

A circular receipt stamp with a clock-like border. The border contains numbers from 00 to 23. The center of the stamp contains the text: RECEIVED, 17 MAY 2012, and GCCC Records Services.

_____ / _____

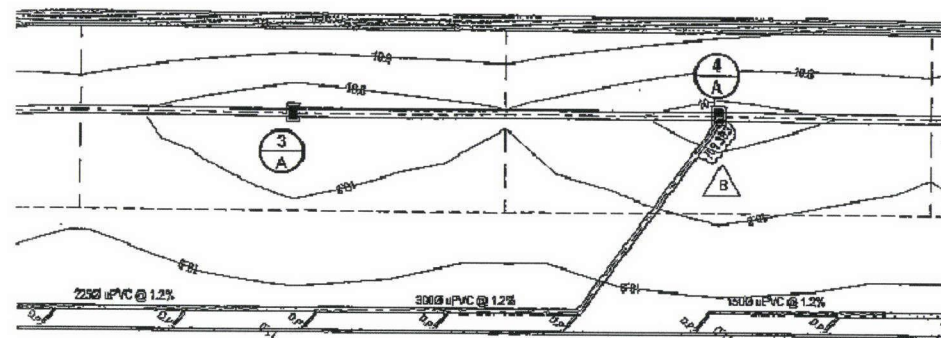


BOULDER
WALL

STORMWATER PLAN - 1

1:250

- * Approval for earthworks related works only
- * Sediment control devices must be provided (incl note the condition #15), including a sediment pond
- * Clean water diversion channels must be provided



FFL 11.00

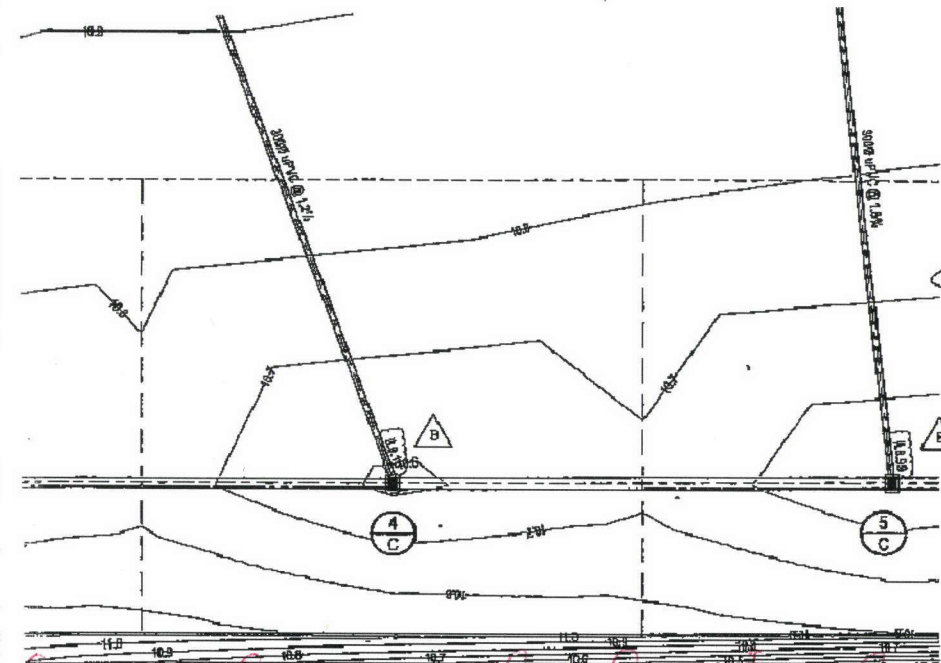
GOLD COAST CITY COUNCIL
ENGINEERING DRAWINGS

APPROVED

AS APPLICABLE AND SUBJECT TO
AMENDMENTS MARKED IN RED
AND THE CONDITIONS OF THE
DEVELOPMENT PLAN

[Signature]
SIGNATURE

16/05/12
DATE



PROJECT TEAM

Consulting Engineer:

i³ consulting pty ltd
engineering consultants
innovation, ingenuity, inspiration
3/626 Moggill Road
Chapel Hill, Qld 4069
www.i3consulting.com.au
AEN 89 106 675 156
P 67 3678 9100
F 67 3678 9144
P O Box 909
Kerremore, Qld 4059
mail@i3consulting.com.au
ACN 106 675 156
F 67 3678 9144

Engineers Certification:

Nicola Canto MIE Aust. CPEng.
NPER Civil & Structural
CAES 3356 RPEQ 6750

Signature: _____

Date: _____

LEGEND

- EXISTING STORMWATER
- PROPOSED STORMWATER
- FINISHED SURFACE CONTOUR
- RETENTION
- SEDIMENT FOREBAY / SCOUR PROTECTION
- STORMWATER STRUCTURE NUMBER

- NOTES:
- ALL STORMWATER DRAINAGE SHALL BE IN ACCORDANCE WITH AS/NZS 3500.3
 - ALL NON-PRESSURE PIPE SHALL BE HD PVC PIPE UNLESS NOTED OTHERWISE

B	INVERT LEVELS CHANGED	28/11/2011	BP
A	FOR APPROVAL	11/10/2011	BP
REV	DESCRIPTION	DATE	BY

FOR APPROVAL

Project
BUILDING 8 ON LOT 334/SP193431
CHRISTENSEN ROAD SOUTH
YATALA
for
MULTISPAN AUSTRALIA

Title
STORMWATER PLAN - 1

Drawn	ELPARGE	Date	09/11	Chief	T.S.MITH	Date	10/10/11
Design	ELPARGE	Date	7/9/11	Appr	N.CANTO	Date	11/10/11
Scale	AS SHOWN	AT		Chief	N.CANTO	Date	11/10/11
Project No.	11-129	Draw. No.	C06	Rev	B		

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DESIGN PARAMETERS:**(A-1) SOIL PROPERTIES - RETAINED MATERIAL**

SOIL - COMPACTED FILL BUT NOT TESTED - AVERAGE SOIL
 SOIL DENSITY = 19 kN/CUM
 INTERNAL FRICTIONAL ANGLE (PHI) = 25°
 COHESION = 5 KPa

$K_a = 0.30$

(A-2) SOIL PROPERTIES - FOUNDATION MATERIAL

SOIL - STIFF SILTY SANDY CLAY-NATURAL - AVERAGE SOIL
 SOIL DENSITY = 19 kN/CUM
 INTERNAL FRICTIONAL ANGLE (PHI) = 28°
 COHESION = 5 KPa
 ALLOWABLE BEARING CAPACITY OF SOIL = 100 kPa
 (ULTIMATE BEARING CAPACITY = 300 KPa - FOS = 3)

(B) STRUCTURAL CLASSIFICATION:

STRUCTURAL CLASSIFICATION = B
 STRUCTURAL CLASSIFICATION FACTOR = 1.0

(C) EXTERNAL STABILITY DESIGN VALUES:

LIMIT STATE DESIGN VALUES

OVERTURNING FACTOR = 1 (1.5 FOR WORKING STRESS)
 BASE SLIDING FACTOR = 1 (1.5 FOR WORKING STRESS)
 BEARING CAPACITY FACTOR = 1 (1.5 FOR WORKING STRESS)
 FOOTING FRICTIONAL COEFFICIENT = 0.7
 WALL/SOIL FRICTIONAL COEFFICIENT = 0.67

(D) SOIL SHEAR STRENGTH FACTORS:

SOIL FRICTIONAL ANGLE FACTOR = 0.9
 SOIL COHESION FACTOR = 0.9

(E) DESIGN LIVE LOAD = 5.0 kPa AS PER AS4678**(F) GLOBAL STABILITY CHECK IS NOT WITHIN THE SCOPE OF THIS DESIGN, EXPERT ADVICE TO BE SOUGHT AT AREA PRONE TO SLIPPAGE****NOTES**

- 1) PROVIDE 65/100 MM DIA DRAIN PIPE BEHIND ROCK WALL TO ALL RETAINING WALL
- 2) PROVIDE GEOTEXTILE TO ALL RETAINING WALL AS SHOWN
- 3) PROVIDE NO FINE CONCRETE/GRANULAR FILL - FREE DRAINING MATERIAL MINIMUM 300 MM THICK TO ALL RETAINING WALL
- 4) PROVIDE SPOON DRAIN OR IMPERMEABLE MATERIAL AT TOP AS SHOWN
- 5) DISCHARGE SPOON DRAIN RUNOFF INTO STORM WATER DRAIN
- 6) DISCHARGE WATER FROM DRAIN PIPE INTO STORM WATER DRAIN
- 7) LOAD FROM TREES IS NOT WITHIN THE SCOPE OF THIS DESIGN, EXPERT ADVICE TO BE SOUGHT

ROCKS:

- 1) ALL ROCK MATERIAL SHALL BE SOUND, DURABLE, UNFRACTURED, IGNEOUS OR METAMORPHIC OR SANDSTONE ROCK OF ANGULAR SHAPE, IT SHALL BE CLEAN & FREE OF TOPSOIL OR ANY ORGANIC MATTERS
- 2) PRIOR TO PLACEMENT OF ROCKS GEOTEXTILE FABRIC TO BE LOCATED AGAINST FACE OF CUT EMBANKMENT. CONTINUE FABRIC TO SURFACE AND TURN BACK UNDER TOP ROCK - TYPICAL ALL ROCK WALLS

NOTES

- 1) PERIODIC INSPECTIONS WILL BE CARRIED OUT AND HENCE IT IS ROCKWALL CONTRACTOR/CIVIL CONTRACTOR/DEVELOPER'S RESPONSIBILITY TO VERIFY ALL ELEMENTS AS PER DETAIL DRAWINGS DURING CONSTRUCTION.
- 2) ROCK RETAINING WALL IS DESIGNED FOR APPLIED DESIGN CAPACITY SOIL LOADING ONLY FOR STATED SOIL PARAMETERS
- 4) REFER TO DRAWING S2 FOR ROCKWALL DETAILS AND NOTES

- 8) CONCRETE FOOTING - 150MM THICK AND 300MM THICK NO FINE CONCRETE BEHIND WALL UP TO 300mm ABOVE Q100 LEVEL - AS PER GCCC - FLOOD SEARCH REPORT - NOT AVAILABLE

NOTES

- 1) PREPARE BASE GROUND AS SHOWN WITH FALL TOWARDS BACK OF WALL AND CUT FRONT AND BACK TO RECEIVE CONCRETE
- 2) FIRST LAYER OF THE ROCKS TO BE PRESSED VERY HARD WITH MACHINE WITH FALL AS SHOWN ON TO CONCRETE
- 3) OTHER LAYERS TO BE PRESSED OVER ROCKS WITH MACHINE AS ABOVE
- 4) ROCK WALL TO BE MINIMUM "C+150" mm BELOW GROUND
- 5) 5.0 kPa LIVE LOAD AS PER AS4678 AND NO OTHER LIVE LOAD OR SURCHARGE EXCEPT LATERAL EARTH PRESSURE
- 6) ALLOWABLE BEARING CAPACITY OF THE FOUNDATION MATERIAL = 100 KPa - TO BE CHECKED ON SITE BY GEOTECH ENGINEER
- 7) GLOBAL STABILITY CHECK IS NOT WITHIN THE SCOPE OF THIS DESIGN
- 8) NO GROUND WATER PRESSURE AS WELL AS OTHER PRESSURE ON WALL
- 9) ROCK WALL RUNS ADJACENT TO ANY OTHER SERVICE OR CROSSES ANY OTHER SERVICE, ENGINEER TO BE CONSULTED FOR DESIGN & DETAIL
- 10) SOIL PARAMETERS ARE BASED ON AN AVERAGE SOIL AS PER AS4678 AS PER SOIL REPORT BY CQA - JOB NO. CQA/03/177 - 04/06/2003 - RETAINED SOIL COMPACTED BUT NOT TESTED
- 11) NO LOAD HAS BEEN ALLOWED FROM ANY EXISTING STRUCTURES OR ANY STRUCTURES OR TREES
- 12) FLOOD - AS PER PLAN NO. 1396-96-13 BY GASSMAN DEVELOPMENT PERSPECTIVE WITH Q100 LEVEL PLOTTED ON DRAWING

WE CONSIDER THE WALLS WILL BE STRUCTURALLY ADEQUATE TO WITHSTAND THE DESIGN EARTH PRESSURE ONLY IF CONSTRUCTED IN ACCORDANCE WITH THE ATTACHED DETAILS AND GOOD CONSTRUCTION PRACTICE

UMESH C KHATRI
 RPEQ-4829.

LIMITATION OF THE DESIGN & DETAIL

- 1) THE RETAINING WALL HAS BEEN DESIGNED FOR 1/3 HYDROSTATIC PRESSURE
- 2) FILL MATERIAL BEHIND ROCKWALL TO BE COMPACTED AS PER CQA REPORT
- 3) ALL SURFACE WATER TO BE DIRECTED AWAY FROM THE ROCK WALL
- 4) THE STABILITY OF BOULDER WALL COULD BE COMPROMISED IF OVERLAND WATER FLOW IS ALLOWED TO FLOW OVER OR BEHIND THE WALL
- 5) THE COMPLETED RETAINING WALL RELIES ON THE GROUND AT THE BASE OF THE ROCKWALL FOR STABILITY
- 6) ANY EXCAVATION IN FRONT OF THE WALL OR BEHIND THE WALL OR RAISING OF THE FINISHED HEIGHT WILL COMPROMISE THE STRUCTURAL INTEGRITY OF THE WALL
- 7) NO LOAD FROM BUILDING OR STRUCTURE OR TREES ON TO ROCKWALL
- 8) WATER POOLING IN FRONT OF WALL IS NOT PERMITTED WHICH WILL COMPROMISE THE STRUCTURAL INTEGRITY OF ROCKWALL
- 9) ALL RETAINING WALL SHALL BE 2.0M AWAY FROM COUNCIL SEWER OR SWD OR AS REQUIRED BY LOCAL AUTHORITY
- 10) ROCKWALL IS NOT DESIGNED FOR LOAD DUE TO FLOWING WATER

AS APPLICABLE AND SUBJECT TO AMENDMENTS MARKED IN RED AND THE CONDITIONS OF THE DEVELOPMENT PERMIT

PROJECT

PROPOSED ROCK RETAINING WALL AT BUILDING -8 ON LOT 334/SP193431 CHRISTENSEN ROAD SOUTH YATALA, QLD

SCALE :
AS SHOWN

DRAWN :
UK

DATE :
APR 2012

ENGINEER

Umesh C Khatri 19 Horizon Place
 BE(Civil), CPEng, MFIE Eight Mile Plains
 MIE(Aust), NPER-3, Q-4113
 RPEQ. Tel/Fax: (07) 3341 8601
 MOB : 0421 891 149

TITLE:

GENERAL & CONSTRUCTION NOTES

Drawing No BR/YATALA-BLDG-8-CHRISTENSEN RD/1204/S1

Signature 16/05/12
 DATE

NOTES

- 1) PREPARE BASE GROUND AS SHOWN WITH FALL TOWARDS BACK OF WALL AND CUT FRONT AND BACK TO RECEIVE CONCRETE
- 2) 150mm THICK CONCRETE TO BE PLACED & COMPACT ON PREPARED GROUND WITH FALL. ALLOW 1 TO 2 HRS FOR INITIAL SETTING OF CONCRETE
- 3) FIRST LAYER OF THE ROCKS TO BE PRESSED VERY HARD WITH MACHINE WITH FALL AS SHOWN ON TO CONCRETE.
- 4) PLACE CONCRETE AROUND BOULDER AS SHOWN WITH FALL TOWARDS FRONT
- 5) OTHER LAYERS TO BE PRESSED OVER ROCKS WITH MACHINE AS ABOVE
- 6) ROCK WALL TO BE MINIMUM "C+150" mm BELOW GROUND
- 7) 5.0 kPa LIVE LOAD AS PER AS4678
- 8) ALLOWABLE BEARING CAPACITY OF THE FOUNDATION MATERIAL -TO BE 100 KPa
- 9) GLOBAL STABILITY CHECK IS NOT WITHIN THE SCOPE OF THIS DESIGN
- 10) NO GROUND WATER PRESSURE AS WELL AS NO OTHER PRESSURE
- 11) ROCK WALL RUNS ADJACENT TO ANY OTHER SERVICE OR CROSSES ANY OTHER SERVICE, ENGINEER TO BE CONSULTED FOR DESIGN & DETAIL.

ROCK WALL HEIGHT TABLE

Wall Height mm	A mm	B mm	C mm	C+150 mm	D
1000	600	350	150	300	3
1500	800	400	250	400	3
2000	1100	500	350	500	3
2500	1400	600	450	600	3
3000	1700	700	550	700	3

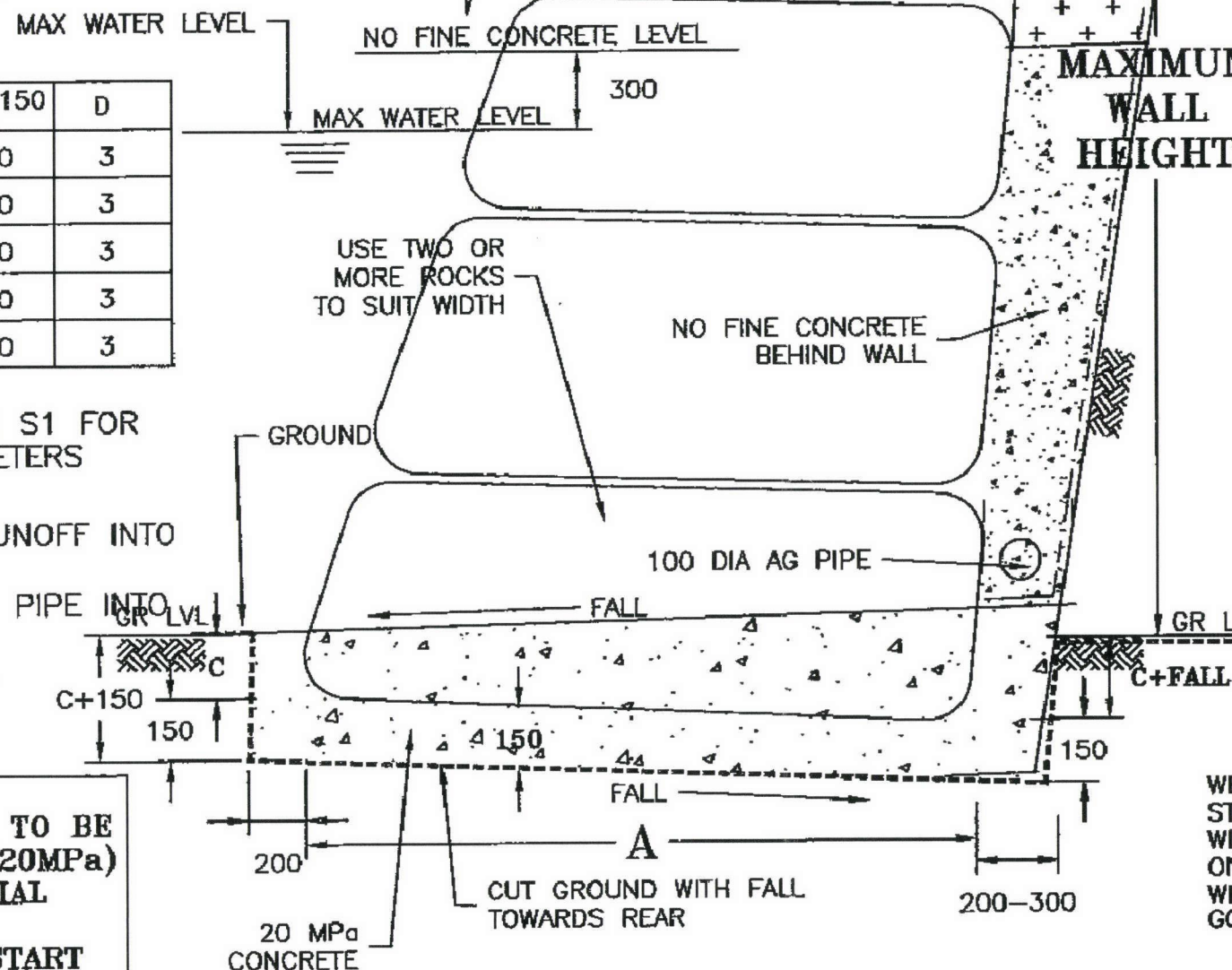
REFER TO DRAWING S1 FOR
NOTES AND PARAMETERS

NOTES

- 1) DISCHARGE SPOON DRAIN RUNOFF INTO STORM WATER DRAIN
- 2) DISCHARGE WATER FROM AG PIPE INTO STORM WATER DRAIN
- 3) PROVIDE GEOTEXTILE TO ALL RETAINING WALL AS SHOWN

CONCRETE-

- 1) 150mm THICK CONCRETE TO BE PLACED AND COMPACTED (20MPa)
- 2) ALLOW 1-2 HRS FOR INITIAL SETTING OF CONCRETE
- 3) AFTER INITIAL SETTING, START PLACING BASE BOULDER & CONCRETE AROUND AS SHOWN



ROCK WALL SECTION

N.T.S.

- NOTE: 1) REFER TO PLAN NO. 1396-96-13 FOR Q100 PLOTTED ON PLAN -BY GASSMAN DEVELOPMENT PERSPECTIVE
- 2) AS PER GCCC - FLOOD SEARCH REPORT - Q100 LEVEL WAS NOT AVAILABLE
- 3) BOULDER RETAINING WALL NEAR CREEK - DESIGNED AND DETAILED FOR 1/3 HYDROSTATIC PRESSURE DUE TO POSSIBLE FLOODING AND
- 4) USE 150mm CONCRETE FOOTING & 300mm THICK NO FINE CONCRETE BEHIND WALL

LIMITATION OF THE DESIGN & DETAIL

- 1) THE RETAINING WALL HAS BEEN DESIGNED FOR 1/3 HYDROSTATIC PRESSURE
- 2) FILL MATERIAL BEHIND ROCKWALL TO BE COMPACTED AS PER CQA REPORT
- 3) ALL SURFACE WATER TO BE DIRECTED AWAY FROM THE ROCK WALL
- 4) THE STABILITY OF BOULDER WALL COULD BE COMPROMISED IF OVERLAND WATER FLOW IS ALLOWED TO FLOW OVER OR BEHIND THE WALL
- 5) THE COMPLETED RETAINING WALL RELIES ON THE GROUND AT THE BASE OF THE ROCKWALL FOR STABILITY
- 6) ANY EXCAVATION IN FRONT OF THE WALL OR BEHIND THE WALL OR RAISING OF THE FINISHED HEIGHT WILL COMPROMISE THE STRUCTURAL INTEGRITY OF THE WALL
- 7) NO LOAD FROM BUILDING OR STRUCTURE OR TREES ON TO ROCKWALL
- 8) WATER POOLING IN FRONT OF WALL IS NOT PERMITTED WHICH WILL COMPROMISE THE STRUCTURAL INTEGRITY OF ROCKWALL
- 9) ALL RETAINING WALL SHALL BE 2.0M AWAY FROM COUNCIL SEWER OR SWD OR AS REQUIRED BY LOCAL AUTHORITY
- 10) ROCKWALL IS NOT DESIGNED FOR LOAD DUE TO FLOWING WATER

WE CONSIDER THE WALLS WILL BE STRUCTURALLY ADEQUATE TO WITHSTAND THE DESIGN EARTH PRESSURE ONLY IF CONSTRUCTED IN ACCORDANCE WITH THE ATTACHED DETAILS AND GOOD CONSTRUCTION PRACTICE

GOLD COAST CITY COUNCIL
ENGINEERING DRAWINGS

APPROVED

IS APPLICABLE AND SUBJECT TO
AMENDMENTS MARKED IN RED
AND THE CONDITIONS OF THE
DEVELOPMENT PERMIT

[Signature] 16/05/12
SIGNATURE DATE

UMESH C KHATRI
RPEQ-4829.

PROJECT

PROPOSED ROCK RETAINING WALL AT BUILDING -8
ON LOT 334/SP193431 CHRISTENSEN ROAD SOUTH
YATALA, QLD

SCALE :
AS SHOWN

DRAWN :
UK

DATE :
APR 2012

ENGINEER

Umesh C Khatri
BE(Civil), CPEng, MFIE
MIE(Aust), NPER-3,
RPEQ.

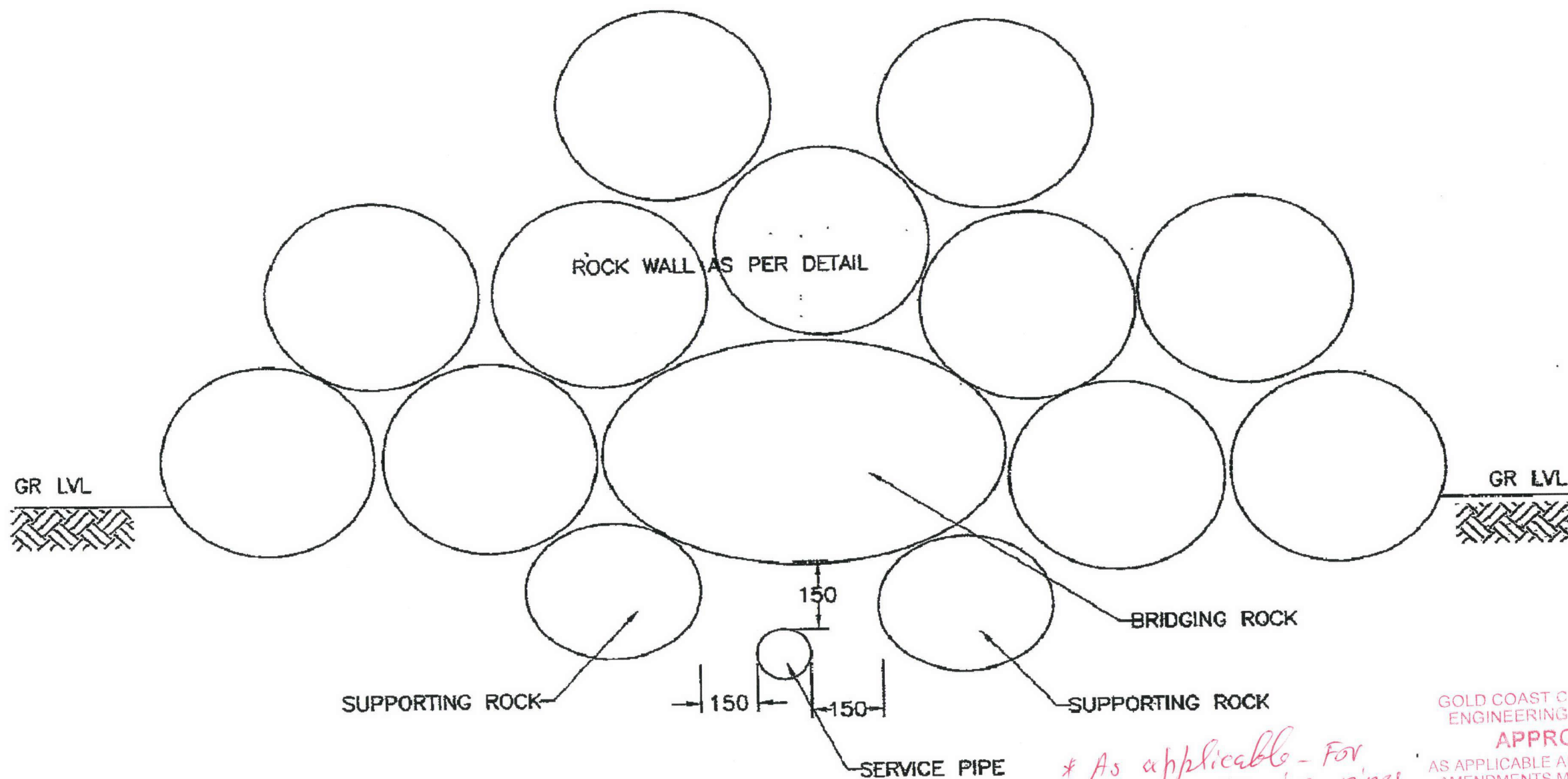
19 Horizon Place
Eight Mile Plains
Q-4113

Tel/Fax: (07) 3341 8601
MOB : 0421 891 149

TITLE:

**ROCKWALL DETAIL WITH
CONCRETE FOOTING &
NO FINE CONCRETE BEHIND WALL**

Drawing No.: BR/YATALA-BLDG-8-CHRISTENSEN RD/1204/S2

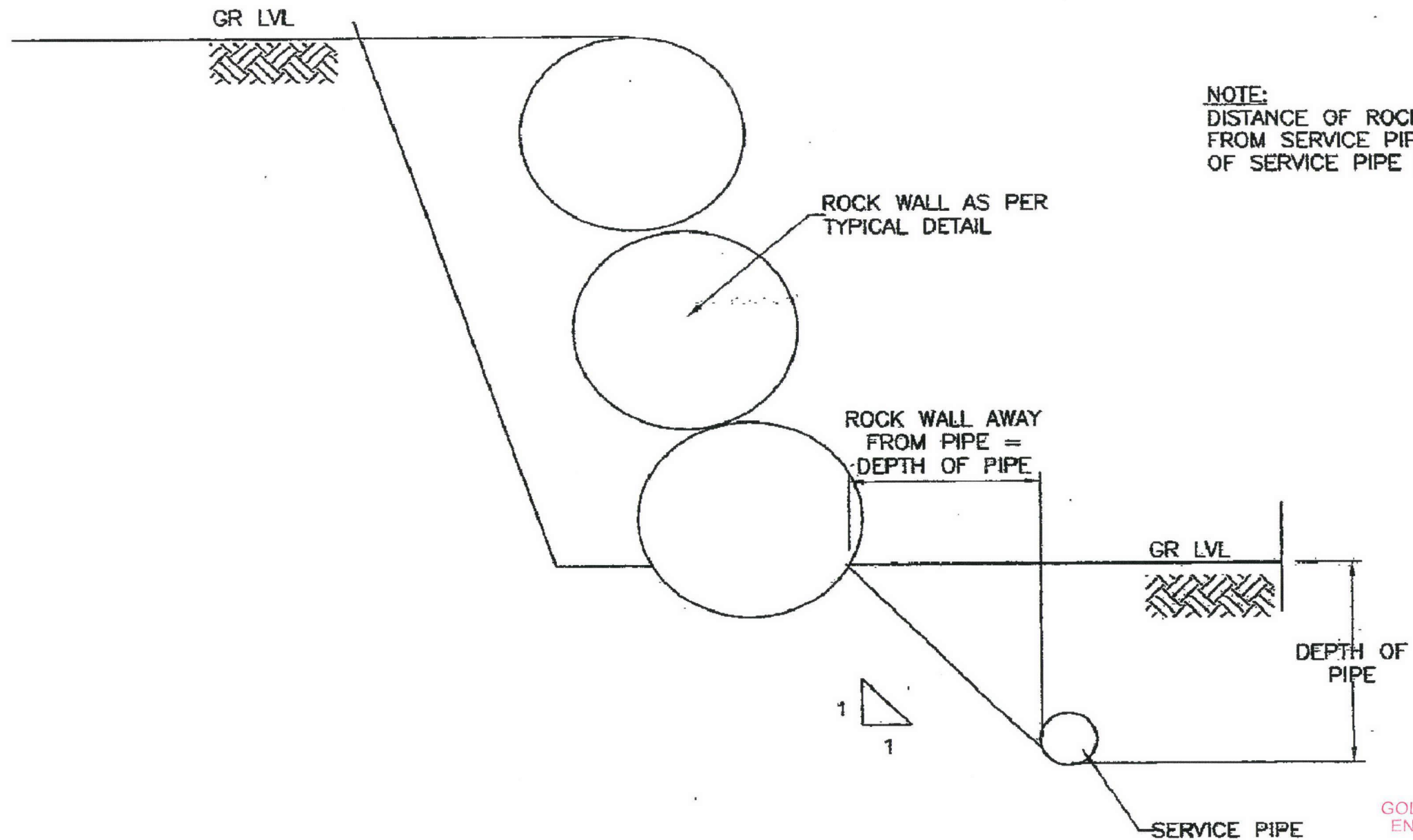


TYPICAL SECTION FOR BRIDGING DETAIL AT SERVICE PIPE

** As applicable - For private service pipes only.*

GOLD COAST CITY COUNCIL
ENGINEERING DRAWINGS
APPROVED
AS APPLICABLE AND SUBJECT TO
AMENDMENTS MARKED IN RED
AND THE CONDITIONS OF THE
DEVELOPMENT PERMIT
[Signature] 16/05/12
SIGNATURE DATE

PROJECT PROPOSED BRIDGING OVER SERVICE PIPE	SCALE : AS SHOWN	ENGINEER Umesh C Khatri BE(Civil), CPEng, MFIE MIE(Aust), NPER-3, RPEQ. 19 Devonlea Street Eight Mile Plains Q-4113 Tel/Fax: (07) 3341 8601 MOB : 0421 891 149	TITLE: BRIDGING DETAIL OVER SERVICE PIPE
	DRAWN : UK		
	DATE : FEB 2003		Drawing No.: BRIDGING/01



TYPICAL DETAIL OF ROCK WALL AT SERVICE PIPE PARALLEL TO ROCK WALL

GOLD COAST CITY COUNCIL
ENGINEERING DRAWINGS

APPROVED

AS APPLICABLE AND SUBJECT TO
AMENDMENTS MARKED IN RED
AND THE CONDITIONS OF THE
DEVELOPMENT PERMIT

Blume 16/05/12
SIGNATURE DATE

**Private services
pipes only*

©

PROJECT

PROPOSED DETAIL AT SERVICE PIPE PARALLEL
TO ROCK WALL

SCALE :
AS SHOWN

DRAWN :
UK

DATE :
FEB 2003

ENGINEER

Umesh C Khatri
BE(Civil),CPEng,MFIE
MIE(Aust),NPER-3,
RPEQ.

19 Devonlea Street
Eight Mile Plains
Q-4113
Tel/Fax:(07)3341 8601
MOB : 0421 891 149

TITLE:

**DETAIL AT SERVICE PIPE
PARALLEL TO ROCK WALL**

Drawing No.: SERVICEPIPE/PARALLEL/01



FIRE ACCESS TO BUILDING 7

GRATED PIT
SL 10.84

GRATED PIT
SL 10.75

GRATED PIT
SL 10.70

AWNING OVERHEAD

FFL 11.00

AWNING OVERHEAD

GRATED PIT
SL 10.78

REFER STRUCTURAL DRAWINGS
FOR RETAINING WALL DETAILS

GOLD COAST CITY COUNCIL
ENGINEERING DRAWINGS
APPROVED

AS APPLICABLE AND SUBJECT TO
AMENDMENTS MARKED IN RED
AND THE CONDITIONS OF THE
DEVELOPMENT PERMIT

[Signature]
SIGNATURE

16/05/12
DATE

FINISHED SURFACE LEVELS PLAN - 1

1:250

PROJECT TEAM

Consulting Engineer:

i³ consulting pty ltd
engineering consultants
innovation, ingenuity, inspiration
3/636 Moggill Road
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p 07 3878 9100
PO Box 909
Kenmore, Qld 4069
mail@icubed.com.au
ACN 106 675 156
f 07 3878 9144

Engineers Certification:

Nicola Canto MIE Aust. CPEng.
NPER Civil & Structural
CAES 3355 RPEQ 6750

Signature: *[Signature]*

Date: 12/10/11

LEGEND

- FINISHED SURFACE CONTOURS
- HINGE LINE
- CARPARK - FLEXIBLE PAVEMENT
- TRUCK PARKING - 150mm THICK CBR15
- BIORETENTION
- FINISHED SURFACE LEVEL

- NOTES:
- SURFACES ARE TO BE GRADED LINEARLY BETWEEN POINTS.
 - REFER TO STRUCTURAL DRAWINGS FOR CONCRETE PAVEMENT DETAILS
 - CARPARK PRELIMINARY PAVEMENT DESIGN:
25mm ASPHALT
100mm CBR 60
100mm CBR 45
 - CARPARK PAVEMENT DESIGN SHALL BE CONFIRMED WHEN CBR'S ARE AVAILABLE
 - ALL KERBS SHALL BE IPWEAQ BARRIER KERB TYPE B2 UNLESS NOTED OTHERWISE. REFER IPWEAQ STD DRAWING NO. R-0080.
 - CONFIRM ALL LOCATIONS AND HEIGHTS BEFORE COMMENCING WORK.

REV	DESCRIPTION	DATE	BY
-----	-------------	------	----

FOR APPROVAL

Project
BUILDING 8 ON LOT 334/SP193431
CHRISTENSEN ROAD SOUTH
YATALA
for
MULTISPAN AUSTRALIA

FINISHED SURFACE LEVELS PLAN - 1

Drawn	Date	Chkd	Date
B.PARGE	9/9/11	T.SMITH	10/10/11
Design	Date	Apprd	Date
B.PARGE	7/9/11	N.CANTO	11/10/11
Scale	As	Certif	Date
AS SHOWN		N.CANTO	11/10/11
Project No.	Dwg. No.	Rev	
11-129	C04	A	

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16 May 2012
Ranji De Silva
Implementation & Assessment Branch, Nerang
(07) 5582 8866
20120423 11-129
PN307555/03/DA6
Application No: OPW201200482

Multispan Australia Pty Ltd
C/- I³ Consulting
PO BOX 909
KENMORE QLD 4069



Dear Sir/Madam

DECISION NOTICE TO APPLICANT

Application Type: Operational Works Change to Ground level
Property Description: Lot 334 on SP193431
Property Location: 84 - 160 Christensen Road South, Stapylton

I wish to advise that on 16 May 2012 the issue of a Development Permit for operational works for change to ground level at the site described above, was approved subject to the conditions outlined in the attached document.

An extract from the *Sustainable Planning Act 2009*, which details your appeal rights, is attached for your information.

If you do not appeal the decision, this Decision Notice is taken to be the Development Approval and has effect immediately.

Tracking your application

You can view your development applications online and track their progress at goldcoastcity.com.au:

[Planning, Building & Environment > Planning & Development Online](#)

Contacting us

Should you wish to clarify any issues contained in this letter, please do not hesitate to contact the Planning Assessment area on telephone (07) 5582 8866.

Yours faithfully

Dr Shahadat Hossain

EXECUTIVE COORDINATOR ENGINEERING & ENVIRONMENTAL ASSESSMENT

For the Chief Executive Officer

rd

VIEWABLE ☒
16/5 JS

NATURE OF DECISION

A Council approves the issue of a development permit for the following operational work assessable under the planning scheme:

1 Operational work (change to ground level)

All other aspects of assessable operational work are **not** approved by this approval.

B The approval is subject to the following conditions:

APPROVED PLANS/DRAWINGS

1 Development to be generally in accordance with specified plans/drawings as amended in red

The development must be carried out generally in accordance with the approved plans/drawings listed below, as amended in red, stamped and returned to the applicant with this decision notice.

Plan No.	Rev.	Title	Date	Prepared by	Certified by
11-129 CO6	B	Stormwater Plan - 1	28/11/2012	I ³ Consulting	RPEQ 6750
RD/1204/S1		General & Construction Notes	April 2012	Umesh C Khatri	RPEQ4829
RD/1204/S2		Rockwall Details	April 2012	Umesh C Khatri	RPEQ4829
Bridging 01		Bridging Details Over Service Pipe	Feb 2003	Umesh C Khatri	RPEQ4829
SP/Parallel/01		Detail at Service Pipe Parallel to wall	Feb 2003	Umesh C Khatri	RPEQ4829
11-129 CO4	A	Finished Surface Level Plan - 1	11/10/2011	I ³ Consulting	RPEQ 6750

Information note: A change to the approved work will be taken to be generally in accordance with the approved plans/drawings for the purpose of this condition if:

- the approved work is of a type specified in Attachment 1 – Acceptable Tolerances; and*
- the change is within the acceptable tolerances specified for that type of work in Attachment 1 – Acceptable Tolerances; and*
- the change does not cause the development to contravene any other conditions of this approval or conditions of any related material change of use or reconfiguring a lot approval.*

If the change is not within the acceptable tolerances in Attachment 1 – Acceptable Tolerances but the Applicant is of the view that the change is generally in accordance with the approved plans/drawings, the Applicant can submit a Generally in Accordance with Request to Council, for Council's assessment.

2 Changes requiring further approval

Changes to the approved design that are not generally in accordance with the approved plans/drawings require approval in accordance with the *Sustainable Planning Act 2009*.

Information note: The Sustainable Planning Act 2009 sets out the procedures for changing approvals where the change can be classified as a permissible change. If the change is not a permissible change, a new development approval is required.

3 Decision notice and approved plans/drawings to be retained on-site

A copy of this decision notice and stamped approved plans/drawings must be retained on site at all times. This decision notice must be read in conjunction with the stamped approved plans to ensure consistency in construction, establishment and maintenance of approved works.

4 Resolution of conflict between conditions and plans

The conditions of this approval are to be read in conjunction with the attached stamped approved engineering drawings. Where a conflict occurs between the conditions of this approval and the stamped approved engineering drawings, the conditions of this approval shall take precedence.

CONSTRUCTION MANAGEMENT

5 Noise management

Noise from construction activities must not cause an 'environmental nuisance' (within the meaning of that term set out in the *Environmental Protection Act 1994*) at any sensitive receptor stated in schedule 1 of the *Environmental Protection (Noise) Policy 2008*.

6 Dust management

The release of dust and particulate matter from construction activities must not cause an 'environmental nuisance' (within the meaning of that term set out in the *Environmental Protection Act 1994*) at any sensitive receptor stated in schedule 1 of the *Environmental Protection (Noise) Policy 2008*.

7 Haulage access / site management

- a Prior to the commencement of works, the applicant must provide a vehicle barrier along the frontages of the land, to ensure that all vehicles only use crossovers approved by the Chief Executive Officer.
- b Loading/unloading operations must be conducted entirely within the site and vehicles waiting to be loaded/unloaded must also stand within the site.
- c All reasonable methods are to be used to reduce nuisance from dust, noise, vibration, smoke and material tracked onto public roads as a result of hauling and filling operations. Upon receipt of a dust nuisance complaint or notification of a dust nuisance by the Council, the applicant is to take reasonable and immediate action to remedy the dust problem to the satisfaction of the Contributed Assets Inspector.
- d The site must be maintained in a clean and tidy state at all times. Satisfactory arrangements must be made for the collection, storage and disposal of all waste materials.
- e Non-recyclable debris must be transported from the site and disposed of at an approved waste facility. Combustion of any material is not permitted on the subject site without prior approval of Council.
- f The applicant must ensure that gravel access areas to the site, transport dust covers and shake (hose) down areas are in place to control both on-site dust nuisance and contamination of external properties, roadways and receiving waterways.
- g Any damage to property (including pavement damage) is to be rectified to the satisfaction of Council prior to the earlier of Council issuing a letter accepting the works on-maintenance or a request for compliance assessment of the subdivision plan. The surrounding carriageways are to be kept clean of any

material carried onto the roadway by construction vehicles. Any work carried out by Council to remove material from the roadway will be at the applicant's expense and any such cost are payable prior to the earlier of acceptance of the works on-maintenance or a request for compliance assessment of the subdivision plan.

8 Transport of soil/fill/excavated material

During the transportation of soil and other fill/excavated material:

- a All trucks hauling soil, or fill/excavated material must have their loads secure and covered;
- b Any spillage that falls from the trucks or their wheels must be collected and removed from the site and streets along which the trucks travel, on a daily basis; and
- c Prior to vehicles exiting the site, measures must be taken to remove soil from the wheels of the vehicles to prevent soil and mud being deposited on public roads.

9 Water usage

The use of potable water is not permitted in activities associated with road and pavement construction, the compaction of fill material or dust suppression. The use of recycled water is encouraged, especially where other alternative sources do not exist. Where recycled water is proposed to be used:

- a The use of the recycled water must be in accordance with the requirements of the Allconnex Water Recycled Water Management Plan (RWMP), which sets out the requirements for transport and use of recycled water;
- b The applicant must first complete the Recycled Water User Operator Training with Allconnex Water, in accordance with the RWMP. Proof of completion of the training course will be by issue of a valid certification card;
- c The applicant can only contract to use a recycled water carrier who is accredited and certified by Allconnex Water. Accreditation requires a current authorised agreement between the water carrier and Allconnex Water; and
- d The water carrier is only allowed to employ certified tanker operator/drivers, who have completed the recycled-water training course with Allconnex Water and hold a valid certification card.

Information note:

To obtain a copy of the management plan and also to obtain a list of approved water carrier operators, the applicant should contact Allconnex Water: Senior Officer Recycled Water ph. (07) 5582 8422 Allconnex Water ph. 1300 366 692.

Potable water is defined as water treated to drinking water standards (NHMRC guidelines 1996) and being available in Councils normal reticulated potable water supply system. Recycled water is defined as treated wastewater in class A+, A B or C in accordance with the Public Health Regulations (NO1) 2008.

10 Workplace health and safety

The *Workplace Health and Safety Act 1995* and *AS 1742 Manual of Uniform Traffic Control Devices* must be complied with in carrying out the works, including ensuring safe traffic control and safe public access in respect of works being conducted on a road.

EARTHWORKS DESIGN AND MANAGEMENT

11 Retaining structures – design and construction

- a Retaining structures and associated footings must be designed and constructed in accordance with *AS 4678 – 2002 Earth-retaining structures*.

- b Retaining structures and associated footings must comply with *Planning Scheme Policy 11 - Land Development Guidelines, Standard Specifications and Drawings* including in particular, but not limited to:
 - i Section 3.2.7 (Cut/fill batters and earth retaining structures); and
 - ii Section 7.7 (Building near or over Council water, sewer and/or stormwater services).
- c Retaining structures adjoining roads, car parking areas or other structures must be designed and constructed to take surcharge loadings. Design drawings must indicate the point of discharge for surface stormwater and subsoil drainage that is collected behind the retaining structures.
- d Retaining structures must be located with a minimum setback of 0.6 metre from the property boundaries.
- e Retaining structures must be made of durable materials not subject to rot and insect attack and have a minimum design life of 60 years.

12 Compliance with Australian Standards

- a The earthworks must be carried out in accordance with AS 3798-1996 *Guidelines on earthworks for commercial and residential developments*.
- b Supervision of bulk earthworks must be to Level 1 and the frequency of field density testing must be in accordance with Table 8.1 of AS 3798-1996.
- c Material must be placed in layers, watered and compacted to achieve the specified density ratio as monitored in Table 5.1 - Guidelines for Minimum Relative Compaction of AS 3798-1996.

13 Cut and fill batters - design and construction

Cut/fill batters must be constructed in accordance with section 3.2.7 of Planning Scheme Policy 11 - Land Development Guidelines, Standard Specifications and Drawings.

14 Stabilisation of batters

All batters are to be stabilised within 10 days of the completion of bulk earthworks. Stabilisation techniques may include hydro mulching, returfing, erosion resistant blankets etc.

15 Erosion and sediment control

Sediment, erosion and dust control measures must be implemented in accordance with the approved plans/drawings and the *Soil Erosion and Sediment Control Engineering Guidelines for Queensland Construction Sites* (The Institution of Engineers, Australia Queensland Division June 1996). Additional sediment, erosion and dust control measures must be implemented as directed by Council officers upon site inspection.

16 Removal of excess fill

Where it is proposed to remove excess fill from the site, the following information must be provided to the Contributed Assets Inspector for approval prior to the commencement of works:

- a The amount of fill to be removed;
- b The location of the spoil site; and
- c The proposed haul route.

17 Vibratory compaction equipment

If the use of vibratory compaction equipment within 100 metres of any building or structure is proposed, the applicant must implement appropriate construction procedures including monitoring and the undertaking of building inspection reports.

18 Safety fences, barriers and guard railing

The applicant must, prior to the earthworks being accepted 'On Maintenance', install adequate safety fences, barriers and guard railing to ensure any reasonably foreseeable risk of injury arising from the earthworks or potential for tampering with the earthworks are minimised as far as reasonably practicable.

GEOTECHNICAL

19 Certification of retaining structures long-term factor of safety

The applicant must submit to Council:

immediately after completion of all bulk earthworks, certification from a RPEQ specialising in geotechnical engineering confirming that all constructed retaining structures (including boulder walls) on the site have achieved adequate stability with a long-term factor of safety greater than or equal to 1.5 against geotechnical failures.

HYDRAULICS

20 No worsening of hydraulic conditions

The development must be designed and constructed so as to result in:

- a No increase in peak flow rates downstream from the site; and
- b No increase in flood levels external to the site; and
- c No increase in duration of inundation external to the site that could cause loss or damage.

21 Alteration of overland flow paths

Overland flow paths on the site (if any) must not be altered in a way that inhibits or alters the characteristics of existing overland flows on other properties or that creates an increase in flood damage on other properties.

ENVIRONMENTAL

22 Management of existing riparian vegetation

The applicant must ensure:

- a The existing riparian vegetation along Sandy Creek is protected, retained and managed during construction activities in accordance with any Final Tree Management Report and Australian Standard AS 4970 - 2009 *Protection of trees on development sites* to avoid any of the following:
 - i Structural damage to the vegetation including root damage;
 - ii Compaction of the root plate including parking of any vehicles;
 - iii Filling of soil within the Tree Protection Zone (TPZ) and/or drip zone of any vegetation;
 - iv Storage of any building materials within the drip zone of any vegetation; and
 - v Long-term harm to the health of the tree.

Please note, vegetation removal is not permitted as part of this approval. Any request to remove protected vegetation must be submitted to, and approved by Council's Environmental Planning Section.

23 Fencing of existing riparian vegetation and prohibited activities

- a Prior to the commencement of works, the applicant must fence the limits of the retained vegetation drip zone along Sandy Creek for the extent of the rear boundary of works. Within this zone the following activities are not permitted:
 - i Storage and mixing of materials;
 - ii Vehicle parking;
 - iii Liquid disposal;
 - iv Machinery repairs and /or refuelling;
 - v Construction of site office or shed;
 - vi Combustion of any material;
 - vii Stockpiling of soil, rubble or debris;
 - viii Any filling or excavation including trenching, topsoil skimming and/or surface excavation, unless otherwise approved by the Chief Executive Officer; and
 - ix Unauthorised application of pesticides, herbicides or chemicals.
- b The applicant must fence the retained vegetation prior to the engineering pre-start for checking at this meeting.

24 Approved landscape works

The applicant must ensure that area to the rear of the proposed retaining wall and earthworks is landscaped in accordance with the approved plan/s, approved as part of OPW201101805 being Operational Works – Landscaping.

RELATIONSHIP WITH OTHER APPROVALS/REQUIREMENTS

25 Compliance with related development approvals

Conditions of all related development approvals and all approved documentation (including but not limited to plans, drawings and reports) for this site must be complied with.

WORKS – COMPLIANCE

26 Compliance with Land Development Guidelines, Specifications and Drawings

Unless otherwise expressly specified in these conditions, all work the subject of this approval must be designed, constructed and maintained in accordance with:

Planning Scheme Policy 11 – Land Development Guidelines, Standard Specifications and Drawings.

27 Certification of compliance

All works to be accepted as being practically complete must be certified by the certifying Registered Professional Engineer Queensland (RPEQ) as being generally in accordance with the approved plans/drawings. This includes changes made during the construction period which are within the acceptable tolerances in Attachment 1 – Acceptable Tolerances or otherwise properly characterised as being 'generally in accordance with' the approved plans/drawings. Such certification must be submitted to Council prior to the earliest of the endorsement of survey plans, the commencement of the 'On Maintenance' period or the commencement of use.

PROGRESS OF WORKS – KEY NOTIFICATIONS, INSPECTIONS & MAINTENANCE

28 Key notifications, inspections & maintenance

Without limiting the requirement for compliance with *Planning Scheme Policy 11 – Land Development Guidelines, Standard Specifications and Drawings*, the following key notifications, inspections and maintenance must be complied with.

29 Prior to works commencing

- a The applicant must notify Council of:
 - i Name of the Consultant's representative;
 - ii Name of the Contractor and its representative;
 - iii Pursuant to the *Workplace Health and Safety Act 1995*, name of the Principal Contractor.
- b The applicant must successfully complete a pre-start inspection with Council officers:
 - i The inspection must be booked through Council's Contributed Assets Inspection Section on (07) 5582 8052.
 - ii All outstanding/unsatisfactory items identified on Council's pre-start checklist must be attended to and checked to Council's satisfaction, prior to works commencing.

30 During works

- a The applicant must successfully complete the inspections relevant to particular work in accordance with *Planning Scheme Policy 11 – Land Development Guidelines, Standard Specifications and Drawings* and/or as required by conditions of this approval. The inspections must be booked through Council's Contributed Assets Inspector for the area, Paul Wilmot (5582 8420).
- b The applicant must allow inspections to be undertaken by Council officers from time to time to ensure compliance with the conditions of this approval. All outstanding/unsatisfactory items identified as a result of an inspection must be attended to and checked to Council's satisfaction, in accordance with the timeframes and requirements indicated on the record of inspection, including variations and/or additions to the approved plans/drawings required as a result of insufficient detail on the plans/drawings or to ensure that compliance with the conditions of this approval and good engineering practice is achieved.
- c Work must not progress until successful completion of each inspection.

31 Completion of works – plans/drawings

At the completion of works, a full set of the final design drawings that notate all 'generally in accordance with' changes (whether being within acceptable tolerances in Attachment 1 – Acceptable Tolerances or otherwise properly characterised as being 'generally in accordance with'), are to be provided to Council for records purposes in conjunction with any as constructed submission or prior to the earliest of the endorsement of survey plans, the commencement of the 'On Maintenance' period or the commencement of use.

32 Following practical completion

- a Following practical completion, the notification, inspection and maintenance requirements set out in the table below that are applicable to the type(s) of operational work the subject of this approval must be complied with.
- b Each applicable requirement in the table below must be carried out in accordance with the details (including timeframes) set out in:
 - i *Planning Scheme Policy 11 – Land Development Guidelines, Standard Specifications and Drawings*; and

- ii Where a bond agreement applies, the terms of the bond agreement; and
- iii Conditions of this approval.
- c Where an inspection is not passed, the applicant must attend to all outstanding/unsatisfactory items and book a re-inspection with Council.

KEY NOTIFICATION, INSPECTION AND MAINTENANCE REQUIREMENTS

Change to ground level

The applicant must notify Council of practical completion by booking of inspection. Applies

ADVISORY NOTES TO APPLICANT

A Rights of appeal

The applicant has a right of appeal to the Planning and Environment Court regarding this decision, pursuant to section 461 of the *Sustainable Planning Act 2009*. A copy of that section is attached to the decision notice.

For particular material changes of use, an appeal can also be made to a Building and Development Committee. Please refer to the prerequisites in sections 519 and 522 of the *Sustainable Planning Act 2009*, attached to this decision notice, to determine whether you have appeal rights to a Building and Development Committee.

B Applicant responsibilities

The applicant is responsible for securing all necessary approvals and tenure, providing statutory notifications and complying with all relevant laws.

Nothing in this decision notice alleviates the need for the applicant to comply with all relevant local, State and Commonwealth laws and to ensure appropriate tenure arrangements have been made where the use of/reliance upon land other than that owned by the applicant is involved. Without limiting this obligation, the applicant is responsible for:

- a Obtaining all other/further necessary approvals, licences, permits, resource entitlements etc by whatever name called required by law before the development the subject of this approval can be lawfully commenced and to carry out the activity for its duration;
- b Providing any notifications required by law (by way of example only, to notify the administering authority pursuant to the *Environmental Protection Act 1994* of environmental harm being caused/threatened by the activity, and upon becoming aware the premises is being used for a 'notifiable activity');
- c Securing tenure/permission from the relevant owner to use private or public land not owned by the applicant (including for access required by conditions of approval);
- d Ensuring the correct siting of structures on the land. An identification survey demonstrating correct siting and setbacks of structures may be requested of the applicant to ensure compliance with this decision notice and applicable codes;
- e Providing Council with proof of payment of the Portable Long Service Leave building construction levy (or proof of appropriate exemption) where the value of the Operational Works exceeds \$80,000. Acceptable proof of payment is a Q.Leave – Notification and Payment Form approved by the Authority. Proof of payment must be provided before Council can issue a development permit for the Operational Works. This is a requirement of section 77(1) of the *Building and Construction Industry (Portable Long Service Leave) Act 1991*; and

- f Making payment of any outstanding Council rates and charges applicable to the development site prior to the lodgement of subdivision plans.

C Indigenous cultural heritage legislation and duty of care requirement

The *Aboriginal Cultural Heritage Act 2003* ('AHCA') is administered by the Department of Environment and Resource Management (DERM). The AHCA establishes a duty of care to take all reasonable and practicable measures to ensure any activity does not harm Aboriginal cultural heritage. This duty of care:

- a Is not negated by the issuing of this development approval;
- b Applies on all land and water, including freehold land;
- c Lies with the person or entity conducting an activity; and
- d If breached, is subject to criminal offence penalties.

Those proposing an activity involving surface disturbance beyond that which has already occurred at the proposed site must observe this duty of care.

Details of how to fulfil this duty of care are outlined in the duty of care guidelines gazetted with the AHCA.

The applicant should contact DERM's Cultural Heritage Coordination Unit on (07) 3238 3838 for further information on the responsibilities of developers under the AHCA.

D Greenhouse gas emissions

As part of Council's commitment to reducing greenhouse gas emissions Council is encouraging the expansion of the natural gas reticulation network. In particular, the use of natural gas hot water systems will result in significantly less greenhouse gas emissions than equivalent electric storage hot water systems.

The applicant should contact the local natural gas reticulator (APA Group) to arrange an assessment of the suitability of the proposed development for connection to the existing gas reticulation network. Please contact Ramon O'Keefe on 0438708798 or email: ramon.o'keefe@apa.com.au.

E Attachment 1 – Acceptable Tolerances

During the construction phase any works that are not in accordance with the development approval requires amended drawings to be submitted unless within the following specified construction tolerances.

1 Bulk Earthworks

Certification of the approved Engineering Drawings is sufficient provided the works meet the following minimum tolerances and parameters:

Earthworks General

Finished Surface Level	±150mm (not to be less than the adopted flood level)
Horizontal Alignment	150mm
The Constructed Minimum Crossfall	Is not less than 1 in 200
The Finished Surface Level	Any variations of ±150mm are approved by Council
Specific Job Tolerances have been met	

Batters

Batter Slopes	Are not steeper than 1 in 6 in parklands or 1 in 4 in allotment areas
Batter Encroachment	Batters must not straddle allotment boundaries or extend into existing or proposed parkland or bushland reserves

Retaining Structures

Vertical Alignment	±150mm
Horizontal Alignment	150mm
Retaining Structure Encroachment	Retaining structures do not straddle allotment boundaries

Sustainable Planning Act 2009

APPEAL RIGHTS FOR APPROVAL OR REFUSAL OF DEVELOPMENT APPLICATIONS FOR MATERIAL CHANGE OF USE, RECONFIGURATION OF A LOT OR OPERATIONAL WORKS APPLICATIONS.

461 Appeals by applicants

- (1) An applicant for a development application may appeal to the court against any of the following:
 - (a) the refusal, or the refusal in part, of the development application;
 - (b) any condition of a development approval, another matter stated in a development approval and the identification or inclusion of a code under section 242;
 - (c) the decision to give a preliminary approval when a development permit was applied for;
 - (d) the length of a period mentioned in section 341;
 - (e) a deemed refusal of the development application;
- (2) An appeal under subsection (1)(a), (b), (c) or (d) must be started within 20 business days (the applicant's appeal period) after:
 - (a) if a decision notice or negotiated decision notice is given - the day the decision notice or negotiated decision notice is given to the applicant;
 - (b) otherwise, the day a decision notice was required to be given to the applicant.
- (3) An appeal under subsection (1)(e) may be started at any time after the last day of a decision on the matter should have been made.