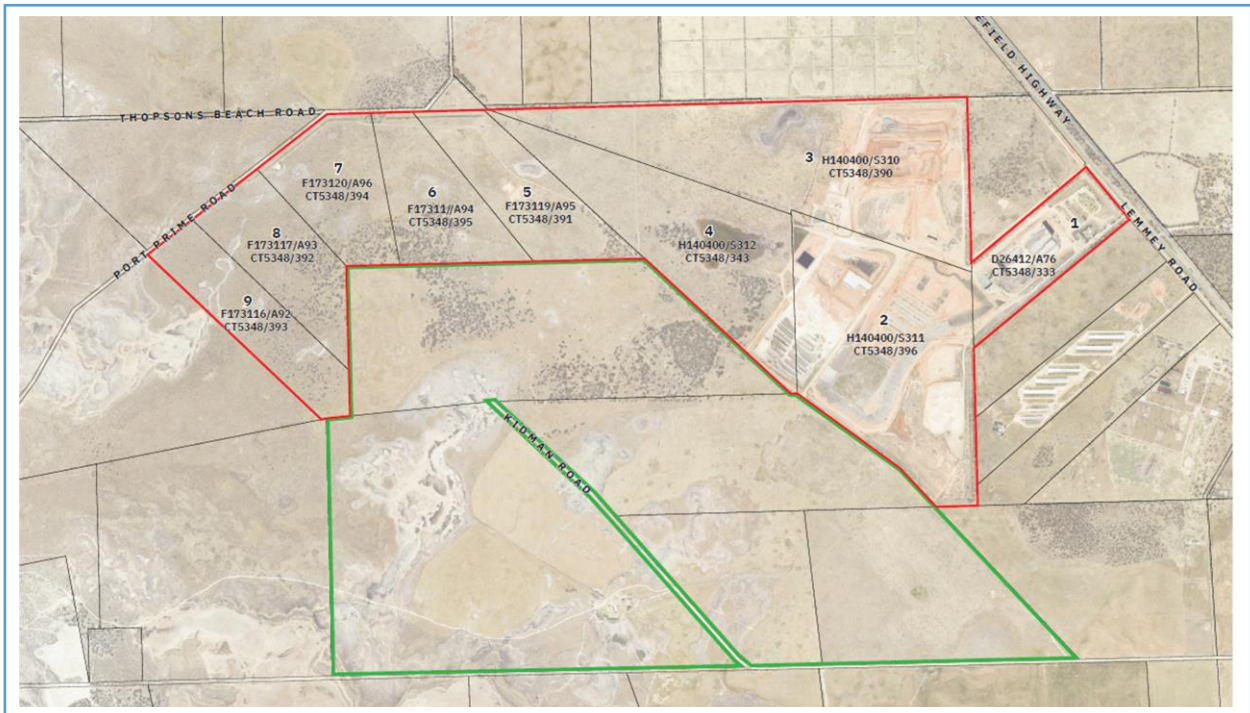


State Planning Commission

AMENDMENT to the ASSESSMENT REPORT

IWS NORTHERN BALEFILL – LOWER LIGHT

Integrated Waste Services (IWS)



August 2023

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Milestones and Key Dates

Milestone	Date
EIS Amendment Received	22 December 2021
Release of Amendment to the EIS for public comment	5 April 2023
Final Response Document Received	9 June 2023

1. Executive Summary

The IWS Northern Balefill (Dublin Landfill) proposal was declared a major development on 19 October 1994 by the then Minister for Housing, Urban Development and Local Government Relations under section 46 of the *Development Act 1993* (the Act).

On 29 January 1998, following an Environmental Impact Statement (EIS) process, the Governor of South Australia gave notice in the Government Gazette that a provisional development authorisation was granted subject to conditions, pursuant to section 48 of the Act.

The Environment Protection Authority (EPA) issued a Waste Depot and Recycling licence to Integrated Waste Services (IWS) on 1 September 2001 to enable operation of the landfill, which was commissioned on 22 May 2002.

On 8 September 2005 and 27 August 2010, further approvals were granted by the Governor to permit the receipt and disposal of low-level contaminated waste and permit the establishment of a Multiple Waste Treatment Facility for the treatment and disposal of high-level contaminated waste.

The development has been progressively modified during its operation, including approved variations to allow for the implementation of a 10-year masterplan, establishment of a resources pad, bioremediation pad and litter net system (January 2013); modifications to landfill module 3 (May 2020); establishment of an additional bioremediation pad (December 2020), construction of a sorting and processing shed (December 2021); and an additional evaporation pond and staff amenities (April-June 2023). These changes have also been reviewed and endorsed by the EPA.

IWS has applied to the Minister for Planning to vary their current development authorisation and amend the EIS to provide a level of flexibility in future internal site configuration (cells and processing pads), an increase in the permissible maximum height of the landfill by 5.0 metres and remove volumetric landfilling calculations and prescriptive requirements for fixed plant (leachate pumps).

The Amendment to the Environmental Impact Statement (AEIS) underwent public consultation during April-May 2023 with no public submissions received. In June 2023, the proponent submitted a Response Document that addressed matters raised in agency referral advice and council comments.

It is noted that the initial establishment and operation of the IWS Northern Balefill facility has been informed by multiple assessment steps and related documentation. Further information on the establishment and operation of the facility is contained in the following reference documents:

- Solid Waste Balefill Environmental Impact Study at Mallala (1996)
- Assessment Report for the Environmental Impact Statement for the IWS Northern Balefill (1997)
- EIS amendment: receipt of low-level contaminated soil and liquid treatment plant residues at the IWS Northern Balefill / Parsons Brinckerhoff, Integrated Waste Services Pty Ltd, MasterPlan SA Pty Ltd (2003).
- Amendment to the Assessment Report for the Environmental Impact Statement for the IWS Northern Balefill (2005)
- Integrated Waste Services, Northern Balefill, Dublin, Multiple Waste Treatment Facility, EIS Amendment dated (2008)
- Second Amendment to the Assessment Report for the Environmental Impact Statement Amendment for the IWS Northern Balefill Multiple Waste Treatment Facility, Dublin (2009).

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The assessment process has been informed with advice from State Government agencies (especially the EPA) and Adelaide Plains Council.

The Adelaide Plains Council confirmed support for the proposal.

The Council Assessment Panel (CAP) reviewed the application and was satisfied that the proposed variation will not result in an intensification of the use of the land, nor will it create any additional or unreasonable impacts on adjoining land. However, the Council reinforced the importance of landscaping to provide screening, particularly with the increase in the overall height of the landfill.

The EPA submission noted that the proposed variation will not modify the waste streams to be received and/or disposed at the site; nor involve new land uses or activities on the land not currently subject to an EPA licence.

The EPA has recommended the use of conditions to reinforce the maximum permissible module height of 28m AHD and approval requirements for the design and configuration of all future modules containing multiple cells (and individual cells).

The proponent provided a Response Document (RD) and an updated version of the AEIS, reflective of any changes made and commitments undertaken to meet regulatory requirements.

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

2. Introduction

The 'IWS Northern Balefill Facility' development proposal was originally declared a major development on 19 October 1994. After undergoing an Environmental Impact Assessment (EIA) process, the proposal was approved by the Governor of South Australia on 29 January 1998.

The declared project area and general locality is defined in **Figure 1**.

The original proposal comprised a change of land use of the declared area, to a waste management facility, in the form of a solid waste landfill and allowed for landfill cells to be opened, filled, closed and capped in a progressive manner.

The landfill was designed to receive solid waste material from metropolitan Adelaide, following initial processing at the IWS Resource Recovery and Transfer Facility (RRTF) located at Wingfield.

The RRTF receives waste from domestic, commercial and industrial premises, building and demolition waste and green waste. Waste material not able to be recycled at the RRTF was to be compressed into bales (where the material allows this to be undertaken) and then transported to the IWS landfill and placed into an engineered landfill cell.

The Environment Protection Authority (EPA) issued a licence to IWS on 1 September 2001 to enable operation of the landfill, which was commissioned on 22 May 2002.

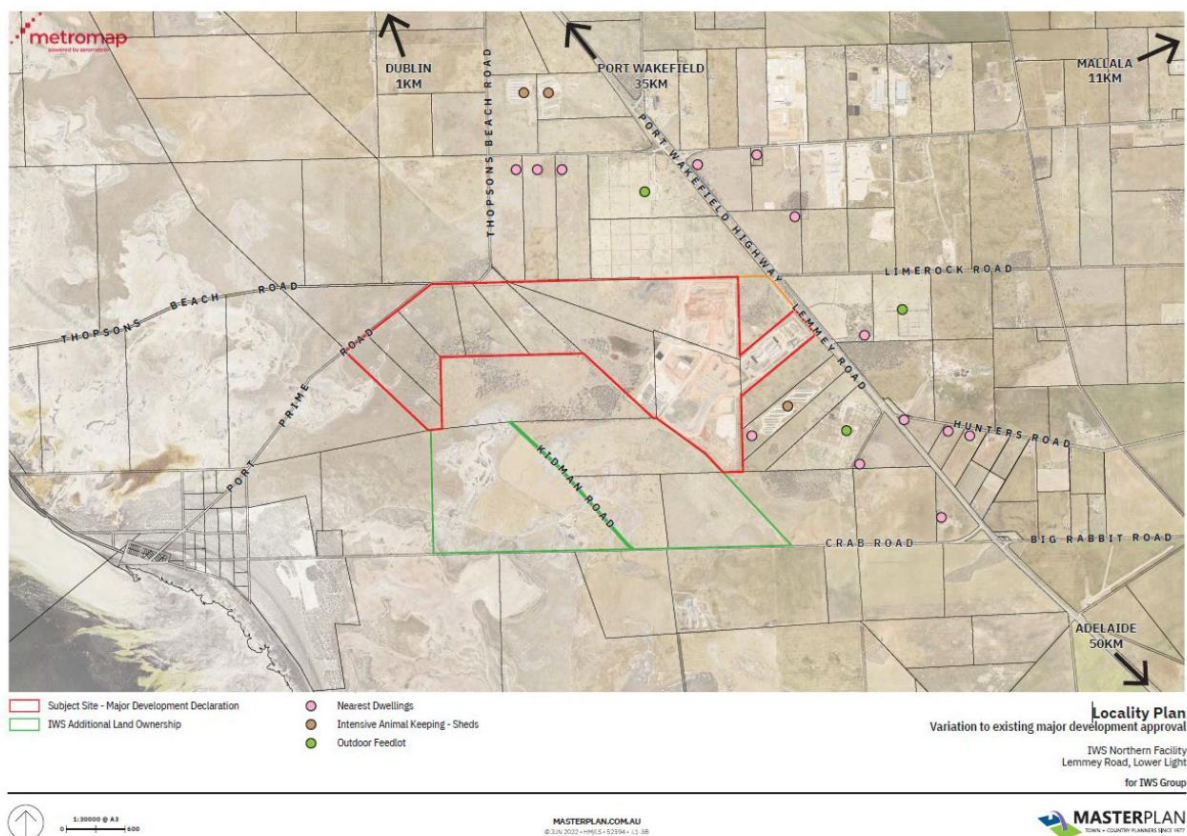


Figure 1: Locality Plan (AEIS, July 2022)

On 8 September 2005 and 27 August 2010, further approvals were granted by the Governor to permit the receipt and disposal of low-level contaminated waste and the establishment of a Multiple Waste Treatment Facility for the treatment and disposal of high-level contaminated waste (respectively).

The development has been progressively modified during its operation, including approved variations to the Development Authorisation for the implementation of a 10-year masterplan, establishment of a resources pad, bioremediation pad and litter net system (January 2013); modifications to landfill module 3 (May 2020); establishment of an additional bioremediation pad (December 2020) construction of a sorting and processing shed (December 2021); and additional evaporation pond and staff amenities (2023).

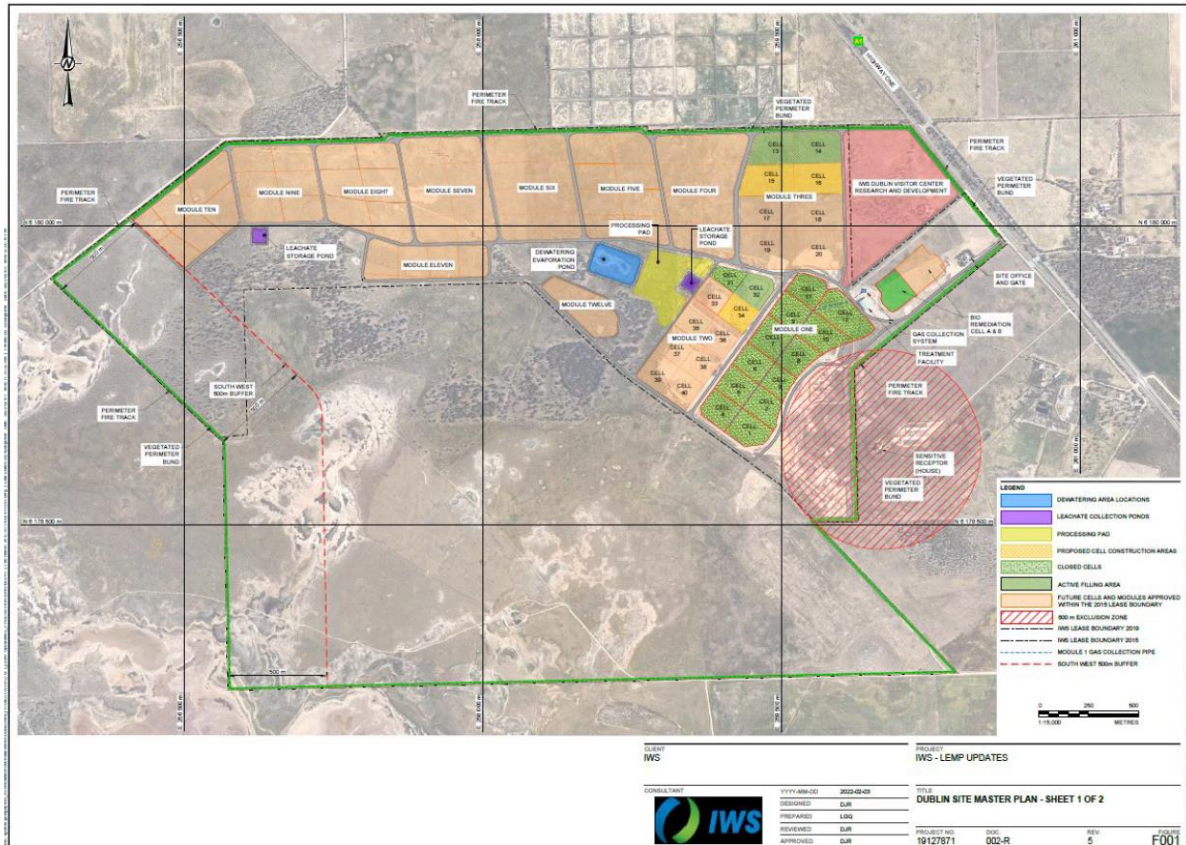


Figure 2: Existing Site Master Plan (AEIS July 2022)

The proponent, Integrated Waste Services(IWS), has applied for an amendment to the current development authorisation. The proponents' Amendment to the Environmental Impact Statement (AEIS) went on public exhibition in April 2023, with no public submission received. The Adelaide Plains Council and EPA provided submissions.

This Amendment to the Assessment Report (AAR) considers the potential environmental, social and economic impacts of proposed variation. 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.

3. Subject Land

The site comprises the following parcels of land:

- Allotment 76 in Deposited Plan 26412; HD Dublin; Certificate of Title Volume 5312 Folio 333.
- Section 311 in Hundred Plan 140400; HD Dublin; Certificate of Title Volume 5348 Folio 396.
- Section 310 in Hundred Plan 140400; HD Dublin; Certificate of Title Volume 5348 Folio 390.
- Section 312 in Hundred Plan 140400; HD Dublin; Certificate of Title Volume 5348 Folio 343.
- Allotment 95 in Filed Plan 173119; HD Dublin; Certificate of Title Volume 5348 Folio 391.
- Allotment 94 in Filed Plan 173118; HD Dublin; Certificate of Title Volume 5348 Folio 395.
- Allotment 96 in Filed Plan 173120; HD Dublin; Certificate of Title Volume 5348 Folio 394.
- Allotment 93 in Filed Plan 173117; HD Dublin; Certificate of Title Volume 5348 Folio 392.
- Allotment 92 in Filed Plan 173117; HD Dublin; Certificate of Title Volume 5348 Folio 393.

Site access is obtained from Lemmey Road which acts as a service road to Port Wakefield Highway.

4. Assessment Process

The existing IWS Northern Balefill was granted a provisional development authorisation on 29 January 1998 after undergoing an Environmental Impact Statement (EIS) process, including the preparation of an Assessment Report by the Minister. The Environment Protection Authority (EPA) then issued an EPA Licence 11275 for composting works and a landfill depot.

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

- **8 September 2005** - Approval to receive low level contaminated soil.
- **27 August 2009** - Approval of a Multiple Waste Treatment Facility for the treatment and disposal of high-level contaminated waste (Listed Waste).
- **2 September 2010** - Approval of Reserve Matters and variation of the authorisation relation to the MWTF. Primarily variation related to 1 stage of construction and minor modifications of design.
- **24 January 2013** – Approval for a variation the implementation of a '10 Year Masterplan' and the establishment of a Resource Pad, Bioremediation Pad and a Litter Net System.
- **14 May 2020** – Variation of the design of the landfill Module 3.
- **3 December 2020** - Vary the Solid Waste Landfill (Northern Balefill) near Dublin development authorisation dated 14 May 2020.
- **3 December 2021** - Variation for the construction of a sorting and processing shed, with associated site and civil works.
- **20 April 2023** – Leachate Pond
- **8 May 2023** - Ancillary shelter structures

A copy of the current authorisation (dated 8 June 2023) is provided at **Appendix 1**.

Pursuant to Section 114 of the Planning, Development and Infrastructure Act 2016, a Development Report and PER (now an EIS under the Act) previously determined under the repealed Act, can be amended by a proponent at any time to take account of an alteration to the original proposal.

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

The Act also requires the amendment to be referred to the local Council and, as the proposal involves a prescribed activity of environmental significance 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 'IWS Northern Balefill Facility' development proposal was originally declared a major development on 19 October 1994, with the draft Guidelines for the preparation of an EIS released in 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 authorisation was granted prior to the introduction of the new Act, 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.

4.3 Consultation on the Amendment to the EIS

Public consultation on the AEIS occurred for a period of 15 business days between 5 April and 1 May 2023. Copies of the AEIS were made available at the Department for Trade and Investment, Planning and Land Use Services (DTI-PLUS) and the Adelaide Plains Council (Two Wells office) and on the SA Planning Portal. A public notice was published in both 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 of an Amendment to the Assessment Report, as required by 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 IWS Northern Balefill facility' development proposal was prepared by the Minister in April 1997.

An Amendment to the Assessment Report (AAR) occurred in 2005 which assessed the impact of a variation to receive and dispose of low-level contaminated soil (LLCS) and liquid treatment plant

residues (LTPR) at the site. A second amendment to the Assessment Report occurred in August 2009 which assessed the impact of a variation to establish a Multiple Waste Treatment Facility (MWTF) at the site.

The current variation and amendment process assesses the environmental, social and economic impacts of the proposal by IWS to vary the current development authorisation as follows:

- Define the facility in a manner that provides for flexibility in future internal configuration. Future cells would still be subject to approval by the EPA as they are now.
- Increase the permissible maximum height of the landfill by 5.0 metres.
- Remove obsolete volumetric calculations.
- Clarify a location for a processing pad more centrally on the site, including that processing pads may be constructed on the areas of the site shown as cells.
- Remove the prescriptive requirements for the capacity of leachate extraction pumps.

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 and certification 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 vary the proposal in seven ways:

1. To define the facility in a manner that provides for flexibility in future internal configuration.
2. Future cells would still be subject to approval by the EPA as they are now.
3. It is proposed to increase the permissible maximum height of the landfill by 5.0 metres.
4. It is proposed as a consequential amendment to remove obsolete volumetric calculations.
5. It is proposed to clarify a location for a processing pad more centrally on the site.
6. It is proposed, for the avoidance of doubt, that processing pads may be constructed on the areas of the site shown as cells.
7. It is proposed, for the avoidance of doubt, to remove the prescriptive requirements for the capacity of leachate extraction pumps.

Section 7.1 to 7.6 of the AEIS provides a detailed description of each proposed element.

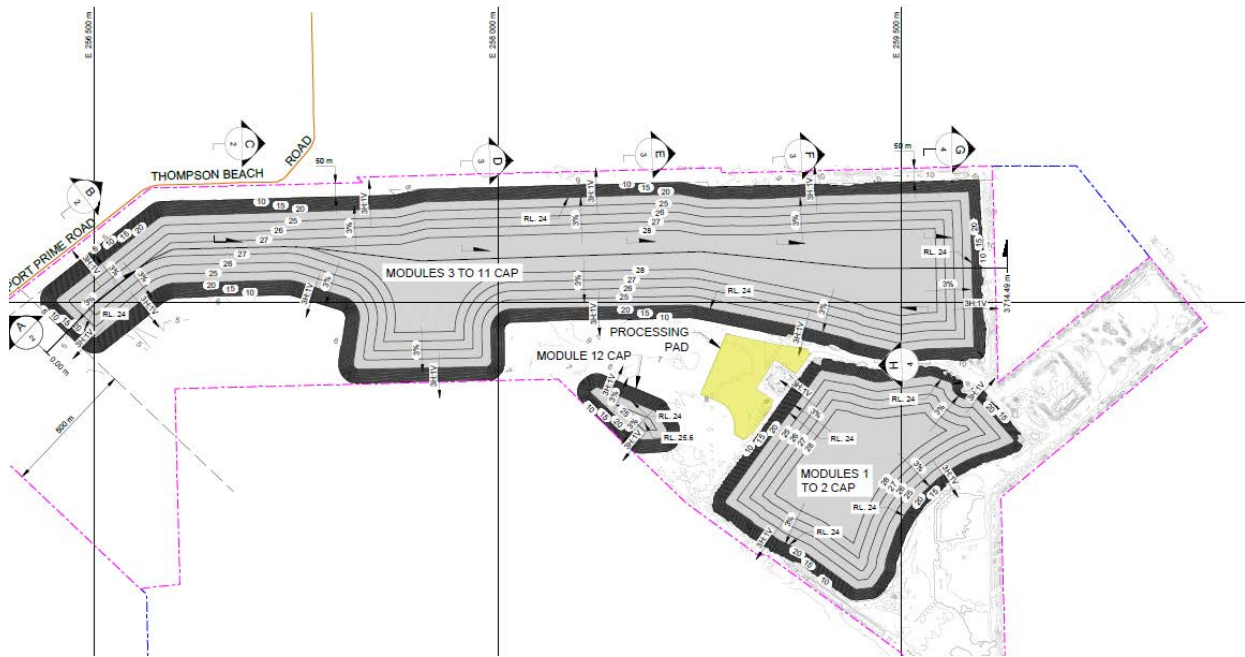


Figure 3: Modules 3-11 Cap and Processing pad (AEIS July 2022)

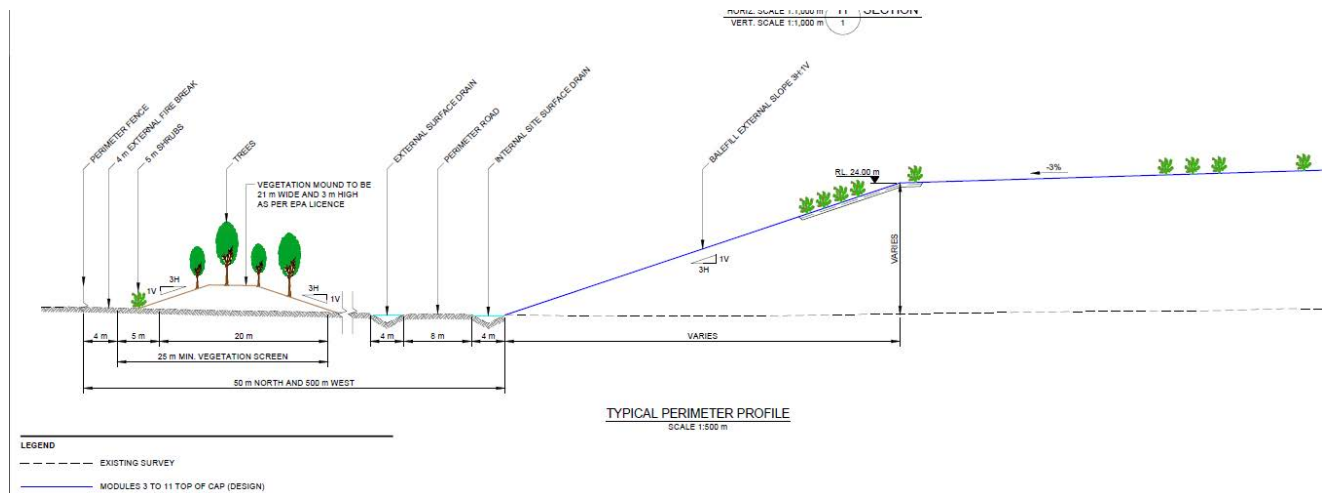


Figure 4: Typical Perimeter Profile (AEIS July 2022)

9. Description of the Existing Environment

The IWS Dublin Balefill facility is located 50km north-west of Adelaide, with the closest township being Dublin, situated 3km to the north. Port Wakefield Road provides access to the site from the east, and forms part of National Highway A1, connecting Port Wakefield to Adelaide.

The site has a total area of approximately 5.75 square kilometres, and a perimeter of 12.45 kilometres.

The eastern section of the site functions as a large facility for the reception, treatment, storage and disposal of waste. A weighbridge and gatehouse facility is located near the Lemmey Road entry point

(eastern boundary). The bioremediation facility is located further to the west, which includes a large pad (with windrowed material) and a large shed for the secondary sorting of remediated waste. The Multi-waste Treatment Facility ('MWTF') and the landfill cells are situated to the west and north.

The locality contains a mix of land uses, representative of its rural zoning, including cropping, grazing and intensive animal keeping (feedlots and poultry sheds).

The closest dwelling to the subject site is located to the south-east, at a distance of 110 metres from the subject site boundary and co-located with poultry sheds. The next nearest dwelling is located approximately 405 meters to the east of the subject site, on the opposite side of Port Wakefield Highway.

The area is characterised by flat plains, with the site sloping gently down from east to west over its entire distance (approximately 4.5km), with a fall of about 10m (ie. 14-4m AHD). The land is generally open and rocky; with extensive grazing, with only scattered (remnant) vegetation.

Soils on the site are of the mallee type overlying sheet calcrete, which in turn overlies low permeability Hindmarsh Clay some 45 - 55m thick. Below the clay is the confined aquifer of the Port Willunga Formation. Salinities of water in this aquifer range from 4000 - 7000mg/L restricting its suitability to stock watering or industrial use.

10. Public Consultation

No public submissions on the AEIS were received during the 15-business day consultation period.

11. Agency Advice

The EPA was extensively consulted on the proposed variation, via agency technical/adequacy review process of the draft AEIS, and then during the formal public consultation and agency referral period.

The response of the EPA acknowledged that the proposed variation did not seek to modify/or extend:

- the waste streams to be received and/or disposed at the site;
- the boundary of the EPA-licensed site;
- existing approvals and requirements for landscape mounds; or
- proximity of the current proposed cells to existing sensitive receivers.

The EPA submission confirmed that previously requested clarifications have been addressed in the public consultation version of the AEIS document. This includes clearly defining all variation items, the maximum permitted height of finished landfill cells and positioning of processing pad.

Further the EPA response acknowledges the clearer rationale provided for the proposed increase in landfill height, via environmental improvements and design flexibility.

The EPA has outlined expectations around future module design and approvals and has recommended the use of conditions to reinforce the maximum permissible module height of 28m AHD and approval requirements for the design and configuration of all future modules containing multiple cells (and individual cells).

12. Council Comments

The Adelaide Plains Council was consulted on the AEIS. The proposed variation was considered by the Council Assessment Panel (CAP) on the 3 May 2023, with CAP satisfied that the proposed variation

will not result in an intensification of the use of the land, nor will it create any additional unreasonable impacts on adjoining land. However, the Council comments reinforced the importance of landscaping to provide screening to the landfill site.

13. Response Document

On 9 June 2023, Masterplan, on behalf of the proponent provided a formal Response Document (RD). The RD adequately responds to (in table form) the issues raised by the EPA and APC in their submissions.

To remove any ambiguity around the 'final height requirements of finished modules' the RD suggests a condition to read *'The final height of finished modules (which includes interim cover and capped modules, which contain multiple cells) must not exceed the three-dimensional space defined in Appendix J, and the maximum permissible height of 28 m AHD.'*

The RD notes that the AEIS should be updated to clearly define 'finished landfill cells' to ensure consistency with references elsewhere to 'closed and capped cells' and incorporate a reference to modules and that processing pads may not be constructed on finished landfill cells.

Further, the RD notes the AEIS should be updated to confirm that where further landscaping is indicated to be established to screen areas of the site, including cells and modules, to be developed in future, a landscaping plan will be prepared prior to works commencing.

The proponent has provided an updated version of the AEIS to reflect the above requirement.

14. Assessment of Key Issues

The suitability of the site for waste disposal was addressed in the original EIS (1996) and Assessment Report (1997) that were considered by the Governor when the landfill was initially approved.

A subsequent EIS Amendment (Sept 2003) and Amendment to the Assessment Report (August 2005) considered site suitability to receive low-level contaminated soil and liquid treatment plant residues; and the EIS Amendment (2008) and Second Amendment to the Assessment Report (2009) considered site suitability for a Multiple Waste Treatment Facility.

Planning considerations identified in the original Guidelines, and addressed in the previous assessments included site operations, groundwater, surface water, landfill gas management, environment/amenity visual amenity, air quality acoustic impacts, traffic impacts, pest and plant management, community engagement and post closure management.

The AEIS document includes an assessment matrix (table 9.1) which is replicated below and sets out of the items which are relevant to the variation assessment.

Key Issues which were previously assessed and approved in the original Assessment Report and subsequent Amendments to the Assessment Report are not revisited in this Amendment to the Assessment Report. The following provides an assessment of the variation.

Internal Configuration Flexibility

The proposed variation provides for internal configuration flexibility to allow the configuration of modules, containing multiple cells (and individual cells) to be altered, within a redefined extent, without a requirement for further amendment to the development approval.

Table 9.1: Assessment Matrix

	Internal Configuration Flexibility	Height Increase	Removal of Volumetric Calculations	Central Processing Pad	Cell Processing Pads	24 Hour Operation (deleted from proposal)	Leachate Pumps
Site Operation	X	X	X	X	X		X
Groundwater	X	X	X	X	X		X
Surface Water	X	X	X	X	X		X
Landfill Gas Management		X	X				
Visual Amenity	X	X	X		X		
Air Quality					X		
Acoustic Impacts					X		
Traffic Impacts							
Pest Plant and Animal Management	X	X	X	X	X		
Community Engagement	X	X	X	X	X		X
Post Closure Management	X	X	X	X	X		X

Figure 5: Assessment Matrix (AEIS, July 2022)

The ‘Golder Cell Module layout Plan’ forming Appendix J of the AEIS depicts the theoretical maximum module/cell space and maximum permitted height, to allow for flexibility in the design and layout of future modules, containing multiple cells. Whilst this plan shows a single land mass (i.e. the theoretical maximum) final landform would not be linked to form a single land mass. Once completed, modules (within which cells will be constructed, filled, closed and capped) would not be linked, rather, each module would be a separate landform with sloped sides and a lower sloped top, with air space between each module.

Whilst the removal of existing module and cell positions currently approved will result in increased usable ‘landfill airspace’ the scale and configuration of individual modules, containing multiple cells (and individual cells) is governed by a range of design factors. Individual cell configuration and design will still need to be approved by the EPA in respect of each cell, pursuant to the licence, and the requirements of the environmental regulator.

It is concluded that the requested internal configuration flexibility is acceptable from a land use planning perspective, with final cell design appropriately managed via the EPA licence.

Height Increase

The variation seeks an increase to the permitted height of the landfill cells from a currently approved maximum of 23.00 metres AHD to a revised maximum of 28.00 metres AHD.

The proponent contends *‘that the increase in the maximum finished height proposed reflects a better understanding of the operational and geotechnical conditions, changes in cell design and liner*

technology, changes in capping design and technology and the need to optimise operations on the site.'

And that 'the revised maximum finished height will, when combined with no change in the depth to which cells can be constructed, result in an increase in the air space available over the life of the facility. In practical terms, however, the additional height will permit a number of operational and design changes which result in any increase in the available airspace being considerably less than the theoretical increase proposed.'



CURRENT SITE PHOTO - 2021



PROJECTED SITE PHOTO
(BASED ON CURRENT SITE PHOTO - 2021)

Figure 6: Existing and projected View from Pt Wakefield Rd near Thompson Rd looking South-West (AEIS July 2022)



CURRENT SITE PHOTO - 2021



Figure 7: Existing and projected View from Port Prime Road looking South (AEIS July 2022)

The increase in height will provide flexibility in cell design to suit operational and geotechnical conditions (such as such as alternate liners, reduced depth of excavation, increase distance between cell liner and ground water, alternate cap designs). The height increase is not anticipated to impact the existing groundwater, surface water, landfill gas management.

It is noted that the increase in height would only apply to new cell design as the EPA is not supportive of re-opening of already closed and capped cells/modules as this would pose additional environmental risks. Any proposed changes to the existing operational cells would be subject to EPA assessment and approval in accordance with the Environment Protection Act licence conditions.

The AEIS acknowledged the potential visual amenity impacts associated with the increase in maximum finished height. Visual amenity formed a key consideration of the original EIS and assessment report, and the proponent correctly states in the AEIS that (the current) *'approval clearly acknowledged that there would be a material change in visual amenity through landform and appearance, that the change would progress in an evolutionary manner and that the level of impact would continue to alter over time.'* The AEIS includes an updated Visual Amenity Assessment (VAAU) prepared by DBD Environmental to assist with the assessment of the proposed variation.

The VAAU includes comparison photography from 1997 (prior to establishment of the Dublin Landfill) to more recent photos taken in 2021. In addition, the VAAU includes photomontages which show the 2021 view with the cell modules being complete, increased to the 28 metres AHD maximum height proposed in the amendment.

The currently approved facility has and will continue to have some level of visual intrusion on the locality as the facility is developed. The proposed mitigations which have been established, in the form of mounding and landscape buffers, assist in reducing the visual impacts of the development.

It is concluded that the increase in cell module height by a maximum of 5 metres (to 28 AHD) is acceptable from a visual amenity perspective, provided current approved mitigation measures (earth mounds and dense landscaping) continue to be established and maintained. It is recommended that the applicant prepare a consolidated landscape plan to ensure appropriate landscape screening is achieved (refer to new Condition 45).

Removal of Volumetric Limitations

The current development authorisation includes reference to specific individual cell positions and nominate volumetric calculations for each cell.

The AEIS notes that the volumetric calculations were defined based on a series of assumptions that were made when the proposal was originally proposed and assessed.

Further the AEIS states *'Given the facility has existing capacity to accept and dispose of waste to landfill for over 100 years, the total volume received at the site is of limited relevance, as the waste being received, managed and disposed at any particular time is more representative of the impacts emanating from the facility, particularly in respect of amenity impacts.'*

It cannot be excluded that the removal of reference to quantitative volumetric caps may result in an increase in the total amount of waste which is ultimately disposed of at the site over its lifespan. However, as proposed by the variation, the extent of material able to be disposed of will still be limited by a defined three-dimensional physical extent of cell space. Any such increase resulting from the removal of reference to volumetric caps is unlikely to represent a significant increase in the overall scale of the facility.'

It is concluded that the removal of volumetric limitation is appropriate and required to allow more usable 'landfill airspace' and internal configuration flexibility. It is accepted that module and cell configuration will be controlled via the revised maximum height of 28.00 metres AHD and final cell design appropriately managed via the EPA licence.

Central Processing Pad

The AEIS notes that as the development of the site proceeds, the progressive opening of cells will progress in a westerly direction. Over time, this will result in the focus of operations on the site being located further to the west than is currently the case.

At the present time, processing and operations occurring on the site are focussed on the eastern end of the site between the entrance to the facility from Port Wakefield Highway and Modules 1 and 2. As the focus of operations on the site moves further to the west, it will become progressively less efficient to have all operations concentrated at the eastern end of the site.

The proposed variation includes an area for processing located more centrally on the site. This area would, subject to any required approvals, be used for various processing and staging operations.

The design and use of areas as processing pads would be subject to approval by the EPA pursuant to the licence and the demonstration that environmental impacts (such as to air quality, noise, dust and odour) would be appropriately prevented and minimised. If any activities or building works on the processing pads were proposed that were outside of the ambit of existing approvals, development approval would also be required.

It is concluded a centrally located processing pad is acceptable, noting construction and use would be subject to approval by the EPA pursuant to the licence.

Cell Processing Pads

The proposed variation seeks to clarify that cell processing pads can be established on areas shown to be used as future cells. The AEIS states that utilising cell areas as processing pads, this allows for a significantly increased efficiency in the movement of material through the site.

The use of areas as processing pads would be subject to approval by the EPA pursuant to the licence due to potential micro-siting matters. Further, if any activities or building works on the processing pads were proposed that were outside of the ambit of existing approvals, development approval would also be required.

It is concluded that cell processing pads located on areas to be used as future cells are acceptable noting construction and use would be subject to approval by the EPA pursuant to the licence.

Leachate Pump

The current development authorisation includes reference to minimum specifications for leachate pumps. Leachate collection and monitoring systems allow for the recording of the volumes of leachate produced. It is important that the pumps specified for leachate collection systems are sufficiently sized to enable them to manage the volume of leachate produced within their specified duty.

The AEIS indicates, based on data collected by IWS that some leachate collection pumps are over-specified based on the amount of leachate being produced. All leachate collection systems on the site are required to be designed in consultation with the EPA, pursuant to the licence for the site.

It is concluded that the minimum specifications for leachate pumps are appropriately managed through the EPA licence for the site and as such existing condition no. 29 should be amended to requires that Leachate pumps shall be adequately sized to maintain leachate levels effectively and efficiently, as may be required by the EPA.

14.1 Need for Proposal & Consequences of Not Proceeding

The AEIS notes that the Impact Assessed development ‘amendment process’ (which continues to guide the assessment requirements for projects where a declaration remains in place) is not well suited to amendments which are of a minor scale, and/or have a crossover with the licencing role of the Environment Protection Authority (i.e. Licencing under the *Environment Protection Act 1993*).

The proponent has identified this AEIS is an opportunity to confirm and formalise various operational and siting matters, this includes removing outdated volumetric calculations for cells and prescriptive operational requirements which will improve the overall efficiency of landfill operations on the site.

In addition, the variation seeks to formalise additional ‘airspace’ and ‘flexibility’ in future cell location and design without the need for ongoing variations under the PDI Act, rather the location and design of each cell is subject to detailed technical assessment and approval by the EPA under the Licence.

Without formalisation of the matters proposed to be varied, a significant level of inefficiency will remain and potentially increase further over time. The Commission is broadly supportive of this approach, which ensures operational matters under the overall land use approval rest with the environmental regulator, which also has the power to more easily adjust licence conditions.

14.2 Environmental Impact

The original Assessment Report included an assessment of the following environmental impacts:

- Ground
- Noise
- Air Quality
- Litter
- Landfill Gas
- Traffic
- Surface Water
- Flora/Fauna/Pests

The AEIS states that the development has now been operating for over 20 years and can operate in accordance with approval conditions and the licence granted by the EPA.

It is concluded that the proposed variation is not likely to create any additional environmental impact, over and above what has previously been assessed and approved in the original Assessment Report and subsequent Amendments to the Assessment Report. However, it is noted that as the site develops new aspects of the site will be subject to EPA approval (for example, the construction and capping of new cells, and the development of new processing pads) in accordance with Environment Protection Act licence condition requirements.

14.3 Social Impacts

The original EIS Assessment included an assessment of the following social impacts:

- Heritage
- Land Use Change
- Visual Amenity
- Mining Tenements
- Public Health and Safety
- Property Values

The AEIS identifies that the only social impact which requires consideration as part of the variation proposal is 'visual impact.' An assessment of the visual impact forming part of the AEIS which concludes that the increased maximum height of 5.0 metres is considered negligible.

The proposed variation includes a 5-metre increase in the approved maximum landfill height. Whilst the proposed increase in landfill height necessitates further consideration of visual amenity impacts, when considered against the existing landfill operations, approved height, boundary setbacks (including to nearby residences), and the facilities' situational context within a sparsely populated, rural area, with a perimeter landscape screen, such impacts are acceptable.

14.4 Economic Impacts

The original EIS included an assessment of the waste transport and disposal costs at the landfill, impact on the state economy and employment generation. The AEIS indicates that as waste treatment and management technology have progressed, the existing operation must respond to these matters to ensure it is being operated at current time best practice. The proposed changes seek to improve site operations in terms of efficiency and longevity, which also ensures both the provision of cost-competitive and fit-for-purpose waste management services.

It is concluded that the proposed variation would not create any additional economic impact, over and above what has previously been assessed and approved in the original Assessment Report and subsequent Amendments to the Assessment Report.

15. Consistency with Current Planning Policies

The assessment of an 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 on a certain parcel(s) of land, an impact assessed 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 planning system, and address the economic, environmental and social planning priorities for South Australia.

State Planning Policies have a role in the preparation of an 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 provides continued support for the development of resource recovery and landfilling activities in accordance with current industry practice (and the associated landfill gas). Given the existence of the Dublin Landfill site in a primary production area, the proposed increased in finished cell height should not negatively impact on existing primary production enterprises in the locality.

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. The IWS Dublin landfill facility is located within the Greater Adelaide Planning Region. The 30-year plan for Greater Adelaide (2010) guides how Adelaide should grow to become more liveable, competitive and sustainable. The 2017 update focusses on a number of matters,

including maximising the efficient use of infrastructure, valuing our natural environment and enhancing biodiversity and mitigating against and adapting to our changing climate.

The 30-year plan for Greater Adelaide includes the following relevant policies and actions.

The economy and jobs

Policy 55 Promote certainty to undertake development while at the same time providing scope for innovation.

Policy 56 Ensure there are suitable land supplies for the retail, commercial and industrial sectors.

Policy 57 Maintain and protect primary production and tourism assets in the Environment and Food Production Areas, while allowing for appropriate value-adding activities to increase investment opportunities.

Transport

Policy 7 Ensure development does not adversely impact the transport function of freight and/or major traffic routes and maintains access to markets.

Infrastructure

Action 52 Deliver long-term planning for waste and resource recovery infrastructure to identify locations to meet the future demand and support a resource efficient economy.

Summary: The proposed variation will improve the efficiency of existing landfilling operations, which is a long-established waste management facility. The site has been alienated from primary industry use for several decades and has demonstrated the ability to co-exist with rural enterprises in the surrounding locality.

The current site and operations provide for adequate activity buffers and management and monitoring measures ensure there should not be impacts on adjacent land uses and sensitive receivers.

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 2021.17 adopted 16 December 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.

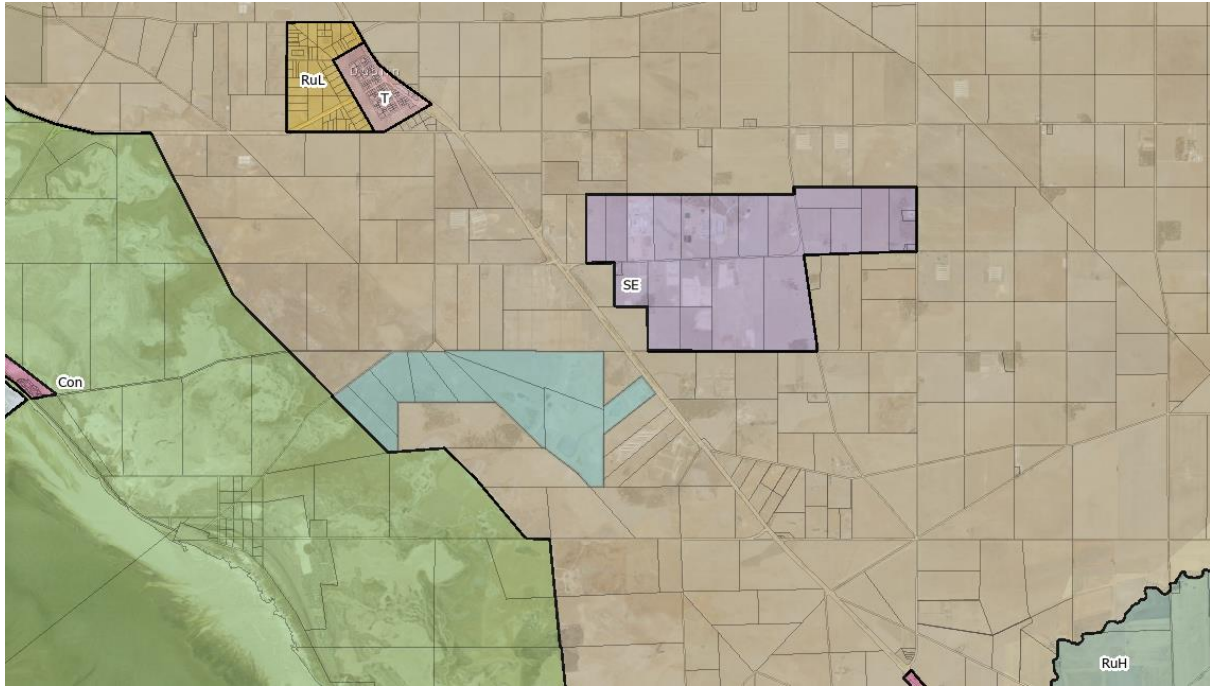


Figure 8: Planning and Design Code Zoning for the site.

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.

Summary: The Rural Zone supports the production, processing, storage and distribution of primary produce, forestry and the generation of energy from renewable sources.

Acceptable land uses 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.

The IWS Dublin landfill facility is an approved and operational land use within the Rural Zone.

Whilst the land use is not *specifically* envisaged in the Zone the proposed variation involves logical efficiency improvements to the operation of the landfill facility. It is also recognised that developments of this nature – which operate for decades – are not generally anticipated, nor their potential environmental impacts assessed, by general planning schemes or codes.

A government supported process was adopted to consider the original project merits, and once established, ensure that future variations would be similarly assessed and determined.

The general locality – whilst used for primary production purposes – has been heavily modified to sustain broadacre cropping, grazing and intensive animal keeping uses on large allotments. The operational impacts on the *continuing* use of adjoining land are considered negligible, whilst the potential visual impacts from a change in cell height have already been considered in this report.

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.

Activities Generating Noise or Vibration:

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.

Summary: The proposed increase in the maximum finished height level of the landfill cells does not conflict with code policies that seek the establishment of appropriately designed, sited and operated waste management facilities in rural areas. The suitability of the site for different waste streams and processing operations was previously considered and approved, such that the increase in landfill height and more flexible cell management should be considered a gradual refinement of current waste management practices, managed under an EPA licensing regime.

15.3.3 Overlays & Technical Variations

The following overlays apply to site:

- Environment and Food Production Area Overlay.
- Hazards (Acid Sulphate Soils) Overlay.
- Hazards (Bushfire – General) Overlay.
- Hazards (Bushfire – Medium Risk) Overlay.
- Hazards (Flooding – Evidence Required) Overlay.
- Interface Management Overlay.
- Major Urban Transport Routes Overlay.
- Native Vegetation Overlay.
- State Significant Major Vegetation Overlay.
- Traffic Generation Development Overlay.
- Water Resources Overlay.
- TNV – Minimum Site Area – 40ha.

Summary: The proposal variation does not involve development which would require further assessment against the applicable Planning and Design Code overlays.

16. Conclusion

The proposal by IWS for enhanced flexibility and certainty in the future management of the existing waste (balefill) facility, involving changes to its overall layout, landfill cell height, and allowance for more flexible landfilling calculations and prescriptive requirements for fixed plant (leachate pumps), is supported. The existing facility has been operating for some time and is well regulated under an environmental licence overseen by an independent regulatory body.

The proposal is consistent with relevant State Planning policies, the 30-Year Plan for Greater Adelaide Plan and the Planning and Design Code (primarily the General Development provisions for Waste Treatment and Management Facilities). The AEIS has identified limited environmental, social, and economic impacts above those which were considered in the original EIS and subsequent EIS Amendments and can therefore be recommended for approval subject to appropriate conditions.

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The EPA has confirmed acceptance of the proposed variation subject to targeted conditions addressing the maximum permissible height of landfill modules; the design and configuration of all future modules, containing multiple cells (and individual cells); and adequate sizing of leachate pumps. Recommended conditions of approval, including a requirement for the proponent to provide detailed cell and leachate pump designs for the review and approval by the EPA, are outlined in part 17 of the AAR, being the recommendation to the Minister for Planning.

17. Recommendations

The IWS Northern Balefill facility is currently the subject of an Impact Assessed development authorisation and EPA licence for composting works and a landfill depot.

The proponent, Integrated Waste Services (IWS), has applied for an amendment to the current development authorisation to allow flexibility in future internal site configuration, an increase in the permissible maximum height of the landfill by 5.0 metres and remove volumetric landfilling calculations and prescriptive requirements for fixed plant (leachate pumps).

Should a variation to the current development authorisation be granted by the Minister for Planning it is recommended that the following additional requirements to be adopted, specifically draft Conditions 43 to 45, and amendment to previous Condition 29.

General Conditions

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

Current Authorisation

- Development application dated 30 June 2008;
- Environmental Impact Statement Amendment, Integrated Waste Services Northern Balefill Dublin Multiple Waste Treatment Facility EIS Amendment prepared by Golder Associates, dated 24 November 2008, but in the case of conflict with a specific condition below the specific condition shall apply;
- Proponent's response to submissions, letter from Connor Holmes to the Department of Planning and Local Government dated 3 April 2009, but in the case of conflict with a specific condition below the specific condition shall apply;
- Correspondence from Connor Holmes to the Department of Planning and Local Government containing additional information on the proposal dated 27 May 2009, but in the case of conflict with a specific condition below the specific condition shall apply;
- Correspondence from Integrated Waste Services to the Department of Planning and Local Government applying for approval of reserved matters and variations related to the Multiple Waste Treatment Facility dated 19 May 2010, but in the case of conflict with a specific condition below the specific condition shall apply;
- Correspondence from Integrated Waste Services to the Department of Planning and Local Government providing additional information to support application dated 11 May 2010, but in the case of conflict with a specific condition below the specific condition shall apply;
- Correspondence from Katnitch Dodd for Stage 1—Civil and Structural Work dated 31 March 2010 and accompanying certified plans;
- Correspondence from Katnitch Dodd for Final Stage—Services and Fitout Works dated 31 March 2010 and accompanying certified plans.
- Application for a variation to the development authorisation from Integrated Waste Services dated 5 October 2012, except as varied by the conditions listed below or to the extent that they are varied by the plans and drawings listed below.
- Application for a variation to the development authorisation from Masterplan (on behalf of Integrated Waste Services P/L) dated 11 March 2020, including plans titled 'Site Layout' (prepared by Golder, dated 2020-02-26), 'Module 3 Cap' (prepared by Golder, dated 2020-02-26) and 'Longsection' (prepared by Golder, dated 2020-02-26).

- Application for a variation to the development authorisation from Masterplan (on behalf of Integrated Waste Services P/L) dated 20 September 2019, including plans titled 'Clearing and Grubbing Layout Plan', (prepared by Golder, dated 2019-09-13), 'Design Layout Plan' (prepared by Golder, dated 2019-09-13), 'Design Surface Top of Subgrade Layout Plan' (prepared by Golder, dated 2019-09-13), Cross Sections – Sheet 1 of 2' (prepared by Golder, dated 2019-09-13), Cross Sections – Sheet 2 of 2' (prepared by Golder, dated 2019-09-13), 'Typical Sections and Details' (prepared by Golder, dated 2019-09-13) and 'Indicative Aeration Pipe Layout Plan and Typical Section' (prepared by Golder, dated 2019-09-13); and the 'Integrated Waste Services – Organics Processing Pad Cell B – Technical Specification' (1654805-020-TS-Rev0) by Golder dated 5 November 2019.

Varied Authorisation – Stage 2 Processing Shed – September 2021

Planning Documentation

- Letter from MasterPlan dated 12 May 2021
- Letter from MasterPlan dated 22 June 2021
- Ahrens – Stage 2 Processing Shed – DA Submission – Project No DSK21211 – Drawings A01-01 to A30-02 – Sheets:7 Rev: EE-GG (as indicated) and dated 6.9.2021).

Building Certification

- Working Drawings – Ahrens – A21-01 to A90-01 (13 Sheets)
- Electrical Services – Tip Top Electrical Services (6 Sheets)
- NCC BCA Vol1 Part J 2019

Varied Authorisation – Additional leachate pond – April 2023

Planning Documentation

- Correspondence (and accompanying plans) from Masterplan on behalf of Integrated Waste Services (IWS) dated 3 April 2023 regarding the construction of an additional leachate pond.

Building Certification

- Not required.

Varied Authorisation – Canopy structures – May 2023

Planning Documentation

- Correspondence (and accompanying plans) from Masterplan on behalf of Integrated Waste Services (IWS) dated 14 April 2023 regarding the construction of two (2) ancillary canopy structures.

Building Certification

- Revolution Building / Homestyle Living Outdoors: QuoteID: P57929Q2 and technical review of documentation by Subi Smartz Consultants PL, Independent Technical Expert dated 15.5.23

Varied Authorisation – EIS Amendment – August 2023

Planning Documentation

- EIS Amendment titled 'Addendum to EIS – IWS Northern Facility – Lemmey Road, Lower Light for Integrated Waste Services' prepared by MasterPlan SA Pty Ltd and dated March 2023 (as amended).
- Correspondence from Masterplan dated 9 June 2023 titled 'Re: IWS Dublin Eco-Hub Variation of Development Approval Response to Submissions.'

Multiple Waste Treatment Facility (MWTF)

3. The design of the MWTF shall be amended to include coloured metal cladding on all sides of the building, so as to enclose the whole of the facility.
4. Designs for the effluent treatment and disposal system shall be prepared to the reasonable satisfaction of the Adelaide Plains Council.
5. Treatment of waste material shall not occur until the construction of the entire MWTF has been completed, to the reasonable satisfaction of the Environment Protection Authority (EPA).
6. High Level Contaminated Waste is not required to be baled or shredded.
7. A truck wash with water sprays shall be installed for the removal of residues from vehicles transporting High Level Contaminated Waste to the site. All transport vehicles shall not leave the site unless they have gone through the truck wash.
8. Treatment of the stored materials shall only commence once the completed MWTF is approved by the EPA to commence operation.
9. Bioremediation and stabilisation are the only treatment processes that shall be used in the MWTF.
10. Pre-remediation trials shall be conducted on all contaminated materials, prior to delivery to the MWTF and the Bioremediation Pad, to determine if treatment methods approved by the EPA would be successful. Trial results shall be submitted to the EPA for assessment, prior to delivery of contaminated materials to the MWTF and the Bioremediation Pad.
11. Post-remediation testing on treated materials shall be undertaken to assess its suitability to be disposed of or reused. Testing results shall be submitted to the EPA for assessment, prior to disposal or reuse.
12. Future treatment options shall undergo pre-trial assessment, to the reasonable satisfaction of the EPA, before they can be adopted.
13. An Environmental Management Plan (EMP) for activities associated with the MWTF, prepared to the reasonable satisfaction of the EPA, must be in place prior to the receipt, storage and treatment of contaminated materials.

Solid Waste Balefill

14. The work shall be carried out as shown on the plans (Figures 3.1 to 3.9) in the Development Application Report dated 28 November 1997, included with the Development Application dated 2 December 1997, except as varied by these conditions.
15. Subject to Conditions 16, 17 and 18, all waste received for disposal at the facility shall be shredded and baled.
16. Unbaled commercial/industrial or construction/demolition waste of appropriate particle sizes may be placed and compacted in any voids unavoidably occurring between bales and the inclined surface of the cells in which those bales are placed or within a suitable netting system to the reasonable satisfaction of the EPA and in accordance with any applicable requirements of a relevant environmental authorisation.

17. Waste materials received for disposal at the facility need not be shredded before baling where shredding of those materials is not required for the purpose of producing bales of a density and structural integrity that satisfy the applicable requirements of any relevant environmental authorisation.
18. Non-friable asbestos waste shall not be shredded or baled but shall be disposed of in accordance with the applicable requirements of any relevant environmental authorisation.
19. All perimeter plantings shall be started as early as practicable after the date of this authorisation to achieve maximum amelioration of visual impacts.
20. 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).
21. All firebreaks and external drainage channels shall be located on the inner edge of the vegetation screen and existing stands of native vegetation. In the event that drainage channels are required to be located close to the site boundary, their redesign to form low-lying wetland/saltmarsh communities as part of the vegetation screen shall be undertaken and implemented to the satisfaction of the Environment Protection Authority.
22. A leachate monitoring bore shall be installed within each cell to assist with leachate management, particularly if leachate circulation is incorporated in the Landfill Environmental Management Plan (LEMP).
23. The proponent shall pay all reasonable costs of the detailed design and construction of any public roadworks made necessary by this development. Such works may include the opening and associated left turn deceleration lane from Port Wakefield Road, and the upgrading of the entrance to balefill junction to the satisfaction of the Commissioner of Highways.
24. The proponent shall seal (two coat spray seal) the internal site access road for a minimum of 520 m from the nearest residence.
25. The applicant shall prepare a Vegetation Management and Revegetation Plan (which may be included in the LEMP) to the reasonable satisfaction of the Development Assessment Commission and must implement that Plan once it has been approved by the Development Assessment Commission.

Low Level Contaminated Soil and Liquid Treatment Plant Residues

26. Low level contaminated soil (LLCS) and liquid treatment plant residues (LTPR) are not required to be baled or shredded.
27. The work shall be carried in accordance with the following documents and plans:
 - EIS Amendment, Receipt of Low Level Contaminated Soil and Liquid Waste Treatment Plant Residues at the IWS Northern Balefill, dated July 2003.
 - Response Document on the EIS Amendment for the Receipt of Low Level Contaminated Soil and Liquid Waste Treatment Plant Residues (Revised), dated 30 April 2004.

- Supplementary Information EIS Amendment Receipt of Low Level Contaminated Soil and Liquid Waste Treatment Plant Residues at the IWS Northern Balefill, dated 26 November 2004.
- Landfill Environmental Management Plan, dated 2001 or as varied by any applicable requirements of a licence from the Environment Protection Authority.
- Drawings
 - 3307DO1, 4/11/2004—cell 31 design plan.
 - 3307DO2, Drawn 25/8/2004 and checked 18/2/2005—Section A, liner and sump design.
 - 3307DO3, 10/8/2004—liner design sections and details.
 - 3307DO4, 14/10/2004—cell 31 interim capping design.
 - 3307DO5, 13/8/2004—landfill staging plan.
 - 3307DO6, 13/8/2004—final surface water control.
 - 3307DO8, Drawn 27/8/2004 and checked 26/11/2004—interim surface water control
 - 3307DO9 P1, Drawn 4/11/2004 and checked 26/11/2004—cell design plan line 2.
 - 3307DO10, Drawn 29/8/2004 and checked 26/11/2004—Sections D and E, swale drain design.

28. Distance to groundwater requirements shall be as follows:

- Based on groundwater level monitoring results and interpolated highest groundwater levels for Cell 31, including a 0.1 metre buffer; the base of the sump shall be at 9.1 m AHD;
- Notwithstanding the above requirement, a minimum separation distance of 2 m between the underside of the lowest portion of the lining system (including the sump area) and the underlying groundwater shall be maintained at all times.

29. Leachate collection and extraction system requirements shall be as follows:

- Leachate removal shall implement a system which accommodates the installation of the pumps at the leachate riser access point.
- Following cell completion and until the entire cell base is covered with a minimum of 1.5 metres of waste, a pump with an adequate flow capacity ~~a flow capacity of a minimum of 40 litres per second~~ shall be installed to the satisfaction of the EPA.
- ~~After it can be demonstrated that leachate production has declined to less than one litre per second, this pump can be replaced by a pump of lesser flow capacity.~~
- A back-up pump with the relevant capacity shall be readily available on site at all time.

30. Leachate treatment requirements shall be as follows:

- Leachate may be managed and treated by means of:

Direct extraction into an on-site leachate evaporation pond which shall meet the minimum design specification as follows:

- composite lining system comprising a one metre low permeability clay liner with $k < 1 \times 10^{-9} \text{m/s}$ compacted to 95% Maximum Dry Density by standard compaction, and a moisture content between 0% and +4% wet of Optimum Moisture Content, overlaid by a 2mm high density polyethylene (HDPE) liner (welded).

- minimum of 600 mm freeboard.
 - modelling with HELP or LANDSIM shall consider a one in 25, 24 hour duration storm event.
 - a minimum separation distance of two metres between the underside of the lowest portion of the lining system and the underlying groundwater shall be maintained at all times.
 - Direct extraction into an onsite tank vehicle suitable for the transport of leachate into an onsite leachate evaporation pond.
 - Direct extraction into a licensed vehicle and transported to an off-site Environment Protection Authority licensed Waste Water Treatment Plant.
 - Direct extraction into a suitably designed, temporary on-site storage tank prior to off-site disposal by an Environment Protection Authority licensed vehicle at an Environment Protection Authority licensed Waste Water Treatment Plant or prior to on-site transport to an onsite leachate evaporation pond.
31. Leachate management requirements shall be as follows:
- The head of leachate on the liner shall not exceed 300 mm (excluding the sump) at all times. To facilitate this, the trigger level for leachate extraction out of the leachate sump shall be set at 290 mm.
 - In addition to automatic leachate data readings, a manual monitoring probe shall be installed and calibrated to allow for direct readings of the vertical elevation of leachate in the riser pipe and conversion to the maximum leachate head on top of the liner.
 - Leachate levels shall be read manually daily and recorded in the onsite operations logbook or as specified otherwise in the Environment Protection Authority licence.
32. Distance between LLCS/LTPR cells and Balefill cells (reference drawing 3307D03, 18/8/2004) shall be as follows:
- The distance between LLCS/LTPR cells and Balefill cells shall be at a minimum of 5 metres, measured between the toe of the LLCS cell structure (that is where the outer surface of the cap of the completed LLCS/LTPR cell joins the outer surface of the underlying clay liner for the same cell) and the cap of the nearest balefill cell (that is where the outer surface of the cap of a completed balefill cell joins the outer surface of the underlying clay liner).
33. Level 1 Supervision requirements shall be as follows:
- The construction of the clay liner of the cell shall be carried out under Level 1 Supervision in accordance with AS 3798-1996, Appendix B.
 - The construction of the HDPE liner shall be carried out under the full time supervision of a suitably qualified geotechnical consultant with experience in the construction and supervision of the construction of HDPE lining systems, quality control procedures and testing.
34. 'As Constructed Report' requirements shall be as follows:
- An 'As Constructed Report' certifying compliance with the approved design for the lining system, including a Construction Quality Assurance Report (CQA) for the HDPE liner and the Level 1 Supervision Report, shall be submitted to the Environment Protection Authority for acceptance prior to the commencement of the receipt and disposal of waste in each cell. No waste shall be received and disposed of prior to written acceptance of the 'As Constructed Report' by the Environment Protection Authority.
35. Coverage of waste requirements shall be as follows:
- All waste shall be covered as soon as reasonable practicable after the receipt of waste and placement in the cell or at close of business on each business day with at least 150 mm of cover

material (waste fill or intermediate landfill cover with the restriction to a maximum particle size of 100 mm).

- If a load of particularly odorous material is received at the LLCS/LTPR cell, it shall be covered immediately with a minimum of 150 mm cover material.
- During periods when the LLCS/LTPR cell is not operating, routine monitoring for odorous gases shall be carried out as part of the site monitoring program and may trigger the application of additional cover material.
- Alternative cover materials may be used after the proponent:
 - has demonstrated to the Environment Protection Authority that the proposed material and placement method result in an equivalent or better performance compared to the approved material; and
 - has received written approval from the EPA prior to the use of alternative materials and placement methods.

36. Groundwater management requirements shall be as follows:

- An additional groundwater well shall be installed west of cell 30 and the first round of groundwater sampling and testing shall be completed at least two weeks prior to commencement of construction of cell 31
- Groundwater level monitoring shall commence at least two weeks before commencement of construction of cell 31; groundwater levels shall be taken weekly and reported to the Environment Protection Authority monthly (datasheet and graph) or as specified otherwise in the EPA authorisation.
- Four monitoring rounds at three monthly intervals in the first 12 months of operation shall be carried out to establish additional background analyte levels around cell 31
- Six monthly monitoring rounds shall be undertaken following the completion of the initial 12 months of groundwater monitoring or as specified otherwise in the Environment Protection Authority licence
- Prior to the commencement of construction of any other cell for the receipt of LLCS/LTPR, the groundwater management and monitoring program shall be reviewed and submitted for Environment Protection Authority approval.

37. Surface Water Management requirements shall be as follows:

- A stormwater management plan shall be developed and submitted for Environment Protection Authority's approval addressing all issues related to the staged construction of LLCS/LTPR cells on site prior to commencement of construction of cell 31.
- The stormwater management plan shall provide surface water control and management measures for:
 - surface water or stormwater runoff that does not interact with the waste material or other operational areas of the site and is considered to be uncontaminated.
 - surface water that comes into contact with waste materials or is collected from landfill areas or other operational areas and is considered to be contaminated.
 - surface runoff from the final landfill cap which has to be controlled.
 - diversion of surface water runoff from perimeter areas away from the operating cell.

38. Landfill Environmental Management Plan (LEMP) requirements shall be as follows:

- The new section of the LEMP ('Section 17') shall be completed and incorporated in the revised LEMP document.
- The complete revised LEMP document shall be finalised and submitted to the Environment Protection Authority for approval prior to the receipt and disposal of LLCS/LTPR on the premises.

39. A wheel wash with water sprays shall be installed ensure removal of residues from the wheels and underside of the vehicles transporting low level contaminated soil and liquid treatment plant residues to the site.

Bioremediation Pad – Cell B (Eastern Extension)

40. The applicant must provide an ‘as constructed’ report to the reasonable satisfaction of the Environment Protection Authority (EPA) confirming compliance with the design and construction specifications prior to the commencement of any receipt, storage, and treatment of waste at the expanded bioremediation pad.
41. Reuse of treated organic waste derived from mixed waste (including municipal solid waste or commercial and industrial waste) must not be permitted outside of the lined landfill cells.

Stage 2 Processing Shed

42. A landscape screen with a suitable mix of native species shall be re-established to the immediate north of the Stage 2 processing shed within six months of the operational use of the facility.

EIS Amendment – August 2023

43. The design and configuration of all future modules, containing multiple cells (and individual cells) must be submitted to the EPA for assessment and approval and must only be constructed in accordance with an EPA approval in accordance with Environment Protection Act licence condition requirements.
44. The final height of finished modules (which includes interim cover and capped modules, which contain multiple cells) must not exceed the three-dimensional space defined in the EIS Amendment Appendix J – Golders Cell Module Layout Plan (Titled MODULES 1 TO 2 CAP, MODULES 3 TO 11 CAP AND MODULE 12 CAP - LAYOUT PLAN and MODULES 3 TO 11 CAP SECTIONS - SHEET 1 OF 3 dated 3/2/20230), and the maximum permissible height of 28 m AHD.
45. Within six months of the date of approval, the applicant shall prepare a consolidated landscape plan which takes into consideration the increase in landfill height. The consolidated landscaping plan must include planting locations, species selections (including mature height levels), staging requirements and an establishment and maintenance strategy. The consolidated landscaping plan shall be prepared and implemented to the reasonable satisfaction of the Minister for Planning.

CONDITIONS OF BUILDING CERTIFICATION:

Stage 2 Processing Shed

46. The nature of the materials stored at any one time shall not:
- contain any hazardous materials, and
 - be stored for long duration of time, and
 - not exceed 4m in height
47. Full perimeter CFS truck access shall be provided and not obstructed by any proposed fencing.

Advisory notes:

- The proponent shall obtain Building certification for any building work to be undertaken from either the Adelaide Plains Council or an accredited professional (at the proponent's option) and forward to the Minister for Planning and Local Government all relevant certification documents for final approval.
- The Adelaide Plains Council or accredited professional undertaking the Building certification must ensure that the assessment is consistent with this development authorisation (including its Conditions and Notes).

Environmental Management Plan for the Multiple Waste Treatment Facility (MWTF)

- An Environmental Management Plan (EMP) covering the operation requirements for the MTWF shall be prepared in consultation with the Environment Protection Authority, and include the following requirements:
 - an air quality monitoring programme to ensure air emissions from the MWTF do not contain contaminants at levels that may be harmful to nearby residents and land uses.
 - protocols for testing/trialling the suitability and effectiveness of treatment methods for batches of contaminated materials that could potentially be treated at the MWTF, prior to the receipt of such material.
 - contingencies for dealing with contaminated materials that cannot meet disposal criteria after treatment.
 - a detailed risk assessment protocol for all contaminated waste types to be treated.
 - a Fire Risk Management Plan.
 - a Hazardous Substances Management Plan.
 - an Occupational Health, Safety and Welfare Plan prepared in consultation with the Department of Health.
 - a financial assurance strategy.

The EMP shall be amended if new treatment options that have been approved by the Environment Protection Authority, are adopted in the future.

- The current Landfill Environmental Management Plan (LEMP) shall be amended, to the reasonable satisfaction of the Environment Protection Authority, to address the management of soil erosion and stormwater and the upgrading of existing screens and/or mounds or the establishment of new vegetated screens and/or mounds associated with the MWTF.
- The amendment of the LEMP and the upgrading of the site infrastructure, including but not limited to vegetated screens and/or mounds, shall be undertaken prior to commencement of the MWTF operations.

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 will 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.

- It is likely that as a condition of such a licence 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.

General Landfill Operations

- To provide additional screening and wildlife habitat the following options could be investigated by the proponent, council, community and local landowners:
 - revegetation of the road reserve along Prime Beach Road, in conjunction with the Adelaide Plains Council and the community;
 - revegetation of the road reserve along Port Wakefield Road, in conjunction with the Department of Infrastructure and Transport to further reduce views from the eastern direction;
 - plantings on private property along fence lines adjoining the site, in conjunction with landowners and the community.
- All sedimentation basins, evaporation ponds, and surface water drainage channels should be suitably located, designed and managed to ensure native vegetation (especially low-lying saltmarsh communities) is not adversely affected by construction activities or groundwater mounding and, if possible, the ecological value enhanced.
- A comprehensive Pest Plant and Animal Management Plan must be implemented prior to landfill operations commencing, to ensure the site is free of as many pest species as possible from the onset and adequate monitoring and follow-up control should occur, as discussed in the Assessment Report.
- Whilst not totally within the control of the proponent, monitoring and control programs to reduce the risk of disease transmission between activities in the area may ideally be prepared by adopting a district approach, in co-ordination with the Adelaide Plains Animal and Plant Control Board, Department of Primary Industries and Resources and landowners.
- To minimise and control any onsite soil erosion (particularly of stockpiled material), a Soil Erosion and Drainage Management Plan (SEDMP) as described in the Environment Protection Agency's 'Stormwater Pollution Prevention Codes of Practice', must be prepared and approved as part of the LEMP, before the site becomes operational.
- As part of the LEMP, a Surface Water Management Plan must be prepared by the proponent to the satisfaction of the EPA prior to receipt of any waste. The plan should address the collection and management of all onsite surface water (including any contaminated runoff originating from roadways, carparks and hardstands, the vehicle workshop or wheel washing facility) and management of all surface water flows entering the site from land external to the site, in particular to ensure their final discharge does not impact adversely on any downstream wetlands.
- A monitoring program must be established to record levels of coastal flooding in the western section of the site and, if results indicate a significant risk, a review process be undertaken (ideally through any relevant local community consultative committee) to determine whether to proceed with Stage 9.

- If blasting is required to remove any of the Ripon Calcrete, explosion vibration characteristics and monitoring requirements must be determined in consultation with the Environment Protection Authority and Adelaide Plains Council, prior to commencement.
- The Environment Protection Agency must be provided with all additional data concerning the site geology as it becomes available, as this could necessitate minor changes to landfill design or method of operation and the installation of additional groundwater monitoring bores.
- To enable detailed design of the proposed groundwater protection system, to determine the minimum depth at which the landfill cells should be based and to enable detailed design of the surface water management system; further investigation of groundwater levels and behaviour on the site must be undertaken prior to finalisation of the detailed design of the landfill and preparation of management plans.
- As part of the LEMP, a detailed Groundwater and Leachate Management Plan must be prepared by the proponent to the satisfaction of the Environment Protection Authority, prior to receipt of any waste. The Plan must demonstrate how the method of hydraulic containment proposed can be practically achieved. Further hydrogeological investigations must be carried out prior to the commencement of any landfill construction in order to fully define the dewatering and groundwater disposal requirements and to provide details of how the cells can be dewatered and constructed for full hydraulic containment of leachate. In particular, monitoring of watertable levels must commence immediately after the granting of the development authorisation in order that the magnitude of seasonal fluctuations can be fully established prior to construction of the landfill. The Plan may provide for staging of leachate and groundwater management works which may be required as a result of the staging of waste disposal activities upon the site, and should include contingency measures to be implemented in the event of any failure of the leachate management system.
- A more sustainable after-use for the site that will encourage the regeneration and rehabilitation of natural communities must be considered during future post closure planning.
- If appropriate with the desired end use to be determined in more detail at a later stage, the entire landform may be planted with appropriate types of native vegetation cover.
- Determination of interim and post closure land uses of the site, proposed to be undertaken in association with any relevant local community consultative committee, must be undertaken as required by the Environment Protection Authority as part of the LEMP.

Building Advisory Notes

- Stage 2 – Sorting Shed: refer to Building Rules Consent and related documentation issued and/or certified by Katnich Dodd on 26 September 2022.

Appendix 1: Current Development Authorisation

DECISION NOTIFICATION FORM

Section 115 of the *Planning, Development and Infrastructure Act 2016*

TO THE APPLICANT:

Name:	Integrated Waste Management Services Pty Ltd
Postal address:	c/- Masterplan, 33 Carrington Street, Adelaide SA 5000
Email:	MichaelR@masterplan.com.au

IN REGARD TO:

Development application no.: 312/P001/18 V3	Lodged on: 12 April 2023
Nature of proposed development: Final Development Approval: leachate evaporation basin and two canopy structures – IWS Northern Balefill Facility	

LOCATION OF PROPOSED DEVELOPMENT:

Street address: name: 99 Lemmey Road, Lower Light*			
Lot no. 76, DP26412	Hundred Dublin	Volume 5312	Folio 333
Section 312, HP140400	Hundred Dublin	Volume 5348	Folio 343
Section 311, HP140400	Hundred Dublin	Volume 5348	Folio 396
Section 310, HP140400	Hundred Dublin	Volume 5348	Folio 390

*Additional undeveloped lots within the declared area include AL93-96 in FP173116 to 173120, CTs 5348/391 to 5348/395

DECISION:

Decision type	Decision	Decision date	Conditions	Responsible Authority
Provisional Development authorisation – Leachate Pond	GRANTED	20 April 2023	44	Minister for Planning
Building Certification – Leachate Pond	NOT REQUIRED	-	-	-
Development Approval – Leachate Pond	GRANTED	8 June 2023	44	Minister for Planning
Provisional Development authorisation – Ancillary shelter structures	GRANTED	8 May 2023	44	Minister for Planning
Building Certification – Ancillary canopy structures	GRANTED	23 May 2023	-	Katnich Dodd
Development Approval – Ancillary canopy structures	GRANTED	8 June 2023	44	Minister for Planning

FROM THE RELEVANT AUTHORITY: Minister for Planning



Robert Kleeman
MANAGER – CROWN AND IMPACT ASSESSMENT
as delegate of the
MINISTER FOR PLANNING

PREAMBLE:

- a. On 19 October 1994 the Minister for Housing, Urban Development and Local Government Relations, being of the opinion that a proposed development of a waste management facility in the form of a solid waste landfill (Northern Balefill) near Dublin ('the development') was a development of major social, economic or environmental importance, directed the proponent to prepare an Environmental Impact Statement, pursuant to Section 46 of the Development Act 1993.
- b. On 22 April 1996 an Environmental Impact Statement for the development was published in accordance with Section 46 of the *Development Act 1993*. Subsequently, the Minister prepared an Assessment Report in accordance with Section 46 of the Development Act 1993.
- c. By notice in the *Government Gazette* on 29 January 1998 at p 30 the Governor granted development authorisation to the development, subject to conditions specified in that notice, pursuant to Section 48 of the Development Act 1993.
- d. Following an application by the beneficiary of the development authorisation for a variation to the authorisation to allow the receipt and disposal of low level contaminated waste, the proposed development was the subject of an Amended Environmental Impact Statement dated June 1998 and an Amended Assessment Report dated December 1998 under Section 47 of the Development Act 1993 ('the amended Major Development').
- e. By notice in the *Government Gazette* on 8 September 2005 at p 3255 the Governor granted provisional development authorisation to the amended Major Development, reserving specific matters for further assessment.
- f. Following an application by the beneficiary of the development authorisation for a variation to the authorisation to allow for the establishment of a Multiple Waste Treatment Facility for the treatment and disposal of high level contaminated waste at the existing landfill, the proposed development was the subject of an Amended Environmental Impact Statement dated 24 November 2008 and an Amended Assessment Report under Section 47 of the Development Act 1993 ('the further amended Major Development').
- g. By notice in the *Government Gazette* on 27 August 2009 the Governor granted provisional development authorisation to the further amended Major Development, reserving specific matters for further assessment.
- h. By notice in the *Government Gazette* on 2 September 2010 at p 4662 the Minister for Urban Development and Planning, under delegation from the Governor, assessed the matters reserved for further assessment and a variation to the design of the Multiple Waste Treatment Facility and granted development authorisation to the further amended Major Development.
- i. Variations to the development authorisation were notified in the *Government Gazette* on 24 January 2013 at p 103 (for the implementation of a '10 Year Masterplan' comprising various changes to the landfill operation and the establishment of a Resource Pad, a Bioremediation Pad and a Litter Net System), 14 May 2020 at p 969 (for a modification to the design of the landfill module 3) and 3 December 2020 at p 5464 (for the establishment of an additional Bioremediation Pad [identified as Cell B – eastern extension]).
- j. On the 12 May 2021, Integrated Waste Management Services Pty Ltd, being the beneficiary of the development authorisation, sought a variation to the authorisation to permit the construction of a sorting and processing shed. The delegate of the Minister for Planning and Local Government agreed to vary the development authorisation on 3 August 2022.
- k. September 2022, Katnich Dodd granted a Building Rules consent for the sorting and processing shed. Conditions 43 and 44 are now included in the Development Authorisation as per this decision.
- l. On 19 April 2023, the delegate of the Minister for Planning granted a final Development approval for the construction of a sorting and processing shed in accordance with s.115(8) of the *Planning, Development and Infrastructure Act 2016*.
- m. By letter dated 3 April 2023, MasterPlan acting on behalf of Integrated Waste Management Services Pty Ltd, being the beneficiary of the development authorisation, sought a variation to the authorisation to permit the construction of an additional leachate pond.
- n. On 20 April 2023, the delegate of the Minister for Planning agreed to vary the development authorisation for an additional leachate pond in accordance with s.115(8) of the *Planning, Development and Infrastructure Act 2016*. The Environment Protection Authority will manage (via its environmental licence) the operation of the facility.

- o. By letter dated 12 April 2023, MasterPlan acting on behalf of Integrated Waste Management Services Pty Ltd, being the beneficiary of the development authorisation, sought a variation to the authorisation to permit the construct two (2) ancillary canopy structures to be used as staff facilities.
- p. I am satisfied that the Environmental Impact Statement and Amendment to the Environmental Impact Statement (as previously approved) in relation to this impact assessed development continues to be appropriate and have had regard, when considering the proposed variation, to all relevant matters under Section 115 of the Planning, Development and Infrastructure Act 2016.
- q. On 8 May 2023, the delegate of the Minister for Planning granted a variation to the current Development authorisation to construct two ancillary canopy structures to be used as staff facilities in accordance with s.115(8) of the Planning, Development and Infrastructure Act 2016.
- r. On 5 May 2023, MasterPlan acting on behalf of Integrated Waste Management Services Pty Ltd, provided confirmation that Building Consent is not required for the leachate basin, which was previously granted provisional Development Authorisation 3 April 2023.
- s. On 23 May 2023, Katnich Dodd provided a Building Rules certification for the installation of two canopies, which was previously granted a provisional Development Authorisation on 8 May 2023.
- t. On 8 June 2023, the delegate of the Minister for Planning granted a final Development approval for the construction of an additional leachate pond, and for the installation of two canopies.
- u. For ease of reference, previous conditions attached to the approval and subsequent variations to the establishment of a Solid Waste Landfill (Northern Balefill) development authorisation are reprinted hereunder.

RESERVED MATTERS:

NIL

CONDITIONS OF PLANNING CONSENT:

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

Current Authorisation

- Development application dated 30 June 2008;
- Environmental Impact Statement Amendment, Integrated Waste Services Northern Balefill Dublin Multiple Waste Treatment Facility EIS Amendment prepared by Golder Associates, dated 24 November 2008, but in the case of conflict with a specific condition below the specific condition shall apply;
- Proponent's response to submissions, letter from Connor Holmes to the Department of Planning and Local Government dated 3 April 2009, but in the case of conflict with a specific condition below the specific condition shall apply;
- Correspondence from Connor Holmes to the Department of Planning and Local Government containing additional information on the proposal dated 27 May 2009, but in the case of conflict with a specific condition below the specific condition shall apply;
- Correspondence from Integrated Waste Services to the Department of Planning and Local Government applying for approval of reserved matters and variations related to the Multiple Waste Treatment Facility dated 19 May 2010, but in the case of conflict with a specific condition below the specific condition shall apply;
- Correspondence from Integrated Waste Services to the Department of Planning and Local Government providing additional information to support application dated 11 May 2010, but in the case of conflict with a specific condition below the specific condition shall apply;
- Correspondence from Katnich Dodd for Stage 1—Civil and Structural Work dated 31 March 2010 and accompanying certified plans;
- Correspondence from Katnich Dodd for Final Stage—Services and Fitout Works dated 31 March 2010 and accompanying certified plans.
- Application for a variation to the development authorisation from Integrated Waste Services dated 5 October 2012, except as varied by the conditions listed below or to the extent that they are varied by the plans and drawings listed below.
- Application for a variation to the development authorisation from Masterplan (on behalf of Integrated Waste Services P/L) dated 11 March 2020, including plans titled 'Site Layout' (prepared by Golder,

- dated 2020-02-26), 'Module 3 Cap' (prepared by Golder, dated 2020-02-26) and 'Longsection' (prepared by Golder, dated 2020-02-26).
- Application for a variation to the development authorisation from Masterplan (on behalf of Integrated Waste Services P/L) dated 20 September 2019, including plans titled 'Clearing and Grubbing Layout Plan', (prepared by Golder, dated 2019-09-13), 'Design Layout Plan' (prepared by Golder, dated 2019-09-13), 'Design Surface Top of Subgrade Layout Plan' (prepared by Golder, dated 2019-09-13), Cross Sections – Sheet 1 of 2' (prepared by Golder, dated 2019-09-13), Cross Sections – Sheet 2 of 2' (prepared by Golder, dated 2019-09-13), 'Typical Sections and Details' (prepared by Golder, dated 2019-09-13) and 'Indicative Aeration Pipe Layout Plan and Typical Section' (prepared by Golder, dated 2019-09-13); and the 'Integrated Waste Services – Organics Processing Pad Cell B – Technical Specification' (1654805-020-TS-Rev0) by Golder dated 5 November 2019.

Varied Authorisation – Stage 2 Processing Shed – September 2021

Planning Documentation

- Letter from MasterPlan dated 12 May 2021
- Letter from MasterPlan dated 22 June 2021
- Ahrens – Stage 2 Processing Shed – DA Submission – Project No DSK21211 – Drawings A01-01 to A30-02 – Sheets:7 Rev: EE-GG (as indicated) and dated 6.9.2021).

Building Certification

- Working Drawings – Ahrens – A21-01 to A90-01 (13 Sheets)
- Electrical Services – Tip Top Electrical Services (6 Sheets)
- NCC BCA Vol1 Part J 2019

Varied Authorisation – Additional leachate pond – April 2023

Planning Documentation

- Correspondence (and accompanying plans) from Masterplan on behalf of Integrated Waste Services (IWS) dated 3 April 2023 regarding the construction of an additional leachate pond.

Building Certification

- Not required.

Varied Authorisation – Canopy structures – May 2023

Planning Documentation

- Correspondence (and accompanying plans) from Masterplan on behalf of Integrated Waste Services (IWS) dated 14 April 2023 regarding the construction of two (2) ancillary canopy structures.

Building Certification

- Revolution Building / Homestyle Living Outdoors: QuoteID: P57929Q2 and technical review of documentation by Subi Smartz Consultants PL, Independent Technical Expert dated 15.5.23

Multiple Waste Treatment Facility (MWTF)

3. The design of the MWTF shall be amended to include coloured metal cladding on all sides of the building, so as to enclose the whole of the facility.
4. Designs for the effluent treatment and disposal system shall be prepared to the reasonable satisfaction of the Adelaide Plains Council.
5. Treatment of waste material shall not occur until the construction of the entire MWTF has been completed, to the reasonable satisfaction of the Environment Protection Authority (EPA).
6. High Level Contaminated Waste is not required to be baled or shredded.
7. A truck wash with water sprays shall be installed for the removal of residues from vehicles transporting High Level Contaminated Waste to the site. All transport vehicles shall not leave the site unless they have gone through the truck wash.
8. Treatment of the stored materials shall only commence once the completed MWTF is approved by the EPA to commence operation.
9. Bioremediation and stabilisation are the only treatment processes that shall be used in the MWTF.
10. Pre-remediation trials shall be conducted on all contaminated materials, prior to delivery to the MWTF and the Bioremediation Pad, to determine if treatment methods approved by the EPA would be successful. Trial results shall be submitted to the EPA for assessment, prior to delivery of contaminated materials to the MWTF and the Bioremediation Pad.

11. Post-remediation testing on treated materials shall be undertaken to assess its suitability to be disposed of or reused. Testing results shall be submitted to the EPA for assessment, prior to disposal or reuse.
12. Future treatment options shall undergo pre-trial assessment, to the reasonable satisfaction of the EPA, before they can be adopted.
13. An Environmental Management Plan (EMP) for activities associated with the MWTF, prepared to the reasonable satisfaction of the EPA, must be in place prior to the receipt, storage and treatment of contaminated materials.

Solid Waste Balefill

14. The work shall be carried out as shown on the plans (Figures 3.1 to 3.9) in the Development Application Report dated 28 November 1997, included with the Development Application dated 2 December 1997, except as varied by these conditions.
15. Subject to Conditions 16, 17 and 18, all waste received for disposal at the facility shall be shredded and baled.
16. Unbaled commercial/industrial or construction/demolition waste of appropriate particle sizes may be placed and compacted in any voids unavoidably occurring between bales and the inclined surface of the cells in which those bales are placed or within a suitable netting system to the reasonable satisfaction of the EPA and in accordance with any applicable requirements of a relevant environmental authorisation.
17. Waste materials received for disposal at the facility need not be shredded before baling where shredding of those materials is not required for the purpose of producing bales of a density and structural integrity that satisfy the applicable requirements of any relevant environmental authorisation.
18. Non-friable asbestos waste shall not be shredded or baled but shall be disposed of in accordance with the applicable requirements of any relevant environmental authorisation.
19. All perimeter plantings shall be started as early as practicable after the date of this authorisation to achieve maximum amelioration of visual impacts.
20. 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).
21. All firebreaks and external drainage channels shall be located on the inner edge of the vegetation screen and existing stands of native vegetation. In the event that drainage channels are required to be located close to the site boundary, their redesign to form low-lying wetland/saltmarsh communities as part of the vegetation screen shall be undertaken and implemented to the satisfaction of the Environment Protection Authority.
22. A leachate monitoring bore shall be installed within each cell to assist with leachate management, particularly if leachate circulation is incorporated in the Landfill Environmental Management Plan (LEMP).
23. The proponent shall pay all reasonable costs of the detailed design and construction of any public roadworks made necessary by this development. Such works may include the opening and associated left turn deceleration lane from Port Wakefield Road, and the upgrading of the entrance to balefill junction to the satisfaction of the Commissioner of Highways.
24. The proponent shall seal (two coat spray seal) the internal site access road for a minimum of 520 m from the nearest residence.
25. The applicant shall prepare a Vegetation Management and Revegetation Plan (which may be included in the LEMP) to the reasonable satisfaction of the Development Assessment Commission and must implement that Plan once it has been approved by the Development Assessment Commission.

Low Level Contaminated Soil and Liquid Treatment Plant Residues

26. Low level contaminated soil (LLCS) and liquid treatment plant residues (LTPR) are not required to be baled or shredded.
27. The work shall be carried in accordance with the following documents and plans:

- EIS Amendment, Receipt of Low Level Contaminated Soil and Liquid Waste Treatment Plant Residues at the IWS Northern Balefill, dated July 2003.
 - Response Document on the EIS Amendment for the Receipt of Low Level Contaminated Soil and Liquid Waste Treatment Plant Residues (Revised), dated 30 April 2004.
 - Supplementary Information EIS Amendment Receipt of Low Level Contaminated Soil and Liquid Waste Treatment Plant Residues at the IWS Northern Balefill, dated 26 November 2004.
 - Landfill Environmental Management Plan, dated 2001 or as varied by any applicable requirements of a licence from the Environment Protection Authority.
 - Drawings
 - 3307DO1, 4/11/2004—cell 31 design plan.
 - 3307DO2, Drawn 25/8/2004 and checked 18/2/2005—Section A, liner and sump design.
 - 3307DO3, 10/8/2004—liner design sections and details.
 - 3307DO4, 14/10/2004—cell 31 interim capping design.
 - 3307DO5, 13/8/2004—landfill staging plan.
 - 3307DO6, 13/8/2004—final surface water control.
 - 3307DO8, Drawn 27/8/2004 and checked 26/11/2004—interim surface water control
 - 3307DO9 P1, Drawn 4/11/2004 and checked 26/11/2004—cell design plan line 2.
 - 3307DO10, Drawn 29/8/2004 and checked 26/11/2004—Sections D and E, swale drain design.
28. Distance to groundwater requirements shall be as follows:
- Based on groundwater level monitoring results and interpolated highest groundwater levels for Cell 31, including a 0.1 metre buffer; the base of the sump shall be at 9.1 m AHD;
 - Notwithstanding the above requirement, a minimum separation distance of 2 m between the underside of the lowest portion of the lining system (including the sump area) and the underlying groundwater shall be maintained at all times.
29. Leachate collection and extraction system requirements shall be as follows:
- Leachate removal shall implement a system which accommodates the installation of the pumps at the leachate riser access point.
 - Following cell completion and until the entire cell base is covered with a minimum of 1.5 metres of waste, a pump with a flow capacity of a minimum of 40 litres per second shall be installed.
 - After it can be demonstrated that leachate production has declined to less than one litre per second, this pump can be replaced by a pump of lesser flow capacity.
 - A back-up pump with the relevant capacity shall be readily available on site at all time.
30. Leachate treatment requirements shall be as follows:
- Leachate may be managed and treated by means of:
 - Direct extraction into an on-site leachate evaporation pond which shall meet the minimum design specification as follows:
 - composite lining system comprising a one metre low permeability clay liner with $k < 1 \times 10^{-9} \text{m/s}$ compacted to 95% Maximum Dry Density by standard compaction, and a moisture content between 0% and +4% wet of Optimum Moisture Content, overlaid by a 2mm high density polyethylene (HDPE) liner (welded).
 - minimum of 600 mm freeboard.
 - modelling with HELP or LANDSIM shall consider a one in 25, 24 hour duration storm event.
 - a minimum separation distance of two metres between the underside of the lowest portion of the lining system and the underlying groundwater shall be maintained at all times.
 - Direct extraction into an onsite tank vehicle suitable for the transport of leachate into an onsite leachate evaporation pond.
 - Direct extraction into a licensed vehicle and transported to an off-site Environment Protection Authority licensed Waste Water Treatment Plant.
 - Direct extraction into a suitably designed, temporary on-site storage tank prior to off-site disposal by an Environment Protection Authority licensed vehicle at an Environment Protection Authority licensed Waste Water Treatment Plant or prior to on-site transport to an onsite leachate evaporation pond.
31. Leachate management requirements shall be as follows:
- The head of leachate on the liner shall not exceed 300 mm (excluding the sump) at all times. To facilitate this, the trigger level for leachate extraction out of the leachate sump shall be set at 290 mm.
 - In addition to automatic leachate data readings, a manual monitoring probe shall be installed and calibrated to allow for direct readings of the vertical elevation of leachate in the riser pipe and conversion to the maximum leachate head on top of the liner.
 - Leachate levels shall be read manually daily and recorded in the onsite operations logbook or as specified otherwise in the Environment Protection Authority licence.

32. Distance between LLCS/LTPR cells and Balefill cells (reference drawing 3307D03, 18/8/2004) shall be as follows:
- The distance between LLCS/LTPR cells and Balefill cells shall be at a minimum of 5 metres, measured between the toe of the LLCS cell structure (that is where the outer surface of the cap of the completed LLCS/LTPR cell joins the outer surface of the underlying clay liner for the same cell) and the cap of the nearest balefill cell (that is where the outer surface of the cap of a completed balefill cell joins the outer surface of the underlying clay liner).
33. Level 1 Supervision requirements shall be as follows:
- The construction of the clay liner of the cell shall be carried out under Level 1 Supervision in accordance with AS 3798-1996, Appendix B.
 - The construction of the HDPE liner shall be carried out under the full time supervision of a suitably qualified geotechnical consultant with experience in the construction and supervision of the construction of HDPE lining systems, quality control procedures and testing.
34. 'As Constructed Report' requirements shall be as follows:
- An 'As Constructed Report' certifying compliance with the approved design for the lining system, including a Construction Quality Assurance Report (CQA) for the HDPE liner and the Level 1 Supervision Report, shall be submitted to the Environment Protection Authority for acceptance prior to the commencement of the receipt and disposal of waste in each cell. No waste shall be received and disposed of prior to written acceptance of the 'As Constructed Report' by the Environment Protection Authority.
35. Coverage of waste requirements shall be as follows:
- All waste shall be covered as soon as reasonable practicable after the receipt of waste and placement in the cell or at close of business on each business day with at least 150 mm of cover material (waste fill or intermediate landfill cover with the restriction to a maximum particle size of 100 mm).
 - If a load of particularly odorous material is received at the LLCS/LTPR cell, it shall be covered immediately with a minimum of 150 mm cover material.
 - During periods when the LLCS/LTPR cell is not operating, routine monitoring for odorous gases shall be carried out as part of the site monitoring program and may trigger the application of additional cover material.
 - Alternative cover materials may be used after the proponent:
 - has demonstrated to the Environment Protection Authority that the proposed material and placement method result in an equivalent or better performance compared to the approved material; and
 - has received written approval from the EPA prior to the use of alternative materials and placement methods.
36. Groundwater management requirements shall be as follows:
- An additional groundwater well shall be installed west of cell 30 and the first round of groundwater sampling and testing shall be completed at least two weeks prior to commencement of construction of cell 31
 - Groundwater level monitoring shall commence at least two weeks before commencement of construction of cell 31; groundwater levels shall be taken weekly and reported to the Environment Protection Authority monthly (datasheet and graph) or as specified otherwise in the EPA authorisation.
 - Four monitoring rounds at three monthly intervals in the first 12 months of operation shall be carried out to establish additional background analyte levels around cell 31
 - Six monthly monitoring rounds shall be undertaken following the completion of the initial 12 months of groundwater monitoring or as specified otherwise in the Environment Protection Authority licence
 - Prior to the commencement of construction of any other cell for the receipt of LLCS/LTPR, the groundwater management and monitoring program shall be reviewed and submitted for Environment Protection Authority approval.
37. Surface Water Management requirements shall be as follows:
- A stormwater management plan shall be developed and submitted for Environment Protection Authority's approval addressing all issues related to the staged construction of LLCS/LTPR cells on site prior to commencement of construction of cell 31.
 - The stormwater management plan shall provide surface water control and management measures for:
 - surface water or stormwater runoff that does not interact with the waste material or other operational areas of the site and is considered to be uncontaminated.
 - surface water that comes into contact with waste materials or is collected from landfill areas or other operational areas and is considered to be contaminated.
 - surface runoff from the final landfill cap which has to be controlled.
 - diversion of surface water runoff from perimeter areas away from the operating cell.
38. Landfill Environmental Management Plan (LEMP) requirements shall be as follows:
- The new section of the LEMP ('Section 17') shall be completed and incorporated in the revised LEMP document.

- The complete revised LEMP document shall be finalised and submitted to the Environment Protection Authority for approval prior to the receipt and disposal of LLCS/LTPR on the premises.

39. A wheel wash with water sprays shall be installed ensure removal of residues from the wheels and underside of the vehicles transporting low level contaminated soil and liquid treatment plant residues to the site.

Bioremediation Pad – Cell B (Eastern Extension)

40. The applicant must provide an 'as constructed' report to the reasonable satisfaction of the Environment Protection Authority (EPA) confirming compliance with the design and construction specifications prior to the commencement of any receipt, storage, and treatment of waste at the expanded bioremediation pad.

41. Reuse of treated organic waste derived from mixed waste (including municipal solid waste or commercial and industrial waste) must not be permitted outside of the lined landfill cells.

Stage 2 Processing Shed

42. A landscape screen with a suitable mix of native species shall be re-established to the immediate north of the Stage 2 processing shed within six months of the operational use of the facility.

CONDITIONS OF BUILDING CERTIFICATION:

Stage 2 Processing Shed

43 The nature of the materials stored at any one time shall not:

- contain any hazardous materials, and
- be stored for long duration of time, and
- not exceed 4m in height

44 Full perimeter CFS truck access shall be provided and not obstructed by any proposed fencing.

ADVISORY NOTES:

- The proponent shall obtain Building certification for any building work to be undertaken from either the Adelaide Plains Council or an accredited professional (at the proponent's option) and forward to the Minister for Planning and Local Government all relevant certification documents for final approval.
- The Adelaide Plains Council or accredited professional undertaking the Building certification must ensure that the assessment is consistent with this development authorisation (including its Conditions and Notes).

Environmental Management Plan for the Multiple Waste Treatment Facility (MWTF)

- An Environmental Management Plan (EMP) covering the operation requirements for the MTWF shall be prepared in consultation with the Environment Protection Authority, and include the following requirements:
 - an air quality monitoring programme to ensure air emissions from the MWTF do not contain contaminants at levels that may be harmful to nearby residents and land uses.
 - protocols for testing/trialling the suitability and effectiveness of treatment methods for batches of contaminated materials that could potentially be treated at the MWTF, prior to the receipt of such material.
 - contingencies for dealing with contaminated materials that cannot meet disposal criteria after treatment.
 - a detailed risk assessment protocol for all contaminated waste types to be treated.
 - a Fire Risk Management Plan.
 - a Hazardous Substances Management Plan.
 - an Occupational Health, Safety and Welfare Plan prepared in consultation with the Department of Health.
 - a financial assurance strategy.

The EMP shall be amended if new treatment options that have been approved by the Environment Protection Authority, are adopted in the future.

- The current Landfill Environmental Management Plan (LEMP) shall be amended, to the reasonable satisfaction of the Environment Protection Authority, to address the management of soil erosion and stormwater and the

upgrading of existing screens and/or mounds or the establishment of new vegetated screens and/or mounds associated with the MWTF.

- The amendment of the LEMP and the upgrading of the site infrastructure, including but not limited to vegetated screens and/or mounds, shall be undertaken prior to commencement of the MWTF operations.

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 will 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.
- It is likely that as a condition of such a licence 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.

General Landfill Operations

- To provide additional screening and wildlife habitat the following options could be investigated by the proponent, council, community and local landowners:
 - revegetation of the road reserve along Prime Beach Road, in conjunction with the Adelaide Plains Council and the community;
 - revegetation of the road reserve along Port Wakefield Road, in conjunction with the Department of Infrastructure and Transport to further reduce views from the eastern direction;
 - plantings on private property along fence lines adjoining the site, in conjunction with landowners and the community.
- All sedimentation basins, evaporation ponds, and surface water drainage channels should be suitably located, designed and managed to ensure native vegetation (especially low-lying saltmarsh communities) is not adversely affected by construction activities or groundwater mounding and, if possible, the ecological value enhanced.
- A comprehensive Pest Plant and Animal Management Plan must be implemented prior to landfill operations commencing, to ensure the site is free of as many pest species as possible from the onset and adequate monitoring and follow-up control should occur, as discussed in the Assessment Report.
- Whilst not totally within the control of the proponent, monitoring and control programs to reduce the risk of disease transmission between activities in the area may ideally be prepared by adopting a district approach, in co-ordination with the Adelaide Plains Animal and Plant Control Board, Department of Primary Industries and Resources and landowners.
- To minimise and control any onsite soil erosion (particularly of stockpiled material), a Soil Erosion and Drainage Management Plan (SEDMP) as described in the Environment Protection Agency's 'Stormwater Pollution Prevention Codes of Practice', must be prepared and approved as part of the LEMP, before the site becomes operational.
- As part of the LEMP, a Surface Water Management Plan must be prepared by the proponent to the satisfaction of the EPA prior to receipt of any waste. The plan should address the collection and management of all onsite surface water (including any contaminated runoff originating from roadways, carparks and hardstands, the vehicle workshop or wheel washing facility) and management of all surface water flows entering the site from land external to the site, in particular to ensure their final discharge does not impact adversely on any downstream wetlands.
- A monitoring program must be established to record levels of coastal flooding in the western section of the site and, if results indicate a significant risk, a review process be undertaken (ideally through any relevant local community consultative committee) to determine whether to proceed with Stage 9.
- If blasting is required to remove any of the Ripon Calcrete, explosion vibration characteristics and monitoring requirements must be determined in consultation with the Environment Protection Authority and Adelaide Plains Council, prior to commencement.

- The Environment Protection Agency must be provided with all additional data concerning the site geology as it becomes available, as this could necessitate minor changes to landfill design or method of operation and the installation of additional groundwater monitoring bores.
- To enable detailed design of the proposed groundwater protection system, to determine the minimum depth at which the landfill cells should be based and to enable detailed design of the surface water management system; further investigation of groundwater levels and behaviour on the site must be undertaken prior to finalisation of the detailed design of the landfill and preparation of management plans.
- As part of the LEMP, a detailed Groundwater and Leachate Management Plan must be prepared by the proponent to the satisfaction of the Environment Protection Authority, prior to receipt of any waste. The Plan must demonstrate how the method of hydraulic containment proposed can be practically achieved. Further hydrogeological investigations must be carried out prior to the commencement of any landfill construction in order to fully define the dewatering and groundwater disposal requirements and to provide details of how the cells can be dewatered and constructed for full hydraulic containment of leachate. In particular, monitoring of watertable levels must commence immediately after the granting of the development authorisation in order that the magnitude of seasonal fluctuations can be fully established prior to construction of the landfill. The Plan may provide for staging of leachate and groundwater management works which may be required as a result of the staging of waste disposal activities upon the site, and should include contingency measures to be implemented in the event of any failure of the leachate management system.
- A more sustainable after-use for the site that will encourage the regeneration and rehabilitation of natural communities must be considered during future post closure planning.
- If appropriate with the desired end use to be determined in more detail at a later stage, the entire landform may be planted with appropriate types of native vegetation cover.
- Determination of interim and post closure land uses of the site, proposed to be undertaken in association with any relevant local community consultative committee, must be undertaken as required by the Environment Protection Authority as part of the LEMP.

Building Advisory Notes

- Stage 2 – Sorting Shed: refer to Building Rules Consent and related documentation issued and/or certified by Katnich Dodd on 26 September 2022.

CONTACT DETAILS OF CONSENT AUTHORITIES:

Name: Minister for Planning	Type of consent: Final Development Authorisation
Postal Address: c/- DTI-PLUS, GPO 1815, ADELAIDE SA 5001	
Telephone: 1800 752 664	Email: spcapplications@sa.gov.au

Appendix 2: Definitions and Acronyms

ACRONYM	DEFINITION
AAR	Amendment to the Assessment Report
AEIS	Amendment to the Environmental Impact Statement
APC	Adelaide Plains Council
AR	Assessment Report
CEMP	Construction Environmental Management Plan
DIT	Department for Infrastructure and Transport
DTI-PLUS	Department for Trade and Investment - Planning and Land Use Services
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
PDI Act	<i>Planning, Development and Infrastructure Act, 2016</i>
RD	Response Document
SPC	State Planning Commission
SPP	State Planning Policy
The Minister	Minister for Planning

Appendix 3: Assessment Guidelines

ENVIRONMENTAL IMPACT STATEMENT
GUIDELINES FOR A SOLID WASTE LANDFILL DEPOT
DISTRICT COUNCIL OF MALLALA

INTRODUCTION

The Minister for Housing, Urban Development and Local Government Relations decided in October 1994 that an Environmental Impact Assessment (EIS) would be required under Section 46 of the Development Act 1993 for the landfill proposal in the District Council of Mallala. An EIS under the Development Act is intended to address the critical issues relating to a proposal.

The proponent is P. & M. Borrelli and Sons Pty Ltd. The proposal is for a landfill for disposing of domestic, solid industrial and commercial waste. Hazardous liquids or chemical wastes will not be accepted at this site. The site chosen covers 440 hectares. The landfill operational life is envisaged to be between for 30-55 years.

THE EIS PROCESS

An Environmental Impact Statement, as defined in the Development Act, means a statement of the expected social, economic, and environmental effects of the development or project. The EIS should consider the extent to which the expected effects of the development or project are consistent with the provisions of any relevant Development Plan, the Planning Strategy, and any matters prescribed by the Regulations. The EIS should also state the conditions (if any) that should be observed in order to avoid or satisfactorily manage and control any potentially adverse effects of the development or project on the environment. Further it should consider any other particulars required by the Minister or by the Regulations.

The EIS process is intended to ensure that the implications of a project considered to be of environmental, social or economic importance are examined, these can then be taken into consideration by the decision-makers.

The EIS process allows public participation at several points and is conducted with reference to a timeframe agreed by the proponent and the Environmental Impact Assessment Branch (EIA Branch) of the Department of Housing and Urban Development (DHUD). The steps of the process where public input is invited are marked with an asterisk * as follows:-

- EIS required
- * Guidelines prepared and exhibited publicly
- Proponent prepares EIS document
- * Public exhibition of EIS document (at least 6 weeks). Written submissions invited. Public meeting may be held during the exhibition period to assist people in the preparation of their submissions
- Proponent responds to public submissions and any other matters required by the Minister
- The Assessment Report is prepared for the Minister by the EIA Branch of DHUD.

The EIS, response, Assessment Report and development application are then sent to the Governor who is the decision maker. There is no appeal against a Governor's decision.

Copies of the EIS, response and Assessment Report will be publicly available for inspection and purchase at a place determined by the Minister and notified in public advertisements.

A flow chart describing the process is attached in Appendix A.

THE EIS DOCUMENT

The following should guide the production of the EIS document.

The document can be presented in two main sections

Part A Draft Waste Depot Management Plan describes the environment, the proposal, and how the depot is to operate. (Appendix B contains the index for the plan)

Part B Environmental Impacts discusses the environmental, social and economic impacts and how they have been considered in formulating the operating plan (including monitoring and rehabilitation) and seeking planning approval. It must also deal with any matter set out in Section 46(1) of the Development Act not already referred to.

The Document should provide the following.

SUMMARY

The Environmental Impact Statement (EIS) should incorporate a discussion of the matters set out in Section 46(1) and include a concise summary of all aspects covered under the headings set out in the guidelines below, in order for the reader to obtain a quick but thorough understanding of the proposal and the resulting environmental impact.

BROAD OBJECTIVES OF THE PROPOSED DEVELOPMENT

The EIS introduction should contain a brief statement of the objectives of the proposed development with reference to the present and future operations of the company/developer, the nature of the waste disposal operation, type of waste, and the timing of the operation. Alternative locations within the region should be discussed. Reference should be made to current waste management plans prepared by the S.A. Environment Protection Authority - Recycling and Waste Branch.

PART A WASTE DEPOT MANAGEMENT PLAN (WDMP)

Appendix B contains the Index provided to the applicant for the preparation of the Plan (as required by the Environment Protection Authority for licensing purposes) which should identify the nature of the site, the proposal and the details of how the depot will be operated.

The General Conditions of Licence Applying to Solid Waste Depots are attached in Appendix C.

PART B ENVIRONMENTAL IMPACTS

This section should provide the information and discussion of the issues which have been considered and evaluated in arriving at the proposed operation outlined in the Waste Depot Management Plan (WDMP) described in Part A.

3.

This part of the EIS should describe all other factors of the existing environment which have not been included in the WDMP and evaluate the potential environmental impact of the development, both direct and indirect, both beneficial and detrimental, using the description of the existing environment (site and surrounding area) as a baseline. Due consideration should be given to the short-term effects of construction and establishment as well as those of long term operation, site rehabilitation and future use. It should give due regard to Section 46(1) of the Development Act which states:

"environmental impact statement", in relation to a development or project, means a statement of -

- (a) the expected social, economic and environmental effects of the development or project;
- (b) the extent to which the expected effects of the development or project are consistent with the provisions of -
 - (i) any relevant Development Plan; and
 - (ii) the Planning Strategy; and
 - (iii) any matters prescribed by the regulations;
- (c) the conditions (if any) that should be observed in order to avoid or satisfactorily manage and control any potentially adverse effects of the development or project on the environment;
- (d) any other particulars in relation to the development or project required -
 - (i) by the regulations; or
 - (ii) by the Minister.

Description of Existing Environment - off site

This section should include information on those other characteristics of the environment not incorporated in the WDMP. These should include;

meteorological data - rainfall, temperature, wind, air quality
nature and type of adjacent land uses

Potential Environmental Impact

The following points should be addressed in the evaluation of the potential environmental impact of the proposed waste disposal site development and operation.

1. Location

Site Area Required for Development

The effects of the proposed land use change, given the area required for the development, and adjacent existing land uses should be examined.

Constraints on Proposal

This section should discuss how constraints on the proposal are to be resolved.

Constraints to be considered include;

- . proximity of other land uses including other similar operations;
- . suitability of local geology and soil conditions;
- . impact on existing road access and current users (Pt Wakefield Rd and local roads):
- . existence of local surface water movement;
- . impact of the proposal on local regional groundwater systems and the environment.

Groundwater

Impact of the proposal on groundwater, the aquifers, recharge/leakage/outflow, water quality, existing uses and the potential effects on the Gulf should be examined.

Visual Impact

Visual representations of the waste disposal depot at progressive stages would be useful. The general visual impact of the depot on the local area in both the short and long terms should be described and evaluated. The estimated time for rehabilitation to take effect should be discussed, and the visual impact of the proposed future use described.

Noise

The frequency, regularity, sources and impacts of any noise associated with depot preparation and operation should be evaluated with respect to accepted standards and legislation.

Air quality

The proposal's acceptability in terms of standards and legislation for air quality should be discussed and any significant source of pollutant material (including dust) in the proposal examined and remedial measures to be adopted described.

Cost and Economic Impact

A cost estimate should include site acquisition, planning development, operation and rehabilitation costs. Consideration should also be given to costs associated with the adoption of safeguards and standards for the protection of the environment. The undertakings proposed should be included in the Appendices to the WDMP. Regional economic consequences should be addressed. Employment opportunities and the sections of the community affected must be addressed.

2. Site Preparation and Operation Implications

Describe in detail the implications of site preparation and depot operation methods to be used, and any environmentally sensitive aspects where impacts should be minimised. Protective measures for sensitive areas should be described. The results of many of these investigations will be in the WDMP.

Resources Required

The impacts of the type of material required for site preparation and operation, sources of materials, and transportation methods to and within the depot location should be described.

Solid Waste Characteristics

The reasons for the choice of operation and procedures to be used should be discussed in relation to the sources, quantity and nature of wastes to be disposed at the site. Reference should be made to alternative methods and appropriate legislation and regulations. Litter management on and off site should be addressed.

Leachate Control and Disposal

Provision should be made for the minimisation of leachate. The document should evaluate the potential for leachate, and migration of leachate, and include plans for the environmentally acceptable disposal of any leachate which may occur.

Construction and Operating Traffic

Measures to restrict traffic or the impacts of traffic in environmentally sensitive areas should be described.

Rehabilitation Measures

Proposed measures for rehabilitation, which may include landscaping, topsoil conservation and native seedling protection, the expected final state of the site, and possible end use of the land should be described. The commitments to be made by the applicant should be included in the WDMP.

Public Health

Measures to be taken to protect public health should be discussed and the commitments included in the WDMP.

3. Associated Biophysical and Social Impact

Flora

Consideration should be given to impacts on population stability and the ability of the flora to regenerate after disturbance. The conservation significance of the flora should be indicated, and any significant associations discussed. A discussion of any expected impact on protected, rare and endangered plant species should quantify affected plants and analyse the effect on the viability of the populations.

Fauna

The impacts of the proposed waste disposal depot on fauna (aquatic and terrestrial) should be evaluated (e.g. destruction of habitats, disturbance of breeding patterns, etc.). It should be ensured that adequate feeding and breeding grounds are maintained in an undisturbed state for the region's fauna.

Natural Drainage

Impacts on natural drainage patterns, including both semi-permanent and permanent swamps, and measures to minimise these impacts should be discussed. The ecological value of local wetland habitats should be assessed.

Erosion

The probabilities of erosion resulting from the project should be evaluated and appropriate ameliorative measures proposed. Specific problem areas should be discussed separately.

Introduction of Pests

The risk of escalation of vermin should be investigated in relation to construction and operation of the depot, and the potential impacts on the surrounding areas and uses of the lands. Preventive and control measures should be described and incorporated in the WDMP.

Heritage

Sites of archaeological, anthropological or historical significance should be recorded and legislative requirements observed. Their conservation significance should be evaluated and protective measures proposed if they are likely to suffer detrimental impact from the proposal.

PUBLIC PARTICIPATION

The level of public involvement in the planning and decision-making process leading to the compilation of the application and the EIS document should be described. Outline the nature of objections raised in any known public response.

LEGISLATION AND CODES OF PRACTICE/ENVIRONMENTAL SAFEGUARDS AND STANDARDS

The appropriate legislation and codes of practice applying to the proposal should be identified and its compliance discussed.

The safeguards and/or standards proposed to minimise the environmental effects of the proposed action should be discussed, together with the costs and benefits of adoption or non-adoption of such safeguards and standards. Reference should be made to existing environmental legislation and relevant codes of practice, such as those relating to noise, leachate and dust control with the intended actions described. Some of this information will be included in the WDMP.

Contingency plans should be formulated to deal with accident events, such as fire, and surface flooding. Commitments to ameliorative action could include measures such as special equipment, drainage, fencing, hours of operation, restricted access, restriction of traffic movement and special rehabilitation measures.

MONITORING AND REVIEW

Monitoring is required to determine the actual environmental impact of the proposal after commencement of operation. Baseline data extracted from the survey of the existing environment are necessary to gauge relative changes in environmental parameters. This will enable the effectiveness of environmental safeguards and standards that have been incorporated into the development and the actual environmental impact of the project to be checked and compared with the predicted impacts. A monitoring programme for this purpose should be formulated and discussed in this section and the appropriate section of the WDMP. These monitoring studies should be carried out over a time span long enough to obtain information on any seasonal or long-term changes, they should be commenced prior to operations starting and continue until long-term impacts are fully documented.

Monitoring is also required during the initial site preparation phase to cover those areas likely to be affected by that activity. If monitoring gives an indication of unacceptable environmental degradation, there must be provision in the design to allow for tightening of the initial standards and rectification of damage where possible.

SOURCES OF INFORMATION

The sources of information (e.g. reference documents, literature sources, research projects, authorities consulted) should be fully referenced. Where judgements are made, these will need to be clearly identified and the basis on which these judgements are made and the expertise of those making the judgements will need to be spelled out. The qualifications of consultants and authorities should also be provided.

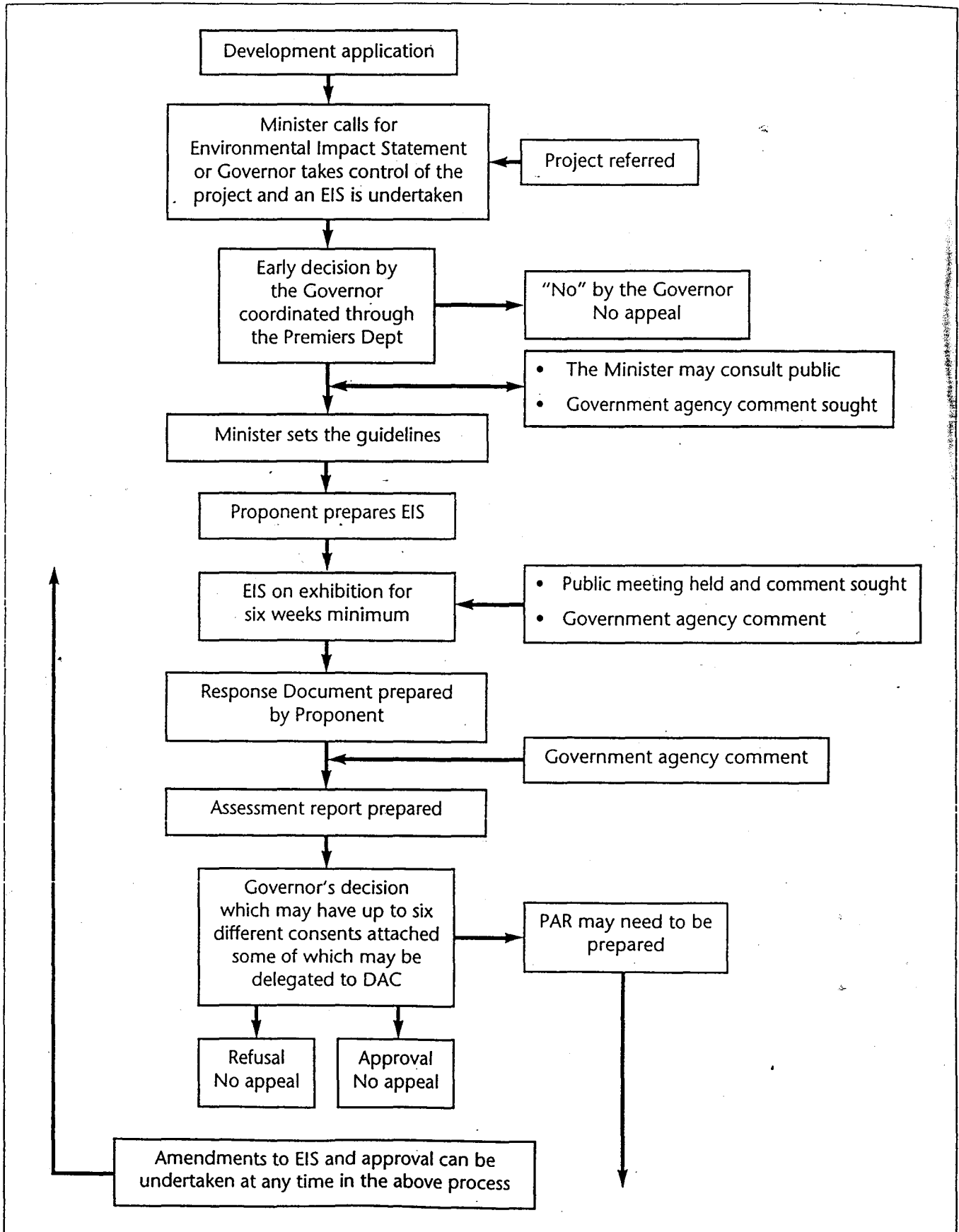
APPENDICES

Additional information relevant to the EIS that is not included in the text should be included in the appendices (maps, graphs, tables, photographs, reports, etc.). A glossary may be appropriate.

The design of the proposal should be flexible enough to incorporate changes to minimise any impacts highlighted by this evaluation or by post - operational monitoring programmes.

ASSESSMENT PROCESS FOR PROJECTS OF MAJOR SIGNIFICANCE

Key steps



WASTE DEPOT MANAGEMENT PLAN

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1. Site Details

- 1.1 Land Owner
- 1.2 Depot Operator
- 1.3 Site manager
- 1.4 Locality Description
- 1.5 Section & Hundred
- 1.6 Certificate of Title
- 1.7 Australian Map Grid Coordinates
- 1.8 Council Area
- 1.9 Zoning & Land Use Policies
- 2.0 Distance to adjoining Zones

2. Site Description

- 2.1 Operation Visibility
- 2.2 Traffic Routes to the Site
- 2.3 Exposure to Prevailing Winds
- 2.4 Buffer Zones within the depot
- 2.5 Proximity to Houses
- 2.6 Distance to Surface Water/Watercourses
- 2.7 Groundwater
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 - 1.5 Access Roads
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 - 2.1 Types of Waste Received
 - 2.2 Capacity of Site / Annual Volumes
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 - 4.2 Method of filling / Compaction
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 - 4.5 Type of Cover Material
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- 5.1 Recycling
- 5.2 Composting
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- 6.2 Internal Roads
- 6.3 Stockpiles
- 6.4 Amenities
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- 6.6 Drainage
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- 7.1 Landfill Gas
- 7.2 Leachate
- 7.3 Groundwater
- 7.4 Stormwater
- 7.5 Smoke
- 7.6 Odours
- 7.7 Noise
- 7.8 Vermin
- 7.9 Dust & Mud

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- 1 Final Landform
- 2 End Use
- 3 Post Closure Monitoring Period
- 4 End Use Maintenance Period

APPENDICES

1. Plans

- 1.1 Locality Plan
- 1.2 Site Operating Plans / Staging
- 1.3 End Use Plans

2.. Attachments

- 2.1 Rehabilitation Trust Fund
- 2.2 End Use Maintenance and Monitoring Fund
- 2.3 Land Use Consent
- 2.4 Licences & Conditions
- 2.5 Proof of Site Tenure
- 2.6 Public Liability Cover
- 2.7 CFS / MFS Requirements
- 2.8 Depot Improvement Programme
- 2.9 Community Consultation Programme,
Community Agreements.
- 2.10 Annual Landfill Volumes
- 2.11 Specifications
- 2.12 Agreed Sanctions.