GENERAL

- G1. THESES DRAWINGS SHALL BE READ IN CONJUNCTION WITH: ALL ARCHITECTURAL, AND CONSULTANT DRAWINGS AND SPECIFICATIONS, THE DEVELOPMENT CONSENT / RELEVANT APPROVALS, AND OTHER WRITTEN INSTRUCTIONS THAT MAY BE ISSUED. THE CONTRACTOR IS TO MAKE THEMSELVES AWARE OF ALL SUCH DOCUMENTS.
- G2. DIMENSIONS SHALL NOT BE OBTAINED BY SCALING FROM THE DRAWINGS. REFER ARCHITECTS DRAWINGS FOR ALL DIMENSIONS.
- G3. REFER ANY DISCREPANCY TO THE ENGINEER/ARCHITECT.
- G4. MATERIALS AND WORKMANSHIP SHALL COMPLY WITH THE APPROPRIATE AUSTRALIAN STANDARDS, SPECIFICATIONS OR CODES AND WITH THE REQUIREMENTS OF THE RELEVANT LOCAL AUTHORITY.
- G5. THE ALIGNMENT AND LEVEL OF ALL SERVICES SHOWN ARE APPROXIMATE ONLY. THE CONTRACTOR SHALL CONFIRM THE POSITION AND LEVEL OF ALL SERVICES PRIOR TO COMMENCEMENT OF CONSTRUCTION. ANY DAMAGE TO SERVICES SHALL BE RECTIFIED AT THE CONTRACTORS EXPENSE.
- G6. ALL SERVICES, OR CONDUITS FOR SERVICING AND DRAINAGE SHALL BE INSTALLED PRIOR TO COMMENCEMENT OF PAVEMENT CONSTRUCTION.
- G7. DRAINAGE SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE RELEVANT LOCAL AUTHORITY CONSTRUCTION SPECIFICATION.AND THE CIVIL DRAWINGS.
- G8. NO WORK IS PERMITTED WITHIN ADJOINING PROPERTIES WITHOUT WRITTEN PERMISSION FROM THE OWNERS OR RESPONSIBLE AUTHORITY.
- G9. CONCRETE WORKS SHALL BE AS DETAILED ON THE DRAWINGS WITH REFERENCE TO THE CONCRETE SPECIFICATION.

DRAINAGE

- D1. ALL DRAINAGE OUTLET PIPES / LEVELS SHALL BE CONFIRMED ON SITE, PRIOR TO CONSTRUCTION COMMENCING.
- D2. STORMWATER DRAINAGE SHALL BE GENERALLY IN ACCORDANCE WITH AS3500.3.
 PIPES OF 300mm DIA. AND SMALLER SHALL BE UPVC TO AS1254
 PIPES OF 375mm DIA. AND LARGER SHALL BE FRC OR CONCRETE CLASS 2 TO AS1342
 RUBBER RING JOINTED UNO.
- D3. ALL PIPES WITHIN THE PROPERTY TO BE MIN. 100 DIA UPVC @ 1% MIN. GRADE, UNO.
- D4. ALL PITS WITHIN THE PROPERTY ARE TO BE FITTED WITH "WELDLOK" OR APPROVED EQUIVALENT GRATES:
 - LIGHT DUTY FOR LANDSCAPED AREAS
 - HEAVY DUTY WHERE SUBJECTED TO VEHICULAR TRAFFIC
- D5. PITS WITHIN THE PROPERTY MAY BE CONSTRUCTED AS:
 - 1) PRECAST STORMWATER PITS
 - 2) CAST INSITU MASS CONCRETE
 - 3) ONLY 300 SQ. PITS IN LANDSCAPE AREAS CAN BE HDPE PLASTIC WHERE NOTED. SUBJECT TO THE RELEVANT LOCAL AUTHORITY CONSTRUCTION SPECIFICATION.
- D6. TRENCH DRAIN GRATES TO BE GALV. STEEL FRAME CAST INTO CONCRETE UNO.
- D7. PIPE / PIT BACKFILL TO BEDDING, HAUNCH AND OVERLAY ZONES IS TO BE 7_10 BLUE METAL, SANDY LOAM OR EQUIV.TAMP COMPACTED AT OPTIMUM MOISTURE, MAY VARY IN ROAD AREAS, IE SHARP CLEAN SAND, TO LOCAL AUTHORITY REQUIREMENTS.
- D8. MINIMUM PIPE COVER IS TYPICALLY 300mm AND 450mm IN ROADWAY AREAS.
- D9. ANY PIPES AT >16% GRADE REQUIRE CONCRETE BULKHEADS IN ACCORDANCE WITH AS 3500.3.2.
- D10. ENSURE ALL GRATES TO PITS ARE SET BELOW FINISHED SURFACE LEVEL WITHIN THE PROPERTY. TOP OF PIT RL'S ARE APPROXIMATE ONLY AND MAY BE VARIED SUBJECT TO APPROVAL OF THE ENGINEER. ALL INVERT LEVELS ARE TO BE ACHIEVED.
- D11. ALL PITS 600×900 AND LARGER ARE TO HAVE A 2.0m SUBSOIL LINE DRAINED INTO THE UPSTREAM FACE AT INVERT.
- D12. ALL PITS ARE TO HAVE CONCRETE BENCHING TO OUTLET INVERT AND UP TO THIRD HEIGHT PIPE DIAMETER UNLESS SUMP NOTED OTHERWISE
- D13. THE CONTRACTOR IS TO BE AWARE OF THE OPENING TO DEPTH PIT REQUIREMENTS OF AS3500.3.2 IF:
 - •450SQ: 600 MAX. DEPTH
 - •600SQ: 900 MAX. DEPTH U.N.O.
- D14. PROVIDE STEP IRONS TO STORMWATER PITS GREATER THAN 1200 IN DEPTH.
- D15. SUBSOIL DRAINAGE SHALL BE PROVIDED TO ALL RETAINING WALLS & EMBANKMENTS, WITH THE LINES FEEDING INTO THE STORMWATER DRAINAGE SYSTEM.
- D16. ALL SERVICES TO BE LOCATED BY HAND DIGGING, BEFORE MECHANICAL EXCAVATION FOR THE SITE OUTLET

EROSION AND SEDIMENT NOTES

- E1. ALL EROSION & SEDIMENT CONTROL DEVICES ARE TO BE PLACED PRIOR TO THE COMMENCEMENT OF ANY CONSTRUCTION WORKS. THE LOCATION OF SUCH DEVICES IS INDICATIVE ONLY AND FINAL POSITION SHOULD BE DETERMINED ON SITE.

 ALL DEVICES ARE TO BE MAINTAINED TO THE STANDARDS OF THE NSW DEPARTMENT OF HOUSING'S 'SOIL AND WATER MANAGEMENT FOR URBAN DEVELOPMENT'.
- THE CONTRACTOR IS TO MAKE THEMSELVES AWARE OF ANY TREE PRESERVATION ORDER OR TREE REMOVAL. REQUIRED TREE PROTECTION MEASURES ARE TO BE IN ACCORDANCE WITH COUNCIL REQUIREMENTS.
- E3. A LOG BOOK OR OTHER SUITABLE RECORDS MUST BE KEPT BY THE SITE SUPERVISOR IN ACCORDANCE WITH THE EPA'S RECORDS.
- E4. NO TOPSOIL, SILT OR EXCAVATED MATERIALS IS TO BE PLACED OUTSIDE THE LIMIT OF WORKS, MATERIAL IS TO BE STOCKPILED AS SHOWN / DIRECTED WITH SILT FENCE AND UPSTREAM DIVERSION BANKS.
- 55. DURING TRENCH EXCAVATION, ALL SPOIL IS TO BE PLACED ON THE UPSTREAM SIDE OF THE TRENCH AND TO THE SUPERINTENDENTS REQUIREMENT.
- E6. DUST SUPPRESSION MEASURES ARE TO BE CARRIED OUT IN ACCORDANCE WITH COUNCIL REQUIREMENTS.
- 7. PROVIDE AND MAINTAIN SILT TRAPS AROUND ALL SURFACE INLET PITS UNTIL CATCHMENT
 IS VEGETATED OR PAVED.
- E8. A TURF STRIP SHALL BE PROVIDED BEHIND ALL KERBS, INLET PITS AND DRAINS AT THE COMPLETION OF THEIR FORMATION.
- E9. TOPSOIL SHALL NOT BE RESPREAD ON AREAS OTHER THAN SPECIFIED, IE: TURF / LANDSCAPE, FOOTPATH, CATCH OR SWALE DRAINS.
- E10. ALL DISTURBED AREAS ARE TO BE TURFED/SEEDED AND FERTILIZED WITHIN 14 DAYS OF EXPOSURE. THEY SHALL BE ADEQUATELY WATERED TO PROMOTE GROWTH. GROWTH SHALL BE TO THE COUNCIL/SUPERINTENDENT'S SATISFACTION. THE CONTRACT IS NOT COMPLETE UNTIL THE REVEGETATION IS ACCEPTED BY COUNCIL; SOME AREAS MAY REQUIRE THE PLACEMENT OF TURF TO ACHIEVE SATISFACTORY REVEGETATION.
- E11. TRUCKS REMOVING EXCAVATED/DEMOLISHED MATERIAL SHOULD TRAVEL ON STABILISED CONSTRUCTION PATHS AND ALL WEATHER SITE ACCESS PROVIDED IN ACCORDANCE WITH COUNCIL REQUIREMENTS. ANY SEDIMENT DEPOSITED ON THE ROAD OR ROAD RESERVE IS TO BE REMOVED IMMEDIATELY.
- E12. CONCRETE PUMPS AND CRANES MUST NOT OPERATE FROM THE FOOTPATH OR ROADWAY UNLESS SPECIFIC COUNCIL PERMISSION IS OBTAINED.
- E13. PEDESTRIAN AND TRAFFIC CONTROL MEASURES ARE REQUIRED TO BE IMPLEMENTED AND MAINTAINED DURING CONSTRUCTION IN ACCORDANCE WITH AS1742:MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES.
- E14. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO ENSURE THAT ALL MEASURES ARE TAKEN DURING THE COURSE OF THE CONSTRUCTION TO PREVENT SEDIMENT EROSION AND POLLUTION OF THE DOWNSTREAM SYSTEM. ALL SEDIMENT CONTROL DEVICES TO BE INSPECTED AFTER EACH RAINFALL. EVENT FOR DAMAGE AND TRAPPED SEDIMENT TO BE REMOVED TO A NOMINATED STOCKPILE.

ENGINEERING INSPECTIONS: 48hrs NOTICE IS REQUIRED

- THE CONTRACTOR IS TO BE AWARE OF THE <u>MANDATORY</u>
 INSPECTIONS REQUIRED BY THE DEVELOPMENT CONSENT
 (DA) UNDER THE ENVIRONMENTAL PLANNING & ASSESSMENT
 ACT. CHECK WITH THE PCA.
- THESE MAY INCLUDE: EXCAVATION, REINFORCEMENT PRIOR TO CONCRETE POURING, PIPES & PITS PRIOR TO BACKFILL, FRAMING PRIOR TO COVERING, FINAL INSPECTION AND OTHER FOR VARIOUS CERTIFICATIONS.

UNDERGROUND SERVICES SEARCH SHOULD BE UNDERTAKEN PRIOR TO ANY EXCAVATION TAKING PLACE UPON THE SITE.



STORMWATER HYDRAULIC DESIGN : MASTER PLAN STAGE 147 GARNET ROAD, KIRRAWEE

PROPOSED SUBDIVISION AND RESIDENTIAL DEVELOPMENT 147 GARNET ROAD, KIRRAWEE

ISSUE DATE DESCRIPTION

REVISION

PROPOSED SUBDIVISION AND RESIDENTIAL DEVELOPMENT 147 GARNET ROAD, KIRRAWEE

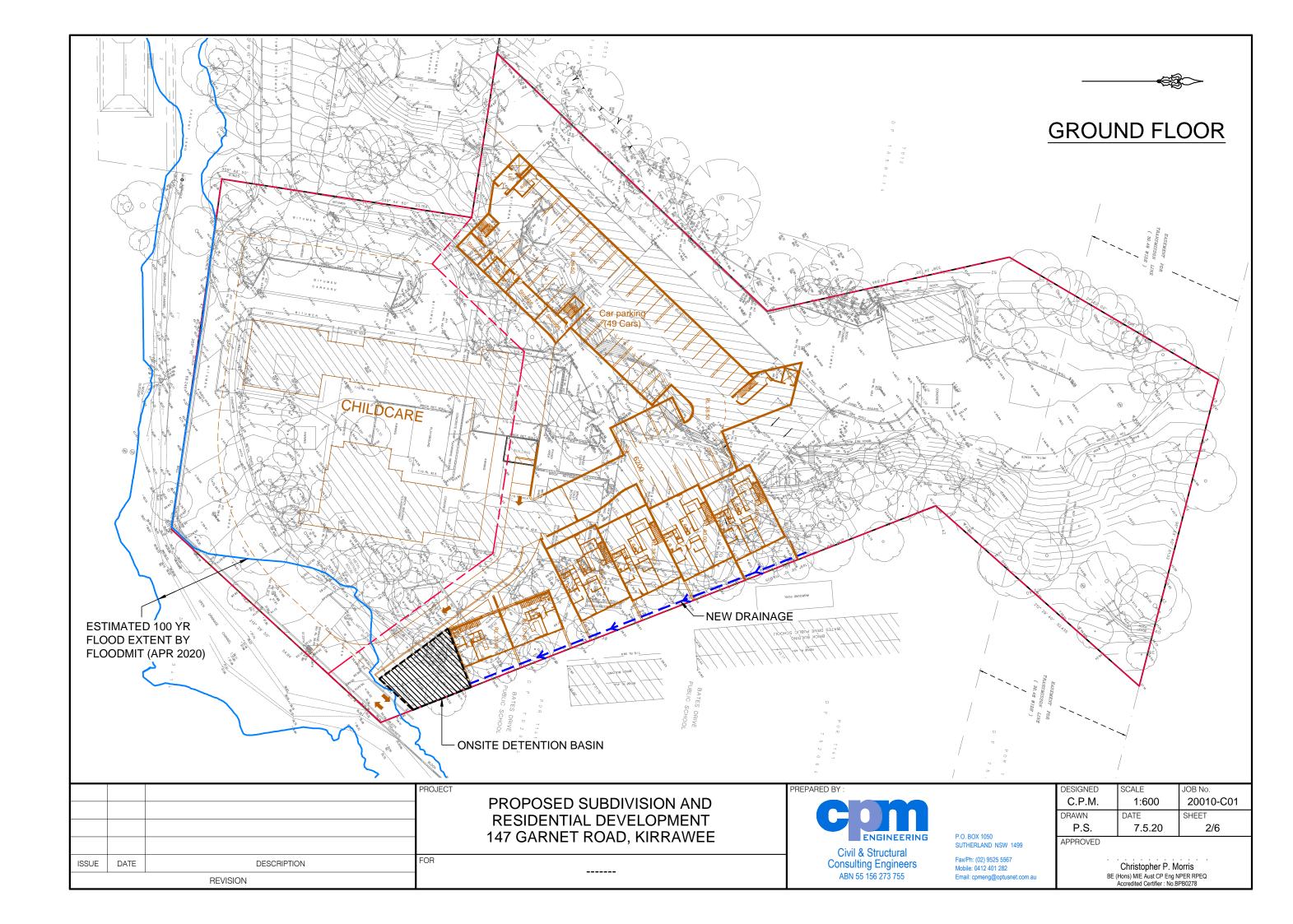
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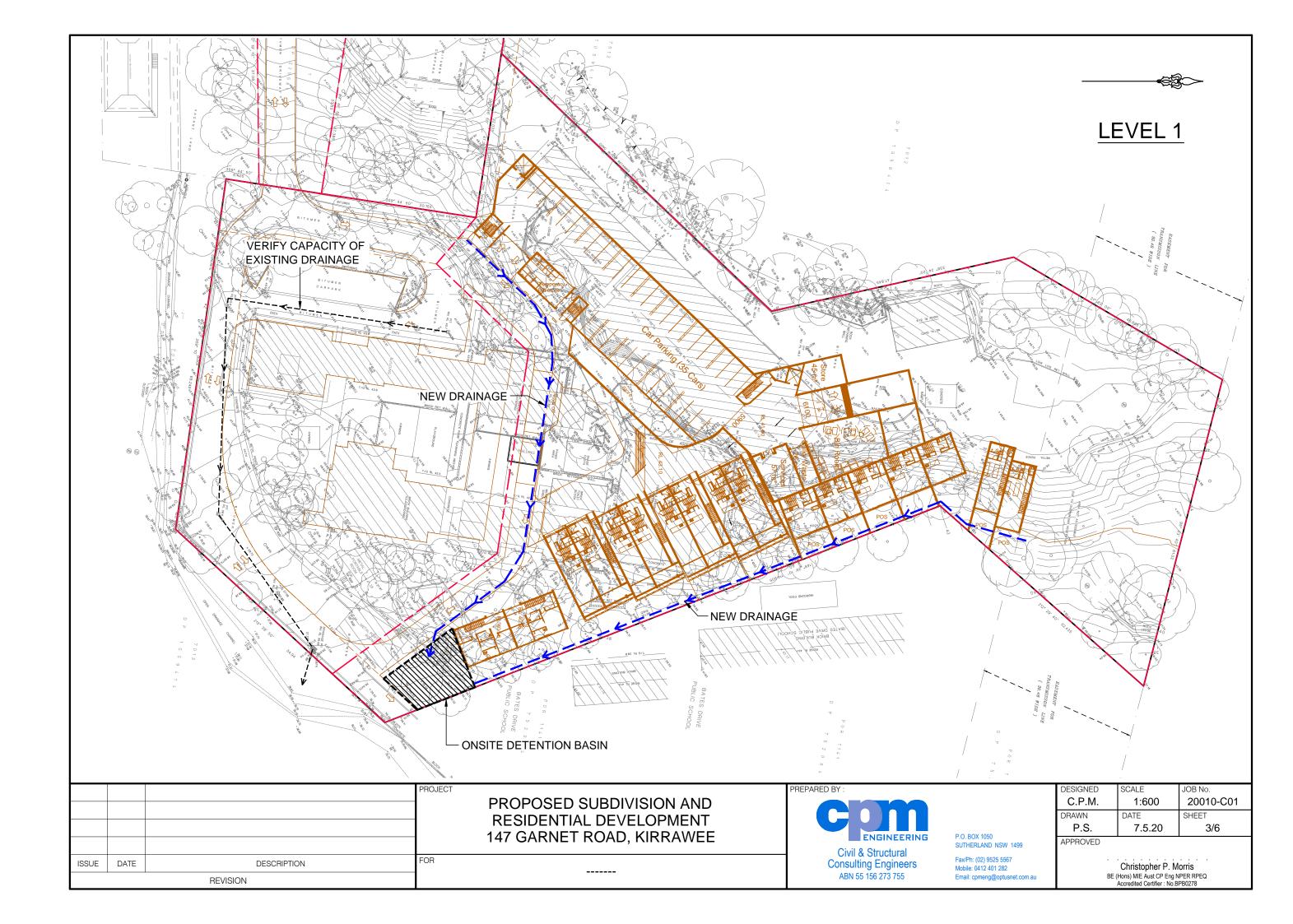
Civil & Structural Consulting Engineers ABN 55 156 273 755 P.O. BOX 1050 SUTHERLAND NSW 1499 Fax/Ph: (02) 9525 5567 Mobile: 0412 401 282

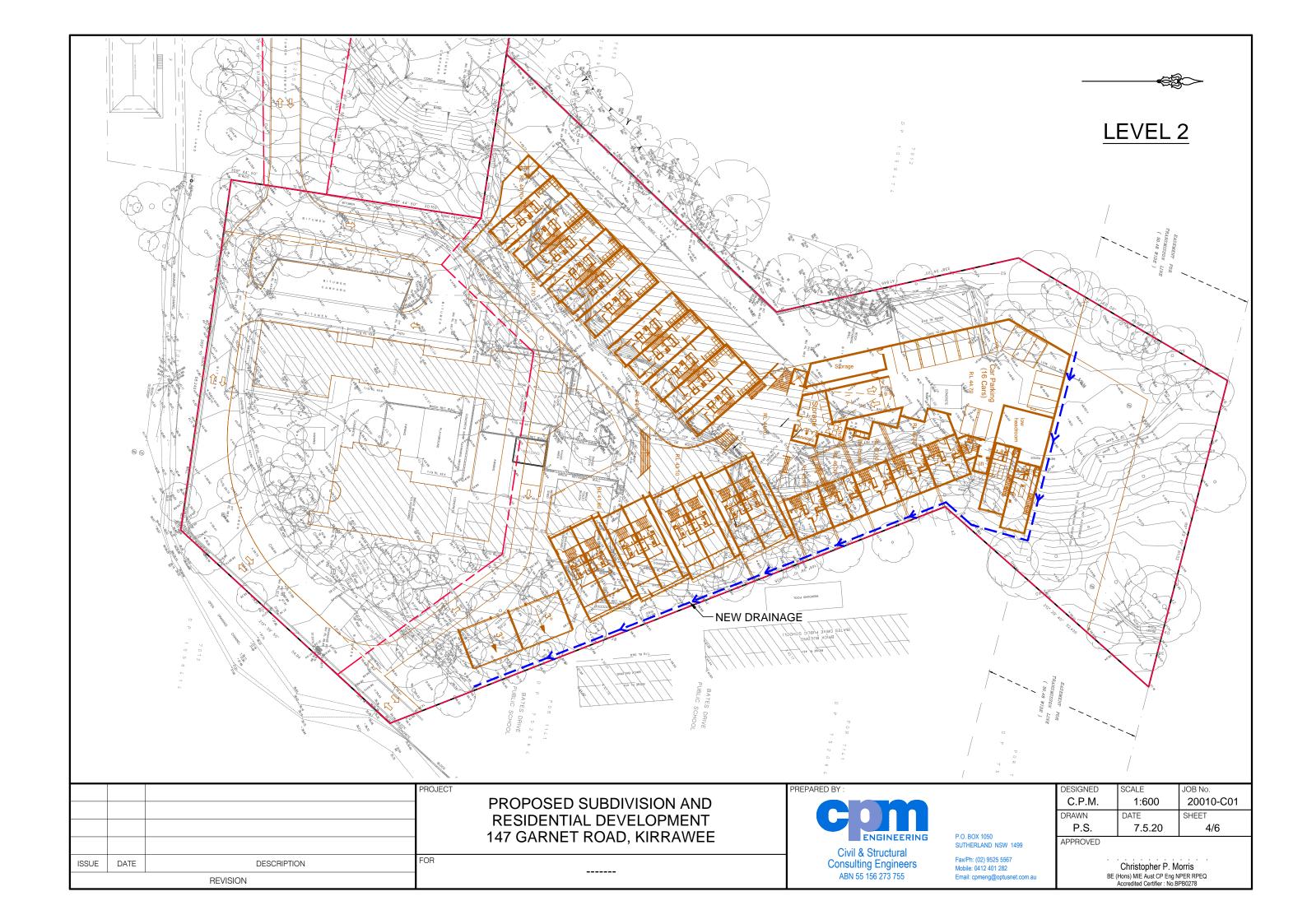
Email: cpmeng@optusnet.com.au

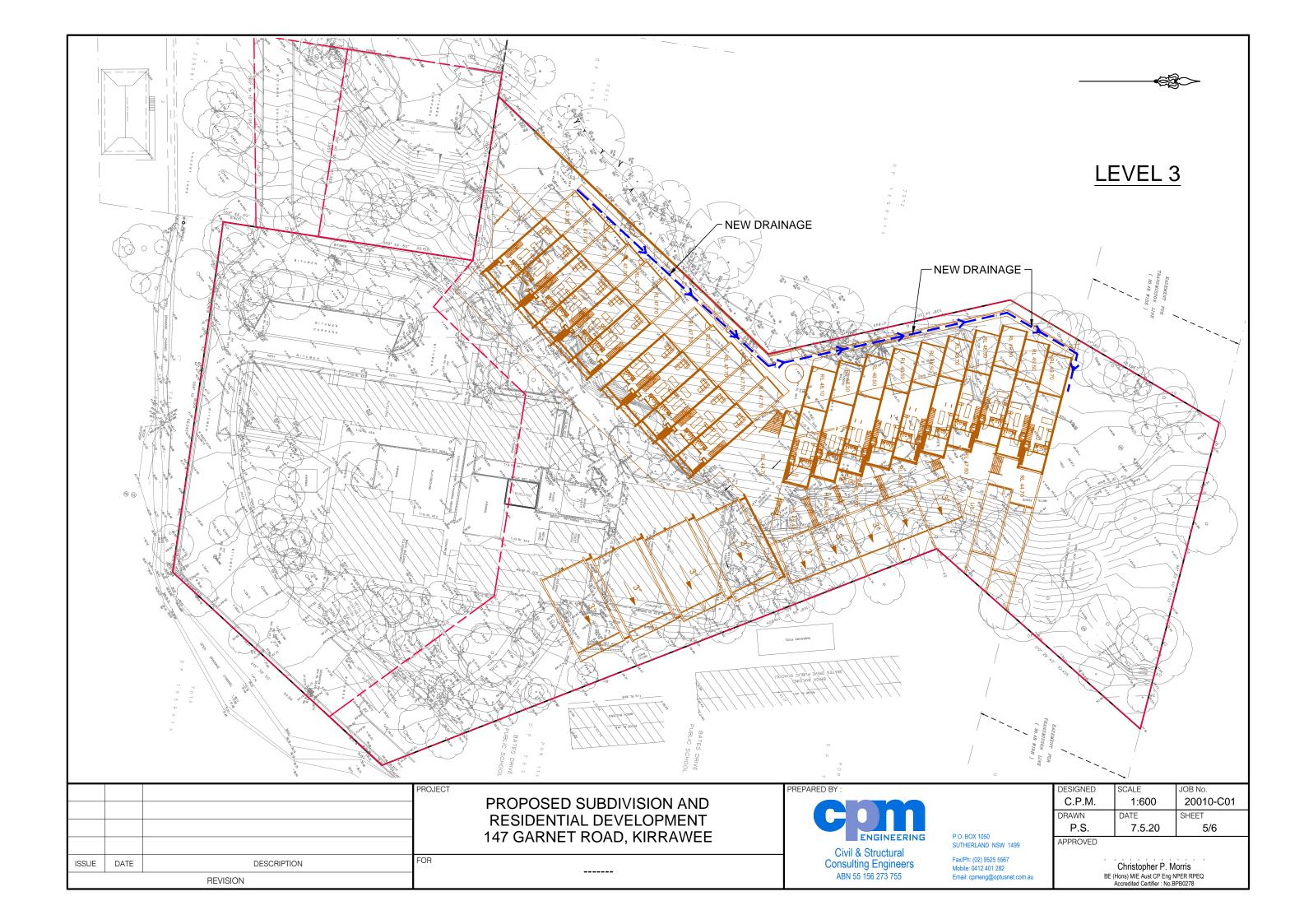
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P.S.	7.5.20	1/6
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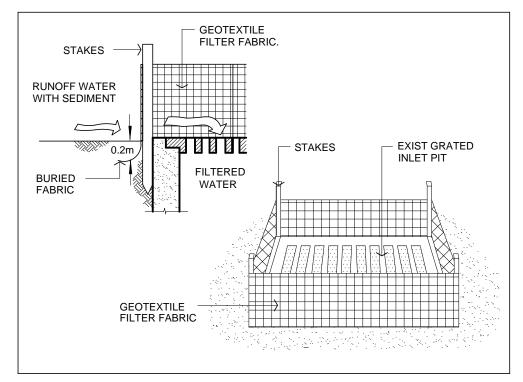
Christopher P. Morris
BE (Hons) MIE Aust CP Eng NPER RPEQ
Accredited Certifier: No.BPB0278



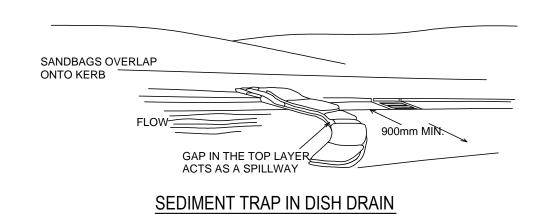


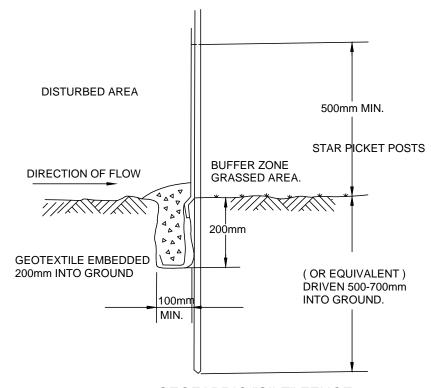




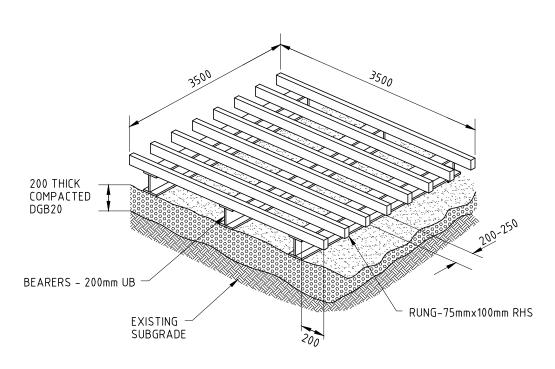


INLET PIT SEDIMENT TRAP





GEOFABRIC "SILT" FENCE



SHAKER PAD (CATTLE GRID)

NTS

			PROPOSED SUBDIVISION AND RESIDENTIAL DEVELOPMENT 147 GARNET ROAD, KIRRAWEE
ISSUE	DATE	DESCRIPTION	FOR
		REVISION	

C	ENGINEERING		
Civil & Structural Consulting Engineers			

ABN 55 156 273 755

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