



Perth
Dilhorn House, 2 Bulwer Street
Perth WA 6000
T (08) 9227 2600
F (08) 9227 2699

21 March 2016

Mr Chris Littlemore
CEO Boddington Shire
39 Bannister Road
PO BOX 4
BODDINGTON WA 6390

Dear Chris,

RE: CROSSMAN NATURAL FERTILISER PROJECT PLANNING APPLICATION

On behalf of Beacons Consulting International, I am pleased to lodge the attached Planning Application (the Application) for the Crossman Natural Fertiliser Project (Crossman Project).

The project will be sited on a 40 hectare portion of land at 9902 Albany Highway Crossman. The project site will initially be leased from the owner but will eventually be subdivided and from the main land parcel and purchased freehold.

The 6 tonne per hour Crossman Natural Fertiliser Project comprises a fully enclosed production facility (Plant) to turn selected residues and manures (Feedstocks) into high performance fertilisers. The Plant and the office building will be unobtrusive and conceptually similar to a major farming building complex. They will be screened by existing trees (dense income areas) and a number of additional trees will be strategically planted. The facility incorporates detention dams for water run-off from the hard stand and roads. The site will be landscaped to improve the visual amenity.

All feedstocks will be delivered in covered trucks, as will the fertiliser product. Relatively small quantities of feedstock manures will be held on site. Typically the manure feedstocks will be turned over weekly.

The manufacturing process comprises size reduction; mixing; pelletising; cooling, and; packaging. The facility incorporates an odour control system to ensure that there will be no detectable odour off-site. This system has been included even though the level of odour emission in pilot trials proved to be low as result of the nature of the feedstocks and the relatively small quantities of material that are that are handled at any one time.

Your planner provided preliminary comments (Shire Comments) on the 27 October 2014 and these are included as Appendix No 1. They have provided valuable guidance in search for and locating a suitable site within the Shire of Boddington. They have also been of assistance in preparing this application. Based on this advice we consider our natural fertiliser plant (the Plant) meets the definition of "Industry—Rural" as set out in the Shire of Boddington Local Planning Scheme (LPS 2).

The Crossman Project has been described for you previously in the Project Overview used in several Shire briefings. This application updates and expands upon the information provided in the Project Overview.

Our Application consists of:

- The completed Shire of Boddington Planning Application Form (Appendix 2).
- Corporate profiles and relationships (Appendix 3).
- Description so of the equipment and manufacturing process (Appendix 4)
- Details of the plant configuration including building floor plans and elevations (Appendix 5).
- A summary of environmental considerations (Appendix 6)
- Summary of Project benefits (Appendix 7).

This Application is for single and two shift operation (Stage 1). A subsequent Application will be made when the Plant operation Increases from two shifts to three shifts (Stage 2) and the new main office building is to be constructed.

The proposal has been referred to the WA Department of Environment Regulation and has been assessed as under Part V of the Environmental Protection Act as a Works Approval Application. The DER has finalised it is assessment and issued a draft Approval (See Appendix 8) which will be issued as a final approval on completion of the planning approval process. As a result there is no need for this planning application to be referred to the EPA for assessment.

We would be pleased to provide any additional information you or your staff may require to finalise the approval.

The current program is to secure all approvals and finalise funding to commence construction before the end of April 2016. The construction is estimated to take five months and commercial operation a month thereafter.

In conclusion; The Crossman Natural Fertiliser Project will be built to the highest standards and has the strong support of the WA Department of Agriculture and Food. It is considered to be a milestone strategic project for high performance organic type fertilisers for a wide ranging production of grains, vegetable, fruits etc. The project's successful operation in the Boddington Shire is expected to result in many benefits some of them outlined in Appendix No 7.

Yours Sincerely



Noel Davies

APPENDIX No 1

SHIRE OF BODDINGTON PROJECT COMMENTS

PRELIMINARY COMMENTS ON NATURAL FERTILISER PROJECT (27 October 2014)

Shire of Boddington Local Planning Scheme No. 2

The *Shire of Boddington Local Planning Scheme No. 2* (LPS2) text and plans can be viewed at <http://online.planning.wa.gov.au/lps/localplanningschemes.asp?q=b>

Most rural parts of the Shire are zoned "Rural". The range of permitted land uses, set out in the Zoning Table of LPS2 (clause 3.2), are broad in the Rural Zone. I suggest the proposed natural fertiliser plant would be best described as either "Industry-Noxious" or "Industry-Rural" as set out in Appendix 1 of LPS2. For both uses, the Shire is able to consider a Planning Application for site's zoned Rural. The Shire legally has to invite comments for at least 21 days. Given a number of State Government agencies will be providing comment, it is suggested the public comment period would be in the order of 28 – 35 days.

Based on the above, there is the legal ability to apply to the Shire for a Planning Application for a fertiliser plant in the Rural Zone. Significantly, there is no requirement to amend (rezone) LPS2 first.

I would expect there is an associated need for licencing by the Department of Environment Regulation. I'm sure the proponent is aware of DER requirements.

Draft Local Planning Strategy

The Council at its meeting on 17 September 2013 adopted (gave in principle support) to the draft *Shire of Boddington Local Planning Strategy*. This in part seeks to support a more robust economy and to encourage greater diversification of the local economy. The Council provided in-principle support for an industrial area at North Bannister accommodating industries requiring larger land holdings. Most industries could be accommodated with the current "Rural" zoning. However, should separate titles be sought (proposed subdivision), there is a need for more detailed technical investigations and rezoning to progress these proposals.

Planning Considerations

Subject to the site identified, it is expected that relevant planning considerations include (but are not limited) to the following:

- whether the proposed fertiliser plant is appropriate use for the site and area;
- buffer distances to sensitive land uses (as outlined in the EPA Guidance for the Assessment of Environmental Factors *Separation Distances between Industrial and Sensitive Land Uses*) addressing relevant impacts;
- whether clearing of native vegetation is proposed;
- water management and implications on off-site areas;
- agricultural "right to farm", biosecurity and being a "good neighbour";
- vehicular access and sight distances;
- fire management;
- visual impact especially when viewed from main roads;
- developer contributions – especially if access is from an unsealed road; and
- measures for on-going management and addressing on-site safety.

Process

The Planning Application to the Shire will require the submission of:

- a site (block) plan;
- floor plan/s and elevations for any proposed buildings;
- filling in the planning application form;
- payment of the Shire planning fee (this is based on the percentage of the cost estimate of the new buildings plus \$295 for the fertiliser use); and
- a covering letter or report that justifies the proposal and addresses key planning and environmental considerations.

Following the end of the consultation period, the Shire will contact the proponent to go through any issues raised and see if solutions can be found. Following this, the Shire administration will report to Council where the proponent is invited to attend.

The Shire administration's final position and recommendation to the Council will be guided by considerations including the location of the proposal, how planning considerations are addressed, requirements in LPS2 and information provided by the proponent, submitters and State Government agencies. The Council, of course, is able to accept the officer recommendation with or without modification, not accept the officer recommendation or defer and seek additional information.

Next Steps

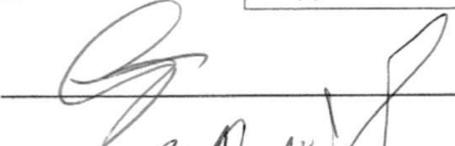
The proponent may wish to arrange a presentation to Councillors (without the public being present) or to Council (with the public present) to discuss the proposal prior to lodging the Planning Application. If the proponent wants to make a presentation, this will need to be agreed by the Shire's CEO.

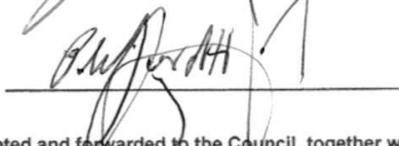
APPENDIX No 2

*SHIRE OF BODDINGTON
PLANNING APPLICATION FORM*

**APPLICATION FOR PLANNING APPROVAL
PLANNING AND DEVELOPMENT ACT
SHIRE OF BODDINGTON**

1. Surname of Applicant:	Jones	Given Names:	Clifford H
Full Address	16 Sheriff Circuit		
	Wattle Grove WA	Postcode:	6107
2. Surname of Land Owner (if different from above)	Lyster	Given Names:	Geoffrey
3. Submitted By:	Beacons Consulting International Pty Ltd		
4. Postal Address:	PO Box 133 Forrestfield WA 6058		
Telephone No:	(08) 8359 2223	Fax No:	(08) 9359 4200
Email:	bci@beaconsconsulting.com.au		
5. Locality of Development:	9902 Albany Highway Crossman WA		
6. Title Details of Land:	9 A83 AVON 4081		
7. Name of Road Serving Property:	South Crossman Road		
8. Description of Development:	Crossman Natural Fertiliser Project		
	(see covering letter and Appendices 4 & 5)		
Nature & size of all buildings proposed:	Receival Bay, Storage Bay, Processing Building (Production Shed) and Offices (see Appendices 4 & 5)		
Materials to be used on external surfaces of buildings:	High quality colour bond (drab green) (see Appendices 4 & 5)		
General treatment of open portions of the site:	All buildings and facilities are on concrete pads and open areas are grazing paddocks (see Appendix 4)		
Details of car parking and landscaping proposals:	Forty Two (42) car parking bays. Some landscaping between buildings and around dams (see Appendix No 4)		
Approximate cost of proposed development:	Earthworks, pads & buildings \$717,000		
Estimated time for completion:	Six (6) months		

Signature of Owner:  Date: 22 MAY 2015

Signature of Applicant of Agent:  Date: 23 MAY 2015

Note: This form should be completed and forwarded to the Council, together with 2 copies of detailed plans showing complete details of the development, including a site plan showing the relationship of the land to the area generally. In areas where close development exists, or is in the course of construction, plans should show the siting of buildings and uses of lots immediately adjoining the subject land.

APPENDIX No 3

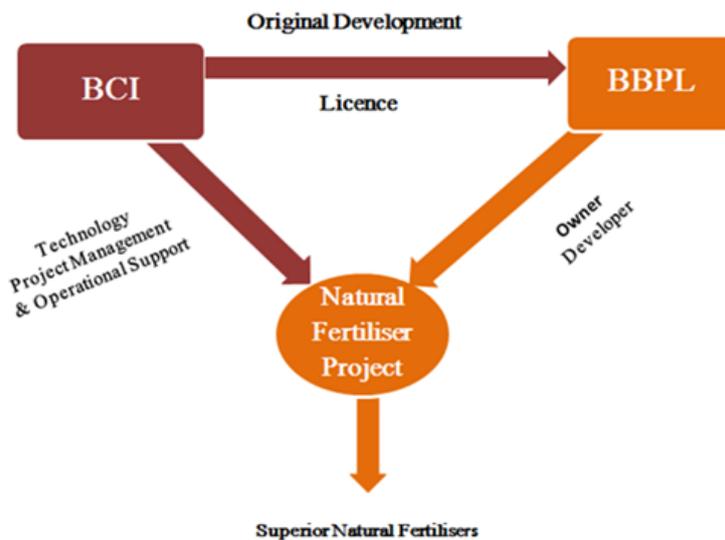
CORPORATE RELATIONSHIPS & PROFILES

1.1 The Proponents

Beacons Consulting International Pty Ltd (BCI) – founded in 1988 – own the technology and provides it under licence to BBPL. BCI is the owner’s representative and project Manager. BCI has been researching and developing Natural Fertiliser Technologies for several years.

Boutique Biofertilisers Pty Ltd (BBPL) –founded in 2013 owns the Crossman Natural Fertiliser Project and intends to establish and operate it with the support of BCI.

The relationships between the Proponents is shown below:



Key Contacts:

CEO PO Box 133 Forrestfield WA 6058 Ph: (08) 9359 2223 Mbl: 0402 599 756 Em: bci@beaconsconsulting.com.au	Principal Project Manager Mbl: 0438 944 591 Em: kam@beaconsconsulting.com.au	Senior Process Engineer Mbl: 0429 115 013 Em: sday4469@bigpond.net.au
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1.2 BCI Technology

BCI has developed and is refining, several innovative technologies and extracts from various media articles and presentations to the Shire of Boddington are shown below:

Team
<p>Beacons team consists of:</p> <ul style="list-style-type: none"> • scientists • engineers • farmers • economists • accountants • manufacturers <p>Staff, associates and advisors, have vast international experience in:</p> <ul style="list-style-type: none"> • energy • food • transport • Manufacturing <p>Detailed Profiles are available</p>

Recognition
<p>BCI has won multiple awards for innovation in renewable technologies and has been recognised in many journals and magazines.</p>



Sustainable Energy Association of Australia Awards



Article in the Oil & Gas Journal



A beacon in bioenergy

EcoGeneration — September/October 2011

EcoGeneration's Melanie Ryan talks to clean energy industry legend Clifford Jones about the latest developments in integrated renewable energy plants using biomass as a fuel source, as well as in the bioenergy sector at large.

Clifford Jones founded Beacons Consulting International in 1988 to provide high-level energy and water system development advice in Australia and a number of other countries.

BCI has a “Crusade for Country Australia” to apply the BCI Technology in projects developed and managed for owners in several business segments. The Crossman Natural Fertiliser is the strategic first project.

1.3 BBPL Board

Clifford (Cliff) Jones: Cliff is a Chartered Professional Engineer. He is a professional manager and company director, with over 45 years' experience (both overseas and within Australia) in infrastructure projects with tertiary and post graduate qualifications in engineering and business administration.

Hon. Kimberley (Kim) Chance: Kim has over 40 years' experience as an expert in agricultural principles and practices. He was the owner and operator of a large farm in Western Australia before starting his parliamentary career and becoming a WA Minister with Portfolios such as: Agriculture, Forestry, Food, Fisheries, Mid West, Great Southern, Midwest and Wheatbelt, etc. He is now a high level food consultant to the Middle East.

Professor Michael (Mike) Dureau-AM: Mike has more than 45 years of business and engineering experience. He is a highly qualified scientist and engineer, a former Managing Director of ABB Power Generation & ALSTOM Power, and a director of several companies, with extensive experience with international organisations, as well as the public sector.

Melissa (Mel) Jones: Mel has tertiary secretarial qualifications and over 22 years of experience providing personal assistant and administration services across a number of business segments including property, construction investment and power generation. She is an experienced company secretary and office manager.

More detailed individual profiles are available.

APPENDIX No 4

PLANT, PROCESS & PROGRAM

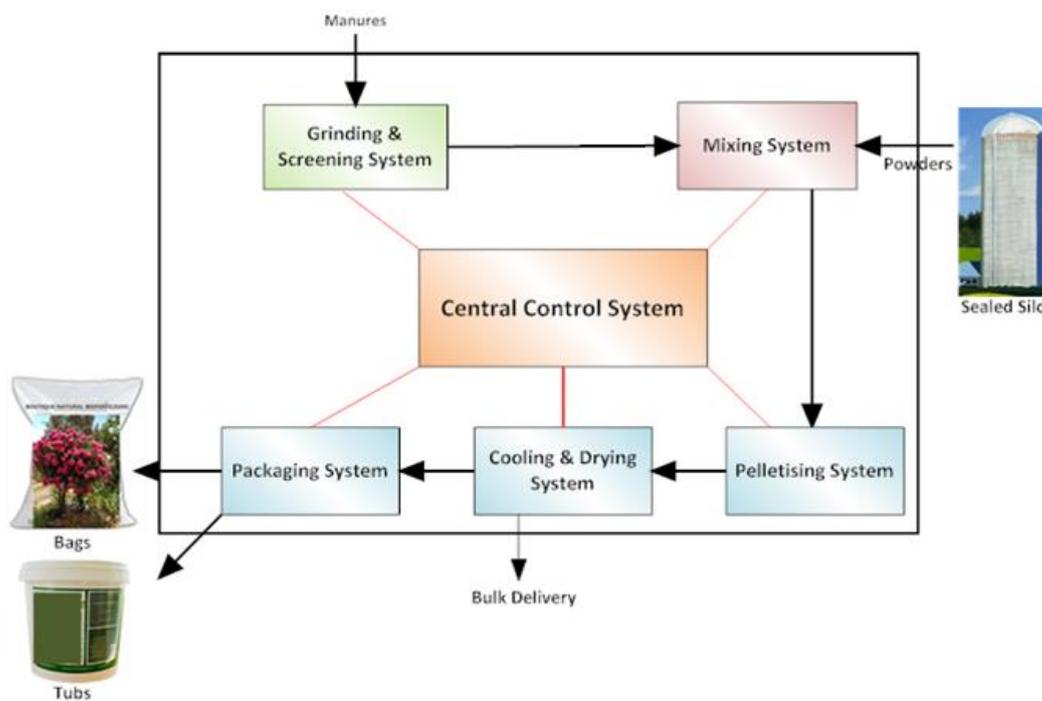
4.1 Project Capital Cost

The BBPL Natural Fertiliser Project began several years ago, and is now being developed at Crossman. Stage 1 of this 6 tonne per hour Crossman Project is now underway for a single and then tow shift operation. Stage 2 as a three shift operation is to follow. The estimated total capital cost of the Crossman Project is \$11.75M.

The facilities and their layout are described in the following Appendices.

4.2 Production Process

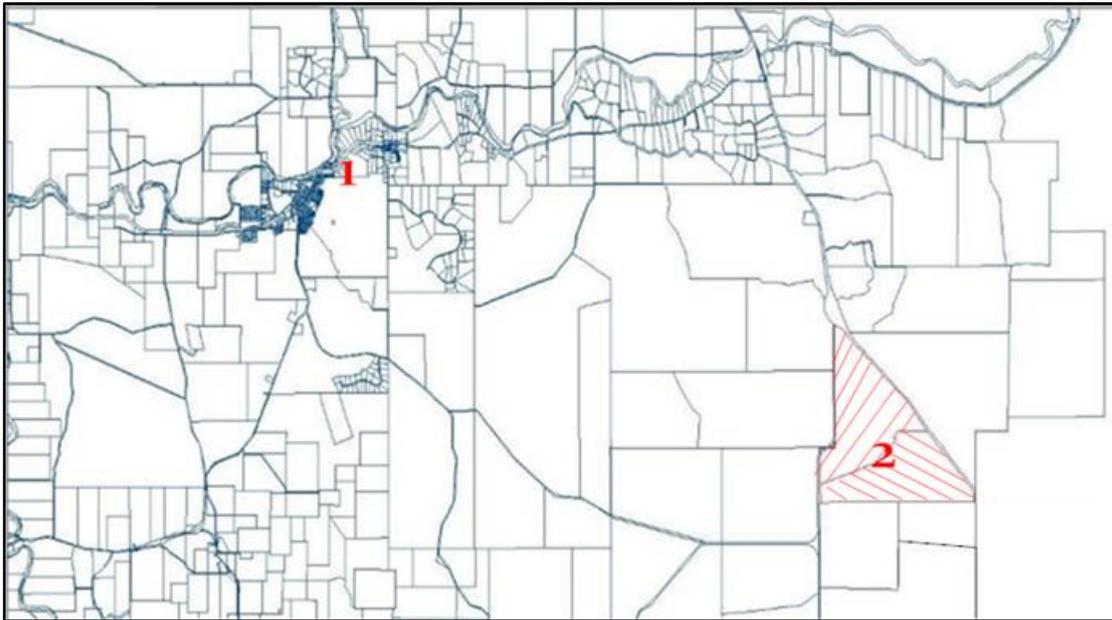
This facility with its process systems - is shown in concept below:



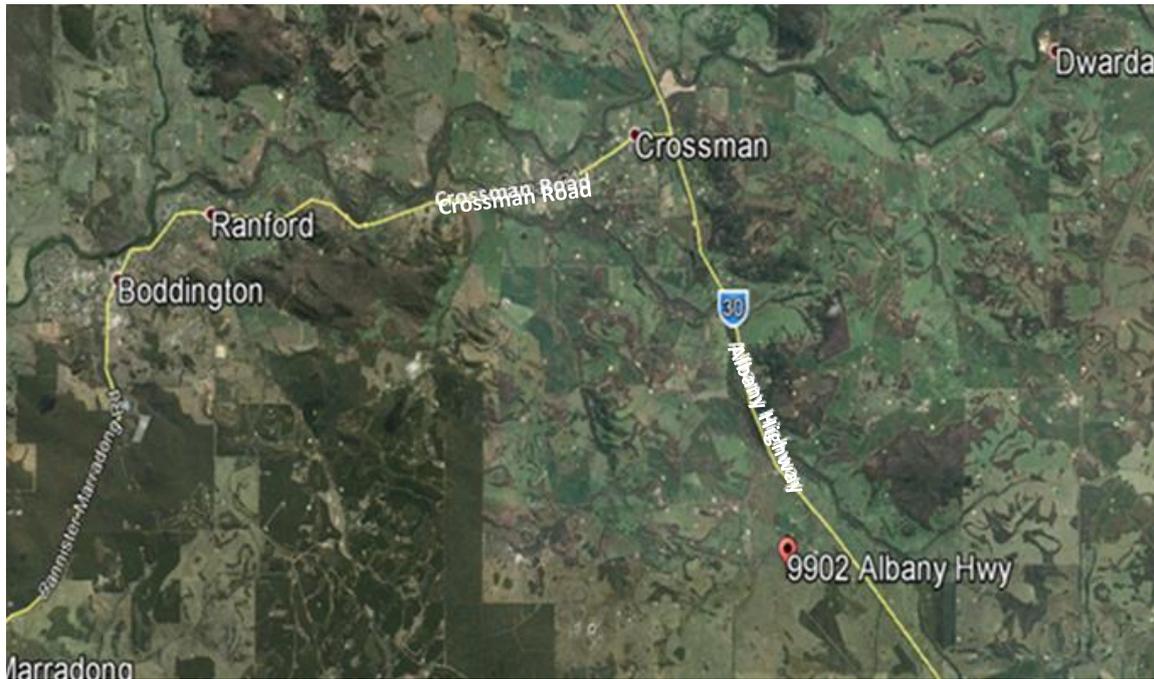
Pellets will be produced initially and liquid fertilisers are planned for the future.

4.3 Locations

Location of Boddington Town (1) and Lyster's Farm (2)



Location of Lyster's Farm (9902 Albany Highway) to main road systems



Property and Site

The Lyster Farm No 9902 Albany Highway is marked X.

The site has access to Albany highway and wide turn-ins will be constructed off the road so as not to impede the traffic.



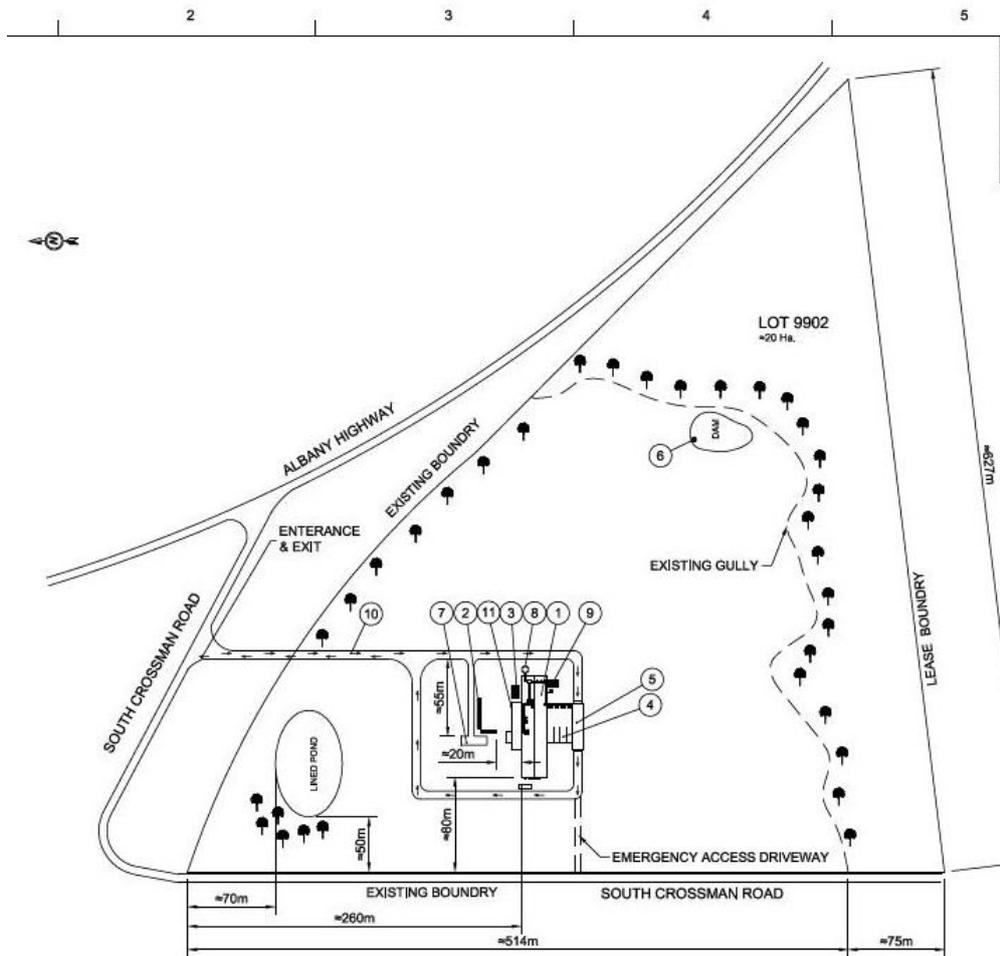
The Plan "Footprint" is \approx 6 hectares as is shown ■.

Initially 20 hectares of land will be leased and this is sufficient for development of the project. It is intended that for the second stage of the project the land area will be extended to 40 hectares and this area of the farm will be subdivided and purchased. The two areas described above are outlined in yellow. The area shown is not to scale and the dividing boundary may change a little to establish the 40 hectares.

The Plant is screened by existing trees. A number of additional trees are to be added to screen the facilities, and some landscaping will also be included.

4.4 Site Layout

This shows the layout on the original 20 ha with the main external dimensions.



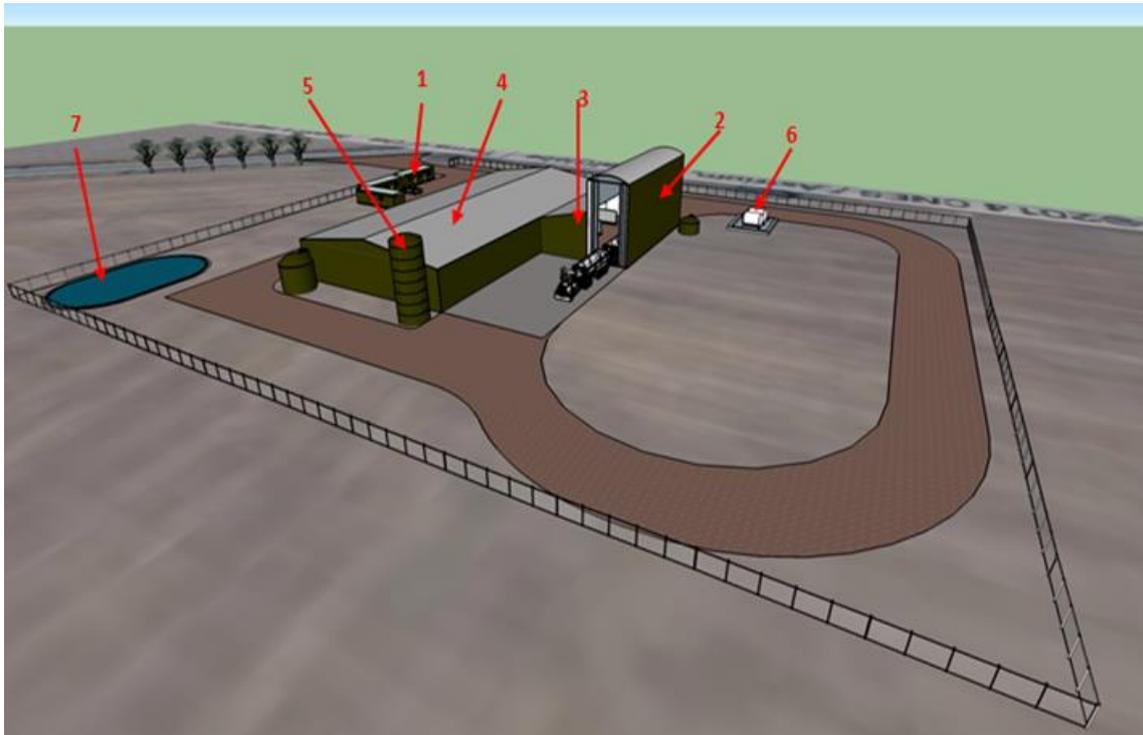
Item	Description
1	Production Shed
2	Temporary Office & Amenities
3	Future Office & Amenities
4	Storage Bay
5	Receival Bay - Drive Thru with Roof
6	Dam
7	Car Park (42 Bays Stage 1)
8	Generator & Fuel Tank
9	Odour Control Unit
10	Internal Access Driveway
11	Fly Ash silo

APPENDIX No 5

*CROSSMAN NATURAL FERTILISER
PROJECT FACILITIES*

5.1 Facilities Configuration

The drawing below is the standard module that has been adapted for Crossman as shown in 4.4.

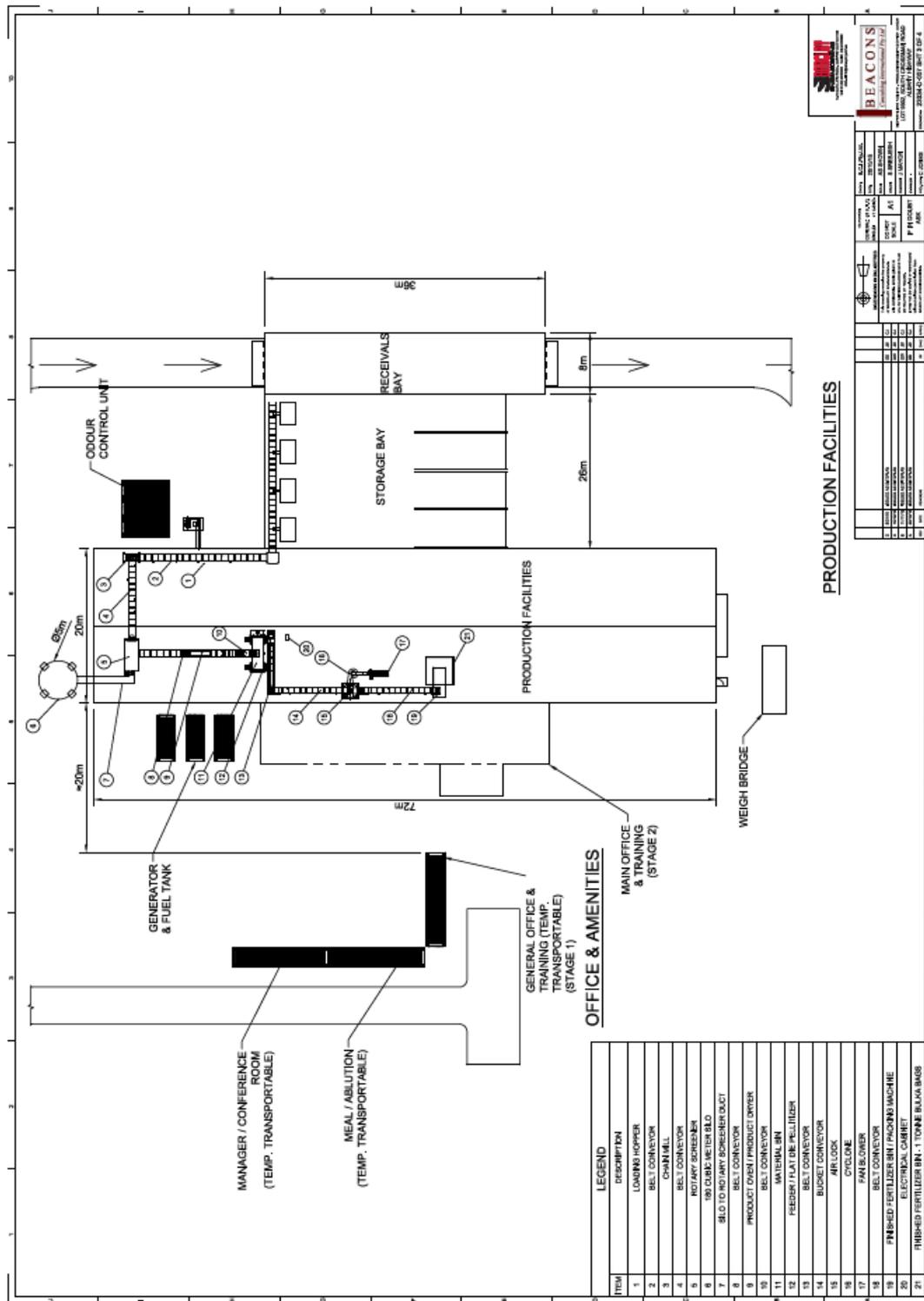


1	Office & Amenities
2	Receivals Bay (for Manures)
3	Storage Bay
4	Production Shed
5	Powder additives Silo
6	Generation and Fuel Bay
7	Drainage Dam

The major facilities are to be built to comply with all building regulations. They are to be in drab green colour bond, or painted that colour for low visual impact.

There will be 30 Car Bays near the Office & Amenities, 6 near the Receiving Bay and 6 near the production shed.

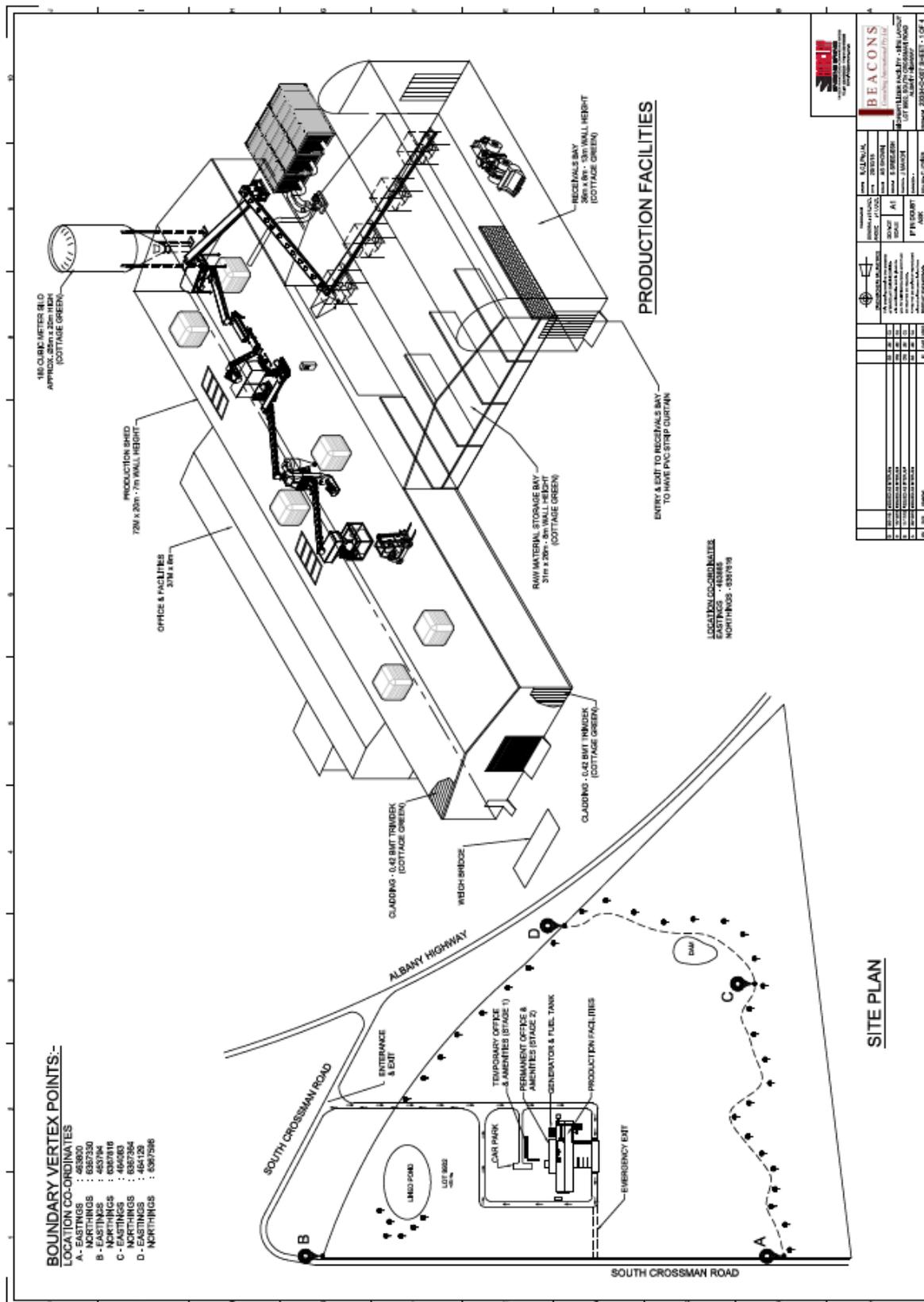
5.2 Plan of Facilities



5.3 Production Facilities

The Storage Bay is likely to be expanded to allow for bulk storage of the natural fertiliser range.

And the orientation of the bays may be turned 90 degrees. Alternatively 4 Silo's will be added.



Item	Description	Details
1	Production Shed	60m x 20m x 7.0m High
2	Storage Bay	30m x 10m x 7.0m High
3	Receival Bay - Drive Thru with Roof	30m x 8m x 13.0m High

5.4 Offices & Amenities

Initial Facilities

There will be three transportable units (Units) of 12m long x 3m wide, for offices and amenities in Stage 1.

All of these units are to be of a high standard and comply with Shire regulations for such facilities.

These Units are to be arranged in a cluster as shown in Appendix 5.2.

A photo of a typical transportable unit at another site is shown below:



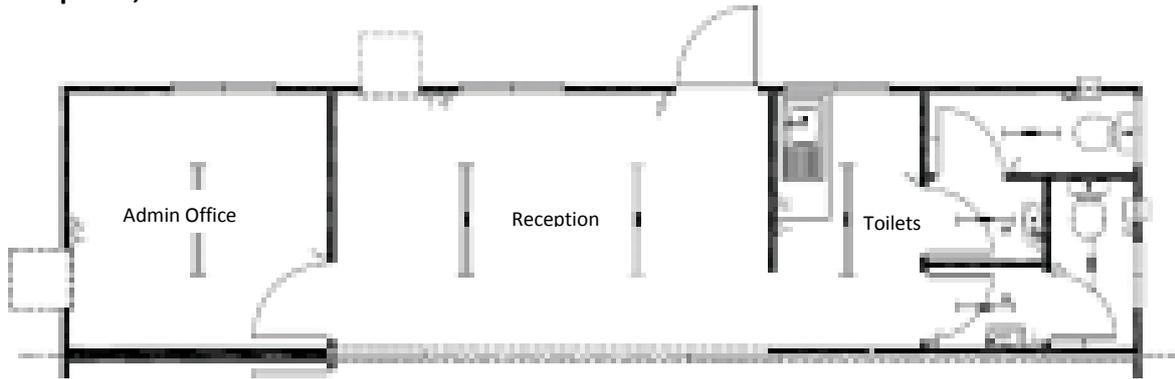
Typical Transportable Units

With the down-turn in the mining industry there are many good quality transportable units for sale and the intention is to purchase three of them, refurbish them and fit them out as required for the Crossman Project.

These Units are to be painted a similar green colour to the production facilities as shown in Appendix 5.1.

The Units are to satisfy the requirements for an office and amenities long term if required. However, once the operations expand to a 3 shift operation in Stage 2 then a somewhat larger facility will be built as described later in this Section.

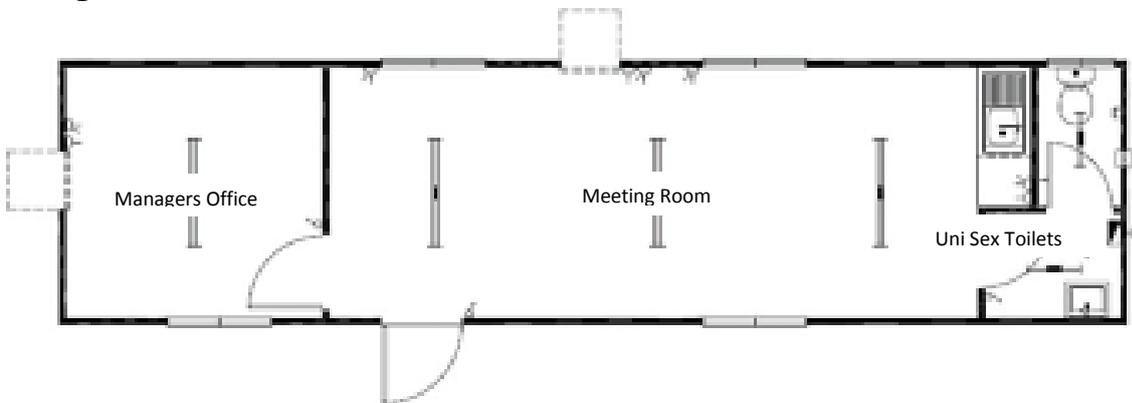
Reception, Administration and Facilities



Typical Inclusion

- 2 External Plain Metal Doors 2043 x 846
- 3 Internal Timber Doors 2040 x 820
- 2 Internal Timber Doors 2040 x 720
- 2 Internal Timber Doors (Lift Off) 2040 x 720
- 8 Windows 1075 x 1155 w/ Flyscreens
- 2 Windows 350 x 755 w/ Flyscreens
- 6 Cut-outs for Air Conditioners
- 2 Toilets Dual Flush, w/Toilet Paper Holder
- 2 Hand Basins, Mini SS, Flickmixer (CO) w/ Mirror
- 2 Exhaust Fans
- 1 Cupboard Laminated Top w/Splashback 1570 x 600 x 900H
- 1 Sink, SS, 1 Bowl, 1 Drainer & 1 Flickmixer(CO)
- 16 Diffused Fluoro Lights
- 9 Single Socket Outlets 10 Amps, 6 for ACs
- 9 Double Socket Outlets 10 Amps
- 1 Load Centre

Managers Office and Facilities



Typical Inclusions

- 1 External Plain Metal Door 2043 x 846
- 1 Internal Timber Door 2040 x 820
- 1 Internal Timber Door 2040 x 720
- 1 Internal Timber Door (Lift Off) 2040 x 720
- 4 Windows 1075 x 1155 w/ Flyscreens
- 1 Window 350 x 755 w/ Flyscreens
- 2 Cut-outs for Air Conditioners
- 1 Cupboard Laminated Top w/Splashback & Fridge Space 1570 x 600 x 900H
- 1 Exhaust Fan
- 1 Sink, SS, 1 Bowl, 1 Drainer & 1 Flickmixer (CO)
- 1 Toilet Dual Flush, w/Toilet Paper Holder
- 6 Diffused Fluoro Lights
- 3 Single Socket Outlets 10 Amps
- 5 Double Socket Outlets 10 Amps
- 1 Load Centre

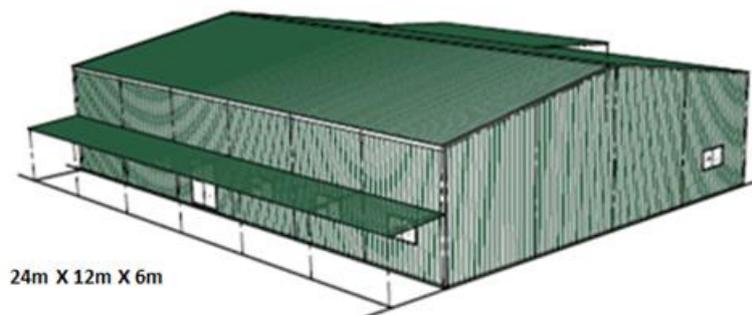
Meals Facilities

Typical Inclusions

- External plain metal door
- Windows
- Cut outs for air conditioners
- Kitchenette counter
- Sink and drainer
- Mini boil unit
- Table and chairs
- Fridge
- Microwave
- Diffused fluoro lights
- Single socket outlets
- Double socket outlets
- Load centre

Additional Facility

To be added in Stage 2 (when in multi shift production).



High quality factory or farm shed on a concrete slab with steel frame and green heavy duty colour bond cladding. To be lined, insulated, air conditioned and partitioned for offices and amenities.

The Proponents may eventually decide on a different and more expensive form of construction for a more imposing corporate aspect.

5.5 Packaged Generators

There will be 2 x 300 kVA diesel generator sets for the Plant. They will be in acoustic enclosures of high standard suitable for operation close to commercial buildings and housing. Typical examples are shown below:



5.6 Fuel Storage Tanks

The fuel tanks will comply with all appropriate regulations and typical fuel tanks are shown below:



5.7 Alternative General

Once the Plant operations increase to Stage 2 then the plan is to install solar / battery generation (which is rapidly falling in capital cost). The diesel sets (5.4) will be progressively reduced to standby duty.

5.8 Proponents Accommodation

At full capacity there is estimated to be \approx 50 direct workers, including those for operations and logistics. They will mostly have homes within 30 minutes of the operational facilities. Locations within the Boddington Shire will be preferred for house and land package considerations.

It is planned to have one and possibly two dwellings on site for security and this is feasible because of the acceptable levels of noise and odour emissions from the operations.

APPENDIX No 6

ENVIRONMENTAL CONSIDERATIONS

6.1 Environmental Approvals Process:

BCI's lodged a draft Works Approval application with DER in September 2015 and presented and updated version in November 2015. DER has finalised its assessment and issued a draft Works Approval Application to Tellus for our comments. It is expected that the Works Approval will be finalised and signed by 19 February 2016. However DER may delay issuing the approval pending finalising of this planning approval.

A copy of the Draft Works Approval has been issued to the Shire of Boddington for information.

6.2 Plant location and nearest neighbours:

The distances from the Plant to the nearest neighbours are all more than 800 metres.



The Plant is screened by thick clusters of existing trees as seen in the photograph above. Additional Trees and dams will be added, with a degree of landscaping, as shown in 4.4



Corner South Crossman Road and Albany Highway



Property taken from South Crossman Road



South Crossman Road looking towards Albany Highway

6.3 Environmental factors

A summary of these factors and their mitigation is provided below:

- Visual:** All major buildings will be drab green to blend into the landscape.
The collection of buildings will be a little different from those of a large farm.
The Plant is well screened by existing trees and further trees to be added (see 4.4).
- Noise:** All processes are under cover and noise modelling is to environmental and planning statutory requirements and standards.
The results of the modelling shows that the potential noise level from the Plant is comparable to that from the highway traffic.
- Odour:** The natural manures are delivered in covered trucks, dumped under cover and on concrete and immediately loaded into covered bins.
They are then conveyed to the Production Shed.
None of these manures are left in the open to degenerate and smell.
There will be minimal smells inside the property boundaries and virtually none outside the property.
An odour extraction and elimination system will be installed.
- Dust:** As all materials will be handled inside buildings using enclosed equipment, there is minimal potential for generation of dust.
Dry Fly Ash is delivered in sealed trucks and pumped (by air) into a sealed silo.
The Fly Ash is pumped from the silos to the process.
Dust suppression misting sprays will be used along with regular sweeping of floors in the materials delivery and storage are to control dust.
- Effluents:** The process is conducted as a dry process with no addition of water or liquids.
No liquid waste or manures are added to the process.
There are no discharges from the process.
All cleaning of spills and housekeeping will utilise dry sweeping.
As a result there is no threat to surface or groundwater.
- Rain Water Control:** The water run-offs from the buildings are to be channelled and piped into tanks for re-use or to the catchment dam. The quality of the water in the dam will be consistent with normal run-off on agricultural land.
- Fire:** An approved system will be installed in all buildings to address any fire outbreak.
Mobile firefighting equipment will be held at the Plant and water sourced from the dams to fight any outbreaks in the field and add to the elimination within the plant if necessary.

APPENDIX No 7

BENEFIT SUMMARY

7.1 Local Benefits

Local direct jobs and jobs (≈ 50) in the Plant and the logistics.

Stimulus for local economy (in particular in the Crossman area).

Work for local service providers.

Some increase in the number of local residences (to house staff).

High quality natural fertiliser for better food production in the Boddington Shire and nearby Shires.

Diversification of Boddington business segment.

Potential “Foundation Project” for a Crossman Intensive Agricultural Industry Precinct.

7.2 Benefits for WA & Australia

The mining export boom is deflating rapidly and export replacements are urgently needed for economic stability. The governments are targeting to double the value of agricultural exports over the next 10 years.

The rapidly accelerating demand for food in Asia is a major opportunity and innovative new farming methods are required with new technologies for the logistics and processing.

Cost effective natural fertilisers are a major factor element in the ambition to “Feed Asia”.

The Crossman Project is the foundation for the BCI led Natural Fertiliser Business throughout WA and the rest of Australia, for food production.



APPENDIX No 8

ENVIRONMENTAL APPROVAL



Government of **Western Australia**
Department of **Environment Regulation**

Your ref: W5945/2016/1
Our ref: DER2015/001770
Enquiries: Caron Goodbourn
Phone: (08) 9724 6135
Email: caron.goodbourn@der.wa.gov.au

Mr Clifford Jones
Manager
Boutique Biofertilisers Pty Ltd
PO Box 133
FORRESTFIELD WA 6058

Dear Mr Jones

**ENVIRONMENTAL PROTECTION ACT 1986: WORKS APPROVAL APPLICATION
W5945/2016/1**

The Department of Environment Regulation (DER) has undertaken an assessment of works approval application W5945/2016/1 for the construction of a compost manufacturing and soil blending facility located at part of Lot 9 on Plan 4850.

Based on the Department's assessment of the application, DER advises that it intends to grant a works approval, subject to conditions, for the proposed Category 61A. Draft copies of the Works Approval and Decision Document were referred to you for comment on 8 February 2016.

Please note that, in accordance with DER's Guidance Statement: *Land use planning* (October 2015), DER will not grant a works approval until all necessary planning approvals for the proposal are in place.

Should you have any queries please do not hesitate to contact DER Manager Licensing, Caron Goodbourn on (08) 9724 6135.

Yours sincerely

Ruth Dowd
Senior Manager Licensing – (Waste Industries)
Officer delegated under section 20
of the *Environmental Protection Act 1986*

1 March 2016

The Atrium, 168 St Georges Terrace, Perth WA 600
Postal address: Locked Bag 33, Cloisters Square, Western Australia 685
Phone: (08) 6467 5000 Fax (08) 6467 556
www.der.wa.gov.a



Decision Document

Environmental Protection Act 1986, Part V

Proponent: Boutique Biofertilisers Pty Ltd

Works Approval: W5945/2016/1

Registered office: 16 Sherriff Circuit
WATTLE GROVE WA 6107

ACN: 162 847 181

Premises address: Crossman Natural Fertiliser Project
No 9902 Albany Highway
CROSSMAN WA 6390
Being part of Lot 9 on Plan 4850 within co-ordinates E: 463800 N: 6367330;
E:463794, N: 6367816; E: 464083, N: 6367364; E:464129, N: 6367596

Issue date: Thursday, 18 February 2016

Commencement date: Monday, 22 February 2016

Expiry date: DRAFT

Decision

Based on the assessment detailed in this document the Department of Environment Regulation (DER), has decided to issue a works approval. DER considers that in reaching this decision, it has taken into account all relevant considerations.

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Licensing Officer

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Delegated Officer



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1 Purpose of this Document

This decision document explains how DER has assessed and determined the application and provides a record of DER's decision-making process and how relevant factors have been taken into account. Stakeholders should note that this document is limited to DER's assessment and decision making under Part V of the *Environmental Protection Act 1986*. Other approvals may be required for the proposal, and it is the proponent's responsibility to ensure they have all relevant approvals for their Premises.



2 Administrative summary

Administrative details		
Application type	Works Approval <input checked="" type="checkbox"/>	
	New Licence <input type="checkbox"/>	
	Licence amendment <input type="checkbox"/>	
	Works Approval amendment <input type="checkbox"/>	
Activities that cause the premises to become prescribed premises	Category number(s)	Assessed design capacity
	61A – Solid waste facility	28,000 tonnes per annual period
Application verified	Date: 07/01/2016	
Application fee paid	Date: 03/02/2016	
Works Approval has been complied with	Yes <input type="checkbox"/>	No <input type="checkbox"/> N/A <input checked="" type="checkbox"/>
Compliance Certificate received	Yes <input type="checkbox"/>	No <input type="checkbox"/> N/A <input checked="" type="checkbox"/>
Commercial-in-confidence claim	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>
Commercial-in-confidence claim outcome	As per emails received from Noel Davies, 11/12/2015 and 21/01/2016 (redacted version).	
Is the proposal a Major Resource Project?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>
Was the proposal referred to the Environmental Protection Authority (EPA) under Part IV of the <i>Environmental Protection Act 1986</i> ?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>
Is the proposal subject to Ministerial Conditions?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>
Does the proposal involve a discharge of waste into a designated area (as defined in section 57 of the <i>Environmental Protection Act 1986</i>)?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>
Is the Premises within an Environmental Protection Policy (EPP) Area	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>
Is the Premises subject to any EPP requirements?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>



3 Executive summary of proposal and assessment

Boutique Biofertilisers has obtained leasehold for the development and construction of a Category 61A – Solid Waste Facility to be known as the Crossman Natural Fertiliser Project (CNFP) located on No 9902, Albany Highway, Crossman, Western Australia. The proposed prescribed premises is sited within 40 hectares of rural zoned land as defined within the Shire of Boddington Local Planning Scheme No. 2, approximately 15 km north east of Boddington, and 130 km south east of Perth.

The facility will be accessed from Albany Highway, surrounded by a stock fence with lockable boom gates. The facility will be manned between the hours of 7am to 5pm, 5 days per week with an alarm system activated when not manned.

Boutique Biofertilisers propose to produce (solid) pelletised fertiliser for retail and wholesale markets in bags, tubs and in bulk following the construction of a completely enclosed and contained processing facility. The construction phase will include the development of:

- Feedstock receival and storage facilities constructed on a bunded concrete pad, covered with an elevated roof;
 - Grinding and screening plant;
 - Mixing plant;
 - Pelletising plant;
 - Bagging plant;
 - Odour control system (extracts air from the storage and process areas to an odour absorption 'biofilter' unit);
 - Storage facilities (enclosed);
 - Two 250 kW packaged diesel alternator sets and self-bunded diesel fuel tank (10,000 L) are to be placed on a sealed concrete bunded area with drive over bunds. The diesel storage fuel tank access point will be placed under an elevated covered area;
 - Storage tanks for water supply sourced from rainwater (25 kL), tanker delivered water and dam water or groundwater depending on availability from the owner of the leased premises;
 - One stormwater drainage pond (HDPE lined) for stormwater potentially considered contaminated;
 - Drainage ponds (in-situ soils) for general stormwater drainage control at the premises; and
 - Internal access roads and parking areas (compacted aggregate covered and compacted pebble gravel, with final 20 m bituminised and drainage culvert in place.
- } Enclosed within an insulated, colour-bond building to house all production equipment, and on a graded concrete hardstand with three sumps.

The pellets will be manufactured from a variety of feedstock's (consisting of animal manures, mineral binders and small quantities of trace elements) that are expected to have a low odour generating, drying ability. Feedstock will be received and temporarily stored in bays/ silo (less than a day) prior to being taken within the fully enclosed facility.

Animal manures in bulk form will be received via trailer or tipping trucks with "wind-on tarps" and will be delivered in spadeable (less than 40% w/w) form to a maximum single delivery of 38 tonnes, with a maximum of 4-6 tonnes being processed at any time. Manures are then transferred to storage bays as soon as the delivery is completed, using front end loaders, from which it is then loaded into hoppers for transfer to a conveyor belt system all within the enclosed facility.

From the conveyor belt the manures are transferred to the main hopper for the hammer mill, which is covered (with a closed lid) when not being loaded. The hammer mill is electric powered and fully enclosed with a screen to remove oversized material which are then recirculated for further milling.

The milled product is brought by enclosed conveyor to an enclosed storage bin which has a 20 tonne capacity. Feedstock is then transferred for mixing with additional small amounts of trace elements, chemical reagents and mineral binders within an enclosed electric mixer through a gentle/ slow



rotation process, which assists in reducing dust emissions. The combination of all the feedstock's has been identified by the proponent as assisting in the reduction of odour emissions by reducing moisture content further due to the nature of the feedstocks that are mixed.

The mixed product is then considered dry, stable and non-odorous and is pelletised for bagging and packaging. The product undergoes a heating (90 degrees Celsius) and cooling (70 degrees Celsius) phase prior to packaging within either sealed bags or tubs. All fumes/ gases are directed through to the (biofilter) odour control system. The proponent has developed an odour management plan and will develop an environmental management plan prior to operations commencing.

Distance to the nearest sensitive human receptors are approximately 1.2km south west (farm residence), 1.0km south east (owners residence) and 820m north east (proposed Caravan Park). Consultation by the proponent with the proposed Caravan Park identified concerns regarding odour from the facility.

A desktop assessment based on WIN groundwater bore (Site Id 20047368), located approximately 2.3 km south west of the premises, identified depth to groundwater as approximately 42.7 mBGL with a TDS of 357 mg/L (fresh). The Crossman River is located approximately 250 m north east of the premises boundary.

DER draft guidance statement for separation distances to sensitive receptors recommends a distance of 500 m for noise, odour and dust.

The site has already been cleared and no native vegetation clearing permits are required.

The primary emissions expected from the construction phase include fugitive emissions (dust) and noise which will be intermittent and short term. The primary emissions expected during operation include fugitive emissions (dust), noise, odour and emissions to land from the discharge of potentially contaminated stormwater used for dust suppression or irrigation to pasture land.

Occupation and planning approval

The Premises is currently occupied/ owned by Mr G. Lyster (Lyster Farm) who has leased 40 ha of the farm to Boutique Biofertilisers Pty Ltd, with a potential option to purchase. Planning consent or planning approval is still pending by the Shire of Boddington for the works.



4 Decision table

All applications are assessed in line with the *Environmental Protection Act 1986*, the *Environmental Protection Regulations 1987* and DER's Operational Procedure on Assessing Emissions and Discharges from Prescribed Premises. Where other references have been used in making the decision they are detailed in the decision document.

DECISION TABLE			
Works Approval / Licence section	Condition number W = Works Approval L = Licence	Justification (including risk description & decision methodology where relevant)	Reference documents
Interpretation	W1.1.1 – W1.1.4	<p>Construction Conditions 1.1.1 – 1.1.4 require that terminology used within the Works Approval is referenced to the appropriate definitions where applicable and that any reference to a standard or guideline is to the most current version of that standard or guideline.</p> <p>Operation Operation is subject to the general provisions of the <i>Environmental Protection Act 1986</i>. Category 61 activities fall under Schedule 1 Part 1 of the <i>Environmental Protection Regulation 1987</i> and may be subject to Licence. An application for a licence under Section 57 of the <i>Environmental Protection Act 1986</i> has not been received.</p>	
General conditions	W1.2.1 – W1.2.6	<p>Construction Condition 1.2.1 and 1.2.2 defines the specifications for the construction of the facility within the proposed prescribed premises.</p> <p>Condition 1.2.3 defines the supporting documentation used in the determination of the design and construction specifications identified within the works approval.</p> <p>Condition 1.2.4 requires the development of an environmental management plan, as defined within the Works Approval application documentation.</p> <p>Condition 1.2.5 requires the management of dust at the premises which has been</p>	Application supporting documentation.



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		<p>further outlined within the submitted application supporting documentation.</p> <p>Condition 1.2.6 requires a noise verification study to be undertaken to ensure that noise emissions comply original assessment undertaken and to the <i>Environmental Protection (Noise) Regulations 1997</i>.</p> <p>Operation General regulatory controls for the operation of the works will be further considered at the licensing stage.</p>	
Emissions general	-	<p>Construction No emissions are proposed during the construction of the premises therefore no conditions have been placed within the works approval permitting any emissions.</p> <p>Operation The proponent has suggested the reuse of potentially contaminated stormwater from the stormwater drainage pond.</p> <p>Depth to groundwater has been identified by the proponent as approximately 1-1.5 m below ground level (ephemeral aquifer) however a desktop assessment of a WIN monitoring bore, approximately 2.3 km south west of the premises has identified groundwater at approximately 42.7 mBGL.</p> <p>Monitoring of groundwater quality has not been identified as a potential risk at the premises. Consultation with Department of Water did not result in any further recommendations for the monitoring of groundwater and it was determined that the "proposal is generally consistent with the Departments Water Quality Protection Note 90: Organic material - storage and recycling (DoW, 2011)" (Department of Water, Brett Dunn, email 7/01/2016).</p>	N/A



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		<p>The proponent has committed to sizing and lining the stormwater drainage pond as per the recommendations of Department of Water. The pond will therefore be constructed to contain a '1 in 10' year or 72 hour extreme rainfall event.</p> <p>Descriptive limits may be set through conditions within the proposed Licence.</p>	
Emissions to land including monitoring	- L	<p>Construction No emissions to land are proposed during the construction phase of the premises.</p> <p>Operation <u>Emission Description</u> <i>Emission:</i> Potentially contaminated stormwater containing nutrients (animal manures, trace minerals, mineral binders) and hydrocarbons from storage area and wash down bays discharged to land. <i>Impact:</i> Potential impact to land and groundwater (nutrification). <i>Controls:</i> All stormwater from the facility roof are directed to a freshwater holding tank (uncontaminated) for reuse and from the concrete apron around the process building to a HDPE lined stormwater drainage (evaporation) pond (potentially contaminated), respectively. Only dry/ spadeable feedstocks (less than 40% w/w) are to be received to the premises, with any residual moisture dried off through the processing and addition of feedstock. All spillages and cleaning of floors will be carried out/ managed through dry sweeping (Works Approval Application, 20 November 2015, Section 4.1).</p> <p>A freeboard limit of 500 mm has been included within the design of the stormwater drainage pond and the proponent has committed to ensuring that the size and holding capacity of the stormwater drainage pond will contain a '1 in 10' year or 72 hour extreme rainfall event (as per the recommendations from Department of Water, 7/01/2016).</p>	<p>Application supporting documentation.</p> <p>General provisions of the <i>Environmental Protection Act, 1986</i>.</p> <p><i>Environmental Protection (Unauthorised Discharges) Regulations 2004</i>.</p> <p><i>Environmental Protection (Controlled Waste) Regulations 2004</i>.</p>



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		<p>The addition of a graded floor (1:100 slope) and three concrete sumps within the processing building will contain any accidental spillages for later removal and disposal either within the lined stormwater drainage pond, reused within the process or to be removed to an appropriate licenced landfill for disposal. Solid wastes that cannot be recycled through the process will be stored within covered bins prior to disposal to an appropriate Licenced landfill.</p> <p>Stormwater generated around the premises surrounding the facility will be directed via a small contour bank to an on-site dam constructed of in-situ clay soils.</p> <p>Stormwater directed from the concrete apron surrounding the processing facility is to be directed to the lined stormwater drainage pond for potential reuse within the process or for controlled irrigation on the surrounding pasture, or for dust suppression at the premises.</p> <p>Desktop assessment of the closest groundwater monitoring bore (2.3 km south west of the premises) has identified depth to groundwater at approximately 42.7 mBGL. However, the proponent has identified groundwater at the premises at approximately 1.5 mBGL due to the presence of an ephemeral aquifer.</p> <p><u>Risk Assessment</u> <i>Consequence:</i> Minor <i>Likelihood:</i> Possible <i>Risk Rating:</i> Moderate</p> <p><u>Regulatory Controls</u> The Licence will define a freeboard limit as 500 mm, to be maintained at all times.</p> <p>Licence conditions may be applied for monitoring and assessment of wastewaters from</p>	



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		<p>the lined stormwater drainage pond, prior to any potential reuse being permitted. The proponent would be required to submit proposed monitoring (and any relevant limits) should any captured water within the stormwater drainage pond be considered for reuse to the surrounding pasture or for the management of fugitive emission (dust) at the premises.</p> <p><u>Residual Risk</u> <i>Consequence:</i> Insignificant <i>Likelihood:</i> Unlikely <i>Residual Risk Rating:</i> Low</p>	
Fugitive emissions	W1.2.5	<p>Construction <u>Emission Description</u> <i>Emission:</i> Fugitive dust emissions from construction equipment activities (development of internal roads, preparation of building footprint and construction of stormwater drainage pond). <i>Impact:</i> Reduced local air quality. <i>Controls:</i> Magnesium chloride (DustMag) is proposed for use for dust control on roads to suppress lift off from road traffic (≤ 2 tonnes per lane kilometre applied once per year. Not classified as hazardous) (Works Approval Application, 20 November 2015, Appendix 7). Trucks entering the premises will have “wind-on traps” to reduce dust particulates lifting off and dispersing to surrounding environments.</p> <p>During construction, water will be applied to the ground or where dust emissions are assessed as excessive (visual assessment or by compacts) then construction activities will cease until weather conditions are considered conducive to continue works (Works Approval Application, 20 November 2015, Section 4.2.4).</p> <p>All conveyors and hoppers will be covered to prevent spillages or dust emissions. “No</p>	<p>Application supporting documentation.</p> <p>General provisions of the <i>Environmental Protection Act, 1986</i>.</p>



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		<p>significant dust emissions [are expected to] occur during the operation of the fertiliser facility as all feedstock's are managed indoors and stored in enclosed bins, bays or silos." (Works Approval Application, 20 November 2015, Section 4.2.3).</p> <p>Low speed signage will be constructed at the premises to further reduce dust lift off from any road surfaces.</p> <p>The proponent will carry out construction activities from Monday to Friday 07h00-19h00 in accordance with the the <i>Environmental Protection Noise Regulations 1997</i>.</p> <p><u>Risk Assessment</u> <i>Consequence: Minor</i> <i>Likelihood: Possible</i> <i>Risk Rating: Moderate</i></p> <p><u>Regulatory Controls</u> Condition 1.2.5 of the works approval requires ongoing management at the premises during construction of dust emissions.</p> <p>It is considered that the provisions of Section 49 of the <i>Environmental Protection Act, 1986</i> is sufficient to regulate dust emissions during construction.</p> <p>The premises construction is expected to result in a short term, intermittent degree of localised dust.</p> <p>Operation <u>Emission Description</u> <i>Emission: Fugitive dust emissions from receipt of feedstocks and operation of processing equipment activities.</i></p>	



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		<p><i>Impact:</i> Reduced local air quality.</p> <p><i>Controls:</i> Operational dust emissions (from receipt of feedstocks and manufacturing of the pellets) is expected to be adequately managed through the controls identified within the application with the facility being fully enclosed with a fogging/ misting spray system operational within the receipt facility and process building, and all conveyors and hoppers covered.</p> <p>During windy/ dry conditions operations will cease until weather conditions improve (Works Approval Application, 20 November 2015, Section 4.2.4) should dust emissions be considered unacceptable either through visual assessment, or due to receipt of complaints.</p> <p>A ventilation system in the adjacent storage bays will extract dust to the biofilter system for treatment. The extraction process results in a negative pressure within the enclosed facility which will further assist in reducing dust losses from any part of the facility (Works Approval Application, 20 November 2015, Section 4.5.4).</p> <p>Trucks delivering feedstocks will be covered, with any product leaving the premises contained within bags (10,20 or 40 L), tubs (10/ 20 L) or (500 or 1,000 L) bulka bags transported on pallets covered in plastic wrap.</p> <p>Design specifications that assist with the management of dust at the premises may be defined within the proposed licence (process monitoring).</p> <p><u>Risk Assessment</u> <i>Consequence:</i> Insignificant <i>Likelihood:</i> Possible <i>Risk Rating:</i> Low</p>	



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		<p><u>Regulatory Controls</u> The Licence may contain conditions within the 'general' or 'premises' conditions for the management of dust emissions at the premises.</p> <p>It is considered that the provisions of Section 49 of the <i>Environmental Protection Act, 1986</i> is sufficient to regulate dust emissions during construction.</p> <p><u>Residual Risk</u> <i>Consequence:</i> Insignificant <i>Likelihood:</i> Possible <i>Residual Risk Rating:</i> Low</p>	
Odour	-	<p>Construction No odour emissions are expected from the construction of the premises. The Works Approval does not Licence the premises for operation under the <i>Environmental Protection Act 1986</i>.</p> <p>Operation <u>Emission Description</u> <i>Emission:</i> Odour from the storage and use of potentially odour generating feedstock's (animal manure). <i>Impact:</i> Reduced local air quality. <i>Controls:</i> The proponent has developed a draft odour management plan. The facility is located within a 10 ha footprint within the 40 ha premises, within a rural zoned area. An odour control (ducted, induction fan with biofilter) system will be installed and operated within the facility. Only small volumes of manure are to be processed at any time (4-6 tonnes) (Works Approval Application, 20 November 2015, Appendix 6).</p>	<p>Application supporting documentation.</p> <p>General provisions of the <i>Environmental Protection Act, 1986</i>.</p>



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		<p>Animal manures will be delivered in spadeable form (moisture content less than 40% w/w) to reduce odour, and stored in a covered receival area with extraction of odourous air through the biofilter system. Transfer of manure within the milling and mixing plant will be done via covered conveyors and hoppers.</p> <p>The proponent has committed to upgrading the proposed odour mitigating controls should issues be identified from the premises. These will include an upgrade of the fan output and biofilter system. In the event that odour is found to be causing issues then the addition of extraction hoods will be placed at the sites (process building or feedstock receival and storage facilities) "most vulnerable" areas for odour generation (Works Approval Application, 20 November 2015, Appendix 6).</p> <p>DER Separation distance to sensitive receptors for Category 61A - odour, recommends a distance of 500 m which the proposed facility is compliant with for all human sensitive receptor locations identified, with the closest being 820 m (proposed Caravan park) away (Section 5, Works Approval).</p> <p><u>Risk Assessment</u> <i>Consequence:</i> Insignificant <i>Likelihood:</i> Possible <i>Risk Rating:</i> Low</p> <p><u>Regulatory Controls</u> Management of low risk odour emissions to be carried out in accordance with Section 49 of the <i>Environmental Protection Act, 1986</i>.</p> <p>Conditions may be included within the Licence for the management of the odour control (biofilter) system, as defined within the works approval, Condition 1.2.2, Table 1.2.1.</p>	



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		<p><u>Residual Risk</u> <i>Consequence:</i> Insignificant <i>Likelihood:</i> Possible <i>Residual Risk Rating:</i> Low</p>	
Noise	-	<p>Construction <u>Emission Description</u> <i>Emission:</i> Noise from heavy vehicle movement, earth removal equipment and loaders/ forklifts. <i>Impact:</i> Interference with the health, welfare, convenience, comfort or amenity of sensitive residential receptors approximately 1.2 km south west (farm residence), 1.0 km south east (owners residence) and 820 m north east (proposed Caravan Park) from noise impacts from trucks or equipment operation. <i>Controls:</i> The construction period at the premises is expected to be short term (3 months), intermittent and low impact with the construction occurring only during Monday- Friday, 07h00-19h00.</p> <p>'Barclay Engineering' undertook a noise study which identified that the noise propagating from the facility will satisfy the <i>Environmental Regulations (Noise) Regulations 1997</i> to all sensitive receptors, however this study did not take into account prevailing wind and land topography (Works Approval Application, proposal description, pg. 15 and Appendix 1).</p> <p>The proponent has committed to the following noise attenuation/ mitigation measures in the event that noise generation from the premises exceeds compliance with the <i>Environmental Protection (Noise) Regulations 1997</i>:</p> <ul style="list-style-type: none"> Complete insulation of entire process building, including receival and storage bay areas and any other noise generation areas at the premises (i.e. generator 	<p>Application supporting documentation.</p> <p>General provisions of the <i>Environmental Protection Act, 1986</i>.</p> <p><i>Environmental Protection (Noise) Regulations 1997</i>.</p>



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		<p>buildings);</p> <ul style="list-style-type: none"> • Erection of acoustic barriers in close proximity of noise sources; • Housing diesel generator(s) within enhanced acoustic buildings; • Creating natural barriers in proximity to the plant such as earthen bunds or fences. <p>Beacons Consulting International Pty Ltd will undertake ambient noise measurements at key locations to verify the estimates calculated from the noise assessment study and will implement mitigation measures if found greater than the estimates identified within the supporting documentation (Works Approval Application, 20 November 2015, Appendix 1, pg. 6).</p> <p>DER guidance for Separation distance to sensitive receptors for Category 61A - noise, recommends a distance of 500 m which the proposed facility is compliant with for all human sensitive receptors identified.</p> <p><u>Risk Assessment</u> <i>Consequence:</i> Minor <i>Likelihood:</i> Possible <i>Risk Rating:</i> Moderate</p> <p><u>Regulatory Controls</u> Condition 1.2.6 requires a noise verification study to be undertaken to assessment noise emissions within 6 months after compliance to the works approval has been received. The study is to assess emissions from full operation of the premises and compare results against the initial assessment/ modelling for compliance against the <i>Environmental Protection (Noise) Regulations 1997</i>.</p> <p>It is considered that the provisions of <i>the Environmental Protection (Noise) Regulations 1997</i> will be sufficient to regulate the noise emissions during operation. Controls have</p>	



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		<p>been specified under Condition 1.2.2, Table 1.2.1 within the Works Approval.</p> <p>Noise levels generated at the premises are not expected to be significant as the enclosed process building is approximately 820 m from the nearest residence. General highway noise assessed by the proponent as being 85 dB(A) at 1 meter, is considerably closer to and will more likely have influence on the proposed Caravan Park (nearest sensitive receptor) than the enclosed facility. Noise estimated levels were undertaken by applying the free field equation with directivity factor Q=2 which identified that the facility would be compliant to the noise regulations limits (Works Approval Application, 20 November 2015, Appendix 1, pg. 6).</p> <p>DER Noise Branch review of the noise assessment confirmed the findings of the modelling were compliant to the <i>Environmental Protection (Noise) Regulations 1997</i> for day time operations. However, an additional assessment for night time noise emissions is required in the future should the premises wish to operate at night as the original assessment was considered insufficient for assessment of night time noise emissions.</p> <p><u>Residual Risk</u> <i>Consequence:</i> Insignificant <i>Likelihood:</i> Possible <i>Residual Risk Rating:</i> Low</p> <p>The proponent will carry out construction activities from Monday to Friday 07h00-19h00 in accordance with the the <i>Environmental Protection Noise Regulations 1997</i> for highly sensitive receptors.</p> <p>Operation <u>Emission Description</u> <i>Emission:</i> Noise from heavy vehicle movement, two diesel generators (250 kW each)</p>	



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		<p>and from the 6 tonne per hour production plant (process building which includes the milling, mixing, conveyors and pelletising plant).</p> <p><i>Impact:</i> Interference with the health, welfare, convenience, comfort or amenity of sensitive residential receptors approximately 1.2 km south west (farm residence), 1.0 km south east (owners residence) and 820 m north east (proposed Caravan Park) from noise impacts from trucks or equipment operation.</p> <p><i>Controls:</i> All of the equipment will be specified for low noise emission levels and will be located within enclosed buildings to reduce noise emissions to the immediate proximity of the facility.</p> <p>'Barclay Engineering' undertook a noise study which identified that the noise propagating from the facility will satisfy the <i>Environmental Regulations (Noise) Regulations 1997</i> to all sensitive receptors, however this study did not take into account prevailing wind and land topography (Works Approval Application, proposal description, pg. 15 and Appendix 1).</p> <p>The proponent has committed to the following in the event that noise generation from the premises exceeds compliance with the <i>Environmental Protection (Noise) Regulations 1997</i>:</p> <ul style="list-style-type: none"> • Erection of acoustic barriers in close proximity of noise sources; housing diesel generator(s) within enhanced acoustic buildings. • Creating natural barriers in proximity to the plant such as earthen bunds or fences. <p>Beacons Consulting International Pty Ltd will undertake ambient noise measurements at key locations to verify the estimates calculated from the noise assessment study and will implement mitigation measures if found greater than the estimates identified within the supporting documentation (Works Approval Application, 20 November 2015, Appendix 1, pg. 6).</p> <p>Approximately 6 truck movements and 8-10 light vehicle movements per day are</p>	



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		<p>expected at full production to/ from the facility, with the facility to operate 5 days per week from 7am to 5pm.</p> <p>DER guidance for Separation distance to sensitive receptors for Category 61A - noise, recommends a distance of 500 m which the proposed facility is compliant with for all human sensitive receptors identified.</p> <p><u>Risk Assessment</u> <i>Consequence:</i> Insignificant <i>Likelihood:</i> Possible <i>Risk Rating:</i> Low</p> <p><u>Regulatory Controls</u> It is considered that the provisions of the <i>Environmental Protection (Noise) Regulations 1997</i> will be sufficient to regulate the noise emissions during operation.</p> <p>DER Noise Branch review of the noise assessment confirmed the findings of the modelling were compliant to the <i>Environmental Protection (Noise) Regulations 1997</i> for day time operations. However, an additional assessment for night time noise emissions is required as the original assessment was considered insufficient for assessment of night time noise emissions. Licence conditions are proposed limiting the operational hours of the premises until a new assessment is completed in accordance with the findings of DER Noise Branch.</p> <p>The Licence may contain conditions requiring the proponent to undertake ambient noise measurements at key locations to verify the estimates calculated from the noise assessment study undertaken. Should any noise issues be identified then the implementation of the above suggested mitigation measures may be required (Works Approval Application, 20 November 2015, Appendix 1, pg. 6).</p>	



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		<p><u>Residual Risk</u> <i>Consequence:</i> Insignificant <i>Likelihood:</i> Possible <i>Residual Risk Rating:</i> Low</p>	
Monitoring general	-	<p>Construction No monitoring requirements are proposed for the construction period of the premises.</p> <p>Operation General monitoring may be required and defined through the licence of the proposed prescribed premises for any proposed emissions to land from the stormwater drainage pond or operational activities.</p> <p>The proponent has considered the reuse of potentially contaminated water within the stormwater drainage pond for irrigation to local pasture or for use in dust suppression along roads within the premises. The proponent would be required to submit proposed monitoring (and any relevant limits) of any captured water should the stormwater drainage pond waters be considered for reuse.</p>	General provisions of the <i>Environmental Protection Act, 1986</i> .
Information	W2.1.1 W2.1.2 W2.1.3	<p>Construction Condition 2.1.1 and 2.1.2 define the reporting requirements under the works approval on completion of all construction at the premises.</p> <p>Condition 2.1.3 requires the proponent to state any deviations from the works approval undertaken during the construction phase. In accordance with condition 1.2.2.</p> <p>Operation Information controls for the operation of the Works will be further considered at the Licensing stage and will likely include:</p> <ul style="list-style-type: none"> • The investigation of any descriptive or numerical limit exceeded; 	



DECISION TABLE			
Works Approval / Licence section	Condition number W = Works Approval L= Licence	Justification (including risk description & decision methodology where relevant)	Reference documents
		<ul style="list-style-type: none">• A complaints management system implemented and maintained;• An Annual Audit Compliance Report completed and submitted;• An Annual Environmental Report completed and submitted• Notification requirements including when a limit is breached, when process equipment is taken off line and when sludge management activities are undertaken.	
Works approval duration	N/A	<p>Construction</p> <p>The Works Approval duration has been proposed for a period of three years. The construction period is expected to take no longer than three months from receipt of Works Approval however additional time is being given in case of unforeseen issues.</p> <p>Other statutory approvals that have been identified as limiting the proposed works are:</p> <ul style="list-style-type: none">• Shire of Boddington planning consent and planning approval; and• Duration of the lease agreement.	DER procedures



5 Advertisement and consultation table

Date	Event	Comments received/Notes	How comments were taken into consideration
15/02/2016	Application advertised in West Australian (or other relevant newspaper)		
Multiple dates	<p>Application referred to interested parties listed Shire of Boddington</p> <p>Department of Water (DoW)</p>	<p>Shire of Boddington, Chris Littlemore (CEO), confirmed 28/01/2015, that the Council would be “very receptive to such an application” for Shire planning approval.</p> <p>Application submitted to Brett Dunn (DoW) 4/01/2016, via email for comment. Response received back from Brett Dunn via email on 7/01/2016 advising that the proposal is generally consistent with the Departments Water Quality Protection Note 90: Organic material - storage and recycling (DoW, 2011). The following specific design considerations are recommended:</p> <ul style="list-style-type: none"> Lined storage dam to be constructed using a liner of no more than 10-9 metres/second permeability, consistent with Water Quality Protection Note 26: Liners for containing pollutants, using synthetic membranes (DoW, 2013). The capacity of the wastewater management system and holding ponds 	<p>Confirmation of planning approval from the Shire is still pending. The proponent has secured a lease agreement with option to purchase later on the parcel of land on Albany Highway (Email: Noel Davies, 11/12/2015). Discussions with Noel Davies, 4/1/2016, confirmed payment to the Shire for the planning approval is pending.</p> <p>The stormwater drainage pond is to be sized and lined as recommended by DoW, and has been confirmed by Noel Davies (Aurora Environmental) 07/01/2016.</p> <p>The proponent has committed to ensuring that the pond is adequately sized and managed to ensure that it can contain a ‘1 in 10 year’ or 72 hour extreme rainfall event. This requirement has been included within Table 1.2.1 of the Works Approval and may be worked into the Licence.</p>



Date	Event	Comments received/Notes	How comments were taken into consideration
		<p>should be designed to:</p> <ul style="list-style-type: none">a) manage a 72 hour duration, 1 in 10 year ARI critical rainfall event without overflowb) have sufficient storage freeboard for a 90th percentile wet year and any wave action without overflowing. (Water Quality Protection Note 90: Organic material - storage and recycling) <p>The Department also wishes to advise the site is located within the Karri Groundwater Area which is unproclaimed. Thus the proponent will not require a licence under the Rights in Water and Irrigation Act 1914 to abstract groundwater, however it should be noted locating a viable resource is potentially difficult in this location.</p>	
Various	Consultation with stakeholders	The proponent in conjunction with the farm owner (Mr G. Lyster) undertook stakeholder consultation with seven stakeholders (Section 6, Table D of the Works Approval Application).	<p>One stakeholder gave comment (proposed Caravan Park owners, 820 m north east of the facility) regarding concerns of odour from the proposed facility.</p> <p>The proponent has developed a draft odour management plan to address any concerns regarding the potential risk of odour emissions from the premises, and expects that with the design specifications of the facility (as defined within Table 1.2.1 of the Works Approval) that odour should be adequately addressed.</p>
08/02/2016	Proponent sent a copy of draft instrument	One comment received back from proponent (Noel Davies) on 9/02/2016 relating to insulation of the entire process building.	An amendment to the insulation of the process building has been made to allow the receival and storage bay area's not to be insulated dependant on the outcome of a



Date	Event	Comments received/Notes	How comments were taken into consideration
		Revised draft emailed through to Noel Davies 22/02/2016.	noise verification study to be undertaken on completion of the works. The proponent will be required to implement the agreed noise attenuation/ mitigation measures as identified with the works approval decision documentation for all noise generating facilities should the noise verification study find that the premises is not compliant to the <i>Environmental Protection (Noise) Regulations 1997</i> .



6 Risk Assessment

Note: This matrix is taken from the DER Corporate Policy Statement No. 07 - Operational Risk Management

Table 1: Emissions Risk Matrix

Likelihood	Consequence				
	Insignificant	Minor	Moderate	Major	Severe
Almost Certain	Moderate	High	High	Extreme	Extreme
Likely	Moderate	Moderate	High	High	Extreme
Possible	Low	Moderate	Moderate	High	Extreme
Unlikely	Low	Moderate	Moderate	Moderate	High
Rare	Low	Low	Moderate	Moderate	High



Works Approval

Environmental Protection Act 1986, Part V

Works Approval Holder: Boutique Biofertilisers Pty Ltd

Works Approval Number: W5945/2016/1

Registered office: 16 Sherriff Circuit
 WATTLE GROVE WA 6107

ACN: 162 847 181

Premises address: Crossman Natural Fertiliser Project
 No 9902 Albany Highway
 CROSSMAN WA 6390
 Being part of Lot 9 on Plan 4850 within co-ordinates E: 463800 N:
 6367330; E:463794, N: 6367816; E: 464083, N: 6367364; E:464129, N:
 6367596 as depicted in Schedule 1.

Issue date: Thursday, 18 February 2016

Commencement date: Monday, 22 February 2016

Expiry date: DRAFT, xx February 2016

The following category/s from the *Environmental Protection Regulations 1987* cause this Premises to be a prescribed premises for the purposes of the *Environmental Protection Act 1986*:

Category number	Category description	Category production or design capacity	Approved premises production or design capacity
61A	Solid waste facility: premises (other than premises within category 67A) on which solid waste produced on other premises is stored, reprocessed, treated, or discharged onto land.	1 000 tonnes or more per year	28 000 tonnes per annual period

Conditions

This Works Approval is subject to the conditions set out in the attached pages.

.....
Caron Goodbourn
A/ Manager Licencing (Waste Industries)
 Officer delegated under section 20
 of the *Environmental Protection Act 1986*



Works Approval Conditions

1 General

1.1 Interpretation

1.1.1 In the Works Approval, definitions from the *Environmental Protection Act 1986* apply unless the contrary intention appears.

1.1.2 In the Works Approval, unless the contrary intention appears:

'Act' means the *Environmental Protection Act 1986*;

'CEO' means Chief Executive Officer of the Department of Environment Regulation;

'CEO' for the purpose of correspondence means;

Chief Executive Officer
Department Administering *Environmental Protection Act 1986*
Locked Bag 33
CLOISTERS SQUARE WA 6850
Email: info@der.wa.gov.au;

'facility' means all constructed buildings and infrastructure in relation to the 'feedstock and receival facilities' and 'process building';

'full operation' means operation of all infrastructure and equipment identified for the premises processes, under maximum capacity;

'low permeability' means hydraulic conductivity of $\leq 1 \times 10^{-9}$ metres per second or equivalent;

'NATA' means the National Association of Testing Authorities, Australia;

'NATA accredited' means in relation to the analysis of a sample that the laboratory is NATA accredited for the specified analysis at the time of the analysis;

'Odour Management Plan' means the document 'Crossman Natural Fertiliser Project, DER Works Approval Application, Draft Odour Management Plan, Appendix 6, 20 November 2015';

'Premises' means the area defined in the Premises Map in Schedule 1 and listed as the Premises address on page 1 of the Works Approval;

'Schedule 1' means Schedule 1 of this Works Approval unless otherwise stated;

'spadeable' means a physical state of material where the material behaves sufficiently like a solid to be removed by a spade at normal outdoor temperatures;

'Works Approval' means this Works Approval numbered W5945/2016/1 and issued under the *Act*;

'Works Approval Application' means the document *Natural Fertiliser Protect Pty Ltd, Crossman Natural Fertiliser Project (No 9902 Albany Highway Crossman 6390 Boddington Shire) WA Department Environment Regulations, Works Approval Application, 20 November 2015*; and

'Works Approval Holder' means the person or organisation named as the Works Approval Holder on page 1 of the Works Approval.



1.1.3 Any reference to an Australian or other standard in the Works Approval means the relevant parts of the standard in force from time to time during the term of this Works Approval.

1.1.4 Any reference to a guideline in the Works Approval means the current version of the guideline in force from time to time, and shall include any amendments or replacements to that guidelines made during the term of this Works Approval.

1.2 General conditions

1.2.1 The Works Approval Holder must ensure that the Works specified in Column 1 of Table 1.2.1 meet or exceed the specifications in Column 2 of Table 1.2.1 for the infrastructure in each row of Table 1.2.1.

1.2.2 The Works Approval Holder must not depart from the specifications for the infrastructure in each row of Table 1.2.1 except:

- (a) where such departure is minor in nature and does not materially change or affect the infrastructure; or
- (b) where such departure improves the functionality of the infrastructure and does not increase risks to public health, public amenity or the environment;

and in accordance with all other Conditions in this Works Approval.

Table 1.2.1: Column 1	Construction specifications Column 2
Infrastructure	Specifications (design and construction)
All	<ol style="list-style-type: none"> 1) All storage infrastructure, tanks, transfer pipelines and conveyance infrastructure must be impermeable and free of leaks or defects. 2) Stormwater must not be able to enter any part of the facility, transfer pipelines and conveyance infrastructure. 3) Odour management must be conducted in accordance with the 'Odour Management Plan' document. 4) All equipment used at the premises should be specified as low noise emission devices.
Feedstock receival and storage facilities (540m ²)	<p>Constructed on bunded, concrete pad and covered with an elevated roof consisting of a storage silo and enclosed storage bays:</p> <ol style="list-style-type: none"> 1) Feedstocks to be stored or handled in concrete silo or enclosed bays (three-sided), at all times; 2) Feedstock storage silo (concrete) to be equipped with modern reverse pulse bag filter; 3) Facility to include misting/ fogging water sprays with wetting agent to ensure dust control and inhibit floors within the production facility becoming wet; 4) Feedstocks conveyed pneumatically into silo; 5) Bag filter to be ducted to ground level; 6) Warehouse (colour bond) for trace elements storage (enclosed).



<p>Process building (1000m²) includes:</p> <p>Grinding and Screening plant; Milling & Mixing plant; Pelletising plant; Bagging plant.</p>	<ol style="list-style-type: none"> 1) Process building to be placed upon 0.5-1 m free draining material, above ground level; 2) Process building walls constructed of colour bond or insulated building panels, fully bunded, placed upon a concrete slab; 3) Process building sealed between the colour bond wall or insulated building panels and the slab to prevent moisture ingress with drive/ walk over bunds to prevent storm water access; 4) Process building to be graded to a 1:100 slope to promote drainage to three sumps to retain any liquids; 5) Process building enclosed within a steel framed colour bond or insulated building panel building to house all production/ process equipment; 6) Process buildings to be surrounded by a bunded, graded concrete apron to contain drainage to be directed to the lined 'detention basin' to trap any solid materials prior to discharge to the 'storm water drainage pond'; 7) Storage bays, to be covered when not being loaded or unloaded; 8) All conveyors and hoppers in the milling and mixing areas to be covered/ enclosed with feedstock transferred by conveyor or pneumatic feeds; 9) Process building, except receival and storage bays, is insulated for noise attenuation.
<p>Odour control system</p>	<ol style="list-style-type: none"> 1) Constructed from modified metal shipping containers using a slotted plenum floor with a verticle linear bed velocity of 1-2cm/second and a resistance time of 20-50 seconds; 2) Inclusion of humidifier sprays with performance monitoring system for temperature, humidity, bed pressure and airflow velocity sensors; 3) Ensure a design efficiency of 80-85% for the removal of odours; 4) Extraction ducting and fan to withdraw and discharge vapours (particulates) through biofilter; 5) Elevated duct at eave level above bulk manure storage bins with lower level ducts on the separating walls of the storage bays.
<p>Diesel alternator sets</p>	<ol style="list-style-type: none"> 1) Two 250 kW generators; 2) Placed on concrete hardstand within an enclosed facility with noise attenuation to 70 dB(A).
<p>Diesel fuel tank</p>	<ol style="list-style-type: none"> 1) Self bunded 10,000ltr tank; 2) Placed on concrete hardstand; 3) Covered by elevated roof.
<p>Stormwater drainage pond (650m²)</p>	<ol style="list-style-type: none"> 1) One HDPE lined pond ($\leq 1 \times 10^{-9}$ m/s) for the containment of potentially contaminated stormwater; 2) Sides of 26m, 1.5 m depth; 3) Designed to contain a '1 in 10' year or 72 hour stormwater event; 4) Freeboard of 0.5 m to be maintained at all times; 5) Volume of approximately 1,000 m³.
<p>Drainage ponds</p>	<ol style="list-style-type: none"> 1) For the drainage, control and containment of uncontaminated stormwater outside of the production facility from the surrounding premises; 2) Constructed of in-situ clay soils with a permeability of 1×10^{-6} m/s.
<p>Internal access roads and parking areas (2000m²)</p>	<ol style="list-style-type: none"> 1) Constructed of compacted aggregate then covered and compacted with pebble gravel, with final 20 m of road bituminised with drainage culvert in place; 2) Erection of 'low speed' signage placed within premises (≤ 10 km/h).



1.2.3 The Works Approval Holder shall construct the works in accordance with the documentation detailed in Table 1.2.2:

Document	Parts	Date of Document
Email: Natural Fertiliser Protect Pty Ltd, Crossman Natural Fertiliser Project (No 9902 Albany Highway Corssman 6390 Boddington Shire) WA Department Environment Regulations, Works Approval Application.	All, including Drawings and Appendices	20 November 2015
Email: Crossman Fertiliser application – Depth to groundwater and monitoring. Sent by Noel Davies, Aurora Environmental.	All	05 January 2016
Email: Application for comment for Crossman Fertiliser – Shire of Boddington – Comments from DoW. Respoonse sent by Noel Davies committing to implement DoW recommendations.	All	07 January 2016

Note 1: Where the details and commitments of the documents listed in condition 1.2.2 are inconsistent with any other condition of this works approval, the conditions of this works approval shall prevail.

1.2.4 The Works Approval Holder shall develop an environmental management plan (EMP) for the premises and submit the document to the CEO on completion of construction of the facility, as defined within the 'Works Approval Application' documentation.

1.2.5 The Works Approval Holder shall operate and maintain all dust management equipment to the manufacturer's specification or any relevant and effective internal management system.

1.2.6 The Works Approval Holder shall:

- (a) undertake a noise verification study within six months after submission of the compliance report for the Works Approval. The noise verification study is to be undertaken during full operation of the premises; and
- (b) submit a report to the CEO confirming the outcome of the noise verification study which:
 - (i) compares the results of the noise verification study to the initial noise modelling assessment submitted for the Work Approval;
 - (ii) compliance to the *Environmental Protection (Noise) Regulations 1997*; and
 - (iii) confirms timeframes for implementation of mitigation measures specified within the works approval, where compliance has not been met.

2 Information

2.1 Reporting

2.1.1 The Works Approval Holder shall submit a compliance document to the CEO, within one month following the completion of construction of the works.

2.1.2 The compliance document shall:

- (a) certify that the works were constructed in accordance with the conditions of the works approval;
- (b) be signed by a person authorised to represent the Works Approval Holder and contain the printed name and position of that person within the company.

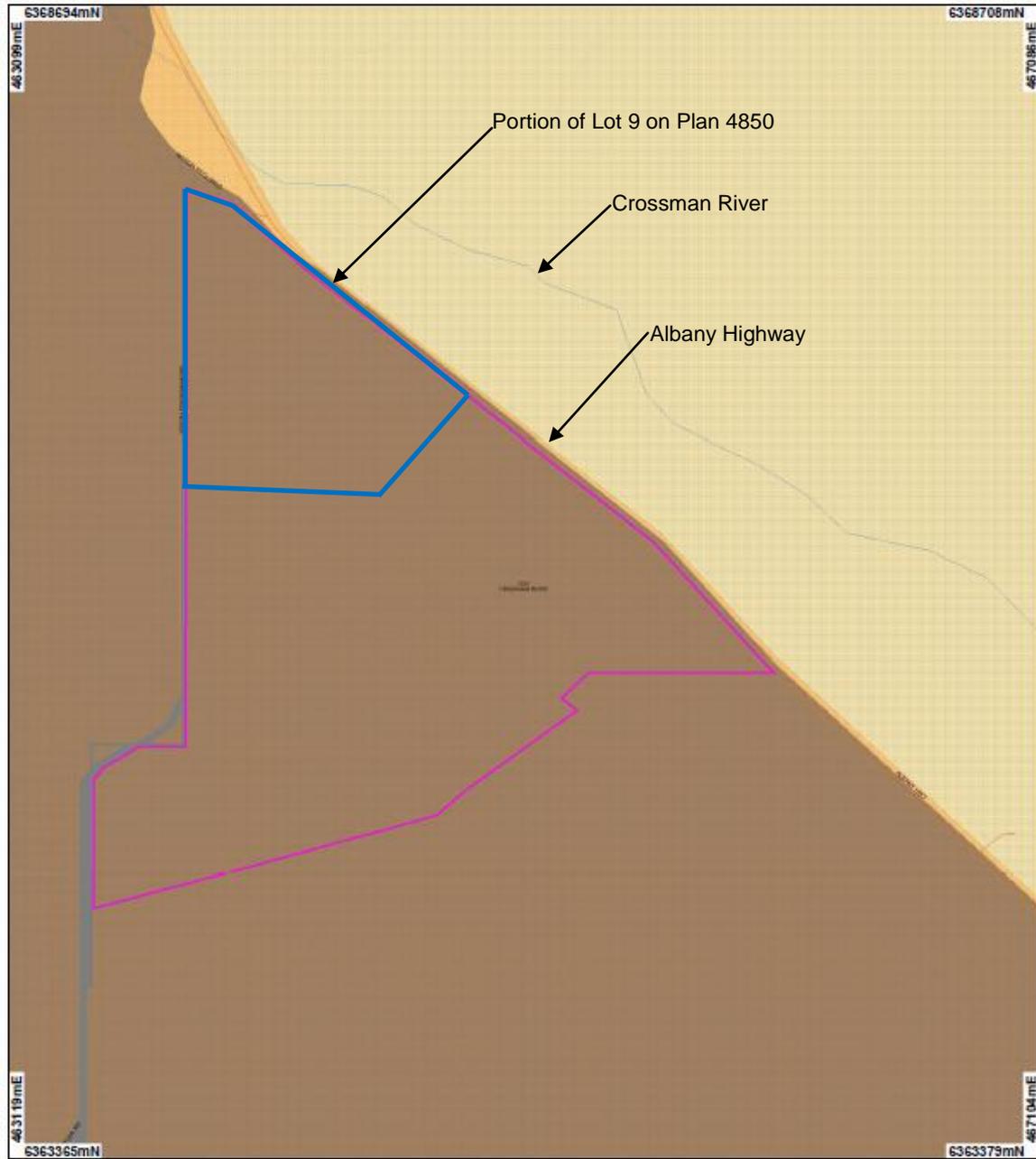
2.1.3 The Works Approval Holder shall provide the CEO with a list of departures which are certified as complying with Condition 1.2.2 at the same time and from the same professional as the certifications submitted in accordance with Conditions 2.1.1 and 2.1.2.



Schedule 1: Maps

Premises map

The Premises is shown in the maps below. The blue line depicts the Premises boundary.





Premises map – Facility location



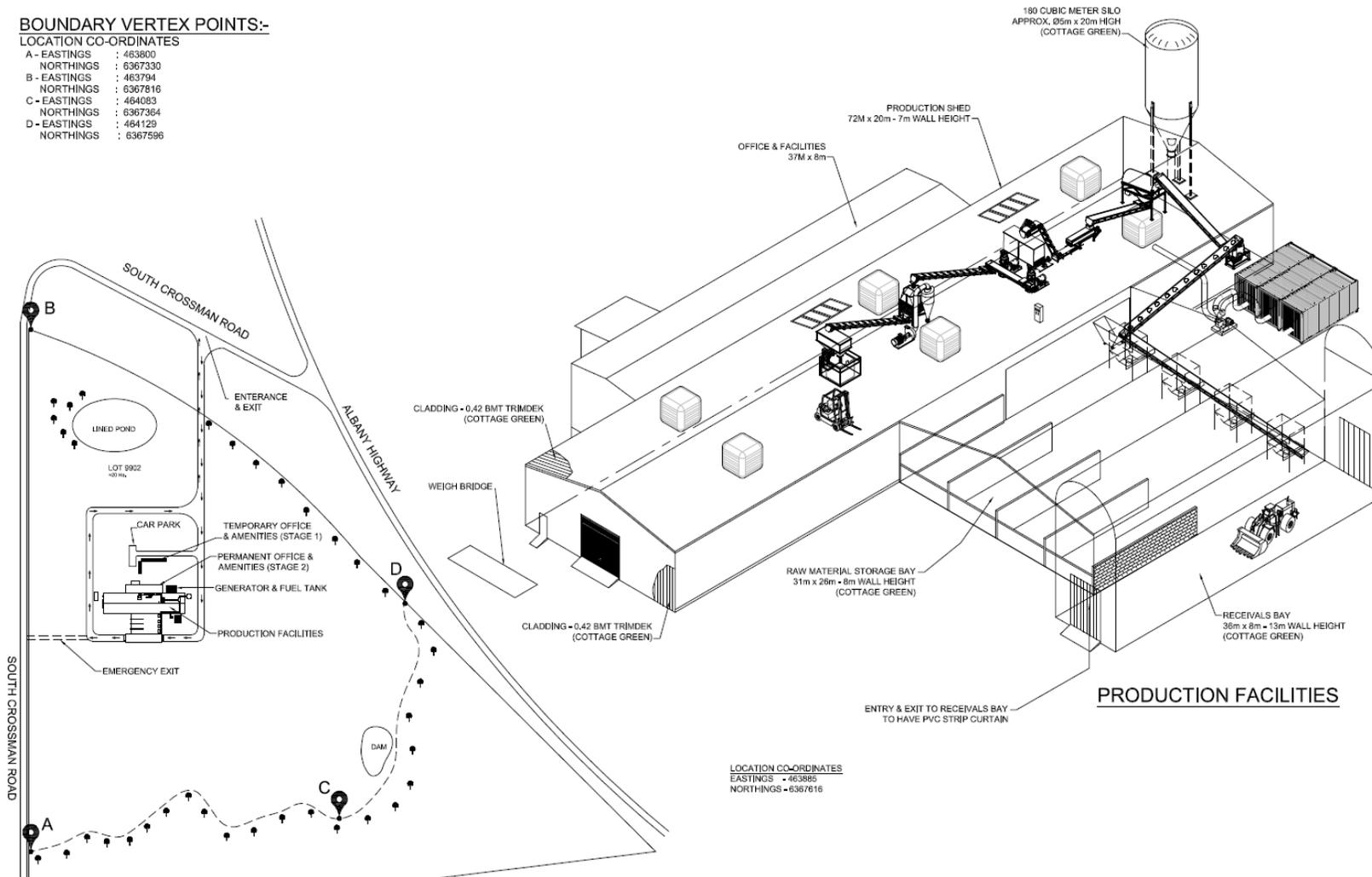


Premises map – Facility layout

BOUNDARY VERTEX POINTS:-

LOCATION CO-ORDINATES

A - EASTINGS	: 463800
NORTHINGS	: 6367330
B - EASTINGS	: 463794
NORTHINGS	: 6367816
C - EASTINGS	: 464083
NORTHINGS	: 6367364
D - EASTINGS	: 464129
NORTHINGS	: 6367596





Premises process map

Simple Process Diagram

