

LEGEND

- 10 — EXISTING OVERHEAD ELECTRICITY
- T — TELSTRA (CABLE & PIT)
- W — EXISTING WATER MAIN
- S — EXISTING SEWER MAIN & ACCESS CHAMBER
- D — EXISTING STORMWATER MAIN
- K — EXISTING KERB INLET
- S — PROPOSED SEWER MAIN & ACCESS CHAMBER (DESIGN AND WORKS BY RRC)
- S — PROPOSED SEWER CONNECTION (INDICATIVE ONLY)
- ▨ STOCKPILE/STORAGE AREA
- CATCHMENT AREA

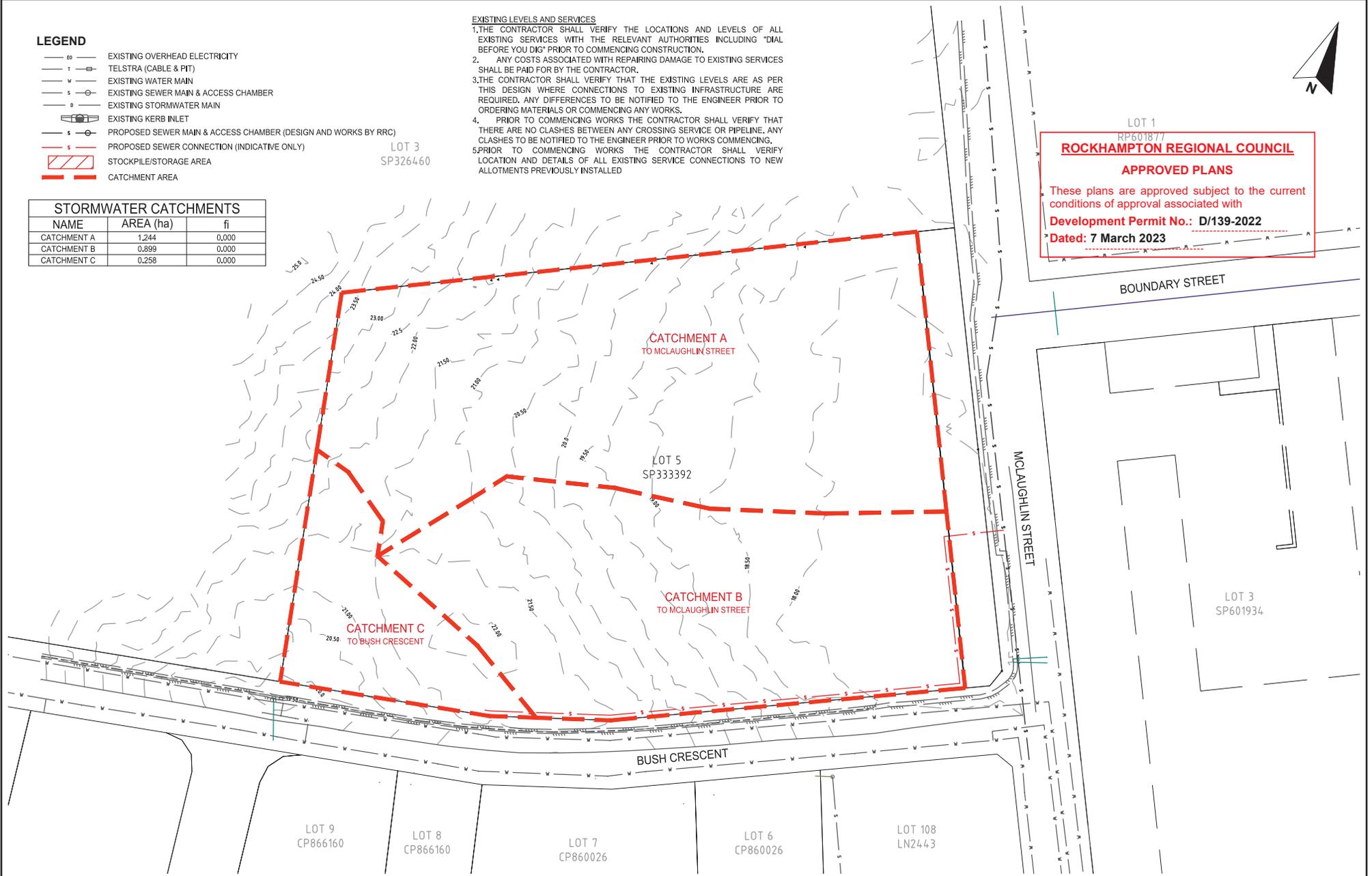
LOT 3
SP326460

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.
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3. THE CONTRACTOR SHALL VERIFY THAT THE EXISTING LEVELS ARE AS PER THIS DESIGN WHERE CONNECTIONS TO EXISTING INFRASTRUCTURE ARE REQUIRED. ANY DIFFERENCES TO BE NOTIFIED TO THE ENGINEER PRIOR TO ORDERING MATERIALS OR COMMENCING ANY WORKS.
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5. PRIOR TO COMMENCING WORKS THE CONTRACTOR SHALL VERIFY LOCATION AND DETAILS OF ALL EXISTING SERVICE CONNECTIONS TO NEW ALLOTMENTS PREVIOUSLY INSTALLED.

STORMWATER CATCHMENTS

NAME	AREA (ha)	fi
CATCHMENT A	1.244	0.000
CATCHMENT B	0.899	0.000
CATCHMENT C	0.258	0.000



LOT 1
RP501877
ROCKHAMPTON REGIONAL COUNCIL
APPROVED PLANS
These plans are approved subject to the current conditions of approval associated with
Development Permit No.: D/139-2022
Dated: 7 March 2023

PRELIMINARY ISSUE

FOR APPROVAL

REV	REVISION DESCRIPTION	DATE
A	FOR MCU APPROVAL	05/09/2022
B	RPI RESPONSE - STORMWATER MANAGEMENT	25/01/2023



ACN 121 309 171
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Drafted	CER
Designed	TAHAMIL
Checked	GJB
Approved	GLENN J BROWN
RPEQ 7882	Sign
14.02.2023	

BTRE 1 PTY LTD
PROPOSED DEVELOPMENT OF LOT 5
LOT 5 BUSH CRESCENT, PARKHURST
MATERIAL CHANGE OF USE
EXISTING SITE CATCHMENTS

Dwg No.	D22.320-SW01
Revision	B

0 5 10 15 20
HORIZONTAL
1:1000

SCALE: FULL SIZE
A3
Document Set ID: 40403023

LEGEND

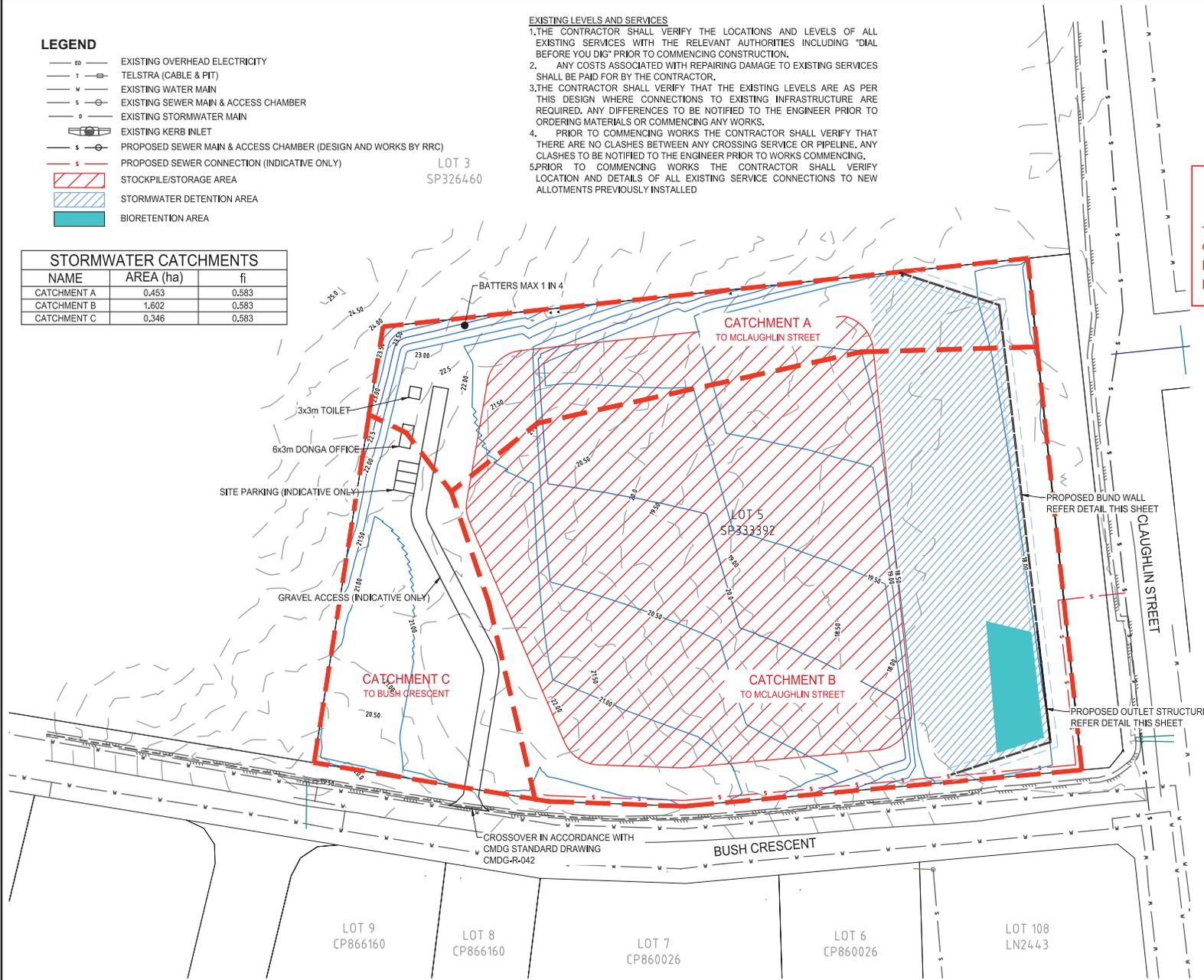
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- ▨ STOCKPILE/STORAGE AREA
- ▨ STORMWATER DETENTION AREA
- BIORETENTION AREA

EXISTING LEVELS AND SERVICES

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STORMWATER CATCHMENTS

NAME	AREA (ha)	fi
CATCHMENT A	0.453	0.583
CATCHMENT B	1.602	0.583
CATCHMENT C	0.346	0.583



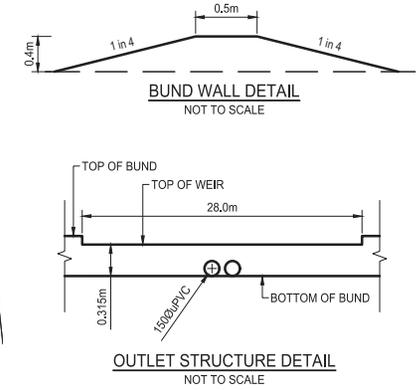
ROCKHAMPTON REGIONAL COUNCIL

APPROVED PLANS

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PRELIMINARY ISSUE

FOR APPROVAL

REV	REVISION DESCRIPTION	DATE
A	FOR MCU APPROVAL	05/09/2022
B	RFI RESPONSE - STORMWATER MANAGEMENT	25/01/2023
C	FURTHER ADVICE	16/02/2023



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Checked	GJB
Approved	GLENN J BROWN
RPEQ 7882	Sign
14.02.2023	

BTRE 1 PTY LTD
PROPOSED DEVELOPMENT OF LOT 5
LOT 5 BUSH CRESCENT, PARKHURST
MATERIAL CHANGE OF USE
PROPOSED LAYOUT AND CATCHMENTS

Dwg No.	D22.320-SW02
Revision	C



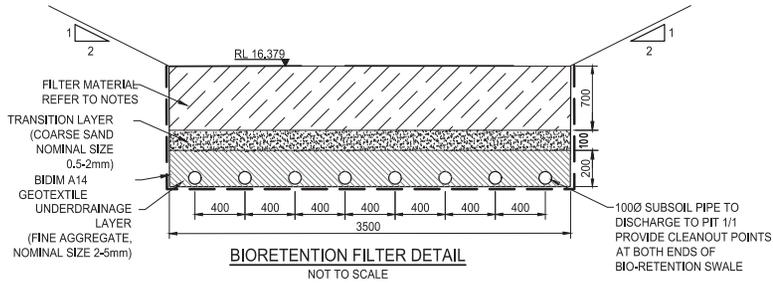
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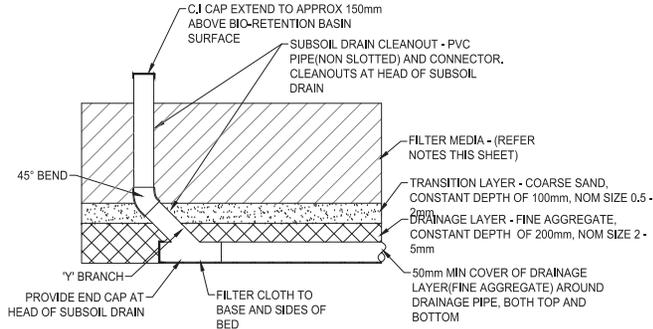
Dated: 7 March 2023



BIORETENTION FILTER DETAIL
NOT TO SCALE

NOTES:

- SUBSOIL PIPE TO BE POLYETHYLENE CORRUGATED SLOTTED PIPE TO AS2439.1 (PIPE NOT TO BE WRAPPED IN FILTER SOCK)



SUBSOIL CLEANOUT DETAIL
SCALE 1:25

Table 1. Recipe for ameliorating the top 100 mm of sand filter media

Constituent	Quantity (kg/100 m ² filter area)
Granulated poultry manure fines	50
Superphosphate	2
Magnesium sulphate	3
Potassium sulphate	2
Trace Element Mix	1
Fertilizer NPK (16.4.14)	4
Lime	20

NOTES:

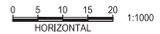
- BIO RETENTION SWALE BED TO BE VEGETATED WITH AT LEAST 2 SPECIES OF GROUNDCOVER FROM APPROVED BIORETENTION SPECIES LIST AT A RATE OF 6 PLANTS/m² AND DRESSED WITH 50mm OF MULCH.
- FILTER MEDIA TO BE EITHER:-
 - SOIL BASED FILTER MEDIA TO BE LOAMY SAND WITH THE FOLLOWING PROPERTIES:
 - MINIMUM HYDRAULIC CONDUCTIVITY OF 100mm/hr MEASURED IN ACCORDANCE WITH ASTM F1815-06.
 - CLAY AND SILT FRACTION (<0.05mm) LESS THAN 3%
 - TOTAL NITROGEN < 1000 mg/kg
 - ORTHOPHOSPHATE < 80mg/kg
 - ORGANIC MATTER CONTENT AT LEAST 3% (W/W)
 - PH BETWEEN 5.5 AND 7.5 (PH1.5 IN WATER)
 - ELECTRICAL CONDUCTIVITY E.C. < 1.2 dS/m
 - ENGINEERED FILTER MEDIA TO BE WASHED WELL GRADED SAND WITH A MINIMUM HYDRAULIC CONDUCTIVITY OF 100mm/hr WITH THE TOP 100mm LAYER TREATED WITH ORGANIC MATTER, FERTILIZER AND TRACE ELEMENTS TO SUPPORT PLANT ESTABLISHMENT IN ACCORDANCE WITH TABLE 1 THIS SHEET.
- BIO-RETENTION AREA SIZED @ 1.5% OF DEVELOPMENT AREA (797m² x 1.5% = 11,96m²) IN ACCORDANCE WITH STATE PLANNING POLICY (JULY 2017) APPENDIX 2 TABLE.B

Species Name	Common Name	Type
Carex appressa	Tall sedge	Groundcover - sedge
Panicum nodosum	Knotby club-sedge	Groundcover - sedge
Gahnia sieberiana	Red-fruit saw-sedge	Groundcover - sedge
Imperata cylindrica	Blady grass	Groundcover - grass
Lepidosperma laterale	Variable sword-sedge	Groundcover - sedge
Lomandra hystrix	Green mat-rush	Groundcover - herb
Lomandra longifolia	Spiny-headed mat-rush	Groundcover - herb
Pennisetum alopecuroides	Swamp foxtail grass	Groundcover - grass
Poa labillardieri	Common tussock grass	Groundcover - grass
Themeda australis	Kangaroo grass	Groundcover - grass
Callistemon sieberi	River bottlebrush	Shrub
Leptospermum livensidei	Olive tea-tree	Shrub
Banksia robury	Swamp banksia	Small tree
Melaleuca linariifolia	Flax-leaved paperbark	Small tree
Melaleuca viridiflora	Broad leaved tea-tree	Small tree
Casuarina glauca	Swamp oak	Tree
Casuarina cunninghamiana	River sheoak	Tree
Lophostemon suaveolens	Swamp mahogany	Tree
Melaleuca bracteata	Black tea-tree	Tree
Melaleuca quinquenervia	Broad-leaved paper bark	Tree

* ADDITIONAL SPECIES MAY INCLUDE MORE COMMERCIALY AVAILABLE VARIETIES OF THE ABOVE SPECIES

APPROVED BIO-RETENTION SPECIES LIST

FROM 'BIORETENTION TECHNICAL GUIDELINES' - WATER BY DESIGN, OCTOBER 2012



PRELIMINARY ISSUE

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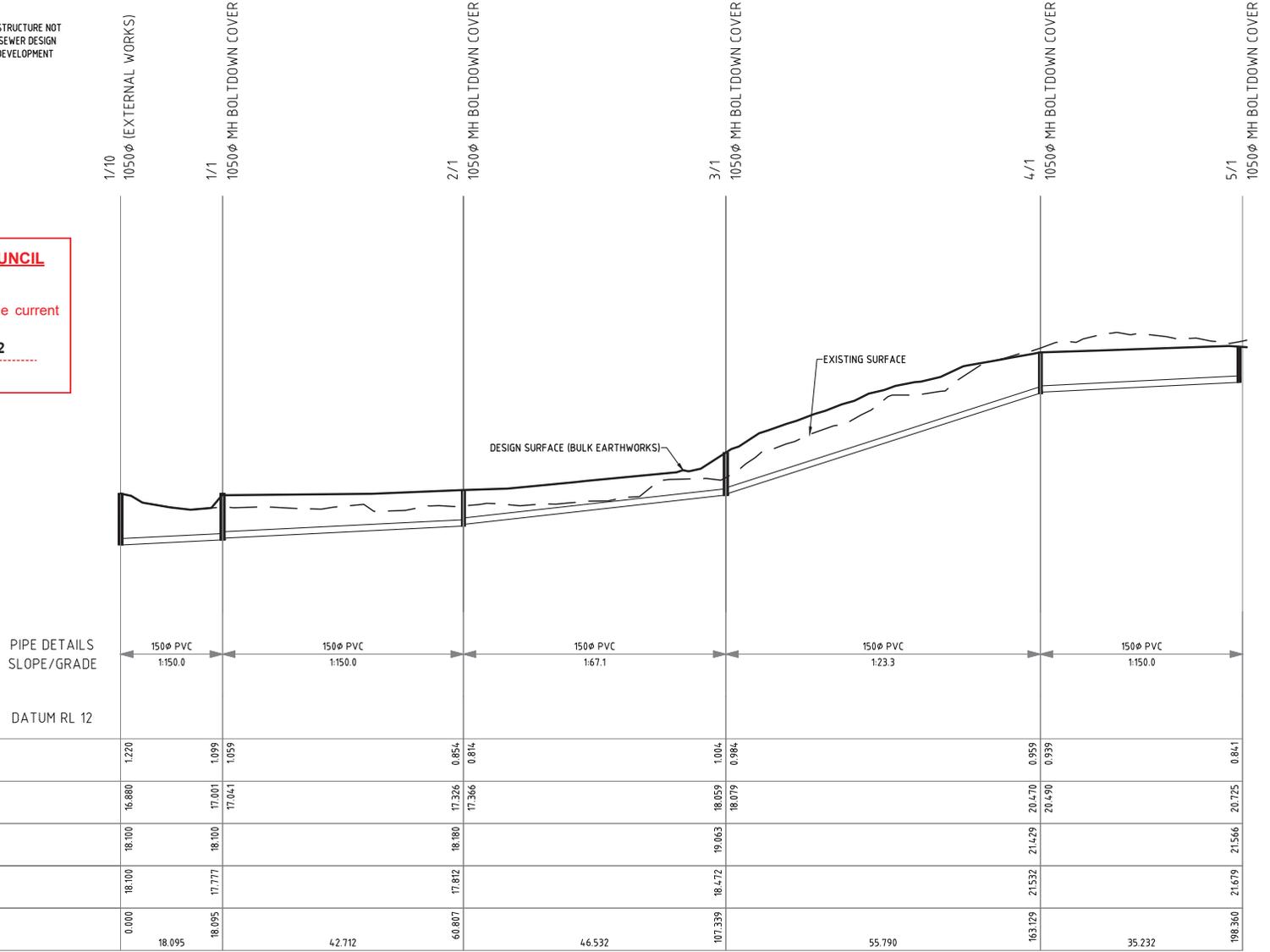
BTRE 1 PTY LTD
PROPOSED DEVELOPMENT OF LOT 5
LOT 5 BUSH CRESCENT, PARKHURST
MATERIAL CHANGE OF USE
BIO-RETENTION DETAILS

Dwg No.
D22.320-SW03
CIVIL
Revision
B

NOTE:
 FUTURE SEWER LONG SECTIONS INDICATIVE ONLY. SEWER INFRASTRUCTURE NOT TO BE CONSTRUCTED AS PART OF THIS APPLICATION. DETAILED SEWER DESIGN AND CONSTRUCTION TO BE UNDERTAKEN AS PART OF FURTHER DEVELOPMENT APPLICATIONS

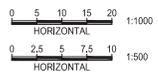
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SEWER LONGITUDINAL SECTION FOR LINE 1

SCALES: HORIZONTAL 1:750 VERTICAL 1:100



OPERATIONAL WORKS ISSUE

FOR CONSTRUCTION ONLY WITH COUNCIL APPROVAL

REV	REVISION DESCRIPTION	DATE
A	FOR DISCUSSION	06/07/2022
B	OPERATIONAL WORKS	08/08/2022
C	RESPONSE TO RF1	19/12/2022
D	FURTHER ADVICE RESPONSE	09/02/2023



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RPEQ 7682	Sign
14.02.2023	

BTRE 1 PTY LTD
 PROPOSED DEVELOPMENT OF LOT 5
 LOT 5 BUSH CRESCENT, PARKHURST
 OPERATIONAL WORKS
 FUTURE SEWER LONGITUDINAL SECTIONS

Dwg No.	D22.320-05
	CIVIL
Revision	D

PROPOSED DEVELOPMENT OF LOT 5

STORMWATER MANAGEMENT PLAN

LOT 5 BUSH CRESCENT, PARKHURST

BTRE 1 PTY LTD

D22.320

CIVIL DESIGN

ROCKHAMPTON REGIONAL COUNCIL

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LOCALITY PLAN
(Not To Scale)

DESIGN DRAWING LIST INDEX	
SHEET NUMBER	SHEET TITLE
	CIVIL
C-00	TITLE PAGE
C-01	EXISTING SITE CATCHMENTS
C-02	PROPOSED LAYOUT AND CATCHMENTS
C-03	BIO-RETENTION DETAILS



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PRELIMINARY ISSUE

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BTRE 1 PTY LTD
 PROPOSED DEVELOPMENT OF LOT 5
 LOT 5 BUSH CRESCENT, PARKHURST
 OPERATIONAL WORKS
 EXISTING FEATURES AND SERVICES

Dwg No.	D22.320-01
CIVIL	
Revision	D

LEGEND

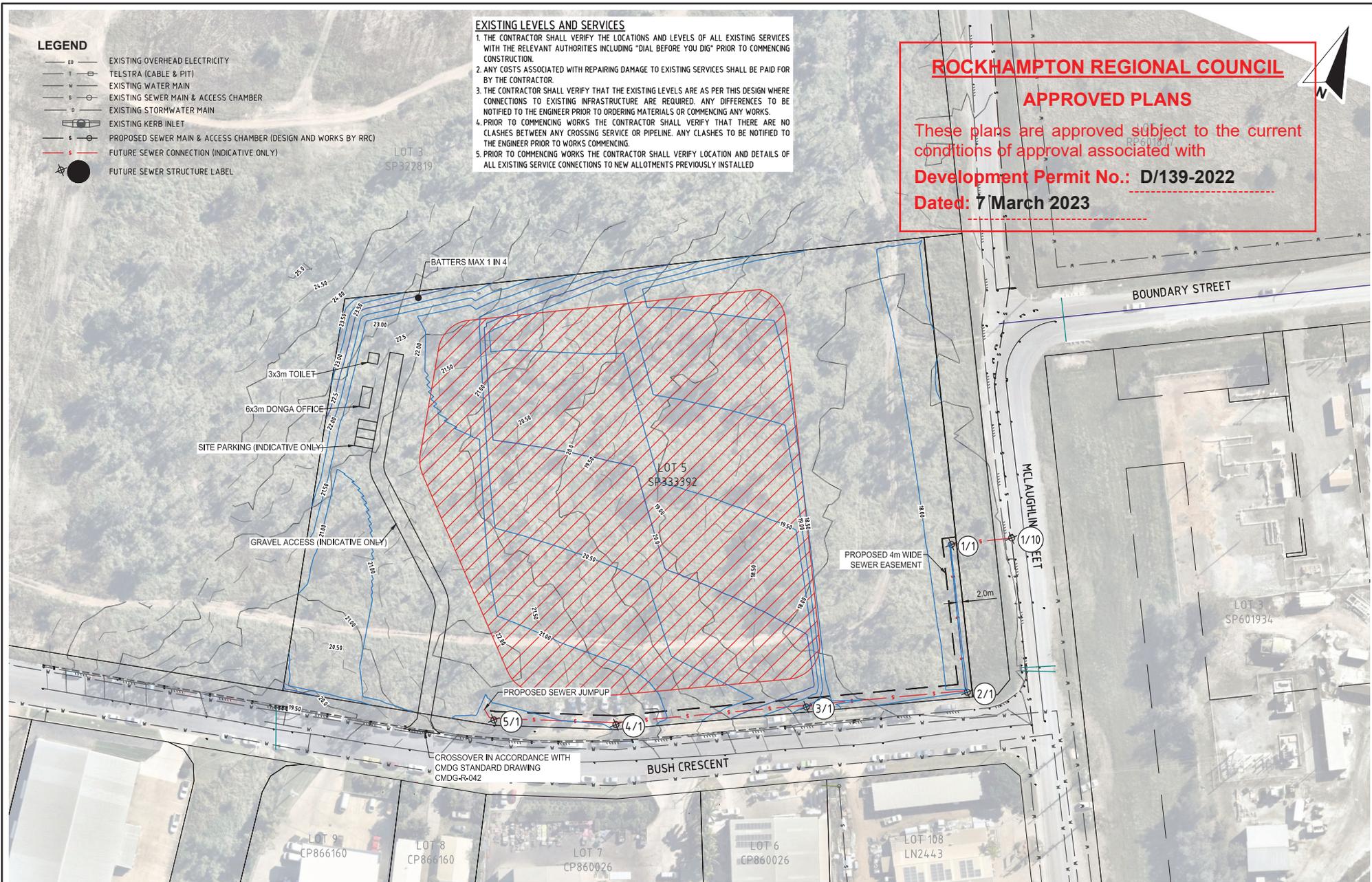
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- FUTURE SEWER STRUCTURE LABEL

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0 5 10 15 20
HORIZONTAL 1:1000

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BTRE 1 PTY LTD
PROPOSED DEVELOPMENT OF LOT 5
LOT 5 BUSH CRESCENT, PARKHURST
OPERATIONAL WORKS
PROPOSED LAYOUT

Dwg No.	D22.320-02
Revision	D

LEGEND

- 4.3.5 EXISTING CONTOUR
- 99.5 DESIGN CONTOUR
- RL 52.5 EARTHWORKS LEVELS

EARTHWORKS BALANCE		
VOLUME CUT (Cu.m)	VOLUME FILL (Cu.m)	BALANCE (Cu.m)
6690.45	6593.43	97.02 CUT

Levels Table			
No.	Min. Level	Max. Level	Colour
1	-2.270	-0.770	Red
2	-0.770	-0.400	Orange
3	-0.400	-0.130	Yellow
4	-0.130	0.000	Light Green
5	0.000	0.270	Green
6	0.270	0.580	Dark Green
7	0.580	2.210	Very Dark Green

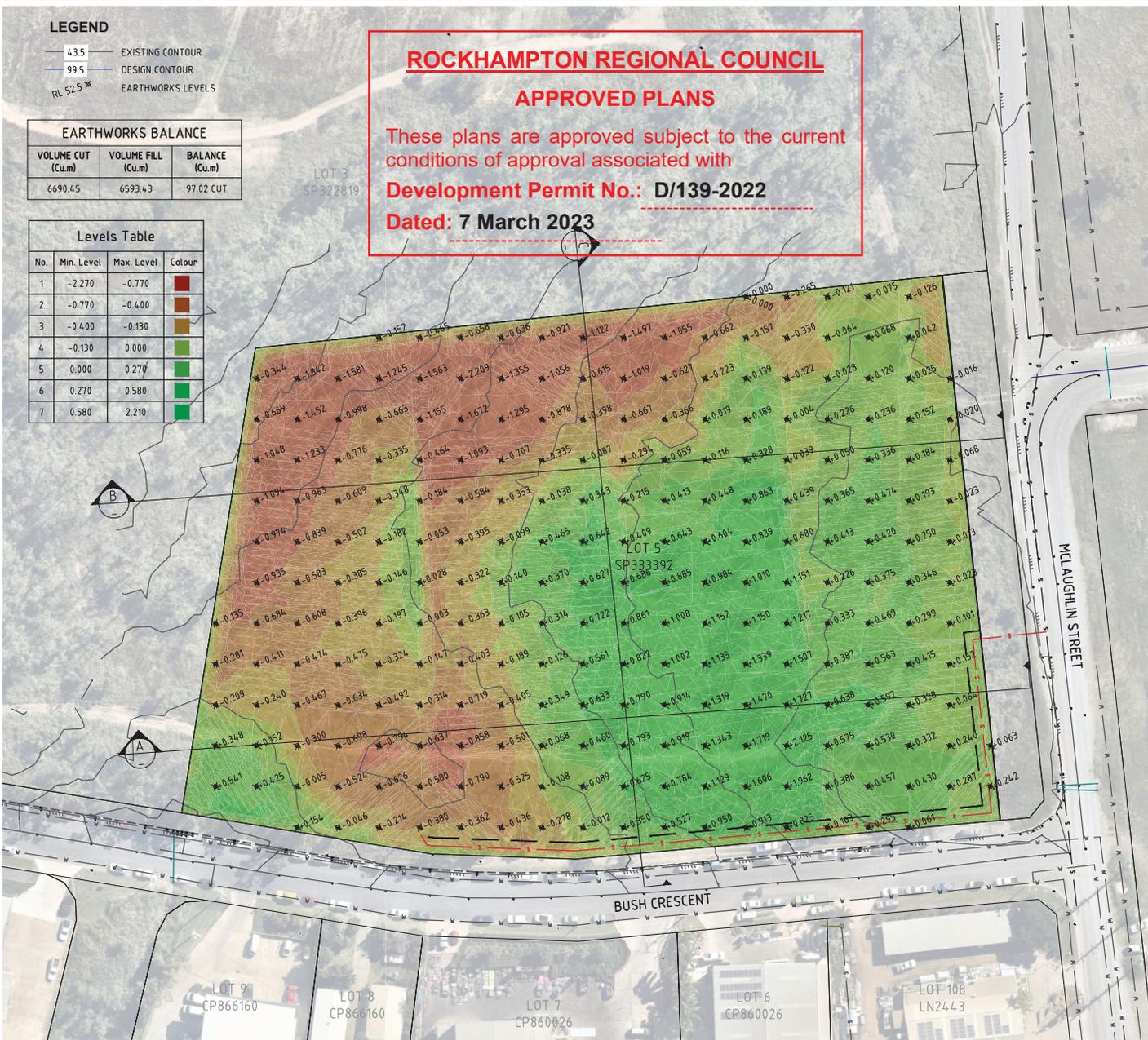
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BULK EARTHWORKS

- ALL LAYERS SHALL BE UNIFORMLY COMPACTED TO NOT LESS THAN RELATIVE COMPACTION SPECIFIED BEFORE THE NEXT LAYER IS COMMENCED. EACH LAYOUT OF MATERIAL SHALL BE TRIMMED PRIOR TO AND DURING COMPACTION TO AVOID BRIDGING OVER LOW AREAS. A SMOOTH SURFACE SHALL BE PRESENTED AT THE TOP OF EACH LAYER.
- THE FOLLOWING AREAS SHALL BE COMPACTED TO PROVIDE A RELATIVE COMPACTION, DETERMINED BY AS 1289.5.7.1 FOR STANDARD COMPACTION EFFORT, OF NOT LESS THAN 95%:
 - EACH LAYER OF MATERIAL REPLACING UNSUITABLE MATERIAL.
 - EACH LAYER OF MATERIAL PLACED IN EMBANKMENTS, UP TO 0.3 METRES FROM THE TOP OF THE SUBGRADE.
 - THE WHOLE AREA ON THE FLOOR OF CUTTINGS.
 - FILL PLACED ADJACENT TO STRUCTURES UP TO 1.0 METRES FROM THE TOP OF PAVEMENT.
 - MATERIAL IN UNSEALED VERGES AND WITHIN MEDIANS UP TO THE LEVEL AT WHICH TOPSOIL IS PLACED.
 - SPOIL (EXCLUDING UNSUITABLE MATERIAL)
 - ALL OTHER AREAS EXCEPT THOSE WHERE 97% RELATIVE COMPACTION IS SPECIFIED.
- UNSUITABLE MATERIAL SHALL BE STOCKPILED AS DIRECTED BY THE SUPERINTENDENT AND UNSUITABLE EARTHWORKS COMPACTED BY TRACK ROLLING.
- THE FOLLOWING AREAS SHALL BE COMPACTED TO PROVIDE A RELATIVE COMPACTION OF NOT LESS THAN 98% AS DETERMINED BY AS 1289.5.7.1 FOR STANDARD COMPACTION EFFORT:
 - FOUNDATIONS FOR SHALLOW EMBANKMENTS.
 - EACH LAYOUT OF THE EMBANKMENT WITHIN 0.3 METRES FROM THE TOP OF THE SUBGRADE.
 - EACH LAYER OF THE SELECTED MATERIAL ZONE.
 - ANY AREAS OF MATERIAL OF SPECIFIED QUALITY WHICH MAY BE SHOWN IN THE DRAWINGS OR SPECIFIED ELSEWHERE BEHIND CURBS AND ALL GUTTERS OR ADJACENT TO RIGID PAVEMENTS.
 - THE FILL MATERIAL PLACED ADJACENT TO STRUCTURES WITHIN 1.0 METRES FROM THE TOP OF THE PAVEMENT, UNLESS OTHERWISE STATED.
- AT THE TIME OF COMPACTION, THE MOISTURE CONTENT OF THE MATERIAL SHALL BE ADJUSTED TO PERMIT THE SPECIFIED COMPACTION TO BE ATTAINED AT A MOISTURE CONTENT OF NOT LESS THAN 80% OR MORE THAN 100% OF THE OPTIMUM MOISTURE CONTENT AS DETERMINED BY AS 1289.5.1.1 OR AS 1289.5.7.1. MATERIAL WHICH BECOMES WETTED UP AFTER PLACEMENT SHALL NOT BE COMPACTED UNTIL IT HAS DRIED OUT SO THAT THE MOISTURE CONTENT IS WITHIN THIS RANGE. THE DRYING PROCESS MAY BE ASSISTED BY AERATION. IF THERE IS INSUFFICIENT MOISTURE IN THE MATERIAL FOR IT TO BE COMPACTED AS SPECIFIED, WATER SHALL BE ADDED. THE ADDED WATER SHALL BE APPLIED UNIFORMLY AND THOROUGHLY MIXED WITH THE MATERIAL UNTIL A HOMOGENEOUS MIXTURE IS OBTAINED.
- COMPACTION SHALL BE UNDERTAKEN TO OBTAIN THE SPECIFIED RELATIVE COMPACTION FOR THE FULL DEPTH OF EACH LAYER IN EMBANKMENTS AND FOR THE FULL WIDTH OF THE FORMATION OVER THE ENTIRE LENGTH OF THE WORK. COMPACTION SHALL BE COMPLETED PROMPTLY TO MINIMISE THE POSSIBILITY OF RAIN DAMAGE.
- ANY MATERIAL PLACED BY THE CONTRACTOR THAT HAS ATTAINED THE SPECIFIED RELATIVE COMPACTION BUT SUBSEQUENTLY BECOMES WETTED UP SO THAT THE MOISTURE CONTENT IS GREATER THAN THE APPARENT OPTIMUM, DETERMINED BY AS 1289.5.7.1 SHUT SHALL BE DRIED OUT AND UNIFORMLY RE COMPACTED TO THE REQUIRED RELATIVE COMPACTION IN ACCORDANCE WITH THIS CLAUSE BEFORE THE NEXT LAYER OF MATERIAL IS PLACED. ALTERNATIVELY, THE CONTRACTOR MAY REMOVE THE LAYER OF WETTED MATERIAL TO A STOCKPILE SITE FOR DRYING AND LATER REUSE.
- FOLLOWING COMPLETION OF COMPACTION AND TRIMMING, THE ENTIRE SUBGRADE AREA SHALL BE INSPECTED BY PROOF ROLLING WITH A FULLY LOADED SINGLE REAR AXLE TRUCK (OR ACCEPTABLE EQUIVALENT). ACCEPTABLE PROOF ROLLING SHALL BE TAKEN TO BE NO VISIBLE SIGNS OF DEFORMATION OR INSTABILITY IN THE SUBGRADE.
- THE SPECIFIED COMPACTION AND MOISTURE TESTS SHALL BE TAKEN AT THE RANDOM TEST FREQUENCY. PRIOR TO TESTING THE CONTRACTOR SHALL WORK THE LOT TO ENSURE UNIFORM MOISTURE CONTENT AND COMPACTION OF ALL MATERIAL WITHIN THE LOT. THE TESTS THEN TAKEN SHALL BE CONSIDERED TO REPRESENT THE TOTAL VOLUME OF MATERIAL PLACED WITHIN THE LOT.
- LIMITS AND TOLERANCES:
 - BATTER SLOPES: EXCAVATION ±300MM, FILL ±300MM
 - FLOOR OF CUTTING: ±50MM PARALLEL TO THE DESIGNED GRADE LINE
 - TOP OF EMBANKMENT: ±10MM FROM THE GRADE LINE.



OPERATIONAL WORKS ISSUE
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DILEIGH
 CIVIL / STRUCTURAL DESIGN & PROJECT MANAGEMENT

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BTRÉ 1 PTY LTD
 PROPOSED DEVELOPMENT OF LOT 5
 LOT 5 BUSH CRESCENT, PARKHURST
 OPERATIONAL WORKS
 EARTHWORKS PLAN

Dwg No.	D22.320-03
Revision	CIVIL D

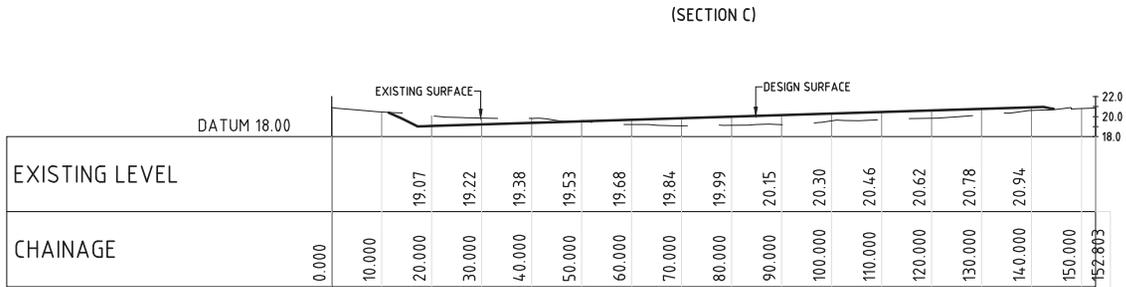
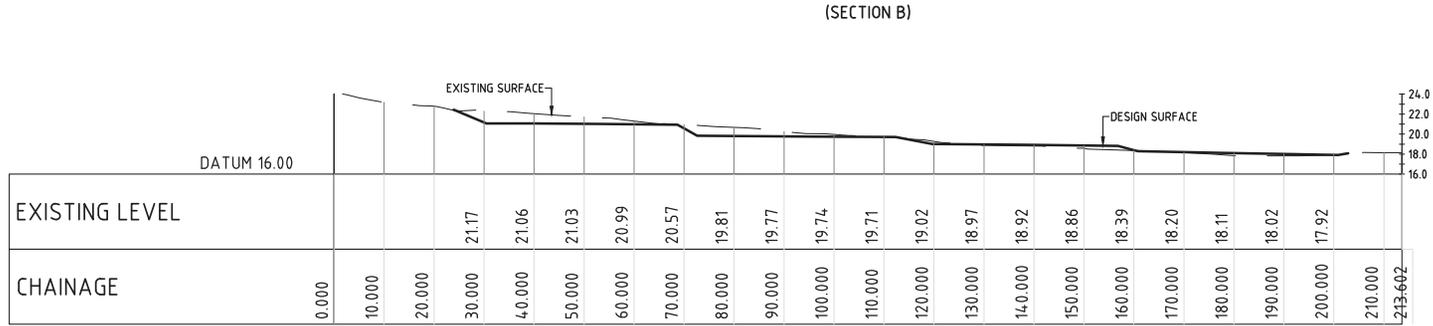
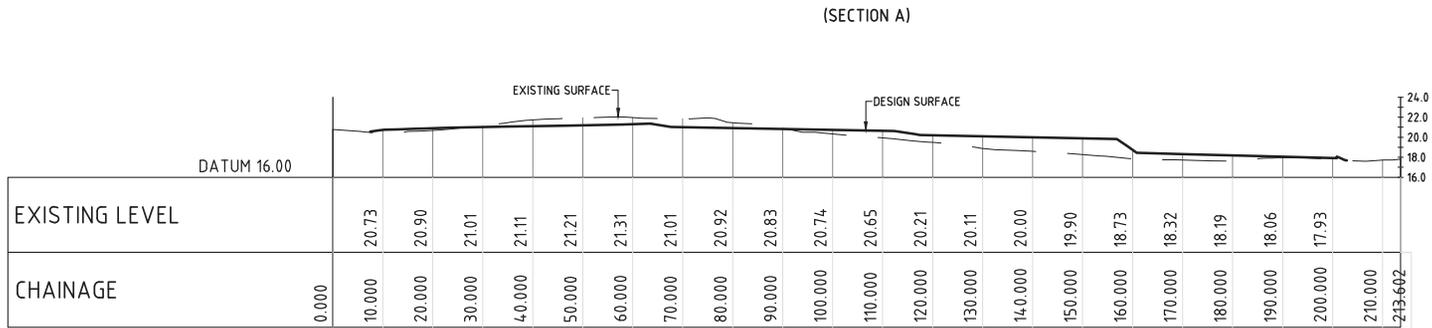
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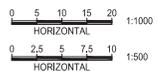
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ROCKHAMPTON REGIONAL COUNCIL
APPROVED PLANS
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OPERATIONAL WORKS ISSUE
 FOR CONSTRUCTION ONLY WITH COUNCIL APPROVAL

REV	REVISION DESCRIPTION	DATE
A	FOR DISCUSSION	06/07/2022
B	OPERATIONAL WORKS	08/08/2022
C	RESPONSE TO RFI	19/12/2022
D	FURTHER ADVICE RESPONSE	09/02/2023



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Designed	TAHAMAL
Checked	GJB
Approved	GLENN J BROWN
RPEQ 7682	Sign
14.02.2023	

BTRE 1 PTY LTD
 PROPOSED DEVELOPMENT OF LOT 5
 LOT 5 BUSH CRESCENT, PARKHURST
 OPERATIONAL WORKS
 EARTHWORKS PROFILE SECTIONS

Dwg No.	D22.320-04
	CIVIL
Revision	D

LEGEND

-  EXISTING OVERHEAD ELECTRICITY
-  TELSTRA (CABLE & PIT)
-  EXISTING WATER MAIN
-  EXISTING SEWER MAIN & ACCESS CHAMBER
-  EXISTING STORMWATER MAIN
-  EXISTING KERB INLET
-  PROPOSED SEWER MAIN & ACCESS CHAMBER
-  PROPOSED SEDIMENT FENCE

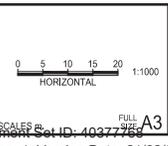
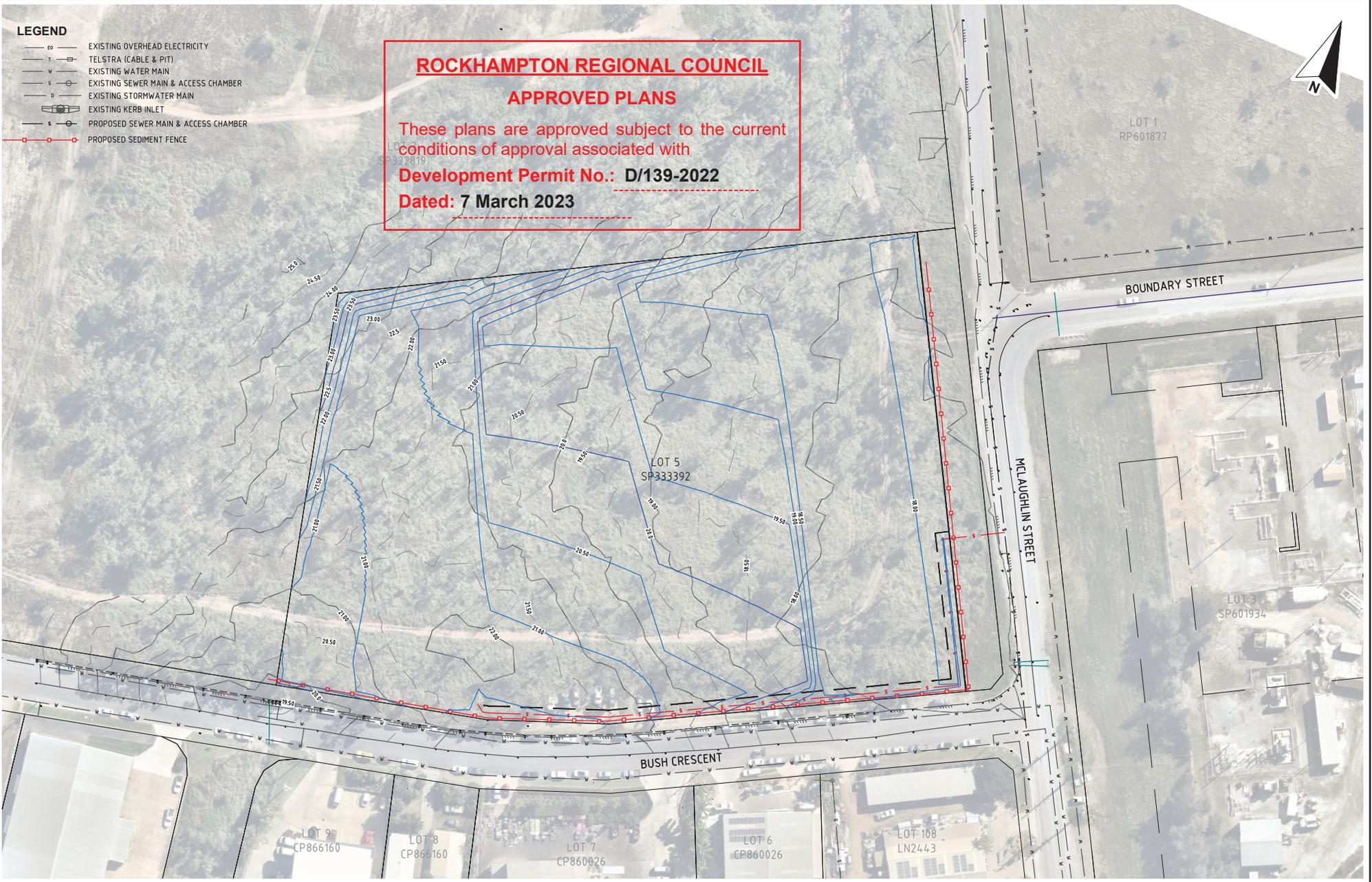
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BTRE 1 PTY LTD
 PROPOSED DEVELOPMENT OF LOT 5
 LOT 5 BUSH CRESCENT, PARKHURST
 OPERATIONAL WORKS
 SEDIMENT AND EROSION CONTROL PLAN

Dwg No.	D22.320-06
CIVIL	
Revision	D

ENVIRONMENTAL MANAGEMENT NOTES:

1. PRIOR TO THE COMMENCEMENT OF EARTHWORKS, TOPSOIL SHALL BE STRIPPED AND STOCKPILED FROM SELECT AREAS ONLY FOR RE-SPREADING OVER DISTURBED AREAS PRIOR TO REVEGETATION AND LANDSCAPING.
2. PRIOR TO THE COMMENCEMENT OF ANY EARTHWORKS ALL SEDIMENT CONTROL DEVICES WILL BE ERRECTED WHERE SHOWN ON THE DRAWINGS OR OTHERWISE DIRECTED BY THE ENGINEER.
3. ALL DISTURBED AREAS ON-SITE AND IN ROAD RESERVE WILL BE RE-TOPSOILED, TURFED OR LANDSCAPED.
4. ALL SOIL CONSERVATION AND ENVIRONMENTAL PROTECTION MEASURES SHALL BE MONITORED BY THE CONTRACTOR AT REGULAR INTERVALS DURING CONSTRUCTION. SEDIMENT CONTROL DEVICES WILL BE MONITORED AFTER RAIN EVENTS AND MADE GOOD WHERE NECESSARY. THIS WILL ALSO BE CARRIED OUT DURING THE DEFECTS LIABILITY PERIOD.
5. SILT FENCES SHALL BE INSTALLED ON THE LOW SIDE OF ALL STOCKPILES WHERE REQUIRED.
6. SILT FENCES SHALL REMAIN ON SITE UNTIL ALL CONSTRUCTION ACTIVITIES ARE COMPLETE AND THERE IS 90% VEGETATION COVERAGE OF PROPOSED LANDSCAPED AREAS.

NOISE MANAGEMENT:

1. **WORKING HOURS** - WORKING HOURS FOR THE SITE ARE TO BE 6.30am TO 6.30pm MONDAY TO SATURDAY. NO WORK TO BE UNDERTAKEN OUTSIDE OF TIMES SPECIFIED UNDER ANY CIRCUMSTANCES.
2. **NOISE MINIMISATION METHODS** - NOISE WILL BE MINIMISED USING THE FOLLOWING METHODS:-
 - 2.1. RESTRICTED WORKING HOURS AS DETAILED ABOVE
 - 2.2. NOISE GENERATING MACHINERY TO OPERATED ONLY WHEN NECESSARY TO UNDERTAKE WORKS - VEHICLES AND MACHINERY ARE NOT TO BE LEFT 'IDLING' WHEN NOT IN USE.
 - 2.3. NOISE SHIELDING ON PLANT TO BE INSPECTED PRIOR TO COMMENCEMENT OF WORKS AND MADE GOOD WHERE FOUND TO BE FAULTY.
 - 2.4. VEHICLES AND MACHINERY TO BE REGULARLY MAINTAINED TO REDUCE ENGINE NOISE THROUGH INFREQUENT MAINTENANCE.

DUST MANAGEMENT:

1. **MINIMISING DUST GENERATION** - THE FOLLOWING WORK PRACTICES WILL BE USED TO MINIMISE DUST GENERATION:-
 - 1.1. WIND CONDITIONS ON SITE ARE TO BE MONITORED AND SITE WORKS STOPPED IF WIND STRENGTH IS SUCH THAT EFFORTS TO MINIMISE AND/OR SUPPRESS DUST ARE INEFFECTIVE.
 - 1.2. SOIL STABILISATION OF BATTERS (THROUGH TOPSOILING AND REVEGETATION) TO BE UNDERTAKEN IMMEDIATELY AFTER FINAL TRIM TO MINIMISE EXPOSURE OF BARE EARTH.
 - 1.3. STOCKPILES INTENDING TO BE LEFT IN PLACE FOR 28 DAYS OR GREATER SHALL BE GRASS SEEDED.
2. **DUST SUPPRESSION** -
 - 2.1. WET DOWN DUST GENERATING SURFACES DAILY PRIOR TO COMMENCEMENT OF WORK USING WATER TRUCKS, SPRINKLERS AND HOSE WATERING BY HAND.
 - 2.2. ADDITIONAL WETTING DOWN OF SITE AREAS IS TO BE UNDERTAKEN AS NEEDED DURING THE COURSE OF THE DAY WHERE WORK AREAS HAVE DRIED AND ARE GENERATING DUST.

WEED MANAGEMENT:

1. **MOVEMENT OF SOIL** - EXISTING TOP SOIL IS TO BE STOCKPILED AND RE-USED ON SITE AFTER SITE WORKS ARE COMPLETE, ANY ADDITIONAL TOP SOIL REQUIRED IS TO BE FREE OF PLANT SEEDS PRIOR TO SPREADING ON SITE.
2. **FILL MATERIAL** - FILL MATERIAL TO BE IMPORTED ON SITE IS TO BE 'CLEAN FILL' AND FREE FROM ANY ORGANIC MATTER OR MATERIALS.

EMERGENCY VEHICLE ACCESS:

1. MAINTAIN CLEAR ACCESS TO SITE FOR EMERGENCY VEHICLES AT ALL TIMES

WASTE MANAGEMENT:

1. ALL LITTER AND WASTE TO BE CONTAINED ON SITE IN CONTAINERS PROVIDED FOR THAT PURPOSE.
2. ALL WASTE TO BE FURTHER DISPOSED OFF SITE IN A RESPONSIBLE MANNER.
3. WHERE POSSIBLE MINIMISE WASTE THROUGH WASTE MINIMIZATION AND RE-USE.

EROSION AND SEDIMENT MANAGEMENT:

DRAINAGE MANAGEMENT - WHERE POSSIBLE, RAINWATER DISCHARGE FROM UPSTREAM PROPERTIES IS TO BE DIRECTED AWAY FROM WORKS THROUGH TEMPORARY BUNDING.

1. **SOIL STABILISATION** -
 - 1.1. EXPOSED EARTH SHALL BE TOPSOILED, VEGETATED, AND LANDSCAPED AS SOON AS POSSIBLE AFTER TRIMMING.
 - 1.2. RE-VEGETATED AND LANDSCAPED AREAS SHALL BE REGULARLY WATERED TO ASSIST ESTABLISHMENT OF COVER.
 - 1.3. ALL BANKS AND BATTERS ARE TO BE REGULARLY INSPECTED TO IDENTIFY AREAS OF EROSION AND RESHAPED TO PREVENT FURTHER EROSION IF NECESSARY - RECTIFICATION WORKS ARE TO BE RE-VEGETATED IMMEDIATELY.
2. **STOCKPILE PROTECTION** -
 - 2.1. STOCKPILES ARE TO BE SITUATED SUCH THAT THEY ARE NOT IN ANY STORMWATER FLOW PATHS.
 - 2.2. SILT FENCING IS TO BE INSTALLED TO DOWNSTREAM SIDE OF STOCKPILE AREAS PRIOR TO THEIR USE.
 - 2.3. STOCKPILES INTENDING TO BE LEFT IN PLACE FOR 28 DAYS OR GREATER SHALL BE GRASS SEEDED.
 - 2.4. STOCKPILES TO HAVE A MAXIMUM SLOPE OF 2H:1V.
3. **SEDIMENT TRAPS** -
 - 3.1. SILT FENCING & SEDIMENT TRAPS TO BE INSTALLED AT AREAS OF SITE DISCHARGE AS SHOWN ON PLAN.
 - 3.2. SILT FENCING TO BE INSTALLED TO DOWNSTREAM SIDE OF STOCKPILE AREAS, STRIPPED AREAS, AND ANY OTHER AREAS OF BARE EARTH WHERE SILT LADEN RUNOFF CAN BE GENERATED.
 - 3.3. SEDIMENT FENCING TO BE INSTALLED IN ACCORDANCE WITH SEDIMENT FENCE DETAILS ON THIS SHEET.
 - 3.4. SEDIMENT FENCE LAYOUT SHALL CONFORM TO "TYPICAL LAYOUT ACROSS GRADE" AS DETAILED ON STANDARD DRAWING CMDG-D-050.
 - 3.5. SILT FENCES AND SEDIMENT TRAPS SHALL REMAIN ON SITE UNTIL ALL CONSTRUCTION ACTIVITIES ARE COMPLETE AND THERE IS 90% VEGETATION COVERAGE OF PROPOSED LANDSCAPED AREAS.
4. **VEHICLE AND ROAD MANAGEMENT**-
 - 4.1. VEHICLES AND PLANT ARE TO ONLY ACCESS THE SITE FROM BUSH CRESCENT SITE ACCESS TO BE OVER A SHAKER ACCESS PAD OR RUMBLE GRID IN ACCORDANCE WITH STANDARD DWG CMDG-D-050.
 - 4.2. VEHICLE OPERATOR TO ASSESS MATERIAL ON VEHICLE PRIOR TO EXITING SITE AND REMOVE EXCESS WITH SHOVEL OR BRUSH.
 - 4.3. BUSH CRESCENT TO BE INSPECTED AT END OF EACH DAY AND ANY DEPOSITED MATERIAL IS TO BE REMOVED.

ACID SULFATE SOILS:

1. DUE TO THE ELEVATION AND SITE GEOLOGY IT IS UNLIKELY THAT A.S.S. WILL BE ENCOUNTERED ON THIS SITE.
2. IF A.S.S. ARE ENCOUNTERED ON THE SITE DURING CONSTRUCTION ENGAGE A SUITABLY QUALIFIED ENVIRONMENTAL CONSULTANT TO PRODUCE AN A.S.S. MANAGEMENT PLAN FOR IT.

FAUNA MANAGEMENT:

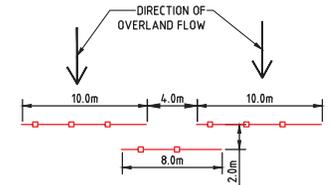
1. ANY CLEARING OF REMNANT VEGETATION WILL REQUIRE A FAUNA SPOTTER / CATCHER TO BE IN ATTENDANCE.

VEGETATION MANAGEMENT:

1. WHERE VEGETATION COVENANT EXISTS ON SITE. THIS AREA TO BE CLEARLY PEGGED AND FLAGGED OR FENCED PRIOR TO WORK COMMENCING ON SITE TO PREVENT ANY CLEARING IN THIS AREA.

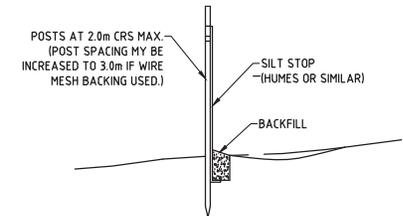
BUSH FIRE MANAGEMENT:

1. THE SITE IS PREDOMINANTLY CLEARED AND NOT IN A BUSH FIRE HAZARD ZONE (BUT STILL MAY BE SUBJECT TO BUSH FIRES)
2. ANY CLEARED VEGETATION TO BE MULCHED AND USED ON SITE.
3. MULCHED STOCK PILES TO BE NO MORE THAN 2.0m HIGH AND WET DOWN DAILY.
4. REMOVE MULCH FROM SITE IF SAFE TO DO SO SHOULD BUSHFIRES THREATEN THE AREA.



SEDIMENT FENCE DETAIL

N.T.S



SEDIMENT FENCE DETAIL

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LOT 5 BUSH CRESCENT, PARKHURST
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ENVIRONMENTAL MANAGEMENT NOTES

Revision	D
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