



APPENDIX E

REHABILITATION PLAN



VantageYatala



gassman
development
perspectives

REHABILITATION REPORT

82 Christensen Road, Stapylton

Prepared for:



icubed consulting

innovation ingenuity inspiration
icubed.com.au



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Approved for release by:

Dr. Justin Harvey
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STATEMENT OF LIMITATION

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1 Introduction

1.1 Background

i³ consulting was commissioned by Amgrow Pty Ltd to prepare reporting on the completed rehabilitation works for the site at 82 Christensen Road, Stapylton, on land described as Lot 500 on SP295994.

The purpose of this Rehabilitation Report is to demonstrate that remediation works have been completed on the lower proposed lease area of the site.

2 Site Description

The Amgrow site is located on land that is described as Lot 500 on SP295994, at 82 Christensen Road Stapylton (Figure 1).

The surrounding area is mostly zoned for current and future industry. The Stapylton Landfill dominates the area immediately to the east of the site.

Figure 2 shows the site as of October 2019, including the locations of Dam 1 and Dam 2, while Figure 3 shows the site as of August 2020 and the completed rehabilitation works.

Table 1 provides an overview of the surrounding land uses to the Amgrow site.

Table 1: Surrounding Land Use

North	Vacant land for proposed industrial development within Lot 501 SP295994, and Medium impact industrial north of this.
East	Vacant land for proposed industrial development within Lot 501 SP295994, and Stapylton Landfill site and extractive industry East of this.
South	Vacant land for proposed industrial development within Lot 501 SP295994, Christensen Road, Sandy Creek, and industrial zone.
West	Industrial zone, with some medium density residential to the north west.



Figure 1: Lot Boundary in Local Context

Source: Nearmap (5th August, 2020)



Figure 2: Amgrow Site with location of Dams

Source: Nearmap (4th October, 2019)



Figure 3: Amgrow Site with location of Dams

Source: Nearmap (5th August, 2020)

3 Site Usage

Amgrow Pty Ltd undertake industrial activities at the site in accordance with an Environmental Authority (EA) under the *Environmental Protection Act 1994* (EP Act). The EA relates to two Environmentally Relevant Activities (ERA), namely ERA 7(4b) – *Fertiliser manufacture (over 5,000 t/yr)* and ERA 53 – *Composting and soil conditioner manufacturing*. Since April 2018 the manufacture of potting media, which occurred mainly in the eastern half of the site, has ceased.

On the site, Dam 1 serves the western part of the site where fertiliser manufacture activities are to continue under ERA 7 (4b). Dam 2 served the eastern part of the site where the former composting area was located and has been decommissioned under a rehabilitation plan to return the area to a condition that is stable and non-polluting.

4 Rehabilitation Objectives

The existing EA conditions do not require rehabilitation of the site once ERA activities have ceased. The applicable Clauses within the Lease document around rehabilitation of the site include:

- 4.2 Maintenance. *The Tenant will keep, repair and maintain the Improvements thereon and any and all Land in as good order and condition as at the commencement of this Lease fair, wear and tear and damage by fire, storm, flood, tempest, riot, civil commotion or the Queen's enemies and without any neglect or default on the part of the Tenant excepted and at the expiration or sooner determination of the term of this lease will peaceably and quietly surrender and yield up the Land and Improvements thereon to the Landlord in the condition required by this clause.*
- 13.1 Yield up. *The Tenant will at the expiration or sooner determination of the term of this lease yield up the Land in the order and condition described in Clause 4 of this lease and the Tenant will in particular at its cost:*
 - *... c) fill in any and all dams on the land and spread evenly across the Land the topsoil removed to from the bung [sic] wall on the Land.*

The aim of the rehabilitation therefore was to create a stable surface over the eastern half of the site and ensure that stormwater runoff does not impact on the receiving environment. Rehabilitation goals were to:

- Reprofile the rehabilitation area to create a fundamentally stable surface;
- Plant a cover crop of grasses and native vegetation to provide soil stabilisation and water filtration;
- Decommission Dam 2 and reprofile to a stable landform and seed with a cover crop of grasses;
- Manage and monitor the cover crop until the landform was stable.

It was not the intent of the rehabilitation effort to restore the area back to a natural pre-disturbance state. The land parcel surrounding the site (501/SP295994) has a current development approval for an industrial subdivision and site preparation commenced as of February 2019. As a part of this, the vegetation surrounding the Amgrow site had been completely cleared.

5 Rehabilitation Monitoring

The rehabilitation works were completed in late 2019 in accordance with Drawings provided in Appendix A. The works generally required re-profiling the dam area located on the most North-Eastern corner of the site (Dam 2), but also required the following to occur:

- Installation of silt control required for temporary works to prepare site;
- Removal of underground pipework, concrete blocks and general debris from works area;
- Removal of trees interfering with works area and rehabilitation works;
- Strip vegetation as required;
- Removal of unsuitable subgrade
- Earthworks to ensure site is free draining and does not pond; and
- Installation of hay bales for silt control until the site has been stabilised.

A photo record of the completed works is as follows:



Figure 4: Dam on North-Eastern corner prior to rehabilitation works (October, 2019)



Figure 5: Dam on North-Eastern corner prior to rehabilitation works (October, 2019)



Figure 6: Debris removal during rehabilitation works (December, 2019)



Figure 7: Concrete block removal during rehabilitation works (December, 2019)



Figure 8: Removal of unsuitable subgrade (December, 2019)



Figure 9: Removal of unsuitable subgrade (December, 2019)



Figure 10: General earthworks (December, 2019)



Figure 11: General earthworks (December, 2019)



Figure 12: General earthworks (December, 2019)



Figure 13: General earthworks showing hay bales as sediment and erosion control (December, 2019)



Figure 14: Regrowth (August, 2020)



Figure 15: Regrowth (August, 2020)



Figure 16: Regrowth (August, 2020)



Figure 17: Regrowth (August, 2020)



Figure 18: Hay Bale Sediment Control and Filtration (August, 2020)



Figure 19: Regrowth (August, 2020)

6 Conclusion

Amgrow are no longer utilising the eastern half of their site for composting activities, which ceased in April 2018. To enable surrender of this half of the site back to the landowner, Amgrow have undertaken rehabilitation of this area.

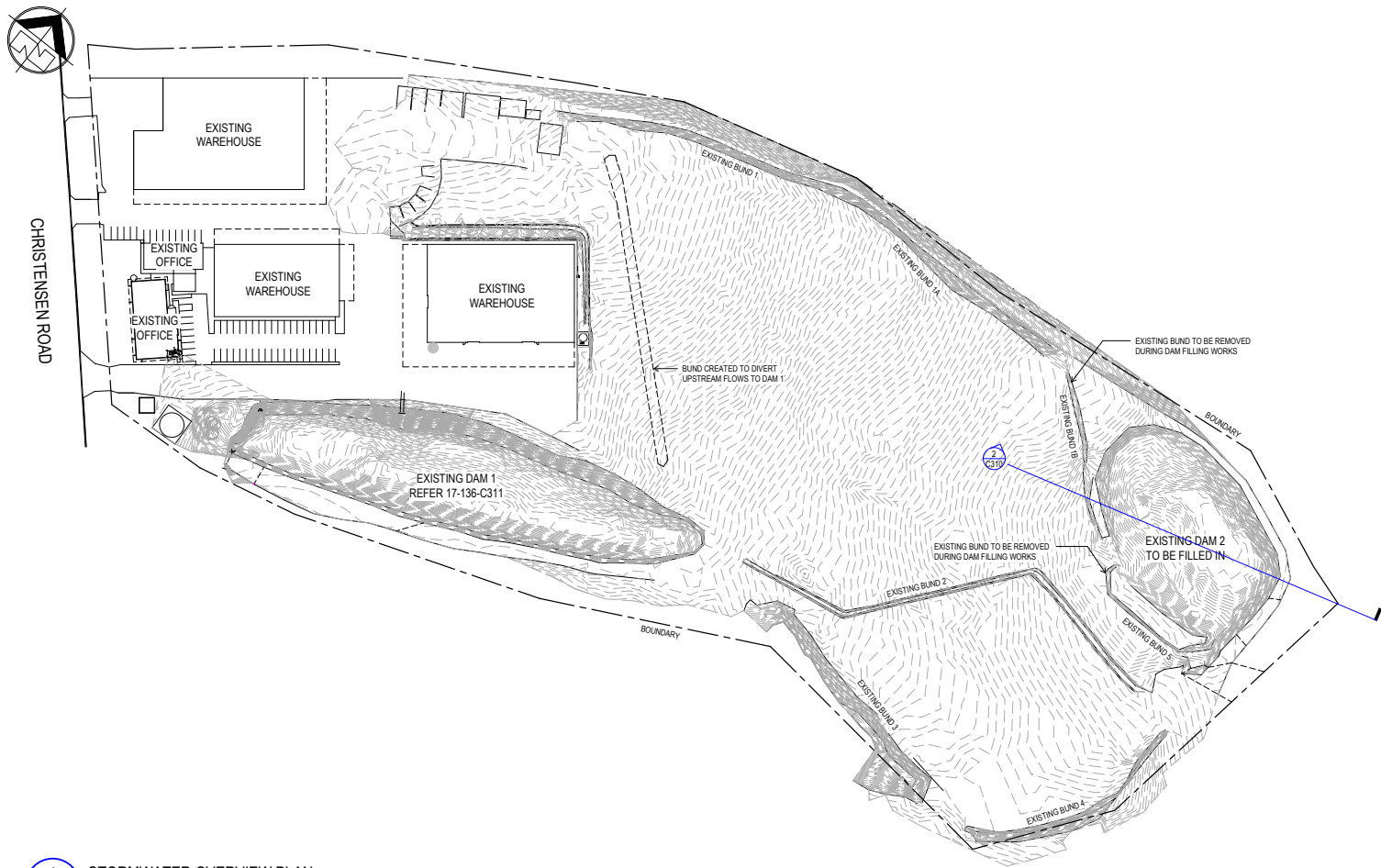
As there are no specific rehabilitation conditions in the existing Environmental Authority (licence) for the site, it was determined that the site should be rehabilitated in line with common rehabilitation conditions to provide a “safe, stable, non-polluting landform”. This rehabilitation goal is in line with Clause 13.1 of the Lease document, which requires any dams on land to be surrendered to be filled in and soil spread evenly to create a stable landform.

Based on the photographic evidence and imagery obtained from Nearmap, it can be seen that the former composting area and the sediment dam that serviced this area, Dam 2, have been successfully rehabilitated. The earthworks undertaken to fill in Dam 2, and the revegetation of the area have been undertaken in accordance with the rehabilitation goals for the eastern half of the site, and it has been returned to a condition that is suitable for surrender to the landowner.

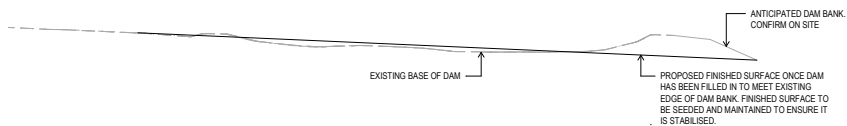
Appendix A – Drawings

Table 2: Drawings prepared by i3 consulting pty ltd

Drawing Number	Drawing Description
17-136-C310	Stormwater Overview Plan
17-136-C314	Sediment and Erosion Control Plan



1 STORMWATER OVERVIEW PLAN
1:1000



2 DAM 2 SECTION
C310 1:500

PROJECT TEAM

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Date:/...../.....

LEGEND

LINE	DESCRIPTION
---	PROPERTY BOUNDARY
---	EXISTING SURFACE CONTOURS

C	FOR APPROVAL	03.12.2018	K.J.L.
B	FOR REVIEW	23.08.2018	K.J.L.
A	FOR APPROVAL	03.08.2018	K.J.L.
REV	DESCRIPTION	DATE	BY

Status

FOR APPROVAL

Project
AMGROW
82 CHRISTENSEN ROAD,
STAPYLTON
for
AMGROW

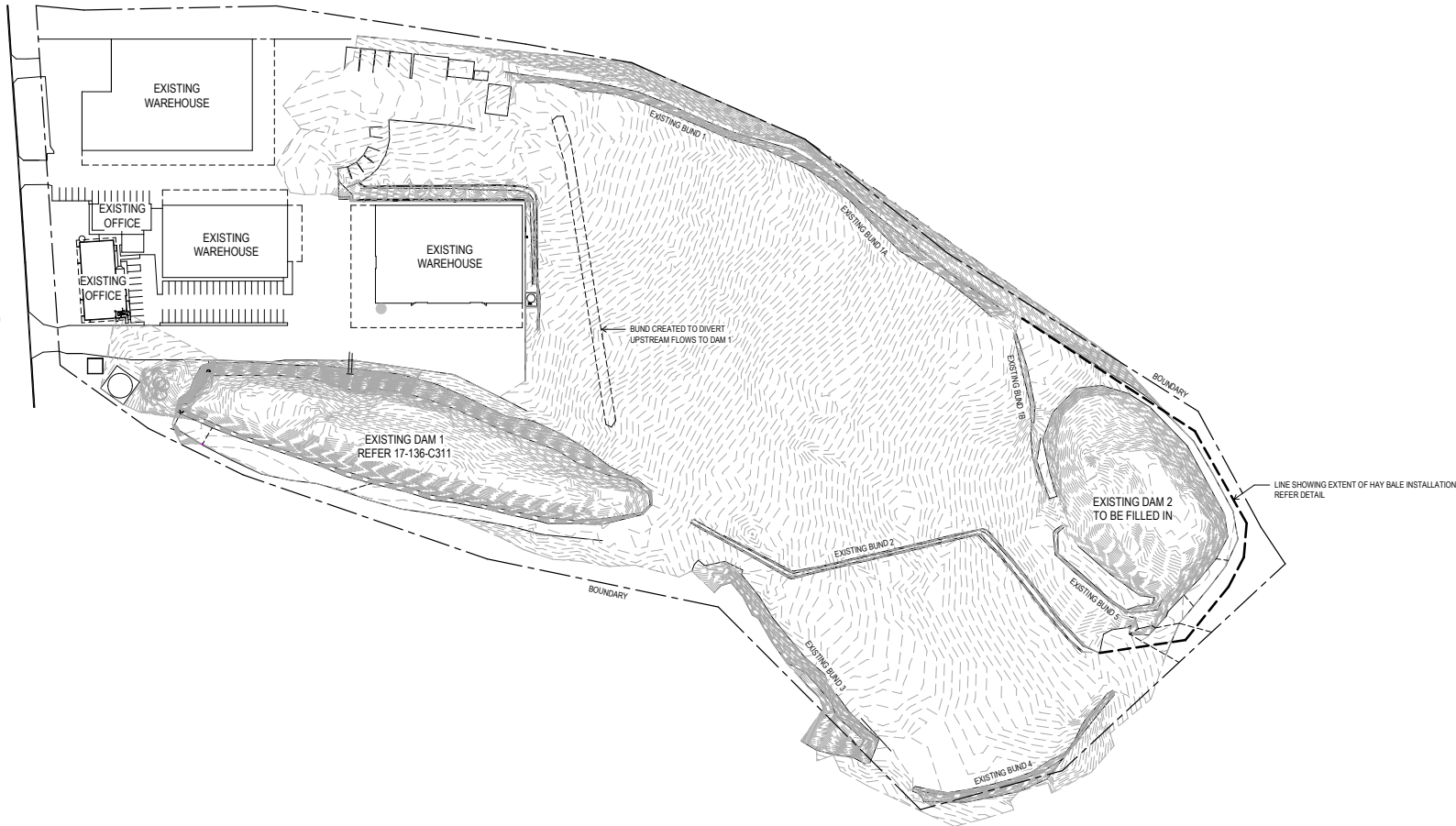
Title
STORMWATER OVERVIEW PLAN

Drawn	Date	Chkd	Date
K.J.L.	03.08.2018	T.J.S.	
Design	Date	Apprd	Date
T.J.S.			
Scale	A1	Certif	Date
As indicated			
Project No.	Dwg. No.	Rev	
17-136	C310	C	

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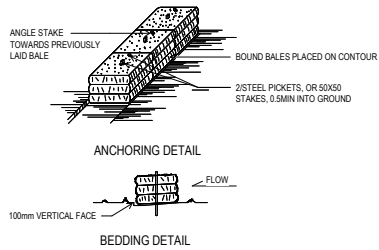


CHRISTENSEN ROAD



1 SEDIMENT AND EROSION CONTROL PLAN

1 : 1000



2 HAY BALE DETAIL

1 : 20

SILT MANGEMENT PLAN NOTES

1. ENSURE NO RUN OFF OR SEDIMENT DISCHARGES TO ADJOINING PROPERTIES.
2. CHECK HAY BALES FOR BUILD UP OF SEDIMENT AND CLEAN OUT AS REQUIRED.
3. CONTRACTOR TO NOMINATE SITE REPRESENTATIVE TO BE RESPONSIBLE FOR THE IMPLEMENTATION AND UP KEEP OF THE SILTATION AND EROSION MANAGEMENT CONTROL PLAN.
4. CONSTRUCTION OF ALL SEDIMENT MANAGEMENT DEVICES SHALL BE COMPLETED AND EFFECTIVE PRIOR TO:
 - STRIPPING OF TOPSOIL AND GRASS
 - EARTHWORKS TO THE SITE
5. ALL SEDIMENT MANAGEMENT DEVICES ARE TO REMAIN UNTIL WRITTEN NOTICE FROM THE CONSULTING ENGINEER.
6. BOTH TEMPORARY AND PERMANENT SEDIMENT MANAGEMENT DEVICES SHALL BE MAINTAINED AT A SUITABLE LEVEL/CONDITION THROUGHOUT CONSTRUCTION.
7. LICENSING AND COMPLIANCE FOR THE LOCATION OF THE SITE ACCESS POINT AND WASH DOWN AREA WHICH ARE TO BE MAINTAINED THROUGHOUT THE CONSTRUCTION PERIOD.

PROJECT TEAM

Consulting Engineer:

3

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Date:/...../.....

A	FOR APPROVAL	03.12.2018	K.J.L.
REV	DESCRIPTION	DATE	BY

Status

FOR APPROVAL

Project
AMGROW
82 CHRISTENSEN ROAD,
STAPYLTON
for
AMGROW

Title
SEDIMENT AND EROSION
CONTROL PLAN

Drawn	Date	Chkd	Date
K.J.L.	03.08.2018	T.J.S.	
Design	Date	Apprd	Date
K.J.L.			
Scale	A1	Certif	Date
As indicated			
Project No.	Dwg. No.	Rev	
17-136	C314	A	

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