



## **PART B – SHIRE OF DARDANUP**

**1. Declarations of Due Consideration**

**2. Disclosure of Interests**

**3. Form 1 DAP Applications**

Nil.

**4. Form 2 DAP Applications**

Nil.

**5. Section 31 SAT Reconsiderations**

- 5.1 Lot 2 Banksia Road, Crooked Brook - Landfill Waste Cells –  
DAP/21/02063

## Part B – Item 5.1 - LOT 2 BANKSIA ROAD, CROOKED BROOK – LANDFILL WASTE CELLS

### State Administrative Tribunal Reconsideration – Responsible Authority Report (Regulation 12)

<b>DAP Name:</b>	Regional Development Assessment Panel (RDAP)
<b>Local Government Area:</b>	Shire of Dardanup
<b>Summary of Modifications:</b>	<ul style="list-style-type: none"> <li>• Revised Landscaping Plan</li> <li>• Modifications of Conditions 2, 4 and 10</li> </ul>
<b>Applicant:</b>	Harley Dykstra Pty Ltd on behalf of Cleanaway Solid Waste Pty Ltd
<b>Owner:</b>	J & P Corporation Pty Ltd
<b>Value of Development:</b>	\$10.5 million
<b>Responsible Authority:</b>	Shire of Dardanup
<b>Authorising Officer:</b>	Ashwin Nair – Director Sustainable Development
<b>LG Reference:</b>	DAP-D0211219
<b>DAP File No:</b>	DAP/21/02063
<b>SAT File No (DR reference):</b>	DR 241/2021
<b>Date of Decision under Review:</b>	27 November 2021
<b>Application for Review Lodgement Date:</b>	5 November 2021
<b>Attachment(s):</b>	<ol style="list-style-type: none"> <li>1. Applicant's Additional Information</li> <li>2. Council Minutes (extract)</li> <li>3. Previous Determination Notice</li> </ol>

### Responsible Authority Recommendation

1. That the Regional Development Assessment Panel, pursuant to section 31 of the State Administrative Tribunal Act 2004 in respect of SAT application DR 241 of 2021, resolves to:
  - a) Reconsider its decision dated 9th February 2024 and VARY its decision for DAP Application reference DAP/21/02063 and accompanying in accordance with Clause 68 of Schedule 2 (Deemed Provisions) of the Planning and *Development (Local Planning Schemes) Regulations 2015* and the provisions of the Shire of Dardanup Local Planning Scheme No. 3 as follows:
    - i) Approving the updated landscaping plan, being Landscaping plan dated 31/01/25 (Rev 9) prepared by Tonkin, replacing the pre-existing version noted in the last bullet point of Condition 2, being Landscaping plan dated 29/08/22 (Rev 7) prepared by Tonkin.



- ii) Amending Condition 10 to remove the requirement for annual reporting with respect to items (a) through to (d).

The amended condition would therefore read:

*“The operator is required to submit an annual “Progress Report” detailing outcomes of monitoring of planted vegetation buffers over the previous 12-month period.”*

2. Refuses to amend Condition 4 to delete the second sentence which reads

*“Internal circulation of all vehicles must not encroach on the 20m landscaped boundary interface of the property” as it will erode the integrity of the Local development Plan and will result in amenity impacts associated with visual, litter and dust impacts from the development.*

#### Details: outline of development application

Region Scheme	Greater Bunbury Region Scheme
Region Scheme Zone/Reserve	Rural
Local Planning Scheme	Shire of Dardanup Local Planning Scheme No. 3
Local Planning Scheme Zone/Reserve	General Farming
Structure Plan/Precinct Plan	N/A
Structure Plan/Precinct Plan Land Use Designation	N/A
Use Class (proposed) and permissibility:	Use Not Listed – Waste Disposal Facility
Lot Size:	121.6658 hectares
Net Lettable Area (NLA):	N/A
Number of Dwellings:	N/A
Existing Land Use:	Waste disposal facility and extractive industry
State Heritage Register	No
Local Heritage	<input checked="" type="checkbox"/> N/A <input type="checkbox"/> Heritage List <input type="checkbox"/> Heritage Area
Design Review	<input checked="" type="checkbox"/> N/A <input type="checkbox"/> Local Design Review Panel <input type="checkbox"/> State Design Review Panel <input type="checkbox"/> Other
Bushfire Prone Area	Yes
Swan River Trust Area	No

#### Proposal:

The Applicant seeks reconsideration of three (3) of the 12 conditions of approval granted by the Regional Development Assessment Panel (**RDAP**) on 9 February 2024 in relation to the construction of three (3) new landfill waste cells (Cells 9, 10 and 12A)

at the existing Cleanaway landfill facility located on Lot 2 Banksia Road, Crooked Brook.

Specifically, the Applicant seeks the following:

- Approval of an updated landscaping plan, being *Landscaping plan dated 31/01/25 (Rev 9) prepared by Tonkin*, as an amendment replacing the pre-existing version noted in Condition 2, being *Landscaping plan dated 29/08/22 (Rev 7) prepared by Tonkin*.
- Amend Condition 4 to delete the second sentence which reads “*Internal circulation of all vehicles must not encroach on the 20m landscaped boundary interface of the property*”.
- Delete Condition 10 in its entirety which requires an annual progress report detailing the progress of the pit over the previous 12-month period.

## **Background:**

### History of Application

The subject site is located approximately 4km southeast of the Dardanup townsite and abuts the Dardanup Conservation Park to the east and south. To the immediate north, the land contains the Shire of Dardanup waste transfer station, green waste facility and the Water Corporation’s Dardanup Wastewater Treatment Plant. Beyond the immediate site the landscape consists of predominantly rural farmland with the closest residence being some 500m from the subject site’s boundary.

The site currently operates a waste landfill facility that was originally given approval from the (then) Minister for Planning in 1999 and is subject to a Department of Water and Environmental Regulation (**DWER**) licence issued under Part V of the *Environmental Protection Act 1986 (EP Act)*. This licence allows for the disposal of 353,000 tonnes of liquid waste per annum and 350,000 tonnes of Class II or Class III putrescible waste.

The site currently contains a weigh bridge, office, nine waste cells, two stormwater ponds, four leachate ponds, two tailings storage facilities, a portion of gravel extraction and internal sealed and unsealed access road. Waste cells are developed in stages as needed, depending on the remaining capacity of existing cells.

Access is via Banksia Road which is sealed only from the northern boundary of the site heading north. Current development approval conditions restrict access to the site only from the northern sealed portion of Banksia Road and prohibits heavy vehicle access to the site from the unsealed southern section.

- *History of Application*

The original RDAP development application for the three (3) new waste cells was lodged with the Shire of Dardanup on 17th August 2021.

Prior to this, in April 2021 the proponent self-referred this application to the Environmental Protection Authority (**EPA**). Pursuant to section 39A(1) of the EP Act,

in August 2021 the EPA decided to assess the proposal. The level of assessment was 'Referral Information with Additional Information required under section 40(2)(a) of the Environmental Protection Act 1986'. The EPA required the following additional information be provided:

- Hydrogeological assessment and water management plan;
- Visual impact assessment;
- Greenhouse gas emission estimates;
- Air Quality Impact Assessment for Odour and particulates; and
- Geotechnical stability of cell construction.

As the decision-making authority, the RDAP was restricted from making a decision (under section 41 of the EP Act) on this proposal which would cause or allow the proposal to be implemented, until the EPA had concluded its assessment.

On 5 October 2023, the EPA's assessment report on the application was published (EPA Report 1747). The report recommends the proposal may be implemented subject to appropriate conditions. No appeals were lodged against the EPA's recommendation through the Office of the Appeals Convenor, and Ministerial Statement 1213 reflecting the recommended conditions of EPA Report 1747 was ultimately published on 21 November 2023.

Concurrently, a Local Development Plan (**LDP**) applicable to the subject site was prepared and approved by Council in May 2021. The LDP was subsequently amended by order of the SAT made in October 2022.

#### Application to the State Administrative Tribunal

In accordance with the required timeframes for deciding an application for development approval under the *Planning and Development (Local Planning Schemes) Regulations 2015*, a decision on the original application was to be made by the RDAP by 27 November 2021. However, due to the RDAP's inability to determine the application (under section 41 of the EP Act), the application was never put forward for consideration by the RDAP.

In anticipation of the development application being deemed refused, the Applicant lodged an application seeking review of the RDAP's deemed refusal of the application with the SAT on 5 November 2021.

Following the release of Ministerial Statement 1213 on 21 November 2023, and a directions hearing was held on 8 December 2023, the SAT made orders inviting the decision-maker, under section 31 of the *State Administrative Tribunal Act 2004* (**SAT Act**) to reconsider its decision.

The RDAP subsequently resolved to set aside the previous decision (deemed refusal) and substitute it with a new decision for approval, subject to twelve (12) conditions. Refer to **Attachment 3**.

On 22 February 2024, the Applicant filed notice that it was dissatisfied with the determination and disputed Conditions 4, 5, 10, 11 and 12 of the approval.

The management plans required under Conditions 5, 11 and 12 were subsequently addressed with the Shire, which resolved the Applicant's dispute regarding those conditions.

The Applicant subsequently requested Shire officers to accept a replacement landscaping plan for Condition 2, which Shire officers declined on 18 September 2024 on the basis that a formal application was deemed necessary to amend the condition, so that the merits of the proposal could be properly assessed.

The SAT made orders on 11 November 2024 allowing the Applicant to provide additional information, which it did on 17 February 2025 (refer to **Attachment 1**) and inviting the decision-maker, under Section 31 of the SAT Act to reconsider its decision on or before 16 May 2025. The decision-maker may:

- affirm the previous decision,
- vary the decision, or
- set aside the decision and substitute a new decision.

### **Legislation and Policy:**

#### Legislation

*Planning and Development Act 2005*

*Planning and Development (Development Assessment Panels) Regulations 2011*

*Planning and Development (Local Planning Schemes) Regulations 2015*

*State Administrative Tribunal Act 2004*

*Environmental Protection Act 1986*

Greater Bunbury Region Scheme

Shire of Dardanup Local Planning Scheme No. 3

#### State Government Policies

State Planning Policy 2.0 – Environment and natural resources policy

State Planning Policy 2.5 – Rural planning

State Planning Policy 2.9 – Water resources

State Planning Policy 3.7 – Bushfire

#### Local Development Plans

Local Development Plan – Lot 2 Banksia Road, Crooked Brook

### **Consultation:**

#### Public Consultation

Public consultation was undertaken in 2021 and again in 2023 prior to the RDAP's decision to approve the development on 9 February 2024.

No further public consultation has been undertaken for the reconsideration subject of this report as it has been considered that the proposal:

- (a) is determined as having no predictable detrimental impact on the character or amenity of the immediate or general locality, and is not required under Clause 64 of the Deemed Provisions; and
- (b) has previously been subject to public consultation(s) and only minor modifications are proposed.

#### Referrals/consultation with Government/Service Agencies

Referrals to State government departments and agencies were undertaken in 2021 and again in 2023 prior to the RDAP's decision to approve the development on 9 February 2024. This involved referrals to:

- Department of Biodiversity, Conservation and Attractions
- Department of Energy, Mines, Industry Regulation and Safety
- Department of Fire and Emergency Services
- Department of Planning, Lands and Heritage
- Department of Primary Industries and Regional Development
- Department of Water and Environmental Regulation
- Main Roads WA
- Water Corporation

In 2023, the proposal was also referred to the Dardanup Environmental Action Group (DEAG).

Further consultation with the abovementioned departments and agencies has not been deemed necessary for the purposes of this reconsideration.

#### Design Review Panel Advice

Not applicable.

#### **Planning Assessment:**

The proposal has been assessed against all the relevant legislative requirements of the Scheme, State and Local Planning Policies and the Local Development Plan outlined in the Legislation and Policy Section of this report. The following matters have been identified as key considerations for the determination of this application:

#### Condition 4

The Applicant seeks the following modification to Condition 4:

*Access to and egress from the site for all heavy haulage vehicles associated with the approved landfill cells and related works are restricted to using the sealed road north of Lot 2 Banksia Road. Internal circulation of all vehicles must not encroach on the 20m landscaped boundary interface of the property.*

The wording of the condition, as it stands, aligns with the 'Site Access and Circulation' provisions of Local Development Plan – Lot 2 Banksia Road, Crooked Brook (**LDP**). The 'Landscaping Requirements' of the LDP also states:

*Development is to be appropriately screened from key viewpoints via the installation of a minimum 20m landscaping strip adjacent the subject site boundary which includes:*

- *Native tree plantings as per any endorsed landscaping plan for the relevant portions of the site.*
- *A variety of smaller shrubs and plantings to provide greater density of foliage to the understory of any trees.*

*Applications for development approval are to be supported by a landscaping plan outlining the proposed landscape design and its effectiveness to screen the development proposed.*

Pursuant to clause 56 of the Deemed Provisions, a decision-maker is to have due regard to, but is not bound by, the LDP when deciding the application.

As a result of previous approvals for, and subsequent development of, the site, internal vehicle tracks are currently within 20m of the subject site's boundaries. Furthermore, the current approval includes a landscaping plan (as required by the LDP) which shows 'Zone 1 Infrastructure' within 20m of the subject site's boundaries, with section 3.2 Restoration Zones noting that no vegetation would be required in this area.

Based on the LDP provision, the intent of the 20m landscaping strip is to screen the landfill development and the resultant changes in landform, as addressed in the Visual Impact Assessment prepared for the LDP; individual vehicle movements were not the focus of assessment. As outlined in the section below, the Applicant has provided a table to supplement the updated landscaping plan which demonstrates that Zone 4 vegetation buffer areas which abut Cells 9, 10 and 12A (subject of the previous determination) achieve a minimum width of 20m 'inside' the internal access track, except for portions of Zone 4C where existing approved infrastructure is located. It is therefore considered that the objective of the LDP to provide 20m vegetated buffers is still achieved.

#### Updated Landscaping Plan and Condition 2

Condition 2 currently makes reference to '*Landscaping plan dated 29/08/22 (Rev 7) prepared by Tonkin*'. As part of the additional information, the Applicant has submitted a Landscaping Plan dated 31 January 2025 (Rev 9) prepared by Tonkin.

The updated landscaping plan provides clarity that the intent of Zone 4 is to provide a visual screen around the landfill, whilst also confirming the width of each zone section. The Applicant has also provided an additional table (not included within the landscaping plan) which clarifies what is existing and proposed within 20m of Lot 2's boundaries and the adjacent landscaping, noting that for the main, Zone 4 vegetation buffers achieve 20m (except where existing approved infrastructure is located) when measured from 'inside' the internal access track.

As the updated landscaping plan otherwise includes no material differences to that which was previously approved, it is considered that the updated landscaping plan should be supported, and Condition 2 modified accordingly, owing to its greater clarity.

#### Condition 10

Condition 10 currently states as follows:

*The operator is required to submit an annual “Progress Report” detailing progress of the pit over the previous 12-month period. The report should provide details of the following:*

- a. Extent of extraction undertaken (volume and area);*
- b. Extent of filling of the cells (volume and area);*
- c. Completion of stages;*
- d. Rehabilitation of completed stages;*
- e. Outcomes of monitoring of planted vegetation buffers.*

The Applicant is seeking the deletion of Condition 10 in its entirety for reasons which can be summarised as follows:

- The condition, particularly the required reporting for items (a) to (d), are a duplication of the annual reporting requirements for the site under DWER Licence L8904/2015/1. Notably, then Condition 65 (now Condition 71) of the DWER Licence requires an annual environmental report which includes:
  - Summary of the Active Landfill Area, Special Waste Disposal Area and Titanium Dioxide Slurry (TDS) Cells, including areas that have been subject to waste deposition for the annual period, remaining void capacity in each cell, and a summary on any alterations to cell rehabilitation sequence and timing;
  - Volume of wastes arriving, leaving or rejected from the premises, for each waste type during the annual period; and
  - Summary of landfill at the premises.
- With respect to Condition 10(e), the maintenance of landscaping is addressed through the enforceable requirement to implement the approved landscaping plan under Condition 2. Furthermore, Council granted development approval for ‘Stormwater Infrastructure Works’ at the subject land on 24 February 2021 which requires implementation of the *Southern Boundary Native Vegetation Buffer Plan*.

It is agreed with the Applicant that Condition 10(a) to (d) effectively duplicates the annual environmental reporting requirements under the DWER Licence and that retaining such components of the condition would be inconsistent with established case law. Specifically, in *SITA Australia Pty Ltd and Wheatbelt Joint Development Assessment Panel* [2016] WASAT 22, at [127] the SAT accepted a general principle that “*where it is likely that a DER condition will operate in parallel with a Shire condition, it is unnecessary to duplicate such requirements in the [Shire’s] conditions*”.

In applying the ‘Newbury’ test of validity of a condition of development approval, it is also considered that Condition 10(a) to (d) would not satisfy Limb 1: Must have a planning purpose. This is supported by the Development Assessment Panel Practice Notes: Making Good Planning Decisions (March 2021) which states at section 4.2.1.2:

*“It is clear from the body of case law generated by courts and tribunals around Australia over the years that conditions that seek to require compliance with a separate and distinct statutory regime are not imposed for a planning purpose.”*

However, in relation to Condition 10(e), there is currently no requirement under the DWER Licence for annual reporting regarding the planted vegetation buffers. In previous determinations for both the development and the LDP, visual impact was a key consideration. Specifically, it is noted that the *Lot 2 Banksia Road, Dardanup – Cleanaway Waste Facility Visual Impact Assessment Review* dated August 2022 noted that the staged rehabilitation of the site did not appear to be progressing together with the landfill in order to sufficiently screen the landfill progress.

As a means of ensuring that potential visual impacts are being mitigated through the vegetation buffers as proposed, annual reporting on these vegetation buffers is considered important and would satisfy Limb 1 of the *Newbury* test, being for a planning purpose. The requirement would also relate to the development, satisfying Limb 2, and is not considered unreasonable owing to the nature and scale of the proposal and potential visual impacts, therefore satisfying Limb 3. The landscaping plan currently requires a landscaping plan after three (3) years; however, the Shire considers that more regular monitoring and reporting is appropriate to identify and take action on any shortcomings, particularly as replacement and/or additional vegetation may need to mature over time to be of impact.

For these reasons, it is recommended that the retention of the annual reporting on the monitoring of planted vegetation buffers, currently required by Condition 10(e).

### **Conclusion:**

This report considers the Applicant's updated landscaping plan and requested modifications to conditions of approval previously issued by the RDAP.

The updated landscaping plan provides greater clarity on each landscaping zone, particularly with respect to Zone 4's purpose to provide visual screening of the landfill areas. As there are otherwise no material changes to the previously approved landscaping plan, the updated plan is being supported.

As for the proposed modifications to Conditions 4 and 10, these have been considered in light of clause 56 of the Deemed Provisions as they relate to LDPs, as well as established case law, including the *Newbury* test. On balance, the modifications are supported, however with the retention of annual reporting in relation to the planted vegetation buffers.

### **Alternatives**

In accordance with section 31(2) of the SAT Act, the RDAP may:

- (a) affirm the decision; or
- (b) vary the decision; or
- (c) set aside the decision and substitute its new decision.

The recommendation to the RDAP is to vary the decision pursuant to subclause (b).

The RDAP may resolve not to support the updated landscaping plan and modifications to the conditions and could therefore affirm the previous decision/conditions of approval pursuant to subclause (a). In doing so, the Applicant may pursue their requested modifications through a final (substantive) Tribunal hearing.



As this reconsideration relates to modifications of conditions on an approval previously granted by RDAP and that no substantial modifications have been made to the development itself, a decision in line with subclause (c) is not recommended.

### Officer Recommendation

That the Regional Development Assessment Panel, pursuant to section 31 of the *State Administrative Tribunal Act 2004* in respect of SAT application DR 241 of 2021, resolves to:

**Reconsider** its decision dated 9 February 2024 and **VARY its** decision for DAP Application reference DAP/21/02063 and accompanying in accordance with Clause 68 of Schedule 2 (Deemed Provisions) of the *Planning and Development (Local Planning Schemes) Regulations 2015* and the provisions of the Shire of Dardanup Local Planning Scheme No. 3 as follows:

1. Approving the updated landscaping plan, being Landscaping plan dated 31/01/25 (Rev 9) prepared by Tonkin, replacing the pre-existing version noted in the last bullet point of Condition 2, being Landscaping plan dated 29/08/22 (Rev 7) prepared by Tonkin.
2. Amending Condition 4 to delete the second sentence which reads *“Internal circulation of all vehicles must not encroach on the 20m landscaped boundary interface of the property”*.

The amended condition would therefore read:

*“Access to and egress from the site for all heavy haulage vehicles associated with the approved landfill cells and related works are restricted to using the sealed road north of Lot 2 Banksia Road.”*

3. Amending Condition 10 to remove the requirement for annual reporting with respect to items (a) through to (d).

The amended condition would therefore read:

*“The operator is required to submit an annual “Progress Report” detailing outcomes of monitoring of planted vegetation buffers over the previous 12-month period.”*

### Reasons for Officer Recommendation

As per the Officer Responsible Authority Report.

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Our ref JS:MP:4983006  
Your ref DR241 of 2021

**17 February 2025**

Stephanie Price  
Assistant State Solicitor  
State Solicitor's Office  
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**CC:**

Chief Executive Officer  
State Administrative Tribunal  
565 Hay Street  
Perth WA 6000

Dear Dr Price

**Additional information for reconsideration**

**DR241 of 2021 - Cleanaway Solid Waste Pty Ltd v DAP Executive Member**

- 1 We refer to the orders made by the State Administrative Tribunal in this matter on 12 November 2024 and in particular the order for the Applicant to provide its additional information in support of its case in these proceedings, following which the Respondent will reconsider its decision.
- 2 Enclosed is a new version of the relevant landscaping plan (**Attachment 1**), which incorporates amendments that seek to improve and clarify the landscaping commitments.
- 3 The Applicant requests, as set out in the submissions in this letter below and supported by the attachments, that the Respondent on reconsideration:
  - (a) approve the updated landscaping plan as an amendment replacing the pre-existing version noted in Condition 2;
  - (b) amend Condition 4 to delete the second sentence; and
  - (c) delete Condition 10 in its entirety.

**Background**

- 4 The following background is noted:

- (a) on 21 November 2023, Ministerial Statement 1213 was published for the determination that the proposal may be implemented;
- (b) on 9 February 2024, the Regional Joint Development Assessment Panel (**DAP**) determined to approve the development application (**Approval**), subject to 12 conditions;
- (c) on 22 February 2024, the Applicant filed notice:
  - (i) that it was not satisfied with the DAP's decision; and
  - (ii) in particular, as to its dispute with conditions 4, 5, 10, 11 and 12 of the Approval;
- (d) on 5 April 2024, the Shire informed the Applicant that it had approved the management plans required under conditions 5, 11 and 12, and as a result of this the dispute regarding those 3 conditions was resolved; and
- (e) on 18 September 2024, the Shire, as part of considering a management plan amendment under Condition 2:
  - (i) refused to approve replacing 'Landscaping plan dated **29/08/22** (Rev **7**) prepared by Tonkin' (**2022 Landscaping Plan**); and
  - (ii) refused to accept, as the replacement, the 'Landscaping plan dated **26/08/24** (Rev **8**) prepared by Tonkin' (**2024 Landscaping Plan**),

despite the Shire stating that 'the submitted landscape plan dated Aug 2024, there appears to be an improvement from the 2022 iteration' (see **Attachment 2**).

#### Condition 4

##### Second sentence disputed

- 5 Condition 4 is as follows, with the second sentence emphasised:

*'Access to and egress from the site for all heavy haulage vehicles associated with the approved landfill cells and related works are restricted to using the sealed road north of Lot 2 Banksia Road. **Internal circulation of all vehicles must not encroach on the 20m landscaped boundary interface of the property.***

- 6 The Applicant seeks the deletion of the second sentence of Condition 4, on the basis that Condition 4 in its current form, including the second sentence, does not meet the reasonableness requirement of the 'Newbury Test'.

##### Conflict between the second sentence and the established development

- 7 There has always been internal circulation of vehicles within 20m of the boundary of Lot 2 by way of long-established roads and access ways, as part of the existing approved development on the site. This is recognised in the first sentence of Condition 4 (ie 'Access to and egress... are restricted to using the sealed road north of Lot 2 Banksia Road'), with respect to the established sealed internal road on the northern boundary that:
- (a) provides the access to, and egress from, Lot 2; and
  - (b) extends into the site past the weighbridge facility and then along the northern boundary (and within 20m of the northern boundary) to various turn off points for entrance to the landfill cells, as necessary for trucks to access and unload waste.
- 8 In addition to the northern boundary, the eastern and southern boundary have also long had internal roads and access ways established within 20m of the boundary, as part of existing approved development of the site.
- 9 Further and in any case, there is no actual provision for landscaping to displace where these existing access ways are established within 20m of the boundary, as the 2022 Landscaping Plan sets out the landscaping and associating planting for buffer vegetation to be around them.

### Existing landscaping around the existing internal roads

- 10 The 2022 Landscaping Plan has planned out the areas of landscaping around the existing roads internal to Lot 2.
- 11 It is not the case that as a requirement of the conditions of the Approval, there is to be landscaping of all of the boundaries of Lot 2 to a width of 20m. In fact, for most of the boundary of Lot 2 that is not the case. In some sections there is landscaping that is wider than 20m, in some sections there is landscaping that is narrower, in some sections there is an access track between the landscaping and the boundary, and in some sections the landscaping is up to the boundary. In all cases the landscaping was clearly set out in the 2022 Landscaping Plan, including how it is to provide for vegetation buffers, and this was approved under Condition 2, as part of the Approval granted on 9 February 2024.
- 12 Therefore, the retention of the access ways for the internal circulation of vehicles and the planned landscaping is not in conflict such that there is any need for the second sentence of Condition 4, and it ought to be deleted to avoid confusion in terms of expectations for the landscaping and access ways in proximity to the boundary of Lot 2.

### Condition 4 and the 2022 Landscaping Plan

- 13 The extent of the landscaping required to be carried out under the Approval, including vegetation to be planted and maintained within 20m of the boundary, is set out in the 2022 Landscaping Plan, as accepted in the decision to grant the Approval and made explicit under Condition 2, which provides:

*'All development must be carried out in accordance with the approved plans listed below, unless amended with the written consent...'*

#### Management & Other Relevant Plans

...

- *Landscaping plan dated 29/08/22 (Rev 7) prepared by Tonkin.'*

- 14 The 2022 Landscaping Plan ultimately provides for the landscaping of all of Lot 2,<sup>1</sup> as part of the rehabilitation commitment for the site. The landscaping has been planned in a staged manner concurrent with the progressive development and completion of the sequence of landfill cells, as those cells are approved on Lot 2.
- 15 The 2022 Landscaping Plan specifically provides for the staged landscaping of the actual landfill footprint, as cells are progressively filled, closed and capped.<sup>2</sup> This is to progressively achieve the final rehabilitation of the site and ameliorate the visual impact, by blending the elevated landfill form with the surrounding topography of the Dardanup Conservation Park and the broader Whicher Range in the background.
- 16 Other than the actual landfill footprint, currently it is not the case that there are any timeframe commitments for the landscaping of other areas Lot 2, including for the buffer landscaping (ie Zone 4), as the 2022 Landscaping Plan was approved under Condition 2, as part of the Approval on 9 February 2024.
- 17 Therefore, given:
- (a) the terms of the 2022 Landscaping Plan currently applicable under Condition 2; and
  - (b) the lack of any requirement for landscaping beyond the landfill footprint,

<sup>1</sup> There is one exception to this, being the small portion at the west, which is for a separate quarrying operation with its own rehabilitation commitments, as part of the specific respective approvals.

<sup>2</sup> See 'Rehabilitation and Closure Plan dated 12/09/23 (Ver V9) prepared by Cleanaway', also approved under Condition 2 of the Approval.

as matters stand, there is not even any landscaping required to be implemented for the area within 20m of the boundary, prior to the closure of the landfill under the terms of the Approval.

### Condition 2, and the 2025 Landscaping Plan

- 18 As referred to above, as part of the request for the deletion of the second sentence of Condition 4, the Applicant prepared the 2024 Landscaping Plan (for approval under Condition 2, as an amendment to the 2022 Landscaping Plan), which the Shire refused to accept on 18 September 2024.
- 19 Since then, the Applicant has made some further minor amendments and updates to the 2024 Landscaping Plan, which is now the '*Landscaping Plan* dated **31 January 2025** (Rev 9) prepared by Tonkin (**2025 Landscaping Plan**) (**Attachment 1**).
- 20 Both the 2024 Landscaping Plan and the 2025 Landscaping Plan have been prepared with updates that clarify the implementation of landscaping for areas other than just the landfill footprint. This includes those areas closest to the boundaries of Lot 2 that either have already been planted with vegetation to serve as a buffer providing a visual screen.
- 21 These updates clarify the implementation of the landscaping, particularly the vegetation buffer (ie Zone 4) and will result in an improved outcome with respect to that interest. This was ostensibly the interest that the second sentence of Condition 4 was attempting to address, but burdened by the poor framing.
- 22 To assist understanding the detail of what is in the area within 20m of the boundary of Lot 2 and the corresponding proposed landscaping components, attached is a table setting this out (**Attachment 3**). The table addresses the areas on the boundary of Lot 2 in 9 sections. Each section is detailed, starting with the north western corner and moving clockwise around Lot 2. Note that the information can be more easily understood by cross-referencing to Figure 1 in the Landscaping Plans.
- 23 The 2024 Landscaping Plan and 2025 Landscaping Plan contain no other material differences from the current approved 2022 Landscaping Plan. The content otherwise remains as was assessed and accepted as part of the Approval.
- 24 The Applicant requests that the DAP approve the 2025 Landscaping Plan, by way of amending Condition 2 to refer to the 2025 Landscaping Plan, in place of the current reference to the 2022 Landscaping Plan.

### Visual impact management and the landscaping

- 25 Relevant to the requests in relation to both Condition 4 and Condition 2, the landscaping for Lot 2 serves as an important visual impact management measure for not just the development of landfill cells 9, 10 and 12A the subject of the Approval, but also the pre-existing development and ongoing operations. The landscaping has been formulated to this end in both the current approved 2022 Landscaping Plan and the updated 2025 Landscaping Plan.
- 26 The visual impact management considerations discharged as part of the process culminating in the Approval are summarised below.
- 27 The expert consultancy, EPCAD, was commissioned to prepare a '*Landscape and Visual Assessment*'. This assessment was submitted as an appendix to the application, which was considered and then granted the Approval.<sup>3</sup> The EPCAD assessment refers extensively to the 2022 Landscaping Plan (see sections 9 to 11) and included extracts (see figures 10 to 11). In particular, the assessment concludes (see 11.1):
- (a) '*[a]s filling progresses, the planting will mature. As the scale and height of the new landform increases the landscape planting will ameliorate effects*'; and

<sup>3</sup> See Appendix F in the application document.

- (b) *"[i]n the long term, the works will be revegetated with woodland plants, and will not be discernible from the wider landscape. The grassland rehabilitation will form an open paddock similar in character to many areas of the contextual rural landscape'.*
- 28 While the EPCAD assessment relies on the 2022 Landscaping Plan, the amelioration measures resulting from the landscaping as set out in the 2022 Landscaping Plan are largely to blend the development of Lot 2 with *'the wider landscape'* (as noted above), rather than to act as a buffer to visually screen sensitive views. The screening through vegetation buffers is largely already achieved by the existing vegetation that is being retained, as the EPCAD assessment notes (see section 5.4.2):
- (a) *'[t]he western boundary of the site, consists of a vegetated buffer... assists in screening views into the interior of the subject site';*
- (b) *'vegetation also extends for approximately 335m along the northern boundary, also providing screening';*
- (c) *'eastern most portion of vegetation, does not appear to have been cleared for any purposes';* and
- (d) *'[t]he southern boundary has... rehabilitation works in order to provide a 20m vegetated buffer'.*
- 29 Further, on the basis of the EPCAD assessment, the responsible authority report (**RAR**) that informed the decision of the DAP to grant the Approval, concluded as follows against the relevant objective under the local planning scheme (see page 11 of the RAR):
- 'While the proposed development is visible from certain vantage points surrounding the site, the impact on the visual amenity of the broader area is not considered significant. The finished landform can be considered a low broad hill that should integrate into the natural undulation sufficiently and be consistent with the broader panorama'.*
- 30 In conclusion, the appropriate vegetation buffer for screening the development on Lot 2 is already largely achieved through the retention of the existing remnant vegetation, as explained by the EPCAD assessment and accepted by the RAR.
- 31 The Applicant submits that under both the 2022 Landscaping Plan and the 2025 Landscaping Plan:
- (a) the retention of the existing remnant vegetation referred to above; and
- (b) the supplementary planting,
- ought to resolve any concern regarding the visual screening that the second sentence of Condition 4 might have been intending to address (albeit burdened by the poor framing). Further to this, the updates in the 2025 Landscaping Plan provide for a better and clearer outcome, which ought to be approved as an amendment to Condition 2, in conjunction with the deletion of the second sentence of Condition 4.

### Condition 10

- 32 Condition 10 states:

*'The operator is required to submit an annual "Progress Report" detailing progress of the pit over the previous 12-month period. The report should provide details of the following:*

- a. Extent of extraction undertaken (volume and area);*
- b. Extent of filling of the cells (volume and area);*
- c. Completion of stages;*
- d. Rehabilitation of completed stages;*

*e. Outcomes of monitoring of planted vegetation buffers.'*

- 33 The Applicant requests that Condition 10 be deleted as part of the reconsideration by the DAP of its decision on 9 February 2024, for the reasons set out below.
- 34 The reporting that is required by Condition 10 is a duplication of the jurisdiction of the Department of Water and Environmental Regulation (**DWER**) and in particular, the reporting requirements under the Licence L8904/2015/1 that are applicable to the landfill operations (**Licence**) (see **Attachment 4** for extract of the Licence).
- 35 Condition 65 of the Licence requires annual reporting, including on the following matters:
- (a) A summary of the active landfill area and also construction quality assurance reporting. This captures detailed information on the as constructed status of the landfill cells, including extraction volumes and covers the scope of what is duplicated by the above requirement in Condition 10(a) of the Approval.
  - (b) A summary of waste volumes accepted and capacity remaining, which covers the scope of what is duplicated by the above requirement in Condition 10(b) and (c).
  - (c) A summary and update on the rehabilitation progress of the landfill cells, which covers the scope of what is duplicated by the above requirement in Condition 10(d).
- 36 There is no planning basis for the Shire, by way the reporting required by Condition 10, to duplicate the operational oversight role of DWER, particularly in this case where the subject matter is specifically addressed under the Licence (ie Condition 65). In **SITA Australia Pty Ltd and Wheatbelt Joint Development Assessment Panel** [2016] WASAT 22, at [127]-[129] the State Administrative Tribunal accepted as a general principle that "*where it is likely that a DER condition will operate in parallel with a Shire condition, 'it is unnecessary to duplicate such requirements in the [Shire's] conditions'*", and at [137]-[138] the Tribunal was specifically prepared to apply this principle to a condition requiring the supply to the Shire of information that was required to be provided to the DWER.
- 37 With respect to the requirement in Condition 10(e), to the extent there is an interest in:
- (a) the maintenance of the landscaping, this is addressed in both the 2022 and the 2025 Landscaping Plans and is enforceable through the requirement to implement those plans under Condition 2 of the Approval; and
  - (b) the planting for vegetation buffers concurrent with the development of Cells 9, 10 and 12A, this is already the subject of the Approval (ie only Zones 4B,C and D) and furthermore, with respect to implementation and monitoring of vegetation on the southern boundary, this is also already addressed in the '*Southern Boundary Native Vegetation Buffer Plan*' approved as part of the development approval for the stormwater infrastructure, by a decision of the Council on 24 February 2024 (see **Attachment 5**).
- 38 On the basis of the above matters, the Applicant submits that Condition 10 is an unreasonable duplication of the pre-existing requirements of the licence administered by DWER and the correct and preferable resolution is for it to be deleted.

Yours faithfully  
**Thomson Geer**



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# **Banksia Road Landfill Rehabilitation and Closure Plan**

## **Appendix D - Landscaping Plan**

### **Cleanaway Waste Management**

31 January 2025  
Ref: 201515R003





## Document History and Status

Rev	Description	Author	Reviewed	Approved	Date
A	For Client Comment	AW/MRS	IPN	MRS	11/09/2020
B	For Client Comment	MRS	MRS	MRS	29/09/2020
0	For Issue	MRS	Sally Carlton, Cleanaway	MRS	01/10/2020
1	Updated for CWY Comments	MRS	MRS	MRS	09/11/2020
2	Updated for Shire submission in response to third party review	IPN	MRS	MRS	22/01/2021
3	Minor updates to document Updated for Shire submission in response to third party review	IPN	MRS	MRS	5/02/2021
4	Updated Figure 2	IPN	IPN	IPN	10/02/2021
5	Minor update to document P3 TOW contour details	Sally Carlton, Cleanaway			10/09/2021
6	Update for Phytocap Report by Tonkin Jan 2022	MRS	Sally Carlton, Cleanaway	MRS	31/01/2022
7	Update to Appendix A Species List	MRS	Sally Carlton	MRS	29/08/2022
8	Update the Zone 4 buffer description to reflect the site condition	IPN	MI	MI	26/08/2024
9	Updated Section 3.2	IPN	SH	SH	31/01/2025

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**Client: Cleanaway Waste Management**  
**Ref: 201515R003**

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**Appendix B – South West Region Threatened And Priority Flora List (5 December 2018) for Whicher Scarp and Dardanup**



# 1 Introduction

Tonkin was engaged by Cleanaway Waste Management to prepare a Landscaping Plan (the Plan) for the Dardanup Landfill (Landfill). The site is located in the Shire of Dardanup local government area. Department of Water and Environmental Regulation (DWER) Licence 8904/2015/1 incorporates Lot 2 on Plan 65861, Banksia Road, Crooked Brook WA.

## 1.1 Aims and Objectives

The Plan aims to provide a clear, concise and practical framework for the landscaping of the final landform of the Landfill, in accordance with the requirements of the *DWER Revegetation Guideline* (DWER, 2018) and the *Rehabilitation and Closure Plan* (Cleanaway, 2022) for the site. The final landform and landscaping are intended to facilitate a final land use as passive open recreational space.

The objectives of the Landscaping Plan are to:

- determine local vegetation characteristics;
- describe the landscaping activities necessary to restore the native vegetation;
- describe the maintenance program to ensure establishment;
- utilise cost efficient restoration techniques;
- restore the Landfill in a manner which minimises management costs in perpetuity; and
- provide an indication of the costing for the landscaping work.

## 1.2 Relationship with Existing Reports

The Plan has taken into consideration the impacts of the following documentation:

- Rehabilitation and Closure Plan, Updated V6 (Cleanaway, 2022).
- Rehabilitation Staging Plan (Drawing F001 Rev B, Cleanaway, 2022).
- Phytocap Performance Trial Final Report (ref:20171422L02RevA, Tonkin 2022)
- Capping Design Report (ref: 201515R001Rev2, Tonkin, 2020);
- Southern Boundary Vegetation Buffer Plan (Cleanaway, 2016);
- Stormwater Management Plan (Golder, 2020)

All work to be performed on site will be in accordance with the following guidelines, or updated versions thereafter:

- Florabank Guideline Series
- Regional forest Agreement for the South-West Forest Region of Western Australia 1999.
- Fire Management Strategy (DPaW, 2019)
- A Revegetation Guide for Eucalypt Woodlands (DWEWPC, Greening Australia and Landcare, undated).

## 1.3 Relevant Legislation

The Plan has been prepared in accordance with the provisions contained in relevant legislation and policy guidelines, including but not limited to the following:

- *Biodiversity Conservation Act 2016* (WA) provides protection for biodiversity, including threatened species and ecological communities and critical habitat;



- *Bush Fires Act 1954* (WA) provides for prevention control and extinguishment of bush fires and diminishing bush fire danger for the public.
- *Conservation and Land Management Act 1984* (WA) provides for the management of land for native vegetation conservation purposes;
- *Environment Protection Act 1986* (WA) provides for the establishment of environment protection policies, regulation of clearing for development and definition of prescribed premises, works, approvals and licences
- *Environment Protection and Biodiversity Conservation Act 1999* (Cth) provide protection of the environment on matters of national significance and identifies species and communities which are under threat;
- *Soil and Land Conservation Act 1945* (WA) provides for the conservation of soil and land resources to mitigate the effects of erosion, salinity and flooding and includes the management of native vegetation to conserve land;



## 2 Description of Proposed Development

This section provides a general description of the proposed development based on discussions with Cleanaway and the existing report listed in Section 1.2

The site operates in accordance with the Licence L8904/2015/1 issued by DWER. Cleanaway proposes to continue landfilling the Dardanup Landfill site to the approved DWER top of waste height contour with capping design and settlement allowances in addition to this. Landfilling rates are not expected to differ substantially from current levels. Site operations require the ongoing use of site facilities including stormwater management infrastructure. Refer to Section 2 of the *Capping Design Report* for additional site setting and background information.

The final landform for the site has been designed to account for the following considerations:

- Providing a long-term stable barrier between waste and the environment
- Providing land suitable for its intended after use.

### 2.1 Landfill Capping System

The landfill capping will be constructed in accordance with Section 2 of the *Rehabilitation and Closure Plan* which nominates a geosynthetic capping system including (from bottom to top):

- min 500mm Daily cover layer;
- geosynthetic clay layer (GCL);
- linear low-density polyethylene (LLDPE);
- geo-composite drainage layer
- 1.3-1.5m growing medium planted to appropriate vegetation (grasses and/or small shrubs).

In 2019, a phytocap trial was constructed on a portion of Cell 5 using 2 m of locally available soil planted to endemic trees, shrubs and grasses. The *Phytocap Performance Trial Final Report* concluded “*The phytocap trial at Banksia Road was constructed in accordance with the technical specification but the establishment of plants did not occur. Native plants are slow to establish and require intensive maintenance to ensure their establishment. As a result of the highly erodible site-won soil which requires vegetation to be established quickly alternative approaches to revegetation would be required and would require a higher level of management and maintenance*”. This did not meet Cleanaway’s requirements for capping so a phytocap was deemed unlikely to provide a suitable capping solution for Banksia Road and a geosynthetic cap option has been selected.

### 2.2 Surface Water

An extensive infrastructure system has been installed / maintained to manage stormwater runoff from and across the site incorporating the following:

- Two stormwater ponds;
- A network of vegetated swales, stormwater drains, channels and bunds;
- Secondary underground drainage on the side of the Southern Haul Road via pit and pipe systems;
- Maintained surface grades to prevent ponding of surface water.

The system relies on the principle of preventing ‘run-on’ to active areas and runoff from active areas and the separation of clean and ‘dirty’ runoff throughout the site. The Stormwater Management Plan for the site details the stormwater management practices at the site and the design of the above infrastructure.



## 3 Landscaping Plan

The following information provides an assessment of the opportunities and constraints at the site in relation to landscaping and a detailed description of all activities required to implement the Landscaping Plan. The opportunities have been developed using desk top research or existing reports relevant to the site, current vegetation maps and restoration guidelines, previous field investigations and liaison with Cleanaway.

### 3.1 Site Opportunities and Constraints

The restoration of such a large area provides numerous opportunities and constraints. To ensure the success of the project it is important to identify these prior to developing a design or undertaking any works.

#### 3.1.1 Opportunities

The opportunities that this project provides include:

- Restoring a large area of native vegetation/habitat;
- Providing valuable bird habitat through the mass installation of native shrubs;
- Linking with local habitat corridors;
- Improving aesthetics of the area;
- Providing a passive recreation area for local residents;
- Utilising 'best practice' vegetation restoration techniques;
- Integrating ecological function and engineering design to achieve balanced landscape outcomes; and
- Improving water quality at the site;
- Providing future use areas for activities such as active recreation (e.g. courts, playing fields), shed-based commercial industries (e.g. farm supplies) or on-going waste related activities (e.g. energy from waste plant, material recovery and recycling facility).

#### 3.1.2 Constraints

Constraints to be considered during project design include:

- Highly modified/artificial site conditions;
- Low summer rainfall;
- Erodible natural soil;
- Depleted natural seed source;
- Weed burden from green waste materials transported to site;
- Settling of landfill and production of landfill gas during early stages;
- Maintenance requirements of the landscaped area.

### 3.2 Restoration Zones

The site is divided into five distinct areas that require different vegetation management approaches, as part of the landscaping to best serve the ongoing management and rehabilitation of the landfill. These areas are:



**Zone 1 Infrastructure** – This is an infrastructure zone, mostly near the landfill perimeter and includes access roads and tracks and stormwater drains and channels, necessary for the management of the site during and after the life of the Landfills operation. Therefore, there will be no vegetation in this area.

**Zone 2 Grassland** – This is to be a grassed area on the upper crest of the landfill and over the Tronox ponds, in order to facilitate use of the site for passive recreation. Native gardens may be included in this space where the growing medium is of sufficient depth and likewise small trees and shrubs will be included where the soil is of sufficient depth.

**Zone 3 Native Woodland** – The western batter slopes of the landfill will be planted to native shrubs and grasses to provide a visual screen and reduce the visual impact of the most prominent aspect of the Landfill's topography by blending into the surrounding Dardanup Conservation Park vegetation.

**Zone 4 Buffer** – This buffer zone around the landfill provides a visual screen comprised of native vegetation, including trees, shrubs and groundcover species on steeper embankments, in order to link with adjacent Dardanup Conservation Park vegetation. This area is not over landfill footprint but around it and the titanium dioxide storage cells, leachate ponds and the other associated developments.

**Zone 4a Woodland**– This area comprises existing trees with a grass understorey and has an established width from the site boundary that varies between 20 to 30 m.

**Zone 4b Groundcovers** – This area is 10m wide and is along the batter slope of the leachate ponds. The vegetated pond wall provides a visual screen between adjacent forest and the landfill. Native shrubs, grasses and forbs have been planted along this section.

**Zone 4c Woodland** – This area is 12-21m wide and has been planted with a range of native vegetation.

**Zone 4d Woodland**– This area is 15-20m wide and has been planted with a range of native Vegetation.

**Zone 4e Retained Native Vegetation** – Remnant native vegetation 20-30m wide in this area will be retained and protected.

These buffer zones are as above, except where restricted by the topography or existing infrastructure along portions of the southern and northern boundary. The areas in Zone 4b-d along the southern boundary are also described in the Southern Boundary Native Buffer Plan.

**Zone 5 Wetland** – This is a wetland area over the lower part of the site and around the stormwater basins and leachate ponds, to consist of native shrubs and groundcovers upon closure of the site. This area is not over the landfill footprint.

Figure 1 shows the location of the zones and is an impression of the final landscaped site. A species list for the Zones with native vegetation is provided in Appendix A with selected photographs and a list of threatened or rare species for Whicher Range and Dardanup is included in Appendix B.

### 3.3 Seed Collection and Supply

Native seed and tube stock will be purchased from Revegetation Industry Association of WA (RIAWA) accredited seed collector and suppliers ([riawa.com.au](http://riawa.com.au)) and will be local provenance, where possible, for trees and shrubs. One potential supplier is Nindethana Seed Suppliers (part of Greening Australia (WA)) who are RIAWA accredited and located in Albany so able to supply local provenance seed and provided the seed for the phytocap trial (Table 1). To allow sufficient lead-in time for the propagation of provenance species, native plant orders must be placed prior to spring for sufficient stock to be available. The vegetation supplied should be consistent with those listed in Appendix A and Appendix B, noting species may be substituted as required and that native seed availability is highly variable. Where practical, threatened and rare plants should also be included. A list of these species for the Whicher Range and near Dardanup plants, as current on 5 December 2018, is presented in Appendix B.





Non-native grasses will be purchased from companies which meet the seed certification standards specified by the Australian Seed Federation. One potential supplier is PGG Wrightson Turf which supplies certified seed and is located in Perth and has previously provided ryegrass seed for stabilisation of embankments (Table 1). They also can supply sterile grass seed which can be used as a cover crop prior to establishment of native seed.

**Table 1 Contact Details for Potential WA-Accredited Vegetation Suppliers**

Vegetation type	Supplier
Native seed and tubestock	Nindethana Seed Supplies Phone: 08 9844 3533 Email: <a href="mailto:seed@nindethana.net.au">seed@nindethana.net.au</a> <a href="http://www.nindethana.net.au">www.nindethana.net.au</a>
Native tubestock (including installation)	Matthew Blunt Tranen 20 Possum Place, Vasse, WA 6280 Phone: (08) 9754 2643 Mobile: 0400 165 729 <a href="mailto:matt.blunt@tranen.com.au">matt.blunt@tranen.com.au</a> <a href="http://www.tranen.com.au">www.tranen.com.au</a>
Non-native grasses	Glen Liebold Revegetation Territory Manager WA & NT. PGG Wrightson Turf Phone: 1800 3872 8879 Email: <a href="mailto:gliebold@pgwturf.com.au">gliebold@pgwturf.com.au</a> <a href="http://www.pggwrightsonturf.com.au">www.pggwrightsonturf.com.au</a>

## 3.4 Plant Propagation

Plant propagation refers to the germination of collection seed and the 'growing on' of plants in enviro cells, hiko cells or forestry tubes. This will be undertaken by a suitably qualified and experienced native plant production nursery.

## 3.5 Site Preparation

### 3.5.1 Site Protection

Once the bulk earthworks are complete and to ensure the success of plant establishment, it will be necessary to control access into the area. Machine access should be limited inside the landscaping zones other than for landscaping purposes and re-shaping areas of erosion or maintaining a free draining surface.



### 3.5.2 Erosion Control

At the completion of earthworks, appropriate sediment control fencing will be installed as specified in the detailed design for capping. Consideration will be given to alternative control structures, particularly those shown in "Best Practice Erosion and Sediment Control" (IECA, 2008).

Areas of high erosion potential may require the installation of jute matting or hydromulching. The Hydromulch "mixture" will include jute fibre and a mixture of pre-treated native seed. Experience has shown that using a mixture of native peas and Acacia's in the hydro mulch is an inexpensive way to establish native vegetation at difficult sites.

### 3.5.3 Litter Removal

All litter from the site should be removed prior to the commencement of landscaping works.

### 3.5.4 Weed control

Being highly modified, the site is unlikely to contain significant weed seed loads at the completion of the bulk earthworks, other than those growing on existing batters. Inspection for and removal of any noxious weeds prior to any landscaping works should be undertaken. All weed control activities are to be completed by a suitably qualified contractor.

### 3.5.5 Installation of Irrigation System

Before revegetation activities commence an irrigation system, e.g. drippers or sprinklers, will be installed throughout Zones 2, 3, 4B, 4C and 5 (refer Figure 3) to assist in establishing vegetation. Once established the irrigation may be retained or removed. As far as practical, the system should be buried to prevent damage and is anticipated to be required for at least 3 years. Installation of an irrigation system helps ensure establishment targets are achieved.

## 3.6 Sowing/Planting Techniques

A combination of landscaping techniques should be employed in each of the zones to maximise the potential for good establishment of plants. Due to the different characteristics of each zone and the different type of vegetation to be established (as described in Section 3.2 and Appendix A), the landscaping techniques recommended for each zone are also different. The landscaping techniques to be used for each zone are summarised in Table 2 and described in more detail below.

**Table 2 Sowing/Planting Technique for Each Zone**

Technique	Zone 1	Zone 2	Zone 3	Zone 4	Zone 5
Hydromulch	NR	✓	✓	✓	✓
Tube stock	NR	Garden beds	✓	✓	✓
Native seed	NR	✓	✓	✓	✓
Lawn seed	NR	✓			

NR – not required

### 3.6.1 Hydromulch

Hydromulch is the means by which mulch in the form of plant fibre can be placed onto topsoil using water as a carrier. Pre-treated seed, including native seed can be added to the mulch; native seed must



be added with minimal agitation to minimise seed damage. Hydromulch encourages vegetation cover and provides protection against erosion. Initially, it is recommended that blends of the appropriate pre-treated native seed mix be added to the mulch and spread across the Zones. It is recommended that 2-3 kg/ha of seed be added to the mulch.

### **3.6.2 Tube Stock**

Native tube stock may also be used across the Zones by hand planting across smaller areas (up to 10 ha). Machinery is available but is not currently recommended for tube stock. The recommended planting density for trees and shrubs for each zone is 1 per 10 m<sup>2</sup> with 5 m interrow spacings to achieve a recommended density of 1 per 20 m<sup>2</sup> when trees and shrubs are established. It is recommended that groundcovers are planted in the interrow at 4 per m<sup>2</sup>.

Most plants will be planted as hiko or enviro cells. Each plant will have a surface mulch ring placed around its base and then protected using a tree guard, stabilised by stakes. This is to prevent herbivory and weed competition and to encourage optimum growing conditions.

In general, autumn is the best season for planting to reduce stress on young plants from high temperatures or frost. Planting in early spring can be effective provided a suitable watering regime is implemented; however, has higher risk of lower survival rates.

### **3.6.3 Seeders**

Non-native grass and native seed, particularly native grasses, may be mechanically sown on-site. Modified air seeders with trailing harrows have been successfully used across large areas to provide a light cover to native seed. Seeders may be used in the inter-row of tree and shrub tube stock. It is recommended that 3-5 kg/ha of seed be used.

### **3.6.4 Hand Broadcasting of Seed**

To supplement the establishment of vegetation, grass seed may be hand broadcast throughout the maintenance period of the landscaping program.

### **3.6.5 Fertiliser**

Fertiliser will only be applied to native vegetation areas if required due to low nutrient conditions. Fertiliser for the native vegetation will be a low or no phosphorus fertiliser suitable for native vegetation and applied at low rates to minimise weed competition.

Fertiliser will be applied to the non-native grass areas to improve establishment as recommended by the seed supplier.

## **3.7 Maintenance Program**

At the completion of the planting a 36-month maintenance program will commence. The maintenance program will optimise plant establishment and weed control. Activities will include watering, herbicide spraying, replacement planting and general maintenance. The aim of the maintenance program is to sustain:

- No bare patches > 4 m<sup>2</sup>.

### **3.7.1 General Maintenance**

Six-monthly general maintenance visits will be scheduled throughout the three - year maintenance period. These activities will include repairing and removing tree guards, monitoring survival and growth rates (see Section 3.8.3), installing replacement plants as required, weeding and continued follow-up spot spraying.



### **3.7.2 Watering**

All plants will be 'watered in' on installation, with each plant receiving a minimum five litres. All plantings will receive a further three applications of water during the first 6 weeks to assist establishment, depending on rain fall. Irrigation will be undertaken by drip or sprinkler irrigation or by hand watering, depending on the zone and resources available.

### **3.7.3 Weed Control**

To ensure the success of the revegetation activities it is essential to control weeds. Weeds compete with the newly installed plants for nutrients and water thereby limiting their survival and growth rates. In Zones 2, weed control will include the removal of any emergent tree species to minimise the potential for roots to penetrate the landfill capping.

Weed spraying will be instigated as required from General Maintenance. All spraying will be carried out by suitably trained contractors.

## **3.8 Monitoring and Reporting**

In order to accurately evaluate the success of the landscaping works, a monitoring and evaluation program will be put into place. The monitoring and reporting requirements are:

- An implementation report;
- Maintenance checklists;
- Vegetation assessment – Zones 3 and 4 only; and
- Landscape Report.

All reports should be prepared by suitably experienced and qualified consultants.

### **3.8.1 Implementation Report**

When the landscape works are completed, an Implementation Report will be prepared as an addendum to the As Constructed Report prepared for final capping. These final capping reports will be completed following the construction of each stage of final capping as detailed in Table B of the *Rehabilitation and Closure Plan*. This report will provide written certification that:

- The individual or company that supplied seed/tube stock is suitably accredited;
- The landscape works have been implemented substantially in accordance with the approved plans. Minor variations to the approved plans, such as small changes in plant species and quantities, are acceptable subject to Cleanaway approval;
- The landscape works have been implemented in accordance with best practice industry standards; and
- A landscape maintenance program has been established.

### **3.8.2 Maintenance Checklists**

As part of the General Maintenance program a checklist will be completed to record all measurements and observations.

### **3.8.3 Zone 3 and Zone 4 Vegetation Assessment**

In Zones 3 and 4 only, vegetation assessment for survival and establishment will be undertaken at 6 monthly intervals after planting for the first 3 years and then annually until vegetation is fully established, which is anticipated to be around 10 years following planting.

The vegetation assessment involves:

- Zone 3 & 4: Visual assessment for tree and shrub death



- Zone 3 only: Assessment of ground cover using aerial survey to identify bare ground > 4 m<sup>2</sup>

It is important for this assessment to be undertaken initially on a six-monthly basis to inform the maintenance program including, weed and pest management, replanting requirements and irrigation requirements.

### **3.8.4 Three Year Landscape Report**

After three years, a landscape report will be prepared which details:

- Summarizes the maintenance undertaken;
- Analyses the survival, establishment and ground cover of vegetation
- Determines if vegetation has matured or whether any additional actions are required.



## 4 Program of Works

Landfill capping and the corresponding landscaping works will be undertaken in stages as described in Table B of the *Rehabilitation and Closure Plan*.



## 5 Costings

Approximate costs to complete the landscape plan are provided in Table 3. These costs are indicative only (+/- 40% at present value) and are provided for budgeting purposes only and should not be utilised for any other purpose. If required, a detailed cost estimate will need to be requested prior to commencing construction works on site.

**Table 3 Estimated Costs for Revegetation Works**

Task	Area (ha)	Estimated Cost	Basis
Seed - grass	58	\$67,000	\$7/kg @ at 150kg/ha
Seed - native	27	\$99,000	Phytocap trial
Hydromulching	85	\$374,000	Phytocap trial
Tubestock	6.5	\$178,000	Quote from Cleanaway
Planting	6.5	\$64,000	Quote from Cleanaway
Tree guards	6.5	\$64,000	Schirmer and Field (2000)
Fertiliser	93	\$8,000	150 kg/ha of <4%P fertiliser @ \$500/t
Irrigation	93	\$120,000/yr	50kL/ha/week for 16 weeks at \$1.45/kL
Weed Control	93	\$15,000/yr	\$70/ha/application, twice/yr
Replacement	93	\$243,000	30% replacement
Project Management		\$24,000/yr	Cleanaway Engineering 10 hours/ month
Monitoring and Reporting		\$30,000/yr	Tonkin estimate
<b>Total (ex. GST)</b>		<b>\$1,364,000</b>	



## 6 References

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- WMAA (2011). *Guidelines for the Assessment, Design, Construction and Maintenance of Phytocaps as Final Covers for Landfills*, Waste Management Association of Australia





## Figures

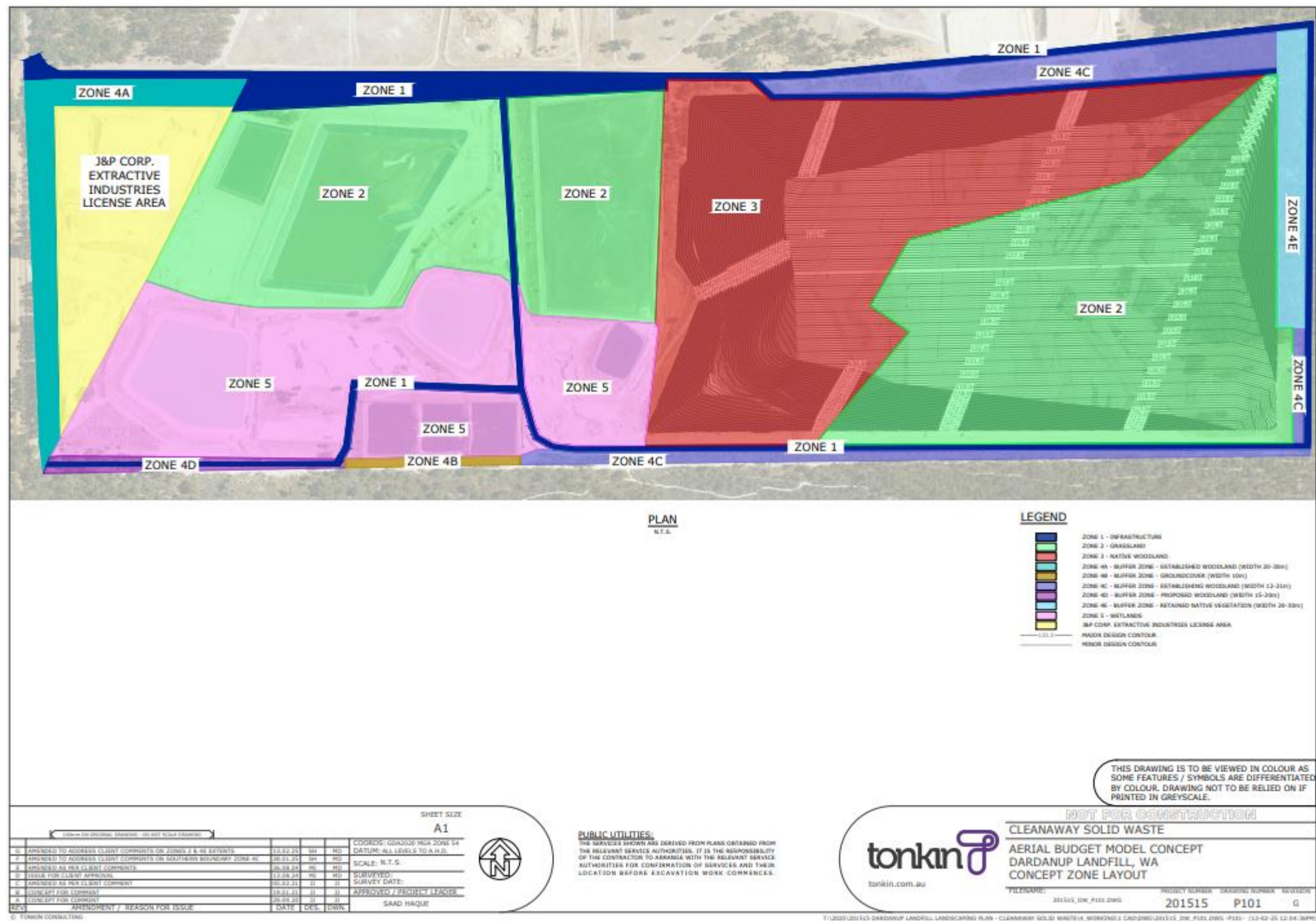


Figure 1 Landscaping Plan



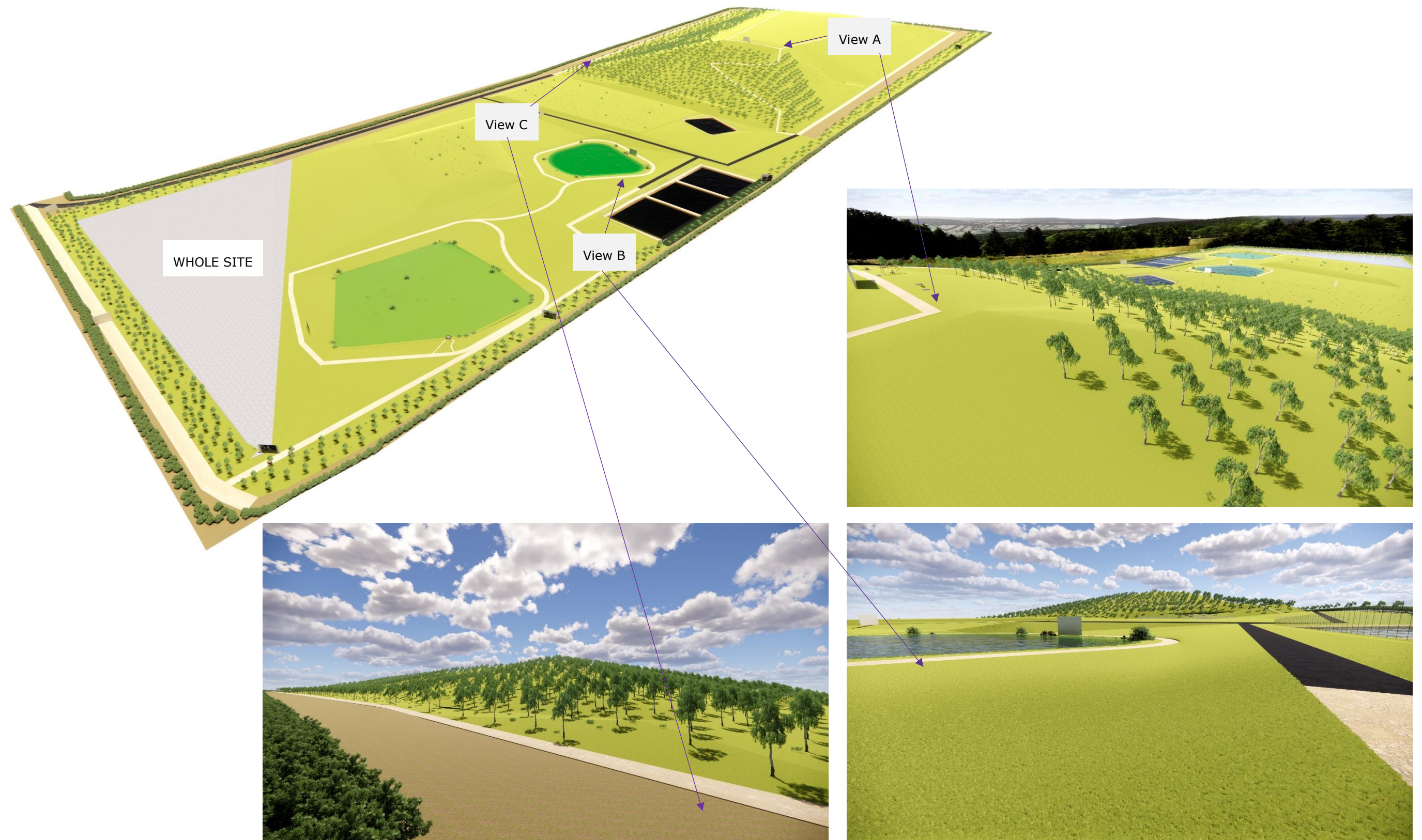


Figure 2 Isometric and Vantage Point Photos of Final Landscape



## **Appendix A – Standard Species List**





It is expected that a selection of plants from the list following will be planted in the various zones. The selection of plants will be based on ensuring a variety of plants of different forms and Families are selected, with availability of supply expected to be the main limitation. Where appropriate, alternate species may be substituted to ensure variety. A current list of rare and threatened species is included as Appendix B and, where practical, some species should also be selected from this list, or as current at the time of planting.

**Zone 2 Grassland** – localised gardens may be created from any of the species listed below, depending on soil depth.

**Zone 3 Native Woodland** –a variety of native shrubs and grasses from the list below will be planted

**Zone 4b Groundcovers** –native grasses and forbs from the right-hand columns in the list below will be planted

**Zone 4c Establishing** –additional planting of native trees and shrubs from the left-hand column of the list below will be planted

**Zone 4d Proposed** – a variety of native trees, shrubs and grasses from the list below will be planted.

**Zone 5 Wetland** - native grasses and forbs from the right-hand columns in the list below will be planted with a predominance of rushes and sedges.

Native Trees and Shrubs		Zone	Native grasses and forbs		Zone
Species	Common Name		Species	Common Name	
<i>Corymbia calophylla</i>	Marri – Red Gum	4c, 4d	<i>Rytidosperma spp</i>	Wallaby Grass	2,3,4,5
<i>Eucalyptus decipiens</i>	Redheart moit	4c, 4d	<i>Austrostipa compressa</i>	Compact needlegrass	2,3,4,5
<i>Eucalyptus drummondii</i>	Drummond’s gum	4c, 4d	<i>Austrostipa semibarbata</i>	Bearded spear-grass	2,3,4,5
<i>Corymbia haematoxylon</i>	Mountain Marri	4c, 4d	<i>Ficinia nodosa</i>	Club rush	2,3,4,5
<i>Eucalyptus marginata</i>	Jarrah	4c, 4d	<i>Hypolaena exsulca</i>	Hypolaena	2,3,4,5
<i>Eucalyptus megacarpa</i>	Bullich	4c, 4d, poss. 5	<i>Lomandra nutans</i>	-	2,3,4,5
<i>Eucalyptus patens</i>	Blackbutt	4c, 4d	<i>Lomandra sericea</i>	Silky mat rush	2,3,4,5
<i>Acacia flagelliformis</i>	Wattle	3, 4c, 4d, 5	<i>Lyginia barbata</i>	-	2,3,4,5
<i>Acacia lasiocarpa var lasiocarpa</i>	Wattle	3, 4c, 4d, 5	<i>Mesomelaena tetragona</i>	Semaphore sedge	2,3,4,5
<i>Acacia pulchella var glaberrima</i>	Prickly moses	4c, 4d	<i>Microalaena stipoides var stipoides</i>	Weeping grass	2,3,4,5



Native Trees and Shrubs		Zone	Native grasses and forbs		Zone
Species	Common Name		Species	Common Name	
<i>Acacia saligna</i>	Golden Wreath Wattle	4c, 4d	<i>Patersonia occidentalis</i>	Swamp flag	2,3,4,5
<i>Allocasuarina fraseriana</i>	Sheoak	4c, 4d	<i>Patersonia umbrosa</i>	Purple flag	2,3,4,5
<i>Banksia attenuata</i>	Candlestick banksia	4c, 4d	<i>Themeda triandra</i>	Kangaroo grass	2,3,4,5
<i>Banksia grandis</i>	Bull Banksia	4c, 4d			
<i>Banksia littoralis</i>	Swamp Banksia	4c, 4d, 5			
<i>Bossiaea eriocarpa</i>	Common brown pea	3,4c, 4d, 5			
<i>Daviesia physodes</i>	Prickly Bitter Pea	3, 4c, 4d			
<i>Hakea cyclocarpa</i>	Ramshorn	4c, 4d			
<i>Hakea ruscifolia</i>	Candle Hakea	3, 4c, 4d			
<i>Hakea undulata</i>	Way leaf Hakea	4c, 4d, poss. 3			
<i>Hibbertia hypericoides</i>	Yellow buttercups	3, 4c, 4d			
<i>Hibbertia subvaginata</i>	-	3, 4c, 4d, 5			
<i>Jacksonia horrida</i>	-	3, 4c, 4d, 5			
<i>Kunzea glabrescens</i>	Spearwood	4c, 4d			
<i>Kunzea micrantha</i>	-	3, 4c, 4d, 5			
<i>Leucopogon glabellus</i>	-	3, 4c, 4d, 5			
<i>Melaleuca preissiana</i>	Stout Paperback	4c, 4d			
<i>Melaleuca viminea</i>	Mohan	4c, 4d			
<i>Persoonia longifolia</i>	Long-leaf Persoonia	4c, 4d			
<i>Hemiphora bartlingii</i>	Woolly Dragon	3, 4c, 4d			



Native Trees and Shrubs		Zone	Native grasses and forbs		Zone
Species	Common Name		Species	Common Name	
<i>Podocarpus drouynianus</i>	Wild Plum	4c, 4d			
<i>Pultenaea reticulata</i>	Bush Pea	3, 4c, 4d, 5			

Picture Source: Florabase.dpaw.wa.gov.au

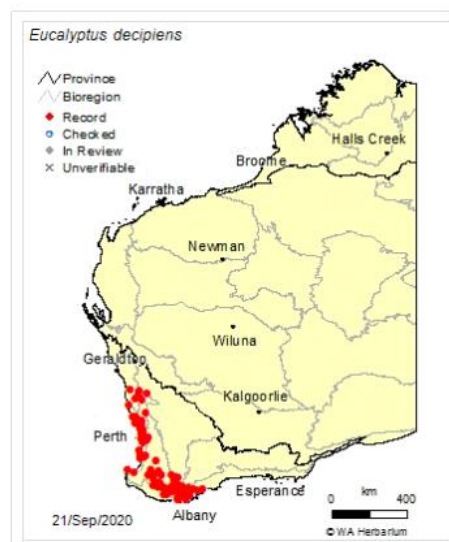
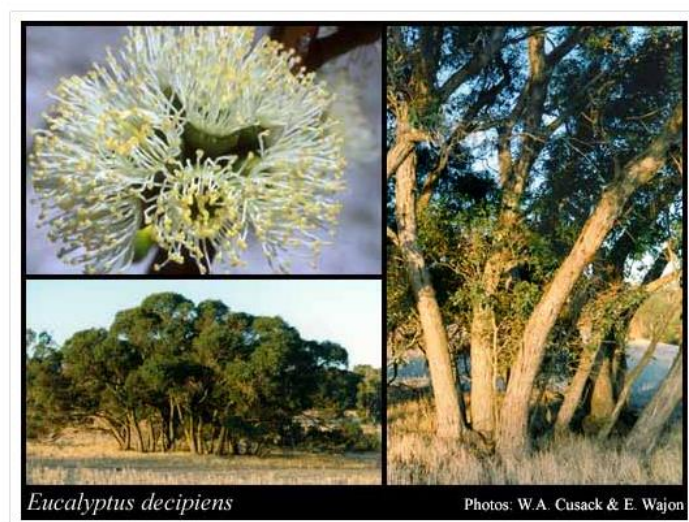
## *Eucalyptus decipiens* Endl. Redheart

Endl., Fenzl, Benth. & Schott, Enum.Pl. 49 (1837)

Conservation Code: **Not threatened**

Naturalised Status: Native to Western Australia

Name Status: **Current**





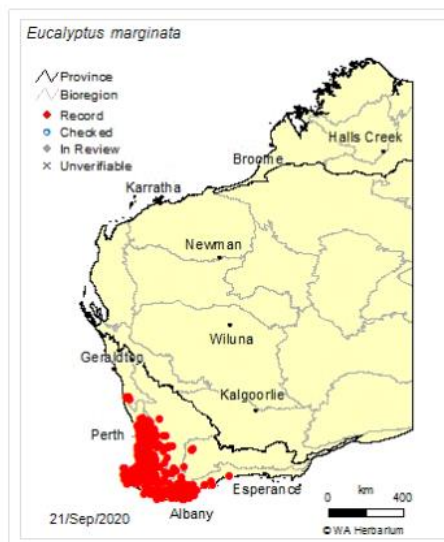
## *Eucalyptus marginata* Sm. Jarrah

Trans.Linn.Soc.London 6:302 (1802)

Conservation Code: **Not threatened**

Naturalised Status: Native to Western Australia

Name Status: **Current**

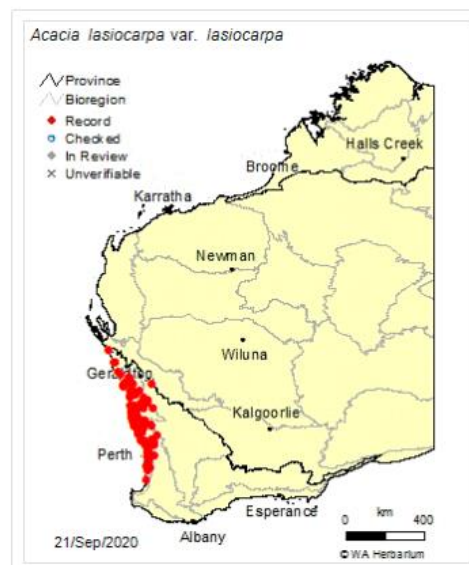


## *Acacia lasiocarpa* Benth. var. *lasiocarpa*

Conservation Code: **Not threatened**

Naturalised Status: Mixed (Native in Part of Range, Naturalised Elsewhere)

Name Status: **Current**







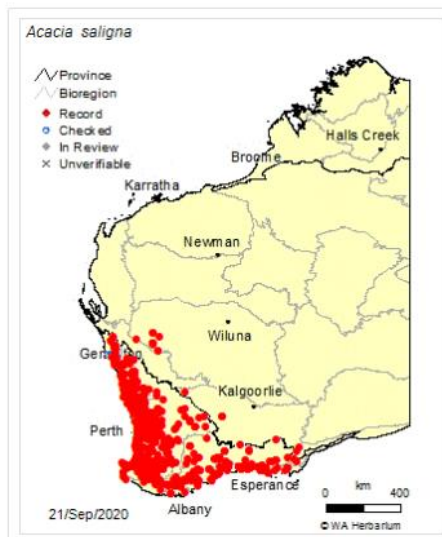
## *Acacia saligna* (Labill.) H.L.Wendl. Orange Wattle

Comm.Acac.Aphyll. 26-27 (1820)

Conservation Code: **Not threatened**

Naturalised Status: Native to Western Australia

Name Status: **Current**



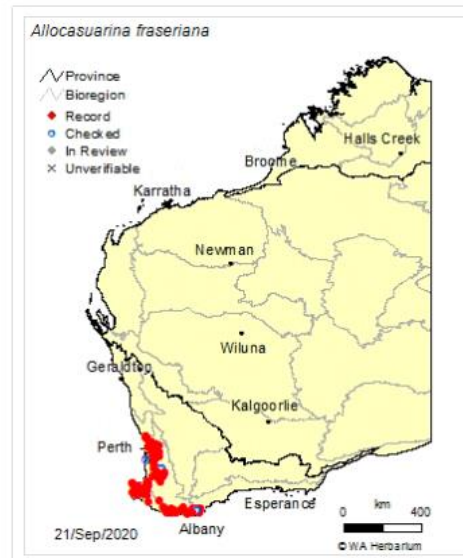
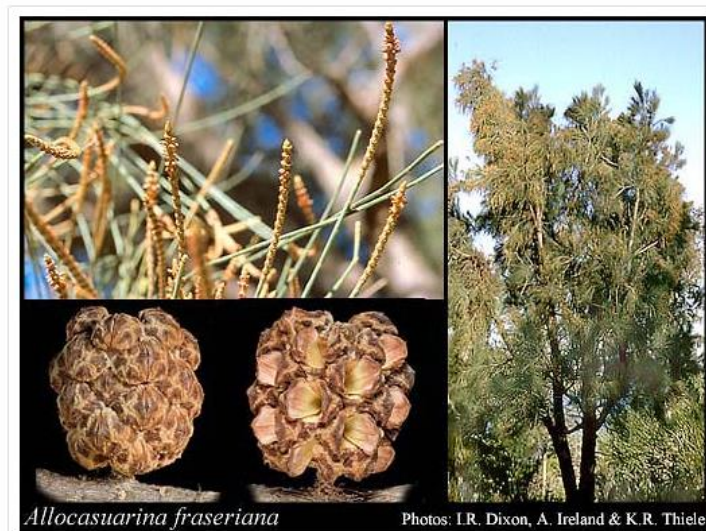
## *Allocasuarina fraseriana* (Miq.) L.A.S.Johnson Sheoak

J.Adelaide Bot.Gard. 6:75 (1982)

Conservation Code: **Not threatened**

Naturalised Status: Native to Western Australia

Name Status: **Current**





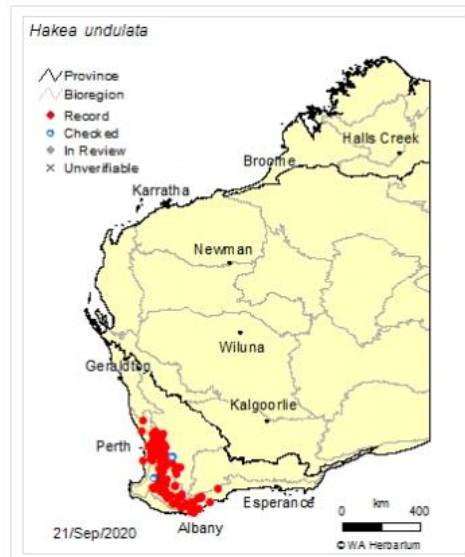
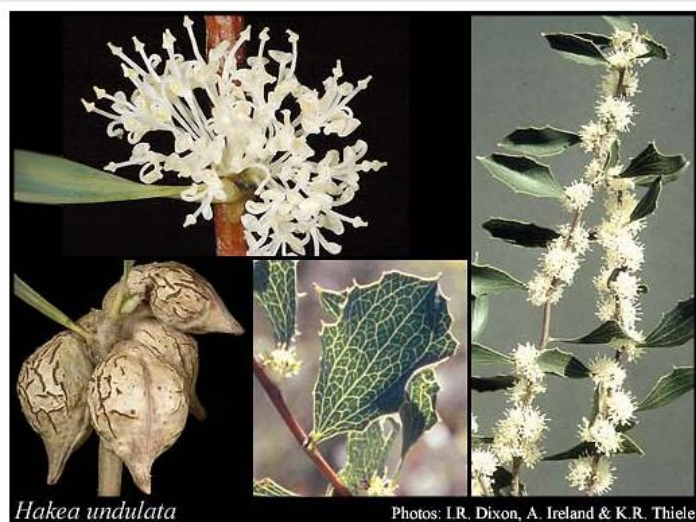
## *Hakea undulata* R.Br. Wavy-leaved Hakea

Trans.Linn.Soc.London 10:185 (1810)

Conservation Code: **Not threatened**

Naturalised Status: Native to Western Australia

Name Status: **Current**



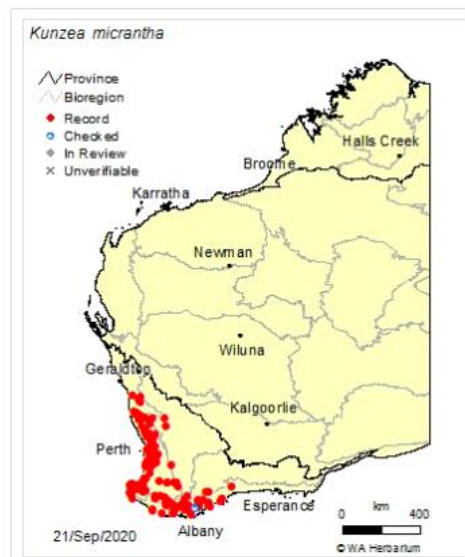
## *Kunzea micrantha* Schauer

Lehm., Pl.Preiss. 1:125 (1844)

Conservation Code: **Not threatened**

Naturalised Status: Native to Western Australia

Name Status: **Current**







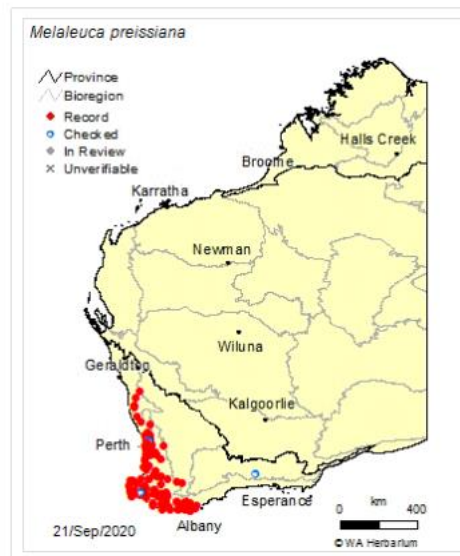
## *Melaleuca preissiana* Schauer Moonah

Lehm., Pl.Preiss. 1:143 (1844)

Conservation Code: **Not threatened**

Naturalised Status: Native to Western Australia

Name Status: **Current**



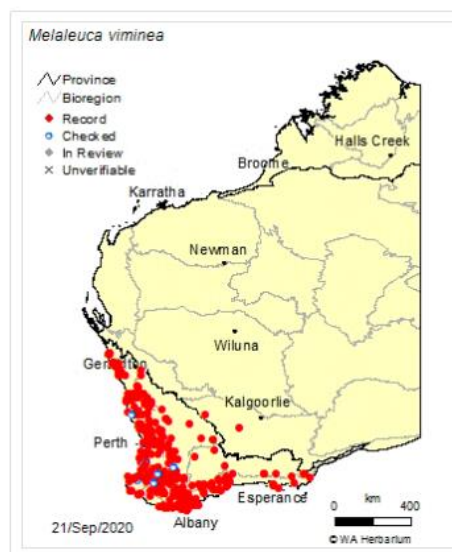
## *Melaleuca viminea* Lindl. Mohan

Sketch Veg.Swan R. 8 (1839)

Conservation Code: **Not threatened**

Naturalised Status: Native to Western Australia

Name Status: **Current**





## *Pultenaea reticulata* (Sm.) Benth.

Fl.Austral. 2:119-120 (1864)

Conservation Code: **Not threatened**

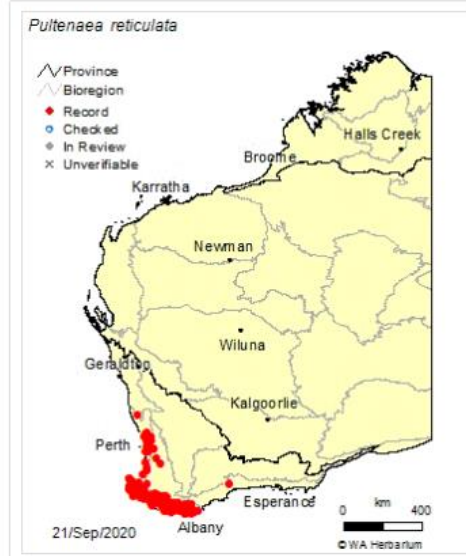
Naturalised Status: Native to Western Australia

Name Status: **Current**



*Pultenaea reticulata*

Photos: B.A. Fuhrer & M. Hislop



## *Patersonia occidentalis* R.Br. Purple Flag

Prodr. 304 (1810)

Conservation Code: **Not threatened**

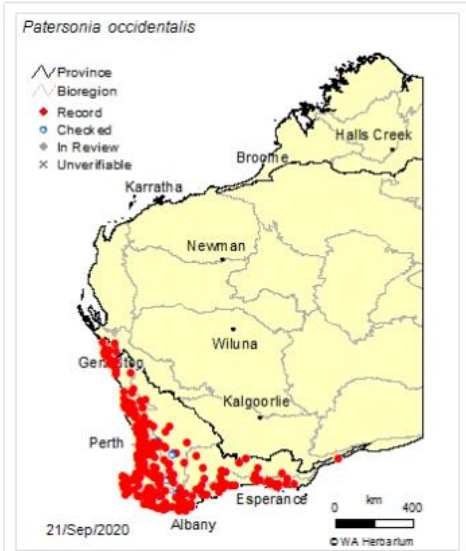
Naturalised Status: Native to Western Australia

Name Status: **Current**



*Patersonia occidentalis*

Photos: G. Byrne & K.C. Richardson







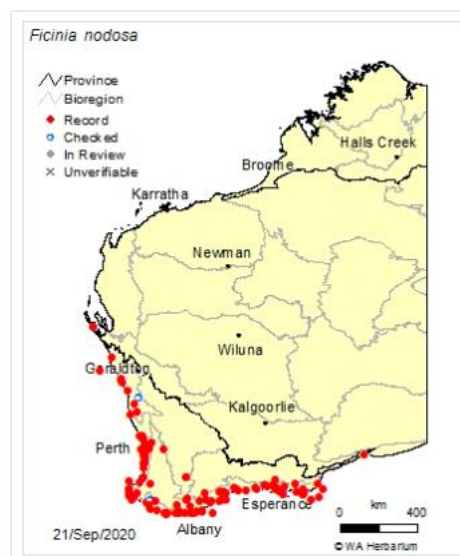
## *Ficinia nodosa* (Rottb.) Goetgh., Muasya & D.A.Simpson Knotted Club Rush

Novon 10:133 (2000)

Conservation Code: **Not threatened**

Naturalised Status: Native to Western Australia

Name Status: **Current**



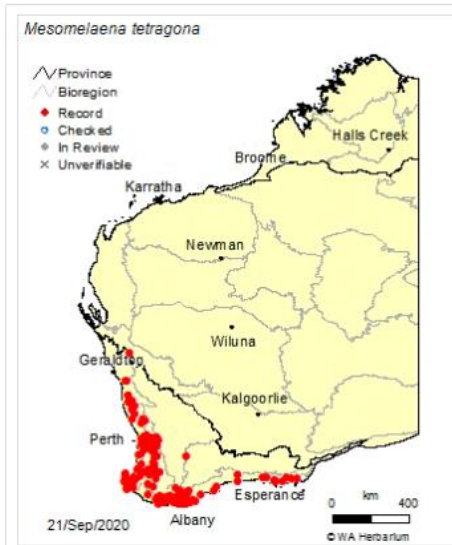
## *Mesomelaena tetragona* (R.Br.) Benth. Semaphore Sedge

Fl.Austral. 7:379-380 (1878)

Conservation Code: **Not threatened**

Naturalised Status: Native to Western Australia

Name Status: **Current**





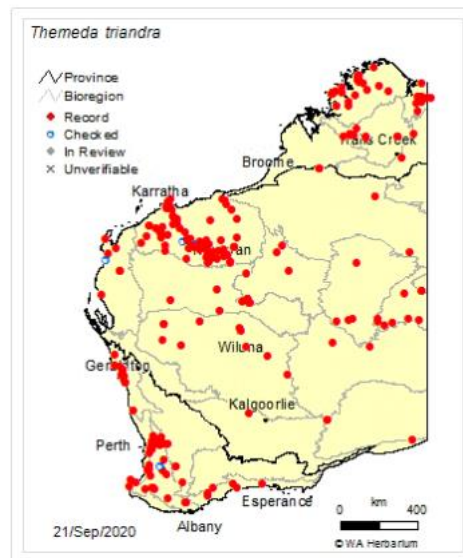
## *Themeda triandra* Forssk.

Fl.Aegypt.-Arab. 178 (1775)

Conservation Code: **Not threatened**

Naturalised Status: Native to Western Australia

Name Status: **Current**





## **Appendix B – South West Region Threatened And Priority Flora List (5 December 2018) for Whicher Scarp and Dardanup**

Source: <https://www.dpaw.wa.gov.au/plants-and-animals/threatened-species-and-communities/threatened-plants>



NameID	Taxon	Status	Rank	IUCN Criteria	EPBC	DPaW Region	DPaW District	Distribution	Flowering Period	Recovery Plan
19258	Actinotus whicheranus	2				SWST	BLACKWOOD	Whicher Range		
4586	Amperea micrantha	2				SWAN, SWST	BLACKWOOD, PERTH HILLS	Mokine, Yoongarillup, Busselton, Capel, Whicher Range, Ruabon NR	Sep-Oct	
6303	Andersonia barbata	2				SWST, WARR	BLACKWOOD, DONNELLY	Busselton, Whicher Range, Nannup, Windy Harbour	Aug-Nov	
18102	Andersonia ferricola	1				SWST	BLACKWOOD	Whicher Range, Hithergreen		
6315	Andersonia longifolia	2				SWST	BLACKWOOD	Whicher Range, Blackwood River N.P.	Aug, Oct	
32211	Banksia mimica	T	VU	D1	EN	MWST, SWAN, SWST, WHTB	BLACKWOOD, MOORA, PERTH HILLS, SWAN COASTAL, CENTRAL WHEATBELT	Whicher Range, Kalamunda, Mogumber, Gingin	Dec-Jan	
32204	Banksia nivea subsp. uliginosa	T	EN	A2c	EN	SWST	BLACKWOOD	Whicher Range, Scott River, Tutunup	Aug-Sep	IRP
32046	Banksia squarrosa subsp. argillacea	T	VU	B1ab(iii)+2ab(iii); C1	VU	SWST	BLACKWOOD	Ruabon, Tutunup, Whicher Range, Upper Capel	Jul-Aug	IRP
17804	Boronia tetragona	3				SWST	BLACKWOOD	Capel, Busselton, Whicher Range, Cowaramup	Oct-Dec	
35796	Calothamnus quadrifidus subsp. teretifolius	4				SWST	BLACKWOOD	Whicher Range		
759	Carex tereticaulis	3				SWAN, SWST, WARR	BLACKWOOD, DONNELLY, SWAN COASTAL, WELLINGTON	Dardanup, Bridgetown, Blackwood River, Guildford, (Harvey), Mungalip	Nov,Feb	
35657	Chamelaucium sp. Yoongarillup (G.J. Keighery 3635)	4				SWST	BLACKWOOD	Whicher Range, S of Busselton, Yoongarillup	Nov-Jan	
34765	Darwinia whicherensis	T	CR	A4ce; B1ab(iii)+2ab(iii); C2a(ii)	EN	SWST	BLACKWOOD, WELLINGTON	Williamson (below Whicher Range), Boyanup	Oct, Dec	IRP
19852	Dillwynia sp. Capel (P.A. Jurjevich 1771)	1				SWST, WARR	BLACKWOOD, DONNELLY	Whicher Range, Nannup, Donnybrook, Pemberton	Sept-Oct	
20852	Eucalyptus relictata	2				SWST	BLACKWOOD	Whicher Range, Sabina River, Busselton, Nannup	?Dec	
16915	Eucalyptus x mundijongensis	1				SWAN, SWST	SWAN COASTAL, WELLINGTON	Wilbinga, Matilda Bay, Dardanup		
20509	Gastrolobium papilio	T	CR	B1ab(iii)+2ab(iii); C1+2a(ii)	EN	SWST	BLACKWOOD	Williamson (below Whicher Range), Busselton, Abba Block	Sep-Oct	IRP





NameID	Taxon	Status	Rank	IUCN Criteria	EPBC	DPaW Region	DPaW District	Distribution	Flowering Period	Recovery Plan
30453	Gastrolobium sp. Yoongarillup (S.Dilkes s.n. 1/9/1969)	1				SWST	BLACKWOOD	Dardanup, Yoongarillup	Oct	
20474	Gastrolobium whicherense	2				SWST	BLACKWOOD	Whicher Range, Dardanup	Oct	
19414	Grevillea brachystylis subsp. grandis	T	CR	A4c; B1ab(iii)+B2ab(iii)	CR	SWST	BLACKWOOD	Busselton (Whicher Range), Jindong	Aug,Dec	IRP
12219	Grevillea bronwenae	3				SWST	BLACKWOOD	Whicher Range, Margaret River, Nannup	June-Nov	
14526	Grevillea elongata	T	EN	C2a	VU	SWST	BLACKWOOD	Ruabon, Abba SF, Whicher Range, Butler SF	Oct	IRP
18436	Grevillea manglesioides subsp. ferricola	3				SWST	BLACKWOOD	Scott River, Whicher Range	Jul-Dec	
2190	Hakea oldfieldii	3				MWST, SCST, SWST, WHTB	BLACKWOOD, ALBANY, GERALDTON, GREAT SOUTHERN	Katanning, Champion Bay, Busselton, Stirling Range, Whicher Range, Woogenilup, Treeton	Sep	
17734	Lambertia echinata subsp. occidentalis	T	CR	A3e; B1ab(iii,v)+2ab(iii,v); C1	EN	SWST	BLACKWOOD	Busselton, Whicher Range	Oct-Dec	IRP
16879	Lambertia rariflora subsp. rariflora	4				SWST	BLACKWOOD	Margaret River, Jarrahood, Whicher Range	Jan-Mar	
45084	Lasiopetalum laxiflorum	3				SWST, WARR	BLACKWOOD, DONNELLY	Cowaramup, Whicher Range, Acton Park, Chapman Hill, Manjimup	Oct,Nov	
29492	Leucopogon sp. Busselton (D. Cooper 243)	2				SWST	BLACKWOOD	Capel, Ruabon N.R., Dardanup	Aug-Sep	
33298	Lomandra whicherensis	3				SWST	BLACKWOOD	Whicher Range, Dardanup	Dec	
37320	Loxocarya striata subsp. implexa	1				SWST	BLACKWOOD	Whicher Range		
46256	Orianthera wendyae	1				SWST	BLACKWOOD	Capel, Dardanup	Oct	
8163	Pithocarpa corymbulosa	3				SWAN, SWST	BLACKWOOD, PERTH HILLS	John Forrest NP, Lesmurdie NP, Helena Valley, Dardanup, Busselton	Apr	
4179	Pultenaea pinifolia	3				SWST, WARR	BLACKWOOD, DONNELLY	Busselton, Karridale, D'Entrecasteaux N.P., Lake Charley, Whicher Range, Margaret River, Mt Manypeaks	Oct	
4183	Pultenaea skinneri	4				SWST	BLACKWOOD, WELLINGTON	Collie, Binningup, Boyanup, Whicher Range, Jalbarragup, Nannup, Bunbury	Jul-Jan	



NameID	Taxon	Status	Rank	IUCN Criteria	EPBC	DPaW Region	DPaW District	Distribution	Flowering Period	Recovery Plan
31872	Stylidium ferricola	1				SWST	BLACKWOOD	Whicher Range	Oct-Nov	
25805	Stylidium hygrophilum	1				SWST	BLACKWOOD	Whicher Range		
25800	Stylidium paludicola	3				SWAN, SWST	BLACKWOOD, SWAN COASTAL, WELLINGTON	Bullsbrook, Ruabon, Mandogalup, Lake Clifton, Cookernup, Capel, Dardanup		
33381	Stylidium perplexum	1				SWST	WELLINGTON	Dardanup	Dec	
16769	Synaphea hians	3				SWST, WARR, WHTB	BLACKWOOD, DONNELLY, WELLINGTON, GREAT SOUTHERN	Busselton, Collie, Ludlow, Capel, Crooked Brook, Unicum, Elgin, Beaufort River	Sep-Oct	
31767	Synaphea polypodioides	3				SWST	BLACKWOOD, WELLINGTON	Dardanup, Boyanup, Donnybrook	Sep-Oct	
18590	Synaphea sp. Fairbridge Farm (D. Papenfus 696)	T	CR	B1ab(iii)	CR	SWAN, SWST	SWAN COASTAL, WELLINGTON	Pinjarra, Dardanup, Serpentine, Kooljerrenup N.R., Dardanup	Oct	IRP

KEY TO CODES USED IN LIST

STATUS	Conservation status of taxon - refer to definitions.
T	Threatened Flora (Declared Rare Flora - Extant)
X	Presumed Extinct (Declared Rare Flora - Extinct)
1	Priority One - Poorly known Species
2	Priority Two - Poorly known Species
3	Priority Three - Poorly known Species
4	Priority Four - Rare, Near Threatened and other species in need of monitoring
RANK	The threat category the taxon is recognised as in Western Australia (see definitions)
CR	Critically Endangered
EN	Endangered
VU	Vulnerable
EX	Extinct

CRITERIA      The criteria that the taxon meets to be listed under the category of threat. Categories and criteria follow IUCN guidelines.  
<https://www.iucnredlist.org/resources/categories-and-criteria>

EPBC      The category that the taxon is listed under the Commonwealth's Environmental Protection and Biodiversity Conservation Act 1999. Note this list is maintained by the Commonwealth and the official list should be sourced at the Commonwealth's website



CR	Critically Endangered
E	Endangered
V	Vulnerable
X	Extinct
DBCA REGION	
GOLD	Goldfields
KIMB	Kimberley
MWST	Midwest
PILB	Pilbara
SCST	South Coast
SWST	South West
SWAN	Swan
WARR	Warren
WHTB	Wheatbelt
DISTRIBUTION Listed according to the nearest town/place name. Includes historical records. NP=National Park, NR=Nature Reserve, Stn=Station, Mt=Mount, Is=Island, Rg=Range	
RECOVERY PLAN	Whether the taxon has a Recovery Plan (RP), Interim Recovery Plan (IRP) or Multiple Species Plan (MSP).
CHANGE CODE Type of change that has occurred:	
ADDITION	Added to list – new entry to State (WCA or Priority) or Commonwealth list (EPBC). If already on one state list and needs to be changed to another see either upgrade or downgrade.
UPGRADED	Species that is on the Priority list has been upgraded to Threatened or Presumed Extinct under the Wildlife Conservation Act.
CAT_CHG	The category under which a species is listed (e.g. EPBC Act VU to EN or Priority 1 to P3) has been changed.
DOWNGRAD	A Species has been downgraded from Threatened or Presumed Extinct under the Wildlife Conservation Act to the Priority list.
NAME_CHG	Species has undergone a name change.
OTHER	Records a change to other details not related to Conservation status (e.g. Location and Recovery Plan details).
DELISTED	Species removed from the particular list it was on. Note that a taxon may be delisted from the "Priority" list and added to the "WCA" list or vice versa. Delistings should be reviewed in the context of other additions, upgrades or downgrades.
RELISTED	Species has been added to the list which it was once previously listed on.
LIST CODE	Priority Priority Flora List
WCA_1991	Wildlife Conservation Act 1950 DRF Schedule [1991 amendments]



## CONSERVATION CODES FOR WESTERN AUSTRALIAN FLORA

**T: Threatened Flora** - Specially protected under the Wildlife Conservation Act 1950, listed under Schedules 1, 2 and 3 of the Wildlife Conservation (Rare Flora) Notice (which may also be referred to as Declared Rare Flora).

Taxa which have been adequately searched for and are deemed to be, in the wild, either rare, at risk of extinction, or otherwise in need of special protection, and have been gazetted as such.

The assessment of the conservation status of these species is based on their national extent.

Ranking:

CR · Schedule 1 - taxa that are extant and considered likely to become extinct or rare, as critically endangered flora, and therefore in need of special protection.

EN · Schedule 2 - taxa that are extant and considered likely to become extinct or rare, as endangered flora, and therefore in need of special protection.

VU · Schedule 3 - taxa that are extant and considered likely to become extinct or rare, as vulnerable flora, and therefore in need of special protection.

**EX: Presumed extinct Flora** - Specially protected under the Wildlife Conservation Act 1950, listed under Schedule 4 of the Wildlife Conservation (Rare Flora) Notice (which may also be referred to as Declared Rare Flora). Taxa which have been adequately searched for and there is no reasonable doubt that the last individual has died, and have been gazetted as such. Threatened flora are ranked according to their level of threat using IUCN Red List categories and criteria. For example *Acacia splendens* is specially protected as Declared Rare Flora under the Wildlife Conservation Act 1950 and is a threatened species with a ranking of Critically Endangered.

EX · Schedule 4 - taxa that are presumed to be extinct in the wild and therefore in need of special protection.

A list of the current rankings can be downloaded from the Department of Biodiversity, Conservation and Attractions Threatened Species and Communities webpage at <http://dpaw.wa.gov.au/plants-and-animals/threatened-species-and-communities/>.

Taxa that may be threatened or near threatened, but are data deficient or have not yet been adequately surveyed to be listed under the Wildlife Conservation (Rare Flora) Notice, are added to the Priority Flora List under Priorities 1, 2 or 3. These three categories are ranked in order of priority for survey and evaluation of conservation status, so that consideration can be given to their declaration as threatened flora. Taxa that are adequately known and are rare but not threatened, or meet criteria for near threatened, or that have been recently removed from the threatened list for other than taxonomic reasons, are placed in Priority 4. These taxa require regular monitoring.

Assessment of Priority codes is based on the Western Australian distribution of the species, unless the distribution in WA is part of a contiguous population extending into adjacent States, as defined by the known spread of locations.

### 1: Priority One: Poorly-known species

Species that are known from one or a few locations (generally five or less) which are potentially at risk. All occurrences are either: very small; or on lands not managed for conservation, e.g. agricultural or pastoral lands, urban areas, road and rail reserves, gravel reserves and active mineral leases; or otherwise under threat of habitat destruction or degradation. Species may be included if they are comparatively well known from one or more locations, but do not meet adequacy of survey requirements and appear to be under immediate threat from known threatening processes. Such species are in urgent need of further survey.

### 2: Priority Two: Poorly-known species

Species that are known from one or a few locations (generally five or less), some of which are on lands managed primarily for nature conservation, e.g. national parks, conservation parks, nature reserves and other lands with secure tenure being managed for conservation. Species may be included if they are comparatively well known from one or more locations, but do not meet adequacy of survey requirements and appear to be under threat from known threatening processes. Such species are in urgent need of further survey.

### 3: Priority Three: Poorly-known species

Species that are known from several locations, and the species do not appear to be under imminent threat, or from few but widespread locations with either large population size or significant remaining areas of apparently suitable habitat, much of it not under imminent threat. Species may be included if they are comparatively well known from several locations, but do not meet adequacy of survey requirements and known threatening processes exist that could affect them. Such species are in need of further survey.

### 4: Priority Four: Rare, Near Threatened and other species in need of monitoring

(a) Rare. Species that are considered to have been adequately surveyed, or for which sufficient knowledge is available, and that are considered not currently threatened or in need of special protection, but could be if present circumstances change. These species are usually represented on conservation lands.

(b) Near Threatened. Species that are considered to have been adequately surveyed and that do not qualify for Conservation Dependent, but that are close to qualifying for Vulnerable.

(c) Species that have been removed from the list of threatened species during the past five years for reasons other than taxonomy.

The conservation codes for Western Australian flora and fauna can be downloaded from the Department's website at:



<https://www.dpaw.wa.gov.au/plants-and-animals/threatened-species-and-communities>

\*Species includes all taxa (plural of taxon - a classificatory group of any taxonomic rank, e.g. a family, genus, species or any infraspecific category i.e. subspecies, variety or forma).

#### Reference

Smith M.G. & Jones A. (2018) Threatened and Priority Flora List, 5 December 2018. Department of Biodiversity, Conservation and Attractions: Kensington, WA.

## Phillips, Moshe

---

**From:** Phillips, Moshe  
**Sent:** Thursday, 19 September 2024 9:45 AM  
**To:** Phillips, Moshe  
**Subject:** RE: Cleanaway - DAP/21/02063 Condition 4

**Moshe Phillips** | Senior Associate  
**Thomson Geer**

T +61 8 9404 9111  
Level 29, Central Park Tower, 152-158 St Georges Terrace, Perth WA 6000 Australia  
[mphillips@tglaw.com.au](mailto:mphillips@tglaw.com.au) | [tglaw.com.au](http://tglaw.com.au)

**Advice | Transactions | Disputes**

**From:** Ashwin Nair <[Ashwin.Nair@dardanup.wa.gov.au](mailto:Ashwin.Nair@dardanup.wa.gov.au)>  
**Sent:** Wednesday, September 18, 2024 12:37 PM  
**To:** Andrew Doyle <[Andrew.Doyle@cleanaway.com.au](mailto:Andrew.Doyle@cleanaway.com.au)>  
**Cc:** Patrick Hughes <[Patrick.Hughes@dardanup.wa.gov.au](mailto:Patrick.Hughes@dardanup.wa.gov.au)>; Jan Strijdom <[Jan.Strijdom@dardanup.wa.gov.au](mailto:Jan.Strijdom@dardanup.wa.gov.au)>; Ashwin Nair <[Ashwin.Nair@dardanup.wa.gov.au](mailto:Ashwin.Nair@dardanup.wa.gov.au)>  
**Subject:** RE: Cleanaway - DAP/21/02063 Condition 4

**External Email: This email is originated from outside of Cleanaway. Please be cautious with links and attachments.**

Mr Doyle,

Thank you for the email and my apologies for the delay in response.

In these instances, I am always careful when considering an amendment to a condition of approval through updating a plan where a condition expressly states as follows:

### Condition 2

*'All development must be carried out in accordance with the approved plans listed below, unless amended with the written consent of the Shire. In the event of an inconsistency between the approved plan(s) and a requirement of the conditions of this development approval, the requirements of the conditions prevail'.*

To this end, as there is a condition of approval (condition 4) which expressly refers to 'Internal circulation of all vehicles must not encroach on the 20m landscaped boundary interface of the property', I don't consider that I can sign off the amended Landscape Plan you submitted. In my opinion, purely from a desktop observation of the submitted landscape plan dated Aug 2024, there appears to be an improvement from the 2022 iteration, however, I respectfully recommend that an application for planning approval be submitted to amend the condition of approval if the requirement cannot be achieved. This way we can also properly assess the merits of the proposal.



In terms of amending the existing approval, I can advise that a prospective application will have to demonstrate the merits of departing from the approved Local Development Plan (LDP). The LDP for the site went through a rigorous process prior to being adopted. The 20m landscaping areas within the LDP formed a key consideration when considering visual amenity impacts from the development on adjoining sites. The result of this application may likely also have implications on the landscaping plan requirements for the site

Once again, my apologies for the delay in response.

Please feel free to contact me on the undersigned for further information.

Regards,

**Ashwin Nair**

Director Sustainable Development



**A:** 1 Council Drive | PO Box 7016 | Eaton WA 6232

**T:** 08 9724 0349 | **E:** [Ashwin.Nair@dardanup.wa.gov.au](mailto:Ashwin.Nair@dardanup.wa.gov.au)

**W:** [www.dardanup.wa.gov.au](http://www.dardanup.wa.gov.au)



## Attachment 3

Section	What's within 20m	Landscaping	Buffering
<u>1 North</u> Zone 1 Zone 4A	Zone 1 is 20m wide. It comprises the constructed sealed access to Lot 2 from Banksia Road, continuing along the boundary past the weighbridge, office, titanium dioxide storage cells and to the landfill.	Zone 4A is inside the road and exceeds 20m width.	The Zone 4A landscaping includes trees are established at a height that provides along this section an ample buffer against views further into Lot 2.
<u>2 North</u> Zone 1 Zone 2 West	As above. In addition, the gas flare infrastructure was relocated to within zone 1 in this section under the Approval.	Zone 2 is inside the road and will exceed 20m width.	The Zone 2 landscaping is limited to smaller shallow root plants due to the capping and liner to be used in the closure of the titanium dioxide storage cell making up this area.  Taller plants will be used where possible and in addition to the elevated landscaping of the capped cell's embankment, an ample vegetation buffer along this section will be provided.
<u>3 North</u> Zone 1 Zone 2 Central	As above	As above.	As above.
<u>4 North</u> Zone 1 Zone 3	Zone 1 is 20m wide. It comprises the constructed sealed northern haul road continuing from the access to, and along the boundary of, Lot 2.  Cell 12A footprint was approved at 24m from the boundary.	Zone 3 is inside the road and will exceed 20m width.	This Zone 3 landscaping will be planted to native shrubs and grasses over the batter slope facing this section.  It will provide a visual screen of the landfill's development internal to the site, with the landscaping having been planned to blend into the surrounding Dardanup Conservation Park vegetation.
<u>4 North</u> Zone 1 Zone 4C	Zone 1 is 20m wide. It comprises the constructed sealed and unsealed haul road continuing along the remainder of the northern boundary of Lot 2.	Zone 4C is inside the road and will exceed 20m width.	This Zone 4C landscaping retains the existing remnant native vegetation and also provides for additional planting to provide an ample vegetation buffer along this section.



### Attachment 3

<u>5 East</u> Zone 1 Zone 4E	Zone 1 is 4-10m wide, comprising the vehicle access track.	Zone 4E is inside the access track and exceeds 20m width.	This Zone 4E provides an ample buffer along this section.
<u>6 South</u> Zone 4C	Zone 4C is 12-21m wide.	<p>Zone 4C is the maximum width obtainable within area available between the boundary and the southern haul road providing access along the perimeter of Lot 2.</p> <p>The small portions of the buffer narrower than 20 metres are where existing infrastructure is sited, including for stormwater management.</p>	<p>This Zone 4C landscaping has established native trees consistent with the '<i>Southern Boundary Native Vegetation Buffer Plan</i>' approved as part of the development approval for the stormwater infrastructure by a decision of the Council on 24 February 2024.</p> <p>This landscaping provides an ample vegetation buffer along this section.</p>
<u>7 South</u> Zone 4B Zone 5	Zone 4B is 10m wide.	<p>Zone 4B comprises smaller shallow root plants due to the batter slope of leachate ponds.</p> <p>Inside Zone 4B is Zone 5, which comprises native shrubs, as part of the wetland landscaping.</p>	The height of the vegetated battered embankment will provide an ample vegetation buffer along this section.
<u>8 South</u> Zone 1 Zone 4D	Zone 1 is 4m wide comprising a vehicle access track.	<p>Zone 4D is inside the access track and is 15-20m wide comprises native vegetation to be consistent the adjacent Dardanup Conservation Park.</p> <p>Inside Zone 4D is Zone 5.</p>	This Zone 4D landscaping provides an ample buffer along this section.
<u>9 West</u> Zone 4A	Zone 4A exceeds 20m. There is no access track within this area.	Zone 4A comprises native tall trees, consistent with the adjacent Dardanup Conservation Park.	The Zone 4A landscaping includes trees are established at a height that provides an ample buffer along this section.

## Department of Water and Environmental Regulation

- (e) records and documents for the waste acceptance register system required under Condition 60 of this licence: and
  - (f) complaints received under Condition 61 of this licence.
- 64.** The books specified under Condition 63 must:
- (a) be legible;
  - (b) if amended, be amended in such a way that the original version(s) and any subsequent amendments remain legible and are capable of retrieval;
  - (c) be retained by the licence holder for the duration of the licence or any subsequent licence; and
  - (d) be available to be produced to an inspector or the CEO as required.
- 65.** The licence holder must submit to the CEO by no later than 90 days after the end of each annual period, an Annual Environmental Report for that annual period for the conditions listed in Table 22, and which provides information in accordance with the corresponding requirement set out in Table 22.

**Table 22: Annual Environmental Report**

Condition	Requirement
Condition 5 & Condition 7	Summary of the Active Landfill Area, Special Waste Disposal Area and TDS Cells that includes: <ul style="list-style-type: none"> <li>(a) Areas that have been subject to waste deposition for the Annual Period;</li> <li>(b) Remaining void capacity for waste deposition in each cell at the end of the Annual Period; and</li> <li>(c) Summary of any alterations to cell rehabilitation sequencing &amp; timing</li> </ul>
Condition 12	Summary of leachate containment and collection infrastructure performance including: <ul style="list-style-type: none"> <li>(a) Inputs;</li> <li>(b) Outputs;</li> <li>(c) Calculations; and</li> <li>(d) explanation of any changes that may indicate an issue with the leachate collection or management system or a failure of the landfill or leachate pond liner.</li> </ul>
Condition 14	Summary of landfill gas collection and management system that includes: <ul style="list-style-type: none"> <li>(a) Infrastructure installed during the Annual Period;</li> <li>(b) A map of the spatial coverage of the landfill gas collection and management system;</li> <li>(c) A summary of landfill gas infrastructure operational performance including an annual review of flare rate against landfill gas generation rate;</li> <li>(d) A review of gas generation rates to determine if sustained generation rates warrant gas utilisation; and</li> <li>(e) A description of changes to operational performance that may indicate an issue with the landfill gas management system and actions taken to investigation and mitigate issues.</li> </ul>
Condition 47	Volume of wastes accepted/rejected for each waste type during the annual period in a table format.
Condition 48	Process monitoring: data in a table format for the annual period.
Condition 49 Condition 50 Condition 51	Leachate Monitoring: data in a table format for the annual period. A summary of action taken within the Annual Period to address leachate head levels which exceeded the leachate head management levels

## Department of Water and Environmental Regulation

Condition 52	
Condition 53 Condition 54	Landfill gas monitoring: a summary of the landfill gas monitoring results. A summary of notifications provided to the CEO following landfill gas trigger level exceedances, causes of trigger level exceedances and actions taken to mitigate a reoccurrence of the exceedances.
Condition 55 & Condition 56	A summary of all dust monitoring undertaken as part of this licence that includes: (a) data in a table format for the annual period; and (b) data in table format for trend analysis to include at least the last five years data where available.
Condition 57 Condition 66	Groundwater Monitoring Report
Condition 60	Plan of disposal locations for Special Waste Type 1 and Special Waste Type 2 and for the Annual Period
Condition 61	Complaints summary for the annual period

- 66.** The licence holder must submit with the Annual Environmental Report required by Condition 65, a groundwater monitoring report demonstrating their compliance with Conditions 57 for the preceding annual period, and must include:
- (a) a clear statement of the scope of work carried out;
  - (b) a description of the field methodologies employed;
  - (c) a summary of the field and laboratory quality assurance / quality control (QA/QC) program;
  - (d) copies of the field monitoring records and field QA/QC documentation;
  - (e) an assessment of reliability of field procedures and laboratory results;
  - (f) a tabulated summary of results, as well as all raw data provided in an accompanying Microsoft Excel spreadsheet digital document/file (or a compatible equivalent digital document/file), with all results being clearly referenced to laboratory certificates of analysis;
  - (g) a diagram with aerial image overlay showing all monitoring locations and depicting groundwater level contours, flow direction and hydraulic gradient (relevant site features including discharge points and other potential sources of contamination must also be shown);
  - (h) an interpretive summary and assessment of the results against relevant assessment levels for water, as published in the Guideline Assessment and management of contaminated sites;
  - (i) an interpretive summary and assessment of results against previous monitoring results;
  - (j) an interpretive summary and assessment of the results against relevant assessment levels for water, as published in the Guideline Assessment and management of contaminated sites; and
  - (k) trend graphs to provide a graphical representation of historical results for at least the last 10 years where available and comparison against relevant assessment levels for water to support the interpretive summary.

Note 1: General guidance on report presentation can be found in the Department's Guideline: Assessment and management of contaminated sites.

12.2 Title: Amended Development Approval – Stormwater Infrastructure Works – Lot 2 Banksia Road, Crooked Brook

Reporting Department: Sustainable Development Directorate  
 Reporting Officer: Mr Murray Connell - Manager Development Services  
 Legislation: Local Government Act 1995

**DECLARATION OF INTEREST**

Cr. J Dow declared an Impartiality Interest in this item as she signed a petition in support of closing the waste site previously.

**DECLARATION OF INTEREST**

Cr. M T Bennett declared an Indirect Financial Interest in this item as the person who rents a property he owns, is employed by Cleanaway.

Note: Cr. M T Bennett remained outside the room.

Overview

The purpose of this report is for Council to consider amending the development approval for the stormwater infrastructure works on Lot 2 Banksia Road, Crooked Brook.

Shire officers do not have delegation for determining applications for Development Approval within the 'Waste Disposal/Processing' area as identified in the Local Planning Strategy, and therefore this application is presented to Council for determination.

Background

In April 2016 the Shire granted Development Approval for the construction of a comprehensive stormwater management system at the Cleanaway waste management facility on Lot 2 Banksia Road, Crooked Brook. As part of the approval and subsequent construction works, Cleanaway developed a stormwater drain on the southern boundary of the site to prevent stormwater from the site entering the adjacent Dardanup Conservation Park.

In recent times, portions of the southern drain have failed, resulting in some surface water flowing from the site into the adjacent Conservation Park. In May 2020 it was determined that the actual property boundary was not on the fence line, but approximately 1.5m and 2.5m to the south of the existing fence line. This discovery provided more flexibility for drain infrastructure to be developed on the Cleanaway property than previously allowed. Subsequently, (December 2020), it was determined that due to a surveying error, the site boundary was on the existing property fence line. In May 2020 discussions between Cleanaway and the Department of Biodiversity, Conservation and Attractions (DBCA) resulted in agreement for a communal stormwater drain that is proposed to span across the common boundary with the site and adjacent conservation park that manages surface water from both properties. Cleanaway have subsequently developed an improved drain design solution to better control stormwater on the southern boundary of the site.

Please refer to (Appendix ORD: 12.2A – Part 1 - Page 63) for details of the application.

### Legal Implications

Part 9 cl. 77 of the Deemed Provisions of the *Planning and Development (Local Planning Schemes Regulations) 2015* allows for amending development approval as follows:

77. *Amending or cancelling development approval*

- (1) *An owner of land in respect of which development approval has been granted by the local government may make an application to the local government requesting the local government to do any or all of the following:*
  - (c) *to amend an aspect of the development approval which, if amended would not substantially change the development approved;*

Should Council refuse the application the applicant has the right of review by the State Administrative Tribunal in accordance with Part 14 of the *Planning and Development Act 2005*.

### Strategic Community Plan

Strategy 2.3.1 - Delivery of a high level of Development & Regulatory Services that considers the environmental, social and land use planning requirements which meets the diverse community needs. (Service Priority: Flagship)

### Environment

The Department of Biodiversity Conservation and Attractions (DBCA) has agreed in-principle to the application and has advised that:

*There has been considerable consultation and on-site investigation involving DBCA, Cleanaway and Project Engineer Ian Watson, resulting in a modification of an earlier design of the drain and firebreak, to eliminate the need to clear any trees greater than 2m tall in the Conservation Park or on the boundary of the Cleanaway southern boundary, with a possible exception of a few borderline trees (not more than five but hopefully none) with every effort to be made to avoid the need for any tree removal and the final decisions to be made onsite by DBCA when the design has been pegged on the ground.*

As part of the original Development Approval, there was a requirement to establish a native vegetation buffer along the southern boundary of the site and the Shire approved a 'Southern Boundary Native Vegetation Buffer Plan' in August 2016. Some portions of the vegetation buffer were established; however, the western portion was not completed.

As part of this application it is proposed to update the vegetation buffer plan to detail additional works required to fulfil native vegetation buffer requirements. Please refer to (Appendix ORD: 12.2B – Part 1 - Page 84) for details of the updated 'Southern Boundary Native Vegetation Buffer Plan'.

The Department of Water and Environment (DWER) have advised that the replacement of stormwater infrastructure proposed in the application requires approval under Part V of the *Environmental Protection Act 1986* and they have advised the proponent of this requirement. DWER's view is that the works should help to minimise stormwater impacts on the southern boundary.

Precedents

Council has previously consider a number of development applications relating to the waste management facility and other related operations in the area.

Budget Implications - None.

Budget – Whole of Life Cost - None.

Council Policy Compliance - None.

Risk Assessment

The Risk Management Governance Framework has been considered in arriving at the officer recommendation. Please refer to (Appendix ORD: 12.2C – Part 1 - Page 96) for the full assessment document.

Tier 2 – ‘Low’ or ‘Moderate’ Inherent Risk.	
Risk Event	Amended Development Approval – Stormwater Infrastructure Works – Lot 2 Banksia Road, Crooked Brook
Inherent Risk Rating (prior to treatment or control)	Low (1 - 4)
Risk Action Plan (treatment or controls proposed)	As the Inherent Risk Rating is below 12, this is not applicable.
Residual Risk Rating (after treatment or controls)	As the Inherent Risk Rating is below 12, this is not applicable.
Risk Category Assessed Against	Financial Should Council refuse the application, and the proponent seek a review of that decision, there is likely to be a financial impact through the State Administrative Tribunal process.
	Legal and Compliance Conditions of the development approval are not complied with.
	Environment Inadequate management of the development could pose a risk to the environment.

Officer Comment

In order to develop a comprehensive stormwater solution on the southern boundary, Cleanaway have engaged with the Department of Biodiversity, Conservation and Attractions (DBCA). Ultimately, it was agreed between the parties to develop a combined drain that traversed the property boundary while maintaining a fire track access along the northern boundary of the Dardanup Conservation Park. The new drain has the capacity to receive the surface water runoff from both the Cleanaway site and also the portions of the Dardanup Conservation Park that fall towards the Cleanaway site. In addition, as part of the application it is proposed to extend the current 2m high chain mesh fencing the entire length of the southern boundary.

The drain design incorporates a ‘V’ shaped rock lined drain that varies in width from 2.5m to 3m. Additionally a 3.1m wide gravel fire track will be constructed and acts as an overflow component to the adjacent rock-lined drain. The total width of the alignment of the drain and fire track varies from 5.5m to 10m which allows for the preservation of the vast majority of vegetation and trees within the

Dardanup Conservation Park. It is envisaged that only one larger tree will need to be removed from Lot 2 and only 5 larger trees removed from the conservation park lot.

During most rainfall events, the surface water flow will be contained within the rock lined portion of the drain however, in peak storm events, the overflow will flow down the fire track. The vast majority of the drain flow will occur within the rock lined portion of the drain. This is where the greatest flow velocity will occur and hence the potential for the greatest erosion. As the overflow down the fire track will be relatively shallow, surface friction will slow down the flow velocity and hence greatly reduce any erosion risk.

- *Greater Bunbury Region Scheme (GBRS)*

The subject land is zoned 'Rural' and the Department of Planning Lands and Heritage (DPLH) has advised that the upgrade of the failed stormwater drainage and the native vegetation buffer will not be inconsistent with the purpose of the 'Rural' zone.

Part of the works will also be located on the adjacent Lot 192 (Reserve 46403) which is reserved as 'Regional Open Space'. DPLH has advised that the proposed stormwater drainage is regarded as ancillary and incidental works (infrastructure) on the 'Regional Open Space' reserve and the works are not in conflict with the reserve purpose.

It is recommended that Council approve the amended application as the new drain design incorporates efficient use of available space without negatively impacting on the adjacent Dardanup Conservation Park and is considered a far more desirable method of controlling stormwater along the southern boundary. The new design incorporates a constructed compacted gravel fire track that will be can also be used to access the drain for maintenance purposes.

The Planning and Development (Local Planning Schemes) Regulations 2015 states that the local government is to be taken to have refused to grant the development approval if it has not made a determination within 90 days of receipt of the application (in this instance being 10 February 2021). However the applicant has agreed to an extension until the February 2021 Council meeting and therefore deferring the matter is not recommended. Additionally the applicant is seeking to establish the stormwater and vegetation works so that they are functional for the winter rain period.

Council Role - Quasi-Judicial.

Voting Requirements - Simple Majority.

#### OFFICER RECOMMENDED RESOLUTION

THAT Council:

Approves the amendment to the Development Approval for Stormwater Infrastructure Works on Lot 2 Banksia Road, Crooked Brook subject to the following conditions:

1. All development must be carried out in accordance with the approved plans and drawings listed below which form part of this approval, including any amendments to those plans and drawings as shown in red, unless with the written consent of the Shire:
  - a) Site Plan (Drawing No. Bank – SK310, Rev D);

- b) Concept Layout – Plan 1 of 2 (Drawing No. Bank – SK311, Rev D);
- c) Concept Layout – Plan 2 of 2 (Drawing No. Bank – SK312, Rev D);
- d) Cross Sections – Sheet 1 of 4 (Drawing No. Bank – SK313, Rev D);
- e) Cross Sections – Sheet 2 of 4 (Drawing No. Bank – SK314, Rev D);
- f) Cross Sections – Sheet 3 of 4 (Drawing No. Bank – SK315, Rev D);
- g) Cross Sections – Sheet 4 of 4 (Drawing No. Bank – SK316, Rev D);
- h) Typical Cross Sections (Drawing No. Bank – SK317, Rev D); and
- i) Miscellaneous Details (Drawing No. Bank – SK318, Rev D).

except that, in the event of an inconsistency between the approved plans and a requirement of the conditions set out below, the requirement of the conditions prevail.

2. The 'Southern Boundary Native Vegetation Buffer Plan (version 3, 1 February 2021)' must be fully implemented within nine (9) months unless otherwise agreed to in writing by the Shire of Dardanup, and must be maintained thereafter to the satisfaction of the Shire of Dardanup. Any species which fail to establish within the first two planting seasons following implementation must be replaced in consultation with the Department of Biodiversity, Conservation and Attractions and to the satisfaction of the Shire of Dardanup.
3. The southern boundary is to be fenced with 2m high chain mesh fencing.

*Note: Cr. T G Gardiner advised that he would like to move the Officer Recommended Resolution with additions to Part 3 of the resolution (additions highlighted in red below). Cr. Patricia Perks seconded the motion.*

3. The southern and eastern boundaryies are to be fenced with 2m high chain mesh fencing with wildlife egress points.

#### Change to Officer Recommendation

As per Local Government (Administration) Regulations 1996 11(da) Council records the following reasons for amending the Officer Recommended Resolution:

- To amend part 3 of the Officer Recommended Resolution to ensure that the eastern boundary of the property is fenced and that there are wildlife egress points.



## ELECTED MEMBER ALTERNATIVE RESOLUTION & COUNCIL RESOLUTION

22-21                      MOVED -                      Cr. T G Gardiner                      SECONDED -                      Cr. P R Perks

**THAT Council approves the amendment to the Development Approval for Stormwater Infrastructure Works on Lot 2 Banksia Road, Crooked Brook subject to the following conditions:**

1. All development must be carried out in accordance with the approved plans and drawings listed below which form part of this approval, including any amendments to those plans and drawings as shown in red, unless with the written consent of the Shire:
  - a) Site Plan (Drawing No. Bank – SK310, Rev D);
  - b) Concept Layout – Plan 1 of 2 (Drawing No. Bank – SK311, Rev D);
  - c) Concept Layout – Plan 2 of 2 (Drawing No. Bank – SK312, Rev D);
  - d) Cross Sections – Sheet 1 of 4 (Drawing No. Bank – SK313, Rev D);
  - e) Cross Sections – Sheet 2 of 4 (Drawing No. Bank – SK314, Rev D);
  - f) Cross Sections – Sheet 3 of 4 (Drawing No. Bank – SK315, Rev D);
  - g) Cross Sections – Sheet 4 of 4 (Drawing No. Bank – SK316, Rev D);
  - h) Typical Cross Sections (Drawing No. Bank – SK317, Rev D); and
  - i) Miscellaneous Details (Drawing No. Bank – SK318, Rev D).

except that, in the event of an inconsistency between the approved plans and a requirement of the conditions set out below, the requirement of the conditions prevail.
2. The 'Southern Boundary Native Vegetation Buffer Plan (version 3, 1 February 2021)' must be fully implemented within nine (9) months unless otherwise agreed to in writing by the Shire of Dardanup, and must be maintained thereafter to the satisfaction of the Shire of Dardanup. Any species which fail to establish within the first two planting seasons following implementation must be replaced in consultation with the Department of Biodiversity, Conservation and Attractions and to the satisfaction of the Shire of Dardanup.
3. The southern and eastern boundaries are to be fenced with 2m high chain mesh fencing with wildlife egress points.

CARRIED  
7/0

*Note: Cr. M T Bennett returned to the room and assumed the Chair [6.00pm].*

*Note: Cr. J Dow returned to the room [6.01pm]. Cr. P S Robinson advised Cr. M T Bennett and Cr. J Dow of the Council Resolutions for Items 12.1 and 12.2.*



6 Anembo Close

DUNCRAIG

WA 6023

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Mobile 0402 909 291

29 January 2021

Cleanaway Solid Waste Pty Ltd  
PO Box 5037  
BUNBURY DC  
WA 6230

Attention: Sally Carlton

**Subject: Banksia Road Landfill Facility - Southern Boundary Stormwater Drain - Concept Design Update for changes from September 2020 to January 2021**

Dear Sally,

Design changes that have occurred from the original IW Projects Southern Stormwater Drain '11 September 2020 Design Concept' to the 'Current Design 28 January 2021'.

Two events have impacted the design:

1) BCE Surveyors confirmed the Southern Boundary Location:

The 11 December 2020 BCE Survey confirmed the location of the Cleanaway/Dardanup Conservation Park boundary, as being more closely aligned to the existing property fence line and not, as previously thought, 1.5 m to 2.0 m south of the fence line. This necessitated moving the drain as far to the north as reasonably practicable to minimise the encroachment into the adjacent Dardanup Conservation Park.

2) Meeting with Cleanaway and Department of Biodiversity, Conservation and Agriculture (DBCA) at which it was agreed to adjusting the drain and fire track alignment to preserve the native vegetation and to better suit the local topography; hence, providing a preferred drain design solution more in line with community expectation (vegetation preservation).

This revised January letter describes the current January 2021 Southern Boundary Stormwater Drain (southern drain) September 2020 design and its history.

**Current Issue**

In mid-2019 the Banksia Road Landfill Facility (BRLF) southern drain was observed to be failing at a number of locations along its length. The failures were primarily due to erosion of the drain formation, resulting in surface water flowing into the adjacent state forest. Golder was commissioned to develop a number of design options to repair/reinstate a functioning southern drain.

The Golder developed designs, while hydraulically sound, had a number of construction and maintenance issues. IW Projects was subsequently commissioned to review if there were alternative construction configurations that rendered cost and maintenance improvements, while maintaining functionality.

### **Description of the Erosion Failure**

Following a review of the drain and the surrounding terrain, it is apparent that the drain failed in a number of locations when the original geotextile drain liner had either been damaged by movement in the drain formation or had degraded under UV exposure. This resulted in some of the flow within the drain escaping through the drain liner and ultimately eroding the side wall and base of the drain such that the stormwater flowed out of the drain and onto the adjacent state forest fire break. In some locations, the level of the adjacent fire break was significantly lower than the level of the drain formation; hence, when the drain lining failed, the extent of erosion was extreme, resulting in large portions of the drain being washed away.

All identified failures occurred in a 1,000 m eastern portion of the drain, well to the east of the first leachate pond. This is the portion of the drain that was originally constructed using a geotextile lining. To the west of the failed portion of the drain, the natural ground levels are such that the drain within the Cleanaway property is lower than the adjacent state forest fire track and hence, there has been no surface water flow from the Cleanaway property into the state forest; however, there has been surface water flow from the state forest into the Cleanaway property.

Image of failed geotextile drain liner – Upper Section of the Drain Approximate Chainage 900 m





Image of drain above adjacent state forest fire track - Lower Section of the Drain  
Approximate Chainage 300 m



Image of drain above adjacent state forest fire track





Image of failed drain flowing into adjacent fire track



Image of failed drain flowing into adjacent fire track - Upper Section of the Drain  
Approximate Chainage 900 m





Image of failed drain flowing into adjacent fire track



Image of failed drain flowing into adjacent fire track





Image of drain lower than fire track in vicinity of leachate ponds – Opposite Leachate pond 2



### Background

Banksia Road Landfill Facility stormwater management improvement activities have been actively pursued by Cleanaway, including the following major events:

- On 12<sup>th</sup> April 2015 Golder completed a Technical Memorandum *BRLF Conceptual Storm Water Management Assessment - 1521734-001-M-Rev0* (Golder, 2015a) which reviewed the site surface water drainage and provided recommended design concept for an improved stormwater management system and hydraulic design criteria for that system after performing hydraulic modelling on the site under various rainfall conditions.
- In October 2015 Golder completed a *Storm Water Management System Design Study - 1521734-002-R-Rev 0* (Golder, 2015b) which further detailed and designed the infrastructure upgrade requirements to achieve the BRLF Storm Water Management Concept.
- In April 2016 a Development Approval (P10/16) was granted by the Shire of Dardanup to install the Golder Designed Storm Water Works as detailed in the Golder designed *Storm Water Management System Design Study - 1521734-002-R-Rev 0* (Golder, 2015b).
- A Construction Compliance Report for Stormwater Infrastructure (CCR) for the installed BRLF stormwater system written by Paul Antony of Cleanaway (Antony, 2017) and submitted and acknowledged as received by Department of the Environment (DER) on the 26<sup>th</sup> June 2017. The report stated that the construction was carried out from May 2016 to February 2017. The CCR stated that the DER approved the commencement of the \$1.4 Million stormwater system improvements on the 5<sup>th</sup> May 2016.

- In March 2019 IW Projects undertook an investigation into the southern drain failure and submitted a letter report addressing possible remedial solutions – *Dardanup Landfill – Southern Stormwater Drain Remediation – IW Projects 1 April 2019* (IW Projects, 2019).
- On 1 July 2019 Golder completed a *Technical Memorandum Dardanup Landfill Storm Water Management Plan Updates - 19124751-001-M-Rev0* (Golder, 2019a), which updated the Dardanup Landfill Storm Water Management Plan for the changes to the installed stormwater infrastructure which included those of 2016 and 2017 and changes in the site landform with subsequent landfill activities.
- On 15 September 2019 Golder completed a *Memorandum Dardanup Landfill Pre-Development Runoff Assessment - 19124752-004-M-Rev1* (Golder, 2019b) to confirm the quantity of surface water runoff anticipated from the internal and external catchments around the site.
- On 4 October 2019 Golder completed a *Memorandum Dardanup Landfill Pre-Development South Drain Erosion Control Options - 19124752-005-M-Rev0* (Golder, 2019c) providing two concept designs for the southern drain which was observed to be failing due to erosion.
- In May 2020 it was determined that the actual property boundary was not on the fence line, but approximately between 1.5 m and 2.5 m to the south of the existing fence line. This discovery provided more flexibility for drain infrastructure to be developed on the Cleanaway property than previously allowed. Subsequently (December 2020), it was determined that due to a surveying error, the site boundary was on the existing property fence line.
- In May 2020 discussions between Cleanaway and the Department of Biodiversity, Conservation and Attractions (DBCA) resulted in agreement for a communal stormwater drain that spanned across the property boundary and that managed surface water from both properties.
- In June 2020, IW Projects presented a stormwater drain design that achieved the outcomes discussed between Cleanaway and the DBCA (IW Projects 2020).
- On 15 September 2020 Golder completed a *Memorandum Dardanup Landfill Stormwater Management Plan Updates - 19124752-001-M-Rev2* (Golder, 2020) providing an updated site stormwater management plan incorporating all recent information on anticipated surface water runoff and the proposed IW Projects drain design. The final report was issued *Memorandum Dardanup Landfill Stormwater Management Plan Updates - 19124752-001-M-Rev3* (Golder, 2021) improving details and diagrams.
- In January 2021, as a result of the site southern boundary position being confirmed as being on the existing fence line, the original IW Projects drain design was amended to move the whole drain and associated fire track 0.5 m to the north, to minimise the encroachment into the adjacent Dardanup Conservation Park.
- On 28 January 2021 IW Projects redesigned the drain to incorporate a meandering design to minimise the removal of native vegetation. This redesign is being assessed by Golder.



### Comparison of IW Projects Original Design and the Updated Designs

There have been only minor amendments to the IW Projects drainage design to facilitate the realignment of the drain 0.5 m north of the original position. These changes include:

- Steepening of the northern internal drain rock lined slope to facilitate the horizontal realignment of the drain and to tie into the existing earthworks slope. The maximum internal drain slope being 1V in 2H;
- A constant drain depth of 800 mm to account for the marginal decrease in drain capacity as a result of steepening up the northern internal slope of the drain and to simplify construction. The original design depth varied from 625 mm deep at the top end of the drain down to 800 mm at the lower end of the drain; and,
- Over some relatively short lengths of the drain there is a need to cut into the existing northern earthworks batter to facilitate the realignment of the drain. These cut batters will be formed at 1V in 1H and will be riprap rock lined, effectively an extension of the drain construction to protect these steeper slopes from erosion.

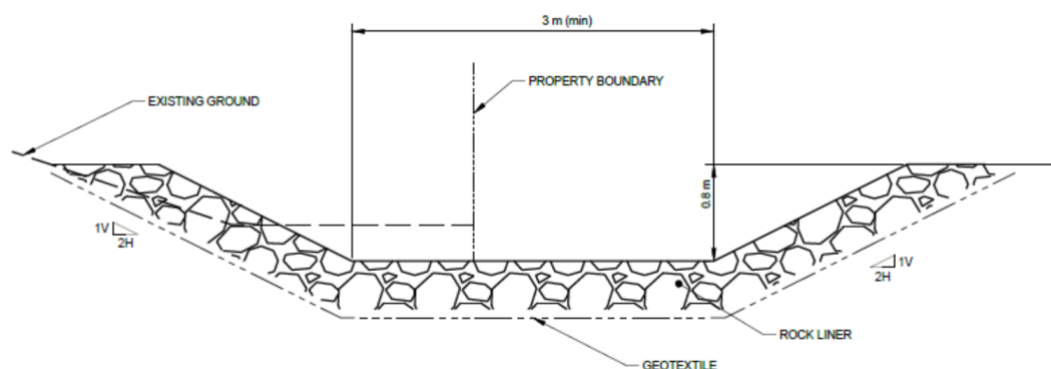
In summary, the realignment of the drain and fire track by 0.5 m north has minimal construction or hydraulic impact. The greatest impact being that there will be less trees required to be cleared on the southern side of the fire track.

### Comparison of Golder and IW Projects Updated Designs

The Golder designs incorporated two concept options, one for the management of water from the Cleanaway property only and the second for the managing of the combined flow from both the Cleanaway property and the adjacent state forest. As part of this design, Golder calculated that, based on a 1% Annual Exceedance Probability (AEP) event, there would be 0.5 m<sup>3</sup>/s discharge from the Cleanaway property and 1.6 m<sup>3</sup>/s discharge from the state forest; hence, a combined discharge of 2.1 m<sup>3</sup>/s down the southern drain.

Based on the above calculated combined discharge, Golder proposed an option of a rock-lined drain with a cross-section area of 4.08 m<sup>2</sup>. This incorporated a minimum 3 m wide drain invert that would assumably be used as a fire track. At the maximum discharge rate of 2.1 m<sup>3</sup>/s, the drain velocity would be 0.51 m/s. This maximum flow rate under peak discharge is seen as relatively slow; hence, the drain has been sized primarily to accommodate the fire track in the drain invert and not as a function of hydraulic flow characteristics.

Figure No. 1 – Golder Drain Design

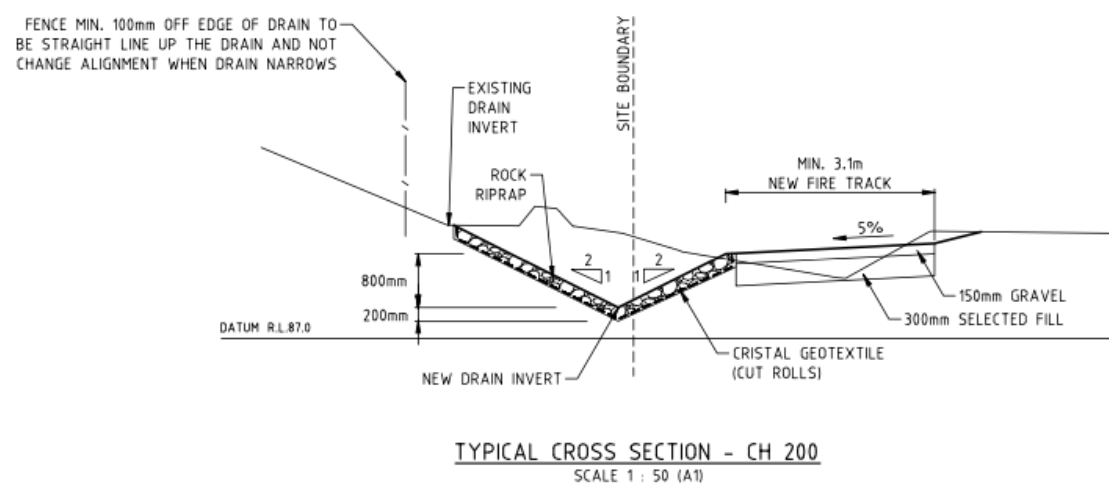


Typically, slow flowing drains drop sediment, and the drain capacity is gradually reduced unless the drain invert is regularly cleaned out. Ideal drain flow rates range between 0.5 m/s and 2.0 m/s, to ensure minimal sedimentation at the lower flow rate and also minimal erosion damage at the higher flow rate. Depending on the drain lining system, flow rates of up to 4.0 m/s can be accommodated. However, for a non-grouted, rock-lined drain, 2.0 m/s would be considered a reasonable upper limit.

The IW Projects updated design retains the V shaped rock lined drain and an adjacent fire track; whereby the fire track acts as an overflow component to the adjacent rock-lined drain. During most rainfall events, the surface water flow is contained within the rock-lined portion of the drain; however, in peak storm events, the drain capacity will be increased as the flow depth increases. The overflow from the lined drain will flow down the fire track.

The majority of the drain flow will occur within the deeper, lined portion of the drain. This is where the greatest flow velocity will occur and hence the potential for the greatest erosion. With the flow down the fire track being relatively shallow, surface friction will slow down the flow and hence reduce erosion.

**Figure No. 2 – IW Projects Updated Meandering Drain Design – Various Sections**



**Figure No. 3 – IW Projects Updated Meandering Drain Design – Various Sections**

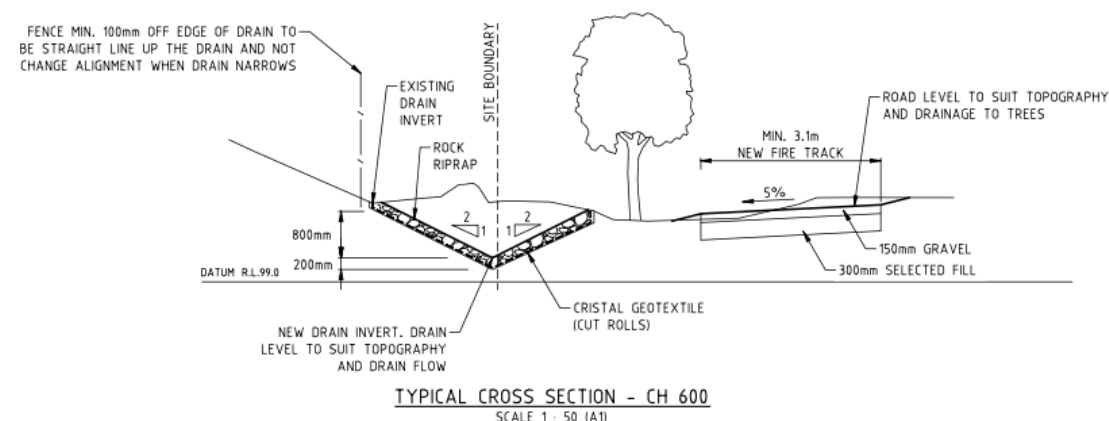


Figure No. 4 – IW Projects Updated Meandering Drain Design – Various Sections

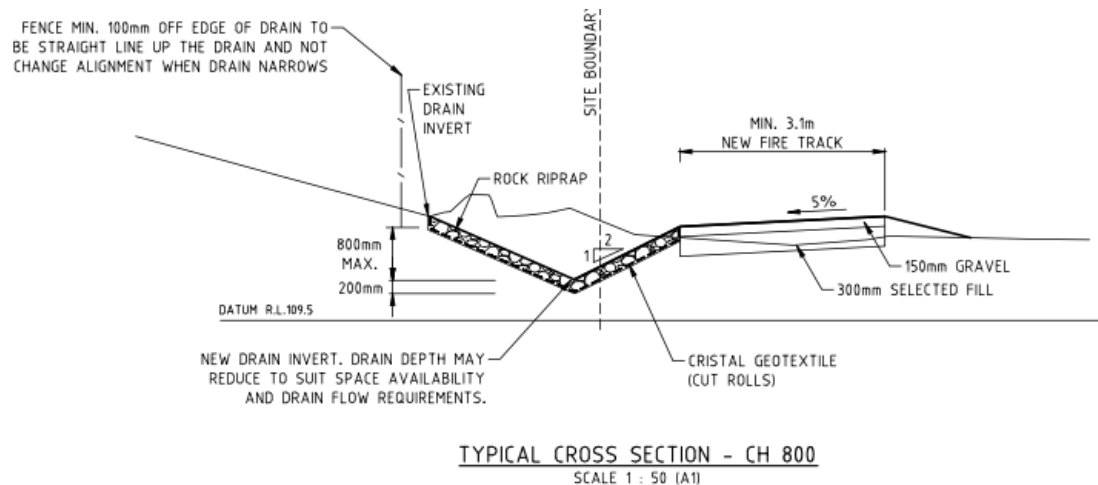
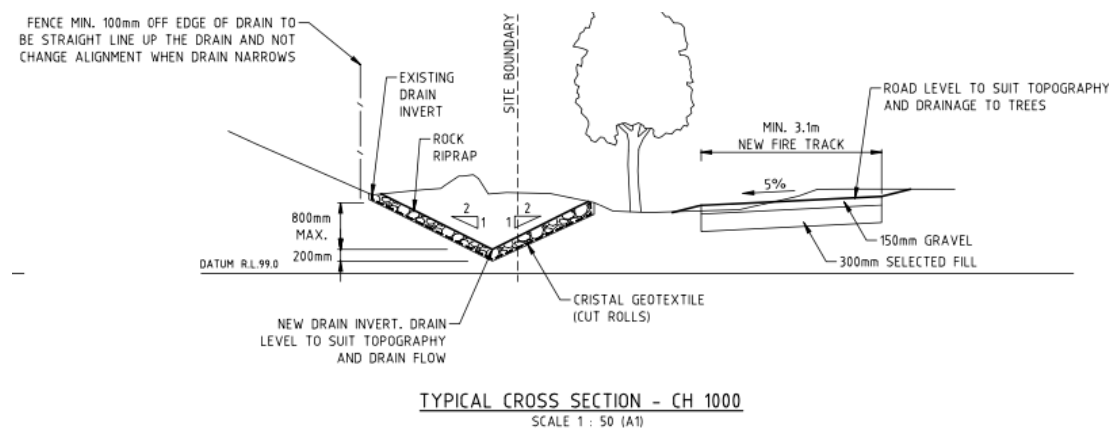


Figure No. 5 – IW Projects Updated Meandering Drain Design – Various Sections



As the peak flow subsides, the stormwater will be once again be contained within the V drain, with the surface water flow continuing to remove accumulated silt downstream to a new silt trap and thereby maintain the vast majority of the drain's original design capacity and hence efficiency for subsequent storm events.

In an extreme rainfall event, the consequence of the drain overflowing the fire track is minimal, as the excess stormwater will simply rise up slightly and flow further into both the Cleanaway property and the conservation park, the majority being into the conservation park side, as this is the side of the drain with the lower topography. The conservation park is also the catchment that generates 75% of the accumulated surface water; hence, that is the direction from which the vast majority of the surface water will be flowing.

The main concern with the use of the fire track as an overflow component of the drainage system is the potential for excessive erosion of the road surface. This will be a function of the drain flow rate, road construction material and the degree to which the road has previously been maintained. The original construction included 300 mm of compacted selected fill and 150 mm of compacted gravel to ensure initial fire track integrity.

The proposed design, including the fire track has a cross-sectional area of 2.0 m<sup>2</sup> (the original IW Projects design was 2.02 m<sup>2</sup>), or approximately 50% of the area of the Golder design. However, at this cross-sectional area, the peak discharge would only be flowing at approximately 1 m/s, which is still relatively slow and hence erosion is anticipated to be minimal.

Following heavy rain events, the drain and fire track will need to be inspected to see if there is any excessive erosion of the fire track or sedimentation within the rock-lined drain. Should any problems be identified, then the appropriate repair and maintenance would need to be carried out. The silt trap constructed at the lower, western end of the drain needs to also be regularly inspected and cleaned out to prevent silt from blocking the drain further downstream.

The IW Projects drain design incorporates efficient use of available space without impacting overly on the adjacent conservation park, while providing a fire track that will be accessible in all but the most extreme rainfall events and a self-cleaning V drain to reduce sedimentation buildup in the drain invert and a silt trap for the collection and removal of silt from the drainage system. In addition, where necessary, the fire track can be used to gain access for cleaning out or maintaining the drain. This drainage design is also cost effective and easy to construct without damaging conservation park areas beyond the footprint of the drain and fire track.

Although the IW Projects proposed updated drain has less flow capacity than the Golder design and may overflow in extreme rainfall events, the consequences thereof are minimal in light of the benefits gained.

### **Approval Process**

Discussions have been held with DBCA during the development of the IW Projects designs (original and updated) to obtain an in-principal approval for the overall drain development concept, including dealing with the clearing of some trees impacted by the drain, die-back assessment and management and the final approval process for the proposed works.

Following the DBCA discussions, Cleanaway has subsequently discussed the need for Planning Approval with the Shire of Dardanup and Environmental Approval from the Department of Water and Environmental Regulation.

### **Summary**

The updated IW Projects stormwater drain design provides an acceptable solution for the improved management of surface water along the upper 1,000 m of the Southern Boundary Stormwater Drain. This design adequately manages the anticipated stormwater flow from both the Cleanaway property and the adjacent state forest during an extreme storm event, while providing a cost-effective solution that is easy to maintain. There will however be a need for ongoing maintenance of the drain and adjacent fire track during the winter rainy season and also after extreme storm events.

Yours Sincerely,

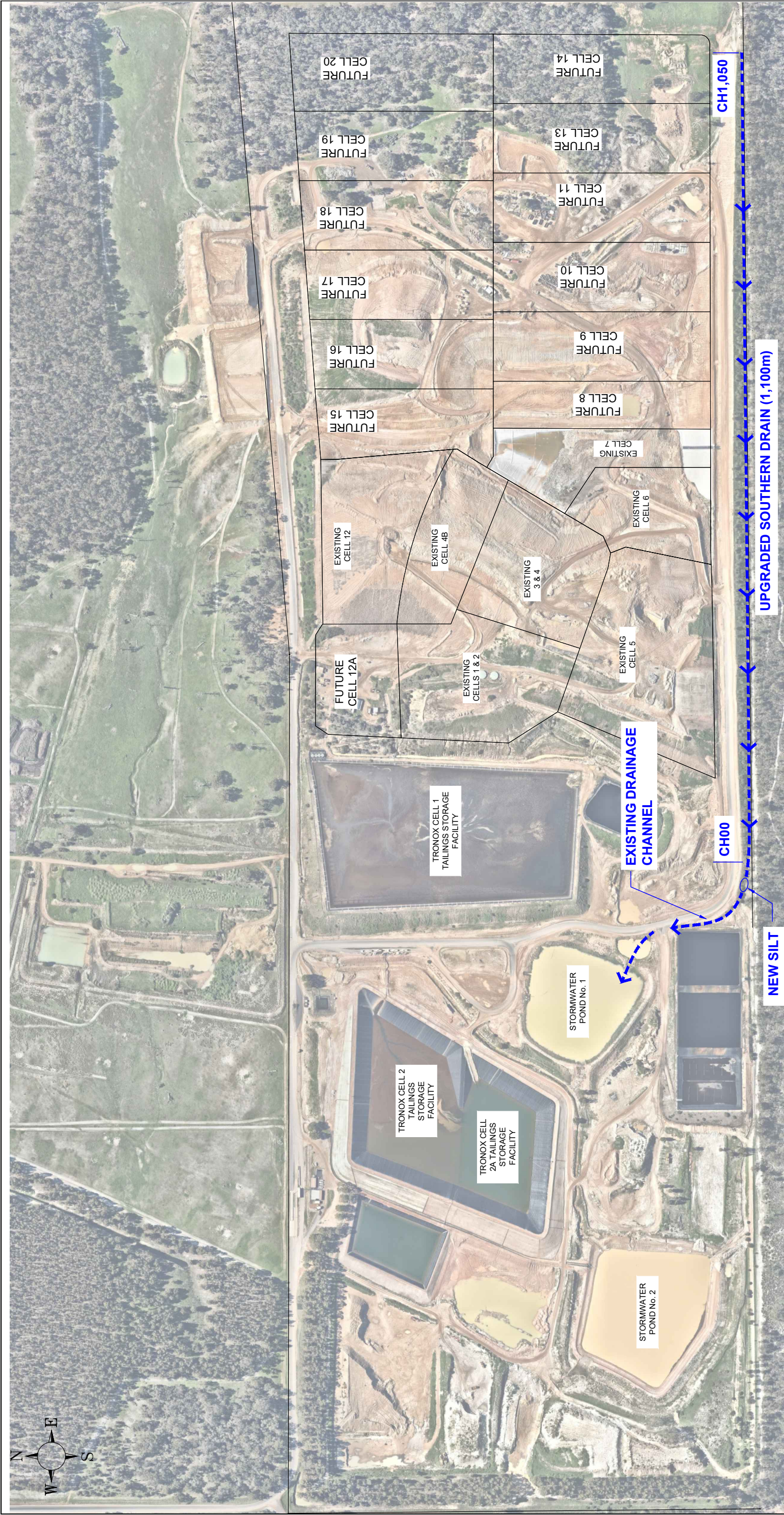


**Ian Watkins**  
Director IW Projects

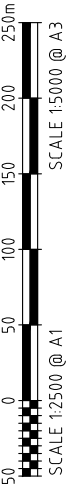
**Attachment – IW Projects Updated Drain Design 28 January  
2021**

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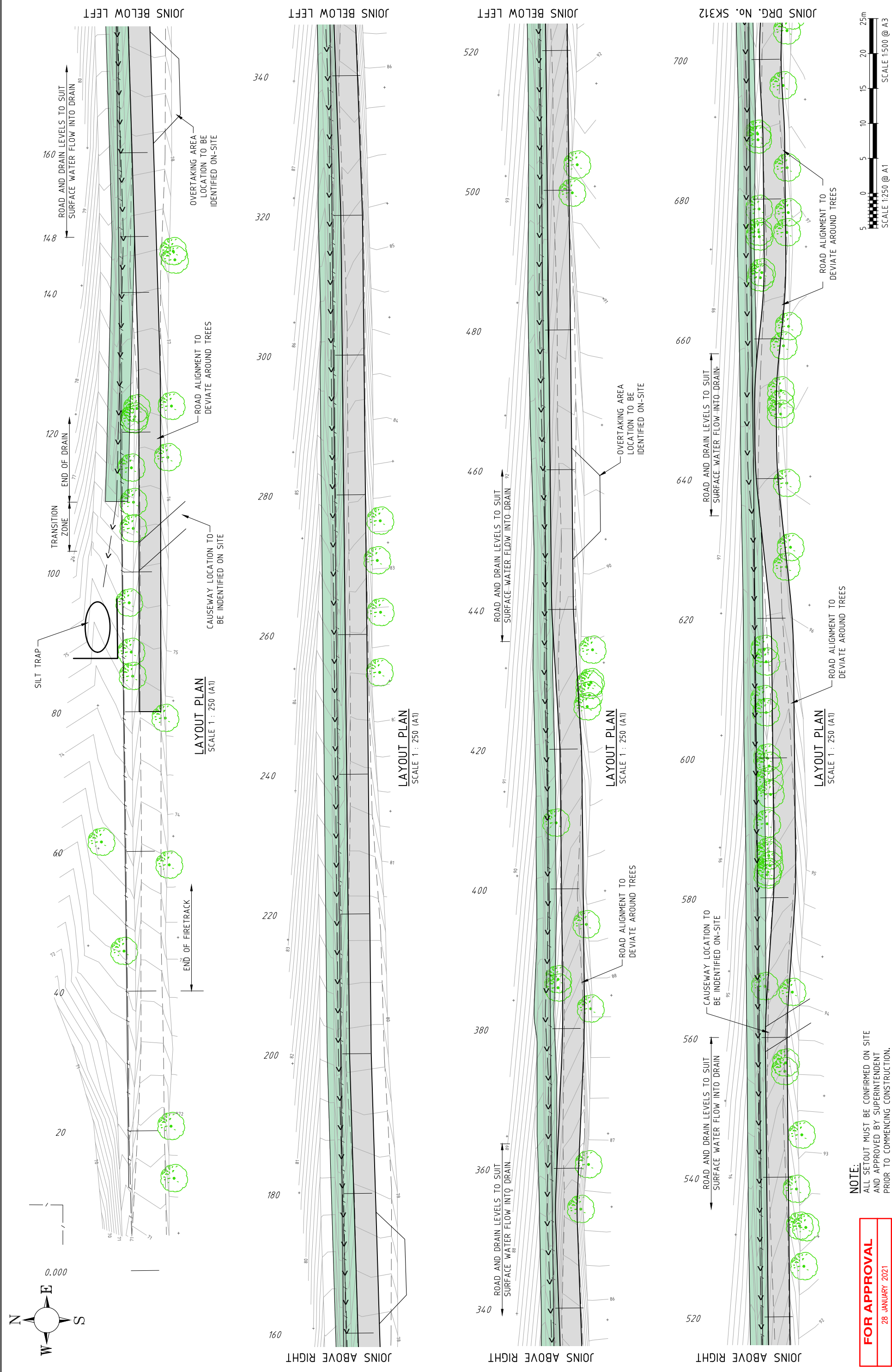


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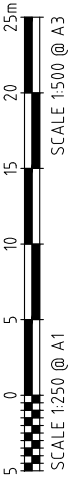
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28 JANUARY 2021

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REVISIONS				TECHNICALLY APPROVED:				CLEANAWAY SOLID WASTE				BANKSIA ROAD LANDFILL FACILITY, DARDANUP WA PROPOSED SOUTHERN BOUNDARY STORMWATER DRAIN CONCEPT LAYOUT – PLAN 1 OF 2				BANK-SK311			
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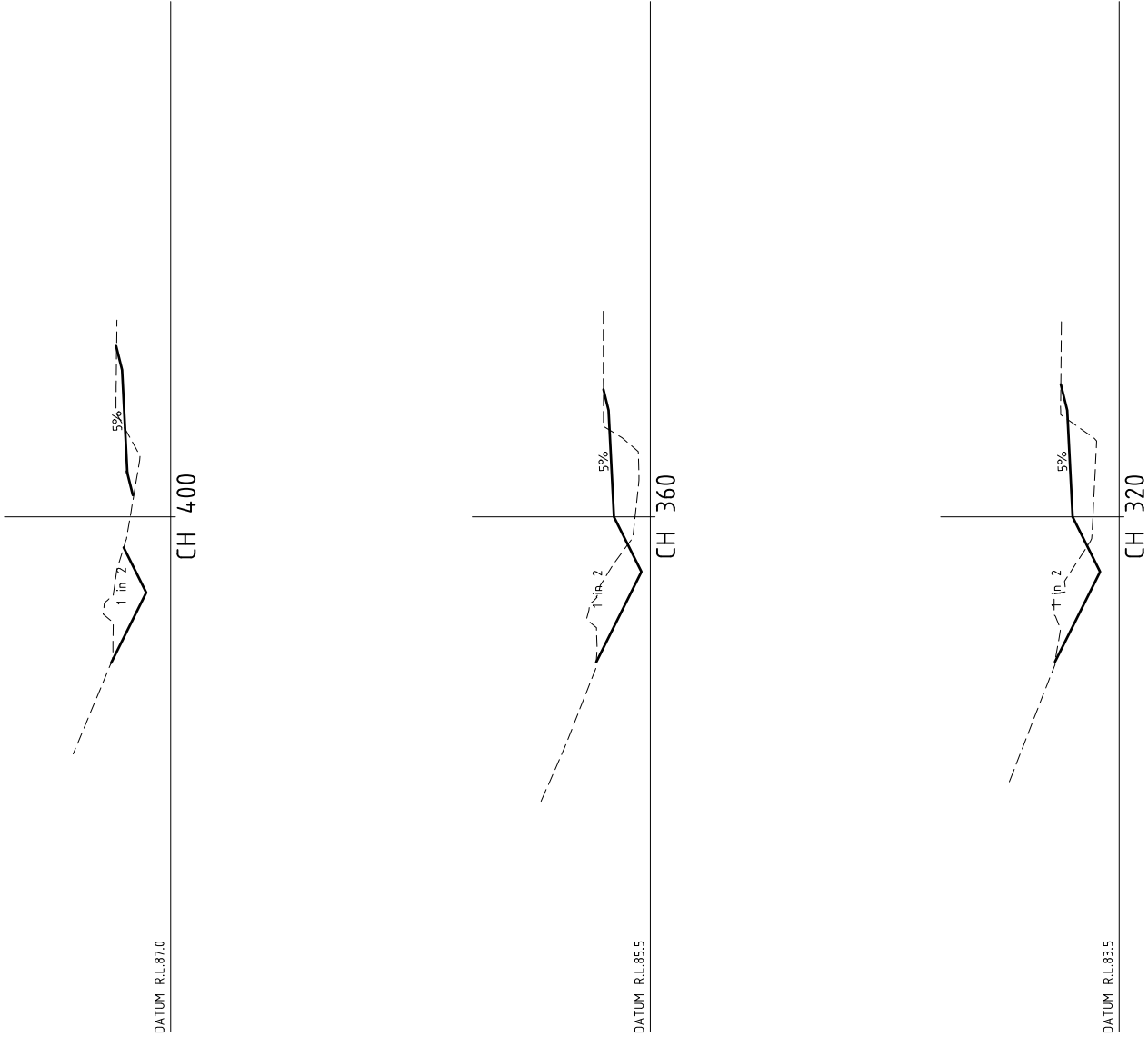
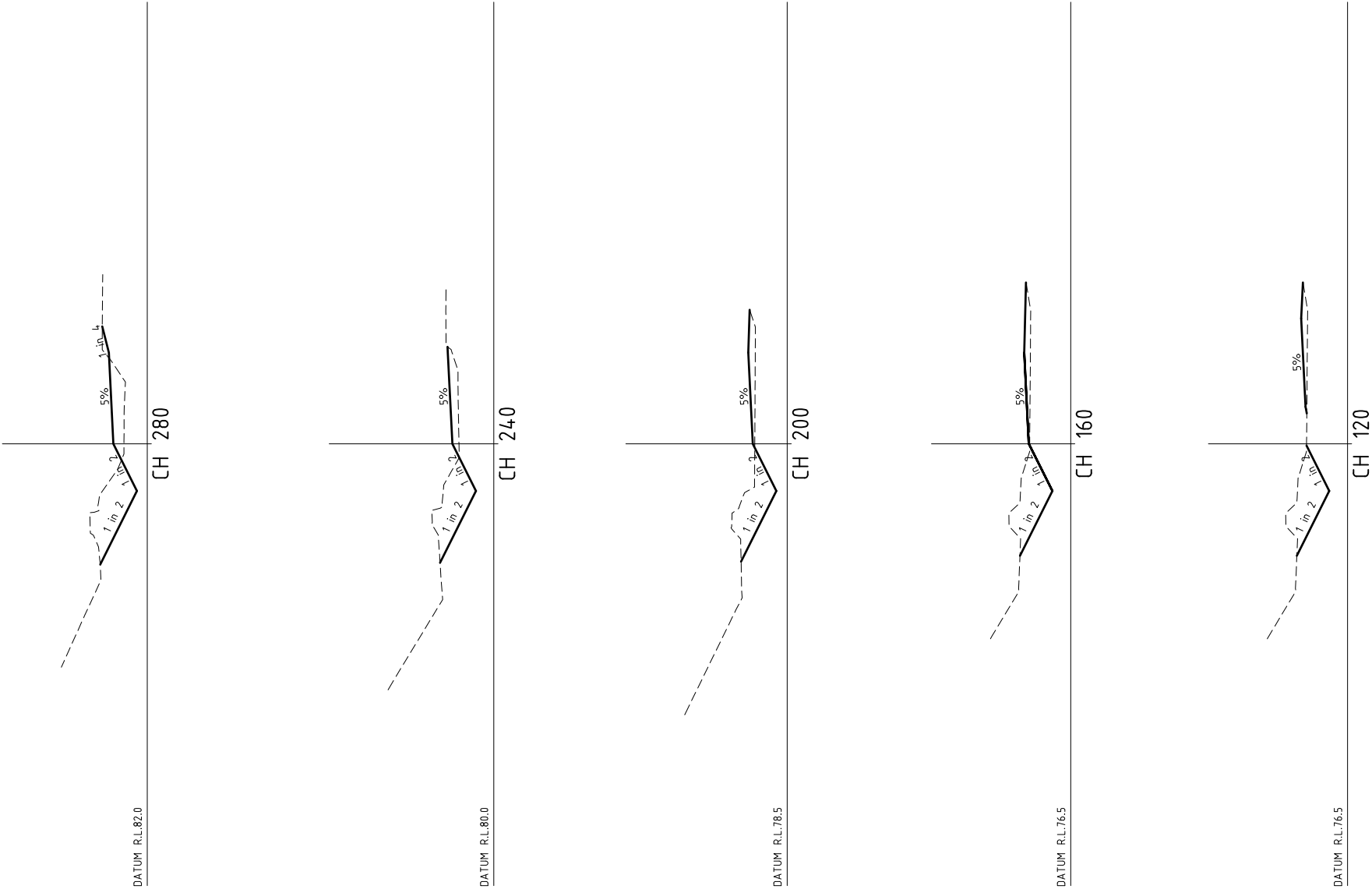
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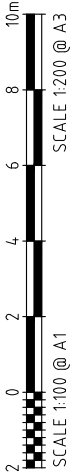
Email – iwatkins@iwprojects.com.au  
Mobile – 0402 909 291  
Address – 6 Anembo Close Duncraig 6023




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**SECTIONS**  
SCALE 1 : 100 (A1)



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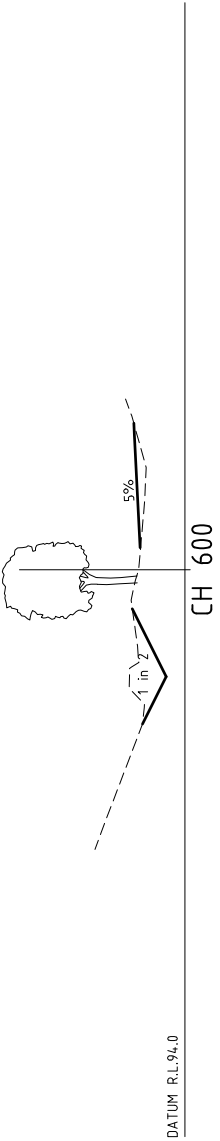
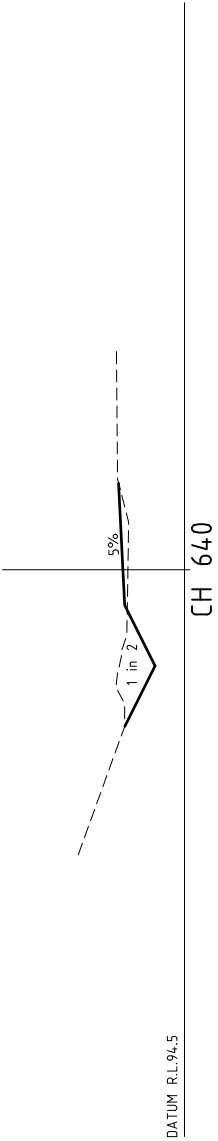
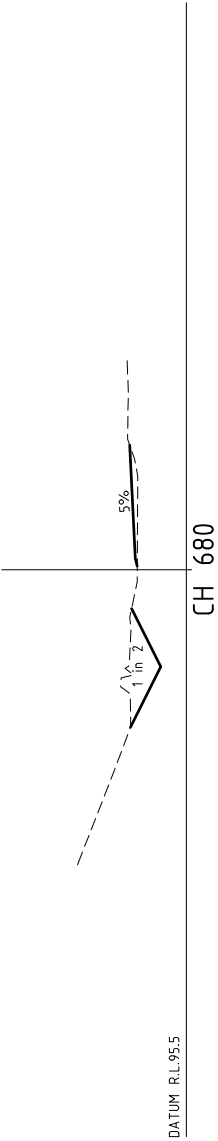
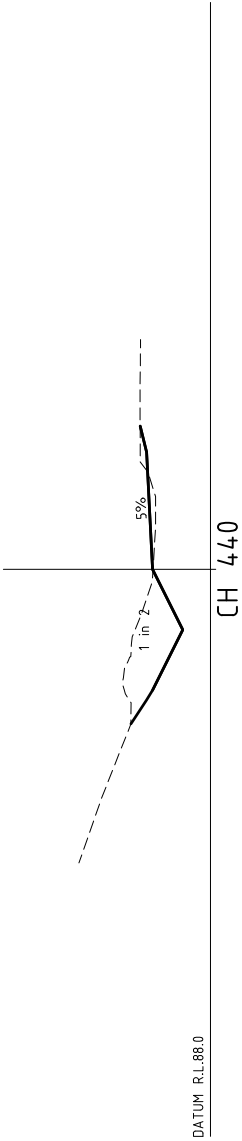
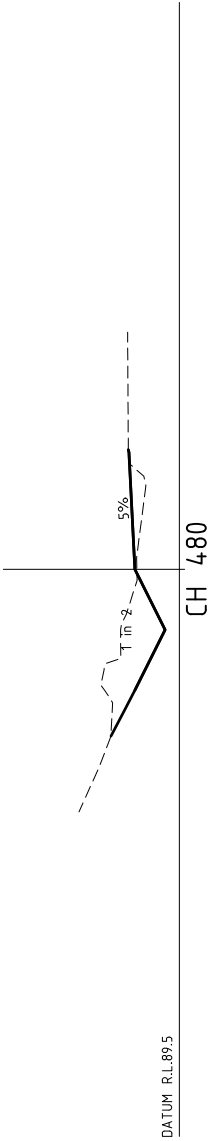
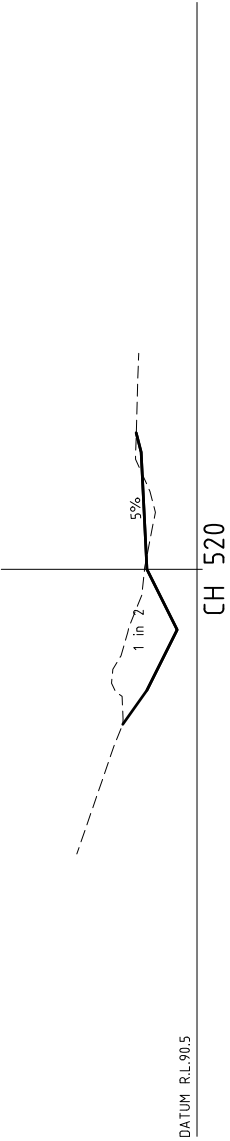


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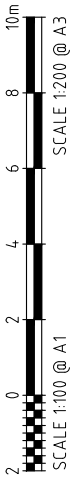


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No.	BY	DATE	DESCRIPTION	DWG. CHK.	I.W.
			TECHNICALLY APPROVED:		
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			Email – iwatkins@iwprojects.com.au Mobile – 0402 909 291 Address – 6 Anembo Close Duncraig 6023		
			CLEANAWAY SOLID WASTE		
			BANKSIA ROAD LANDFILL FACILITY, DARDANUP WA		
			PROPOSED SOUTHERN BOUNDARY STORMWATER DRAIN		
			CROSS SECTIONS – SHEET 2 OF 4		
			SCALE	AS SHOWN	
			SHEET		
			DRG No.	REVISION	ID
					Bank–SK314

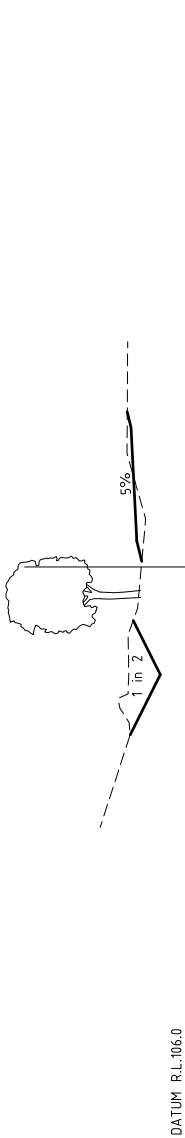
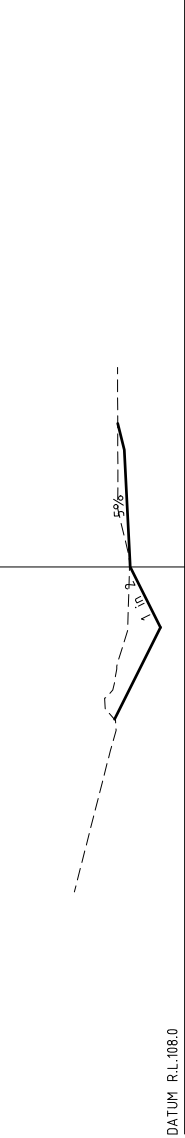
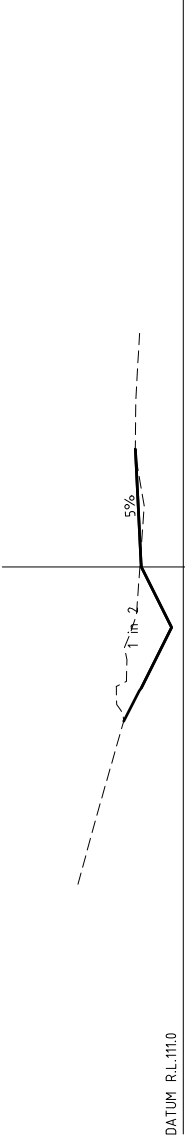




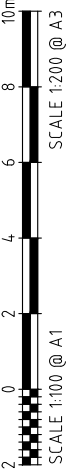
FOR APPROVAL  
28 JANUARY 2021

NOTE:  
ALL SETOUT MUST BE CONFIRMED ON SITE  
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PRIOR TO COMMENCING CONSTRUCTION.

REVISIONS				TECHNICALLY APPROVED:			
D	S.B.Y.	28/01/21	ROAD AND DRAIN ALIGNMENT SHIFTED	DRG.	FILE		DATE
C	S.B.Y.	19/01/21	DRAIN ALIGNMENT SHIFTED	DESIGN		I.W.	06/20
B	S.B.Y.	07/12/20	ISSUED FOR TENDER	DRAWN		S.B.Y.	06/20
A	S.B.Y.	19/06/20	PRELIMINARY ISSUE FOR REVIEW	DES.	CHK.	I.W.	
No.	BY	DATE	DESCRIPTION	DWG.	CHK.	I.W.	



SECTIONS  
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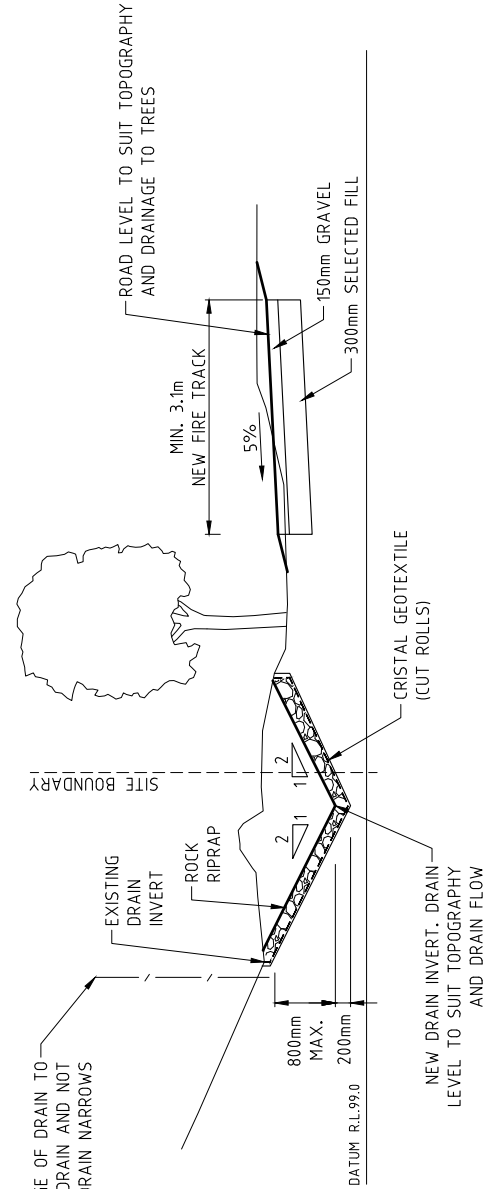


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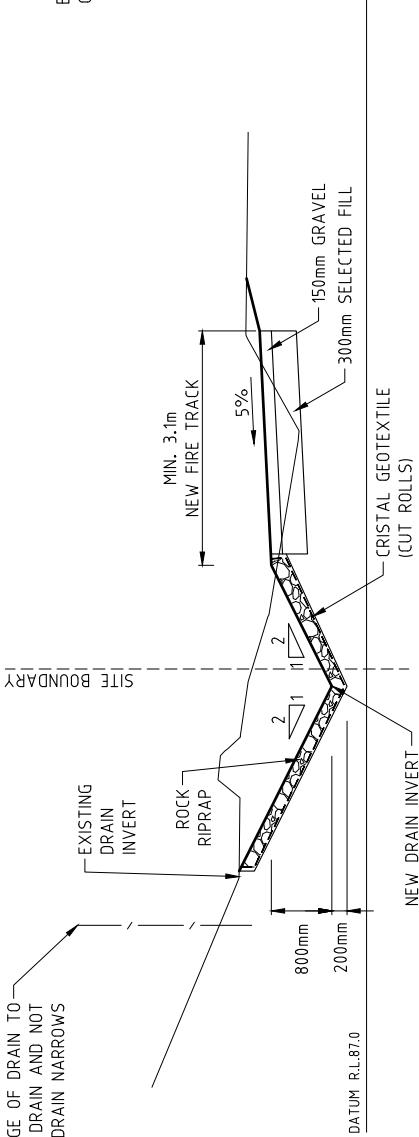
Email – iwatkins@iwprojects.com.au  
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Address – 6 Anembo Close Duncraig 6023

CLEANAWAY SOLID WASTE		SCALE	AS SHOWN
BANKSIA ROAD LANDFILL FACILITY, DARDANUP WA		SHEET	
PROPOSED SOUTHERN BOUNDARY STORMWATER DRAIN			
CROSS SECTIONS – SHEET 4 OF 4		DRG No.	Bank-SK316

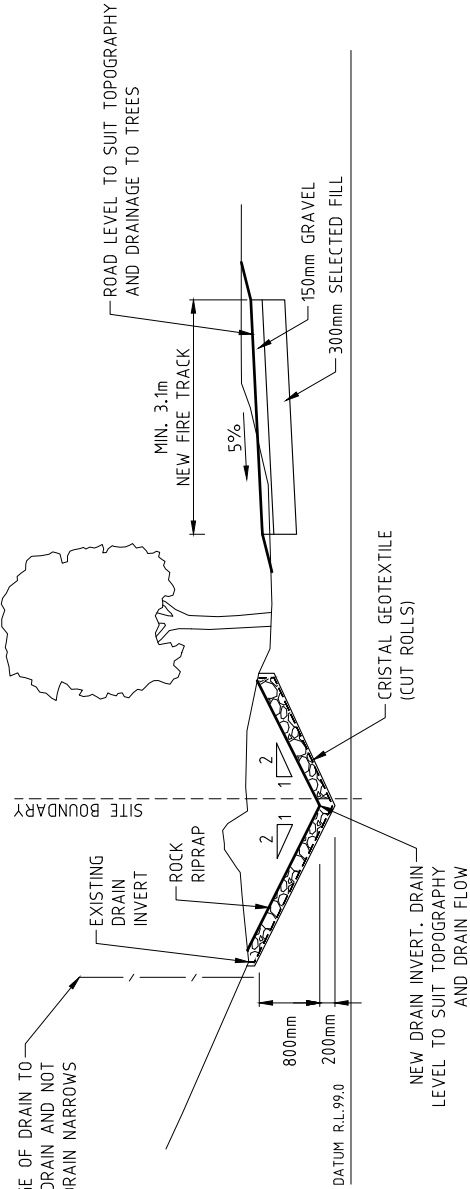




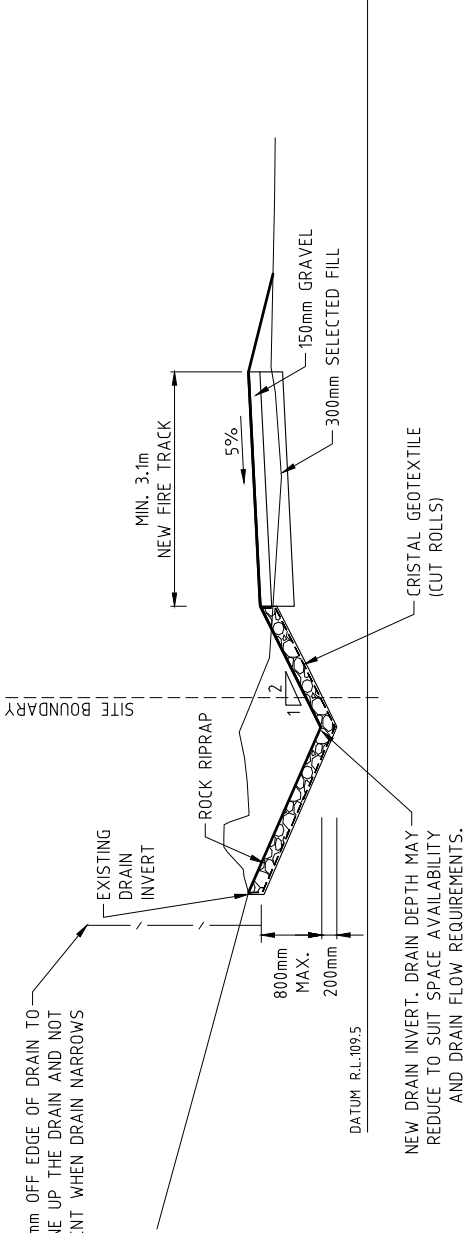
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TYPICAL CROSS SECTION – CH 600  
SCALE 1 : 50 (A1)



TYPICAL CROSS SECTION – CH 800  
SCALE 1 : 50 (A1)

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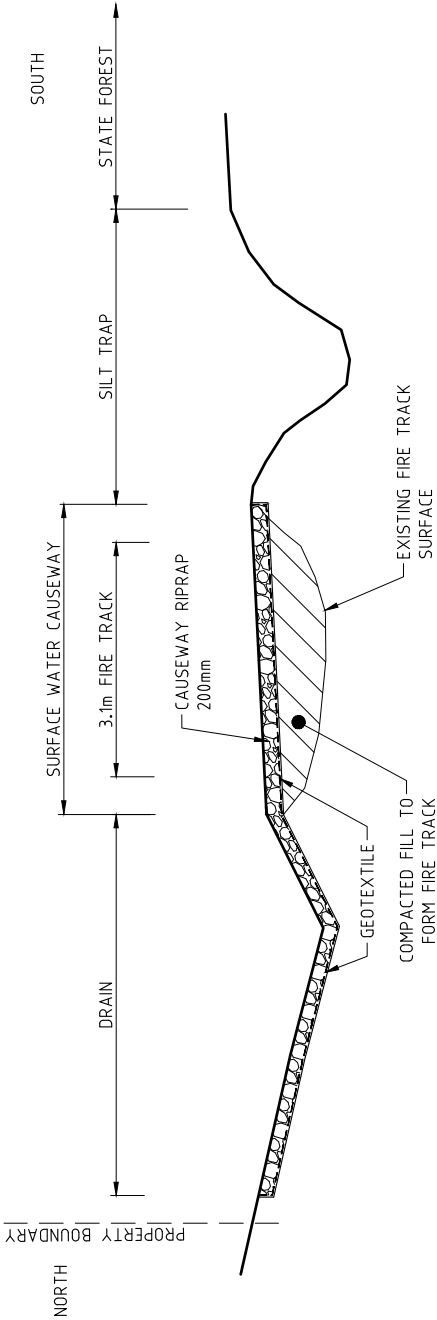
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C	S.B.Y.	19/01/21	DRAIN ALIGNMENT SHIFTED	DESIGN			I.W.	06/20		SHEET	
B	S.B.Y.	07/12/20	ISSUED FOR TENDER	DRAWN			S.B.Y.	06/20			
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No.	BY	DATE	DESCRIPTION	DWG.	CHK.		I.W.			DRG No.	Bank – SK317

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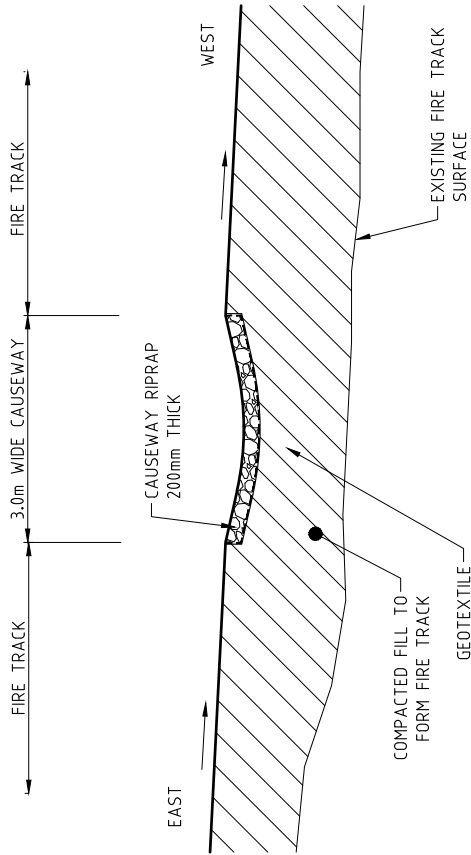
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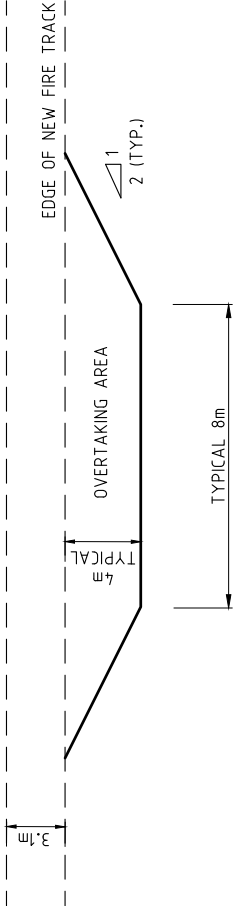
Address – 6 Anembo Close Duncraig 6023



SECTION A-A  
NOT TO SCALE



SECTION B-B  
NOT TO SCALE




OVERTAKING AREA - PLAN  
NOT TO SCALE

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FOR APPROVAL  
28 JANUARY 2021

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No.	BY	DATE	DESCRIPTION	DWG. CHK.	I.W.
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CLEANAWAY SOLID WASTE				SCALE	AS SHOWN
BANKSIA ROAD LANDFILL FACILITY, DARDANUP WA				SHEET	
PROPOSED SOUTHERN BOUNDARY STORMWATER DRAIN				DRG No.	REVISION I.D
MISCELLANEOUS DETAILS					Bank-SK318



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**Southern Boundary  
Native Vegetation Buffer Plan**

**at**

**Cleanaway Dardanup Landfill  
Lot 2 Banksia Road,  
Crooked Brook**

**for**

**Stormwater Management**



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## Document Control

Version	Author	Reviewed By	Date
1	P Antony	G Rose	13 June 2016
2	P Antony	G Rose	29 July 2016
3	S Carlton	L. Bergsma	1 February 2021

## Introduction

The Banksia Road Landfill Facility located at Lot 2 Banksia Road, Crooked Brook, WA (site) is licensed under Cleanaway Solid Waste Pty Ltd (CWY) by the Western Australian Department of Environment Regulation (DWER) as per Licence number **L8904/2015/1**.

This document is an update of the '2016 Native Vegetation Buffer Plan' capturing the details of the '2021 Additional Native Planting' works intended by Cleanaway to be completed as part of the '2020 Amendment Application to P10/16 Stormwater Infrastructure Works DA' which is to:

1. Repair the failed Southern Boundary Stormwater Drain
2. To increase the 'Native Vegetation Buffer' planting so that it extends, as intended, along the full southern boundary.

## Background

Shire of Dardanup approved extensive Stormwater Infrastructure Works for the Cleanaway Site in 2016 as per below reference:

Ref: P10/16

Assess: A8241

Doc No: DAP-0190308

These approved Stormwater Infrastructure Works were fully completed in 2016/17 along with establishing sections of 'Native Vegetation Buffer' plantings. Currently the 'Native Vegetation Buffer' planting does not extend as intended along the full southern boundary.

The '2016 Native Vegetation Buffer Plan' was prepared at the time to meet Condition 3 and Note 5 of the DA P10/16 approval.

The details of that Condition 3 and Note 5 were:

*Condition 3: "A Native Vegetation Buffer Plan shall be prepared to the specifications of the Department of Parks and Wildlife (DPAW) and submitted to and approved in writing by the Shire and DPAW, prior to the commencement of development."*

*The Native Vegetation Buffer Plan shall provide a 20 metre wide native vegetation buffer along the entire southern boundary of Lot 2 Banksia Road, Crooked Brook and be implemented to the satisfaction of the Director Development and Engineering Services within 3 months of completion of the proposed development and thereafter maintained".*

*Note 5: "With regard to Condition No.3, the Shire requires the native vegetation buffer to be established to the full 20 metre width where practically possible. Any proposed reduction to the required 20 metre width at any location within the subject property shall be justified within the required Native Vegetation Buffer Plan"*

## Approach to Determining Vegetation Buffer Layout

The Cleanaway site has been operational as a landfill site for many years. It is required by the site DWER licence to contain all stormwater generated within the site & prevent unauthorised discharge during adverse storm events. The existing infrastructure along the southern boundary of the site includes:

- Southern perimeter road for fire break and patrolling,
- Drains along southern boundary to prevent run-off beyond premise,
- Three landfill leachate treatment ponds and
- Site fencing.

A copy of the site's 'Stormwater Management Plan- Overall Layout' is attached at Appendix 1 below.

The width vegetation buffer proposed in 2016 was prepared by considering the above infrastructures and was shown in drawings (as part of that application):

**Drawing 01:** Eastern Half of Southern Boundary

**Drawing 02:** Western Half of Southern Boundary

The practically achievable vegetation buffer width was stated in 2016 as generally varied between:

- 12 metre to 21 metre for Eastern Half of Southern Boundary, and
- 5.5 metre to 11 metre for Western Half of Southern Boundary.

These practicable achievable vegetation buffer widths remain unchanged and the '2021 Additional Native Planting' works intend to complete these works as per the 2016 detail in the attached (refer to Appendix 2 below):

**Drawing 01:** Eastern Half of Southern Boundary

**Drawing 02:** Western Half of Southern Boundary

### Landscaping Plan

These 'Banksia Road Landfill Rehabilitation and Closure Plan -Appendix D -Landscaping Plan Rev C ( the Landscaping Plan ) for the site is shown in the figure below with Zones 4b, 4C and 4e being the areas that of the '2021 Additional Native Planting' works.





**The Landscaping Plan states that:**

**Zone 4 Buffer** – is buffer zone around the landfill comprised of native vegetation, including trees, shrubs and groundcover species to link with adjacent Dardanup Conservation Park vegetation. This area is not over landfill and does not require capping.

**Zone 4a Established**– this area has already been planted to trees and has a grass understorey.

**Zone 4b Groundcovers** – this area is along the batter slope of the leachate ponds. The pond wall provides a visual screen between adjacent forest and the landfill. Native grasses and forbs will be planted along this section.

**Zone 4c Establishing** – some native shrubs and small trees are present in this area; however additional planting is required to further improve the visual screen.

**Zone 4d Proposed** – requires planting of a range native vegetation to provide a link to the adjacent Dardanup Conservation Park.

### Current state

The current state of Zones 4b, 4c & 4d is as follows:

- 1) Zone 4c Establishing:** The width of the native Buffer Zone in the eastern half of the southern boundary is of a good width being 20m (as per Drawing 01). As per the photo below reasonable native shrubs and small trees density is present in this area. There are some gaps where trees have not survived exist and it is intended to replant these areas to achieve the intended scrub and small tree density as per the Landscaping Plan. There is also a small area of Zone 4c on the most eastern portion of the southern boundary that is not yet planted.

**Photo of part of Zone 4c -Southern Boundary Native Vegetation Buffer East of the Leachate Ponds**



- 2) **Zone 4b Groundcovers** – this area is along the batter slopes of the leachate ponds. The pond bund wall provides some visual screening between adjacent forest and the landfill. Any 2016 plantings in this area have all but failed to survive.

It is intended to plant native grasses and forbs in this area to create the Zone 4b buffer. The constraints of the leachate pond infrastructure in this zone mean this will be the area with the narrowest buffer width area as per Drawing 02 only between 5.5 and 11m of planting practicable. The groundcover intended planting density is as per the Landscaping Plan of 4 per m<sup>2</sup>.

**Drawing 02** (below) shows the detail of the embankments installed in 2016. This drawing is part of the 2016 Shire DA P16/10 Banksia Road Landfill Stormwater Management Drawings. Further below pictures of the current state of the Leachate Pond Embankments & the batters south of the stormwater pond 2.

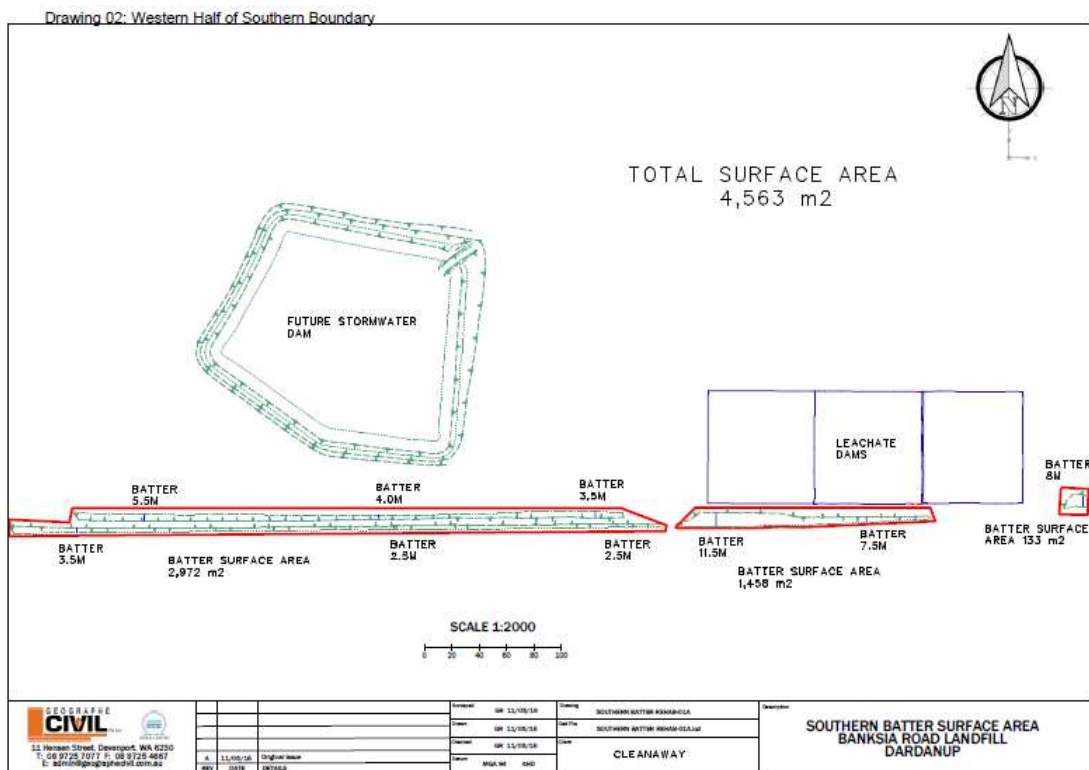




Photo of the Leachate Pond 3 Southern Bund wall looking north showing the sloped pond embankment with almost no current plantings.



**3) Zone 4d Proposed** – This area only has a few sparse plantings. It is intended to extend the batter profile that are on the southern side of the Stormwater Pond 2 as shown in the 2016 Drawing 02 further to the west. Then plant of a range native vegetation to provide a link to the adjacent Dardanup Conservation Park. The planting density will be as per the Landscaping Plan of 1 per 10m<sup>2</sup> with 5m interrow spacings with groundcovers planted in the interrow at 4 per m<sup>2</sup>.



Photo of the Southern Boundary Western end looking north showing the raised batter on the southern side of the Stormwater Pond 2 and the sparse current plantings.

## Native Vegetation Species

The Landscaping Plan details the Native Vegetation Species List that planting tube stock will be selected from to plant in Zones 4b, 4c, and 4d. that list is reproduced below:

Native Trees and Shrubs		Native grasses and forbs	
Species	Common Name	Species	Common Name
<i>Eucalyptus calophylla</i>	Marri – Red Gum	<i>Austrodanthonia spp</i>	Wallaby Grass
<i>Eucalyptus decipiens</i>	Redheart molt	<i>Austrostipa compressa</i>	Compact needlegrass
<i>Eucalyptus drummondii</i>	Drummond's gum	<i>Austrostipa semibarbata</i>	Bearded spear-grass
<i>Eucalyptus haematoxylon</i>	Mountain Marri	<i>Ficinia nodosa</i>	Club rush
<i>Eucalyptus marginata</i>	Jarra	<i>Hypolaena exsulca</i>	Hypolaena
<i>Eucalyptus megacarpa</i>	Bullich	<i>Lomandra nutans</i>	-
<i>Eucalyptus patens</i>	Blackbutt	<i>Lomandra sericea</i>	Silky mat rush
<i>Acacia flagelliformis</i>	Wattle	<i>Lyginia barbata</i>	-
<i>Acacia lasiocarpa var lasiocarpa</i>	Wattle	<i>Mesomelaena tetragona</i>	Semaphore sedge
<i>Acacia pulchella var glaberrima</i>	Prickly moses	<i>Microalaena stipoides var stipoides</i>	Weeping grass
<i>Acacia saligna</i>	Golden Wreath Wattle	<i>Patersonia occidentalis</i>	Swamp flag
<i>Allocasuarina fraseriana</i>	Sheoak	<i>Patersonia umbrosa</i>	Purple flag
<i>Banksia attenuata</i>	Candlestick banksia	<i>Themeda triandra</i>	Kangaroo grass
<i>Banksia grandis</i>	Bull Banksia		
<i>Banksia littoralis</i>	Swamp Banksia		
<i>Bossiaea eriocarpa</i>	Common brown pea		
<i>Daviesia physodes</i>	Prickly Bitter Pea		

Native Trees and Shrubs		Native grasses and forbs	
Species	Common Name	Species	Common Name
<i>Hakea cyclocarpa</i>	Ramshorn		
<i>Hakea ruscifolia</i>	Candle Hakea		
<i>Hakea undulata</i>	Way leaf Hakea		
<i>Hibbertia hypericoides</i>	Yellow buttercups		
<i>Hibbertia subvaginata</i>	-		
<i>Jacksonia horrid</i>	-		
<i>Kunzea glabrescens</i>	Spearwood		
<i>Kunzea micrantha</i>	-		
<i>Leucopogon glabellus</i>	-		
<i>Melaleuca preissiana</i>	Stout Paperback		
<i>Melaleuca viminea</i>	Mohan		
<i>Persoonia longifolia</i>	Long-leaf Persoonia		
<i>Pityrodia bartlingii</i>	Woolly Dragon		
<i>Podocarpus drouynianus</i>	Wild Plum		
<i>Pultenaea reticulata</i>	Bush Pea		

### ***Vegetation Establishment Methodology***

The 'Banksia Road Landfill Rehabilitation and Closure Plan Appendix D -Landscaping Plan' details in Sections 3.3 to 3.8 the intended methodology for Seed Selection, Plant Propagation, Site Preparation, Planting, Maintenance and Monitoring .

### ***Vegetation Density***

The target planting density will be as per the Landscaping Plan of 1 per 10m<sup>2</sup> with 5m interrow spacings with groundcovers planted in the interrow at 4 per m<sup>2</sup>. The completion criteria is to achieve 80% coverage after 2 summers with no large gaps larger than 20 m<sup>2</sup>.

### ***Summary***

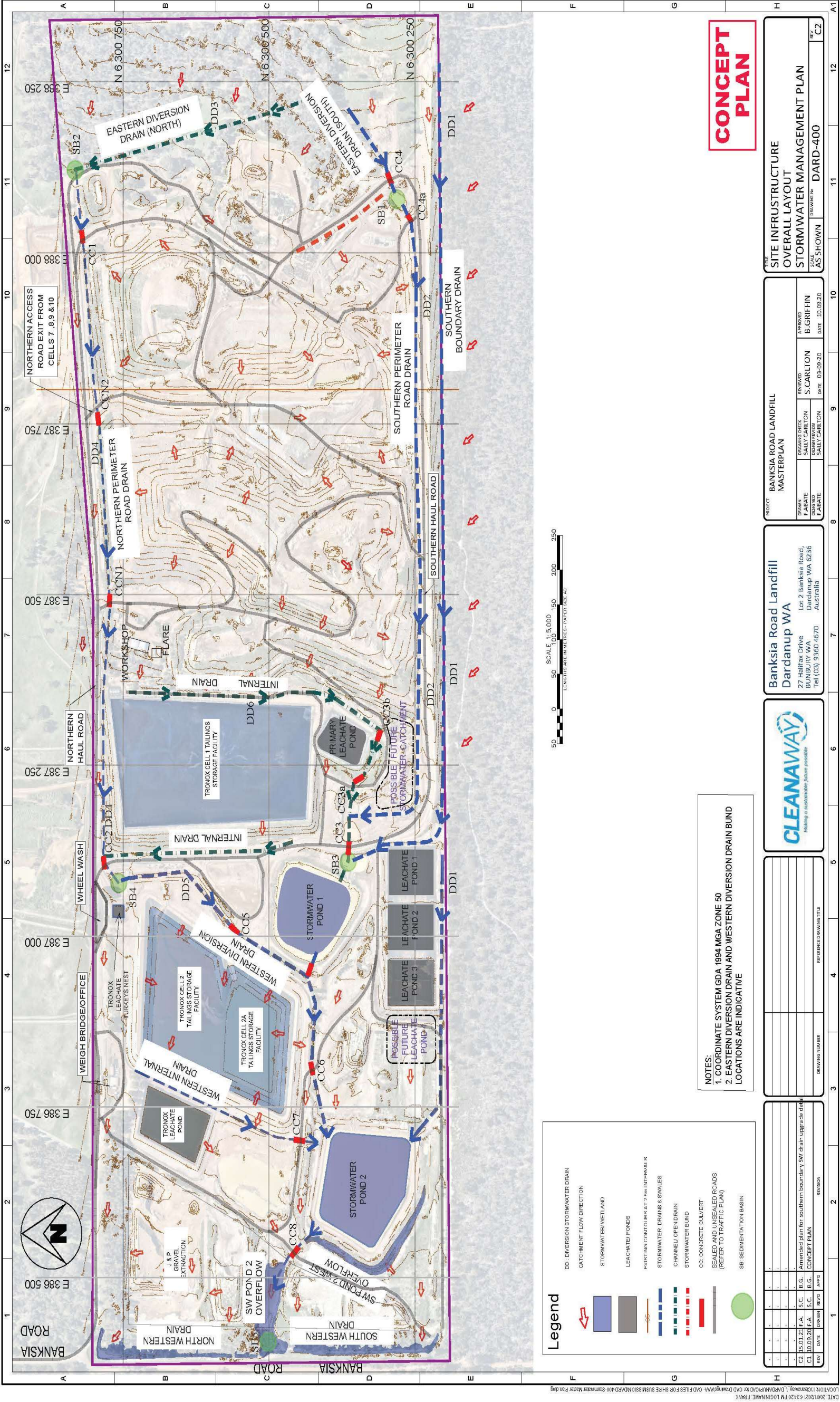
The proposed 2021 Native Vegetation Buffer Plan is expected to meet Condition 3 and Note 5 of the P10/16 Development Approval. CWY request approval from the Shire of Dardanup to commence the vegetation establishment works at the earliest.

### ***Drawings***

***Appendix 1 –DARD-400 -Banksia Road Landfill Stormwater Management Plan***

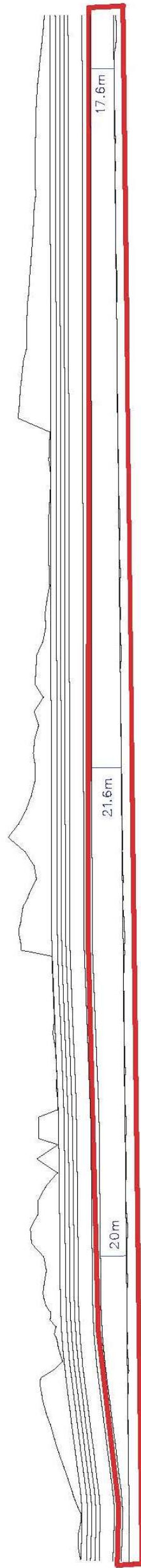
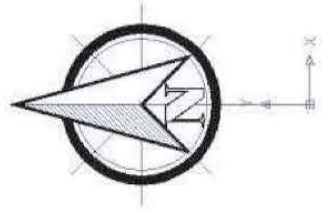
***Appendix 2 -2016 Drawing 01 and 2016 Drawing 02***







### Drawing 01: Eastern Half of Southern Boundary



Section 1  
Surface Area  
21,054 square meters

[illegible]





6 Anembo Close  
DUNCRAIG  
WA 6023  
[iwatkins@iwprojects.com.au](mailto:iwatkins@iwprojects.com.au)  
Mobile 0402 909 291

12 November 2021

Shire of Dardanup  
PO Box 7016  
EATON  
WA 6232

Attention: Murray Connell - Manager Development Services

**Subject: Banksia Road Landfill Development – Southern Boundary Drain  
Development Approval Compliance Report**

Dear Murray,

As per the requirements of Development Approval (Amendment to P10/16, dated 15 April 2016), issue date 10 March 2021, Cleanaway Solid Waste Pty Ltd (Cleanaway) hereby provides confirmation that the works have been completed.

Referenced below are the conditions contained within the Development Approval, with the relevant supporting comment or attachment addressing compliance with the various conditions. Italics refer to wording copied directly from the Development Approval. Responses to the Development Approval conditions are in normal font.

**Condition 1:**

*All development must be carried out in accordance with the approved plans and drawings listed below, which form part of this approval, including any amendments to these plans and drawings as shown in red, unless with written consent from the Shire;*

- a) *Site Plan (Drawing No. Banks – SK310, Rev D);*
- b) *Concept Layout Plan – Plan 1 of 2 (Drawing No. Bank – SK311, Rev D);*
- c) *Concept Layout Plan – Plan 2 of 2 (Drawing No. Bank – SK312, Rev D);*
- d) *Cross Section – Sheet 1 of 4 (Drawing No. Bank – SK313, Rev D);*
- e) *Cross Section – Sheet 2 of 4 (Drawing No. Bank – SK314, Rev D);*
- f) *Cross Section – Sheet 3 of 4 (Drawing No. Bank – SK315, Rev D);*
- g) *Cross Section – Sheet 4 of 4 (Drawing No. Bank – SK316, Rev D);*
- h) *Typical Cross Sections (Drawing No. Bank – SK317, Rev D); and,*
- i) *Miscellaneous Details (Drawing No. Bank – SK318, Rev D).*



*Except that, in the event of an inconsistency between the approved plans and the requirement of the conditions set out below, the requirements of the conditions prevail.*

The drawings stated above are the Shire Development Approval approved drawing set. These were used for construction.

It is confirmed that the drain was constructed in accordance with the design. The typical section details (Drawing No. Bank – SK317, Rev D) were achieved, with the exception of the 5% fall on the fire track into the drain. The track crossfall was adjusted on site to suit the natural topography and to retain as much native vegetation as possible. Ultimately a suitable crossfall was constructed in order to achieve the design intent of directing all surface water into the drain as soon as practically possible.

**Attachment No. 1 – Photos** provides images of the drain construction.

For completeness, the Shire approved drawings have also been included in this report.

**Attachment No. 2 – Shire Approved Drawings** provides a copy of the Shire approved drawings.

**Attachment No. 3 – As-Constructed Drawings** provides a copy of the as-constructed drawings.

**Condition 2:**

*The “Southern Boundary Native Vegetation Buffer Plan (version 3, 1 February 2021)” must be fully implemented within nine (9) months unless otherwise agreed in writing by the Shire of Dardanup, and must be maintained thereafter to the satisfaction of the Shire of Dardanup. Any species that failed to establish within the first two planting season following implementation must be replaced in consultation with the Department of Biodiversity, Conservation and Attractions and to the satisfaction of the Shire of Dardanup.”*

Cleanaway has undertaken extensive rehabilitation of the southern boundary of the site in accordance with the requirements of the Southern Boundary Native Vegetation Buffer Plan (version 3, 1 February 2021). Cleanaway also carried out additional planting in excess of what is required within the buffer plan.

Tranen Revegetation Southwest (Tranen) carried out the rehabilitation works and on completion, provided a post activity report.

The rehabilitation works were completed during the period 18 June 21 to 17 September 21. With the Development Approval being granted on 10 March 21, the works were completed well within the nine-month implementation period, ending 10 December 2021.

**Attachment No. 4 – Banksia Road Landfill Vegetation Screening – Post Activity Report** provides information on the rehabilitation works carried out by Tranen.

**Attachment No. 5 – Landscaping Plan Buffer Zones Mark-up** showing the planting carried out in the landscaping buffer zones. The areas of this planning are as per the buffer plan February 2021 (Geographe Civil drawing – Drawing 2).

### Condition 3:

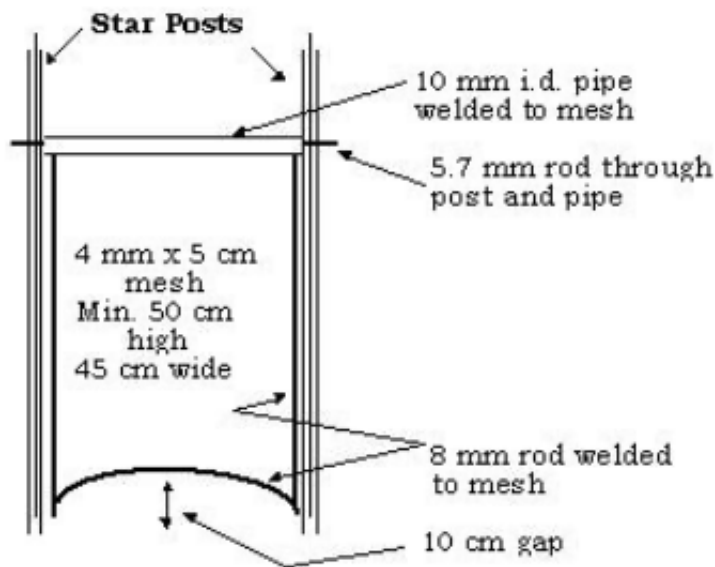
*The southern and eastern boundaries are to be fenced with 2m high chain mesh fencing with wildlife egress points.*

The required fencing was included in the construction works. The fencing included two wildlife egress points at either end of the eastern boundary fence. The design for the wildlife egress points was obtained from the Department of Biodiversity, Conservation and Attractions (DBCA).

Refer to **Attachment No. 1 - Photos** for evidence of the boundary fencing.

**Figure 1 – Swing Gate Design** is an extract from the DBCA *Wildlife Management Methods – Kangaroos and Wallabies* guideline, which was used to design the wildlife egress points.

**Figure 1 – Swing Gate Design**



It is hereby certified that the works have been constructed in accordance with the conditions of the development Approval requirements, subject to the comments contained within this document. Where any discrepancies occur, these have been clearly stated in this Compliance Report.

Should you have any further queries, please do not hesitate to contact the undersigned.

Yours Sincerely,

**Ian Watkins**

Director IW Projects

cc Cleanaway

**Attachments:**

**Attachment No. 1 – Photos**

**Attachment No. 2 – Shire Approved Drawings**

**Attachment No. 3 – As-Constructed Drawings**

**Attachment No. 4 – Banksia Road Landfill Vegetation Screening – Post Activity Report**

**Attachment No. 5 – Landscaping Plan Buffer Zones Mark-up**

## **Attachment No. 1 – Photos**

### **Drain Construction – Shaping the drain**



### **Drain Construction – Geotextile being installed below rock riprap**





**Drain Construction – Rock riprap being placed on top of geotextile**



**Drain Construction – Rock riprap installed on top of geotextile**





## Drain Construction



## Drain Construction – Compaction test hole





**Completed Drain**



**Completed Drain and Fire Track**





**Completed Drain and Compacted Gravel Fire Track**



**Completed Drain and Compacted Gravel Fire Track**





**Silt Trap – looking upstream**



**Silt Trap – looking downstream**





**Silt Trap – After a storm event**



**Southern Boundary Fencing**





**Eastern Boundary Fencing**



**Boundary Fencing with wildlife egress point**



## **Attachment No. 2 – Shire Approved Drawings**

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SHIRE OF DARDANUP  
PLANNING DEPARTMENT

TOWN PLANNING SCHEME NO. 3

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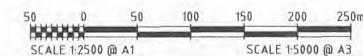
Murray Connell  
Delegated Officer

9/03/2021

FOR APPROVAL

28 JANUARY 2021

SHEET 1 OF 9



REVISIONS	No.	BY	DATE	DESCRIPTION	DWG. CHK.	I.W.
	D	S.B.Y.	28/01/21	ROAD AND DRAIN ALIGNMENT SHIFTED	DRG. FILE	DATE
	C	S.B.Y.	19/01/21	DRAIN ALIGNMENT SHIFTED	DESIGN	I.W. 06/20
	B	S.B.Y.	07/12/20	ISSUED FOR TENDER	DRAWN	S.B.Y. 06/20
	A	S.B.Y.	19/04/20	PRELIMINARY ISSUE FOR REVIEW	DES. CHK.	I.W.

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**Projects**

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CLEANAWAY SOLID WASTE

BANKSIA ROAD LANDFILL FACILITY, DARDANUP WA  
PROPOSED SOUTHERN BOUNDARY STORMWATER DRAIN  
SITE PLAN

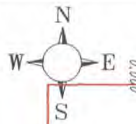
SCALE AS SHOWN

SHEET

DRG No.

REVISION D  
Bank-SK310





SHEET 2 OF 9

SHIRE OF DARDANUP  
PLANNING DEPARTMENT  
TOWN PLANNING SCHEME NO. 3  
**APPROVED**

Murray Connell  
Delegated Officer

9/03/2021

LAYOUT PLAN  
SCALE 1 : 250 (A1)

CAUSEWAY LOCATION TO  
BE IDENTIFIED ON SITE

ROAD ALIGNMENT TO  
DEVIATE AROUND TREES

OVERTAKING AREA  
LOCATION TO BE  
IDENTIFIED ON-SITE

LAYOUT PLAN  
SCALE 1 : 250 (A1)

LAYOUT PLAN  
SCALE 1 : 250 (A1)

LAYOUT PLAN  
SCALE 1 : 250 (A1)

ROAD ALIGNMENT TO  
DEVIATE AROUND TREES

ROAD ALIGNMENT TO  
DEVIATE AROUND TREES

**NOTE:**

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**FOR APPROVAL**

28 JANUARY 2021

5 0 5 10 15 20 25m  
SCALE 1:250 @ A1 SCALE 1:500 @ A3

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PROPOSED SOUTHERN BOUNDARY STORMWATER DRAIN  
CONCEPT LAYOUT - PLAN 1 OF 2

SCALE AS SHOWN

SHEET

REVISION D

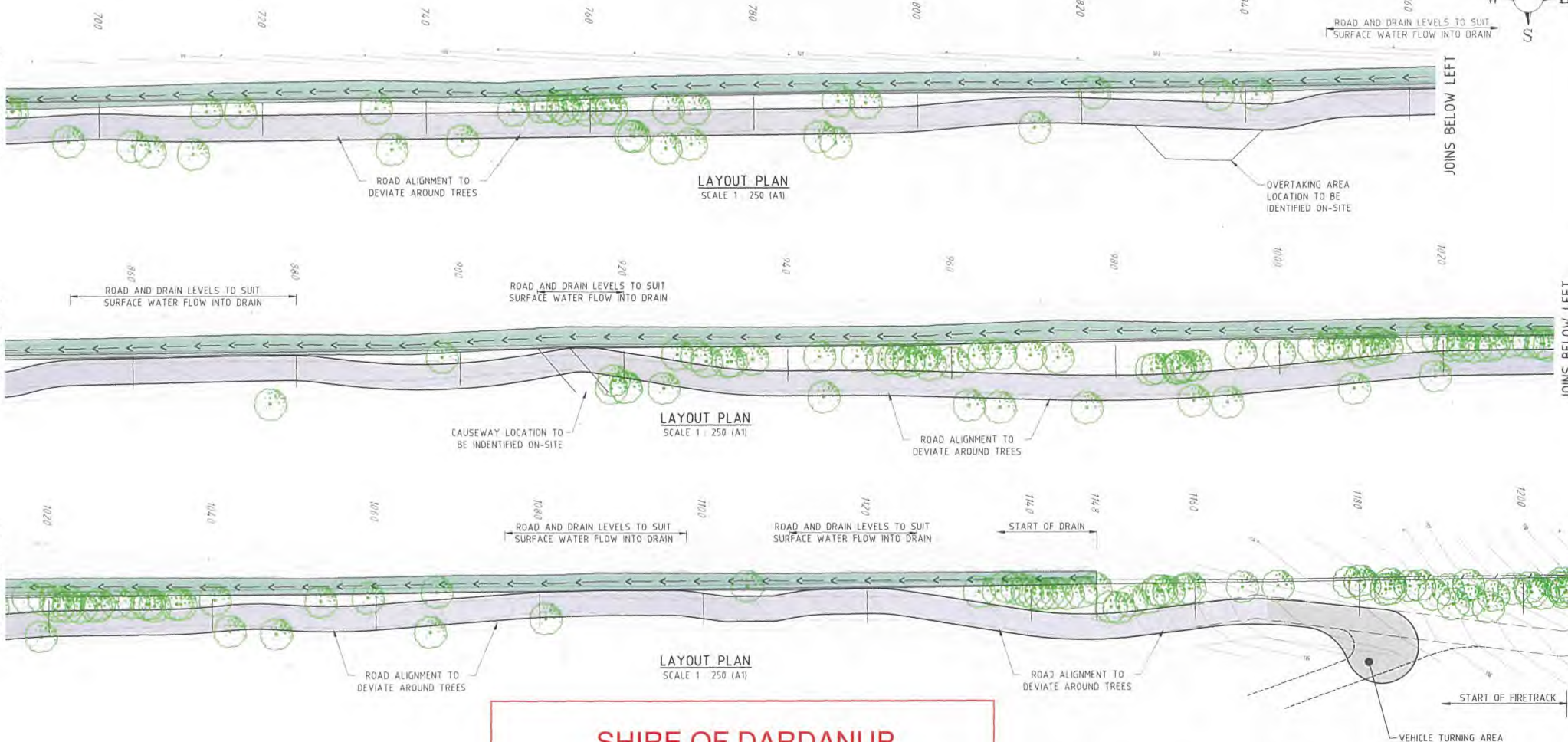
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SHIRE OF DARDANUP  
PLANNING DEPARTMENT  
TOWN PLANNING SCHEME NO. 3

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Delegated Officer

9/03/2021

SHEET 3 OF 9

FOR APPROVAL

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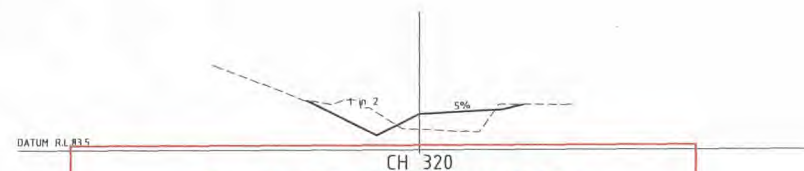
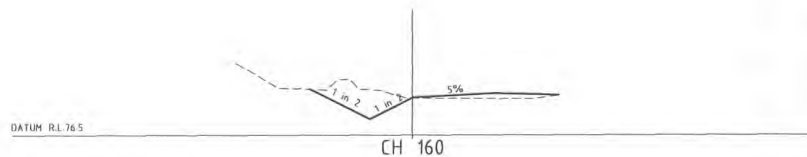
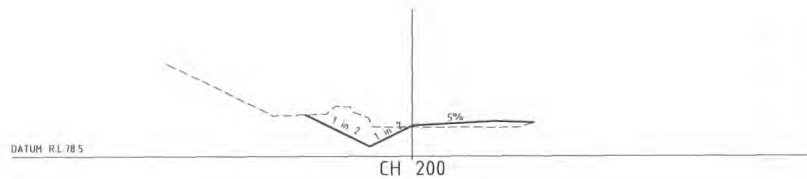
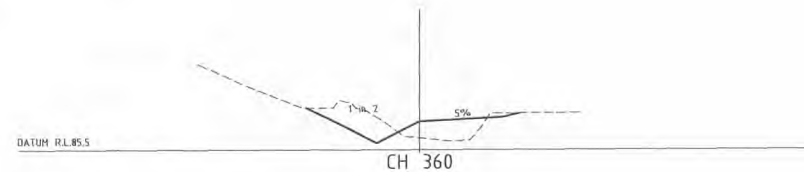
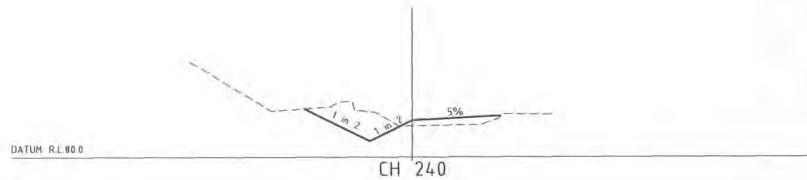
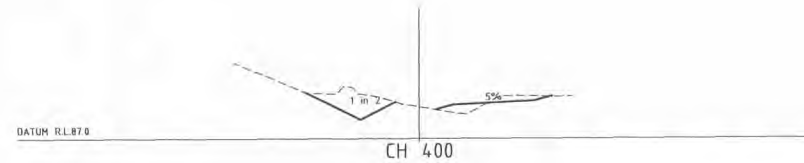
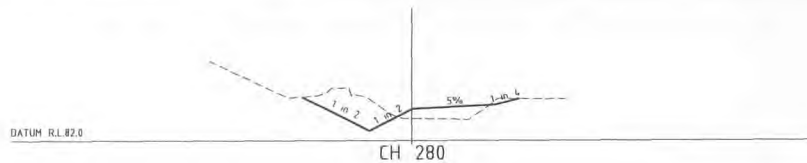
BANKSIA ROAD LANDFILL FACILITY, DARDANUP WA  
PROPOSED SOUTHERN BOUNDARY STORMWATER DRAIN  
CONCEPT LAYOUT - PLAN 2 OF 2

SCALE AS SHOWN

SHEET

REVISION D

DRG No. Bank-SK312



SHIRE OF DARDANUP  
PLANNING DEPARTMENT  
TOWN PLANNING SCHEME NO. 3  
**APPROVED**

SHEET 4 OF 9



SECTIONS  
SCALE 1 : 100 (A1)

Murray Connell  
Delegated Officer

9/03/2021

CLEANAWAY SOLID WASTE

SCALE AS SHOWN

BANKSIA ROAD LANDFILL FACILITY, DARDANUP WA  
PROPOSED SOUTHERN BOUNDARY STORMWATER DRAIN  
CROSS SECTIONS - SHEET 1 OF 4

REVISION D  
DRG No. Bank-SK313

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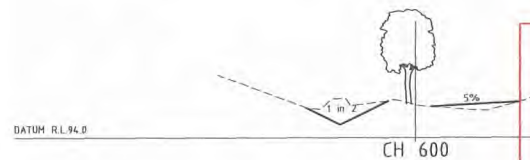
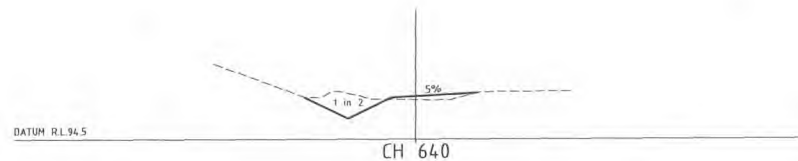
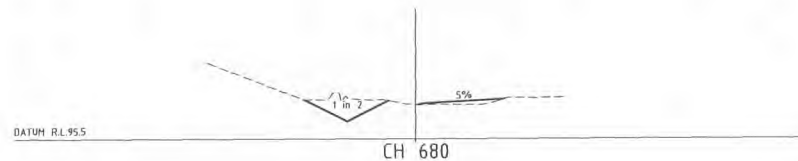
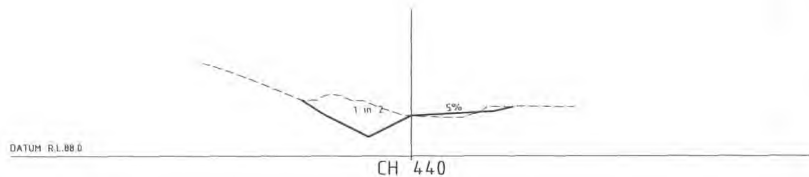
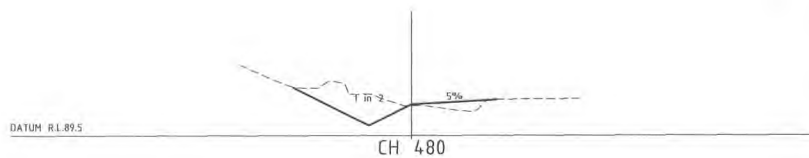
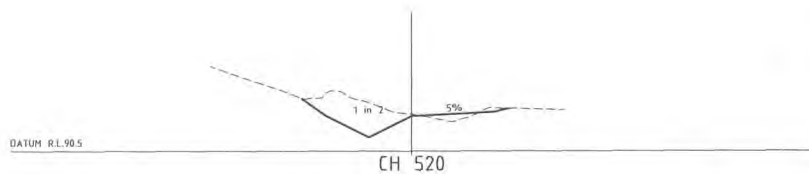
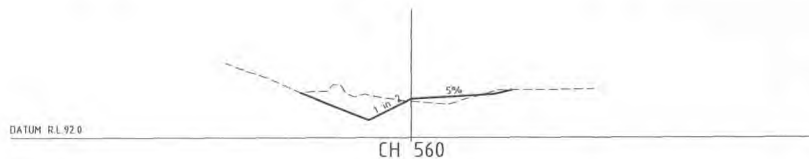
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FOR APPROVAL  
28 JANUARY 2021

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	C	S.B.Y.	19/01/21	DRAIN ALIGNMENT SHIFTED	DESIGN	I.W.	06/20
	B	S.B.Y.	07/12/20	ISSUED FOR TENDER	DRAWN	S.B.Y.	06/20
	A	S.B.Y.	19/06/20	PRELIMINARY ISSUE FOR REVIEW	DES. CHK.	I.W.	
	No.	BY	DATE	DESCRIPTION	DWG. CHK.	I.W.	





SHEET 5 OF 9

SHIRE OF DARDANUP  
PLANNING DEPARTMENT  
TOWN PLANNING SCHEME NO. 3

**APPROVED**

Murray Connell  
Delegated Officer

9/03/2021

SECTIONS  
SCALE 1 : 100 (A1)



FOR APPROVAL

28 JANUARY 2021

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CLEANAWAY SOLID WASTE

BANKSIA ROAD LANDFILL FACILITY, DARDANUP WA  
PROPOSED SOUTHERN BOUNDARY STORMWATER DRAIN  
CROSS SECTIONS - SHEET 2 OF 4

SCALE AS SHOWN

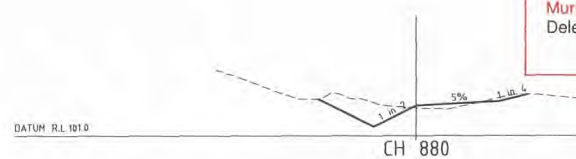
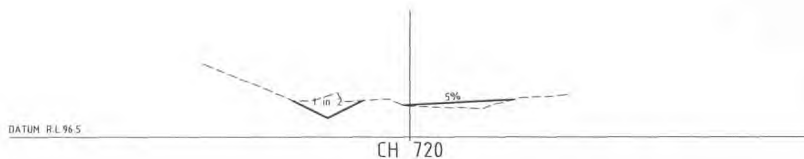
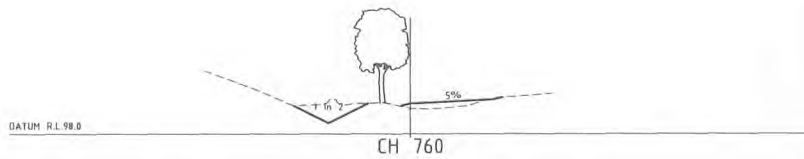
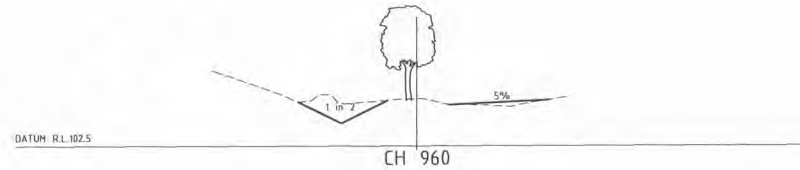
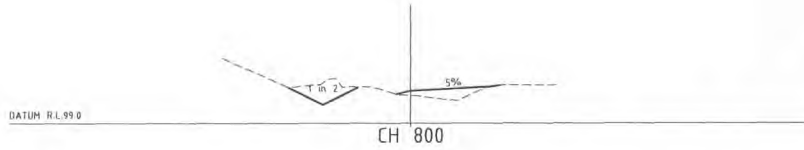
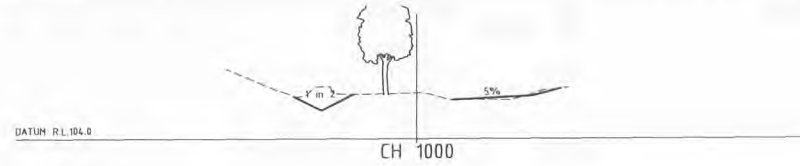
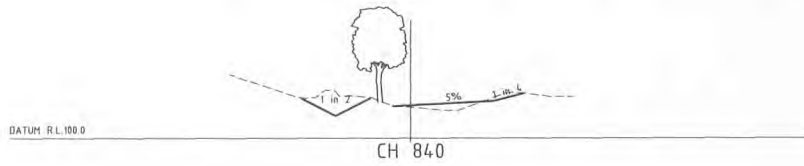
SHEET

REVISION D

DRG No. Bank-SK314

REVISIONS

D	S.B.Y.	DATE	ROAD AND DRAIN ALIGNMENT SHIFTS	DRG. FILE	DATE
C	S.B.Y.	19/01/21	DRAIN ALIGNMENT SHIFTS	DESIGN	I.W. 06/20
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A	S.B.Y.	19/04/20	PRELIMINARY ISSUE FOR REVIEW	DES. CHK.	I.W.
No.	BY	DATE	DESCRIPTION	DWG. CHK.	I.W.



SHIRE OF DARDANUP  
PLANNING DEPARTMENT  
TOWN PLANNING SCHEME NO. 3

**APPROVED**

Murray Connell  
Delegated Officer

9/03/2021

**SHEET 6 OF 9**

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28 JANUARY 2021

SECTIONS  
SCALE 1:100 (A1)

2 0 2 4 6 8 10m  
SCALE 1:100 @ A1 SCALE 1:200 @ A3

REVISIONS

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C	S.B.Y.	19/01/21	ROAD AND DRAIN ALIGNMENT SHIFTED	DESIGN	I.W.
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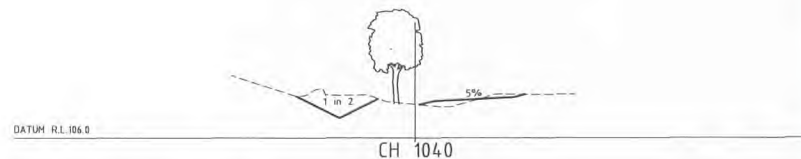
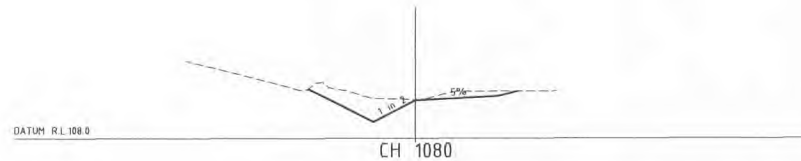
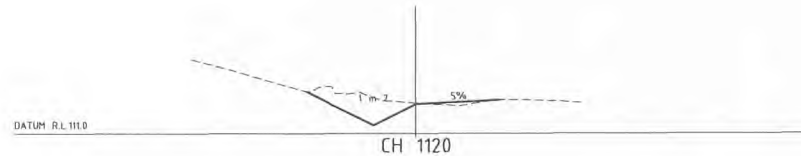
BANKSIA ROAD LANDFILL FACILITY, DARDANUP WA  
PROPOSED SOUTHERN BOUNDARY STORMWATER DRAIN  
CROSS SECTIONS - SHEET 3 OF 4

SCALE AS SHOWN

SHEET

DRG No.

REVISION D  
Bank-SK315



SHIRE OF DARDANUP  
PLANNING DEPARTMENT  
TOWN PLANNING SCHEME NO. 3

**APPROVED**

Murray Connell  
Delegated Officer

9/03/2021

**SHEET 7 OF 9**



SECTIONS  
SCALE 1:100 (A1)

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28 JANUARY 2021

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PROPOSED SOUTHERN BOUNDARY STORMWATER DRAIN  
CROSS SECTIONS - SHEET 4 OF 4

SCALE AS SHOWN

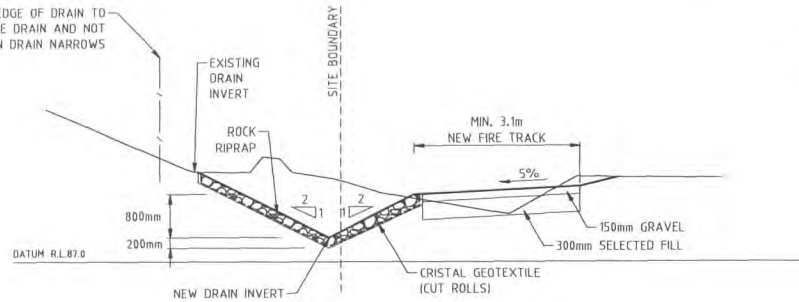
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REVISION D

DRG No. Bank-SK316



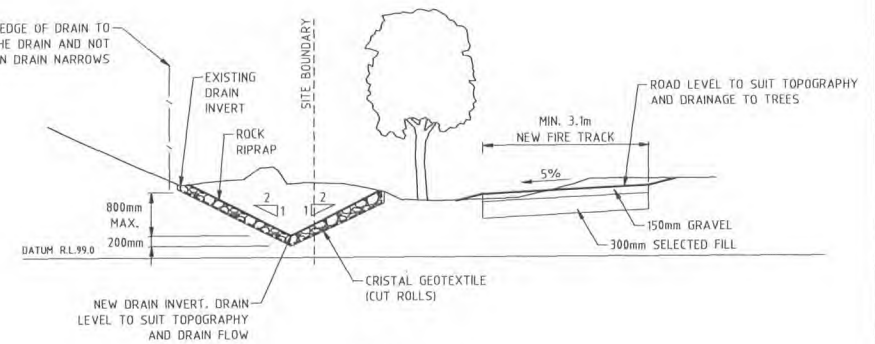
FENCE MIN. 100mm OFF EDGE OF DRAIN TO BE STRAIGHT LINE UP THE DRAIN AND NOT CHANGE ALIGNMENT WHEN DRAIN NARROWS



TYPICAL CROSS SECTION - CH 200

SCALE 1 : 50 (A1)

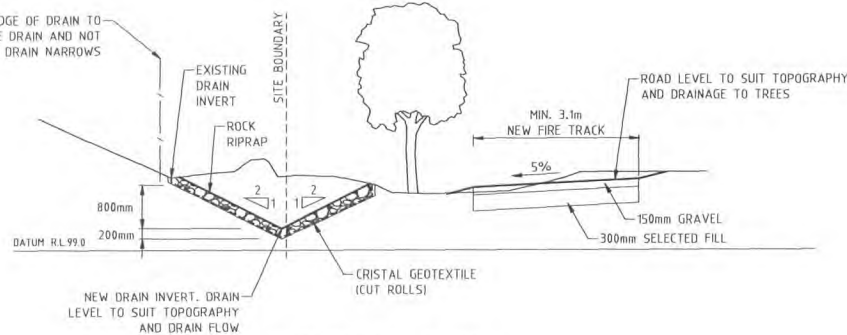
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TYPICAL CROSS SECTION - CH 1000

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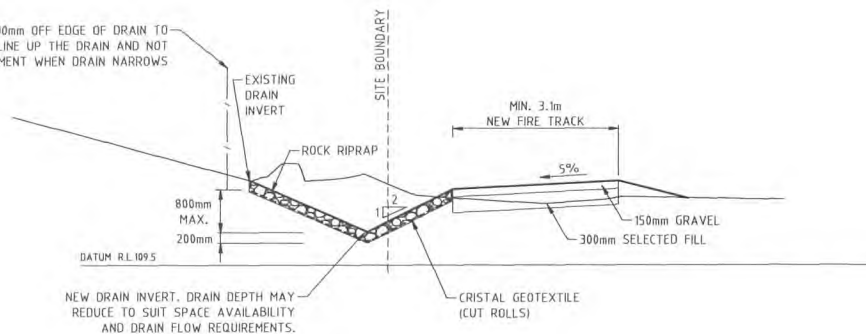
FENCE MIN. 100mm OFF EDGE OF DRAIN TO BE STRAIGHT LINE UP THE DRAIN AND NOT CHANGE ALIGNMENT WHEN DRAIN NARROWS



TYPICAL CROSS SECTION - CH 600

SCALE 1 : 50 (A1)

FENCE MIN. 100mm OFF EDGE OF DRAIN TO BE STRAIGHT LINE UP THE DRAIN AND NOT CHANGE ALIGNMENT WHEN DRAIN NARROWS



TYPICAL CROSS SECTION - CH 800

SCALE 1 : 50 (A1)

SHIRE OF DARDANUP  
PLANNING DEPARTMENT

TOWN PLANNING SCHEME NO. 3

**APPROVED**

Murray Connell  
Delegated Officer

9/03/2021

SHEET 8 OF 9

FOR APPROVAL

28 JANUARY 2021

REVISIONS

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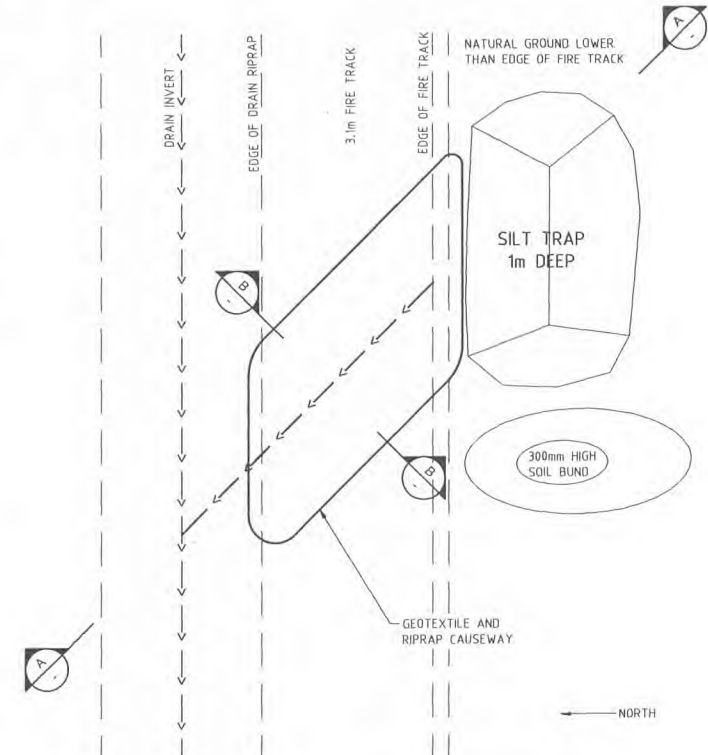
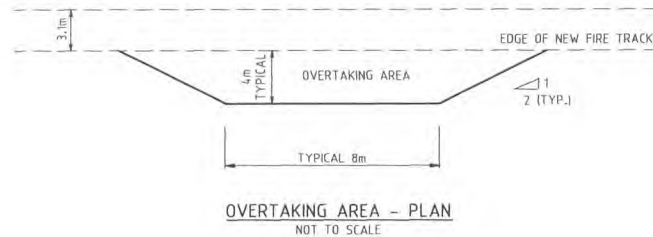
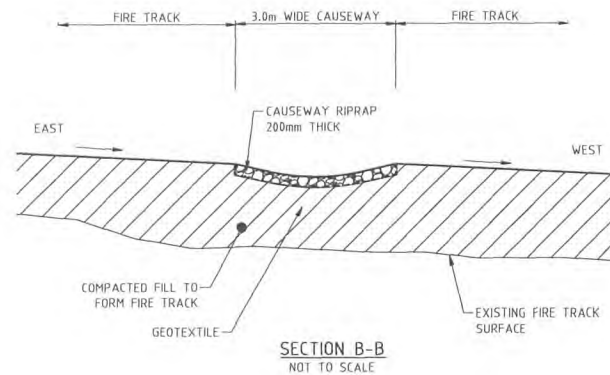
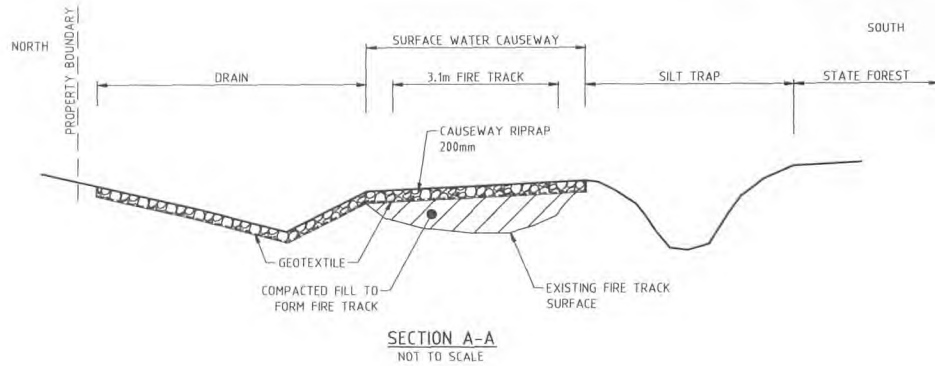
CLEANAWAY SOLID WASTE

SCALE AS SHOWN

BANKSIA ROAD LANDFILL FACILITY, DARDANUP WA  
PROPOSED SOUTHERN BOUNDARY STORMWATER DRAIN  
TYPICAL CROSS SECTIONS

SHEET  
DRG No. Bank-SK317





SURFACE WATER CAUSEWAY OVER  
FIRE TRACK  
NOT TO SCALE

SHEET 9 OF 9

SHIRE OF DARDANUP  
PLANNING DEPARTMENT  
TOWN PLANNING SCHEME NO. 3

**APPROVED**

Murray Connell  
Delegated Officer

9/03/2021

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REVISIONS	D	S.B.Y.	DATE	DESCRIPTION	DRG. FILE	DATE	TECHNICALLY APPROVED:
	D	S.B.Y.	28/01/21	ROAD AND DRAIN ALIGNMENT SHIFTED	DESIGN	I.W.	06/20
	C	S.B.Y.	19/01/21	DRAIN ALIGNMENT SHIFTED	DRAWN	S.B.Y.	06/20
	B	S.B.Y.	07/12/20	ISSUED FOR TENDER	DES. CHK.	I.W.	
	A	S.B.Y.	19/06/20	PRELIMINARY ISSUE FOR REVIEW	DWG. CHK.	I.W.	

**Projects**

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Mobile - 0402 909 291  
Address - 5 Anemba Close Duncraig 6023

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the checked in date and signature are approved

CLEANAWAY SOLID WASTE

BANKSIA ROAD LANDFILL FACILITY, DARDANUP WA  
PROPOSED SOUTHERN BOUNDARY STORMWATER DRAIN  
MISCELLANEOUS DETAILS

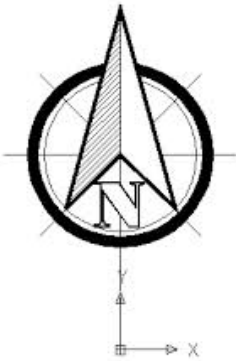
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SHEET	
DRG No.	Bank-SK318

## **Attachment No. 3 – As-Constructed Drawings**

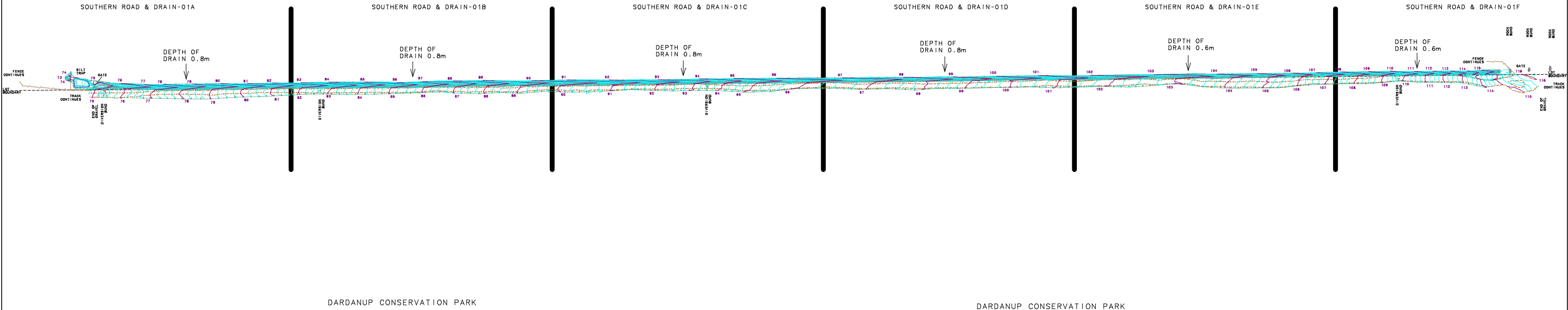
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LEGEND

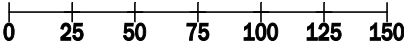
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- EDGE OF ROCK PITCHING
- TOP OF BANK
- BOTTOM OF BANK
- FENCE
- LOT BOUNDARY
- MAJOR CONTOUR ( 1.0m)
- MINOR CONTOUR ( 0.25m)
- RETAINING WALL



LANDFILL













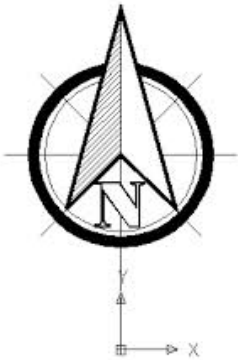
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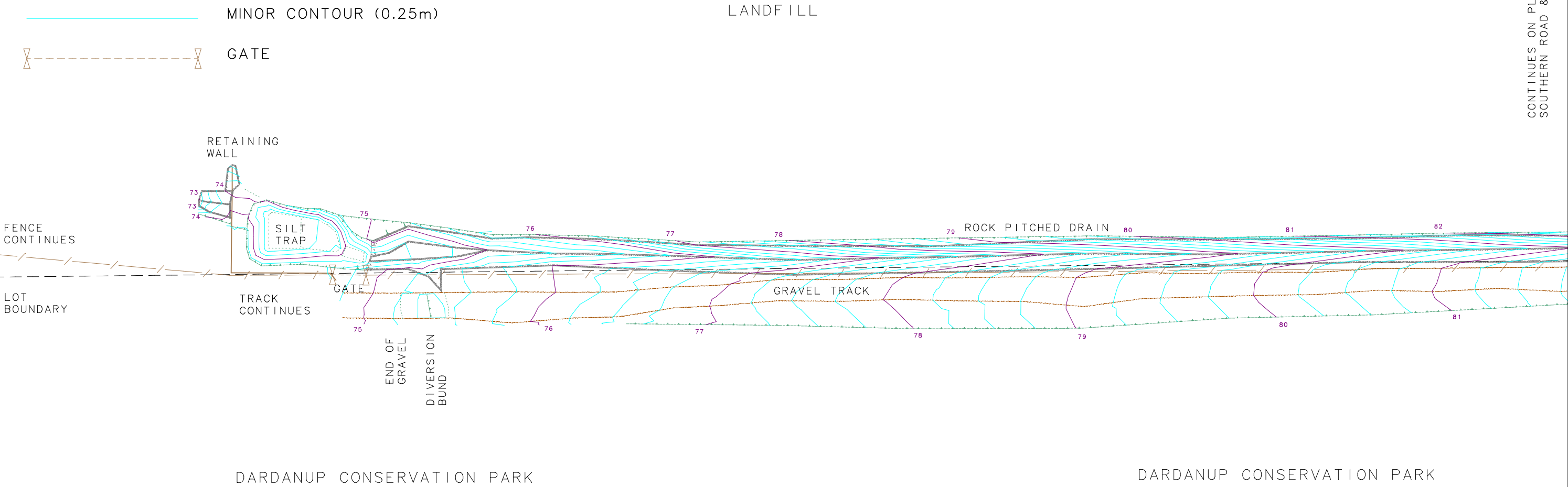
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				Datum	MGA 94 AHD			
	REV	DATE	DETAILS					

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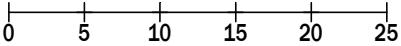
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- EDGE OF ROCK PITCHING
- TOP OF BANK
- BOTTOM OF BANK
- FENCE
- LOT BOUNDARY
- RETAINING WALL
- MAJOR CONTOUR (1.0m)
- MINOR CONTOUR (0.25m)
- GATE




CONTINUES ON PLAN  
SOUTHERN ROAD & DRAIN-01B













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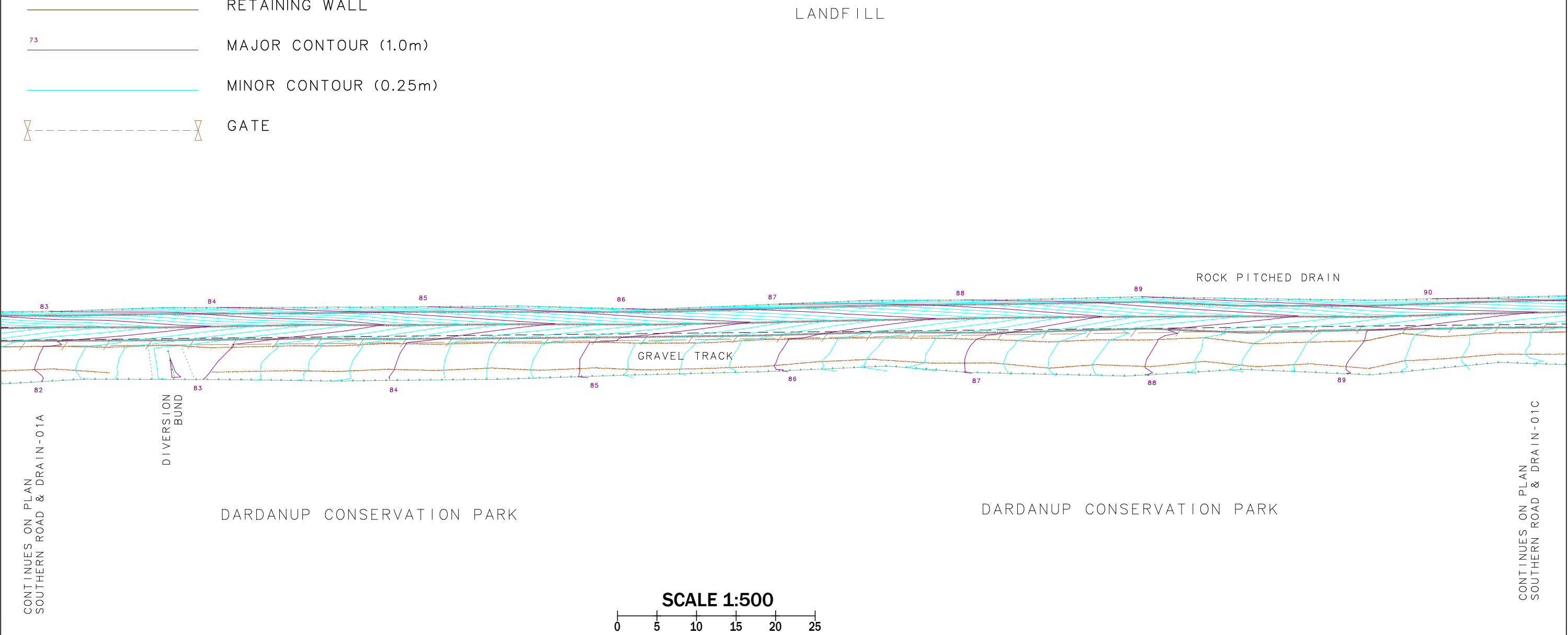
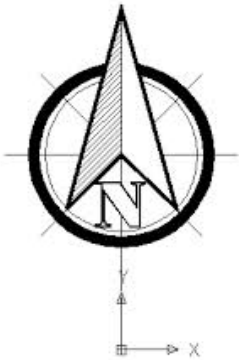



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	A	05/10/21	Original Issue	Datum	MGA 94 AHD			
	REV	DATE	DETAILS					




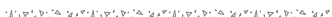








LEGEND

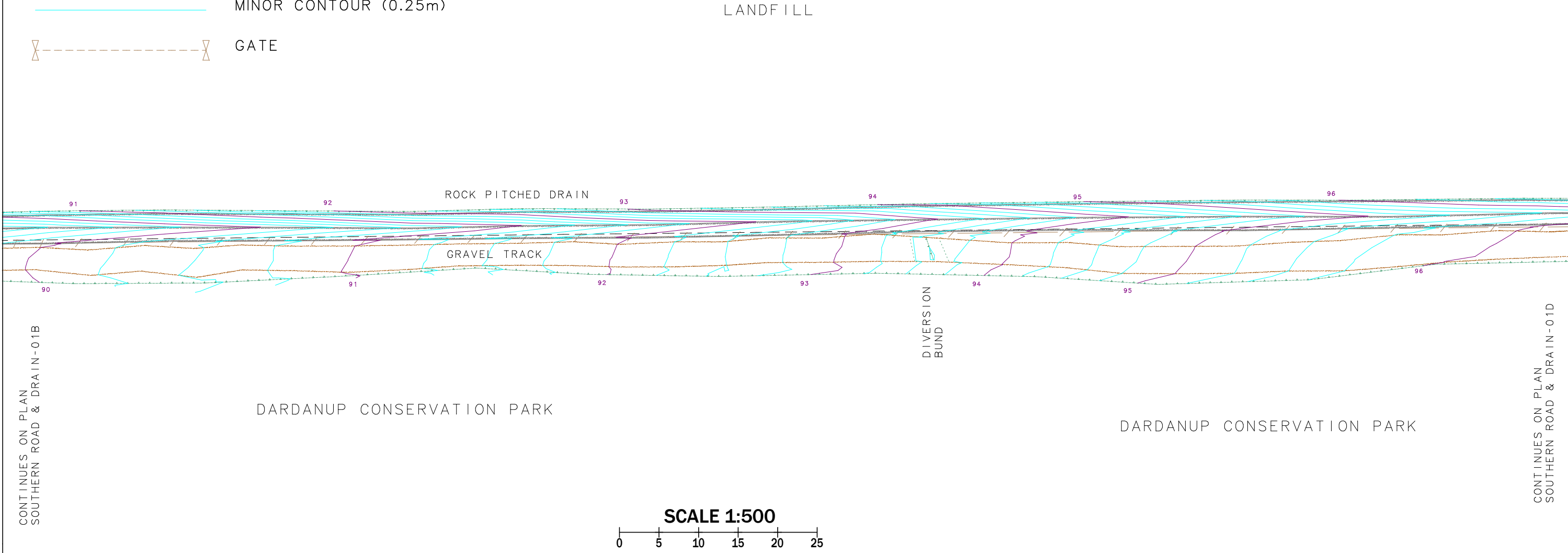
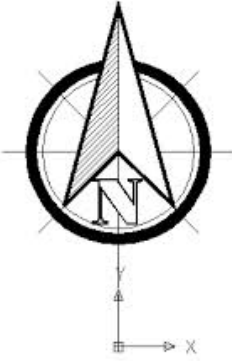
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- EDGE OF ROCK PITCHING
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- BOTTOM OF BANK
- FENCE
- LOT BOUNDARY
- RETAINING WALL
- 73  
MAJOR CONTOUR (1.0m)
- MINOR CONTOUR (0.25m)
- GATE



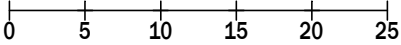
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	A	05/10/21	Original Issue	Datum	MGA 94 AHD			
	REV	DATE	DETAILS					


LEGEND

- EDGE OF GRAVEL
- EDGE OF ROCK PITCHING
- TOP OF BANK
- BOTTOM OF BANK
- FENCE
- LOT BOUNDARY
- RETAINING WALL
- 73  
MAJOR CONTOUR (1.0m)
- MINOR CONTOUR (0.25m)
- GATE













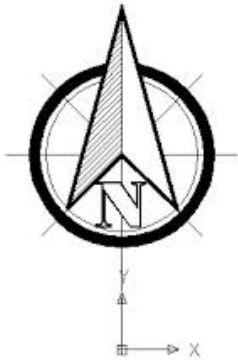
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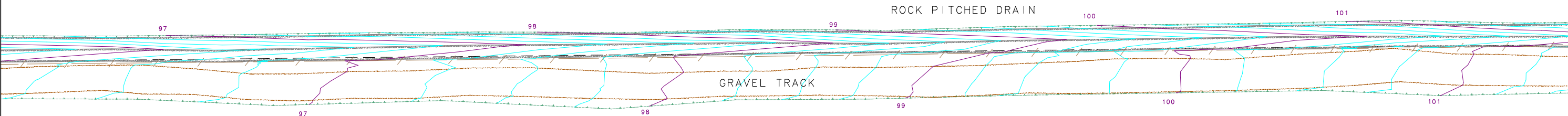
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	A	05/10/21	Original Issue	Datum	MGA 94 AHD			
	REV	DATE	DETAILS					

LEGEND

- EDGE OF GRAVEL
- EDGE OF ROCK PITCHING
- TOP OF BANK
- BOTTOM OF BANK
- FENCE
- LOT BOUNDARY
- RETAINING WALL
- 73  
MAJOR CONTOUR (1.0m)
- MINOR CONTOUR (0.25m)
- GATE



LANDFILL



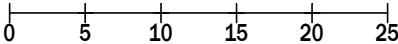
CONTINUES ON PLAN  
SOUTHERN ROAD & DRAIN-01C


CONTINUES ON PLAN  
SOUTHERN ROAD & DRAIN-01E

DARDANUP CONSERVATION PARK











DARDANUP CONSERVATION PARK

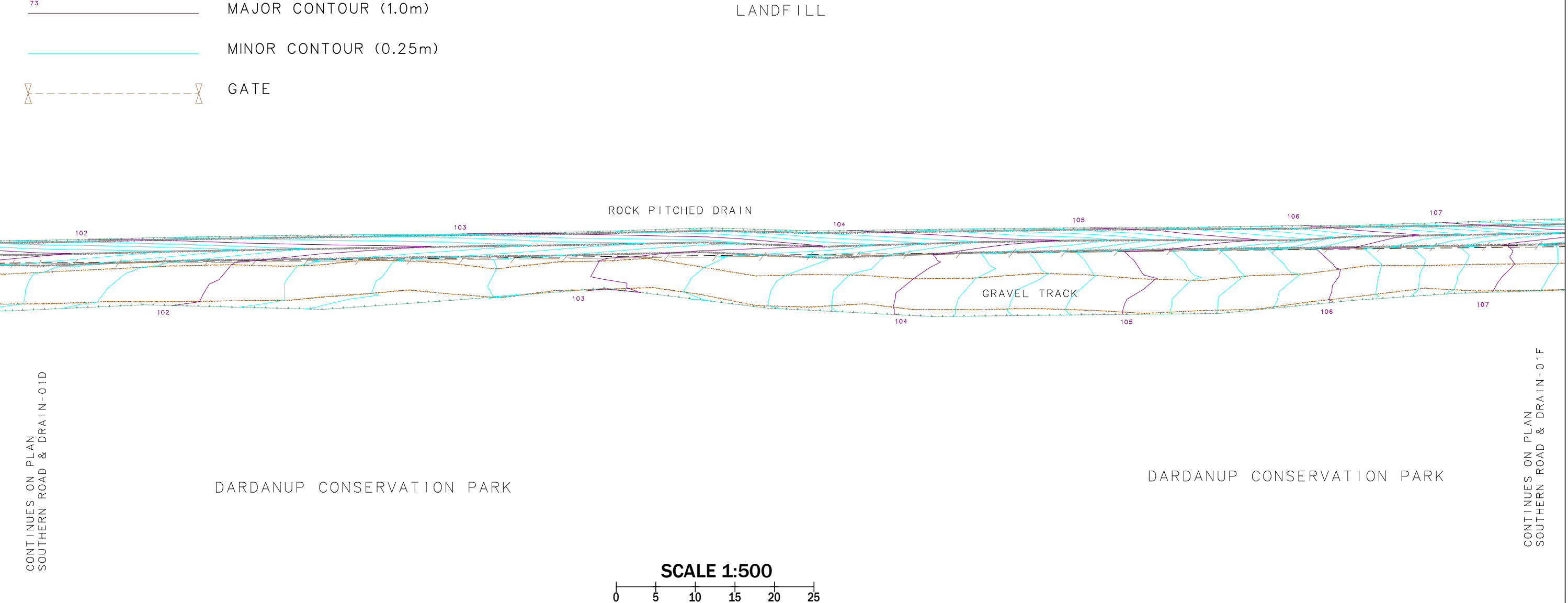
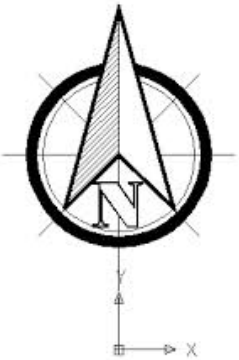
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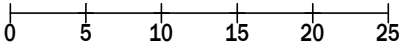
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			Checked	JS 05/10/21	Client	CLEANAWAY	
	A	05/10/21	Original Issue				
	REV	DATE	DETAILS	Datum	MGA 94	AHD	


LEGEND

- EDGE OF GRAVEL
- EDGE OF ROCK PITCHING
- TOP OF BANK
- BOTTOM OF BANK
- FENCE
- LOT BOUNDARY
- RETAINING WALL
- 73MAJOR CONTOUR (1.0m)
- MINOR CONTOUR (0.25m)
- GATE













SCALE 1:500

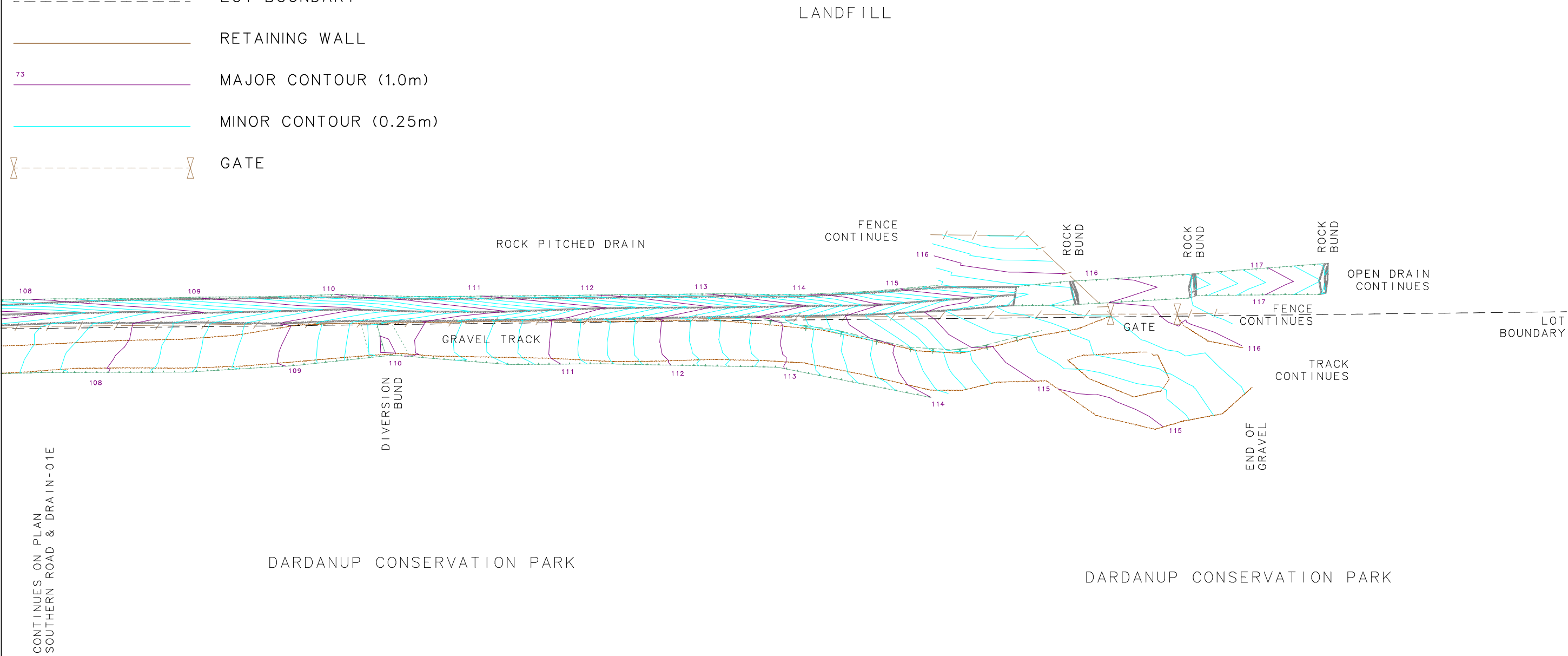
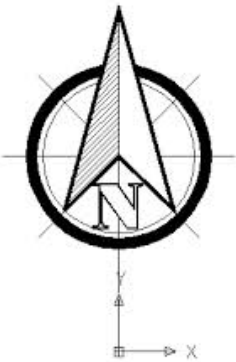


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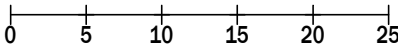



LEGEND

- EDGE OF GRAVEL
- EDGE OF ROCK PITCHING
- TOP OF BANK
- BOTTOM OF BANK
- FENCE
- LOT BOUNDARY
- RETAINING WALL
- 73MAJOR CONTOUR (1.0m)
- MINOR CONTOUR (0.25m)
- GATE



SCALE 1:500



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				Checked	JS 05/10/21	Client  <b>CLEANAWAY</b>		
	A	05/10/21	Original Issue	Datum	MGA 94 AHD			
	REV	DATE	DETAILS					

**Attachment No. 4 – Banksia Road Landfill Vegetation  
Screening – Post Activity Report**

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## Banksia Rd Landfill Vegetation Screening – Cleanaway

### Post Activity Report

<b>Activity Date(s):</b>	18/6/21 – 17/9/21	<b>Conducted By:</b>	Matt Blunt
<b>Site Reference:</b>	Banksia Rd Landfill	<b>Reviewed By:</b>	Alex Johnston
<b>Area (ha):</b>	NA		

### Site Condition

- Vegetation Screening works had been completed by others over the past few years;
- Soils were modified and consisted of a sandy clay profile. Soils were compact in several of the screening areas; and
- Site divided into management areas (SE Area, Infill Zone, Leachate Ponds and SW Area).

### Action Taken

Date(s):	Activity	Description
23/7/21 – 26/7/21	Re-planting seedlings + new seedlings + transplanting	<p>Seedlings that had previously been planted had been pushed out of the holes from the swelling of TerraCottem. All the vegetation buffers were inspected and plants re-installed. A total of 120 seedlings was installed into the Southeastern buffer.</p> <p>A selection of native specimens was removed from existing bushland that is to be cleared. A total of 20 plants were removed of various species and planted in clumps in the Leachate pond area. Prior to planting the hole was augered and TerraCottem mixed in with spoil.</p>
16/8/21	Seedling planting + weed control + mature trees	<p>A total of 550 seedlings was installed along the Southwestern vegetation buffer fenceline. An additional 20 x 140mm pots were installed along the Leachate ponds in various locations. A total of 4 x mature trees were installed at the southeastern vegetation buffer.</p> <p>Additional broadleaf weed control was completed in southwestern buffer targeting Capeweed.</p>

### Additional Comments

- Some of the seedlings planted previously had been popped out due to the swelling of the TerraCottem crystals. This is likely due to the soil having some clay in it resulting in the soil profile holding on to moisture for longer, too much TerraCottem being applied into each hole and the high.
- Out of the 20 specimens removed from the remnant bush to be cleared only 5 survived. These have been tree guarded.

### Prior Works History

Date(s):	Activity	Description
15/6 – 16/6/21	Weed control	Weed control (chemical) was undertaken on the Leachate Pond, the South East Area and Infill Zone.
16/6 – 18/6/21	Seedling planting	A total of 4,500 tubestock were installed across three areas (Leachate pond, SE Area and Infill Area). Prior to each seedling being installed a hole was augered and 5g of TerraCottem was thoroughly mixed into the soil before the seedling was installed.  Active installed approx. 200 seedlings on the 16/6/21.



## Summary

Below is a summary of the works completed in each of the planting zones as per the approved Southern Boundary Native Vegetation Buffer Plan (Ver.3).

### **Zone 4d (South West) Planting Area**

Pre-planting weed control was undertaken along the entire 20m wide buffer in this zone prior to the area being planted. A total of 1,850 seedlings were planted along this buffer, spaced at a density of approx. 1 plants / m<sup>2</sup>. The species mix comprised of a mix of trees, shrubs and groundcovers, with a total of 20 species were planted. The extent of the planting in this zone went further than required in the Plan, particularly at the western end.



**Banksia Rd Landfill – SW Area Planting– August 2021**



**Banksia Rd Landfill – SW Area Planting– August 2021**



#### **Zone 4b (Leachate) Planting Area**

Pre-planting weed control was undertaken along the entire Leachate Pond batter prior to planting occurring. A total of 2,020 plants were installed and comprised of a mix of tubestock and 140mm pots. The species planted were all groundcover and herb species and were planted at a density of approx. 1 plant / m<sup>2</sup>. A total of 7 species were planted. As per the Native Vegetation Buffer Plan, planting occurred along the first two leachate ponds starting from the western end. Additional planting was undertaken at the eastern end of the leachate ponds also.



**Banksia Rd Landfill – Leachate Planting Area– July 2021**



### **Zone 4c Planting Area**

Prior to any infill planting occurring in Zone 4c, weed control was completed along the entire batter. A total of 1,000 seedlings consisting of shrubs and groundcovers were planted in open areas to enhance the vegetation screening already present in the 20m wide buffer. At the eastern end of this zone, 4 x mature trees were installed to provide enhanced screening and to assess whether utilising more advanced stock is more beneficial than tubestock when it comes to establishing buffers. A total of 17 species were used in across this zone.



**Banksia Rd Landfill – Zone 4c Infill Planting Area– July 2021**





**Banksia Rd Landfill – Zone 4c Infill Planting Area– July 2021**



**Banksia Rd Landfill – Zone 4c Mature Tree Planting– August 2021**

## Recommendations

The following activities are recommended to ensure the successful establishment of the seedlings across the entire Southern Boundary Buffer:

- Ongoing weed control in spring, summer and autumn to keep weed competition to a minimum and allow the seedlings to establish;
- Ongoing inspections and maintenance of the temporary reticulation system that has been installed along the buffer;
- Undertake regular informal monitoring of the seedlings and the buffer in general and identify if there are any remedial actions necessary; and
- Formal monitoring in Spring and Autumn to measure the survival of the seedlings and whether remedial planting will be required.

## Seedling Species and Allocations



**Trees and Shrubs**

Species	Common Name	Height Range (m)	Flower Colour	Suitability for Zones							TOTAL
				South West		Leachate		Infill	South East		
				Original	Additional	Original	140mm pots		Original	Mature Trees	
Acacia lasiocarpa		0.15-1m	Yellow			100					100
Acacia pulchella	Prickly Moses	upto 1m	Yellow						50		50
Acacia saligna	Golden Wreath Wattle	1.5-6m	Yellow						50		50
Agonis flexuosa	Peppermint	upto 4m	White	40	20						60
Banksia attenuata	Slender Banksia	upto 10m	Yellow	40	20				20		80
Banksia grandis	Bull Banksia	upto 10m	Yellow / Green	40	20				20		80
Beaufortia squarrosa		0.5-3m	Orange / Red	80				80	20		180
Calothamnus quadrifidus	One-sided Bottlebrush	0.15-1m	Red	80	70			100	80		330
Corymbia calophylla	Marri	40-60m	White	80					40	2	122
Eremaea pauciflora		0.4-4m	Orange / Red	80	40			80	80		280
Eucalyptus marginata	Jarrah	upto 40m	White / Cream	40					20	2	62
Grevillea vestita		0.9-2m	White	60				80	50		190
Hakea lissocarpa		0.15-1m	White	80	50			50	80		260
Hakea ruscifolia	Candle Hakea	0.5-3m	White					50	50		100
Hakea undulata	Way Leaf Hakea	1-2m	White	80	50						130
Jacksonia furcellata		0.4-2m	Orange / Red	80	40			80	80		280
Kunzea glabrescens	Spearwood	1.5-4m	Yellow	80	60			50	50		240
Lechenaultia biloba	Blue Lechenaultia	upto 10m	Blue	80				50	50		180
Melaleuca thymoides		0.5-2m	Yellow	80				50	80		210
Melaleuca viminea	Mohan	upto 5m	White	80	60			50			190
Mirbelia dilatata	Honey Leaved Mirbelia	0.5-3m	Pink / Purple					80	80		160
SUB-TOTAL				1,100	430	100	0	800	900	4	3,334

**Native Grasses and Forbs**

Native Grasses and Forbs											
Species	Common Name	Height Range (m)	Flower Colour	Suitability for Zones							TOTAL
				Zone 4D		Zone 4B		Zone 4C	South East		
Conostylis aculeata	Prickly conostylis	upto 0.5m	Yellow			350			125		475
Ficinia nodosa	Club Rush	upto 1m	Brown / Cream			300					300
Hemiandra pungens	Snakebush	0.3-1m	Blue / Purple	60		350	10	50	50		520
Hypocalymma angustifolium	White Myrtle	upto 1.5m	White / Cream / Pink	60	60	300					420
Kennedia prostrata	Scarlet Runner	Groundcover	White	60	60	200		100	100		520
Patersonia occidentalis	Purple Flags	upto 1m	Purple	20		400	10	50	125		605
SUB-TOTAL				200	120	1,900	20	200	400	0	2,840

<b>OVERALL TOTAL</b>	<b>1,300</b>	<b>550</b>	<b>2,000</b>	<b>20</b>	<b>1,000</b>	<b>1,300</b>	<b>4</b>	<b>6,174</b>
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\*Additional species recommended by Tranen



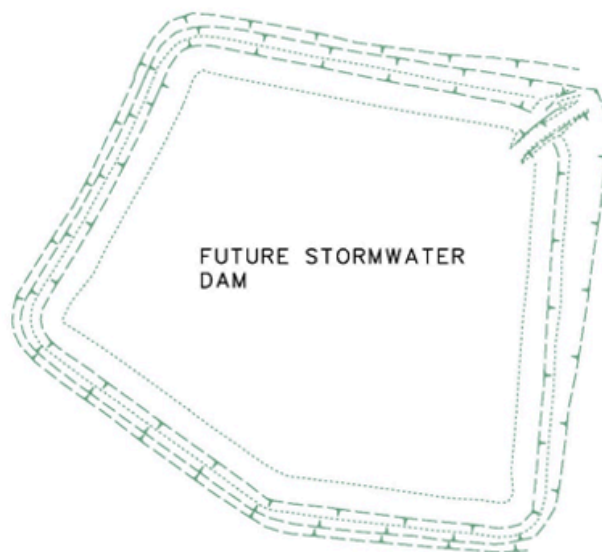
## **Attachment No. 5 – Landscaping Plan Buffer Zones Mark-up**

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## LANDSCAPING PLAN BUFFER ZONES MARK-UP

TOTAL SURFACE AREA  
4,563 m<sup>2</sup>



FUTURE STORMWATER  
DAM



LEACHATE  
DAMS

BATTER  
5.5M

BATTER  
4.0M

BATTER  
3.5M

ZONE 4D

ZONE 4B

BATTER  
3.5M

BATTER SURFACE AREA  
2,972 m<sup>2</sup>

BATTER  
2.5M

BATTER  
2.5M

BATTER  
11.5M

BATTER SURFACE AREA  
1,458 m<sup>2</sup>

BATTER  
7.5M

BATTER SURFACE  
AREA 133 m<sup>2</sup>

BATTER  
8M

ADDITIONAL  
PLANTING ZONE

START OF  
ZONE 4C

SCALE 1:2000



A	11/05/16	Original Issue
REV	DATE	DETAILS

Surveyed	GR 11/05/16	Drawing	SOUTHERN BATTER REHAB-01A
Drawn	GR 11/05/16	Cad File	SOUTHERN BATTER REHAB-01A.dwg
Checked	GR 11/05/16	Client	CLEANAWAY
Datum	MGA 94 AHD		

Description	SOUTHERN BATTER SURFACE AREA BANKSIA ROAD LANDFILL DARDANUP
-------------	---

**12.2.2**      *Title: RDAP Development Application for Landfill Waste Cells – Lot 2 Banksia Road, Crooked Brook – Section 31 Reconsideration Request – State Administrative Tribunal*

<b>Reporting Department</b>	<i>Sustainable Development Directorate</i>
<b>Responsible Officer</b>	<i>Mr Ashwin Nair – Director Sustainable Development</i>
<b>Reporting Officer</b>	<i>Mr Ashwin Nair – Direction Sustainable Development</i>
	<i>Altus Planning</i>
<b>Applicant</b>	<i>Harley Dykstra Pty Ltd on behalf of Cleanaway Solid Waste Pty Ltd</i>
<b>Landowner</b>	<i>J&amp;P Corporation Pty Ltd.</i>
<b>Legislation</b>	<i>Planning and Development Act 2005</i>
<b>Council Role</b>	<i>Quasi-Judicial.</i>
<b>Voting Requirement</b>	<i>Simple Majority.</i>
	<i>Appendix ORD: 12.2.2A – Previous Responsible Authority Report</i>
	<i>Appendix ORD: 12.2.2B – RDAP Determination Notice and Plans</i>
	<i>Appendix ORD: 12.2.2C – Applicant’s Additional Information</i>
	<i>Appendix ORD: 12.2.2D – Risk Assessment Tool</i>
<b>Attachments</b>	<i>Appendix ORD: 12.2.2E – Draft Responsible Authority Report</i>

**DECLARATION OF INTEREST**

Cr E P Lilly declared an Impartiality Interest in this item.  
Please refer to Part 11 ‘Declaration of Interest’ for full details.

**Overview**

The purpose of this report is for Council to consider a section 31 request for reconsideration received from the State Administrative Tribunal (SAT) regarding the development approval granted by the Regional Development Assessment Panel (RDAP) on 9<sup>th</sup> February 2024 in relation to the construction of three (3) new landfill waste cells (Cells 9, 10 and 12A) at the existing Cleanaway landfill facility located on Lot 2 Banksia Road, Crooked Brook. More specifically, this report seeks Council’s endorsement of a Responsible Authority Report (RAR) which recommends varying the previous RDAP approval by modifying Condition 2, 4 and 10 in response to the Applicant’s request.

The RDAP will replace Council as the decision-making authority for the application in accordance with the *Planning and Development (Development Assessment Panels) Regulations 2011*. The report is presented to Council to consider the RAR to the RDAP, consistent with the established delegations.

It has been determined that the Applicant’s request to modify Conditions 2, 4 and 10 of the previous RDAP approval has merit and as a result, the RAR (Appendix ORD: 12.2.2E) recommends that those conditions be modified as per the Applicant’s request, albeit with part of Condition 10 being retained.

**OFFICER RECOMMENDED RESOLUTION “A”**

**THAT Council supports the Officer’s Responsible Authority Report and endorses the following recommendation:**

1. That the Regional Development Assessment Panel, pursuant to section 31 of the *State Administrative Tribunal Act 2004* in respect of SAT application DR 241 of 2021, resolves to:

- a) Reconsider its decision dated 9<sup>th</sup> February 2024 and VARY its decision for DAP Application reference DAP/21/02063 and accompanying in accordance with Clause 68 of Schedule 2 (Deemed Provisions) of the *Planning and Development (Local Planning Schemes) Regulations 2015* and the provisions of the Shire of Dardanup Local Planning Scheme No. 3 as follows:

- i) Approving the updated landscaping plan, being *Landscaping plan dated 31/01/25 (Rev 9) prepared by Tonkin*, replacing the pre-existing version noted in the last bullet point of Condition 2, being *Landscaping plan dated 29/08/22 (Rev 7) prepared by Tonkin*.

- ii) Amending Condition 4 to delete the second sentence which reads *"Internal circulation of all vehicles must not encroach on the 20m landscaped boundary interface of the property"*.

The amended condition would therefore read:

*"Access to and egress from the site for all heavy haulage vehicles associated with the approved landfill cells and related works are restricted to using the sealed road north of Lot 2 Banksia Road."*

- iii) Amending Condition 10 to remove the requirement for annual reporting with respect to items (a) through to (d).

The amended condition would therefore read:

*"The operator is required to submit an annual "Progress Report" detailing outcomes of monitoring of planted vegetation buffers over the previous 12-month period."*

OR

#### ALTERNATIVE OFFICER RECOMMENDATION "B"

THAT Council does not support the Officer's Responsible Authority Report and endorses the following recommendation:

1. That the Regional Development Assessment Panel, pursuant to section 31 of the *State Administrative Tribunal Act 2004* in respect of SAT application DR 241 of 2021, resolves to:

- a) Not reconsider its decision dated 9<sup>th</sup> February 2024 and AFFIRM its decision for DAP Application reference DAP/21/02063 and accompanying in accordance with Clause 68 of Schedule 2 (Deemed Provisions) of the *Planning and Development (Local Planning Schemes) Regulations 2015* and the provisions of the Shire of Dardanup Local Planning Scheme No. 3 as follows:



- i) Refuses the updated landscaping plan, being *Landscaping plan dated 31/01/25 (Rev 9) prepared by Tonkin*, replacing the pre-existing version noted in the last bullet point of Condition 2, being *Landscaping plan dated 29/08/22 (Rev 7) prepared by Tonkin as infrastructure located within the 20m landscape buffer of the Local Development Plan will erode the integrity of the Local Development Plan which has been prepared with cumulative measures to reduce the amenity impacts resulting from the development.*
- ii) Refuses to amend Condition 4 to delete the second sentence which reads *“Internal circulation of all vehicles must not encroach on the 20m landscaped boundary interface of the property” as it will erode the integrity of the Local development Plan and will result in amenity impacts associated with visual, litter and dust impacts from the development.*
- iii) Refuses to delete Condition 10 as it allows the Shire of Dardanup to regulate compliance to ensure the development does not result in amenity impacts within the locality.

No Change. **OR:**

As per Local Government (Administration) Regulations 1996 11(da) Council records the following reasons for amending the Officer Recommended Resolution:

## **Background**

The subject site is located approximately 4km southeast of the Dardanup townsite and abuts the Dardanup Conservation Park to the east and south. To the immediate north, the land contains the Shire of Dardanup waste transfer station, green waste facility and the Water Corporation's Dardanup Wastewater Treatment Plant. Beyond the immediate site the landscape consists of predominantly rural farmland with the closest residence being some 500m from the subject site's boundary.

The site currently operates a waste landfill facility that was originally given approval from the (then) Minister for Planning in 1999 and is subject to a Department of Water and Environmental Regulation (**DWER**) licence issued under Part V of the *Environmental Protection Act 1986 (EP Act)*. This licence allows for the disposal of 353,000 tonnes of liquid waste per annum and 350,000 tonnes of Class II or Class III putrescible waste.

The site currently contains a weigh bridge, office, nine waste cells, two stormwater ponds, four leachate ponds, two tailings storage facilities, a portion of gravel extraction and internal sealed and unsealed access road. Waste cells are developed in stages as needed, depending on the remaining capacity of existing cells.

Access is via Banksia Road which is sealed only from the northern boundary of the site heading north. Current development approval conditions restrict access to the site only from the northern sealed portion of Banksia Road and prohibits heavy vehicle access to the site from the unsealed southern section.

- *History of Application*

The original RDAP development application for the three new waste cells was lodged with the Shire of Dardanup on 17<sup>th</sup> August 2021.

Prior to this, in April 2021 the proponent self-referred this application to the Environmental Protection Authority (**EPA**). Pursuant to section 39A(1) of the EP Act, in August 2021 the EPA decided to assess the proposal. The level of assessment was 'Referral Information with Additional Information required under section 40(2)(a) of the Environmental Protection Act 1986'. The EPA required the following additional information be provided:

- Hydrogeological assessment and water management plan;
- Visual impact assessment;
- Greenhouse gas emission estimates;
- Air Quality Impact Assessment for Odour and particulates; and
- Geotechnical stability of cell construction.

As the decision-making authority, the RDAP was restricted from making a decision (under section 41 of the EP Act) on this proposal which would cause or allow the proposal to be implemented, until the EPA had concluded its assessment.

On 5<sup>th</sup> October 2023, the EPA's assessment report on the application was published (EPA Report 1747). The report recommends the proposal may be implemented subject to appropriate conditions. No appeals were lodged against the EPA's recommendation through the Office of the Appeals Convenor, and Ministerial Statement 1213 reflecting the recommended conditions of EPA Report 1747 was ultimately published on 21<sup>st</sup> November 2023.

Concurrently, a Local Development Plan (**LDP**) applicable to the subject site was prepared and approved by Council in May 2021. The LDP was subsequently amended by order of the SAT made in October 2022.

- *Application to the State Administrative Tribunal*

In accordance with the required timeframes for deciding an application for development approval under the *Planning and Development (Local Planning Schemes) Regulations 2015*, a decision on the original application was to be made by the RDAP by 27<sup>th</sup> November 2021.

The application was assessed by Shire officers, an RAR was prepared and presented to Council on 27<sup>th</sup> October 2021. However, due to the RDAP's inability to determine the application (under section 41 of the EP Act), the application was never put forward for consideration by the RDAP.

In anticipation of the development application being deemed refused, the Applicant lodged an application seeking review of the RDAP's deemed refusal of the application with the SAT on 5<sup>th</sup> November 2021.

Following the release of Ministerial Statement 1213 on 21<sup>st</sup> November 2023, and a direction hearing was held on 8<sup>th</sup> December 2023, the SAT made orders inviting the decision-maker, under section 31 of the *State Administrative Tribunal Act 2004 (SAT Act)* to reconsider its decision.

A RAR was prepared and presented to Council on 31<sup>st</sup> January 2024 (Appendix ORD: 12.2.2A) and the RDAP subsequently resolved to set aside the previous decision (deemed refusal) and substitute it with a new decision for approval, subject to twelve (12) conditions (Appendix ORD: 12.2.2B).

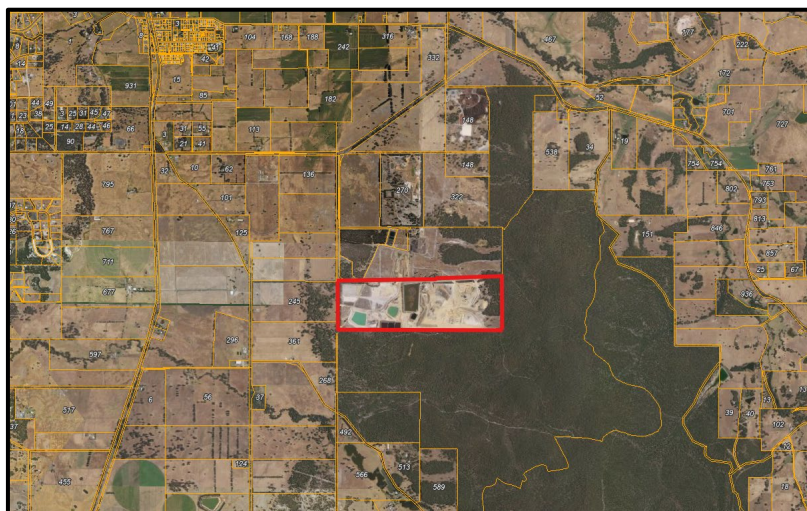
On 22<sup>nd</sup> February 2024, the Applicant filed notice that it was dissatisfied with the determination and disputed Conditions 4, 5, 10, 11 and 12 of the approval.

The management plans required under Conditions 5, 11 and 12 were subsequently addressed with the Shire, which resolved the Applicant's dispute regarding those conditions.

The Applicant subsequently requested Shire officers to accept a replacement landscaping plan for Condition 2, which Shire officers declined on 18<sup>th</sup> September 2024 on the basis that a formal application was deemed necessary to amend the condition, so that the merits of the proposal could be properly assessed.

On 11<sup>th</sup> November 2024, the SAT made orders for the Applicant to provide additional information and also inviting the RDAP to reconsider its decision pursuant to section 31 of the SAT Act. The Applicant provided this additional information on 17<sup>th</sup> February 2025 (Appendix ORD: 12.2.2C).

### Location Plan



Lot 2 Banksia Road, Crooked Brook (Source: SLIP Locate 2025)

## Proposal

The outline of the proposal is as follows:

<b>Region Scheme</b>	Rural
<b>Local Planning Scheme No.3 (LPS3)</b>	General Farming
<b>Structure Plan/Precinct Plan</b>	Local Development Plan – Lot 2 Banksia Road, Crooked Brook
<b>Use Class and Permissibility in LPS3</b>	Use Not Listed – Waste Disposal Facility
<b>Lot Size</b>	121.6658 hectares
<b>Existing Land Use</b>	Use Not Listed – Waste Disposal Facility & Extractive Industry
<b>State Heritage Register</b>	No
<b>Local Heritage</b>	No
<b>Bushfire Prone Area</b>	Yes

Reconsideration is being sought of the approval granted by the RDAP on 9<sup>th</sup> February 2024 in relation to the construction of three (3) new landfill waste cells (Cells 9, 10 and 12A) at the existing Cleanaway landfill facility located on Lot 2 Banksia Road, Crooked Brook. Specifically, the reconsideration seeks the following modifications:

- Approval of an updated landscaping plan, being *Landscaping plan dated 31/01/25 (Rev 9) prepared by Tonkin*, as an amendment replacing the pre-existing version noted in Condition 2, being *Landscaping plan dated 29/08/22 (Rev 7) prepared by Tonkin*.
- Amend Condition 4 to delete the second sentence which reads “*Internal circulation of all vehicles must not encroach on the 20m landscaped boundary interface of the property*”.
- Delete Condition 10 in its entirety which requires an annual progress report detailing the progress of the pit over the previous 12-month period.

## **Legal Implications**

Pursuant to clause 31(1) of the *State Administrative Tribunal Act 2004*, upon being invited to reconsider the reviewable decision, the decision-maker may –

- (a) affirm the decision; or
- (b) vary the decision; or
- (c) set aside the decision and substitute its new decision.

Regulation 18(4) of the *Planning and Development (Development Assessment Panels) Regulations 2011* stipulates that the RDAP remains the decision-maker for the purposes of the reconsideration invitation.

## **Council Plan**

8.1 - Support responsible planning and development.



## **Environment**

In April 2021 the proponent self-referred the application to the Environmental Protection Authority (EPA). Pursuant to section 39A (1) of the *Environmental Protection Act 1986* the EPA has decided to assess the proposal.

On 5<sup>th</sup> October 2023, the EPA's assessment report on the application was published (EPA Report 1747). The report recommends the proposal may be implemented subject to appropriate conditions. No appeals were lodged against the EPA's recommendation through the Office of the Appeals Convenor, and Ministerial Statement 1213 reflecting the recommended conditions of EPA Report 1747 was ultimately published on 21<sup>st</sup> November 2023.

The proposed modifications to the conditions of approval are not considered to have any impact on the above.

## **Precedents**

Council have considered a number of applications related to the site including previous waste cells, stormwater management and the local development plan.

Council endorsed the previous RAR which recommended the conditions in relation to the construction of three (3) new landfill waste cells (Cells 9, 10 and 12A) that the Applicant is now asking to be reconsidered.

## **Consultation**

### Public Consultation – Initial Proposal (2021)

The application was initially advertised in accordance with clause 64 (1)(a) of the deemed provisions of the *Planning and Development (Local Planning Schemes) Regulations 2015 (LPS Regulations)* and Council Policy *SDVE CP505- Public Consultation- Planning Matters*.

The advertising period was for 28 days (concluding on Thursday, 23<sup>rd</sup> September 2021) and involved the following:

- A notice was published in a newspaper circulating the area;
- A notice was displayed on the subject site;
- A notice was displayed at both the Eaton and Dardanup Administration buildings and also placed on the Shire's website; and
- A written notice was sent to adjoining landowners within approximately 2km of the subject site

During this initial advertising process, a total of 53 submissions were received. All submissions objected to the application and raised concerns with the following:

- Visual amenity impacts;
- Environmental impacts;
- Dust impacts;
- Odour impacts;
- Noise impacts;
- Groundwater impacts;
- Land use permissibility;
- Increase in heavy vehicle movements; and
- Hours of operation.

The above matters were previously considered by Shire officers.

#### Public Consultation – Updated Proposal (2023)

Subsequent to the SAT reconsideration order, once the updated plans had been received, they were advertised in accordance with clause 1C and clause 64 (1)(a) of the deemed provisions of the LPS Regulations and Council Policy *SDVE CP505-Public Consultation - Planning Matters*, from 11<sup>th</sup> December 2023 – 19<sup>th</sup> January 2024, by the following methods:

- A notice was published in a newspaper circulating the area;
- A notice was displayed at both the Eaton and Dardanup Administration buildings and also placed on the Shire's website; and
- A written notice was sent to adjoining landowners within approximately 2km of the subject site.

At the end of the advertising period, one (1) public submission was received, primarily objecting to potential visual and environmental impacts, as previously summarised by Officers.

No further public consultation has been undertaken for the reconsideration subject of this report as it has been determined by Shire officers as 'Level 1' in accordance with Council Policy *SDev CP505 – Public Consultation – Planning Matters* on the basis that the proposal:

- (a) is determined as having no predictable detrimental impact on the character or amenity of the immediate or general locality, and is not required under Clause 64 of the Deemed Provisions; and
- (b) has previously been subject to public consultation(s) and only minor modifications are proposed.

#### Consultation with Government/Service Agencies – Initial Proposal (2021)

The application during the initial public advertising process was also sent to the following State departments and agencies for a period of 42 days:

- Department of Biodiversity, Conservation and Attractions
- Department of Energy, Mines, Industry Regulation and Safety
- Department of Fire and Emergency Services
- Department of Planning, Lands and Heritage
- Department of Primary Industries and Regional Development
- Department of Water and Environmental Regulation
- Main Roads WA
- Water Corporation

Their submissions were considered by Shire officers at the time.

#### Consultation with Government/Service Agencies – Updated Proposal (2023)

During the public advertising period for the updated proposal in 2023, the application was referred to the abovementioned State government departments and agencies, as well as the Dardanup Environmental Action Group (**DEAG**), for a period of 42 days.

The DEAG did not provide a submission and all other State government submissions were considered by Shire officers at the time.

Further consultation with the abovementioned departments and agencies has not been deemed necessary for the purposes of this reconsideration.

**Budget Implications** - None.

**Budget – Whole of Life Cost** - None.

**Council Policy Compliance** - None.

### **Risk Assessment**

The Risk Management Governance Framework has been considered in arriving at the officer recommendation. Please refer to (Appendix ORD: 12.2.2D) for full assessment document.

<b>TIER 2 – ‘Low’ or ‘Moderate’ Inherent Risk.</b>		
Risk Event	RDAP Development Application for Landfill Waste Cells – Lot 2 Banksia Road, Crooked Brook – Section 31 Reconsideration Request – State Administrative Tribunal	
Inherent Risk Rating (prior to treatment or control)	Low (1 - 4)	
Risk Action Plan (treatment or controls proposed)	As the Inherent Risk Rating is below 12, this is not applicable.	
Residual Risk Rating (after treatment or controls)	As the Inherent Risk Rating is below 12, this is not applicable.	
Risk Category Assessed Against	Environment	Potential amenity impacts as a result of an inadequate landscaping plan or unsatisfactory implementation of approved landscaping plan.

### **Officer Comment**

The Applicant’s requested modifications have been considered against the Deemed Provisions, the LDP and established case law.

Refer to ‘Planning Assessment’ section within the RAR for further details.

### **Conclusion**

This report considers the Applicant’s updated landscaping plan and requested modifications to conditions of approval previously issued by the RDAP.

The updated landscaping plan provides greater clarity on each landscaping zone, particularly with respect to Zone 4’s purpose to provide visual screening of the landfill areas. As there are otherwise no material changes to the previously approved landscaping plan, the updated plan is considered to be of merit.

As for the proposed modifications to Conditions 4 and 10, these have been considered in light of clause 56 of the Deemed Provisions as they relate to LDPs, as well as established case law, including the *Newbury* test. On balance, the modifications are supported, however with the retention of annual reporting in relation to the planted vegetation buffers.

END REPORT

- (a) An area of existing vegetation to be retained between the southern boundary and the development to the satisfaction of the Shire of Dardanup. The vegetation must ensure that filtered views of the development will be provided for at all times. Where additional planting is required to ensure filtered views are maintained this must be included within the site plan for approval and undertaken within sixty (60) days of the site plan being approved. Once approved the vegetation is to be retained and maintained in perpetuity to the satisfaction of the Shire.
- 3. Within thirty (30) days of the date of this approval, an external colour schedule is to be submitted to and approved by the Shire of Dardanup. The colour schedule must be based on a green palette to ensure the sea containers reflect the rural setting of the immediate locality and blend into the natural environment.
- 4. Within sixty (60) days of the date of this approval, the external surfaces of the approved outbuildings/sea containers must be painted in accordance with the approved external colour schedule.
- 5. The condition of the outbuildings/sea containers is to be maintained in perpetuity to the satisfaction of the Shire of Dardanup.
- 6. The approved outbuildings/sea containers must not be used for habitation, commercial or industrial purposes.
- 7. All stormwater from the approved building(s) and hardstand area(s) must be contained on site at all times, as indicated on the approved plans and in accordance with the Shire's specifications in Council Policy Infr CP060 'Storm water Discharge from Buildings', to the satisfaction of the Shire of Dardanup.

#### **Advice Notes**

- i) In regard to Condition 3, the Applicant/landowner is advised that the colour 'blue' is not considered to blend in within the natural environment.
- ii) All conditions of this development approval must be complied with at no cost to the Shire of Dardanup.
- iii) Please note, the Shire of Dardanup regularly undertakes audits of Development Approval conditions and a Shire Officer may be in contact with you in the future to discuss compliance with the conditions of this approval.
- iv) Please be advised that this is not a Building Permit. A Building Permit must be obtained prior to commencement of construction.

#### ***Change to Officer Recommendation***

No Change. **OR:**

As per Local Government (Administration) Regulations 1996 11(da) Council records the following reasons for amending the Officer Recommended Resolution:



**12.2.3 Title: Retrospective Two (2) Sea Containers Outside of Building Envelope – Lot 24 (No. 111) Gardincourt Drive, Henty**

<b>Reporting Department</b>	<i>Sustainable Development Directorate</i>
<b>Responsible Officer</b>	<i>Mr Ashwin Nair – Director Sustainable Development</i>
<b>Reporting Officer</b>	<i>Mr Ashwin Nair – Director Sustainable Development</i>
<b>Applicant</b>	<i>Planned Focus</i>
<b>Legislation</b>	<i>Planning and Development Act 2005</i>
<b>Council Role</b>	<i>Quasi-Judicial.</i>
<b>Voting Requirement</b>	<i>Simple Majority.</i>
<b>Attachments</b>	<i>Appendix ORD: 12.2.3A – DA Report and Updated Site Plan</i> <i>Appendix ORD: 12.2.3B – Schedule of Submissions</i> <i>Appendix ORD: 12.2.3C – Risk Assessment Tool</i> <i>Appendix ORD: 12.2.3D – Planning Assessment</i>

**Overview**

The purpose of this report is for Council to consider the retrospective development application for two (2) sea containers outside of the existing building envelope at Lot 24 (No. 111) Gardincourt Drive, Henty.

The application is presented to Council as the presence of two (2) sea containers exceeds the Shire's policy (Sea Containers Local Planning Policy) requirement. Officers do not have delegated authority to determine development applications where concerns/objections cannot be addressed by way of amendments or through the imposition of planning conditions, in accordance with Delegated Authority 9.1.1 Powers or Duties Under the Local Planning Scheme. For the reasons outlined in the report, Officers recommend that Council approves the development application subject to conditions.

**OFFICER RECOMMENDED RESOLUTION**

**THAT Council approves the development application for two (2) sea containers outside of the existing building envelope at Lot 24 (No. 111) Gardincourt Drive, Henty, subject to the following conditions:**

**Conditions**

- 1. All development must be carried out in accordance with the approved plan(s) listed below, unless amended with the written consent of the Shire. In the event of an inconsistency between the approved plan(s) and a requirement of the conditions of this development approval, the requirement of the conditions prevail.**
- 2. Within thirty (30) days of the date of this approval, amended plans to the satisfaction of the Shire of Dardanup must be submitted to and approved by the Shire. When approved, the plans will be endorsed and will then form part of this approval. The plans must be generally in accordance with the plans submitted with the application/other specified plans, but modified to show the following:**

## Background

The subject land is located approximately 10km east of the Dardanup Townsite. This site is part of the Henty Brook Estate and measures 3.3628ha in size. It is zoned 'Small Holding' pursuant to the Shire of Dardanup Local Planning Scheme No. 3 (**LPS3**).

The site currently contains a single house and multiple incidental structures, located on the middle of the land. The land is predominantly used for residential purposes, with the property having a restrictive covenant for a building envelope.

As part of the original application, the proposal was to relocate the existing sea container to a minimum of 20m from the southern boundary and including modifications to the building envelope.

After advertising to the adjoining neighbours and further information sought by the Shire, the Applicant has made the following changes to the application:

- Provide a better indication of the location of sea containers, which is now setback 10m and 20m from the southern boundary respectively.
- No modification to building envelope.

## Location Plan



Source: SLIP Locate, 2025

## Proposal

The application seeks approval for two (2) sea containers (unauthorised works) at Lot 24 (No. 111) Gardincourt Drive, Henty (**subject land or site**). Key aspects of the application are as follows:

- The existing sea containers on the subject site consist of a 40ft sea container (12m x 2.4m x 2.5m high), and a 20ft sea container (6m x 2.4m x 2.5m high).
- The existing 20ft sea container will remain in its present location, set back approximately 20m from the southern boundary.
- The 40ft container will be relocated closer and in vicinity to the 20ft sea container. It is to be set back 10m from the southern boundary.
- Both sea containers are proposed to be painted in green to match the surrounding landscape or Colourbond blue to match the existing outbuilding on the subject land.
- No modification to the building envelope is proposed. Site plan is captured below:



<b>Region Scheme</b>	Rural
<b>Local Planning Scheme No.3 (LPS3)</b>	Small Holding
<b>Structure Plan/Precinct Plan</b>	N/A
<b>Use Class and Permissibility in LPS3</b>	Single Dwelling - P
<b>Lot Size</b>	3.3628ha
<b>Existing Land Use</b>	Single Dwelling and Home Business
<b>State Heritage Register</b>	N/A
<b>Local Heritage</b>	N/A
<b>Bushfire Prone Area</b>	Yes

### **Legal Implications**

Planning and Development (Local Planning Schemes) Regulations  
Greater Bunbury Regional Scheme  
Shire of Dardanup Local Planning Scheme No. 3

#### **Council Plan**

- 8.1 - Support responsible planning and development.
- 13.1 - Adopt best practice governance.
- 14.2 - Ensure equitable, inclusive and transparent engagement and decision- making.

### **Environment**

The development does not propose to remove any vegetation.

**Precedents** - None.

### **Consultation**

#### Public Consultation

The application was advertised in accordance with clause 64 of Schedule 2 (**Deemed Provisions**) of the *Planning and Development (Local Planning Schemes) Regulations 2015*.

The advertising period was conducted for a period of 14 days, commencing 7<sup>th</sup> March 2025 and concluding on 21<sup>st</sup> March 2025. The advertising process included a written notice sent to adjoining landowners of the subject site.

In response, a total of two (2) public submissions were received, with one (1) conditional support and one (1) objection to the proposal. The public submissions are included in (Appendix ORD: 12.2.3B). A response to each submission by the assessing officer can be found within the schedule of submissions as at (Appendix ORD: 12.2.3D).

The key issues raised in the public submissions are summarised below, along with Officer comments in response. Further commentary is also provided in the 'Officer Comment' section of this report.

<b>Issue Raised</b>	<b>Officer comments</b>
<b>Historical Non-Compliance</b>	The extent of consideration extends only to where it pertains to the current proposal.
<b>Amenity</b>	Vegetation screening is proposed by way of utilising the existing natural vegetation. It is recommended that a condition of approval is applied to ensure that the screening is maintained in perpetuity.  Additionally, the sea containers are proposed to be repainted in green or Colourbond blue. It is recommended that a condition be imposed for both sea containers be painted in a colour so as to blend into the landscape, by way of a colour schedule.
<b>Use</b>	The Applicant's intended use for the storage of individual items cannot be speculated any further than what is proposed as part of this application. However, it is recommended that a condition be imposed that limits the storage capacity to a residential nature, and



	for the development to not be used for habitable, commercial or industrial purposes.
<b>Modification to Building Envelope</b>	<p>Subsequent to the request of further information, the Applicant has provided an updated proposal which does not modify the building envelope but rather, seeks the approval of sea containers outside of the building envelope.</p> <p>The consideration of development outside of building envelope is based on:</p> <ul style="list-style-type: none"> <li>• No further clearing of land</li> <li>• Consistency with objectives of the zone</li> <li>• Whether amenity impact can be managed</li> </ul> <p>The proposal is considered to be capable of satisfying all of the above.</p>
<b>Property Value</b>	Perceived impacts on property value is not a valid planning consideration.

#### Consultation with Government/Service Agencies

No external agencies have been consulted, nor considered necessary.

#### Additional Consultation

None.

#### **Budget Implications**

None. It is however noted that the landowner has appealed to the State Administrative Tribunal with respect to a Directions Notice on this matter.

**Budget – Whole of Life Cost** - None.

#### **Council Policy Compliance**

*SDev CP096 – Local Planning Policy – Sea Containers.*

#### **Risk Assessment**

The Risk Management Governance Framework has been considered in arriving at the officer recommendation. Please refer to (Appendix ORD: 12.2.3C) for full assessment document.

<b>TIER 2 – ‘Low’ or ‘Moderate’ Inherent Risk.</b>	
Risk Event	Two (2) Sea Containers outside of Building Envelope
Inherent Risk Rating (prior to treatment or control)	Low (1 - 4)
Risk Action Plan (treatment or controls proposed)	As the Inherent Risk Rating is below 12, this is not applicable.

TIER 2 – ‘Low’ or ‘Moderate’ Inherent Risk.		
Residual Risk Rating (after treatment or controls)	As the Inherent Risk Rating is below 12, this is not applicable.	
Risk Category Assessed Against	Legal and Compliance	If Council refuses the application and a review is lodged with the State Administrative Tribunal, reasons for the refusal based on sound planning principles must be provided.

### Officer Comment

Clause 67 of the Deemed Provisions lists matters to be considered in the determination development application. A full technical assessment was carried out against the current planning framework. For the purposes of this report, discussion is confined to the objections resulting in the proposal being presented to Council, and where Council is required to exercise discretion.

### Land Use & Permissibility

The subject site is zoned ‘Small Holding’ under LPS3.

The objectives of the ‘Small Holding’ zone are:

- *To provide for residential development within a rural settling, where the predominant land use is residential.*

The development is considered to be incidental to the predominant residential use on site, being a ‘Single Dwelling’. A ‘Single Dwelling’ is a permitted ‘P’ use in the ‘Small Holding’ zone. The development is therefore capable of approval.

### Site Requirements

All relevant site requirements for the subject land have been assessed, pursuant to LPS3. LPS3 requires that the development be set back by a minimum of 20m to primary and secondary street boundary and minimum of 10m to side and rear boundary.

The proposed sea containers are setback at a minimum of 10m from the southern (side) boundary, and approximately 110m from the primary street setback (Gardincourt Drive). Therefore, it is considered to have met site requirements.

### Small Holding Zones Requirements

Clause 3.14.1(j) of LPS3 allows for consideration of outbuildings outside of a building envelope.

The criteria for such a consideration include:

- Does not result in further clearing of land;
- Consistent with the objectives of the zone;
- Does not result in reduction in amenity.

No clearing of land is proposed, and it is deemed unlikely that further clearing will be required.



LG Ref: DAP-D0211219  
DAP Ref: DAP/21/02063  
Enquiries: (08) 6551 9919

State Administrative Tribunal  
565 Hay Street  
PERTH WA 6000

Dear Sir/Madam

**STATE ADMINISTRATIVE TRIBUNAL APPLICATION – DR 241/2021  
CLEANAWAY SOLID WASTE PTY LTD v PRESIDING MEMBER OF THE  
REGIONAL JOINT DEVELOPMENT ASSESSMENT PANEL**

Property Location:	Lot 2 Banksia Road, Crooked Brook
Application Details:	Cleanaway Dardanup Landfill Facility

Please be advised that the Regional Joint Development Assessment Panel reconsidered the above-mentioned development application, SAT ref DR 241/2021, pursuant to section 31 of the *State Administrative Tribunal Act 2004* on 9 February 2024.

The Notice of Determination is attached.

Yours sincerely,

**DAP Secretariat**

19 February 2024

Encl: Amended DAP Determination Notice

Cc:  
Cleanaway Waste Pty Ltd  
State Solicitor's Office  
Ashwin Nair  
Shire of Dardanup  
Planning Appeals

***Planning and Development Act 2005***

**Shire of Dardanup Local Planning Scheme No. 3**

**Regional Joint Development Assessment Panel**

**Determination on Development Assessment Panel  
Application for Planning Approval**

**Property Location:** Lot 2 Banksia Road, Crooked Brook

**Application Details:** Cleanaway Dardanup Landfill Facility

Pursuant to section 31 of the *State Administrative Tribunal Act 2004*, the Regional JDAP, at its meeting on 9 February 2024, has resolved to:

**Reconsider** its decision dated 27 November 2021 and **SET ASIDE the decision and substitute a new** decision and approve DAP Application reference DAP/21/02063 and accompanying plans in accordance with Clause 68 of Schedule 2 (Deemed Provisions) of the *Planning and Development (Local Planning Schemes) Regulations 2015* and the provisions of the Shire of Dardanup Local Planning Scheme No. 3, subject to the following conditions:

1. This decision constitutes planning approval only and is valid for a period of four years from the date of approval. If the subject development is not substantially commenced within the specified period, the approval shall lapse and be of no further effect.
2. All development must be carried out in accordance with the approved plans listed below, unless amended with the written consent of the Shire. In the event of an inconsistency between the approved plan(s) and a requirement of the conditions of this development approval, the requirement of the conditions prevail.

Development Plans (prepared by IW Projects)

- Development Site Plan (Drg No. BANK-421, Rev F, dated 14/12/23);
- Landfill Cell 9 Layout Plan (Drg No. BANK-306, Rev B, dated 21/08/23);
- Cell 9 Top of Waste Section (Drg No. BANK-SK-92, Rev B, dated 14/09/23);
- Cell 9 Top of Waste Surface Profile (Drg No. BANK-SK-91, Rev B, dated 14/09/23);
- Landfill Cell 10 Layout Plan (Drg No. BANK-406, Rev B, dated 22/08/23);
- Cell 10 Top of Waste Section (Drg No. BANK-SK-94, Rev B, dated 15/09/23);
- Cell 10 Top of Waste Surface Profile (Drg No. BANK-SK-93, Rev B, dated 15/09/23);
- Landfill Cell 12A Layout Plan (Drg No. BANK-506, Rev C, dated 20/08/23);
- Cell 12A Top of Waste Sections (Drg No. BANK-SK-96, Rev B, dated 06/09/23);
- Cell 12A Top of Waste Surface Profile (Drg No. BANK-SK-95, Rev B, dated 06/09/23);



Management & Other Relevant Plans

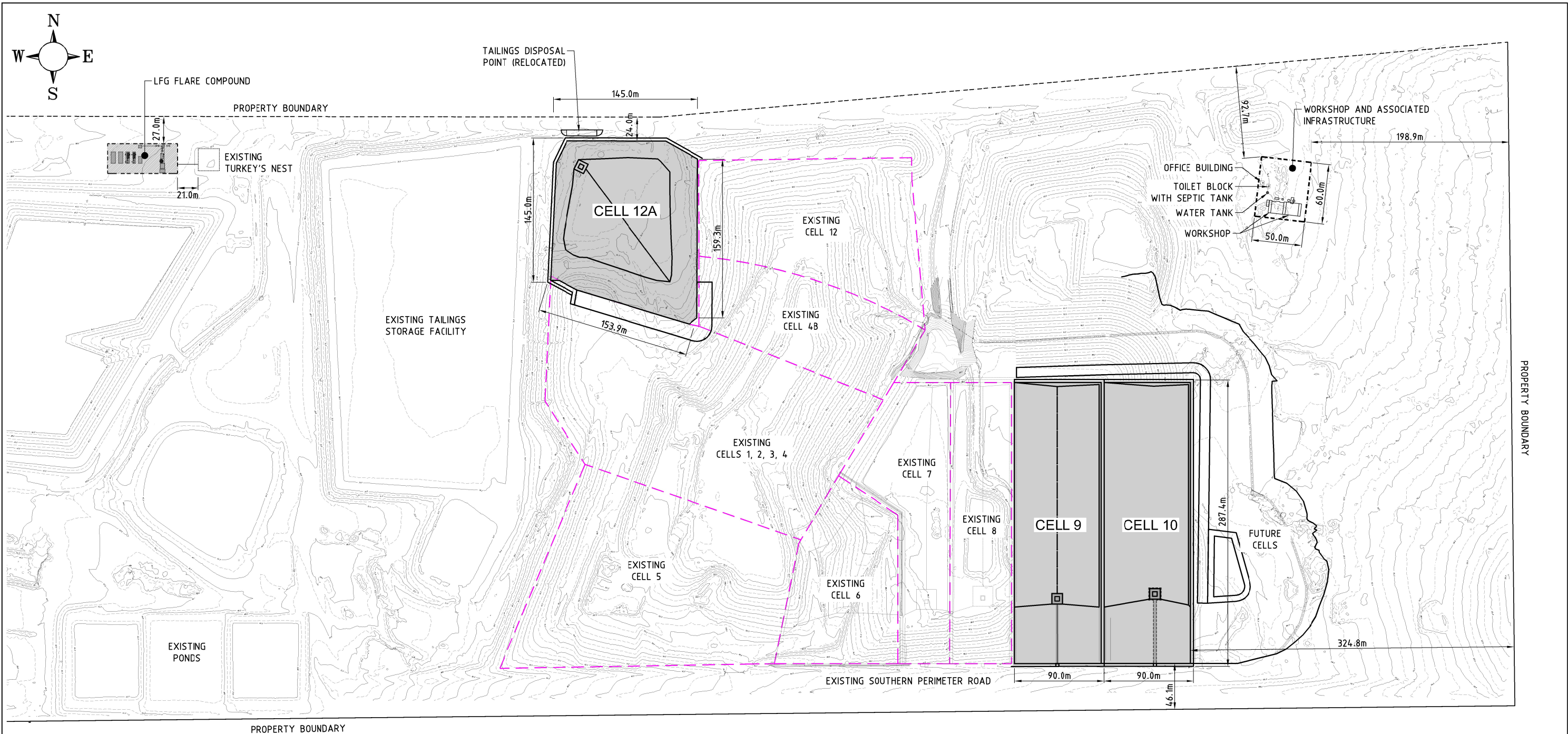
- Dust Management Plan dated 12/03/21 (Rev 4) prepared by Strategn-JBS&G;
- Environmental Management Plan dated 18/03/21 (Ver 004) prepared by Cleanaway;
- Stormwater Management Plan dated 15/01/21 (Ver C2) prepared by Cleanaway;
- Rehabilitation and Closure Plan dated 12/09/23 (Ver V9) prepared by Cleanaway;
- Landfill Gas Management Plan dated September 2023 (Ver 004) prepared by Cleanaway;
- Bushfire Management Plan dated 12/07/2021 (Ver 1.0) prepared by Bushfire Prone Planning; and
- Landscaping plan dated 29/08/22 (Rev 7) prepared by Tonkin.

The landowner/proponent is responsible to ensure that the development is carried out at all times and in all respects in accordance with the approved plans.

3. Landfill within the new cells must not exceed a maximum height of 130m AHD (128m to top of waste plus 2m capping).
4. Access to and egress from the site for all heavy haulage vehicles associated with the approved landfill cells and related works are restricted to using the sealed road north of Lot 2 Banksia Road. Internal circulation of all vehicles must not encroach on the 20m landscaped boundary interface of the property.
5. Prior to the commencement of use, a 'Noise Management Plan' that has been prepared by a suitably qualified acoustic consultant must be submitted to and approved by the Shire of Dardanup that includes the following:
  - a. demonstrates that noise from the approved use will comply with the *Environmental Protection (Noise) Regulations 1997*; and
  - b. details the noise mitigation measures that will be implemented to make the noise comply with the *Environmental Protection (Noise) Regulations 1997*.
  - c. Once approved the plan will form part of this approval and must be complied with at all times for the life of this approval.
6. All boundaries of the site are to be fenced with chain mesh fencing to a minimum of 2m in height and to include wildlife egress points.
7. All materials extracted are to be used on site, unless otherwise approved by the Shire of Dardanup.
8. The approved hours of operation are 6.00am until 6.00pm daily.
9. All works must be undertaken in a manner that minimises soil erosion, and any exposed areas of soil must be stabilised to prevent soil erosion, to the satisfaction of the Shire of Dardanup.

10. The operator is required to submit an annual "Progress Report" detailing progress of the pit over the previous 12-month period. The report should provide details of the following:
  - a. Extent of extraction undertaken (volume and area);
  - b. Extent of filling of the cells (volume and area);
  - c. Completion of stages;
  - d. Rehabilitation of completed stages;
  - e. Outcomes of monitoring of planted vegetation buffers.
11. Prior to the commencement of use an updated Bushfire Management Plan being submitted and approved by the Shire on advice of the Department of Fire Emergency Services which includes the modifications recommended by the Department of Fire Emergency Services. Once approved the plan be implemented in its entirety.
12. Prior to the lodgment of a Building Permit, a Workshop Operation Plan must be submitted to the Shire of Dardanup for approval. The plan must demonstrate the following:
  - a. All measures to manage the risk of contaminants, including hydrocarbons escaping from the area and leaching into the ground;
  - b. Fuel kept onsite to be stored in bunded fire rated fuel tanks;
  - c. The workshop floor being constructed of hardstand and bunded to specifications to cater for the type of vehicles proposed to be parked/serviced/maneuvering onsite.

Where an approval has so lapsed, no development shall be carried out without further approval having first been sought and obtained, unless the applicant has applied and obtained Development Assessment Panel approval to extend the approval term under regulation 17(1)(a) or local government approval under regulation 17A of the *Planning and Development (Development Assessment Panels) Regulations 2011*.

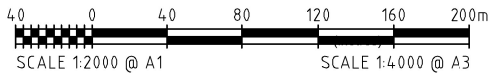


**SITE PLAN**  
SCALE 1 : 2,000 (A1)

DEVELOPMENT  
ASSESSMENT PANEL

APPROVED  
09-Feb-2024

**FOR APPROVAL**  
14 DECEMBER 2023



REVISIONS	No.	BY	DATE	DESCRIPTION	DRG. CHK.	I.W.
	F	S.B.Y.	14/12/23	PLAN UPDATED	DRG. FILE	
	E	S.B.Y.	25/11/23	PLAN UPDATED	DESIGN	I.W.
	D	S.B.Y.	23/08/23	PLAN UPDATED	DRAWN	S.B.Y.
	C	S.B.Y.	30/07/21	PLAN UPDATED	DES. CHK.	I.W.

TECHNICALLY APPROVED:

**iw Projects**

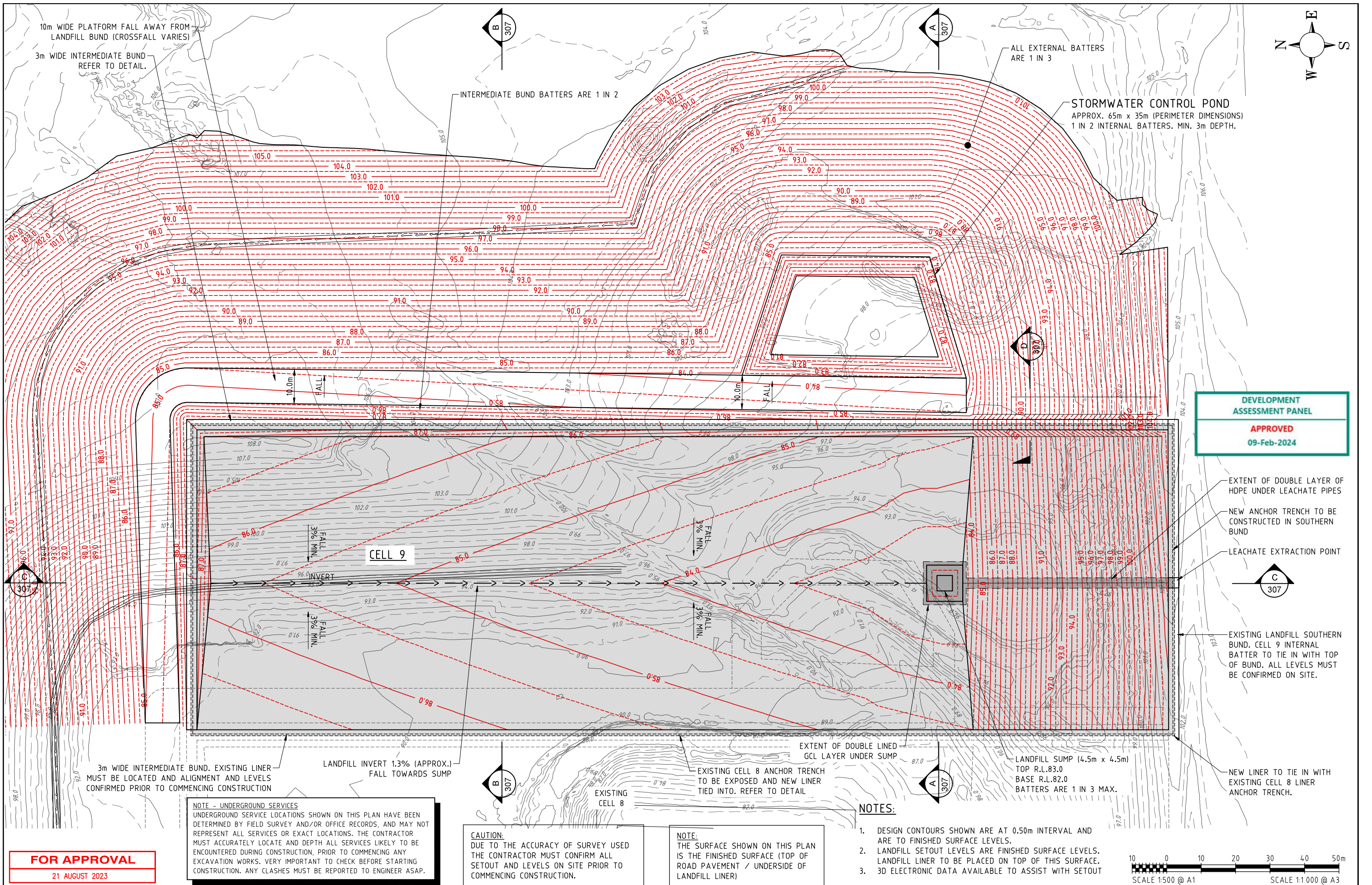
Email – iwatkins@iwprojects.com.au  
Mobile – 0402 909 291  
Address – 6 Anembo Close Duncraig 6023

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CLEANAWAY SOLID WASTE  
BANKSIA ROAD LANDFILL FACILITY, DARDANUP WA  
CELL 12A, CELL 9 AND CELL 10  
DEVELOPMENT SITE PLAN

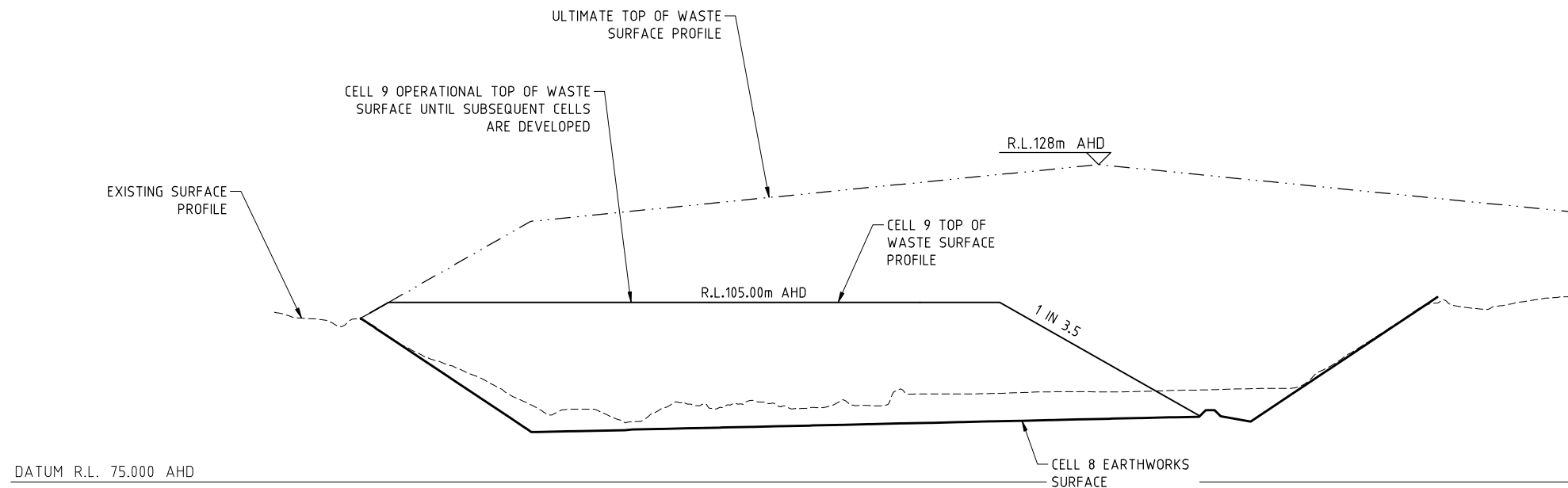
SCALE	AS SHOWN
SHEET	
DRG No.	REVISION F BANK-421





REVISIONS				DRG. FILE		DATE	TECHNICALLY APPROVED:	 <div>COPYRIGHT © These designs and drawings are copyright and are not to be used or reproduced without the written permission of iwPROJECTS. The contents of this drawing are electronically generated, are confidential and may only be used for the purpose for which they were intended. This is an uncontrolled document issued for information purposes only, unless the checked sections are signed and approved.</div>	CLEANAWAY SOLID WASTE		SCALE	AS SHOWN
	B	S.B.Y.	21/08/23	GENERAL AMENDMENTS	DRAWN	S.B.Y.			BANKSIA ROAD LANDFILL FACILITY, DARDANUP WA		SHEET	
	A	S.B.Y.	28/10/20	ISSUED FOR APPROVAL	DES. CHK.	I.W.			CELL 9 DEVELOPMENT			
	No.	BY	DATE	DESCRIPTION	DWG. CHK.	I.W.			LANDFILL CELL 9 LAYOUT PLAN		DRG No.	REVISION   B
												BANK-306



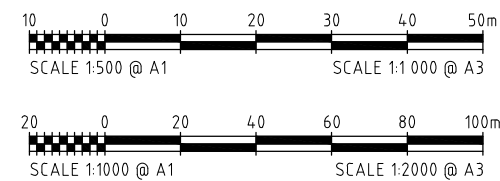


CELL 9 SECTION A  
SCALE H 1 : 1,000 (A1)  
V 1 : 500

DEVELOPMENT  
ASSESSMENT PANEL

APPROVED

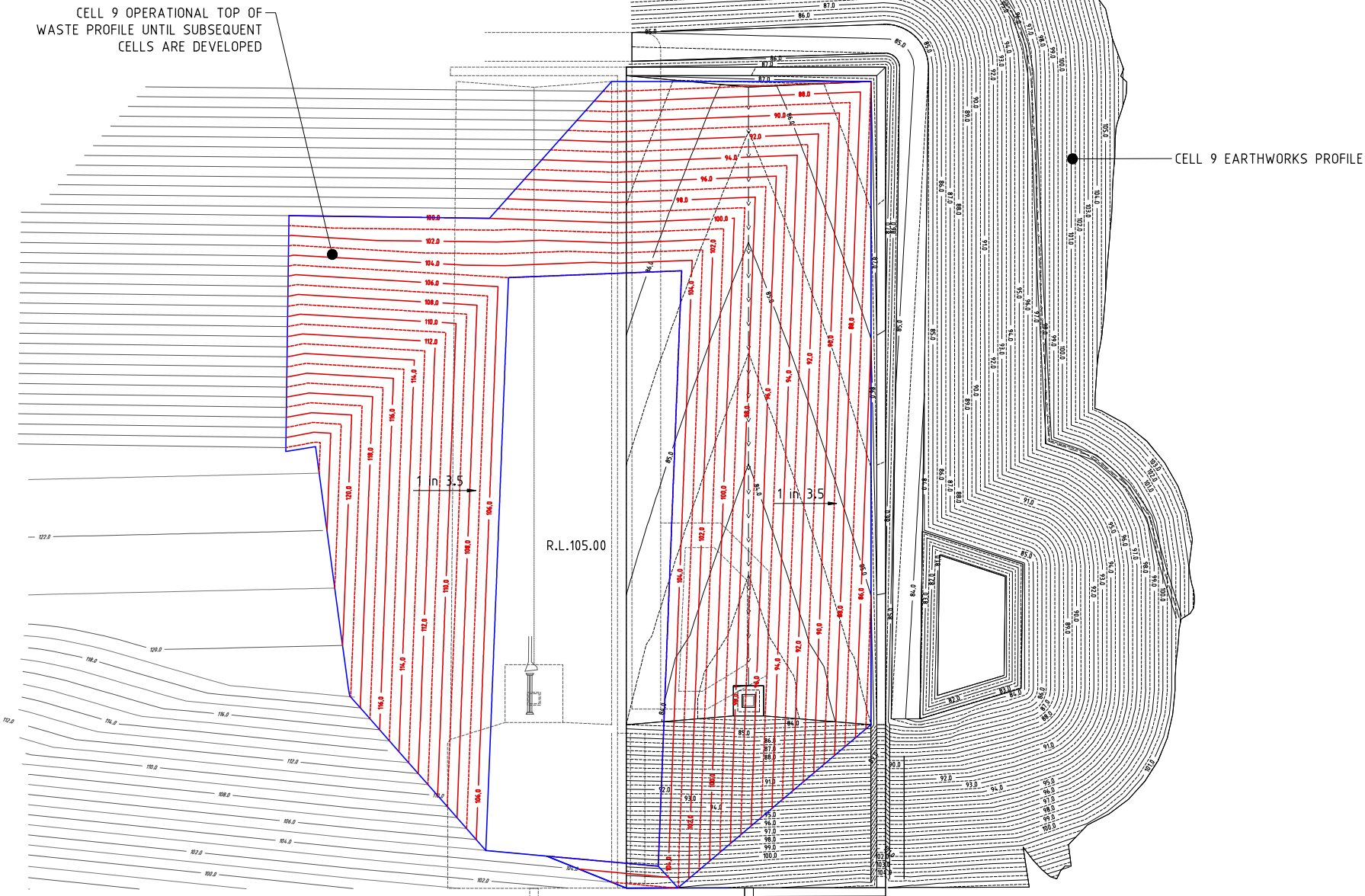
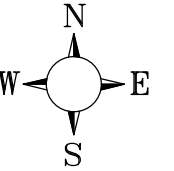
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14 SEPTEMBER 2023

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	B	S.B.Y.	14/09/23	BATTER SLOPE AMENDED	DRAWN	S.B.Y.						09/23	SHEET	01 of	
	A	S.B.Y.	07/09/23	ISSUE FOR APPROVAL	DES. CHK.	I.W.							DRG No.	REVISION	B
	No.	BY	DATE	DESCRIPTION	DWG. CHK.	I.W.								BANK—SK92	



DEVELOPMENT  
ASSESSMENT PANEL

APPROVED

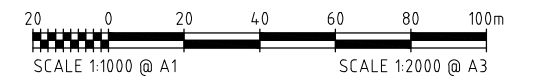
09-Feb-2024

FOR APPROVAL

14 SEPTEMBER 2023

LAYOUT PLAN - CELL 9

SCALE 1 : 1,000 (A1)



REVISIONS	No.	BY	DATE	DESCRIPTION	DRG. FILE	DATE
					DESIGN	I.W.
	B	S.B.Y.	14/09/23	BATTER SLOPE AMENDED	DRAWN	S.B.Y.
	A	S.B.Y.	07/09/23	ISSUE FOR APPROVAL	DES. CHK.	I.W.
					DWG. CHK.	I.W.

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CLEANAWAY SOLID WASTE

BANKSIA ROAD LANDFILL, DARDANUP

CELL 9 DEVELOPMENT

TOP OF WASTE SURFACE PROFILE

SCALE AS SHOWN

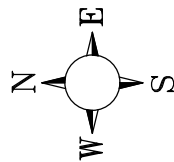
SHEET 01 of

DRG No. 

REVISION	B
BANK-SK91	

NOTE - UNDERGROUND SERVICES  
UNDERGROUND SERVICE LOCATIONS SHOWN ON THIS PLAN HAVE BEEN DETERMINED BY FIELD SURVEY AND/OR OFFICE RECORDS, AND MAY NOT REPRESENT ALL SERVICES OR EXACT LOCATIONS. THE CONTRACTOR MUST ACCURATELY LOCATE AND DEPTH ALL SERVICES LIKELY TO BE ENCOUNTERED DURING CONSTRUCTION, PRIOR TO COMMENCING ANY EXCAVATION WORKS. VERY IMPORTANT TO CHECK BEFORE STARTING CONSTRUCTION. ANY CLASHES MUST BE REPORTED TO ENGINEER ASAP.

NOTE:  
THE SURFACE SHOWN ON THIS PLAN IS THE FINISHED SURFACE (TOP OF ROAD PAVEMENT / UNDERSIDE OF LANDFILL LINER)



10m WIDE PLATFORM FALL AWAY FROM LANDFILL BUND (CROSSFALL VARIES)

3m WIDE INTERMEDIATE BUND REFER TO DETAIL.

INTERMEDIATE BUND BATTERS ARE 1 IN 2

ALL EXTERNAL BATTERS ARE 1 IN 3

STORMWATER CONTROL POND  
APPROX. 70m x 35m (PERIMETER DIMENSIONS)  
1 IN 2 INTERNAL BATTERS. MIN. 3m DEPTH.

CELL 10

FALL 3% MIN.

FALL 3% MIN.

FALL 3% MIN.

EXTENT OF DOUBLE LINED GCL LAYER UNDER SUMP

LANDFILL INVERT 1.4% (APPROX.) FALL TOWARDS SUMP

EXISTING CELL 9

EXISTING CELL 9 ANCHOR TRENCH TO BE EXPOSED AND NEW LINER TIED INTO. REFER TO DETAIL

LANDFILL SUMP (4.5m x 4.5m)  
TOP R.L.83.5  
BASE R.L.82.5  
BATTERS ARE 1 IN 3 MAX.

EXISTING LANDFILL SOUTHERN BUND. CELL 10 INTERNAL BATTER TO TIE IN WITH TOP OF BUND. ALL LEVELS MUST BE CONFIRMED ON SITE.

NEW LINER TO TIE IN WITH EXISTING CELL 9 LINER ANCHOR TRENCH.

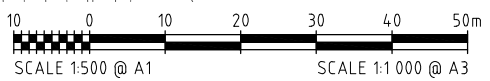
EXTENT OF DOUBLE LAYER OF HDPE UNDER LEACHATE PIPES

NEW ANCHOR TRENCH TO BE CONSTRUCTED IN SOUTHERN BUND

LEACHATE EXTRACTION POINT

NOTES:

- DESIGN CONTOURS SHOWN ARE AT 0.50m INTERVAL AND ARE TO FINISHED SURFACE LEVELS.
- LANDFILL SETOUT LEVELS ARE FINISHED SURFACE LEVELS. LANDFILL LINER TO BE PLACED ON TOP OF THIS SURFACE.
- 3D ELECTRONIC DATA AVAILABLE TO ASSIST WITH SETOUT



CAUTION:  
DUE TO THE ACCURACY OF SURVEY USED THE CONTRACTOR MUST CONFIRM ALL SETOUT AND LEVELS ON SITE PRIOR TO COMMENCING CONSTRUCTION.

DEVELOPMENT ASSESSMENT PANEL

APPROVED  
09-Feb-2024

FOR APPROVAL

22 AUGUST 2023

REVISONS				DRG. FILE	DATE	TECHNICALLY APPROVED:
	No.	BY	DATE	DESCRIPTION	DWG. CHK.	
	B	S.B.Y.	22/08/23	GENERAL AMENDMENTS	DRAWN	S.B.Y.
	A	S.B.Y.	26/10/20	ISSUE FOR APPROVAL	DES. CHK.	

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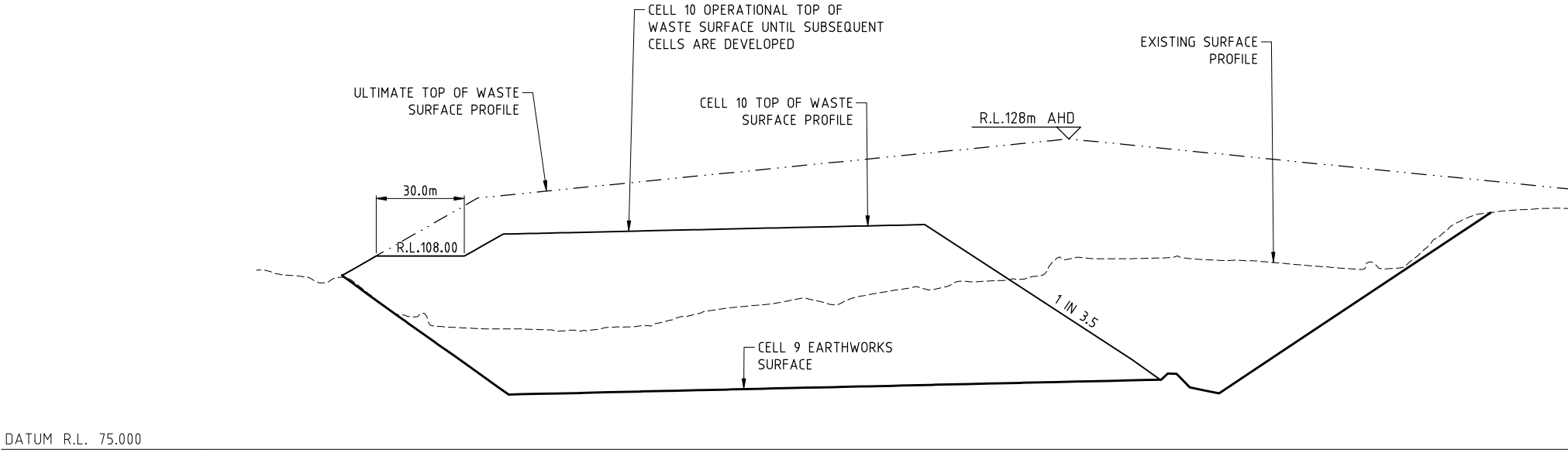
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CLEANAWAY SOLID WASTE  
BANKSIA ROAD LANDFILL FACILITY, DARDANUP WA  
CELL 10 DEVELOPMENT  
LANDFILL CELL 10 LAYOUT PLAN

SCALE	AS SHOWN
SHEET	
DRG No.	REVISION B BANK-406





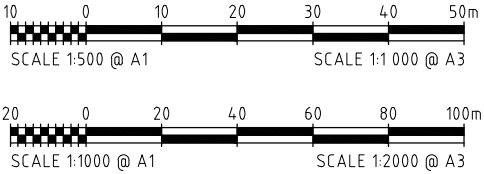
CELL 10 SECTION A  
SCALE H 1 : 1,000 (A1)  
V 1 : 500

FOR APPROVAL  
15 SEPTEMBER 2023

DEVELOPMENT  
ASSESSMENT PANEL

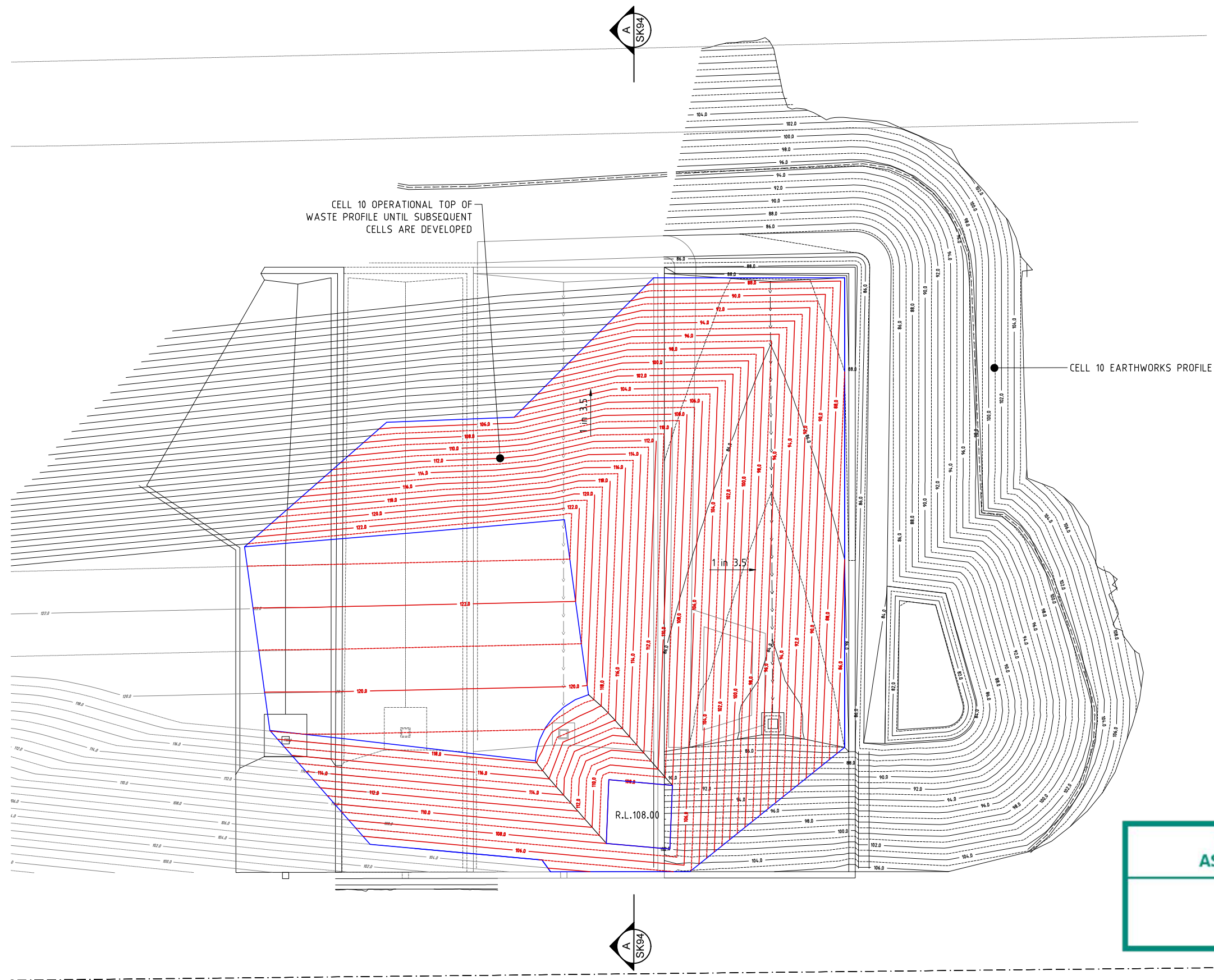
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09-Feb-2024



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	B	S.B.Y.	15/09/23	BATTER SLOPE AMENDED	DESIGN	I.W.	09/23			BANKSIA ROAD LANDFILL, DARDANUP CELL 10 DEVELOPMENT TOP OF WASTE SECTION		SHEET	01 of
	A	S.B.Y.	08/09/23	ISSUE FOR APPROVAL	DES. CHK.	I.W.						DRG No.	REVISION B
	No.	BY	DATE	DESCRIPTION	DWG. CHK.	I.W.						BANK-SK94	



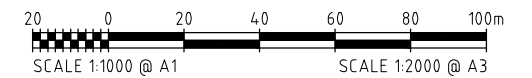


FOR APPROVAL

15 SEPTEMBER 2023

LAYOUT PLAN - CELL 10

SCALE 1 : 1,000 (A1)



REVISIONS	No.	BY	DATE	DESCRIPTION	DRG. FILE	DATE
	B	S.B.Y.	15/09/23	BATTER SLOPE AMENDED	DRAWN	09/23
	A	S.B.Y.	08/09/23	ISSUE FOR APPROVAL	DES. CHK.	I.W.
	No.	BY	DATE	DESCRIPTION	DWG. CHK.	I.W.

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CLEANAWAY SOLID WASTE

BANKSIA ROAD LANDFILL, DARDANUP

CELL 10 DEVELOPMENT

TOP OF WASTE SURFACE PROFILE

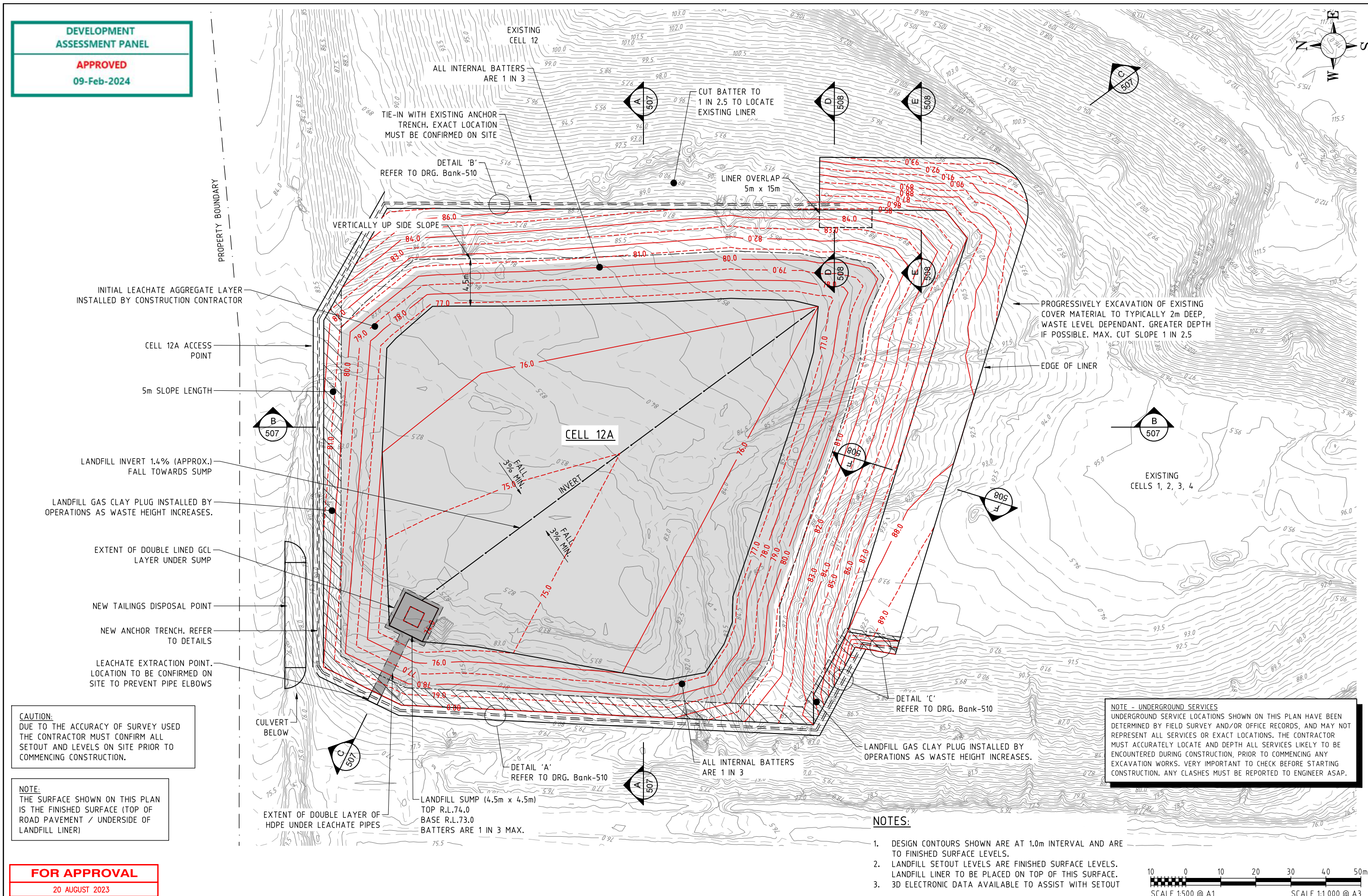
SCALE AS SHOWN

SHEET 01 of

REVISION B  
DRG No. BANK-SK93



**APPROVED**  
09-Feb-2024



REVISIONS	C	S.B.Y.	20/08/23	EARTHWORKS AMENDED	DRG. FILE	I.W.	DATE	TECHNICALLY APPROVED:	<div><div><div>COPYRIGHT ©</div><div>These designs and drawings are copyright and are not to be used or reproduced without the written permission of IWPROJECTS. The contents of this drawing are electronically generated, are confidential and may only be used for the purpose for which they were intended. This is an uncontrolled document issued for information purposes only, unless the checked sections are signed and approved.</div></div></div> <div>Email – iwatkins@iwprojects.com.au Mobile – 0402 909 291 Address – 6 Anembo Close Duncraig 6023</div>	CLEANAWAY SOLID WASTE			SCALE	AS SHOWN	
	B	S.B.Y.	28/04/23	GENERAL AMENDMENTS	DRAWN	S.B.Y.	08/23			BANKSIA ROAD LANDFILL FACILITY, DARDANUP WA	SHEET				
	A	S.B.Y.	11/11/20	ISSUED FOR APPROVAL	DES. CHK.	I.W.				CELL 12A DEVELOPMENT					
	No.	BY	DATE	DESCRIPTION	DWG. CHK.	I.W.				LANDFILL CELL 12A LAYOUT PLAN	DRG No.	REVISION	C		
										BANK-50					

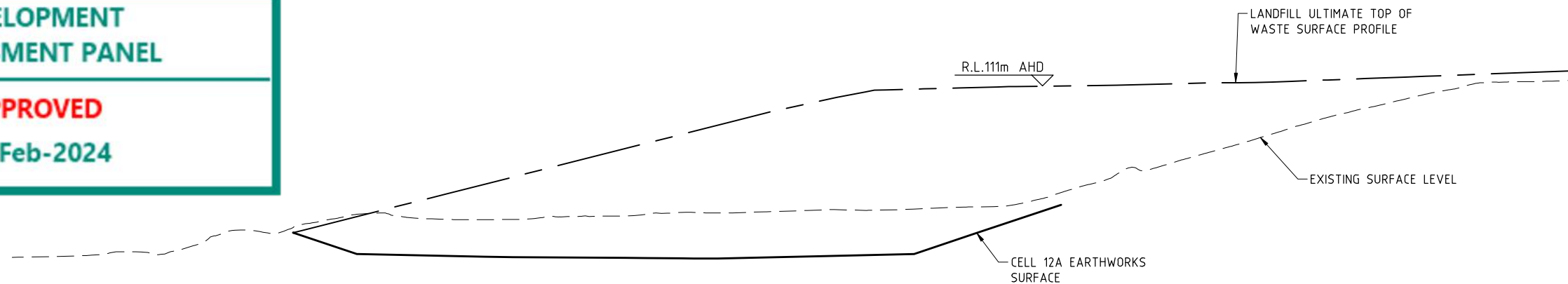


**DEVELOPMENT  
ASSESSMENT PANEL**

**APPROVED**

**09-Feb-2024**

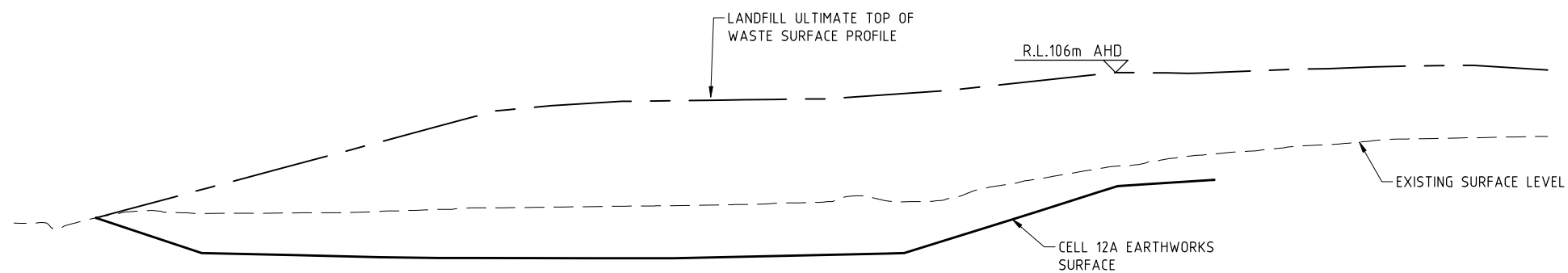
09-Feb-2024



DATUM R.L. 60.000 AHD

SECTION  
SCALE 1 : 500 (A1)

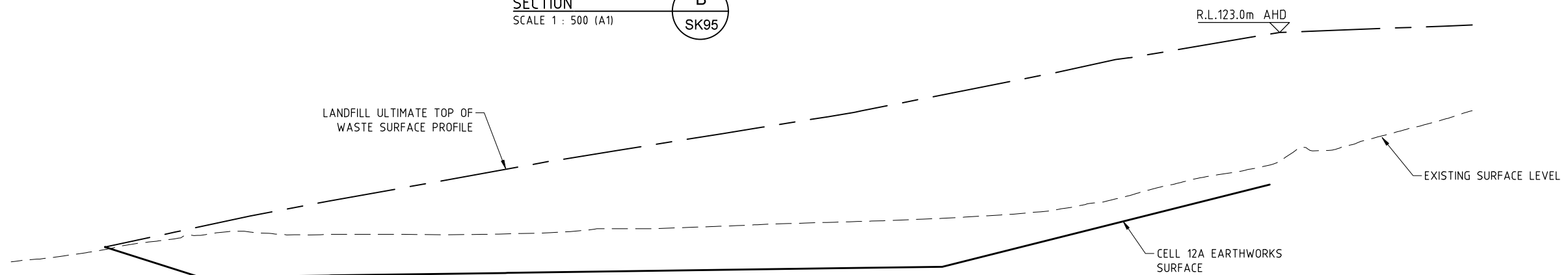
A circular logo with a horizontal line through the center. The letter 'A' is positioned above the line, and the text 'SK95' is positioned below the line.



DATUM R.L. 60.000 AHD

SECTION  
SCALE 1 : 500 (A1)

A circular logo with a horizontal line through the center. The letter 'B' is positioned above the line, and the text 'SK95' is positioned below the line.



DATUM R.L. 60.000 AHD

SECTION  
SCALE 1 : 500 (A1)

<b>FOR APPROVAL</b>
06 SEPTEMBER 2023

REVISIONS					DRG. FILE		DATE
					DESIGN	I.W.	09/23
					DRAWN	S.B.Y.	09/23
	A	S.B.Y.	06/09/23	ISSUE FOR APPROVAL	DES. CHK.	I.W.	
	No.	BY	DATE	DESCRIPTION	DWG. CHK.	I.W.	

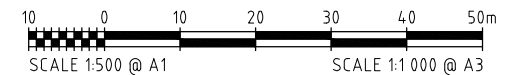
Email – [iwatkins@iwprojects.com.au](mailto:iwatkins@iwprojects.com.au)  
Mobile – 0402 909 291  
Address – 6 Anembo Close Duncraig 6023

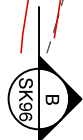
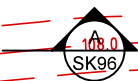
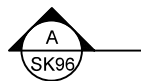
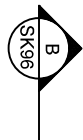
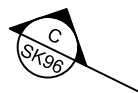
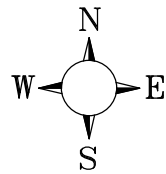
uncraig 6023

BANKSIA ROAD LANDFILL FACILITY, DARDANUP WA  
CELL 12A DEVELOPMENT  
TOP OF WASTE SECTIONS

SHEET

	REVISION	A
DRG No.	BANK-SK96	

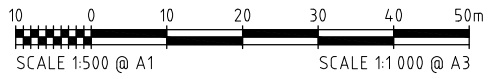
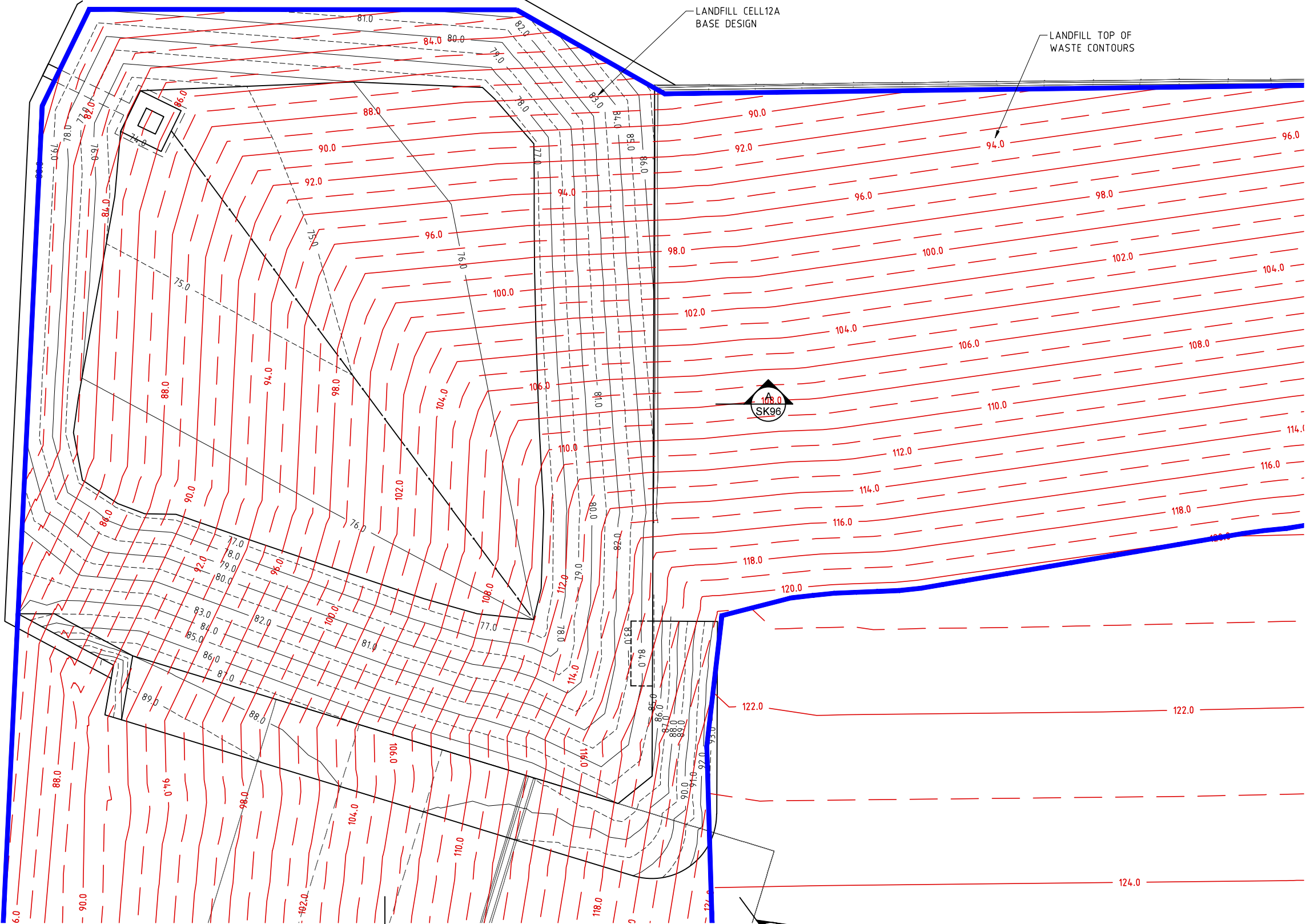




DEVELOPMENT  
ASSESSMENT PANEL

APPROVED  
09-Feb-2024

FOR APPROVAL  
06 SEPTEMBER 2023



REVISIONS	No.	BY	DATE	DESCRIPTION	DRG. FILE	DATE
					DESIGN	I.W.
					DRAWN	S.B.Y.
					DES. CHK.	I.W.
A	S.B.Y.	06/09/23	ISSUE FOR APPROVAL		DES. CHK.	I.W.
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CLEANAWAY SOLID WASTE  
BANKSIA ROAD LANDFILL FACILITY, DARDANUP WA  
CELL 12A DEVELOPMENT  
TOP OF WASTE SURFACE PROFILE

SCALE	AS SHOWN
SHEET	
DRG No.	REVISION   A BANK-SK95