

State Planning Commission

AMENDMENT to the ASSESSMENT REPORT

INKERMAN LANDFILL (NORTHWARD FILL) – RESOURCE RECOVERY CENTRE MASTERPLAN

Cleanaway Waste Management Ltd



August 2022

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1. Milestones and Key Dates

Milestone	Date
EIS Amendment Received	2 July 2021
Release of Amendment to the EIS for public comment	26 January 2022
Final Response Document Received	24 May 2022

2. Executive Summary

The Inkerman Landfill (Northward Fill) proposal was declared to be a major development on 4 August 1995 by the then Minister for Housing, Urban Development and Local Government Relations under section 46 of the *Development Act 1993* (the Act).

The original proposal involved the development of a below and above ground landfill at Inkerman, 85km north-west of Adelaide. The landfill was proposed to receive waste products after processing at off-site waste transfer stations utilising best practice recycling and waste minimisation techniques. The landfill depot was expected to receive waste at a rate of approximately 250 000 tonnes per annum increasing to 600 000 tonnes per annum when existing Metropolitan sites closed.

On 21 January 1999, following an Environmental Impact Statement (EIS) process, the Governor gave notice in the Government Gazette that a development authorisation was granted subject to conditions, pursuant to section 48 of the Act.

The development has been progressively modified during its operation, being the subject of multiple applications to vary the development authorisation and associated amendments to the EIS under section 47 of the repealed Act.

The proponent, Cleanaway Waste Management Ltd (Cleanaway), has applied for an amendment to the current development authorisation to transition the site to a resource recovery centre, with the key purpose of creating products with beneficial uses and diverting waste from landfill.

A Masterplan has been prepared that outlines the proposed staged development of resource recovery facilities over a 10-year timeframe and addressed in an Amendment Environmental Impact Statement (AEIS).

The AEIS underwent public consultation during January-February 2022. In May 2022, the proponent submitted a Response Document that addressed the matters raised in the public submissions, agency advice and council comments. In particular, it highlighted the conceptual nature of the masterplan approach and the requirement to process any stages via separate statutory approvals.

The Masterplan proposes new facilities which aim to recycle soil and to process Construction and Demolition (C&D), Commercial and Industrial (C&I), and Municipal Solid Waste (MSW) streams, including contaminated soil/hazardous waste materials.

This Amendment to the Assessment Report (AAR) considers the implications of the proposed resource recovery activities operating in conjunction with the existing landfill operations and assesses the potential environmental, social and economic impacts at a masterplan 'conceptual' level.

Further information on the establishment of the landfill site can be obtained from

- the Assessment Report for the Construction of the Inkerman Landfill Depot (1997);
- the Amendment to the Assessment Report for the Environmental Impact Statement (as Amended) for the Inkerman Landfill Depot Northward Fill (1998); and
- the Second Amendment to the Assessment Report for the Environmental Impact Statement (Amendment) For the Transpacific Waste Management, Accommodation of Additional Waste Types at the Northward Fill, Inkerman (2009)

The assessment process has been informed with advice from State Government agencies (especially the EPA); the Wakefield Regional Council; and public submissions.

The Wakefield Regional Council submission acknowledges that the proposed resource recovery facility broadly aligns with Council's strategic aims for the region, however the inclusion of High Level Contaminated Waste (HLCW) into the waste stream at Inkerman – conceptual or otherwise – requires further information and consideration.

The EPA has indicated in-principle support of the Resource Recovery Centre Master Plan, noting that each stage of the proposed masterplan implementation would require an application during which an assessment (including referral to the EPA) would be undertaken.

Issues raised by the public mainly related to the difficulties in understanding the proposed development and potential impacts given the level of detail provided at a masterplan/conceptual level. Concern was also raised with a reference to Cleanaway's intention to seek approval to receive and treat HLCW at the Inkerman site.

The assessment process has found that, at a conceptual level, the proposed Resource Recovery Centre has the potential to deliver a range of environmental benefits given the planned diversion of waste from landfill and the reuse of recovered products on site (i.e. for existing and future site operations and development), in addition to the opportunity for external markets.

The Masterplan articulates the proposed resources recovery elements at a 'conceptual level' as such the risk and mitigation measures associated with implementing each stage will require provision of detailed information.

It is concluded that a variation to the current development authorisation should be granted to adopt the proposed Masterplan, subject to additional conditions recommended in the AAR.

3. Introduction

The 'Inkerman Northward Fill Landfill' development proposal was originally declared a major development on 4 August 1995. After undergoing an Environmental Impact Assessment (EIA) process the proposal was approved by the Governor on 21 January 1999.

The original proposal involved the development of a below and above ground landfill at Inkerman, which would receive waste products after processing at off-site waste transfer stations utilising best practice recycling and waste minimisation techniques.

The landfill depot was anticipated to receive waste at a rate of approximately 250,000 tonnes per annum increasing to 600,000 tonnes per annum when existing metropolitan sites closed.

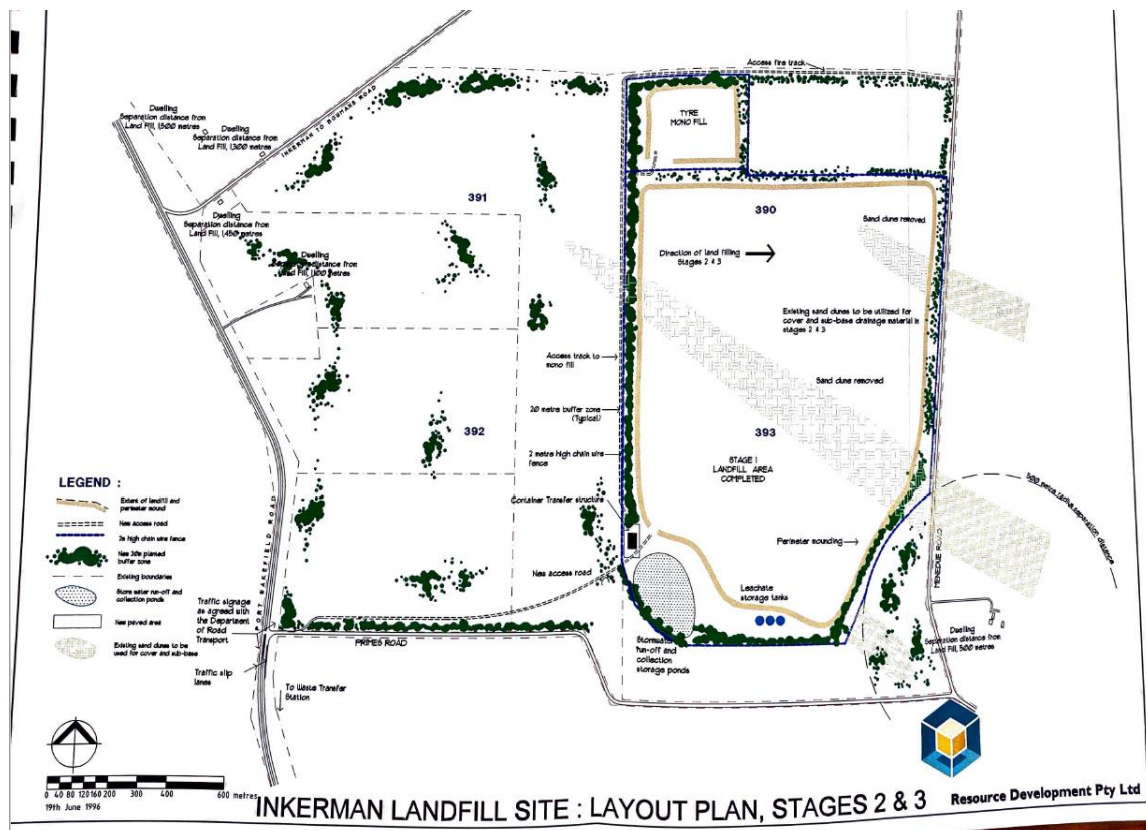


Figure 1: Layout plan showing the various components of the original approved landfill development.

The Northward Fill Landfill facility located approximately 85 km north-west of Adelaide, and approximately 15 kms south-east of Port Wakefield at Inkerman, South Australia.



Figure 2: Location Plan.

The site comprises the following parcels of land:

- Allotment 9 in Deposited Plan 32395; Certificate of Title: Volume 5974 Folio 868.
- Sections 390 and 393; Certificate of Title: Volume 5974 Folio 869.
- Allotment 57 in Deposited Plan 34319; Certificate of Title: Volume 5417 Folio 367.
- Allotment 11 in Deposited Plan 45788; Certificate of Title: Volume 5401 Folio 336.
- Allotment 58 in Deposited Plan 34319; Certificate of Title: Volume 5417 Folio 364.

Site access is obtained from Primes Road which intersects with Port Wakefield Road.

The landfill was commissioned in 2004 and since that time ten (10) variations to the development authorisation have been granted, with the most recent approved by the State Commission Assessment Panel on 1 August 2019 for modification of the final landfill profile design.

Waste received at the site for 'landfilling' typically comprises of residual material remaining after the waste is subjected to offsite resource recovery processes.

Examples of waste received at the Northward Fill Landfill includes the receipt of residues from Cleanaway's Liquid Waste Treatment Plant and the network of waste transfer stations located in metropolitan and regional South Australia.

Stages 1 and 2 of the landfill are closed and capped in accordance with an EPA approved capping plan.

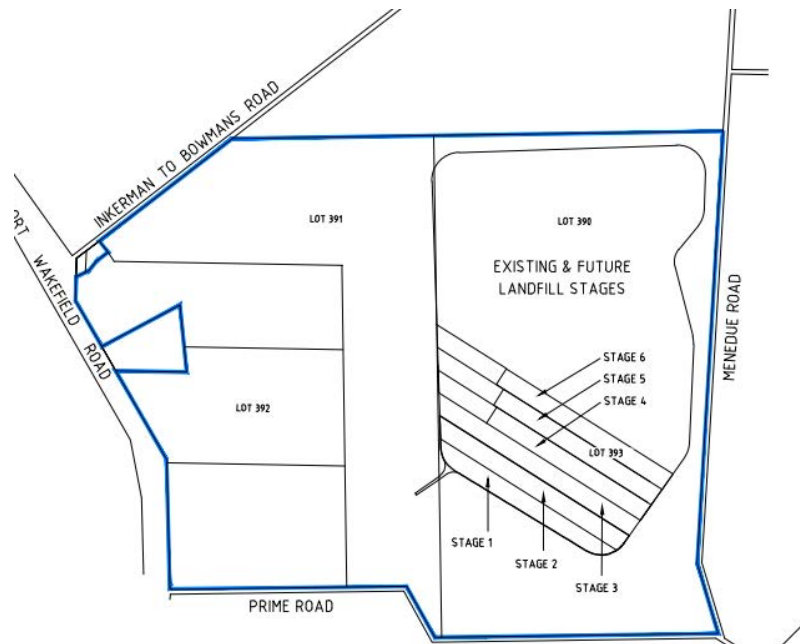


Figure 3: Layout plan showing the current approved landfill.

The proponent (Cleanaway) now wishes to establish a resource recovery facility to divert waste from landfill and the reuse of recovered products.

The proponents' Amendment to the Environmental Impact Statement (AEIS) went on public exhibition in January 2022, resulting in receipt of public, council and agency submissions.

This Amendment to the Assessment Report (AAR) considers the potential environmental, social and economic impacts of establishing the proposed resource recovery facility which would be operated in association with the current landfill.

The report outlines the assessment process, project scope, submissions on the AEIS, consideration of the key planning issues, and then makes a recommendation on the merits of the proposal for the further consideration and decision by the Minister for Planning.

4. Assessment Process

The existing Inkerman Northward Fill Landfill was granted provisional development authorisation on 21 January 1999 after undergoing an Environmental Impact Statement (EIS) process, including the preparation of an Assessment Report.

The Environment Protection Authority (EPA) issued a Waste or Recycling Depot licence (14463) to Waste Management Pacific on 1 September 2001 to enable establishment of the landfill, which was commissioned in 2004.

The development authorisation has been varied on multiple occasions as follows:

- **17 June 2004** - alteration to the method of waste transport and transfer to the disposal area, alteration of the maintenance workshop and removal of the long haul vehicle fuel storage area

- **14 October 2004** - landfill lining and leachate collection system
- **13 April 2006** - leachate collection system and a change to the operating hours
- **20 September 2007** - receipt of additional waste materials
- **5 June 2008** - recycling of waste materials
- **20 August 2009** - allow the receipt of low level contaminated waste at the approved landfill and disposal of these wastes into cells that are separate from those used to dispose of solid wastes)
- **4 March 2010** - receipt and disposal of non- metropolitan construction and demolition waste that is not required to go through a waste recovery and waste transfer facility and an updated design of the liner system for low level contaminated waste cells
- **8 December 2011** - modification to the design of the existing maintenance shed
- **20 December 2018** - increase of the final landfill height
- **1 August 2019** - modification of the final landfill profile design.

The variations were granted by the former Development Assessment Commission (now State Commission Assessment Panel), as the delegate of the Governor.

A copy of the current authorisation (dated 25 July 2019) is provided at Appendix 1.

Pursuant to Section 47 of the *Development Act 1993* (now superseded by the *Planning, Development and Infrastructure Act 2016*), an EIS could be amended by a proponent at any time to take account of an alteration to the original proposal.

If the Minister considered that a proposed amendment would significantly affect the substance of the original EIS, the amendment must not be made before interested persons had been invited, by public advertisement, to make written submissions on the amendment.

The Act also required the amendment to be referred to the local Council and, as the proposal involves a prescribed activity as defined by the *Environment Protection Act 1993*, to the Environment Protection Authority (EPA) for review and any comment. Additionally, if more than five years have elapsed since the public consultation of the original proposal, the documentation must be formally reviewed as part of this process.

4.1 Declaration and Guidelines

The 'Inkerman Northward Fill Landfill' development proposal was originally declared a major development on 4 August 1995, with the draft Guidelines for the preparation of an EIS released on 21 August 1995. The original Major Development declaration/determination and Guidelines remain applicable for the assessment of this EIS Amendment.

4.2 The Relevant Authority

The original major development approval was granted prior to the introduction of the Planning and Design Code, such that Regulation 11(3) of the *Planning, Development and Infrastructure (Transitional Provisions) Variation Regulations 2017* has the effect of recognising the previous declaration, EIS documentation, Assessment Report, and development authorisations as if they were made and/or approved under the impact assessed (not restricted) pathway of the new Act.

The Minister for Planning is the decision maker.

In considering this matter, regard must be given to the Amendment to the EIS, public, agency and Council submissions, the Response Document, relevant planning policies of the Code, the applicable Planning Strategy - Regional Plan, State Planning Policies, the *Environment Protection Act 1993* and any other matters that the State Planning Commission, and ultimately the Minister as the decision maker, considers relevant to the assessment and determination of the variation.

It should be noted that the EIS Amendment only seeks to implement a 10 year Masterplan for the site, involving resource recovery activities which are conceptual proposals at this stage and, if approved, detailed technical information and designs would need to be submitted for further assessment and approval before any facilities could be constructed and commence operation.

4.3 Consultation on the Amendment to the EIS

Public consultation on the AEIS occurred for a period of 15 business days between 26 January and 16 February 2022. Copies of the AEIS were made available at the Attorney-General's Department, Planning and Land Use Services (AGD-PLUS) and Wakefield Regional Council office and on the SA Planning Portal. Two public notices were published in the *Adelaide Advertiser* and *The Plains Producer* advising of the release of the AEIS, where to obtain or view a copy of the AEIS.

5. The Amendment to the Assessment Report

The State Planning Commission is responsible for the preparation – in this case – of an Amendment to the Assessment Report, a new responsibility under the *Planning, Development and Infrastructure Act 2016* (a role previously undertaken by the Minister for Planning under the *Development Act 1993*).

The original Assessment Report for the 'Inkerman Northward Fill Landfill' development proposal was prepared by the Minister in April 1997. A subsequent amendment to the Assessment Report occurred in August 2009 to accommodate additional waste types (to receive and dispose of low level contaminated waste).

This Amendment to the Assessment Report (AAR) assesses the environmental, social and economic impacts of the proposal by Cleanaway Waste Management Ltd (Cleanaway) to establish a Resource Recovery Centre via the development of a range of resources recovery facilities.

The AAR takes into consideration the requirements established under the new impact assessed (not restricted) pathway, including an assessment of the proposal as presented in the AEIS, community, Council and agency comments, and the Response Document.

The Response Document, along with the AEIS, forms the finalised proposal.

The public submissions and the Response Document are available at:
https://plan.sa.gov.au/state_snapshot/development_activity/major_projects

The AAR does not include an assessment of any elements of the proposal against the provisions of the Building Rules under the *Planning, Development and Infrastructure Act 2016*. Further assessment of the elements of the proposed development against these rules will be required should an approval be issued.

6. Description of the Proposal

The proposal seeks to develop the site to form the Inkerman Resource Recovery Centre (RRC) by establishing resource recovery facilities outside of the landfill footprint to process incoming waste streams to create products with beneficial uses.

The 'Inkerman Resource Recovery Centre Masterplan' prepared by DBD Environmental proposes the introduction of the following activities:

- Soil Recycling
- Green Waste Processing and Composting
- Construction and Demolition waste processing
- Stage 3a - Installation of C&D Processing Shed
- Stage 4 - Contaminated Soil / Hazardous Waste Treatment
- Stage 5 - Material Recovery Facility: Commercial and Industrial (C&I), and Municipal Solid Waste (MSW) materials

In addition, the proposed Masterplan identifies a range of required supporting infrastructure and works and also flags the possibility of an energy from waste (EFW) facility or solar farm.



Figure 4: Masterplan site layout

The Masterplan has indicated a staged implementation of the resource recovery activities over an approximately 10-year period.

Elements of each staging is detailed below.

Soil Recycling Facility - Stage 1

Construction of soil recycling facility to accept incoming soil materials for processed (if required), temporarily stockpiling, and reused on site. The facility would comprise a dedicated heavy vehicle unloading area, dedicated heavy vehicle entrance and exit, feedstock storage areas, processing area (including trommel, screens and other associated plant) and finished product storage areas

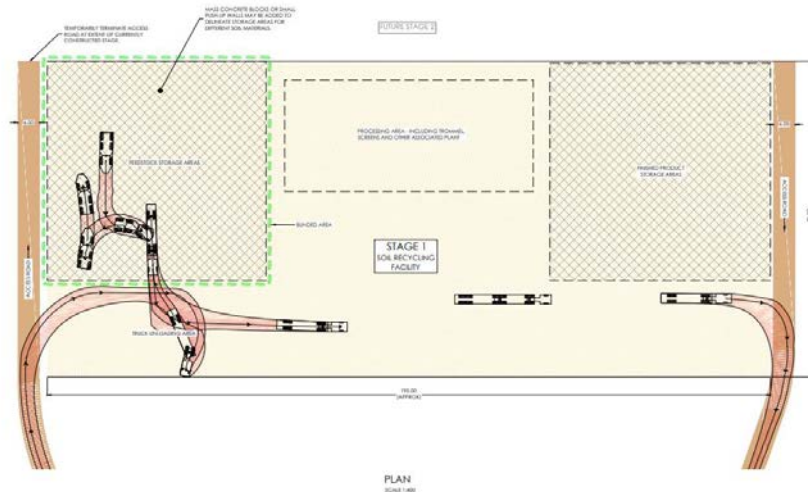


Figure 5: Stage 1 – Soil Recycling Facility

Green Waste Processing/Composting Facility - Stage 2

Establishment of a green waste processing and composting operations.

The facility would comprise a dedicated heavy vehicle unloading area, dedicated heavy vehicle entrance and exit, feedstock storage areas equipped with mass concrete blocks or push-up walls, pre-processing area with shredding plant, lined composting pad, post-processing area (including trommel/screens to delineate the material into fractions for reuse) and finished product storage area.

The intent is for the facility to process a selection of suitable material from the following waste streams:

- Green waste
- Clean timber
- Domestic and commercial organics
- Organics from processed MSW (Compost like Organics)
- C&I trommel fines (Soil like Fines)
- Soils

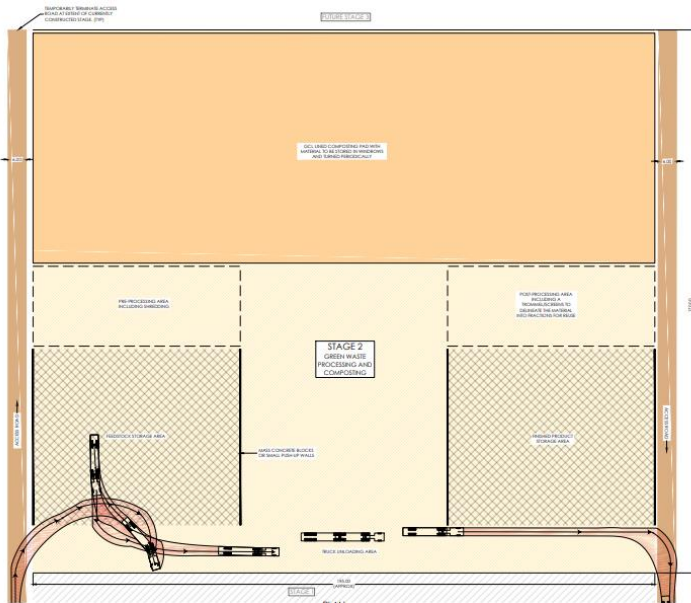


Figure 6: Green waste processing and composting

C&D Processing Facility - Stage 3 (and Processing Shed - Stage 3a)

Establishment of a C&D processing facility comprising a combination of crushing and screening processes to create aggregates to a variety of specifications.

The facility will comprise a dedicated heavy vehicle unloading area, dedicated heavy vehicle entrance and exit, feedstock storage areas, processing area (including crushing plant, screens, and other associated plant), processing shed structure (future item stage 3a) and finished product storage areas.

The intent is for these aggregates to be reused on site (e.g., as road base for site roads or granular pavements constructed by Cleanaway) or for resale into the local market and the processing and required quality assurance will be tailored to the intended end use for the product.

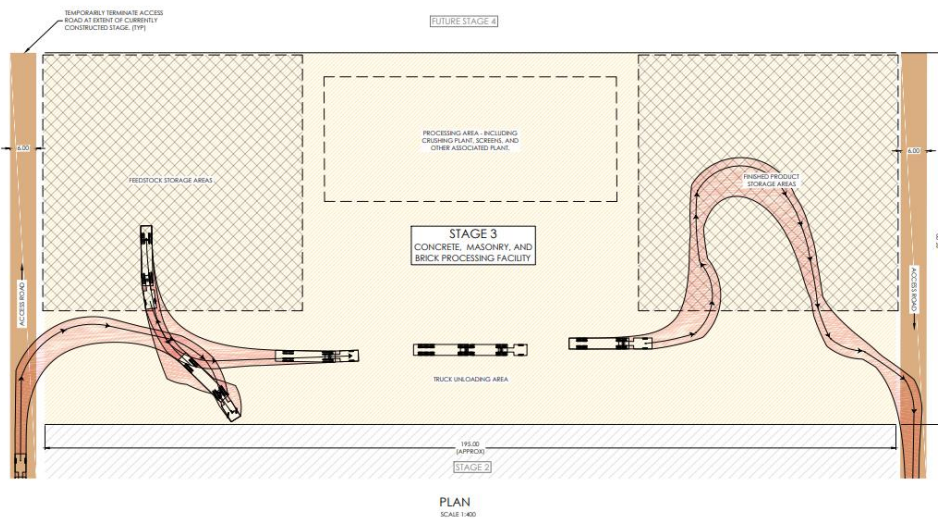


Figure 7: Stage 3 – C&D Processing Facility

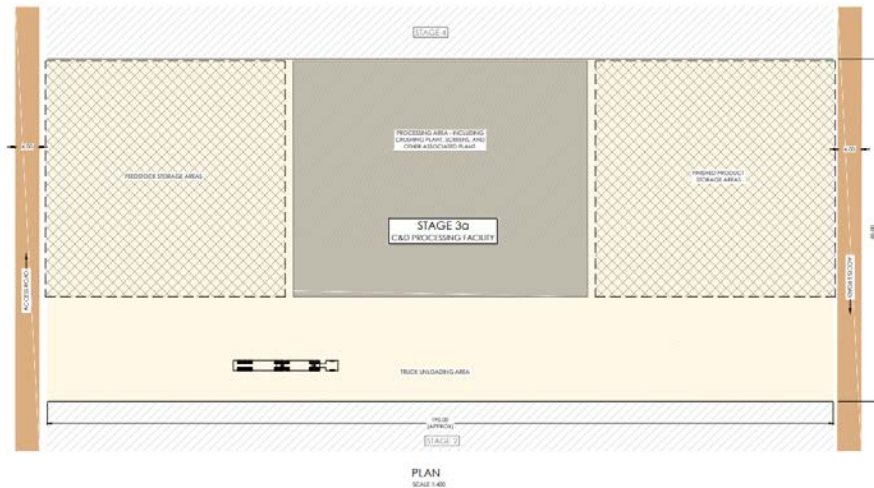


Figure 8: Stage 3a – C&D Processing Facility

Contaminated Soil/Hazardous Waste Treatment Facility - Stage 4

Establishment of a Contaminated Soil/Hazardous Waste Treatment Facility comprising a dedicated heavy vehicle unloading area, dedicated heavy vehicle entrance and exit, concrete apron for waste soil drop-off, processing shed (nominally 50m x 40m) and finished product storage areas.

The proponent has indicated that prior to the establishment of Stage they will seek approval from the EPA for a storage licence to store unclassified material on an isolated portion of the LLCW cell with appropriate environmental management measures.

Further the proponent has indicated that they intend to seek EPA and Development approval to receive and treat HLCW at the site via a range of treatment processes.

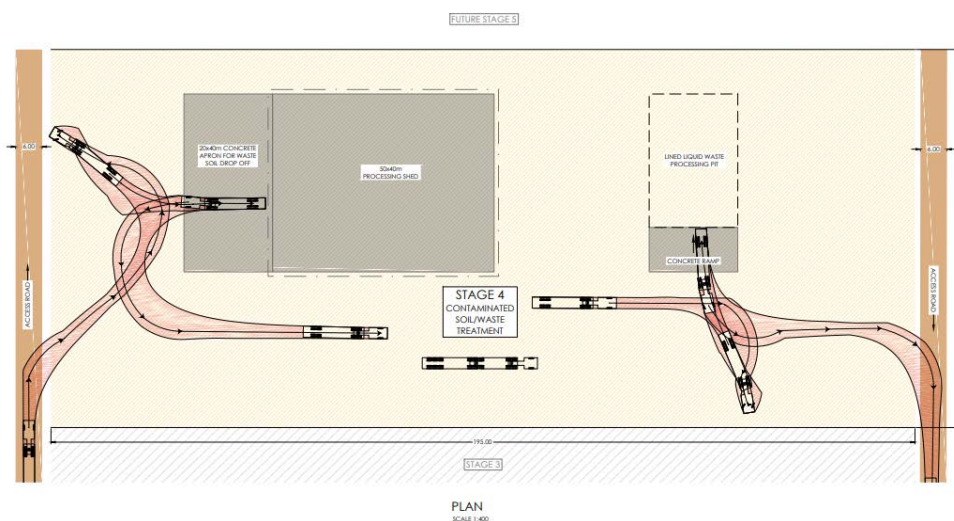


Figure 9: Stage 4 – Contaminated Soil and Waste Treatment

Material Recovery Facility - Stage 5

Establishment of a Material Recovery Facility processes incoming mixed waste and divert recoverable waste streams from landfill. The facility would comprise a dedicated heavy vehicle unloading area, dedicated heavy vehicle entrance and exit, feedstock waste drop-off, floor sorting and temporary storage areas, MRF shed with concrete floor, plant area (including a selection of: shredders, trommels, screens, optical sorting, eddy-current separator, magnetic separator, air separators, vibration/ballistic separators, and conveyor systems), residual MSW temporary storage area, finished product storage areas, and additional area for plant laydown, additional product storage and/or to facilitate future developments.

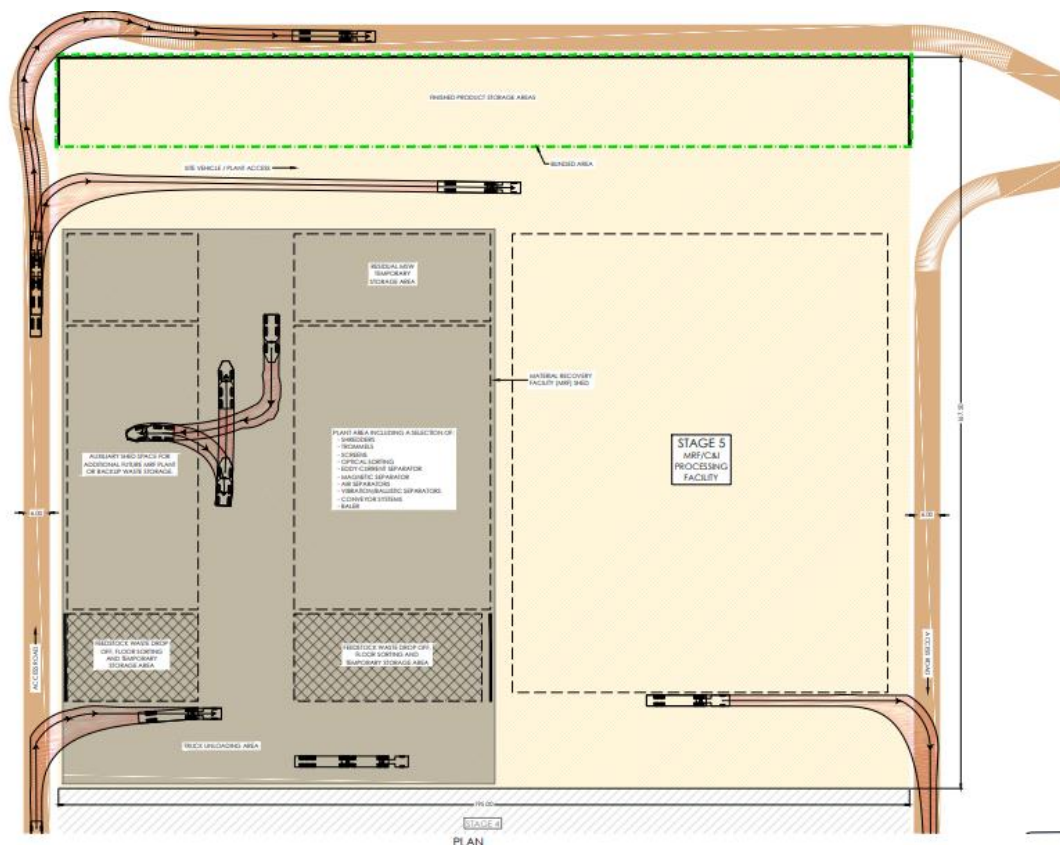


Figure 10: Stage 5 – MRF Processing Facility

Potential for Future Small Scale EFW / Solar Farm Development

The EIS Amendment and Masterplan indicates that the proponent may explore the installation of a solar farm and/or small to medium scale energy from waste facility for power generation purposes.

No further supporting information has been provided.

Supporting Infrastructure and Works

Site Roads

Upgrade of the unsealed haulage road adjacent to the active and capped landfill to provide a perimeter road around the proposed facilities for access, with secondary internal unsealed roads as required.

Rehabilitation of Borrow Pits

Rehabilitation of the existing borrow pits with geotechnically sound material to allow the construction of the resource recovery facilities across a portion of the footprint.

Environmental Mounds

Construction of vegetated earthen mounds adjacent the proposed resource recovery operations and sections of the landfill to assist with management of environmental risks (associated with litter, noise, dust, odour, and visual amenity).

Stormwater Management

Construction of a new stormwater basin to service the future resource recovery operations. The intended stormwater management methodology is for stormwater to be managed via overland flow and a combination of gravity stormwater management measures from the proposed facilities and to be controlled in the stormwater basin to the southwest of the development.

9. Description of the Existing Environment

Surrounding land uses include livestock grazing, cereal cropping and intensive animal keeping. The nearest residence is situated approximately 500 m from the southern edge of the landfill disposal area, while three other residences are approximately 830 m, 1,030 m, and 1,500 m (respectively) from the site. A Mineral Lease is located on the northern property boundary and agricultural activities occur within 1 kilometre of site boundaries.

The portion of site which is not utilised for landfill and associated operations is routinely used for broadacre farming.



Figure 11: View from Inkerman Road looking South.



Figure 12: View from Prime Road looking Northeast.



Figure 13: View from Prime Road looking West.



Figure 14: View from Prime Road looking West.

10. Public Consultation

A total of three (3) public submissions on the AEIS were received during the 15-business day consultation period. The key matters raised on the proposal are summarised as follows:

- The level of detail presented in the AEIS and masterplan document made it difficult to understand the scope of the proposal.
- Industrial scale recycling on the site should be implemented in a safe manner in terms of human health, safe for the environment, and not be harmful to the general farming operations in the area
- Clarification sought on the ownership and operation of the facility
- Clarification sought on the Lined Liquid Waste processing pit shown in concept layout in Sheet 6 -stage 4.
- Further detail required on the intended treatment or onsite storage of waste materials as different materials/products/waste, all pose different types and levels of danger.
- Concerns with the proponent's commentary regarding acceptance and treatment of HLCW at the site.
- Concern that masterplan envisages some activities occurring onsite prior to build form.
- Clarification required on the proposed leachate pond on Menadue Rd and the potential for offsite odour impacts.
- Clarification required on fire management associated with the proposed composting facility and general site operations on fire danger days.
- Clarification required on the potential increase in odour and any proposed mitigation measures.

11. Agency Advice

The EPA was consulted on the AEIS and provided a response that highlighted the proposed Resource Recovery Centre presented a significant shift in site operations which presents a number of potential risks and opportunities that need to be considered in line with the State waste strategy and recent reforms to the *Environment Protection Act 1993* (EP Act).

The EPA response noted the key focus of the proposed Masterplan is the potential for the diversion of waste from landfill and the reuse of recovered products on site (for existing and future site operations and development) in addition to the opportunity for external markets.

The objects of the EP Act, amongst other things, seek to promote the circulation of materials through the waste management process and to support a strong market demand for recovered resources (EP Act, s.10(b)(iaa)). The 'South Australian Waste Strategy 2020-2025' nominates the key objective of diverting at least 75 percent of metropolitan Municipal Solid Waste (MSW) and 90 percent of Commercial and Industrial (C&I) waste from landfill by 2025.

The EPA identified a range of further information which was considered necessary to enable assessment of the proposal.

In response the proponent advised that the AEIS is conceptual in nature and specific details regarding the proposed activities will be provided when formal application of the stage activities is progressed. (Refer 13. Response Document below).

The EPA subsequently indicated in-principle support of the Resource Recovery Centre Masterplan approach, noting the proponents response that each stage of the proposed masterplan implementation would require an application during which an assessment (including referral to the

EPA) would be undertaken. The EPA further information requirements would be addressed in the stage applications.

12. Council Comments

The Wakefield Regional Council was consulted on the AEIS, and provide the following comments:

- The Masterplan is consistent with the aims of Council's strategic community plan Wakefield 2030 – in particular, the themes of Sustainable Future and Thriving Region – insofar as it:
 - Seeks to establish a resource recovery operation and divert waste from landfill;
 - Aligns with waste diversion and circular economy targets of the National Waste Policy 2018 and the SA Waste Strategy 2020-25;
 - Allows for an existing industry in the Wakefield region to grow and remain competitive;
 - Allows for Cleanaway to potentially reinvest in environmental best practice measures onsite, including small scale solar farm development.
- Council raises no objections to the proposed amendment to the EIS from a planning assessment perspective, (other than to highlight concerns in relation to high level contaminated waste as a potential new waste stream as per below).
- Council noted that the site is currently not licensed to receive HLCW and the Masterplan describes Cleanaway's intention in Stage 4 to seek EPA and Development approval to receive and treat HLCW at the site via a range of treatment processes. Whilst Cleanaway has indicated to the Inkerman Landfill Community Reference Group (ILCRG) this is conceptual, community members have expressed particular alarm in relation to this potential new waste stream.
- Council understand Cleanaway would be required to undertake a formal separate approval process in relation to HLCW but a concern has been raised that support for this current EIS process may be seen as tacit acceptance of HLCW on the site. The Council submission in no way implies support for Stage 4.
- Council notes that prior to the establishment of Stage 4, Cleanaway wishes to seek approval from the EPA for a storage licence to store unclassified material on an isolated portion of the existing low level contaminated waste cell. This element of the proposal has not been sufficiently explained.
- Council acknowledged a risk assessment process has been undertaken, however believe it would have been preferable to understand the assessed level of likelihood and consequence that determined the rating outcome.
- Fire management is a particular concern. From Council's perspective, the likelihood of the risk may be rare but the consequence could be severe and it is expected the controls in place (which have resulted in a 'medium' residual risk) would continue to be reviewed and updated to ensure this risk is further mitigated.
- Council notes there are standard controls in place to suppress dust and odour from any activities on site. Cleanaway should, with the ILCRG, establish an agreed set of key performance indicators for responding to any community concerns in relation to these issues during construction activities on the site and for ongoing site operations. It is assumed site construction and development – and ongoing operations – will continue in a manner that protects and preserves the amenity for our community members who live in close proximity to the landfill site.
- The EIS Amendment describes current hydrology and environmental conditions. Given the anticipated longevity of the site (50+ years) it would have been appropriate for consideration

of any potential long-term changes to environmental conditions, including potential for coastal inundation, and how these may affect new development and waste streams.

- Council seeks assurance from the proponent that careful and ongoing site monitoring will continue and results reported to the ILCRG and those appropriate interventions will take place to mitigate any risk to the environment from any new developments and waste streams.

13. Response Document

On 24 May 2022, the proponent (Cleanaway) provided a formal Response Document (RD) which addressed the matters raised in the public submissions, agency advice and council comments.

The RD states that the EIS Amendment encompasses a 'masterplan' for the site which is a visionary document which potential opportunities to support the waste hierarchy and sustainability objectives and does not make application for the implementation of the opportunities identified.

The RD provides the following responses to issues raised in submissions:

- The AEIS is conceptual in nature and specific details regarding the proposed activities will be provided when formal application of the stage activities is progressed.
- Confirms that the AEIS not seek approval to undertake the receipt or treatment of high level contaminated waste.
- Confirms that the site of the future leachate pond along Menadue Road has not changed from the original concept design approved in 1999.
- Clarifies that Waste Management Pacific (SA) Pty Ltd (WMP) holds the licence for the Inkerman facility and that WMP is one of the companies in the broader Cleanaway business.
- Advises that relevant environmental and risk assessments will be completed as each stage of the masterplan is implemented.

14. Assessment of Key Issues

The suitability of the site for waste disposal was addressed in the original EIS (October 1995), the Supplement to the EIS (June 1996) and Assessment Report (April 1997) that were considered by the Governor when the landfill was initially approved. A subsequent EIS Amendment (Sept 2008) and Amendment to the Assessment Report (August 2009) considered whether the site was suitable to accommodate additional waste type (i.e. permit the receipt of low level contaminated wastes).

Considerations addressed in these previous assessments included the potential impact on nearby residents and land uses; groundwater and surface water contamination risk (including the risk to the Gulf St Vincent); air emissions (i.e. dust and noise); litter; visual impact; site access and traffic implications (especially for Port Wakefield Road); fire risk; effect on native vegetation and fauna; pest plants and animals; economic implications; and management and monitoring (including post closure remediation).

This assessment concentrates on issues associated with the proposed resource recovery activities, which are detailed in the AEIS and Inkerman Masterplan.

As outlined in section 6 (Description of the Proposal) of this AAR the AEIS proposes to vary the current development authorisation to adopt a new site masterplan which will 'stage' the implementation of a resource recovery centre adjacent the landfill footprint to process incoming waste streams to create products with beneficial uses.

The masterplan proposes the following elements:

- Soil Recycling
- Green Waste Processing and Composting
- C&D Processing
- Stage 3a - Installation of C&D Processing Shed
- Stage 4 - Contaminated Soil / Hazardous Waste Treatment
- Stage 5 - Material Recovery Facility – MSW and C&I Waste
- Supporting Infrastructure and works
- energy from waste (EFW) facility or solar farm.

The proposed introduction of resource recovery activities at the Inkerman landfill site represents a logical evolution of the site from solely 'landfilling' to a resource recovery centre providing both waste recovery and landfill. Such an approach aligns with the waste diversion and circular economy targets itemised in the National Waste Policy 2018 and the South Australia Waste Strategy 2020-25.

Whilst co-locating 'resource recovery' activities with an established landfill is considered appropriate from a land use perspective, it is necessary to consider any relevant site impacts (in addition to those considered for the landfill assessments).

Given the high-level conceptual nature of the Masterplan, the potential impacts from each element of the masterplan cannot be assessed in detail as part of this AAR and as such must be considered during any future assessment of subsequent variation applications (of which their exact nature and timing is still to be determined).

This assessment considers the compatibility of the resource recovery activities with the current landfill activities and whether the proposed modifications to the landfill development are suitable (including the siting and general arrangement of the new elements).

The potential impacts of the activities can be broadly assessed in the context of the current impacts of the landfill use and how they are managed (especially adequate separation distances from sensitive receivers). It should be noted the potential impacts of a resource recovery facility on the community and the environment are relatively predictable and well understood (especially by the EPA and industry) and can be appropriately managed.

Similar impacts have previously been assessed for other waste management related proposals, such as for the IWS Dublin Landfill and the Jeffries Soils Composting Facility (Buckland Park).

Potential planning and environmental issues associated with resource recovery facilities will likely focus on land use interface (separation distances and visual amenity/ built form) and environmental impacts (air quality, noise/vibration, water quality).

Future applications to implement each stage of the masterplan would require detailed plans and designs, including site plans, elevations, cross-sections, technical specifications for machinery and equipment, and any applicable technical reports (i.e. noise, odour, traffic etc.).

Further, a range of Construction and/or Operational Plans and Environmental Management Plans would be required to demonstrate the suitability of impact avoidance, minimisation and mitigation measures related to the proposed resource recovery activity.

14.1 Need for Proposal & Consequences of Not Proceeding

The AEIS states the proposal to undertake resource recovery activities at the Inkerman Landfill site is directly linked to the objectives of the SA Waste Strategy 2020-2025 to move towards a circular economy. The Strategy places particular emphasis on the recovery of organic waste streams, including food waste and other organics. Cleanaway's proposal will involve substantial diversion of organics from landfill and reprocessing via a number of processes for beneficial reuse.

The proponent stated that if the proposed development does not proceed the following potential consequences are anticipated:

- Missed opportunity to realise the resource recovery potential for the site.
- Cleanaway will be unable to achieve their sustainability, corporate social responsibility, and environmental objectives.
- Landfilling of avoidable waste streams at the site, including organics and other recoverable waste (such as plastics, paper, cardboard and metals).
- Reduced diversion of waste from landfill for a large portion of South Australia's waste volumes.
- Negative impacts on the potential for South Australia to meet the targets set out in the National Waste Policy 2018 and the Green Industries SA Waste Strategy 2020-2025.
- Loss of potential commercial revenue for Cleanaway.

14.2 Environmental Impact

The proponent has identified throughout the AEIS and Masterplan documents various environmental considerations associated with the proposed resource recovery facility in terms of the transition of the 'waste industry' but also the environmental considerations for site operations.

In addition, the AEIS has identified the following key environmental benefits will be realised if the proposal is approved to proceed:

- Allows Cleanaway to implement best resource recovery practices
- Facilitates alignment with the objectives set out in the National Waste Policy 2018 and the Green Industries SA Waste Strategy 2020 – 2025., including the adoption of the improved Performance Based on the Waste Hierarchy (Reuse, Recycle, Recover and Treat); and the comply with the *Environment Protection (Waste to Resources) Policy* (EPP) and treatment of waste prior to landfill.
- Improved diversion of waste from landfill.
- Provides beneficial reuse pathways for recoverable waste streams.
- Minimises the reliance on virgin materials for onsite construction works (e.g., quarrying, mining, forestry)
- Reduces greenhouse gas emissions associated with the project as a result of employing lower emissions processes such as composting as an alternative to landfill and the positive supply chain impacts of recycling of waste streams.
- Improves site aesthetics and amenity.
- Allows Cleanaway to meet their sustainability, corporate social responsibility, and environmental objectives.
- Optimises the use of the current landfill footprint by extending the life of the landfill and improving efficacy via improved consistency of the residual waste stream.

- Reduces the frequency of cell construction works and associated community disturbance due to earthworks.
- Improved financial performance which will ensure the facility is able to achieve environmental best practice into the future.
- Secures the long-term future of the facility as a state and community asset.

14.3 Social Impacts

The following social benefits of the proposal have been identified in the AEIS:

- Increased local employment, particularly within the Adelaide Plains region.
- Promotes business leadership and innovation for the community.
- Creates increased pride in the site as an asset within the local community.
- Recycling and reuse of material provides benefits and savings to businesses.
- Drives investment in the industry in machinery and infrastructure.
- Preservation of landfill airspace providing a waste disposal facility for a longer duration.
- Diverts waste from landfill and reduces the overall pollution potential of the site.

14.4 Economic Impacts

The following economic impacts of the proposal have been identified in the AEIS:

- Secures the long-term future of the facility as a state and community asset.
- Maintains market competition within the waste disposal and resource recovery sectors in South Australia.
- Increased investment into infrastructure within the SA waste industry including:
 - Machinery and plant.
 - Roads and infrastructure.
- Increased flow on benefits to the service and professional technical services industries (e.g., mechanics, trades, environmental professionals, engineering).
- Increased employment via direct jobs i.e., Recycling will provide a greater level of employment compared with traditional landfill operations.
- Systemic affordability of waste management practices from an overall perspective:
 - Greater efficiency and affordability of operations will represent cost savings to the supply chain including local government, state government and private companies that generate waste.
 - Improved cost to do business in SA.
 - Improved cost of living in SA

15. Consistency with Current Planning Policies

The assessment of a 'Major Development' (now 'Impact Assessed development') proposal must have regard to current planning policies, including State Planning Policies, Regional Plans and the Planning and Design Code. Unlike a standard development application that must be in general accordance with those policies that relate to the development of land in a certain parcel(s) of land, a major development process is guided by more expansive guidelines which cover a wider range of issues and requirements to be satisfied.

15.1 State Planning Policies

State Planning Policies represent the highest level of policy in our new planning system, and address the economic, environmental and social planning priorities for South Australia.

State Planning Policies have a role in the preparation of Environmental Impact Statement. This must include a statement of the extent to which the impacts of development would be consistent with relevant State Planning Policies, and must provide any commitments regarding avoidance, mitigation or management consistent with the provisions of any special legislative scheme.

The SPPs are relevant to the assessment of the proposal:

SP5: Climate Change

Objective

Provide for development that is climate ready so that our economy, communities and environment will be resilient to climate change impacts.

Relevant Policies:

5.9 - Encourage development that does not increase our vulnerability to, or exacerbate the impacts of, climate change and which makes the fullest possible contribution to mitigation.

5.10 - Support the transition of traditional industries that rely on fossil fuels to climate smart initiatives to reduce greenhouse gas emissions.

SP8: Primary Industry

Objective

A diverse and dynamic primary industry sector making the best use of natural and human assets.

Relevant Policies:

8.1 - Identify and protect key primary production assets and secure strategic opportunities for future primary industry development.

8.4 - Equitably manage the interface between primary production and other land use types, especially at the edge of urban areas.

SP8: Employment Lands

Objective

To provide sufficient land supply for employment generating uses that supports economic growth and productivity.

Relevant Policies:

9.3 - Support state-significant operations and industries and protect them from encroachment by incompatible and/or more sensitive land uses.

9.13 - Provide an appropriate supply of land for waste and resource recovery infrastructure and other related green industries to maximise resource use, support economic growth and service our communities.

SP14: Water Security and Quality

Objective

To ensure South Australia's water supply is able to support the needs of current and future generations.

Relevant Policies:

14.1 - Protect the state's water supply to support a healthy environment, vibrant communities and a strong economy.

14.5 - Development should incorporate water sensitive urban design principles that contribute to the management of risks to water quality and other risks (including flooding) to help protect people, property and the environment and enhance urban amenity and livability.

14.6 - Support development that does not adversely impact on water quality.

SP16: Emissions and hazardous Activities

Objective

To protect communities and the environment from risks associated with emissions, hazardous activities and site contamination, whilst industrial development remains viable.

Relevant Policies:

16.1 - Protect the Protect communities and the environment from risks associated with industrial emissions and hazards (including radiation) while ensuring that industrial and infrastructure development remains strong through:

- a) supporting a compatible land use mix through appropriate zoning controls
- b) appropriate separation distances between industrial sites that are incompatible with sensitive land uses
- c) controlling or minimising emissions at the source, or where emissions or impacts are unavoidable, at the receiver.

Summary: The proposal is consistent with current SPPs, as it involves a transition to a circular economy via resource recovery and reducing reliance on traditional landfilling of waste (and the associated landfill gas). Given the existence of the Inkerman landfill site in a primary production area, the additional of resource recovery activities at the site will not impact on existing farming land.

The site is suitable for waste and resource recovery infrastructure and other related green industries to maximise resource use, support economic growth and service our communities.

15.2 Regional Planning Policies

Each region in South Australia has a plan to both guide development and reflect the vision of the State Planning Policies. Regional plans set the direction for future planning and development of South Australia. The current (operative) regional plan applicable to the Inkerman site is the Yorke Peninsula Regional Land Use Framework (2007), being a volume of the South Australian Planning Strategy.

The Framework includes an integrated vision for the region, with the key elements comprising:

- Population and industry growth – with a focus on the Copper Coast and Wakefield Plains.
- Sustainable coastal growth

- Strengthened inland towns
- Conservation and nature based tourism – in particular in western and southern Yorke Peninsula

Objective and Strategies have been developed to support this vision, under the following headings:

- Environmental and Cultural Assets
- Economic Development
- Population and Settlements

This assessment of the proposed Inkerman Resource Recovery Centre masterplan has considered specific policies in the Regional Plan that relate to waste management. Previous assessments of the appropriateness and sustainability of establishing a waste depot (landfill) at the site against the key objectives and policies of the Strategy have been made in the original Assessment Report and Amendment to the Assessment Report.

Summary: The proposal will expand the range of waste disposal and recovery activities undertaken at an approved waste depot on land that is now alienated from agricultural use and no additional land will be lost from agricultural use. This means there is no need to establish a new facility at an alternative location and therefore provides for an orderly, efficient and economical option for management of listed wastes.

The current site and operations provide for adequate activity buffers and management and monitoring measures ensure there would not be impacts on adjacent residents and land uses. The inclusion of ‘resource recovery activities’ would be included within the current site management and monitoring measures.

15.3 Planning and Design Code

15.3.1 Zones

The subject site is located within the Rural Zone of the Planning and Design Code (Version 2021.8 adopted 1 July 2021) under the *Planning, Development and Infrastructure Act 2016*.

Rural Zone

Desired Outcome:

DO 1 - A zone supporting the economic prosperity of South Australia primarily through the production, processing, storage and distribution of primary produce, forestry and the generation of energy from renewable sources.

DO 2 - A zone supporting diversification of existing businesses that promote value-adding such as industry, storage and warehousing activities, the sale and consumption of primary produce, tourist development and accommodation.

Performance Outcome (Land Use and Intensity):

PO 1 - The productive value of rural land for a range of primary production activities and associated value adding, processing, warehousing and distribution is supported, protected and maintained.

Performance Outcome (Siting and Design):

PO 2.1 - Development is provided with suitable vehicle access.

PO 2.2 - Buildings are generally located on flat land to minimise cut and fill and the associated visual impacts.

Performance Outcome (Built Form and Character):

PO 10.1 - Large buildings are designed and sited to reduce impacts on scenic and rural vistas by:

- (a) having substantial setbacks from boundaries and adjacent public roads
- (b) using low-reflective materials and finishes that blend with the surrounding landscape
- (c) being located below ridgelines.

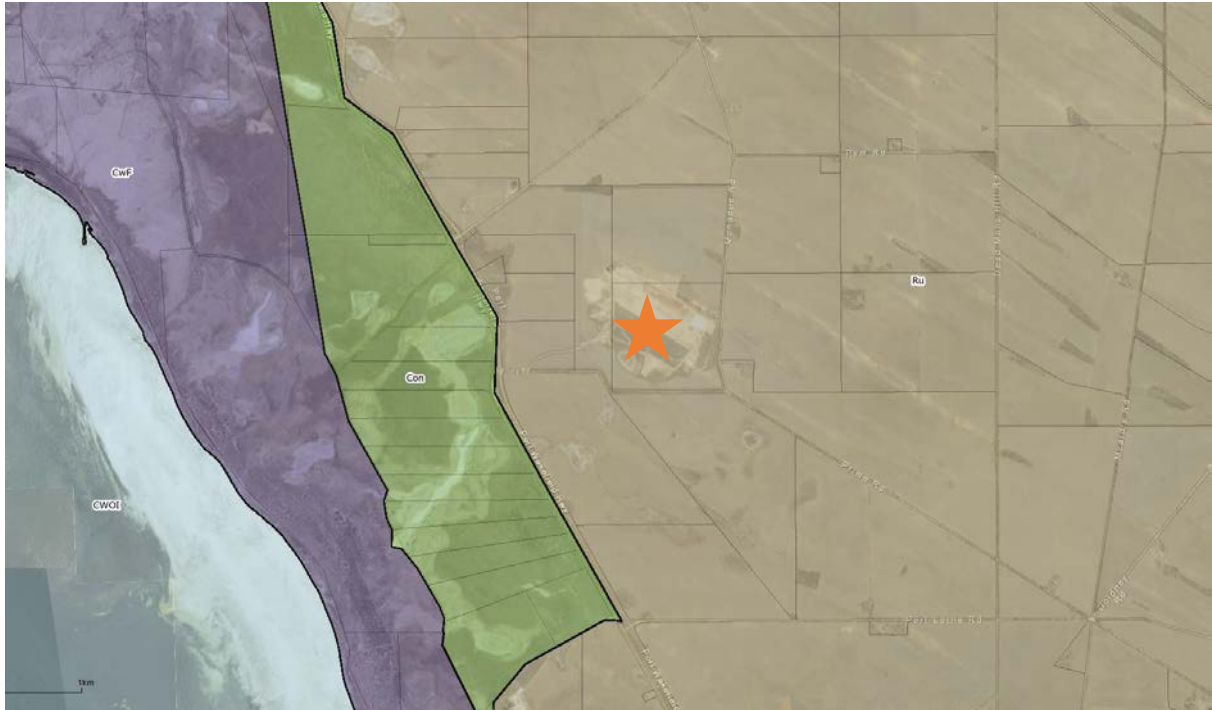


Figure 15: Planning and Design Code Zoning for the site.

Summary: The Inkerman landfill site is an existing approved (and operational) land use within the Rural zone. Whilst the Zone Desired Outcomes and Performance Outcomes do not envisage a 'resource recovery' land use the proposal presents a logical co-location of waste management facilities on land already alienated from primary production.

Any applicable land use interface issues (if not previously been assessed as part of the landfill activities) and built form considerations can be assessed as each stage of the masterplan is implemented via future applications.

15.3.2 General Development Policies

The general Code policies that relate to the proposed sites include:

Interface between Land Uses

Desired Outcome:

DO1 – Development is located and designed to mitigate adverse effects on or from neighbouring and proximate land uses.

Performance Outcome (General Land Use Compatibility):

PO 1.2 – Development adjacent to a site containing a sensitive receiver (or lawfully approved sensitive receiver) or zone primarily intended to accommodate sensitive receivers is designed to minimise adverse impacts.

Performance Outcome (Hours of Operation):

PO 2.1 – Non-residential development does not unreasonably impact the amenity of sensitive receivers (or lawfully approved sensitive receivers) or an adjacent zone primarily for sensitive receivers through its hours of operation having regard to:

- (a) the nature of the development
- (b) measures to mitigate off-site impacts
- (c) the extent to which the development is desired in the zone
- (d) measures that might be taken in an adjacent zone primarily for sensitive receivers that mitigate adverse impacts without unreasonably compromising the intended use of that land.

Performance Outcome (Hours of Operation):

PO 4.2 – Areas for the on-site maneuvering of service and delivery vehicles, plant and equipment, outdoor workspaces (and the like) are designed and sited to not unreasonably impact the amenity of adjacent sensitive receivers (or lawfully approved sensitive receivers) and zones primarily intended to accommodate sensitive receivers due to noise and vibration by adopting techniques including:

- (a) locating openings of buildings and associated services away from the interface with the adjacent sensitive receivers and zones primarily intended to accommodate sensitive receivers
- (b) when sited outdoors, locating such areas as far as practicable from adjacent sensitive receivers and zones primarily intended to accommodate sensitive receivers
- (c) housing plant and equipment within an enclosed structure or acoustic enclosure
- (d) providing a suitable acoustic barrier between the plant and / or equipment and the adjacent sensitive receiver boundary or zone.

Performance Outcome (Air Quality):

PO 5.1 – Development with the potential to emit harmful or nuisance-generating air pollution incorporates air pollution control measures to prevent harm to human health or unreasonably impact the amenity of sensitive receivers (or lawfully approved sensitive receivers) within the locality and zones primarily intended to accommodate sensitive receivers.

Waste Treatment and Management Facilities

Desired Outcome:

DO1 – Mitigation of the potential environmental and amenity impacts of waste treatment and management facilities.

Performance Outcome (Siting):

PO 1.1 – Waste treatment and management facilities incorporate separation distances and attenuation measures within the site between waste operations areas (including all closed, operating and future cells) and sensitive receivers and sensitive environmental features to mitigate off-site impacts from noise, air and dust emissions.

Performance Outcome (Soil and Water Protection):

PO 2.1 – Soil, groundwater and surface water are protected from contamination from waste treatment and management facilities through measures such as:

- (a) containing potential groundwater and surface water contaminants within waste operations areas
- (b) diverting clean stormwater away from waste operations areas and potentially contaminated areas
- (c) providing a leachate barrier between waste operations areas and underlying soil and groundwater.

Performance Outcome (Soil and Water Protection):

PO 2.4 - Waste operations areas of landfills and organic waste processing facilities are set back from watercourses to minimise adverse impacts on water resources.

Performance Outcome (Amenity):

PO 3.1 - Waste treatment and management facilities are screened, located and designed to minimise adverse visual impacts on amenity.

PO 3.2 - Access routes to waste treatment and management facilities via residential streets is avoided.

PO 3.3 - Litter control measures minimise the incidence of windblown litter.

PO 3.4 - Waste treatment and management facilities are designed to minimise adverse impacts on both the site and surrounding areas from weed and vermin infestation.

Performance Outcome (Access):

PO 4.1 - Traffic circulation movements within any waste treatment or management site are designed to enable vehicles to enter and exit the site in a forward direction.

PO 4.2 - Suitable access for emergency vehicles is provided to and within waste treatment or management sites.

Performance Outcome (Fencing and Security):

PO 5.1 - Security fencing provided around waste treatment and management facilities prevents unauthorized access to operations and potential hazard to the public.

Performance Outcome (Landfill):

PO 6.1 - Landfill gas emissions are managed in an environmentally acceptable manner.

PO 6.2 - Landfill facilities are separated from areas of environmental significance and land used for public recreation and enjoyment.

PO 6.3 - Landfill facilities are located on land that is not subject to land slip.

PO 6.4 - Landfill facilities are separated from areas subject to flooding.

Performance Outcome (Organic Waste Processing Facilities):

PO 7.1 - Organic waste processing facilities are separated from the coast to avoid potential environment harm.

PO 7.2 - Organic waste processing facilities are located on land where the engineered liner and underlying seasonal water table cannot intersect.

PO 7.3 - Organic waste processing facilities are sited away from areas of environmental significance and land used for public recreation and enjoyment.

PO 7.4 - Organic waste processing facilities are located on land that is not subject to land slip.

PO 7.5 - Organic waste processing facilities separated from areas subject to flooding.

15.3.3 Overlays & Technical Variations

The following overlays apply to site:

- Dwelling Excision Overlay - seeks to limit the creation of allotments to accommodate existing dwelling to avoid undermining primary production

- Hazards (Bushfire - General) Overlay - seeks to ensure development responds to the general level of bushfire risk by siting and designed buildings to mitigate threat and impact of bushfires on life and property and facilitate access for emergency service vehicles
- Hazards (Flooding - Evidence Required) Overlay - adopts a precautionary approach to mitigate potential impacts of potential flood risk through appropriate siting and design of development.
- Key Outback and Rural Routes Overlay - aims to ensure safe and efficient vehicle movement and access is provided along key outback and rural routes.
- The Limited Land Division Overlay - seeks to limit fragmentation of land to avoid undermining primary production.
- The Native Vegetation Overlay - seeks to protect, retain and restore areas of native vegetation.
- The Water Resources Overlay - seeks to protect the quality of surface waters in South Australia.

The following technical variations apply to site:

- Minimum site area is 100 ha
- Minimum dwelling allotment size is 100 ha

Summary: The proposal resource recovery centre masterplan is consistent with the General Development Polices for 'Interface between Land Uses' and 'Waste Treatment and Management Facilities.' The Inkerman landfill site is an existing approved (and operational) land use with established separation to sensitive uses and operational mitigation and attenuation measures. Any additional interface issues or environmental impacts (if not previously been assessed as part of the landfill activities) associated with the implementation of the resource recovery centre activities can be addressed via future applications which will be required to progressively implement the masterplan.

16. Conclusion

This Amendment to the Assessment Report considers the current proposal by Cleanaway Waste Management Ltd (Cleanaway) to establish a Resource Recovery Facility via a Masterplan approach. Approval of the Masterplan would provide a framework for and additional clarity around future investment opportunities.

The existing landfill operations were previously assessed in the original Assessment Report (1997) and subsequent amendments. The EIS Amendment proposes a Masterplan for the Inkerman landfill site which outlines the staged development of resource recovery facilities over a 10-year period.

The proponent has stated that the Masterplan articulates Cleanaway's vision for the facility as it transitions from a landfill to a resource recovery facility and outlines a range of proposed resource recovery activities that are presented at a conceptual level. The co-locating of 'resource recovery' activities with an established landfill is considered appropriate from a land use perspective, and consistent with the move toward a circular economy and waste volumes to landfill in Australia.

The proposal will not impact the existing landfill operations (other than the positive diversion of waste from landfill), nor require substantive changes to the existing environmental management approach at the site.

The AEIS identifies a range of environmental risks and mitigation measures in relation to the proposed resource recovery activities presented in the Masterplan. Given the high-level conceptual nature of the masterplan, the level of detail is noted but not sufficient to undertake a detailed assessment of predicted future impacts.

The Masterplan concept for a resource recovery centre for the Inkerman site is supported, noting that future detailed applications to progress each stage will be required to enable further assessment to be completed. Furthermore, a range of Construction and/or Operational Plans and Environmental Management Plans would be required to demonstrate the suitability of the proposed resource recovery activity.

The proposal is considered to be consistent with relevant State Planning policies, Regional Plan and the Planning and Design Code (primarily the General Development provisions for Waste Treatment and Management Facilities). The environmental, social, and economic impacts identified in the AEIS indicate positive benefits of the resource recovery centre at a broad 'land use' level.

If the proposed AEIS / Resource Recovery Centre Masterplan is supported, the proponent would be required to submit future applications for each stage for detailed assessment.

Issues raised during the consultation process focus on the suitability of the level of detail provided in the AEIS and Masterplan to undertake a detailed assessment. The Proponent's Response Document provided some additional detail, whilst highlighting the conceptual nature of the masterplan approach, and acknowledging the requirement for future detailed applications to implement each stage in the masterplan.

Public submission also highlighted opposition to any future high level contaminated waste activities (LCW). The proponent confirmed in the Response Document that the AEIS does not seek approval to undertake the receipt or treatment of HLCW.

If approved, a condition has been recommended (for inclusion in the current development authorisation) requiring the proponent to obtain approval for the implementation of the Inkerman Resource Recovery Centre Masterplan.

17. Recommendations

The 'Inkerman Northward Fill Landfill' site is currently the subject of a major development authorisation and EPA licence, which permit the receipt and disposal of a range of waste streams within engineered cells.

This EIS Amendment and accompanying masterplan seek to further develop the site as a resource recovery facility with the purpose of creating products with beneficial uses and diverting waste from landfill.

The proposed 'Inkerman Resource Recovery Centre Masterplan' outlines the conceptual intent for the site, with the staged implementation subject to the provision of technical information and further detailed assessment.

Should a variation to the current development authorisation be granted to recognise the 'Inkerman Resource Recovery Centre Masterplan – July 2021', it is recommended that the following additional requirements (highlighted yellow) be included in the revised decision notice to set out future assessment requirements.

General Conditions

1. Except where minor amendments may be required by other legislation, or by conditions imposed herein, the proposed Major Development shall be undertaken in strict accordance with the following documents:

Current Amendment

- Inkerman Resource Recovery Centre Environmental Impact Assessment Amendment prepared by DBP Environmental, dated July 2021.
- Inkerman Resource Recovery Centre Masterplan prepared by DBP Environmental, dated July 2021.
- Proponent's response to submission – Letter from Cleanaway Waste Management to the Attorney-General's Department, dated 24 May 2022.

Previously Approved Documentation

- Application and letter from Transpacific Industries Group Inc. to the Development Assessment Commission dated 30 November 2009 (except to the extent that it may be varied by a subsequent document in this paragraph).
- Application and letter (including accompanying plans) from Transpacific Industries Group Inc. to the Development Assessment Commission dated 20 January 2010 (except to the extent that it may be varied by a subsequent document in this paragraph).
- Transpacific Waste Management, Northward Fill—EIS Amendment to Accommodate Additional Waste Types (dated 19 September 2008). Prepared by QED Pty Ltd (except to the extent that it may be varied by a subsequent document in this paragraph).
- Proponent's response to submissions—Letter from QED Pty Ltd (on behalf of Transpacific Waste Management Pty Ltd) to the Department of Planning and Local Government dated 1 April 2009 (Ref: 10786) (except to the extent that it may be varied by a subsequent document in this paragraph).
- Letter from MSP Constructions, on behalf of the Transpacific Industries Group Inc., to the Department of Planning dated 26 August 2011 (except to the extent that it may be varied by a subsequent document in this paragraph).

- Application letter from Cleanaway Waste Management Ltd to the Department of Planning, Transport and Infrastructure dated 8 June 2018 (except to the extent that it may be varied by a subsequent document in this paragraph).
 - Northward Fill Landfill, Increase in Finished Landform Height – Amendment Environmental Impact Statement, Cleanaway Waste Management Ltd (dated June 2018). Prepared by Tonkin Consulting (except to the extent that it may be varied by a subsequent document in this paragraph).
 - Proponent’s response to submissions—Letter from Cleanaway Waste Management Ltd to the Department of Planning, Transport and Infrastructure dated 29 August 2018 (except to the extent that it may be varied by a subsequent document in this paragraph).
 - Application letter from Cleanaway Waste Management Ltd to the Department of Planning, Transport and Infrastructure titled ‘Northward Fill – Landform Design Variation Application for Minor Variation to Development Authorisation’, dated 15 February 2019.
2. Before any building work is undertaken on the site, the building work is to be certified by a private certifier, or by some person determined by the Minister for Planning, as complying with the provisions of the Building Rules (or the Building Rules as modified according to criteria prescribed by the Regulations).

Low Level Contaminated Waste/Treatment Plant Residues Cells

3. Prior to the construction of the Low Level Contaminated Waste/Treatment Plant Residues Cell (LLCW/TPRC), the Licensee shall submit to the Environment Protection Authority for assessment and approval a revised Landfill Environmental Management Plan (LEMP) incorporating the design, construction, technical specifications, environmental and post-closure management of the LLCW/TPRC.
4. The Licensee shall, no less than three months prior to construction of any LLCW/TPRC at the Premises:
- (a) provide to the Environment Protection Authority a specification document that provides a detailed design for the relevant cell; and
 - (b) not construct any cell unless written approval has been received from the Environment Protection Authority.
5. The Licensee shall prior to receiving, storing, treating or disposing of any waste within the LLCW/TPRC, provide to the Environment Protection Authority:
- (a) an ‘As Constructed Report’ certifying compliance with the approved design for the lining system, including a Construction Quality Assurance (CQA) for the liner and the Level 1 Supervision Report; and
 - (b) not receive any LLCW/TPR without written approval from the Environment Protection Authority.

Groundwater

6. Monitoring shall be undertaken over two successive winter seasons to determine the maximum seasonal watertable level for that period starting prior to the landfill operations starting.
7. An internal leachate-level monitoring bore network within each stage of the landfill shall be established to allow early identification of any problem with the leachate collection system before excessive leachate heads develop.

8. Groundwater monitoring bores shall be established down gradient of the leachate collection ponds to the satisfaction of the Environment Protection Authority.

Leachate Management

9. The 'As Constructed Report' shall include a certification from a geotechnical consultant that the liner and drainage system has been constructed in accordance with the design principles together with *in-situ* testing to demonstrate that the required permeability has been achieved prior to operations commencing, except as varied by Conditions (a), (b), (c) and (d).
 - (a) the high density polyethylene (HDPE) membrane and geotextile portion of the liner shall extend a minimum of 5 m laterally from the sump (measured from the toe of the sump side slope to the outer edge of the lining system) and the underlying clay outside the sump area must have a minimum thickness of 1 m;
 - (b) the drainage slopes towards drainage lines and along drainage lines shall be a minimum of 2% and 1% respectively;
 - (c) construction of the landfill liner and polylock system shall be undertaken and certified in accordance with Level 1 supervision and Construction Quality Assurance (CQA) procedures. A report documenting the results of the Level 1 supervision and construction quality control tests for the compacted clay liner, HDPE membrane and polylock system shall be prepared to the reasonable satisfaction of the Environment Protection Authority;
 - (d) appropriate procedures and controls shall be implemented on site to address potential risks or damage which may compromise the integrity of the leachate extraction system, including from vehicle traffic, Ultraviolet Radiation, and any movements of the overland pipework including interim flexible pipework used while cells are operational;
 - (e) contingency procedures shall be developed to address the potential for and response to any pipe rupture and leachate emission from the leachate pipes and extraction system; and
 - (f) the LEMP shall be updated to incorporate Conditions (d) and (e).

Landfill Gas

10. Landfill gas extraction wells shall be installed progressively as filling of the cell proceeds, to the satisfaction of the Environment Protection Authority.
11. All fire control measures proposed at the site shall be approved by the Country Fire Service prior to operations commencing.

Buffers and Landscaping

12. The maximum height of the landfill including rehabilitation shall be restricted to 32 m AHD (generally 12 m above the existing natural surface) to be consistent with the existing maximum topographic levels in the region.
13. All perimeter plantings shall be started as early as practicable after the date of this approval to achieve maximum amelioration of visual impacts.
14. Screening by suitable plantings where adequate natural screening is not provided, shall be provided for the perimeter fence, all built structures, stockpiles and internal roads (where practicable) using suitable species in accordance with the Vegetation Management and Revegetation Plan proposed as part of the Landfill Environmental Management Plan (LEMP).

Noise and Dust

15. The proponent shall comply with the provisions of the Environment Protection (Industrial Noise) Policy (1994, SA Government).
16. —
- (a) the maximum hours of operation shall be 6 a.m. to 7.30 p.m. seven days per week and waste shall only be received between 6 a.m. and 7 p.m.;
 - (b) the Applicant shall ensure that close proximity and low impact directional reverse beepers are installed and utilised on all mobile plant associated with waste disposal operations; and
 - (c) noise levels shall not exceed 40 dB(A) in accordance with EPA Fact Sheet 424/04 between the hours of 10 p.m. and 7 a.m.

Infrastructure

17. The proponent shall pay all reasonable costs of the detailed design and construction of any public road works made necessary by this development and to the satisfaction of the Department of Infrastructure and Transport and the Wakefield Regional Council.

Building Rules

18. Work constituting building work under the Planning, Development and Infrastructure Act 2016, shall be certified by a private certifier, as complying with the Building Rules. Copies of the relevant certification documentation shall then be provided to the Minister for Planning. No building works shall commence until a favourable decision has been notified in writing to the applicant by the Minister for Planning (or their delegate).

Heritage

19. The party with the benefit of this approval shall ensure that operators and construction personnel are made aware of the requirements under the Aboriginal Heritage Act 1988 that any burial site skeletal material or significant artefact discovery is reported to the Department of Premier and Cabinet (Aboriginal Affairs and Reconciliation).

Wastes

20. No Listed Waste as prescribed in Schedule 1, Part B of the Environment Protection Act 1993, or contaminated soil and material or asbestos containing material, shall be permitted to be disposed of without further development authorisation except as varied by the conditions listed below.
21. The proponent may receive and dispose of wastes from different regions as follows:
- (a) waste from the Adelaide Metropolitan Area that has gone through a Resource Recovery and Waste Transfer Facility; or
 - (b) waste from regional areas outside the Metropolitan area that:
 - has been through a kerbside recycling service comprising at least 2 mobile garbage bins with a maximum 140 litre weekly waste collection and a minimum 240 litre fortnightly recycling collection;
 - has been through a mobile garbage bin kerbside recycling system that yields at least 4 kg per household per week for recycling, excluding contamination;
 - has been processed through a resource recovery facility/transfer station for the purposes of removing recyclable material prior to being transported for disposal; or
 - comprises construction and demolition waste that does not contain recyclable materials.

22. The proponent may receive and dispose of the following additional wastes:
- (a) shredded tyres with other approved waste for a period of three years after which the proponent must apply for additional development approval;
 - (b) non-friable asbestos subject to handling and disposal procedures for non-friable asbestos, including the Environmental Management procedures as discussed in detail in Appendix F of the variation proposal; and
 - (c) quarantine waste subject to approval from AQIS to receive and dispose of quarantine waste. In addition, the proponent shall:
 - (i) receive quarantine waste that is accompanied by a completed Quarantine Waste Form developed by the Licensee;
 - (ii) dispose of quarantine waste immediately upon receipt;
 - (iii) ensure a minimum of 2 m of cover is placed over the waste immediately after disposal;
 - (iv) dispose of waste in accordance with requirements of AQIS (including supervision, deep burial and tracking);
 - (v) maintain records that describe details for each load of quarantine waste received and disposed including the following items:
 - o Location of disposal;
 - o Date and time of receipt and disposal;
 - o Volume of waste;
 - o Type of waste;
 - o Producer of the waste;
 - o Transporter of the waste and driver name; and
 - o Name of person supervising disposal of waste.
 - (vi) maintain procedures for the notification, handling, supervision, records management and disposal of quarantine waste and tracking systems to prevent the re-excitation of quarantine wastes.
 - (d) foundry sands—the proponent shall:
 - (i) assess the Used Foundry Sand in accordance with EPA Guidelines for Used Foundry Sand (UFS)—classification and disposal (EPA 329/03—September 2003);
 - (ii) ensure that the Used Foundry Sands have been classified prior to disposal according to the maximum concentrations in mg/kg (dry weight), and the maximum leachate concentration in mg/L, of the contaminants listed in the above referenced Guideline; and
 - (iii) ensure that only Used Foundry Sand classified and certified as Class 1 (or with lower contaminant levels) is received and disposed at the Premises,
 - (e) Low Level Contaminated Waste that meet the relevant Environment Protection Authority Low Level Contaminated Waste Criteria;
 - (f) construction and demolition waste from non-metropolitan areas—the proponent shall:
 - (i) maintain procedures and records, to the reasonable satisfaction of the Environment Protection Authority, that describe details for each load of waste received and disposed to ensure it does not contain recyclable materials.

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23. Detailed applications shall be submitted to the Minister for Planning (or delegate) for assessment and approval, prior to the establishment and/or construction of each stage of the Inkerman Resource Recovery Centre Masterplan.

Part B: Notes to Proponent

Building Rules

- The proponent must obtain a Building Rules assessment and certification for any building work from either the Wakefield Regional Council or a private certifier (at the proponent's option) and forward to the Minister for Planning all relevant certification documents as outlined in Regulation 64 of the Development Regulations 2008.
- Pursuant to Development Regulation 64, the proponent is especially advised that the Wakefield Regional Council or private certifier conducting a Building Rules assessment must:
 - provide to the Minister for Planning a certification in the form set out in Schedule 12A of the Development Regulations 2008 in relation to the building works in question; and
 - to the extent that may be relevant and appropriate:
 - (i) issue a Schedule of Essential Safety Provisions under Division 4 of Part 12;
 - (ii) assign a classification of the building under these regulations; and
 - (iii) ensure that the appropriate levy has been paid under the Construction Industry Training Fund 1993.
- Regulation 64 of the Development Regulations 2008 provides further information about the type and quantity of all Building Rules certification documentation for Major Developments required for referral to the Minister for Planning. The Wakefield Regional Council or private certifier undertaking Building Rules assessments must ensure that the assessment and certification are consistent with this development authorisation (including its Conditions and Notes).

EPA Licensing and General Environmental Duty of Care

- The applicant is reminded of its general environmental duty, as required by Section 25 of the *Environment Protection Act 1993*, to take all reasonable and practical measures to ensure that the activities on the whole site, including during both construction and operation, do not pollute the environment in a way which causes or may cause environmental harm.
- Environmental authorisation in the form of an amended licence may be required for the construction and/or operation of this development. The applicant is advised to contact the Environment Protection Authority before acting on this approval to ascertain licensing requirements.
- The Environment Protection Authority will require the proponent to review and amend where necessary the current Landfill Environmental Management Plan (LEMP) to satisfy the Authority's licensing requirements. Such a plan will be required to include provisions for the review, from time to time, of waste treatment and disposal methods to facilitate implementation of continuous improvement programs. The LEMP will be required to incorporate specific plans in relation to groundwater, leachate and, surface water management. It will also be required to include provisions for implementation of corrective actions in the event of any failure of the leachate and groundwater management system.
- Control over the types of waste to be received at the site will be exercised by the Environment Protection Authority. This will be done through conditions of environmental authorisation or requirements under a relevant Environment Protection Policy rather than through conditions of development authorisation.
- It is likely that as a condition of such a license the Environment Protection Authority will require the licensee to carry out specified environmental monitoring of air and water quality and to make reports of the results of such monitoring to it.

- A financial assurance in accordance with the provisions of Section 51 of the Environment Protection Act 1993 will be required by the Environment Protection Authority as a condition of license.
- In regard to Conditions of Development Authorisation 3-5, a Geosynthetic Clay Liner may be used in the construction of a liner for a low level contaminated waste cell (such as in place of an upper 600 mm compacted clay liner) provided it has a specification equivalent to ELCOSEAL X3000 made by Geofabrics Australia or its equivalent.

Implementation of the Inkerman Resource Recovery Centre Masterplan

- In accordance with Condition 23, prior to the preparation and submission of documentation seeking approval for each stage of the *Inkerman Resource Recovery Centre Masterplan*, the applicant / operator shall consult with Planning and Land Use Services (DTI) and the Environment Protection Authority (EPA) to confirm required information requirements and technical investigations to support the consideration and assessment of each stage.
- The applicant is advised that future assessment for each stage of the Inkerman Resource Recovery Centre Masterplan may be subject to public notification, agency and Council referral processes.

Appendix 1: Current Development Authorisation

Appendix 2: Definitions and Acronyms

ACRONYM	DEFINITION
AEIS	Amendment to the Environmental Impact Statement
AGD	Attorney-General's Department
AR	Assessment Report
CEMP	Construction Environmental Management Plan
EIS	Environmental Impact Statement
EMP	Environmental Management Plan
EPA	Environment Protection Authority
EP Act	<i>Environment Protection Act 1993</i>
OEMP	Operational Environmental Management Plan
PLUS-AGD	Planning and Land Use Services (within the Attorney-General's Department)
RD	Response Document
SPC	State Planning Commission
SPP	State Planning Policy
The Minister	Minister for Planning

Appendix 3: Assessment Guidelines

