CORE PROJECT CONSULTING

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Rosebery NSW 2018

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ABN 34 620 484 602

ELECTRICAL ● FIRE ● HYDRAULIC ● MECHANICAL ● STRUCTURAL● CIVIL ● FACADES

PROJECT ADDRESS:
PROPOSED CARPARK A7.
33 CONSUL ROAD, BROOKVALE

DRAWING INDEX & COVER SHEET: CIVIL

PROJECT No.	DWG No.	DWG TITLES	REVISION
2290	C000	COVER SHEET & DRAWING INDEX	02
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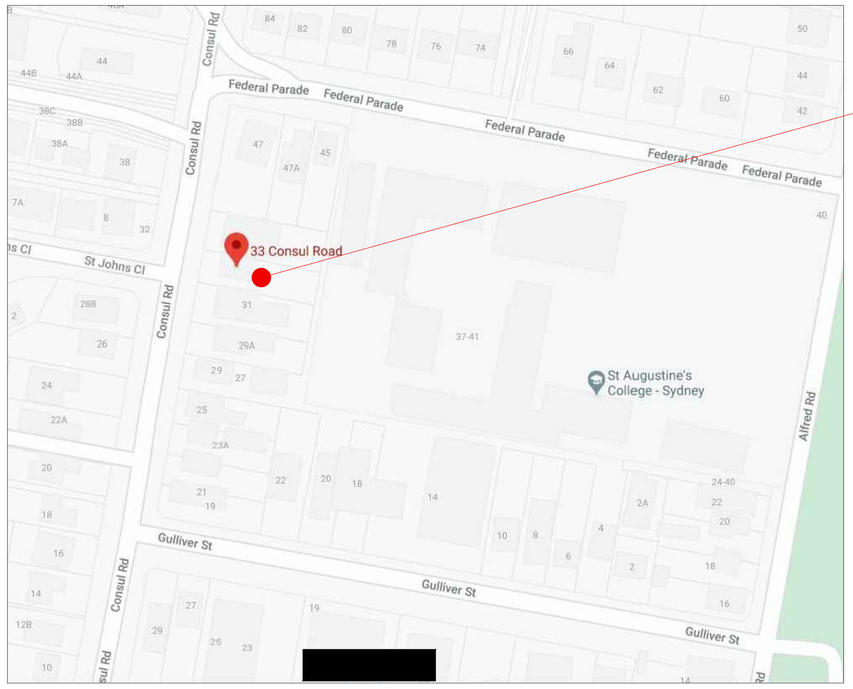

SATE MAP (SOURCE: GOOGLE MAP)

33 CONSUL ROAD, BROOKVALE

SITE LAYOUT (SOURCE: SIX MAPS)

ISSUE FOR DA

ISSUE	DATE	AMENDMENT
00	29.09.2020	ISSUE FOR DISCUSSION
01	02.10.2020	ISSUE FOR DEVELOPMENT APPLICATION
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NORTH :

SCALE : NTS

VERIFIED : AC

DESIGNED : HR

DRAWN : RQ

DRAWING TITLE : COVER SHEET & DRAWING INDEX

PROJECT : PROPOSED CARPARK A7.
33 CONSUL ROAD, BROOKVALE

DATE : 12/09/2020

SCALE : N.T.S

PROJECT No : 2290

REVISION : 02

DRAWING No : C000

Plotted by: Ammar Khalid

Cad File No: D:\HASAN\SEPTEMBER PROJECT\P-27 (0000) 33 Consul\SWMP\33 CONSUL - SWMP 09-10-2020.dwg

EXISTING UNDERGROUND SERVICES NOTES

THE LOCATIONS OF UNDERGROUND SERVICES SHOWN IN THIS SET OF DRAWINGS HAVE BEEN PLOTTED FROM SURVEY INFORMATION AND SERVICE AUTHORITY INFORMATION. THE SERVICE INFORMATION HAS BEEN PREPARED ONLY TO SHOW THE APPROXIMATE POSITIONS OF ANY KNOWN SERVICES AND MAY NOT BE AS CONSTRUCTED OR ACCURATE.CARDNO CAN NOT GUARANTEE THAT THE SERVICES INFORMATION SHOWN ON THESE DRAWINGS ACCURATELY INDICATES THE PRESENCE OR ABSENCE OF SERVICES OR THEIR LOCATION AND WILL ACCEPT NO LIABILITY FOR INACCURACIES IN THE SERVICES INFORMATION SHOWN FROM ANY CAUSE WHATSOEVER.

CONTRACTORS SHALL TAKE DUE CARE WHEN EXCAVATING ONSITE INCLUDING HAND EXCAVATION WHERE NECESSARY.
CONTRACTORS ARE TO CONTACT THE RELEVANT SERVICE AUTHORITY PRIOR TO COMMENCEMENT OF EXCAVATION WORKS. CONTRACTORS ARE TO UNDERTAKE A SERVICES SEARCH, PRIOR TO COMMENCEMENT OF WORKS ON SITE. SEARCH RESULTS ARE TO BE KEPT ON SITE AT ALL TIMES.

COMMUNICATIONS - DUTY OF CARE NOTE

COMMUNICATIONS AND DATA PROVIDER PLANS SHOW ONLY THE PRESENCE OF CABLES AND PLANT. THEY ONLY SHOW THEIR POSITION RELATIVE TO ROAD BOUNDARIES, PROPERTY FENCES ETC. AT THE TIME OF INSTALLATION AND EACH PROVIDER DOES NOT WARRANT OR HOLD OUT THAT SUCH PLANS ARE ACCURATE THEREAFTER DUE TO CHANGES THAT MAY OCCUR OVER TIME. DO NOT ASSUME DEPTH OR ALIGNMENT OF CABLES OR PLANT AS THESE VARY SIGNIFICANTLY. THE CONTRACTOR HAS A DUTY OF CARE WHEN EXCAVATING NEAR COMMUNICATIONS AND DATA CABLES AND PLANT.
BEFORE USING MACHINE EXCAVATORS COMMUNICATIONS PLANT MUST FIRST BE PHYSICALLY EXPOSED BY SOFT DIG POTHOLING TO IDENTIFY IT'S LOCATION, PROVIDERS WILL SEEK COMPENSATION FOR DAMAGES CAUSED TO IT'S PROPERTY AND LOSSES CAUSED TO THE PROVIDERS AND IT'S CUSTOMERS.

TELSTRA - DUTY OF CARE NOTE

TELSTRA'S PLANS SHOW ONLY THE PRESENCE OF CABLES AND PLANT. THEY ONLY SHOW THEIR POSITION RELATIVE TO ROAD BOUNDARIES, PROPERTY FENCES ETC. AT THE TIME OF INSTALLATION AND TELSTRA DOES NOT WARRANT OR HOLD OUT THAT SUCH PLANS ARE ACCURATE THEREAFTER DUE TO CHANGES THAT MAY OCCUR OVER TIME. DO NOT ASSUME DEPTH OR ALIGNMENT OF CABLES OR PLANT AS THESE VARY SIGNIFICANTLY. THE CONTRACTOR HAS A DUTY OF CARE WHEN EXCAVATING NEAR TELSTRA CABLES AND PLANT.
BEFORE USING MACHINE EXCAVATORS TELSTRA PLANT MUST FIRST BE PHYSICALLY EXPOSED BY SOFT DIG POTHOLING TO IDENTIFY IT'S LOCATION TELSTRA WILL SEEK COMPENSATION FOR DAMAGES CAUSED TO IT'S PROPERTY AND LOSSES CAUSED TO TELSTRA AND IT'S CUSTOMERS.

BULK EARTHWORKS NOTES

1. STRIP ALL TOPSOIL/ORGANIC MATERIAL FROM CONSTRUCTION AREA AND REMOVE FROM SITE OR STOCK PILE AS DIRECTED BY SUPERINTENDENT.
2. EXCAVATED MATERIAL TO BE USED AS STRUCTURAL FILL PROVIDED THE PLACEMENT MOISTURE CONTENT OF THE MATERIAL IS +/- 2% OF THE OPTIMUM MOISTURE CONTENT.
3. COMPACT FILL AREAS AND SUBGRADE TO NOT LESS THAN:

LOCATION	STANDARD DRY DENSITY (AS 1289 E 5.1.1.)
UNDER BUILDING SLABS ON GROUND	98%
UNDER ROADS AND CARPARKS	98%
LANDSCAPED AREAS UNLESS NOTED OTHERWISE	98%

4. FOR NON COHESIVE MATERIAL, COMPACT TO 75% DENSITY INDEX.
5. BEFORE PLACING FILL, PROOF ROLL EXPOSED SUBGRADE WITH AN 8 TONNE (MIN) DEADWEIGHT SMOOTH DRUM VIBRATORY ROLLER TO DETECT THEN REMOVE SOFT SPOTS (AREAS WITH MORE THAN 2mm MOVEMENT UNDER ROLLER).
6. FREQUENCY OF COMPACTION TESTING SHALL BE NOT LESS THAN :-
   (A) 1 TEST PER 200m² OF FILL PLACED PER 300 LAYER OF FILL.
   (B) 3 TESTS PER VISIT
   (C) 1 TEST PER 1000m² OF EXPOSED SUBGRADE "LEVEL 1" TESTING SHALL BE TESTING IN ACCORDANCE WITH AS 3798 (1996).
7. FILLING TO BE PLACED IN MAXIMUM 150mm - LOOSE LAYERS AND COMPACTED AS SPECIFIED
8 NO FILLING SHALL TAKE PLACE TO EXPOSED SUBGRADE UNTIL THE AREA HAS BEEN PROOF ROLLED IN THE PRESENCE OF CARDNO AND APPROVAL GIVEN IN WRITING THAT FILLING CAN PROCEED.

EROSION AND SEDIMENT CONTROL NOTES

GENERAL INSTRUCTIONS

1. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR THE CONTROL OF EROSION AND SEDIMENTATION TO THE SATISFACTION OF COUNCIL, NSW OFFICE OF WATER, OFFICE OF ENVIRONMENT AND HERITAGE, THE EROSION AND SEDIMENTATION CONTROLS SHOWN ON THE DRAWINGS SHALL ONLY BE USED AS A GUIDE BY THE CONTRACTOR, AND SHALL REPRESENT THE MINIMUM REQUIREMENT ONLY.
2. THE CONTRACTOR SHALL ENSURE THAT ALL SOIL AND WATER MANAGEMENT WORKS ARE LOCATED AS DOCUMENTED OR AS OTHERWISE DIRECTED BY THE SUPERINTENDENT.
   ALL WORK SHALL BE GENERALLY CARRIED OUT IN ACCORDANCE WITH
   a. LOCAL AUTHORITY REQUIREMENTS
   b. EPA REQUIREMENTS
   c. NSW DEPARTMENT OF HOUSING MANUAL "MANAGING URBAN STORMWATER, SOILS AND CONSTRUCTION", 4th EDITION, MARCH 2004.
3. MAINTAIN THE EROSION CONTROL DEVICES TO THE SATISFACTION OF THE SUPERINTENDENT AND THE LOCAL AUTHORITY.
4. WHEN STORMWATER PITS ARE CONSTRUCTED, PREVENT SITE RUNOFF ENTERING UNLESS SEDIMENT FENCES ARE ERECTED AROUND PITS.
5. CONTRACTOR IS TO ENSURE ALL EROSION & SEDIMENT CONTROL DEVICES ARE MAINTAINED IN GOOD WORKING ORDER AND OPERATE EFFECTIVELY. REPAIRS AND OR MAINTENANCE SHALL BE UNDERTAKEN AS REQUIRED, PARTICULARLY FOLLOWING STORM EVENTS.

LAND DISTURBANCE

6. WHERE PRACTICAL, THE SOIL EROSION HAZARD ON THE SITE WILL BE KEPT AS LOW AS POSSIBLE. TO THIS END, WORKS SHOULD BE UNDERTAKEN IN THE FOLLOWING SEQUENCE:
   a. INSTALL A SEDIMENT FENCE ALONG THE BOUNDARIES AS SHOWN ON PLAN. REFER DETAIL.
   b. CONSTRUCT STABILISED CONSTRUCTION ENTRANCE TO LOCATION AS DETERMINED BY SUPERINTENDENT/ENGINEER. REFER DETAIL.
   c. INSTALL SEDIMENT BASIN AS SHOWN ON PLAN (D) INSTALL SEDIMENT TRAPS AS SHOWN ON PLAN.
   d. UNDERTAKE SITE DEVELOPMENT WORKS IN ACCORDANCE WITH THE ENGINEERING PLANS. WHERE POSSIBLE, PHASE DEVELOPMENT SO THAT LAND DISTURBANCE IS CONFINED TO AREAS OF WORKABLE SIZE.

EROSION CONTROL

7. DURING WINDY WEATHER, LARGE, UNPROTECTED AREAS WILL BE KEPT MOIST (NOT WET) BY SPRINKLING WITH WATER TO KEEP DUST UNDER CONTROL.
8. FINAL SITE LANDSCAPING WILL BE UNDERTAKEN AS SOON AS POSSIBLE AND WITHIN 20 WORKING DAYS FROM COMPLETION OF CONSTRUCTION ACTIVITIES.

SEDIMENT CONTROL

9. STOCKPILES WILL NOT BE LOCATED WITHIN 2 METRES OF HAZARD AREAS, INCLUDING LIKELY AREAS OF CONCENTRATED OR HIGH VELOCITY FLOWS SUCH AS WATERWAYS. WHERE THEY ARE BETWEEN 2 AND 5 METRES FROM SUCH AREAS, SPECIAL SEDIMENT CONTROL MEASURES SHOULD BE TAKEN TO MINIMISE POSSIBLE POLLUTION TO DOWNSLOPE WATERS, E.G. THROUGH INSTALLATION OF SEDIMENT FENCING.
10. ANY SAND USED IN THE CONCRETE CURING PROCESS (SPREAD OVER THE SURFACE) WILL BE REMOVED AS SOON AS POSSIBLE AND WITHIN 10 WORKING DAYS FROM PLACEMENT.
11. WATER WILL BE PREVENTED FROM ENTERING THE PERMANENT DRAINAGE SYSTEM UNLESS IT IS RELATIVELY SEDIMENT FREE, I.E. THE CATCHMENT AREA HAS BEEN PERMANENTLY LANDSCAPED AND/OR ANY LIKELY SEDIMENT HAS BEEN FILTERED THROUGH AN APPROVED STRUCTURE.
12. TEMPORARY SOIL AND WATER MANAGEMENT STRUCTURES WILL BE REMOVED ONLY AFTER THE LANDS THEY ARE PROTECTING ARE REHABILITATED.
13. ACCEPTABLE RECEPTORS WILL BE PROVIDED FOR CONCRETE AND MORTAR SLURRIES, PAINTS, ACID WASHINGS, LIGHT-WEIGHT WASTE MATERIALS AND LITTER.
14. ANY EXISTING TREES WHICH FORM PART OF THE FINAL LANDSCAPING PLAN WILL BE PROTECTED FROM CONSTRUCTION ACTIVITIES BY:

OTHER MATTERS

a. PROTECTING THEM WITH BARRIER FENCING OR SIMILAR MATERIALS INSTALLED OUTSIDE THE DRIP LINE
b. ENSURING THAT NOTHING IS NAILED TO THEM
c. PROHIBITING PAVING, GRADING, SEDIMENT WASH OR PLACING OF STOCKPILES WITHIN THE DRIP LINE EXCEPT UNDER THE FOLLOWING CONDITIONS.

(I) ENCROACHMENT ONLY OCCURS ON ONE SIDE AND NO CLOSER TO THE TRUNK THAN EITHER 1.5 METRES OR HALF THE DISTANCE BETWEEN THE OUTER EDGE OF THE DRIP LINE AND THE TRUNK, WHICH EVER IS THE GREATER
(II) A DRAINAGE SYSTEM THAT ALLOWS AIR AND WATER TO CIRCULATE THROUGH THE ROOT ZONE (E.G. A GRAVEL BED) IS PLACED UNDER ALL FILL LAYERS OF MORE THAN 300 MILLIMETRES DEPTH
(III) CARE IS TAKEN NOT TO CUT ROOTS UNNECESSARILY NOR TO COMPACT THE SOIL AROUND THEM.

STORMWATER DRAINAGE NOTES

1. STORMWATER DESIGN CRITERIA:
   (A) AVERAGE RECURRENCE INTERVAL:
   100 YEAR ARI ROOFED AREAS TO SURCHARGE PIT
   10 YEAR ARI PAVEMENTS (MINOR SYSTEM)
   100 YEAR ARI OVERLAND FLOW PATHS (MAJOR SYSTEM)
   (B) RAINFALL INTENSITIES: TIME OF CONCENTRATION:
   5 MINUTES
   100 YEAR ARI 193mm/hr
   10 YEAR ARI 280mm/hr
2. PIPES 375 DIA. AND LARGER TO BE REINFORCED CONCRETE CLASS '2' APPROVED SPIGOT AND SOCKET WITH RUBBER RING JOINTS. U.N.O.
3. PIPES 300 DIA AND LESS SHALL BE DWV GRADE (CLASS SN8) uPVC WITH SOLVENT WELDED JOINTS.
4. ALL PIPES ARE TO BE UNIFORMLY SUPPORTED ALONG THE LENGTH OF THE BARREL BY SUITABLE FILL MATERIAL. REFER TO BEDDING SUPPORT TYPE.
5. PIPES WITH SOCKETS SHALL BE LAID IN BEDDING WHERE SUITABLE RECESSES HAVE BEEN PROVIDED TO ENSURE PIPES DO NOT BEAR ON THEIR SOCKETS.
6. ALL STORMWATER DRAINAGE LINES UNDER PROPOSED BUILDING SLABS TO BE uPVC PRESSURE PIPE GRADE 6. ENSURE ALL VERTICALS AND DOWNPIPES ARE uPVC PRESSURE PIPE, GRADE 6 FOR A MIN OF 3.0m IN HEIGHT.
7. PIPES TO BE INSTALLED TO TYPE HS1 SUPPORT IN ACCORDANCE WITH AS 3725 (2007) IN ALL CASES BACKFILL TRENCH WITH SAND TO 300mm ABOVE PIPE. WHERE PIPE IS UNDER PAVEMENTS BACKFILL REMAINDER OF TRENCH TO UNDERSIDE OF PAVEMENT WITH SAND OR APPROVED GRANULAR MATERIAL COMPACTED IN 150mm LAYERS TO MINIMUM 98% STANDARD MAXIMUM DRY DENSITY IN ACCORDANCE WITH AS 1289 5.2.1. (OR A DENSITY INDEX OF NOT LESS THAN 75).
8. REFER TO AS/NRS 3725:2007 TABLE B1 FOR REQUIRED FILL DEPTHS ABOVE PIPE BARREL PRIOR TO USE OF COMPACTION MACHINERY OR TRAVERSING OF PIPES BY GENERAL SITE EQUIPMENT.
9. WHERE WORKING METHODS REQUIRE HIGHER CLASS PIPE, THE CONTRACTOR SHALL REFER TO AS 3725 (2007) TO DETERMINE THE APPROPRIATE PIPE CLASS. PROPOSED PIPE CLASS SHALL BE REVIEWED BY CORE PRIOR TO INSTALLATION.
10. ALL INTERNAL WORKS WITHIN PROPERTY BOUNDARIES ARE TO COMPLY WITH THE REQUIREMENTS OF AS 3500 3.1 (2003) AND AS/NZS 3500 3.2 (2003).
11. PRECAST PITS MAY BE USED EXTERNAL TO THE BUILDING SUBJECT TO APPROVAL BY CORE.
12. ENLARGERS, CONNECTIONS AND JUNCTIONS TO BE PREFABRICATED FITTINGS WHERE PIPES ARE LESS THAN 300 DIA.
13. WHERE SUBSOIL DRAINS PASS UNDER FLOOR SLABS AND VEHICULAR PAVEMENTS, UNSLOTTED uPVC SEWER GRADE PIPE IS TO BE USED.
14. CARE IS TO BE TAKEN WITH LEVELS OF STORMWATER LINES. GRADES SHOWN ARE NOT TO BE REDUCED WITHOUT APPROVAL.
15. GRATES AND COVERS SHALL CONFORM TO AS 3996.
16. ALL BOX CULVERTS SHALL BE STRUCTURALLY DESIGNED BY THE MANUFACTURER AND DELIVERED TO SITE AS FIT FOR PURPOSE.
17. AT ALL TIMES DURING CONSTRUCTION OF STORMWATER PITS, ADEQUATE SAFETY PROCEDURES SHALL BE TAKEN TO ENSURE AGAINST THE POSSIBILITY OF PERSONNEL FALLING DOWN PITS.
18. ALL EXISTING STORMWATER DRAINAGE LINES AND PITS THAT ARE TO REMAIN ARE TO BE INSPECTED AND CLEANED. DURING THIS PROCESS ANY PART OF THE STORMWATER DRAINAGE SYSTEM THAT WARRANTS REPAIR SHALL BE REPORTED TO THE SUPERINTENDENT/ENGINEER FOR FURTHER DIRECTIONS.

SITEWORKS NOTES

1. ORIGIN OF LEVELS:- REFER SURVEY DRAWING AND SETOUT PLAN.
2. CONTRACTOR MUST VERIFY ALL DIMENSIONS AND EXISTING LEVELS ON SITE PRIOR TO COMMENCEMENT OF WORK. ANY DISCREPANCIES TO BE REPORTED TO CORE.
3. MAKE SMOOTH CONNECTION WITH EXISTING WORKS.
4. ALL TRENCH BACKFILL MATERIAL SHALL BE COMPACTED TO THE SAME DENSITY AS THE ADJACENT MATERIAL.
5. ALL SERVICE TRENCHES UNDER VEHICULAR PAVEMENTS SHALL BE BACKFILLED WITH SAND TO 300mm ABOVE PIPE. WHERE PIPE IS UNDER PAVEMENTS BACKFILL REMAINDER OF TRENCH TO UNDERSIDE OF PAVEMENT WITH SAND OR APPROVED GRANULAR MATERIAL COMPACTED IN 150mm LAYERS TO MINIMUM 98% MODIFIED MAXIMUM DRY DENSITY IN ACCORDANCE WITH AS 1289 5.2.1. (OR A DENSITY INDEX OF NOT LESS THAN 75)
6. PROVIDE 10mm WIDE EXPANSION JOINTS BETWEEN BUILDINGS AND ALL CONCRETE OR UNIT PAVEMENTS.
7. ASPHALTIC CONCRETE SHALL CONFORM TO R.M.S. SPECIFICATION R116.
8. ALL BASECOURSE MATERIAL SHALL BE IGNEOUS ROCK QUARRIED MATERIAL TO COMPLY WITH R.M.S. FORM 3051, COMPACTED TO MINIMUM 98% MODIFIED DENSITY IN ACCORDANCE WITH AS 1289 5.2.1 FREQUENCY OF COMPACTION TESTING SHALL NOT BE LESS THAN 1 TEST PER 50m³ OF BASECOURSE MATERIAL PLACED.
9. ALL SUB-BASE COURSE MATERIAL SHALL BE IGNEOUS ROCK QUARRIED MATERIAL TO COMPLY WITH R.M.S. FORM 3051, AND COMPACTED TO MINIMUM 95% MODIFIED DENSITY IN ACCORDANCE WITH A.S 1289 5.2.1 FREQUENCY OF COMPACTION TESTING SHALL NOT BE LESS THAN 1 TEST PER 50m³ OF SUB-BASE COURSE MATERIAL PLACED.
10. AS AN ALTERNATIVE TO THE USE OF IGNEOUS ROCK AS A SUB-BASE MATERIAL IN (9) A CERTIFIED RECYCLED CONCRETE MATERIAL COMPLYING WITH R.M.S. FORM 3051 WILL BE CONSIDERED. SUBJECT TO MATERIAL SAMPLES AND APPROPRIATE CERTIFICATIONS BEING PROVIDED TO THE SATISFACTION OF CARDNO.
11. SHOULD THE CONTRACTOR WISH TO USE A RECYCLED PRODUCT THIS SHALL BE CLEARLY INDICATED IN THEIR TENDER AND THE PRICE DIFFERENCE BETWEEN AN IGNEOUS PRODUCT AND A RECYCLED PRODUCT SHALL BE CLEARLY INDICATED.
12. WHERE NOTED ON THE DRAWINGS THAT WORKS ARE TO BE CARRIED BY OTHERS, (eg. ADJUSTMENT OF SERVICES), THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE CO-ORDINATION OF THESE WORKS.

ISSUE FOR DA

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DRAWN : RQ

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PROJECT : PROPOSED CARPARK A7.
33 CONSUL ROAD, BROOKVALE

DATE : 12/09/2020

SCALE : N.T.S

PROJECT No : 2290

REVISION : 02

DRAWING No : C001

Plotted by: Ammar Khalid

Cad File No: D:\HASAN\SEPTEMBER PROJECT\P-27 (0000) 33 Consul\SWMP\33 CONSUL - SWMP 09-10-2020.dwg

LEGEND:

- AUSGRID
- JEMENA GAS NORTH
- TELSTRA
- NBN
- NORTHERN BEACHES COUNCIL
- SYDNEY WATER
- VERIZON BUSINESS

NOTE:

* THIS PLAN IS SHOULD BE USED **FOR INDICATIVE PURPOSES ONLY**.
* BEFORE WORKS ARE CARRIED OUT THE CONTRACTOR SHOULD CONTACT DIAL BEFORE YOU DIG TO OBTAIN AN UPDATED PLAN.
* IF THE SERVICES ARE OBSERVED ON SITE AND NOT SEEN ON DIAL BEFORE YOU DIG PLANS. UNDERGROUND UTILITY MAPPING SHOULD BE DONE TO EXPLORE UNDERGROUND SERVICES.
* THIS PLAN DOES NOT RELEASE ANY OTHER CONTRACTOR FROM HIS RESPONSIBILITIES. THIS PLAN SHOULD NOT BE CONSIDERED AS A DIAL BEFORE YOU DIG MAP.
* THIS PLAN IS DRAWN ON THE BASIS OF AVAILABLE INFORMATION, INVESTIGATION REGARDING OTHER SERVICE SHALL BE DONE BY THE CONTRACTOR.

DIAL BEFORE YOU DIG REFERENCE DETAILS:

JOB NO.: 1935313

USER REF NO.: NOT SUPPLIED

WORKING ON BEHALF OF: PRIVATE

ENQUIRY DATE: 04/09/2020

DIAL BEFORE YOU DIG
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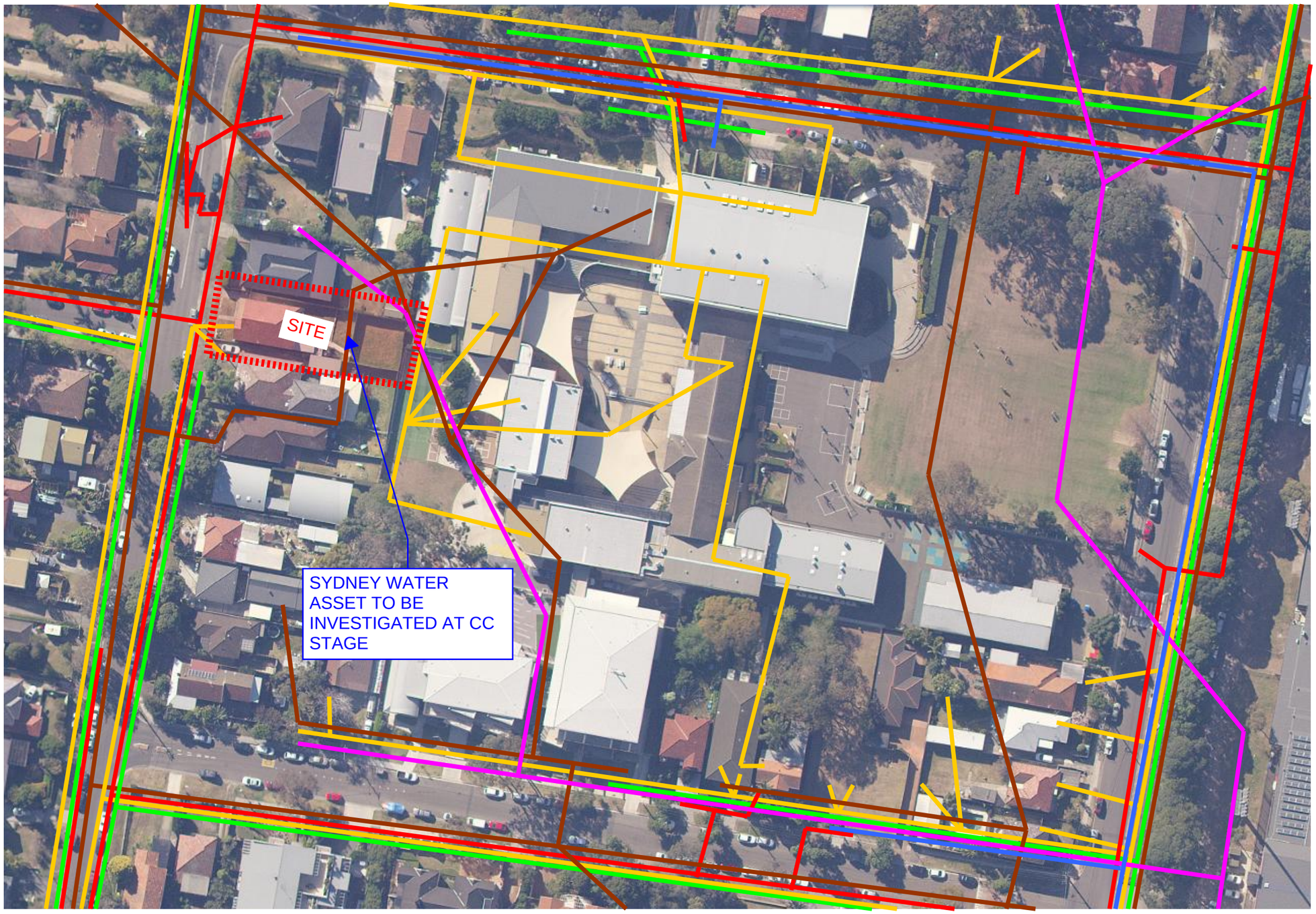

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PROJECT : PROPOSED CARPARK AT 33 CONSUL ROAD, BROOKVALE

DATE : 12/09/2020

SCALE : N.T.S

PROJECT No : 2290

REVISION : 01

DRAWING No : C002

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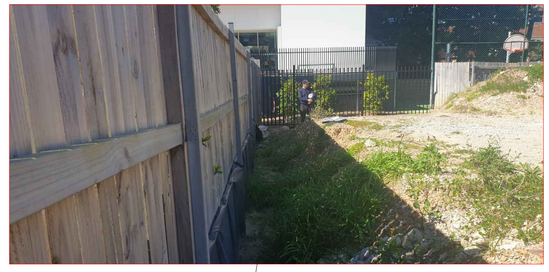
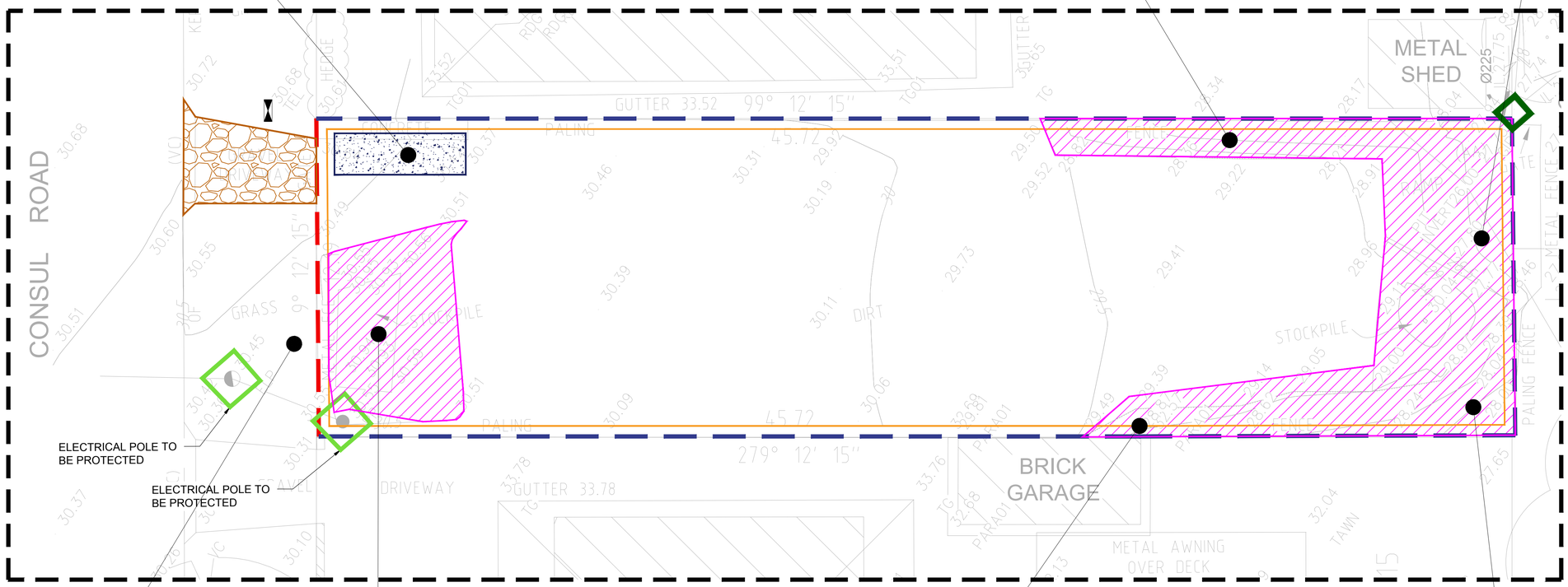
EXISTING CONCRETE TO BE REMOVED AND SEND TO RECYCLING FACILITY. BRICKS TO BE REUSED IN CONSTRUCTION OF OSD & PITS. CAN ALSO BE USED IN SET OUT DURING INITIAL WORK.

EXISTING CAVITY TO BE FILLED AND GRADED WITH AVAILABLE TOP SOIL (STOCKPILE) AFTER CLEANING THE DEBRIS.

EXISTING CAVITY TO BE FILLED AND GRADED WITH AVAILABLE TOP SOIL (STOCKPILE) AFTER CLEANING THE DEBRIS.

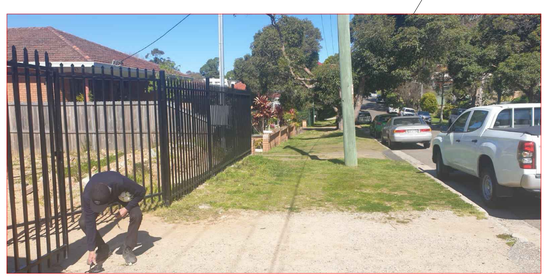


EXISTING TOPSOIL TO BE CLEANED FROM WASTE, GRAVELS & CLEAN SOIL IS TO BE USED AS BACKFILL IN THE CAVITIES PRESENT ALONG THE TWO SIDES OF THE BOUNDARY. NOTE THE FILL IS TO BE COMPACTED AND GRADED AS PER PROPOSED DRIVEWAY PLAN.



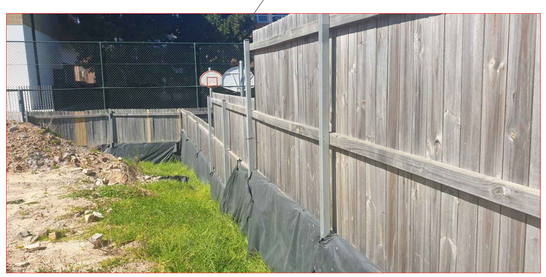
WASTE MANAGEMENT PLAN

SCALE - 1:100

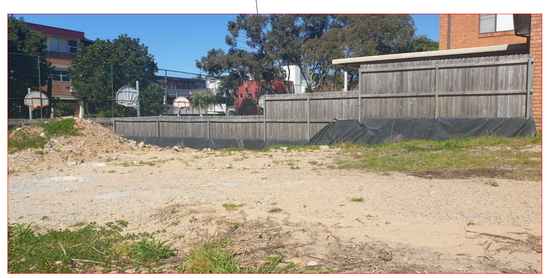


EXTERNAL GREEN AREA AND POLE TO BE PRESERVED. THE EXISTING STEEL FENCE TO BE REUSED.

STOCKPILE AT THE FRONT AREA TO BE RELOCATED AND REUSED AFTER REMOVING THE TOP SOIL, BOULDERS & GRAVELS.



GRASS AND VEGETATION TO BE REMOVED. EXISTING CAVITY TO BE FILLED AND GRADED WITH AVAILABLE TOP SOIL (STOCKPILE) AFTER CLEANING THE DEBRIS.



EXISTING TOPSOIL TO BE CLEANED FROM WASTE, GRAVELS CLEAN SOIL IS TO BE USED AS BACKFILL IN THE CAVITY PRESENT ALONG THE TWO SIDES OF THE BOUNDARY. NOTE THE FILL IS TO BE COMPACTED AND GRADED AS PER PROPOSED DRIVEWAY PLAN.

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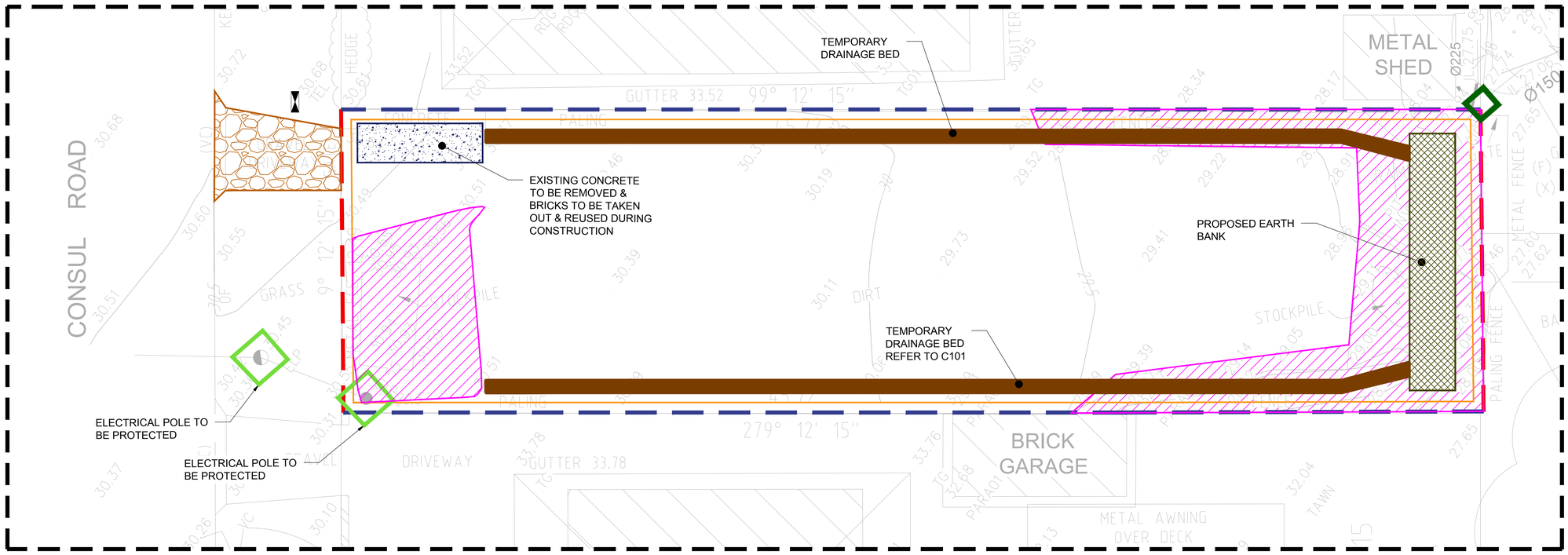
Plotted by: Ammar Khalid

Cad File No: D:\HASAN\SEPTEMBER PROJECT\P-27 (0000) 33 Consul\SWMP\33 CONSUL - SWMP 09-10-2020.dwg



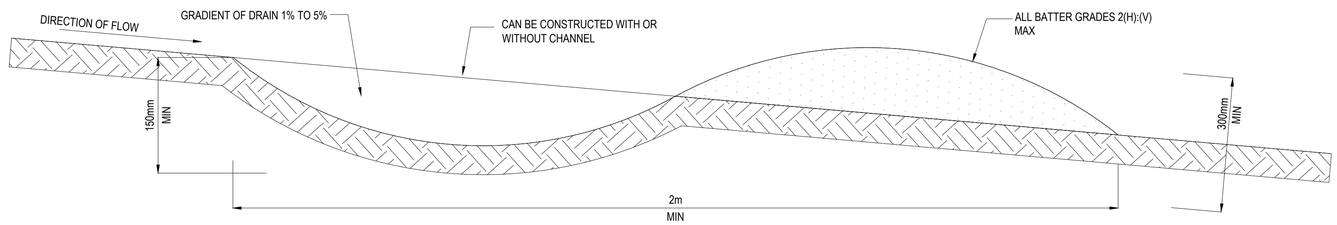
SEDIMENTATION & EROSION CONTROL PLAN

SCALE - 1:100

LEGEND

- SEDIMENT FENCE
- EXISTING METAL FENCE (TO BE RETAINED OR REINSTALLED IF REMOVED)
- EXISTING TIMBER FENCE
- EXISTING CONCRETE TO BE REMOVED & BRICKS TO BE TAKEN OUT & REUSED DURING CONSTRUCTION
- ON SITE SOIL TO BE REMOVED
- PIT TO BE PRESERVED REFER TO DETAIL
- EXISTING GRAVEL DRIVEWAY TO BE RECONSTRUCTED AT COMPLETION STAGE

NOTE:
ONLY TO BE USED AS TEMPORARY BANK
WHERE MAXIMUM UPSLOPE LENGTH IS 80m



EARTH BANK

NOT TO SCALE

CONSTRUCTION NOTES:

1. BUILD WITH GRADIENTS BETWEEN 1% AND 5%
2. AVOID REMOVING TREES AND SHRUBS IF POSSIBLE- WORK AROUND THEM
3. ENSURE THE STRUCTURES ARE FREE OF PROJECTIONS OR OTHER IRREGULARITIES THAT COULD IMPEDE WATER FLOW
4. BUILD THE DRAINS WITH CIRCULAR, PARABOLIC OR TRAPEZOIDAL CROSS SECTIONS, NOT V SHAPED
5. ENSURE THE BANKS ARE PROPERLY COMPACTED TO PREVENT FAILURE
6. COMPLETE PERMANENT OR TEMPORARY STABILISATION WITHIN 10 DAYS OF CONSTRUCTION

ISSUE FOR DA

ISSUE	DATE	AMENDMENT
00	29.09.2020	ISSUE FOR DISCUSSION
01	02.10.2020	ISSUE FOR DEVELOPMENT APPLICATION
02	09.10.2020	ISSUE FOR DEVELOPMENT APPLICATION

CLIENT / BUILDER / ARCHITECT

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ABN 34 620 484 602
ELECTRICAL ● FIRE ● HYDRAULIC ● MECHANICAL ● STRUCTURAL ● CIVIL ● FACADES

NORTH :

SCALE : 0 1000 2000 3000 4000 5000 SCALE 1:100

VERIFIED :	AC
DESIGNED :	HR
DRAWN :	RQ

DRAWING TITLE : SEDIMENTATION & EROSION CONTROL PLAN

PROJECT : PROPOSED CARPARK A7. 33 CONSUL ROAD, BROOKVALE

DATE :	12/09/2020
SCALE :	1:100
PROJECT No :	2290
REVISION :	02
DRAWING No :	C100

Plotted by: Ammar Khalid

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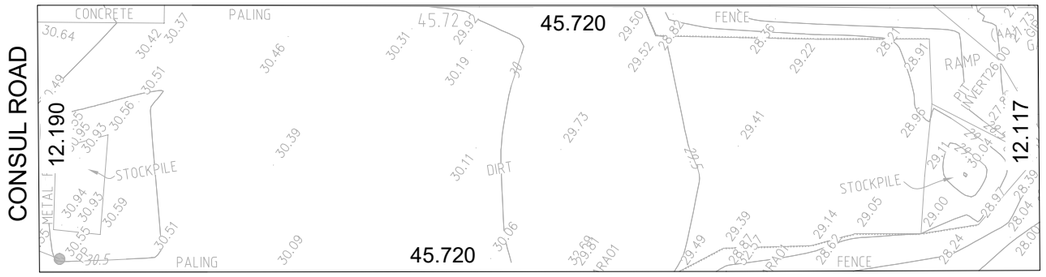
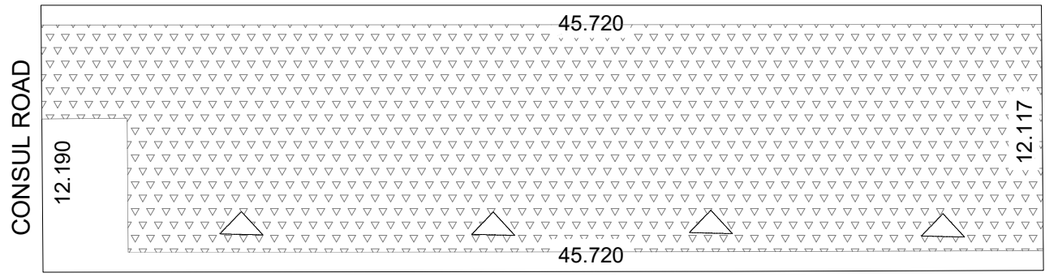




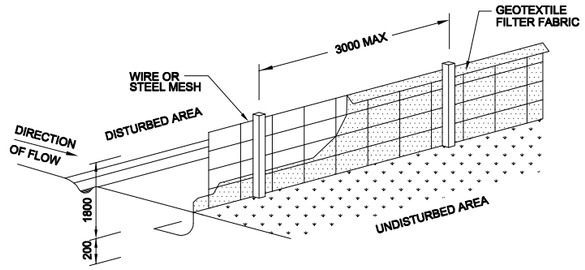
POST DEVELOPMENT PAVED AREA

SITE AREA	556.11 m² (AS PER CAD)
IMPERVIOUS AREA	0 m² (0%)
PERVIOUS AREA	556.11 m² (100%)

SITE AREA	556.11 m² (AS PER CAD)
IMPERVIOUS AREA	452.47 m² (81.36%)
PERVIOUS AREA	103.64 m² (18.64%)

CATCHMENTS ANALYSIS

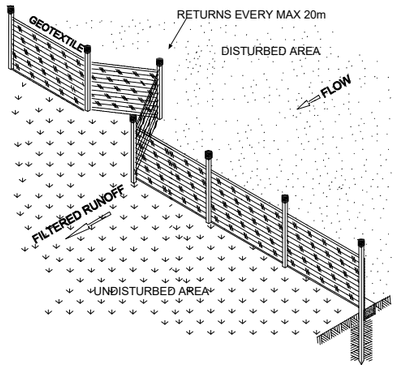
AS PER CATCHMENT ANALYSIS OF PRE AND POST DEVELOPMENT IT IS EVALUATED THAT THERE IS 100% INCREASE IN THE IMPERVIOUS AREA. AS THE LOT. BEFORE DEVELOPMENT WAS A VACCANT LOT. DUE TO THIS INCREASE IN IMPERVIOUS AREA STORMWATER MANAGEMENT IS PROPOSED IN ACCORDANCE WITH COUNCIL DCP. FURTHER COUNCIL OSD CHECKLIST IS ALSO PROVIDED AS PART OF THIS DA DOCUMENTATION.



SEDIMENT FENCE

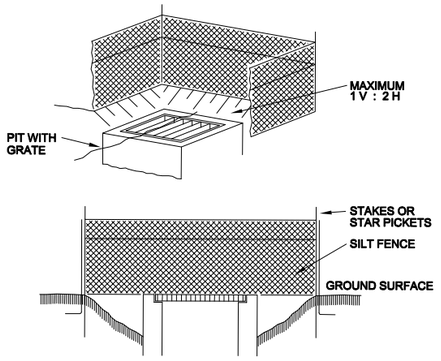
1. TO BE USED AS A TEMPORARY BARRIER TO INTERCEPT SEDIMENT LADEN RUN-OFF FROM SMALL DRAINAGE AREAS
2. MAXIMUM DRAINAGE AREA FOR OVERLAND FLOW TO A SILT FENCE SHALL NOT EXCEED 0.6Ha PER LINE OF FENCE
3. DO NOT USE IF CONCENTRATED FLOW IS DIRECTED TO SILT FENCE
4. MAXIMUM ALLOWABLE DISTANCE BETWEEN SILT FENCE FOR VARIOUS GRADES LISTED BELOW:

SLOPE V:H	MAX. SLOPE LENGTH (m)
1:2	15
1:3	25
1:4	40
1:5	50
FLATTER THAN 1:5	60



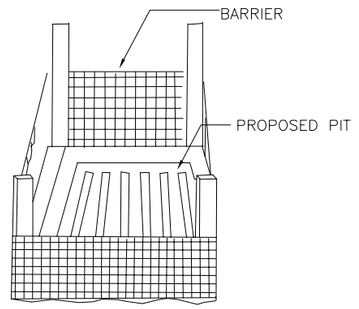
SEDIMENT FENCE ISOMETRIC

NOT TO SCALE



SURFACE INLET PIT PROTECTION

NOT TO SCALE



SEDIMENT BARRIER AROUND STORMWATER PIT (DURING) CONSTRUCTION)

EROSION CONTROL MEASURES.

1. ALL EROSION AND SEDIMENT CONTROL MEASURES, (INCLUDING RE-VEGETATION AND STORAGE OF SOIL AND TOP SOIL), SHALL BE IMPLEMENTED TO THE DEPARTMENT OF CONSERVATION OF NEW SOUTH WALES STANDARDS.
2. TOPSOIL FROM ALL AREAS TO BE DISTURBED, SHALL BE STOCK PILED AND LATER RESPREAD TO AID VEGETATION.AS SHOWN IN C102
3. ALL DRAINAGE WORKS SHALL BE CONSTRUCTED AND STABILIZED AS EARLY AS POSSIBLE DURING DEVELOPMENT.
4. SEDIMENT TRAPS SHALL BE CONSTRUCTED AROUND ALL PITS.
5. DISTURBANCE TO VEGETATION SHALL BE LIMITED TO FILL AREAS, ROADWAYS AND DRAINAGE LINES. AREAS OTHER THAN SPECIFIED SHALL BE DISTURBED ONLY WITH PRIOR APPROVAL FROM THE COUNCIL ENGINEER.
6. ALL DISTURBED AREAS SHALL BE REVEGETATED AS SOON AS THE RELEVANT WORKS ARE COMPLETED.
7. ALL SEDIMENT BASINS AND TRAPS SHALL BE CLEANED WHEN THE STRUCTURES ARE A MAXIMUM OF 60% FULL OF SOLID MATERIALS, INCLUDING DURING MAINTENANCE PERIOD.
8. A STRIP OF TURF BEHIND AND FOR TOTAL LENGTH OF ALL THE KERBS SHALL BE PROVIDED.
9. PIT GUARDS SHALL BE INSTALLED AROUND DRAINAGE PITS AT THE COMPLETION OF ROAD WORKS.

SEDIMENT CONTROL DEVICES

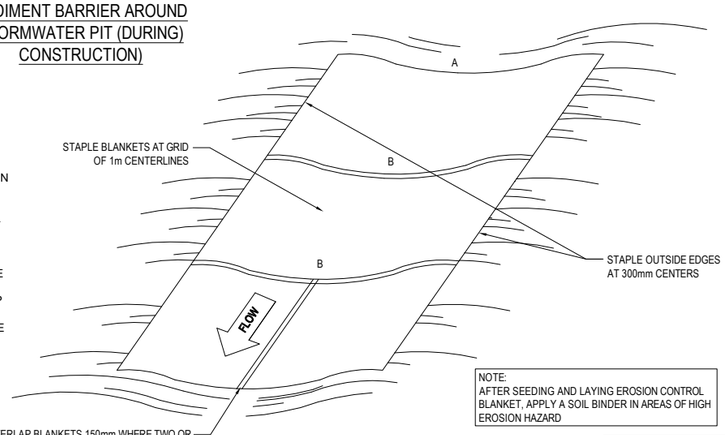
1. IF SILT FENCE IS NOT USED HAY BALES CAN BE USED FOR SURFACE INLET PIT PROTECTION.
2. ALL HAY BALES SHALL BE BOUND WITH WIRE. HAY BALES SHALL BE PLACED END TO END IN A SINGLE ROLE AND EMBEDDED INTO THE SOIL TO A DEPTH OF 100mm. EACH BALES SHALL BE SECURELY ANCHORED WITH TWO STEEL STAKES DRIVEN 600mm INTO THE GROUND AND LOCATED ON THE BALE CENTERLINE.
2. FILTER FENCE SHALL BE CONSTRUCTED BY STRETCHING A FILTER FABRIC (PROPEX OR SIMILAR) BETWEEN POSTS AT 3m CENTERS MAXIMUM. FABRIC SHALL BE BURIED INTO THE GROUND 200mm ALONG ITS LOWER EDGE.

TEMPORARY SITE CONTROL FOR ENTRY / EXIT AREAS

1. THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OF SEDIMENT ONTO PUBLIC ROADS.
2. PERIODIC TOP DRESSING WITH ADDITIONAL AGGREGATE MAY BE REQUIRED TO KEEP THE SITE CONTROL IN A 'USEABLE STATE'.
3. ALL SEDIMENT SPILLED, DROPPED OR WASHED ONTO PUBLIC ROADS MUST BE REMOVED IMMEDIATELY AND CHECKED DAILY.
4. REMOVAL AND CLEANING OF PUBLIC ROADS BY BROOMS AND SHOVELS ETC.. WASHING DOWN ROADS IS NOT PERMITTED.

EARTH WET BASIN (EARTH BANK)

1. REMOVE ALL VEGETATION AND TOPSOIL FROM UNDER THE DAM WALL AND FROM WITHIN THE STORAGE AREA.
2. CONSTRUCT A CUT-OFF TRENCH 500mm DEEP AND 1200mm WIDE ALONG THE CENTERLINE OF THE EMBANKMENT EXTENDING TO A POINT ON THE GULLY WALL LEVEL WITH THE RISER CREST.
3. MAINTAIN THE TRENCH FREE WATER AND RE-COMPACT THE MATERIALS WITH EQUIPMENT AS SPECIFIED IN THE SWMP TO 95% STANDARD PROCTOR DENSITY.
4. SELECT FILL FOLLOWING THE SWMP THAT IS FREE ROOTS, WOOD, ROCK, LARGE STONE OR FOREIGN MATERIAL.
5. PREPARE THE SITE UNDER THE EMBANKMENT BY RIPPING TO AT LEAST 100mm TO HELP BOND COMPACTED FILL TO EXISTING SUBSTRATE.
6. SPREAD THE FILL IN 100mm TO 150mm LAYERS AND COMPACT IT AT OPTIMUM MOISTURE CONTENT FOLLOWING THE SWMP.
7. CONSTRUCT THE EMERGENCY SPILLWAY.
8. REHABILITATE THE STRUCTURE FOLLOWING THE SWMP.



TEMPORARY DRAINAGE BED

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NORTH :

SCALE : NTS

VERIFIED : AC

DESIGNED : HR

DRAWN : RQ

Plotted by: Hasan Rana

DRAWING TITLE : AREA ANALYSIS & SEC DETAILS

PROJECT : PROPOSED CARPARK A7.
33 CONSUL ROAD, BROOKVALE

DATE : 12/09/2020

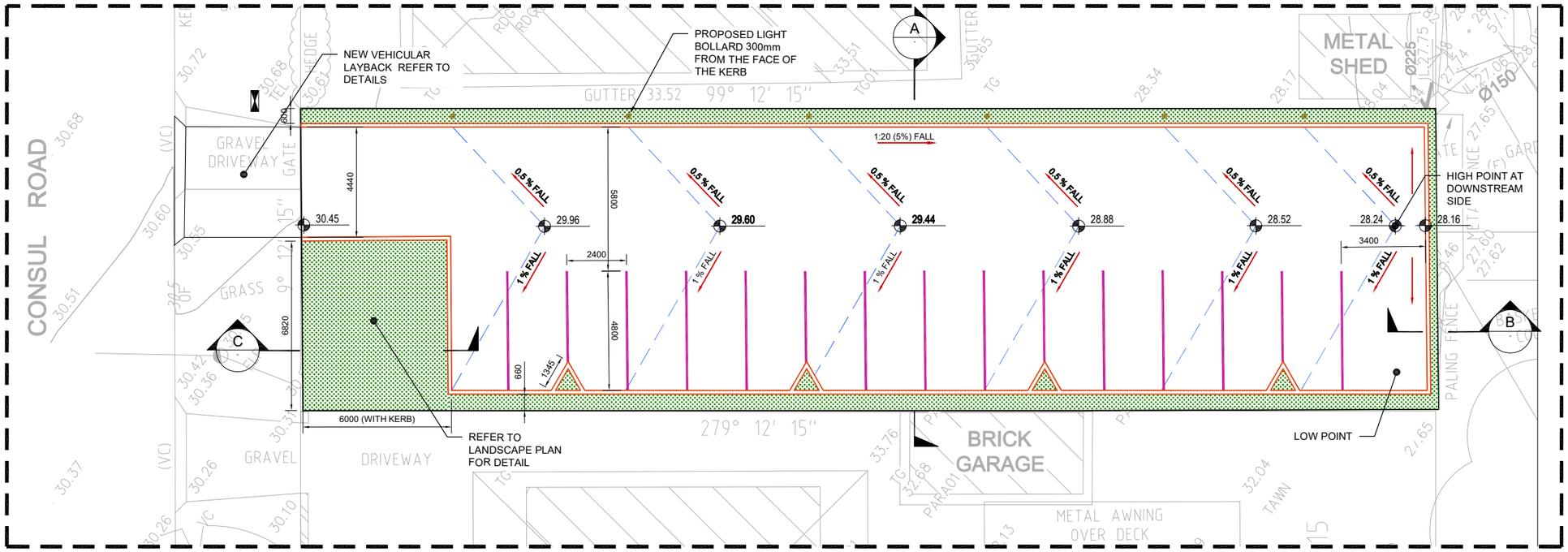
SCALE : 1:100

PROJECT No : 2290

REVISION : 02

DRAWING No : C101

Cad File No: \\192.168.1.4\n\1 Jobs\NSW\BROOKVALE, Federal Parade - St. Augustine College\AC2290 - Civil\0 Incoming Documents\Workflow In\201008-final incoming\33 CONSUL - SWMP 09-10-2020.dwg

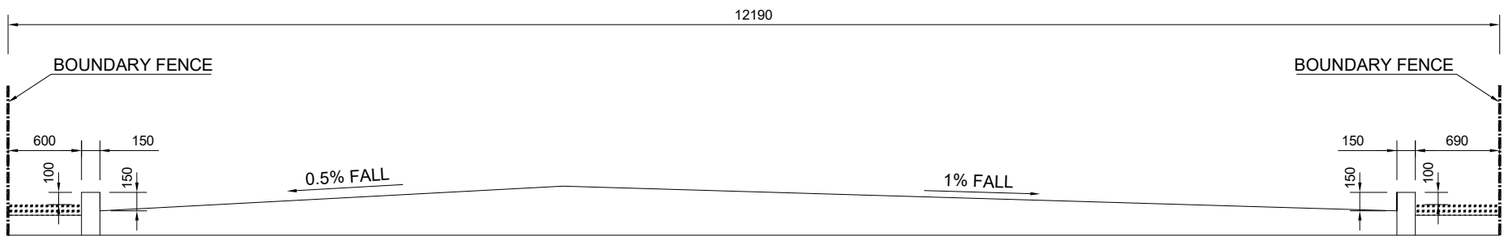


PROPOSED CARPARK LAYOUT

SCALE - 1:100

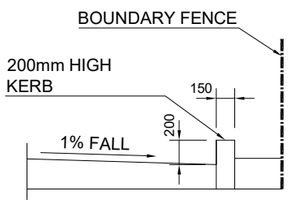
NOTE:

THIS CAR PARK IS PROPOSED AS PER ADVISE OF THE TRAFFIC CONSULTANT. REFER TO TRAFFIC ENGINEER REPORT & EVALUATION.



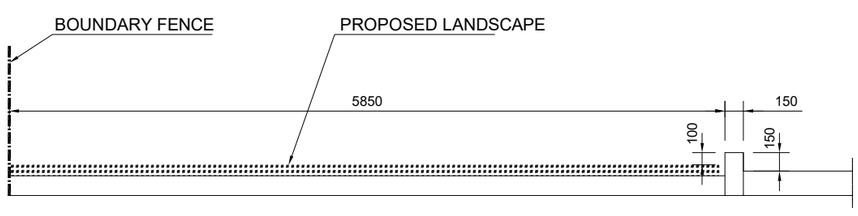
SECTION A-A

SCALE - 1:25



SECTION B-B

SCALE - 1:25



SECTION C-C

SCALE - 1:25

PAVEMENT DESIGN NOTES & SPECIFICATION

ENGINEER OBSERVATION AS PER MY SITE EVALUATION & GEOTECHNICAL INITIAL ADVISE I HAVE ANTICIPATED THE SUBGRADE IN MEDIUM CATEGORY SUBGRADE IS MAINLY COMPOSED OF MAINLY CLAYEY GRAVELS, FIRM SAND WITH SOME CLAY, SANDY CLAY, SILTY CLAY. THIS MATERIAL IS OBSERVED TO MAKE A POOR UNSEALED ROAD WHEN EXCESSIVELY WET OR DRY. THIS TYPE OF SUBGRADE NORMALLY HAVE CBR VALUE BETWWEN 6 TO 10.

SPECIFICATION OF THE PAVEMENT:

- **30mm ASPHALT WEARING COURSE**
- **10mm SINGLE COAT PRIME SEAL.**
- **175mm THICK BASE COURSE (DGB20) OR**
- **220mm THICK SUB BASE DGB40. ON COMPACTED SUB GRADE MIN CBR 5%.**

PROPOSED LANDSCAPE AREA

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NORTH :

SCALE : NTS

VERIFIED : AC

DESIGNED : HR

DRAWN : RQ

Plotted by: Hasan Rana

DRAWING TITLE : STANDARD DETAILS LAYBACK & CARPARK

PROJECT : PROPOSED CARPARK A7. 33 CONSUL ROAD, BROOKVALE

DATE : 12/09/2020

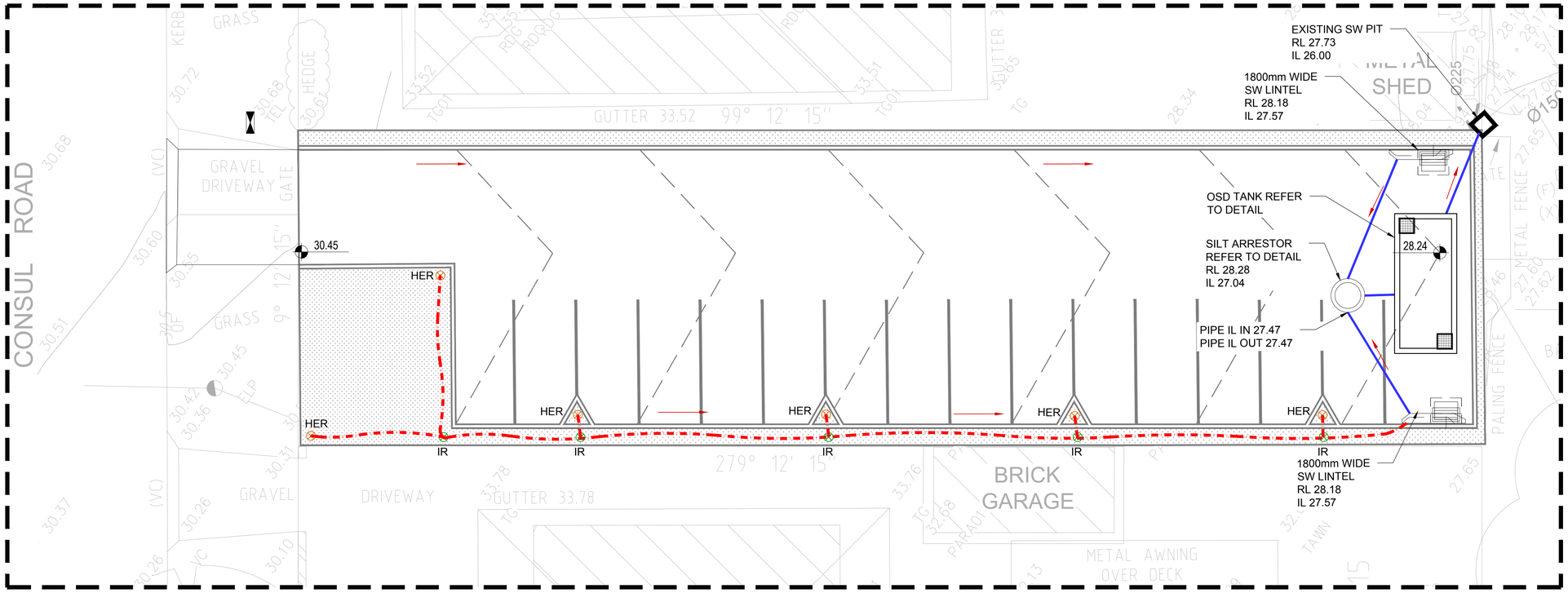
SCALE : 1:100

PROJECT No : 2290

REVISION : 02

DRAWING No : C102

Cad File No: \\192.168.1.4\m\1 Jobs\NSW\BROOKVALE, Federal Parade - St. Augustine College\AC2290 - Civil\0 Incoming Documents\Workflow In\201008-final incoming\33 CONSUL - SWMP 09-10-2020.dwg

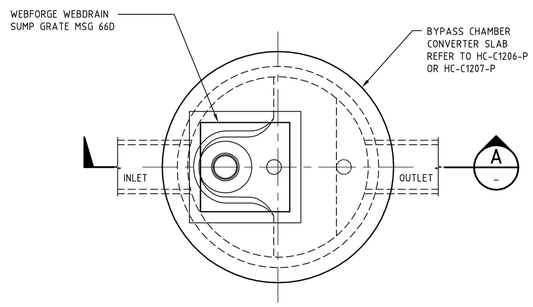


STORMWATER MANAGEMENT PLAN

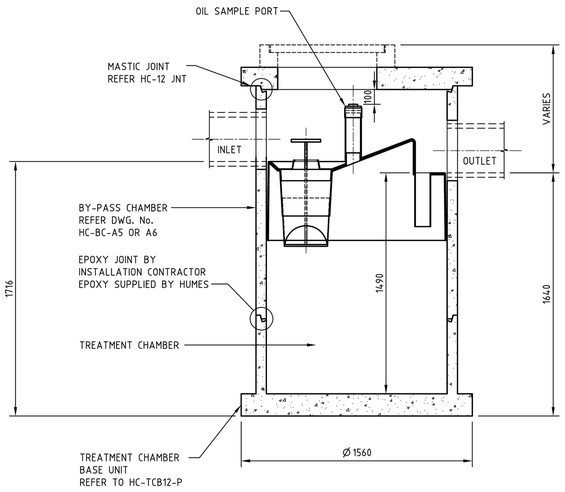
SCALE - 1:100

LEGENDS

- SWD — STORM WATER DRAIN LINE (Ø150)
- SW-PIT WITH LINTEL
- FLOW DIRECTION
- EXISTING SW PIT
- SILT ARRESTOR
- Ø100 SUBSOIL DRAINAGE LINE- (AGI LINE)
- IR — (IR) INTERMEDIATE RISER
- HER — (HER) HIGH END RISER



PLAN - SQUARE OPENING (PREFERRED)
SCALE 1:20



NOTE: STANDARD DROP INLET TO OUTLET IS 76mm

SECTION A
SCALE 1:20

HUMECEPTOR STC 2 (INLET) MODEL
PROPOSED SILT SRRESTOR

NOTE:

CONCEPT PROVIDED FOR ILLUSTRATION DETAIL DECOMENTATION.

NOTE:

THE PRODUCT SPECIFICATIONS ARE AS PER MANUFACTURER / PROVIDER INFORMATION

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NORTH :

SCALE : NTS

VERIFIED : AC

DESIGNED : HR

DRAWN : RQ

DRAWING TITLE : CONCEPT STORMWATER MANAGEMENT PLAN

PROJECT : PROPOSED CARPARK A7. 33 CONSUL ROAD, BROOKVALE

DATE : 12/09/2020

SCALE : 1:100

PROJECT No : 2290

REVISION : 02

DRAWING No : C200

Plotted by: Ammar Khalid

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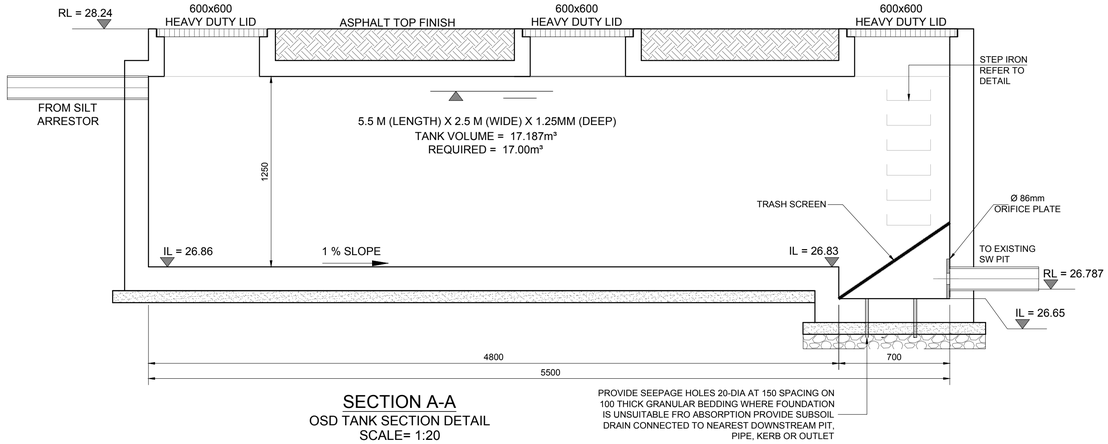
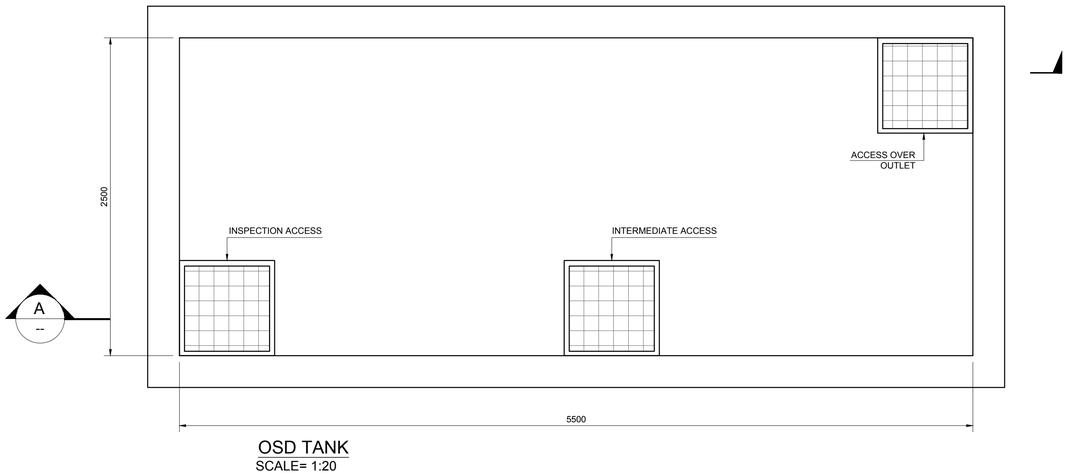
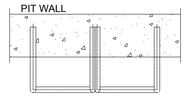


SECTION A-A
OSD TANK SECTION DETAIL
SCALE= 1:20

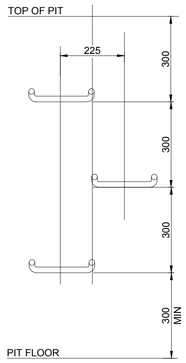


OSD TANK
SCALE= 1:20

ORIFICE PLATE DETAIL
NTS



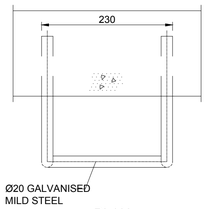
PLAN



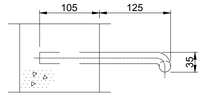
ELEVATION

STEP IRON
PLACEMENT TO PIT WALL
NTS

FRONT ELEVATION

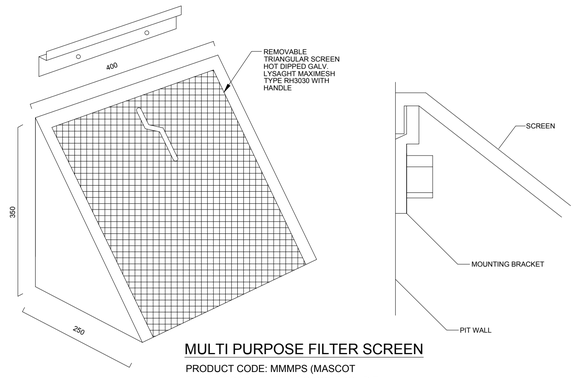


PLAN



SIDE ELEVATION

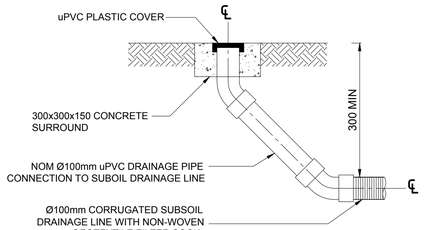
STEP IRON DETAIL
NTS



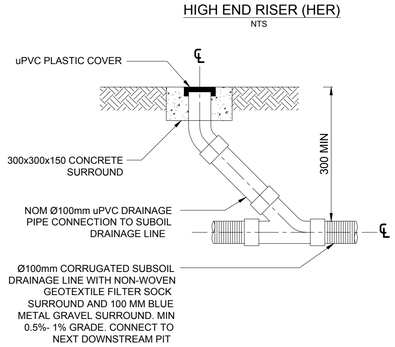
MULTI PURPOSE FILTER SCREEN
PRODUCT CODE: MMMPS (MASCOT
ENGINEERING) FITTED TO CONTROL PIT
PRIOR TO OUTLET

TRASH SCREEN NOTES:

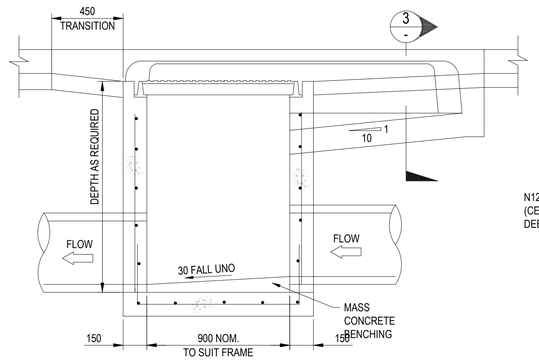
1. MAXIMUM SCREENS MUST BE PLACED SUCH THAT THE LONG AXIS OF THE OVAL SHAPED HOLES ARE ORIENTATED HORIZONTALLY WITH THE PROTRUDING LIP ANGLED UPWARDS AND FACING TOWARDS THE OUTLET.
2. THE SCREEN IS TO BE FORMED BY WELDING TWO TRIANGULAR MAXIMESH (OR EQUIVALENT) PANELS TO A RECTANGULAR FRONT MAXIMESH PANEL (OR EQUIVALENT)



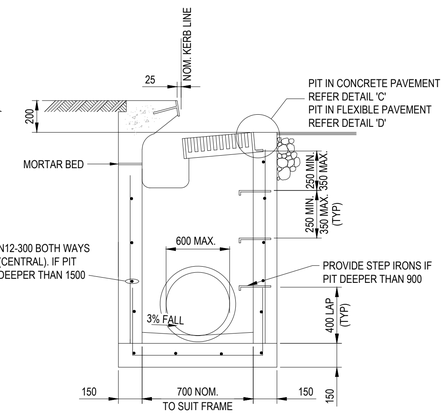
HIGH END RISER (HER)
NTS



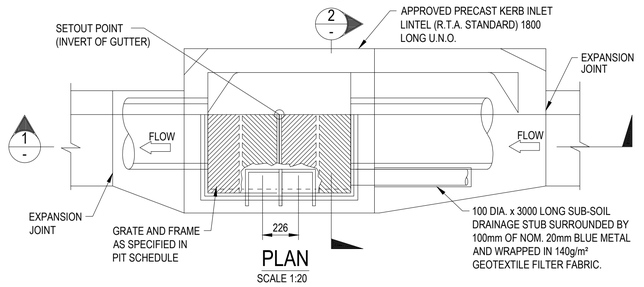
INTERMEDIATE RISER (IR)
NTS



SECTION 1
SCALE 1:20

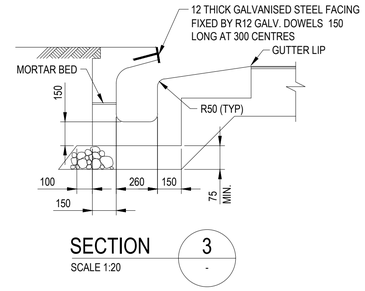


SECTION 2
SCALE 1:20



PLAN
SCALE 1:20

PIT TYPE 'A'



SECTION 3
SCALE 1:20

ON SITE DETENTION NOTE:

1. AS PER COUNCIL DCP & WATER MANAGEMENT POLICY.
2. THE SIYE LIES IN ZONE REGION 2. AND THE LOT AREA IS GREATER THAN 450 sqm.
3. AS SITE IMPERVIOUS AREA IS MORE THAN 40% SO OSD IS REQUIRED.
4. AS PER TABLE 2B OF ONSITE STORMWATER TECHNICAL SPECIFICATION FOR A 550 sqm SITE WE REQUIRED.
   17 m³ OSD
   Q5 (EXISTING) 17 l/s
   Q100 (EXISTING) 33 l/s
5. FROM TABLE 3, FOR 17 l/sec 85mm ORIFICE PLATE IS REQUIRED WITH 1.25 M OSD.

ORIFICE PLATE NOTES

1. HOLE IN ORIFICE PLATE TO BE PRECISION CUT WITH SHARP EDGES TO THE SPECIFIED DIAMETER.
2. ORIFICE PLATE TO BE PLACED CENTRALLY OVER THE OUTLET PIPE.
3. ORIFICE PLATE TO BE MADE FROM STAINLESS STEEL HOT DIPPED GALVANIZED OR OTHERS NOT ACCEPTABLE.
4. OUTLET PIPE TO BE CAST INTO THE WALL OF THE PIT.
5. HOLE IN THE PLATE TO BE CENTRALLY PLACED.

IMPORTANT NOTE:

1. INTERMEDIATE ACCESS IS PROVIDED BECAUSE THE LENGTH OF OSD IS GREATER THAN 3M.

ISSUE FOR DA

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NORTH :

SCALE : NTS

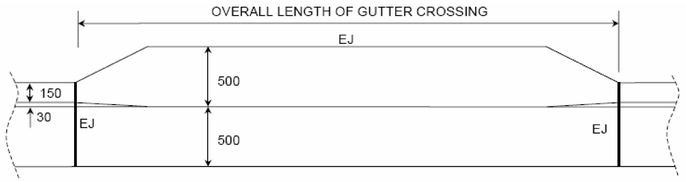
VERIFIED : AC
DESIGNED : HR
DRAWN : RQ

DRAWING TITLE : OSD & SILT ARRESTOR AND MISC DETAILS

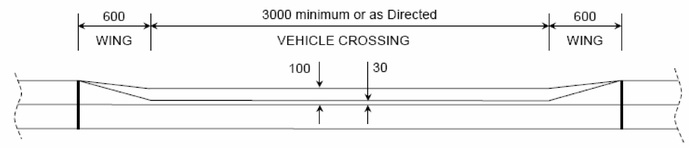
PROJECT : PROPOSED CARPARK A7. 33 CONSUL ROAD, BROOKVALE

DATE : 12/09/2020
SCALE : 1:100
PROJECT No : 2290
REVISION : 02
DRAWING No : C201

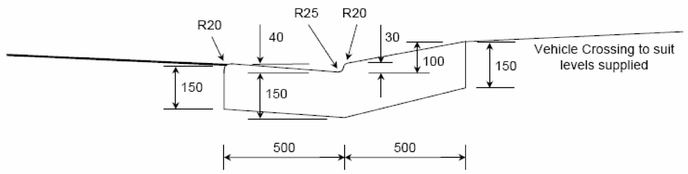
Plotted by: Ammar Khalid
Cad File No: D:\HASAN\SEPTEMBER PROJECT\P-27 (0000) 33 Consul\SWMP\33 CONSUL - SWMP 09-10-2020.dwg



PLAN



FRONT ELEVATION



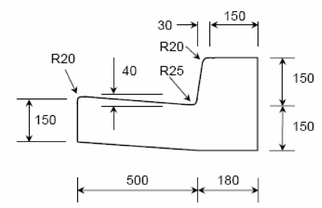
TYPICAL CROSS SECTION

NOTES:

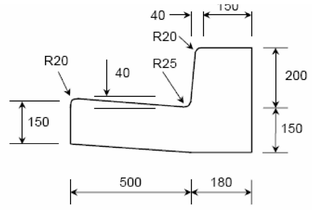
1. Layback and gutter shall be poured in **PLAIN CONCRETE** and finished with a steel trowel. Minimum compressive strength of concrete shall be 25MPa at 28 days. Industrial/commercial properties shall increase the depth of concrete to 180mm and provide SL82 mesh with 30mm top cover.
2. The subgrade shall be thoroughly compacted by the use of vibratory compaction equipment until it shows no signs of movement, or as directed by Council.
3. Vehicle crossing to be constructed in accordance with levels and specifications issued by Council.
4. Kerbing to be constructed in accordance with Council Plan A4 2276/A and specifications.
5. Where Council or an Accredited Certifier (Civil Woks) directs that the gutter be retained, the contractor shall place a 75mm deep saw cut in the gutter invert and remove kerb and/or layback.
6. Where Council or an Accredited Certifier (Civil Woks) directs that the gutter be removed, a Road Opening Permit must be obtained from Council's Customer Service Centre prior to commencing work. Once the permit is established the contactor may commence vehicle crossing works. Upon completion of the works, temporary restoration shall be provided as set out in the *'Specification For Trench Construction Within Council Roads'*.
7. The construction of all vehicle crossings and associated works on the road reserve must be completed by a Council approved concrete contractor.
8. EJ – Expansion Joint – 10mm Mastic.
   R – Radius

Not to Scale. All Dimensions in Millimetres.

THIS DRAWING & DETAILS ARE TAKEN FORM COUNCIL DRAWING No. A4 2276/B



150mm KERB & GUTTER



200mm KERB & GUTTER

NOTES:

1. Kerb and gutter shall be poured in **PLAIN CONCRETE** and finished with a steel trowel. Minimum compressive strength of concrete shall be 25MPa at 28 days.
2. The subgrade shall be thoroughly compacted by the use of vibratory compaction equipment until it shows no signs of movement, or as directed by Council.
3. Where Council or an Accredited Certifier (Civil Woks) directs that the gutter be retained, the contractor shall place a 75mm deep saw cut in the gutter invert and remove kerb and/or layback.
4. Where Council or an Accredited Certifier (Civil Woks) directs that the gutter be removed, a Road Opening Permit must be obtained from Council's Customer Service Centre prior to commencing work. Once the permit is established the contactor may commence vehicle crossing works. Upon completion of the works, temporary restoration shall be provided as set out in the *'Specification For Trench Construction Within Council Roads'*.
5. The construction of all vehicle crossings and associated works on the road reserve must be completed by a Council approved concrete contractor.

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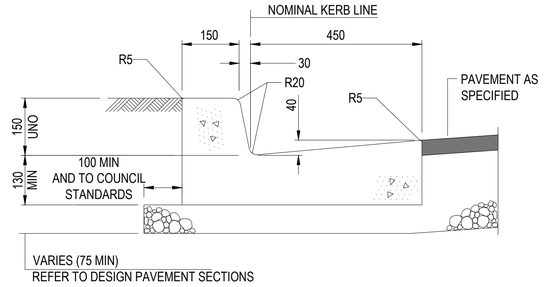
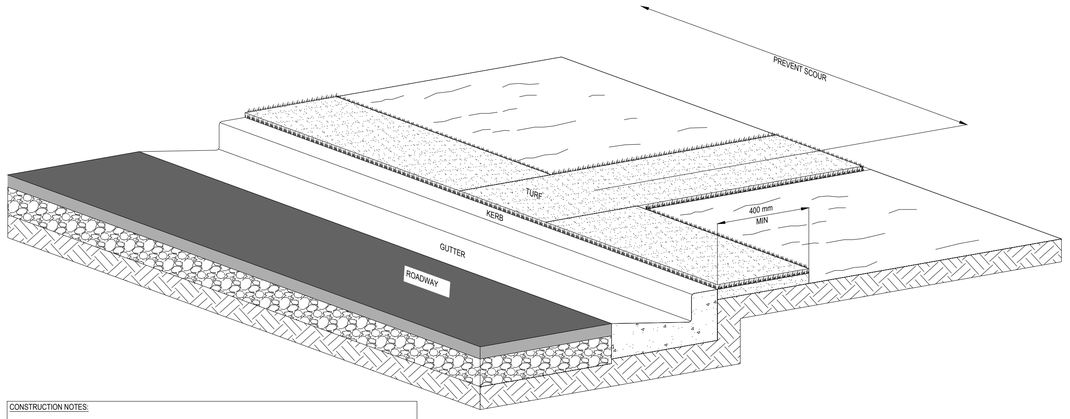


KERB & GUTTER (KG)

NTS



CONSTRUCTION NOTES:

1. INSTALL A 400mm MINIMUM WIDE ROLL OF TURF ON THE FOOTPATH NEXT TO THE KERB AND AT THE SAME LEVEL AS THE TOP OF THE KERB
2. LAY 1.4m LONG TURF STRIPS NORMAL TO THE KERB EVERY 10m
3. REHABILITATE DISTURBED SOIL BEHIND THE KERB

KERBSIDE TURF STRIP

NOT TO SCALE

TYPICAL DETAIL FOR ILLUSTRATION

FORMWORK

THE FORMS SHALL BE ALIGNED TRUE TO GRADE AND WITH OUT IRREGULARITIES. THE TOLERANCE SHALL BE ±15mm PROVIDED THAT VARIATIONS IN LEVELS ARE NOT LOCAL AND ORE OVER LENGTH OF 3 METERS OR MORE.

FORMS SHALL BE CONSTRUCTED SO THAT THEY CAN BE REMOVED WITHOUT DAMAGING THE CONCRETE AND SHALL BE ADEQUATELY BRACED. THE INNER SURFACE OF FORMS SHALL BE ADEQUATELY OILED TO ENSURE THE NON-ADHESION OF THE CONCRETE. THE MATERIAL USED FOR FORMS FOR THE EXPOSED SURFACES SHALL BE DRESSED SOFT WOOF TIMBER.

TIMBER PEGS OF 50mm x 50mm-DIMENSION MINIMUM MUST BE PROVIDED FOR THE SUPPORT OF ALL FORMWORK. THE USE OF STEEL PEGS FOR THE SUPPORT OF FORMWORK IS PROHIBITED.

MATERIALS

READY MIXED CONCRETE SHALL CONFORM TO THE PROVISIONS OF AS 1379 - 2007 " READY MIXED CONCRETE"

THE MINIMUM COMPRESSIVE STRENGTH Fc OF THE CONCRETE SHALL BE 25 MPa AT 28 DAYS IN ACCORDANCE WITH AS 3600 - 2009 " CONCRETE STRUCTURES"

JOINTS

FOR HAND PLACED KERB AND GUTTER EXPANSION JOINT 10mm THICK FOR THE FULL DEPTH OF THE KERB AND GUTTER SHALL BE PROVIDED AT INTERVALS NOT EXCEEDING 6m.

FOR MACHINE PLACED KERB AND GUTTER, EXPANSION JOINTS 6mm THICK SHALL BE PROVIDED AT INTERVALS OF 6m AND CONSTRUCTION JOINTS SHALL BE FORMED EVERY 3m FOR THE FULL DEPTH OF THE KERB AND GUTTER.

JOINTS ARE ALSO REQUIRED WHERE THE GUTTER ABUTS GULLY PITS AND GUTTER CROSSINGS. EXPANSION JOINTS SHALL CONSIST OF PERFORMED JOINTING MATERIAL BITUMINOUS FIBERBOARD.

TOLERANCE

TOLERANCE ON THE LEVEL OF KERB AND GUTTER CONSTRUCTION BOTH HORIZONTAL AND VERTICAL SHALL BE PLUS OR MINUS 10mm.

KERB AND GUTTER

THECONSTRUCTION OF CONCRETE KERB AND GUTTER IS TO BE IN ACCORDANCE WITH AS 2876 - 2000 " CONCRETE KERBS AND CHANNELS (GUTTERS) - MANUALLY OR MACHINE PLACED " UNLESS OTHERWISE INDICATED BELOW.

KERB AND GUTTER DETAIL
KERB AND GUTTER SHALL BE IN ACCORDANCE WITH COUNCIL DRAWING NUMBER A4 2267/A/ AS DOCUMENTED BELOW.

LEVELS
DESIGN PLAN ARE TO BE PREPARED BY THE APPLICANT AND APPROVED BY THE COUNCIL PRIOR TO CONSTRUCTION.

PLACING CONCRETE

THE CONCRETE SHALL BE PLACED SO AS TO AVOID SEGREGATION AND SHALL BE ADEQUATELY COMPACTED. CARE SHALL BE TAKEN TO FILL EVERY PART OF THE FORMS AND TO WORK TO COARSER AGGREGATE BACK FROM THE FACE. EXPOSED SURFACES SHALL BE FINISHED WITH A STEEL FLOAT, AND CORNERS AND EDGES SHALL BE NEATLY ROUNDED WITH A NOISING TOOL. CONCRETE SHALL NOT BE DISTURBED AFTER IT HAS BEEN IN THE FORMS FOR TWENTY (20) MINUTES.

FINISH

AFTER REMOVAL OF THE FORMS, MINOR OR POROUS SECTIONS OR HOLES SHALL BE REPAIRED WITH A 3 TO 1 SAND AND CEMENT MORTAR MIX. THE EXPOSED SURFACES SHALL THEN BE RUBBED WITH A WOODEN FLOAT AND CLEAN WATER TO LEAVE THE SURFACES SMOOTH AND UNIFORM IN COLOR AND APPEARANCE.

BACKFILLING

AFTER REMOVAL OF FORMWORK THE FOOTWAY BEHIND THE KERB SHALL BE NEATLY TRIMMED, FILLED AND OR TURFED TO MAKE A SMOOTH CONNECTION TO THE UNDISTURBED NATURE STRIP.

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NORTH :

SCALE : NTS

VERIFIED : AC

DESIGNED : HR

DRAWN : RQ

DRAWING TITLE : MISC DETAILS

PROJECT : PROPOSED CARPARK A7. 33 CONSUL ROAD, BROOKVALE

DATE : 12/09/2020

SCALE : 1:100

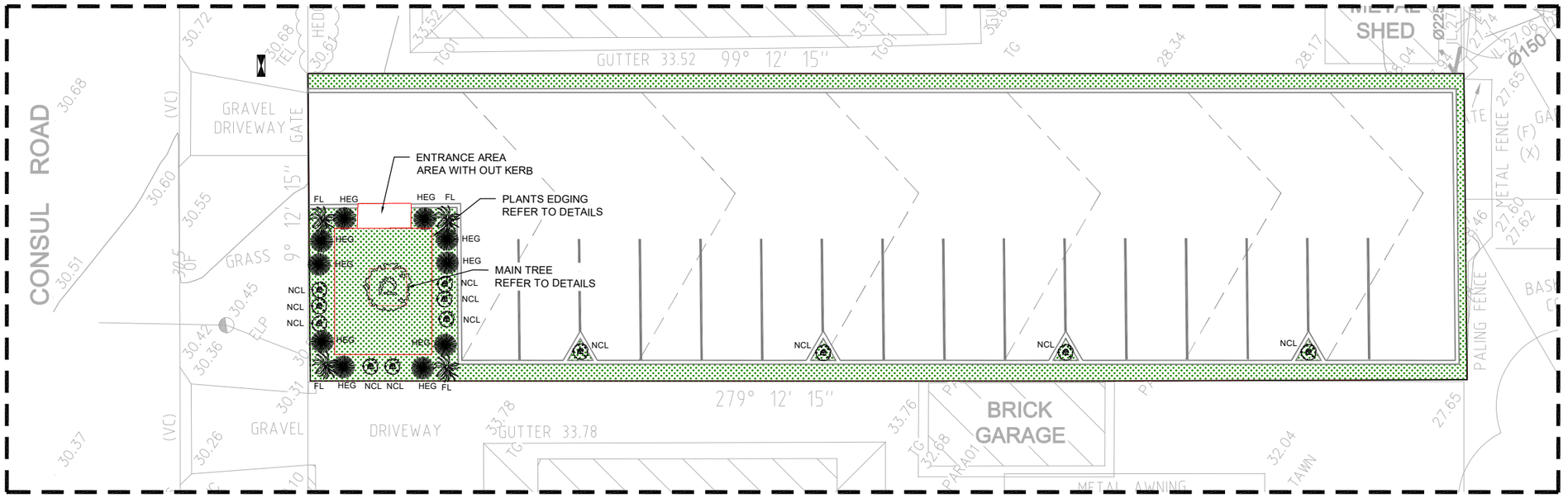
PROJECT No : 2290

REVISION : 02

DRAWING No : C202

Plotted by: Ammar Khalid

Cad File No: D:\HASAN\SEPTEMBER PROJECT\P-27 (0000) 33 Consul\SWMP\33 CONSUL - SWMP 09-10-2020.dwg



LANDSCAPING PLAN

SCALE - 1:100

NOTES:

REFER THIS WITH LANDSCAPE SPECIFICATION + DETAILS

PLAN PREPARED IN ACCORDANCE WITH THE LANDSCAPE GUIDELINES OUTLINED IN NORTHERN BEACHES COUNCIL'S D.C.P

READ THIS IN CONJUNCTION WITH THE ARCHITECTURAL, SURVEY, STRUCTURAL, HYDRAULIC DRAWINGS AND DETAILS

ALL BOUNDARY FENCING WHERE IN POOR CONDITION

1.8M LAPPED AND CAPPED TIMBER FENCING OR EQUIVALENT

POLLUTION CONTRL, EROSION CONTROL AND TREE PROTECTION MEASURES AS DETAILED OR SPECIFIED SHALL BE IN PLACE PRIOR TO CONSTRUCTION & MAINTAINED DURING THE ENTIRE DURATION OF CONSTRUCTION

CONCRETE EDGING TO BE PROVIDED BETWEEN TURF AREAS AND GARDEN BEDS.

GARDEN BED/ MULCH

ALL GARDEN BEDS TO BE PROVIDED WITH 300MM GARDEN SOIL MIX.

ALL TURF AREAS ARE TO BE PROVIDED WITH 50MM TURF UNDERLAY SOIL MIX

IRRIGATION TO BE PROVIDED TO GARDEN BEDS

LINE TO BE 200MM BELOW FINISHED SURFACE LEVELS

PROVIDE ORGANIC MULCH TO PLANTING AREAS (MIN 75MM) AND IN ACCORDANCE WITH AS 4454

MAINTENANCE

MAINTAIN ALL LANDSCAPE AREAS TO ENSURE PLANT HEALTH AND OCCUPANT SAFTEY FOR A PERIOD OF 6 MONTHS BEGINING FROM THE DATE OF PRACTICAL COMPLETION

FERTILISE ALL PLANT MATERIAL, PRUNING, WATERING, REPLACMENT OF FAILED PLANTS, TREAT DISEASES & PESTS

TOPPING UP OF MULCH AND WEEDING GARDEN BEDS

GENERAL

THE FOLLOWING ITEMS ARE NOT INCLUDED IN THE LANDSCAPE PLANS OR SPECIFICATIONS

REFER TO BUILDING SPECIFICATIONS AND ARCHITECTURAL PLANS FOR DETAILS

PAVING DETAILS

GARDEN FURNITURE OR LIGHTING

LANDSCAPE PLAN DETAILED IN ACCORDANCE WITH BASIX CERTIFICATE REQUIREMENT

MIN 15 m2 COMMITMENT

GENERAL NOTES:

1/. ALL AREAS WITHIN A DEVELOPMENT NOT OCCUPIED BY BUILDING, DRIVEWAY OR SERVICES AREAS WILL REQUIRE TO BE LANDSCAPED.

2/.ALL EXISTING TREES ON THE SITE, ON THE NATURAL STRIP, AND CLOSE TO BOUNDARIES ON NEIGHBORING PROPERTIES SHOULD BE ACCURATELY PLOTTED ON PLANS PRESERVED IN ACCORDANCE WITH COUNCIL'S TREE PRESERVATION ORDER.

3/.PROTECTIVE FENCING IS TO REMAIN IN PLACE UNTIL COMPLETION OF ALL BUILDING & HARD LANDSCAPE CONSTRUCTION.

4/.CONCRETE PAVING SHOULD BE 20MPA 100MM THICK FOR DRIVEWAYS, & 15MPA 75MM THICK FOR FOOTPATHS,PROVIDED ALL PAVING CONTROL JOINTS AT MAXIMUM 1800MM CENTRES.

5/. PAVING LEVELS SHALL BE A MAXIMUM 225MM BELOW SLAB FLOOR LEVELS TO 100MM MINIMUM IN LOCALIZED ARE SUCH AS DOORWAYS, & PROVIDED WITH 1:20 FALLS AWAY FROM THE BUILDING OTHER PAVING SHOULD BE USED WITH LENDING AUTHORITY APPROVAL.

6/.PROVIDED METAL, TIMBER OR MASONRY FENCING & GATES TO FRONT BOUNDARY INKEEPING WITH THAT ERECTED IN THE LOCALITY, PROVIDED SIDE & REAR BOUNDARY FENCING TO ENSURE PRIVACY & SAFETY.

7/.PROVIDED EXTERNAL LIGHTING FROM THE DWELLING TO ILLUMINATE THE ENTRANCE PATH & FRONT DOOR, REAR DOOR. PROVIDED CLOTHES DRYING LINE WITH PAVING FROM LAUNDRY TO CLOTHER-LINE.

8/.PROVIDE A TAP STAND & GULLY TO THE FRONT & REAR OF THE DWELLING WHERE REQUIRED FIXED TO THE EXTERNAL WALL.

9/. ALL LANDSCAPE WORKS ARE TO INCLUDE PROVISION FOR ADEQUATE DRAINAGE INCLUDING COLLECTION OR DISPERSAL OF STORM WATER RUN-OFF, PREVENTION OF PONDING OF WATER ON PAVEMENTS OR DISCHARGE OF RUN-OFF ONTO ADJOINING PROPERTY OR PUBLIC AREAS, WHERE POSSIBLE WATER SHOULD DRAIN TO PLANTING BEDS & LAWN AREAS AS A BASIC WATER CONSERVING STRATEGY.

10/.ALL LANDSCAPE CONSTRUCTION BE CARRIED OUT BY A QUALIFIED LANDSCAPE CONTRACTOR TO ENSURE THAT A SATISFACTORY STANDARD OF LANDSCAPING IS ACHIEVED.

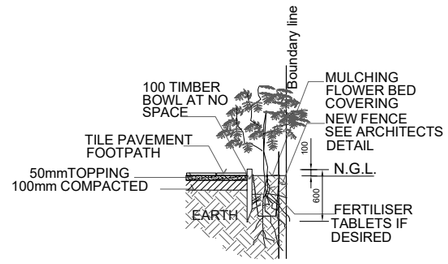
RECOMMENDATIONS FOR PLANTING TREES & SHRUBS

* IT IS ADVISABLE TO DIG A HOLE APPROXIMATELY TWICE THE SIZE OF THE POT THE PLANT IS IN. THIS WILL GIVE THE PLANTS' ROOTS PLENTY OF ROOM TO SPREAD & DEVELOP.
* TO ASSIST THE QUALITY OF SOIL DIG IN ORGANIC MATTER/COMPOST TO A DEPTH OF 200MM (IT IS NOT ADVISABLE TO GO DEEPER THAN THIS AS ORGANIC MATTER HAS TROUBLE BREAKING DOWN BEYOND THIS POINT AND CAN ACTUALLY RETARD PLANT GROWTH). ORGANIC MATTER WILL ENRICH SANDY SOILS & MAKE THEM MORE WATER RETENTIVE. IT WILL ALSO LOOSEN UP CLAY SOILS. BEYOND THIS POINT AND CAN ACTUALLY RETARD PLANT GROWTH). ORGANIC MATTER WILL ENRICH SAND
* WHEN PLANTING TREES BE SURE TO PLANT AT EXISTING SOIL LEVEL. IF THE TRUNK IS COVERED WITH SOIL IT MAY ROT. IF THE ROOTS ARE EXPOSED THIS MAY LEAD TO THE DRYING OUT OF THE ROOT BALL.
* 'WATERING BOWLS' ASSISTS THE DIRECTION OF WATER ONTO THE ROOT ZONE AND MINIMIZES WASTAGE WHEN WATERING. WATERING BOWLS CAN BE MADE FROM LEFT OVER SOIL WHEN PLANTING.
* 'MULCHING AROUND PLANTS', SHRUB & TREES IS VERY EFFICIENT MAY TO KEEP THE ROOT ZONE COOL & MOIST IN SUMMER, HOWEVER KEEP IN MIND THAT MULCH MUST BE KEPT CLEAR OF THE TRUNK AREA AS THIS CAN LEAD COLLAR ROT & INSECT ATTACK.
* 'AFTER PLANTING WATER IN WELL & CONTINUE TO WATER ONCE A WEEK (3 TIMES A WEEK ON SUMMER) UNTIL THE PLANTS IS ESTABLISHED. SEE TYPICAL DETAIL OF PLANTING

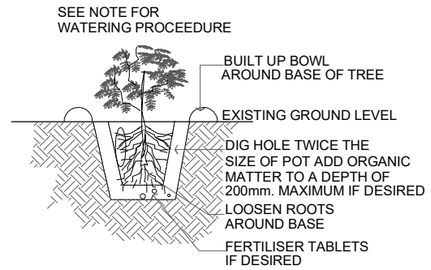
SYMBOL	BOTANICAL NAME	PLANT NAME	CONTAINER SIZE (min)	QUANTITY	MATURITY HT/SPREAD
NCL	DICHOPOGON FIMBRIATUS	NODDING CHOCLATE LILY	5 Litre	12	0.5m -0.5m
FL	DIANELLA TASMANICA	FLAX LILY	5 Litre	4	0.45m - 0.05m
HEG	HEBE EMERELD GREEN	EMERELD GREEN HEBE	5 Litre	10	0.3m - 0.3m

MAIN TREE:

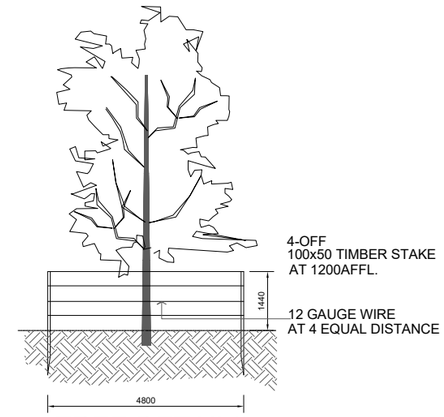
AS PER COUNCIL LANDSCAPE GUIDELINE WATER CUM TRISTANIOPISI LAURINA IS PROPOSED
THIS TREE IS SELECTED FROM COUNCIL APPROVED LIST AND ILLUSTRATED IN C301.



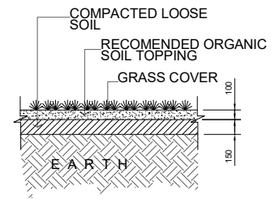
SHRUB DETAILS AT BOUNDARY LINE



TYPICAL PLANTING PROCEEDURE DETAIL



TREE DETAILS



TYPICAL GRASS PLANTING DETAIL

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NORTH :

SCALE : NTS

VERIFIED : AC

DESIGNED : HR

DRAWN : RQ

Plotted by: Hasan Rana

DRAWING TITLE : LANDSCAPE PLAN

PROJECT : PROPOSED CARPARK A7. 33 CONSUL ROAD, BROOKVALE

DATE : 12/09/2020

SCALE : 1:100

PROJECT No : 2290

REVISION : 02

DRAWING No : C300

Cad File No: \\192.168.1.4\n\1 Jobs\NSW\BROOKVALE, Federal Parade - St. Augustine College\AC2290 - Civil\0 Incoming Documents\Workflow In\201008-final incoming\33 CONSUL - SWMP 09-10-2020.dwg

Bronze Baby Flax

Phormium tenax Bronze Baby - botanical name

Evergreen erect tussock forming perennial (0.75m x 0.8m). Dwarf hybrid of P. tenax from New Zealand. Arching bronze purple strap-like sword shaped leaves. Red tubular flowers on erect stems in summer. Useful accent for its foliage contrast and vertical form. Suitable for coastal conditions. Prefers well drained soil in sun to semi-shade. Drought tolerant. Moderately frost tolerant.

Plant type	Perennial
Sun/Shade tolerance	Full Sun, Part Shade
Frost tolerance	Frost sensitive
Soil type(s)	Sand, Loam
Water rating	Low
Plant origin	Non indigenous (New Zealand)
Scale	

PLANT DESCRIPTION _ BRONZ BABY FLAX
SOURCE : SYDNEY WATER

Nodding Chocolate Lily

Dichopogon fimbriatus - botanical name

G. Manley © Australian National Botanic Gardens

Semi-evergreen tuberous tufted perennial (0.5m x 0.4m) from NSW (including Sydney Cumberland Plain); Vic; SA and WA. Grass-like leaves surrounded with a tuft of dense fibres at the base. Fragrant delicate mauve flowers with dark anthers on slender stems in spring. Two to six flowers on each stem node. Dies back in winter. Useful clumped in a rock or gravel garden or massed as understorey particularly in a bush garden or woodland setting. Tolerates poor soils. Drought and frost tolerant.

Plant type	Grass, Perennial
Sun/Shade tolerance	Full Sun, Part Shade
Frost tolerance	Frost hardy
Soil type(s)	Sand, Clay, Loam
Water rating	Low
Plant origin	Indigenous (NSW (Sydney Cumberland Plain); Vic; SA & WA)
Scale	

PLANT DESCRIPTION _ NODDING CHOCLATE LILY
SOURCE : SYDNEY WATER

Emerald Green Hebe

Hebe Emerald Green - botanical name

Evergreen small compact shrub (0.3m x 0.3m). Hybrid from New Zealand. Minute crowded green leaves. Insignificant flowers. Useful low border or massed in a rock garden. Prefers a sunny site with well drained soil. Frost and drought tolerant.

Plant type	Shrub
Sun/Shade tolerance	Full sun
Frost tolerance	Frost hardy
Soil type(s)	Sand, Loam, Clay
Water rating	Low
Plant origin	Non indigenous (New Zealand)
Scale	

PLANT DESCRIPTION _ EMERALD GREEN HEBE
SOURCE : SYDNEY WATER

Flax Lily

Dianella tasmanica - botanical name

Evergreen tufted perennial (0.45m x 0.5m) from NSW, Vic and Tas. Strap-like leaves; broadest of all Dianella species. Selected cultivar 'Emerald Arch' has broader arching leaves. Blue flowers with yellow anthers on branched stems in mid spring. Useful group planted as a border; understorey or for a tropical themed garden. Tolerates full sun to heavy shade. Frost and drought tolerant.

Plant type	Perennial
Sun/Shade tolerance	Full Sun, Part Shade, Shade
Frost tolerance	Frost hardy
Soil type(s)	Sand, Clay, Loam
Water rating	Low
Plant origin	Non indigenous (NSW; Vic & Tas)
Scale	

PLANT DESCRIPTION _ FLAX LILY
SOURCE : SYDNEY WATER

TREE ILLUSTRATION _ WATER GUM_TRISTANIOPSIS- LAURINA
SOURCE : SYDNEY WATER

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ISSUE	DATE	AMENDMENT
00	29.09.2020	ISSUE FOR DISCUSSION
01	02.10.2020	ISSUE FOR DEVELOPMENT APPLICATION
02	09.10.2020	ISSUE FOR DEVELOPMENT APPLICATION

CLIENT / BUILDER / ARCHITECT

APG

CIVIL

CORE PROJECT CONSULTING
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NORTH :

SCALE : NTS

VERIFIED : AC

DESIGNED : HR

DRAWN : RQ

DRAWING TITLE : PROPOSED PLANT

PROJECT : PROPOSED CARPARK A7.
33 CONSUL ROAD, BROOKVALE

DATE : 12/09/2020

SCALE : N.T.S

PROJECT No : 2290

REVISION : 02

DRAWING No : C301

Plotted by: Ammar Khalid

Cad File No: D:\HASAN\SEPTEMBER PROJECT\P-27 (0000) 33 Consul\SWMP\33 CONSUL - SWMP 09-10-2020.dwg