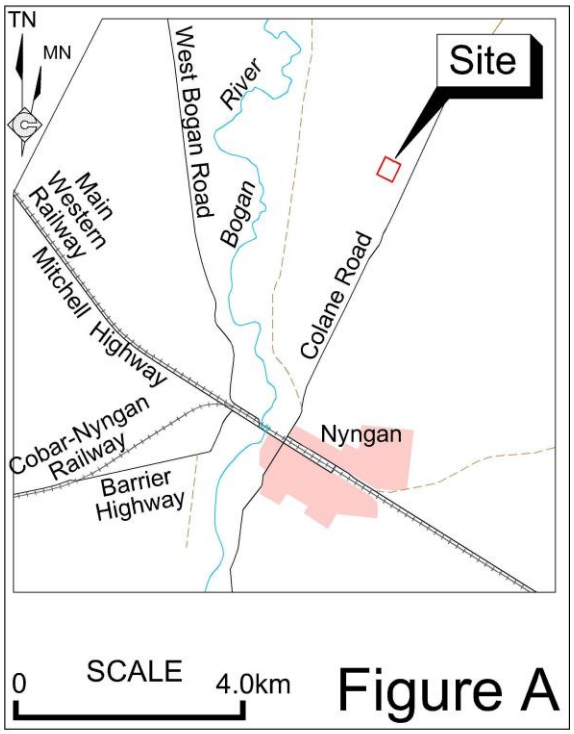
Summary

INTRODUCTION

This *Environmental Impact Statement* has been prepared by R.W. Corkery & Co. Pty. Limited on behalf of Bogan Shire Council ('the Applicant') to support an application for development consent to extend the existing Nyngan Waste and Resource Management Facility ('the Proposal') located approximately 5km north of Nyngan in Western NSW (**Figure A**).

The Proposal is to extend the landfilling operations approximately 190m to the northeast of the existing facility, thereby increasing the landfilling operational area to approximately 10.2ha and the life by approximately 16 years. The facility would continue to manage the following classes of waste.[1]

- General solid waste (putrescible) – e.g. household and food waste, manure, animal waste, waste from sewage treatment plants, etc.;
- General solid waste (non-putrescible) including recyclable materials – e.g. glass, plastics, waste oil, rubber, paper/cardboard, garden and wood wastes, virgin excavated natural material; and
- Special waste – e.g. clinical, asbestos and waste tyres.



The Site is zoned RU1 under the *Bogan Local Environmental Plan* 2011. Development for the purpose of waste management facilities may be carried with consent under Clauses 120 and 121 of the *State Environmental Planning Policy (Infrastructure) 2007*. As a result, Development Consent under Part 4 of the *Environmental Planning and Assessment Act 1979* (EP&A Act) will be required.

In addition, the Proposal may be classified as "designated development" in accordance with the requirements of Schedule 3(1), Clause 32 of the *Environmental Planning and Assessment Regulation 2000* because the waste management facility would dispose of solid waste that comprises substance classified in the *Australian Dangerous Goods Code* (Commonwealth of Australia, 2007), and more than 200 tonnes per year of other waste material.

[1] Waste classification in accordance with *Waste Classification Guidelines, Part 1: Classifying Waste*, Department of Environment, Climate Change and Water, December 2009.

As a result and in accordance with the requirements of Clause 8(c), Schedule 4A of the EP&A Act, the Proposal is also classified as Regional Development, with the Joint Regional Planning Panel (Western) to be the determining authority. Bogan Shire Council will be required to assist the Panel through administration of the application and preparation of the relevant assessment report.

Finally, the Proposal may also be classified as "integrated development" under Section 91 of the EP&A Act because an Environment Protection Licence under Section 43(b), 48 and 55 of the *Protection of the Environment Operations Act 1997* would be required.

NEED FOR THE PROPOSAL

The Applicant estimates that the existing waste management facility has sufficient capacity for continued operations until March 2013. At the end of that period the Applicant will require new landfill cells to be constructed and become operational.

Extending the landfill operations would allow the Applicant to continue to manage waste material within the Bogan Local Government Area (LGA) in a socially-responsible manner.

THE SITE

For the purposes of this document, the Site is the area within which all existing and proposed activities would be undertaken. The Site comprises Lot 107, DP 822472 and part Lot 7301, DP 1161404. The Applicant has agreed with Catchments and Lands and the Livestock Pest and Health authority to transfer ownership of the Site to the Applicant. To this end, a plan of subdivision has been prepared but has yet to be approved.

As can be seen on **Figure B**, an area has been identified for potential future expansion of the facility. It is envisaged that nearing the end of the life of the current Proposal, an application would be submitted for further expansion of the landfilling activities into this area. This additional area is not part of the current Proposal.

THE APPLICANT

The Applicant for the Proposal is Bogan Shire Council. The Applicant provides services for approximately 3 000 residents and visitors within the Bogan LGA. These services include roads, waste management, sporting and recreational facilities.

The Applicant operates the existing Nyngan Waste and Resource Manage Facility (existing facility). The day-to-day management of the facility is managed by Council.

PROPOSAL

Overview

The Site would incorporate all infrastructure and activities required to successfully operate the Nyngan Waste and Resource Management Facility and would comprise the following components (**Figure B**).

- Site entrance and access road.
- Site office and workshop.
- Selected Waste Drop-off Area.
- A Landfill area (approximately 2ha) comprising 24 landfill cells, each approximately 40m long, 15m wide and 6m deep.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TN
MN
MW4
MW3
MW5
Potential Future Expansion Area
MW6
MW2
Myall EEC Community
35m
Extended Area
90m
40m
15m
5m
See Figure 2.3
Internal Access Road (10m Wide)
30m
Soil & VENM Stockpile Area
MW7
MW1
Proposed Tree Screen - Myall (Acacia Pendula)
Existing Area
150m
Leachate Evaporation Pond
Workshop
Site Office
Site Access Road
Existing Landfill Facility
See Figure 2.4 Selected Waste Drop-off Area
Canonba Road
300m
200m
75m
MW8
Site Entrance
REFERENCE
Limit of Council-controlled Land
Site Boundary (Offset for Clarity)
Unsealed Road
Existing Landfill Facility
Proposed Landfill Cell & Identifier
Surface Water Diversion (Existing / Relocated)
Surface Water Diversion (to be removed)
MW1 Borehole & Reference
SCALE 1:4 000
50 0 50 100 150 200 m
Source: Bogan Shire Council
Figure B
PROPOSED SITE LAYOUT

- Soil and clay or virgin excavation natural material (VENM) stockpile areas.
- Leachate Evaporation Pond.
- A vegetation/tree screen.
- A centrally-located internal access road.

Waste collected during Council's kerbside waste collection program would be delivered to the Site by Council-controlled vehicles and deposited directly in the active cell.

Waste delivered by the public, businesses and waste management contractors would be placed within the General Waste Drop-off Area or the Selected Waste Drop-off Area. These areas would be divided into a number of appropriately signposted drop-off points for the following classes of waste.

General Waste Drop-off Area

- General waste, including domestic, commercial and industrial putrescible and non-putrescible wastes.

Selected Waste Drop-off Area

- Green waste.
- Demolition waste, including bricks and concrete.
- Recyclable materials, including waste oils, metal, glass, paper and cardboard and batteries.
- Bulky items, including household items (refrigerators, stoves and microwave ovens, etc.) and vehicle bodies.
- Used tyres.

Other classes of waste, including dead animals requiring burying and special waste (clinical, asbestos-contaminated and other contaminated wastes), would only be accepted by prior arrangement and would be placed directly into an appropriate emplacement area under the supervision of the facility manager or operator.

When sufficient material has accumulated within the Selected Waste Drop-off Area, it would be collected by a suitably licenced waste management contractor for transportation to a suitable recycling facility.

Greenwaste would be stockpiled within the Selected Waste Drop-off Area until sufficient material has been accumulated to justify a mulching program. Mulched material would be used within the Bogan LGA for Council-related purposes or provided to the public.

Demolition waste would be stockpiled until sufficient material has been accumulated to justify a crushing program. Crushed material would be used as drainage medium within the cells or elsewhere within the Bogan LGA.

Landfill Design

The landfill design for the proposed facility is presented in **Figure C**. The proposed landfilling operations would include 24 landfill cells. Each landfill cell would be approximately 40m long, 15m wide and 6m deep for a final volume of approximately 3 000m^3 (assuming a 1m thick capping and topsoil cover) within each cell and 72 000m^3 for the entire facility.

The proposed landfill design incorporates objectives, principles and design elements for the emplacement of waste in an environmentally responsible manner in accordance with the Environment Protection Authorities (EPA) *Environmental Guidelines: Solid Waste Landfills* (EPA, 1996) (the Guideline).

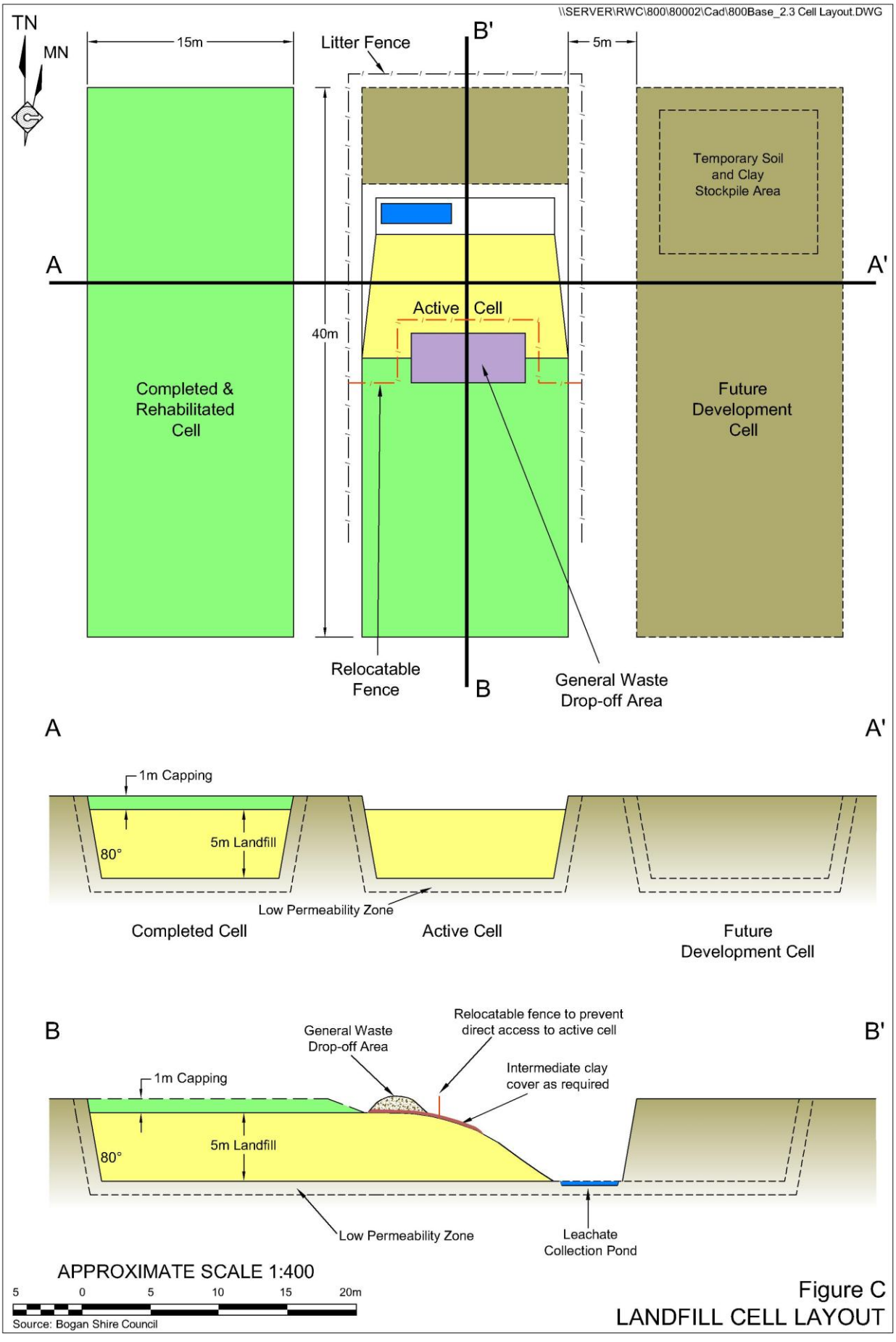


Figure C
LANDFILL CELL LAYOUT

Leachate Management

The design of the floor of the active landfill cell would include a leachate collection point or sump which would be relocated as landfilling activities progressively move north within the active cell. Leachate collected in the sump would be pumped to an appropriately lined Leachate Evaporation Pond using a mobile pump as required. As monthly evaporation rates in the vicinity of the Site exceeds the monthly mean rainfall during all months, accumulation of excessive volumes of leachate is not anticipated.

If required, the leachate management pond would be aerated to manage odour-related issues.

Once capped and rehabilitated, the Applicant anticipates that very little rainfall would infiltrate into the landfill cells and consequently very little leachate would be generated within the completed cells. As such, no post-rehabilitation leachate-specific management would be required.

Gas and Odour Management

Gas generation and odour emissions are not expected to be a major issue given the limited quantities of putrescible waste that would be landfilled. Notwithstanding this, the Applicant would implement the following gas and odour management measures.

- Minimise the risk of subsurface migration of gas through the use of an impermeable barrier in the floor and walls of each landfill cell.
- Ensure that odours would be minimised through limiting the size of the active emplacement area and installation and operation of an aerator on the Leachate Evaporation Pond, if required.
- Collect and oxidise any methane generated within the landfill cells in accordance with the State and Federal Regulatory requirements.

Hours of Operation

The proposed operational hours for the facility would be as follows.

- Landfilling Operations

  7:00am to 6:00pm, Monday to Saturday.

- Public Access

  7:00 am to 4:00pm Monday – Friday.

  6:00am to 6.00pm Saturday.

The facility would be locked and public access prevented outside the identified hours.

Employment

The Proposal will not result in the creation of additional employment. Rather, it will secure the ongoing employment of the existing Council workforce of approximately two people on a full-time equivalent basis.

The Proposal would also support employment within the Bogan Shire through flow-on benefits, including processing of recycled materials, the purchase of consumables and spending of employee wages.

Rehabilitation and Final Land Use

The final land use for the Site following completion of the Proposal would be the same as the existing land use, namely grazing, with areas of Myall Woodland EEC.

Rehabilitation would be undertaken progressively, with completed sections of cells compacted, covered with clay and soil and permitted to revegetate naturally.

Following completion of the life of the Proposal, the following would be implemented.

- Remove the Site office, workshop and all other infrastructure from the Site.
- Rip compacted areas and spread stockpiled subsoil then topsoil and allow to revegetate naturally.
- Construct long-term water management structures (if necessary).
- Implement an appropriate contamination survey and remediate any contamination identified.
- Backfill and rehabilitate the Leachate Evaporation Pond.

ENVIRONMENTAL SAFEGUARDS AND IMPACTS

The components and features of the existing environment on and around the Site have been studied in detail and the Proposal designed to avoid or minimise impacts on that environment. A brief overview of the main components of the surrounding environment, the proposed safeguards and the assessed level of impact are set out in the following sub-sections.

Biodiversity

The biodiversity assessment identified and recognised the potential value of the Myall Woodland EEC and threatened Grey-crowned Babbler observed immediately surrounding the Site (**Figure D)**. As such, the proposed layout has been developed to avoid impact to the EEC and threatened species. As a result, the Proposal would not result in a significant adverse biodiversity-related impact. In addition, the Applicant would use of species consistent with the Myall Woodland EEC as a visual screen within the Site. As a result, the Proposal is likely to result in additional areas of this community becoming established.

Litter

Litter-related impacts would be reduced through the placement of waste and use of intermediate covers and litter fences to limit the distribution of windblown litter. Litter that did occur would be managed through a daily inspection program and follow up collection.

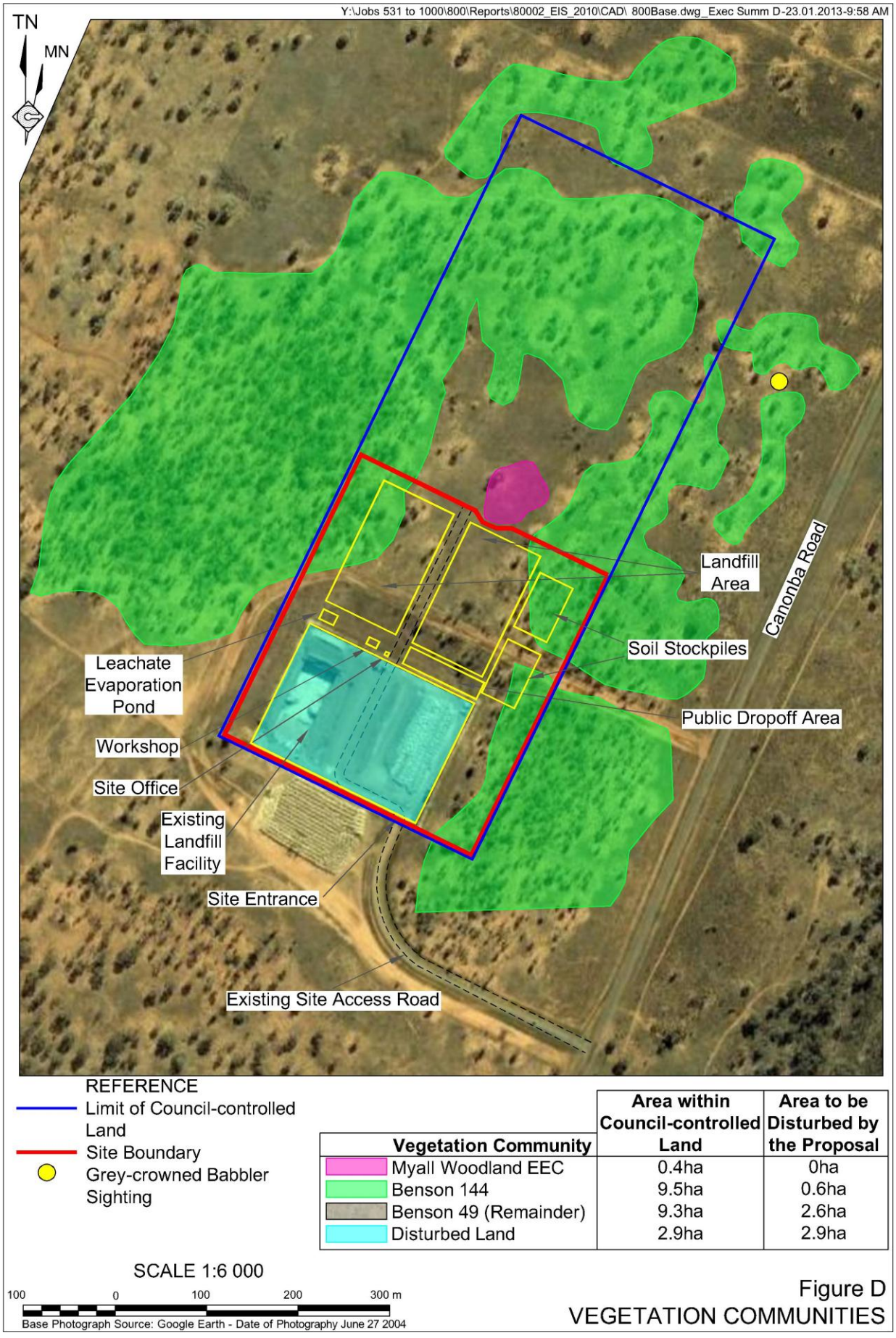
Air Quality, Odour and Greenhouse Gas

The air quality assessment has established that dust generated by on-site activities and dust lift-off from exposed areas is not likely to cause adverse dust impacts at any sensitive receptors. Odour is unlikely to impact any sensitive receptors.

Given the minimal quantities of waste proposed to be collected at the facility, it is not anticipated measures are required to monitor, capture or dispose of landfill gas.

Visibility

The proposed operations on the Site would be visible from Canonba Road. The Proposal has been designed with a range of visual controls including the planting of a tree/visual amenity screen consistent with the Myall Woodland EEC and the minimising of windblown litter.



Vegetation Community	Area within Council-controlled Land	Area to be Disturbed by the Proposal
Myall Woodland EEC	0.4ha	0ha
Benson 144	9.5ha	0.6ha
Benson 49 (Remainder)	9.3ha	2.6ha
Disturbed Land	2.9ha	2.9ha

Figure D
VEGETATION COMMUNITIES

Groundwater

The groundwater investigations for the Proposal have established that with the adoption of procedures for leachate collection and management and the compliance with the EPA Benchmark Technique 1, namely a permeability of 1 x 10^{-9}m/s over 900mm or equivalent, groundwater in the vicinity of the Site would not be adversely impacted by the Proposal. Additionally, as there is no anticipated discharge of groundwater in the vicinity of the Site, there would be no adverse impacts on groundwater dependent ecosystems.

Surface Water

The surface water investigations for the Proposal have established that with the adoption of the proposed leachate management measures and evaporation of potentially-contaminated water in accordance with EPA Benchmark Technique 3, surface water in the vicinity of the Site would not be adversely impacted by the Proposal.

Noise

The noise assessment has established that noise-related impacts associated with the Proposal are unlikely to be significant, with no increase in existing noise emissions and the closest residence being more than 2km from the Site.

Fire

Fire related impacts are anticipated to be minimal given the management measures proposed to reduce the risk of ignition, extinguish fire in the event it occurs and to prevent the spread of fire both from the Site and onto the Site.

Traffic

The traffic assessment has established that there would not be significant increases in vehicle movements as a result of the Proposal. The Applicant would ensure the behaviour of the drivers of Council-operated trucks travelling to and from the Site complies with the requirements identified by Council's Driver's Code of Conduct.

Heritage

The Aboriginal Heritage assessment did not identify any artefacts within or in the near vicinity of the Site. No ongoing Aboriginal heritage issues are expected.

Soils, Land Capability and Agricultural Suitability

The anticipated soils, land capability and agricultural suitability-related impacts associated with the Proposal would be negligible given the proven ability to manage the soils and achieve successful rehabilitation consistent with the land surrounding the Site.

PROJECT EVALUATION AND JUSTIFICATION

The Proposal has been justified based on the principles of ecologically sustainable development (ESD) and, on balance, it is concluded that the Proposal achieves a sustainable outcome for the local and wider environment.

After a full evaluation of the potential environmental impacts of the Proposal, there are no activities or features for which there is a level of uncertainty in achieving an acceptable level of environmental performance.

In general, the ESD concept promotes reducing, re-using and recycling of wastes. The Proposal is consistent with the continued efforts of the NSW Government to encourage community waste reduction, recycling and greater recognition of wastes as resources. Additionally, the focus upon recycling and re-processing on the Site is intended to ensure that where possible, resources are reprocessed into useful products, hence increasing the sustainable life span of those resources and limiting the amount of wastes destined for emplacement.

Ultimately, however, there are residual or other wastes that cannot be reused, recycled or reprocessed, and waste emplacement is the only feasible alternative.

CONCLUSION

The Proposal has, to the extent feasible, been designed to address all issues raised by all levels of government as well as the principles of ESD. The Proposal would assist in the management of the waste in Bogan Shire, maximising opportunities for recycling and re-processing waste and regressively rehabilitating the Site to productive grazing land.