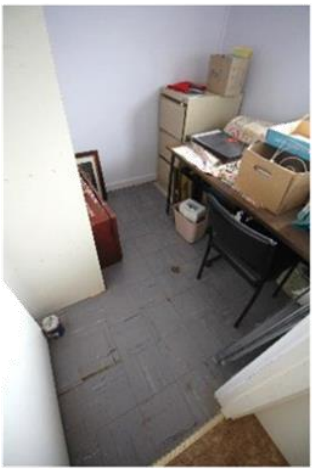
123: Robinvale Room ceiling

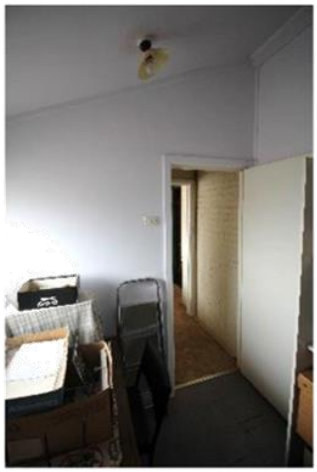
124: Robinvale Room - cracking at walls

125: Robinvale Room - cracking at walls

126: Robinvale Room - flooring

127: Robinvale Room - flooring





128: Bath/Store – flooring, window, wall + door views

129: Hall

130: Rear infilled verndah

131: Store - shelving

134: Store - flooring

135: Store - ceiling

136: Infill verandah – north wall

137: Infill verandah – window

138: Infill verandah south wall

139: Infill verandah steps to vestibule

140: Infill verandah view of wall/ceiling

141: Door view – showing 'gap'

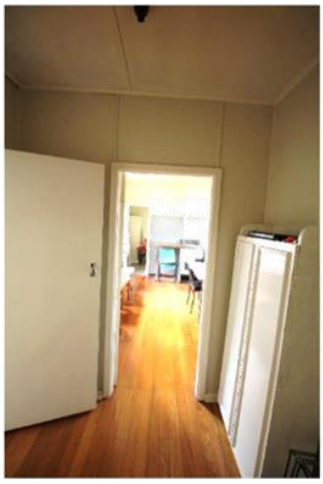
142: Infill verandah oringinal window detail

143: Infill verandah door/hall detail

144: Infill verandah cracking at wall

145: Infill verandah cracking at wall

146: Vestible – south wall



147: Vestible – east wall

148: Vestible north wall/door

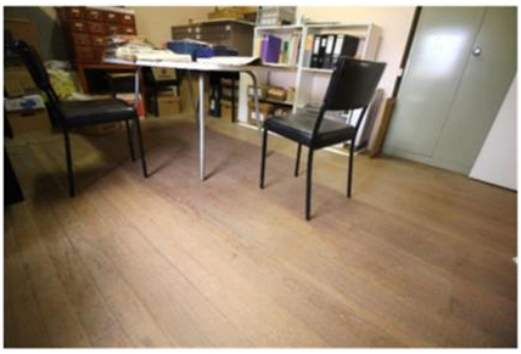
149: Research Room – ceiling west out

150: Research Room – north wall/fireplace

151: Research Room - East wall/door

152: Research Room - south wall/window

153: Research Room ceiling



154: Research Room flooring

155: Research Room Ceiling + damage

156: Research Room flooring

157: Kitchen - south wall/cabinetry

158: Kitchen - east wall/ceiling

159: Kitchen - north wall/window

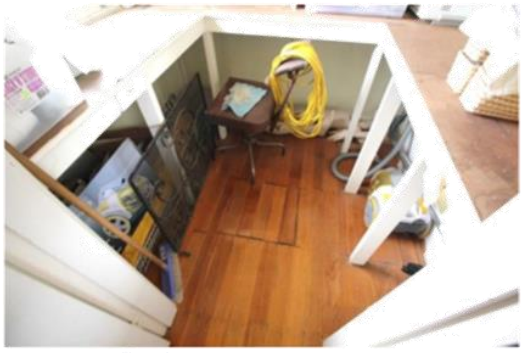
160: Kitchen - west wall/doors

161: Kitchen flooring

162: Kitchen ceiling

163: Pantry window/shelving

164: Pantry shelving



165: Pantry flooring

166: Laundry - east wall/window

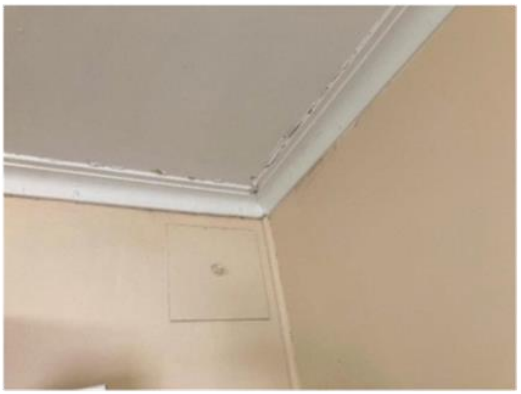
167: Laundry - west + north walls

168: Laundry - north wall/ door

169: Laundry - south wall/toilet door

170: Laundry flooring

171: Laundry ceiling

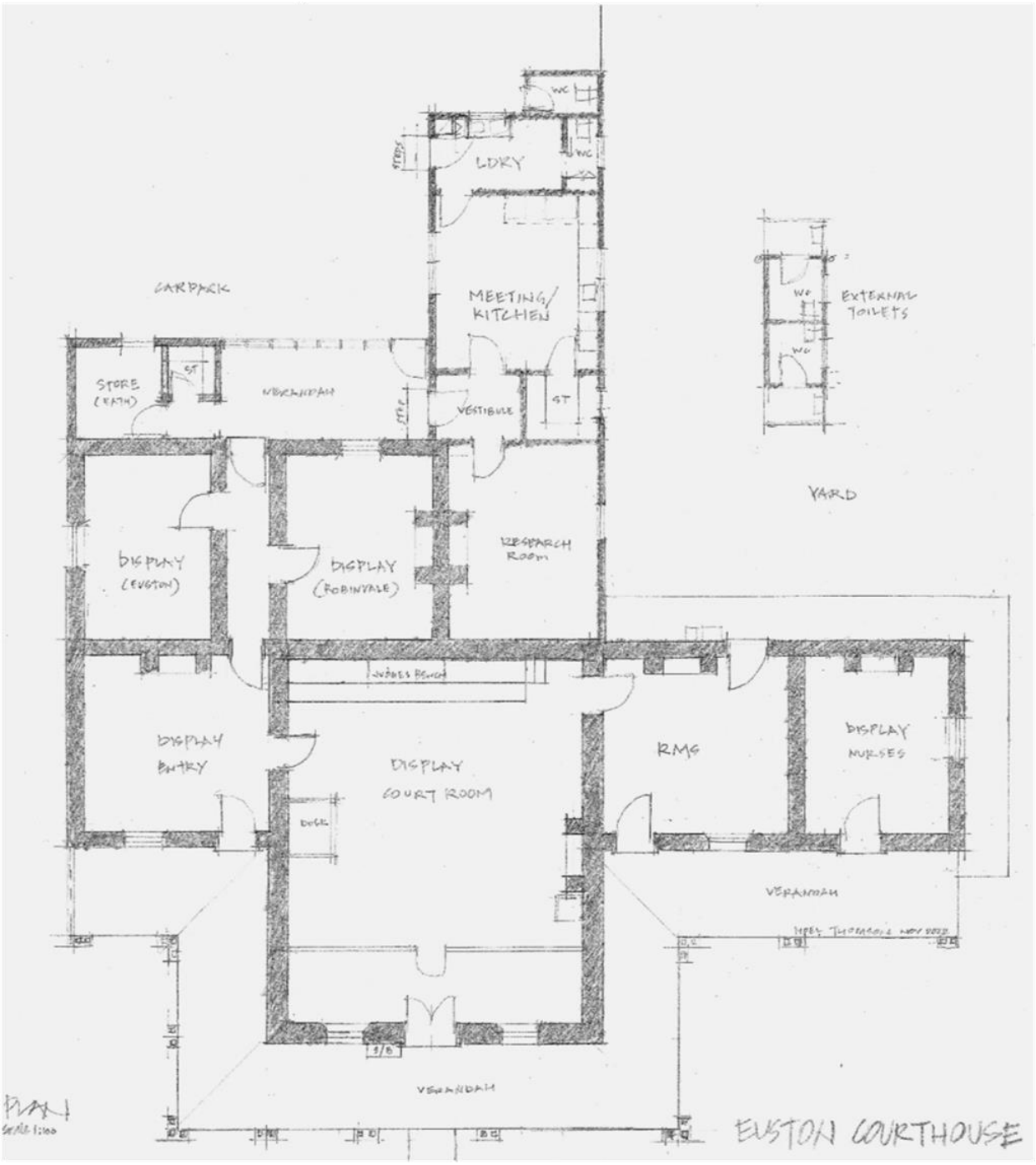


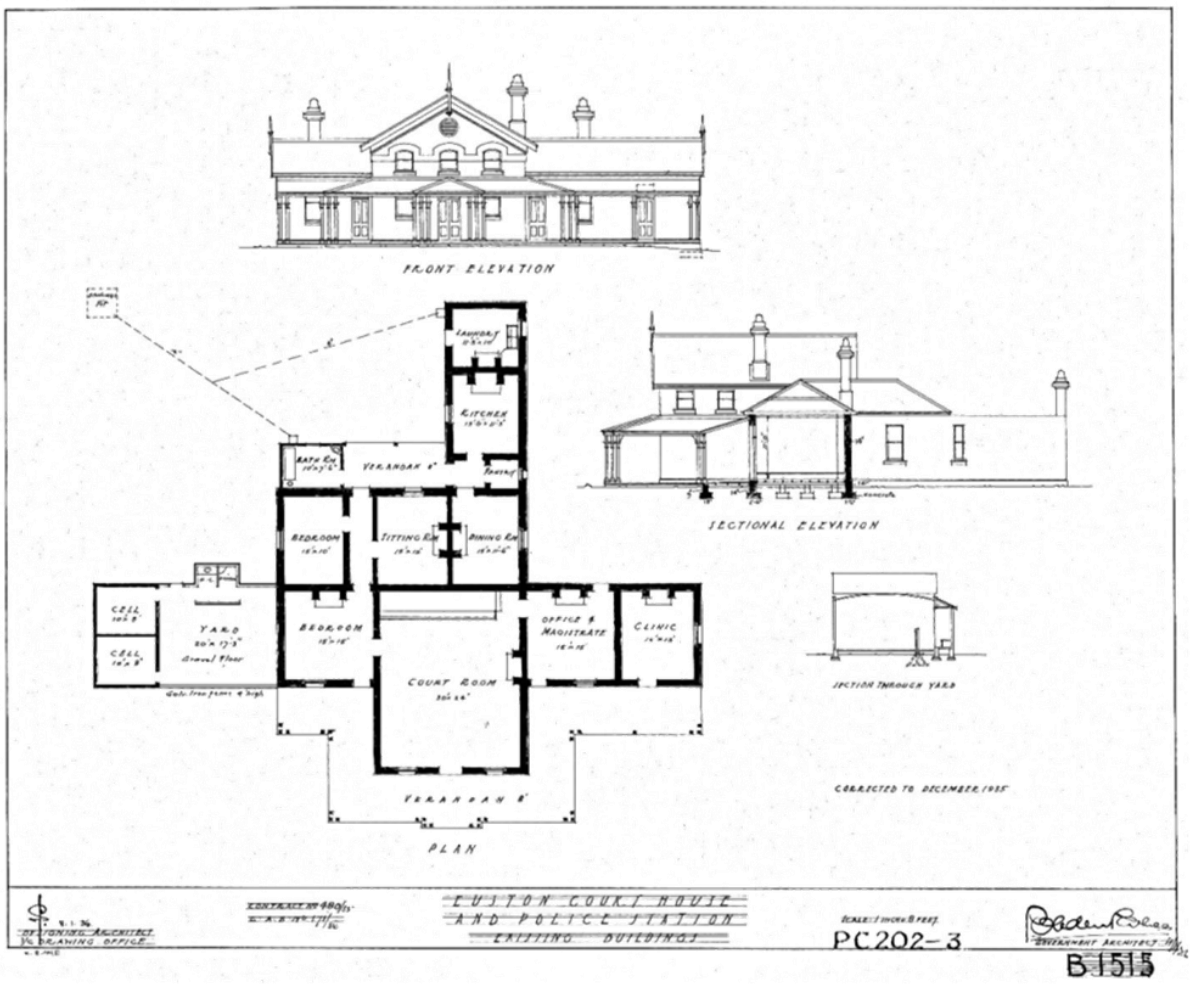
172: Laundry movement at cornice

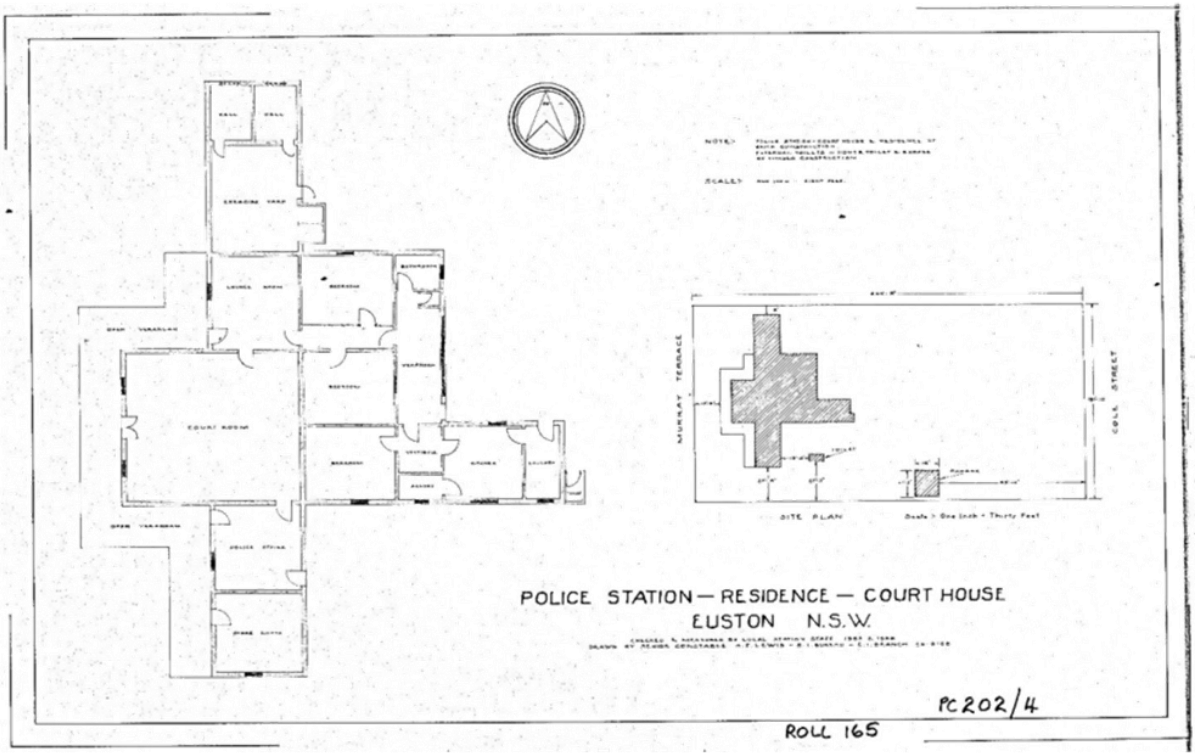
173: Toilet

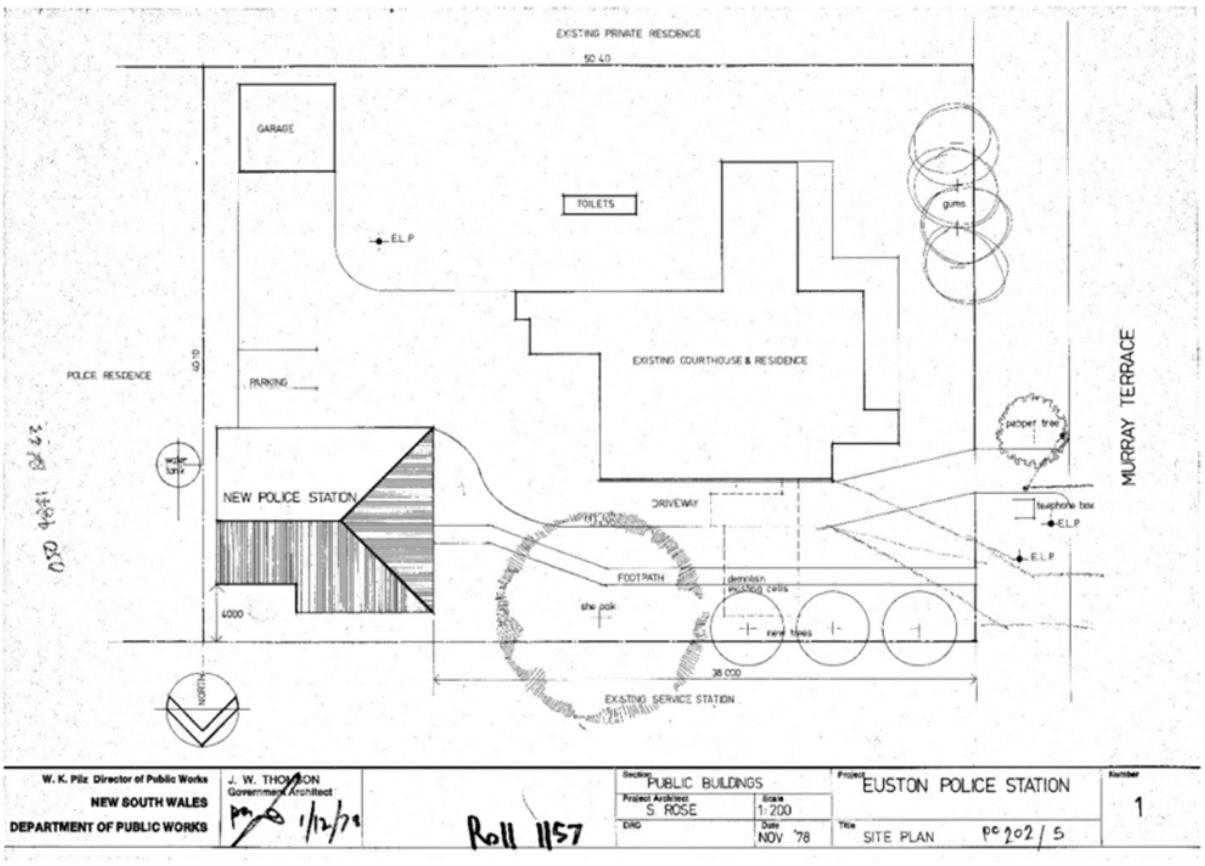
174: Toilet cupboard

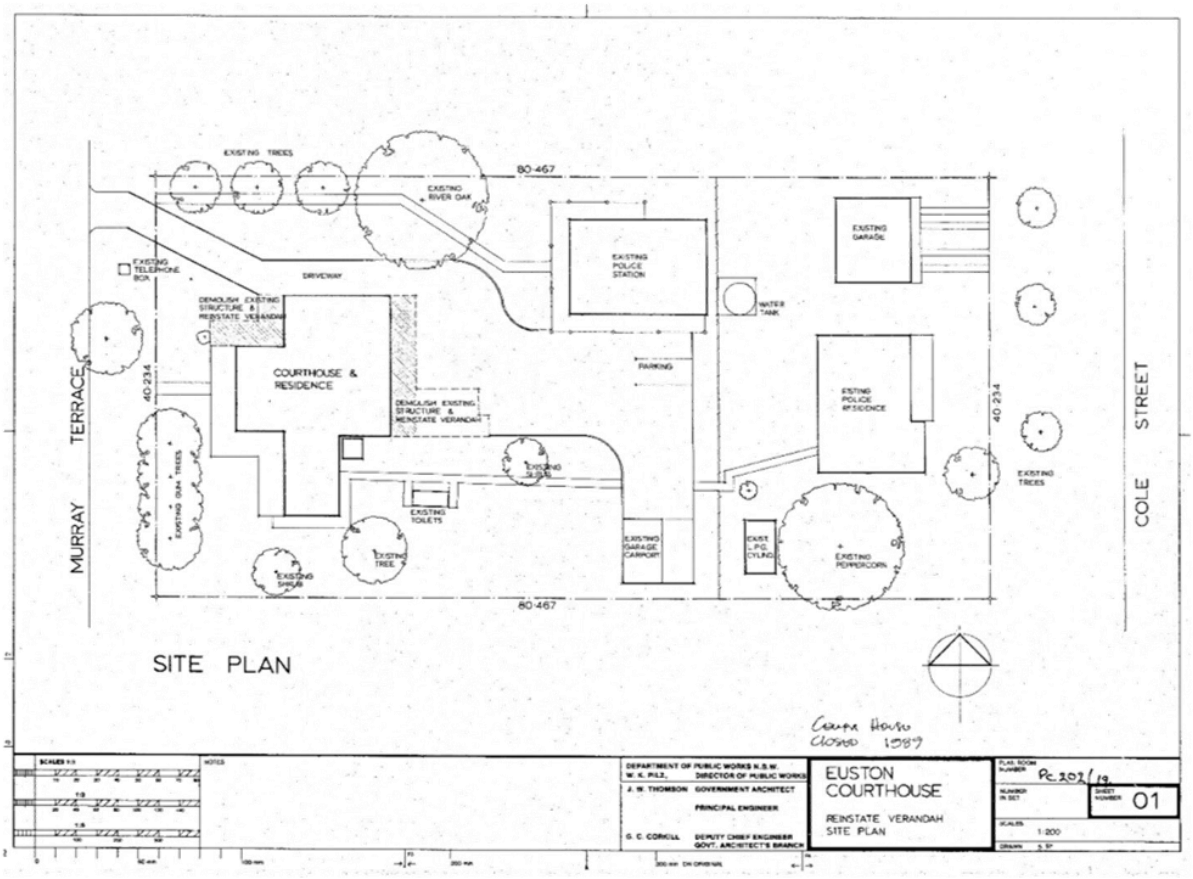
APPENDIX 2 – EXISTING BUILDING LAYOUT + ARCHIVAL DRAWINGS

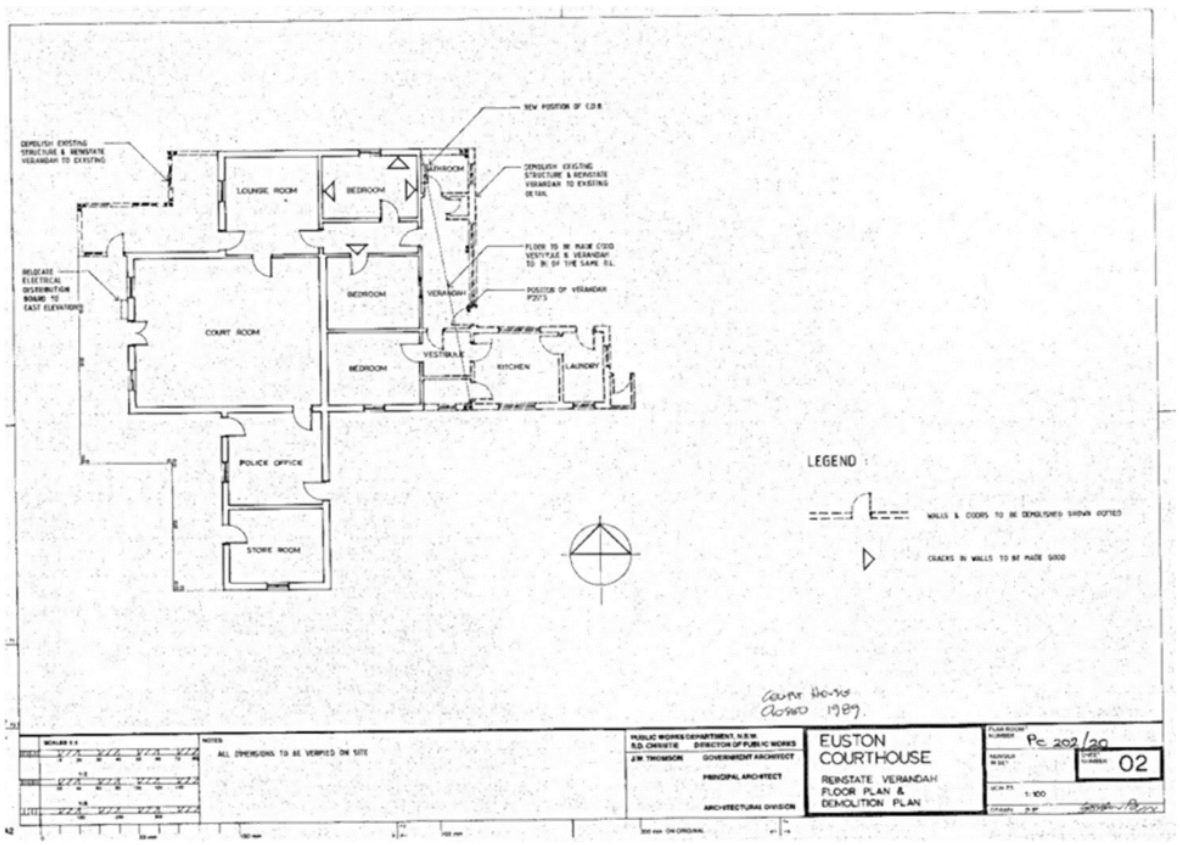


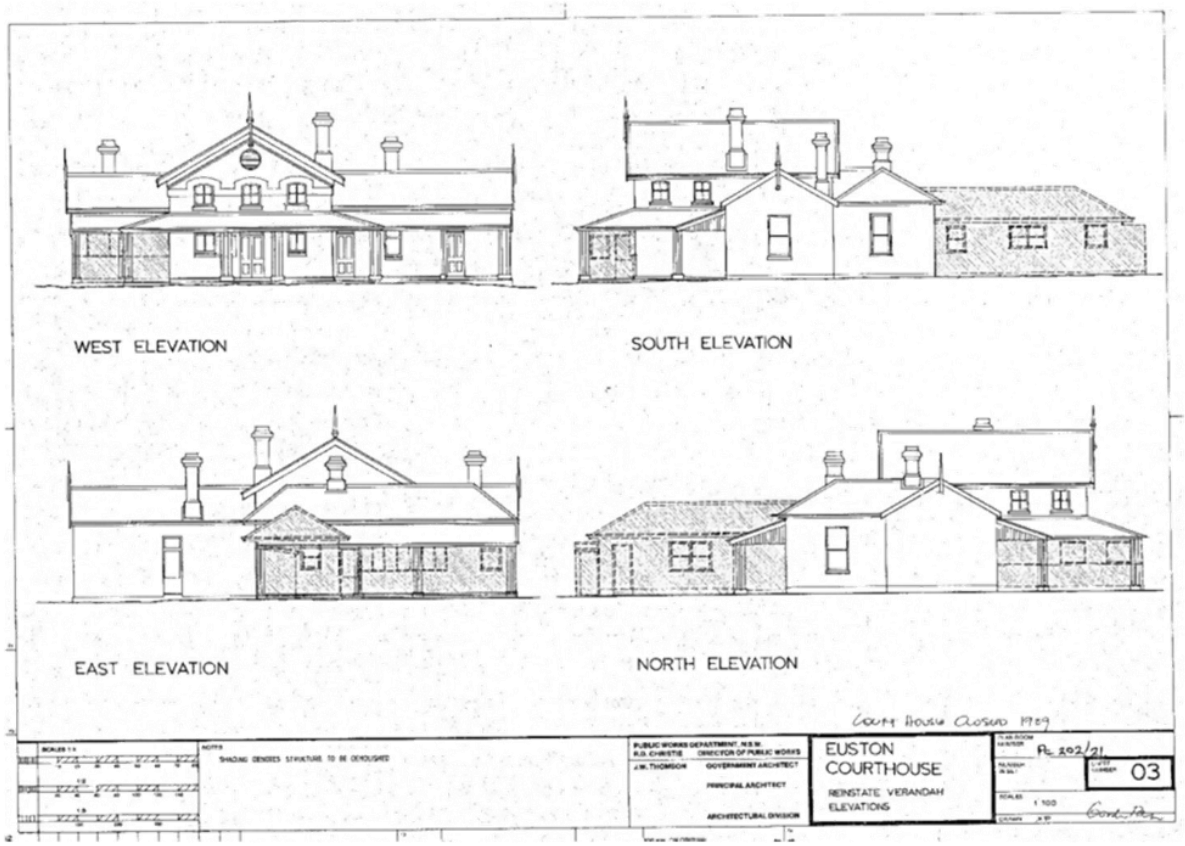

FRONT ELEVATION
SECTIONAL ELEVATION
SECTION THROUGH YARD
PLAN
CORRECTED TO DECEMBER 1935
EUSTON COURT HOUSE
AND POLICE STATION
EXISTING BUILDINGS
PC202-3
B 1515


POLICE STATION — RESIDENCE — COURT HOUSE
EUSTON N.S.W.
PC202/4
ROLL 165

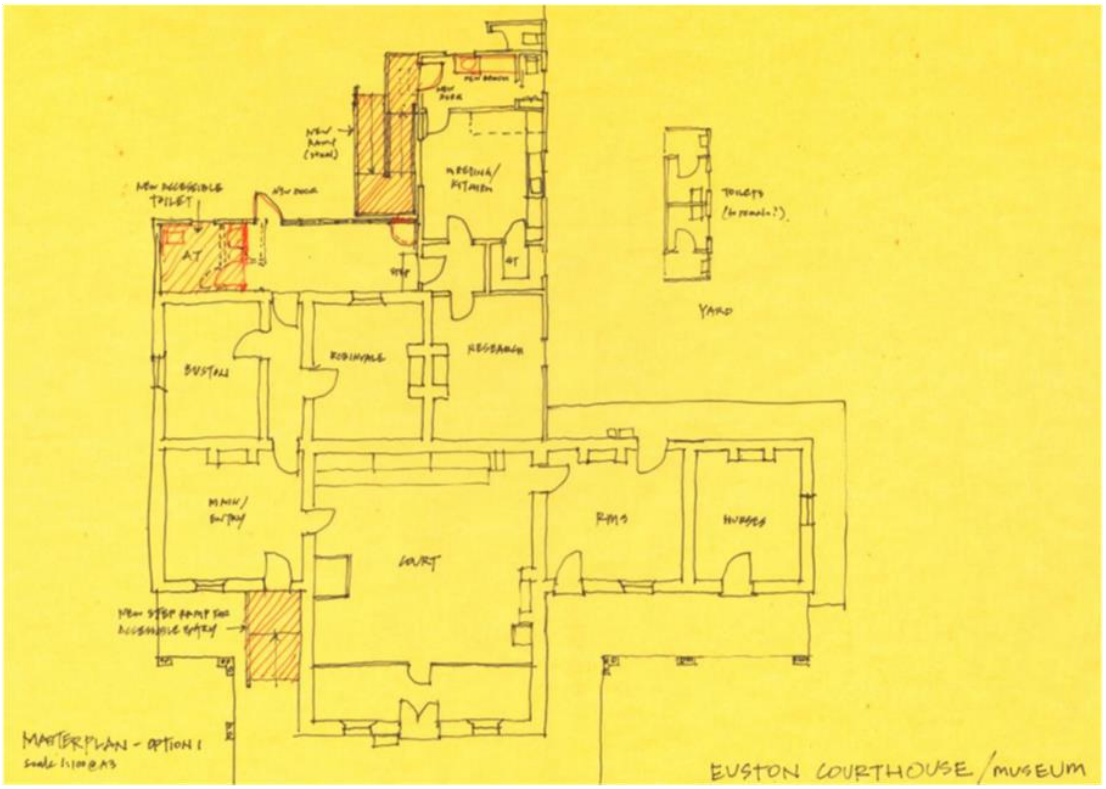

EXISTING PRIVATE RESIDENCE
50.40
GARAGE
TOILETS
E.L.P
gums
EXISTING COURTHOUSE & RESIDENCE
POLICE RESIDENCE
PARKING
NEW POLICE STATION
DRIVEWAY
FOOTPATH
pepper tree
telephone box
MURRAY TERRACE
demolish existing cells
shed
4000
36.000
EXISTING SERVICE STATION
NORTH
W. K. Pilz Director of Public Works
NEW SOUTH WALES
DEPARTMENT OF PUBLIC WORKS
J. W. THOMSON
Government Architect
Roll 1157
PUBLIC BUILDINGS
S. ROSE
1:200
NOV '78
EUSTON POLICE STATION
SITE PLAN
pc 202/5
1


EXISTING TREES
80.467
EXISTING RIVER OAK
EXISTING TELEPHONE BOX
DRIVEWAY
EXISTING POLICE STATION
EXISTING GARAGE
WATER TANK
DEMOLISH EXISTING STRUCTURE & REINSTATE VERANDAH
COURTHOUSE & RESIDENCE
PARKING
EXISTING RESIDENCE
40.234
MURRAY TERRACE
COLE STREET
EXISTING OAK TREES
EXISTING SHED
EXISTING TOILETS
EXISTING TREE
EXISTING GARAGE CARPORT
EXIST. PG. CYLINDER
EXISTING POINCIANA
EXISTING TREES
SITE PLAN
Courts House closed 1987
DEPARTMENT OF PUBLIC WORKS N.S.W.
W. K. PILZ, DIRECTOR OF PUBLIC WORKS
J. W. THOMSON GOVERNMENT ARCHITECT
PRINCIPAL ENGINEER
G. C. CORCILL DEPUTY CHIEF ENGINEER
GOVT. ARCHITECT'S BRANCH
EUSTON COURTHOUSE
REINSTATE VERANDAH
SITE PLAN
Pc 202/19
01
1:200

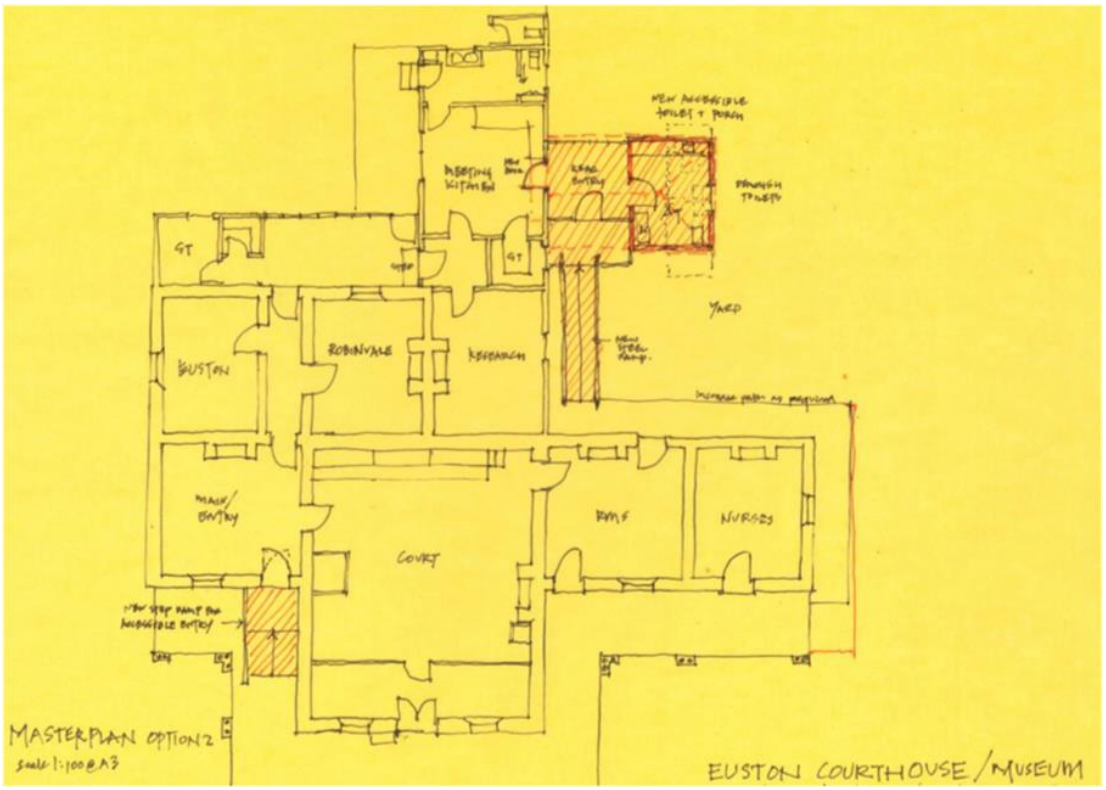

LOUNGE ROOM
BEDROOM
BATHROOM
BEDROOM
COURT ROOM
VERANDAH
BEDROOM
VESTIBULE
KITCHEN
LAUNDRY
POLICE OFFICE
STORE ROOM
LEGEND :
Court House Closed 1989.
EUSTON COURTHOUSE
REINSTATE VERANDAH
FLOOR PLAN & DEMOLITION PLAN
Pc 202/20
02


WEST ELEVATION
SOUTH ELEVATION
EAST ELEVATION
NORTH ELEVATION
Court House Closed 1989
EUSTON COURTHOUSE
REINSTATE VERANDAH
ELEVATIONS
Pc 202/21
03

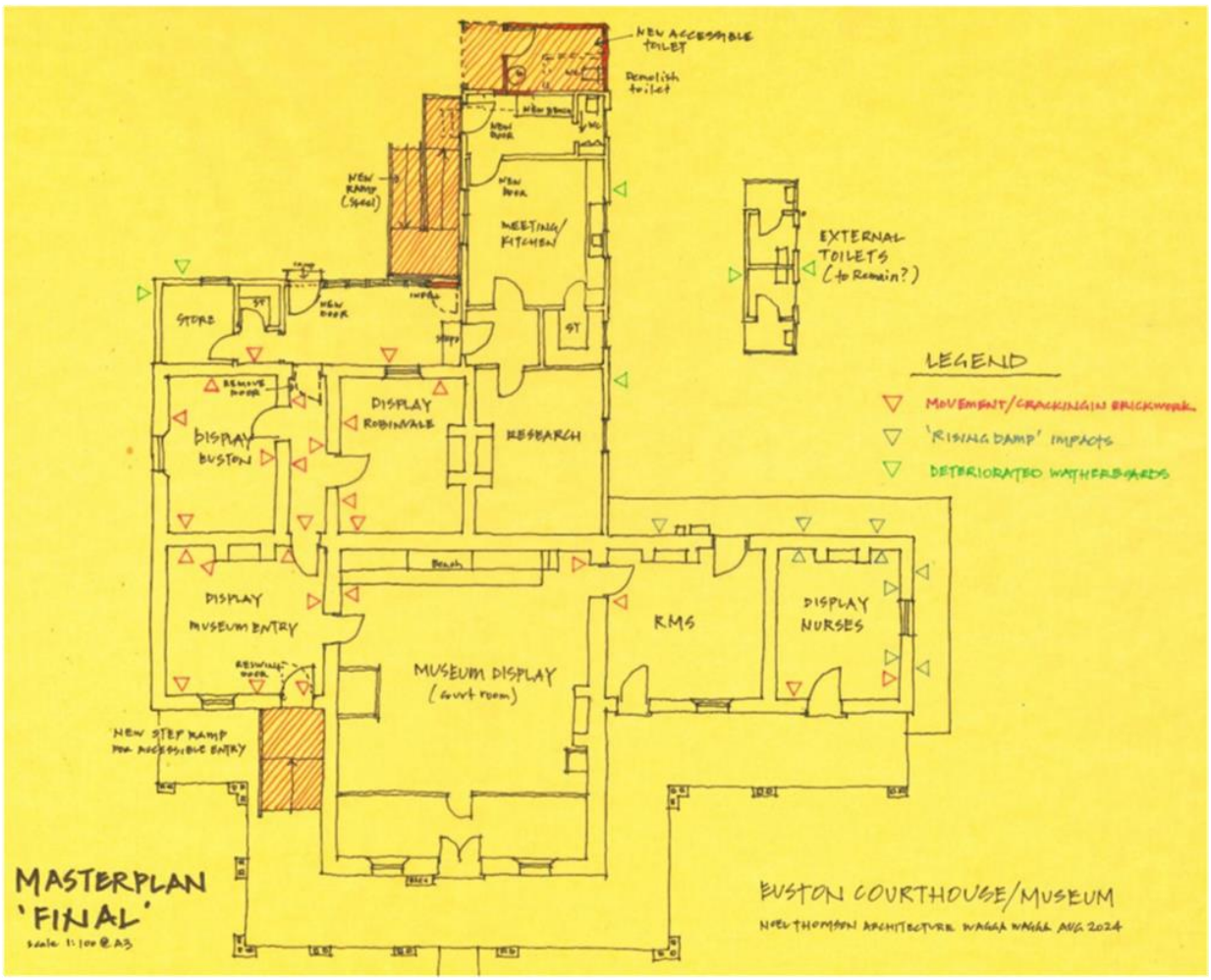
APPENDIX 3 – MASTERPLAN DRAWINGS - PLAN LAYOUT



MASTERPLAN - OPTION 1
scale 1:100@A3



MASTERPLAN OPTION 2
scale 1:100@A3


NEW ACCESSIBLE TOILET
Demolish toilet
NEW RAMP (5%fall)
NEW DOOR
MEETING/ KITCHEN
EXTERNAL TOILETS (to Remain?)
STORE
ST
NEW DOOR
REMOVE DOOR
DISPLAY BUSTON
DISPLAY ROBINVALE
RESEARCH
Bench
DISPLAY MUSEUM ENTRY
REMOVE DOOR
MUSEUM DISPLAY (court room)
RMS
DISPLAY NURSES
NEW STEP RAMP FOR ACCESSIBLE ENTRY
LEGEND
MOVEMENT/CRACKING IN BRICKWORK
'RISING DAMP' IMPACTS
DETERIORATED WEATHERBOARDS
MASTERPLAN 'FINAL'
scale 1:100 @ A3
EUSTON COURTHOUSE/MUSEUM
NOEL THOMSON ARCHITECTURE WAGGA WAGGA AUG 2024

APPENDIX 4 – MANAGEMENT & MAINTENANCE PLAN AND MAINTENANCE CHECKLIST

EUSTON COURTHOUSE

Management & Maintenance Plan

Owner;

Balranald Shire Council
70 Market Street, Balranald
Tel: (03) 5020 1300
council@balranald.nsw.gov.au

Prepared by;

Noel Thomson Architecture
20 Churchill Ave, Wagga Wagga

October 2023

Euston Courthouse – Management & Maintenance Plan for Balranald Shire Council

Euston Courthouse

Conservation Guidelines

The Burra Charter guides all cultural heritage management practices in Australia. It establishes the following principles for the management of heritage places, including heritage buildings:

Article 2. Conservation and management

2.1 Places of cultural significance should be conserved.

2.2 The aim of conservation is to retain the cultural significance of the place.

2.3 Conservation is an integral part of good management of places of cultural significance.

2.4 Places of cultural significance should be safeguarded and not put at risk or left in a vulnerable state.

Article 3. Cautious approach

3.1 Conservation is based on a respect for the existing fabric, use, associations and meanings. It requires a cautious approach of changing as much as necessary but as little as possible.

3.2 Changes to a place must not distort the physical or other evidence it provides, nor be based on conjecture.

Article 4. Knowledge, skills and techniques

4.1 Conservation should make use of all the knowledge, skills and disciplines, which can contribute to the study and care of the place.

4.2 Traditional techniques and materials are preferred for the conservation of significant fabric. In some circumstances modern techniques and materials, which offer substantial conservation benefits may be appropriate.

Hierarchy of interventions

The Burra Charter recommends the following hierarchy of interventions in the management of heritage places:

1. *Conservation* is the preferred option. *Conservation* means all the processes of looking after a *place* so as to retain its *cultural significance.* It generally involves taking efforts to retain the existing fabric of the place or building.
2. *Maintenance* means the continuous protective care of the *fabric* and *setting* of a *place*, and is to be distinguished from repair. Repair involves *restoration* or *reconstruction*.
3. *Preservation* means maintaining the *fabric* of a *place* in its existing state and retarding deterioration.
4. *Restoration* means returning the existing *fabric* of a *place* to a known earlier state by removing accretions or by reassembling existing components without the introduction of new material.
5. *Reconstruction* means returning a *place* to a known earlier state and is distinguished from *restoration* by the introduction of new material into the *fabric*.
6. *Adaptation* means modifying a *place* to suit the existing use or proposed use.

Building Significance & Listings

1. Listed heritage item

Euston Courthouse is a local listed heritage item (I6) in the Balranald Local Environmental Plan 2010 - Schedule 5 Part 1 heritage items.

2. Statement of Significance

Historical and aesthetic significance. Built 1883, this courthouse is historically associated with law enforcement at the busy river port of Euston in the 1850s to 1900. The attractive Victorian style building makes an important contribution to the street. Acquired by the Shire Council in mid-1970's it has been provided to the local historical society for displays and public visitation.

Policies for the management of the building

1. Understanding the building

It is a principle of conservation that work on a significant building should be based on a proper understanding of the building and its problems.
It should be noted that buildings move, sink, bend and weather with age and may not need to be straightened or kept in "as new" condition.

2. History and cultural significance

The history of the place with all its alterations and additions and repairs needs to be known. The significant elements of a building must be identified so that informed decisions can be made on whether an element would be preserved rather than replaced.

A conservation management plan for the building, which includes a survey of the building fabric and a condition report, will answer most of these questions. Further information on this subject can be found on at Heritage Council of NSW and Heritage NSW website.

Information about the history of the building should be available to those undertaking and to do the work on the building possibly as an appendix to a scope of works/ specification.

3. General guidance for repairs and maintenance

Maintenance and repairs should be undertaken in accordance with Heritage NSW – (NSW Department of Planning and Environment) guidelines for the maintenance of heritage assets, Information Sheet ***"How to Carry Out Work on Heritage Sites and Buildings"***.

4. Conserve existing fabric

Efforts should be made to ensure that as much of the original fabric as possible is retained, when works are being undertaken on the building. All work to be undertaken in accordance with Heritage NSW guidelines for the maintenance of heritage assets, ***"Maintenance Series"*** in particular the following brochures;

- Information Sheet 1.1 Preparing a Maintenance Plan
- Information Sheet 1.2 Documenting Maintenance and Repairs
- Information Sheet 2.1 Rising Damp
- Information Sheet 4.1 Corrugated Roofing
- Information Sheet 5.1 Wood Preservation
- Information Sheet 5.2 Timber Repairs.
- Information Sheet 5.3 Patching Old Floorboards

5. Total Asset Management

For NSW Government agencies, the maintenance plan forms part of a total asset management strategy. Total asset management is aimed at improving value for money from public sector assets. (Refer to Heritage Asset Management Guidelines, 2nd edition, published by NSW Department of Public Works and Services in 1996.) Whether in public or private ownership, good management of heritage assets should include effective conservation planning aimed at retaining heritage values, and effective maintenance programs to direct money effectively and wisely.

Recording the asset

As a building manager, you need to know and record in detail what you are managing. Without this information you cannot decide on a maintenance policy or estimate your expenditure for a budget. Basic information that a building manager needs to have includes:

- plans, showing location of all elements,
- easements and construction details
- age and condition of the building
- services details
- maintenance requirements
- names and contacts of those responsible for maintenance
- dimensions and areas of accommodation
- local council requirements
- heritage listings
- reports on the building, including a conservation management plan details of previous conservation works.

6. What is Maintenance?

What is maintenance? Maintenance is defined by the Burra Charter1 as the continuous protective care of the fabric, contents and setting of a place. Maintenance can be categorised according to why and when it happens, as:

corrective maintenance

- work necessary to bring a building to an acceptable standard (often as recommended by a conservation plan) such as treatment for rising damp; or

planned maintenance

- work to prevent failure which recurs predictably within the life of a building, such as cleaning gutters or painting; or

emergency corrective maintenance

- work that must be initiated immediately for health, safety, security reasons or that may result in the rapid deterioration of the structure or fabric if not undertaken (for example, roof repairs after storm damage, graffiti removal or repairing broken glass). A daily response system detailing who is responsible for urgent repairs should be prepared.

7. Why have a maintenance plan?

The main reason for a maintenance plan is that it is the most cost-effective way to maintain the value of an asset. The advantages of a plan are:

- the property is organised and maintained in a systematic rather than ad-hoc way;
- building services can be monitored to assist their efficient use;
- the standard and presentation of the property can be maintained;
- subjective decision making and emergency corrective maintenance are minimised.

When buildings are neglected, defects can occur which may result in extensive and avoidable damage to the building fabric or equipment. Neglect of maintenance can also give rise to fire and health & safety hazards.

Health & safety hazards:

Flooring tiles to "Judges stage" and to rear Store / Bathroom contain 'asbestos'

North wall linings to back sunroom (infilled verandah) and internal and external to store/cupboard are 'Fibro' (contains asbestos) and check for deterioration of paint finish or lining.

Wall linings to airlock off kitchen & walls to kitchen above picture rail height + walls to pantry off kitchen are 'Fibro' (contains asbestos) and check for deterioration of paint finish or lining.

Wall and ceilings linings to back laundry & toilet are 'Fibro' (contains asbestos) and check for deterioration of paint finish or lining.

Note: for the Asbestos Inspection Report / Register dated 4 June 2019 (by All Clear Inspections) refer Appendix D

8. Maintenance plan

The maintenance of the building is about;

- Resource management
- Providing a safe environment for stakeholders and users
- Creating a physical environment that is 'fit for purpose'

Accountabilities:

1. The 'Asset/Building Manager' reports to the Director/General Manager for the upkeep of the building; and for approval of the maintenance budget.
2. The 'Asset/Building Manager' is responsible for the development of the Annual Maintenance Plan and the Assets Register to record the purchase or disposal of plant and equipment.
3. Recommendations for major upgrade expenditure are to be included in the formulation of the annual budget for Council approval.
4. The Director delegates responsibility for all maintenance activities to the Asset Manager.
5. This plan is to be read in conjunction with relevant policy documents including the Council's Workplace Health and Safety Policy and the Risk Management Policy.

Responsive Maintenance:

There will always be maintenance emergencies that need to be attended to. A maintenance request book is to be kept at the Euston Courthouse's (Museum/Research) office. Stakeholders must make requests for maintenance through the request book.

Planned Maintenance:

Routine: The stakeholders are responsible for the day-to-day cleaning of the Museum (former Courthouse) and for the following maintenance items.

- Movement of furniture, seating, equipment, etc
- Minor repairs to seating
- Classroom comfort features
- Minor repairs to curtains & cleaning
- Minor door repairs
- Cleaning of minor graffiti immediately it appears
- Minor landscape maintenance

Planned: Maintenance for the following will be carried out by Contractors:

- Locks, must be carried out by a professional locksmith
- Repairs to light fittings and supply & install of light tubes and globes
- Maintenance & checking of fire extinguishers
- Regular inspections of gutters and down pipes
- Repainting of internal & external surfaces
- Any plumbing issues and replacing tap washers, cisterns, etc
- Wall, ceiling and door repairs where damage has occurred

Preventative

Protection of Council's assets and safety of stakeholders and users requires a regular cycle of upkeep of the building, plant and equipment. The 'Asset/Building Manager' is responsible for arranging the following;

Monthly/Annually:

- Annual checking of electrical equipment by professional tradespeople
- Annual pest control treatment
- 6 Monthly filter checks and cleaning for air-conditioning units and exhausts
- Annual checking of air-conditioning via maintenance contract with professional tradespeople
- Annual inspection of ceilings, floors, paving, plumbing, partitions, internal painting, door hinges & hardware, locks, grilles
- Replacement of glass where necessary

Every two years:

- Hardware/furniture replacement where necessary

Every five years:

- Internal painting

Every ten years:

- External painting
- Replacement of floor coverings
- Replacement of guttering

Every twenty five years:

- Roof refurbishment/replacement
- Replacement of electrical wiring, switchboard upgrade

Material containing asbestos:

- The asbestos containing materials marked as is in poor condition should be removed as a matter of importance due to their deterioration and potential for exposure.
- The asbestos containing material marked as is in fair condition should be stabilised and scheduled for removal during refurbishment.
- The asbestos containing material marked as in good can be left insitu and monitored regularly for any deterioration/damage and reassessed during future inspections

Note: for the Asbestos Inspection Report / Register dated 4 June 2019 (by All Clear Inspections) refer Appendix D

Appendix A: Management Plan

Building element	Conservation Policy
Roof structure & cladding	The roof structure and cladding should be conserved. The integrity of the roof should be maintained by ensuring that the roof structure is sound and corrugated iron sheets are securely fixed. Fixings should be checked regularly in accordance with Euston Courthouse Conservation / Maintenance Checklist. Replacement sheets must be corrugated galvanised iron of identical profile to the existing. Sound second-hand galvanised iron may be used.
Guttering and drainage	Guttering and drainage should be maintained in a functional condition. Storm water should drain away from the building. Replacement guttering must be galvanised iron of identical profile to the existing.
Wall structure	The wall structure should be conserved and check brickwork faces for deterioration and movement/cracking. Note: Cracking currently to brickwork / walls in several locations – monitoring required. Note: Rising Damp and surface deterioration of bricks and render evident to walls in several locations – treatment required. Joinery/timbers should be checked for intactness and any sign of deterioration. If repainting required, to be painted to match a previous known colour scheme. Repairs to timber work should be undertaken in accordance with the recommendations of Heritage NSW guidelines for the maintenance of heritage assets - refer 'Information Sheet' series.
Floor	The floor should be maintained to ensure its ongoing integrity as a component of the building. Where required floorboards should be repaired in accordance with the recommendations of Heritage NSW guidelines for the maintenance of heritage assets. For reference see 'Information Sheet' 5.3 Patching Old Floorboards.
Ceilings	Where possible existing ceiling should be retained. Any replacement elements should reflect the materials, style and profile of the existing.
Doors	Original doors should be retained where possible. Any replacement should reflect the materials, style and profile of the existing door being replaced.

Appendix B: Action Plan

Priority	Works to be performed
1	Ensure guttering on the main roof is functional and drains away from the building. Replace damaged, failed or missing guttering and downpipes.
2	Repairs to the building, including: • upgrading of brickwork where impacted by movement + rising damp and deterioration evident, • stabilisation of timber windows & doors, • replacement of deteriorated timber weatherboards, • upgrading / add toilets to meet current standards, • painting of the building to reflect a known earlier colour scheme.
3	For doors, replacing damaged or missing components as required.
4	Secure external doors & windows to reduce/stop vandalism.

Note: For detailed Action Plan & Checklist refer to Appendix 3: Euston Courthouse Conservation / Maintenance Checklist

Appendix C: Sample Maintenance Plan

Date	Activity	Frequency	Records of actions undertaken
January	Review timber floor finish throughout	Annually, each January	Date
	Internal painting as designated - say 5 year program	Annually, each January	Date Building area details
	Termite check, upgrade	Annually, each January	Date Company contact details
	Electrical testing and tagging	Annually, each January	
	Fire equipment / extinguisher maintenance and service	Bi-annually, each January and July	Date Company contact details
	Taps, basins, pans, hot water, etc check and maintenance	Monthly	Date
	Internal lighting check	Monthly	Date
	External lighting check and maintenance	Monthly	Date
February	Door latch, lock, hinge – check, maintenance & repairs	Bi-annually, February, August	Date
	Taps, basins, pans, hot water, etc check and maintenance	Monthly	Date
	Internal lighting check	Monthly	Date
	External lighting check and maintenance	Monthly	Date
March	Internal/external pest control	Bi-annually – March and September	Date Company contact details
	Taps, basins, pans, hot water, etc check and maintenance	Monthly	Date
	Internal lighting check	Monthly	Date
	External lighting check and maintenance	Monthly	Date
	General landscape maintenance, fertilizer insecticide, herbicide, mulch as needed	Each March, August, December	Date Fertiliser / chemicals used
	Taps, basins, pans, hot water, etc check and maintenance	Monthly	Date
April	Internal lighting check	Monthly	Date
	External lighting check and maintenance	Monthly	Date
May	Taps, basins, pans, hot water, etc check and maintenance	Monthly	Date
	Internal lighting check	Monthly	Date
	Air-conditioning unit and toilet / kitchen exhaust servicing	Bi-annually – May and November	Date Company contact details

	External lighting check and maintenance	Monthly	Date
June	Taps, basins, pans, hot water, etc check and maintenance	Monthly	Date
	Internal lighting check	Monthly	Date
	External lighting check and maintenance	Monthly	Date
July	Fire equipment / extinguisher maintenance and service	Bi-annually, each January and July	Date Company contact details
	Taps, basins, pans, hot water, etc check and maintenance	Monthly	Date
	Internal lighting check	Monthly	Date
	External lighting check and maintenance	Monthly	Date
August	Door latch, lock, hinge – check, maintenance & repairs	Bi-annually, February, August	Date
	General landscape maintenance, insecticide, herbicide, mulch	Each March, August, December	Date Fertiliser / chemicals used
	Taps, basins, pans, hot water, etc check and maintenance	Monthly	Date
	Internal lighting check	Monthly	Date
	External lighting check and maintenance	Monthly	Date
September	Internal/external pest control	Bi-annually – March and September	Date Company contact details
	Taps, basins, pans, hot water, etc check and maintenance	Monthly	Date
	Internal lighting check	Monthly	Date
	External lighting check and maintenance	Monthly	Date
October	Taps, basins, pans, hot water, etc check and maintenance	Monthly	Date
	Internal lighting check	Monthly	Date
	External lighting check and maintenance	Monthly	Date
November	Air-conditioning unit and toilet / kitchen exhaust servicing	Bi-annually – May and November	Date Company contact details
	Taps, basins, pans, hot water, etc check and maintenance	Monthly	Date
	Internal lighting check	Monthly	Date
	External lighting check and maintenance	Monthly	Date

December	Security and Key access update	Annually	Date
	General landscape maintenance, insecticide, herbicide, mulch	Each April, August, December	Date Fertiliser / chemicals used
	Taps, basins, pans, hot water, etc check and maintenance	Monthly	Date
	Internal lighting check	Monthly	Date
	External lighting check and maintenance	Monthly	Date

Appendix D: Asbestos Inspection Report / Register

00059
ALL CLEAR INSPECTIONS

Asbestos Inspection Report

49 Dobney Avenue, Wagga Wagga, NSW, 2650, Australia
P: 02 6925 5225
info@allclearinspections.com.au

REPORT DETAILS

Balranald Council
Courthouse - Euston Murray Terrace

DATE OF INSPECTION
04/06/2019

TIME OF INSPECTION
11:30 AM

INSPECTOR
Greg Goldspink

PHOTO OF THE PROPERTY

00059

ALL CLEAR INSPECTIONS

Asbestos Inspection Report

49 Dobney Avenue, Wagga Wagga, NSW, 2650, Australia
P: 02 6925 5225
info@allclearinspections.com.au

REPORT DETAILS

Balranald Council

Courthouse - Euston Murray Terrace

DATE OF INSPECTION

04/06/2019

TIME OF INSPECTION

11:30 AM

INSPECTOR

Greg Goldspink

PHOTO OF THE PROPERTY

3AD1B87E-6123-440C-B550-7BBA41CC2CB(

00059

ALL CLEAR INSPECTIONS

CONTENTS

00059

ALL CLEAR INSPECTIONS

1.0 SUMMARY OF ASBESTOS CONTAINING MATERIALS LOCATED.

Asbestos Containing Materials that were visually identified or found through sample analysis.

ASBESTOS CONTAINING MATERIALS WAS IDENTIFIED IN THE - REFER TO AUDIT FORM.

1.1 NOTES

- NO INSPECTION TO CONCEALED AREAS. PRECAUTION TO BE TAKEN WHEN ENTERING CONCEALED UN INSPECTED AREAS AS THESE AREAS COULD CONTAIN ASBESTOS AND MUST BE TREATED AS ASBESTOS UNTIL SAMPLING CAN BE DONE TO CONFIRM THE MATERIAL.
- NO INSPECTION TO ELECTRICAL SYSTEM - RECOMMEND SEEKING FURTHER ADVICE FROM A LICENSED AND PRACTICING ELECTRICIAN.
- ALL TENANTS SHOULD BE FURNISHED WITH A COPY OF THE ASBESTOS AUDIT REPORT AND HAVE THE REPORT READILY AVAILABLE FOR TRADESPEOPLE ENGAGED TO CARRY OUT REPAIRS/ALTERATIONS OF THE PROPERTY.
- ANY RENOVATIONS/ALTERATIONS INVOLVING THE PRODUCTS AND MATERIALS NOTED IN THIS REPORT REQUIRES PRECAUTION TO PROTECT WORKERS AND OR A SPECALIST CONTRACTORS INVOLVEMENT.

3AD1B87E-6123-440C-B550-7BBA41CC2CB(

00059

ALL CLEAR INSPECTIONS

ASBESTOS REGISTRY AUDIT FORM

1.0 ASBESTOS REGISTRY AUDIT FORM

TYPES AND FORMS OF ASBESTOS PRODUCTS/ MATERIAL	SAMPLE TAKEN	SAMPLE NUMBER	SAMPLE SIMILAR TO	SAMPLE LOCATION
FLOOR TILE 1	YES	1		Judge room stage flooring.
FLAT SHEET 1	YES	2		North wall to back sunroom and internal and external to cupboard.
FLAT SHEET 2	NO		2	All ceiling sheets to back skillion, sunroom, kitchen.
FLOOR TILE 2	YES	3		Floor tiles to back north store room.
FLAT SHEET 3	YES	4		Walls to back airlock off kitchen & walls to kitchen above picture rail height + walls to pantry off kitchen.
MOULDED SHEET 1	NO			Wall sheets below picture rail height to kitchen (blue).
FLAT SHEET 4	YES	5		Wall and ceilings sheets to back laundry & toilet.
PIPES 1	NO			Pipe to old wood stove in kitchen.
FLAT SHEET 5	NO		5	All eaves to back of courthouse and external toilet.

3AD1B87E-6123-440C-B550-7BBA41CC2CB(

00059

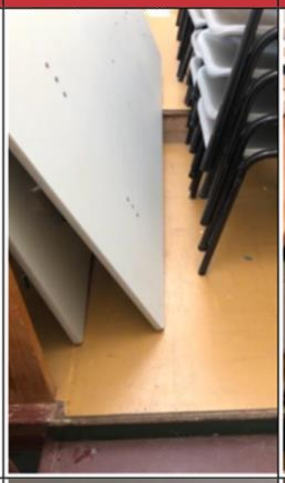
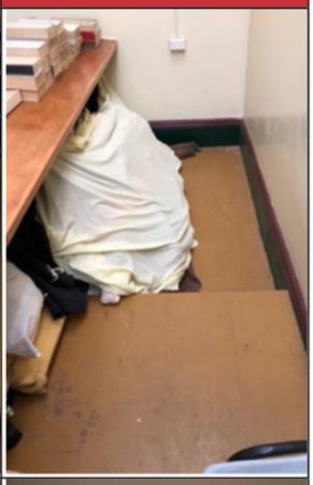
ALL CLEAR INSPECTIONS

TYPES AND FORMS OF ASBESTOS PRODUCUCTS & MATERIALS	ASBESTOS TYPE	CONDITION	PRIORITY	NOTES
FLOOR TILE 1	NON-FRIABLE ASBESTOS DETECTED CH, OF	GOOD	LOW	Low traffic area.
FLAT SHEET 1	NON-FRIABLE ASBESTOS DETECTED CH, OF	GOOD	LOW	
FLAT SHEET 2	NON-FRIABLE ASSUMING ASBESTOS DETECTED CH, OF	**FAIR**	**MODERATE**	**Paint flaking on some areas, recommend painting.**
FLOOR TILE 2	NON-FRIABLE ASBESTOS DETECTED CH, OF	**FAIR**	**HIGH**	**Broken tiles, Replacement Recommended.**
FLAT SHEET 3	NON-FRIABLE ASBESTOS DETECTED CH, OF	GOOD	LOW	
MOULDE SHEET 1	NON-FRIABLE ASSUMING ASBESTOS	GOOD	LOW	
FLAT SHEET 4	NON-FRIABLE ASBESTOS DETECTED A, C, CH	**FAIR**	**MODERATE**	**Some cover strips required to seal edges of fibro.**
PIPES 1	NON-FRIABLE ASSUMING ASBESTOS	GOOD	LOW	
FLAT SHEET 5	NON-FRIABLE ASSUMING ASBESTOS DETECTED A, C, CH	GOOD	LOW	

3AD1B87E-6123-440C-B550-7BBA41CC2CB(

00059

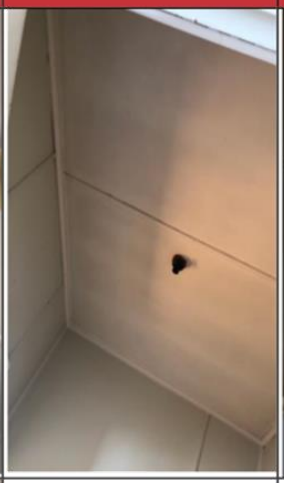
ALL CLEAR INSPECTIONS

TYPES AND FORMS OF ASBESTOS PRODUCTS/ MATERIALS	IMAGE	IMAGE
FLOOR TILE 1 **ASBESTOS DETECTED** **CH, OF** Judge room stage flooring.		
FLAT SHEET 1 **ASBESTOS DETECTED** **CH, OF** North wall to back sunroom and internal and external to cupboard.		

3AD1B87E-6123-440C-B550-7BBA41CC2CB(

00059

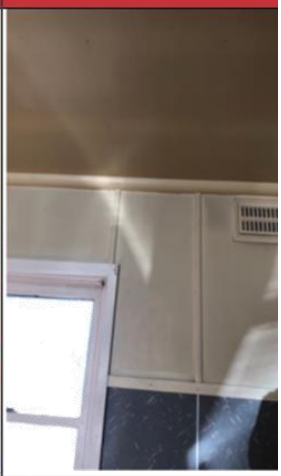
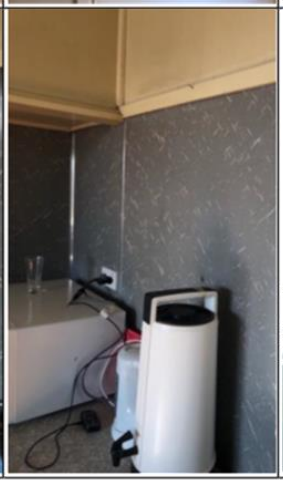
ALL CLEAR INSPECTIONS

TYPES AND FORMS OF ASBESTOS PRODUCTS/ MATERIALS	IMAGE	IMAGE	IMAGE	IMAGE
FLAT SHEET 2 **ASSUMING ASBESTOS DETECTED CH, OF** All ceiling sheets to back skillion, sunroom, kitchen.				
FLOOR TILE 2 **ASBESTOS DETECTED CH, OF** Floor tiles to back north store room.				

3AD1B87E-6123-440C-B550-7BBA41CC2CB(

00059

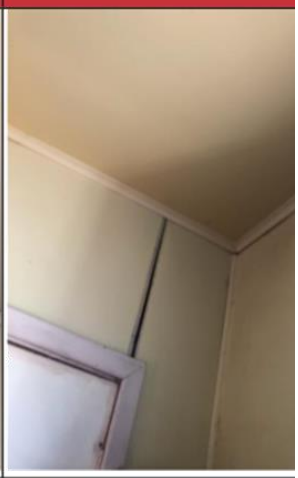
ALL CLEAR INSPECTIONS

TYPES AND FORMS OF ASBESTOS PRODUCTS/ MATERIALS	IMAGE	IMAGE	IMAGE	IMAGE
FLAT SHEET 3 **ASBESTOS DETECTED CH, OF** Walls to back airlock off kitchen & walls to kitchen above picture rail height + walls to pantry off kitchen.				
MOULDED SHEET 1 **ASSUMING ASBESTOS** Wall sheets below picture rail height to kitchen (blue).				

3AD1B87E-6123-440C-B550-7BBA41CC2CB(

00059

ALL CLEAR INSPECTIONS

TYPES AND FORMS OF ASBESTOS PRODUCTS/ MATERIALS	IMAGE	IMAGE	IMAGE	IMAGE
FLAT SHEET 4 **ASBESTOS DETECTED** **A, C, CH** Wall and ceilings sheets to back laundry & toilet.				
PIPES 1 **ASSUMING ASBESTOS** Pipe to old wood stove in kitchen.				

3AD1B87E-6123-440C-B550-7BBA41CC2CB(

00059

ALL CLEAR INSPECTIONS

TYPES AND FORMS OF ASBESTOS PRODUCTS/ MATERIALS	IMAGE	IMAGE	IMAGE	IMAGE
FLAT SHEET 5 **ASSUMING ASBESTOS DETECTED A, C, CH** All eaves to back of courthouse and external toilet.				

3AD1B87E-6123-440C-B550-7BBA41CC2CB(

00059

ALL CLEAR INSPECTIONS

NOTES

No access to external toilets. Assuming fibro walls and ceiling are similar to sample 5.

Limited access to sub due to low clearance. Inspection from manhole only. Take precaution if entering this area

Flat and/or racked sections to roof. No access or inspection.

3AD1B87E-6123-440C-B550-7BBA41CC2CB(

If removal, maintenance or repair tasks need to be carried out upon any of these items please refer Section 8.6 “Maintenance Work Flow-Chart” - on how best to proceed. These products do not pose a risk from exposure to airborne fibres so long as the materials are not disturbed or have work carried out upon them. I.e. cut sanded, drilled etc. Attachment 8.6 contains a summary of health risks.

THE ASBESTOS CONTAINING MATERIALS MARKED AS IS IN POOR CONDITION SHOULD BE REMOVED AS A MATTER OF IMPORTANCE DUE TO THEIR DETERIORATION AND POTENTIAL FOR EXPOSURE.

THE ASBESTOS CONTAINING MATERIAL MARKED AS IS IN FAIR CONDITION SHOULD BE STABILISED AND SCHEDULED FOR REMOVAL DURING REFURBISHMENT.

THE ASBESTOS CONTAINING MATERIAL MARKED AS IN GOOD CAN BE LEFT INSITU AND MONITORED REGULARLY FOR ANY DETERIORATION/DAMAGE AND REASESSED DURING FUTURE INSPECTIONS.

2.1 REMOVAL OF ASBESTOS

Any samples identified during this inspection as priority immediate or high and/or having deteriorated to an unserviceable condition should be removed as soon as practical. Potential for exposure exists.

2.2 POLICY DEVELOPMENT FOR ASBESTOS CONTAINING MATERIALS

We recommend that specific policies on different aspects of asbestos management be developed and documented in Workplace Health & Safety Plans and Quality Systems. We would suggest the following topics be covered:

•Asbestos product management: comprising care, maintenance, repairs & clean up of damaged areas

•Responsibilities of contractors and sub-contractors regarding asbestos on this site

2.3 SIGNAGE & LABELLING

In accordance with the Workplace Health & Safety Regulations an asbestos materials register notification sign shall be affixed to “an appropriate prominent place”. This applies only to the buildings that contain “asbestos material”.

The register must be on-site and is to be made available to:

• Workers and their representatives

3AD1B87E-6123-440C-B550-7BBA41CC2CB(

• Any other employers within the premises
• Any person removing ACM
• Any person engaged to perform work that may disturb ACM
• Any other person who might be exposed

3. SCOPE OF THE INSPECTION

The purpose of the inspection report was to determine the presence of any asbestos materials in the building in accordance with Workplace Health & Safety.

This report specifically refers to a visual inspection on areas of the building that were safely accessible at the time of the inspection to identify Asbestos Containing Materials which may be in the building.

Reference may be made to other Asbestos Containing Materials that are not thermal or acoustic insulation and as such are not covered by the legislation.

Workplace Health & Safety Amendment Regulation (No.1) 2000, Section 69 refers to “asbestos materials” installed in the building, including in essential plant in or on the building. The Workplace Health and Safety Regulations – 1997 defines “asbestos materials” as “installed thermal or acoustic insulation materials comprising or containing asbestos”.

Examples of installed thermal or acoustic insulation materials comprising or containing asbestos would be: • Asbestos lagging on steam/hot water pipes
• Asbestos material sprayed on steel beams
• Asbestos millboard installed in air-conditioning ductwork where heater banks are present

This type of material may be referred to as friable asbestos products, which means that it is loosely bound and could quite easily liberate fibres to the air if disturbed.

The more common use of asbestos in building products is fibro sheeting, pipe work and some vinyl floor tiles. The asbestos fibres in this type of material are bound into a matrix of cement, plastic or resin and as such are not likely to be liberated into the air if disturbed.

The contents of this report are not privileged and may be distributed to third parties including future owners and occupiers of the relevant property. This concession is made on the proviso that the report is only reproduced in full and that alterations are not made to the report without the express permission of ALL CLEAR INSPECTIONS.

All Materials / Products located will be classified as suspected Asbestos Containing Materials unless samples are taken and tested.

3AD1B87E-6123-440C-B550-7BBA41CC2CB(

4.0 METHODOLOGY OF THE INSPECTION

The inspection report survey involved visually inspecting each accessible area of the building for thepurpose of identifying Asbestos Containing Materials, as defined under the Workplace Health and Safety.

The process of identifying asbestos materials is as follows:

• Gathering information – age of building, type of building products used.
• Visual inspecting – gaining access to all areas available safely.
• Taking samples – samples are taken where possible of suspect materials and products, all samples are sent and tested at a competent & accredited laboratory.
• The Asbestos Register will identify the samples taken and tested, it may also refer to other materials within the property which in the consultants opinion are similar, however while the materials may appear similar they may not be identical.
• Report and summary – the report outlines findings, health risks and if asbestos is present.
• The presence of asbestos or asbestos containing materials installed in a building or plant & equipment can only be confirmed visually and backed by sample analysis in a certified laboratory. An appropriately qualified person will take samples of suspected materials and have them analysed in a laboratory to confirm the presence of asbestos. Therefore limiting samples taken will decrease the confidence in the Asbestos Audits findings and the Asbestos Materials Report generated from it.
• There is no device or instrument at the moment that can automatically detect asbestos.

5.0 LIMITATIONS OF THE INSPECTION

ALL CLEAR INSPECTIONS has made every effort to identify all Asbestos Containing Materials contained within the building, together with basic items of plant and equipment but no warranty, expressed or implied, is made to the completeness of this inspection and report. During the course of a visual non-destructive asbestos inspection it may not be possible to identify the presence of all asbestos materials. In many instances, asbestos materials may be present in areas that cannot be accessed without implementing destructive sampling techniques.

Such areas may include:

• Wall cavities & internal pipe work
• Penetrations in solid walls and concrete floor slabs
Iintegral parts of machinery, plant and pipe work
• Fire dampers and reheat units within air conditioning ducts, and
• Inaccessible service ducts / risers
• No air monitoring has been carried out during this inspection Samples were not taken of suspect materials that may have placed the inspector at risk of injury or death at the time of the inspection. High-risk asbestos situations that may be identified during an inspection may include internals of electrical switchboards and substations. Generally it is impossible to locate all asbestos within a building in the course of an audit. This is due to factors such as,
• To avoid damage to the building-asbestos may be hidden behind walls or floors/floor coverings or above fixed ceilings

• Plant or equipment within the building which contains an asbestos component included by the manufacturer •No plant or building plans available indicating hidden asbestos usage.
• Minimising the inconvenience or delay while an asbestos audit is underway
•No access to lifts, lift shafts and rooms, air conditioning ductwork, airways and other internal construction elements such as plumbing or electrical risers/conduits.
• Services located below wall surfaces “chased” in insulated material.

Relying on an asbestos inspection or audit
• An Asbestos materials report can only indicate such asbestos as was found in the course of the inspection. For the reasons outlined above it should never be relied upon solely to indicate the presence of all or no asbestos. The findings must be considered together with the specific limitations and scope of the inspection which was undertaken, and all other documentation on the building. (Refer Maintenance Work Flow-Chart – 8.6)

6.0 LEGISLATIVE REQUIREMENTS
The current Workplace Health and Safety Regulations require that the owner of a building or plant that contains any asbestos ensures that:
• Asbestos which is unstable or poses a significant health risk is removed as soon as reasonably practicable; and
• Policies and procedures are established to control the asbestos and prevent (or where not reasonably practicable to minimise) the exposure of any person to airborne asbestos fibres.

The policies must address the following:
• The steps that can be taken to restrict access to the place where the asbestos is situated.
• The steps that can be taken to prevent disturbance of the asbestos.
• Work practices in the vicinity of the asbestos materials.
• Notification of the existence of an asbestos register.
• Regular inspections by a competent person; of the asbestos (at least annually) and earlier if the nature or location of work in the vicinity of the asbestos materials changes;
and
Any asbestos removal work done is required to be carried out by an “asbestos removalist”. Any maintenance work done on, or in the vicinity of, materials which contain asbestos is required by legislation to be carried out in accordance with the Australian Code of Practice for Asbestos Work. It is necessary to ensure that all asbestos products are removed prior to any demolition, removal, maintenance, operational or construction work which may damage or disturb asbestos product/s.

7.0 TERMS USED IN ASBESTOS REGISTERS

CONDITION

G. Good: Showing no, or very minor signs of damage and/or deterioration of the material.
F. Fair: Showing small amounts of damage and/or deterioration of the material.
P. Poor: Showing large amounts of damage and/or deterioration of the material.

PRIORITY LEVELS

I. Immediate: Materials deteriorated to an unserviceable condition and as such should be removed as soon as practical. Potential for exposure exists.
H. High: Deterioration of material is evident. Stabilise the material, prevent further deterioration and review option to remove material.
M. Medium: Minor deterioration of material is evident. (eg. Structural integrity affected; breakdown of castable legging etc.) Planned removal should be allowed for in Maintenance Budget.
L. Low: Leave in situ and monitor condition. Should be reassessed in conjunction with future inspections and reports.

ASBESTOS LEGEND

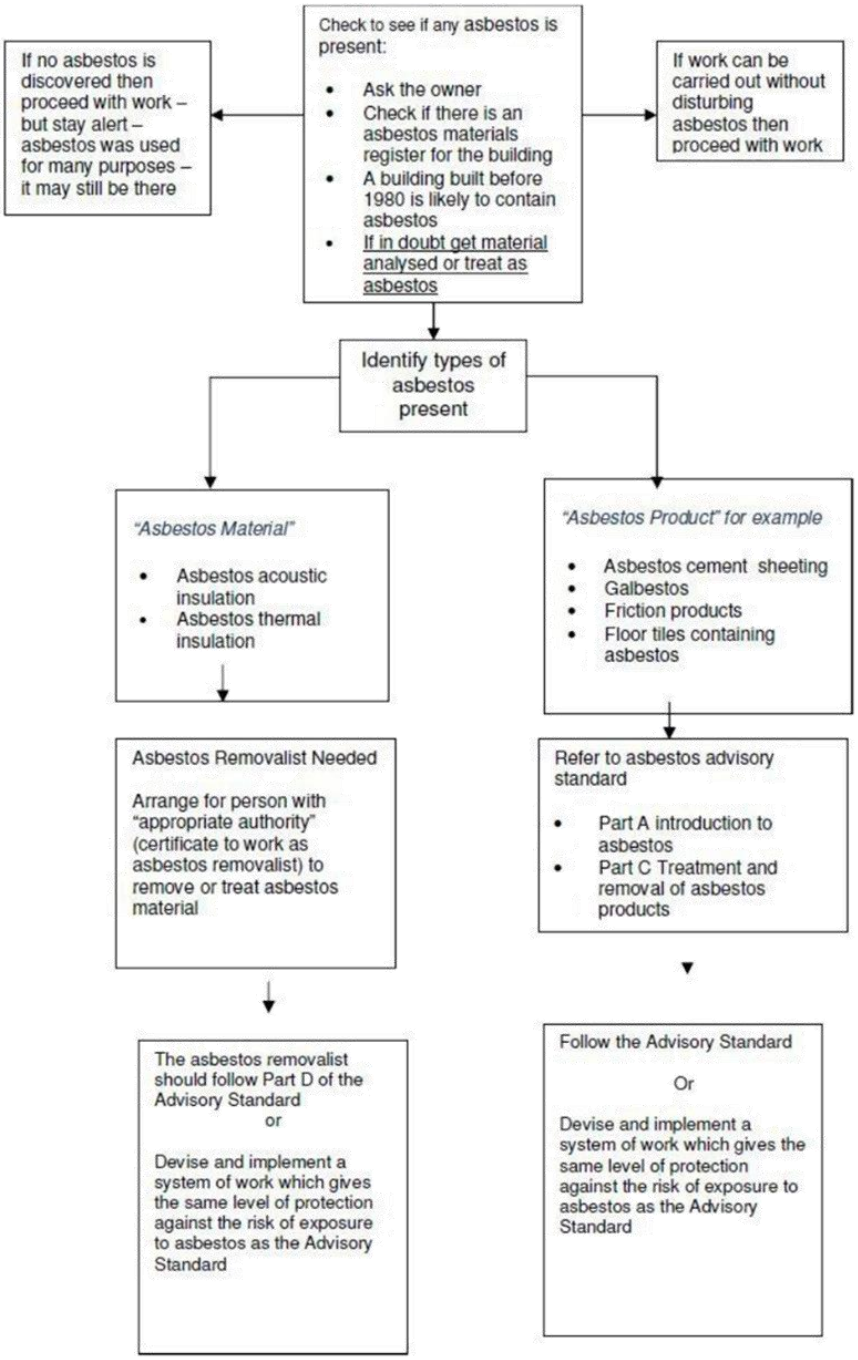
NAD:	NO ASBESTOS DETECTED.
CH:	CHRYSOTILE ASBESTOS.
A:	AMOSITE ASBESTOS.
C:	CROCIDOLITE ASBESTOS.
UMF:	UNKNOWN MINERAL FIBRES DETECTED
SMF:	SYNTHETIC MINERAL FIBRES DETECTED
OF:	ORGANIC FIBRES DETECTED

MAINTENANCE WORK FLOW-CHART
Every time – before every job

3AD1B87E-6123-440C-B550-7BBA41CC2CB(

00059

ALL CLEAR INSPECTIONS



9.0 HEALTH RISKS OF ASBESTOS – GENERAL HEALTH

Asbestosis, mesothelioma, pleural plaques and lung cancer are the recognised diseases caused by

asbestos and are all as a result of inhalation of airborne asbestos fibres. Hence for asbestos containing materials or products to pose a health risk airborne fibres must be generated either through degradation or high energy mechanical action.

The degree of asbestos fibre release, and hence inhalation exposure, is in part dependent upon the matrix material binding the asbestos, general condition and product type. The highest health risk is associated with exposure to amphibole asbestos (amosite, crocidolite) with crocidolite being cited as the material of greatest concern. Chrysotile (a serpentine mineral) is considered to be of lesser but still significant concern.

Asbestos types:
• Chrysotile is commonly known as white asbestos.
• Amosite is commonly known as grey or brown asbestos.
• Crocidolite is commonly known as blue asbestos.

Asbestos Cement Products

Asbestos cement products were commonplace building materials prior to 1986. Many building product manufacturers in Australia didn't phase out the use of asbestos in their products until the early 1980's and then it was a gradual process.

Imported building products can still contain asbestos either through legislation that allows a certain percentage of asbestos in products in that country or no legislation at all in countries that still mine it.

These products consist of asbestos fibres bound in a cement matrix and the degree of fibre release depends on the condition of the material.

The main health risk with asbestos cement products is from maintenance or similar activity where the material is worked upon (mechanical energy applied) resulting in airborne dust.

It can also be prone to weather, storm damage and the cement matrix does react and break down in acidic or polluted atmospheric conditions (i.e.; industrial areas) over a period of time.

Vinyl Floor Coverings

With vinyl floor covering, asbestos may be present in any of the following:
• The vinyl body of the tile or sheet.
• A fibrous backing felt/insulation under the tile or sheet.
• A fibrous adhesive, putty or grout used to fix the tile.

Asbestos contained in the vinyl body of the tile or sheet is held in a stable matrix. The very low rate of wear

does not normally give rise to fibre release considered to pose a significant health risk. A health risk may arise when asbestos fibres are released due to maintenance work or when the flooring is friable due to age.

Asbestos adhesive or putty is sometimes used to coat the back of vinyl tiles or sheet. This product does not pose a risk to exposure from airborne fibres, so long as it is not disturbed or worked upon. Asbestos backing felt/insulation or asbestos adhesive is normally not exposed and does not represent a significant health risk.

However, when exposed due to wear or damage to the overlaying vinyl these materials upon further wear or abrasion may liberate fibres depending upon the amount of abrasion and the age and condition of the material.

10.0 GLOSSARY OF TERMS

Action Taken: This section is provided for the building owner/manager to record any works carried out altering the status or condition of products, eg “sheeting removed May 2004”. This will make the annual update if required easier and more detailed.

Amosite: Grey or brown asbestos: This is a Amphibole mineral and has straight harsh grey to brown fibres and was often used in situations where additional strength was required such as high temperature asbestos pipe insulation as well as heat resistance such as fire rating.

Asbestos: Asbestos is a naturally occurring mineral which is fibrous in nature. Asbestos is found in veins surrounded by other rock. The vein consists of bundles of fibres held together reasonably firmly to form a solid rock, Mechanical milling breaks the fibres away from each other, leaving free fluffy fibres. Further mechanical action can break the fibres down into finer and finer fibres. This is because asbestos tends to break along the length of the fibre, not across the length of the fibre. Asbestos fibres can be extremely fine, with fibre diameters smaller than a micrometre (one one-thousandth of a millimetre) being fairly common.

It differs from other minerals in its crystal development. The crystal formation of asbestos is in the form of long thin fibres. Asbestos is divides into two mineral groups – serpentine and amphibole. The division between the two types is based upon the crystalline structure. Serpentines have a sheet or layered structure where as amphiboles have a chain like structure.

These minerals do not have any detectable odour or taste. Asbestos can be found naturally in soil and rocks in some areas. Asbestos fibres are resistant to heat and most chemicals and have great tensile strength. Because of these properties asbestos has been mined for use in a very wide range of building materials, friction products and heat resistant fabrics.

3AD1B87E-6123-440C-B550-7BBA41CC2CB(

Asbestos removalist: An employer whose business or undertaking includes asbestos removal Work; or a self employed person whose work includes asbestos removal work.

Avoid damage and abrasion: As far as practicable limit activities on or adjacent to material such that significant damage to the material that will release respirable fibres is avoid, eg; avoid drilling, cutting, sanding, etc. For softer or more friable materials this also mean lighter or repeated impacts (such as opening or closing doors with asbestos door seals or heavy wear areas for asbestos felt backed vinyl).

Chased: Where pipe work (usually hot water pipes) has been fitted into channels carved out of brickwork or concrete walls and insulated using plaster type filler asbestos. (This is not common in the Northern states of Australia but is important in the Southern states where heat loss due to low temperatures meant that hot w3ater piping needed to be insulated).

Chrysotile: White asbestos: This is a Serpentine mineral and considered to be of lesser but still significant concern than brown or blue asbestos. White asbestos has “curly” fibres. This property allows it to be woven e.g. fire resistant suits or gloves.

Crocidolite: Blue asbestos: This is a Amphibole mineral and has straight blue fibres and the fibres are very fine. Blue asbestos tends to have been used in situations where acid resistance was required as well as being a common material used for fire rating of steel structural beams.

Essential plant: includes – •Air conditioning plant; and
•Boilers; and •Cooling towers; and
•Escalators; and
•Lifts; and
•Piping.

Friability: The potential for a product containing asbestos to release breathable fibres depends on its degree of friability. Friable means that the material can be crumbled with hand pressure and is therefore likely to emit or release fibres. The fibrous or fluffy sprayed on materials used for fireproofing, insulation or sound proofing are considered to be friable and they readily release airborne fibres if disturbed. Materials such as asbestos containing vinyl floor tile or asbestos containing sealants are generally considered non friable and do not emit or release fibres unless subjected to mechanical energy operations such as sawing or sanding

3AD1B87E-6123-440C-B550-7BBA41CC2CB(

operations. Asbestos cement pipes or sheet can emit or release airborne fibres if the materials are cut or sawed or if broken up in demolition operations.

Friable:

Non bonded asbestos fabric or material can be in a powder form or can be crumbled, pulverised or reduced to powder by hand pressure when dry.

Monitor Condition:

Carry out regular general observation of the condition of the material to note any changes.

Non Friable:

Material / Product which contains asbestos fibres are bonded by cement, vinyl, resin or other similar material.

Owner:

of a building – means a person who – •Holds title to the building •Has effective management or control of the building and any essential plant in it and includes a person who manages a building as agent for a person mentioned above.

3AD1B87E-6123-440C-B550-7BBA41CC2CB(

Conservation / Maintenance Checklist for Euston Courthouse, Euston

This conservation / maintenance checklist should be completed every twelve months or after severe weather events

Name of person completing the checklist: _____ **Date completed:** / /

Foundations			
Area of inspection	**What to look for**	**Comments**	**Initials**
Foundation movement or instability of wall bases & structural members	Look for cracks or deterioration in walls, particularly near corners of building.		
	Inspect the sub-floor areas for signs of moisture or deterioration of stumps, floor bearers and joists.		
	Inspect the external masonry at sub-floor areas for signs of moisture (rising damp) or deterioration of mortar and blocks.		
Adjacent vegetation	Inspect vegetation / landscape areas where growing against the building for areas of damp and movement related to vegetation.		
Levels around building	Check that verandah/paths where adjacent/up against walls. Ensure that they are sloping away from the building.		
Site drainage around building	Check that water is running away from the building, Look for ponding of water in wet weather.		

Walls			
Area of inspection	**What to look for**	**Comments**	**Initials**
Walls & wall framing	Check condition of masonry walls to ensure they are sound. Look for cracking & dampness (crumbling surface due to salts, etc) and check for signs of wall movement.		
	Look for deterioration of exposed timbers, windows moving apart, doors sticking or locks not matching indicate settlement		
	Where appropriate ensure paint finishes are stable / in good condition and protect timber from deterioration.		
	At rear extension look for deterioration of timber weatherboards/ wall cladding, windows, doors, etc		
	At rear infilled verandah & store cupboard, wall linings are 'Fibro' (contains asbestos) and check for deterioration of paint finish or lining		
Penetrating damp	Look for changes in colour or discolouring of wall materials, bubbling of finishes, powdering on surfaces, etc. Damp is often related to overflowing eaves or gutters.		

Roof			
Area of inspection	**What to look for**	**Comments**	**Initials**
Roof covering material	Look for holes in metal roofs through rust or damage – mainly at fixings, where sheets are lapped, at ridge and flashings and roof penetrations. Repair/replace as required.		
Fixings to roof covering	Inspect for loose fixings, loose metal sheets, etc and appropriately secure as required. Note: loose fittings can indicate batten failure.		
Ridge / roof flashings and roof penetrations	Check ridge and roof flashings (at walls), roof penetrations, etc that they are sound and secure.		
Gutter & downpipes	Inspect gutter and downpipe joints for cracks/rust. Are there drips at underside? Are there loose or missing brackets to gutters and downpipes.		
Falling damp	Check to ensure that water is not leaking into the building during heavy rain. If leaks occur check for sources at wall/roof junctions, etc.		
Generally	Remove debris and leaves and check vents / pipes penetration, etc Avoid combining dissimilar metals that will react with each other.		

Doors and windows			
Area of inspection	**What to look for**	**Comments**	**Initials**
General	Check for corrosion of structural members; embedded metal may be seen in fixings or lintels. Inspect doors for loose jambs, decay at threshold and damage to / correct function of locks. Check windows for broken glazing and correct operation (sashes, casements non-binding, etc)		
Condition of frames	Check for signs of dampness (rot) at timber window frames and deterioration at joints. Look for cracks in glazing from frame or surrounding movement.		
Water entry through window units	Check internal surfaces around frames for stains – as this may indicate water seepage through the frame, window units & surrounding walling.		

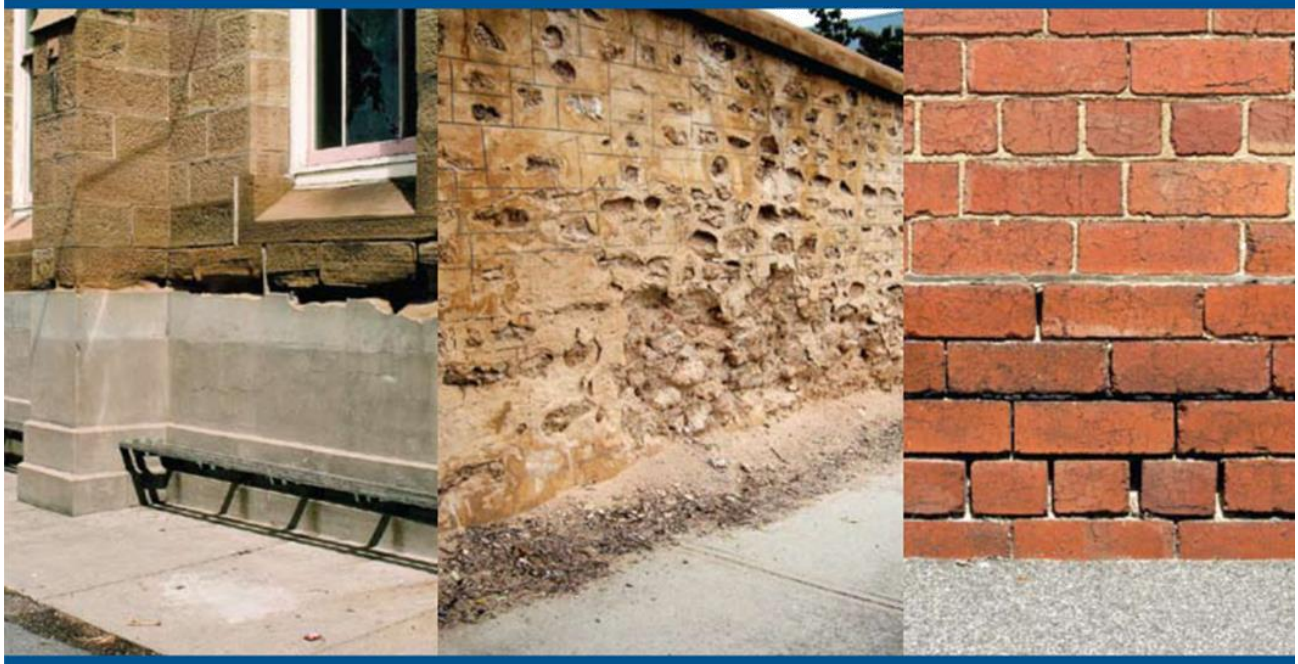
Services			
Area of inspection	**What to look for**	**Comments**	**Initials**
Stormwater	Inspect for dish drains and pits blocked with rubbish, leaves or silt. Check whether stormwater drains correctly and not into the sewer system.		
Sewerage	Inspect sewer lines for blockages. Inspect sumps for damaged covers / grating. Ensure surface water is not drained to sewer. Ensure hose taps discharge into gullies and that gratings sit square are operable and not damaged. Check correct operation of toilet cisterns and for secure and undamaged toilet pans, basins, etc		
Water	Inspect taps for drips and ease of operation. Are taps supported / secured (to walls) correctly. Look for wet / damp areas at walls, cupboards, etc as this may indicate a leaking pipe.		
Electricity	Check if light bulbs are operating correctly or for damaged light fittings. Check for secure fixings of light fittings to walls & ceilings. Check for loose wiring / conduits and unsupported cabling, particularly in roof spaces.		

General			
Area of inspection	**What to look for**	**Comments**	**Initials**
Floors	Check for evidence of damp, evidence of condensation, sub floor ventilation, springiness in floor, evidence of white ants/termites, condition of floor material, etc.		
Floor Finishes **(Carpet, Tiling, etc)**	Check for movement cracking, 'wear & tear' on floor finishes to ensure good condition of floor material/finishes.		
Walls & Finishes	Check walling material - plaster, tiling, etc for condition and for any underlying issues. Check condition of plaster work and ensure 'solid' – repairs cracks & damaged areas as required – repaint to approved colour scheme and heritage advice.		
Paintwork	Look for peeling or deteriorating paint finish, type and condition of paint system used on various elements: • Timber structural members • Timber fascia, eaves, trim, architraves • Doors and partitions • Plaster finishes • Ceilings Repaint to approved colour scheme and in accordance with heritage advice.		
Stairs, Ramps & Handrails	Check stairs, ramps and handrails for condition and compliance with regulations – upgrade as required in accordance with heritage advice.		

General			
Area of inspection	**What to look for**	**Comments**	**Initials**
Timberwork and joinery	Check condition of doors, frames, architraves, cabinetry, wall framing, timber panelling to walls or partitions.		
Lighting and power	Check mains connection to building, main distribution board, sub boards (if applicable). Check general wiring, general purpose outlets, locations and safety/operation. Check all fittings within the building, including lights etc.		
Heating & cooling systems + exhaust systems	Check condition of heating and cooling systems in all areas of the building, and exhausts at kitchen & toilets		
Ceilings	Check condition of ceilings for movement and upgrade any damaged/water affected areas.		
Toilets	Check condition of toilet fixtures & fittings or special items – ensure correct operation.		
Fittings and fixtures	Condition of shelves and benches at kitchen. pantry, etc.		

APPENDIX 5 – SALT ATTACK AND RISING DAMP - TECHNICAL GUIDE

TECHNICAL GUIDE



Salt attack and rising damp

A guide to salt damp in historic and older buildings

David Young for: Heritage Council of NSW · Heritage Victoria · South Australian Department for Environment and Heritage · Adelaide City Council

Cover photographs
Left: Rendering the base of walls in a hard cement render is a very common, but poor treatment. The damp simply rises in the masonry behind and comes out above the render, which in this case has already been extended once. Maitland, NSW.
Centre: A boundary wall of rubble limestone in Gawler, SA, showing extensive loss of stone and mortar due to salt attack and rising damp. Damage such as this can be made worse if there is a watered garden on the other side of the wall. Salt from inorganic fertilisers will add to the decay.
Right: A house wall in suburban Melbourne with the tar and sand damp-proof course showing as the dark line above the third course of bricks. Although the walls may be dry above, there is now a need for maintenance of the mortar joints below the damp-proof course. They should be repointed in a weak lime and sand mix to control salt attack and so protect the surrounding bricks while also re-instating the structural integrity of the wall.

Authorship
Text, photographs and diagrams by David Young, Heritage Consultant, Melbourne; drawings by Dr Donald Ellsmore.

Printed by Red Rover
Text printed on 100% Recycled paper

ISBN 978-0-9805126-4-9 (print)
ISBN 978-0-9805126-5-6 (online)
November 2008

Contents

BOXES

DIAGRAMS (WITH FIGURE NUMBERS)

Part 1
Understanding salt attack and rising damp

1 Introduction

This guide aims to provide owners, consultants and contractors with sufficient information to understand what causes salt attack and rising damp (and also falling and penetrating damp) and to diagnose and identify appropriate repairs for cases commonly seen in Australia. While emphasis is given to buildings of heritage value, the principles apply to all older buildings.

Salt attack and rising damp are two separate but interrelated processes; both must be understood if damage is to be minimised and if corrective measures are to be successful. While the term rising damp has been commonly used to cover both aspects, it tends to overlook the role of salt, an issue that will become increasingly important as our buildings get older and as our soils become more saline.

Salt damp is a term widely used in South Australia to refer to high salt concentrations associated with rising damp. The term is quite apt, as it combines the two concepts of salt attack and rising damp. Though less an issue in some parts, the problem of high salt concentrations affects buildings across much of Australia, and so the term salt damp has begun to be used in other States. Salt damp is used throughout this guide to mean the combination of salt attack and rising damp.

This guide is divided into two parts: Part One (Sections 1–9) covers some background and provides an understanding of how salt attack and rising damp damage buildings, while Part Two (Sections 10–25) deals with diagnosis, maintenance and repair.

Those with insufficient time should at least read the next section (The Basics) which includes a summary of the Seven Key Steps needed to manage a salt damp problem. It also has some common Questions and Answers and important Dos and Don'ts.

Technical terms are explained in a glossary at the rear and there is a bibliography for further reading. Boxes containing illustrations or discussion of particular issues are distributed through the guide.

The approach recommended by this guide is to treat a salt damp problem as one requiring thorough understanding of the causes, as well as ongoing attention if it is to be managed successfully. Approaching salt damp as a simple question of which damp-proofing technique should be employed, is neither the right question, nor is it likely to lead to a good outcome. There are many buildings with mild cases of salt damp which need attention, but which do not warrant insertion of a damp-proof course (DPC), at least in the short to medium term. This guide outlines a structured approach to salt damp problems so that appropriate methods and level of repair can be identified. This often enables retention of original fabric to be maximised and therefore heritage value to be retained.

2 The basics

Figure 1 The dense bluestone base courses of this Melbourne building help reduce upward movement of moisture. Dense stones such as bluestones and granites are commonly seen as base courses around Australia.

Figure 2 Typical salt damp damage in Adelaide, with decay of the bricks extending from about 0.5 to 1.2 metres above ground. There are no obvious signs of salt because it has been washed off by rain. Paler (underfired) bricks are more susceptible to salt attack than the darker, more well-fired ones.

Rising damp is caused by capillary suction of the fine pores or voids that occur in all masonry materials. The capillaries draw water from the soils beneath a building against the force of gravity, leading to damp zones at the base of walls. Many traditional buildings were constructed on footings of dense stone which helped reduce the upward passage of water (Figure 1). In modern construction rising damp is prevented by the insertion of a damp-proof course (DPC) which is generally a 0.5 mm thick sheet of polyethylene (plastic). Because many nineteenth century buildings were constructed without DPCs and because some DPCs have failed, been bridged, or damaged, there are now common problems of dampness at the base of walls. In most cases that dampness will have salt associated with it.

Salt attack is the decay of masonry materials such as stone, brick and mortar by soluble salts forming crystals within the pores of the masonry. As the salt crystals grow the masonry is disrupted and decays by fretting and loss of surface skins. The salt commonly comes from the soils beneath and is carried up into walls by rising damp. When the dampness evaporates from the walls the salts are left behind, slowly accumulating to the point where there are sufficient to cause damage. Repeated wetting and drying with seasonal changes leads to the cyclic precipitation of salts and the progressive decay of the masonry.

One of the difficulties for the casual observer is that salts are not always apparent, and so their role is often not appreciated (Figure 2).

As well as the quality of building materials, and of construction and subsequent maintenance, climate and soil conditions are strong determinants of the severity of salt damp problems. Across Australia the wide range of climate and soil types leads to a great diversity in the degree and extent of salt damp. Adelaide is well known for its bad salt damp; this is because it has hot drying summers and very salty soils, whereas in Sydney the more humid climate and lower salt levels means the decay rates are slower. Age is another important factor; many buildings that have only a mild damp problem at present may, with time, accumulate sufficient salts to cause major decay.

Once salt concentrations are high enough to cause damage repairs will only be successful if they include treatment of both the damp and the salt.

The next three pages contain important information: some common Questions and Answers, a summary of the Seven Key Steps needed to manage a salt damp problem and some fundamental Dos and Don'ts.

2.1 Question and answers

Q My house has bad damp and there is salt bursting through the interior paintwork. Which of the damp-proofing treatments should I use?

A Wrong question. You first should make sure that the source of dampness is minimised and carry out other basic housekeeping measures. Work through the Seven Keys Steps to deal with the problem. Depending on the circumstances, you may need to use a combination of several methods. Be aware that many damp-proofing contractors specialise in one treatment method only, so seek independent advice.

▶ See the Seven Key Steps on the next page and also Part 2 of this guide.

Q Unlike the first enquiry, my house seems to have dampness in some places but no signs of salt. Does it need a damp-proofing treatment?

A Not necessarily. The problem may be eliminated or minimised to an acceptable degree by basic housekeeping measures, such as attention to plumbing and drainage. Check these first and make any repairs needed before considering damp-proofing.

▶ See Section 12: *Good housekeeping*

Q There is mould on the timber inside the built-in cupboard in the corner of the living room. What should I do?

A Mould is due to high humidity, the source of which should first be identified. If it's because of damp walls, the problem may be solved simply by ensuring that the existing underfloor ventilation is working properly. Clean out vent grilles and monitor air flow. More vents may be needed if changes to the house have blocked previous air passages.

▶ See Section 12.3: *Underfloor ventilation.*

Q Our school chapel has damp patches in the wood blocks of the parquet floor. Years ago there was some damp treatment to the walls at one end. Could they be related?

A Yes. When we inspected the outside we found that the ground had been built up over the damp-proof course, which was the reason for the previous (unnecessary) treatment. It is very likely that the underfloor spaces are too damp because of moisture penetrating through the walls from the built-up ground. Lower ground levels to expose the DPC, check underfloor ventilation and make sure all gutters, downpipes and drains work properly. Monitor for a year before making further changes.

▶ See Sections 11: *Diagnosis* and 12: *Good housekeeping*

Q I'm having split-system air conditioning installed in my old stone house and the contractor wants to put the external fan unit against the side wall. Could that be a problem?

A Yes, it could. As well as detracting from the aesthetic qualities of your house, the fan blowing warm air against the wall will encourage evaporation and focus salt damage on the area behind the unit. Site the fan unit, and the condensate drain, well away from valuable old walls.

▶ See Section 6: *Salt attack.*

Q We had our historic presbytery treated for damp with chemicals, yet the mortar is still eroding from between the bricks. Have the chemicals failed and should we have it done again?

A Not necessarily — the water-repellent zone formed by the chemicals may be working OK as a damp-proof course. The problem may be salts remaining in the walls above. Remove the salts and monitor before considering any further damp-proofing treatment.

▶ See Sections 6, 13, 14 and 16.3 and also Figure 43.

2.2 Seven Key Steps to dealing with salt damp

This is a summary of the Seven Key Steps to successfully dealing with salt damp. These steps are explained in detail in Part 2 of this guide beginning with Section 10: *Approach*.

1. Accurate diagnosis of the cause
- is it rising damp? or is it falling damp? or a combination? or
- is the damp penetrating sideways from a localised source, or
- is it condensation on internal surfaces?
- is there an existing DPC that is buried or otherwise bridged?
- how bad is the problem — does it really need major works?
- is there a lot of salt? what is its source?

2. Good housekeeping is fundamental
- ensure gutters and downpipes are working
- ensure rainwater is carried well away from base of walls
- ensure site is well drained — no ponding against walls
- minimise splash from hard pavements into walls
- maintain about 200 mm between DPCs and ground level
- check for and fix any plumbing leaks, including sewers
- check for fungal rot, borers and termites in damp floor timbers
- ensure adequate (but not too much) underfloor ventilation
- monitor changes, for these may be sufficient.

3. Treat mild damp sacrificially
- use weak mortars in eroding joints, or
- weak plasters and renders to control damage
- monitor changes before considering further treatment
- ongoing sacrificial treatments may be sufficient.

4. Remove excessive salts
- remove surface salt deposits by dry vacuuming, then
- use captive-head washing for near-surface salts
- use poultices of absorbent clay and/or paper pulp
- use sacrificial plasters, renders and mortars.
- monitor effectiveness — re-treat if necessary
- periodic maintenance treatments as required.

5. Review results before proceeding
- allow at least one year of monitoring
- account for unusual events — storms, floods, drought, etc
- routine maintenance activities may be sufficient.

6. Inserting damp-proof courses
- undersetting with mechanical DPC, and/or
- slot sawing with mechanical DPC, and/or
- impregnation of chemical DPC, and/or
- active electro-osmotic damp-proofing.
- install DPCs at a level that will also protect floor timbers
- monitor for 'leaks'.

7. Desalinating walls
- when salts abound, do not just insert DPC
- also remove excessive salts from above DPC
- use poulticing, captive-head washing and sacrificial treatments
- monitor annually for further salt attack
- re-treat if necessary until salts are reduced to a less harmful level.

2.3 The Dos & Don'ts of damp

Dos:

Do go out in the rain (the heavier the better) and check gutters and downpipes for blockages, leaks and overflows. Also check around the base of the building for water lying against walls. Fix leaks and make any improvements needed to site drainage.

Do check for the presence of a DPC — and ensure that it is continuous, and not 'bridged' by built up paving and garden beds.

Do remember that damp walls increase the risks of fungal rot and termite attack to floor timbers — always check beneath timber floors.

Do consider the possibility that your old building may have had previous treatments for rising damp, and that these may be obscuring the extent of the problem. Thorough investigation before commissioning works will be important to defining the nature, scope and likely costs of any repairs.

Do clean out existing air vents regularly — and monitor results before deciding to add new ones.

Do consider the possibility of salt attack decay into wall cavities — always inspect cavities for accumulation of debris (and corrosion of ties).

Do consider the implications of drying out the soils beneath your building. If it is founded on reactive (expansive) clay soils excessive drying could lead to structural cracking as a result of differential settlement. On reactive soils the challenge is to strike a balance between limiting cracking and minimising rising damp. The unhappy medium might be a bit of each.

Do get independent advice — that way there should be no pressure to use a particular product or system. Check your adviser's credentials.

Don'ts:

Don't use hard cement mortar to repoint failed lime mortar joints — that will just drive the damp further up the wall and may also damage the bricks.

Don't even think about sealing walls with water-repellent coatings.

Don't mulch your walls. Move garden beds away from the base of walls and remove irrigation to prevent spray and ponding against walls.

Don't dismiss the old tar and sand DPC — reduce the damp 'stress' on the walls, repair the DPC, use sacrificial mortars in the joints if necessary, and monitor results before considering an expensive new DPC.

Don't undertake insertion of any form of DPC until all the basic housekeeping measures have been completed and their effectiveness assessed over a period of time (at least a year).

Don't accept the cheapest quote for chemical dampcoursing without checking the contractor's references and the details of the proposed works such as drill hole spacing and depth, and how the contractor will determine when sufficient fluid has been impregnated.

Don't try to get away with using less chemicals and then locking in the inevitable damp with waterproof plasters — your client has read this too!

3 Previous investigations

▶ The first edition of this guide was jointly published in South Australia in 1995 by the Heritage Branch, Department of Environment and Natural Resources and the City of Adelaide under the title *Rising Damp and Salt Attack*.
See *Further Reading* for details of the publications mentioned in this section.

In South Australia in the 1960s and 1970s there were many cases of failed damp treatments as the salt damp problem was poorly understood. So many complaints were made to consumer affairs that the State government established a Salt Damp Research Committee which operated in the period 1974 to 1982. The committee produced several reports and guides, held a national conference in 1978 and commissioned scientific research.

More recently, the developing problem of soil salinity across large parts of Australia has resulted in previously sound buildings succumbing to salt damage as rising water tables bring salts closer to the land surface. Increasing soil salinity is not only an issue for the major dryland and irrigated areas such as the Murray Darling Basin. It is also a problem in coastal areas, where expanding cities and towns are exposing and building on soils containing salts, including the problematic acid-sulphate soils.

The NSW Salinity Strategy was launched in 2000 and a component, the Local Government Salinity Initiative, provides training, education and technical support. The Initiative has produced a series of booklets and guides, and has held several conferences on urban salinity. Note that, in respect of damage to buildings, the terms salinity and urban salinity are synonymous with salt damp.

Responding to increasing salinity problems, some local councils are requiring higher standards of construction of modern buildings, particularly in regard to concrete slabs and footings for housing. This guide is about existing buildings and is focused on those that have deficient, absent or bridged damp-proof courses. Even buildings with good damp-proofing are not immune to salt damage and many will require ongoing maintenance to control the problem (Figure 34).

4 Porosity and permeability

All masonry materials, whether stone, brick, mortar, earth or concrete block, are to some degree porous: that is, they contain voids or pores. Porosity is measured as a percentage of the volume of the material and ranges from 0.1% for fresh marbles to an extreme 50% for some limestones. Common porosities of sandstones, limestones, bricks and mortar used in traditional construction are in the range 10–30%. Denser materials such as granites, bluestone and slate have porosities around 1-5%. Porosity is a rough guide to durability: the higher the porosity, the less durable will be the material. Pore size is an important factor: materials with a lot of very small pores are generally less durable than materials with fewer but larger pores.

The degree to which the pores in a material are connected is known as permeability. Closed cell foam has lots of pores but little permeability, whereas a kitchen sponge depends on both porosity and permeability for its capacity to absorb water and release it again when squeezed out. Most masonry materials have some permeability: water and air can move through them to varying degrees. Some materials are relatively impermeable and these include granite, marble, slate and dense concrete. Totally impermeable materials such as plastic DPCs are often described as impervious.

5 Walls breathe

When a wall warms up after a cool night, the air contained within its pores expands as it warms and a small proportion moves out of the wall via the connected pores. As the wall cools down again the air within contracts and air moves back into the wall from the atmosphere. And so masonry walls 'breathe' – out as they warm and in as they cool. Breathing occurs on a daily basis, or more frequently in periods of variable weather; breathing is shallow when there is little temperature variation and deepest when the daily range is greatest. Of course, walls don't actually breathe in the human sense: they just sit there while changes in temperature (and air pressure) do the work, but the 'breathing' analogy is a convenient way of understanding frequent exchanges of air from masonry to atmosphere and back again.

If the air drawn into a wall is humid and if the wall material cools below the dew point then some of the water vapour in the humid air will condense as water droplets within the pores of the masonry, though the wall will still be 'dry'. During warmer and drier times some of this water will evaporate and leave the wall as it breathes out. And so apparently dry walls commonly contain water, the amount varying with changes in the season and climate. If there are salts or other hygroscopic (moisture-attracting) materials in the masonry then the amount of water drawn into (and retained in) the wall can be sufficient to make the wall visibly damp, even in dry weather.

Anything that prevents a masonry wall breathing will reduce its life expectancy. Coatings that are designed to seal the surface of masonry walls (and so 'protect' them) risk trapping moisture behind the coating and causing a damp problem elsewhere, such as on the other side of the wall. If there are appreciable salts in the wall, the damage caused by the inappropriate use of coatings can be dramatic (Figure 3).

Figure 3 Inappropriate use of water repellent coating, trapping moisture and salts and causing loss of the sandstone's natural case-hardened surface. Beneath this 'skin' the stone can be quite weak.

6 Salt attack

Figure 4 Thin needles of salt extruding from the top of a window arch. A slipped roofing slate punctured the copper roof gutter, allowing rainwater to wash salts into the stonework.

Figure 5 Salt attack in bricks causing disruption and loss of the fireskin, the harder outer surface that develops during firing in the brick kiln.

Salt attack (or salt weathering) is the term used to describe the damage caused by soluble salts crystallising within the pores of masonry materials. Salts are brought into the porous masonry in solution in water by a variety of means described later under Rising, Falling and Penetrating Damp (Sections 7 & 8). During a dry period, when the water evaporates from the wall, the salt will be left behind (as salts can't evaporate) and the salt solution in the wall will become more concentrated. As more salts are brought into the wall the salt solutions are further concentrated as the moisture evaporates. When the solution reaches a condition known as saturation, or supersaturation (depending on the type of salt), crystals will begin to form.

When the rate of evaporation from the wall surface is low (such as in humid climates, or in cellars and basements with little air movement) the evaporative front may be at or very near the surface, in which case salt crystals will grow as long thin needles, extruding from the wall face (Figure 4). This is known as efflorescence and is commonly seen as a relatively harmless white powder on the surface of new brickwork.

However, when the rate of evaporation is much greater, the evaporative front will be inside the wall and salts will crystallise within the pores of the masonry (subflorescence). The force exerted by rapidly crystallising salts is very high and sufficient to disrupt even the strongest masonry material. Crystal growth leads to either grain-by-grain loosening, which produces fretting and crumbling of the surface (particularly to soft mortars) or to delamination of a complete skin, such as the case hardening found on many sandstones (Figure 3) or the fireskin on bricks (Figure 5).

Cyclic wetting and drying is an important driver of salt attack decay. When salts first disrupt masonry they enlarge the pores slightly. After a cycle of wetting and drying, salts fill the enlarged pores and the new crystal growth further disrupts the masonry and enlarges the pores some more. Each cycle may produce only tiny changes, but cumulatively they result in the progressive decay of the masonry material.

6.1 Which salts?

Salts consist of a combination of positively and negatively charged ions known as cations and anions. The table below shows those that make up the salts commonly encountered in walls.

Cations (+ve)	Anions (–ve)
Sodium (Na^+)	Chloride (Cl^-)
Potassium (K^+)	Sulphate (SO_4^{2-})
Magnesium (Mg^{2+})	Nitrate (NO_3^-)
Calcium (Ca^{2+})	Carbonate (CO_3^{2-})

Salts may consist of a combination of any cation with any anion, provided there is a balance of positive and negative charges. Thus sodium chloride (table salt) is written NaCl, while sodium sulphate is Na_2SO_4 and calcium chloride is $CaCl_2$. Sodium chloride, sodium sulphate and calcium sulphate (gypsum) are commonly found causing salt attack problems in walls.

Salt attack can occur simply through changes in humidity. Some salts have water (H_2O) combined in the crystal structure and may exist in several different hydration states. These include sodium sulphate, which can exist as Na_2SO_4 or as $Na_2SO_4 \cdot 10H_2O$, and is a particularly damaging salt. Salts that are deliquescent at normal humidities, such as magnesium chloride ($MgCl_2 \cdot 6H_2O$) are also problematic; they attract water from moist atmospheres, dissolve, and then crystallise again when the humidity drops, or on rapid cooling.

Not all the possible combinations of cations and anions shown in the table are very soluble and hence damaging. Calcium carbonate ($CaCO_3$) is relatively insoluble, which is fortunate as it is the principal component of limestone, marble and the cured lime in mortars.

▶ For information about testing for salts go to Section 11.3 *Chemical analyses for salts*. Do-it-yourself salt testing is explained in Box 4.

The amount of salt required to cause damage will vary and will depend on the type of salt(s), the nature and condition of the masonry, including its pore structure (pore size and distribution) and the cohesive strength of the material. A general rule of thumb is that more than about 0.5% by weight of salt is considered cause for concern and reason for considering salt removal (desalination).

Sources of salts in walls may be one or more of the following:

- saline soils and groundwater
- sea-spray for coastal sites
- air-borne (meteoric) salts — even in inland locations
- air pollutants
- inorganic garden fertilisers
- biological sources — pigeon droppings, micro-organisms, leaking sewers
- salt naturally occurring in the stone, brick clay, or mortar sand
- salty water used for puddling brick clay or mixing mortar
- salts used for de-icing roads in cold climates
- cleaning compounds that contain (or react to produce) salts in walls.

The type of salt may be a guide to its source; e.g. high levels of nitrate salts may indicate leaking sewers or confirm that a building was once a stable.

7 Rising damp

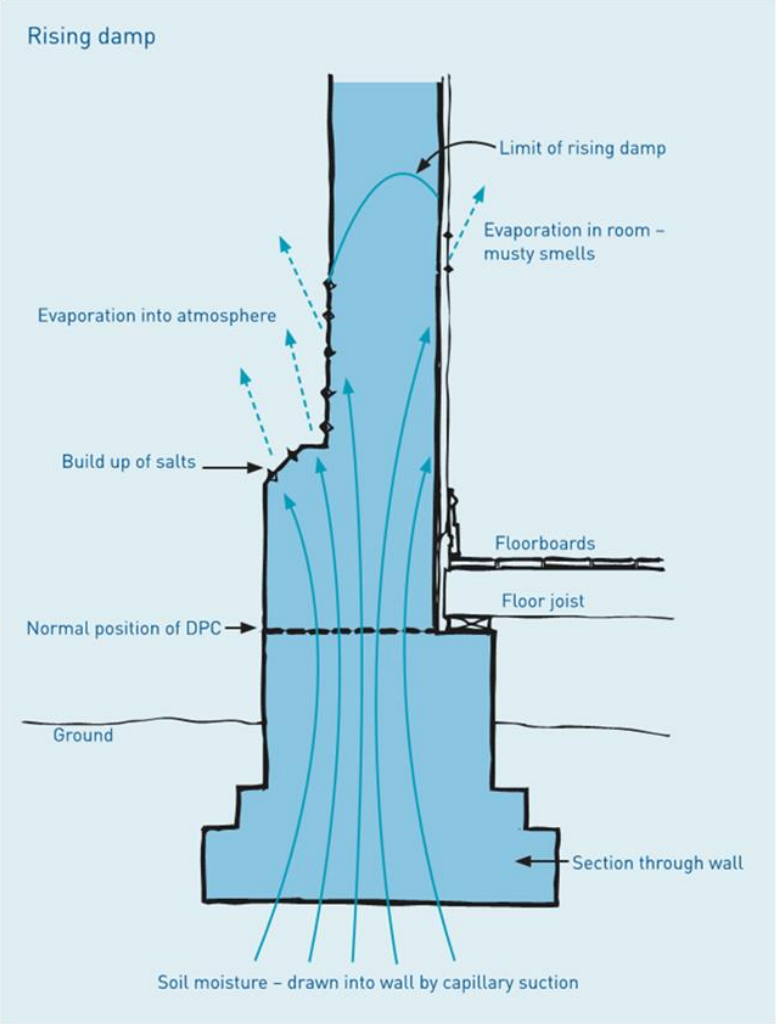


Figure 6 Section through a solid wall showing the path of rising damp which is caused by the suction of porous masonry. The pores effectively form a network of capillaries which draw soil moisture against gravity. Damp rises in the wall and eventually evaporates from the wall surfaces. As well as damaging masonry materials, the dampness may lead to fungal rot and insects (borers and termites) in the floor timbers. Today it is normal building practice to include a moisture barrier known as a damp-proof course (DPC) across the base of the wall below all floor timbers and at least 150 mm above ground level

Rising damp is caused by capillary action (or suction) drawing water from the ground through the network of pores in a permeable masonry material. Capillary suction becomes stronger as the pore size gets smaller; if the pore size is fine enough damp may rise many metres in a wall, until the upward suction is balanced by the downward pull of gravity (Figure 6).

In practice, the height to which water will rise in a wall is limited by the rate of evaporation of water from the wall surfaces. The evaporation rate for external surfaces is related to the nature of the masonry materials, surface coatings, climate, season and siting. In Australia the normal exterior height limit for rising damp ranges from 1.0 to 1.5 metres above ground level, whereas in cooler, more humid climates damp may rise several metres before evaporating. The evaporative zone is commonly from 0.5 to 1.2 metres above ground level. There is often little evaporation up to 0.3 metre

Figure 7 Typical blistering of paintwork and damage to internal plaster due to the combined effects of rising damp and salt attack. The skirting is a cement moulding and also shows salt damage.

above ground because the air near the ground is more humid and is more slowly moving. Trees, gardens, fences and nearby buildings will influence the particular circumstances.

Heating, ventilation and air-conditioning play a critical role in determining the height to which damp will rise on internal walls: the more ventilation the lower will be the damp zone. Air-conditioners generally dehumidify the air in a room and increase ventilation rates. The addition of heating or air-conditioning will increase the rate of drying and so increase the associated decay. Air-conditioning systems can draw moisture through solid masonry walls and their introduction into older buildings can be problematic.

As moisture evaporates from either face of a wall, more moisture is drawn from below. The process is dynamic: there is often a continuous upward flow of moisture, slowing or stopping only in dry weather and particularly during droughts. The rate of flow depends on the supply of water, evaporation as described, and the permeability of the masonry.

Rising damp may show as a high-tide like stain on wallpaper and other interior finishes, and when more severe, as blistering of paint and loss of plaster (Figure 7, and also Figure 15). Musty smells are common in poorly ventilated rooms and particularly in cellars and basements (see Box 1: *Damp rooms may be unhealthy*). Externally, a damp zone may be evident at the base of walls with associated fretting and crumbling of the masonry (Front cover & Figure 2).

Damp rooms may be unhealthy

Damp conditions promote the growth of moulds, tiny members of the fungal kingdom that include rots and mushrooms. Moulds have the potential to cause health problems. Inhaling or touching mould or mould spores may cause allergic reactions in sensitive individuals. Moulds can also cause asthma attacks in people with asthma who are allergic to mould. Research on mould and health effects is ongoing. Indoor mould growth can and should be controlled by controlling moisture levels. Keeping walls relatively dry is a sensible precaution. In building science terms, surface relative humidities (the relative humidity of surfaces such as walls) should be kept below 80% for periods of a month at a time. This is readily achieved in well-ventilated housing in warmer parts of Australia.

Box 1

7.1 The damp-proof course (DPC)

Figure 8 Many late nineteenth and early twentieth century DPCs were a mix of tar and sand that was laid hot. Being viscous, some have harmlessly extruded a little under the weight of the overlying masonry.

To prevent rising damp it is now normal practice to build in an impervious barrier at the base of the wall just above ground level and below any floor timbers. This is known as the damp-proof course (DPC) or sometimes just as the dampcourse. Modern DPCs include the common embossed black polyethylene sheeting. The standard thickness is 0.5 mm and there is a heavy duty grade, which is 0.75 mm thick and has a higher impact resistance, providing improved resistance to damage during laying. Careful building practice is necessary to ensure that the DPC is not punctured or otherwise damaged during construction, and that it forms a barrier across the full thickness of the wall.

Many nineteenth century buildings in Australia were built without DPCs. By the third quarter of the nineteenth century the need for damp-courses seems to have been recognised, though not always practised. Early DPCs included roofing slates laid in mortar with an overlapping second layer, sheets of glass, lead, hardwoods, bitumen-impregnated fibre, felt or paper, and various asphalt and tar-based compositions, including a widely used tar and sand mix which was laid hot (Front cover & Figure 8).

Some of the most effective DPCs used were glazed hard-burnt ceramic tiles or bricks, often with perforations allowing ventilation (Figures 9 & 10). These DPCs were laid without mortar in the perpendicular joints to prevent moisture passage through permeable mortar. The open joints also allowed through-wall ventilation. It is a great pity that glazed brick units suitable for DPCs are not made today as they have many advantages.

Figures 9 and 10 Hard burnt and glazed ventilating ceramic tiles and bricks. Made for the purpose, these are among the best dampcourses ever used, particularly the example at left from 1879. At right is a 1930s example which (together with its adjacent brickwork) is a remedial undersetting of an 1840s church of rubble limestone. Both examples were laid with open perpendicular joints to prevent damp travelling through the permeable mortar. In both cases salt attack is damaging the masonry below the DPCs — and each building will need treatments to control the salts (see Sections 13 & 14).

More recent DPCs have included thin copper or aluminium sheets coated with bitumen and then with talc or mica flakes to prevent adhesion when rolled. These have not performed well in corrosive (i.e. salty) environments. There is also a composite DPC which has a metal core coated in bitumen with an external coating of polyethylene. Because the plastic coating is very thin (0.1 mm) it is easily damaged, exposing the metal which is then susceptible to corrosion. Waterproofing additives for mortars have been commonly used, generally in the first three courses of brickwork above the concrete footing. Mortar additives should not be relied on as a sole means of damp-proofing.

Very few DPCs are truly durable and damp-proof; of currently available materials, only polyethylene has proved impermeable and resistant in very corrosive environments. *The Building Code of Australia* (see Box 8) has provisions for acceptable damp-proof course materials.

While most early DPCs would not meet modern standards, many have performed quite well, particularly where the rising damp 'stress' on the wall is relatively low. Existing DPCs, such as those based on asphalt and tar, should not be assumed to be defective simply because they are old. The better ones continue to perform well today.

7.2 Bridging the DPC

Rising damp is often caused by bridging the damp-proof course: a moisture pathway or bridge that negates the effect of the DPC. Bridges may be caused by rendering or plastering over the DPC. Pointing over the external face of a DPC will also cause a bridge, though it is important to be aware that asphalt or tar-based DPCs were often specified to be pointed over in hard cement, so as to retain the viscous DPC while minimising permeability. Examples where this pointing has failed are common, with the DPC extruding slightly from the joint (Figure 8). Poorly installed DPCs that do not form a barrier across the entire wall thickness will be bridged by mortar in the joints or cavity. Concrete floors or external paths can form a bridge if the concrete, or the fill beneath, abuts the DPC without some form of vertical damp-proofing. Build-up of garden beds and pavements against walls can also bridge the DPC (Figure 11). To be effective a DPC needs to remain about 200 mm above ground or paving level.

▶ For more advice on the position of DPCs go to Box 2: *Location of damp-proof courses.*

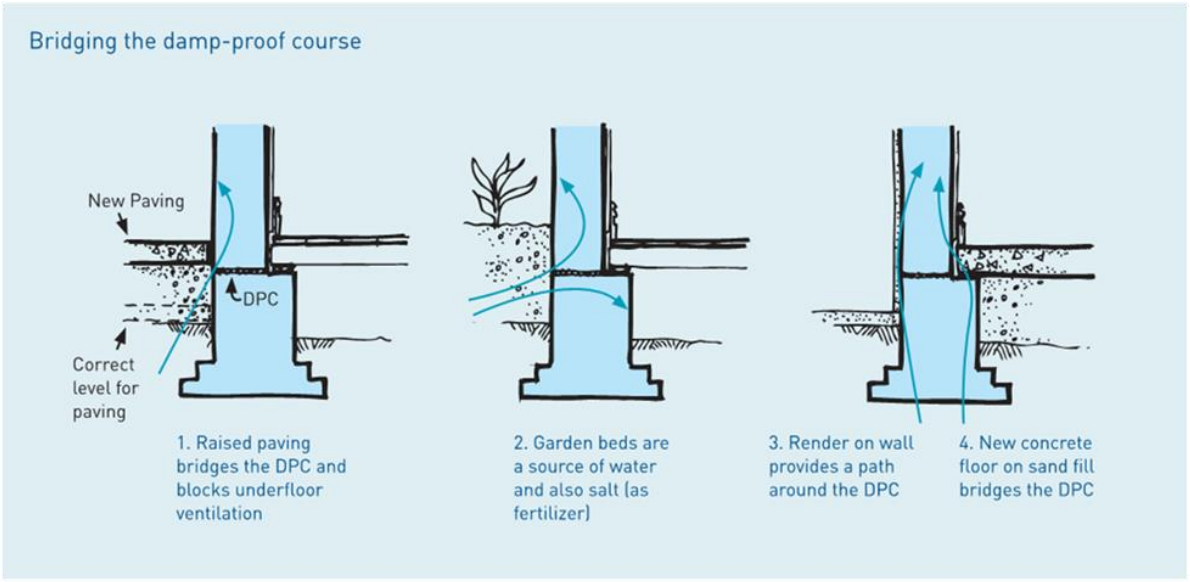


Figure 11 Bridging the damp-proof course. Four examples of how changes to a building can create a path, or bridge, around an existing damp-proof course. Bridging by build-up of paving or garden beds is a common cause of rising damp problems. See also Figures 29 and 49 for further examples of bridging.

7.3 When the damp contains salt

By itself, rising damp causes wet walls and musty smells but limited decay of masonry (except to particularly susceptible materials, such as those containing swelling clays — some earth materials and some clay-rich sandstones and limestones). It is when salt is present in the soil that salt attack combines with rising damp to cause substantial decay. In practice some salt is likely to be associated with most cases of rising damp, particularly in older buildings that have accumulated salts over a long period of time. Thus it may be that an old building with deficient, absent or bridged DPCs is badly damaged, despite relatively low salinity in the soil beneath. The importance of time is considered further in Section 9: *Further factors*.

Once rising damp has drawn enough salt into the wall so that the concentration of salt in the masonry is higher than in the soil below, the very presence of the salts helps to perpetuate the damp, increasing the problem. This is because of the hygroscopic and deliquescent nature of many salts: their tendency to attract water and then dissolve into it (think of the dinner table salt shaker in humid weather). Deliquescence keeps salty walls wet in humid weather and then solute suction (the osmotic pressure of a salt solution) draws more water towards the higher concentration of salts, compounding the capillary suction and adding to the rising damp (Figure 12).

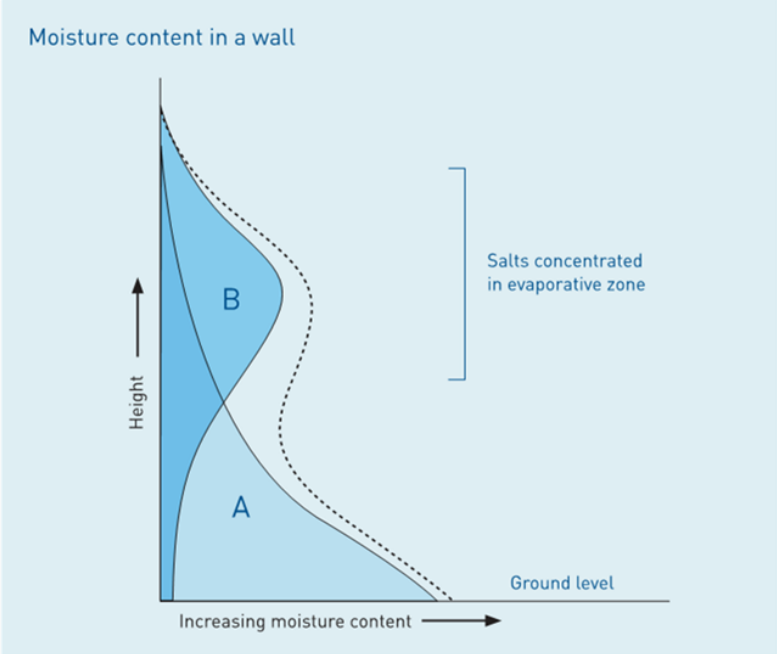


Figure 12 Moisture content in a masonry wall due to A, capillary action (rising damp) and B, hygroscopic salts. The total moisture content is shown by the dashed line and is the sum of A and B. The relative contributions of A and B to the total will depend on the amount and nature of the salts in the soils beneath, on the climate (humidity, temperature and wind speed) and on time (the older the wall the longer it will have had to accumulate salt).

8 Other forms of damp

Most damp-related decay is caused by salt attack in combination with rising damp, but other forms of damp can also cause substantial damage.

8.1 Falling damp

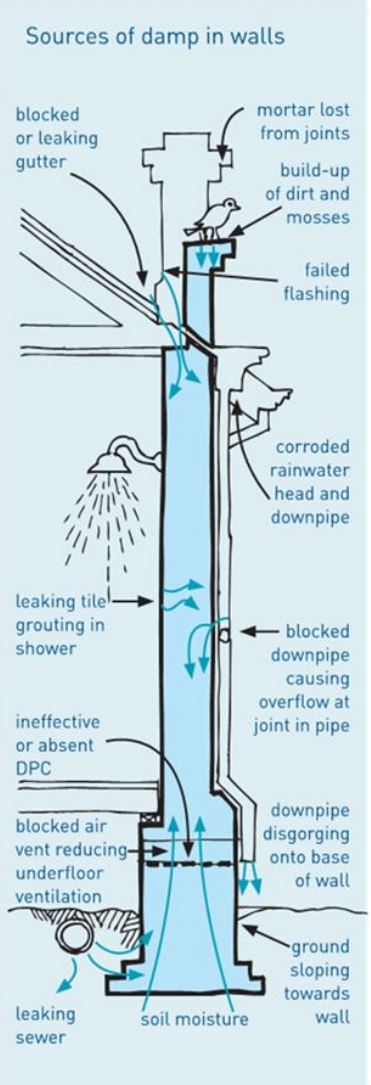


Figure 13 (above) The many sources of damp in walls.
Figure 14 (right) Two examples of falling damp. Overflow from the blocked rainwater head is made apparent by dark green algae. The coping above the rainwater head is allowing water through to the stones below. Salt attack is causing these stones, above and to the left of the rainwater head, to decay.

As the name suggests, falling damp is moisture entering masonry walls from above and percolating downwards through the network of pores that most materials possess. The numerous sources of falling damp (Figure 13) include failed roof coverings, blocked or leaking gutters, failed flashings and joints that have lost their mortar. Build-up of dirt and mosses on upper surfaces of parapets and cornices encourages water retention which in turn promotes downward percolation through the masonry. Most cases of falling damp lead to relatively localised patches of damage.

The typical debris that builds up in roof gutters and on parapets (such as fallen leaves, bird manure, mosses and dirt) contains weak acids which will contribute to masonry decay by slowly dissolving weaker components leading to progressively more porous and permeable materials. Salts also accumulate on the tops of buildings, not only near the coast, where sea spray is a major factor, but even in central Australia, where wind storms whip up salts from the dry salt lakes and where tiny particles of salt rain from the sky. Though the rates of accumulation of air-borne salt are relatively low, with time a building can absorb sufficient salt to cause damage, particularly when it is all concentrated at one point, such as the top of a blocked downpipe or rainwater head. The importance of regular maintenance of gutters and downpipes cannot be over-emphasised (Figure 14).

As with rising damp, the damage caused by falling damp happens not where the moisture enters the masonry, but at the point where it evaporates from the wall surface and leaves the salts behind (Figures 4 & 14). Tracing damp back to the point of entry can be difficult, particularly when the masonry is rendered and/or painted and the moisture is trapped behind the render or paint coating.

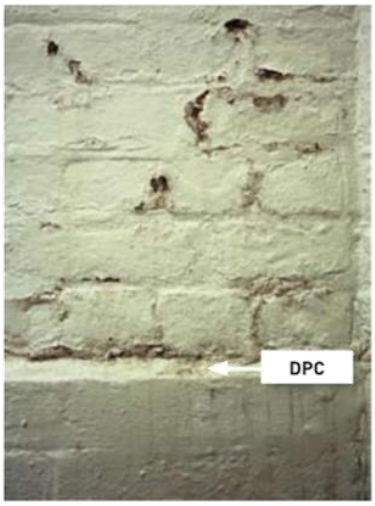
8.2 Penetrating damp

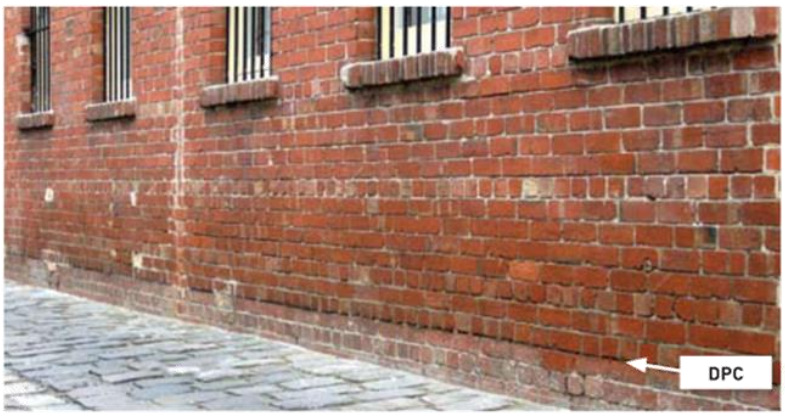
Penetrating damp can be due to leaking water or waste pipes; to failure of tile-grouts in kitchens, bathrooms and laundries; or to defective mortar joints in external walls. Leaking grouting in shower alcoves is particularly common and often shows as damp patches and blistering of paint in the room next to the bathroom. Persistent drips from air-conditioning condensate drains or hot water system overflows can also be a problem. Sources of penetrating dampness such as plumbing leaks can sometimes be difficult to trace and may require a range of sophisticated techniques, including acoustic detection, thermal imaging, moisture meter surveys and the use of tracer gases.

Construction faults may cause penetrating damp. Mortar droppings (snots) caught on ties in wall cavities can provide a pathway for water to travel from outer leaf to inner leaf and so negate the point of having a cavity. Substantial accumulations of snots at the base of the cavity can produce large damp patches on interior surfaces. Prior to the introduction of cavities, all walls were solid and relied on good workmanship and their thickness to limit rain penetration. On the prevailing wind side of a house, 230 mm (nine inch) walls commonly leaked and were often rendered to fill cracks in mortar joints, improve water shedding and reduce water entry. The alternative use of modern paints for this purpose can be problematic, for while limiting water entry, they will also prevent the wall drying rapidly and so may increase, rather than reduce, interior dampness problems.

Like falling damp, penetrating damp generally produces small, localised patches of dampness and decay. Exceptions are cellars and basements, where ground and surface water may penetrate laterally through the walls due to the failure or lack of external damp-proofing or drainage. In these cases damage may be widespread and at first sight may appear to be due to rising damp (Figures 15 & 16). Accurate diagnosis will be critical to successfully managing or remedying such a damp problem.

Figures 15 and 16 In both these examples of penetrating damp the walls are wetter above the DPC than below. At right moisture is penetrating horizontally from a concrete floor, while on the left (in a basement) moisture is coming through the wall from the ground outside. Had the left hand example been an external surface, the paint would have prevented rain from flushing salts out of the wall.





9 Further factors

This section begins with the factors causing salt attack and considers rates of decay in Australia in contrast to those of the United Kingdom. Some important considerations in the management of a salt damp problem are then discussed, providing a theoretical basis for the recommended approach and remedial works of Part Two.

9.1 Factors causing salt attack

For salt attack to occur there must be a combination of the following factors:

- permeable masonry
- available moisture
- available soluble salts
- evaporation

All four factors must be present for decay caused by salt attack to occur. Conversely, decay can be prevented by removing any one factor. While ostensibly an attractive path to preventing salt attack, in reality it is impossible to completely eliminate any one factor.

Permeable masonry. People have sought to make masonry materials impermeable by applying water repellent coatings, which have led to many failures as moisture and salt are trapped behind the coatings (Figure 3).

Available moisture. Preventing moisture entering masonry is one of two factors over which we have some (but not total) control. We can minimise water entry by good design and detailing and by good repair and maintenance practices, but we cannot totally prevent water entry. As noted in Sections 5: *Walls breathe* and 6: *Salt attack*, moisture may enter walls as vapour, and salt attack may be triggered simply through changes in humidity.

Available soluble salts. Salts abound and we cannot change that, but we can reduce the amount of salt in our walls (see Section 14: *Removing excessive salt*), though we will never remove it entirely, nor remove the need for periodic maintenance to control salt attack.

Evaporation. Where there is no evaporation there is no salt attack, the most obvious example being buried masonry such as footings, which if kept wet will not decay. This principle is used in partially uncovered archaeological sites where parts of buildings are displayed through windows into the ground. To prevent salt attack, the masonry in such sites must be kept moist 100% of the time (and there must be no evaporation of that moisture) which means sophisticated temperature and humidity controls. Keeping above ground walls permanently wet in order to prevent evaporation is impractical.

9.2 Rates of decay — comparison with the UK

Our building tradition derives from the United Kingdom where the climate is cooler and wetter than ours and so the rate of transpiration of moisture through walls is lower, though the walls themselves may be wetter. Condensation is a more significant problem, and the misdiagnosis of damp problems as due to rising damp is common. In contrast, the hotter and drier, temperate Australian climate promotes rapid evaporation from wall surfaces and hence greater rates of transpiration of moisture due to rising damp. When coupled with relatively saline soils, the result is much higher rates of decay in this country than in the UK. And so younger Australian buildings can be in worse condition than the much older buildings of northern Europe.

9.3 What to fix — the damp, the salt, or both?

Like our building tradition, our building repair tradition also comes from Europe, and so we have tended to focus on the damp, rather than on the salt. Yet both must be dealt with if our buildings are to be maintained in the long term. Failure to understand this has led to remedial treatments that may have successfully inserted a new damp-proof course but haven't stopped decay, because salts are left in the walls above the new DPC and continue to cycle in and out of solution with changes in humidity. Although the main source of moisture is removed (and the further supply of salt reduced) decay will continue, albeit at a slower rate. **Best practice treatment of salt damp involves removal of salts as well as cutting off or minimising the rising damp.**

9.4 Managing salt attack with maintenance

Consider the hypothetical (and common) case of a 100 year old house which is well built, with brick walls and lime mortar, and sits up on a well drained block with no ponding of surface water against the walls. Yet the lime mortar of the lower 5–10 courses of brickwork is eroding and in places the loss is up to 50 mm. The bricks are in reasonable condition, showing only the first signs of deterioration. There is no damp-proof course and not a lot of dampness in the walls. On the inside the plasterwork is in good condition with only a few small areas of blistering beneath paint coatings. It is tempting to think that as the house has lasted 100 years, the decay will not be much worse after another 20 or 30 years. Postponing action on this basis would be wrong, as Figure 17 shows. While this graph is notional, it is based on conservation science and an understanding of the rate of decay of materials.

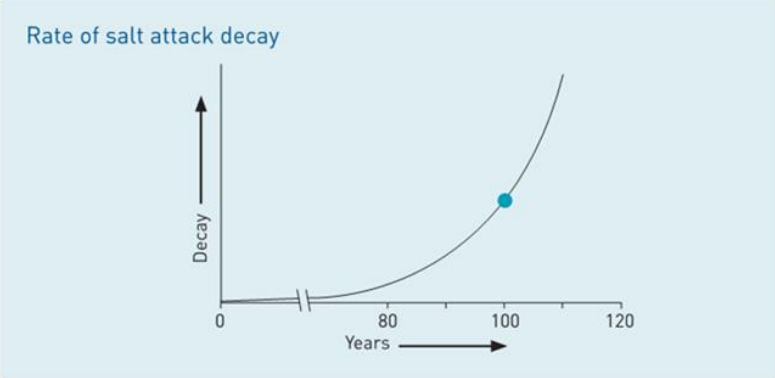


Figure 17 The rate of salt attack decay follows an exponential curve in which there is a long period of little or no decay as salt slowly accumulates in the pores of the masonry. Then when the salt has filled the pores there is a rapid acceleration of decay — the condition of a 100 year old building may be twice as bad after only another 10 years.

There is a long period of almost no decay (in this case about 80 years) during which time salts are slowly accumulating within the masonry. Only then do they fill the pores sufficiently to cause significant salt attack decay. By the time the house turns 100 the decay has accelerated to near its maximum rate (the slope of the line), and in only ten more years the decay will be twice as bad as it is now. There are two important lessons from this. The first is that procrastination is not an option — something must be done, and done soon, or sufficient mortar will be lost to cause partial collapse of the walls (Figure 18).

Figure 18 Extensive loss of lime mortar due to salt attack. The bricks remain sound — protected by the weaker mortar. Any further mortar loss risks local collapse of the brickwork. Successful repair may require dismantling and reconstruction as is done when undersetting (See Section 16.1).

The second is that, by reversing the decay and its cause, it will be possible to effectively reset the position on the graph back to a point where there is little decay. This is shown in Figure 19 which assumes that we have reversed the decay (i.e. put mortar back in the walls) and removed the immediate cause (by taking the salt out) so as to reset the decay clock back twenty years.

▶ For advice on mortar mixes and desalination go to Section 13: *Treating mild damp sacrificially* and Section 14: *Removing excessive salts.*

Repointing, the process of putting mortar back into joints between bricks and stones, is relatively straightforward. Removal of the salts can be achieved partly by raking out the weak mortar containing the salt and partly by desalinating the masonry, though we will never get all of the salt out which is why the vertical line does not go all the way down to the baseline.

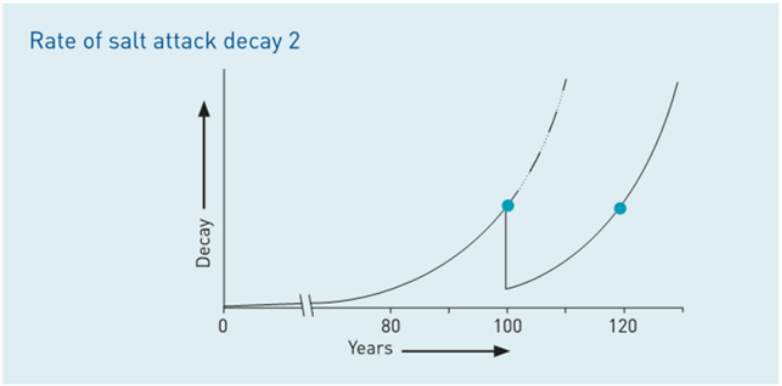


Figure 19 After 100 years decay is reaching its maximum rate and something must be done. By putting mortar back in the walls and by removing the salts we can reset the decay clock back twenty years. The vertical line at 100 years does not go all the way to the baseline because is impractical to remove all the salts. This is an approach which requires ongoing maintenance — every twenty years in this hypothetical case.

Clearly, this treatment does not cure the salt damp — instead it is a maintenance approach of managing the problem and preventing it from getting worse. Like any maintenance it will require periodic renewal — in this hypothetical case, every twenty years.

Importantly, this approach buys time. By reducing salt concentrations so that decay is minimised, the owners and managers of a building have time to review its moisture regime and to determine an appropriate course of action, which may or may not include insertion of a damp-proof course. This is particularly important where the masonry is of heritage value and an objective is maximising retention of historic material.

The foregoing is not an argument for never inserting a DPC. There are many situations — masonry materials with high suction and moderate to high permeability, buildings on low-lying or otherwise poorly drained sites, and sites with heavy clay soils that produce temporary high water tables during rain periods — where a DPC will be an essential part of dealing with a salt damp problem. But for those on well-drained sites and with only mild decay (perhaps because of a partially effective DPC, or low permeability materials), managing the decay by minimising the salts and the moisture 'stress' on walls will at least buy time for consideration of further options. As well as reducing intervention in masonry of heritage value, it may prove to be a cost-effective approach in the long term.

Location of damp-proof courses

The *Building Code of Australia* (see Box 8) Deemed-to-Satisfy Provisions generally require a damp-proof course to be installed in new buildings a minimum of 150 mm above ground level. This is to allow for some subsequent build up of ground level without risking bridging of the DPC. The BCA clearance above ground varies for different circumstances and may be reduced to as low as 50mm in areas protected from the weather by carports, verandas and the like. These provisions have been developed for modern construction practices and are not necessarily the most effective for traditional building forms. There is no upper limit for a DPC and this means that they can be, and often are, more than a metre above ground level, particularly on sloping sites. This negates part of the point of having a DPC as most evaporation from Australian walls takes place in a zone from 300 to 1200 mm above ground level.

This guide recommends that remedial DPCs be installed between 150 and 250 mm (two to three courses of standard brickwork) above finished ground level, with an ideal of 200 mm. Good maintenance practices should be used to ensure that ground levels do not build up and that the 200 mm clearance is maintained. Where the ground slopes, the DPC should be stepped to follow the slope, and so the maximum height may need to locally exceed 250 mm. The minimum height of 150 mm is important to counter the effects of splash from rain strike on adjacent pavements (see Section 12.2: *Site drainage*). Consider installing the DPC at a higher level (250+ mm) in situations where rain splash from hard pavements cannot be avoided. DPCs should always be installed below all floor timbers. Where the floor is below ground level, some form of vertical DPC may be required to prevent moisture penetrating sideways to the timbers. An air drain (Box 5) may be appropriate.

The point of these recommendations is to keep the size of the potential evaporative zone below a DPC to a minimum in order to limit decay due to salt attack (Figures 10 & 34). Decay below a DPC will require ongoing maintenance. See Box 7: *Potential negative impacts of DPC installation* for an additional perspective.

Box 2

Part 2
Diagnosis, maintenance and repair

10 Approach

This part of the guide begins with a series of Seven Key Steps which should be followed when dealing with a salt damp problem. These are the steps already outlined in Section 2: *The Basics*. The steps and their section numbers are:

11 Key Step 1 Diagnosing the cause — and the importance of getting it right
12 Key Step 2 Good housekeeping — to minimise the damp 'stress' on walls
13 Key Step 3 Treating mild damp sacrificially — to control salt attack
14 Key Step 4 Removing excessive salts — when normal methods are not enough
15 Key Step 5 Reviewing results before proceeding — important
16 Key Step 6 Inserting DPCs — and the different types available
17 Key Step 7 Desalinating walls — as DPC insertion alone is not enough

Not all steps will be necessary in every case: indeed after diagnosing that the problem is actually a broken downpipe in Step 1 and then repairing it in Step 2, there may be nothing more to do. At the opposite extreme there will be buildings where the extent of damage and the rate of decay are so great that Steps 3, 4 and 5 might be omitted. Different parts of a building may need different treatments — sacrificial treatments may be sufficient for some parts, while other parts may require one or more types of DPC together with desalination. Taking the process step by step is recommended for most circumstances as it ensures that unnecessary work is not done and that more expensive works can be anticipated and planned for over a period of time. Consideration of treatments and options should happen at each stage.

Importantly, it will be apparent from these steps that the decision about inserting a damp-proof course, and what form(s) that should take, are decisions for later in the process.

Following the Seven Key Steps are sections dealing with particular aspects of treating salt attack and rising damp:

18 Cavity walls
19 Inserting chemical DPCs in internal walls
20 Out of sight, out of mind: the need for improvements to practice
21 Repairs to interior plasterwork
22 Repainting — and allowing walls to breathe
23 Cellars and basements — their particular circumstances
24 Old treatments that should no longer be considered.

The dos and don'ts of damp, a series of points and reminders about good and bad practice when dealing with salt attack and rising damp, is included in Section 2: *The basics*. A glossary of technical terms and a bibliography of further reading are incorporated at the end of the guide.

When dealing with listed heritage buildings always check for any planning or heritage approvals that may be required before undertaking any works.

Key Step 1

11 Diagnosis

Figure 20 Evidence of previous treatment with hard impermeable plaster. Damp is evaporating from above and below the impermeable zone.

Accurate diagnosis of the cause and extent of a damp problem is important. Failure to correctly identify the source of moisture can lead to wasteful and unnecessary repairs which do not solve the problem. Among the questions that should be asked of each case are:

- is it rising, falling or penetrating damp, or a combination of two or more?
- is the problem none of these but just condensation on internal surfaces?
- is there a damp-proof course?
- is the damp problem reasonably uniform around the building, which may suggest failure of the DPC? or
- is it just in one part, suggesting bridging, or a localised source such as a leaking pipe, or failed gutters and downpipes?
- is there a localised source of salt, such as an old brine tank, or fertiliser stockpile?
- where do the hot water system overflow and air-conditioning condensate drains run?
- are there signs of a previous treatment (Figure 20) and what is its nature?
- what is the condition of underfloor spaces, including dwarf walls and floor timbers?
- what is the condition inside the wall cavities?

Because there may be more than one cause of a dampness problem it is wise to complete a thorough investigation, even though a likely cause has already been identified. Ideally, inspections should be undertaken before and after a dry spell to avoid the possibility that rain may have washed salts back into the walls, making their presence less obvious. Follow-up inspections allow monitoring of changes and are highly recommended.

11.1 Independent advice

▶ Ask your State heritage agency to identify possible advisers.

Advice should be sought from an independent specialist, so avoiding bias towards any particular commercial treatment. Such advice might be provided by consultants specialising in the field and by architects, engineers, licensed builders or building consultants. When seeking suitable consultants always ask for references and evidence of their experience in this type of work. It may be appropriate that their investigation be undertaken according to Australian Standard AS4349.0—2007, which provides for inspection of "particular technical aspects". Such an inspection should include a thorough investigation of all walls (inside and out), stormwater drainage and external site conditions such as paving against walls. The condition of the masonry walls should be described, as should the nature, condition and location of damp-proof courses. Wall cavities and spaces beneath timber floors must be inspected and an assessment made of the existing underfloor ventilation. Be aware that soil in underfloor spaces may have been treated with organochlorine termiticides — always take appropriate safety precautions.

11.2 Moisture meters

Moisture content of wood and masonry materials can be conveniently measured with hand-held meters. These are of several types, measuring one or more of several related electrical properties, including the conductivity (or conversely, the electrical resistance), the impedance, or the fringe capacitance of a material. The presence of water can significantly alter these properties.

Some meters have two sharp probes which are pressed against, or pushed into, the material, some have smooth sensor pads and some have both. Using meters equipped with sensor pads rather than sharp probes avoids damage to finishes such as paint and wallpapers, which is important for buildings of heritage value, but there is a place for both types in surveying walls.

Because the presence of salts also has a considerable effect on the electrical properties (e.g. increasing conductivity) meters cannot distinguish between relatively dry but salty walls, and those that are wet but free of salt. Great care is needed in interpreting their results. It is common in salty walls to get a reading of greater than 100% moisture content, an unreal figure, leaving no room for the masonry itself! The only valid result is a zero figure indicating no moisture and no salt, though as different materials have different electrical properties, figures above zero may not necessarily indicate the presence of any moisture or salt. Further, a moisture meter survey may find high 'spots' which are actually due to buried cabling, pipes, or other metal objects.

Caution: Moisture meters should never be used as the sole basis for diagnosing a damp problem. Because soluble salts considerably change the electrical properties of masonry, moisture meters should never be used on their own to prove that a wall is unacceptably damp.

Although moisture meters should be used with caution, they can be very useful aids for quickly mapping the extent of damp patches in walls. Always check high on a wall (well above the rising damp zone) for any moisture that may indicate another source of damp. Meters are also useful for monitoring changes over time — use the same meter to ensure reliable comparisons.

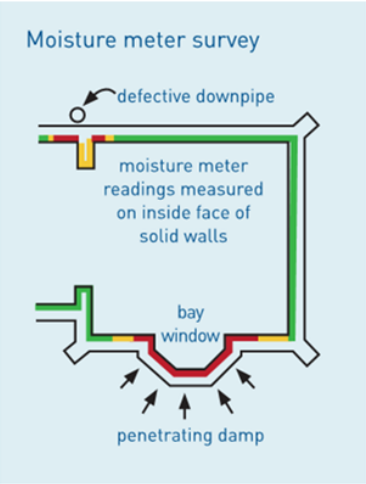


Figure 21 Moisture meter survey with results shown colour coded as on meter; red = high, yellow = moderate, and green = low.

In addition to a numerical readout, some meters show their results on a colour coded scale of red, yellow and green (high, moderate and low). Using this simple scale is often the best way to survey a building as it gives a quick guide that is easily read and understood. Figure 21 shows the results of such a survey measured on internal surfaces of solid walls. Most of the dampness is around the bay window but there is a patch on the opposite wall that is due to a failed downpipe allowing water to run down the outside of the building. The water percolates through the solid wall to produce the narrow red zone measured on the inside. This zone can be traced well up the wall proving that the source is not rising, but falling damp.

More accurate on-site measurements of moisture content can be obtained using carbide meters. They require samples collected from the wall using an electric drill. For greater accuracy still, samples taken from the wall are kept in sealed containers until tested in a laboratory for the weight loss of oven-dried material. An assessment of the moisture that is due to the presence of hygroscopic salts can then be obtained by allowing the dried samples to reach equilibrium in a controlled atmosphere of 75% relative humidity and reweighing. This is the only method that will distinguish between moisture due to rising damp and that due to hygroscopic salts (see Figure 12).

11.3 Chemical analyses for salts

Depending on the nature and scale of the project there may be value in understanding the type and quantity of salts present. Understanding how much salt is in a wall may be important in deciding on the extent of remedial works and, later, to determining the success of desalination treatments. As noted in Section 6.1, a general rule of thumb is that more than about 0.5% by weight of salt is cause for concern. A knowledge of the type of salts will help understand their source and may point to a particular problem (see Box 3).

Contaminated materials

Beware of contaminated materials such as sands and other aggregates. Chemical analysis of the strong efflorescence in the photograph shows it to be predominantly magnesium sulphate (epsomite), a very soluble salt. Its origin is almost certainly from contaminated dolomite quarry sand used as a bed for the concrete paving in the foreground. A former quarry produced a dolomite aggregate for concrete and roadmaking and the crusher fines (quarry sand) were widely used as a bed for paving bricks and concrete. Some parts of the quarry contained pyrite (iron sulphide) which, on exposure to the atmosphere after crushing, oxidised to liberate sulphuric acid.

This in turn attacked the dolomite, producing magnesium sulphate. Although the upper parts of the wall are protected by the 1980s DPC, action will now be required to conserve the stone below. Always specify sands and aggregates to be free of soluble salts, sulphide mineralisation and other contaminants. Store sands in covered containers on building sites.

Box 3, Figure 22

▶ Ask your State heritage agency for advice on local laboratories that undertake such tests.

Full chemical analysis for both the type and quantity of salts requires carefully controlled sampling and a chemical laboratory with a range of analytical equipment. All the cations and anions (except carbonate) listed in Section 6.1 should be analysed for, using techniques such as ion chromatography for the cations and inductively-coupled plasma atomic emission spectrometry for the anions. Simpler and cheaper (but less accurate) tests are available for both the type and quantity of salts. Test strips (akin to litmus paper) are available from laboratory chemical suppliers and can be used as indicators of the presence of particular salts such as sulphates or nitrates. These strips are only semi-quantitative: they indicate whether there is a lot or a little of the salt present.

The total amount of soluble salt (without distinguishing between the types) can be calculated by measuring the electrical conductivity of a solution of a sample taken from the wall. This is known as the total dissolved solids (TDS) or total soluble salts (TSS) method and is explained in Box 4: *Do-it-yourself salt testing*. Some moisture meters come in a kit which includes blotting paper that is wetted and then pressed onto the wall for a short period to absorb any salt. The meter is used to measure the increased conductivity of the paper.

Another method involves dissolving the salts from a known mass of sample, filtering out the insoluble solids, then evaporating the liquid, leaving behind the salts, which are weighed. These tests are also available from analytical laboratories. Combining TDS testing with the use of test strips for particular salts can often provide enough information for effectively managing a salt damp remediation project.

Ideally, collect samples from mortars rather than bricks or stones, as the mortar is readily repaired and patches on bricks and stones can be disfiguring. Where the mortar is appreciably less permeable than the surrounding masonry, salts are likely to accumulate in the bricks or stones, rather than the mortar. In these circumstances it will be necessary to sample the bricks or stones in order to obtain valid results. Each situation will need to be judged on its merits, the aim being to obtain samples that are representative of the wall as a whole. Record sample locations accurately so that repeat samples can be obtained from nearby to test the effectiveness of later desalination treatments.

Do-it-yourself salt testing

Reasonably accurate determination of total dissolved solids (TDS) can be made by measuring the electrical conductivity of solutions of samples taken from the walls. Equipment required includes sample jars, deionised water, an electrical conductivity meter, good scales that will read to 0.1 gram and a mortar and pestle for breaking down samples to small particle sizes.

A convenient way of obtaining the conductivity meter and associated calibrating solution and sample jars is the 'Salt Bag', a product of the NSW Department of Primary Industries' Wagga Wagga Agricultural Institute, www.dpi.nsw.gov.au/agriculture/resources/soils/salinity/general/salt-bag. While the Salt Bag is intended for monitoring water and soil salinities in agriculture, it can also be applied to salt in walls.

Using an electric drill, collect samples from known depth intervals in a wall (0–10, 10-20 and 20-40 mm are commonly tested, though more may be required if there are salts deeper in the wall). If needed, the samples should be lightly crushed with a mortar and pestle to break up any lumps. Weigh out 5 grams of each sample and add to 50 ml of deionised water. Shake thoroughly and allow a little time for the salts to dissolve. Measure the electrical conductivity of the solution. With aid of the Soil & Water Salinity Calculator supplied in the Salt Bag, determine the salt content of the solution in parts per million. Multiply the result by 10 to account for the initial ten-fold dilution. Convert from parts per million to percent by dividing by 10,000.

Box 4

12 Good housekeeping

This section is about the basic measures which should always be undertaken to minimise the rising damp 'stress' on the base of walls. These measures may reduce the severity of an existing problem to an extent that major works (such as DPC insertion) are not necessary. Any treatment proposal that does not include or take account of the effect of these measures should be dismissed.

12.1 Maintenance

Figure 23 Maintenance, maintenance, maintenance. Here a roof gutter has rusted through and the colourful green damp zone is due to splash.

Maintenance is important. Too often damp problems are the result of neglect and bad housekeeping: circumstances that can be avoided. Regular maintenance of roof drainage systems, including gutters and downpipes, will involve cleaning gutters and rainwater heads, re-aligning gutters to ensure correct falls towards downpipes, and repairing leaks as soon as they are discovered. Ideally, roof drainage should be inspected during periods of heavy rain so that overflows and other failures can be identified (Figure 23). Are the stormwater systems adequate — are there enough downpipes and are gutters and downpipes of sufficient size?

At the bottom of the downpipes, stormwater shouldn't discharge onto the base of walls, but should flow into a gully basin or sump with an adequate connection to the stormwater system or to a downslope outfall. The gully basin or sump should be big enough to prevent splash, capture all water and permit cleaning or rodding of the stormwater pipe below. There should be ground level inspection points (IPs) on all bends and along long straight runs. The common practice of running downpipes straight into PVC risers prevents access for clearing blockages — such access is essential for good maintenance.

Maintain ground levels around buildings so that the DPC is about 200 mm above ground. This is to ensure that DPCs are not bridged by gardens and paving, and also to prevent rain splash from entering the wall above the DPC. Ideally, ground levels should also be below floor levels. See also Section 12.2: *Site drainage* and Box 2: *Location of damp-proof courses*.

Where a building has timber floors, regular checks of underfloor spaces for fungal rot, borer and termite activity are essential, as they are associated with high humidity, and hence high moisture levels, in adjacent masonry. Rising damp and termite problems often go together.

12.2 Site drainage

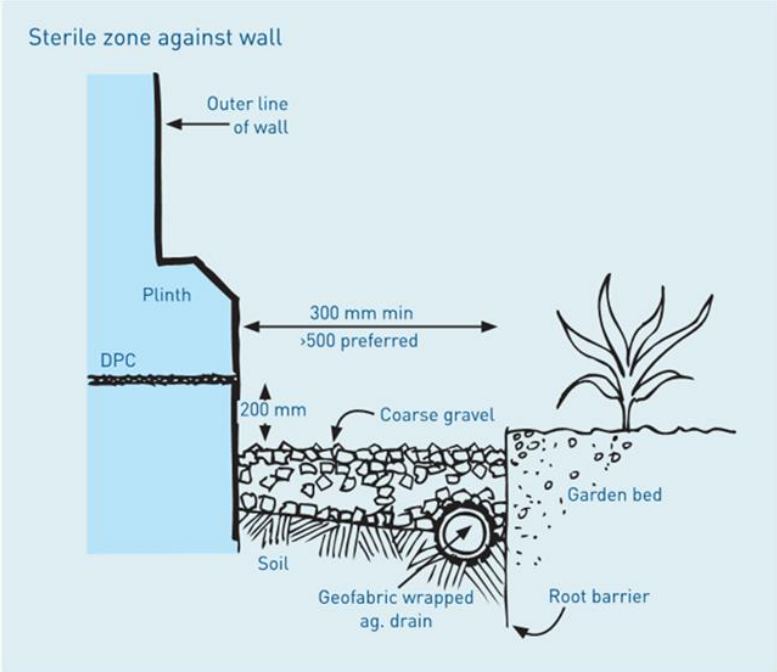
Figure 24 Garden beds against walls almost guarantee salt damp problems. Here the DPC was buried by 300 mm of soil — five courses of sandstone have been severely damaged.

Figure 25 Sterile zone between wall and garden — paved with coarse gravel to allow rainfall in and evaporation out. Drainage is provided by an agricultural drain wrapped in geofabric. Garden sprinklers are replaced with drippers and are kept at least 500 mm away from walls.

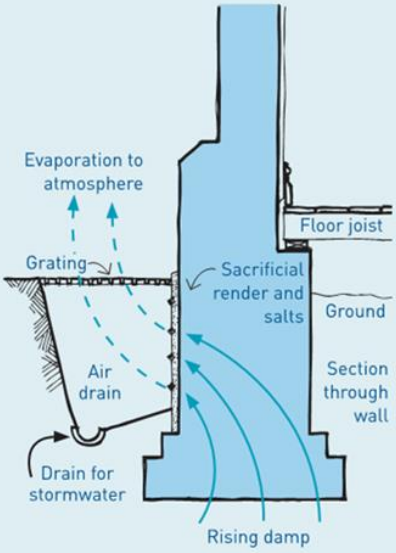
It is important that water does not lie (pond) against the base of walls. Surrounding paths and ground levels should be sloped so as to drain water away from walls: the first metre should have a fall of about 25 mm (1:40) and where possible, the low point should be 1.5–2.0 metres away from the building. A spoon drain at the low point is a traditional and effective way of removing surface water. Though open, it is readily cleaned.

Gardens against walls are particularly bad — soil levels build up as mulches are added, fertilisers contribute soluble salts and watering by enthusiastic gardeners washes it all into the walls (Figure 24). Garden beds should be pulled back and a sterile zone at least 300 mm wide left against the walls. Sprinkler systems should be replaced with drippers and kept well away from walls (Figure 25).

The nature of any paving adjacent to walls is also important. Hard paving contributes to damp problems as it encourages rain to splash up into walls. Further, impervious hard paving will prevent evaporation of soil moisture encouraging it to be transpired via the walls (Figure 28). Coarse gravel is the ideal material for the zone adjacent to old walls as it limits splash from rain while also allowing evaporation of soil moisture (Figure 25). Deliberately permeable paving slabs made of no-fines concrete or resin-bound aggregate offer some potential, although the upper surfaces should be rough and angular to deflect rain strike.



Air drains



Air drains — a possible control measure

Air drains offer some potential to control damp by encouraging evaporation to occur at the lowest possible level. The evaporative zone can be lowered by excavating a trench against the building and exposing the bottom parts of the walls. The advantages of this measure include protecting valuable internal plasters or murals, and reducing underfloor moisture levels. This in turn reduces the risk to timbers from fungal rot, borer and termite attack.

If salt attack is anticipated, a sacrificial render should be applied to the wall face: this is discussed in Section 13. The trench needs good stormwater drainage to prevent ponding against walls. Ideally, the top of the trench should be left open or covered with a metal grating that allows good ventilation and ready inspection of the wall face. While sealing over the top, and providing some means of ventilation is a method of using the space against the walls, it is not recommended because decay could then occur where it cannot be seen or readily repaired.

Air drains are not a new idea: they have been widely used in various forms in the construction of older buildings to provide daylight and to keep basements dry.

Air drains should never be installed in reactive clay soils without geotechnical engineering advice; there is a risk of structural cracking should the soils dry too much (see Box 6).

Importantly, air drains may not work! They will only be successful when the rate of evaporation from within the drain will be high enough to ensure that all drying takes place at that level. This may be impossible in cool damp climates where ground level humidities are high and rising damp climbs several metres up walls. Air drains may only work in hot, dry climates where evaporation rates are already high and where rising damp climbs only a short distance up walls before evaporating.

Further, air drains will not lower damp zones in walls if there are already a lot of salts present. This is because the salt-contaminated zone will wet up during humid periods (due to the deliquescent nature of the salts) and then solute suction (the osmotic pressure of the salt solution) will draw more water towards the highest concentration of salts, effectively adding to the capillary suction and maintaining the rising damp at the present level (see Figure 12). Desalination is essential if air drains are to work (see Section 14: *Removing excessive salt*).

Before installing air drains, consideration should be given to their potential impact on the archaeological resource that may be present adjacent to the building.

Box 5, Figure 26

Ground levels may need to be lowered to expose a buried DPC. This can sometimes be difficult in old city areas, where the progressive build-up of road pavements due to resurfacing has left buildings sitting in low-lying ground surrounded effectively by a levee bank. Air drains offer some potential for lowering the evaporative zone in walls (see Box 5: *Air drains — a possible control measure*).

An in-ground drainage system may be required to lower groundwater levels, or to cut off water running down a slope. A word of caution here. Where buildings are founded on reactive (expansive) clay soils and subsoils, changes to site drainage may upset a pre-existing moisture balance and lead to soil shrinkage and structural cracking of walls as the clays dry out — droughts produce a similar effect. In these circumstances an appropriate treatment might be a compromise between controlling damp and controlling cracking (see Box 6). If wetted-up soils are essential to maintaining stability in the walls then further intervention and additional expense will be needed to deal with the inevitable increase in damp problems. Advice should be sought from a geotechnical engineer if structural cracking due to clay soils is a problem.

The cracking vs. damp compromise

Some soils and sub-soil strata are very reactive to changes in moisture content. They contain clay minerals such as smectite or montmorillonite which expand when wet and shrink when dried with resulting volume changes of up to 50%. These are problem soils for buildings and are commonly associated with structural cracking of masonry walls, particularly those of traditional construction set on flexible footings of stone or brick rather than reinforced concrete. Reactive soil problems can be aggravated by planting large trees with aggressive root systems too close to buildings. Thirsty trees are very efficient at extracting moisture from clay soil, leading to shrinkage and settlement of building foundations, and potentially, substantial damage. The problem is made worse during prolonged droughts.

Geotechnical engineers seek to manage reactive soils by maintaining them in a stable state, the aim being minimal change in moisture content. This is often achieved by the use of impermeable paving around a building, sometimes as a complete concrete apron with integral vertical walls of concrete at the outer limit of the paving. Impermeable plastic membranes are often used instead of concrete and are sometimes also laid beneath timber floors to further limit drying of clay soils. Alternative solutions include in-ground watering systems with automatic controls to maintain soil moisture at a constant proportion.

These solutions almost always mean an increased risk of rising damp and an associated risk of fungal and insect attack to floor timbers. In particular, impermeable aprons around (or under) a building with absent or ineffective damp-proof courses are a guarantee of subsequent damp problems in the masonry walls (see Section 12.4 and Figure 28). The conflicting objectives of minimising soil moisture for damp control, and maintaining soil moisture for crack control, mean that a compromise may be necessary. Where the cracking problem is mild, the compromise may be semi-permeable paving, perhaps coupled with an in-ground watering system. Where the cracking problem is severe and an impermeable apron is the only practical solution, then rising damp should be anticipated and appropriate treatment planned and budgeted for.

Where there is structural cracking due to reactive clay soils, advice should be sought from a geotechnical engineer. That advice should account for any remedial treatment for rising damp that may be required as a result of the need to maintain soil moisture around the base of the building.

Box 6

12.3 Underfloor ventilation

Figure 27 Semi-circular sections of PVC piping catch salt and other debris from sacrificial plasters and mortars on the walls beneath the floor of a church. Bedded on the same sacrificial mortar mix as that used for the walls, the pipes prevent the recirculation of the salts through the soils below and are cleaned out annually. White salts are visible on the stones in the centre of the photograph.

Maintaining underfloor ventilation is an important part of controlling damp, as it allows ever-present soil moisture to evaporate beneath the floor and to pass out through the vents in the base of the walls. The moisture 'stress' on the walls would be much greater without this ventilation; so would the moisture content of floor timbers, with the consequent risk of fungal rot, borer and termite attack. Mould growth in built-in cupboards can be a sign of insufficient underfloor ventilation.

Dust and cobwebs should be regularly cleaned from vent grilles, and any obstructions, such as paving, planter boxes or dense shrubs, ought to be removed. Make sure that surface water isn't directed through the vents. Before deciding to add new vents, clean out the existing ones and monitor the results for a period, as this may be enough to improve airflow sufficiently. New air vents (matching the original) may be warranted when previous air passages are blocked by changes or additions to a building.

The use of adjustable sliding vent grilles enables reduction of venting in hot dry weather and retention of cool air beneath a house with the added benefit of energy savings. However, they do require an attentive owner to ensure they are not left closed when most needed during cold wet weather.

In cases of bad decay, the vent passages themselves may be totally blocked with debris from decaying masonry. This is partly due to the very function of vents — providing for evaporation — which concentrates drying, and hence salt attack, on the surfaces of the vent passages. In a situation like this, consider lining the passages with rigid plastic liners. Linings may need perforating to allow for the ventilation of wall cavities. It is important that wall cavities should still drain freely; if the linings restrict drainage new weep holes will need to be cut in nearby perpendicular joints.

Controlling evaporation of moisture from sub-floor walls or from adjacent soils is one of the fundamentals of successfully managing rising damp. The emphasis is on control because there can be too much of a good thing. Too much underfloor ventilation may lead to salt attack on the inside faces of walls and on dwarf walls supporting floors. This could lead to unseen damage and could become dangerous. Regular inspection of underfloor spaces is therefore important. Where higher rates of ventilation are needed to manage dampness it may be necessary to apply sacrificial plasters to vulnerable walls (Section 13) and to catch debris from them so that salts are not recirculated (Figure 27).

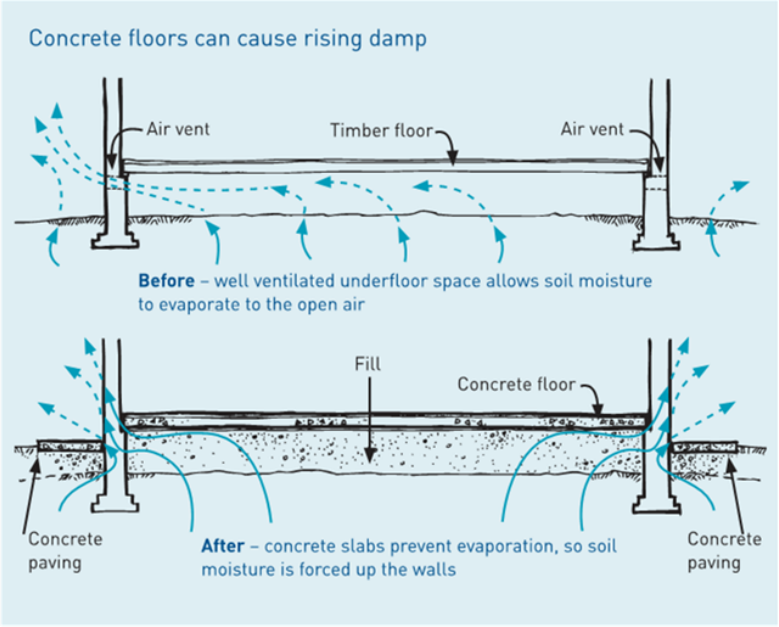
Changes to floor finishes may be enough to tip the balance towards too little evaporation. For example, an unfinished timber floor may be found to be cold and draughty in winter and so is modernised. Gaps beneath the skirtings are sealed with compressible foam; and new vinyl sheeting, or a polyurethane finish on the floorboards forms an effective seal, reducing previous circulation. New vents may be needed to restore adequate ventilation in this situation.

Remember that underfloor ventilation is also important for reducing the risks of fungal rot and termite attack to floor timbers; a balance must be struck that keeps the timber relatively dry, preferably with a moisture content below about 20% by weight.

12.4 Concrete floors and paving

One of the worst mistakes made by renovators is to remove a ventilated timber floor and replace it with a concrete slab poured on sand or other fill. The concrete and its associated damp-proof membrane (DPM) prevent evaporation, and the soil moisture rising beneath the building becomes focused on the walls. Rising damp problems are almost guaranteed, whereas before there may have been no significant damp, even though the walls may have lacked effective DPCs (Figure 28). This is also the reason why external paving should be permeable.

Figure 28
Concrete floors and external paths can cause rising damp in old walls.



The same effect can often be seen in old houses with tiled or concrete front verandas. Because of absent, bridged or ineffective DPCs, moisture rising beneath the semi-permeable veranda floor is forced up the front wall,

causing decay. Very often this may be the only rising damp in the house. Ensuring that roof drainage takes stormwater well away from the veranda may reduce the damp stress on the front wall. However, eventually sufficient salts may accumulate to damage the walls and veranda floor and a more invasive solution will be required. Figure 29 illustrates one such solution, which enables the retention of most of the veranda. Old concrete verandas were laid without a damp-proof membrane (DPM) and are semi-permeable. Replacing such a veranda with a new one laid on a DPM (or sealing the surface of the old one) will add to the moisture stress on the walls.

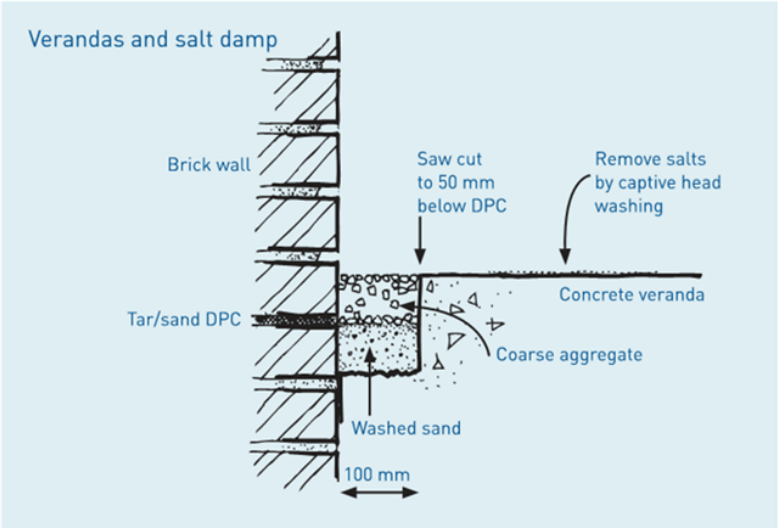


Figure 29
Damp rising through a concrete veranda is causing damage to the adjacent front wall and is beginning to damage the veranda itself. In this case the veranda was laid too high and bridges the DPC. One approach would be to replace the concrete at a lower level. Another, which avoids the cost and the loss of original fabric is shown here. By cutting a narrow trench against the wall and filling the bottom with washed sand, moisture can evaporate and salts will accumulate in the sand. The sand and gravel will need to be replaced periodically, perhaps annually. Captive-head washing or poulticing may be needed to remove salt from the concrete floor (see Section 14: *Removing excessive salt*).

12.5 Repairing a tar and sand damp-proof course

Many tar and sand DPCs decay due to oxidation of the tar, leaving crumbly friable material. Excessive decay endangers the structural stability of the wall and should be repaired. There is little experience with such repairs in Australia and so the following is offered on an experimental basis only.

After raking out the decaying DPC back to reasonably sound material, use a long thin brush to prime the remaining DPC and the joint surfaces of brick or stone with a diluted water-based bitumen rubber material. Use masking tape to prevent spills of bitumen on the face of the bricks or stones. Then use a 'mortar' of the bitumen and well-graded, washed sand in proportions of about 1:2.5–3 bitumen to sand to repoint the joint, compacting tightly with jointing keys (tools) that fit within the joint. If chemical impregnation is also planned it should be undertaken after the repairs to the DPC have thoroughly cured.

Key Step 3

13 Treating mild salt damp sacrificially

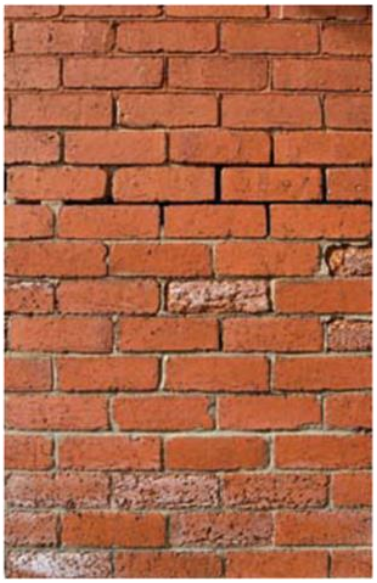


Figure 30 The wrong response to salt damp. Nine courses of brickwork have been repointed in cement mortar, driving the damp even further up the wall and leading to salt attack damage to the bricks. Whereas the original lime mortar was weaker than the bricks and acted sacrificially, the new cement mortar is less permeable, forcing some of the damp to evaporate through the bricks — causing the obvious salt attack decay — and the rest to rise further in the wall. Traditional construction relies on mortars that are weaker than the bricks, partly for the reasons above and also so that any structural cracking will be expressed in the mortar, where it is less obvious and readily patched.

A sacrificial treatment is designed to decay over a period of time, and in doing so, to protect the original masonry. Such treatments use deliberately weak mortars and plasters (or renders) to encourage salt attack to erode the new mortar or plaster rather than the original fabric. They can be useful ways of controlling mild salt damp. Coupled with attention to ventilation, site drainage and the other aspects of good housekeeping, they may limit the decay to such an extent that it becomes a manageable problem that can be lived with — without the need for the expensive insertion of a DPC.

Consider the common case of a building with mild damp in which the lime mortar is decaying from the lower courses of brickwork (the case discussed in *Managing salt attack with maintenance* at 9.4). An all too common (and wrong) response would be to repoint the joints in a hard, dense, cement mortar. This may stop the decay of the mortar, but will transfer the problem to the bricks if they are now the more permeable material. Evaporation will then take place through the bricks, promoting their decay due to salt attack. Alternatively, if the bricks are relatively impermeable, the damp may rise further up the wall and attack the lime mortar higher up. Both outcomes occur in the example shown in Figure 30 — the bricks are decaying and the damp is rising further up the wall. The recommended approach, in which the joints are repointed with a deliberately weak mortar, retains a permeable zone which will continue to decay — but in doing so it protects the surrounding bricks or stones. Because it allows evaporation, it also reduces the risk of the damp rising further in the wall. The salt damp is thus controlled — but not cured — and will require ongoing maintenance. Repointing mortar joints is much cheaper and easier than replacing bricks.

The same principle can be applied to plasters or renders. By using weak plasters the evaporative front (and hence decay) is moved from the original masonry out into the new plaster. Provided there is sufficient evaporation from the sacrificial plaster, decay can be limited to the lower parts of a wall. These treatments are the opposite of the incorrect practice of rendering the base of affected walls with dense, relatively impermeable cement renders. This simply prevents the evaporation of moisture, which continues rising up the wall until it can evaporate above the render, starting the problem all over again (Front cover & Figure 54).

Figure 31 Sacrificial plaster decaying as intended. Plastic sheeting is used to catch the salts and prevent their recycling through the soils and walls.

As they crumble, sacrificial mortars and plasters will produce a dust of sand, lime and salt which should be collected and periodically removed, rather than allowing the salt to re-enter the soil and so be recycled up the wall. When protected from rain strike (internally, in a cellar, or on a veranda) a drop-sheet of strong plastic sheeting can be useful (Figure 31). An alternative treatment, using half round PVC piping beneath a timber floor is shown in Figure 27.

Sacrificial mortars and plasters are designed to crumble and decay and will need ongoing maintenance in the form of periodic patching and, eventually, replacement. Because salts are rarely distributed evenly across a wall, they will decay differentially, and thus require selective patching. Their decay may not be aesthetically acceptable, making them unsuitable for some situations, particularly occupied interiors. More rapid desalination treatments (Section 14) may be needed.

13.1 Sacrificial mixes

The formulation of sacrificial mortar mixes will depend on the particular situation and may vary for different parts of a building. A starting point might be a 1:3 or 1:4 lime: sand mix. If the wall is well protected (such as in a cellar) a weaker mix like 1:5 or 1:6 may be suitable. Where exposed, a sacrificial plaster can be limewashed to provide some additional durability and improve its aesthetics (though take care not use a modern limewash containing resins such as acrylics, as they will prevent breathing: see Section 22). The limewash will fret off with salt attack and so the colour of the sand in the mortar may be important. Re-applying limewash may be the best approach aesthetically.

The performance of sacrificial mortars and plasters can be improved by adding what are known as porous particulates in place of some of the sand. Porous particulates include crushed lightly-fired bricks and crushed porous limestones; their purpose is to provide additional pore space within which the salt can crystallise, thus extending the life of the mortar or plaster. They have a further benefit: their pore space carries water during mixing and application, and that water helps ensure better curing of the lime. There is little experience with porous particulates in Australia and so it is difficult to recommend particular mix proportions. Experiment by replacing half to one part of sand with half to one part of a porous particulate material.

The use of inert short fibre reinforcement has been shown to improve the durability and long term serviceability of some sacrificial renders.

▶ More details about mortars, their materials, mixes and the repointing of joints can be found in a separate document in the same series as this Technical Guide.

Key Step 4

14 Removing excessive salt

While sacrificial treatments (coupled with good housekeeping) may be sufficient for many mild cases of salt damp, additional treatments — beyond normal building work — may be needed to reduce high concentrations of salt. Commercially available desalination treatments include: poultices, to actively suck salt from masonry; and captive-head washing, which removes salty wash water with a vacuum system. Researchers have tested electro-kinetic removal of salt, demonstrating its effectiveness in pilot trials. Electro-kinetic salt removal is related to electro-osmotic drying of walls (see Section 16.4).

The decision to proceed to desalination treatments might be made when it is apparent that an otherwise well-made and well-cured sacrificial mortar or render is showing early signs of breaking down after say a year. Rather than waiting until it needs replacing again, it may be better to prolong its life by desalination treatment. In the case of a sacrificial mortar, an advantage of such a treatment is that the bricks or stones are also desalinated, considerably reducing the overall salt load on the mortar.

14.1 Dry vacuuming

Surface deposits of salt (such as those shown in Figures 4, 5, 27, 30 & 50) should be removed using an industrial vacuum cleaner fitted with a brush head. Brushing alone will work, but the vacuum has the advantage of capturing the salt, preventing its recycling through the soils beneath.

14.2 Poultices

Figure 32 Absorbent poultice shortly after application to an interior wall from which plaster has been removed. The poultice is left on the wall until it is dry, which may take 2–3 weeks depending on weather conditions.

Poultices are made of absorbent materials whose fine pore size produces a high suction when in contact with the masonry. Suitable materials include diatomaceous earth and highly absorbent clays such as attapulgite. To these may be added other materials like paper pulp which provides a framework or reinforcing. Poultices are purpose-made by conservators working on sculpture or museum objects. In recent years, a commercial poultice material has been developed in Sydney for use on masonry.

Poultices are applied wet to dryish masonry; the water contained in the poultice soaks slowly into the wall and dissolves salts, while the poultice shrinks onto the wall face (Figures 32 & 33). As the wall dries, water carrying salts in solution is drawn back to the surface by the high suction created by the fine pores in the poultice. The water evaporates and salts precipitate within the poultice, which is left on the wall until it dries out; this may take several weeks, depending on the weather. The poultice is then removed, taking the salt with it. Two or three cycles of poulticing may be required to reduce salt concentrations down to an acceptable level.

One approach with salty walls is to carry out two cycles of poulticing and then use a sacrificial plaster (Section 13) to control the remaining salts. This method has the advantage of rapid salt reduction with the poulticing, while enabling the sacrificial plaster to last longer — as it has less work to do — improving its appearance over a longer term. Always make sure that the substrate is suitable for poulticing; it may be too fragile or too susceptible to moisture.

14.3 Captive-head washing

These systems use a water jet spray within a hood or jacket which also contains a powerful vacuum to capture the dirty water and prevent it being spread over the masonry. They are used principally for cleaning dirt and grime from walls, and have some potential to remove surface and near surface salts, although there is limited experience with their use for this purpose. They will only ever be partially effective, as they must compete against the initial high capillary suction of the masonry, which will draw some of the water inwards, taking some salt with it.

Captive-head washing may be a useful way of reducing surface salts in bricks and stones prior to sacrificial repointing of the joints. That way the new mortar will have less salt to contend with and should last longer. An alternative would be to use a poultice, which would remove more salt, but which may not be warranted in many cases, particularly given the relative ease and speed of the captive-head washing. The choice will be a compromise between the need to remove salt and the complexity and cost of the treatment.

Other washing treatments have been tried without much success. They have generally been based on a period of spraying the walls with a fine mist, followed by a drying phase to bring the salts to the surface, and then either flushing the salts off with more water, or sponging them off by hand with damp sponges.

14.4 Monitor effectiveness of treatment

Figure 33 A square section of dried poultice has been cut out for chemical analysis. Sampling of the same point during subsequent cycles of poulticing is aided by a marker such as the galvanised nail in the bottom left of the 'window'.

Desalination techniques such as those described will never remove all salts from walls. Although most salts occur relatively close to the surface (because that's where most evaporation happens) there will be some deeper in the masonry which will slowly migrate towards the surface and accumulate there. With time these salts may reach high enough concentrations to warrant a further cycle of poulticing or captive-head washing in order to minimise decay. The results of all desalination treatments should be monitored for their effectiveness over time.

In the simplest cases monitoring might consist of a close visual examination looking for signs of efflorescence, or for early signs of decay of sacrificial mortars and plasters which might indicate the more damaging subflorescence. Inspections should be repeated after a dry spell to avoid the possibility that rain may have washed salts back into the wall just before the first inspection. In larger projects sampling and chemical analyses for salts may be warranted, and should be undertaken before and after desalination treatments.

As well as sampling the masonry for its salt content, poultice materials can be sampled as they are about to be removed from the wall (Figure 33). The results will not be comparable with those from the wall itself but can be used to monitor the effectiveness of poulticing over a series of cycles; later cycles will generally draw less salts, although experience suggests that sometimes the second cycle will draw more salt than the first. While a reduction in salt content will demonstrate the declining efficacy of further poulticing, it will not prove conclusively that the wall has been desalinated: only samples taken from the wall will do that. However, sampling the poultices has the advantage of not damaging the masonry: this may be important, particularly in high-value works such as sculpture.

See Section 11.3: (under *Diagnosis*) for further information on sampling and analysis.

15 Reviewing results before proceeding

This is a review step in the process. It is important to take the time to assess the effectiveness of the treatments to date before more invasive (and costly) work is considered. Have the good housekeeping, sacrificial treatments and desalination measures reduced the damp 'stress' on the walls to the point where they are relatively dry? Is the rate of decay now minimal and not sufficient to warrant further action for the moment? While this may be the case, it is important to understand that periodic desalination and renewal of sacrificial mortars will be required to control the salt damp to this minimal level. Even so, this may be the best outcome, as it removes the need for the more expensive and invasive insertion of damp-proof courses.

As discussed in Section 9.4: *Managing salt attack with maintenance*, there will be many situations where inserting a DPC is an essential part of dealing with a salt damp problem. In the more severe cases this will be obvious from the beginning and for these the intermediate steps of sacrificial treatments, desalination and review can be omitted, and the project can proceed directly to DPC insertion and associated desalination. It is for the less severe cases where the final outcome is less clear that Key Steps 3, 4 and 5 will be of most benefit.

Among things that should be considered during the review is the impact of unusual events, such as storms and floods, which may have temporarily added to moisture levels in walls and floors. Conversely, a long period of drought may lead to an incorrect assessment that the damp has been successfully controlled. There is no substitute for a thorough understanding of the building fabric and its behaviour over an extended period of time.

Key Step 6

16 Inserting a damp-proof course

In many cases of severe damp the only effective solution is the insertion of a new damp-proof course. Done well, it can provide a permanent cure to rising damp to the masonry above the DPC; an important proviso is that salts must also be removed. Regular inspections will be necessary to check that the new DPC is not being compromised by the failure of guttering systems or because of bridging by built-up gardens. Sacrificial mortars used to control salts above the DPC may need periodic maintenance. It may also be necessary to maintain the wall beneath the DPC, using sacrificial treatments or more active salt-removal techniques, such as poulticing (Figure 34; see also Figures 9 and 10 and Box 7: *Potential negative impacts of DPC installation*). Inserting a DPC should only be contemplated after undertaking the housekeeping of Key Step 2 (Section 12).

Figure 34 Stonework below the DPC needs attention as salts accumulate and the mortar and bluestone erode. In the first instance sacrificial treatments should be used to manage the problem. The 1879 ceramic DPC is doing an excellent job of protecting the sandstone above it, although where it steps down the slope it is compromised by hard paving that is laid too high, allowing splash onto the stone (see Box 2: *Location of DPCs*).

The position of the new DPC in relation to ground level and to floor timbers is important; advice on these aspects is given in Box 2: *Location of damp-proof courses* and Section 19: *Inserting chemical DPCs in internal walls*.

New DPCs can be inserted by a range of techniques including:

- **undersetting**, in which sections of the base of a wall are progressively rebuilt in new materials, together with a DPC
- **slot sawing**, where a horizontal slot is sawn through a wall allowing insertion of a sheet DPC
- **chemical impregnation**, where water repellent chemicals are introduced into a wall via a series of drilled holes
- **active electro-osmosis**, in which an electrical current is used to drive water downwards against capillary action.

These techniques are explained in the following sections. Depending on the particular circumstances several DPC insertion techniques might be needed on the one building — all in combination with the management of salts by sacrificial treatments (Section 13) and/or desalination (Section 14).

16.1 Undersetting

The traditional physical means of introducing a new DPC is the technique known as undersetting, or masonry replacement. Undersetting should not be confused with underpinning, which is a treatment for structural cracking due to settlement or footing failure. In undersetting, sections of the base of the wall are removed down to the footing and progressively replaced with new materials and a DPC. Small sections (or pins) of brick or stonework are removed (including all decayed material), leaving pillars to support the wall structure (Figure 35). A DPC is incorporated as each pin is rebuilt; after the new mortar cures the top joint is packed tightly to take up the load of the wall (Figure 36). Adjacent sections are then removed and rebuilt until the whole wall has a new base incorporating a continuous DPC. Figure 37 is an example of undersetting carried out in the 1930s.

Figures 35 and 36 Undersetting to install new damp-proof courses. At left sections, known as pins, are removed from a cavity wall, while at right a pin has been rebuilt on a plastic DPC, the end of which is rolled up ready for use in the next section. In the case of cavity walls, such as at left, the inner leaf also needs to be treated, using one of the methods described in this guide. Where solid walls are being underset, such as on the right, the entire thickness of the wall must be removed and rebuilt to allow a DPC to be installed across the full width of the wall. Partial undersetting of a solid wall is bad practice as the damp will continue to rise through the remaining portion.

Undersetting is skilled work requiring great care. Do not attempt it without specialist advice. Undersetting of high walls may need structural engineering advice. While it may look precarious, the high compressive strength of masonry materials means that the load of a wall can be supported on the remaining brickwork despite the removal of a substantial proportion. In some cases, particularly in thick walls of rubble masonry, it is necessary to provide additional support for the overlying wall while sections are being rebuilt.

Figure 37 Undersetting from the 1930s. New bricks and stones have been inserted up to a line above the window sill on the left. Bricks below the DPC are visibly damp (see also Figure 10).

Though the most expensive, undersetting is the best method for dealing with very severe salt damp because it removes salt-laden masonry as well as inserting a new DPC. No other technique combines both aspects. Additionally, undersetting permits ready inspection inside a wall (whether solid or cavity) which may be important to understanding the extent of decay and the nature of repairs needed (see Section 18: *Cavity walls*).

A disadvantage of undersetting from a heritage conservation viewpoint is that it requires the removal of original fabric. The use of new materials may be more of an issue where good matching to the original is not possible. If the stones or bricks are generally sound and the decay is limited to the mortar, this can sometimes be overcome by dressing off the latter and soaking the stones or bricks in successive baths of fresh water to remove salts, without drying between baths. Conductivity meters can used to show when salt concentrations in the wash water have reached a minimum. The desalinated stones are then rebuilt into the wall together with a new DPC. It is important that skilled stonemasons are engaged to carefully match the appearance of the rebuilt masonry with that of the original wall.

16.2 Slot sawing

Figure 38 Insertion of a DPC by slot sawing. A mortar joint is sawn out with a chainsaw allowing insertion of DPC sheeting. As salt-laden stone is left above the DPC, the technique must be combined with desalination to be successful.

Another physical method involves sawing a horizontal slot through the wall along a mortar joint, inserting a DPC membrane and repacking the joint. Like undersetting, the work is done in stages to ensure adequate support for the wall. Sawing is done by hand with a masonry saw, or with a chainsaw with specially hardened blades. The technique is limited to regular masonry with continuous horizontal courses (such as brickwork) and relatively soft mortars. Dense bluestones and granites will blunt saw blades. Random rubble masonry cannot be cut, though it may be possible to saw-cut a mortar joint if the masonry is in regular courses, or where there is a failed DPC. In thick stone walls where the core often comprises small irregular pieces of rubble, sawing can be impractical, particularly if there are voids with loose stones which may drop into the saw-cut.

DPC sheeting is inserted into the saw-cut, which is then packed with stiff mortar and tightly rammed to take up the load of the walls (Figure 38). After the mortar cures the next section of joint can be sawn out and work progresses around the walls. A potential problem with this method is the perforation of plastic DPCs owing to the (correct) use of sharp sands and the ramming necessary to pack the joint tightly. Thicker (0.75 mm) DPC material is recommended in these cases.

A neat version of this method uses a series of overlapping envelopes made of DPC polyethylene and sealed at the edges. After insertion in the wall, a non-shrink grout is pumped into each envelope in turn through a nozzle

on the outer edge. The advantage is that the envelope expands to tightly fill the space left by the saw-cut and so supports the weight of the wall when the grout has cured. Excess envelope material and grout are trimmed off, leaving two DPCs with grout in-between.

The slot sawing method has the advantage over undersetting of reducing disruption to existing historic masonry. By itself, it is an appropriate technique in circumstances where there are no salts in the wall above the new DPC, such as a relatively new building constructed without any, or defective, damp-proofing. **However for older walls, which in Australia will almost certainly contain salt, slot sawing must be combined with sacrificial treatments and/or desalination for it to be successful.**

16.3 Chemical impregnation

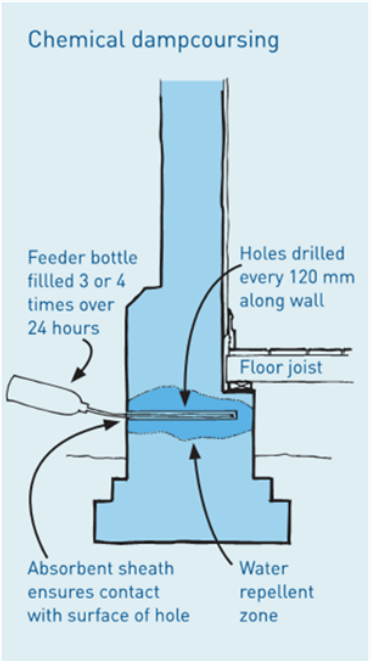


Figure 39 Chemical dampcoursing. Cross-section through a solid wall showing the gravity-fed system. Note that the new water-repellent zone should be installed below all floor timbers.

Chemical impregnation is now the most frequently used treatment for remedial dampcoursing in Australia. The principle is to create a water-repellent zone at the base of walls by inserting appropriate fluids into a series of pre-drilled holes. The fluid permeates through the pore structure of the masonry, meeting fluid from the adjacent drill holes and curing to form a continuous water-repellent zone. Such treatments have been used in Australia for about thirty years. In the UK, where they been used for fifty years, there is a British Standard which gives recommendations for the procedures to be used in diagnosing and treating rising damp by chemical methods (see *Further reading*).

A range of chemicals has been used for this purpose, the most common today being alkyl and alkoxy- siloxanes (commonly shortened to siloxane) which are carried in an organic solvent at a rate of about 5–7% by weight. Following impregnation, a catalyst in the fluid triggers the formation of a gel, the solvent evaporates and a water-repellent silicone resin is left lining the pores of the masonry. The treatment will prevent rising damp but will not stop water under pressure, so impregnation techniques cannot be used where there is a hydrostatic head such as may occur when tanking a cellar or basement.

Other chemicals used include aluminium stearates and potassium and sodium siliconates, but their use has declined in favour of siloxanes.

Water-based versions of silanes and siloxanes have been developed in response to concerns about health issues associated with volatile organic solvents. These materials are emulsified as viscous 'creams'; they have a relatively high concentration of active ingredient and a small proportion of water as carrier. They are comparatively new on the Australian market and there is limited experience with using them. Early indications suggest that there is some variation between products.

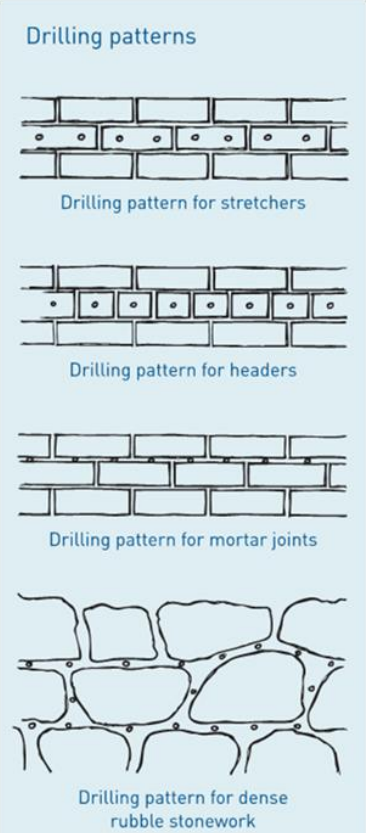


Figure 40 Drilling patterns for chemical impregnation. The first two examples are for low-pressure injection into the bricks and the last two for treating the mortar joints by either low-pressure injection, gravity-fed fluid, or water-based cream. Where a wall 230 mm (one brick) thick is to be injected, a header course should be drilled for preference. Where a stretcher course is to be drilled the stretchers on the other side of the wall must also be drilled, either from the other side, or from this face in sequence — by drilling and injecting the visible stretchers first and then drilling through the same holes to the other stretchers and injecting them in a second phase. The same sequential approach is applied when cavity walls are accessed from one side only.

Holes about 10–15 mm in diameter are drilled about every 120 mm in a line along the base of a wall, such as in a mortar joint. In bricks, two holes are drilled in every stretcher and one hole in every header (Figure 40). The holes are drilled to within about 30 mm of the other side of the wall or brick (Figure 39).

Where the masonry consists of hard and dense rubble stonework, it may be impractical to drill into the hard stone; and penetration of dampcoursing fluid into dense materials may be imperfect. The rubble construction means that there is a lot of mortar with potential for voids. In these circumstances some suppliers advise enveloping the dense material with dampcourse fluid through holes drilled into the mortar above, below and to the sides of each stone (Figure 40). Thick walls of irregular rubble may be difficult to fully impregnate.

Fluid is delivered into the holes by either a tube or a lance depending on whether it is to be gravity-fed or injected under low pressure (Figures 41 & 42). The choice of technique is to some extent determined by the nature of the masonry: gravity-fed diffusion is suitable for porous mortars and soft bricks, while normal bricks can be injected under low pressure (20–70 psi, 150–500 kPa). High pressure injection (greater than 150 psi, 1000 kPa) risks the blowout of weak mortars and imperfect coverage in sound materials due to viscous fingering, a process in which the fluid advances as a series of fingers, leaving gaps between.

Water-based creams are delivered by a cartridge or caulking gun fitted with a narrow tube that reaches the rear of the holes. Creams are generally applied to mortar joints, as the more porous mortar permits better diffusion and penetration of the emulsion.

Critical to the success of any chemical treatment is the formation of a continuous water-repellent zone through the entire wall thickness. This may be difficult to achieve and must be judged by the operator, whose experience and skill are essential to a good result.

Each of the three techniques described:

- low pressure injection of solvent-based fluid
- gravity-fed diffusion of solvent-based fluid
- diffusion of water-based cream

permit prolonged or multiple applications of fluid or cream, which allows the operator to add more if there is any doubt about the adequacy of coverage.

Figure 41 and 42 Chemical impregnation. On the left: the gravity-fed system in which small plastic bottles are filled with a lance. Depending on the nature of the masonry and thickness of the wall the bottles are filled three and sometimes four times. Open holes just above the drilled line are used to indicate extent of penetration. On the right: low-pressure injection in progress on an interior wall from which plaster has been removed. Note the variation in the permeability of the brickwork; the brick on the left is already saturated and the lance is moved on while the central brick slowly fills with fluid.

The following should be considered when contemplating a chemical DPC:

- chemical impregnation should not be attempted where the mortar or masonry is weak and crumbling: treat only relatively sound materials
- voids in thick walls may lead to loss of fluid. Where voids are large, it may be necessary to fill them with grout prior to chemical impregnation (grouting may be desirable anyway to re-establish the integrity of the wall). This needs to be evaluated prior to commissioning any treatment
- in a small proportion of cases the chemistry and mineralogy of the substrate may affect the curing and water-repellency of the fluid or cream
- very wet walls may limit diffusion of gravity-fed fluid or cream
- for the treatment to be successful the wall must be allowed to dry thoroughly after impregnation, particularly during winter months
- good operators may use more fluid than might otherwise be necessary in order to be certain of thorough penetration through the full wall thickness
- dampcoursing fluid and creams are expensive and so there is a cost pressure on contractors to use less
- unscrupulous contractors might dilute the fluid with additional solvent, leading to insufficient water-repellency, or space the drill holes at wider intervals than recommended leading to incomplete coverage
- injection of fluid may displace saline moisture in the wall, forcing it higher up, where it may cause decay to susceptible materials not previously damaged. It is advisable to use a desalination poultice at the same time as the injection
- never drill and impregnate directly into an old tar and sand DPC — it may not be working well, but perforating it will not help

- the solvents used may dissolve polystyrene insulation in cavity walls; and may dissolve tar or bitumen from existing DPCs and spread it through the masonry, leaving a brown stain on the surface
- fumes and fire safety issues with solvents must be managed
- the position of the chemical damp-proof zone in relation to ground level and to floor timbers is critical to achieving a good result. See Section 19: *Inserting chemical DPCs in internal walls* and Box 2: *Location of damp-proof courses* for important advice on these aspects
- chemical impregnation treatments can be used in the zone below existing DPCs. This may be useful where the existing DPC is too far above ground level (see Box 2: *Location of damp-proof courses*), and/or where reducing evaporation to the exterior (and therefore transferring it to the underfloor space) is an appropriate solution
- the treatment may leave a row of unsightly plugged holes; when filling them, care is required to accurately match the surrounding material.

▶ See Section 6.1: *Which salts?* for an explanation.

Importantly, chemical impregnation provides only a barrier to rising damp; it does not prevent salts in the walls above the new damp-proof zone from cycling in and out of solution with changes in humidity, and so continuing to cause damage. **Chemical impregnation must be combined with sacrificial treatments and/or desalination for it to be a successful treatment for salt damp** (Figure 43).

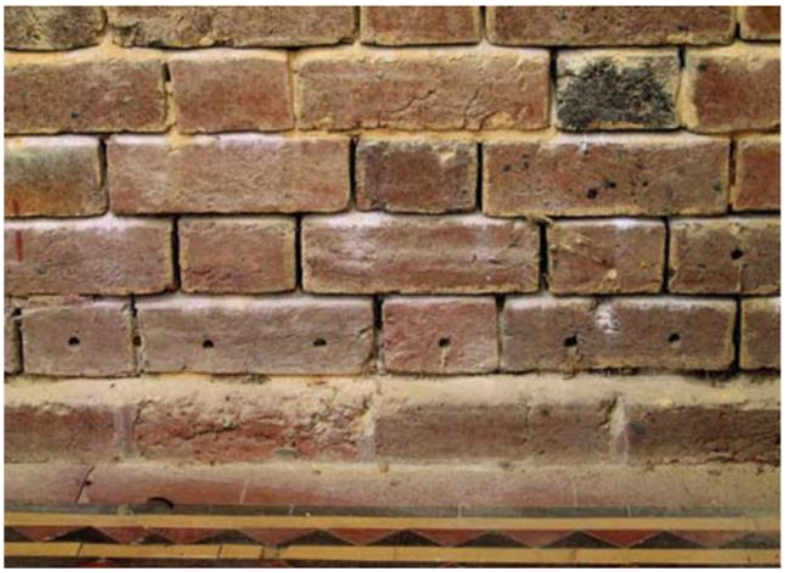


Figure 43 Despite chemical impregnation, decay continues to the brickwork above the treated zone. This is because salts remain in the wall and can cycle in and out of solution with changes in humidity, causing ongoing salt attack decay. The yellow sand is what remains of a sacrificial mortar applied at the time of chemical impregnation. The white material is a mixture of the original lime mortar and salt. Further treatment should include raking out the salty mortar and repointing in a sacrificial mix and possibly poultice desalination, together with an assessment of the effectiveness of the chemical DPC. Note that extensive repointing may bridge the DPC, and so it may need re-treatment once the new mortar is well-cured. Alkaline-stable damp-course fluids should be used.

16.4 Active electro-osmosis

Electro-osmotic damp-proofing is based on the scientific observation that water moving through a porous medium creates an electrical potential difference which is known as the 'streaming potential'. By using an active current to superimpose an electrical potential, water can be driven in a chosen direction. This is exploited in various ways including the dewatering of wet silts and clays to allow the excavation of construction sites.

Both passive and active approaches have been used in applying electro-osmosis to the treatment of rising damp.

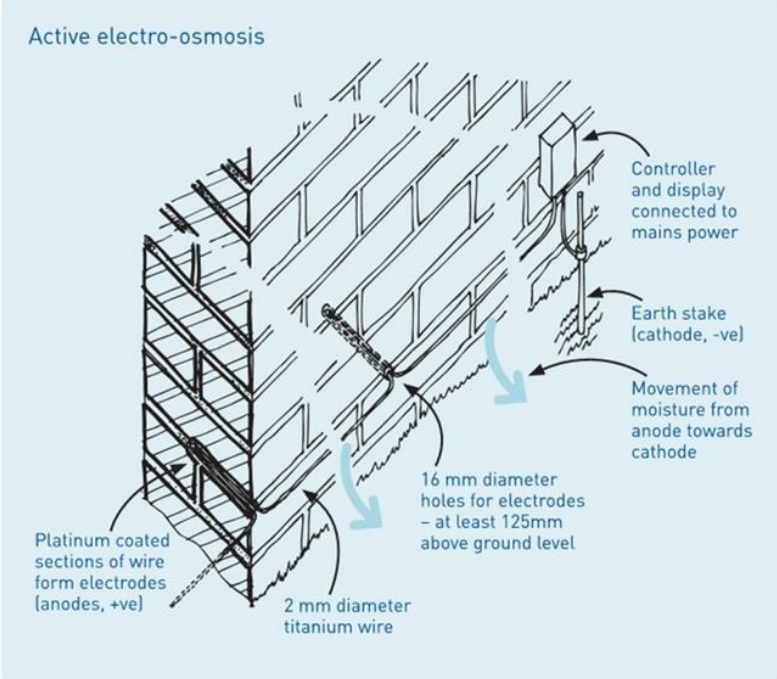
Passive electro-osmosis was widely used across Australia in the 1960s and 70s and gained a notorious reputation on account of the many failures of the technique. Most claimed successes can be attributed to other works undertaken at the same time, including repair of gutters and attention to ventilation and site drainage. Proponents of the method argued that by electrically connecting the damp zone of the wall to the ground, the electrical potential could be negated and the moisture flow stopped. A continuous copper strip was looped into holes drilled into walls and laid into a raked-out mortar joint (or left behind skirting boards) about 300 mm above ground level. The copper strips were earthed to the ground to complete the circuit.

There is no scientific basis to the passive system — it is the movement of water through the porous medium that creates the electrical potential, not the other way around, and so simply earthing the resulting charge will not prevent the damp from rising, as capillary suction is unaffected.

On the other hand, **active electro-osmosis** is based on applying an active DC current to drive water down a wall in a similar manner to its use for dewatering building sites. Although the technique was available in the 1960s it was not much used due to the cost of electricity and because the copper strips (or electrodes) were rapidly corroded in salty walls.

In recent years a more advanced version of active electro-osmosis has been introduced to Australia from the United Kingdom. This system uses titanium wires with platinum-coated electrodes to overcome the corrosion problem. It has an electronic controller that reduces power consumption to a minimum and has a display that enables monitoring of voltage and current (Figure 44).

Figure 44 The active electro-osmosis system showing arrangement of electrodes. The platinum-coated sections of titanium wire that form the anodes are looped into holes drilled in the wall approximately one metre apart and are set in a rich cement mix to form an electrical contact with the surrounding masonry.



The following should be considered when contemplating active electro-osmotic treatment of rising damp:

- the system must remain switched on at all times
- later building works may cut through the cables, though the risk is reduced by running the cables in continuous loops
- there are no chemicals such as organic solvents involved in the process
- the system has received a current CSIRO Appraisal (see *Further reading*) indicating it "is suitable for counteracting rising damp in new and existing buildings", though similar 'fit-for-purpose' assessments have not been made by the UK Building Research Establishment (BRE) or the British Board of Agrément (BBA)
- electro-osmosis requires a material that has high surface charges and fine pores, such as old underfired bricks. Treatment of materials such as limestones with large pores is unlikely to succeed
- there are some concerns as to its function at low moisture levels when the transport of water as a liquid ceases and is replaced by evaporation and condensation of vapour. At very low moisture levels this may not matter
- because active electro-osmosis dries the wall below the line of electrodes it has the potential to protect floor timbers, even though the electrodes may be installed at, or just above, floor level (see Section 19: *Inserting chemical DPCs in internal walls*)

- active electro-osmosis may be useful as a supplementary damp-proof course where the existing DPC is too far above ground level (see Box 2: *Location of damp-proof courses*)
- stray currents may cause corrosion of steel reinforcing in concrete and of pipes and other buried metals
- the effectiveness and long term performance of active electro-osmosis in very salty walls is unclear.

As noted in Section 14 *Removing excessive salt* there is a related phenomenon, electro-kinesis, which is being investigated as a possible means of desalinating walls. The interrelationship between electro-osmotic dewatering and electro-kinetic desalination warrants further investigation.

While active electro-osmosis may remove salt already in solution below the electrodes, there remains the issue of salts above the electrodes which are free to continue causing damage with changes in humidity. **Like chemical impregnation and slot sawing, active electro-osmotic damp-proofing must be combined with sacrificial treatments and/or desalination for it to be a successful treatment for salt damp.**

Potential negative impacts of DPC installation

Installing a DPC in a wall may reduce the evaporative zone on the external face from a height of about 1000 mm down to about 200 mm. This means that moisture evaporation through this zone will be increased by a factor of five times, assuming that evaporation from all other wall surfaces is unchanged. This has implications for the masonry below the DPC, which may begin to decay rapidly as a result and may require additional remedial treatments such as desalination.

Two treatments might be considered in this situation. By chemically impregnating all of the exposed masonry from ground level up to 200 mm, a new DPC can be installed without leaving an evaporative zone below it. Secondly, active electro-osmosis may keep the zone above ground level dry. High salt concentrations should be removed from this zone prior to the use of either chemical impregnation or electro-osmotic treatments.

Alternatively, where both salt levels and rates of evaporation are relatively low (and where the site is well drained) it may be appropriate not to install a DPC but to manage the ongoing salt attack and rising damp using sacrificial treatments and minimising the rising damp 'stress' on the walls. This will mean that evaporation (and hence decay) will continue to occur over a broad zone, but will be much less intense; so the rate of surface loss will be lower at any one point than it would be if the zone were to be narrowed.

Also note that where installing a DPC reduces evaporation the risk of fungal rot and insect attack to floor timbers will be increased, due to higher humidities in the underfloor space.

Box 7

Key Step 7

17 Desalinating walls

The works of this last of the Seven Key Steps are similar to those of Key Step 4 (Section 14: *Removing excessive salt*) which should be referred to for details. The works consist of two or more of:

- dry vacuuming
- poulticing
- captive-head washing
- sacrificial treatments.

They are undertaken in combination with the insertion of a DPC; the focus is on removing as much salt as possible from above the new DPC.

Desalination may be needed in combination with all of the methods of DPC insertion. Even with undersetting there may be a need for desalination: particularly where costs and/or a shortage of matching replacement materials limit the height up to which undersetting is carried, and so desalination is needed to manage salts that remain higher in the walls. With chemical injection it is useful to begin poultice desalination prior to injection, as explained in Sections 16.3 and 21. Where electro-osmotic damp-proofing is to be used, remove as much salt as possible prior to switching on the current.

Despite thorough desalination there will still be the need for annual monitoring for further salts migrating to the surface from deeper within the walls. Follow-up desalination and sacrificial repointing may be required until most salts are removed from the masonry. Monitoring may reveal a localised area of dampness indicating a 'leak' in the new DPC which may need remedial injection or other corrective action. In addition there will always be the need for maintenance of the wall between the DPC and ground level; this will commonly require the use of sacrificial treatments.

Building Code of Australia

The annually updated *Building Code of Australia* (BCA) is a uniform set of performance-based technical provisions for the design and construction of buildings and other structures throughout Australia. The BCA contains mandatory Performance Requirements accompanied by optional Deemed-to-Satisfy Provisions. In relation to rising damp the BCA provides Deemed-to-Satisfy Provisions for:

- acceptable damp-proof course materials;
- location of damp-proof courses; and
- ventilation of sub-floor spaces.

The BCA details minimum requirements for building work and is given legal effect by building regulatory legislation in each State and Territory. It is generally applied to new buildings and new building work only. Application of the BCA to new work on existing buildings is triggered when the scale of works reach certain thresholds that vary between States. In some States it may be necessary to bring an entire building into compliance due to the extent of construction work, irrespective of whether work is being conducted in that area. When works to an existing building are only repairs (such as remedial damp-proofing) then the BCA is not called up, though it provides a useful reference as a construction standard. The Australian Building Codes Board is currently (2008) considering issues related to salinity, that may result in changes to the BCA.

Box 8

18 Cavity walls

Figure 45 Decay of an inner leaf of brickwork into the cavity. This would not have been discovered had the wall not been opened up for undersetting of the outer leaf. The decay means that evaporation is occurring in the cavity in preference to the interior of the house. Multiple paint coatings or previous repairs of interior plasters with dense impermeable materials may be an explanation. Whatever the cause, the implications of decay occurring where it cannot be seen are profound. The inner leaf must be treated, using one of the methods described in this guide.

Prior to the late nineteenth century all brick and stone walls were of solid construction, although thick stone walls may have consisted of two leaves with a rubble-filled core that often contained voids. Solid walls, particularly those made of 230 mm (nine inch) brickwork are susceptible to moisture penetration during prolonged driving rain. The cavity wall was developed in response to this problem and became the dominant twentieth century means of domestic building until the advent of brick-veneer construction.

In domestic construction cavity walls generally consist of two leaves of brick 110 mm (4.25 inches) thick with a 50 mm (2 inch) cavity. Metal ties are built in at regular intervals to bind the two leaves together. Cavity walls stay dry on the inside because any moisture that penetrates the outer leaf runs down the cavity and out through weep holes left in perpendicular joints at the base of the wall. Critical to their success are the correct detailing and use of flashings and the care taken in construction to prevent mortar droppings (snots) from accumulating on the wall ties, and so providing a moisture bridge across the cavity. A pattern of "dots" of moisture on an inside face can be a sign of a cavity bridged at the wall ties.

Salt damp can be particularly problematic in cavity walls because of the risk of decay inside the cavity where it cannot be seen (Figures 45 and 46). In normal circumstances most decay should occur at the external surface of the wall (because that is where there is most evaporation — see Section 9.1: *Factors causing salt attack*). Some decay can be expected on interior surfaces, particularly if the rooms are heated and air-conditioned.

Unfortunately, 'normal' circumstances are progressively removed as successive owners seek to deal with a damp problem by sealing it in. Hard waterproof plasters and multiple paint coatings on interior surfaces; and dense cement renders, cement repointing of joints, as well as paint coatings on external surfaces; all reduce evaporation from these surfaces and increase the likelihood that evaporation inside the cavity will become dominant, leading to unseen decay.

While Figure 45 shows an example of decay of an inner leaf, more severe decay is likely on the inside face of an outer leaf, as shown in Figure 46.

Despite repointing with hard mortars, water will enter the wall through the bricks and through cracks between the new mortar and bricks as well as through failed DPCs. And if walls have been sandblasted they will be particularly liable to water penetration as both bricks and mortar will be much more permeable than before. Where the bedding mortar was relatively weak (because it was to be finished in a stronger pointing mortar) it will be susceptible to rapid decay into the cavity.

Severe decay of the outer leaf will lead to the accumulation of debris at the bottom of the wall, bridging the cavity with saline material and causing dampness inside the building. Wall ties will be more susceptible to corrosion in the saline environment and ultimately the outer leaf will become structurally weak — all of it unseen from the outside. Buildings close to the coast will be particularly at risk of this type of damage from sea spray.

When inspecting damp problems in old buildings with cavity walls it is essential that the inside of the cavities be checked for decay, bridging and the corrosion of wall ties.

Inspection of cavities will often involve removal of vent grilles, and removal of bricks at corners to get a clear sighting along the cavity. Borescopes, industrial versions of medical endoscopes, use fibre optics to enable viewing through narrow holes drilled through mortar joints. They are commonly used to detect mortar snots on wall ties. Because they involve minimal intervention they can be useful tools for determining the need for further opening up.

Repair of an outer leaf that is found to be decaying into the cavity may involve its progressive removal and reconstruction using the undersetting technique described in Section 16.1. If the decay is only to a weak mortar then the bricks can be soaked to remove salt and reused in the wall. A new DPC should be inserted at the same time. Even if repair of the outer leaf is not (yet) warranted, the bottom of the cavity should always be cleared of debris.

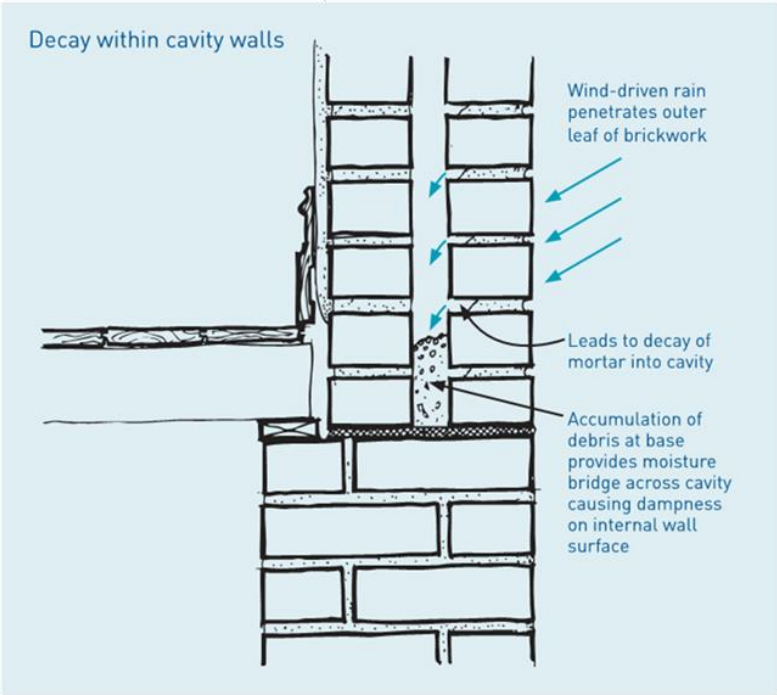


Figure 46 Section through a cavity wall showing deterioration of the inside face of the outer leaf due to moisture penetration through the brickwork. Such decay is more likely where the wall has been sandblasted, making the outer surface more permeable, and where the DPC is not effective, allowing rising damp to compound the problem. Even with a perfect DPC, decay into the cavity may be a problem, particularly near the coast where sea spray carries salt into walls.

19

Inserting chemical DPCs in internal walls

A common practice when chemical dampcourses are being installed in internal walls is to remove the skirting boards and plaster and to drill into a course of bricks just above floor level, as shown in Figure 47. It must be understood that this is a compromise between the good practice of installing the DPC as low as possible on the one hand, and minimising cost and disruption to the building owner on the other. While the new DPC will protect the overlying masonry, wet bricks will remain below in contact with floor timbers, with the consequent risks of fungal rot, borer and termite attack.

It is bad practice to cut costs and minimise disruption by drilling at a steep angle from above skirtings which are left in place. When salt damp is severe enough to warrant DPC insertion, skirtings should always be removed and their backs inspected, as they may be damaged by rot and termites.

As shown in Figure 47 the desirable location for the DPC is below all floor timbers. This is because the purpose of the DPC is not only to keep the masonry dry but also to keep the floor timbers dry. Unfortunately, in many Australian houses the DPC was not carried through under the floor plates; instead, the latter often sit directly on masonry, which may be quite damp.

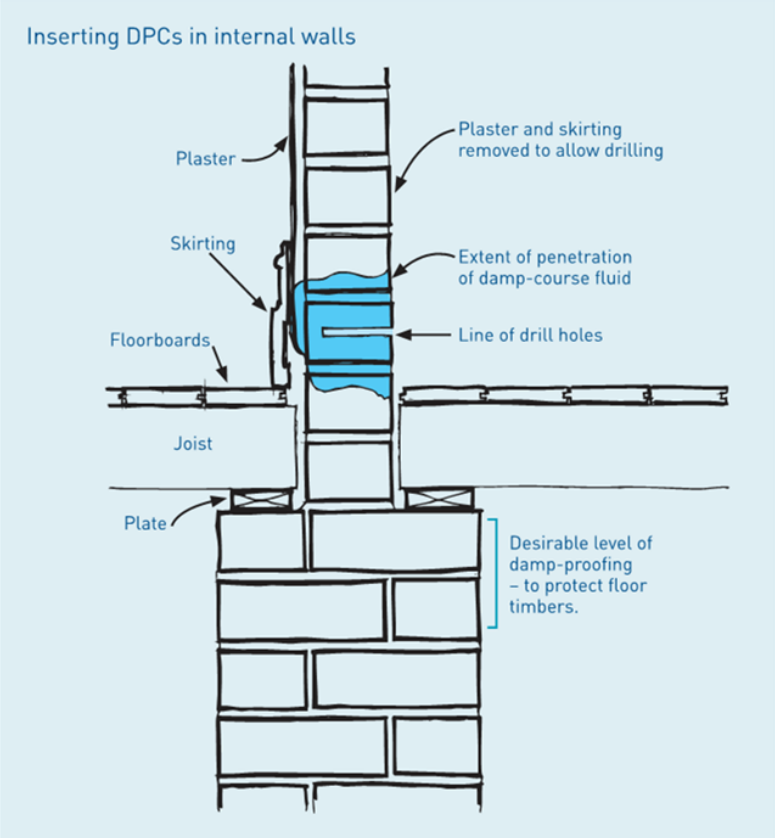


Figure 47 A common practice when installing chemical dampcourses into internal walls is to drill and inject the course of bricks shown. This produces a water repellent zone that may protect the wall above but does not protect the floor timbers, which remain at risk of fungal rot and termite attack.

Best practice DPC insertion would therefore require the removal of sufficient floorboards to enable working access to the wall so that it can be injected (or slot sawn) below floor level. This will obviously add to the expense and disruption of the job. (Note that there are practical difficulties with injecting the upper course or slot sawing in the first mortar joint below the floor plate, as the upper course of bricks will be loosened by vibration. Drilling, or slot sawing, would need to be in the second or third course or joint, respectively.) There may be additional complications if the wall below floor level is not made of regular brickwork but of dense stone such as bluestone or granite, which may make DPC insertion difficult. A less expensive alternative, but one which would still provide protection to both masonry and timber, is explained below.

Three or four floorboards are removed to enable the drilling and injection of the course of bricks immediately above the floor plates as shown in Figure 48. Dampcourse fluid will penetrate up into the course above and downwards into the top of the wider masonry below.

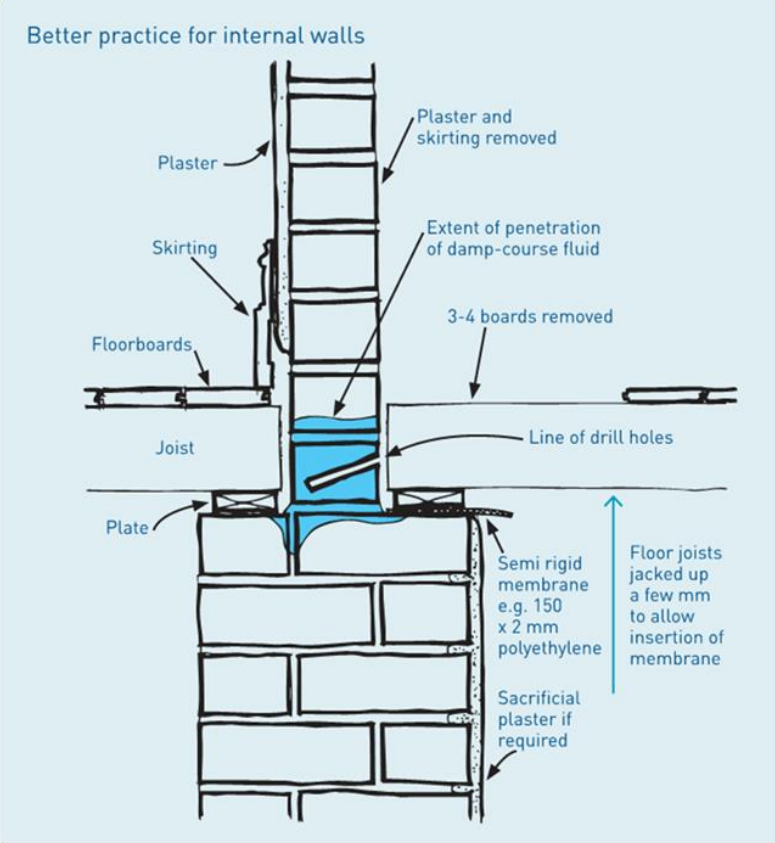


Figure 48 Proposed method of achieving damp-proofing of interior walls and of floor timbers using a combination of chemical impregnation and insertion of a semi-rigid membrane beneath the floor plates. The membrane, which might be 2–3 mm thick polyethylene, such as is used for root barriers and lawn edging, is pushed in hard against the newly created DPC. Removing floorboards, which is a skilled activity requiring a carpenter, may not be necessary if there is access and working room beneath the floor.

The mortar joint immediately above the wider masonry (and directly below the brick being drilled) is where we would expect to find a DPC. A partially effective DPC (e.g. of tar and sand) at this joint will limit downward penetration of the fluid. Drilling and impregnating an existing tar and sand DPC would be counter-productive and should never be undertaken. Impregnation adjacent to a tar and sand DPC creates the risk of staining as solvents in the fluid dissolve components of the tar, although this shouldn't be an issue for interior walls that are to be replastered.

Protection of the floor timbers is achieved by jacking floor joists up a few millimetres to enable insertion of a new membrane beneath the plates. The membrane can function as both a DPC and as a partial termite shield, though it could not be considered as termite shielding within the meaning of Australian Standard AS 3660—2000: *Termite Management*.

Appropriate materials might be stiff plastic such as is used for root barriers and lawn edging. Normal DPC material, whether 0.5 or 0.75 mm thick, would not be suitable, as it would not resist the abrasion of dry insertion, nor have sufficient rigidity to enable it to be forced into place. A material of the order of 2–3 mm thick would be more suitable. Standard termite shield materials, such as galvanised steel and other metals, are not recommended, as they may corrode in the damp saline environments that are commonly encountered in old walls.

Floor plates on dwarf walls should also be protected with a membrane.

Instead of chemical impregnation, internal walls might be treated by undersetting, in which case it is important that the new DPC be carried through under the floor plates.

Whichever treatment is used, it may be desirable to apply a sacrificial plaster to the face of the wall below the new membrane. More thorough desalination will be required for very salty walls, such as that shown in Figure 50.

20

Out of sight, out of mind: the need for improvements to practice

The risk for many walls and timbers in underfloor spaces is that they are unseen and ignored, as these photographs show. Figure 49 was taken through a floor trap near a damp wall and shows a wet zone on the floor joist. Of particular concern is the pile of debris sitting on the floor plate to the left of the joist. The debris is from the previous plaster on the wall above, plaster that decayed with salt attack, some of it falling behind the skirting board and onto the plate. Most of the debris on the plate would have landed there during the last round of repairs when the damaged plaster was hacked off the wall, some of it falling through the gap between floorboards and the wall itself as the diagram shows. Being salt-laden (and hence hygroscopic) the debris attracts moisture and spreads it to the timber plate and the joist. After removing the debris, the wall plate beneath was found to be mostly rotten, with little sound timber remaining. As well as promoting fungal rot, high moisture levels in timber significantly increase the risk of borer and termite attack.

Figure 49 The photograph at right is looking beneath a floor against a damp wall, and shows a wet zone on the timber joist and plaster debris on the floor plate, which is wet and rotten. The diagram below is a sectional view showing how the plaster debris drops behind the floorboards and sits on the floor plate. The debris provides a path or bridge around the DPC. Even though the DPC may have been only partially effective, the newly created bridge will add to the rate at which damp rises. And the salt that caused the first plaster to fail is being recycled into the wall where it will cause more damage. Furthermore, the plaster debris holds moisture against the floor timbers, increasing the risk of fungal rot and insect attack.

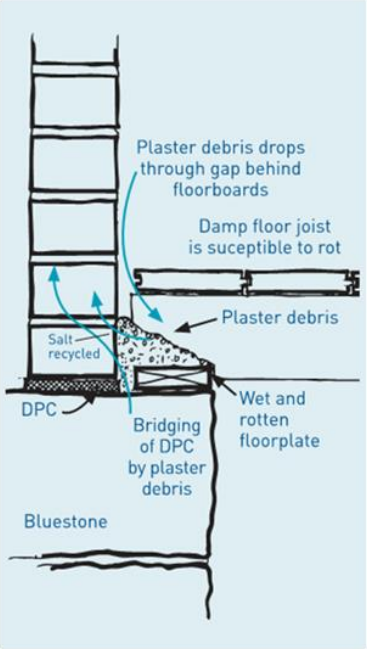


Figure 50 shows a similar view beneath the floor of another house. Salt attack is decaying the brickwork and the debris is accumulating on the damp floor plate. The brick debris overlies previous plaster material which has fallen onto and behind the plate, thereby making a bridge across the DPC which is located out of sight, directly behind the floor plate. Unfortunately the plate is not isolated from the damp masonry below, a situation that is common in Australian buildings. Note the extensive salt efflorescence on the face of the bluestone rubble.

Figure 50 Looking beneath a floor at the edge of a debris-covered floor plate. There are water stains on the end and base of the joist. Salt attack is damaging the bricks at the rear, which are slowly crumbling onto the floor plate. Dense salt crystals encrust the surface of the rubble bluestone in the foreground. The lack of a membrane beneath the floor plate means that the floor timbers are at greater risk of fungal rot and termite attack.

The problem of accumulation of plaster debris on floor plates is widespread and is likely to be encountered wherever repairs to plasterwork have been undertaken.

The message from these photographs is that plaster repairs to the walls above are endangering the floor timbers below — timbers which may be out of sight and out of mind to the damp-proofing contractor. There is a need to change the work practices of specifiers and contractors to recognise and deal with these risks. There are five key points to keep in mind:

- all investigations of buildings for salt attack and rising damp should include an underfloor inspection to assess the condition and risks to floor timbers, in addition to the state of the walls, and any dwarf walls that support the floor
- all debris accumulating on floor plates should be removed (e.g. by industrial vacuum cleaner) which will mean access to the floor plate — either from under the floor where headroom is sufficient; or by lifting floorboards against the wall; or from the other side of a wall that is being opened up for undersetting
- membranes should be inserted beneath the floor plates to protect them from dampness coming directly from the wet wall below — see Section 19: *Inserting chemical DPCs in internal walls)*
- replastering work should include additional measures to prevent debris from dropping through the gap behind floorboards and to retrieve any that does
- certification of completed works should include underfloor inspections to confirm that debris has been removed from floor plates and that all floor timbers are suitably protected from rising dampness.

21 Repairs to interior plasterwork

Figure 51 Discoveries on removing plaster from interior walls. On the left, the brick-on-edge is a partial undersetting of the inner part of a solid wall, leaving the outer part untreated — a total waste of effort. On both walls, but more apparent on the right, are remnants of a dense hard cementitious material containing milled iron that was designed to rust and block pores, making it impermeable. Its removal proved extremely difficult.

Figure 52 A thick film of salt that crystallised beneath a hard render, which was in turn finished with a high-build (thick) paint coating. For evaporation (and hence salt crystallisation) to occur the render must first have become partially detached from the brickwork. Thermal cycling would then drive air movement, allowing evaporation. The salt was chiselled off and the brickwork poulticed before re-rendering.

Repairs to interior plasterwork are commonly required when dealing with a damp problem, whether its origin is rising, falling or penetrating. In each case it will be important to cut off or minimise the source of moisture and to remove any salts prior to replastering. This section expands on some of the issues with interior plasters and rising damp.

Prior to undertaking the insertion of a damp-proof course (by whatever method), plaster is removed from interior walls up to at least 300 mm above the upper limit of elevated salt and damp readings, as measured with a moisture meter — used with informed caution as explained in Section 11.2.

This is when some unhappy discoveries may be made. The building may have been previously treated for salt damp and the discoveries may include corroded remnants of copper wire electrodes from a passive electro-osmotic treatment, replacement masonry from a partial undersetting of the walls, and hard impervious renders trapping moisture and salt within the walls (Figure 51). The hard render may have delaminated in places, leaving a film of salt crystallising in the space between render and wall (Figure 52). The render, which may have been formulated to be waterproof and may be an extremely hard mix of almost neat cement, will need to be removed to allow desalination.

Desalination can begin straight away and need not wait for DPC insertion. Indeed, beginning the desalination before treatments such as chemical impregnation has some advantages, including protecting the wall above from a sudden flushing of salt that may be displaced by the injection of dampcoursing fluid (see Section 16.3: *Chemical impregnation*).

Some contractors claim that the old plaster acts sacrificially, making poulticing unnecessary. While there is some truth in this, the overall effect will be slight, particularly as paint coatings will slow the drying while multiple coats may stop it altogether. Where there is a lot of salt, it is better to remove the old plaster and to poultice the underlying masonry.

After thorough desalination and insertion of a new DPC, the walls can be replastered. So that the new plaster will be compatible with the wall, its materials should be similar to those of the original. The replacement plasters for old walls of flexible masonry should also be soft and flexible and made of lime, whereas a stronger cement-lime plaster may be appropriate for newer and stiffer walls on rigid footings. The amount of gypsum (plaster of Paris) in the final (set) coat will be determined in the same way: less for old flexible walls and more for younger stiffer walls.

Figure 53 Damaged plaster on a damp wall; the dampness is indicated by green algae and white salts crystallising on the stonework and fill below. The recent plaster is decaying because it contains gypsum.

Gypsum plasters should not be used where there is any risk of continuing dampness. This is because gypsum, which is calcium sulphate ($CaSO_4 \cdot 2H_2O$) is a slightly soluble salt and any moisture will trigger salt attack within the new plaster (Figure 53). Use only lime or lime-cement plasters where walls may be subject to continuing dampness. Portland cements contain gypsum and other salts which may add to a damp problem. Specify low-alkali cements to keep salts to a minimum.

After replastering comes thorough drying, not only of the construction water introduced with the plaster, but of any residual dampness from deep in the wall. Depending on the climate this may take 3–6 months, or even up to 12 months for wet thick walls in cooler damp climates. Without thorough drying before repainting, bubbling paint films are almost guaranteed.

Whereas in the past prolonged drying was accepted as a necessary part of constructing masonry buildings with solid plasters, such understanding is less evident today. The demands to complete the job and to quickly tidy up someone's living or working area has meant that some contractors offer alternative approaches to the best practice method described above. These alternatives generally include the addition of waterproofing additives to the first plaster coat (the render coat) with the aim of preventing moisture damage to new paint coatings. To make these work, the render coat is made with a rich cement-sand mix which will be too strong for old walls.

Depending on the nature and amount of the additive, the render coat can be made moderately or strongly hydrophobic (waterproof). Strongly hydrophobic treatments will prevent evaporation from any continuing rising damp and may be being used as a belts-and-braces approach in case DPC insertion has not been adequate. However, in twenty or thirty years the damp will have risen above the hard render and will once again break out (Figure 20), requiring a new round of treatment. Less strongly hydrophobic additives (such as some salt retarders) will allow the wall to breathe and dry, but will not prevent active rising damp from damaging the plaster. At least these are more honest, as any failure of the DPC will become apparent relatively quickly. However, there remains the potential incompatibility of the hard and brittle cement render on what may be soft and flexible walls.

While the desire to complete repairs quickly may lead some to accept the use of hard render coats that contain additives to control or prevent drying, these treatments are not best practice and should not be used in buildings of considerable heritage value. **Good practice requires the removal of as much salt as possible and thorough drying before repainting.**

22 Repainting

The choice of paint type is important in situations where walls are damp, particularly when salts are present. As walls get older and accumulate salts, the need for good breathing increases. Unfortunately, many modern paints are less vapour-permeable than traditional coatings; they don't allow the wall to breathe as effectively as the older ones.

Acrylic (water-based) paints are more vapour-permeable than alkyd (oil-based) paints; the latter should not be used where walls remain damp or are still drying out after DPC insertion. Even the acrylics can be too impermeable for old walls (Figure 54). In these circumstances alternative coatings such as cement-based paints and traditional limewashes should be considered. Limewashes are more vapour-permeable than cement-based paints.

Figure 54 Failure of an acrylic paint coating due to salt damp. The bottom part of the wall is rendered in cement, which has contributed to the damp rising further due to its relative (but not total) impermeability. Decay of the brickwork is focussed where the paint film fails because that's where salt crystallises as moisture evaporates. The paint and the render should be removed and replaced with a more vapour-permeable coating such as limewash.

Buildings of heritage value that were traditionally painted in limewash should be repainted in limewash, not only because it is the authentic finish, but because it has the greatest breathing capacity of all coatings.
Be aware that some modern 'limewashes' (and cement-based paints) contain acrylic or other resins and their breathing capacity may be no better than normal paints. Look for limewashes that have a minimum of organic resin binders, or alternatively, make your own from lime putty, water and pigments.

23 Cellars and basements

Cellars and basements present particular problems because of the risk of groundwater penetrating horizontally through the walls, causing salt attack on the inside faces, and creating damp internal environments. Flooding of cellars is common where groundwater tables are shallow, or where the subsoils are heavy clays which form temporary watertables, diverting some of the water through the cellar. The internal lining of cellar walls with impervious membranes is often proposed. While it may limit water inflow, it will simply drive the damp higher up the walls and is not recommended.

There are several approaches to cellars with salt damp. One is to keep the cellar tightly closed, thus reducing evaporation and the rate of decay. Under such conditions, salts may crystallise relatively benignly on the face of the walls as efflorescence, rather than just beneath the wall surface where they do damage. This option will only be viable if the damp does not rise further in the walls. Often a better alternative is to add some (but not too much) ventilation, and seek to manage salt attack decay with sacrificial plasters and limewash coatings. Both these approaches may limit the future uses of cellars: the latter may lead to unsightly crumbling plaster, and the former to very high humidity levels, which will preclude even normal storage functions.

Making cellars and basements habitable may require more substantial treatments including excavation along the outside of the cellar or basement walls and the installation of a drainage system with vertical moisture barriers against the wall surfaces (tanking). This is expensive and often difficult to achieve in an existing building (geotechnical engineering advice may be required — see Section 12.2: *Site drainage*). The installation of a DPC in the base of the walls might then be considered, together with removal of salts from the wall surfaces. Floors may also need to be made impervious, and in practice this is expensive, with few examples of success.

24 Old treatments

Over the years there has been a range of different treatments for rising damp, many of which have proved to be unsatisfactory. Some of the more common include hard cement renders, damp-proof mortar additives, Knapen tubes, and passive electro-osmosis. These methods should no longer be considered.

24.1 Hard cement renders

A rich cement render along the base of walls can be seen disfiguring many buildings (Front cover). Because these renders are relatively impermeable, they prevent evaporation of rising damp. At best this is a short term solution, for (as explained in Section 13: *Sacrificial treatments*) the damp will eventually rise and cause decay above the render. Alternatively, the damp may cause damage by evaporating through wall cavities or the inside faces of solid walls.

The remedial treatment of hard-rendered walls should begin with an assessment of the thickness of the render and of the extent of original wall material lost prior to the application of the render. By carefully hammering across the face of the render, it may be possible to break it into small pieces, which can then be removed with minimal damage to the original masonry. Because of the quite different mechanical properties of the render and the wall, many renders will be found to be partially detached, often with salt crystallising at the interface. Remove any surface salt by brushing, vacuuming or light chiselling and desalinate the wall as explained in Section 14.

Decisions then need to be made about the desirability of a damp-proof course and the finished appearance of the wall: whether it can be returned to its original face brickwork or stonework, or whether the extent of decay and costs of repair mean that it needs to be re-rendered. If re-rendering, seek to make the render compatible with the underlying masonry. If the wall is soft and flexible, make the render the same. If there's any likelihood of salt remaining in the wall, the new render should act sacrificially. Incorporate porous particulates in the render mix to provide storage space for the salt and prolong the render's life (see Section 13.1: *Sacrificial mixes*). Finish with limewash to allow it to breathe.

24.2 Atmospheric syphons

Atmospheric syphons, also known as Knapen tubes, are lightly fired ceramic tubes that were mortared into holes drilled in walls with plastic or metal covers over the exposed ends. They were intended as drying aids, based on the principle of drawing moisture into the small pores of the ceramic and then encouraging it to evaporate into the hollow tube and then to pass into the atmosphere. However, tests have shown that an empty hole is just as effective in drying the surrounding wall. Further, when the natural rate of evaporation from the wall surface is greater than is possible from the tube or empty hole (and this is the norm) they will not add significantly to the drying of a wall. In high salt conditions the ceramic tube is rapidly destroyed by salt attack.

25 The future

Although most Australian buildings are less than 200 years old, we want those of heritage value to last many hundreds more. Many will now be at a critical stage in their salt damp history, and many more will reach this stage in the coming decades, particularly those with ineffective damp-proofing. The long term management of these buildings will require regular maintenance, attention to good housekeeping, and periodic inspection of wall cavities and underfloor spaces to check the condition of normally unseen parts of walls.

Accurate diagnosis is critically important; there is no substitute for a thorough understanding of a building's behaviour and its response to changes over time. Minor changes can have a significant impact, both positive and negative. Make small changes first, then assess their effectiveness before deciding on more expensive treatments like the insertion of damp-proof courses.

There is a need for the damp-proofing industry to also become salt-removalists, and to recognise that removing salt is as important as damp-proofing. There is also the need for the damp-proofing and pest control industries to come together and overlap to the extent that pest inspectors checking for termites should be able to comment in an informed way on the condition of walls beneath floors. Equally, damp-proofing contractors should undertake works in such a way as to minimise timber decay and, where needed, should install suitable protection for floor timbers.

Finally, those who commission, specify, fund and live with salt damp remedial works should do so knowing that the business is as much about salt as it is about damp, and in full knowledge of the ongoing need for maintenance and of the limitations and risks associated with partial treatments that deal only with the more obvious symptoms.

The slate doorstep

In recent years several examples have come to light of replacement slate doorsteps failing after only a few years in service. The following case study provides a valuable insight into an important aspect of salt damp.

A brick house built in about 1900 had a slate front doorstep. Mild damp affects parts of the house particularly near the front door, causing the doorstep to delaminate and become powdery on the surface due to salt attack. The badly worn step was replaced in the mid-1980s with a new piece of slate from the same quarry. Within five years the new step began to decay in the same manner (Figure 55, below). What happened? Why did the first step last eighty-odd years and yet the second need replacing after ten? Perhaps the slate is not what it used to be?

The answer to the last question is a definite no: the slate is the same sound, relatively durable material it always was. So why did the second one fail in such a short time?

The explanation is that it took eighty years for rising damp to draw salts from the soils up into the walls to a concentration sufficient for it to cause decay in the first step (see Figure 17 in Section 9.4). The second step was built into this already salt-laden environment and so it began to decay shortly afterwards.

The dense layered nature of slate contributes to its demise — its very fine pore structure has a high suction along the layers, while being relatively impermeable across the layers. Thus the slate will draw any available moisture in from its edges — edges which are butted against salty brickwork.

The third step, which is now doing fine after ten years, had its edges sealed with slate sealer prior to installation (several coats of siloxane dampcourse fluid would be an alternative). The new step is bedded on a plastic DPC and on weak mortar that will decay sacrificially in preference to the adjacent brickwork.

Box 9, Figure 55

26 Glossary

Aggregate Hard and generally inert material used as a filler in mortars and concrete: coarse aggregate = gravel; fine aggregate = sand.

Bluestone Hard, dense, dark coloured stone, occasionally bluish. In Victoria, volcanic basalt; in New South Wales, includes granite-like metavolcanics; and in South Australia, sedimentary rocks such as siltstones and shales.

Capillarity Capillary action: suction of fine tubes, related to surface tension, drawing water sideways or against gravity in fine-pored materials.

Captive-head washing Cleaning system with a water jet within an enclosed hood which is equipped with a powerful vacuum to capture the dirty wash water.

Case hardening Hardening of the outer skin of sandstones, limestones and some other types due to solution and re-precipitation of some of the natural cementing material within the stone. Retaining its case hardening can be critical to a stone's durability.

Contour scaling The loss of a thin scale (commonly the case-hardening) from the surface of a stone, often (but not always) caused by salt attack.

Coping Capping of the top of a wall in stone, brick or concrete.

Cornice On exteriors the cornice is the horizontal or near horizontal projection from the base of the parapet at the top of the building; designed to shed water and protect the walls below.

Damp-proof course (DPC) A layer of impervious material (e.g. polyethylene) built into walls to prevent the upward migration of water. Also called a dampcourse. Remedial damp-proofing may include chemical DPCs.

Damp-proof membrane (DPM) As for a DPC but generally used to describe the thinner sheet material used beneath concrete slab footings.

Deliquescence Deliquescent materials are those which absorb water vapour from surrounding air and dissolve into it, forming a solution.

Desalination The removal of salt, in this case from masonry materials.

Dew point The temperature at which water vapour in air condenses as liquid droplets (condensation).

Diatomaceous earth A natural deposit of fossil 'skeletons' of tiny organisms (diatoms).

Efflorescence Crystallisation of white powdery salts on the surface of masonry.

Electro-osmosis Movement of liquid under an applied electrical field.

Evaporative front Line within masonry at which evaporation from liquid to water vapour takes place. The front may move with changes in weather.

Evaporative zone Zone of a wall through which evaporation occurs, often 0.5–1.2 m above ground level when DPC is absent or ineffective.

Falling damp Dampness in buildings resulting from water entering at upper levels and percolating downwards; as distinct from rising damp.

Flashing A strip of impervious material such as lead or other metal fitted into walls to provide a barrier to the movement of moisture.

Footing The widened base of walls that spreads the load to the ground beneath; traditionally of stone or brick, now of reinforced concrete.

Header A brick laid with its long dimension across the plane of a wall so that its end is visible in the wall face (see stretcher).

Hydrophobic Water repellent material.

Hygroscopic Materials that attract moisture from air. Some are also deliquescent.

Impervious A material that does not permit water or other fluids to pass through; one that is impermeable (see permeability).

Masonry Bricks, concrete bricks or blocks, stone and terracotta laid in mortar to form walls or other structures.

No-fines concrete Concrete made without fine aggregate (sand) so as to be porous and permeable.

Osmotic pressure Pressure required to stop the flow of a dilute salt solution towards a more concentrated salt solution across a semi-permeable membrane.

Parapet Low wall projecting above the line of a roof.

Penetrating damp Horizontal penetration of dampness into walls.

Permeability The property of a porous material that allows fluids such as water to pass through it. Impermeable materials don't (see impervious).

Plaster Lining of internal walls or ceilings (see render).

Porosity The void (or pore) space in a material, expressed as a percentage.

Rainwater head A box-like fitting at the top of a downpipe that collects and discharges rainwater from roof gutters.

Render Covering of external walls in mortar-like materials. The term is also for the first coat of plasters.

Repointing The replacement of the outer part of the jointing material in brick and stonework. Usually includes the weatherproof surface "pointing" and some of the softer mortar behind it.

Rising damp Upward capillary migration of water in masonry.

Salinity Soluble salts in soils, natural waters and the environment.

Salt attack Decay of masonry materials due to the crystallisation of soluble salts within the pores of the material; see also salt weathering.

Salt damp A term originating in South Australia that neatly combines the two discrete phenomena of salt attack and rising damp.

Salt weathering The same process as salt attack, but applied more broadly, e.g. in geomorphology, to the weathering of landforms.

Saturated solution A solution containing the normal maximum amount of salt.

Solute suction The osmotic pressure of a salt solution — drawing less saline water towards the more saline, so as to dilute it.

Stretcher A brick laid with its long dimension horizontally along a wall.

Subflorescence Crystallisation of salts within the pores of masonry. Sometimes referred to as crypto-efflorescence, meaning hidden.

Suction The negative force exerted by the capillarity of porous materials. It draws water into walls and aids in adhesion of plaster and mortar.

Supersaturation A salt solution which is over saturated in salt which has not yet crystallised out.

Termites Commonly called white ants, termites belong to a different order of insects; their food consists of cellulose in trees, grass and timber.

Urban Salinity Recently coined term encompassing the combined impact of water and salt on the urban environment, including buildings, roads and other infrastructure. Includes salt attack and salt damp.

Undersetting Salt damp treatment in which sections of the base of a wall are progressively rebuilt in new materials, incorporating a DPC.

27 Further reading

27.1 General references

Ashurst, J. & N. 1988. *Practical building conservation*. English Heritage technical handbooks, 5 volumes, Gower Technical Press, Aldershot, Hants, UK. *Volume 2: Brick, terracotta and earth*. ISBN 0-291-39746-8.

Burkinshaw, R. & Parrett, M. 2003. *Diagnosing damp*. RICS Books, Coventry. ISBN 1-84219-097-0.

CCAA. 2005. *Guide to residential slabs and footings in saline environments*. Cement Concrete & Aggregates Australia, Sydney. ISBN 1-877023-14-0.

Charola, A.E. 2000. 'Salts in the deterioration of porous materials: an overview'. *Journal of the American Institute for Conservation*, Volume 39, No 3. Viewed 27 May 2008 (http://aic.stanford.edu/jaic/articles/jaic39-03-002.html)

CSIRO. 2003. *Lectros Electro Osmotic Dampcourse System, Technical Assessment 308*. (renewed 2006) CSIRO Appraisals, Highett, VIC.

Doehne, E. 2002. 'Salt weathering: a selective review'. In: Siegesmund, S., Weiss, T. & Vollbrecht, A. (eds). *Natural stone, weathering phenomena, conservation strategies and case studies*. Geological Society, London, Special Publications, 205, pp 51–64.

Goudie, A. & Viles, H. 1997. *Salt weathering hazards*. Wiley, Chichester, NY. ISBN 0-471-95842-5.

Heiman, J.L. & Riley, K.W. 2000. 'Salt attack and treatment in sandstone and brick structures'. In: McNally, G.H. & Franklin, B.J. (eds). *Sandstone city: Sydney's dimension stone and other sandstone geomaterials*. Monograph 5, EEHSG, Geological Society of Australia, Conference Publications, Springwood, NSW. pp 125-137. ISBN 1-876315-22-9.

López-Arce, P., Doehne, E., Greenshields, J., Benavente, D. & Young, D. 2008. 'Treatment of rising damp and salt decay: the historic masonry buildings of Adelaide, South Australia'. *Materials and Structures*, RILEM (DOI: 10.1617/s11527-008-9427-1).

Massari, G. & I. 1993. *Damp buildings, old and new*. ICCROM, Rome. ISBN 92-9077-111-9.

NSW Department of Natural Resources. Local Government Salinity Initiative Booklets, including: 5 *Introduction to urban salinity*. 6 *Building in a saline environment*. 12 *Repairing and maintaining salinity affected houses*.

Oliver, A.C. 1997. *Dampness in buildings*. 2nd edn, revised by J. Douglas and J.S. Stirling, Blackwell Science, Oxford. ISBN 0-632-04085-8.

Oxley, T.A. & Gobert, E.G. 1994. *Dampness in buildings: diagnosis, treatment, instruments*. 2nd edn, Butterworth-Heinemann, Oxford. ISBN 0-7506-2059-5.

Richardson, B. 2001. *Defects and deterioration in buildings: a practical guide to the science of material failure*. 2nd edn, Taylor & Francis, London. ISBN 0-419-25210-X.

Rose, W. B. 2005. *Water in buildings: an architect's guide to moisture and mold*. Wiley, Hoboken, NJ. ISBN 0-471-46850-9.

Salt Damp Research Committee. Adelaide. Reports (1976, 1978, 1981); Information Papers (6); Booklets: *The scourge of salt damp in buildings*. 1977; *How to avoid salt damp*. 1978; *Living with salt damp*. 1980.

The Bible. Leviticus. Chapter 14, verses 33–45, (King James version).

Torraca, G. 1988. *Porous building materials: materials science for architectural conservation*. 3rd edn, reprinted 2005, ICCROM, Rome. ISBN 92-9077-198-4.

Trotman, P., Sanders, C. & Harrison, H. 2004. *Understanding dampness: effects, causes, diagnosis and remedies*. Building Research Establishment, Watford. ISBN 1-86081-686-X.

Young, D. 1995. *Rising damp and salt attack*. South Australia, Department of Environment and Natural Resources, and the City of Adelaide, Heritage Conservation: 3.8. ISSN 1035-5138.

27.2 Standards and codes of practice

ABCB. 2008. *Building Code of Australia 2008*. Australian Building Codes Board, Canberra. ISBN 1-921453-06-9 (Volume 1), ISBN 1-921453-07-6 (Volume 2).

British Standards Institution. 2005. *Code of practice for diagnosis of rising damp in walls of buildings and installation of chemical damp-proof courses*. BS 6576:2005. ISBN 0-580-46867-4.

Standards Australia. 2001. *Methods of sampling and testing mortar for masonry constructions*. Australian Standard AS 2701—2001, Standards Australia, Homebush, NSW. ISBN 0-7337-3638-6.

Standards Australia. 1995. *Damp-proof courses and flashings*. Australian Standard AS/NZS 2904—1995, (& Amendment 1, 1998) Standards Australia, Homebush, NSW. ISBN 0-7337-0054-3 & ISBN 0-7337-1726-8.

Standards Australia. 2007. *Inspection of buildings*, Part 0: *General requirements*. Australian Standard AS4349.0—2007, Standards Australia, Sydney, NSW. ISBN 0-7337-8503-4.

27.3 Internet links

Adelaide City Council *www.adelaidecitycouncil.com/heritage*

Heritage Branch, NSW Department of Planning
www.heritage.nsw.gov.au

Heritage Victoria, Department of Planning and Community Development
www.heritage.vic.gov.au

Heritage Branch, South Australian Department for Environment and Heritage *www.environment.sa.gov.au/heritage*

28 Acknowledgements

Nathan Aust, Susan Balderstone, Lyn Baxter, David Beauchamp, Rick Bolton, Murray Brown, Mark Butcher, Barrie Cooper, Dr Eric Doehne, Jim Gard'ner, John Geraghty, Dr George Gibbons, Meredith Gould, John Greenshields, Jack Heiman, Paula Judson, Dr Douglas Kagi, Andris Lidums, Elizabeth Little, Dr Paula López-Arce, Elisha Long, Susan Macdonald, Stuart McLennan, Dr Lisbeth Ottosen, Inge Rörig-Dalgaard, Don Scott, Ike Solomon, Paul Stark, Robert Vincent, Peter Wells, Neil Williams, Malcolm Winrow, Heritage Council of NSW's Technical Advisory Group, Heritage Council of Victoria's Technical Advisory Committee.

Heritage Council of New South Wales

Heritage Victoria

Government of South Australia
Department for Environment and Heritage

Adelaide City Council

TERMS OF REFERENCE
AUSTRALIA DAY COMMITTEE (ADC) SECTION 355

The Balranald Australia Day Section 355 Committee has the following terms of reference:

Terms of Reference

i. Provide expertise and advice to assist Council to make its decisions and/or help engage community resources and opinion
ii. Exercise the function of Council to organise the Australia Day event.
iii. The Australia Day Committee will guide the event and operations by offering advice for Australia Day in Balranald and overseeing the event in Euston by:
    - Providing a forum for discussion to help guide the strategic direction of Australia Day event
    - Actively promote the events and award ceremony.
    - Recommending to Council the winners of the various categories in the Citizen of the Year and other awards.
iv. The Australia Day Committee, established under s.355 of the NSW *Local Government Act (1993)* is bound by practices established in Council's policies and procedures – in particular
    - Council's Code of Conduct.
    - WHS Policy
    - Gifts & Benefits Policy
    - Conflict of Interest Policy
    - Council's procurement policy
v. Elect Chairperson bi-annually from the Community Representatives who will:
    - Chair the meetings and ensure agenda items are discussed, decisions are made and action to be taken, as appropriate.
    - Ensure preparation of agenda at least 7 days before the meeting.
    - Approve meeting minutes prior to distribution.
    - Represent the Committee as spokesperson.
vi. If applicable the financial records are to be kept in a proper manner
    - All monies received are to be banked in an approved bank account and utilised for Australia Day events.
    - A financial statement is to be presented to each meeting.
    - Present the annual financial statement for the committee to Council by 30 August each year for the inclusion in Council's financial statements.

vii. The Minutes of the Australia Day Advisory Committee should be accurate, clear and concise recording what transpired at the meeting.
viii. The minutes may be approved "off-line" via an email to all members and a majority of voting members agreeing that the minutes are a true and accurate record of the meeting.
ix. Pecuniary and Non-Pecuniary Conflicts of Interests are required to be declared.
x. Council resources must be used ethically, effectively and in a cost-effective manner in the course of members' volunteer duties and must not be used for private purposes.

Membership

- 6 Community Representatives
- 3 Councillors
- No more than 3 Staff members nominated by the General Manager (Observers)

Support

A non-voting Council Executive or Officer may be assigned to support the Advisory Committee depending on available resources.

Quorum

A majority of the voting members must be present at the meeting or via an audio-visual link for the meeting to proceed. Should this not be the case, notes can be taken as opposed to formal minutes of the meeting.

Delegation

To organise the Balranald Australia Day event, including the determination of award recipients, and oversee and coordinate with the Euston Event.

Meeting Frequency

As required.

Voting

Recommendations are made by a majority vote of advisory committee voting members.

Meeting Minutes

Within one month of each committee meeting the minutes are to be submitted to the General Manager to be reported to the next Council meeting.

Term of Membership

The term of office for committee members will be two (2) years from commencement. At the expiration of two (2) years, members will be eligible for extension or re-appointment, subject to a resolution of Council.

Committee membership and terms of reference will be reviewed every two years or otherwise at Council's discretion.

TERMS OF REFERENCE

EUSTON PROGRESSIVE ADVISORY COMMITTEE (EPAC)

EUSTON PROGRESSIVE

The Euston Progressive Advisory Committee (EPAC) has the following terms of reference:

Terms of Reference

i. To provide advice in regard to the economic development and tourism strategic objectives to benefit the Euston Community.
ii. Encourage and nurture volunteerism of members (committee and community) to help resource on-the-ground activities.
iii. Advocate for the Euston community on identified areas of interest and priority
iv. Assist in the development of an annual action plan to focus Advisory Committee priorities and actions.
v. Collaborate as regularly as is necessary with the Balranald Tourism & Economic Development Advisory Committee to ensure a whole-of-Shire approach is taken on economic development and tourism opportunities and initiatives.

Membership

- 7 Community Representatives, to be appointed by Council following a public Expression of Interest process.
- 2 Councillors
- Up to three staff nominated by the General Manager (Observers)

Support

A non-voting Council Executive or Officer may be assigned to support the Advisory Committee depending on available resources.

Quorum

A majority of the voting membership must be present at the meeting or via audio-visual link for the meeting to proceed. Should this not be the case, notes can be taken as opposed to formal minutes of the meeting.

Delegation

No delegation.

Meeting Frequency

As required but no less than three meetings per year.

Voting

Recommendations are made by a majority vote of voting members in attendance.

Meeting Minutes

Within one month of each committee meeting, minutes are to be submitted to the General Manager to be reported to the next Council meeting.

Term of Membership

The term of office for committee members will be two (2) years from commencement. At the expiration of two (2) years, members will be eligible for extension or re-appointment, subject to a resolution of Council.

Committee membership and terms of reference will be reviewed every two years or otherwise at Council's discretion.

TERMS OF REFERENCE

BALRANALD WELLBEING & HEALTH ADVISORY COMMITTEE (BWHAC)

The Balranald Wellbeing & Health Advisory Committee has the following terms of reference:

Terms of Reference

i. Map and monitor provision of health, well-being and connection/inclusion services and programs for the community.
ii. Plan and advocate regarding closing community service gaps and improving public access and amenity for all.
iii. Support and promote community knowledge of, and access to, all available services.
iv. Identify and promote inclusion of community diversity, events and programs which celebrate diversity.
v. Develop an annual action plan to focus Advisory Committee priorities and actions.
vi. Facilitate and assist in the operation of the Balranald Emergency Accommodation facililty.

Membership

- 7 Community Representatives to be appointed by Council following a public expression of interest process.
- 2 Councillors
- No more than three staff nominated by the General Manager (Observers)

Support

A non-voting Council Executive or Officer may be assigned to support the Advisory Committee depending on available resources.

Quorum

A majority of the membership must be present at the meeting or via audio-visual link for the meeting to proceed. Should this not be the case, notes can be taken as opposed to formal minutes of the meeting.

Delegation

No delegation.

Meeting Frequency

As required but no less than three times per year.

Voting

Recommendations are made by a majority vote of voting members at the meeting.

Meeting Minutes

Within one-month minutes are to be submitted to the General Manager to be reported to the next Council meeting for consideration.

Minutes may be approved “off-line” by an email to all members and with a majority of voting members agreeing in writing or via email that the minutes are a true and accurate record of the meeting.

Term of Membership

The term of office for committee members will be two (2) years from commencement. At the expiration of two (2) years, members will be eligible for extension or re-appointment, subject to a resolution of Council.

Committee membership and terms of reference will be reviewed every two years or otherwise at Council’s discretion.

TERMS OF REFERENCE

BALRANALD SHIRE TOURISM & ECONOMIC DEVELOPMENT ADVISORY COMMITTEE (TED)

GROWING BUSINESS, INDUSTRY AND TOURISM

The Tourism & Economic Development Advisory Committee has the following terms of reference:

Terms of Reference

i. Advise Council in regard to the Implementation of the Economic Development Strategy (EDS) and the Destination Management Plan (DMP) and to encourage equitable access to the benefits of economic development, tourism and industry growth (includes identifying opportunities for increased local employment and local training needs to ensure improved employment options for residents).
ii. Assist with the establishment of new tourism events and conducting existing tourism events.
iii. Advise Council on promoting and creating Councils Tourism attractions and events.
iv. Advise on the preservation and/or development of Natural, Heritage/Cultural and Built assets (sites), historic stories and narratives.
v. Identify and advise Council in relation to potential new business or tourism opportunities.
vi. Assist Council with investment attraction and tourism promotion.
vii. Support infrastructure and event grant funding prioritisation and applications where so requested by Council.
viii. Advise on business – industry synergy/partnerships.
ix. Establish and nurture volunteerism of members (committee and community) to resource on-the-ground activity for tourism development.
x. Actively support and collaborate with the Euston Progressive Advisory Committee for possible joint business, tourism promotion and development opportunities.
xi. Develop an annual action plan to focus Advisory Committee priorities and actions.

Membership

- 7 Community Representatives to be appointed by Council following a public expression of interest process
- 2 Councillors
- No more than three staff nominated by the General Manager (Observers)

Support

A non-voting Council Executive or Officer may be assigned to support the Advisory Committee depending on available resources

Quorum

A majority of the membership must be present at the meeting or via audio-visual link for the meeting to proceed. Should this not be the case, notes can be taken as opposed to formal minutes of the meeting.

Delegation

No delegation.

Meeting Frequency

As required but no less than three times per year.

Voting

Recommendations are made by a majority vote of voting members at the meeting.

Meeting Minutes

Within one month of each committee meeting, minutes are to be submitted to the General Manager to be reported to the next Council meeting for consideration.

Minutes may be approved “off-line” by an email to all members and with a majority of voting members agreeing in writing or via email that the minutes are a true and accurate record of the meeting.

Term of Membership

The term of office for committee members will be two (2) years from commencement. At the expiration of two (2) years, members will be eligible for extension or re-appointment, subject to a resolution of Council.

Committee membership and terms of reference will be reviewed every two years or otherwise at Council’s discretion.

Advisory Committees Guidelines

Adopted by Council – 20 September 2022

9/20/2022

PAGE LEFT BLANK INTENTIONALLY

Contents

INTRODUCTION

In 2020 the Balranald Shire Council (herein called Council) under the discretion of the Administrator resolved to establish seven advisory committees.

Advisory committees, each with specific terms of reference, can make recommendations to Council. Local people are members of these committees. These people include professional persons, government employees, business owners, and farmers. Advisory committees assist Council in the decision forming and decision making processes.

These guidelines assist the advisory committees in dealing with meeting practice and the general conduct of meetings.

Council acknowledges the valuable contributions that can be made by the community. Typically, advisory committees will provide advice and recommendations to Council on a range of challenges, opportunities, and issues.

Advisory committees are a valuable resource for Council.

A list of Council's advisory committees is listed in the Advisory Committees Structure **(see Attachment 1).**

Members of advisory committees who require clarification on any matter included in these guidelines should contact the Office of the General Manager on (03) 5020 1300 or email to council@balranald.nsw.gov.au.

SECTION 1: PURPOSE OF ADVISORY COMMITTEES

1.1 WHY DOES COUNCIL HAVE ADVISORY COMMITTEES?

Advisory committees provide a mechanism by which interested residents with relevant expertise and/or experience can play an advisory role in the formulation of Council policy and its future direction. These committees are an important link in Council's community engagement strategy.

1.2 OBJECTIVES

Advisory committees are established by Council to:

- Harness the informed views and expertise of the wider community.
- Assist Council in its understanding of, and approach to, specific or localized issues, initiatives or community assets.
- Provide a structured approach to the ongoing involvement of community residents in Council affairs and the democratic process.

1.3 SCOPE AND LIMITATION OF POWERS

The scope and limitations of power (delegations) of each advisory committee is outlined in its terms of reference (Section 5). Advisory committees do not have the authority to instruct staff or to make decisions on Council's behalf.

The advisory committees currently have no delegated authority. In other words, advisory committees do not have the power to make decisions on financial matters and other matters but rather can make recommendations to Council for consideration.

1.4 ESTABLISHMENT OF ADVISORY COMMITTEES

Advisory committees are established by a resolution of Council with members appointed at the discretion of the Administrator.

The Advisory Committees Structure (Attachment 1) was established by Council at its meeting on 30 June 2020. These advisory committees are:

- Ageing Well, Aged Care and Facilities (AWACAF)
- Balranald Beautification (BBAC)
- Euston Progressive (EPAC)
- Growing Business, Industry and Tourism (GBIT)
- Sport & Recreation (SAR)
- Strengthening Community Access, Inclusion and Wellbeing (SCAIW)
- Youth Council (YC)

1.5 TERMS OF REFERENCE

The advisory committee will be responsible for providing advice to council in accordance with the committee's terms of reference. Details of the terms of reference of each committee are presented in Section 5.

1.6 CODE OF CONDUCT

Council has adopted the Model Code of Conduct for Local Councils (2018) (herein the code of conduct) that is applicable to all council officials in that it sets the minimum requirements of conduct in carrying out their functions.

Council will extend the application of the code of conduct to advisory committees where it sees relevance to their function. The intent of doing so is to align, where applicable, the conduct of advisory committee members with the minimum requirements set out for council officials under the Model Code of Conduct

Breaches of the code of conduct by advisory committee members may result in:

- Requirement to apologize
- Censure
- Dismissal from their advisory committee(s)
- Prosecution

It is therefore important for advisory committee members to be aware of and comply with the contents of the code of conduct. The obligations of being an advisory committee member are outlined in the adopted code of conduct **(see Attachment 2).** It is a requirement of Council that training on the code be provided to all advisory committee members as part of their induction process.

Additionally, it is the responsibility of the chair during advisory committee meetings to inform and take necessary action with respect to the members' conduct in relation to this code.

1.7 COUNCIL OBLIGATIONS

In commissioning the advisory committees, Council agrees to:

- Give consideration to all recommendations and suggestions put forward.
- Give members feedback on how their recommendations have been used.
- Encourage member participation and meeting attendance.
- Respond within a reasonable timeframe to requests for relevant information or feedback.
- Consider providing administrative resources to assist in the smooth operation of the committee.

1.8 MEMBER OBLIGATIONS

As a member of an advisory committee, members agree to:

- Attend meetings (including via video technology) and participate in discussions and debate.
- Adequately review any agenda attachments or documents, as required, prior to meetings.
- Report their views and, where known, those of the respective Balranald Shire community.
- Engage with the wider community on committee matters where possible;
- Not override or diminish the views and opinions of fellow members and embrace the processes of debate and democracy.
- Suggest agenda items to the Chairperson.
- Make suggestions regarding improvements to their advisory committees.
- Work within, and remained focused on the terms of reference.
- Declare any conflict of interest regarding any issue under discussion.
- Maintain confidentiality and show discretion where appropriate.
- Not speak publicly, such as to the media, on behalf of Council.

SECTION 2: MEMBERSHIP - ADVISORY COMMITTEES

2.1 ADMINISTRATOR & GENERAL MANAGER ATTENDANCE

The Administrator and General Manager will be able to attend any advisory committee meetings and as such, are required to be advised as to the time and location of all meetings. The Administrator and General Manager will attend meetings as observers, but may offer oversight on matters at hand or address member conduct or committee practice in line with the respective codes outlined in their training and induction.

2.1.1 ROLE AND RESPONSIBILITIES OF THE GENERAL MANAGER

The General Manager plays an important role in ensuring the matters brought before advisory committees and associated recommendations are presented to Council. To this end, the Administrator is then in a position to offer advice or make decisions on those matters or recommendations at a meeting of Council.

The process for doing this is as follows:

1. The General Manager will take receipt of the meeting minutes of an advisory committee from the committee chairperson (once confirmed as true and accurate by committee members).
2. The General Manager will review the meeting minutes and, as necessary, seek clarification or further information relating to agenda items covered and any recommendations from either the chairperson or council officers in attendance.
3. The General Manager will report the business transacted by the advisory committee to the next available Council meeting following a committee meeting.

The General Manager may consider allocation of a Shire Officer and other resources to support advisory committees.

2.2 COMMITTEE APPOINTMENTS

As advisory committees proceed over time, membership will vary. Candidates can be nominated by way of a committee recommendation with the support of an expression of interest form (Attachment 3) attached to the minutes.

It is a requirement that all newly-appointed members be inducted and trained for their role. The Administrator reserves the right to appoint or dismiss advisory committee members at any time.

2.3 DISSOLUTION OF COMMITTEE

The Council may dissolve an advisory committee at any time by a resolution of Council.

2.4 VACATION OF OFFICE

Advisory committee membership may become vacant in the following circumstances:

- if the member resigns membership by notice in writing to the committee;
- if the member is absent for more than three (3) consecutive meetings without prior leave of absence or an apology being accepted by the committee; and
- If a member is found to be in breach of the Code of Conduct.

2.5 CHAIRPERSON, DEPUTY CHAIRPERSON AND SECRETARY

There are three formal positions on advisory committees – chairperson, deputy chairperson and secretary.

The chairperson is usually the spokesperson for the committee and ensures that meetings are conducted in accordance with these guidelines and business is dealt with efficiently.

If the chairperson is not present at the time designated for the meeting, the deputy chairperson shall take the responsibilities of the chairperson. If neither the chairperson nor deputy chairperson of a committee is able to preside at a meeting and there is a quorum present, the committee must elect a member of the committee to act as the chairperson for that meeting.

The secretary will take the minutes of meeting and work with the chairperson to collate agenda items in preparation for the committee meeting. Reports or papers tabled during a committee meeting will be circulated by the secretary to all committee members during or at the close of the meeting (where practicable), or during the next business day following the meeting.

2.5.1 RESPONSIBILITIES OF THE CHAIRPERSON

The chairperson has the following specific duties:

(i) Before a meeting:

- prepares the agenda setting out the terms of business to be considered, and
- ensures the meeting is properly convened in accordance with the Model Code of Meeting Practice.

(ii) During the meeting:

- chairs all meetings, opens meeting, welcomes and introduces members and guests; keeps individuals and the meeting focused on the topics being discussed and encourages all members to participate, ensures adequate opportunity is given to members who wish to speak;
- ensures correct meeting procedures are followed and control of the meeting is maintained, keeping track of time; makes sure members are aware of decisions / recommendations being made and that the minute taker has recorded decisions / recommendations of the meeting.
- acts impartially and uses discretionary powers in the best interests of members and in accordance with the meeting practices
- ensures all statutory regulations and the Code of Conduct and Code of Meeting Practice are observed; and
- closes meetings after business at hand has been properly concluded.

(iii) Other responsibilities:

- be aware of certain issues and procedures and the importance of establishing and maintaining a working relationship with the Council;
- approve the meeting minutes prior to them being reported to Council; and
- attend quarterly Executive of Chair meetings with other advisory committee chairpersons, the Administrator and the General Manager where they are able to speak on behalf of their committee and seek opportunities to collaborate;

2.5.2 RESPONSIBILITIES OF ALL MEMBERS

All advisory committee members have the following broad duties during committee meetings:

To act in accordance with the terms of reference of the advisory committee, in the best interests of the community(s) they represent and in a manner of integrity, equity and transparency

To read meeting papers and attend meetings* prepared to participate with full thoughtfulness and knowledge

To act in an orderly manner during advisory committee meetings including to NOT behave in a manner that contravenes the Local Government Act or any regulation in force under the Act or the Model Code of Meeting Practice; assault or threatens to assault another member, council officer or person present at the meeting; move or attempts to move a motion or an amendment that has an unlawful purpose or that deals with a matter outside the jurisdiction of the committee; insults or makes personal reflections on or imputes improper motives to any other member or council official, or alleges a breach of the council's code of conduct; or says or does anything that is inconsistent with maintaining order at the meeting or is likely to bring the council or the committee into disrepute

To respect the confidentiality of experiences that may be shared in committee meetings and the knowledge and contributions of all committee members

2.5.2 ELECTION OF CHAIRPERSON & SECRETARY

The Chairperson & Secretary shall be elected by the Committee from the members.

The term of office shall be for two years. The first order of business for the committee meeting following the expiration of the term or casual vacancy in office is to elect the Chairperson/Secretary. The General Manager or his delegated officer is to conduct the election.

**note travel to and from meetings will be at each committee members own expense. Special consideration may be given where AC members are representing Council outside of the Shire boundaries. Such consideration must be agreed to prior to the travel event taking place.*

SECTION 3: MEETING PROCEDURES FOR ADVISORY COMMITTEES

3.1 NOTICE OF MEETINGS

Notice of advisory committee meetings will be provided to members, along with the Administrator and General Manager, at least three (3) days prior to the meeting. The notice will specify the time, place and date of the meeting and the business proposed to be transacted (the agenda). Notice of less than three (3) days may be given of a meeting in an emergency or at the Administrator's discretion.

3.2 NON-MEMBERS ENTITLED TO ATTEND COMMITTEE MEETINGS

The Administrator and General Manager or their delegates are entitled to attend a committee meeting. However, they are not entitled to add items to the meeting agenda, move or second a motion or vote at the meeting.

The General Manager may assign a Council officer to guide and assist an advisory committee during meetings.

Members cannot assign a proxy member to attend meetings in their absence.

At the discretion of the Administrator or with the agreement of a majority of advisory committee members, guests can be invited to attend meetings to either observe meetings or present ideas or information relevant to matters on the agenda. Guests cannot be invited by individual members without the prior agreement of the committee. Notice of guests invited to attend must be included in the meeting agenda at the time notice of the meeting is given.

3.3 QUORUM/STARTING TIME FOR MEETINGS

Meetings are to commence at the time designated for the meeting. The quorum for an advisory committee is set out in the respective advisory committees' terms of reference. If a quorum is not present within thirty (30) minutes of the designated commencement time then the meeting must be adjourned.

3.4 AGENDA

The agenda is an organized list of the business, in order, that will be transacted at the meeting. A copy of the agenda will be distributed to all the committee members at least three (3) days before the commencement of the meeting.

Each item of business to be considered at the meeting must be listed on the agenda.
If any item on the agenda is not discussed due to time constraints, they are carried over to the next meeting agenda.

3.5 CONDUCT OF BUSINESS

Each item of business is discussed in the order in which it appears on the agenda. Adequate time is to be allowed for discussion on important issues. Time management of meetings is a responsibility of the chairperson.

For some matters, it will be necessary to attach other relevant information to the agenda to inform and direct discussion. Such information is to be circulated with the agenda to all members, the Administrator and the General Manager with the approval of the chairperson at the time meeting notice is given (or at least three days prior to the meeting date).

3.6 MOTIONS & VOTING

Decisions of the Advisory Committee, including the formation of recommendations to Council must be put through the form of a motion. A motion or an amendment cannot be debated and decided upon unless or until it has been seconded.

The chairperson must rule out of order any motion or amendment to a motion that is unlawful or the implementation of which would be unlawful.

Any motion, amendment or other matter that the chairperson has ruled out of order is taken to have been lost.

An amendment may become the motion without further debate or a vote where it is accepted by the member who moved the original accepted motion.

Voting is a mechanism through which members can express their agreement or disagreement on a matter that is for recommendation to Council. Each advisory committee member is entitled to one vote.

Voting can be conducted in two ways, verbally or by show of hands. For a vote to be carried it is necessary that a majority of participants vote for that matter. If a vote is tied, the chairperson shall have the casting vote. A casting vote is effectively a second vote cast by the Chairperson.

Where the chairperson declines to exercise, or fails to exercise, their second or casting vote, in the event of an equality of votes, the motion being voted upon is lost.

A member who is present but who abstains from voting on a motion is counted as having voted against the motion. Members who are not present may not vote by proxy or any other means.

3.7 MINUTES OF MEETINGS

Minutes of the committee meeting will record attendees at meetings, conflicts of interest, decisions (in the form of recommendations which are moved, seconded and carried). It is not intended to record debate or discussion of items in the minutes.

It is the responsibility of the secretary to record minutes of the meeting. In the absence of the secretary a Council officer may be assigned to record the minutes of the meeting.

The minutes will be distributed to committee members (via email) within seven (7) days of the meeting. These minutes will require verification of trueness and accuracy by members who must respond via a circulated email. If members do not respond within three (3) days, it is assumed the minutes are true and accurate. Such a process of verification will enable the General Manager to receive the minutes in order to elevate recommendations to Council and enable decisions and advice to be given in a timely fashion.

The recommendations of a committee as notified in the meeting minutes and reflected in the General Manager's Advisory Committee Report, which are adopted by Council, become resolutions of the Council.

3.8 GENERAL MANAGER AND COUNCIL OFFICERS – ATTENDANCE AT MEETINGS

The General Manager is entitled to attend any advisory committee meeting. In consultation with the chairperson, the General Manager may assign an appropriate Council officer to attend the meetings and assist proceedings.

Council officers are not permitted to vote.

3.9 DURATION OF MEETINGS

Committee meetings shall close at the scheduled finish time, however a motion to extend the meeting for up to an extra 30 minutes may be considered by the chair. Matters listed on the agenda and not dealt with by the conclusion of the meeting will be carried forward to the next meeting of the committee.

3.10 SUB-COMMITTEES

The committee may appoint working groups to report back to the committee. These 'sub-committees' have no formal standing and must recommend back to the committee for its determination and/or ratification. The purpose of such sub-committees might be to fact-find or assist Council to develop programs, project concepts/designs or events.

Members of sub-committees must be duly appointed members of the committee unless otherwise determined by Council.

3.11 ABSENCE FROM COMMITTEE MEETINGS

All committee members are required to advise the chair when they are unable to attend committee meetings. The absence of committee members from the meeting is to be recorded in the minutes.

3.12 RECORDING OF COMMITTEE MEETINGS

A person may use a recording device to record the proceedings of a meeting of a committee – with the approval of the committee – for the purposes of the business of the committee.

SECTION 4: MISCELLANEOUS ISSUES

4.1 INSURANCE MATTERS

4.1.1 Public Liability

All advisory committee members are covered by the public liability policy of Council. This insurance does not preclude committee members from due diligence and taking all practicable measures to ensure the safety of others.

4.1.2 Personal Accident

Committee members are covered by council's personal accident policy when injured whilst undertaking actions authorized by council relating to their role in the committee.

4.1.3 Motor Vehicle

In the event that a committee member utilizes a council vehicle, the motor vehicle policy of Council will provide cover.

4.2 LEGAL ISSUES

Committees sometimes believe they are responsible in their own right and that their actions are independent of Council. This is not correct. Council has resolved to constitute the advisory committees and the Administrator can dismiss any advisory committee at any time, if deemed necessary.

4.3 CONFLICT OF INTEREST

All Advisory Committee members will be inducted and trained according to the Model Code of Conduct for Local Councils in New South Wales.

It is a requirement for all advisory committee members to declare conflict of interests, including pecuniary interests.

4.4 INDUCTION & TRAINING

All advisory committee members will be required to participate in an induction process of appointment to their respective committee(s). The General Manager will coordinate with the advisory committee members in relation to the induction and training process.

At the request of the advisory committee and at the discretion of the General Manager members may be required to complete a volunteer induction specific to their request to undertake their volunteer task.

SECTION 5: ADVISORY COMMITTEES - TERMS OF REFERENCE

5.1 YOUTH COUNCIL

The Youth Council has the following terms of reference:

Terms of Reference:

i. Strengthen the capacity of our young people to participate and thrive in all facets of community life.
ii. Commit to a youth leadership development program (supported by Council).
iii. Provide a welcoming and inclusive platform for young people to provide ideas and voice concerns to Council.
iv. Advise Council on decision-making regarding infrastructure, service and program growth and advocacy within mandate.
v. Identify training, education and enterprise skill development needs and connect with or advocate for relevant opportunities.
vi. Promote Youth Mental Health awareness and create and support opportunities for the diversity of Shire youth to come together.
vii. Organise and coordinate Youth Week events.
viii. Develop a term and annual (or biennial) Action Plan to guide Youth Council priorities and actions.

Support:
A non-voting Council Executive or Officer may be assigned to support the Advisory Committee depending on available resources. Non-voting support members may also participate (teachers, etc) at the discretion of the Administrator.

Quorum:

A majority of the membership must be present at the meeting or via online access for the meeting to proceed. Should this not be the case notes can be taken as opposed to formal minutes of the meeting.

Delegation:

No delegation.

Meeting Frequency:

A minimum of quarterly.

Voting:

Recommendations are made by a majority vote of Youth Council members.

Meeting Minutes:

Following each advisory committee meeting, minutes are to be submitted to the General Manager for inclusion in the next Advisory Committee Recommendations Report Council

Term of Membership:

The term of office for committee members will be two (2) years from commencement. At the expiration of two (2) years, members will be eligible for extension or re-appointment, subject to a resolution of Council.

Committee membership and terms of reference will be reviewed every two years or otherwise at Council's discretion.

5.2 GROWING BUSINESS, INDUSTRY AND TOURISM

The Growing Business, Industry and Tourism Advisory Committee has the following terms of reference:

Terms of Reference:

i. Advise Council on measures to encourage equitable access to the benefits of economic development and industry growth (includes identifying opportunities for increased local employment and local training needs to ensure improved employment options for residents).
ii. Make suggestions to Council about the promoting of our Tourism Asset Portfolio to ensure the preservation and/or development of Natural, Heritage/Cultural and Built assets (sites), historic stories and narratives.
iii. Assist with the establishment of new tourism events and the development of existing tourism events.
iv. Identify and advise Council in relation to potential new business or tourism opportunities.
v. Assist Council with investment attraction and tourism promotion
vi. Support infrastructure and event grant funding prioritisation and applications where so requested by Council.
vii. Advise on business – industry synergy/partnerships.
viii. Establish and nurture volunteerism of members (committee and community) to resource on-the-ground activity for tourism development.
ix. Actively support and collaborate with the Euston Progressive Committee for business and tourism promotion and development.
x. Develop annual (or biennial) action plan to focus Advisory Committee priorities and actions.

Support:
A non-voting Council Executive or Officer may be assigned to support the Advisory Committee depending on available resources

Quorum:

A majority of the membership must be present at the meeting or via online video access for the meeting to proceed. Should this not be the case, notes can be taken as opposed to formal minutes of the meeting.

Delegation:

No delegation.

Meeting Frequency:

A minimum of quarterly.

Voting:

Recommendations are made by a majority vote of the Advisory Committee members.

Meeting Minutes:

Following each advisory committee meeting, minutes are to be submitted to the General Manager to be received and reported in the next Advisory Committee Recommendations Report to Council.

Term of Membership:

The term of office for committee members will be two (2) years from commencement. At the expiration of two (2) years, members will be eligible for extension or re-appointment, subject to a resolution of Council.

Committee membership and terms of reference will be reviewed every two years or otherwise at Council's discretion.

5.3 STRENGTHENING COMMUNITY ACCESS, INCLUSION AND WELLBEING

The Strengthening Community Access, Inclusion & Wellbeing Advisory Committee has the following terms of reference:

Terms of Reference:

i. This function is predominantly a primary health network responsibility.
ii. Map and monitor provision of health, well-being and connection/inclusion services and programs.
iii. Plan and advocate regarding closing service gaps and improving public access and amenity for all.
iv. Support and promote community knowledge of, and access to, all available services.
v. Identify and promote inclusion of community diversity and events and programs which celebrate diversity.
vi. Develop annual (or biennial) action plan to focus Advisory Committee priorities and actions.

Support:
A non-voting Council Executive or Officer may be assigned to support the Advisory Committee depending on available resources.

Quorum:
A majority of the membership must be present at the meeting or via online video access for the meeting to proceed. Should this not be the case, notes can be taken as opposed to formal minutes of the meeting.

Delegation:

No delegation.

Meeting Frequency:

A minimum of quarterly

Voting:

Recommendations are made by a majority vote of advisory committee voting members.

Meeting Minutes:

Following each advisory committee meeting, minutes are to be submitted to the General Manager for inclusion in the next Advisory Committee Recommendations Report to Council.

Term of Membership:

The term of office for committee members will be two (2) years from commencement. At the expiration of two (2) years, members will be eligible for extension or re-appointment, subject to a resolution of Council.

Committee membership and terms of reference will be reviewed every two years or otherwise at Council's discretion.

5.4 AGEING WELL, AGED CARE AND FACILITIES

The Ageing Well, Aged Care and Facilities advisory committee has the following terms of reference:

Terms of Reference:

i. Provide a platform to positively promote and support all community members to age well in the setting of their choice.
ii. Advise Council on remedies for key service gaps to better support ageing well, including advocacy strategies.
iii. Identify and encourage opportunities which showcase the qualities, assets and skills of our ageing community and provide opportunities for the sharing of these with younger community members.
iv. Develop a Term and annual (or biennial) Action Plan to guide Advisory Committee priorities and actions.

Support:
A non-voting Council Executive or Officer may be assigned to support the Advisory Committee depending on available resources.

Quorum:

A majority of the membership must be present at the meeting or via online video access for the meeting to proceed. Should this not be the case, notes can be taken as opposed to formal minutes of the meeting.

Delegation:

No delegation.

Meeting Frequency:

A minimum of quarterly.

Voting:

Recommendations are made by a majority vote of advisory committee voting members.

Meeting Minutes:

Following each advisory committee meeting, minutes are to be submitted to the General Manager for inclusion in the next Advisory Committee Recommendations Report Council

Term of Membership:

The term of office for committee members will be two (2) years from commencement. At the expiration of two (2) years, members will be eligible for extension or re-appointment, subject to a resolution of Council.

Committee membership and terms of reference will be reviewed every two years or otherwise at Council's discretion.

5.5 BALRANALD BEAUTIFICATION

The Balranald Beautification Advisory Committee has the following terms of reference:

Terms of Reference:

i. Represent Shire communities in a coordinated and considered approach to town beautification.
ii. Establish and nurture volunteerism of members (committee and community) to help resource on-the-ground activity for public beautification.
iii. Provide advice on the implementation of the "Balranald Street Tree Masterplan".
iv. Collaborate with Business Industry & Tourism on planning larger Culture and Heritage orientated beautification efforts to ensure consistent focus and branding.
v. Develop terms of reference and annual (or biennial) action plan to focus Advisory Committee priorities and actions.

Support:
A non-voting Council Executive or Officer may be assigned to support the Advisory Committee depending on available resources.

Quorum:

A majority of the membership must be present at the meeting or via online video access for the meeting to proceed. Should this not be the case, notes can be taken as opposed to formal minutes of the meeting.

Delegation:

No delegation.

Meeting Frequency:

A minimum of quarterly.

Voting:

Recommendations are made by a majority vote of advisory committee voting members.

Meeting Minutes:

Following each advisory committee meeting, minutes are to be submitted to the General Manager for inclusion in the next Advisory Committee Recommendations Report Council

Term of Membership:

The term of office for committee members will be two (2) years from commencement. At the expiration of two (2) years, members will be eligible for extension or re-appointment, subject to a resolution of Council.

Committee membership and terms of reference will be reviewed every two years or otherwise at Council's discretion.

5.6 SPORT & RECREATION

The Sport and Recreation Advisory Committee has the following terms of reference:

Terms of Reference:

i. Provide advice to Council in relation to strategic planning, development and coordination of Council's sporting and recreational infrastructure.
ii. Represent the breadth of community sporting and recreation bodies equitably to ensure the broadest possible access of all community members to all available opportunities.
iii. Partner with Council to catalogue and promote sporting and recreation opportunities across the Shire to encourage active participation for health and connection benefits.
iv. Encourage all sporting and recreation bodies to ensure positive messaging reaches all community members and especially children and youth (including messages which prevent violence, discourage the use of drugs and alcohol, and encourage fair and inclusive participation in sports for all – messaging to reflect State and Federal guidelines).
v. Assist or partner with Council in development of projects and applications for infrastructure grant funding or events grant funding.
vi. Engage with NSW Sport and SportAUS, in partnership with Council, to advocate about challenges, priorities and opportunities.

Support:
A non-voting Council Executive or Officer may be assigned to support the Advisory Committee depending on available resources.

Quorum:

A majority of the membership must be present at the meeting or via online video access for the meeting to proceed. Should this not be the case, notes can be taken as opposed to formal minutes of the meeting.

Delegation:

No delegation.

Meeting Frequency:

A minimum of quarterly.

Voting: Recommendations are made by a majority vote of advisory committee voting members.

Meeting Minutes:

Following each advisory committee meeting, minutes are to be submitted to the General Manager for inclusion in the next Advisory Committee Recommendations Report Council

Term of Membership:

The term of office for committee members will be two (2) years from commencement. At the expiration of two (2) years, members will be eligible for extension or re-appointment, subject to a resolution of Council.

Committee membership and terms of reference will be reviewed every two years or otherwise at Council's discretion.

5.7 EUSTON PROGRESSIVE

The Euston Progressive Advisory Committee has the following terms of reference:

Terms of Reference:

i. Provide the Euston community with a platform through which to connect with Council in the absence of elected representatives.
ii. Establish and nurture volunteerism of members (committee and community) to help resource on-the-ground activity for public beautification.
iii. Advocate for the Euston community on identified areas of interest and priority
iv. Develop annual (or biennial) action plan to focus Advisory Committee priorities and actions.
v. Collaborate as regularly as is necessary with the Business, Industry and Tourism Advisory Committee to ensure a whole-of-Shire approach is taken on tourism and economic development.

Support:
A non-voting Council Executive or Officer may be assigned to support the Advisory Committee depending on available resources.

Quorum:

A majority of the membership must be present at the meeting or via online video access for the meeting to proceed. Should this not be the case, notes can be taken as opposed to formal minutes of the meeting.

Delegation:

No delegation.

Meeting Frequency:

A minimum of quarterly.

Voting:

Recommendations are made by a majority vote of advisory committee voting members.

Meeting Minutes:

Following each advisory committee meeting, minutes are to be submitted to the General Manager for inclusion in the next Advisory Committee Recommendations Report Council

Term of Membership:

The term of office for committee members will be two (2) years from commencement. At the expiration of two (2) years, members will be eligible for extension or re-appointment, subject to a resolution of Council.

Committee membership and terms of reference will be reviewed every two years or otherwise at Council's discretion.

SECTION 6: THE EXECUTIVE OF CHAIRS

An additional requirement of advisory committee chairpersons is to attend quarterly meetings of the Executive of Chairs. The General Manager (or their delegate) and the Administrator will be in attendance

- Investigate opportunities to collaborate on cross-committee interests or challenges.
- Guidance/feedback from GM and Administrator on Committees' charters and achievements.
- Foster the Committee-Council relationship.
- Share opportunities and challenges

ATTACHMENT 1: ADVISORY COMMITTEES STRUCTURE

ADOPTED ADVISORY COMMITTEES STRUCTURE 2020-2021

On the 6th May and then on the 13th May, Council ran two phases of e-workshops to engage with our community on proposed Advisory Committees for adoption in FY2020-21. The workshops, despite having limited attendance on the audio-visual digital platforms (Facebook and Zoom), were the only effective open community engagement technique available to Council. The feedback, however, was thoughtful and instructive/guiding and enabled Council to further refine and focus the Draft Advisory Committee Structure.

Following on from a four week period of exhibition – during which a shire-wide survey seeking feedback on Advisory Committees was conducted – the draft Advisory Committees Structure was adopted on the 30th June at an Extraordinary Meeting of Council.

These seven adopted Advisory Committees are explained in the below table. The five existing Advisory Committees (including the Youth Council) are notified under "Former Committee" and have been re-scoped/reshaped under the respective "New Advisory Committee". By this, it's intended to preserve the current areas-of-interest where existing committee members are actively achieving.

A new element to the Advisory Committees structure is the "Executive of Chairs". In this committee, the elected Chairs of the Advisory Committees meet with the General Manager, the Executive and the Administrator on a quarterly basis to ensure a fostered Council-Committee relationship, addressing challenges and opportunities across and within Advisory Committees.

These Advisory Committees are also located in the Community-Council framework to show how they complement or overlap with existing community organisations/clubs and regional/state associations.

New Advisory Committee	Strategic Focus	Key Communities-of-interest	Membership Range; Council Representative	Former Committee
Youth Council	• Strengthen the capacity of our young people to participate and thrive in all facets of community life. • Leadership development for our youth • Provide a welcoming and inclusive platform for young people to provide ideas and voice concerns to Council • Assist Council with decisions regarding infrastructure, service and program growth and advocacy within mandate. • Identify training, education and enterprise skill development needs and connect with / advocate for relevant opportunities • Promote Youth Mental Health awareness and create and support opportunities for the diversity of Shire youth to come together • Youth Week event organisation. • Develop a Term and annual (or biennial) Action Plan to guide Advisory Committee priorities and actions	12-25 years of age only; Local high school-aged and young adults	~6-12; Council Officer (coordination)	None
Growing Business, Industry & Tourism	• Represent the Shire community to encourage equitable access to the benefits of economic development and industry growth (includes identifying opportunities for increased local employment and local training needs to ensure improved employment options for residents) • Promoting and growing our Tourism Asset Portfolio to ensure the preservation and/or development of Natural, Heritage/Cultural and Built assets (sites), historic stories and narratives • Assist with the establishment of new tourism events and the development of existing tourism events. • Assist Council with investment attraction and tourism promotion • Organise Business after dark events (as per Business Chamber and BEC topics/initiatives) • Support infrastructure and event grant funding prioritisation and applications • Actively seek and develop small business – industry synergy/partnerships • Establish and nurture volunteerism of members (committee and community) to resource on-the-ground activity for tourism development • Actively support and collaborate with the Euston Progressive Committee for business and tourism promotion and development.	Small Business, Industry Representatives, Tourism advocates and operators	~6-12; 1 x Executive or Manager	Tourism Committee

	• Develop terms of reference and annual (or biennial) action plan to focus Advisory Committee priorities and actions			
Strengthening Community Access, Inclusion & Well-Being	• This function is predominantly a primary health network responsibility • Map and monitor provision of health, well-being and connection/inclusion services and programs • Plan and advocate regarding closing service gaps and improving public access and amenity for all • Support and promote community knowledge of, and access to, all available services • Establish a community-services cooperative for handling challenges and opportunities in health, well-being and connection services and programs (both local and visiting) • Identify and promote inclusion of community diversity and events and programs which celebrate diversity • Develop terms of reference and annual (or biennial) action plan to focus Advisory Committee priorities and actions.	Disability community representatives; Health/Well-being businesses people; Diversity of community members including ability, gender, culture and belief.	~6-10; 1 x Executive or Manager	Balranald Interagency Group
Ageing Well, Aged Care and Facilities	• Provide a platform to positively promote and support all community members to age well in the setting of their choice • Identify and advocate for remedy of key service gaps to better support ageing well • Identify and encourage opportunities which showcase the qualities, assets and skills of our ageing community and provide opportunities for the sharing of these with younger community members • Reference group to the Hostel Dementia Ward development • Develop a Term and annual (or biennial) Action Plan to guide Advisory Committee priorities and actions	Senior Community members and support; Carers; Hostel Staff	~8-12; 1 x Executive or Manager	Hostel Committee
Balranald Beautification,	• Represent Shire communities in a coordinated and considered approach to town beautification • Collaborate with Business Industry & Tourism on planning larger Culture and Heritage orientated beautification efforts to ensure consistent focus and branding. • Develop terms of reference and annual (or biennial) action plan to focus Advisory Committee priorities and actions.	Local volunteers: gardeners, tradespersons, Indigenous and Colonial Art/Culture representatives	~6-12; 1 x Executive or Manager	Beautification Committee

Sport & Recreation	• Strategic planning, development and coordination of Council's sporting and recreational infrastructure. • Represent the breadth of community sporting and recreation bodies equitably to ensure the broadest possible access of all community members to all available opportunities • Partner with Council to catalogue and promote sporting and recreation opportunities across our Shire to encourage active participation for health and connection benefits • Encourage all sporting and recreation bodies to ensure positive messaging reaches all community members and especially our children and youth (including messages which prevent violence, discourage the use of drugs and alcohol, encourage fair and inclusive participation in sports for all – messaging to reflect State and Federal guidelines) • Assist or partner with Council in development of projects and applications for infrastructure grant funding or events grant funding.	Local Clubs and enthusiasts of sport and recreational activities	~10-12; 2 x Executive or Manager	none
Euston Progressive	• Provide the Euston community a platform through which to connect with Council in the absence of elected representatives • Advocate for the Euston community identified areas of interest and priority • Develop terms of reference and annual (or biennial) action plan to focus Advisory Committee priorities and actions • Collaborate regularly with Business, Industry, Tourism (Culture & Heritage) Committee to ensure a whole-of-Shire approach is taken on tourism, beautification and economic development.	small business, Industry Representatives, Indigenous Art/Culture enthusiasts, volunteers, gardeners	~6-12; 1 x Executive or Manager	Euston Beautificatio n & Tourism Committee
Executive of Chairs	• Opportunity to collaborate on cross-committee interests or challenges • Guidance/feedback from GM and Administrator on Committees' charters and achievements. • Foster the Committee-Council relationship • Share opportunities and challenges	chairpersons from each of the Advisory Committees	7 chairs (or their delegates); GM, Administrator	none

Balranald Shire Council

ATTACHMENT 2: EXPRESSION OF INTEREST FORM

BALRANALD SHIRE ADVISORY COMMITTEES

Expression of Interest Registration Form

On the 30th June 2020 at an Extraordinary Meeting of Council, the Administrator ratified the Proposed Advisory Committee Structure comprising seven Advisory Committees.
Thank you for expressing interest. In order for the Administrator to formally consider your EOI to one or more of the seven advisory committees, you are required to:

- fill out this registration form (if under 18 years of age – have your parent or guardian sign the consent statement herein)
- either be nominated at an advisory committee meeting; or
- be personally invited to express interest in an advisory committee by the Administrator; and

1. Your Contact Details (to remain confidential with Council):

Name:
Mobile/Home telephone number:
E-mail address:
Residential Address:

2. Are you seeking to represent an organisation or business? Yes/No

   If Yes, please provide Letter of Authorisation from your organisation or business.

3. Can you please give Council a brief snapshot of your career (list any qualifications) and interests?

4. Which Advisory Committee(s) are you interested in becoming a member of?

   ☐ Youth Council
   ☐ Growing Business Industry and Tourism
   ☐ Strengthening Community Access, Inclusion & Well-being

- ☐ Ageing Well, Aged Care and Facilities
- ☐ Balranald Beautification
- ☐ Sport and Recreation
- ☐ Euston Progressive

5. Can you please briefly explain why you are interested in joining the above committee/s

6. Can you please indicate which weekdays and times you are available for meetings, including availability during and after-work hours.

7. Are you able to access and utilise a computer or mobile device for the purposes attending meetings remotely via teleconference software/apps? Yes / No

IMPORTANT: For Youth under 18 years of age, the following Parent/Guardian consent is required to be signed:

I,_____, do hereby give consent for _____ to register an expression of interest in becoming a member of the Balranald Shire Youth Council.

Signed_____ Date___/___/___

Balranald Shire Council

ATTACHMENT 3: CODE OF CONDUCT & CODE OF MEETING PRACTICE

To be attached

1 Monthly Summary of Revenue and Expenditure for the Caravan Park

CARAVAN PARK 2024/25	Original Budget	Actual Amendments to Budget for September QBR	Actual Amendments to the budget for December QBR	Actual Amendments to the Budget for March QBR	Revised Budget	Actual YTD 30 June 2025	Remaining Budget	Proposed Budget as at 30 June 2025	YTD Actual %
REVENUE									
Fees	$600,000	$50,000	$70,000	$0	$720,000	$755,636	$0	$755,636	100.0%
Washing Machine Charges	$4,000	$2,000	$0	$0	$6,000	$7,719	$281	$8,000	96.5%
Merchandise Sales	$6,000	$0	$0	$0	$6,000	$2,203	$3,797	$6,000	36.7%
TOTAL OPERATING REVENUE	**$610,000**	**$52,000**	**$70,000**	**$0**	**$732,000**	**$765,558**	**$4,078**	**$769,636**	**99.5%**
EXPENDITURE									
Salaries	$223,000	$0	$0	$0	$223,000	$277,722	$0	$277,722	100.0%
Advertising	$1,500	$0	$0	$0	$1,500	$0	$1,500	$1,500	0.0%
Bank Charges	$5,000	$0	$0	$0	$5,000	$6,423	$0	$6,423	100.0%
Cleaning Materials	$8,000	$0	$0	$0	$8,000	$6,112	$1,888	$8,000	76.4%
Electricity - Operational	$40,000	$10,000	$0	$10,000	$60,000	$72,491	$0	$72,491	100.0%
Admin Fee	$125,700	$0	$0	$0	$125,700	$125,700	$0	$125,700	100.0%
Rates & Charges	$14,705	$0	$0	$0	$14,705	$39,515	$485	$40,000	98.8%
Software Support	$6,500	$0	$0	$0	$6,500	$3,400	$3,100	$6,500	52.3%
Telephone	$3,000	$0	$0	$0	$3,000	$2,398	$602	$3,000	79.9%
R & M	$20,000	$0	$0	$0	$20,000	$59,818	$0	$59,818	100.0%
Membership fees	$20,000	$0	$0	$0	$20,000	$0	$20,000	$20,000	0.0%
Consumables GST	$25,000	$0	$0	$0	$25,000	$22,959	$2,041	$25,000	91.8%
Consumables No GST	$1,000	$0	$1,000	$0	$2,000	$1,985	$15	$2,000	99.2%
Depreciation	$60,000	$0	$0	$0	$60,000	$60,000	$0	$60,000	100.0%
TOTAL OPERATING EXPENDITURE	**$553,405**	**$10,000**	**$1,000**	**$10,000**	**$574,405**	**$678,523**	**$29,632**	**$708,154**	**95.8%**
NET OPERATING SURPLUS / DEFICIT	**$56,595**	**$42,000**	**$69,000**	**-$10,000**	**$157,595**	**$87,036**	**-$25,554**	**$61,482**	
CAPITAL									
Capital Revenue									
Capital Grants - CRIF	$0	$0	$0	$0	$0	$17,352	$0	$17,352	0.0%
Transfer from Restriction	$500,000	$0	$0	$0	$500,000	$500,000	$0	$500,000	0.0%
Total Capital Revenue	**$500,000**	**$0**	**$0**	**$0**	**$500,000**	**$517,352**	**$0**	**$517,352**	**0.0%**
Capital Expenditure									
CRIF Grant Expenditure	$0	$0	$0	$0	$0	$17,352	$0	$17,352	0.0%
Transfer to Restriction	$0	$0	$0	$0	$0	$0	$0	$0	0.0%
Riverfront Upgrade	$500,000	$0	$0	$0	$500,000	$500,000	$0	$500,000	0.0%
Total Capital Expenditure	**$500,000**	**$0**	**$0**	**$0**	**$500,000**	**$517,352**	**$0**	**$517,352**	**0.0%**
Net Capital Surplus/ (Deficit)	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**0%**
Net Overall Result Surplus/ (Deficit)	**$56,595**	**$42,000**	**$69,000**	**-$10,000**	**$157,595**	**$87,036**	**-$25,554**	**$61,482**	

SUMMARY

Caravan Park 2024/25	Original Budget	Actual Amendments to Budget for September QBR	Actual Amendments to the budget for December QBR	Actual Amendments to the Budget for March QBR	revised budget	Actual YTD 30 June 2025	Remaining Budget	Proposed Budget to 30 June 2025
Total Operating Revenue	$610,000	$52,000	$70,000	$0	$732,000	$765,558	$4,078	$769,636
Total Operating Expenditure	$553,405	$10,000	$1,000	$10,000	$574,405	$678,523	$29,632	$708,154
Net Operating Surplus / Deficit	**$56,595**	**$42,000**	**$69,000**	**$10,000**	**$157,595**	**$87,036**	**-$25,554**	**$61,482**
Total Capital Revenue	$500,000	$0	$0	$0	$500,000	$517,352	$0	$517,352
Total Capital Expenditure	$500,000	$0	$0	$0	$500,000	$517,352	$0	$517,352
Net Capital Surplus / (Deficit)	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**
Net Overall Result Surplus/ (Deficit)	**$56,595**	**$42,000**	**$69,000**	**$10,000**	**$157,595**	**$87,036**	**$25,554**	**$61,482**

2 Monthly Summary of Revenue and Expenditure for the Bidgee Haven Retirement Hostel

Bidgee Haven Hostel & Bidgee Manor Self Care Units 2024/25 Operational	Original Budget	Actual YTD 30 June 2025	QBR 1 (Sept 24) Adopted variations	QBR 2 (Dec 24) Adopted variations	QBR 3 (Mar 25) Adopted Variations	Remaining Budget	Revised Budget to 30 June 2025	YTD Actual %
REVENUE - Bidgee Haven Hostel								
Resident Subsidies	$1,500,000	$1,400,839				$99,161	$1,500,000	93.4%
Hostel - Training Subsidy	$4,000	$0				$4,000	$4,000	0.0%
Hostel - Resident Accomm Fees	$25,000	$27,239		-$5,000		-$7,239	$20,000	136.2%
Hostel - Resident Care Basic Daily	$300,000	$266,452		-$70,000		-$36,452	$230,000	115.8%
Hostel - Interest Received	$85,000	$85,000				$0	$85,000	100.0%
RN Supplement	$780,000	$720,709				$59,291	$780,000	92.4%
Business Improvement Fund c/fwd		*$130,734*				*$130,734*	*$130,734*	
	$2,694,000	**$2,500,239**		**-$75,000**		**$118,761**	**$2,619,000**	
REVENUE - Bidgee Manor Units								
Unit Rentals	$24,000	$18,578				$5,422	$24,000	77.41%
	$24,000	**$18,578**				**$5,422**	**$24,000**	
TOTAL OPERATING REVENUE	**$2,718,000**	**$2,518,817**		**-$75,000**		**$124,183**	**$2,643,000**	**92.8%**
EXPENDITURE - Bidgee Haven Hostel								
Salaries	$1,770,000	$2,574,307		$350,000	$280,000	-$174,307	$2,400,000	107.3%
RAD Interest Refund	$1,000	$2,224			$2,000	$776	$3,000	74.1%
Medical Expenses	$6,500	$6,220				$280	$6,500	95.7%
Training	$10,000	$6,272				$3,728	$10,000	62.7%
Recruitment Expenses	$5,000	$24,743	$25,000			$5,258	$30,000	82.5%
Agency Travel Expenses	$2,000	$2,485		$1,000		$515	$3,000	82.8%
Advertising	$1,000	$416				$584	$1,000	41.6%
Audit Fees	$5,500	$5,724				-$224	$5,500	104.1%
Electricity	$45,000	$45,775				-$775	$45,000	101.7%
Gas	$1,000	$559				$441	$1,000	55.9%
General Expenses	$2,000	$2,583		$1,000		$417	$3,000	86.1%
Laundry & Cleaning	$20,000	$10,036				$9,964	$20,000	50.2%
Administration Fees	$144,930	$132,853				$12,078	$144,930	91.7%
Commuter Bus & Sedan Running	$10,000	$10,000				$0	$10,000	100.0%
Freight	$0	$840			$1,500	$660	$1,500	56.0%
Printing & Stationary	$2,000	$3,794		$1,000	$500	-$294	$3,500	108.4%
IT Expenditure	$3,000	$1,760				$1,240	$3,000	58.7%
Rates & Charges	$7,365	$8,825				-$1,460	$7,365	119.8%
Repairs & Maintenance	$60,000	$47,570				$12,430	$60,000	79.3%
Subscriptions & Memberships	$7,000	$6,454				$546	$7,000	92.2%
Telephone	$3,500	$5,205			$900	-$805	$4,400	118.3%
Chemist	$12,000	$8,145				$3,855	$12,000	67.9%
Food	$60,000	$45,186			-$4,900	$9,914	$55,100	82.0%
Policy & Procedures	$0	$15,500	$15,500			$0	$15,500	100.0%
Business Improvement Fund c/fwd	*$0*	*$29,342*				*$101,392*	*$130,734*	22.4%
	$2,178,795	**$2,967,476**	**$40,500**	**$353,000**	**$280,000**	**-$13,789**	**$2,852,295**	
EXPENDITURE - Bidgee Manor Units								
Electricity	$3,000	$2,092				$908	$3,000	69.73%
Insurance	$1,500	$0				$1,500	$1,500	0.00%
Rates and Charges	$10,000	$7,143				$2,857	$10,000	71.43%
Repairs and Maintenance	$5,000	$16,959	$7,000			-$4,959	$12,000	141.33%
	$19,500	**$26,194**	**$7,000**			**$306**	**$26,500**	
TOTAL OPERATING EXPENDITURE	**$2,198,295**	**$2,993,670**	**$47,500**	**$353,000**		**-$13,483**	**$2,878,795**	**103.99%**
NET OPERATING SURPLUS / DEFICIT	**$519,705**	**-$474,852**	**-$47,500**	**-$428,000**		**$137,665**	**-$235,795**	

CAPITAL

Bidgee Haven Hostel & Bidgee Manor Self Care Units 2024/25 Capital	Original Budget	Actual YTD 30 June 2025	QBR 1 (Sept 24) Adopted variations	QBR 2 (Dec 24) Adopted variations	QBR 3 (Mar 25) Adopted Variations	Remaining Budget	Revised Budget to 30 June 2025
REVENUE							
Transfer from restriction	$25,000	$0				$25,000	$25,000
EXPENDITURE - Bidgee Manor Units							
Market Street Security Gate Replacement	$5,000	$0				$5,000	$5,000
EXPENDITURE - Bidgee Haven Hostel							
Furniture & Fittings	$15,000	$26,671	$15,000			$3,329	$30,000
Medical Equipment	$5,000	$0				$5,000	$5,000
Transfer to restriction	$519,705	$0	-$47,500	-$428,000		$44,205	$44,205
NET OPERATING SURPLUS / DEFICIT	**$544,705**	**$26,671**	**-$47,500**	**-$428,000**		**$57,534**	**$84,205**

SUMMARY

Bidgee Haven Hostel & Bidgee Manor Self Care Units 2024/25	Original Budget	Actual YTD 30 June	QBR 1 (Sept 24) Adopted variations	QBR 2 (Dec 24) Adopted variations	QBR 3 (Mar 25) Adopted Variations	Remaining Budget	Revised Budget to 30 June 2025
TOTAL OPERATING REVENUE	$2,718,000	$2,518,817		-$75,000		$124,183	$2,643,000
TOTAL OPERATING EXPENDITURE	$2,198,295	$2,993,670	$47,500	$353,000		-$13,483	$2,878,795
NET OPERATING SURPLUS / DEFICIT	**$519,705**	**-$474,852**	**-$47,500**	**-$428,000**		**$137,665**	**-$235,795**

3 Monthly Summary of Revenue and Expenditure for the Tourism and Economic Development

TOURISM 2024/25	Original Budget	Actual Amendments to Budget for September QBR	Actual Amendments to Budget for December QBR	Actual Amendments to Budget for March QBR	Revised Budget	Actual YTD 30 June 2025	Remaining Budget	Proposed Budget to 30 June 2025	YTD Actual %
REVENUE									
Fees	$500	$0	$0	$0	$500	$0	$500	$500	0.0%
Rent - Discovery Centre	$20,000	$0	$0	$0	$20,000	$20,800	$0	$20,800	104.0%
Souvenir Sales	$70,000	$0	$0	$0	$70,000	$59,847	$10,153	$70,000	85.5%
Sales Yanga HH Guides	$3,000	$0	$0	$0	$3,000	$3,052	$948	$4,000	101.7%
Commissions	$100	$0	$0	$0	$100	$115	$35	$150	114.5%
Sundry income	$1,000	$0	$0	$0	$1,000	$9,048	$952	$10,000	904.8%
Donations - Discovery Centre	$4,000	$0	$0	$0	$4,000	$2,760	$1,240	$4,000	69.0%
TOTAL OPERATING REVENUE	**$98,600**	**$0**	**$0**	**$0**	**$98,600**	**$95,621**	**$13,829**	**$109,450**	
EXPENDITURE									
Salaries	$208,000	$0	$0	$0	$208,000	$236,268	$0	$236,268	113.6%
Staff Uniforms	$800	$0	$0	$0	$800	$0	$800	$800	0.0%
Training	$2,500	$0	$0	$0	$2,500	$0	$2,500	$2,500	0.0%
Advertising	$47,000	$0	$0	$0	$47,000	$36,689	$10,311	$47,000	78.1%
Security Monitoring	$1,000	$0	$0	$0	$1,000	$567	$433	$1,000	56.7%
Conference Expenses	$4,000	$0	$0	$0	$4,000	$1,466	$2,534	$4,000	36.6%
General Expenses	$2,000	$0	$0	$0	$2,000	$1,596	$404	$2,000	79.8%
Admin Charges	$82,030	$0	$0	$0	$82,030	$82,030	$0	$82,030	100.0%
Postage	$500	$0	$0	$0	$500	$63	$437	$500	12.7%
Printing and Stationery	$2,000	$0	$0	$0	$2,000	$1,374	$626	$2,000	68.7%
Special Events - Shows / Movies	$2,000	$0	$0	$0	$2,000	$0	$2,000	$2,000	0.0%
Easter Events	$2,000	$0	$0	$0	$2,000	$3,515	$0	$3,515	175.8%
Seminars & Workshops - Local	$2,000	$0	$0	$0	$2,000	$1,735	$265	$2,000	86.8%
Subscriptions	$4,000	$0	$0	$0	$4,000	$800	$3,200	$4,000	20.0%
Christmas Decorations	$500	$0	$0	$0	$500	$530	$0	$530	106.1%
Telephone	$2,000	$0	$0	$0	$2,000	$2,041	$0	$2,041	102.0%
Internet	$1,500	$0	$0	$0	$1,500	$1,244	$256	$2,000	82.9%
Travelling Expenses	$2,000	$0	$0	$0	$2,000	$372	$1,628	$2,000	18.6%
Souvenirs	$45,000	$0	$0	$0	$45,000	$43,476	$1,524	$45,000	96.6%
Cleaning	$6,000	$0	$0	$0	$6,000	$2,726	$3,274	$6,000	45.4%
R & M	$10,000	$30,000	$0	$0	$40,000	$38,551	$1,449	$40,000	96.4%
Vermon control	$0	$6,000	$0	$0	$6,000	$6,860	$0	$6,860	114.3%
Council Donations	$13,500	-$10,000	$0	$0	$3,500	$0	$3,500	$3,500	0.0%
Electricity	$20,000	$20,000	$0	$10,000	$50,000	$46,904	$3,096	$50,000	93.8%
Rates	$7,365	$0	$0	$0	$7,365	$6,103	$1,262	$7,365	82.9%
Software & licensing	$5,000	$0	$0	$0	$5,000	$0	$5,000	$5,000	0.0%
Integrated Tourism Campaign	$30,000	$0	$0	$0	$30,000	$0	$30,000	$30,000	0.0%
Product development	$2,000	$0	$0	$0	$2,000	$0	$2,000	$2,000	0.0%
SW Arts Contribution	$6,000	$0	$0	$0	$6,000	$6,264	$0	$6,264	104.4%
TOTAL OPERATING EXPENDITURE	**$510,695**	**$46,000**	**$0**	**$10,000**	**$566,695**	**$521,175**	**$76,499**	**$598,173**	92.0%
NET OPERATING SURPLUS/DEFICIT	**-$412,095**	**-$46,000**	**$0**	**-$10,000**	**-$468,095**	**-$425,554**	**-$62,670**	**-$488,723**	
Capital Revenue									
Grants - Joint Organisation	$0	$0	$0	$0	$0	$348,200	$0	$348,200	0.0%
Children & Young People Grant	$0	$0	$0	$0	$0	$6,717	$0	$6,717	0.0%
Economic Development Strategy	$0	$0	$0		$0	$0	$0	$6,714	0.0%
Total Capital Revenue	**$0**	**$0**	**$0**	**$0**	**$0**	**$354,917**	**$0**	**$361,631**	**0.00%**
Capital Expenditure									
Joint Organisation Discovery Centre Complex	$0	$0	$0		$0	$348,200	$0	$348,200	0.0%
Economic Development Strategy	$0	$0			$0	$6,339	$0	$6,714	
Children & Young People Grant	$0	$0	$0	$0	$0	$6,717	$0	$6,717	0.0%
Total Capital Expenditure	**$0**	**$0**	**$0**	**$0**	**$0**	**$361,256**	**$0**	**$361,631**	**0.00%**
Net Capital Surplus/ (Deficit)	**$0**	**$0**	**$0**	**$0**	**$0**	**-$6,339**	**$0**	**$0**	
Net Result Surplus/ (Deficit)	**-$412,095**	**-$46,000**	**$0**	**-$10,000**	**-$468,095**	**-$431,892**	**-$62,670**	**-$488,723**	

SUMMARY

TOURISM 2024/25	Original Budget	Actual Amendments to Budget for September QBR	Actual Amendments to Budget for December QBR	Actual Amendments to Budget for March QBR	Revised Budget	Actual YTD 30 June 2025	Remaining Budget	Actual budget to 30 June 2025
Total Operating Revenue	$98,600	$0	$0	$0	$98,600	$95,621	$13,829	$109,450
Total Operating Expenditure	$510,695	$46,000	$0	$10,000	$566,695	$521,175	$76,499	$598,173
Net Operating Result Surplus / Deficit	**-$412,095**	**-$46,000**	**$0**	**-$10,000**	**-$468,095**	**-$425,554**	**-$62,670**	**-$488,723**
Total Capital Revenue	0.00	0.00	0.00	0.00	0.00	$354,917	0.00	$361,631
Total Capital Expenditure	0.00	0.00	0.00	0.00	0.00	$361,256	0.00	$361,631
Net Capital Surplus / (Deficit)	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**-6,338.50**	**0.00**	**0.00**
Net Overall Result Surplus / (Deficit)	**-$412,095**	**-$46,000**	**$0**	**-$10,000**	**-$468,095**	**-$431,892**	**-$62,670**	**-$488,723**

4 Monthly Summary of Revenue and Expenditure for the Library

Library Services 2024/25	Original Budget	Actual Amendments to Budget for September QBR	Actual Amendments to Budget for December QBR	Actual Amendments to the Budget for March QBR	Revised Budget	Actual YTD 30 June 2025	Remaining Budget	Proposed Budget to 30 June 2025	YTD Actual %
REVENUE									
Operational Subsidy	$45,100	$0	$0	$0	$45,100	$51,158	$0	$51,158	100.0%
Sundry Sales	$1,000	$0	$0	$0	$1,000	$878	$122	$1,000	87.8%
Museum other Revenue	$500	$0	$0	$0	$500	$111	$389	$500	22.2%
Room Hire	$2,000	$5,000	$0	$0	$7,000	$8,091	$409	$8,500	95.2%
TOTAL OPERATING REVENUE	**$48,600**	**$5,000**	**$0**	**$0**	**$53,600**	**$60,238**	**$920**	**$61,158**	
EXPENDITURE									
Salaries	$87,000	$0	$0	$0	$87,000	$92,707	$0	$92,707	100.0%
Training	$2,000	$0	$0	$0	$2,000	$278	$1,722	$2,000	13.9%
Electricity	$3,000	$0	$3,000	$0	$6,000	$8,033	$467	$8,500	94.5%
Office Expenses	$1,000	$0	$0	$0	$1,000	$213	$787	$1,000	21.3%
Administration Charge	$16,770	$0	$0	$0	$16,770	$16,770	$0	$16,770	100.0%
Printing and Stationery	$1,000	$0	$0	$0	$1,000	$581	$419	$1,000	58.1%
Books and Journals	$6,000	$0	$0	$0	$6,000	$7,063	$937	$8,000	88.3%
IT Expenditure	$4,000	$0	$0	$0	$4,000	$352	$3,648	$4,000	0.0%
Repairs and Maintenance	$13,000	$0	$0	$0	$13,000	$6,193	$6,807	$13,000	47.6%
Security Monitoring	$2,000	$0	$0	$0	$2,000	$690	$1,310	$2,000	34.5%
Conferences and travelling	$3,000	$0	$0	$0	$3,000	$443	$2,557	$3,000	14.8%
Cleaning	$6,000	$0	$0	$0	$6,000	$1,522	$4,478	$6,000	25.4%
Subscriptions	$3,500	$0	$0	$0	$3,500	$2,140	$1,360	$3,500	61.2%
Telephone and Communications	$600	$2,600	$0	$0	$3,200	$2,381	$819	$3,200	74.4%
Rates	$2,204	$0	$0	$0	$2,204	$4,053	$947	$5,000	81.1%
TOTAL OPERATING EXPENDITURE	**$151,074**	**$2,600**	**$3,000**	**$0**	**$156,674**	**$143,419**	**$26,257**	**$169,677**	84.5%
NET OPERATING SURPLUS / DEFICIT	**-$102,474**	**$2,400**	**-$3,000**	**$0**	**-$103,074**	**-$83,182**	**-$25,337**	**-$108,519**	
CAPITAL									
Capital Revenue									
Library Local Priority	$25,000	$0	$0	$0	$25,000	$19,235	$5,765	$25,000	76.9%
Library Infrastructure Grant	$0	$0	$0	$0	$0	$113,343	$0	$113,343	0.0%
Tech Savvy Program	$0	$8,150	$0	$0	$8,150	$8,163	$0	$8,163	100.0%
Sunraysia Solar Grant	$2,700	$0	$0	$0	$2,700	$2,700	$0	$2,700	100.0%
Holiday Break Funding	$3,546	$0	$0	$0	$3,546	$3,546	$0	$3,546	100.0%
Grandparents Grant	$500	$0	$0	$0	$500	$500	$0	$500	100.0%
WinterSpring Youth Program	$6,414	$0	$0	$0	$6,414	$6,414	$0	$6,414	100.0%
LWT & FOLA Grant	$1,000	$0	$0	$0	$1,000	$1,000	$0	$1,000	100.0%
Solar Farm Grant	$0	$800	$0	$0	$800	$800	$0	$800	100.0%
Total Capital Revenue	**$39,160**	**$8,950**	**$0**	**$0**	**$48,110**	**$155,701**	**$5,765**	**$161,466**	
Capital Expenditure									
Capital Items Library						$113,343			
Grant Priority Project	$25,000	$0	$0	$0	$25,000	$20,730	$4,270	$25,000	82.9%
Infra Grant - 1	$113,343	$0	$0	$0	$113,343			$113,343	0.0%
Library Infra Grant - 2	$0	$0	$0	$0	$0	$0	$0	$0	0.0%
Library Grant - Tech Savy	$0	$8,150	$0	$0	$8,150	$2,013	$6,137	$8,150	24.7%
Holiday Break Funding	$3,546	$0	$0	$0	$3,546	$1,987	$1,560	$3,546	56.0%
Grandparents Grant	$500	$0	$0	$0	$500	$62	$438	$500	12.3%
WinterSpring Youth Program	$6,414	$0	$0	$0	$6,414	$5,548	$865	$6,414	86.5%
LWT & FOLA Grant	$1,000	$0	$0	$0	$1,000	$802	$198	$1,000	80.2%
Sunraysia Solar Expenditure	$2,700	$0	$0	$0	$2,700	$2,700	$0	$2,700	100.0%
Solar Farm Grant	$0	$800	$0	$0	$800	$110	$690	$800	13.8%
Total Capital Expenditure	**$152,503**	**$8,950**	**$0**	**$0**	**$161,453**	**$147,295**	**$14,158**	**$161,453**	
Net Capital Surplus/ (Deficit)	**-$113,343**	**$0**	**$0**	**$0**	**-$113,343**	**$8,406**	**-$8,393**	**$0**	
Net Overall Result Surplus/ (Deficit)	**-$215,817**	**$2,400**	**-$3,000**	**$0**	**-$216,417**	**-$83,182**	**-$33,730**	**-$108,519**	

SUMMARY

Library Services 2023/24	Original Budget	Actual Amendments to Budget for September QBR	Actual Amendments to Budget for December QBR	Actual Amendments to the Budget for March QBR	Revised Budget	Actual YTD 30 June 2025	Remaining Budget	Proposed Budget to 30 June 2025
Total Operating Revenue	48,600	5,000	0	0	53,600	60,238	920	61,158
Total Operating Expenditure	151,074	2,600	3,000	0	156,674	143,419	26,257	169,677
Net Operating Surplus / Deficit	-102,474	2,400	-3,000	0	-103,074	-83,182	-25,337	-108,519
Total Capital Revenue	39,160	8,950	0	0	48,110	155,701	5,765	161,466
Total Capital Expenditure	152,503	8,950	0	0	161,453	147,295	14,158	161,453
Net Capital Surplus / (Deficit)	-113,343	0	0	0	0	8,406	-8,393	0
Net Overall Result Surplus/ (Deficit)	-215,817	2,400	-3,000	0	-213,417	-83,182	-33,730	-108,519

Balranald Shire Council Grants/Projects Update Summary As at the 7th July 2025

Prepared by the Community Projects, Tourism/Economic Development & Grants Coordinator

Balranald Shire Council Grants/Projects Update Summary as @ the 7th July 2025

REPORT HIGHTLIGHTS:

Key Activities since Last Report:

- Bidgee Haven Retirement Hostel perimeter fencing is in progress and due for completion by the 13th July 2025.
- External works as part of the Discovery Centre Redevelopment project that include the erection of an eight meter windmill and other minor works, financed through surplus funds, are currently being advertised in the community as part of Council's REF process. In regards to internal enhancement, a Purchase Order has been issued to the designate sign designer to design and fabricate the internal wall-mounted signage for the building.
- Council is currently commencing the preparation of documentation to acquit the Stronger Country Community Funds Round 4 - Euston Netball change-rooms toilets upgrade project.
- Council is currently commencing the preparation of documentation to acquit the Local Roads Community Infrastructure 4 – Euston Recreation Reserve Upgrade & Kilpatrick Road Reconstruction projects.
- The court fencing has now been installed for the ORG Club Category Infrastructure Fund 3 2024– Euston Club multipurpose court project

Completed Projects that have been taken off this Report from the last report:

- N/A for this report

New Application/s submitted since last report

- Community Energy Upgrades Fund Round 2

Application/s in process of being submitted:

- ORG Club Grant Category 3 Infrastructure Fund - July 2025

Balranald Shire Council Grants/Projects Update Summary as @ the 7th July 2025

INFRASTRUCTURE GRANTS/PROJECTS (Non Roads)

Grant/Project	CM Folder	Project Manager & Project Dates	Description	Funding Value/ Funds Received & Expenses	Status to Date
Bidgee Haven Retirement Hostel Expansion Grant – Department of Health **Job Code: 2620-4999-0021** **General Ledger: 2620-1100-0001**	F19.244 Agreement: D19.20869	Director of Governance, Business & Community Services **Expected Project End Date:** TBA	Bidgee Haven Expansion Construction - Specialised Dementia Wing	Total potential funding: $6,060,000 $4,680,000 (Signed Funding Agreement) $1,380,000 Aged Care Approvals Round (ACAR) Top-Up 2020 (Not Formalised due to uncertainty with project) Funds Received to date Milestone 1 Payment: $500,000 – Receipt 49078	As at the 31st of October 2024 Council is awaiting confirmation of a proposed variation from the funding body. As at the 31st of January 2025 proposing to develop amended plans, project scope and a cost estimate to submit a project variation to the funding authority. As at the 7th of April 2025 project designs, planning and cost estimates are still in progress. As at the 9th of May 2025 the Quantity Survey exercise has been completed and concept drawings have been prepared by the architect. A variation reflecting the revised project direction has been submitted to the funding authority. The Request for Quotation (RFQ) for the new fencing was issued on the 4th May and is scheduled to close on 21st May. Following the closure, a contractor will be selected to undertake the installation which is expected to be completed prior to 30th June 2025. As at the 10th of June 2025 the perimeter fencing works have commenced and are due for completion by the 30th of June 2025. As at the 7th of July 2025 the perimeter fencing work is in progress and is now due for completion by the 13th July 2025. **Percentage Completion:** TBA **Percentage Budget Expended:** TBA

Balranald Shire Council Grants/Projects Update Summary as @ the 7th July 2025

Grant/Project	CM Folder	Project Manager & Project Dates	Description	Funding Value/ Funds Received & Expenses	Status to Date
Discovery Centre Redevelopment – Far West Joint Organisation **Job Code:** **6560-4999-0033** **General Ledger:** **6560-4999-0000**	F20.593	Interim Acting Project Manager **Proposed Project Start Date:** 1st of April 2024 **Expected Project End Date:** 30th August 2025	Discovery Centre Upgrade – New Pavilion at the Visitor Centre	$950,000 **Expenses to date:** $102,950 (for 21/22)	As at the 9th of May 2025 the construction of the building has been completed. External works, financed through surplus funds, are currently at the Request for Quotation (RFQ) stage and are scheduled for completion by 30th June 2025. In reference to the internal enhancements, a Purchase Order has been issued to the designated sign designer to finalise the installation of internal and external wall-mounted signage for the building. The remaining internal items, including furniture, are expected to be delivered by 30th June 2025. As at 10th of June 2025 the Finance department is confirming remaining available funds to direct towards the external works and internal displays. As at the 7th of July 2025 the construction of the building has been completed. External works that include the erection of an eight-meter windmill and other minor works, financed through surplus funds, are currently being advertised in the community as part of Council's REF process. In regards to internal enhancement, a Purchase Order has been issued to the designated sign designer to design and fabricate the internal wall-mounted signage for the building. **Percentage Completion:** 98% **Percentage Budget Expended:** 95%

Balranald Shire Council Grants/Projects Update Summary as @ the 7th July 2025

Grant/Project	CM Folder	Project Manager & Project Dates	Description	Funding Value/ Funds Received & Expenses	Status to Date
Stronger Country Community Funds Round 4 – Local Government NSW **General Ledger:** **4546-1100-0000** **4662-1100-0008**	F21.364	Interim Acting Project Manager **Milestone 1 Completion Date:** 31st of August 2023 **Milestone 2 Expected Finish Date:** 31st of August 2023 **Milestone 3 Expected Finish Date:** 27th July 2025	Euston Netball Upgrade: Demolition of existing change netball rooms and public toilets at Euston and construction of new, inclusive, change rooms and public toilets combined. Renewed 200 lux LED outdoor sport lighting to both Balranald and Euston netball courts **Milestone 1:** Design, Documentation & Procurement Phase and Milestone 1: substructure, plumbing/ reticulation, walls, superstructure **Milestone 2:** Plumbing, electrical, internal/external fittings/fixtures, painting, flooring, finishes **Milestone 3:** Court Lighting, landscaping and paths/entries	$527,626 **Funds Received:** $211,050.40 Receipt 56474	As at the 31st of January 2025 new trussing and roof have been installed and wall frames have been installed. The building is wrapped in sisalation paper and the electrical first fix has now been completed. As at the 1st of March 2025 a variation for time extension for completion of works to the end of March 2025 was submitted & was acknowledged by the funding body. The building is now clad with corrugated finish and the internal floors are now being epoxied. As at the 7th of April 2025 partitions are to be installed and external pavements to be formed and poured. The lighting for the Balranald & Euston netball courts have been installed and completed. As at the 9th of May 2025 the construction of the change-room building has been completed. The installation of lighting for the netball court has been finalised. The painting of the play equipment fence and the reinstatement of the access gate are pending completion. As at the 10th of June 2025 the painting of the front entrance remains to be completed and the retention payment remains. As at the 7th of July 2025 Council is commencing the preparation of documentation to acquit this grant/project. Defects are currently being remedied and retention payment remains. **Percentage Completion:** 98% **Percentage Budget Expended:** 100%

Balranald Shire Council Grants/Projects Update Summary as @ the 7th July 2025

Grant/Project	CM Folder	Project Manager & Project Dates	Description	Funding Value/ Funds Received & Expenses	Status to Date
Stronger Country Communities Fund – Round 5 **General Ledger: 4500-1145-0000**	CM Box: G22/11 App Folder: F22.461	Interim Acting Project Manager **Project Start Date:** June 2023 **Expected Project Finish Date:** 30th November 2025	**1. Kyalite Memorial Park Rest Area:** to include public toilets & ancillary facilities (**$101,200**) **2. Balranald Shire Signage:** To undertake recognition of First Nations Lands upon entry into the Shire (**$203,500**) **3. Netball Courts Resurfacing & Basketball Courts Balranald**: To resurface netball courts and design and construct new basketball courts and facilities (**$418,000**) **4. Hatfield Community Hall & Precinct Upgrade:** Renovations of the Hatfield Community Hall (**$110,000**) **5. Safe Fencing at the Balranald Pool:** To installed approved fencing around the Balranald Pool (**$111,100**)	**Balranald Shire Council Allocation:** $943,758 for Council Community Projects **Payments Received:** First instalment $755,040 – Receipt 57488	**As at the 7th of July 2025** the following are in progress: **PROJECT 1:** The Kyalite Memorial Park Rest Area is 100% completed **Percentage Completion:** 100% **Budget Expended:** 100% **PROJECT 2:** Awaiting variation request for time extension. We are also finalising our research and consultation for correct wording for the signs. **Percentage Completion:** 10% **Budget Expended:** 0% **PROJECT 3:** All works are now completed and all deliverables installed. **Percentage Completion:** 100% **Budget Expended:** 100% **PROJECT 4:** Upgrade works of the Hatfield Hall has been completed and funds expended. **Percentage Completion:** 100% **Budget Expended:** 100% **PROJECT 5:** The Safe Fencing has been installed. **Percentage Completion:** 100% **Budget Expended:** 100%

Balranald Shire Council Grants/Projects Update Summary as @ the 7th July 2025

Grant/Project	CM Folder	Project Manager & Project Dates	Description	Funding Value/ Funds Received & Expenses	Status to Date
Local Roads Community Infrastructure Round 4 (LRCI4) – Department of Infrastructure **Job Cost Numbers:** **Euston Recreation Reserve Upgrade**: 4664-4999-0000 **Kilpatrick Road Reconstruction:** 6400-4999-0009	CM Box G23/5	**1.** Interim Acting Project Manager **2.** Director, Infrastructure & Planning **Project Start Date:** 5th of March 2024 **Expected Project Finish Date:** Works Completed	**1.** $832,921 is allocated for the Euston Recreation Reserve Upgrade Project and any other infrastructure related project in Euston **2.** $480,447 is for the Kilpatrick Road Reconstruction	**Funding Value Total** $1,313,368 $832,921 for community infrastructure projects $480,447 for road projects **Funds Received:** $525,348 – Remittance – 17th May 2024	As at the 31st of January 2025 the remaining works on the Euston Recreation Reserve includes the installation of the irrigation main pump, score board installation, top dressing and reseeding the oval, field lighting and the player, observer and timekeepers boxes to be installed. As at the 1st of March 2025 the remaining works are in progress with a proposed completion date of the project to be by the 30th April 2025. As at the 7th of April 2025 the electronic scoreboard and stand is to be installed the week of the 14th April and the field lighting is to be constructed and installed in the week of the 14th of April 2025. The interchange benches to be installed the week of the 14th of April 2025. As at the 9th of May 2025 all contracted deliverables have been finalized. The variation works, which include the installation of team interchange benches, are scheduled for completion by 2nd June 2025. As at the 10th of June 2025 the team interchange benches have been installed and the fitting of Perspex remains. The retention payment remains. As at the 7th of July 2025 works are completed and retention payment remains. Council has commenced preparing the documents required for acquitting this grant/project. **Euston Recreation Reserve Project:** **Percentage Completion:** 100% **Percentage Budget Expended:** 100% **Kilpatrick Road Reconstruction Project:** **Percentage Completion:** 100% - **(**Repair work is now to be completed) **Percentage Budget Expended:** (the balance of unspent funds will be allocated to repair works to the Kilpatrick Road project

Balranald Shire Council Grants/Projects Update Summary as @ the 7th July 2025

Grant/Project	CM Folder	Project Manager & Project Dates	Description	Funding Value/ Funds Received & Expenses	Status to Date
Office of Local Government - AGRN 1034 Floods 2022 Grant Funding **Job Cost Codes:** **Ben Scott Memorial Bird Trail Remediation Project 4686-4000-0001** **Balranald Riverfront Precinct Remediation 4686-40001-0001** **Euston Riverfront Precinct Remediation 4686-4002-0001**	CM Box G24/8	Interim Acting Project Manager **Project Start Date:** August 2024 **Expected Project Finish Date:** 30th of June 2026	This grant will fund three key projects as follows: **Project 1** - Ben Scott Memorial Bird Trail Remediation Project **$400,000** **Project 2** - Balranald Riverfront Precinct Remediation **$350,000** **Project 3** - Euston Riverfront Precinct Remediation **$250,000**	**Funding Value $1,000,000**	As at the 14th of May 2024 further information was required from the funding body in reference to the Program of Works. Council is currently in the process of providing the requested information. As at the 12th of June 2024 all information has now been submitted and planning has commenced. As at the 1st of March 2025 the status of each project remains as follows: As at the 7th of April 2025 Council has received notice from the funding body that all projects have an **extension to the 30th of June 2026** As at the 10th of June 2025 the projects are as follows: **Project 1:** Design on the Ben Scott Memorial Bird Trail is in progress **Percentage Completion:** 30% **Percentage Budget Expended:** 30% **Project 2:** Balranald riverfront installation of furniture at the Riverbend has been completed and other improvements and design are in progress **Percentage Completion:** 30% **Percentage Budget Expended**: 30% **Project 3:** Council is working with Adrian Wells from Pretoris on delivery of the Euston River Walk and signage by the end of November 2025. **Percentage Completion:** 30% **Percentage Budget Expended:** 30%

Balranald Shire Council Grants/Projects Update Summary as @ the 7th July 2025

NON INFRASTRUCTURE GRANTS/PROJECTS

Grant/Project	CM Folder	Project Manager & Project Dates	Description	Funding Value/ Funds Received & Expenses	Status to Date
Community Benefit Fund - Office of Responsible Gambling **General Ledger: 1020-3110-0001**	F22.220	Community Projects, Tourism & Economic Development Coordinator **Project Start Date:** 17th of August 2023 **Expected Project Finish Date:** 17th of August 2026	Funds to: **Strengthening Community Access, Inclusion & Wellbeing Advisory Committee** (SCAIWAC) - under the auspice of Balranald Shire Council For the delivery of Mental Health First Aid Training for Community Members as well as Gambling Education & Awareness and other Mental Health related programs	Funds to Council's Advisory Committee: $84,764 per year for 3 years **TOTAL: $254,292** **Funds Received:** $93,240.40 – Receipt 59244	As at the 30th of November 2024 a supplier for the first set of Mental First Aid Training workshops has been appointed and the first draft of the Services Directory has been submitted for review. Council's Community Projects, Tourism & Economic Development Coordinator and the Chair of SCAIWAC had an online meeting with the funding body to provide a progress update. As at the 31st of January 2025 activities for the Mental Health First Aid Training is underway. The training organisation to deliver the training has been selected, the dates for the workshops have been established, the venue has been booked and promotional flyer has been designed and promotional activities have commenced. As at the 1st of March 2025 delivery of the Mental Health First Aid Training was fully booked and was to be delivered on the 3rd and 4th of March. As at the 7th of April 2025 a progress report is being submitted to the funding body. As at the 9th of May 2025 work continues on the development of the Services brochure. As at the 10th of June 2025 plans are underway for the next round of Mental Health First Aid training sessions and a community event. As at the 7th of July 2025 the draft of the Services brochure has been completed and currently being prepared for printing. A community event is also being planned. **Percentage Completion:** 50% **Percentage Budget Expended:** 40%

Balranald Shire Council Grants/Projects Update Summary as @ the 7th July 2025

Grant/Project	CM Folder	Project Manager & Project Dates	Description	Funding Value	Status to Date
LGP Procurement Capability Grant Fund 2024-EOI	CM Box G24/7	Community Projects, Tourism & Economic Development Coordinator **Expected Project End Date:** 31st December 2025	Funding to deliver a series of Procurement & Contract awarding related training courses to a number of Council staff.	**Grant Funding Value:** $11,660	As at the 30th of September 2024 Council have been given approval of the Project Plan and has had an online meeting with the funding body for a debrief. Council has also had a meeting with LGP's training department and they are currently developing a training plan and schedule for the delivery of the training programs. Once the training program has been completed and submitted to the funding body we will receive 50% of the funding. As at the 31st of January 2025 Council is awaiting the training delivery plan from the LGP Procurement training department. As at the 1st of March 2025 follow-up activities has been implemented and training plan is being developed As at the 7th of April 2025 the training plan is ready to be implemented. As at the 9th of May 2025 the first course being Procurement and Contracting in Local Government has been organised for the 21st of May 2025 As at the 10th of June 2025 the first training course has been delivered and the balance of the training plan is being developed by LGP Procurement. As at the 7th of July 2025 the next set of training sessions are currently being planned. **Percentage Completion:** 20% **Percentage Budget Expended:** 0%

Balranald Shire Council Grants/Projects Update Summary as @ the 7th July 2025

Grant/Project	CM Folder	Project Manager & Project Dates	Description	Funding Value	Status to Date
ORG Club Grant Category 3 Infrastructure Fund July 2024	CM Box G24/11	Interim Acting Project Manager **Expected Project End Date:** 30th September 2025	Funding for the Euston Club multi-purpose court project to include: • Application of surfacing paint material to court areas and surrounds. • Line marking to the court area in a multicourt motif for tennis, netball and basketball. • Tennis posts, netting, netball post / nets and counter levered basketball tower and backboards. • Bench seating and shelter. • Fencing, two pedestrian gates and one double gate	**Funding Value: $135,301** **Grant**: $50,000 **Council Contribution:** $50,000 (via Euston Club) **Euston Club Contribution:** $35,301	As at the 31st January 2025 the funding body has provided documentation to complete and the invoice is being raised. As at the 1st of March 2025 the first instalment invoice has been raised and sent to the funding body. As at the 7th of April 2025 a new invoice has been requested by the funding body. As at the 9th of May 2025 an invoice has been submitted for Category 3 Infrastructure Funds. The contractor, Synthetic Sports, has been engaged to execute the works. The arrival of court paint is anticipated at the end of May, subsequent to which the construction of the fence will commence. As at the 10th of June 2025 the court fencing is to be installed on the 15th of June. The court surfacing is to be completed during September when the temperature increases. The basketball backboards / Netball hoops have been ordered. As at the 7th of July 2025 the court fencing has now been installed, the court surfacing is to be completed during September 2025 when the temperature increases. Basketball backboards / Netball hoops have been ordered and are due for installation the week of the 28th of July 2025. **Percentage Completion:** 5% **Percentage Budget Expended:** 0%

Balranald Shire Council Grants/Projects Update Summary as @ the 7th July 2025

APPLICATIONS PENDING

Grant/Project	CM Folder	Personnel who submitted the application	Description	Funding Value	Status to Date
Remote Airstrip Upgrade Program Round 11	CM Box G24/13	Community Projects, Tourism & Economic Development Coordinator	Balranald Aerodrome Upgrade Project	**Funding Value:** $3,126,263 **Council Contribution** $3,126,263	As at the 31st January 2025 an application had been submitted in November 2024 and Council is currently awaiting a response. As at the 7th of April 2025 Council is still waiting for a response. As at the 10th of June 2025 we continue to await a response As at the 7th of July 2025 this application is still pending.
NSW Sustainable Communities Program Early Investment Round – BSC Project	G25/2	Community Projects, Tourism & Economic Development Coordinator	To include 4 key activities: - Activation of the FSW Heritage & Cultural Trail (development of all the collateral needed to activate the product) - Town Entry Signs for Balranald & Euston and tourism related directional signs in Euston - Audio-Visual technology for the Southern Cross Exhibition - Upgrade of the camping site at Lake Benanee	**Funding Value:** $731,331 (ex GST) **Council Contribution** $243,777 (ex GST)	As at the 9th of April 2025 Council has submitted the application. As at the 10th of June 2025 we continue to await a response. As at the 7th of July 2025 this application is still pending.

Balranald Shire Council Grants/Projects Update Summary as @ the 7th July 2025

Grant/Project	CM Folder	Personnel who submitted the application	Description	Funding Value	Status to Date
NSW Sustainable Communities Program Early Investment Round – Euston Club project	G25/3	Community Projects, Tourism & Economic Development Coordinator on behalf of Euston Club	Funding for the upgrade of the Euston Riverfront and floating pontoon for public use for all residents and visitors	**Funding Value:** $346.500 (ex GST) **Euston Club Contribution:** $350,000 (ex GST)	As at the 9th May 2025 an application has been submitted on behalf of the Euston Club. As at the 10th of June 2025 we continue to await a response. As at the 7th of July 2025 this application is still pending
Aged Care Capital Assistance Program Residential – Staff Accommodation	G25/4	Community Projects, Tourism & Economic Development Coordinator	Funding for the construction of staff accommodation at the Bidgee Haven Hostel and for refurbishment of the existing bedrooms	**Funding Value:** 3,111,700.00	As at the 10th of June 2025 Council has submitted an application for grant funding. As at the 7th of July 2025 this application is still pending
Community Energy Upgrades Fund Round 2	G25/5	Community Projects, Tourism & Economic Development Coordinator	Funding for energy upgrades at various Council facilities	**Funding Value:** TBA	As at the 10th of June 2025 Council is in the process of collating the necessary information and documentation for the application which is due on Friday the 13th June 2025. As at the 7th of July 2025 the application has been submitted and is now pending response.

Balranald Shire Council Grants/Projects Update Summary as @ the 7th July 2025

APPLICATIONS IN THE PROCESS OF BEING SUBMITTED

Grant/Project	CM Folder	Personnel who will submit the application	Description	Funding Value	Status to Date
ORG Club Grant Category 3 Infrastructure Fund July 2025		Community Projects, Tourism & Economic Development Coordinator	Funding for playground equipment located adjacent to the Multi-purpose court at the Euston Club	**Funding Value:** TBA	As at the 7th of July 2025, a meeting was conducted with the Euston Club to discuss the project and proposed application

DISCOVER BALRANALD & Surrounds
Where the wetlands meet the outback

A YEAR IN REVIEW

2024 - 2025

Tourism, Economic Development, Events & Strategic Activities

Presented by Council's Tourism & Economic Development Department

A FINANCIAL YEAR IN REVIEW: 2024 – 2025 Year
Tourism, Economic Development, Events & Strategic Activities

CONTENTS

A FINANCIAL YEAR IN REVIEW: 2024 – 2025 Year
Tourism, Economic Development, Events & Strategic Activities

1. OVERVIEW

The 2024-2025 year was a very busy and productive year for Council's Community Projects, Tourism & Economic Development department. As summarised in this report, many activities were implemented, achieved and delivered across the tourism, economic development, marketing, events and strategic spectrum.

- The comparative statistics shown against the previous year indicate that although there was a t downturn in visitor numbers to the Balranald Visitor Information Centre and corresponding merchandise sales (mainly due to the cost of living pressures, the heat in December – February), the department nevertheless continued to excel in our marketing activities in particular with our promotional social media activities (particularly in the first 2 quarters), advertising and product development. Another key impact on visitor numbers to Balranald has been the unavailability of visitor accommodation due to the transient workforce. This is a challenge that is prevalent across the region.

- On a very bright note has been the statistics provided to us through a subscription facility with Destination Riverina Murray and CommBank IQ. We commenced this access around July 2024 and received our first data set in August 2025. This provides us with visitor count and visitor spend across the shire. The latest data **July 2024 – May 2025** show **visitor count of 145,900 up by 9%** and **visitor spend of $16,129,000.00** up by 13%. What Destination Riverina Murray has told us that for a small community, we are punching above our weight with our marketing activities. It is also a credit to the VIC staff in directing visitors to tourism attractions across the shire as well as encouraging longer stays and more spend within the shire.

- The social media medium has been exceptional in its ability to provide key performance statistics against various measurement criteria as well as enabling us to reach and engage with targeted audiences at a fraction of the cost of traditional mediums. As shown by the statistical information provided in this report, our performance in this medium has been outstanding against an average investment of $250 per promotion. Within all key measurement criteria our performance against last year's results have increased quite substantially particularly in total **audience reach of 2,030,821 (56% increase)** and **total views of our postings 3,031,421 (62% increase)** and total engagement with our postings of **391,392 (11% increase)**. It is important to note that the target audience set behind the social media platform includes all towns north, south, east and west within a 4 hour drive to the shire. This means that the majority of the audience are those that can make a relatively quick decision to visit for the day, weekend away and/or for a holiday. With the viral nature of social media our postings are also seen by all those connected to our audiences. Unfortunately early in 2025 we had some fraudulent activity on our social media platforms which caused our platforms to be suspended. However the matter has since been resolved and the platforms should be reactivated in July 2025.

A FINANCIAL YEAR IN REVIEW: 2024 – 2025 Year
Tourism, Economic Development, Events & Strategic Activities

- The success of our social media postings has had a direct positive impact on our enquiries and bookings which have increased by 92% from the previous year. The information centre staff can now book tours to Mungo NP and Yanga NP directly from the centre which has provided an incentive for travellers who are not time poor to stay the extra night. It is valuable to note that the Visitor Information Centre staff are experienced and very successful in understanding visitor needs and interests and being able to "sell" the best visitor experience most suited to the visitor. Consequently our department has been busy developing a series of "products" to provide added incentives for visitors to stay longer and therefore spend more in our towns.

- Apart from our social media activities, our department has also delivered on a number of key marketing activities in print and broadcasting media. With a relatively tight marketing budget, the department is selective in where our marketing dollars are allocated. During the year we have delivered a series of integrated marketing campaigns with broadcast media and with key print media brands

- The department has been very active in supporting strategic activities including supporting the IP&P planning process and helped to organise and oversee the community consultation activities for the development of the **Community Strategic Plan** (CSP) and also designed and prepared the CSP and Council's **Delivery Program** for public exhibition. The department also developed **Council Community Engagement & Communications Strategy**.

- A key highlight during the year has been the construction of the new Pavilion at the Discovery Centre precinct which will be ready for opening around late August 2025. Another highlight has been the FSW Heritage & Cultural Trail project development activities. Balranald Shire Council is the lead council on this trail of interpretive signage across the Far South West region, joining 4 LGAs – Balranald, Wentworth, Central Darling & Broken Hill. We anticipate the signage component of the trail to be delivered by August/September 2025.

- As the report outlines, Council's Tourism & Economic Development Coordinator attended and supported a number of regional committees and agencies during the year including the South West REZ roundtables; the Robinvale Euston Business Association (REBA); The Robinvale Euston Workforce Network (REWN); Destination Riverina Murray agency and a series of cross-border agencies and committees and other collaborative committees and networks. The Tourism & Economic Development Coordinator also attended Council's advisory committee meetings and supported the management of their respective Rolling Action Plans to ensure the delivery of nominated projects and/or seeking funding to support nominated projects.

- During the year the Tourism & Economic Development department supported a large number of events throughout the shire by way of promotions in a fortnightly Events Calendar and/or other marketing initiatives or funding support. The range of events supported throughout the year is outlined in this report.

A FINANCIAL YEAR IN REVIEW: 2024 – 2025 Year
Tourism, Economic Development, Events & Strategic Activities

2. KEY HIGHLIGHTS OF THE 2024 - 2025 YEAR

July – September 2024	October – December 2024	January – March 2025	April – June 2025
• Council's Tourism & Economic Development Coordinator attended the first **EnergyCo and South West REZ LGA Roundtable** held in Hay in August. The Coordinator presented **a report** on this roundtable which was presented and minuted at the GBITAC September meeting. • Community consultation workshops began during this quarter for the development of Council's **Destination Management Plan (DMP)**. The first draft is due in July 2025. • The final draft of the **Economic Development strategy** was finalised during this period in readiness for endorsement at the November GBITAC meeting (post elections) • The **Discovery Centre upgrade & construction of new Pavilion** commenced in this period. • The **Implementation Plan for the proposed Far South West Heritage & Cultural Trail Project** was approved and we also went to tender for the signage infrastructure and received an impressive 36 applications. The applications were shortlisted to 11 and then to the winning contractor via a comprehensive assessment & measurement matrix.	• The **Economic Development Strategy** was submitted to GBITAC for endorsement at the November meeting and recommendation for endorsement was minuted and noted at Council's December Ordinary meeting • Consultation workshops and online surveys for the **Community Strategic Plan (CSP)** took place throughout the month of November and completed in the second week of December. • Council's Tourism & Economic Development Coordinator attended the second **EnergyCo and South West REZ LGA Roundtable** held in Hay in October. An agreement for the first $250,000 **Commissioning Funds** were sent to Council's Tourism & Economic Development Coordinator and Management in December • Council's Tourism & Economic Development Coordinator attended the **Robinvale/Euston Census 26 Workshop** in Euston • The development and submission of Council's **Annual Report** 2023/2024and **End of Term Report** took place during this period	• Activities in the development of the Far **South West Heritage & Cultural Trail** project accelerated during this period with content for all signage being submitted • **Australia Day** planning and staging of the Balranald & Euston Events including development of Risk Management plans for both events • Attended the **Outback Beds AGM** and discussion workshop • Development of Council's **Community Engagement & Communications Strategy 2025** • Support in the planning and staging of the **Murrumbidgee Fishing Classic** event • Design & preparation of the **Community Strategic Plan (CSP)** • Organisation and staging of the **Grant Writing Workshop** in Euston • Organisation and staging of the **Community Capacity Building Workshop** in Balranald • Attendance at the **ICPA Conference** in Euston	• Attendance and contribution at the **SW REZ Roundtables** in Hay and Online meetings • Design and preparation of Council's **Delivery Plan** • Attendance at the **Dry Times** workshop • Planning & Staging of the **Easter Egg Hunt & Market** event • Attendance & contribution to the Balranald Shire **Housing Strategy** Workshop • Successful passing of the **AVIC accreditation** process and documentation. Received high praise • Finalisation of the new **Visitor Guide** with printed guides due in July 2025 • Attendance at the **Robinvale Euston Workforce Network** (REWN) Annual Workshop & Leadership Table meeting • Finalisation of the branding and of signage content for the **FSW Heritage & Cultural Trail** • Attendance at the annual LGNSW **Destination & Visitor Economy Conference** • Attendance & contribution to the **SW Arts** discussion workshop • Attendance at the **NSW Sustainable Communities R2** Workshops

A FINANCIAL YEAR IN REVIEW: 2024 – 2025 Year
Tourism, Economic Development, Events & Strategic Activities

3. KEY STATISTICS

Social Media Performance – Promotional Posts (Average of $250 per promotion)	TOTAL 2024 Year	Previous Year	%Change from previous year
Total People Reach The number of people who saw our posts at least once	2,030,821	1,299,485	56% ↑
Total Views/Impressions The number of times our posts were seen on screen	3,031,421	1,864,505	62% ↑
Total Number of People Engaging & Interacting with our Posts (Comments, likes, shares, clicks)	391,392	352,070	11% ↑
Shire-Wide Visitor Count & Visitor Spend (Provided by Destination Riverina Murray & CommBank IQ)	TOTAL June 2024 – May 2025		%Change from previous year
Visitor Count	145,900		9% ↑
Visitor Spend	$16,129,000.00		13% ↑

A FINANCIAL YEAR IN REVIEW: 2024 – 2025 Year
Tourism, Economic Development, Events & Strategic Activities

Visitor & Visitor Information Centre Performance	TOTAL 2024 - 2025 Year	Previous Year	%Change from previous year
Bookings & Enquiries (emails, websites, phone, OGA tour bookings only commenced recording in late 2024)	8,855	4,618	92% ↑
Visitor Walk-In - Interpretive Pavilion (Counting recommenced in March 2024 when the IP's technology was upgraded)	13,865	4,656	198% ↑
Visitor Walk-In – Visitor Information Centre	11,868	13,515	12% ↓
Merchandise Sales	$ 62,399.65	$ 72,424.85	13%↓

Discovery Centre Precinct /Discover Balranald & Surrounds Ratings as at 30th June 2025:

WikiCamps (Balranald Information/Discovery Centre)	Google (Balranald Discovery Centre)	Facebook (Discover Balranald & Surrounds)	Trip Advisor (Balranald Discovery Centre)
4.9 star rating	4.6 Star Rating	92% Recommendation Rating 4.6 Star Rating	4.5 Rating #2 out of 9 things to do in Balranald

A FINANCIAL YEAR IN REVIEW: 2024 – 2025 Year
Tourism, Economic Development, Events & Strategic Activities

4. KEY COMMITTEES/WORKSHOPS ATTENDED/SUPPORTED DURING 2024-2025 YEAR

Regional/State	Local
• South West REZ webinars & South West REZ Roundtables • REBA (Robinvale Euston Business Association) monthly meetings • REWN (Robinvale Euston Workforce Network) meetings and workshops • The 6weekly Destination NSW Riverina Murray Online meetings • Collaboration in the Mallee & Cross-border Partnership Online meetings • Riverina Economic Development Officers online meetings • Riverina Tourism Working Group – online meetings • Attendance at the LGNSW Destination & Visitor Economy Conference 2025 • NSW Visitor Economy Review meeting • Darling Murray Murrumbidgee Rural Service Network online meetings • Robinvale/Euston Census 2026 Working Group meetings • LGNSW Ageing Focus Services for Councils Webinars • NSW AVIC Connect online meetings • Swan Hill Integrated Transport & Land Use Strategy Adjoining Councils Workshop • Local Government Procurement Grant Success Debrief meeting • Local Government Procurement training program development meeting • The CMA Transport for NSW Community Improvement Districts meetings • Far West NSW Tourism Networking meeting	• Growing Business Industry & Tourism Advisory Committee (GBITAC) • Euston Progressive Advisory Committee (EPAC) • Strengthening Community Access, Inclusion & Wellbeing Advisory Committee (SCAIWAC) • Balranald Beautification Advisory Committee (BBAC) • Specific Rolling Action Plan Workshops with GBITAC, EPAC and BBAC outside the usual monthly meetings • Balranald Inc committee meetings • Balranald Murrumbidgee Classic planning meetings • Australia Day Committee meetings • Balranald Southern Cross Inc committee meetings • Balranald Gallery/Art & Culture committee meetings • Kyalite Progress Association committee meetings • Organisation and facilitation of the Destination Management Plan community consultation workshops • Organisation and support facilitation of the Community Strategic Plan workshops • Council's Consultative Committee

A FINANCIAL YEAR IN REVIEW: 2024 – 2025 Year
Tourism, Economic Development, Events & Strategic Activities

5. KEY ADVERTISING & PROMOTIONS DURING 2024 – 2025 YEAR

July - September 2024	October - December 2024	January – March 2025	April – June 2025
Direct mail during the quarter included: • The Hatfield Happening • The Great Murray River Salami Festival **Promotional posts** included the following: Beautiful Birdlife • Magical Murrumbidgee • Stunning Sunsets at Lake Benanee • Bonding Time – Fishing of the Bidgee • Agatha Christie eating oranges at Yanga National Park Homestead • Say Hello to a Local Icon – The Southern Bell Frog • Funky Frog Sculpture Trail • Yanga Sunset & Heritage Tour • Sunrise Streaming through the River Red Gums • Stunning Sky at Mungo National Park	**Integrated** (print, broadcast and social media) Marketing campaign for the **Stop Shop Stay Market Day** Event included: • A series of radio commercials leading up to the event • Live Radio Broadcast from Balranald from 10am – 2.00pm with 8 interview spots promoting all businesses across the shire, attractions, activities, & events • Full page adverts in our 2 key regional newspapers • Direct Mail & Social Media Promotions **Direct Mail** campaigns included: • CSP community workshops • DMP community workshops • Great Murray River Salami Festival • Balranald Health & Wellbeing Expo • Stop, Shop, Stay Market Day **Social Media Promotional Posts** included: • Sunrise Across the Bidgee • Stunning Sky at Mungo NP • Great Murray River Salami Festival • Remembrance Day • Stunning Sunset Tour at Mungo NP • Sunset Moods of Yanga Lake • Christmas/New Year Greetings	**Direct mail** during the quarter included: • Australia Day Events • Murrumbidgee Fishing Classic • The Power of Conversation • Balranald Shire Easter Events **Advertising:** • Tourist News: 2 page spread and full page Advert • Integrated promotional campaign for Easter Events incorporating broadcast media and print media advertising **Product Development:** • Balranald and District Military Heritage Walk Brochure • Mungo Loop Brochure • Funky Frog Trail (No social media activities during this period due to fraudulent activities which have since been resolved. The suspended social media pages should be reactivated in July 2025)	**Direct Mail** during the quarter included: • Balranald Shire Easter Events • Murray Tourism Public Relations Workshop • Fundraising event – Community BBQ at Balranald's Lion's Park **Advertising:** • Full page advert in the Swan Hill Visitor Guide • Integrated promotional campaign for Easter Events incorporating broadcast media and print media advertising **Product Development:** • Balranald Shire Birds – Photo Guide Checklist brochure • Finalisation of the new Visitor Guide and draft for vetting. Final version to be printed in July 2025 • Finalisation of the new tourism website for vetting. To be launched in August-September 2025 (No social media activities during this period due to fraudulent activities which have since been resolved. The suspended social media pages should be reactivated in July 2025)

A FINANCIAL YEAR IN REVIEW: 2024 – 2025 Year
Tourism, Economic Development, Events & Strategic Activities

6. KEY EVENTS PROMOTED DURING 2024 – 2025 YEAR

July – September 2024	October – December 2024	January – March 2025	April – June 2025
• Balranald Quilting & Craft Group Exhibition • Monthly Entertainment at the Euston Club • Fabric Mache Workshop at the Gallery • BFNC Grand Friends Day • BFNC Barn Dance Dinner • Hatfield Happening • Balranald Community Event • BSC Education Week Assembly • Information Session at the Gallery • Mallee Almond Blossom Festival • Euston Bowling Club Helen Robertson Classic • BFNC Roo Ball • Euston Club 2 Day Grand Final Tournament • Balranald Art Gallery Weaving Workshop • Balranald Art Gallery "Sista Girls" First Nations Creations Exhibition • Winlan Wind Farm Information Session • Balranald Field & Game Members Practice Day • Fire & Rescue Info Session & Coffee with a Fire Fighter • Mallee Bird Community Information session • Euston Club 40th Birthday Family Fun Day • Robinvale Euston Lantern Festival • Chat & Create Free Event • Robinvale Golf Club Grand Final Event • School Holiday Programme at the Library • The Dinomaniacts Travel Show • The Mik Maks Show	• Balranald Races • Great Murray River Salami Festival • Water Bird Photography Exhibition • Mystery Garden Tour • Balranald Health, Wellbeing & Support Expo • DMP Community Workshops • Balranald Cup & Dachshund Dash • Robinvale Centenary Celebrations • Balranald Soccer Club Activities • St Joseph's School Annual Fete • BFNC Debutante Ball • CSP Community Workshops • Monthly Entertainment at the Euston Club • Carols on the Riverfront in Euston • Kyalite and Murrumbidgee Classic • Create your own pottery event • Dancing in the Dust workshops • Water, Trees & Light Exhibition • Birds, Bowls & More – Steve Cole Exhibition • Exploring Sculptural Forms • Stop Shop Stay Market Day • Christmas Wreath Making • Christmas Bingo Event • Carols – Balranald Churches Combined • Robinvale Euston Christmas Carnival	• Australia Day Events in Balranald & Euston • Kyalite Fishing Classic • Visit of Author Fion Tarr at the Library • Mallee Artists "Home is Where the Art Is" Exhibition @ The Gallery • The Power of Conversation – Mental Health First Aid Training • Whole of Town Garage Sale • MFC Community BBQ • Returning the Past Gathering • Grant Writing Workshop in Euston • Community Capacity Building Workshop in Balranald • BSC Seniors Luncheon • Murrumbidgee Classic Fishing Competition • Balranald Pony Club 21st Birthday event • Resin Art Workshop for Beginners • Euston Playgroup launch • Entertainment at the Balranald Club • Entertainment at the Euston Club • Balranald Club Good Friday Appeal • Balranald Easter Egg Hunt & Market • BFNC upcoming events • Just a Farmer – Film Screening event • Back to Nature Ceramic Birds & Organic Nests workshop • Good Morning Vietnam Exhibition • Easter Tennis Tournament • Homebush Rodeo 2025	• Easter 2025 in Balranald Shire • Easter Egg Hunt & Market event • Entertainment at the Euston Club • Entertainment at the Balranald Club • Robinvale/Euston Easter Festival • Balranald Field & Game Easter Shoot • Easter Tennis Tournament • Save the Date – Balranald Deb Ball • Good Morning Vietnam Exhibition • Little Bunyips Kids Zone Program • Dragged to Drag Bingo event • Mother's Day Bouquet Making at Rustic Pear • Balranald Pony Club Annual Camp • Model Kit Class at The Gallery • Miniatures in May Art Exhibition • Fundraising event – Community BBQ at the Lions Park • Service NSW Mobile Service Centre at Euston • Hurry Its Curry workshop • Music Trivia Night • Fabric Painting workshop at The Gallery • BFNC Ladies Day • Christmas In July – Dragged to Drag Bingo • Clare School 160th Year School Fete

A FINANCIAL YEAR IN REVIEW: 2024 – 2025 Year
Tourism, Economic Development, Events & Strategic Activities

7. PHOTOS: The following are few photos of key highlights during the 2024 – 2025 year

Construction of the new pavilion at the Discovery Centre took place during the 2024 – 2025 year.

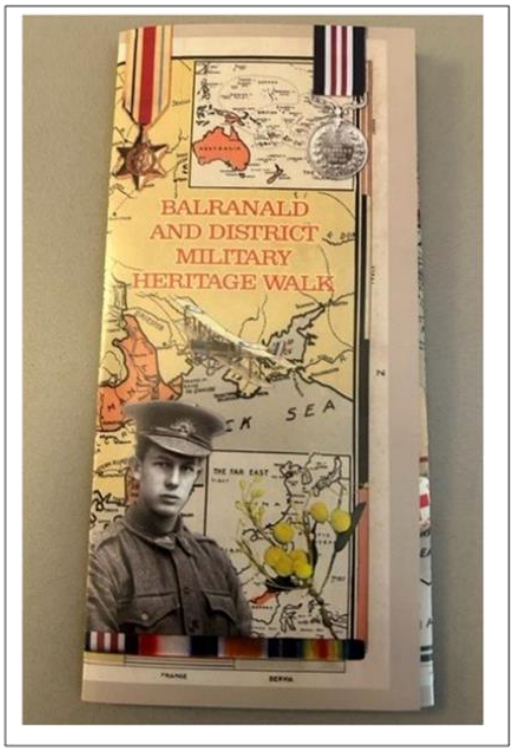
The department attended the SW REZ Roundtables and provided the reports. We also designed and prepared the Community Strategic Plan & Delivery Program documents for public exhibition and developed Council's Community Engagement & Communications Strategy

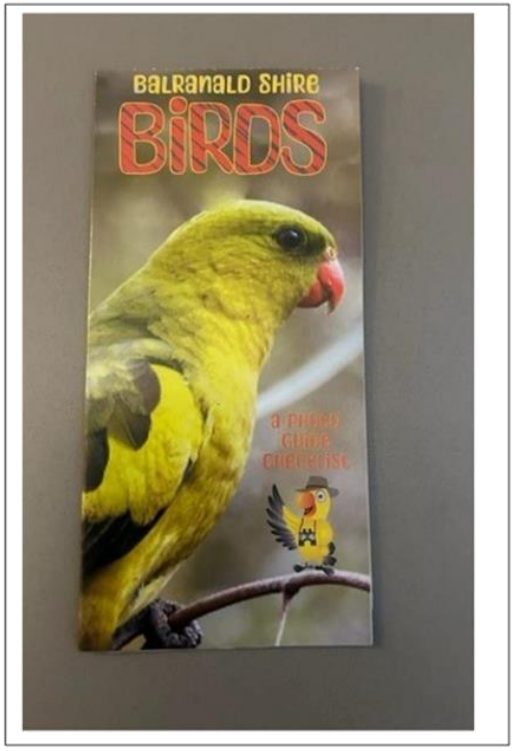
DISCOVER BALRANALD & Surrounds
where the wetlands meet the outback

A FINANCIAL YEAR IN REVIEW: 2024 – 2025 Year
Tourism, Economic Development, Events & Strategic Activities

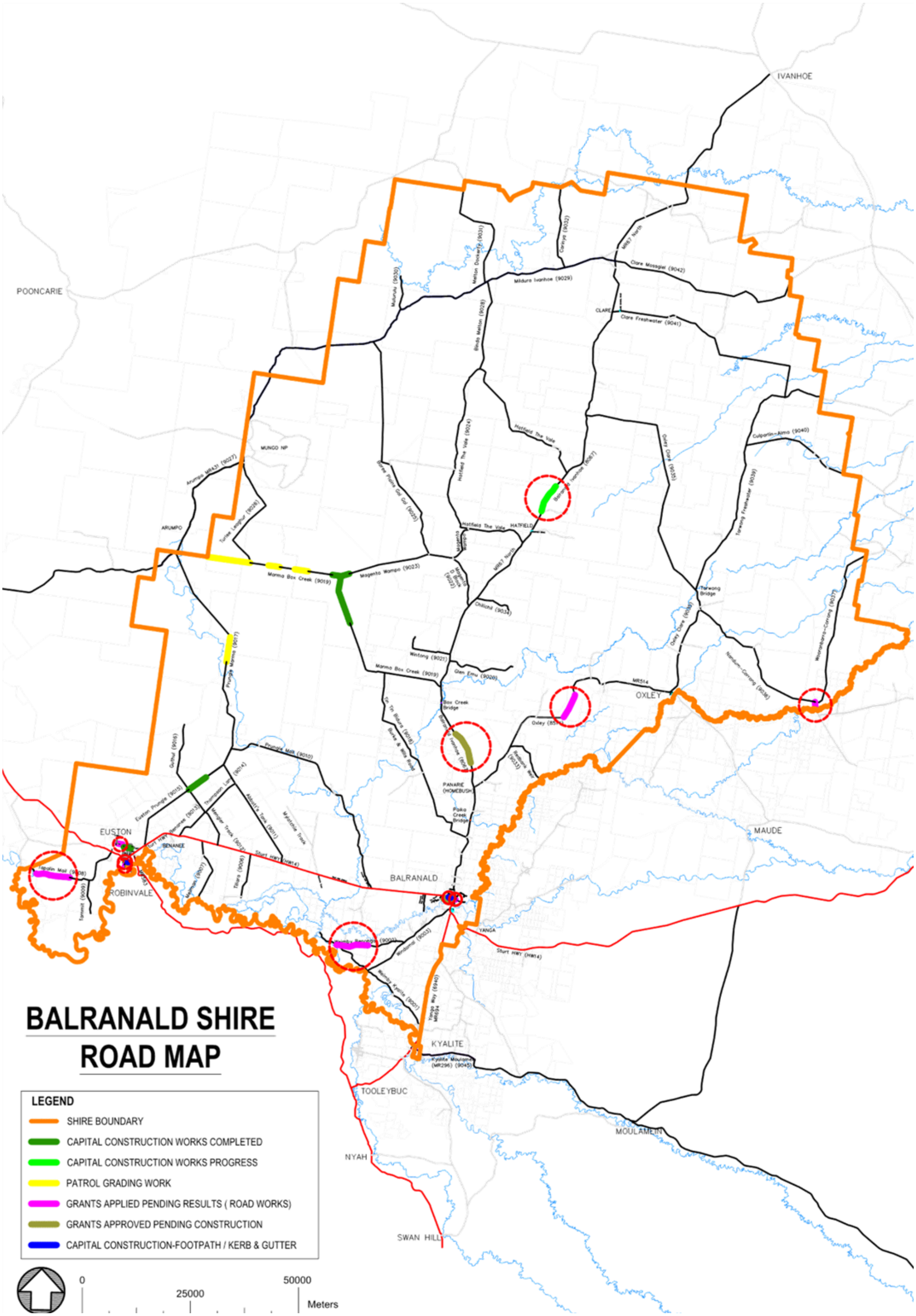
*The 2 page editorial and full page advert in the **Tourist News** publication.*

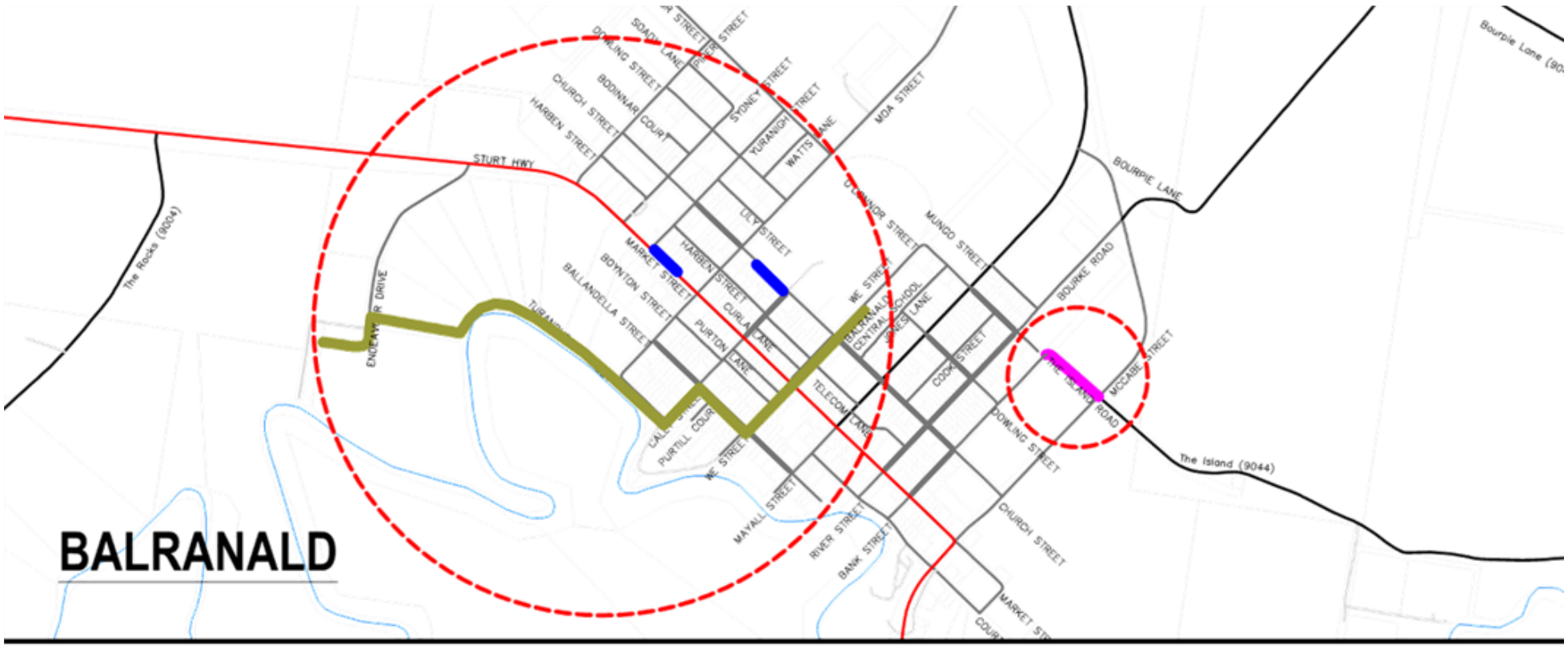
A FINANCIAL YEAR IN REVIEW: 2024 – 2025 Year
Tourism, Economic Development, Events & Strategic Activities

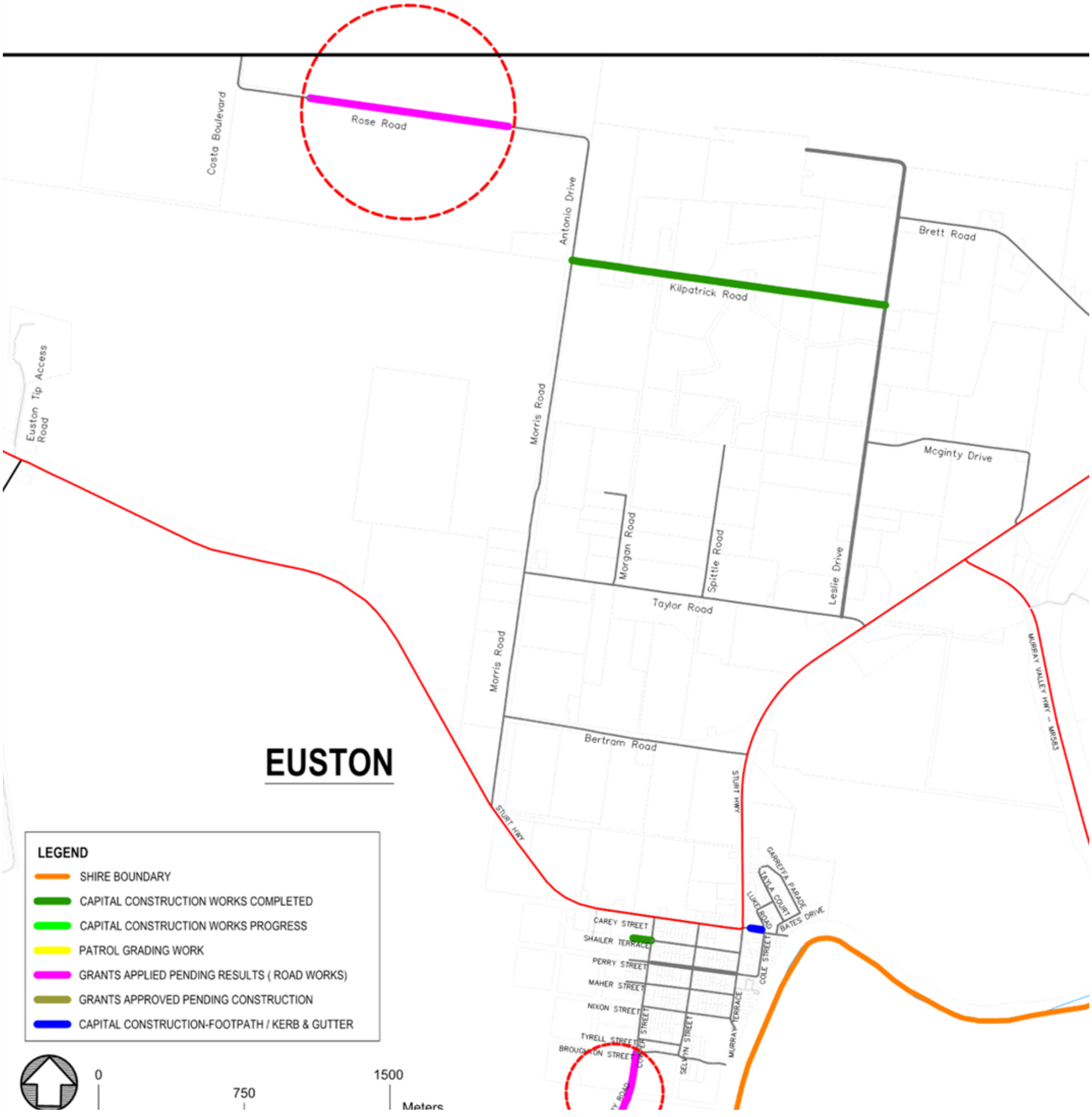




As part of our product development strategy to support the VIC team in providing visitors with reasons to stay longer, we have commenced developing a series of brochures to give visitors. These are particularly in promoting trails, walks and niche interests such as birdwatching.


IVANHOE
POONCARIE
MUNGO NP
ARUMPO
HATFIELD
OXLEY
PANARIE (HOMEBUSH)
EUSTON
BENANEE
ROBINVALE
BALRANALD
MAUDE
YANGA
KYALITE
TOOLEYBUC
MOULAMEIN
NYAH
SWAN HILL
Mildura Ivanhoe (9029)
Clare Mossgiel (9042)
Clare Freshwater (9041)
Hatfield The Vale (9024)
Magenta Wampo (9023)
Marma Box Creek (9019)
Wintong (9021)
Glen Emu (9020)
Box Creek Bridge
Prungle Marma (9017)
Prungle Melk (9010)
Euston Prungle (9015)
Thurnscoe Lane (9014)
Mystic Park Benanee (9013)
Mystic Park Track (9012)
Abbott's Tank (9011)
Mystic Park Track
Sturt HWY (HW14)
Tapolin Mail (9008)
Tarrinot (9009)
Tillairs (9006)
Nelwood (9007)
Nelwood (9003)
Nelwood Kyalite (9001)
Tongala Hay (6940)
Kyalite Mourquong (MR296) (9045)
Tarrawong Bridge
Tarrawong Freshwater (9039)
Culparlin-Almo (9040)
Oakey Clare (9035)
Oakey Clare (9038)
Woorinbamna-Corrong (9037)
Nanalum-Corrong (9036)
Oxley (8554)
Barbers Lane (9033)
Burke & Wills Road
Cn To Balura (9018)
Mallee Track (9022)
Chillichil (9034)
MR514
MR87 North
Carwyn (9032)
Melton Dockerty (9031)
Mututulu (9030)
Rhodo Melton (9028)
Turtee Langkur (9026)
Arumpo MR431 (9027)
Turtee Plains Gal Gal (9025)
Hatfield The Vale (9024)
Barnaal Ivanhoe (6067)
Odery Clare (9035)
Magenta Box (9022)
Chillichil (9034)
Tarrawong Bridge
Oakey Clare (9038)
Box Creek Bridge
Barnaal Ivanhoe (6067)
Oxley (8554)
Barbers Lane (9033)
Panaria Road
Pooka Creek Bridge
Mystic Park Benanee (9001)
Nelwood (9003)
Tongala Hay (6940)
Sturt HWY (HW14)
BALRANALD SHIRE
ROAD MAP
LEGEND
SHIRE BOUNDARY
CAPITAL CONSTRUCTION WORKS COMPLETED
CAPITAL CONSTRUCTION WORKS PROGRESS
PATROL GRADING WORK
GRANTS APPLIED PENDING RESULTS (ROAD WORKS)
GRANTS APPROVED PENDING CONSTRUCTION
CAPITAL CONSTRUCTION-FOOTPATH / KERB & GUTTER
0
25000
50000
Meters


BALRANALD
STURT HWY
The Rocks (9004)
ENDEAVOUR DRIVE
MARKET STREET
BOYNTON STREET
BALLANDELLA STREET
HARBEN STREET
CURLA LANE
PURTON LANE
PURTILL COURT
LILY STREET
CHURCH STREET
BODINNAR COURT
STONEY STREET
YURANIGH STREET
WATTS LANE
MOA STREET
O'CONNOR STREET
MUNGO STREET
BOURKE ROAD
BOURKE LANE
COCK STREET
DOWLING STREET
MCCABE STREET
THE ISLAND ROAD
The Island (9044)
CHURCH STREET
MARKET STREET
MAYALL STREET
RIVER STREET
BANK STREET
TELECOM LANE
WE STREET
The Island (9044)


EUSTON
Rose Road
Costa Boulevard
Antonio Drive
Kilpatrick Road
Brett Road
Euston Tip Access Road
Morris Road
Mcginty Drive
Morgan Road
Spittle Road
Leslie Drive
Taylor Road
Bertram Road
MURRAY VALLEY HWY – MR583
STURT HWY
GARRETTA PARADE
TAXA COURT
BATES DRIVE
LUKE ROAD
COLE STREET
CAREY STREET
SHAILER TERRACE
PERRY STREET
MAHER STREET
NIXON STREET
TYRELL STREET
BROUGHTON STREET
COWEN STREET
SELWYN STREET
MURRAY TERRACE
LEGEND
SHIRE BOUNDARY
CAPITAL CONSTRUCTION WORKS COMPLETED
CAPITAL CONSTRUCTION WORKS PROGRESS
PATROL GRADING WORK
GRANTS APPLIED PENDING RESULTS (ROAD WORKS)
GRANTS APPROVED PENDING CONSTRUCTION
CAPITAL CONSTRUCTION-FOOTPATH / KERB & GUTTER
0
750
1500
Meters

Date	Meeting	Topic	Who Was Involved
11.06.2025	Radio Interview	Upcoming Events	IGM
11.06.2025	Webinar	Centre for Local Government	IGM
11.06.2025	Webinar	NSW Local Government Grants Commission – Regional & Rural Councils	Mayor & IGM
12.06.2025	Korakee Energy Park	Project Update Meeting	IGM & DIPS
12.06.2025	Zoom Meeting	Board Governance in Aged Care	IGM
16.06.2025	Balranald Beautification Advisory Committee Meeting	Monthly Meeting	DIPS
17.06.2025	Catch Up	Regular Catch Up	Mayor & IGM
17.06.2025	Meeting	Council Workshop & Regular Meting	Mayor, IGM, DIPS & CFO
18.06.2025	Radio Interview	Upcoming Events	IGM
18.06.2025	Staff Meeting	Update on Council Meeting	CFO & DIPS
18.06.2025	Meeting	Junction Rivers Update	IGM
18.06.2025	Teams Meeting	ERM Review Project	IGM
18.06.2025	Growing Business Industry & Tourism Advisory Committee Meeting	Monthly Meeting	IGM
19.06.2025	Site Visit/Meeting	Iluka	IGM
24-27.06.2025	National General Assembly	Annual Conference	Mayor & IGM
26.06.2025	Teams Meeting	NSW Ombusdman Information Session	IGM
26.06.2025	Lunch & Learn	Local Government Procurement Lunch & Learn Meeting	IGM
26.06.2025	Catch UP	Sussan Ley	Mayor & IGM
01.07.2025	Teams Meeting	NSW Ombudsman – Complaint Handling	IGM
01.07.2025	Catch Up	Regular Catch Up	Mayor & IGM
01.07.2025	Afternoon Tea	Balranald Beautification thankyou Afternoon Tea	Mayor, IGM & DIPS
02.07.2025	Radio Interview	Upcoming Events	IGM
02.07.2025	Meting	South West REZ Coordination Forum	IGM
03.07.2025	Teams Meeting	eCISO Monthly Cadence Meeting	IGM

Mayor – Cr Louie Zaffina
Interim General Manager (IGM) – Mr Peter Bascomb
Chief Financial Officer (CFO) – Ms Edna Mendes
Director of Infrastructure & Planning Services (DIPS) – Mr David McKinley

Date	Meeting	Topic	Who Was Involved
03.**07.2025**	ELT Meeting	Regular Meeting	IGM, CFO & DIPS
04.07.2025	Teams Meeting	Project Management Framework	IGM & DIPS
07.07.2025	TfNSW Meeting	Speed reviews	IGM & DIPS
08.07.2025	Catch Up	Regular Catch Up	Mayor & IGM
08.07.2025	Workship	Fluoridation	Mayor, IGM & DIPS
09.07.2025	Radio Interview	Upcoming Events	IGM

Mayor – Cr Louie Zaffina
Interim General Manager (IGM) – Mr Peter Bascomb
Chief Financial Officer (CFO) – Ms Edna Mendes
Director of Infrastructure & Planning Services (DIPS) – Mr David McKinley

Meeting	Officer/Director	Section	Subject
Council 17/06/2025	McKinley, David	Committee Reports	Euston Progressive Advisory Committee Meeting held on Monday, 28 April 2025

RESOLUTION 2025/127

Moved: Cr Alison Linnett
Seconded: Cr Leigh Byron

That:

1. the Minutes of the Euston Progressive Advisory Committee meeting held on Monday 28 April 2025 be received and noted.
2. Council endorse the concept of the artwork on the water towers Mural.

CARRIED

04 Jul 2025 12:19pm Holmes, Carol - Reallocation
Action reassigned to McKinley, David by Holmes, Carol - David being the Director of Infrastructure & Planning

Meeting	Officer/Director	Section	Subject
Council 17/06/2025	McKinley, David	Mayor/Councillor Report	Mayoral Minute - Limiting Overnight Truck Parking

MAYOR'S RECOMMENDATION

That Council implements a "No Truck Parking 8pm to 6am" zone along the South-Western side of Market St from the corner of Cally St for 70 metres.

04 Jul 2025 12:18pm Holmes, Carol - Reallocation
Action reassigned to McKinley, David by Holmes, Carol - David being Director Infrastructure & Planning

Meeting	Officer/Director	Section	Subject
Council 17/06/2025	Bascomb, Peter	Part A - General Manager's Reports	Mayoral and Councillor Fees for 2025-26

RESOLUTION 2025/129

Moved: Cr Alison Linnett
Seconded: Cr Iain Lindsay-Field

That Council:

1. Sets the annual Councillor Fee payable for the period 1 July 2025 to 30 June 2026 at $13,930 as determined by the Local Government Remuneration Tribunal and in accordance with section 248 of the Local Government Act 1993.
2. Sets the annual Mayoral Additional Fee payable for the period 1 July 2025 to 30 June 2026 at $30,390 as determined by the Local Government Remuneration Tribunal and in accordance with section 248 of the Local Government Act 1993.

CARRIED

Meeting	Officer/Director	Section	Subject
Council 20/05/2025	Bascomb, Peter	Part A - General Manager's Reports	Proposed Upgrade of Balranald NRMA EV Charging Station

RESOLUTION 2025/100
Moved: Cr Alison Linnett
Seconded: Deputy Mayor Dwaine Scott
That Council

1. **Endorse the NRMA's concept layout for the upgrade of the Balranald EV Charging Station as per the attached drawing NSWHWY002-SCP-S1-2**
2. **Commence consultation with affected stakeholders as a Category 2 proposal**
3. **Authorise the development to proceed if no objections are raised during the consultation process**.

CARRIED

05 Jun 2025 2:40pm Bascomb, Peter
The neighbours have been notified by letter. The closing date for submissions is after the 17 June meeting.

Meeting	Officer/Director	Section	Subject
Council 20/05/2025	Bascomb, Peter	Notice of Motion	Notice of Motion - Workshop for Discussion on Fluoridation on Water Supply

RESOLUTION 2025/97

Moved: Cr Iain Lindsay-Field
Seconded: Deputy Mayor Dwaine Scott

That Council hold a workshop at 3:30pm on Tuesday 10 June 2025 to discuss the fluoridation of Balranald's drinking water.

CARRIED

05 Jun 2025 2:41pm Bascomb, Peter
To ensure attendance of appropriate people, the workshop date has been changed to 8 July.

Meeting	Officer/Director	Section	Subject
Council 20/05/2025	Bascomb, Peter	Part A - General Manager's Reports	Balranald Caravan Park Management and Operation

RESOLUTION 2025/103

Moved: Cr Tracy O'Halloran
Seconded: Deputy Mayor Dwaine Scott

That:

i. **The Balranald Caravan Park continue to be operated utilising day labour until the 31 December 2025**

ii. **Tenders be called for the operation of the Balranald Caravan Park on a contract/lease basis effective from the 1 January 2026**

iii. **Due process be followed with appropriate consultations undertaken**

iv. **Potential contractors be requested to consider funding some or all of the park upgrade**

v. **A workshop be conducted with Councillors to review and discuss the Balranald Caravan Park master plan**

vi. **In the meantime, prior to the 1 January 2026 the Caravan Park be upgraded within the confines of Councils budget with consideration given to installing new cabins and upgrading the powered sites**

vii. **Grant funding applications be submitted under appropriate programs to assist in funding any proposed upgrade works**.

CARRIED

Meeting	Officer/Director	Section	Subject

Meeting	Officer/Director	Section	Subject
Council 20/05/2025	Bascomb, Peter	Part A - General Manager's Reports	Council Committees - Terms of Reference

RESOLUTION 2025/104

Moved: Cr Alison Linnett
Seconded: Deputy Mayor Dwaine Scott

That:

i. The terms of reference for the following committees be endorsed as attached;

a. Australia Day Committee (ADC) Section 355

b. Euston Progressive Advisory Committee (EPAC)

c. Balranald Wellbeing & Health Advisory Committee (BWHAC)

d. Tourism & Economic Development Advisory Committee (TED)

ii. Expressions of Interest (EOI) for community members to become members of one or more of the committees as per the Terms of Reference be called and submitted to the June 2025 Council meeting for Council endorsement.

iii. Council appoint Council members and the General Manager to the respective committees as per the Terms of Reference at the June 2025 Council meeting.

CARRIED

Meeting	Officer/Director	Section	Subject
Council 20/05/2025	Bascomb, Peter	Part B - General Manager's Reports	Yanga National Park Fuel Load

RESOLUTION 2025/110

Moved: Cr Iain Lindsay-Field
Seconded: Cr Tracy O'Halloran

That Council not accept this report and request further information from National Parks & Wildlife Service.

CARRIED

Meeting	Officer/Director	Section	Subject

Council 20/05/2025	Edgcome-Lucas, Adrian Bascomb, Peter	Part A - General Manager's Reports	Turandurey Street Transfer of Crown Ownership to Balranald Shire Council

RESOLUTION 2025/102

Moved: Cr Tracy O'Halloran
Seconded: Cr Iain Lindsay-Field

That Council formally requests Crown Lands to transfer ownership to Council of the unformed portion of Turandurey Street currently classified as Crown Roads as per the plan on the attachment.

CARRIED

04 Jun 2025 12:21pm Edgcome-Lucas, Adrian - Target Date Revision
Target date changed by Edgcome-Lucas, Adrian from 17 June 2025 to 30 July 2025 - Awaiting Planning Manager to return from leave to assist with this action with Crown Land.

Meeting	Officer/Director	Section	Subject
Council 15/04/2025	Bascomb, Peter	Part A - General Manager's Reports	Integrated Planning & Reporting - 2025-2035 Resourcing Strategy

RESOLUTION 2025/75

Moved: Cr German Ugarte
Seconded: Cr Tracy O'Halloran

That Council place the draft Resourcing Strategy on public exhibition for a period of twenty-eight (28) days for comment prior to it being submitted to the June 2025 Council meeting for formal adoption.

CARRIED

06 May 2025 3:52pm Carroll, Glenn - Target Date Revision
Target date changed by Carroll, Glenn from 13 May 2025 to 24 June 2025 - IP & R draft documents currently on public exhibition for comment and will be presented to the June 2025 Council meeting for formal adoption.

10 Jun 2025 1:48pm Holmes, Carol - Reallocation
Action reassigned to Bascomb, Peter by Holmes, Carol - Glenn no longer works for Council, Peter being the Interim General Manager

Meeting	Officer/Director	Section	Subject
Council 15/04/2025	Bascomb, Peter	Mayor/Councillor Report	Mayoral Minute - Recruitment of ARIC Chair and Internal Auditor

RESOLUTION 2025/68

Moved: Cr German Ugarte

Seconded: Deputy Mayor Dwaine Scott

That Council:

1. Acknowledge
   (a) That Ross Earl is not eligible to remain as ARIC Chair as he is an employee of a Joint Organisation
   (b) The resignation of Kirstyn Thronder as an independent member of the Audit Risk and Improvement Committee (ARIC)
   (c) The resignation of Keith Coates as Council's Internal Auditor
2. Appoint Ross Earl as an independent member of ARIC
3. Commence the recruitment of a replacement ARIC Chair and a new Internal Auditor contractor.

CARRIED

05 May 2025 12:23pm Bascomb, Peter
Documentation to recruit new chair is being developed.
05 Jun 2025 2:42pm Bascomb, Peter
Expressions of Interest have been called with a closing date of Friday 13 June.

Meeting	Officer/Director	Section	Subject
Council 18/03/2025	McKinley, David	Mayor/Councillor Report	Mayoral Minute - Installation of Electronic Scoreboard at Greenham Park Balranald

RESOLUTION 2025/41

Moved: Deputy Mayor Dwaine Scott
Seconded: Cr Alison Linnett

That Council

1. Approve in principle the installation, at no cost to Council, an electronic scoreboard at Greenham Park and
2. Request the General Manager to expedite stakeholder discussions with the Balranald Football and Netball Club to allow the installation to proceed before the first game.

CARRIED

14 Apr 2025 12:10pm Bascomb, Peter - Reallocation
Action reassigned to McKinley, David by Bascomb, Peter - Responsible officer
07 May 2025 1:46pm McKinley, David - Target Date Revision
Target date changed by McKinley, David from 15 April 2025 to 04 August 2025 - The BFNC have been contacted and advised the score board does not attract a DA or associated conditions and therefore the BFNC can proceed with delivery and installation

Meeting	Officer/Director	Section	Subject
Council 18/03/2025	Manning-Rayner, Nikkita McKinley, David	Part A - General Manager's Reports	Draft Euston Courthouse Conservation Management Plan

RESOLUTION 2025/52

Moved: Cr Alison Linnett
Seconded: Deputy Mayor Dwaine Scott

That Council:

1. **Places the draft Conservation Management Plan for the Euston Courthouse on public exhibition for a period of 28 days; and**
2. **The Euston-Robinvale Historical Society Inc be sent a copy of the draft Conservation Management Plan for comment within the 28-day public exhibition period in addition to consultation already undertaken; and**
3. **Receive a further report following conclusion of public exhibition to consider any submissions.**

CARRIED

07 May 2025 11:17am Manning-Rayner, Nikkita - Target Date Revision
Target date changed by Manning-Rayner, Nikkita from 15 April 2025 to 17 June 2025 - Correct target date to cover advertisement periods
07 May 2025 11:17am Manning-Rayner, Nikkita
In progress

Meeting	Officer/Director	Section	Subject
Council 18/03/2025	McKinley, David	Part A - General Manager's Reports	TRONOX Mining Australia Ltd - Contribution to Hatfield Road Widening Balranald Ivanhoe Road (MR67)

RESOLUTION 2025/49

Moved: Deputy Mayor Dwaine Scott
Seconded: Cr Tracy O'Halloran

That Council support the Officer recommendation for Council to enter into an agreement with TRONOX for:

1. **Replacement of 6 cattle grids on the MR67, specifically at chainages 6.4km 15.341km, 19.266km, 30.828km, 37.820km, and 55km from the MR67-Haulroad intersection (Grids Works) cost to be borne by TRONOX;**
2. **MR67 change from approved A Double Road Trains to use of AB Triples subject to NHVR permit approval, this will come with a speed restriction of 80km/hr;**
3. **Where a contribution of $692,000 inclusive of GST is made by TRONOX to Council toward Road widening materials for approved Hatfield Shoulder widening works (outside of the existing Road Maintenance agreement SSD 5012) (See attached proposed Draft Agreement) and**
4. **Any proven damage along approved route by TRONOX related AB Triple activity shall be fiscally borne by TRONOX Mining Australia Ltd for the life of the Atlas-Campaspe Mineral Sands Project Operations.**

CARRIED

03 Apr 2025 10:25am McKinley, David - Target Date Revision
Target date changed by McKinley, David from 15 April 2025 to 30 June 2025 - The construction works is substantial and requires time, the agrrement has been signed and invoices sent

07 May 2025 1:47pm McKinley, David - Target Date Revision
Target date changed by McKinley, David from 30 June 2025 to 01 October 2025 - Works are in progress

Meeting	Officer/Director	Section	Subject
Council 18/03/2025	Bascomb, Peter	Notice of Motion	Notice of Motion - Purchase of Laptops for Councillors

RESOLUTION 2025/45

Moved: Cr German Ugarte
Seconded: Cr Iain Lindsay-Field

That from the beginning of the new financial year all council business papers are only distributed in digital format subject to the acquisition of proper computers with screen touch/writing and internet capabilities.

AMENDMENT

Moved: Cr Tracy O'Halloran

Seconded: Cr Phillip Pippin

That from the beginning of the new financial year council business papers be distributed in digital format to councillors who would prefer digital subject to the acquisition of proper computers with screen touch/writing and internet capabilities.

Upon being put to the Meeting, the amendment became the Motion and was CARRIED

05 May 2025 12:19pm Bascomb, Peter
Quotes have been obtained and included in the FY26 draft operational plan. Appropriate laptops will be acquired in the new financial year.

Meeting	Officer/Director	Section	Subject
Council 18/02/2025	McKinley, David	Notice of Motion	Notice of Motion - Garreffa Parade Median strip

RESOLUTION 2025/8

Moved: Mayor Louie Zaffina
Seconded: Cr Iain Lindsay-Field

That Council install sprinklers and establish lawn on Garreffa Parade median strip in the new development at Euston.

CARRIED

03 Mar 2025 4:02pm Holmes, Carol - Reallocation
Action reassigned to Bascomb, Peter by Holmes, Carol - Peter being the Interim General Manager

14 Apr 2025 12:05pm Bascomb, Peter - Reallocation
Action reassigned to McKinley, David by Bascomb, Peter - Responsible officer

07 May 2025 1:26pm McKinley, David - Target Date Revision
Target date changed by McKinley, David from 18 March 2025 to 01 July 2025 - The draft delivery program 2025-2029 and the draft operational plan 2025/26 cover of on the median strip irrigation and associated preferred landscape treatment and the Garreffa Park preferred children's play equipment. Council has sourced quotes for the irrigation and are preparing to move ahead with the median strip irrigation as to the preferred median strip land scaping and the Garreffa park play equipment, this will need to be bought to the residents of Garreffa parade as a community consultation process

Meeting	Officer/Director	Section	Subject
Council 18/02/2025	Bascomb, Peter	Notice of Motion	Notice of Motion - Medical Facility in Euston

RESOLUTION 2025/12

Moved: Mayor Louie Zaffina
Seconded: Cr Tracy O'Halloran

That Council investigate a possible building or building site to install a portable building office-rooms for the Doctor to use in Euston.

CARRIED

03 Mar 2025 4:04pm Holmes, Carol - Reallocation
Action reassigned to Bascomb, Peter by Holmes, Carol - Peter being the Interim General Manager
05 May 2025 12:17pm Bascomb, Peter
Concept design completed and costed. These will be used when a suitable funding program is identified.

Meeting	Officer/Director	Section	Subject
Council 18/02/2025	McKinley, David	Notice of Motion	Notice of Motion - Installation of Playground

RESOLUTION 2025/9

Moved: Mayor Louie Zaffina
Seconded: Cr Leigh Byron

That Council build a children's play area on a council owned lot that fronts Garreffa Parade and Tayla Court.

CARRIED

03 Mar 2025 4:03pm Holmes, Carol - Reallocation
Action reassigned to Bascomb, Peter by Holmes, Carol - Peter being the Interim General Manager
14 Apr 2025 12:06pm Bascomb, Peter - Reallocation
Action reassigned to McKinley, David by Bascomb, Peter - responsible officer
07 May 2025 1:27pm McKinley, David - Target Date Revision
Target date changed by McKinley, David from 18 March 2025 to 01 July 2025 - See 8.1
03 Jul 2025 5:47pm McKinley, David - Target Date Revision
Target date changed by McKinley, David from 01 July 2025 to 01 September 2026 - In keeping with Pillar 1 Our Lifestyle and the approved DP 2025 - 2029 Council will engage the Garreffa Parade residents to better understand what their expectations are in terms of what play equipment order and install in the 2027 - 2028 financial year build

Meeting	Officer/Director	Section	Subject

Council 18/02/2025	McKinley, David	Notice of Motion	Notice of Motion - Harben St Kerb and Guttering.

RESOLUTION 2025/11

Moved: Mayor Louie Zaffina
Seconded: Deputy Mayor Dwaine Scott

That Council investigate the installation of kerb and guttering in Harben St Balranald.

CARRIED

03 Mar 2025 4:03pm Holmes, Carol - Reallocation
Action reassigned to Bascomb, Peter by Holmes, Carol - Peter being the Interim General Manager
14 Apr 2025 12:08pm Bascomb, Peter - Reallocation
Action reassigned to McKinley, David by Bascomb, Peter - responsible officer
07 May 2025 1:42pm McKinley, David - Target Date Revision
Target date changed by McKinley, David from 18 March 2025 to 04 August 2025 - Reports or studies have been completed with indicative options with costings
03 Jul 2025 5:52pm McKinley, David - Target Date Revision
Target date changed by McKinley, David from 04 August 2025 to 03 November 2025 - This project will have 4 stages first stage will target the drainage adjacent to the Play Group building

Meeting	Officer/Director	Section	Subject
Council 18/02/2025	McKinley, David	Notice of Motion	Notice of Motion - Toilets at Anderson Park

RESOLUTION 2025/10

Moved: Mayor Louie Zaffina
Seconded: Deputy Mayor Dwaine Scott

That Council investigate the construction of a toilet block on Anderson Park in Euston.

CARRIED

03 Mar 2025 4:03pm Holmes, Carol - Reallocation
Action reassigned to Bascomb, Peter by Holmes, Carol - Peter being the Interim General Manager
14 Apr 2025 12:07pm Bascomb, Peter - Reallocation
Action reassigned to McKinley, David by Bascomb, Peter - responsible officer
07 May 2025 1:30pm McKinley, David - Target Date Revision
Target date changed by McKinley, David from 18 March 2025 to 01 July 2025 - This is a capital project for consideration in the 2025/26 CAPEX the Infrastructure team have undertaken a report and will mobilise after June 1 - 2025
03 Jul 2025 5:49pm McKinley, David - Target Date Revision
Target date changed by McKinley, David from 01 July 2025 to 01 April 2026 - Works being programmed

Meeting	Officer/Director	Section	Subject
Council 26/11/2024	McKinley, David	Mayor/Councillor Report	Mayoral Minute - Rural Addressing

RESOLUTION 2024/245

Moved: Cr Tracy O'Halloran
Seconded: Cr Alison Linnett

That Balranald Shire Council review, correct and assist agencies in updating the rural addresses within the Balranald Shire.

CARRIED

02 Dec 2024 12:28pm McKinley, David - Target Date Revision
Target date changed by McKinley, David from 24 December 2024 to 24 December 2024 - Firstly Council will need to scope the works based on the following:

02 Dec 2024 12:28pm McKinley, David - Target Date Revision
Target date changed by McKinley, David from 24 December 2024 to 24 December 2024 - 3

02 Dec 2024 12:33pm McKinley, David - Target Date Revision
Target date changed by McKinley, David from 24 December 2024 to 31 December 2026 - Council will need to firstly, scope of the works required for such an undertaking to include but not limited to, auditing of the existing road network within BSC updating BSC GIS system to reflect the status quo, also endorse of new street addresses to be submitted to the Geographic names board and for Council also to adopt Urban Rural Project street and numbering to assist the local community and emergency services and finally the cost of this exercise

11 Mar 2025 10:38am McKinley, David - Target Date Revision
Target date changed by McKinley, David from 31 December 2026 to 31 December 2026 - Organising budget item for consideration in the future CSP DP

Meeting	Officer/Director	Section	Subject
Council 26/11/2024	McKinley, David	New Item	Notice of Motion - Policy for Management of Trees on Council Land

RESOLUTION 2024/274

Moved: Cr German Ugarte
Seconded: Cr Iain Lindsay-Field

That the Balranald Shire Council develop a Tree Masterplan which will incorporate a policy for the management of trees on Council land and the heritage listing of trees that have significance to our Shire.

CARRIED

04 Jul 2025 12:41pm Holmes, Carol
Target date changed by McKinley, David from 24 December 2024 to 31 December 2025 - Council sees this as a priority, however there are already Strategies in the system ahead of the tree masterplan

04 Jul 2025 12:42pm Holmes, Carol - Target Date Revision
Target date changed by McKinley, David from 24 December 2024 to 31 December 2025 - Working Progress

Meeting	Officer/Director	Section	Subject
Council 26/03/2024	McKinley, David	Part A - General Manager's Reports	Balranald Reservoir Remediation

RESOLUTION 2024/43

Moved: Administrator Mike Colreavy

That Council considers allocating funding as part of its deliberations on the draft budgets for the 2024/2025 and 2025/2026 Financial Years so that recommended remediation works can be completed for the Balranald potable water reservoir.

CARRIED

18 Apr 2024 4:43pm McKinley, David - Target Date Revision
Target date changed by McKinley, David from 23 April 2024 to 28 February 2025 - Need to consider allocating monies in the 2025/2026 budget

18 Apr 2024 4:43pm McKinley, David
Budget funds allocated to the 2024/2025 draft budget

04 Jul 2024 2:58pm McKinley, David
16 July meeting with Consultant and Water Team to plan design works

21 Nov 2024 9:30am Holmes, Carol
To be considered as part of the 2025/2026 estimates process

02 Dec 2024 12:19pm McKinley, David - Target Date Revision
Target date changed by McKinley, David from 28 February 2025 to 30 May 2025 - Council design Consultant only just commencing with design scoping works needed for going to tender for reservoir remediation works

11 Mar 2025 10:35am McKinley, David - Target Date Revision
Target date changed by McKinley, David from 30 May 2025 to 30 May 2025 - Working progress and organising public consultation
03 Apr 2025 10:20am McKinley, David - Target Date Revision
Target date changed by McKinley, David from 30 May 2025 to 30 June 2025 - Lead in works
05 Jun 2025 3:10pm McKinley, David - Target Date Revision
Target date changed by McKinley, David from 30 June 2025 to 30 September 2025 - Works marked to be completed end September 2025