

An application has been received and requires assessment.

General Application Details	
Client Name:	Nugrow Roma PtyLtd
Lot/Plan:	
Project reference:	404328
Address:	
Application Type	Beneficial Reuse – Amendment
PaLM Contact:	Liz James
Hardcopy sent to:	
Department of Environment and Heritage Protection (EHP)	
Role:	
Jurisdictions:	Contaminated Land
Ecotrack Application No:	556150
Permit reference:	ENBU05029013
Date Properly made/referred:	12/5/2014
Project Director:	
DATE DUE:	26/5/2014 <i>Received by WLCA on 20/5/14.</i>
APPLICATION	PO return to EMR/CLR Registry for Action:
EMR/CLR ID:	Date to EMR/CLR Registry / Admin:
PRINT COVER SHEET & SAVE EMAIL TO FOLDER^*	Officer initials:
PRINT PART 1 & 2**	RESPONSE
SAVE ALL PARTS TO FOLDER*	PRINT COPY OF RESPONSE (STAMP “COPY”), ADD TO FILE
LOCATE/ORDER FILE No:	SCAN COPY OF RESPONSE, SAVE TO FILE
UPDATE EMR (WITH FILE #)	EMAIL (if Email address provided on application) PERMIT TO CLIENT
UPDATE ECOTRACK (WITH FILE #)	UPDATE EMR WITH DATE & SUMMARY OF RESPONSE
UPDATE WLCA Register and/or EMR/CLR Register	UPDATE ECOTRACK (Decision, Permit Eff. Date, Officer Responsible, Delegate and File ref. no.)
UPDATE CARMS (FILE LOCATION TO PO)	UPLOAD RESPONSE (scanned copy) TO ECOTRACK
FORWARD FILE TO OFFICER	UPDATE WLCA Register and/or EMR/CLR Register
Officer: HB KC SD BG AJ SC	UPDATE CARMS FILE LOCATION
IR DUE DATE: XXXX	DATE CLOSED:

^Print to the 'Bypass Tray' onto yellow paper

*Save to: “\\chqfile2\groupdir\Environmental Services\Contaminated Land\DISPOSAL PERMITS AND SITE ASSESSMENTS” under the corresponding year and month as “Ecotrack Permit Reference #”

**Print only when hard copy is not received to WLCA or EMR/CLR Registry

Amendment

☐ For Regional Information & Filing	☒ Regional Action Required
Department/Office: <u>CONTAM C&D</u>	
Ecotrack Project no: <u>404328</u>	AR <u>0575021</u>
Permit no(s): <u>ENB405029013</u>	
Application no(s): <u>356150</u>	

**Approval of Resource for Beneficial Use
PaLM NON-SPA VALIDATION CHECKLIST**

THE REQUEST IS FOR	☐	Beneficial Use of Resource- GENERAL
	☐	Beneficial Use of Resource- SPECIFIC

Company / Business Name: Nugrow Roma Pty Ltd

Individual or Contact Name: Peter Thorpe

PaLM Coordinator: Liz James

Application Received: 22/4/14

Decision Due: 26/05/14

Application Date: 12/5/14

Indicate by Yes ☒ or No ☒. Leave unmarked if not applicable			
Please note: ☒ in any of the checkboxes may indicate an 'INVALID' application			
Form A: General details complete	☒	Location details provided	☒
Form B: Beneficial Use complete	☒	Name/contact details provided	☒
Forms signed and dated	☒		

Receipt details:	Payment Method:
Correct application fee paid:	☒ Cheque ☐ EFT ☐ Cash ☐ Credit ☒
Fees Exempt:	☐ Cheque No:
Receipt No <u>1205754</u>	Drawer:
Receipt Date <u>12/5/14</u>	
Amount Paid \$ <u>7605.50</u>	Receipt sent to client Yes ☒ No ☐

Record of consultation

Date	Person Contacted:		Phone No:	
	Information Requested:			
	Response:			
	PaLM Staff:			

Date	Person Contacted:		Phone No:	
	Information Requested:			
	Response:			
	PaLM Staff:			

Date	Person Contacted:		Phone No:	
	Information Requested:			
	Response:			
	PaLM Staff:			

Date	Person Contacted:		Phone No:	
	Information Requested:			
	Response:			
	PaLM Staff:			

CHRISTESON Kim

From: PALM
Sent: Wednesday, 7 May 2014 12:48 PM
To: 'peterthompson@nugrow.com.au'
Subject: FW: NON- DA - FW: Amendmend to BUA Permit number ENBU05029013
Attachments: form-general-details-part-a-em1124.doc; fees for benefical use.pdf

Hello Peter,

Thank you for your email. I have validated your application and the following is missing.

- Part A – please complete and return by email. I have attached the Part A for your convenience. *815*
- Application fee of \$7605.50. This fee can be paid by cheque or credit card. If paying by cheque, please return by mail with the reference number of AR057502 to the address below. I can take credit card details over the phone. I have attached and see below information in regards to the fees. *— send -g
no day*

<http://www.ehp.qld.gov.au/licences-permits/business-industry/pdf/approval-resource-benefical-use-em1719.pdf> *↓ send -g
day*

Please do not hesitate to contact me if you have any questions regarding this email.

Kind regards
Kim

Kim Christeson

Senior Administration Officer
Permit and Licence Management
Environmental Regulatory Practice and Support
Environmental Performance & Coordination Branch

Telephone: 1300 130 372 (option 4) Facsimile: 07 3330 5875

Department of Environmental and Heritage Protection
GPO Box 2454
Brisbane QLD 4001



From: Peter Thompson [<mailto:peterthompson@nugrow.com.au>]
Sent: Tuesday, 22 April 2014 7:41 AM
To: PALM
Cc: Roy Wilson; Dan Stuart
Subject: Amendmend to BUA Permit number ENBU05029013

To whom it may concern,

Please find attached NuGrow's application to amend BUA Permit number ENBU05029013. Should you have any questions please do not hesitate to contact myself on the details provided below.

Kind Regards,
Peter Thompson

Environmental Compliance Manager



Site Address: Memorial Dr Swanbank

Postal Address: P.O.Box 4353 Raceview, QLD 4305

Mobile: sch4p4(6) Personal
information

Fax: 3288 6831

peterthompson@nugrow.com.au

www.nugrow.com.au

EHP RTI DL Release

CHRISTESON Kim

From: Peter Thompson <peterthompson@nugrow.com.au>
Sent: Monday, 12 May 2014 10:37 AM
To: PALM
Cc: Jacob Wilson
Subject: RE: NON- DA - FW: Amendmend to BUA Permit number ENBU05029013
Attachments: form-general-details-part-a-em1124.pdf; Attachment A - expansion property boundaries.docx

Hi Kim,

Apologies for not attaching Part A in my original email.

Please find attached the completed Part A along with Attachment A – expansion property boundaries.

I tried calling to arrange for payment via credit card over the phone but one of your peers said you are currently away from your desk. If you could kindly phone me on sch4p4(6) Personal information when you return so that I can pay the \$7,605.50 application fee that would be appreciated.

Kind Regards,
Peter Thompson
Environmental Compliance Manager



Site Address: Memorial Dr Swanbank
Postal Address: P.O.Box 4353 Raceview, QLD 4305
Mobile: sch4p4(6) Personal information
Fax: 3288 6831
peterthompson@nugrow.com.au
www.nugrow.com.au

From: PALM [<mailto:palm@ehp.qld.gov.au>]
Sent: Wednesday, 7 May 2014 12:48 PM
To: Peter Thompson
Subject: FW: NON- DA - FW: Amendmend to BUA Permit number ENBU05029013

Hello Peter,

Thank you for your email. I have validated your application and the following is missing.

- Part A – please complete and return by email. I have attached the Part A for your convenience.
- Application fee of \$7605.50. This fee can be paid by cheque or credit card. If paying by cheque, please return by mail with the reference number of AR057502 to the address below. I can take credit card details over the phone. I have attached and see below information in regards to the fees.

<http://www.ehp.qld.gov.au/licences-permits/business-industry/pdf/approval-resource-benefical-use-em1719.pdf>

Please do not hesitate to contact me if you have any questions regarding this email.

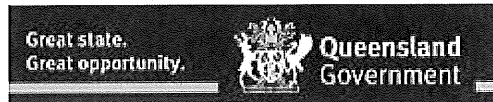
Kind regards
Kim

Kim Christeson

Senior Administration Officer
Permit and Licence Management
Environmental Regulatory Practice and Support
Environmental Performance & Coordination Branch

Telephone: 1300 130 372 (option 4) Facsimile: 07 3330 5875

Department of Environmental and Heritage Protection
GPO Box 2454
Brisbane QLD 4001



From: Peter Thompson [<mailto:peterthompson@nugrow.com.au>]
Sent: Tuesday, 22 April 2014 7:41 AM
To: PALM
Cc: Roy Wilson; Dan Stuart
Subject: Amendmend to BUA Permit number ENBU05029013

To whom it may concern,

Please find attached NuGrow's application to amend BUA Permit number ENBU05029013. Should you have any questions please do not hesitate to contact myself on the details provided below.

Kind Regards,
Peter Thompson

Environmental Compliance Manager



Site Address: Memorial Dr Swanbank
Postal Address: P.O.Box 4353 Raceview, QLD 4305
Mobile: sch4p4(6) [redacted]
Fax: 3288 6831
peterthompson@nugrow.com.au
www.nugrow.com.au

The information in this email together with any attachments is intended only for the person or entity to which it is addressed and may contain confidential and/or privileged material. There is no waiver of any confidentiality/privilege by your inadvertent receipt of this material.

Any form of review, disclosure, modification, distribution and/or publication of this email message is prohibited, unless as a necessary part of Departmental business.

If you have received this message in error, you are asked to inform the sender as quickly as possible and delete this message and any copies of this message from your computer and/or your computer system network.



Form

Corporate

Part A - General details for all applications

OFFICIAL USE ONLY

DATE RECEIVED

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FILE REF

PROJECT REF

COMPLETE FORM

☐

ENTERED BY [SIGNATURE]

DATE

--	--	--

RECEIPTING DETAILS ONLY

DATE RECEIVED

--	--	--

RECEIPT NUMBER

AMOUNT RECEIVED

\$

PROCESSED BY (INITIALS AND NAME)

--

Important information for applicants

This form asks for general applicant details and a description of the proposed project and any associated activities. The completed form must be submitted together with relevant activity specific Part B forms.

Specific details must accompany this form to enable your application to be processed. The guide provided will help you complete your application correctly. If you have any difficulties completing the form, contact Permit and Licence Management on 1300 130 372 (Option 4). Please number all attachments alphabetically (e.g. 'Attachment A').

Commercial and confidential information must be marked clearly. This information will not be disclosed, except where required by law (including the *Right to Information Act 2009*). If subsequent activities are added to the project, you will be required to resubmit this application with details of the additional activity.

Tick relevant boxes below if the applicant(s) are:

- ☐ an individual or sole trader
- ☐ individuals in a partnership
- ☐ individual(s) acting on behalf of an unincorporated organisation
- Go to Section 1
- ☒ an incorporated company
- ☐ an incorporated association
- ☐ a statutory authority
- ☐ a body politic
- Go to Section 2

Form

Part A - General details for all applications

Guide

Question 1

The applicant is the person intending to carry out the activity and in whose name the relevant permits or licences are to be issued.

The registered address is legally required for the serving of notices.

It is the address of a person and cannot be a post office box.

If more than one applicant as part of a partnership, complete the form Joint Applicant Details (EM1863) and attach to this form.

1 Individual applicant(s) details

APPLICANT'S FULL NAME	TITLE	DATE OF BIRTH
-----------------------	-------	---------------

REGISTERED ADDRESS	POST CODE
--------------------	-----------

PHONE	FAX	EMAIL
-------	-----	-------

POSTAL ADDRESS (WRITE "AS ABOVE" IF THE SAME AS REGISTERED ADDRESS)	POST CODE
---	-----------

Guardian details (if applicable)

A parent or legal guardian must complete the following details if an applicant is less than 18 years of age.

GUARDIAN'S FULL NAME	DATE OF BIRTH
----------------------	---------------

GUARDIAN'S REGISTERED ADDRESS	POST CODE
-------------------------------	-----------

GUARDIAN'S SIGNATURE	DATE
----------------------	------

→ Go to Section 3

Form

Part A - General details for all applications

2 Applicant details

Question 2

The applicant is the registered legal entity (not a business trading name) intending to carry out the activity and in whose name the relevant permits or licences are to be issued.

The registered address is legally required for the serving of notices. It is the registered business address of the company making the application and cannot be a post office box.

Enter the Australian Business Number (ABN); or the Australian Company Number (ACN) of the incorporated company; or the Association Number (AN) of the incorporated association; or the title and section of the legislation that gives the statutory corporation its legal status.

REGISTERED LEGAL ENTITY NAME

NuGrow Roma Pty Ltd

TRADING NAME (IF APPLICABLE)

As above

REGISTERED ADDRESS

Unit 3 / 17-19 Mayneview St, Milton

POST CODE

4064

PHONE

3294 1371

FAX

E-MAIL/WEBSITE

POSTAL ADDRESS (WRITE "AS ABOVE" IF THE SAME AS REGISTERED ADDRESS)

P.O.Box 4353 Raceview QLD

POST CODE

4305

ABN/ACN/AN OR TITLE AND SECTION OF LEGISLATION

ABN - 88151756517

Principal contact or person in charge details

PRINCIPAL CONTACT/PERSON IN CHARGE FULL NAME

Peter Thompson

TITLE

Mr

POSITION IN CORPORATION

Environmental Compliance Manager

TELEPHONE

sch4p4(6)
Personal
information

FASCIMILE

E-MAIL/WEBSITE

peterthompson@nugrow.com.au

POSTAL ADDRESS (WRITE "AS ABOVE" IF THE SAME AS REGISTERED ADDRESS)

Unit 4 / 7 Sonia Court, Raceview, Qld

POST CODE

4305

Part A - General details for all applications

Authorised signatory

The authorised signatory is the person authorised to sign an application on behalf of a corporation and in doing so declares that the corporation will be bound by the conditions associated with the granting of the licence or permit.

AUTHORIZED SIGNATORY FULL NAME	TITLE
Peter Thompson	Mr

POSITION IN CORPORATION
Environmental Compliance Manager

3 Project details**Pre-lodgement**

Have you previously attended a pre-lodgement meeting or submitted a pre-lodgement form for this project?

☒ No

☐ Yes

PROJECT NUMBER (IF APPLICABLE)

N/a

Project description

Briefly describe the proposed activities, works, development or management.

Attach a separate sheet if there is insufficient space below.

DESCRIPTION

THE APPROVED RESOURCES ARE LIMITED TO THOSE LISTED THAT MEET THE RESPECTIVE CRITERIA FOR USE LISTED IN TABLE 1 - RESOURCE CRITERIA OF PERMIT NUMBER ENBU05029013, THAT ARE TO BE APPLIED TO LAND BY NUGROW ROMA PTY LTD FOR THE IMPROVEMENT OF SOILS LOCATED AT IONA PARK, MILBANK BOUNDARY ROAD, KOGAN QLD 4406 (LOT 3 ON DY117).

Form

Part A - General details for all applications

This information should at least provide enough details to allow a Department of Environment and Heritage Protection officer to locate the site of the proposal.

Give as much information as possible to accurately locate your activity, for example maps with contextual or boundary lines on plan or GPS boundary co-ordinates.

Geographical co-ordinates can include northing/easting, longitude/latitude.

Approvals required

Please list all Part B application forms you are attaching to this form.

APPLICATION FORMS

Transfer or amendment of an approval of a resource for beneficial use.

Project site

Where will the activities be conducted? Provide the street address, real property description(s) of the land(s) in which the project is located and local government area. If you require more space, attach a separate sheet.

STREET ADDRESS

Fairfield 3387 Tara-Kogan Rd, Tarra, Qld, 4221

LOT

8

PLAN

DY117

LOCAL GOVERNMENT AREA

Tarra

If possible, provide a specific location within a protected area, a property name or an attached map with the project area clearly delineated. Also include the map name/details.

SPECIFIC LOCATION/PROPERTY NAME

Fairfield (refer to attachment)

PROTECTED AREA

GEOGRAPHICAL CO-ORDINATES

Label all attachments alphabetically
(e.g. 'Attachment A')

Attachments

List all attached documents, including maps containing information supporting this application in the space below. If there are no attachments mark "N/A."

ATTACHMENTS (LABEL ALL ATTACHMENTS ALPHABETICALLY – E.G. "ATTACHMENT A")

Attachment A - Expansion property boundaries

Privacy statement

The Department of Environment and Heritage Protection is committed to protecting the privacy, accuracy and security of your personal information in accordance with the *Information Privacy Act 2009*. The department is collecting your personal information in accordance with the Act specified in the relevant Part B form in order to process your application. The information will only be accessed by authorised employees within the department. Some of this information may be given to another department or agency as indicated in the privacy statement on the relevant Part B form. Your information will not be given to any other person or agency unless you have given us permission or we are authorised or required by law. All information supplied on this form may be disclosed publicly in accordance with the *Right to Information Act 2009* and *Evidence Act 1977*. For queries about privacy matters email: AdminReview@ehp.qld.gov.au or telephone: (07) 3896 3705.

Further Information

The latest version of this publication can be found at <www.ehp.qld.gov.au>. Note: where available, the publication number (e.g. EM1124 for this document) can be used as a search term.

4 Applicant's certification

If you have not told the truth in this application you may be liable for prosecution under the relevant Acts or Regulations.

- I do solemnly and sincerely declare that the information provided is true and correct to the best of my knowledge.
- I understand that information supplied on or with this application form may be disclosed publicly in accordance with the *Right to Information Act 2009* and the *Evidence Act 1977*.

APPLICANT (1) SIGNATURE
sch4-Signature

Joint applicant signatures (if applicable)

APPLICANT(2) SIGNATURE

APPLICANT(3) SIGNATURE

APPLICANT(4) SIGNATURE

APPLICANT(5) SIGNATURE

DATE

12/05/2014

Complete the following checklist.

- ☒ Application form(s) signed and completed
- ☒ Permit fees paid or enclosed (if applicable)
- ☒ Supporting information attached (e.g. maps)

Please return your completed application to:

Permit and Licence Management
Implementation Support Unit
Department of Environment and Heritage Protection
GPO Box 2454
Brisbane Queensland 4001

Enquiries: 1300 130 372 (Option 4)
Fax: (07) 3330 5875
Email: palm@ehp.qld.gov.au

JAMES Elizabeth

From: PALM
Sent: Tuesday, 22 April 2014 11:04 AM
To: PALM
Subject: NON- DA - FW: Amendmend to BUA Permit number ENBU05029013
Attachments: form-partb-amend-beneficial-use-em849.pdf

Hi Palm

This needs to go in the NON_DA in box not mining.

Regards

Veronica
Veronica Lightfoot
Administration Officer
Permit and Licence Manager
Environmental Regulatory Support
Environmental Performance and Coordination Branch

Telephone: 1300 130 372 (Select option 4) **Facsimile :** 07 3330 5875
Email: palm@ehp.qld.gov.au



From: Peter Thompson [<mailto:peterthompson@nugrow.com.au>]
Sent: Tuesday, 22 April 2014 7:41 AM
To: PALM
Cc: Roy Wilson; Dan Stuart
Subject: Amendmend to BUA Permit number ENBU05029013

To whom it may concern,

Please find attached NuGrow's application to amend BUA Permit number ENBU05029013. Should you have any questions please do not hesitate to contact myself on the details provided below.

Kind Regards,
Peter Thompson
Environmental Compliance Manager



Site Address: Memorial Dr Swanbank
Postal Address: P.O.Box 4353 Raceview, QLD 4305
Mobile: [sch4p4\(6\) Personal information](tel:32886831)
Fax: 3288 6831
peterthompson@nugrow.com.au
www.nugrow.com.au

Application form—Part B

Waste Reduction and Recycling Act 2011

Transfer or amendment of an approval of a resource for beneficial use

Information

This form is to be completed to apply to transfer the benefit of, or to amend, a specific approval under s. 168 of the *Waste Reduction and Recycling Act 2011* (Waste Reduction Act).

Please complete and sign the form and number all attachments alphabetically (e.g. 'Attachment A'). You should also read any information material provided to understand any relevant policies and procedures.

1. Applicant prerequisites

Are you the holder of the specific approval subject to this application? (Tick the appropriate box.)

- ☒ Yes → Please provide details below.
☐ No → You cannot make this application.

PERMIT NUMBER ENBU05029013
HOLDER NUGROW ROMA PTY LTD
BRIEF DESCRIPTION OF THE RESOURCE AND BENEFICIAL USE THE APPROVED RESOURCES ARE LIMITED TO THOSE LISTED THAT MEET THE RESPECTIVE CRITERIA FOR USE LISTED IN TABLE 1 - RESOURCE CRITERIA OF PERMIT NUMBER ENBU05029013, THAT ARE TO BE APPLIED TO LAND BY NUGROW ROMA PTY LTD FOR THE IMPROVEMENT OF SOILS LOCATED AT IONA PARK, MILBANK BOUNDARY ROAD, KOGAN QLD 4406 (LOT 3 ON DY117).

2. Application type

Are you applying to transfer or amend a resource? (Tick the appropriate box.)

- ☐ **Transfer** the benefit of your existing specific approval of a resource for a beneficial use to another individual or company. (Please complete Section 3—'Transfer details'); or
☒ **Amend** your existing specific approval of a resource for a beneficial use. (Please complete Section 4—'Amendment details').

Transfer or amendment of an approval of a resource for beneficial use

3. Transfer details

NAME OF TRANSFEREE	ACN or ABN (and ANZSIC code if applicable)
TRADING NAME	PHONE NUMBER
REGISTERED ADDRESS	FAX NUMBER
POSTAL ADDRESS (if same as registered address write 'as above')	EMAIL ADDRESS
CONTACT NAME	CONTACT PHONE NUMBER (if different to applicant phone)

Transferee consent

I, as the proposed transferee, agree to the transfer of benefit of the specific approval. I understand that by agreeing to this transfer, I will be responsible for complying with any conditions that have been imposed on the approval if the application is approved.

FULL NAME	POSITION (e.g. Director, Manager, Owner)
TRANSFEREE SIGNATURE	DATE

4. Amendment details

<p>DETAILS OF THE AMENDMENT SOUGHT</p> <p>NUGROW ROMA PTY LTD (HEREIN REFERRED TO AS NUGROW) WOULD LIKE TO AMEND CONDITION 23(A) OF BUA PERMIT NUMBER ENBU05029013. NUGROW WOULD LIKE THE AMENDED CONDITION TO READ AS FOLLOWS:</p> <p>"NOT GENERATE AEROSOL OR CAUSE SPRAY DRIFT THAT RESULTS IN OFFSITE ENVIRONMENTAL NUISANCE OR DELETERIOUS HUMAN HEALTH EFFECTS AT A SENSITIVE RECEPTOR LOCATION".</p> <p>ADDITIONALLY NUGROW WOULD ALSO LIKE TO AMEND CONDITION 1 OF BUA PERMIT NUMBER ENBU05029013 TO INCLUDE AN ADDITIONAL SITE FOR THE APPROVED RESOURCES TO BE APPLIED TO LAND FOR THE IMPROVEMENT OF SOILS, THIS BEING FAIRFIELD 3387 TARA-KOGAN RD, TARRA, QLD, 4221 (LOT 8 ON DY117).</p>
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Transfer or amendment of an approval of a resource for beneficial use

REASON FOR AMENDMENT REQUEST

NUGROW SEEKS THE ABOVE AMENDMENT AS DURING THE DETAILED DESIGN PHASE, NUGROW HAS DETERMINED THAT AN ALTERNATIVE IRRIGATION DEVICE, THAN WAS PREVIOUSLY PROPOSED, WOULD BE MORE SUITABLE FOR THE APPLICATION OF FLUIDS TO LAND. THIS PARTICULAR IRRIGATION DEVICE HAS THE POTENTIAL TO GENERATE AEROSOL AND SPRAY DRIFT HOWEVER IT WILL BE MINIMAL AND CONTROLLED. ADDITIONALLY NUGROW SEEKS TO INCLUDE AN ADDITIONAL SITE FOR THE APPROVED RESOURCES TO BE APPLIED TO LAND AS NUGROW HAS RECENTLY PURCHASED LOT 8, DY117 (SETTLEMENT EXPECTED 20TH MAY 2014) AND PROPOSES TO IMPROVE THE SOILS OF THIS SITE BY APPLYING THE SAME APPROVED RESOURCES TO LAND AS APPROVED FOR IONA PARK.

IN ORDER TO ENSURE POTENTIAL ENVIRONMENTAL IMPACTS CAUSED BY POSSIBLE AEROSOL AND SPRAY DRIFT ARE ELIMINATED OR MINIMISED, NUGROW WILL IMPLEMENT VARIOUS CONTROL MEASURES INCLUDING:

-PRIOR TO IRRIGATION, DUE REGARD FOR WIND DIRECTION AND SPEED WILL BE GIVEN AS PART OF THE MANAGEMENT FOR MINIMISING NUISANCE OR DELETERIOUS HEALTH EFFECTS AT A SENSITIVE RECEPTOR LOCATION.

-A MINIMUM 20M BUFFER SURROUNDING THE PERIMETER OF THE PROPERTY WILL BE MAINTAINED TO ENSURE ANY AEROSOL AND SPRAY DRIFT DOES NOT LEAVE NUGROW'S SITE.

-WHEN IRRIGATION OCCURS A RECORD OF WIND DIRECTION AND SPEED WILL BE KEPT.

WITH REGARDS TO APPLYING THE APPROVED RESOURCES TO LOT 8 ON DY117, NUGROW WILL FOLLOW THE EXACT SAME LAND APPLICATION METHODS AND PROCEDURES AS THOSE DOCUMENTED IN PART B: SITE BASED MANAGEMENT PLAN FOR A BENEFICIAL USE APPROVAL FOR MULTIPLE RESOURCES PREPARED FOR IONA PARK. THIS SBMP WILL BE UPDATED ACCORDINGLY TO INCLUDE THE APPLICATION OF RESOURCES AT LOT 8, DY117 IF DEHP APPROVE THIS AMENDMENT APPLICATION AND PRIOR TO OPERATIONS OCCURING ON THIS SITE.

NOTE: If more space is required please include the relevant information as an attachment to this form.

Transfer or amendment of an approval of a resource for beneficial use

5. Fees

Please see below for details of fees¹ relating to a transfer or amendment of a specific approval.

Application to transfer the benefit of an approval (Waste Reduction Act, s. 168(2)(d))	\$
Application to amend an approval (Waste Reduction Act, s. 168(2)(d)):	
i) for an amendment of a condition to add a new site	50% of the application fee for an application for a specific approval for the same resource
ii) for any other amendment	25% of the application fee for an application for a specific approval for the same resource

6. Payment

Enclosed with this application (cheque, money order, etc) is the applicable fee of:

- ☐ \$ for the transfer of the benefit of an approval; or
- ☐ \$ 7,605.50 (please call sch4p4(6) Personal information for credit card details for payment) for an amendment of an approval.

NOTE: Cheques should be made payable to the Department of Environment and Heritage Protection.

7. Declaration

- I declare that the information provided is true and correct to the best of my knowledge and I make this solemn declaration conscientiously believing the same to be true.
- I am aware that under s. 265 of the *Waste Reduction and Recycling Act 2011*, it is an offence to give the administering authority information that I know is false, misleading or incomplete in any material particular. The maximum penalty for such action is 1665 penalty units for an individual or two years imprisonment, or 8325 penalty units where the applicant is a corporation (s. 181B (3) of the *Penalties and Sentences Act 1992* (PS Act)). Refer to the PS Act for value of a penalty unit.
- I understand that all information supplied on or with this application form may be disclosed publicly in accordance with the *Right to Information Act 2009* and the *Evidence Act 1977*.
- I understand that an incomplete application (including applications that do not include the fee) may be invalid. Invalid applications will be returned without processing and will only be processed if resubmitted with all invalidating issues addressed.

APPLICANT'S FULL NAME

Roy Wilson

¹ Details on the application fee for an application for a specific approval for the same resource can be found in Schedule 7, section 45 of the *Waste Reduction and Recycling Regulation 2011*.

Application form—Part B

Transfer or amendment of an approval of a resource for beneficial use

APPLICANT'S SIGNATURE

sch4-Signature

DATE

22/04/2014

8. Applicant checklist

- ☒ Application form(s) completed and signed
- ☒ Permit fees paid or enclosed
- ☐ Supporting information attached (if applicable)

Please return your completed application to:

Permit and Licence Management
Implementation and Support Unit
Department of Environment and Heritage Protection
GPO Box 2454
BRISBANE QLD 4001

Privacy statement

The Department of Environment and Heritage Protection (EHP) is committed to protecting the privacy, accuracy and security of your personal information in accordance with the *Information Privacy Act 2009*. EHP is collecting your personal information in accordance with s.157 (2) of the *Waste Reduction and Recycling Act 2011* in order to in order to apply for an approval of a resource for beneficial use. The information will only be accessed by authorised employees within the department. Your information will not be given to any other person or agency unless you have given us permission or we are authorised or required by law. All information supplied on this form may be disclosed publicly in accordance with the *Right to Information Act 2009* and *Evidence Act 1977*. For queries about privacy matters, email <AdminReview@ehp.qld.gov.au> or telephone (07) 3330 5448.

Enquiries

Permit and Licence Management
Phone: **1300 130 372 (Option 4)**
Fax: (07) 3330 5875
Email: <palm@ehp.qld.gov.au>

COPY

Queensland Government
Dept of Environment & Heritage Protection

ABN: 46 640 294 485

RECEIPT

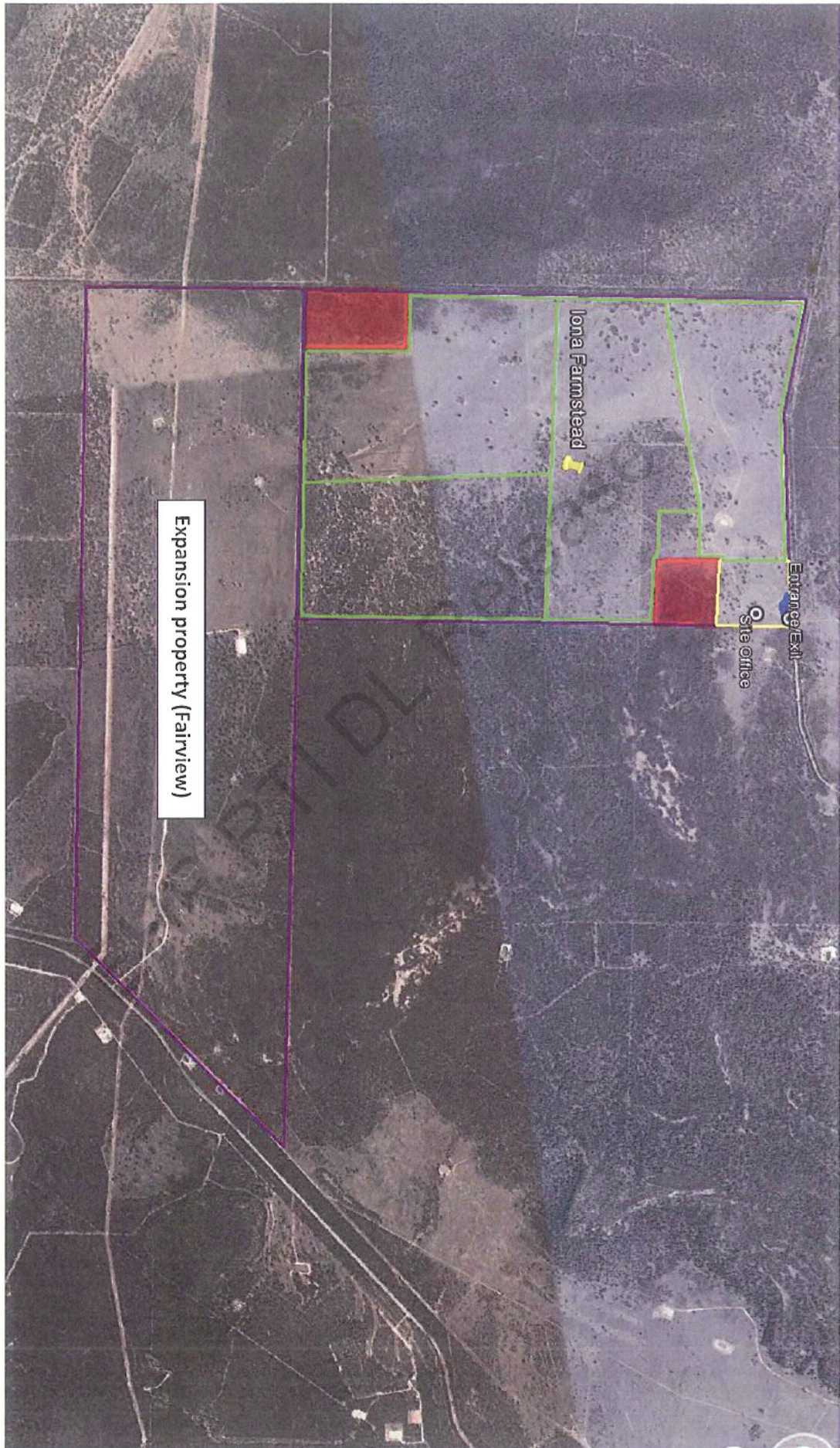
Received from: RAY WILSON
ABN/Address: C/- NUGROW ROMA PTY LTD

No.: 4205754

Description	Qty	Unit	Val	Extended	Discount	Ext Value	GST	Total Price
ASTE APPLICATION AMENDMENT-NEW SITE	1		7605.50	7605.50	0.00	7605.50		7605.50

ate: 12/05/14	Time: 12:39	DAMEX	7605.50	Tot Value:	7605.50
rch: dnrbris	SPer: azm			GST:	0.00
CYC: 178996	Reg: 92			Tot Price:	7605.50
				Tendered:	
				Change:	0.00

Cheques or other negotiable instruments accepted subject to clearance.



Waste Reduction and Recycling Act 2011

Request for further information

Use this checklist when reviewing the information provided with an application for a new, transfer or amendment of an approval of a resource made under s.157 (new application) or s.168 (transfer or amendment) of the *Waste Reduction and Recycling Act 2011*. Completion of this checklist is evidence that a review of the information provided has been conducted and that any further information requested is reasonable.

EHP PROJECT NO: 404328	EHP FILE NUMBER:
EHP PERMIT NO:	ENBU05029013
NAME OF APPLICANT:	Nugrow Roma Pty Ltd
ABN/ACN:	88 151 756 517
REGISTERED ADDRESS:	4/7 Sonia Court, Raceview Qld 4305
Generator	Company Name: Various generators throughout SE Qld
Transporter	Company Name: Nugrow Roma Pty Ltd and other contractors
Site of Beneficial Use	Site Address: Iona Park, Millbank Boundary Rd, Kogan Qld 4406 Western Downs LGA Site lot and plan: Lot 3 on DY117

CRITICAL DATES	DATE
VALID APPLICATION RECEIVED	12 May 2014
INFORMATION REQUEST TO BE SENT BY	

This is relation to requiring further information for an application for a–

Please check the relevant box:

- ☐ **New** specific approval (Complete Part A and Part B).
- ☐ **Transfer** of an existing specific approval (Complete Part A and Part C).
- ☒ **Amendment** of an existing specific approval (Complete Part A and Part D).

Part A: General details

To be completed for all applications.

1. Summary of the proposed use of the resource

A specific approval has been granted for Nugrow to apply a number of waste materials to land as part of a soil rejuvenation program at Iona Park, Millbank Boundary Road, Kogan Qld 4406. A summary of the proposed uses is provided in *Figure 1 – Proposed beneficial uses*. The waste materials include a mix of regulated wastes under the EP Act and non-regulated wastes.

sch4p4(7)(1)(c) Business/commercial/professional/financial affairs

EHP RTI DL Release

The applicant has made the following request to amend the approval:

NUGROW ROMA PTY LTD (HEREIN REFERRED TO AS NUGROW) WOULD LIKE TO AMEND CONDITION 23(A) OF BUA PERMIT NUMBER ENBU05029013. NUGROW WOULD LIKE THE AMENDED CONDITION TO READ AS FOLLOWS:

"NOT GENERATE AEROSOL OR CAUSE SPRAY DRIFT THAT RESULTS IN OFFSITE ENVIRONMENTAL NUISANCE OR DELETERIOUS HUMAN HEALTH EFFECTS AT A SENSITIVE RECEPTOR LOCATION".

ADDITIONALLY NUGROW WOULD ALSO LIKE TO AMEND CONDITION 1 OF BUA PERMIT NUMBER ENBU05029013 TO INCLUDE AN ADDITIONAL SITE FOR THE APPROVED RESOURCES TO BE APPLIED TO LAND FOR THE IMPROVEMENT OF SOILS, THIS BEING FAIRFIELD 3387 TARAKOGAN RD, TARRA, QLD, 4221 (LOT 8 ON DYI17).

Part B: New application details

Does this section apply? ☐ Yes ☒ No

To be completed for new applications for a specific approval.

The following information is to be provided at the time of making an application for a specific approval for the application to proceed. If all of the information is provided, please check the **Yes** box. If not, please check the **No** box and give a description of the information to be requested from the applicant and the reasons why the information is required. Note that a further indication of the information to be provided is included in the guideline *Approvals of a resource for beneficial use* (EM1719).

1. Possession of resource

Under s. 157(1) of the *Waste Reduction and Recycling Act 2011* a person may apply to the administering authority for a specific approval of a resource if –

(a) the person possesses the resource when the application is made; OR (b) the person has consent to make the application from the person who, when the application is made, has possession of the resource.	<i>Is the applicant eligible to make the application?</i> ☐ Yes ☐ No
<If no, provide details>	

2. Information about resource

Under s. 157(2) of the *Waste Reduction and Recycling Act 2011* an application for a specific approval must include the following information about the resource –

Information required under s. 157(2)(b)	Has all of the information been provided?
(i) a description of it, including, for example, its physical state and its components and their concentrations;	☐ Yes ☐ No <if no, provide details>
(ii) details of any of its environmentally significant characteristics;	☐ Yes ☐ No <if no, provide details>
(iii) details of its origin, including, for example, its place of production and the type of activity resulting in its production;	☐ Yes ☐ No <if no, provide details>
(iv) details of persons, premises or industry intended to receive it;	☐ Yes ☐ No <if no, provide details>
(v) details of the form of transportation, storage, re-use, recycling, energy recovery, reprocessing	☐ Yes ☐ No

or other use proposed for it;	<if no, provide details>
(vi) details of the benefits, and any end product, or its proposed use;	☐ Yes ☐ No <if no, provide details>
(vii) the quantity of it proposed to be used;	☐ Yes ☐ No <if no, provide details>
(viii) details of any relevant waste minimisation scheme, waste management plan or industry code relevant to it;	☐ Yes ☐ No <if no, provide details>
(ix) any Australian or industry standards relevant to its end product;	☐ Yes ☐ No <if no, provide details>
(x) an assessment of the potential for material harm, serious environmental harm or environmental nuisance arising from its proposed use;	☐ Yes ☐ No <if no, provide details>
(xi) an assessment of its alternative uses having regard to the waste and resource management hierarchy;	☐ Yes ☐ No <if no, provide details>
(xii) an assessment of the best practice environmental management for its proposed use;	☐ Yes ☐ No <if no, provide details>
(xiii) an assessment of commonly available technologies, methods or processes relevant to its proposed use; and	☐ Yes ☐ No <if no, provide details>
(xiv) other information required under a regulation.	☐ Yes ☐ No <if no, provide details>
Information required under s. 157(2)(c)	<i>Has all of the information been provided?</i>
Details of proposed measures to ensure the applicant's proposed use of the resource is not likely to result in material environmental harm, serious environmental harm or environmental nuisance.	☐ Yes ☐ No <if no, provide details>

Part C: Transfer information

Does this section apply? ☐ Yes ☒ No

To be completed for applications for a transfer of benefit of a specific approval.

Has the signed consent of the transferee been received?	☐ Yes	☐ No
Is any further information required for the transfer to proceed?	☐ Yes	☐ No
<provide details of any further information to be requested>		

Part D: Amendment information

Does this section apply? ☒ Yes ☐ No

To be completed for applications to amend a specific approval.

Is the application to amend a condition of an approval?	☒ Yes	☐ No
Does the application state the amendment sought?	☒ Yes	☐ No
Does the application state the reasons for the amendment?	☒ Yes	☐ No
Is there any further information required for the amendment to proceed?	☒ Yes	☐ No

The applicant has provided the following reasons for seeking the amendment:

NUGROW SEEKS THE ABOVE AMENDMENT AS DURING THE DETAILED DESIGN PHASE, NUGROW HAS DETERMINED THAT AN ALTERNATIVE IRRIGATION DEVICE, THAN WAS PREVIOUSLY PROPOSED, WOULD BE MORE SUITABLE FOR THE APPLICATION OF FLUIDS TO LAND. THIS PARTICULAR IRRIGATION DEVICE HAS THE POTENTIAL TO GENERATE AEROSOL AND SPRAY DRIFT HOWEVER IT WILL BE MINIMAL AND CONTROLLED. ADDITIONALLY NUGROW SEEKS TO INCLUDE AN ADDITIONAL SITE FOR THE APPROVED RESOURCES TO BE APPLIED TO LAND AS NUGROW HAS RECENTLY PURCHASED LOT 8, DY117 (SETTLEMENT EXPECTED 20TH MAY 2014) AND PROPOSES TO IMPROVE THE SOILS OF THIS SITE BY APPLYING THE SAME APPROVED RESOURCES TO LAND AS APPROVED FOR IONA PARK.

IN ORDER TO ENSURE POTENTIAL ENVIRONMENTAL IMPACTS CAUSED BY POSSIBLE AEROSOL AND SPRAY DRIFT ARE ELIMINATED OR MINIMISED, NUGROW WILL IMPLEMENT VARIOUS CONTROL MEASURES INCLUDING:

- a) PRIOR TO IRRIGATION, DUE REGARD FOR WIND DIRECTION AND SPEED WILL BE GIVEN AS PART OF THE MANAGEMENT FOR MINIMISING NUISANCE OR DELETERIOUS HEALTH EFFECTS AT A SENSITIVE RECEPTOR LOCATION.
- b) A MINIMUM 20M BUFFER SURROUNDING THE PERIMETER OF THE PROPERTY WILL BE MAINTAINED TO ENSURE ANY AEROSOL AND SPRAY DRIFT DOES NOT LEAVE NUGROW'S SITE.
- c) WHEN IRRIGATION OCCURS A RECORD OF WIND DIRECTION AND SPEED WILL BE KEPT.

WITH REGARDS TO APPLYING THE APPROVED RESOURCES TO LOT 8 ON DY117, NUGROW WILL FOLLOW THE EXACT SAME LAND APPLICATION METHODS AND PROCEDURES AS THOSE DOCUMENTED IN PART B: SITE BASED MANAGEMENT PLAN FOR A BENEFICIAL USE APPROVAL FOR MULTIPLE RESOURCES PREPARED FOR IONA PARK. THIS SBMP WILL BE UPDATED ACCORDINGLY TO INCLUDE THE APPLICATION OF RESOURCES AT LOT 8, DY117 IF DEHP APPROVE THIS AMENDMENT APPLICATION AND PRIOR TO OPERATIONS OCCURING ON THIS SITE.

Change of aerosol/spray drift conditions

Conditions prohibiting the generation of aerosol/spray drift were included in the original approval for the purpose of managing health risks associated with using treated sewage effluent and nuisance.

The amendment application states that the particular irrigation device to be used has the potential to generate aerosol and spray drift however it will be minimal and controlled. No further information has been provided on how the likelihood of potential for generation has been determined including the device to be used, size of droplets, rate of irrigation or area of land that will be irrigated at one time. Insufficient information has also been provided on how aerosol and spray drift will be controlled. The applicant has stated that due regard will be given for wind direction however has not included what 'due regard' means.

Considering the high risk presented with aerosols and the low quality of the water being generated (Class D, *E. Coli* concentrations up to 10,000cfu/100mL), it is necessary that conditions be imposed to ensure the

resource can be used without an unacceptable risk to the public.

In accordance with the appropriate hierarchy of control measures (section 6.1 of the *Water quality guidelines for recycled water schemes* (2008)), as the applicant proposes to remove a condition that eliminates the risk of aerosols/spray drift (elimination being the most preferred method of control), conditions should be included that minimise the risk through:

- a) Substitution—Replacing the hazard with a suitable alternative that has a lower risk. For example, sourcing a higher quality of water.
- b) Isolation— Removing or separating people from the source of the hazard. For example, Irrigation of areas with restricted access (for example, irrigation of fenced areas such as golf courses or sporting fields after hours)
- c) Engineering means— Changing the physical characteristics of the way in which the recycled water is used to remove or reduce the risk. For example, modifying application of the water from fine spray to heavy droplet to decrease risk of overspray. It is noted that s. 6.1.1 *Dust and Particulate Management* of Part B: Site Based Management Plan, provided with the original application, states that “*NuGrow must equip the travelling boom irrigator with a hose or other configuration, which will deliver irrigation waters as close to the ground as possible to minimise the production of aerosols*” however this hasn’t been confirmed in the amendment application.
- d) Administrative measures— Use policies, procedures, signs and training to control risk. For example, Review systems of work so that irrigation only occurs during times of low wind speed; use of signs advising recycled water is in use; train users in the safe use of recycled water.

In order to determine appropriate conditions to manage the potential public health and nuisance risks, FURTHER INFORMATION IS REQUIRED.

Addition of land

The original approval was granted with the understanding that the use of the resources was going to be conducted on a trial basis with a determination of the effectiveness of the use of the resources in improving soil quality serving a basis for any future land applications. The proposed addition of land is provided in Figure 1, below.

FURTHER INFORMATION IS REQUIRED demonstrating the requirement for the additional property (Fairview) to be included in the trial.

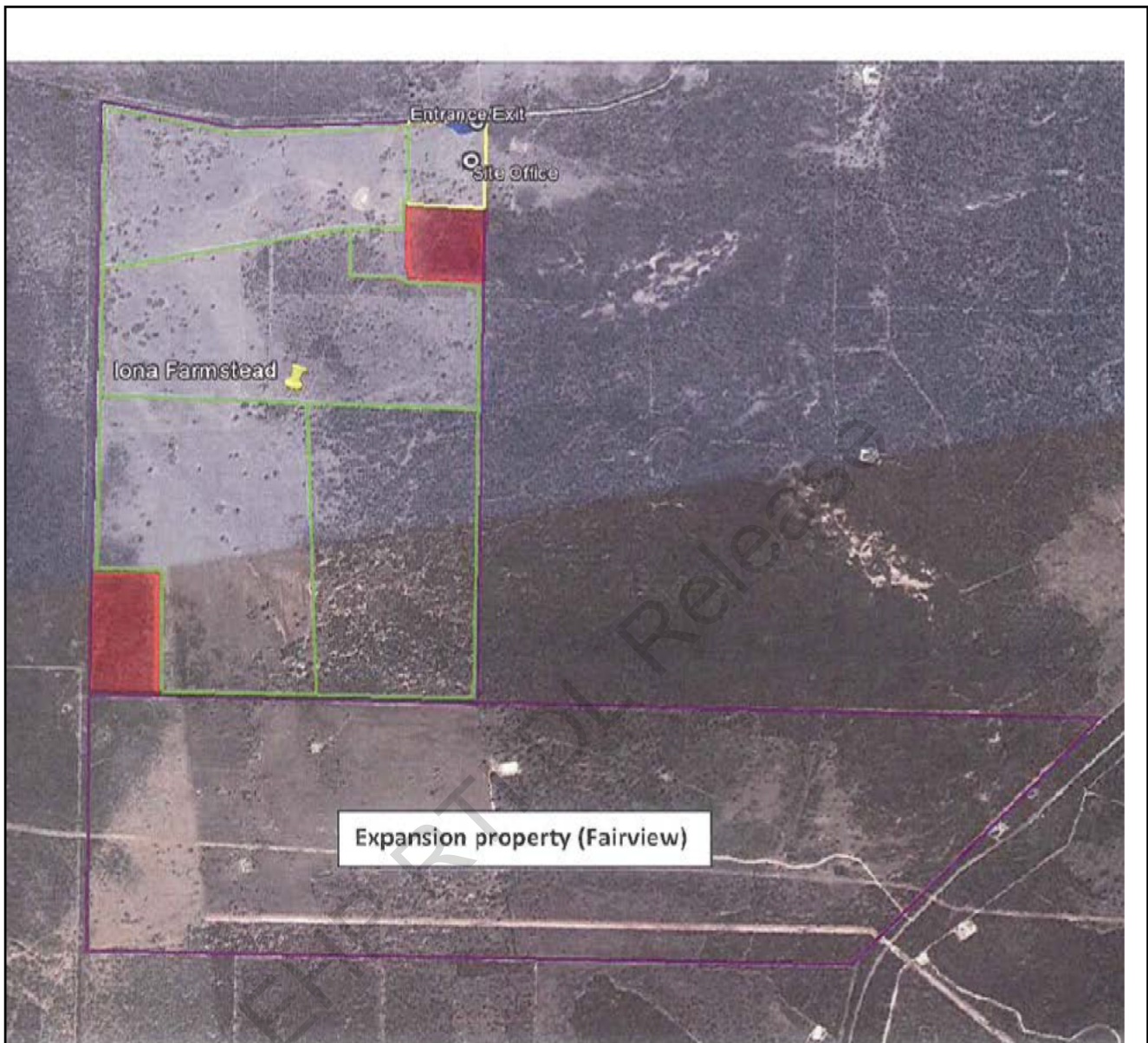


Figure 2 - Existing land under the BUA and proposed expansion

Part E: Recommendation and approval

Details of the recommendation:

It is recommended that:

- a) further information is requested from the applicant in accordance with–
- ☐ s. 158 of the *Waste Reduction and Recycling Act 2011* for a new application for a specific approval.
 - ☒ s. 169 of the *Waste Reduction and Recycling Act 2011* for an application for a transfer or amendment of an existing specific approval.

A notice requesting further information has been drafted and is attached for the delegate's signature.

OR

- b) ☐ No further information is required.

Simone Ventura Principal Project Officer, WLCA		
Assessing Officer	Signed	Date

Review and endorsement

Insert any comments relevant for the delegate's consideration:

David Cook Manager, WLCA		
Manager/Supervisor	Signed	Date

Approval

I approve the recommendation stated above for the reasons set out in the report.

Lindsay Delzoppo Director, SEA		
Delegate	Signed	Date

Notice

Waste Reduction and Recycling Act 2011

Request for further information

This notice is issued by the Department of Environment and Heritage Protection (the department), pursuant to s. 158 or s. 169 of the Waste Reduction and Recycling Act 2011 (the Waste Reduction Act), to advise you of a decision to require further information for an application made under s. 157 or s. 168 of the Waste Reduction Act.

Your reference:

Our reference: PR: 404328 / Appn. 556150

Nugrow Roma Pty Ltd
PO Box 4353
RACEVIEW QLD 4305

Attention: Peter Thompson, Environmental Compliance Manager

Dear Mr Thompson,

Re: Amendment application for the beneficial use of a resource – multiple wastes in a soil rejuvenation program

Thank you for your application for an amendment of a specific approval for the beneficial use of multiple wastes in a soil rejuvenation program at Kogan, Qld 4406. The application was received by the department on 12 May 2014.

This notice is issued under section 169(1) of the Waste Reduction Act as the application does not provide sufficient detail for assessment. The department requires the following further information for the application to be considered:

Change of condition 1 – Addition of new property

1. The original approval was granted with the understanding that the use of the resources was going to be conducted on a trial basis with a determination of the effectiveness of the use of the resources in improving soil quality serving as a basis for any future land applications.

Please provide information demonstrating the requirement for the additional property (Fairview) to be included in the trial.

Change of condition 23 – Aerosol and spray drift

2. Conditions included in the original approval prohibiting the generation of aerosol and spray drift were included for the purpose of managing health risks associated with using treated sewage effluent, and nuisance. The amendment application requests that this requirement be removed as the particular

Notice Request for further information

irrigation device to be used has the potential to generate aerosol and spray drift. Insufficient information has been provided on how any aerosol and spray drift will be controlled. For example, the application states that due regard will be given for wind direction however there is no indication on what 'due regard' means.

Considering the relatively high risk presented with aerosols and the low quality of the sewage effluent being used (Class D, *E. Coli* concentrations up to 10,000cfu/100mL), it is necessary that conditions be imposed to ensure the resource is used without an unacceptable risk to the public.

Risks associated with the use of sewage effluent should be managed in accordance with the hierarchy of control measures in section 6.1 of the *Water quality guidelines for recycled water schemes* (DEWS, 2008) (the guideline). The existing condition eliminates the risk of aerosols/spray drift; elimination being the most preferred method of control.

Please provide details of the measures that would be implemented to minimise the risks associated with aerosol and spray drift, considering the hierarchy of control in the guideline. Consideration must be given to the following order:

- a) Substitution—Replacing the hazard with a suitable alternative that has a lower risk. For example, sourcing a higher quality of water.
- b) Isolation— Removing or separating people from the source of the hazard. For example, irrigation of areas with restricted access (for example, irrigation of fenced areas such as golf courses or sporting fields after hours).
- c) Minimisation through engineering means— Changing the physical characteristics of the way in which the recycled water is used to remove or reduce the risk. For example, modifying application of the water from fine spray to heavy droplet to decrease risk of overspray
- d) Administrative measures— Use policies, procedures, signs and training to control risk. For example, Review systems of work so that irrigation only occurs during times of low wind speed; use of signs advising recycled water is in use; train users in the safe use of recycled water.

Please provide the requested information by **1 August 2014**. This date may be extended if, before the date, a request to extend the time for providing the further information is agreed to. If a response or a request to extend the time in which to respond is not received by this date, or a reasonable excuse has not been provided, the application may be refused.

Your response should be sent to the following address quoting the reference at the top of this notice:

Permit and Licence Management
Implementation and Support Unit
Department of Environment and Heritage Protection
GPO Box 2454
BRISBANE QLD 4001

Notice
Request for further information

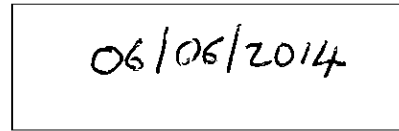
Should you have any queries in relation to this notice, please contact Simone Ventura of the department on telephone (07) 3330 5729.

sch4-Signature



Signature

06/06/2014



Date

Lindsay Delzoppo
Director, Statewide Environmental Assessments
Delegate of the Chief Executive
Waste Reduction and Recycling Act 2011

Enquiries:
Simone Ventura
Principal Project Officer, WLCA
Statewide Environmental Assessments
Ph: (07) 3330 5729
Email: wlca@ehp.qld.gov.au

EHP RTI DL Released

DRAFT Notice

Amendment of an approval of a resource for beneficial use

This notice is issued by the chief executive, pursuant to section 168 of the *Waste Reduction and Recycling Act 2011* to advise you of a decision by the chief executive and your review and appeal rights.

Nugrow Roma Pty Ltd
4/7 Sonia Court
RACEVIEW QLD 4305

Our reference : PR: 409312, App. no. 543076

Attn: Mr Peter Thompson, Environmental Compliance Manager

Dear Mr Thompson

Re: Amendment application for approval of a resource by Nugrow Roma Pty Ltd for the beneficial use of multiple wastes in a soil rejuvenation program (ENBU05261913)

The chief executive has considered your application that was received on 12 May 2014 and decided to approve the application. The amendments take effect from the date of this Notice.

This approval (ENBU05261913) is a specific approval of which Nugrow Roma Pty Ltd (ABN 88 151 756 517) has the benefit and it is subject to the conditions set out in the attached schedule, issued in accordance with section 166 of the *Waste Reduction and Recycling Act 2011*.

The approval of the resource remains in force until **23 January 2019** (the period of the approval) unless the approval is replaced, suspended or cancelled.

The issuing of this approval for the beneficial use of a resource does not warrant or imply the lawfulness of the activity under other legislation, or that all approvals necessary under other legislation have or will be approved. It is the responsibility of the applicant to identify and obtain all other approvals necessary for the proposed activity.

The issuing of this approval also does not remove the obligation for the holder of the approval to take all reasonable and practicable measures to prevent and/or to minimise the likelihood of environmental harm being caused (the 'general environmental duty', see s. 319 of the *Environmental Protection Act 1994*). Environmental harm is any adverse effect, or potential adverse effect (whether temporary or permanent and of whatever magnitude, duration or frequency) on an environmental value, and includes environmental nuisance.

Guidance on acceptable approaches to monitoring compliance with this approval is provided in Appendix B of this document.

Permit number: ENBU05261913

Notice

Deleted: 05029013

Additional Advice about the application

You may apply to the chief executive for a review of this decision within 14 days of receiving this notice. Applications must be made using the approved form, "Application for Internal Review of an Original Decision" (EM219), which is available at <www.ehp.qld.gov.au> using the publication number EM219 as a search term. The completed form must be sent to the address on the form.

An application to review a decision does not stay the original decision. If you apply for an internal review of this decision you can also apply to the chief executive (using the same form) or the Queensland Civil and Administrative Tribunal (using form 44, "Application to Stay a Decision" available at <www.qcat.qld.gov.au>) for a stay of the original decision.

Sections 174-179 of the *Waste Reduction and Recycling Act 2011* cover the internal review process.

Should you have any queries in relation to this Notice, please contact Simone Ventura in the telephone number listed below.

Yours sincerely,

Signature

Date

Lindsay Delzoppo
Director, Statewide Environmental Assessments
Environment and Heritage Protection

Enquiries:

Simone Ventura, Principal Project Officer
Waste and Land Contamination Assessment
Level 9, 400 George Street, Brisbane Qld 4000
GPO Box 2454, Brisbane Qld 4001
Ph: (07) 3330 5729
Fax: (07) 3330 5875
Email: wica@ehp.qld.gov.au

SCHEDULE: CONDITIONS

Limitations of approval

- The approved resources are limited to those listed that meet the respective criteria for use listed in *Table 1 – Resource criteria*¹, that are to be applied to land by Nugrow Roma Pty Ltd (holder of the approval) for the improvement of soils located at Iona Park, Millbank Boundary Road, Kogan Qld 4406 (Lot 3 on DY117) (the site).

Table 1 – Resource criteria²

Resource	Criteria
Green waste	Green waste will only be utilised in the following scenarios: (a) in onsite composting; (b) applied as mulch to the surface layer of the ground surface; and/or (c) incorporated within the soil (top 10cm only).
Food waste	Food waste (liquid and solid) will only be incorporated in onsite composting windrows.
Livestock manure	Livestock manure will be applied directly to land or used in manufacturing compost.
Biosolids	Biosolids will be applied directly to land or used in manufacturing compost. Biosolids to be directly applied to land meet at least <i>Stabilisation Grade B</i> ³ , and <i>Contaminant Grade C</i> ⁴ classified as suitable for <i>Restricted Use 2</i> under the New South Wales Environmental Protection Authority <i>Environmental Guidelines: Use and Disposal of Biosolids Products</i> (2000) (the NSW Guidelines). Biosolids to be used in manufacturing compost meet at least <i>Stabilisation Grade B</i> ⁵ , and <i>Contaminant Grade D</i> ⁶ under the NSW Guidelines.
Treated sewage effluent	Treated sewage effluent: (a) will be released to the main dam for storage prior to irrigation; and (b) does not have, or prior to release to the main dam will be treated by ozone disinfection on site ⁷ so that it does not have, <i>Escherichia coli</i> (E. Coli) concentrations that exceed 10,000 cfu/100mL found in 95% of the samples taken for a 12 month period ⁸ ; and (c) will not be used on food crop including minimally processed food crop.
Coal seam gas (CSG) produced water and drilling fluids	CSG produced water and drilling fluids used: (a) have a pH of at least 6 but not more than 10.5; and (b) have an electrical conductivity of less than 15,000 µS/cm.

¹ Any resource that is not used as stated in condition 1 is considered a waste and must be managed in accordance with the *Environmental Protection Act 1994* and *Waste Reduction and Recycling Act 2011*, and their subordinate legislation.

² Resource sampling and analysis for biosolids should be conducted in accordance with the procedures detailed in *Schedule 1—Biosolids sampling and analysis procedures* and *Schedule 2—Grading, sampling and compliance procedures* of the NSW Guidelines.

³ Biosolids must meet at least one of the requirements for pathogen reduction and the vector attraction requirements in Table 3–3 *Biosolids Stabilisation Requirements* of the NSW Guidelines.

⁴ Biosolids must not exceed the contaminant acceptance concentration limits for Grade C listed in Table 3–1 *Contaminant Concentration Thresholds* of the NSW Guidelines.

⁵ Biosolids must meet at least one of the requirements for pathogen reduction and the vector attraction requirements in Table 3–3 *Biosolids Stabilisation Requirements* of the NSW Guidelines.

⁶ Biosolids must not exceed the contaminant acceptance concentration limits for Grade D listed in Table 3–1 *Contaminant Concentration Thresholds* of the NSW Guidelines.

⁷ To remove any doubt, treated sewage effluent with *E. Coli* concentrations >10,000 cfu/100mL may be received on site however must be treated prior to being released to the main dam using ozone disinfection methods to ensure that *E. Coli* concentrations do not exceed 10,000 cfu/100mL found in 95% of the samples taken for a 12 month period.

⁸ Based on the Department of Energy and Water Supply (2008) *Water quality guidelines for recycled water schemes*, available at <www.dews.qld.gov.au>, and the *Public Health Regulation 2005*.

2. The resources must not have any properties nor contain any other contaminants at concentrations which may cause environmental harm⁹ when used in accordance with the conditions of this approval.
3. Prior to the use of any resource under this approval, the holder of the approval must obtain written consent to use the resource from the person who possesses the resource, and keep records of the consent.

Resource monitoring

4. Any monitoring to determine the quality of resources applied to land on the site must be carried out on samples that are representative of the resources to be used.
5. Where the composition of a resource has changed or is likely to change, sufficient monitoring must be conducted to detect and characterise the extent of any change.
6. An **appropriately qualified person** must monitor, record and interpret all parameters listed in *Table 1 – Resource criteria* as part of this approval.
7. All analyses undertaken as a part of this approval must be carried out by a laboratory that has NATA certification, or an equivalent certification, for such analyses.

Use of the resources

8. The use of the resources must ensure that:
 - a) the soil structure, stability and productive capacity of the land on the site is maintained or improved;
 - b) there are no toxic effects to either crops or pasture plants; and
 - c) yields and produce quality are maintained or improved.
9. The use of the resources must be undertaken in accordance with written procedures that:
 - a) identify potential risks to the environment from the use of the resource during routine operations, closure and an emergency
 - b) establish and maintain control measures that minimise the potential for environmental harm; and
 - c) ensure that reviews of environmental performance are undertaken at least annually.
10. The use of the resources must not result in soil on the site being contaminated soil, when investigated in accordance with the current of the National Environment Protection (Assessment of Site Contamination) Measure 1999.
11. The resources must not be released directly or indirectly to land, air, or **waters** in a way or at a concentration that would cause environmental harm.

Records

12. All information and records that are required by the conditions of this approval must be kept for a minimum of five (5) years, and must be provided to the **chief executive** upon request.

Noise

13. Noise resulting from the use of the resource must not cause an environmental nuisance.

Air

14. Odours or airborne contaminants which are noxious or offensive or otherwise unreasonably disruptive to public amenity or safety must not cause nuisance to any **sensitive place** or **commercial place**.

⁹ See section 14 of *Environmental Protection Act 1994*. Environmental harm includes any adverse effect or potential adverse effect on public amenity and safety, waters, and health of stock grazed and plants grown on land ameliorated by the resource.

Transportation of resources

15. The resources must be handled and transferred in a manner that prevents the release of those resources during transporting, loading and unloading.
16. The following information must be recorded for each load of resource transported to the site:
 - a) origin of the resource;
 - b) date of pickup of the resource;
 - c) date of delivery of the resource; and
 - d) quantity of the resource.

Compost manufacturing

17. Compost in which the resources are used must be manufactured at a rate of less than 200t per year¹⁰.
18. Biosolids used in the compost must be treated in an aerobic process for at least 14 days. During that time, the temperature of the biosolids must be >40 °C and the average temperature >45 °C.
19. Any compost manufactured must meet the requirements for producing compost contained in Australian Standard 4454 *Compost, soil conditioners and mulches*.

Solid resource application to land

20. The application of biosolids, manures and compost to land must be conducted at an agronomic loading rate no greater than the lower of the nitrogen limited biosolids application rate (NLBAR) or the contaminant limited biosolids application rate (CLBAR) as determined in accordance with the NSW guidelines.
21. The following records must be kept for each land application of resources:
 - a) details of the land on which the application occurs;
 - b) date and time when the resource is applied;
 - c) the calculated application rate at which the resource is to be applied; and
 - d) the actual application rate.

Liquid resource application to land

22. The liquid resources to be irrigated to land must be of a quality that are suitable for irrigation, having been determined by an appropriately qualified person in accordance with the relevant assessment procedure listed in Appendix A.
23. Liquid resources irrigated to land on the site must only be sourced from the main dam and must:
 - a) not harm vegetation surrounding the irrigation area;
 - b) not cause soil erosion and soil structure damage;
 - c) not produce visible salting;
 - d) not cause surface ponding of the resource;
 - e) not result in surface runoff;
 - f) ensure that percolation of the resource beyond the plant root zone is minimised;
 - g) not exceed plant fertiliser requirements; and
 - h) not generate aerosol or cause spray drift, unless the irrigation methods comply with condition 24.

Deleted: f
not generate aerosol or cause spray drift;

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24. Irrigation of the liquid resources using spray methods must only occur:

- a) at a pressure of equal to or less than 20 pounds per square inch (PSI);

¹⁰ Manufacturing compost or soil conditioners at a rate of greater than 200t per year constitutes Environmentally Relevant Activity 53 Composting or soil conditioner manufacturing and requires an Environmental Authority under the *Environmental Protection Act 1994*.

- b) with a nozzle height of equal to or less than 30 centimetres from the crop height, or if there is no crop, the ground; and
- c) at a distance that is greater than 25 metres from the boundary of the site.

Withholding period

- 25. Animals must not be allowed to graze on land on the site, on which biosolids or treated sewage effluent has been applied, for a period of at least 30 days after application.

Storage of the resources

- 26. The resources must be stored in a manner to prevent contact with stormwater runoff.
- 27. Any water that has come in contact with the resources in either storage or composting areas must be collected and recycled or irrigated to land in a manner that complies with conditions 8, 10, 11 and 23 as if it were a resource.

Impact assessment

- 28. An annual assessment of groundwater quality must be undertaken to determine any detrimental impacts of the use or if any environmental harm has, or is likely to be, caused by the use of the resources.
- 29. An annual assessment of soil quality of land where the resources have been applied must be undertaken to determine if any impact or environmental harm has or is likely to be caused by the use of the resources.
- 30. Monitoring undertaken to assess impacts of the use of the resources on groundwater or soil quality must be compliant with the chief executive's most recent monitoring and sampling manual.

DEFINITIONS

Words and phrases used throughout this approval are defined below. Where a definition for a term used in this approval is sought and the term is not defined within this permit the definitions provided in the relevant legislation shall be used.

Appropriately qualified person means a person who has professional qualifications, training, skills or experience relevant to the nominated subject matter and can give authoritative assessment, advice and analysis on performance relating to the subject matter using the relevant protocols, standards, methods or literature.

Biosolids means treated tank sludges and residues from a municipal sewage treatment plant including sedimentation tank and clarifier sludges, aerobically and anerobically digested sludge and filter cake products from those sewage treatment plants.

Coal seam gas (CSG) production waters has the meaning in section 15A of the *Petroleum and Gas (Gas Production and Safety) Act 2004* and means CSG water or associated water for a petroleum tenure. It does not include the waste water resulting from simulation activities.

Chief executive means the Department of Environment and Heritage Protection or its successor.

Commercial place means a workplace used as an office or for business or commercial purposes, which is not part of the mining activity and does not include employees' accommodation or public roads.

Drilling fluids means liquids used in a drilling process for petroleum activities that are returned to the surface. It does not include residual drilling material or restricted stimulation fluids.

Liquid resources mean treated sewage effluent and CSG drilling fluids.

Main dam means the dam located on the site which is used for the storage of treated sewage effluent and CSG drilling fluids.

Minimally processed food crop means a crop for a food product that—

- (a) may be eaten raw; or
- (b) will be subjected to a minimal food process only.

Examples of a minimal food process—washing, cutting, peeling, packaging.

Residual drilling material means waste drilling materials including muds and cuttings or cement returns from well holes and which have been left behind after the drilling fluids are pumped out.

Restricted stimulation fluids has the meaning in section 206 of the *Environmental Protection Act 1994* and means fluids used for the purpose of stimulation, including fracturing, that contain the following chemicals in more than the maximum amount prescribed under a regulation—

- (a) petroleum hydrocarbons containing benzene, ethylbenzene, toluene or xylene;
- (b) chemicals that produce, or are likely to produce, benzene, ethylbenzene, toluene or xylene as the chemical breaks down in the environment.

Sensitive place means:

- (a) a dwelling, residential allotment, mobile home or caravan park, residential marina or other residential premises; or
- (b) a motel, hotel or hostel; or an educational institution; or
- (c) a medical centre or hospital; or
- (d) a protected area under the Nature Conservation Act 1992, the Marine Parks Act 1992 or a World Heritage Area; or
- (e) a public park or gardens.

Site means Iona Park, Millbank Boundary Road, Kogan Qld 4406 (Lot 3 on DY117).

Spray methods for irrigation of liquid resources include those that are capable of generating aerosols and/or spray drift. They do not include methods such as drip, surface or sub surface irrigation.

Treated sewage effluent means sewage that has undergone treatment by sewage treatment works approved under the *Environmental Protection Act 1994* or the *Plumbing and Drainage Act 2002*.

Waters includes any river, stream, lake, lagoon, pond, swamp, wetland, unconfined surface water, unconfined water, natural or artificial watercourse, bed and bank of any waters, dams, non-tidal or tidal waters (including sea), stormwater channel, stormwater drain, roadside gutter, stormwater run-off, and groundwater and any part thereof.

- END OF CONDITIONS -

Appendix A

Quality parameter	Assessment procedure
electrical conductivity	<p>Salinity Management Handbook, with reference to Chapter 11; and/or Australian and New Zealand Guidelines for Fresh and Marine Water Quality, with reference to Volume 1 Chapter 4 and Volume 3 Chapter 9.</p> <p>The assessment should consider:</p> <ul style="list-style-type: none"> • soil properties within the root zone to be irrigated (e.g. clay content, cation exchange capacity, exchangeable sodium percentage) • water quality of the proposed resource (e.g. salinity, sodicity) • climate conditions (e.g. rainfall) • leaching fractions • average root zone salinity (calculated) • crop salt tolerance (e.g. impact threshold and yield decline) • management practices and objectives (e.g. irrigation application rate, amelioration techniques) • broader landscape issues (e.g. land use, depth to groundwater) • any additional modelling and tests undertaken to support the varied water quality parameters.
sodium adsorption ratio	
pH	
heavy metals	<p>Australian and New Zealand Guidelines for Fresh and Marine Water Quality, with reference to Volume 1 Chapters 3 and 4 and Volume 3 Chapter 9.</p> <p>The assessment should aim to derive site specific trigger values (e.g. cumulative contaminant loading limit) based on the methodology provided in the above mentioned procedure.</p>

Appendix B

Advice

Please find following advice regarding the development of any monitoring programs used to help determine compliance with the conditions of approval. Monitoring programs and any written procedures for the use of the resources should be developed in accordance with best practice environmental management standards and reviewed regularly to ensure that current best practice is being implemented.

It is recommended that;

- Monitoring of biosolids to determine compliance with condition 1 should be conducted with samples taken at least every 120 dry tonnes¹¹.
- Monitoring of treated sewage effluent to determine compliance with condition 1 should be undertaken at least weekly.
- Monitoring of CSG drilling fluids and produced waters to determine compliance with condition 1 should be undertaken at least fortnightly.

Groundwater

Any groundwater monitoring program developed should provide for:

- Installation and monitoring of bores installed in accordance with relevant Australian standards in aquifer(s) potentially affected by the use of the resource; and
- The determination and keeping records of groundwater height and quality by sampling for at least the parameters, and at the frequency, stated in *Table 1 – Groundwater monitoring parameters*

Table 1 - Groundwater monitoring parameters

Parameter	Frequency
Standing groundwater level (metres AHD)	6 monthly
Arsenic	6 monthly
Cadmium	6 monthly
Chromium (Total)	6 monthly
Copper	6 monthly
Lead	6 monthly
Zinc	6 monthly
Nitrate	6 monthly
Chloride	6 monthly
Electrical conductivity (in-situ)	6 monthly
pH (in-situ)	6 monthly
<i>E. Coli</i>	6 monthly
Calcium	6 monthly
Nitrogen (total)	6 monthly
Phosphorous (total)	6 monthly
Sodium	6 monthly
Total Dissolved Solids	6 monthly

¹¹ Resource sampling and analysis for biosolids should be conducted in accordance with the procedures detailed in *Schedule 1—Biosolids sampling and analysis procedures* and *Schedule 2—Grading, sampling and compliance procedures* of the NSW Guidelines.

Soil

Any soil monitoring program should provide for monitoring of at least the parameters, and at the frequency, stated in *Table 2 – soil monitoring parameters*.

Table 2 - Soil monitoring parameters

Parameter	Frequency
Electrical conductivity (EC)	6 monthly
pH	6 monthly
Exchangeable Cation Exchange Capacity (ECEC)	Annually
Exchangeable Sodium Percentage (ESP)	Annually
Sodium Adsorption Ratio (SAR)	Annually
Arsenic	Annually
Cadmium	Annually
Chromium (total)	Annually
Copper	Annually
Lead	Annually
Mercury	Annually
Nickel	Annually
Selenium	Annually
Zinc	Annually
DDT/DDD/DDE	Annually
Aldrin	Annually
Dieldrin	Annually
Chlordane	Annually
Heptachlor and heptachlor epoxide	Annually
Hexachlorobenzene (HCB)	Annually
Lindane	Annually
Benzene hexachloride (BHC)	Annually
PCBs	Annually

Irrigation

Liquid resource being irrigated to land from the main dam should be monitored for at least the quality parameters and at the frequency specified in *Table 3 – Main dam monitoring parameters*.

Table 3 - Main dam monitoring parameters

Quality parameter	Frequency
Electrical conductivity	Fortnightly
Sodium absorption ratio (SAR)	Fortnightly
pH	Fortnightly
<i>E. Coli</i>	Monthly
Alkalinity (bicarbonate, carbonate and hydroxide)	Quarterly
Arsenic	Quarterly
Aluminium	Quarterly
Boron	Quarterly
Cadmium	Quarterly
Chromium (total)	Quarterly
Copper	Quarterly

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Cobalt	Quarterly
Iron	Quarterly
Lead	Quarterly
Lithium	Quarterly
Manganese	Quarterly
Mercury	Quarterly
Molybdenum	Quarterly
Nickel	Quarterly
Selenium	Quarterly
Strontium	Quarterly
Vanadium	Quarterly
Zinc	Quarterly
Ammonium (NH ₄ ⁺)	Quarterly
Nitrate + nitrite	Quarterly
Total Kjeldahl Nitrogen (TKN)	Quarterly
Total Nitrogen	Quarterly
Total phosphorous	Quarterly
BTEX	Quarterly
Total dissolved solids (TDS)	Quarterly
Total petroleum hydrocarbons (TPH)	Quarterly
Flouride	Quarterly
Sulphate	Quarterly
Hardness (calculated)	6 monthly
Calcium, magnesium, sodium, and potassium	6 monthly
Chloride	6 monthly
Ortho phosphorous	6 monthly

Approval of a resource for beneficial use

Use this assessment report when deciding applications for approval of a resource under section 159 of the Waste Reduction and Recycling Act 2011 or when deciding application to transfer or amend an approval under section 168 of the Waste Reduction Act. Preparation of this assessment report is evidence that the criteria has been taken into consideration when making a decision.

EHP PROJECT NO: 404328	EHP FILE NUMBER: 101/0002277
EHP PERMIT NO:	ENBU05261913
NAME OF APPLICANT:	Nugrow Roma Pty Ltd
ABN/ACN:	88 151 756 517
REGISTERED ADDRESS:	4/7 Sonia Court, Raceview Qld 4305
Generator	Company Name: Various generators throughout SE Qld
Transporter	Company Name: Nugrow Roma Pty Ltd and other contractors
Site of Beneficial Use	Site Address: Iona Park, Millbank Boundary Rd, Kogan Qld 4406 Western Down LGA Site lot and plan: Lot 3 on DY117

CRITICAL DATES	DATE
VALID APPLICATION RECEIVED	12 May 2014
INFORMATION REQUEST ISSUED	6 June 2014
RESPONSE TO INFORMATION REQUEST RECEIVED	15 July 2014
Has an extension of time been approved? <small>NOTE: Only one extension of time up to 20BD can be approved. An extension cannot be approved for an amendment or transfer application.</small>	☐ Yes ☒ No
DECISION DUE	10 September 2014

This is an assessment report relating to an application for a—

Please check the relevant box:

- ☐ **New specific approval**
☐ **Transfer of an existing specific approval**
(NOTE: for a transfer application, a reference to the applicant in the criteria is taken to be a reference to the proposed transferee)
☒ **Amendment of an existing specific approval**

Part A: General details

1. Summary of the proposed use of the resource/amendments

A specific approval has been granted for Nugrow to apply a number of waste materials to land as part of a soil rejuvenation program at Iona Park, Millbank Boundary Road, Kogan Qld 4406. A summary of the approved uses is provided in *Figure 1 – Approved beneficial uses*. The waste materials include a mix of regulated wastes under the EP Act and non-regulated wastes.

sch4p4(7)(1)(c) Business/commercial/professional/financial affairs

EHP RTI DL Release

The applicant has requested the following amendments to the approval:

1. Condition 1 – Inclusion of additional site

Proposal: The applicant proposed to include a new site (Fairview), located adjacent to the southern boundary of the current site for operational convenience. The additional area would double the size of the land currently approved. The original approval was granted with the understanding that the use of the resources were going to be conducted on a trial basis with a determination of the effectiveness of the use of the resources in improving soil quality serving as a basis for any future land applications. It is not desired that area of land be increased above that considered necessary to demonstrate the sustainable use of the resources. In the information request issued, information was requested demonstrating the requirement of the additional property to be included in the trial.

Recommendation: No further action. The applicant has since withdrawn this request. Refer to the response to information request letter from NuGrow to EHP, dated 15 July 2014.

Further details are provided in Part B, section 2 *Likelihood of harm*, of this report.

2. Condition 1 – Provision for further disinfection of treated sewage effluent prior to release

Proposal: The approval conditions currently limit the treated sewage effluent being received on the site to have an *E.Coli* concentration of <10,000 cfu/100mL (being indicative of the level of disinfection and pathogen risk). To ensure that treated sewage has appropriate disinfection treatment prior to irrigation, NuGrow proposes to install an ozone disinfection system to further treat the sewage prior to release to the main dam for irrigation.

Recommendation: Amend the criteria to allow the resource to include sewage effluent that has >10,000cfu/mL, provided that it will be further treated by ozone disinfection on site to achieve <10,000cfu/mL for irrigation. The specific disinfection method has been included as other methods may leave residual chemicals.

Note that in accordance with the Environmental Protection Regulation 2008, the further treatment does not trigger Environmentally Relevant Activities 63 Sewage Treatment as the treated effluent is not considered sewage, or 64 Water treatment as treatment by disinfection is excluded, and therefore an environmental authority under the *Environmental Protection Act 1994* is not required.

Further details are provided in Part B, section 2 *Likelihood of harm* of this report.

3. Condition 23 – Permission to generate aerosols

Proposal: Considering the low quality/higher pathogen content of the sewage effluent being received, it was considered appropriate in the original approval to prohibit irrigation that generates aerosols or causes spray drift. The applicant had reviewed and agreed to the conditions imposed prior to the approval being issued. Refer to the Assessment Report for the original application, signed by Lindsay Delzoppo, Director SEA, dated 23/1/2014) for further details on how health risks were considered.

The applicant has since reviewed their proposed irrigation methods and now wishes to use equipment that is likely to generate aerosols.

Recommendation: Considering the higher health risks associated with using low quality sewage effluent it is appropriate that prescriptive measures be stated in place of removing the requirement to not generate aerosols or spray drift.

It is recommended to amend condition 23 and add condition 24 prohibiting the generation of aerosols or spray drift unless:

- a) irrigation occurs at a pressure of equal to or less than 20 PSI; and
- b) at a distance that is greater than 25 metres from the boundary of the site where there is vegetation screening between the irrigation area and the boundary, or at a distance that is greater than 50 metres from the boundary of the site where there is no vegetation screening.

Further details are provided in Part B, section 2 *Likelihood of harm* of this report.

2. Summary of environmental risks

The main risks associated with proposed amendments are:

- Offsite health impacts – the irrigation of sewage effluent that generates aerosols and spray drift has the potential to release airborne pathogens offsite. This risk is increased as the sewage effluent approved for use has a higher pathogen content compared to effluent used in typical irrigation projects (sewage effluent approved for irrigation to land typically meets at least Class B under the Public Health Regulation 2005 having <100cfu/mL – as opposed to the currently approved Class D effluent having <10,000cfu/mL).

Pathogens include bacteria, viruses, protozoa and helminths (parasitic worms), and can result in diarrhoea, typhoid, hepatitis A or other serious illnesses.

There are neighbouring residential premises to the site.

Prescriptive conditions have been proposed in accordance with the relevant industry standards to minimise the potential for offsite release of airborne pathogens.

3. Documents and mapping considered in the assessment

Indicate the mapping documents considered in this assessment:

- | | |
|---|--|
| ☒ Applicant maps supplied | ☐ Local government maps
(including overlays from local planning schemes) |
| ☐ Applicant site plan supplied | |
| ☐ Ecomaps with relevant layers | |
| ☐ Other <provide details> | |

Indicate the plans/programs/other documents that have been considered in this assessment:

- | | |
|--|---|
| ☐ Site management plan (contaminated land) | ☐ Monitoring programs |
| ☐ Site based management plan / activity based management plan | ☐ Environmental Impact Study (or other study assessing the impacts on the environment) |
| ☐ Stormwater management plan | ☐ Resource Management Plan |
| ☐ Noise management plan | ☐ Applicant design drawings |
| ☐ Dust management plan | |
| ☒ Other: Information provided with the application | |

Provide a brief description of any further information that was submitted following a request for further information:

A response to an information request was provided by Peter Thompson of Nugrow on 15 July 2014 – Refer to the file.

4. Associated activities/history of applicant

A history of the applicant is included in the assessment report for the original application.

5. Prelodgement meeting, consultations, site inspections

The draft amended conditions were developed in consultation with Peter Thompson, Environmental Compliance Manager of Nugrow.

6. Advice received

Nil

PART B: ASSESSMENT CONSIDERATIONS

Section 160 of the *Waste Reduction and Recycling Act 2011* (the Waste Reduction Act) outlines the criteria for decision. In addressing these considerations reference should be made to any subsequent conditions contained imposed on the approval.

NOTE that when deciding an application for a transfer or amendment the chief executive may consider the criteria under s. 160.

Section 160(1) of the Waste Reduction and Recycling Act 2011

Under s. 160(1) of the Waste Reduction Act, in deciding whether to grant or refuse an approval, the administering authority must consider the following:

1. Best practice environmental management

s. 160(1)(e) the best practice environmental management for the proposed use of the resource

- Ozone disinfection supports best practice as it does not leave any residual contaminants in the effluent and assists in reducing the risks at the source by improving the quality of effluent.
- While it is preferred that no aerosols or spray drift is generated, the applicant proposes appropriate measures to be implemented to minimise the potential for the release of airborne contaminants from the irrigation of liquid resources. The amendments support the hierarchy of control described in section 6.1 of the *Water quality guidelines for recycled water schemes* (DEWS, 2008).
- The disinfection activity and irrigation methods will be conducted in accordance with written procedures as required by condition 9 of the approval.
- The existing transport conditions are considered sufficient to manage any increased risk with transport.

Refer also to above consideration of part (g) of the standard criteria.

2. Likelihood of harm

s. 160(1)(f) the likelihood of any material environmental harm, serious environmental harm, or environmental nuisance happening because of the proposed use of the resource

Provided the proposed amended conditions of the approval are complied with, it is considered that there is a low likelihood of any material or serious environmental harm, or environmental nuisance happening from the use of the resource. Further details of considerations made and how the amended conditions were developed are provided below.

Ozone disinfection

The likelihood of harm is not going to be increased from including an additional stage of disinfection prior to the placement of treated sewage effluent in the dam for irrigation.

Ozone disinfection has specifically been stated in the criteria in Table 1 as not specifying a treatment option could mean that methods are used which leave residual disinfectant chemicals in the effluent that have not been considered. For example, treatment using chlorine leaves residual chlorine.

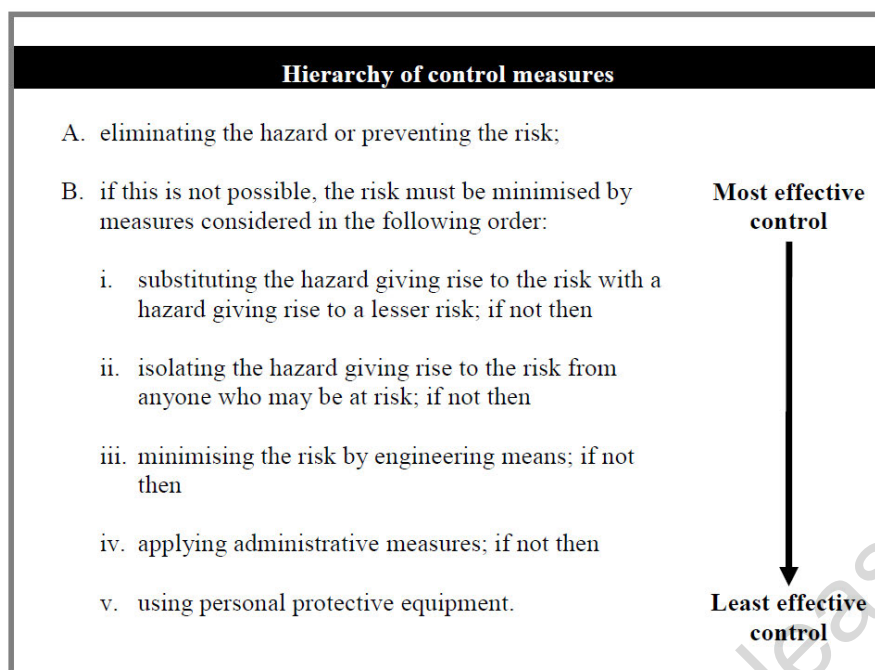
Aerosol and spray drift

Conditions in the original approval prohibiting the generation of aerosol and spray drift were included for the purpose of managing health risks associated with using treated sewage effluent, and nuisance. The amendment application requests that this requirement be removed as the particular irrigation device to be used has the potential to generate aerosol and spray drift.

Considering the relatively high risk presented with aerosols and the low quality of the sewage effluent being used (Class D, *E. Coli* concentrations up to 10,000cfu/100mL), it is necessary that conditions be imposed to ensure the resource is used without an unacceptable risk to the public.

Risks associated with the use of sewage effluent should be managed in accordance with the hierarchy of control measures in section 6.1 of the *Water quality guidelines for recycled water schemes* (DEWS, 2008) (the water quality guideline).

The hierarchy of control in the water quality guideline is as below:



Source: Department of Energy and Water Supply (2008), *Water quality guidelines for recycled water schemes*, State of Queensland, p. 21.

The existing condition eliminates the risk of aerosols/spray drift; elimination (option A) being the most preferred method of control. As the applicant has advised that option A is not possible, the risk must be minimised in accordance with the measures in option B. The proposed amendments include a combination of these.

In relation to the measures to be implemented, the water quality guidelines also refer to the *Australian Guidelines for Water Recycling: Managing Health and Environmental Risk (Phase 1)* (Environment Protection and Heritage Council, the Natural Resource Management Ministerial Council and the Australian Health Ministers' Conference, 2006) as a source of information. Table 3.8 of the National guidelines summarises typical combinations of preventive measures that can be used for various types of recycling. Below is an excerpt of Table 3.8 that relates to the irrigation being conducted under the approval.

Table 3.8 (continued)

Log reduction targets (V, P, B) ^a	Indicative treatment process	Log reductions achievable by treatment (V, P, B)	On-site preventive measures	Exposure reduction ^b	Water quality objectives ^c
Nonfood crops — trees, turf, woodlots, flowers					
5.0	Secondary treatment or primary treatment with lagoon detention	0.5–1.0	Public in vicinity of irrigation area		• <i>E. coli</i> <10 000 cfu/100 mL
3.5		0.5–2.0	• No access and drip irrigation	6.0	
4.0		1.0–3.0	• No access during irrigation and, if spray irrigation, minimum 25–30 m buffer distance between irrigation area and nearest point of public access, and spray drift control (eg through part cycle sprinklers with 180° inward throw, vegetation screening, or anemometer switching or • Extended buffer distances to >50 m	5.0	

B = enteric bacteria; BOD = biochemical oxygen demand; cfu = colony forming unit; Ct = disinfectant concentration × time; P = enteric protozoa; SS = suspended solid; V = enteric virus; UV = ultraviolet

^a Log reduction targets are minimum reductions required from raw sewage based on 95th percentiles from Table 3.7.

^b Exposure reductions are those achievable by on-site measures as listed in Table 3.3.

^c Water quality objectives represent medians for numbers of *E. coli* and means for other parameters.

^d BOD and SS are an indication of secondary treatment effectiveness.

^e Aim is to demonstrate reliability of disinfection and ability to consistently achieve microbial quality

^f Log reductions for public in the vicinity of commercial food crop irrigation areas should comply with total log reductions required for municipal use.

Source: Environment Protection and Heritage Council, Natural Resource Management Ministerial Council; and Australian Health Ministers' Conference (2006), *National Guidelines for Water Recycling: Managing Health and Environmental Risks*, p.108.

The applicant has indicated that they will implement the following measures, consistent with those stated in Table 3.8 that are considered appropriate to reduce risks to an acceptable level (see email from Peter Thompson to SV, dated 1/9/2014):

- There will be no access to the site by the public during irrigation.
- A minimum distance of 50m will be kept between the irrigation area and site boundary where there is no vegetation screen and a minimum buffer distance of 25m will be kept where there is a vegetation screen.
- Spray drift control measures will be implemented including low pressure sprinklers (20PSI in accordance with the design specifications for the nozzles to be used – Nelson S3000 Spinner) and vegetation screening as described above.

Considering the above, the following changes to conditions have been proposed (red text):

23. *Liquid resources irrigated to land on the site must only be sourced from the main dam and must:*

- a) *not harm vegetation surrounding the irrigation area;*
- b) *not cause soil erosion and soil structure damage;*
- c) *not produce visible salting;*
- d) *not cause surface ponding of the resource;*
- e) *not result in surface runoff;*
- f) *ensure that percolation of the resource beyond the plant root zone is minimised;*
- g) *not exceed plant fertiliser requirements; and*
- h) *not generate aerosol or cause spray drift, unless the irrigation methods comply with condition 24.*

24. *Irrigation of the liquid resources using **spray methods** must only occur:*

- a) *at a pressure of equal to or less than 20 pounds per square inch (PSI);*
- b) *at a distance that is greater than 25 metres from the boundary of the site where there is vegetation screening between the irrigation area and the boundary, or at a distance that is greater than 50 metres from the boundary of the site where there is no vegetation screening.*

A definition of spray methods has also been included as follows:

Spray methods for irrigation of liquid resources include those that are capable of generating aerosols and/or spray drift. They do not include methods such as drip, surface or sub surface irrigation.

Consideration of the Regulatory Strategy (EHP, 2014)

In accordance with the Regulatory Strategy, the department is to set the standards by which industry is to meet, where possible not prescribing the measures that are to be undertaken. These standards are based on both science and consideration of the community's expectations that the environment (including air quality) is protected. It is then the operators' responsibility to meet the standards.

The original condition prohibiting aerosols and spray drift set the outcome which was expected in line with the hierarchy of control measures in the DEWS water quality guideline, to which the applicant had agreed. In the amendment application, the applicant proposed rewording of the condition to that irrigation must '*not generate aerosol or cause spray drift that result in offsite environment nuisance or deleterious human health effect at a sensitive receptor location*'.

It is not considered that an outcome condition such as the one proposed is appropriate to sufficiently manage the risks and meet communities expectations for the following reasons:

- i) The community (including neighbouring residents) have an expectation that the activity will not impact on human health outside of the site boundary.
- ii) The lower quality of the effluent means a higher likelihood of impacts to human health.
- iii) Use of irrigation methods that generate aerosols and/or spray drift significantly increase the likelihood of releasing pathogens offsite.
- iv) The consequences of impacts on human health could be severe (refer to Part A, section 2 *Summary of environmental risks* of this report).

For these reasons it is considered appropriate to use more prescriptive conditions that are supported by best practice environmental management (hierarchy of control measures in the DEWS water quality guideline, and the National guidelines for water recycling) to meet community expectations of protecting the environment.

Section 160(2) of the Waste Reduction and Recycling Act 2011

Under s. 160(2) of the *Waste Reduction and Recycling Act 2011*, in deciding whether to grant or refuse an approval, the administering authority may consider the following. These criteria however should be considered where applicable.

<i>s. 160(2) the applicant's environmental record;</i>	Considered
<ul style="list-style-type: none">The applicants environmental record has not changed since the approval was originally issued.	☒ Yes ☐ No
<i>s. 160(2)(b) the applicant's ability to comply with any proposed conditions of the approval;</i>	Considered
<ul style="list-style-type: none">The applicant has reviewed and agreed to the proposed changes to conditions. Refer to email from Peter Thompson of NuGrow to Simone Ventura, EHP, dated 1 September 2014.	☒ Yes ☐ No
<i>s. 160(2)(c) whether a disqualifying event has happened in relation to—</i> <ul style="list-style-type: none"><i>i. if the applicant is an individual—the applicant or another person who is the applicant's partner; or</i><i>ii. if the applicant is a corporation—the corporation, any of the corporation's executive officers, or another corporation of which any of the corporation's executive officers is, or has been, an executive officer.</i>	Considered
<ul style="list-style-type: none">No disqualifying events have happened since the approval was originally issued.	☒ Yes ☐ No

PART D: RECOMMENDATION

Details of the recommendation:

For the reasons stated in this report, it is recommended that the chief executive (check the applicable statements):

- ☐ **approve the new specific approval** application in accordance with s. 156 of the Waste Reduction Act
(Subsequently the waste is to be considered as a resource under s13 of the *Environmental Protection Act 1994*.)
- ☒ **grant the amendment/transfer** application in accordance with s. 168 of the Waste Reduction Act
- ☐ **approve the transfer** application in accordance with s. 156 of the Waste Reduction Act
- ☒ **impose conditions on the approval** in accordance with s. 166 of the Waste Reduction Act
(Proposed conditions and Notice of approval accompany this assessment report. The legislative considerations included in Attachment 1 – Conditions of this report have been made when drafting the proposed conditions.)
- ☐ **refuse the application** in accordance with s. 156 of the Waste Reduction Act
(A notice of refusal including a statement of reasons accompanies this assessment report)

Simone Ventura
Principal Project Officer

Assessing Officer

Signed

Date

Review and endorsement

Insert any comments relevant for the delegates consideration:

David Cook
Manager, WLCA

Manager/Supervisor

Signed

Date

Approval

I approve the recommendation to approve with conditions based on the reasons stated in this report.

Lindsay Delzoppo
Manager, WLCA

Delegate

Signed

Date

EHP RTI DL Release

Attachment 1— CONDITIONS

LEGISLATIVE CONSIDERATIONS

Waste Reduction and Recycling Act 2011

Section 166 of the Waste Reduction Act states that:

- (1) The chief executive may impose conditions on an approval that the chief executive considers necessary or desirable.
- (2) Without limiting subsection (1), the conditions may relate to any of the following —
 - (a) The characteristics of the resource, including, for example, its physical state and its components and their concentrations;
 - (b) The origin and destination of the resource;
 - (c) Transporting or storing the resource;
 - (d) Any treatment or process for re-using, recycling, energy recovery, reprocessing or other use of the resource;
 - (e) Any waste resulting from a treatment or process mentioned in paragraph (d)
 - (f) The quantity of the resource that may be used under the approval and time frames relating to its use;
 - (g) Sampling, analysis, monitoring and reporting in relation to the resource;
 - (h) Measures or action to be taken to minimise against or remediate environmental impacts from the use of the resource, including material environmental harm, serious environmental harm or environmental nuisance.
- (3) A condition may be expressed to apply to anyone who has the benefit of the approval.
Without limiting subsection (3) a condition of a general approval may be expressed to apply to the producer, receiver, re-user, recycler or energy recoverer of the resource to which the approval relates.

DRAFTING INSTRUCTIONS FOR CONDITIONS

When drafting approval conditions, the principles contained in the departments procedural guide, [Writing Effective and Enforceable Conditions](#) (EM2417)¹, and the [Regulatory Strategy](#) should be followed.

Before developing a condition, it should be considered whether a condition is necessary to achieve the desired environmental outcomes. Following this, conditions should be developed using the **SMART** principles.

In summary, the “SMART” principles are

Letter	Rule	Details of the rule
S	Specific	What must be done (including details of where it must be done) or what must not be done (and details)? Who must or must not do it?
M	Measurable	It must be possible to know whether the person has complied with the condition.
A	Achievable	Is it capable of being complied with?
R	Reasonable/Relevant	There is a connection between the requirement and the operation/development/activity proposed. The requirement cannot be an unreasonable obligation, having regard to the activity proposed
T	Time Specific	When it must be completed by (or, if it is an ongoing obligation, clearly state that).

¹ This is the publication number. The publication number can be used as a search term to find the latest version of a publication on Ecosteps.

Assessment report

Approval of a resource for beneficial use

Use this assessment report when deciding applications for approval of a resource under section 159 of the Waste Reduction and Recycling Act 2011 or when deciding application to transfer or amend an approval under section 168 of the Waste Reduction Act. Preparation of this assessment report is evidence that the criteria has been taken into consideration when making a decision.

EHP PROJECT NO: 404328	EHP FILE NUMBER: 101/0002277
EHP PERMIT NO:	ENBU05261913
NAME OF APPLICANT:	Nugrow Roma Pty Ltd
ABN/ACN:	88 151 756 517
REGISTERED ADDRESS:	4/7 Sonia Court, Raceview Qld 4305
Generator	Company Name: Various generators throughout SE Qld
Transporter	Company Name: Nugrow Roma Pty Ltd and other contractors
Site of Beneficial Use	Site Address: Iona Park, Millbank Boundary Rd, Kogan Qld 4406 Western Down LGA Site lot and plan: Lot 3 on DY117

CRITICAL DATES	DATE
VALID APPLICATION RECEIVED	12 May 2014
INFORMATION REQUEST ISSUED	6 June 2014
RESPONSE TO INFORMATION REQUEST RECEIVED	15 July 2014
Has an extension of time been approved? NOTE: Only one extension of time up to 20BD can be approved. An extension cannot be approved for an amendment or transfer application.	☐ Yes ☒ No
DECISION DUE	10 September 2014

This is an assessment report relating to an application for a—

Please check the relevant box:

- ☐ **New** specific approval
☐ **Transfer** of an existing specific approval
 (NOTE: for a transfer application, a reference to the applicant in the criteria is taken to be a reference to the proposed transferee)
☒ **Amendment** of an existing specific approval

Part A: General details

1. Summary of the proposed use of the resource/amendments

A specific approval has been granted for Nugrow to apply a number of waste materials to land as part of a soil rejuvenation program at Iona Park, Millbank Boundary Road, Kogan Qld 4406. A summary of the approved uses is provided in *Figure 1 – Approved beneficial uses*. The waste materials include a mix of regulated wastes under the EP Act and non-regulated wastes.

sch4p4(7)(1)(c) Business/commercial/professional/financial affairs

EHP RTI DL Release

The applicant has requested the following amendments to the approval:

1. Condition 1 – Inclusion of additional site

Proposal: The applicant proposed to include a new site (Fairview), located adjacent to the southern boundary of the current site for operational convenience. The additional area would double the size of the land currently approved. The original approval was granted with the understanding that the use of the resources were going to be conducted on a trial basis with a determination of the effectiveness of the use of the resources in improving soil quality serving as a basis for any future land applications. It is not desired that area of land be increased above that considered necessary to demonstrate the sustainable use of the resources. In the information request issued, information was requested demonstrating the requirement of the additional property to be included in the trial.

Recommendation: No further action. The applicant has since withdrawn this request. Refer to the response to information request letter from NuGrow to EHP, dated 15 July 2014.

Further details are provided in Part B, section 2 *Likelihood of harm*, of this report.

2. Condition 1 – Provision for further disinfection of treated sewage effluent prior to release

Proposal: The approval conditions currently limit the treated sewage effluent being received on the site to have an *E. Coli* concentration of <10,000 cfu/100mL (being indicative of the level of disinfection and pathogen risk). To ensure that treated sewage has appropriate disinfection treatment prior to irrigation, NuGrow proposes to install an ozone disinfection system to further treat the sewage prior to release to the main dam for irrigation.

Recommendation: Amend the criteria to allow the resource to include sewage effluent that has >10,000cfu/mL, provided that it will be further treated by ozone disinfection on site to achieve <10,000cfu/mL for irrigation. The specific disinfection method has been included as other methods may leave residual chemicals.

Note that in accordance with the Environmental Protection Regulation 2008, the further treatment does not trigger Environmentally Relevant Activities 63 Sewage Treatment as the treated effluent is not considered sewage, or 64 Water treatment as treatment by disinfection is excluded, and therefore an environmental authority under the *Environmental Protection Act 1994* is not required.

Further details are provided in Part B, section 2 *Likelihood of harm* of this report.

3. Condition 23 – Permission to generate aerosols

Proposal: Considering the low quality/higher pathogen content of the sewage effluent being received, it was considered appropriate in the original approval to prohibit irrigation that generates aerosols or causes spray drift. The applicant had reviewed and agreed to the conditions imposed prior to the approval being issued. Refer to the Assessment Report for the original application, signed by Lindsay Delzoppo, Director SEA, dated 23/1/2014) for further details on how health risks were considered.

The applicant has since reviewed their proposed irrigation methods and now wishes to use equipment that is likely to generate aerosols.

Recommendation: Considering the higher health risks associated with using low quality sewage effluent it is appropriate that prescriptive measures be stated in place of removing the requirement to not generate aerosols or spray drift.

It is recommended to amend condition 23 and add condition 24 prohibiting the generation of aerosols or spray drift unless:

- a) irrigation occurs at a pressure of equal to or less than 20 PSI;
- b) the nozzle height is less than 30cm from the crop height or ground (whichever is applicable); and
- c) a buffer of 25m to the boundary of the site is kept.

Further details are provided in Part B, section 2 *Likelihood of harm* of this report.

2. Summary of environmental risks

The main risks associated with proposed amendments are:

- Offsite health impacts – the irrigation of sewage effluent that generates aerosols and spray drift has the potential to release airborne pathogens offsite. This risk is increased as the sewage effluent approved for use has a higher pathogen content compared to effluent used in typical irrigation projects (sewage effluent approved for irrigation to land typically meets at least Class B under the Public Health Regulation 2005 having <100cfu/mL – as opposed to the currently approved Class D effluent having <10,000cfu/mL).

Pathogens include bacteria, viruses, protozoa and helminths (parasitic worms), and can result in diarrhoea, typhoid, hepatitis A or other serious illnesses.

There are neighbouring residential premises to the site.

Prescriptive conditions have been proposed in accordance with the relevant industry standards to minimise the potential for offsite release of airborne pathogens.

3. Documents and mapping considered in the assessment

Indicate the mapping documents considered in this assessment:

- | | |
|---|--|
| ☒ Applicant maps supplied | ☐ Local government maps |
| ☐ Applicant site plan supplied | (including overlays from local planning schemes) |
| ☐ Ecomaps with relevant layers | |
| ☐ Other <provide details> | |

Indicate the plans/programs/other documents that have been considered in this assessment:

- | | |
|--|---|
| ☐ Site management plan (contaminated land) | ☐ Monitoring programs |
| ☐ Site based management plan / activity based management plan | ☐ Environmental Impact Study (or other study assessing the impacts on the environment) |
| ☐ Stormwater management plan | ☐ Resource Management Plan |
| ☐ Noise management plan | ☐ Applicant design drawings |
| ☐ Dust management plan | |
| ☒ Other: Information provided with the application | |

Provide a brief description of any further information that was submitted following a request for further information:

A response to an information request was provided by Peter Thompson of Nugrow on 15 July 2014 – Refer to the file.

4. Associated activities/history of applicant

A history of the applicant is included in the assessment report for the original application.

5. Prelodgement meeting, consultations, site inspections

The draft amended conditions were developed in consultation with Peter Thompson, Environmental Compliance Manager of Nugrow.

6. Advice received

Nil

PART B: ASSESSMENT CONSIDERATIONS

Section 160 of the *Waste Reduction and Recycling Act 2011* (the Waste Reduction Act) outlines the criteria for decision. In addressing these considerations reference should be made to any subsequent conditions contained imposed on the approval.

NOTE that when deciding an application for a transfer or amendment the chief executive may consider the criteria under s. 160.

Section 160(1) of the Waste Reduction and Recycling Act 2011

Under s. 160(1) of the Waste Reduction Act, in deciding whether to grant or refuse an approval, the administering authority must consider the following:

1. Best practice environmental management

s. 160(1)(e) the best practice environmental management for the proposed use of the resource

- Ozone disinfection supports best practice as it does not leave any residual contaminants in the effluent and assists in reducing the risks at the source by improving the quality of effluent.
- While it is preferred that no aerosols or spray drift is generated, the applicant proposes appropriate measures to be implemented to minimise the potential for the release of airborne contaminants from the irrigation of liquid resources. The amendments support the hierarchy of control described in section 6.1 of the *Water quality guidelines for recycled water schemes* (DEWS, 2008).
- The disinfection activity and irrigation methods will be conducted in accordance with written procedures as required by condition 9 of the approval.
- The existing transport conditions are considered sufficient to manage any increased risk with transport.

Refer also to above consideration of part (g) of the standard criteria.

2. Likelihood of harm

s. 160(1)(f) the likelihood of any material environmental harm, serious environmental harm, or environmental nuisance happening because of the proposed use of the resource

Provided the proposed amended conditions of the approval are complied with, it is considered that there is a low likelihood of any material or serious environmental harm, or environmental nuisance happening from the use of the resource. Further details of considerations made and how the amended conditions were developed are provided below.

Ozone disinfection

The likelihood of harm is not going to be increased from including an additional stage of disinfection prior to the placement of treated sewage effluent in the dam for irrigation.

Ozone disinfection has specifically been stated in the criteria in Table 1 as not specifying a treatment option could mean that methods are used which leave residual disinfectant chemicals in the effluent that have not been considered. For example, treatment using chlorine leaves residual chlorine.

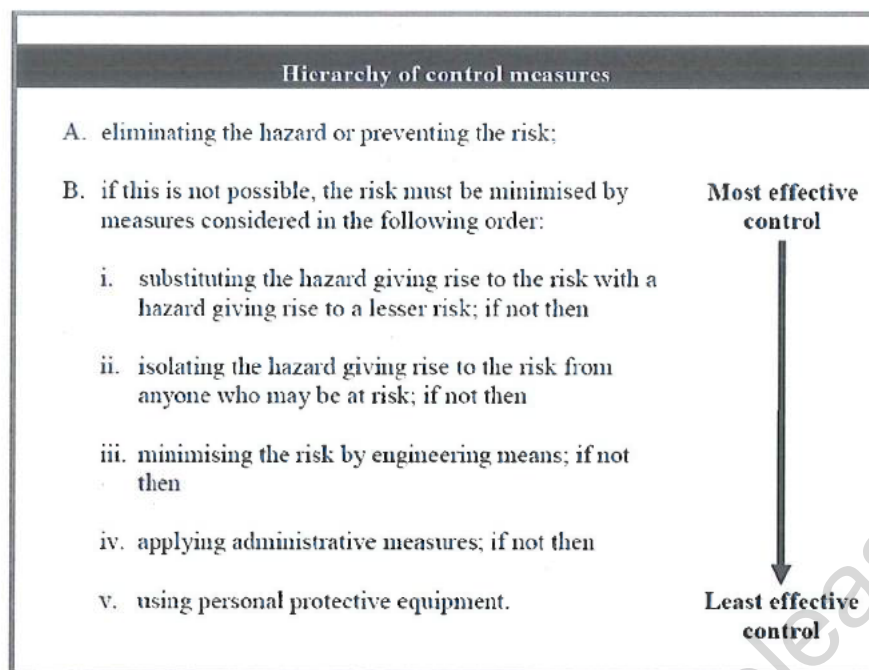
Aerosol and spray drift

Conditions in the original approval prohibiting the generation of aerosol and spray drift were included for the purpose of managing health risks associated with using treated sewage effluent, and nuisance. The amendment application requests that this requirement be removed as the particular irrigation device to be used has the potential to generate aerosol and spray drift.

Considering the relatively high risk presented with aerosols and the low quality of the sewage effluent being used (Class D, *E. Coli* concentrations up to 10,000cfu/100mL), it is necessary that conditions be imposed to ensure the resource is used without an unacceptable risk to the public.

Risks associated with the use of sewage effluent should be managed in accordance with the hierarchy of control measures in section 6.1 of the *Water quality guidelines for recycled water schemes* (DEWS, 2008) (the water quality guideline).

The hierarchy of control in the water quality guideline is as below:



Source: Department of Energy and Water Supply (2008), *Water quality guidelines for recycled water schemes*, State of Queensland, p. 21.

The existing condition eliminates the risk of aerosols/spray drift, elimination (option A) being the most preferred method of control. As the applicant has advised that option A is not possible, the risk must be minimised in accordance with the measures in option B. The proposed amendments include a combination of these.

In relation to the measures to be implemented, the water quality guidelines also refer to the *Australian Guidelines for Water Recycling: Managing Health and Environmental Risk (Phase 1)* (Environment Protection and Heritage Council, the Natural Resource Management Ministerial Council and the Australian Health Ministers' Conference, 2006) as a source of information. Table 3.8 of the National guidelines summarises typical combinations of preventive measures that can be used for various types of recycling. Below is an excerpt of Table 3.8 that relates to the irrigation being conducted under the approval.

Table 3.8 (continued)

Log reduction targets (V, P, B) ^a	Indicative treatment process	Log reductions achievable by treatment (V, P, B)	On-site preventive measures	Exposure reduction ^b	Water quality objectives ^c
Nonfood crops — trees, turf, woodlots, flowers					
5.0	Secondary treatment or primary	0.5–1.0	Public in vicinity of irrigation area		• <i>E. coli</i> <10 000 cfu/100 mL
3.5	treatment with lagoon detention	0.5–2.0	• No access and drip irrigation	6.0	
4.0		1.0–3.0	• No access during irrigation and, if spray irrigation, minimum 25–30 m buffer distance between irrigation area and nearest point of public access, and spray drift control (eg through part cycle sprinklers with 180° inward throw, vegetation screening, or anemometer switching or • Extended buffer distances to >50 m	5.0	

B = enteric bacteria; BOD = biochemical oxygen demand; cfu = colony forming unit; Ct = disinfectant concentration × time; P = enteric protozoa; SS = suspended solid; V = enteric virus; UV = ultraviolet

^a Log reduction targets are minimum reductions required from raw sewage based on 95th percentiles from Table 3.7.

^b Exposure reductions are those achievable by on-site measures as listed in Table 3.3.

^c Water quality objectives represent medians for numbers of *E. coli* and means for other parameters.

^d BOD and SS are an indication of secondary treatment effectiveness.

^e Aim is to demonstrate reliability of disinfection and ability to consistently achieve microbial quality

^f Log reductions for public in the vicinity of commercial food crop irrigation areas should comply with total log reductions required for municipal use.

Source: Environment Protection and Heritage Council, Natural Resource Management Ministerial Council; and Australian Health Ministers' Conference (2006), *National Guidelines for Water Recycling: Managing Health and Environmental Risks*, p.108.

The applicant has indicated that they will implement the following measures, consistent with those stated in Table 3.8 that are considered appropriate to reduce risks to an acceptable level (see email from Peter Thompson to SV, dated 1/9/2014):

- There will be no access to the site by the public during irrigation.
- A minimum distance of 50m will be kept between the irrigation area and site boundary where there is no vegetation screen and a minimum buffer distance of 25m will be kept where there is a vegetation screen.
- Spray drift control measures will be implemented including low pressure sprinklers (20PSI in accordance with the design specifications for the nozzles to be used – Nelson S3000 Spinner) and vegetation screening as described above.

Considering the above, the following changes to conditions have been proposed (red text):

23. *Liquid resources irrigated to land on the site must only be sourced from the main dam and must:*

- a) *not harm vegetation surrounding the irrigation area;*
- b) *not cause soil erosion and soil structure damage;*
- c) *not produce visible salting;*
- d) *not cause surface ponding of the resource;*
- e) *not result in surface runoff;*
- f) *ensure that percolation of the resource beyond the plant root zone is minimised;*
- g) *not exceed plant fertiliser requirements; and*
- h) *not generate aerosol or cause spray drift, unless the irrigation methods comply with condition 24.*

24. *Irrigation of the liquid resources using spray methods must only occur:*

- a) *at a pressure of equal to or less than 20 pounds per square inch (PSI);*
- b) *at a distance that is greater than 25 metres from the boundary of the site where there is vegetation screening between the irrigation area and the boundary, or at a distance that is greater than 50 metres from the boundary of the site where there is no vegetation screening.*

A definition of spray methods has also been included as follows:

Spray methods for irrigation of liquid resources include those that are capable of generating aerosols and/or spray drift. They do not include methods such as drip, surface or sub surface irrigation.

Consideration of the Regulatory Strategy (EHP, 2014)

In accordance with the Regulatory Strategy, the department is to set the standards by which industry is to meet, where possible not prescribing the measures that are to be undertaken. These standards are based on both science and consideration of the community's expectations that the environment (including air quality) is protected. It is then the operators' responsibility to meet the standards.

The original condition prohibiting aerosols and spray drift set the outcome which was expected in line with the hierarchy of control measures in the DEWS water quality guideline, to which the applicant had agreed. In the amendment application, the applicant proposed rewording of the condition to that irrigation must '*not generate aerosol or cause spray drift that result in offsite environment nuisance or deleterious human health effect at a sensitive receptor location*'.

It is not considered that an outcome condition such as the one proposed is appropriate to sufficiently manage the risks and meet communities expectations for the following reasons:

- i) The community (including neighbouring residents) have an expectation that the activity will not impact on human health outside of the site boundary.
- ii) The lower quality of the effluent means a higher likelihood of impacts to human health.
- iii) Use of irrigation methods that generate aerosols and/or spray drift significantly increase the likelihood of releasing pathogens offsite.
- iv) The consequences of impacts on human health could be severe (refer to Part A, section 2 *Summary of environmental risks* of this report).

For these reasons it is considered appropriate to use more prescriptive conditions that are supported by best practice environmental management (hierarchy of control measures in the DEWS water quality guideline, and the National guidelines for water recycling) to meet community expectations of protecting the environment.

Section 160(2) of the Waste Reduction and Recycling Act 2011

Under s. 160(2) of the *Waste Reduction and Recycling Act 2011*, in deciding whether to grant or refuse an approval, the administering authority may consider the following. These criteria however should be considered where applicable.

s. 160(2) the applicant's environmental record;	Considered
• The applicants environmental record has not changed since the approval was originally issued.	☒ Yes ☐ No
s. 160(2)(b) the applicant's ability to comply with any proposed conditions of the approval;	Considered
• The applicant has reviewed and agreed to the proposed changes to conditions. Refer to email from Peter Thompson of NuGrow to Simone Ventura, EHP, dated 1 September 2014.	☒ Yes ☐ No
s. 160(2)(c) whether a disqualifying event has happened in relation to— i. if the applicant is an individual—the applicant or another person who is the applicant's partner; or ii. if the applicant is a corporation—the corporation, any of the corporation's executive officers, or another corporation of which any of the corporation's executive officers is, or has been, an executive officer.	Considered
• No disqualifying events have happened since the approval was originally issued.	☒ Yes ☐ No

PART D: RECOMMENDATION

Details of the recommendation:

For the reasons stated in this report, it is recommended that the chief executive (check the applicable statements):

- ☐ **approve the new specific approval** application in accordance with s. 156 of the Waste Reduction Act (Subsequently the waste is to be considered as a resource under s13 of the *Environmental Protection Act 1994*.)
- ☒ **grant the amendment/transfer** application in accordance with s. 168 of the Waste Reduction Act
- ☐ **approve the transfer** application in accordance with s. 156 of the Waste Reduction Act
- ☒ **impose conditions on the approval** in accordance with s. 166 of the Waste Reduction Act (Proposed conditions and Notice of approval accompany this assessment report. The legislative considerations included in Attachment 1 – Conditions of this report have been made when drafting the proposed conditions.)
- ☐ **refuse the application** in accordance with s. 156 of the Waste Reduction Act (A notice of refusal including a statement of reasons accompanies this assessment report)

Simone Ventura Principal Project Officer	sch4-Signature	9/9/14
Assessing Officer	Signed	Date

Review and endorsement

Insert any comments relevant for the delegates consideration:

David Cook Manager, WLCA		
Manager/Supervisor	Signed	Date

Approval

I approve the recommendation to approve with conditions based on the reasons stated in this report.

Lindsay Delzoppo Manager, WLCA	<div>sch4-Signature</div>	10/09/2014
Delegate	Signed	Date

EHP RTI DL Release

Attachment 1— CONDITIONS

LEGISLATIVE CONSIDERATIONS

Waste Reduction and Recycling Act 2011

Section 166 of the Waste Reduction Act states that:

- (1) The chief executive may impose conditions on an approval that the chief executive considers necessary or desirable.
- (2) Without limiting subsection (1), the conditions may relate to any of the following —
 - (a) The characteristics of the resource, including, for example, its physical state and its components and their concentrations;
 - (b) The origin and destination of the resource;
 - (c) Transporting or storing the resource;
 - (d) Any treatment or process for re-using, recycling, energy recovery, reprocessing or other use of the resource;
 - (e) Any waste resulting from a treatment or process mentioned in paragraph (d);
 - (f) The quantity of the resource that may be used under the approval and time frames relating to its use;
 - (g) Sampling, analysis, monitoring and reporting in relation to the resource;
 - (h) Measures or action to be taken to minimise against or remediate environmental impacts from the use of the resource, including material environmental harm, serious environmental harm or environmental nuisance.
- (3) A condition may be expressed to apply to anyone who has the benefit of the approval.
Without limiting subsection (3) a condition of a general approval may be expressed to apply to the producer, receiver, re-user, recycler or energy recoverer of the resource to which the approval relates.

DRAFTING INSTRUCTIONS FOR CONDITIONS

When drafting approval conditions, the principles contained in the departments procedural guide, [Writing Effective and Enforceable Conditions](#) (EM2417)¹, and the [Regulatory Strategy](#) should be followed.

Before developing a condition, it should be considered whether a condition is necessary to achieve the desired environmental outcomes. Following this, conditions should be developed using the **SMART** principles.

In summary, the “SMART” principles are

Letter	Rule	Details of the rule
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T	Time Specific	When it must be completed by (or, if it is an ongoing obligation, clearly state that).

¹ This is the publication number. The publication number can be used as a search term to find the latest version of a publication on Ecosteps.

Amendment of an approval of a resource for beneficial use

This notice is issued by the chief executive, pursuant to section 168 of the *Waste Reduction and Recycling Act 2011* to advise you of a decision by the chief executive and your review and appeal rights.

Nugrow Roma Pty Ltd
4/7 Sonia Court
RACEVIEW QLD 4305

Our reference : PR: 409312, App. no. 543076

Attn: Mr Peter Thompson, Environmental Compliance Manager

Dear Mr Thompson

Re: Amendment application for approval of a resource by Nugrow Roma Pty Ltd for the beneficial use of multiple wastes in a soil rejuvenation program (ENBU05261913)

The chief executive has considered your application that was received on 12 May 2014 and decided to approve the application. The amendments take effect from the date of this Notice

This approval (ENBU05261913) is a specific approval of which Nugrow Roma Pty Ltd (ABN 88 151 756 517) has the benefit and it is subject to the conditions set out in the attached schedule, issued in accordance with section 166 of the *Waste Reduction and Recycling Act 2011*.

The approval of the resource remains in force until **23 January 2019** (the period of the approval) unless the approval is replaced, suspended or cancelled.

The issuing of this approval for the beneficial use of a resource does not warrant or imply the lawfulness of the activity under other legislation, or that all approvals necessary under other legislation have or will be approved. It is the responsibility of the applicant to identify and obtain all other approvals necessary for the proposed activity.

The issuing of this approval also does not remove the obligation for the holder of the approval to take all reasonable and practicable measures to prevent and/or to minimise the likelihood of environmental harm being caused (the 'general environmental duty', see s. 319 of the *Environmental Protection Act 1994*). Environmental harm is any adverse effect, or potential adverse effect (whether temporary or permanent and of whatever magnitude, duration or frequency) on an environmental value, and includes environmental nuisance.

Guidance on acceptable approaches to monitoring compliance with this approval is provided in Appendix B of this document.

Additional Advice about the application

You may apply to the chief executive for a review of this decision within 14 days of receiving this notice. Applications must be made using the approved form, "Application for Internal Review of an Original Decision" (EM219), which is available at <www.ehp.qld.gov.au> using the publication number EM219 as a search term. The completed form must be sent to the address on the form.

An application to review a decision does not stay the original decision. If you apply for an internal review of this decision you can also apply to the chief executive (using the same form) or the Queensland Civil and Administrative Tribunal (using form 44, "Application to Stay a Decision" available at <www.qcat.qld.gov.au>) for a stay of the original decision.

Sections 174-179 of the *Waste Reduction and Recycling Act 2011* cover the internal review process.

Should you have any queries in relation to this Notice, please contact Simone Ventura in the telephone number listed below.

Yours sincerely,

Signature

Date

Lindsay Delzoppo
Director, Statewide Environmental Assessments
Environment and Heritage Protection

Enquiries:

Simone Ventura, Principal Project Officer
Waste and Land Contamination Assessment
Level 9, 400 George Street, Brisbane Qld 4000
GPO Box 2454, Brisbane Qld 4001
Ph: (07) 3330 5729
Fax: (07) 3330 5875
Email: wlca@ehp.qld.gov.au

SCHEDULE: CONDITIONS

Limitations of approval

- The approved resources are limited to those listed that meet the respective criteria for use listed in *Table 1 – Resource criteria*¹, that are to be applied to land by Nugrow Roma Pty Ltd (holder of the approval) for the improvement of soils located at Iona Park, Millbank Boundary Road, Kogan Qld 4406 (Lot 3 on DY117) (the site).

Table 1 – Resource criteria²

Resource	Criteria
Green waste	Green waste will only be utilised in the following scenarios: (a) in onsite composting; (b) applied as mulch to the surface layer of the ground surface; and/or (c) incorporated within the soil (top 10cm only).
Food waste	Food waste (liquid and solid) will only be incorporated in onsite composting windrows.
Livestock manure	Livestock manure will be applied directly to land or used in manufacturing compost.
Biosolids	Biosolids will be applied directly to land or used in manufacturing compost. Biosolids to be directly applied to land meet at least <i>Stabilisation Grade B</i> ³ , and <i>Contaminant Grade C</i> ⁴ classified as suitable for <i>Restricted Use 2</i> under the New South Wales Environmental Protection Authority <i>Environmental Guidelines: Use and Disposal of Biosolids Products</i> (2000) (the NSW Guidelines). Biosolids to be used in manufacturing compost meet at least <i>Stabilisation Grade B</i> ⁵ , and <i>Contaminant Grade D</i> ⁶ under the NSW Guidelines.
Treated sewage effluent	Treated sewage effluent: (a) will be released to the main dam for storage prior to irrigation; and (b) does not have, <u>or prior to release to the main dam will be treated by ozone disinfection on site⁷ so that it does not have, <i>Escherichia coli</i> (E. Coli) concentrations that exceed 10,000 cfu/100mL found in 95% of the samples taken for a 12 month period⁸; and</u> (c) will not be used on food crop including minimally processed food crop .
Coal seam gas (CSG) produced water and drilling fluids	CSG produced water and drilling fluids used: (a) have a pH of at least 6 but not more than 10.5; and (b) have an electrical conductivity of less than 15,000 µS/cm.

¹ Any resource that is not used as stated in condition 1 is considered a waste and must be managed in accordance with the *Environmental Protection Act 1994* and *Waste Reduction and Recycling Act 2011*, and their subordinate legislation.

² Resource sampling and analysis for biosolids should be conducted in accordance with the procedures detailed in *Schedule 1—Biosolids sampling and analysis procedures* and *Schedule 2—Grading, sampling and compliance procedures* of the NSW Guidelines.

³ Biosolids must meet at least one of the requirements for pathogen reduction and the vector attraction requirements in Table 3–3 *Biosolids Stabilisation Requirements* of the NSW Guidelines.

⁴ Biosolids must not exceed the contaminant acceptance concentration limits for Grade C listed in Table 3–1 *Contaminant Concentration Thresholds* of the NSW Guidelines.

⁵ Biosolids must meet at least one of the requirements for pathogen reduction and the vector attraction requirements in Table 3–3 *Biosolids Stabilisation Requirements* of the NSW Guidelines.

⁶ Biosolids must not exceed the contaminant acceptance concentration limits for Grade D listed in Table 3–1 *Contaminant Concentration Thresholds* of the NSW Guidelines.

⁷ To remove any doubt, treated sewage effluent with *E. Coli* concentrations >10 000 cfu/100mL may be received on site however must be treated prior to being released to the main dam using ozone disinfection methods to ensure that *E. Coli* concentrations do not exceed 10 000 cfu/100mL found in 95% of the samples taken for a 12 month period.

⁸ Based on the Department of Energy and Water Supply (2008) *Water quality guidelines for recycled water schemes*, available at <www.dews.qld.gov.au>, and the *Public Health Regulation 2005*.

2. The resources must not have any properties nor contain any other contaminants at concentrations which may cause environmental harm⁹ when used in accordance with the conditions of this approval.
3. Prior to the use of any resource under this approval, the holder of the approval must obtain written consent to use the resource from the person who possesses the resource, and keep records of the consent.

Resource monitoring

4. Any monitoring to determine the quality of resources applied to land on the site must be carried out on samples that are representative of the resources to be used.
5. Where the composition of a resource has changed or is likely to change, sufficient monitoring must be conducted to detect and characterise the extent of any change.
6. An **appropriately qualified person** must monitor, record and interpret all parameters listed in *Table 1 – Resource criteria* as part of this approval.
7. All analyses undertaken as a part of this approval must be carried out by a laboratory that has NATA certification, or an equivalent certification, for such analyses.

Use of the resources

8. The use of the resources must ensure that:
 - a) the soil structure, stability and productive capacity of the land on the site is maintained or improved;
 - b) there are no toxic effects to either crops or pasture plants; and
 - c) yields and produce quality are maintained or improved.
9. The use of the resources must be undertaken in accordance with written procedures that:
 - a) identify potential risks to the environment from the use of the resource during routine operations, closure and an emergency
 - b) establish and maintain control measures that minimise the potential for environmental harm; and
 - c) ensure that reviews of environmental performance are undertaken at least annually.
10. The use of the resources must not result in soil on the site being contaminated soil, when investigated in accordance with the current of the National Environment Protection (Assessment of Site Contamination) Measure 1999.
11. The resources must not be released directly or indirectly to land, air, or **waters** in a way or at a concentration that would cause environmental harm.

Records

12. All information and records that are required by the conditions of this approval must be kept for a minimum of five (5) years, and must be provided to the **chief executive** upon request.

Noise

13. Noise resulting from the use of the resource must not cause an environmental nuisance.

Air

14. Odours or airborne contaminants which are noxious or offensive or otherwise unreasonably disruptive to public amenity or safety must not cause nuisance to any **sensitive place** or **commercial place**.

⁹ See section 14 of *Environmental Protection Act 1994*. Environmental harm includes any adverse effect or potential adverse effect on public amenity and safety, waters, and health of stock grazed and plants grown on land ameliorated by the resource.

Transportation of resources

15. The resources must be handled and transferred in a manner that prevents the release of those resources during transporting, loading and unloading.
16. The following information must be recorded for each load of resource transported to the site:
 - a) origin of the resource;
 - b) date of pickup of the resource;
 - c) date of delivery of the resource; and
 - d) quantity of the resource.

Compost manufacturing

17. Compost in which the resources are used must be manufactured at a rate of less than 200t per year¹⁰.
18. Biosolids used in the compost must be treated in an aerobic process for at least 14 days. During that time, the temperature of the biosolids must be >40 °C and the average temperature >45 °C.
19. Any compost manufactured must meet the requirements for producing compost contained in Australian Standard 4454 *Compost, soil conditioners and mulches*.

Solid resource application to land

20. The application of biosolids, manures and compost to land must be conducted at an agronomic loading rate no greater than the lower of the nitrogen limited biosolids application rate (NLBAR) or the contaminant limited biosolids application rate (CLBAR) as determined in accordance with the NSW guidelines.
21. The following records must be kept for each land application of resources:
 - a) details of the land on which the application occurs;
 - b) date and time when the resource is applied;
 - c) the calculated application rate at which the resource is to be applied; and
 - d) the actual application rate.

Liquid resource application to land

22. The **liquid resources** to be irrigated to land must be of a quality that are suitable for irrigation, having been determined by an appropriately qualified person in accordance with the relevant assessment procedure listed in Appendix A.

~~23.~~ Liquid resources irrigated to land on the site must only be sourced from the main dam and must:

~~24-23.~~ **not generate aerosol or cause spray drift;**

- a) not harm vegetation surrounding the irrigation area;
- b) not cause soil erosion and soil structure damage;
- c) not produce visible salting;
- d) not cause surface ponding of the resource;
- e) not result in surface runoff;
- f) ensure that percolation of the resource beyond the plant root zone is minimised; ~~and~~
- g) not exceed plant fertiliser requirements; and
- h) not generate aerosol or cause spray drift, unless the irrigation methods comply with condition 24.

24. Irrigation of the liquid resources using spray methods must only occur:

¹⁰ Manufacturing compost or soil conditioners at a rate of greater than 200t per year constitutes Environmentally Relevant Activity 53 Composting or soil conditioner manufacturing and requires an Environmental Authority under the *Environmental Protection Act 1994*.

- a) at a pressure of equal to or less than 20 pounds per square inch (PSI); and
- b) at a distance that is greater than 25 metres from the boundary of the site where there is vegetation screening between the irrigation area and the boundary, or at a distance that is greater than 50 metres from the boundary of the site where there is no vegetation screening.

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Withholding period

- 25. Animals must not be allowed to graze on land on the site, on which biosolids or treated sewage effluent has been applied, for a period of at least 30 days after application.

Storage of the resources

- 26. The resources must be stored in a manner to prevent contact with stormwater runoff.
- 27. Any water that has come in contact with the resources in either storage or composting areas must be collected and recycled or irrigated to land in a manner that complies with conditions 8, 10, 11 and 23 as if it were a resource.

Impact assessment

- 28. An annual assessment of groundwater quality must be undertaken to determine any detrimental impacts of the use or if any environmental harm has, or is likely to be, caused by the use of the resources.
- 29. An annual assessment of soil quality of land where the resources have been applied must be undertaken to determine if any impact or environmental harm has or is likely to be caused by the use of the resources.
- 30. Monitoring undertaken to assess impacts of the use of the resources on groundwater or soil quality must be compliant with the chief executive's most recent monitoring and sampling manual.

DEFINITIONS

Words and phrases used throughout this approval are defined below. Where a definition for a term used in this approval is sought and the term is not defined within this permit the definitions provided in the relevant legislation shall be used.

Appropriately qualified person means a person who has professional qualifications, training, skills or experience relevant to the nominated subject matter and can give authoritative assessment, advice and analysis on performance relating to the subject matter using the relevant protocols, standards, methods or literature.

Biosolids means treated tank sludges and residues from a municipal sewage treatment plant including sedimentation tank and clarifier sludges, aerobically and anaerobically digested sludge and filter cake products from those sewage treatment plants.

Coal seam gas (CSG) production waters has the meaning in section 15A of the *Petroleum and Gas (Gas Production and Safety) Act 2004* and means CSG water or associated water for a petroleum tenure. It does not include the waste water resulting from simulation activities.

Chief executive means the Department of Environment and Heritage Protection or its successor.

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Drilling fluids means liquids used in a drilling process for petroleum activities that are returned to the surface. It does not include residual drilling material or restricted stimulation fluids.

Liquid resources mean treated sewage effluent and CSG drilling fluids.

Main dam means the dam located on the site which is used for the storage of treated sewage effluent and CSG drilling fluids.

Minimally processed food crop means a crop for a food product that—

- (a) may be eaten raw; or
- (b) will be subjected to a minimal food process only.

Examples of a minimal food process—washing, cutting, peeling, packaging.

Residual drilling material means waste drilling materials including muds and cuttings or cement returns from well holes and which have been left behind after the drilling fluids are pumped out.

Restricted stimulation fluids has the meaning in section 206 of the *Environmental Protection Act 1994* and means fluids used for the purpose of stimulation, including fracturing, that contain the following chemicals in more than the maximum amount prescribed under a regulation—

- (a) petroleum hydrocarbons containing benzene, ethyl benzene, toluene or xylene;
- (b) chemicals that produce, or are likely to produce, benzene, ethylbenzene, toluene or xylene as the chemical breaks down in the environment.

Sensitive place means:

- (a) a dwelling, residential allotment, mobile home or caravan park, residential marina or other residential premises; or
- (b) a motel, hotel or hostel; or an educational institution; or
- (c) a medical centre or hospital; or
- (d) a protected area under the Nature Conservation Act 1992, the Marine Parks Act 1992 or a World Heritage Area; or
- (e) a public park or gardens.

Site means Iona Park, Millbank Boundary Road, Kogan Qld 4406 (Lot 3 on DY117).

Spray methods for irrigation of liquid resources include those that are capable of generating aerosols and/or spray drift. They do not include methods such as drip, surface or sub surface irrigation.

Treated sewage effluent means sewage that has undergone treatment by sewage treatment works approved under the *Environmental Protection Act 1994* or the *Plumbing and Drainage Act 2002*.

Waters includes any river, stream, lake, lagoon, pond, swamp, wetland, unconfined surface water, unconfined water, natural or artificial watercourse, bed and bank of any waters, dams, non-tidal or tidal waters (including sea), stormwater channel, stormwater drain, roadside gutter, stormwater run-off, and groundwater and any part thereof.

- END OF CONDITIONS -

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Appendix A

Quality parameter	Assessment procedure
electrical conductivity	Salinity Management Handbook, with reference to Chapter 11; and/or Australian and New Zealand Guidelines for Fresh and Marine Water Quality, with reference to Volume 1 Chapter 4 and Volume 3 Chapter 9.
sodium adsorption ratio	
pH	<p>The assessment should consider:</p> <ul style="list-style-type: none"> • soil properties within the root zone to be irrigated (e.g. clay content, cation exchange capacity, exchangeable sodium percentage) • water quality of the proposed resource (e.g. salinity, sodicity) • climate conditions (e.g. rainfall) • leaching fractions • average root zone salinity (calculated) • crop salt tolerance (e.g. impact threshold and yield decline) • management practices and objectives (e.g. irrigation application rate, amelioration techniques) • broader landscape issues (e.g. land use, depth to groundwater) • any additional modelling and tests undertaken to support the varied water quality parameters.
heavy metals	<p>Australian and New Zealand Guidelines for Fresh and Marine Water Quality, with reference to Volume 1 Chapters 3 and 4 and Volume 3 Chapter 9.</p> <p>The assessment should aim to derive site specific trigger values (e.g. cumulative contaminant loading limit) based on the methodology provided in the above mentioned procedure.</p>

Appendix B

Advice

Please find following advice regarding the development of any monitoring programs used to help determine compliance with the conditions of approval. Monitoring programs and any written procedures for the use of the resources should be developed in accordance with best practice environmental management standards and reviewed regularly to ensure that current best practice is being implemented.

It is recommended that;

- Monitoring of biosolids to determine compliance with condition 1 should be conducted with samples taken at least every 120 dry tonnes¹¹.
- Monitoring of treated sewage effluent to determine compliance with condition 1 should be undertaken at least weekly.
- Monitoring of CSG drilling fluids and produced waters to determine compliance with condition 1 should be undertaken at least fortnightly.

Groundwater

Any groundwater monitoring program developed should provide for:

- a) Installation and monitoring of bores installed in accordance with relevant Australian standards in aquifer(s) potentially affected by the use of the resource; and
- b) The determination and keeping records of groundwater height and quality by sampling for at least the parameters, and at the frequency, stated in *Table 1 – Groundwater monitoring parameters*

Table 1 - Groundwater monitoring parameters

Parameter	Frequency
Standing groundwater level (metres AHD)	6 monthly
Arsenic	6 monthly
Cadmium	6 monthly
Chromium (Total)	6 monthly
Copper	6 monthly
Lead	6 monthly
Zinc	6 monthly
Nitrate	6 monthly
Chloride	6 monthly
Electrical conductivity (in-situ)	6 monthly
pH (in-situ)	6 monthly
<i>E. Coli</i>	6 monthly
Calcium	6 monthly
Nitrogen (total)	6 monthly
Phosphorous (total)	6 monthly
Sodium	6 monthly
Total Dissolved Solids	6 monthly

¹¹ Resource sampling and analysis for biosolids should be conducted in accordance with the procedures detailed in *Schedule 1— Biosolids sampling and analysis procedures* and *Schedule 2— Grading, sampling and compliance procedures* of the NSW Guidelines.

Soil

Any soil monitoring program should provide for monitoring of at least the parameters, and at the frequency, stated in *Table 2 – soil monitoring parameters*.

Table 2 - Soil monitoring parameters

Parameter	Frequency
Electrical conductivity (EC)	6 monthly
pH	6 monthly
Exchangeable Cation Exchange Capacity (ECEC)	Annually
Exchangeable Sodium Percentage (ESP)	Annually
Sodium Adsorption Ratio (SAR)	Annually
Arsenic	Annually
Cadmium	Annually
Chromium (total)	Annually
Copper	Annually
Lead	Annually
Mercury	Annually
Nickel	Annually
Selenium	Annually
Zinc	Annually
DDT/DDD/DDE	Annually
Aldrin	Annually
Dieldrin	Annually
Chlordane	Annually
Heptachlor and heptachlor epoxide	Annually
Hexachlorobenzene (HCB)	Annually
Lindane	Annually
Benzene hexachloride (BHC)	Annually
PCBs	Annually

Irrigation

Liquid resource being irrigated to land from the main dam should be monitored for at least the quality parameters and at the frequency specified in *Table 3 – Main dam monitoring parameters*.

Table 3 - Main dam monitoring parameters

Quality parameter	Frequency
Electrical conductivity	Fortnightly
Sodium absorption ratio (SAR)	Fortnightly
pH	Fortnightly
<i>E. Coli</i>	Monthly
Alkalinity (bicarbonate, carbonate and hydroxide)	Quarterly
Arsenic	Quarterly
Aluminium	Quarterly
Boron	Quarterly
Cadmium	Quarterly
Chromium (total)	Quarterly
Copper	Quarterly

Cobalt	Quarterly
Iron	Quarterly
Lead	Quarterly
Lithium	Quarterly
Manganese	Quarterly
Mercury	Quarterly
Molybdenum	Quarterly
Nickel	Quarterly
Selenium	Quarterly
Strontium	Quarterly
Vanadium	Quarterly
Zinc	Quarterly
Ammonium (NH ₄ ⁺)	Quarterly
Nitrate + nitrite	Quarterly
Total Kjeldahl Nitrogen (TKN)	Quarterly
Total Nitrogen	Quarterly
Total phosphorous	Quarterly
BTEX	Quarterly
Total dissolved solids (TDS)	Quarterly
Total petroleum hydrocarbons (TPH)	Quarterly
Fluoride	Quarterly
Sulphate	Quarterly
Hardness (calculated)	6 monthly
Calcium, magnesium, sodium, and potassium	6 monthly
Chloride	6 monthly
Ortho phosphorous	6 monthly

Notice

Amendment of an approval of a resource for beneficial use

This notice is issued by the chief executive, pursuant to section 168 of the *Waste Reduction and Recycling Act 2011* to advise you of a decision by the chief executive and your review and appeal rights.

Nugrow Roma Pty Ltd
4/7 Sonia Court
RACEVIEW QLD 4305

Our reference : PR: 409312, App. no. 543076

Attn: Mr Peter Thompson, Environmental Compliance Manager

Dear Mr Thompson

Re: Amendment application for approval of a resource by Nugrow Roma Pty Ltd for the beneficial use of multiple wastes in a soil rejuvenation program (ENBU05261913)

The chief executive has considered your application that was received on 12 May 2014 and decided to approve the application. The amendments take effect from the date of this Notice

This approval (ENBU05261913) is a specific approval of which Nugrow Roma Pty Ltd (ABN 88 151 756 517) has the benefit and it is subject to the conditions set out in the attached schedule, issued in accordance with section 166 of the *Waste Reduction and Recycling Act 2011*.

The approval of the resource remains in force until **23 January 2019** (the period of the approval) unless the approval is replaced, suspended or cancelled.

The issuing of this approval for the beneficial use of a resource does not warrant or imply the lawfulness of the activity under other legislation, or that all approvals necessary under other legislation have or will be approved. It is the responsibility of the applicant to identify and obtain all other approvals necessary for the proposed activity.

The issuing of this approval also does not remove the obligation for the holder of the approval to take all reasonable and practicable measures to prevent and/or to minimise the likelihood of environmental harm being caused (the 'general environmental duty', see s. 319 of the *Environmental Protection Act 1994*). Environmental harm is any adverse effect, or potential adverse effect (whether temporary or permanent and of whatever magnitude, duration or frequency) on an environmental value, and includes environmental nuisance.

Guidance on acceptable approaches to monitoring compliance with this approval is provided in Appendix B of this document.

Additional Advice about the application

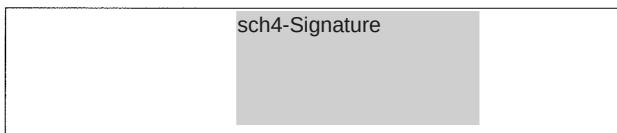
You may apply to the chief executive for a review of this decision within 14 days of receiving this notice. Applications must be made using the approved form, "Application for Internal Review of an Original Decision" (EM219), which is available at <www.ehp.qld.gov.au> using the publication number EM219 as a search term. The completed form must be sent to the address on the form.

An application to review a decision does not stay the original decision. If you apply for an internal review of this decision you can also apply to the chief executive (using the same form) or the Queensland Civil and Administrative Tribunal (using form 44, "Application to Stay a Decision" available at <www.qcat.qld.gov.au>) for a stay of the original decision.

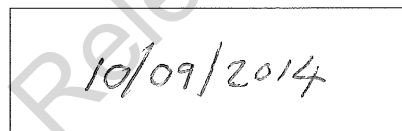
Sections 174-179 of the *Waste Reduction and Recycling Act 2011* cover the internal review process.

Should you have any queries in relation to this Notice, please contact Simone Ventura in the telephone number listed below.

Yours sincerely,



Signature



Date

Lindsay Delzoppo
Director, Statewide Environmental Assessments
Environment and Heritage Protection

Enquiries:

Simone Ventura, Principal Project Officer
Waste and Land Contamination Assessment
Level 9, 400 George Street, Brisbane Qld 4000
GPO Box 2454, Brisbane Qld 4001
Ph: (07) 3330 5729
Fax: (07) 3330 5875
Email: wlca@ehp.qld.gov.au

SCHEDULE: CONDITIONS

Limitations of approval

- The approved resources are limited to those listed that meet the respective criteria for use listed in *Table 1 – Resource criteria*¹, that are to be applied to land by Nugrow Roma Pty Ltd (holder of the approval) for the improvement of soils located at Iona Park, Millbank Boundary Road, Kogan Qld 4406 (Lot 3 on DY117) (the **site**).

Table 1 – Resource criteria²

Resource	Criteria
Green waste	Green waste will only be utilised in the following scenarios: (a) in onsite composting; (b) applied as mulch to the surface layer of the ground surface; and/or (c) incorporated within the soil (top 10cm only).
Food waste	Food waste (liquid and solid) will only be incorporated in onsite composting windrows.
Livestock manure	Livestock manure will be applied directly to land or used in manufacturing compost.
Biosolids	Biosolids will be applied directly to land or used in manufacturing compost. Biosolids to be directly applied to land meet at least <i>Stabilisation Grade B</i> ³ , and <i>Contaminant Grade C</i> ⁴ classified as suitable for <i>Restricted Use 2</i> under the New South Wales Environmental Protection Authority <i>Environmental Guidelines: Use and Disposal of Biosolids Products</i> (2000) (the NSW Guidelines). Biosolids to be used in manufacturing compost meet at least <i>Stabilisation Grade B</i> ⁵ , and <i>Contaminant Grade D</i> ⁶ under the NSW Guidelines.
Treated sewage effluent	Treated sewage effluent: (a) will be released to the main dam for storage prior to irrigation; and (b) does not have, or prior to release to the main dam will be treated by ozone disinfection on site ⁷ so that it does not have, <i>Escherichia coli</i> (E. Coli) concentrations that exceed 10,000 cfu/100mL found in 95% of the samples taken for a 12 month period ⁸ ; and (c) will not be used on food crop including minimally processed food crop .
Coal seam gas (CSG) produced water and drilling fluids	CSG produced water and drilling fluids used: (a) have a pH of at least 6 but not more than 10.5; and (b) have an electrical conductivity of less than 15,000 µS/cm.

¹ Any resource that is not used as stated in condition 1 is considered a waste and must be managed in accordance with the *Environmental Protection Act 1994* and *Waste Reduction and Recycling Act 2011*, and their subordinate legislation.

² Resource sampling and analysis for biosolids should be conducted in accordance with the procedures detailed in *Schedule 1— Biosolids sampling and analysis procedures* and *Schedule 2— Grading, sampling and compliance procedures* of the NSW Guidelines.

³ Biosolids must meet at least one of the requirements for pathogen reduction and the vector attraction requirements in Table 3–3 *Biosolids Stabilisation Requirements* of the NSW Guidelines.

⁴ Biosolids must not exceed the contaminant acceptance concentration limits for Grade C listed in Table 3–1 *Contaminant Concentration Thresholds* of the NSW Guidelines.

⁵ Biosolids must meet at least one of the requirements for pathogen reduction and the vector attraction requirements in Table 3–3 *Biosolids Stabilisation Requirements* of the NSW Guidelines.

⁶ Biosolids must not exceed the contaminant acceptance concentration limits for Grade D listed in Table 3–1 *Contaminant Concentration Thresholds* of the NSW Guidelines.

⁷ To remove any doubt, treated sewage effluent with *E. Coli* concentrations >10,000 cfu/100mL may be received on site however must be treated prior to being released to the main dam using ozone disinfection methods to ensure that *E. Coli* concentrations do not exceed 10,000 cfu/100mL found in 95% of the samples taken for a 12 month period.

⁸ Based on the Department of Energy and Water Supply (2008) *Water quality guidelines for recycled water schemes*, available at <www.dews.qld.gov.au>, and the *Public Health Regulation 2005*.

2. The resources must not have any properties nor contain any other contaminants at concentrations which may cause environmental harm⁹ when used in accordance with the conditions of this approval.
3. Prior to the use of any resource under this approval, the holder of the approval must obtain written consent to use the resource from the person who possesses the resource, and keep records of the consent.

Resource monitoring

4. Any monitoring to determine the quality of resources applied to land on the site must be carried out on samples that are representative of the resources to be used.
5. Where the composition of a resource has changed or is likely to change, sufficient monitoring must be conducted to detect and characterise the extent of any change.
6. An **appropriately qualified person** must monitor, record and interpret all parameters listed in *Table 1 – Resource criteria* as part of this approval.
7. All analyses undertaken as a part of this approval must be carried out by a laboratory that has NATA certification, or an equivalent certification, for such analyses.

Use of the resources

8. The use of the resources must ensure that:
 - a) the soil structure, stability and productive capacity of the land on the site is maintained or improved;
 - b) there are no toxic effects to either crops or pasture plants; and
 - c) yields and produce quality are maintained or improved.
9. The use of the resources must be undertaken in accordance with written procedures that:
 - a) identify potential risks to the environment from the use of the resource during routine operations, closure and an emergency
 - b) establish and maintain control measures that minimise the potential for environmental harm; and
 - c) ensure that reviews of environmental performance are undertaken at least annually.
10. The use of the resources must not result in soil on the site being contaminated soil, when investigated in accordance with the current of the National Environment Protection (Assessment of Site Contamination) Measure 1999.
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Sensitive place means:

- (a) a dwelling, residential allotment, mobile home or caravan park, residential marina or other residential premises; or
- (b) a motel, hotel or hostel; or an educational institution; or
- (c) a medical centre or hospital; or
- (d) a protected area under the Nature Conservation Act 1992, the Marine Parks Act 1992 or a World Heritage Area; or
- (e) a public park or gardens.

Site means Iona Park, Millbank Boundary Road, Kogan Qld 4406 (Lot 3 on DY117).

Spray methods for irrigation of liquid resources include those that are capable of generating aerosols and/or spray drift. They do not include methods such as drip, surface or sub surface irrigation.

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Waters includes any river, stream, lake, lagoon, pond, swamp, wetland, unconfined surface water, unconfined water, natural or artificial watercourse, bed and bank of any waters, dams, non-tidal or tidal waters (including sea), stormwater channel, stormwater drain, roadside gutter, stormwater run-off, and groundwater and any part thereof.

- END OF CONDITIONS -

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Appendix A

Quality parameter	Assessment procedure
electrical conductivity	Salinity Management Handbook, with reference to Chapter 11; and/or Australian and New Zealand Guidelines for Fresh and Marine Water Quality, with reference to Volume 1 Chapter 4 and Volume 3 Chapter 9.
sodium adsorption ratio	
pH	<p>The assessment should consider:</p> <ul style="list-style-type: none"> • soil properties within the root zone to be irrigated (e.g. clay content, cation exchange capacity, exchangeable sodium percentage) • water quality of the proposed resource (e.g. salinity, sodicity) • climate conditions (e.g. rainfall) • leaching fractions • average root zone salinity (calculated) • crop salt tolerance (e.g. impact threshold and yield decline) • management practices and objectives (e.g. irrigation application rate, amelioration techniques) • broader landscape issues (e.g. land use, depth to groundwater) • any additional modelling and tests undertaken to support the varied water quality parameters.
heavy metals	<p>Australian and New Zealand Guidelines for Fresh and Marine Water Quality, with reference to Volume 1 Chapters 3 and 4 and Volume 3 Chapter 9.</p> <p>The assessment should aim to derive site specific trigger values (e.g. cumulative contaminant loading limit) based on the methodology provided in the above mentioned procedure.</p>

Appendix B

Advice

Please find following advice regarding the development of any monitoring programs used to help determine compliance with the conditions of approval. Monitoring programs and any written procedures for the use of the resources should be developed in accordance with best practice environmental management standards and reviewed regularly to ensure that current best practice is being implemented.

It is recommended that;

- Monitoring of biosolids to determine compliance with condition 1 should be conducted with samples taken at least every 120 dry tonnes¹¹.
- Monitoring of treated sewage effluent to determine compliance with condition 1 should be undertaken at least weekly.
- Monitoring of CSG drilling fluids and produced waters to determine compliance with condition 1 should be undertaken at least fortnightly.

Groundwater

Any groundwater monitoring program developed should provide for:

- a) Installation and monitoring of bores installed in accordance with relevant Australian standards in aquifer(s) potentially affected by the use of the resource; and
- b) The determination and keeping records of groundwater height and quality by sampling for at least the parameters, and at the frequency, stated in *Table 1 – Groundwater monitoring parameters*

Table 1 - Groundwater monitoring parameters

Parameter	Frequency
Standing groundwater level (metres AHD)	6 monthly
Arsenic	6 monthly
Cadmium	6 monthly
Chromium (Total)	6 monthly
Copper	6 monthly
Lead	6 monthly
Zinc	6 monthly
Nitrate	6 monthly
Chloride	6 monthly
Electrical conductivity (in-situ)	6 monthly
pH (in-situ)	6 monthly
<i>E. Coli</i>	6 monthly
Calcium	6 monthly
Nitrogen (total)	6 monthly
Phosphorous (total)	6 monthly
Sodium	6 monthly
Total Dissolved Solids	6 monthly

¹¹ Resource sampling and analysis for biosolids should be conducted in accordance with the procedures detailed in *Schedule 1—Biosolids sampling and analysis procedures* and *Schedule 2—Grading, sampling and compliance procedures* of the NSW Guidelines.

Soil

Any soil monitoring program should provide for monitoring of at least the parameters, and at the frequency, stated in *Table 2 – soil monitoring parameters*.

Table 2 - Soil monitoring parameters

Parameter	Frequency
Electrical conductivity (EC)	6 monthly
pH	6 monthly
Exchangeable Cation Exchange Capacity (ECEC)	Annually
Exchangeable Sodium Percentage (ESP)	Annually
Sodium Adsorption Ratio (SAR)	Annually
Arsenic	Annually
Cadmium	Annually
Chromium (total)	Annually
Copper	Annually
Lead	Annually
Mercury	Annually
Nickel	Annually
Selenium	Annually
Zinc	Annually
DDT/DDD/DDE	Annually
Aldrin	Annually
Dieldrin	Annually
Chlordane	Annually
Heptachlor and heptachlor epoxide	Annually
Hexachlorobenzene (HCB)	Annually
Lindane	Annually
Benzene hexachloride (BHC)	Annually
PCBs	Annually

Irrigation

Liquid resource being irrigated to land from the main dam should be monitored for at least the quality parameters and at the frequency specified in *Table 3 – Main dam monitoring parameters*.

Table 3 - Main dam monitoring parameters

Quality parameter	Frequency
Electrical conductivity	Fortnightly
Sodium absorption ratio (SAR)	Fortnightly
pH	Fortnightly
<i>E. Coli</i>	Monthly
Alkalinity (bicarbonate, carbonate and hydroxide)	Quarterly
Arsenic	Quarterly
Aluminium	Quarterly
Boron	Quarterly
Cadmium	Quarterly
Chromium (total)	Quarterly
Copper	Quarterly

Cobalt	Quarterly
Iron	Quarterly
Lead	Quarterly
Lithium	Quarterly
Manganese	Quarterly
Mercury	Quarterly
Molybdenum	Quarterly
Nickel	Quarterly
Selenium	Quarterly
Strontium	Quarterly
Vanadium	Quarterly
Zinc	Quarterly
Ammonium (NH ₄ ⁺)	Quarterly
Nitrate + nitrite	Quarterly
Total Kjeldahl Nitrogen (TKN)	Quarterly
Total Nitrogen	Quarterly
Total phosphorous	Quarterly
BTEX	Quarterly
Total dissolved solids (TDS)	Quarterly
Total petroleum hydrocarbons (TPH)	Quarterly
Flouride	Quarterly
Sulphate	Quarterly
Hardness (calculated)	6 monthly
Calcium, magnesium, sodium, and potassium	6 monthly
Chloride	6 monthly
Ortho phosphorous	6 monthly