

ASSESSMENT REPORT

Section 4.55(1A) Modification Armidale Regional Landfill (06_0220 MOD 2)

1. INTRODUCTION

This report assesses a modification application by Armidale Regional Council (the Applicant) to utilise alternative liner and leachate drainage options at the Armidale Regional Landfill. The application has been lodged pursuant to section 4.55(1A) of the *Environmental Planning and Assessment Act 1979* (EP&A Act).

2. BACKGROUND

The Applicant has approval for the construction and operation of a regional general solid waste landfill at 1238 Grafton Road, Metz in the Armidale Regional local government area (LGA) (see **Figure 1**). The site is legally described as Lot 1 in DP 1206469.



Figure 1: Site Location (depicted with star)

The site is located approximately 12 kilometres (km) east of the city of Armidale off Grafton Road (also known as Waterfall Way). The nearest rural residents are located approximately 410 metres (m) south and 1.4 km north of the site. The Gara River and the Oxley Wild Rivers National Park are located approximately 1 km east and 4 km south of the site, respectively.

Construction of the landfill cell commenced in April 2017, however an inadequate supply of suitable clay was identified both within the site and the Armidale region. As such, the Applicant is seeking approval for use of alternative liner material.

The layout of the development is depicted in **Figure 2**.

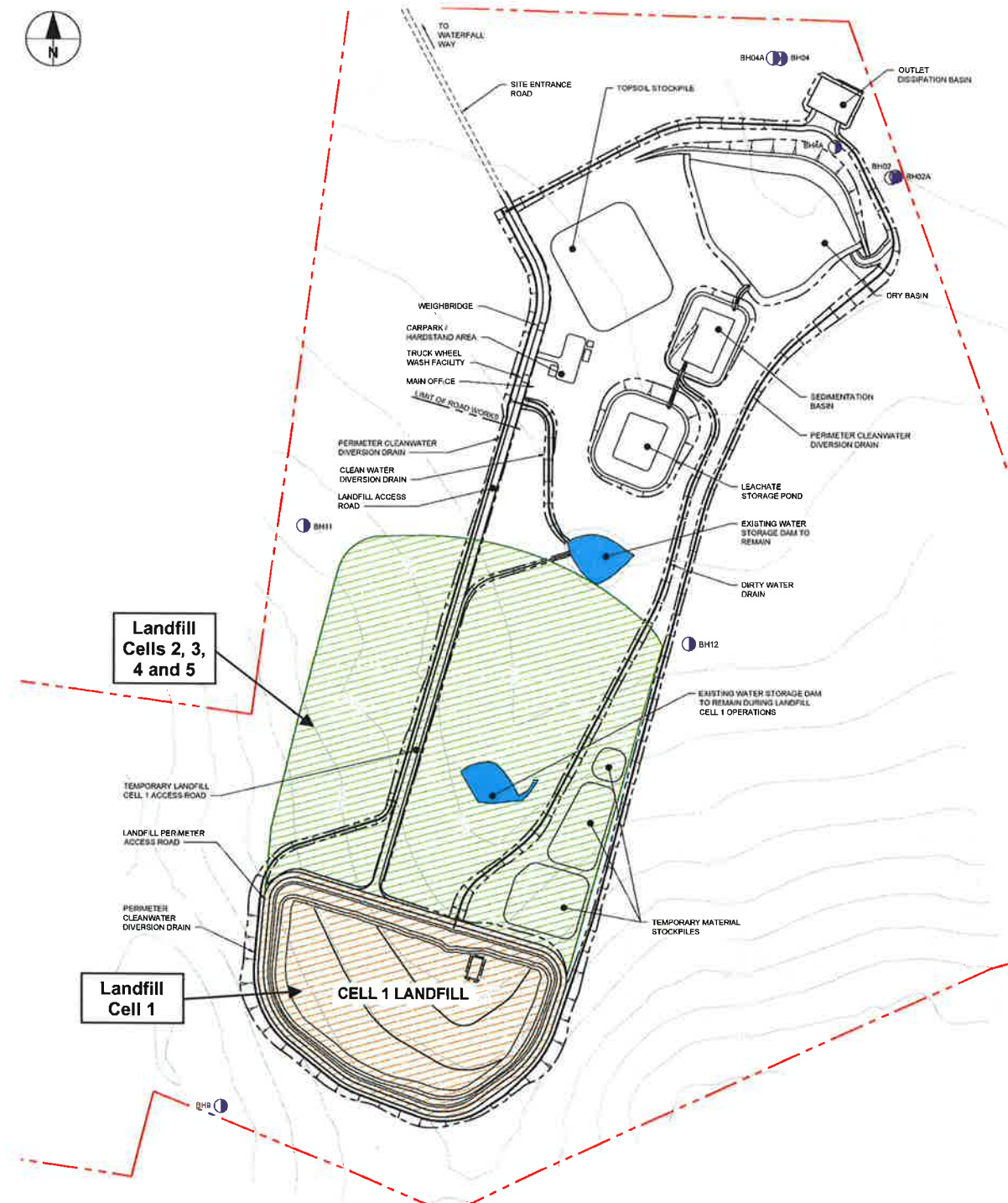


Figure 2: Armidale Regional Landfill Layout

3. APPROVAL HISTORY

On 4 July 2012, Project Approval 06_0220 was granted by the then Planning Assessment Commission (now the Independent Planning Commission) under delegation of the Minister for Planning for a regional landfill providing a waste capacity of 750,000 tonnes over 50 years at a rate of 15,000 tonnes per annum (tpa). The Project Approval permits the following works:

- associated infrastructure comprising five 211,000 cubic metre (m³) landfill cells, leachate containment and circulation system, internal access road, office and staff amenities and diesel storage
- internal access road and access junction at Grafton Road (Waterfall Way)
- clearing 20.3 hectares (ha) of land and a 61 ha biodiversity offset scheme
- subdivision.

On 11 August 2015, the Project Approval was modified under section 75W of the EP&A Act by the Director, Industry Assessments under delegation of the Minister for Planning. The modification was sought following refinements made during the detailed design phase of the landfill. The modification of the Project Approval permitted the:

- amendment of the timing for the submission of the ground and surface water monitoring plan
- installation of a new weighbridge
- realignment of the internal access road
- amendment of the culvert design
- removal of the commitment to install a cattle grid
- removal of the 'cell cap layer' from the calculation of the maximum cell volume.

On 1 March 2018, the transitional arrangements for Part 3A approvals ended. In order to modify a Part 3A approval, it must be declared SSD by the Minister for Planning and modified under section 4.55 of the EP&A Act. The transition of Part 3A Projects to State significant development (SSD) is discussed further in section 5.

On 4 April 2018, the Applicant lodged a section 4.55(1A) modification application (06_0220 MOD 2) seeking approval to amend the approved landfill base liner, the leachate pond liner and the sidewall leachate drainage system.

4. PROPOSED MODIFICATION

The Applicant has lodged a modification application under section 4.55(1A) of the EP&A Act to modify the Armidale Regional Landfill to facilitate the use of alternative landfill and leachate pond liners and leachate drainage system. The modification is described in full in the modification application included in **Appendix B** and is summarised in **Table 1**.

Table 1: Proposed Modifications to the Landfill Liners

Aspect	Approved	Proposed
Landfill base liner	900 mm thick clay liner with a 1.5 mm High Density Polyethylene (HDPE) liner	Geosynthetic clay liner (GCL) with a 2 mm HDPE liner
Leachate pond liner	900 mm clay liner with a permeability of 10^{-9} with a 1.5 mm HDPE liner	600 mm clay liner with a permeability of 2×10^{-10} with a 2 mm HDPE liner
Sidewall leachate drainage system	Drainage gravel	Drainage geocomposite

4.1 Applicant's Need for the Modification

The Armidale Regional Landfill is being constructed to service the waste management needs of the Armidale Region, Uralla and Walcha LGAs over a 50 year lifespan. The development of a single regional landfill was considered the best option for waste management in the region as it would cut down on operational costs and simplify regulation by consolidating this operation to a single site.

To date, construction of the Armidale Regional Landfill has commenced, but has recently stalled awaiting clarification on alternative liner solutions. The Applicant advised the construction delays are creating a strain on the management of waste in the region. Currently, the largest landfill in the area is the Armidale Waste Management Centre (see **Figure 1**), which comprises a materials recycling facility, a waste transfer station and a landfill. The facility has been operating since 1961 and is reaching its landfill capacity.

Despite prior geotechnical investigations on the site, the Applicant has been unable to obtain the required volume of suitable clay to provide a 900 mm thick clay liner for the landfill and leachate pond. As such, the Applicant has had to pursue alternative liner options. The Applicant carried out an options analysis of possible alternative liners permitted under the *Environmental Guidelines for Solid Waste Landfills – EPA 2016* (the landfill guidelines) in consultation with the EPA.

As a result, the Applicant has selected a GCL as an alternative to the 900 mm of re-compacted clay for the landfill and a reduced thickness of clay and increased thickness of HDPE for the leachate pond liner. The Applicant has lodged this modification application to facilitate the use of these alternative liner options.

5. STATUTORY CONTEXT

5.1 Consent Authority

The Minister for Planning is the consent authority for the application under section 4.5(a) of the EP&A Act. Under the Minister's delegation of 11 October 2017, the acting Director, Industry Assessments, may determine the application under delegation as:

- the relevant local council has not made an objection and
- a political disclosure statement has not been made and
- there are no public submissions in the nature of objections.

5.2 Part 3A Transition to State Significant Development

The Armidale Regional Landfill (06_0220) was approved under Part 3A of the EP&A Act. Under clause 6 of Schedule 2 of the *Environmental Planning and Assessment (Savings, Transitional and Other Provisions) Regulation 2017*, the Armidale Regional Landfill was transitioned to SSD by order, which took effect by publication in the NSW Government Gazette on 27 April 2018.

The Applicant lodged a modification application under section 4.55(1A) of the EP&A Act for a modification involving minimal environmental impact.

5.3 Section 4.55(1A)

The Department has reviewed the scope of the modification application and is satisfied that the proposed modification would result in minimal environmental impacts, and relates to substantially the same development as the original approval on the basis that:

- the primary function and purpose of the approved project would not change as a result of the proposed modification
- the modification is of a scale that warrants the use of section 4.55(1A) of the EP&A Act
- the approved footprint, capacity and operation of the landfill would remain unchanged as a result of the proposed modification
- any potential environmental impacts would be minimal and appropriately managed through the existing or modified conditions of approval.

Therefore, the Department is satisfied the proposed modification is within the scope of section 4.55(1A) of the EP&A Act and does not constitute a new development application. Accordingly, the Department considers that the application should be assessed and determined under section 4.55(1A) of the EP&A Act rather than requiring a new development application to be lodged.

6. CONSULTATION

Clause 117(3B) of the *Environmental Planning and Assessment Regulation 2000* (EP&A Regulation) specifies that the notification requirements of the EP&A Regulation does not apply to SSD. Accordingly, the application was not notified or advertised, however, it was made publicly available on the Department's website on 9 April 2018.

The Applicant selected the alternative liner and leachate drainage options agreed with by the Environment Protection Authority (EPA).

7. ASSESSMENT

The Department has assessed the merits of the proposed modification. During this assessment, the Department has considered the:

- modification application provided to support the proposed modification (see **Appendix B**)
- assessment report for the original development application and subsequent modification application
- relevant environmental planning instruments, policies and guidelines
- requirements of the EP&A Act, including the objects of the EP&A Act.

The Department considers the key assessment issue is leachate management.

7.1 Leachate Management

The site is located within the Gara River catchment, which flows to Oxley Wild Rivers National Park (see **Figure 1**). The release of leachate into the surface water or groundwater would have downstream impacts on the river and the national park. Recognising this, strict standards for the leachate system were recommended by the EPA and imposed in the conditions of approval for the Armidale Regional

Landfill by the Department, including specifications for the landfill cell and leachate pond liners. This included the ability for the Applicant to utilise a “re-compacted clay liner or similar material (refer to Schedule 4, Condition 5 of Project Approval 06_0220)” to ensure a co-efficient permeability of less than 10^{-9} metres / second. To avoid leachate impacting the groundwater, any alternative liner option must meet or exceed the permeability requirements of the existing condition of approval and the criteria set out in EPA’s landfill guidelines.

As such, the Applicant ensured the alternative liner options were selected in consultation with the EPA and in accordance with the landfill guidelines. The modification application included a letter of endorsement from the EPA, which is summarised in **Table 2** and details compliance with the landfill guidelines.

Table 2: Assessment of the Proposed Landfill Liner

Design aspect	Approved	Proposed	Meets EPA Landfill Guidelines Criteria?
Landfill cell liner	900 mm thick clay liner with a 1.5 mm HDPE liner	900 mm GCL with a 2 mm HDPE liner	Yes, a GCL may be used as an alternative when used in conjunction with an overlying geomembrane liner (section 1.1 of the landfill guidelines)
Leachate pond liner	900 mm clay liner with a permeability of 10^{-9} with a 1.5 mm HDPE liner	600 mm clay liner with a permeability of 2×10^{-10} with a 2 mm HDPE liner	Yes, the proposed liner has improved permeability
Sidewall leachate drainage system	Drainage gravel	Drainage geocomposite	Yes, a geonet drainage geocomposite may be used as an alternative for sidewall leachate drainage (section 1.9 of the guidelines)

The Department is generally satisfied with the robustness of the Applicant’s assessment of potential alternative options and notes the EPA’s support for the alternative liner and leachate drainage options selected by the Applicant. The Department’s assessment concludes the proposed modification would not result in additional impacts beyond what was previously assessed as the permeability of the alternative liner options would be the same as or exceed the permeability of recompacted clay and comply with the criteria set out in the landfill guidelines. The Department has recommended amendments to the conditions to allow for the utilisation of the alternative material.

8. CONCLUSION

The Department has assessed the proposed modification in accordance with the relevant requirements of the EP&A Act. The Department considers the proposed modification is appropriate on the basis that:

- the proposed modification will result in minimal environmental impacts beyond the approved facility
- the approved footprint, capacity and operation of the landfill would remain unchanged as a result of the proposed modification
- the proposed landfill liner would provide the same environmental performance and meet relevant EPA requirements.

The Department is satisfied that the modification should be approved, subject to conditions.

9. RECOMMENDATION

It is recommended that the Director, Industry Assessments, as delegate for the Minister for Planning:

- consider the findings and recommendations of this report
- determine that the application 06_0220 MOD 2 falls within the scope section 4.55(1A) of the EP&A Act
- modify Project Approval 06_0220
- sign the attached approval of the modification (**Appendix A**).

Recommended by:

 27/4/18

Bianca Thornton
Planning Officer
Industry Assessments

Recommended by:

 27/04/18

Kelly McNicol
Team Leader
Industry Assessments

DECISION

The recommendation is: Approved by:

 30.04.18

Nicholas Hall
A/Director
Industry Assessments
as delegate of the Minister for Planning

APPENDIX A – NOTICE OF MODIFICATION

See link: http://www.majorprojects.planning.nsw.gov.au/index.pl?action=view_job&job_id=9248

APPENDIX B – MODIFICATION APPLICATION

See link: http://www.majorprojects.planning.nsw.gov.au/index.pl?action=view_job&job_id=9248