

From: "Matthew Newton" <mnewton@hce-engineers.com.au>
Sent: 15/02/2018 16:33:34
To: "City of Gold Coast mail" <mail@goldcoast.qld.gov.au>
Cc: "MORSE Craig" <CMORSE@goldcoast.qld.gov.au>; "Bill Cuneo" <BillCuneo@spaceframe.com>; "Robert Cunningham" <RobertCunningham@spaceframe.com>
Subject: RFI Submission 84 - 160 Christensen Road South Stapylton HCE 8046 GCCC OPW201800001
Attachments: 8046-180213-LET-Council RFI.PDF, 8046-OPW RFI.PDF, 8046-180213-Re Issued For Council Approval.pdf

Good Afternoon,

Please find attached updated drawings and letter of response in relation to the RFI received for the subject application.

Kind Regards

Matthew Newton
Phone: **3829 1399**
Direct Line: **3461 0304**
Email: mnewton@hce-engineers.com.au
Office Address: 6 Marine Street, Redland Bay 4165
Mailing Address: PO Box 7214 Redland Bay 4165



[Click the Facebook logo to see what we have been up to recently.](#)



HCE Engineers

Hydraulic • Civil • Environmental

This Email originates from outside the City of Gold Coast



HCE Engineers

Hydraulic • Civil • Environmental

PO Box 7214, Redland Bay Qld 4165

6 Marine St, Redland Bay Qld

Tel: (07) 3829 1399

Email: mail@hce-engineers.com.au

Our Ref: 8046

13 February 2018

Council of the City of Gold Coast
PO Box 5042
GCMC QLD 9729

Attention: Craig Morse

OPW201800001
84-160 Christensen Road South, Stapylton

Dear Sir,

The following has been prepared to address engineering items raised in Council's Information Request dated 5th February 2018. Please find attached amended engineering plans and additional information as highlighted below.

Item 1: All the design drawings must be signed by RPEQ

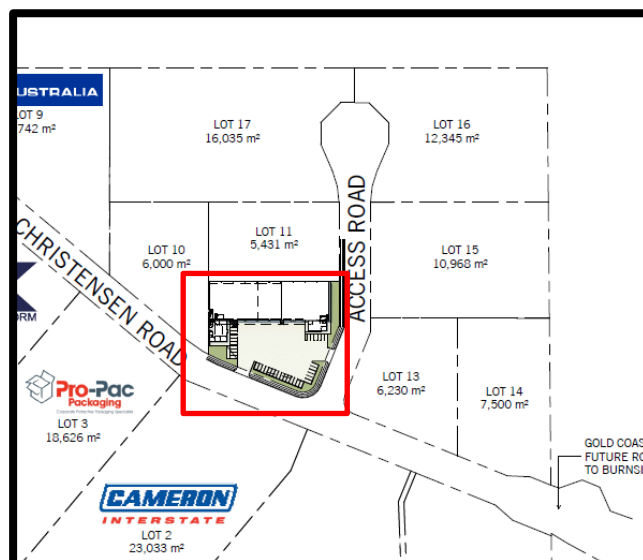
Response: All drawings are now signed by an RPEQ.

Item 2A: Council record shows that there is no rising main in the vicinity of the work area as shown in the drawing. Amend the drawings accordingly.

Response: The rising main has been removed from the drawings.

Item 2B: Council record shows that there is an existing Manhole east of the proposed connection point (End/1). Explore if the connection can be made to this manhole which will eliminate the requirement of laying the sewer across the Christensen Road South.

Response: Whilst the sewer to the east could be utilised to service the development it is proposed to construct the new sewer per the submitted design for the following reason. The existing parcel of land that the new industrial building is to be built on will be subdivided as shown below.



The sewer to the east will be located within future Lot 10 as identified above. The new sewer across Christensen Road South will be on an alignment to suit the new road identified as Access Road above and as shown on the design drawings and provide the proposed development with a sewer connection.

Furthermore, an Energex transformer is proposed to be located in the north eastern corner near the existing sewer manhole. This limits the opportunity to extend a sewer PC from the existing manhole, as sewers cannot be located under transformers.

As a result we propose to leave the sewer design per the submitted drawings.

Item 2C: Update Live Sewer Works Table which shows the proposed invert level higher than the surface level.

Response: The sewer live works table has been amended.

Yours faithfully,
HCE Engineers



Matthew Newton

Date: 5 February 2018
Contact: Craig Morse
Location: City Development
Telephone: 07 5582 8866
Your reference:
Our reference: PN307555/03/DA10
OPW201800001

Spaceframe Buildings Pty. Ltd.
C/- Spaceframe Buildings Pty Ltd
PO BOX 452
MORNINGSIDE QLD 4170

Dear Sir/Madam

INFORMATION REQUEST

I refer to the development application lodged by:

Spaceframe Buildings Pty. Ltd.
C/- Spaceframe Buildings Pty Ltd
PO BOX 452
MORNINGSIDE QLD 4170

In relation to development of land/premises described as:

L334 SP193431 : 84 - 160 Christensen Road South Stapylton

Council of the City of Gold Coast (Council) officers have reviewed the development application and supporting information and determined that further information is required to properly assess the application.

Pursuant to [sections 13.2 and 13.3 of the Development Assessment Rules under the Planning Act 2016](#), the applicant may respond to this information request by giving to the assessing authority:

- 1 all of the information requested below; or
- 2 part of the information requested below; or
- 3 part of the information requested below together with a notice advising the assessing authority that it must proceed with the assessment of the application; or
- 4 a notice stating that none of the information requested below will be provided; or
- 5 a notice stating that none of the information requested below will be provided together with a notice advising the assessing authority that it must proceed with the assessment of the application.

You are advised that pursuant to [section 13.1 of the Development Assessment Rules](#), the period for the applicant to respond to this information request is [three \(3\) months](#) of the date of this letter.

[If no response is provided or only part of the information is provided to this request within](#)

the three (3) month period, Council will continue its assessment of the application based on the information submitted.

It would be in the applicant's best interest to address all of the information requested.

Please note that the provision of sufficient information to properly assess an application is a requirement for a favourable decision.

**INFORMATION REQUEST
CIVIL**

1 RPEQ certification

All the design drawings must be signed by RPEQ.

GOLD COAST WATER

2 Amended plans

The applicant must provide amended plans in accordance with the following:

- a Council record shows that there is no rising main in the vicinity of the work area as shown in the drawing. Amend the drawings accordingly.
- b Council record shows that there is an existing Manhole east of the proposed connection point (End/1). Explore if the connection can be made to this manhole which will eliminate the requirement of laying the sewer across the Christensen Road South.
- c Update Live Sewer Works Table which shows the proposed invert level higher than the surface level.

As this application was lodged electronically, please direct all future correspondence regarding this application in the required PDF format (ie)

- **Forms** (combine as one single PDF)
- **Supporting documents** (combine as one single PDF)
- **Plans** (combine as one single PDF)
- **Specialist reports** (combine as one single PDF)

The electronic response should be forwarded to mail@goldcoast.qld.gov.au

Contacting us

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

Yours faithfully

Sam Hartley
Executive Coordinator Engineering & Environmental Assessment
For the Chief Executive Officer
Council of the City of Gold Coast
CM

ARCO & AODELI
LOT 334 ON SP 193431
84 CHRISTENSEN ROAD SOUTH
STAPYLTON, QUEENSLAND 4207

DRAWING INDEX

DRAWING No.	DESCRIPTION
8046-C01	LOCALITY PLAN, DRAWING INDEX AND GENERAL NOTES
8046-SW01	STORMWATER LAYOUT PLAN, NOTES AND LONGITUDINAL SECTION
8046-S01	SEWERAGE RETICULATION LAYOUT PLAN AND NOTES
8046-S02	SEWERAGE RETICULATION LONGITUDINAL SECTION
8046-W01	WATER RETICULATION LAYOUT PLAN AND DETAILS

GENERAL NOTES

1. ALL DIMENSIONS ARE IN METRES UNLESS NOTED OTHERWISE.

2. TOPSOIL IS TO BE STRIPPED AND REPLACED ON ALL DISTURBED EARTHWORKS AREAS WITHIN FOOTPATH AREA.

3. ALL TEMPORARY AND PERMANENT SIGNAGE AND LINEMARKING TO BE IN ACCORDANCE WITH MAIN ROADS STANDARDS (MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES).

4. ALL DIMENSIONS ARE TO BE CHECKED ON-SITE BEFORE WORK COMMENCES.

5. DIMENSIONS SHALL NOT BE OBTAINED BY SCALING THE DRAWING.

6. DURING CONSTRUCTION BARRIERS, LIGHTS & SIGNS SHALL BE MAINTAINED TO ENSURE SAFE PASSAGE OF TRAFFIC AND PEDESTRIANS IN ACCORDANCE WITH THE REQUIREMENTS OF THE LOCAL AUTHORITY.

7. ALL WORKMANSHIP AND MATERIALS SHALL BE IN ACCORDANCE WITH S.A.A. CODES & BY-LAWS AND ORDINANCES OF THE RELEVANT LOCAL AUTHORITY AND WORKPLACE HEALTH AND SAFETY REQUIREMENTS.

8. THE CONTRACTOR SHALL BE RESPONSIBLE FOR NOTIFYING ALL RELEVANT AUTHORITIES AND PAYING ALL FEES NECESSARY BEFORE COMMENCING WORK, FOR LOCATING ALL EXISTING SERVICES AND FOR REPAIR OF ANY SERVICES DAMAGED AS A RESULT OF THE WORKS.

9. THE CLIENTS SURVEYOR SHALL PEG PIT LOCATION AND STAKE R.P. BOUNDARIES PRIOR TO CONSTRUCTION.
10. CONTRACTOR TO VERIFY ALL INVERT LEVELS, SURFACE LEVELS, COVER OVER DRAINAGE LINES, AND MINIMUM FALLS ARE CORRECT & OBTAINABLE PRIOR TO COMMENCEMENT OF WORK.

11. THE CONTRACTOR'S ATTENTION IS DRAWN TO THE REQUIREMENTS OF THE WORKPLACE HEALTH AND SAFETY ACT 1995. ALL WORK IS TO BE CARRIED OUT IN ACCORDANCE WITH THIS ACT AND IN PARTICULAR THE CONTRACTOR IS TO ENSURE THE REQUIREMENTS OF THIS SPECIFICATION WITH REGARD TO 'NOTIFICATION IN RELATION TO A NOTIFIABLE PROJECT, ARE FORFILLED.

12. ALL WORK SHALL BE CARRIED OUT IN ACCORDANCE WITH CURRENT GOOLD COAST CITY COUNCIL STANDARD DRAWINGS AND SPECIFICATIONS.

13. CONTRACTOR SHALL VERIFY BENCH MARK LEVELS AND ADVISE THE SUPERINTENDENT OF ANY DISCREPANCIES PRIOR TO COMMENCING CONSTRUCTION.

14. CONTRACTOR SHALL VERIFY THE LOCATION OF ALL EXISTING SERVICES PRIOR TO COMMENCEMENT OF WORK. ALL EXISTING SERVICES AND STRUCTURES ARE TO BE MAINTAINED IN GOOD ORDER FOR THE DURATION OF THE CONTRACT. ANY COST ASSOCIATED WITH REPAIRING DAMAGE TO EXISTING SERVICES SHALL BE PAID FOR BY THE CONTRACTOR.



LOCALITY PLAN
SCALE 1:5000

SCALE 1:5000 (A1)



DO NOT SCALE. CONFIRM ALL DIMENSIONS ON SITE.		
ISSUE	AMENDMENT	DATE
A	ISSUED FOR COMMENT	15.12.17
B	ISSUED FOR COUNCIL APPROVAL	18.12.17
C	RE ISSUED FOR COUNCIL APPROVAL	13.02.18

REAL PROPERTY DESCRIPTION
LOT 334 ON SP 193431

PROJECT
84 CHRISTENSEN ROAD
SOUTH, STAPYLTON

CLIENT
SPACEFRAME BUILDINGS
PTY LTD

TITLE
LOCALITY PLAN, DRAWING
INDEX AND GENERAL NOTES

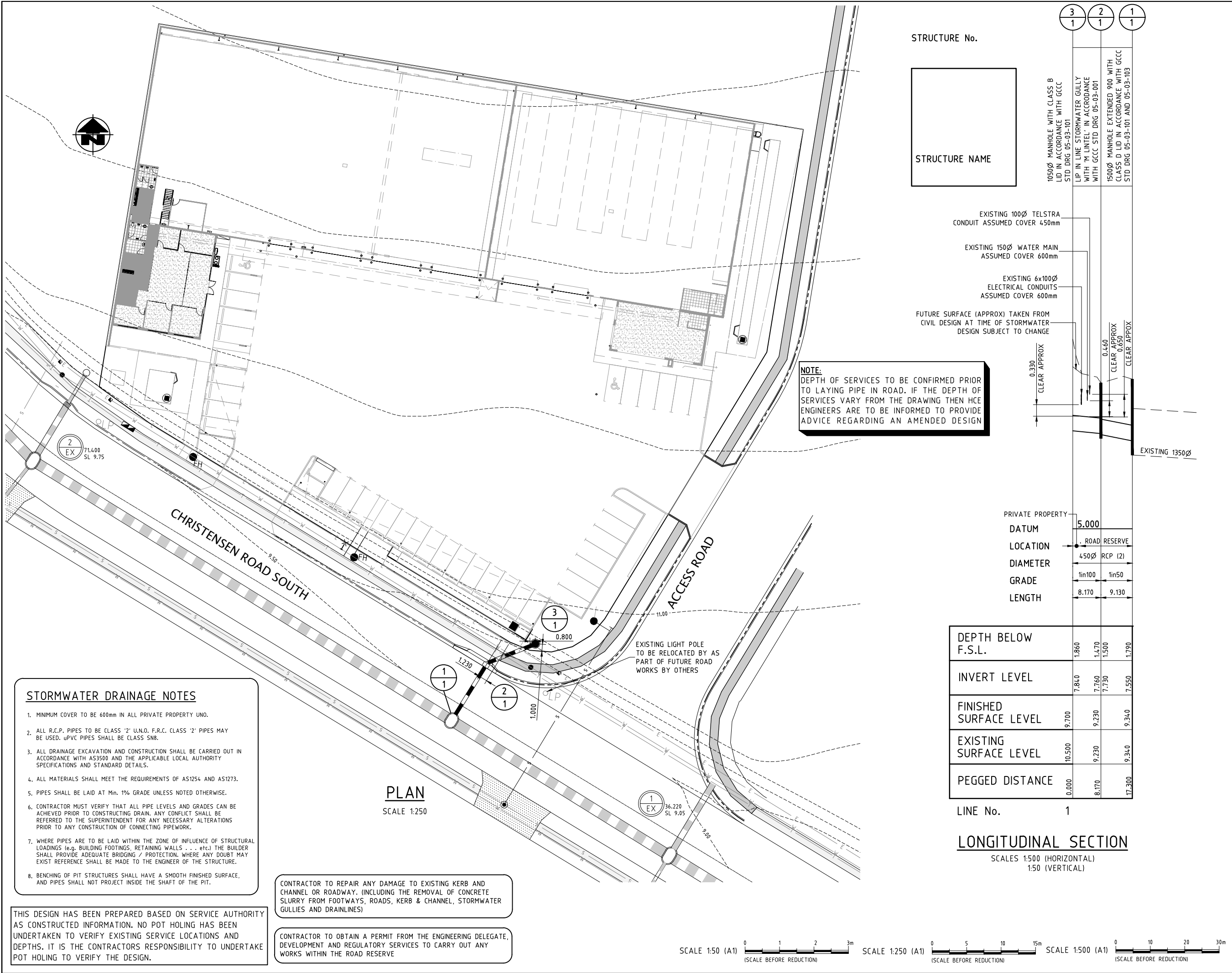


HCE Engineers
Hydraulic • CEM • Environmental

P.O. Box 7214,
Redland Bay,
QLD, 4165

Phone: (07) 3829 1399
mail@hce-engineers.com.au
6 Marine Street, Redland Bay

Designed MN	Drawn MN	Date 14.12.17
Approved 	Scale AS SHOWN	Rev. C
Drawing No. 8046-C01		



STORMWATER DRAINAGE NOTES

1. MINIMUM COVER TO BE 600mm IN ALL PRIVATE PROPERTY UNO.

2. ALL R.C.P. PIPES TO BE CLASS '2' U.N.O. F.R.C. CLASS '2' PIPES MAY BE USED. uPVC PIPES SHALL BE CLASS SN8.

3. ALL DRAINAGE EXCAVATION AND CONSTRUCTION SHALL BE CARRIED OUT IN ACCORDANCE WITH AS3500 AND THE APPLICABLE LOCAL AUTHORITY SPECIFICATIONS AND STANDARD DETAILS.

4. ALL MATERIALS SHALL MEET THE REQUIREMENTS OF AS1254 AND AS1273.

5. PIPES SHALL BE LAID AT Min. 1% GRADE UNLESS NOTED OTHERWISE.

6. CONTRACTOR MUST VERIFY THAT ALL PIPE LEVELS AND GRADES CAN BE ACHIEVED PRIOR TO CONSTRUCTING DRAIN. ANY CONFLICT SHALL BE REFERRED TO THE SUPERINTENDENT FOR ANY NECESSARY ALTERATIONS PRIOR TO ANY CONSTRUCTION OF CONNECTING PIPEWORK.

7. WHERE PIPES ARE TO BE LAID WITHIN THE ZONE OF INFLUENCE OF STRUCTURAL LOADINGS (e.g. BUILDING FOOTINGS, RETAINING WALLS . . . etc.) THE BUILDER SHALL PROVIDE ADEQUATE BRIDGING / PROTECTION. WHERE ANY DOUBT MAY EXIST REFERENCE SHALL BE MADE TO THE ENGINEER OF THE STRUCTURE.

8. BENCHING OF PIT STRUCTURES SHALL HAVE A SMOOTH FINISHED SURFACE, AND PIPES SHALL NOT PROJECT INSIDE THE SHAFT OF THE PIT.

THIS DESIGN HAS BEEN PREPARED BASED ON SERVICE AUTHORITY AS CONSTRUCTED INFORMATION. NO POT HOLING HAS BEEN UNDERTAKEN TO VERIFY EXISTING SERVICE LOCATIONS AND DEPTHS. IT IS THE CONTRACTORS RESPONSIBILITY TO UNDERTAKE POT HOLING TO VERIFY THE DESIGN.

CONTRACTOR TO REPAIR ANY DAMAGE TO EXISTING KERB AND CHANNEL OR ROADWAY. (INCLUDING THE REMOVAL OF CONCRETE SLURRY FROM FOOTWAYS, ROADS, KERB & CHANNEL, STORMWATER GULLIES AND DRAINLINES)

CONTRACTOR TO OBTAIN A PERMIT FROM THE ENGINEERING DELEGATE, DEVELOPMENT AND REGULATORY SERVICES TO CARRY OUT ANY WORKS WITHIN THE ROAD RESERVE

DO NOT SCALE.
CONFIRM ALL DIMENSIONS ON SITE.

ISSUE

AMENDMENT

DATE

A

ISSUED FOR COMMENT

13.12.17

B

ISSUED FOR COUNCIL APPROVAL

18.12.17

C

RE ISSUED FOR COUNCIL APPROVAL

13.02.18

LEGEND

10.0---

EXISTING SURFACE CONTOURS

EXISTING STORMWATER DRAINAGE

PROPOSED STORMWATER DRAIN

1

1

PROPOSED DRAINAGE STRUCTURE

1

1

EXISTING DRAINAGE STRUCTURE

S

EXISTING SEWERAGE

S

PROPOSED SEWERAGE

T

EXISTING TELECOMMUNICATIONS

W

EXISTING WATER RETICULATION

E

EXISTING UNDERGROUND ELECTRICAL

■

EXISTING ELECTRICAL PILLAR

×

PROPOSED WATER METER

EXISTING FOOTPATH

FUTURE FOOTPATH

EXISTING CROSSOVER

REAL PROPERTY DESCRIPTION

LOT 334 ON SP 193431

PROJECT

84 CHRISTENSEN ROAD SOUTH, STAPYLTON

CLIENT

SPACEFRAME BUILDINGS PTY LTD

TITLE

STORMWATER LAYOUT PLAN, NOTES AND LONGITUDINAL SECTION

HCE Engineers

Hydraulic • CMI • Environmental

P.O. Box 7214,
Redland Bay,
QLD, 4165

Phone: (07) 3829 1399
mail@hce-engineers.com.au
6 Marine Street, Redland Bay

Designed

MN

Drawn

MN

Date

13.12.17

Approved

Scale

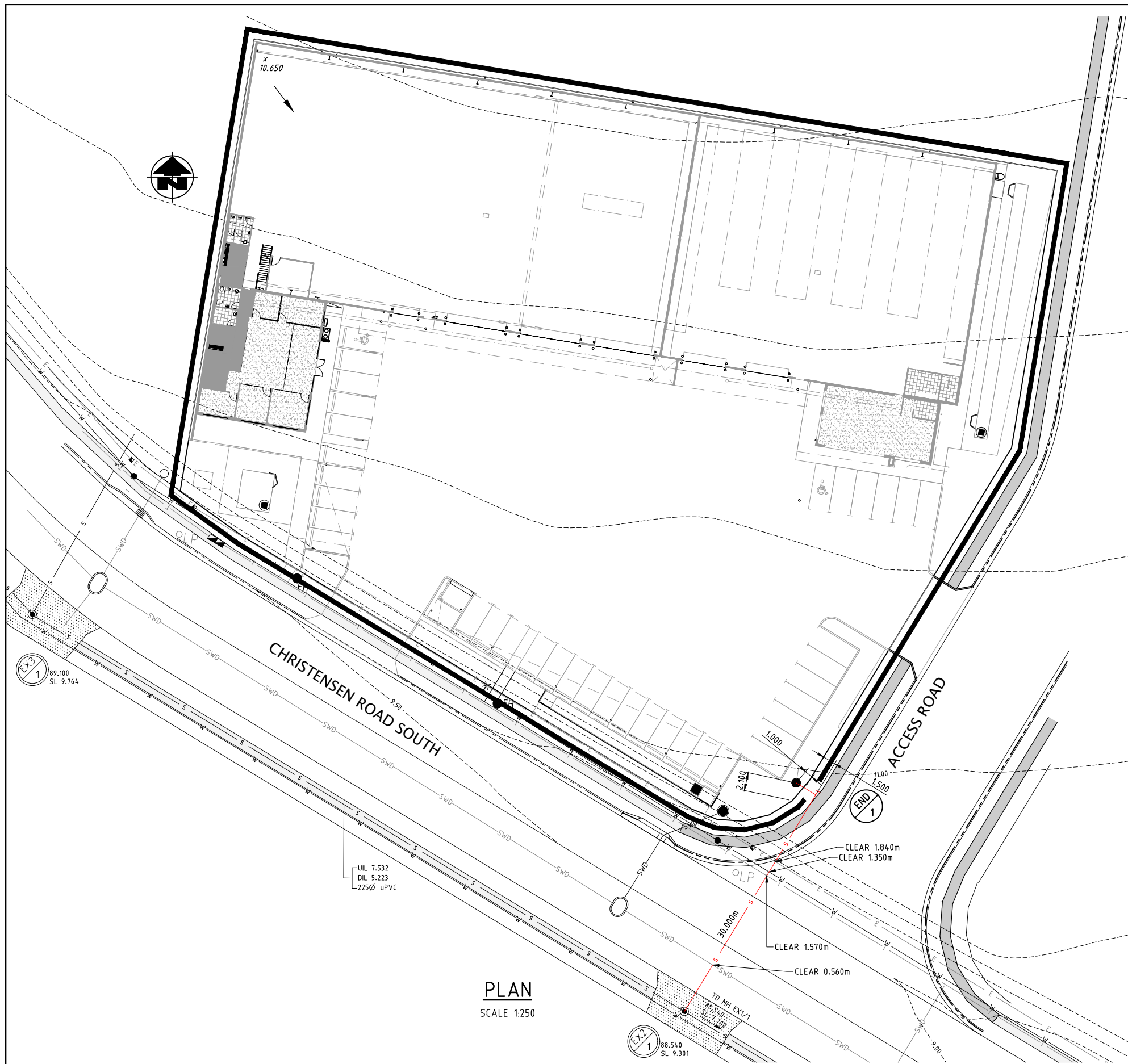
AS SHOWN

Drawing No.

8046-SW01

Rev.

C



THIS DESIGN HAS BEEN PREPARED BASED ON SERVICE AUTHORITY AS CONSTRUCTED INFORMATION. NO POT HOLING HAS BEEN UNDERTAKEN TO VERIFY EXISTING SERVICE LOCATIONS AND DEPTHS. IT IS THE CONTRACTORS RESPONSIBILITY TO UNDERTAKE POT HOLING TO VERIFY THE DESIGN.

NOTE:
CONTRACTOR TO REINSTATE
EXISTING CROSSOVER UPON
COMPLETION OF SEWER WORKS

SCALE 1:250 (A1)
(SCALE BEFORE REDUCTION)

SCALE 1:2500 (A1)
(SCALE BEFORE REDUCTION)

SEWER NOTES

- ALL WORK AND MATERIALS SHALL BE IN ACCORDANCE WITH CURRENT SEQ WATER SUPPLY AND SEWERAGE DESIGN AND CONSTRUCTION CODE (SEQ WS&S D&C) STANDARDS AND ADDITIONAL GCCC REQUIREMENTS.
- UNLESS SPECIFIED OTHERWISE ALL MATERIALS AND WORK SHALL COMPLY WITH THE RELEVANT AUSTRALIAN STANDARDS.
- THE CONSTRUCTION OF THE SEWERAGE WORK SHOWN ON THIS DRAWING SHALL BE SUPERVISED BY AN ENGINEER WHO HAS RPEQ REGISTRATION. SEWERAGE WORKS NOT COMPLYING WITH THIS REQUIREMENT WILL NOT BE PERMITTED TO CONNECT INTO COUNCIL'S SEWERAGE SYSTEM.
- ALL WORK ASSOCIATED WITH LIVE SEWERS OR MAINTENANCE HOLES SHALL BE CARRIED OUT BY THE DEVELOPER'S APPROVED CONTRACTOR UNDER THE SUPERVISION OF GOLD COAST CITY COUNCIL AT THE DEVELOPER'S EXPENSE.
- ALL PIPES AND MATERIALS SHALL COMPLY WITH THE REQUIREMENTS OF THE "ACCEPTED PRODUCTS AND MATERIALS LIST".
- EACH ALLOTMENT SHALL BE SERVED BY A 100Ø PROPERTY CONNECTION. FOR ALLOTMENTS OTHER THAN SINGLE RESIDENTIAL, A 150Ø PROPERTY CONNECTION SHALL BE PROVIDED. A MAXIMUM OF 2 RESIDENTIAL PREMISES IS ALLOWED ON A 100Ø. PROPERTY CONNECTION SEWER DETAILS SHALL COMPLY WITH THE DETAILS GIVEN IN THE SEQ WS&S D&C STANDARD DRAWINGS - SEWERAGE SEQ-SEW-1106-1 TO 1106-7.
- PROPERTY CONNECTION BRANCHES SHALL EXTEND INTO THE PROPERTY A MINIMUM OF 500mm AND A MAXIMUM OF 1000mm.
- PROPERTY CONNECTIONS SHALL BE LOCATED A MINIMUM OF 500mm FROM THE PROPERTY BOUNDARY WHERE POSSIBLE.
- WHERE PIPES ARE LAID IN FILL, THE FILLING SHALL BE CARRIED OUT IN LAYERS NOT EXCEEDING 300mm (LOOSE) IN DEPTH AND SHALL BE COMPACTED UNTIL THE COMPACTION IS NOT LESS THAN 95% OF THE MATERIALS MAXIMUM COMPACTION WHEN TESTED IN ACCORDANCE WITH AS 1289 (MODIFIED COMPACTION). TESTING SHALL BE CARRIED OUT AFTER EACH ALTERNATIVE LAYER. IN ALL SUCH CASES APPROVAL OF CONSTRUCTED SEWERS WILL NOT BE ISSUED BY THE COUNCIL UNLESS CERTIFICATES ARE PRODUCED CERTIFYING THAT THE REQUIRED COMPACTION HAS BEEN ACHIEVED. PVC SEWERS SHALL BE INSTALLED IN ACCORDANCE WITH THE REQUIREMENTS FOR NON-PRESSURE PIPELINES SPECIFIED IN WSA-02.
- WHERE SEWERS HAVE A GRADE OF 1 IN 20 OR STEEPER, BULKHEADS SHALL BE CONSTRUCTED IN ACCORDANCE WITH CL.8.10, 17.5 AND 17.6 OF THE SEQ WS&S D&C CODE AMENDMENTS TO WSA-02.
- THE CONTRACTOR SHALL VERIFY THE LOCATION AND DEPTH OF EXISTING SERVICES WITH RELEVANT AUTHORITIES BEFORE COMMENCING WORKS.
- SEWERS SHALL BE DISUSED/ABANDONED IN ACCORDANCE WITH PROCEDURES SET OUT IN CL.4.2.6 OF THE SEQ WS&S D&C CODE AMENDMENTS TO WSA 02.
- PROPERTY CONNECTION MARKERS ARE TO BE INSTALLED IN ACCORDANCE WITH STANDARD DRAWING No. SEQ-SEW-1106-2 ON ALL PROPERTY CONNECTIONS, EXCEPT WHERE THE PROPERTY CONNECTION IS PROVIDED FROM A MAINTENANCE HOLE OR PRIVATE DRAINAGE IS CONNECTED TO THE PROPERTY CONNECTION AS PART OF THE WORKS.
- ALL PVC PIPES AND CONNECTIONS TO BE INSTALLED BY AN ACCREDITED CONTRACTOR.
- ALL LEVELS TO A.H.D.
- EMBEDMENT AND TRENCHING IN ACCORDANCE WITH (SEQ WS&S D&C) STD DRG SEQ-SEW-1200-2.
 - BEDDING - SPECIAL BEDDING SHALL BE SPECIFIED IF THE TRENCH FLOOR HAS:
 - IRREGULAR OUTCROPS OF ROCK
 - AHBP OF <50kPa (SEE SEQ-WAT-1200-01) OR,
 - UNCONTROLLED GROUND WATER HAS DISTURBED THE FLOOR OF THE TRENCH
 - EMBEDMENT, TRENCH FILL AND COMPACTION TO MEET THE REQUIREMENTS OF WSA-02 PART 3 AND THE RELEVANT SEQ-SP
 - SIDES OF EXCAVATION TO BE KEPT VERTICAL TO AT LEAST 150mm ABOVE THE PIPE
 - DESIGNER TO CHECK ON RELEVANT AUTHORITIES' REQUIREMENTS ADDITIONAL INFORMATION PROVIDED IN SEQ-SEW-1200 SERIES.

NAME OF ESTATE	84 CHRISTENSEN ROAD SOUTH	
	STAPYLTON	
SUBDIVIDER	SPACEFRAME BUILDINGS PTY LTD	
APPLICATION NO.		
SP DELEGATE	GOLD COAST CITY COUNCIL	
APPROVAL DATE		
DRAWING/PLAN NO.		
No. OF ALLOTS.	1	
AREA IN ha.	0.6293	
LENGTH OF SEWER	100Ø	
	150Ø	32.700
	225Ø	
REFERENCE		

DO NOT SCALE.
CONFIRM ALL DIMENSIONS ON SITE.

ISSUE	AMENDMENT	DATE
A	ISSUED FOR COMMENT	13.12.17
B	ISSUED FOR COUNCIL APPROVAL	18.12.17
C	RE ISSUED FOR COUNCIL APPROVAL	13.02.18

LEGEND

- S—○— EXISTING SEWERAGE RETICULATION
- S—●— PROPOSED SEWERAGE RETICULATION
- S— PROPOSED PROPERTY CONNECTION
- 35--- EXISTING SURFACE CONTOURS
- 1/1 PROPOSED SEWERAGE STRUCTURE
- 1/1 EXISTING SEWERAGE STRUCTURE
- SWD— PROPOSED STORMWATER DRAINAGE
- SWD— EXISTING STORMWATER DRAINAGE
- T— EXISTING TELECOMMUNICATIONS
- W— EXISTING WATER RETICULATION
- E— EXISTING UNDERGROUND ELECTRICAL
- 39.72 X ALLOTMENT CONTROL POINT (NOT FOR CONSTRUCTION PURPOSES)
- LOTS TO BE SEWERED
- EXISTING FOOTPATH
- FUTURE FOOTPATH
- EXISTING CROSSOVER

REAL PROPERTY DESCRIPTION

LOT 334 ON SP 193431

PROJECT
**84 CHRISTENSEN ROAD
SOUTH, STAPYLTON**

CLIENT
**SPACEFRAME BUILDINGS
PTY LTD**
TITLE
**SEWERAGE RETICULATION
LAYOUT PLAN AND NOTES**



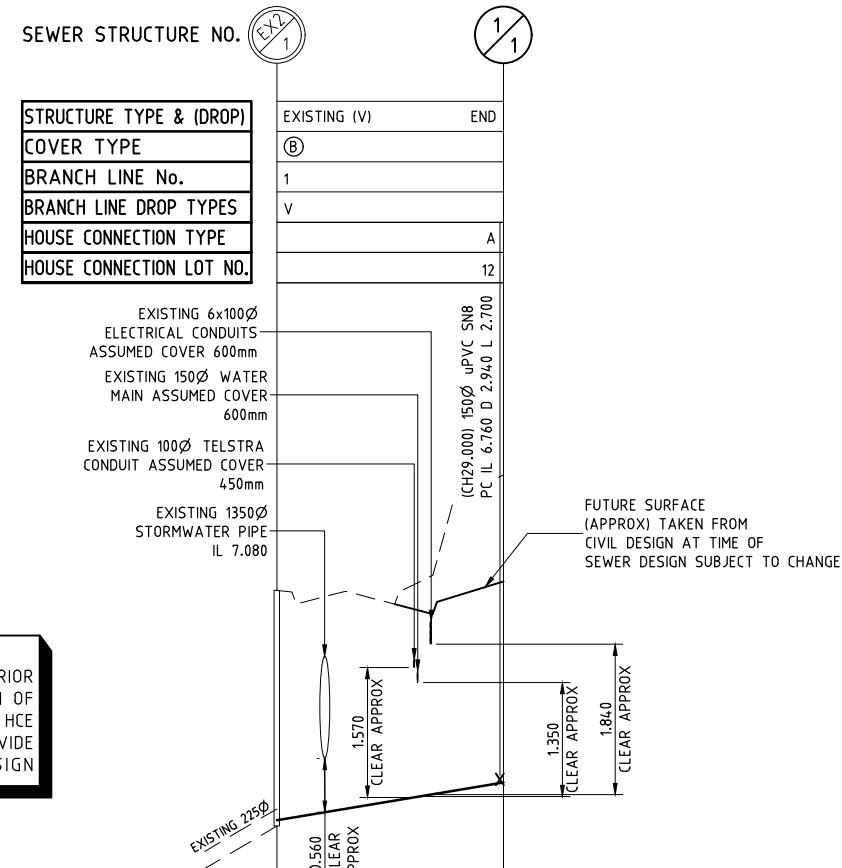
HCE Engineers

Hydraulic • CMI • Environmental

P.O. Box 7214, Phone: (07) 3829 1399
Redland Bay, mail@hce-engineers.com.au
QLD, 4165 6 Marine Street, Redland Bay

Designed MN	Drawn MN	Date 13.12.17
Approved 	Scale AS SHOWN	
Drawing No. 8046-S01		Rev. C

NOTE:
DEPTH OF SERVICES TO BE CONFIRMED PRIOR TO LAYING PIPE IN ROAD. IF THE DEPTH OF SERVICES VARY FROM THE DRAWING THEN HCE ENGINEERS ARE TO BE INFORMED TO PROVIDE ADVICE REGARDING AN AMENDED DESIGN



DATUM	4.000	
LOCATION	ROAD RESERVE	
DIAMETER/CLASS	150Ø uPVC SN8	
GRADE	1in60.00	
LENGTH	30.000	
EMBEDMENT	TYPE 3	
BRANCH LINE INVERT LEVEL	6.223	
DEPTH BELOW F.S.L.	3.117 3.040	2.660
INVERT LEVEL	6.184 6.260	6.760
FINISHED SURFACE LEVEL	9.301	9.420
EXISTING SURFACE LEVEL	9.301	10.830
PEGGED DISTANCE	0.000	30.000

LINE No. 1

LONGITUDINAL SECTION

SCALES 1:500 (HORIZONTAL)
1:50 (VERTICAL)

THIS DESIGN HAS BEEN PREPARED BASED ON SERVICE AUTHORITY AS CONSTRUCTED INFORMATION. NO POT HOLING HAS BEEN UNDERTAKEN TO VERIFY EXISTING SERVICE LOCATIONS AND DEPTHS. IT IS THE CONTRACTORS RESPONSIBILITY TO UNDERTAKE POT HOLING TO VERIFY THE DESIGN.

ENVIRONMENTAL NOTES:

NOTE: ALL ENVIRONMENTAL PROTECTION MEASURES SHOULD BE IMPLEMENTED PRIOR TO ANY CONSTRUCTION WORK, INCLUDING CLEARING, COMMENCING.

VEGETATION PROTECTION

- TREES LOCATED ALONG THE FOOTPATH SHALL BE, WHERE POSSIBLE, TRANSPLANTED PRIOR TO CONSTRUCTION, OR REPLACED IF DESTROYED.
- WHEN WORKING WITHIN 4m OF TREES, RUBBER OR HARDWOOD GIRDLES WITH 1.8m BATTENS CLOSELY SPACED AND ARRANGED VERTICALLY FROM GROUND LEVEL. GIRDLES MUST BE STRAPPED TO TREES PRIOR TO CONSTRUCTION AND REMAIN UNTIL COMPLETION.
- TREE ROOTS SHOULD BE TUNNELLED UNDER, RATHER THAN SEVERED. IF ROOTS ARE SEVERED THE DAMAGED AREA SHOULD BE TREATED WITH A SUITABLE FUNGICIDE. CONTACT RELEVANT ARBORIST FOR FURTHER ADVICE.
- ANY TREE LOPPING REQUIRED SHOULD BE UNDERTAKEN BY AN APPROVED ARBORIST.

SOIL

- TOPSOIL AND SUBSOIL SHOULD BE STOCKPILED SEPARATELY.
- CARE SHOULD BE TAKEN TO PREVENT SEDIMENT FROM ENTERING THE STORMWATER SYSTEM. THIS MAY INVOLVE PLACING APPROPRIATE SEDIMENT CONTROLS AROUND THE STOCKPILES.

CREEK CROSSINGS

- SILTATION CONTROL MEASURES SHOULD BE PLACED DOWNSTREAM OF ANY EXCAVATION WORK.
- APPROPRIATE SEDIMENT CONTROL MEASURES SHOULD BE USED TO PREVENT SEDIMENT FROM ENTERING THE CREEK.
- NO SOIL SHOULD BE STOCKPILED WITHIN 5m OF THE CREEK.

REHABILITATION

- PRE-DISTURBANCE SOIL PROFILES AND COMPACTION LEVELS ARE TO BE REINSTATED.
- PRE-DISTURBANCE VEGETATION PATTERNS SHOULD BE RESTORED.

SAFETY

- THE DESIGN AND CONSTRUCTION OF THE WORKS SHALL COMPLY WITH ALL QUEENSLAND LEGISLATION.

DO NOT SCALE.
CONFIRM ALL DIMENSIONS ON SITE.

ISSUE	AMENDMENT	DATE
A	ISSUED FOR COMMENT	13.12.17
B	ISSUED FOR COUNCIL APPROVAL	18.12.17
C	RE ISSUED FOR COUNCIL APPROVAL	13.02.18

REAL PROPERTY DESCRIPTION
LOT 334 ON SP 193431

PROJECT
84 CHRISTENSEN ROAD
SOUTH, STAPYLTON

CLIENT
SPACEFRAME BUILDINGS
PTY LTD

TITLE
SEWERAGE RETICULATION
LONGITUDINAL SECTION



HCE Engineers
Hydraulic • Civil • Environmental

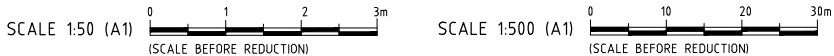
P.O. Box 7214, Redland Bay, QLD, 4165
Phone: (07) 3829 1399
mail@hce-engineers.com.au
6 Marine Street, Redland Bay

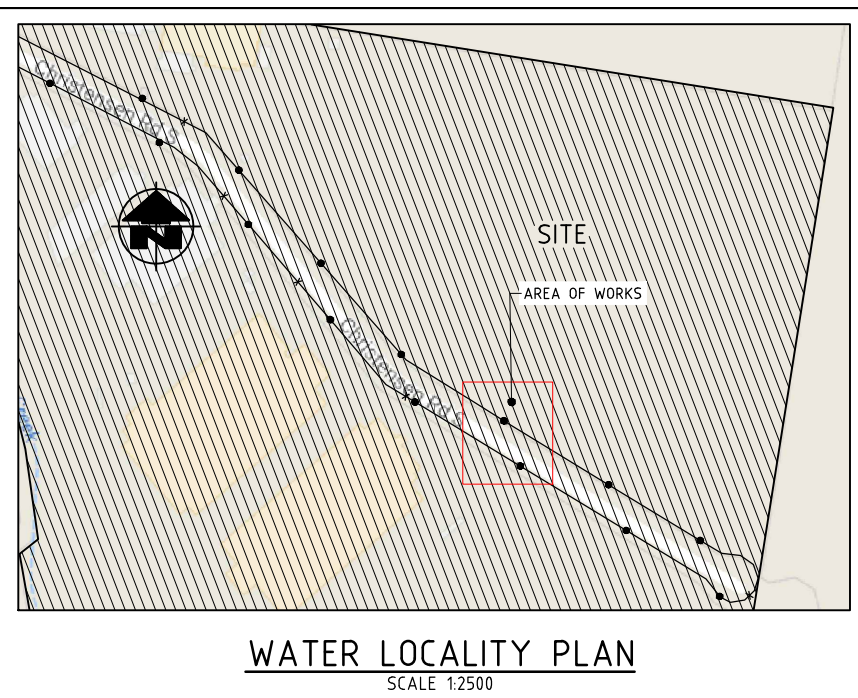
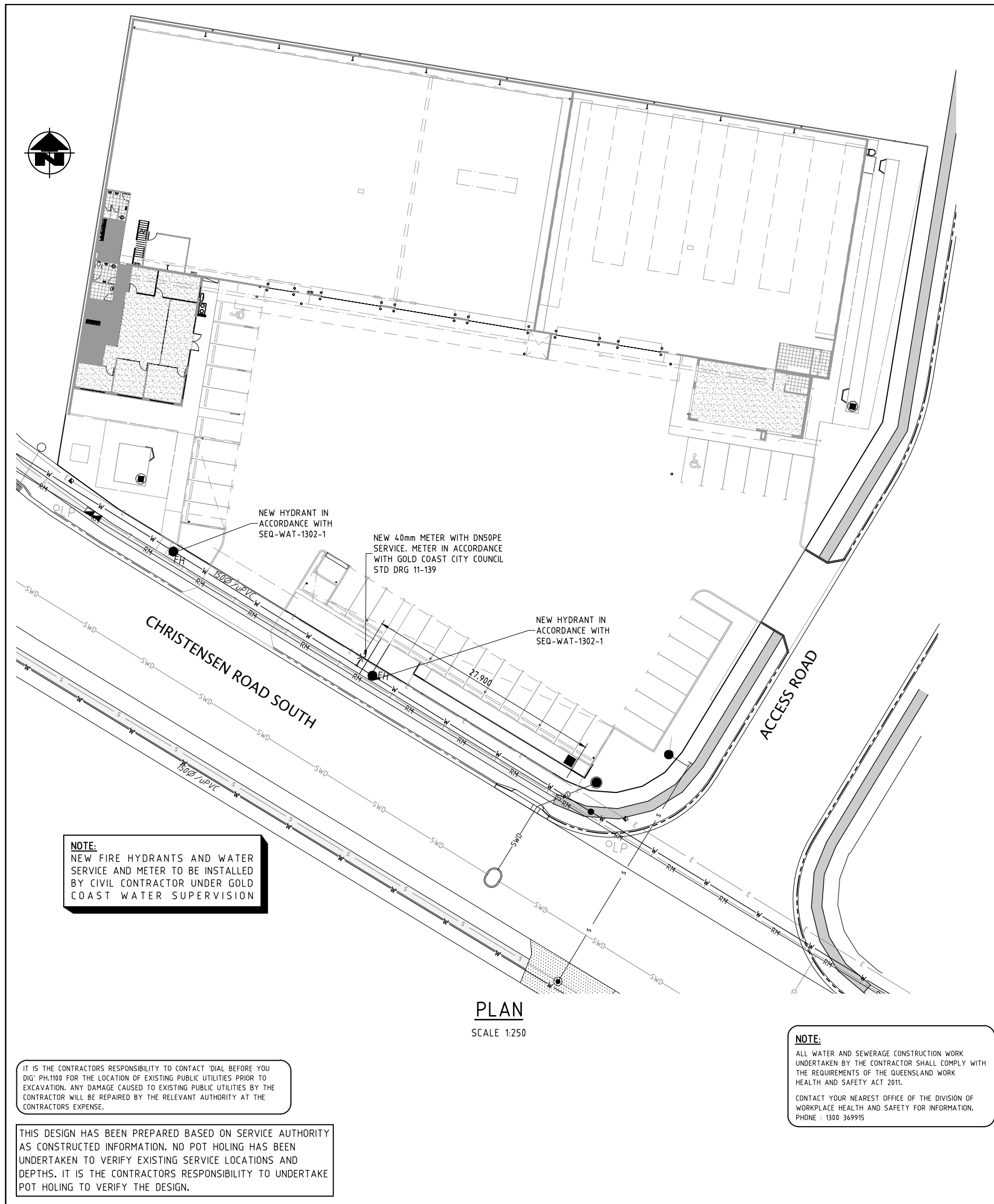
Designed MN	Drawn MN	Date 13.12.17
Approved 		Scale AS SHOWN
Drawing No. 8046-S02		Rev. C

GOLD COAST WATER AND CONTRACTOR LIVE SEWER WORK

IT IS THE DEVELOPERS RESPONSIBILITY TO ENSURE ALL LIVE SEWER WORKS ARE COMPLETE BEFORE ALLOWING PRIVATE DRAINAGE TO BE CONNECTED

No.	DESCRIPTION	DIA. SEWER	MH No.	MH TYPE	COVER TYPE	LOT No.	F.S.L.	E.S.L.	IL	DEPTH
1(a)	CONTRACTOR TO BREAK INTO EXISTING MAINTENANCE HOLE EX2/1 AND CONSTRUCT A 150 STUB (TEMPORARILY PLUGGED) PRIOR TO START OF CONSTRUCTION UNDER GOLD COAST WATER SUPERVISION	150	EX2/1	1200	Ⓑ	ROAD RESERVE	9.301	9.301	6.184	3.117
1(b)	CONTRACTOR TO LAY LINE 1.									
1(c)	CONTRACTOR TO REMOVE TEMPORARY PLUG IN MAINTENANCE HOLE 1/EX AFTER SUCCESSFUL 'ON MAINTENANCE' INSPECTION.									





DO NOT SCALE.
CONFIRM ALL DIMENSIONS ON SITE.

ISSUE	AMENDMENT	DATE
A	ISSUED FOR COMMENT	15.12.17
B	ISSUED FOR COUNCIL APPROVAL	18.12.17
C	RE ISSUED FOR COUNCIL APPROVAL	13.02.18

LEGEND

—W— EXISTING WATER RETICULATION

--- PROPOSED WATER SERVICE

—SWD— EXISTING STORMWATER DRAINAGE

—SWD— PROPOSED STORMWATER DRAINAGE

—S— EXISTING SEWERAGE

—S— PROPOSED SEWERAGE

—T— EXISTING TELECOMMUNICATIONS

--- KERB LINE

—E— EXISTING UNDERGROUND ELECTRICAL

✕ WATER SERVICE POINT OF ENTRY

—RM— EXISTING RISING MAIN

■ EXISTING ELECTRICAL PILLAR

EXISTING FOOTPATH

FUTURE FOOTPATH

EXISTING CROSSOVER

SYMBOLS

✕ SLUICE VALVE

✕ SCOUR BRANCH

— DEAD END

— TEST POINT / CHLORINATION POINT

100 150 REDUCER

● PROPOSED FIRE HYDRANT

● EXISTING FIRE HYDRANT

□ WM EXISTING WATER METER

NOTES

1. ALL WORK AND MATERIALS SHALL BE IN ACCORDANCE WITH CURRENT GCCC SPECIFICATIONS AND STANDARDS.

2. UNLESS SPECIFIED OTHERWISE, ALL MATERIALS AND WORK SHALL COMPLY WITH THE RELEVANT AUSTRALIAN STANDARDS.

3. ADOPT TOP OF KERB AS PERMANENT LEVEL.

4. COVER ON MAINS FROM PERMANENT LEVEL TO BE AS FOLLOWS U.N.D.

100 & 150Ø (DN63, 125 & 180 FOR PE100) - 600mm

200, 250 & 300Ø (DN250, 315 & 355 FOR PE100)-1000mm

5. CONDUITS TO BE INSTALLED IN ACCORDANCE WITH GCCC SPECIFICATIONS.

6. A WATER METER, SUPPLIED AT THE DEVELOPER'S COST, IS TO BE INSTALLED AT THE SERVICE POINT OF EACH LOT IN ACCORDANCE WITH STD DRG. No. 08-06-108.

7. U.P.V.C. PIPES SHALL BE SERIES 2 CLASS 16 AND COMPLY WITH A.S.1477. MPVC PIPES SHALL BE SERIES 2 CLASS 16 AND COMPLY WITH A.S.4765. FITTINGS SHALL BE CEMENT LINED GREY IRON IN ACCORDANCE WITH A.S.2544; OR DUCTILE IRON CEMENT LINED (DCL) IN ACCORDANCE WITH A.S.2280.

DCL PIPES & FITTINGS SHALL BE PN16 OR PN35 AND COMPLY WITH A.S.2280.

PIPES & FITTINGS SHALL BE POLYETHYLENE SLEEVED.

MILD STEEL (MSCL) PIPES TO COMPLY WITH A.S.1579 AND BE CEMENT LINED IN ACCORDANCE WITH A.S.1281. PIPE COATING TO COMPLY WITH A.S.4321 (SINTAKOTE III).

POLYETHYLENE PIPES OF 63 OD SHALL BE CLASS PN16 PER80B AND COMPLY WITH A.S.4130. FITTINGS SHALL COMPLY WITH A.S.1460.

8. ALL CONCRETE FOOTPATHS TO BE CLEAR OF WATER MAIN ALLOCATION.

9. TEST/CHLORINATION POINTS TO BE INSTALLED IN ACCORDANCE WITH GCCC STANDARDS

10. CONSTRUCTION OF THE WATER RETICULATION WORK SHOWN ON THIS DRAWING MUST BE SUPERVISED BY AN ENGINEER WHO HAS RPEQ REGISTRATION. WORKS NOT COMPLYING WITH THIS REQUIREMENT WILL NOT BE PERMITTED TO CONNECT INTO GCCC'S RETICULATION SYSTEM.

11. ALL DISTURBED AREAS TO BE TOPSOILED AND TURFED.

12. PROPOSED AND EXISTING WATER METER BOXES TO BE CLEANED OF DIRT AND DEBRIS PRIOR TO PLAN SEALING.

13. ALL LIVE CONNECTIONS SHALL BE UNDERTAKEN BY DEVELOPER/APPROVED CONTRACTOR UNDER GOLD COAST WATER SUPERVISION AT THE DEVELOPERS EXPENSE.

ENVIRONMENTAL NOTES:

NOTE: ALL ENVIRONMENTAL PROTECTION MEASURES SHOULD BE IMPLEMENTED PRIOR TO ANY CONSTRUCTION WORK, INCLUDING CLEARING, COMMENCING.

VEGETATION PROTECTION

- TREES LOCATED ALONG THE FOOTPATH SHALL BE, WHERE POSSIBLE, TRANSPLANTED PRIOR TO CONSTRUCTION, OR REPLACED IF DESTROYED.
- WHEN WORKING WITHIN 4m OF TREES, RUBBER OR HARDWOOD GIRDLES WITH 1.0m BATTENS CLOSELY SPACED AND ARRANGED VERTICALLY FROM GROUND LEVEL. GIRDLES MUST BE STRAPPED TO TREES PRIOR TO CONSTRUCTION AND REMAIN UNTIL COMPLETION.
- TREE ROOTS SHOULD BE TUNNELLED UNDER, RATHER THAN SEVERED. IF ROOTS ARE SEVERED THE DAMAGED AREA SHOULD BE TREATED WITH A SUITABLE FUNGICIDE. CONTACT RELEVANT ARBORIST FOR FURTHER ADVICE.
- ANY TREE LOPPING REQUIRED SHOULD BE UNDERTAKEN BY AN APPROVED ARBORIST.

SOIL

- TOPSOIL AND SUBSOIL SHOULD BE STOCKPILED SEPARATELY.
- CARE SHOULD BE TAKEN TO PREVENT SEDIMENT FROM ENTERING THE STORMWATER SYSTEM. THIS MAY INVOLVE PLACING APPROPRIATE SEDIMENT CONTROLS AROUND THE STOCKPILES.

CREEK CROSSINGS

- SILTATION CONTROL MEASURES SHOULD BE PLACED DOWNSTREAM OF ANY EXCAVATION WORK.
- APPROPRIATE SEDIMENT CONTROL MEASURES SHOULD BE USED TO PREVENT SEDIMENT FROM ENTERING THE CREEK.
- NO SOIL SHOULD BE STOCKPILED WITHIN 5m OF THE CREEK.

REHABILITATION

- PRE-DISTURBANCE SOIL PROFILES AND COMPACTION LEVELS ARE TO BE REINSTATED.
- PRE-DISTURBANCE VEGETATION PATTERNS SHOULD BE RESTORED.

SAFETY

- THE DESIGN AND CONSTRUCTION OF THE WORKS SHALL COMPLY WITH ALL QUEENSLAND LEGISLATION.

REAL PROPERTY DESCRIPTION

LOT 334 ON SP 193431

PROJECT

84 CHRISTENSEN ROAD SOUTH, STAPYLTON

CLIENT

SPACEFRAME BUILDINGS PTY LTD

TITLE

WATER RETICULATION LAYOUT PLAN AND DETAILS

HCE Engineers

Hydraulic • CMI • Environmental

P.O. Box 7214, Redland Bay, QLD, 4165

Phone: (07) 3829 1399

mail@hce-engineers.com.au

6 Marine Street, Redland Bay

Designed	Drawn	Date
MN	MN	13.12.17

Approved	Scale	Rev.
	AS SHOWN	

Drawing No. **8046-W01**