

# JRT EQUIPMENT HIRE WASTE DISPOSAL FACILITY DEVELOPMENT 231 LUCAS STREET GRACEMERE



## CIVIL WORKS DRAWING INDEX

SH.	DWG. No.	DRAWING TITLE
1	D12.42	COVER SHEET
2	D12.42-01	SITE PLAN
3	D12.42-02	WASTE DISPOSAL FACILITY PLAN
4	D12.42-03	CAR PARKING SWEEP PATHS
5	D12.42-04	HRV & LV TIPPING SWEEP PATHS
6	D12.42-05	ARTICULATED VEHICLE SWEEP PATHS
7	D12.42-06	STORMWATER MANAGEMENT PLAN

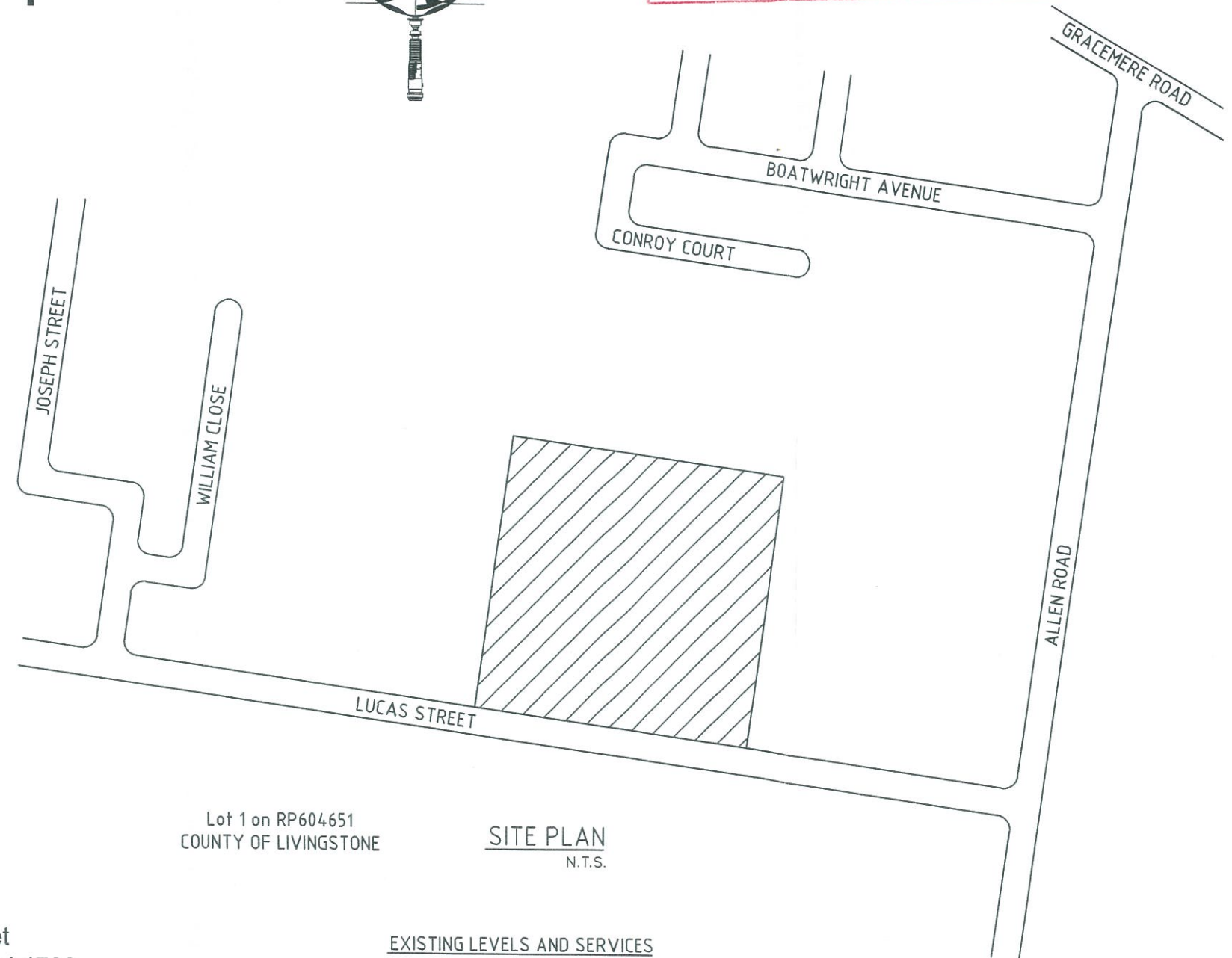
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D12.42



ROCKHAMPTON REGIONAL COUNCIL  
These plans are approved subject to the current  
conditions of approval associated with  
Development Permit No. ...D/648-2012  
Dated ...15-04-2014



Lot 1 on RP604651  
COUNTY OF LIVINGSTONE

SITE PLAN  
N.T.S.

## EXISTING LEVELS AND SERVICES

1. THE CONTRACTOR SHALL VERIFY THE LOCATIONS AND LEVELS OF ALL EXISTING SERVICES WITH THE RELEVANT AUTHORITIES INCLUDING "DIAL BEFORE YOU DIG" PRIOR TO COMMENCING CONSTRUCTION. ANY COSTS ASSOCIATED WITH REPAIRING DAMAGE TO EXISTING SERVICES SHALL BE PAID FOR BY THE CONTRACTOR.
2. THE CONTRACTOR SHALL VERIFY THAT THE EXISTING LEVELS AT POINTS WHERE CONNECTIONS TO EXISTING INFRASTRUCTURE ARE REQUIRED ARE AS PER THIS DESIGN. ANY DIFFERENCES TO BE NOTIFIED TO THE ENGINEER PRIOR TO ORDERING MATERIALS OR COMMENCING ANY WORKS.
3. PRIOR TO COMMENCING WORKS THE CONTRACTOR SHALL VERIFY THAT THERE ARE NO CLASHES BETWEEN ANY CROSSING SERVICE OR PIPELINE. ANY CLASHES TO BE NOTIFIED TO THE ENGINEER PRIOR TO WORKS COMMENCING.
4. PRIOR TO COMMENCING WORKS THE CONTRACTOR SHALL VERIFY LOCATION AND DETAILS OF ALL EXISTING SERVICE CONNECTIONS TO NEW ALLOTMENTS PREVIOUSLY INSTALLED BY OTHERS





**Scale**



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Dated 15-04-2014

REV	REVISION	DATE
1	NCU APPROVAL	6/2012

**REVISIONS**

**PROJECT**  
WASTE DISPOSAL FACILITY  
231 LUCAS STREET  
GRACEMERE

**CLIENT**  
JRT EQUIPMENT HIRE

**DRAWING TITLE**  
SITE PLAN

Name	Signature	Number
H.B. Carseldine		2855

drawn by: BTS  
checked by: ACD  
date: 6/2012  
drawing no. D12.42-01





LOT 1 on RP604651  
PARISH OF LIVINGSTONE

A3 Scale 1:600

1	MCU APPROVAL	6/2012
REV	REVISION	DATE

PROJECT  
WASTE DISPOSAL FACILITY  
231 LUCAS STREET  
GRACEMERE

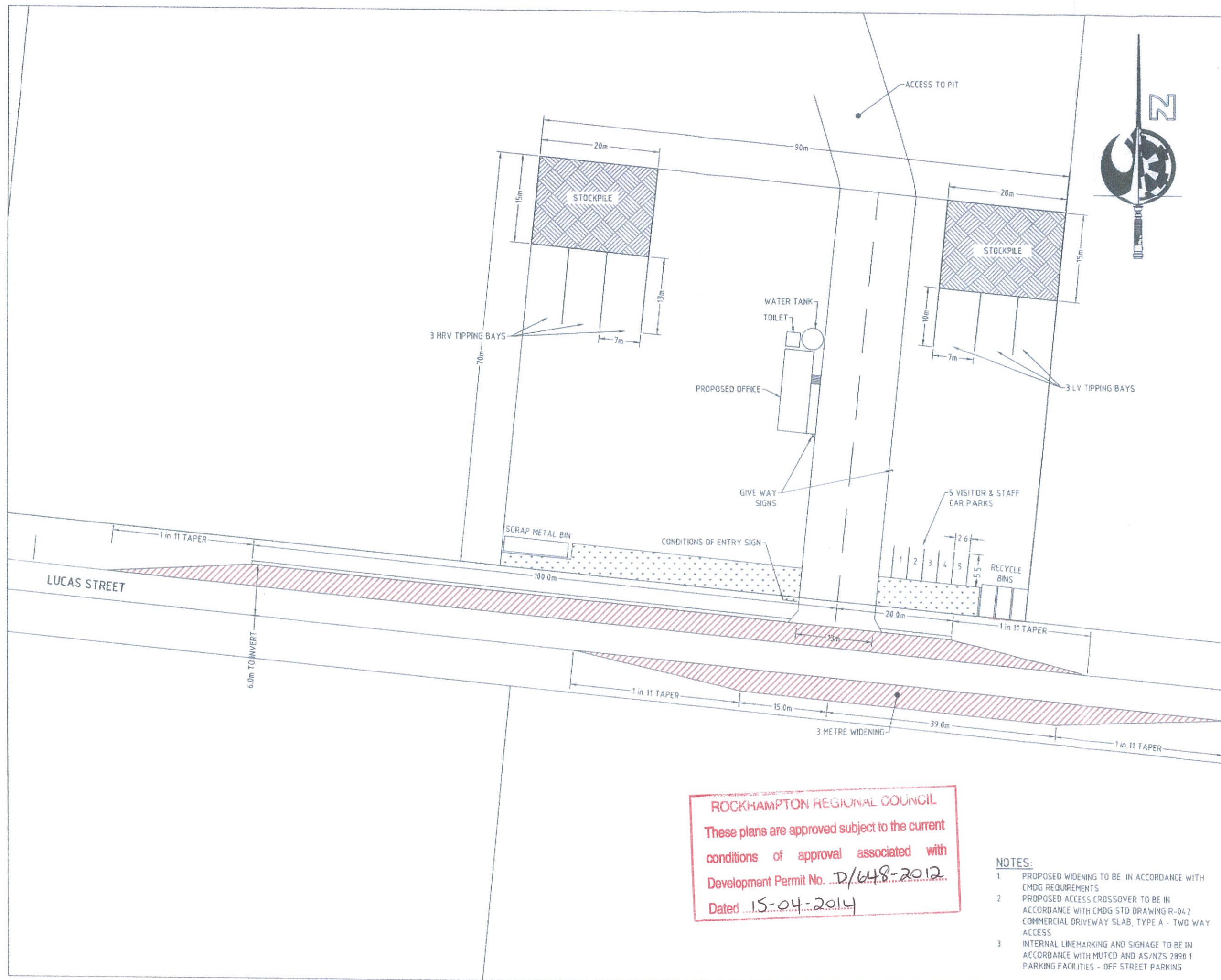
CLIENT  
JRT EQUIPMENT HIRE

**DRAWING TITLE**  
WASTE DISPOSAL  
FACILITY PLAN

Name	Signature	Number
H.B. Carseldine		2855

drawn by;	BTS
checked by;	ACD
date;	6/2012
drawing no.	

D12.42-02







Time of Concentration						Comments	$t_c = \frac{F \cdot L}{A \cdot S^{0.5}}$
F	L	A	S	t <sub>c</sub>			
sq kms	kms	ha	m/km	mins			
Area A	92.7	0.221	3.823	36.169	8.740	8.740	A*0.1 <sup>0.5</sup> *0.2

Q = F * C * P * A						Comments	
DISCRETE STORM EVENT							
Area A	F	C	P	A	Q	FI	D
sq kms	mm/hr	co eff		sq kms	m <sup>3</sup> /sec	h <sub>2</sub>	m/m/hr
Q1	0.278	0.595	57	0.03823	0.550		
Q5	0.278	0.665	146	0.03823	1.032		
Q10	0.278	0.7	167	0.03823	1.242		
Q50	0.278	0.805	233	0.03823	1.953		
Q100	0.278	0.84	284.00	0.03823	2.357		

#### STORMWATER STORAGE

Q100 EVENT TOTAL VOLUME = $Q \times T_c$	1202.0 m <sup>3</sup>
90th PERCENTILE AVERAGE MONTHLY RAINFALL = 273 mm	
STORAGE REQUIRED = $I \times A$	10449 m <sup>3</sup>
TOTAL MAX STORAGE REQUIRED =	11651 m <sup>3</sup>
CAPACITY ON SITE (TO RL OF 100m) =	82000 m <sup>3</sup>
MAX CAPACITY USED =	14.2 %

#### STORMWATER USAGE

AVERAGE ANNUAL RAINFALL =	700 mm/yr
AVERAGE ANNUAL RAINFALL VOLUME =	26782 m <sup>3</sup>
30m <sup>3</sup> /DAY USED ON SITE =	7800 m <sup>3</sup> /yr
REMAINING WATER TO BE EXPORTED =	18982 m <sup>3</sup> /yr
15m <sup>3</sup> WATER TRUCKS EXPORTING WATER =	5 TRUCKS/DAY

#### NOTES:

- 100% OF STORMWATER IS TO BE RETAINED ON SITE FOR OPERATIONAL PURPOSES (DUST CONTROL) AND EXPORT TO EXTERNAL JOB SITES VIA WATER TRUCK.
- AVERAGE MONTHLY AND ANNUAL RAINFALL DATA HAS BEEN TAKEN FROM THE B.O.M. LUCAS ST RAINFALL MONITORING STATION.
- STORAGE CAPACITY REQUIRED ON SITE CALCULATED USING THE SUM OF TOTAL RAINFALL FOR A 90TH PERCENTILE AVERAGE MONTHLY RAINFALL AND A Q100 EVENT VOLUME.
- CAPACITY REQUIRED ASSUMES 0% INFILTRATION INTO SOIL AND NO WATER TRUCKS RUNNING DURING THE MONTH.
- STORMWATER USAGE ASSUMES 30cu.m WATER REQUIRED DAILY ON SITE FOR PERIODIC WETDOWN OF STOCKPILES AND ROAD TRAFFIC AREAS TO FACILITATE DUST CONTROL.
- FUTURE SITE BASED MANAGEMENT PLAN TO CONTAIN:
  1. SITE FILLING PLAN ADDRESSING STORMWATER STORAGE AND ENSURE REQUIRED CAPACITY IS NOT COMPROMISED DURING FACILITY OPERATIONAL LIFESPAN.
  2. SITE FILLING PLAN ADDRESSING STORMWATER FLOW PATHS TO WATER STORAGE AREA, AND ENSURING 100% SITE STORMWATER CONTINUES TO BE CAPTURED AND RETAINED ON SITE DURING FACILITY OPERATIONAL LIFESPAN.
- STORMWATER CALCULATIONS INCLUDE 100% OF THE SITE, NO EXTERNAL CATCHMENTS DRAIN TO THIS SITE.
- ALL CALCULATIONS ARE IN LINE WITH THE Q.U.D.M.
- ALL BATTERS ON SITE TO BE 1 in 4 MAX.

#### LEGEND:

- DENOTES SITE STORMWATER INUNDATION AT 90TH PERCENTILE MONTHLY RAINFALL PLUS Q100 STORMWATER EVENT
- PROPOSED LANDSCAPED AREA
- PROPOSED CONSTRUCTION AND DEMOLITION WASTE STOCKPILE
- FINISHED LEVEL OF WASTE TRANSFER AREA

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LOT 1 on RP604651  
PARISH OF LIVINGSTONE

ROCKHAMPTON REGIONAL COUNCIL

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Dated 15-04-2014

#### Scale

A3 Scale 1:250  
1.25 0 1.25 5.0 6.25 m

REV	REVISION	DATE
2	RFI RESPONSE	3/2013
1	MCU APPROVAL	6/2012

#### REVISIONS

PROJECT  
WASTE DISPOSAL FACILITY  
231 LUCAS STREET  
GRACEMERE

CLIENT  
JRT EQUIPMENT HIRE

DRAWING TITLE  
STORMWATER  
MANAGEMENT PLAN

Name	Signature	Number
H.B. Carseldine		2855

drawn by: BTS  
checked by: ACD  
date: 6/2012  
drawing no.

D12.42-06



# NOTES:

1. ALL GARDEN AREAS TO BE WELL MULCHED AND BE SUITABLY EDGED WITH COVERED KERBING.
2. PROVIDE SUITABLE TIMED WATERING SYSTEM COMPLYING WITH COUNCIL REQUIREMENTS.
3. HEIGHT OF PLANTS INDICATES HEIGHT AT MATURITY.

ITEM	PLANT TYPE	HEIGHT	No.
1	GARDENIA AUGUSTA	0.5-1.5m	61
2	SYZYGUM: NORTHERN LIGHTS	1-2m	31
3	DURANTA: BLUE CASCADE	0.5-1.5m	52
4	JASMINUM SAMBAC	1-2m	19
5	MURRAYA PANICULATA	3-4m	12

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Dated 15-04-2014

Scale

A3 Scale 1:600



REV	REVISION	DATE
1	RFI RESPONSE	03/2013

## REVISIONS

PROJECT  
WASTE DISPOSAL FACILITY  
231 LUCAS STREET  
GRACEMERE

CLIENT  
JRT EQUIPMENT HIRE

DRAWING TITLE  
WASTE DISPOSAL  
FACILITY PLAN

Name	Signature	Number
H.B. Carseldine		2855

drawn by: RAJ

checked by: ACD

date: 02/2013

drawing no.  
D12.42-08



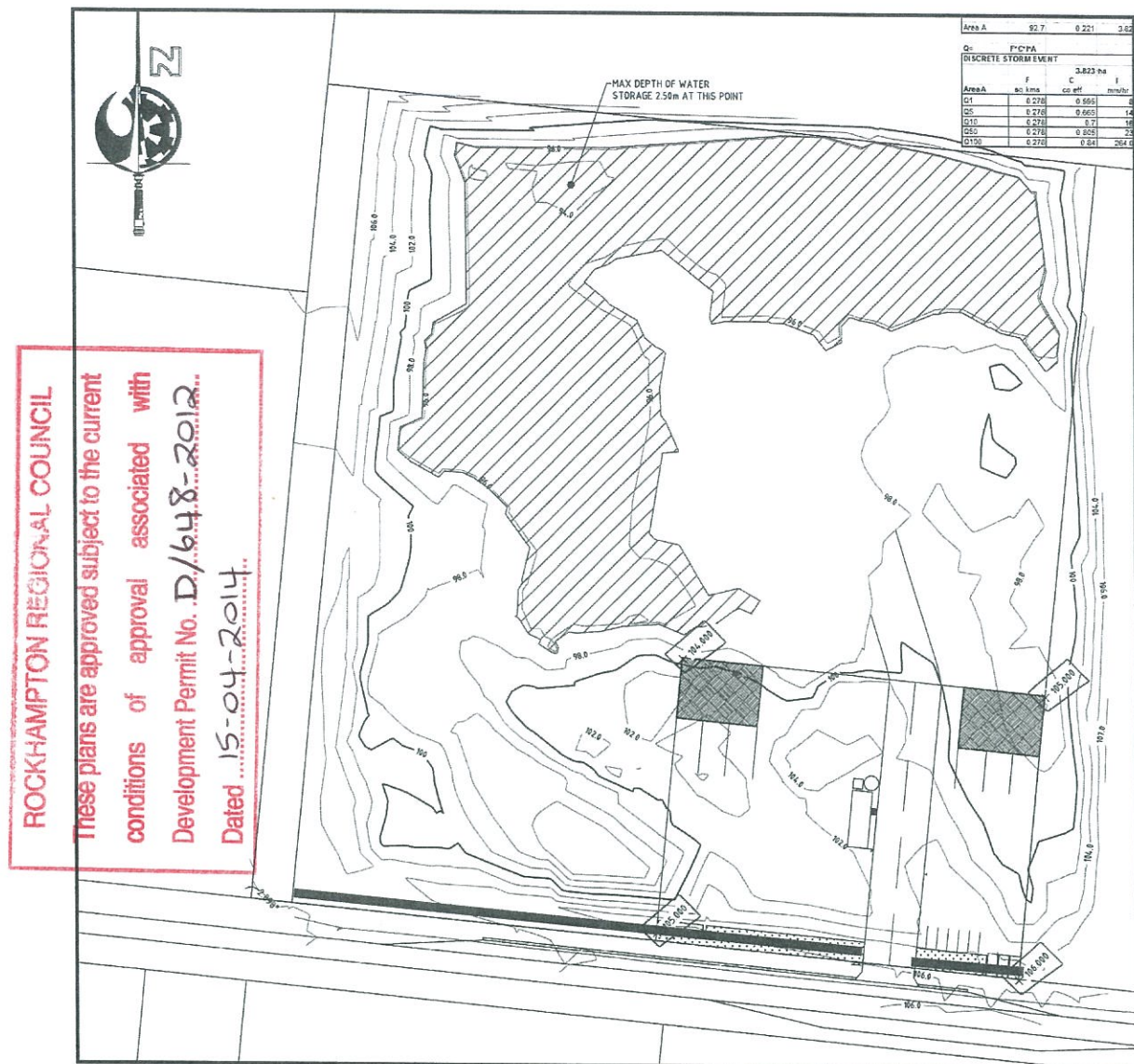


Figure 3  
Location of 2.4 m High Acoustic Barrier (Bold Red Line)

## CONCLUSIONS

It is proposed to utilise an existing quarry site (material no longer extracted from quarry) at 231 Lucas Street, Gracemere (Lot 1 on RP604651, County of Livingstone), for the purpose of a waste disposal facility. It is the consultants understanding that this proposed waste disposal facility will be predominantly for building and construction materials, and will include both disposal of waste into the quarry pit and sorting and recycling of some materials. The proposed hours of operation will be daytime only. Potential noise sources associated with this waste disposal facility could include:

- truck movements;
- compactor;
- bulldozer;
- light vehicles.

The closest residences to the subject site (and separation distance) are as follows (as determined from site visit and Google Maps):



**Scale**

A3 Scale 1:400  
0 2 4 6 8 1:400  
DESCRIPTION

REV	REVISION	DATE
1	FOR CONSIDERATION	08/2015

**REVISIONS**

**PROJECT**  
WASTE DISPOSAL FACILITY  
231 LUCAS STREET  
GRACEMERE

**CLIENT**  
JP JRT PTY LTD  
9 CASSAM ST  
YEPPON QLD

**DRAWING TITLE**  
LANDSCAPING BUFFER  
SKETCH

**RPEQ**

Name	Signature	Number

drawn by: CER  
checked by: RAJ  
date: 08/2015  
sheet number: 1 OF 1

drawing no. D12.42OW-SK1

