

PROPOSED ALTERATION AND ADDITION NO.88 DUKE STREET, CAMPSIE

GENERAL NOTES:

1. MAIN STORMWATER DRAINS ≥ 300mm DIAMETER SHALL FALL AS NOTED. HOWEVER, ALL OTHER BRANCH DRAINS SHALL HAVE A MINIMUM GRADE OF 1%.
2. STORMWATER DRAINS SHALL BE RUBBER RING JOINTED FRC (CLASS 2) OR RCP OF EQUIVALENT CLASS. PIPES OF SIZE LESS THAN 300mm SHALL BE DWV GRADE PVC WITH SOLVENT CEMENT JOINTS.
3. STORMWATER PIT LIDS LOCATED IN DRIVEWAY AREAS SHALL BE EQUAL TO CI & D CAST IRON GRATES AND FRAMES - CLASS D.
4. STORMWATER PIT LIDS TO LANDSCAPED AND PEDESTRIAN AREAS SHALL BE EQUAL TO CI & D CAST IRON GRATES AND FRAMES - CLASS A.
5. ALL WORKS SHALL BE CARRIED OUT TO THE REQUIREMENTS OF THE RELEVANT COUNCIL / AUTHORITY, AS 3500.3, AS 2032, AS 3996 AND AS 3725.
6. AT THE COMPLETION OF THE WORKS PROVIDE A "WORK AS EXECUTED" PLAN OF THE STORMWATER DRAINAGE AND DETENTION SYSTEM. THE PLAN SHALL BE PREPARED AND CERTIFIED BY THE REGISTERED SURVEYOR AND SHOW ALL PIPE SIZES, INVERTS, PIT COVER AND BASE LEVELS AND ALL DETENTION TANK DIMENSIONS, SURFACE LEVELS AND THE ORIFICE PLATE SIZE (IF APPLICABLE).
7. PITS SHALL BE CI & D PRECAST CONCRETE OR APPROVED EQUAL WITH EXTENSION RISERS AS REQUIRED. PITS SHALL BE BEDDED ON A 50mm LAYER OF 4:1 CEMENT MORTAR AND BACKFILLED WITH EXCAVATED MATERIAL IN 200mm THICK COMPACTED LAYERS TO FINISHED SURFACE LEVEL.
8. COVERS TO PITS LOCATED WITHIN PAVED AREAS SHALL BE CAST IN WITH THE CONCRETE POUR. ALL OTHER PIT COVERS SHALL BE PROVIDED WITH A 150mm CONCRETE SURROUND.
9. PROVIDE TO EACH STORMWATER PIT A 1m LONG SECTION OF SUB-SOIL DRAINAGE, Ø75mm WITH GEOTEXTILE, LAID WITHIN THE UPSTREAM TRENCH.
10. PROVIDE 25mm DIAMETER GALVANIZED STEP-IRONS AT INTERVALS OF 300mm WHERE THE INTERNAL DEPTH OF THE PIT EXCEEDS 1000mm, TO AS 4108.
11. RETENTION TANK TO BE CLEANED & ALL SLUDGE REMOVED ON AN ANNUAL INSPECTION.
12. IT IS THE CONTRACTORS RESPONSIBILITY TO LOCATE THE POSITION & LEVEL OF ALL EXISTING SERVICES PRIOR TO THE COMMENCEMENT OF ANY EARTHWORKS.
13. LOCATION OF DOWNPIPES & FLOOR WASTES ARE INDICATIVE ONLY. DOWNPIPE & FLOOR WASTE SIZE, LOCATION & QUANTITY TO BE DETERMINED BY BUILDER & IN ACCORDANCE WITH RELEVANT AUSTRALIAN STANDARDS.
14. THE GRATES (HEAVY DUTY IN THE DRIVEWAYS) SHALL BE HINGED AND LOCKABLE.
15. THE PLANS SHALL INDICATE THAT DRIVEWAYS AND LAYBACKS MUST BE CONSTRUCTED AT LEAST 1-METRE CLEAR OF STORMWATER PITS/LINTELS, TREES, TELSTRA PITS AND EXISTING POWER POLES.

16. REFER TO ENGINEER ANY SERVICES THAT INTERFERE WITH THE REQUIREMENTS OF THESE PLANS.

SITEWORKS NOTES:

1. DATUM A.H.D.
2. ORIGIN OF LEVELS. REFER TO BENCH OR STATE SURVEY MARKS WHERE SHOWN ON PLAN.
3. CONTRACTOR MUST VERIFY ALL DIMENSIONS AND EXISTING LEVELS ON SITE PRIOR TO COMMENCEMENT OF WORK.
4. ALL WORKS TO BE UNDERTAKEN IN ACCORDANCE WITH THE DETAILS SHOWN ON THE DRAWINGS & THE DIRECTIONS OF THE SUPERINTENDENT.
5. EXISTING SERVICES UNLESS SHOWN ON SURVEY PLAN HAVE BEEN PLOTTED FROM SERVICES SEARCH PLANS AND AS SUCH THEIR ACCURACY CANNOT BE GUARANTEED. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO ESTABLISH THE LOCATION AND LEVEL OF ALL EXISTING SERVICES PRIOR TO THE COMMENCEMENT OF ANY WORK. ANY DISCREPANCIES SHALL BE REPORTED TO THE SUPERINTENDENT. CLEARANCES SHALL BE OBTAINED FROM THE RELEVANT SERVICE AUTHORITY.
6. WHERE NEW WORKS ABOUT EXISTING THE CONTRACTOR SHALL ENSURE THAT A SMOOTH EVEN PROFILE, FREE FROM ABRUPT CHANGES IS ACHIEVED.
7. THE CONTRACTOR SHALL ARRANGE ALL SURVEY SETOUT TO BE CARRIED OUT BY A REGISTERED SURVEYOR.
8. CARE IS TO BE TAKEN WHEN EXCAVATING NEAR EXISTING SERVICES. NO MECHANICAL EXCAVATION IS TO BE UNDERTAKEN OVER TELSTRA OR ELECTRICAL SERVICES. HAND EXCAVATE IN THESE AREAS.
9. CONTRACTOR TO OBTAIN AUTHORITY APPROVALS WHERE APPLICABLE.
10. MAKE SMOOTH TRANSITION NEW TO EXISTING SURFACES AND MAKE GOOD AS APPLICABLE.
11. THESE PLANS SHALL BE READ IN CONJUNCTION WITH APPROVED LANDSCAPE, ARCHITECTURAL, STRUCTURAL, HYDRAULIC AND MECHANICAL DRAWINGS AND SPECIFICATIONS OR WRITTEN INSTRUCTIONS THAT MAY BE ISSUED RELATING TO DEVELOPMENT AT THE SITE BY THE SUPERINTENDENT.
12. TRENCHES THROUGH EXISTING ROAD AND CONCRETE PAVEMENTS SHALL BE SAWCUT TO FULL DEPTH OF CONCRETE AND A MINIMUM OF 50mm IN BITUMINOUS PAVING.
13. ALL BRANCH GAS AND WATER SERVICES UNDER DRIVEWAYS AND BRICK PAVING SHALL BE LOCATED IN 80Ø uPVC SEWER GRADE CONDUITS EXTENDING A MINIMUM OF 500mm BEYOND EDGE OF PAVING.
14. GRADES TO PAVEMENTS TO BE AS INDICATED ON PLAN. GRADE EVENLY BETWEEN NOMINATED RL'S. AREAS EXHIBITING PONDING GREATER THAN 5mm DEPTH WILL NOT BE ACCEPTED UNLESS IN A DESIGNATED SAG DRAINAGE LOCATION.

15. ALL COVERS AND GRATES ETC. TO EXISTING SERVICE UTILITIES ARE TO BE ADJUSTED TO SUIT NEW FINISHED SURFACE LEVELS WHERE APPLICABLE TO AUTHORITY REQUIREMENTS.

EROSION CONTROL NOTES:

1. ALL EROSION & SEDIMENT CONTROL MEASURES ARE TO BE INSTALLED AND MAINTAINED IN ACCORDANCE WITH 'MANAGING URBAN STORMWATER, 4th EDITION PRODUCED BY LANDCOM.
2. ALL EROSION AND SILTATION CONTROL DEVICES ARE TO BE PLACED PRIOR TO THE COMMENCEMENT OF ANY CONSTRUCTION WORKS, AND ALL SILT TRAPS ARE TO HAVE DEPOSITED SILT REMOVED REGULARLY DURING CONSTRUCTION.
3. ALL TREES ARE TO BE PRESERVED UNLESS INDICATED OTHERWISE ON THE ARCHITECT'S OR LANDSCAPE ARCHITECT'S DRAWINGS. EXISTING GRASS COVER SHALL BE MAINTAINED EXCEPT IN AREAS CLEARED FOR BUILDINGS, PAVEMENTS ETC.
4. INSTALL TEMPORARY SEDIMENT BARRIERS TO ALL INLET PITS LIKELY TO COLLECT SILT LADEN WATER.
5. NOT WITHSTANDING DETAILS SHOWN IT IS THE CONTRACTORS SOLE RESPONSIBILITY TO ENSURE THAT ALL SITE ACTIVITIES COMPLY WITH THE REQUIREMENTS OF THE CLEAN WATERS ACT. DISCHARGE TURBIDITY NOT TO EXCEED 50mg/L

CHARGED PIPE SYSTEMS

1. GENERAL REQUIREMENTS FOR CHARGED PIPE SYSTEMS:

(A) WHERE THE BOUNDARY LEVEL IS ABOVE ANY KERB WITHIN 15m OF THE SITE OR A COUNCIL PIPE IS AVAILABLE, THE ROOF WATER IS TO DRAIN BY GRAVITY FROM THE BOUNDARY TO THE COUNCIL SYSTEM VIA A SILT/LITTER ARRESTOR PIT. WHERE A GRAVITY DISCHARGE TO THE COUNCIL SYSTEM IS NOT VIABLE THE CHARGED PIPE MAY CONNECT DIRECTLY TO THE KERB.

(B) FLAP (REFLUX) VALVES ARE TO BE INSTALLED ON THE OUTLET PIPES FROM THE CHARGED SYSTEM THAT DISCHARGE TO THE SILT/LITTER ARRESTOR PIT TO MINIMISE MOSQUITO NUISANCE.

(C) THE LOWEST LEVEL OF THE CHARGED SYSTEM SHALL DRAIN BY GRAVITY TO A SMALL INSPECTION PIT (600mm x 600mm MIN.) WITH SUMP FOR CLEANING. There shall be a minimum of ONE METRE OF PIPE FROM THE LAST DOWNPIPE TO THE INSPECTION PIT. THE CONNECTION TO THE PIT IS TO HAVE A SEALED SCREW CAP TO ALLOW FOR PERIODIC CLEANING AND REMOVAL OF RUBBISH. THE CAP IS TO HAVE A 5mm DRIBBLE HOLE TO ALLOW TRAPPED WATER TO DISCHARGE SLOWLY. REFER TO CHARGED PIPE CLEAN-OUT PIT DETAIL.

(D) ONLY SEWER GRADE PVC OR PRESSURE PIPES ARE TO BE USED TO CONVEY CHARGED FLOWS.

(E) ALL PIPES AND DOWNPIPES ARE TO BE SEALED TO A MINIMUM OF 0.5m ABOVE THE MAXIMUM WATER LEVEL IN THE SYSTEM. THE SYSTEM SHALL BE PRESSURE TESTED PRIOR TO BACKFILLING. THE USE OF EXPOSED PIPELINE SHALL BE MINIMISED.

(F) ALL GUTTERS MUST HAVE LEAF GUTTER GUARDS INSTALLED AND UNDERTAKE REGULARLY CLEANING OF THE DOWNPIPES TO ENSURE EFFECTIVENESS OF THE SYSTEM.

2. REQUIREMENTS FOR CHARGED PIPE SYSTEMS FOR ROOF SYSTEMS:

(A) THE EAVE GUTTER LEVEL SHALL BE A MINIMUM OF 0.6m AN PREFERABLY 1.6m ABOVE THE HIGHER OF THE TOP OF THE KERB OUTLET OR THE TOP STORAGE LEVEL (E.G. RAINWATER TAKN). WHERE THE HEIGHT IS BEWTEEN 0.5m AND 1.5m AN ANALYSIS OF HEAD LOSSES SHALL BE PROVIDED.
3. REQUIREMENTS FOR CHARGED PIPE SYSTEMS FOR ABOVEGROUND RAINWATER TANKS:

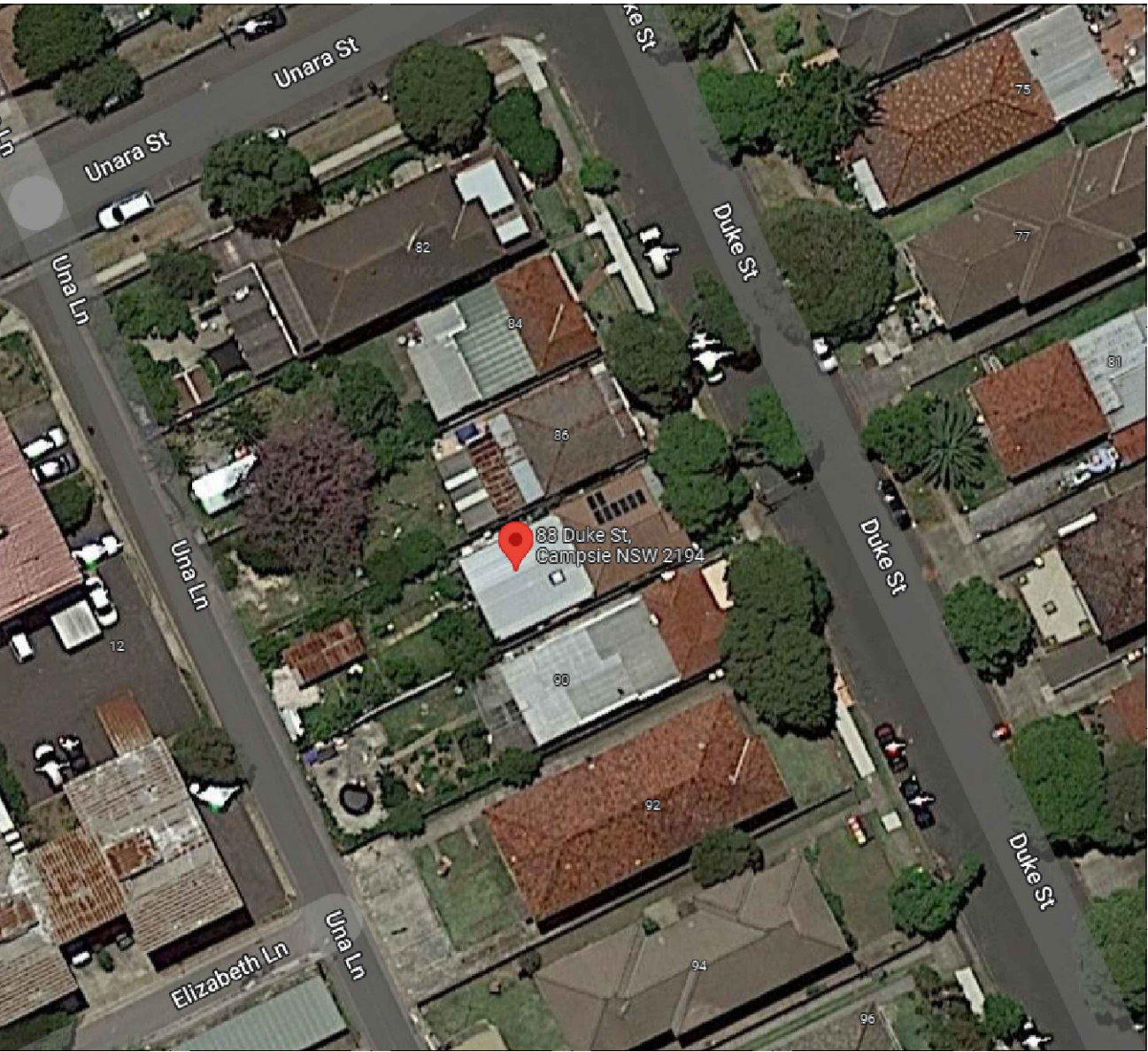
(A) THE OVERFLOW FROM THE RAINWATER TANK IS TO BE A MINIMUM OF 0.5m AND PREFERABLY 1.5m ABOVE THE TOP OF THE KERB OUTLET. WHERE THE HEIGHT IS BEWTEEN 0.5m AND 1.5m AN ANALYSIS OF HEAD LOSSES SHALL BE PROVIDED.

(B) THE INLET PIPES FROM THE ROOF SYSTEM TO THE RAINWATER TANK MAY ENTER DIRECTLY, OR THROUGH A CHARGE SYSTEM, WHERE A CHARGE SYSTEM IS USED EACH LINE WILL HAVE A CLEAN-OUT PIT.

(C) FLAP VALVES ARE TO BE INSTALLED ON THE INLET PIPES TO THE RAINWATER TANK FROM THE CHARGED SYSTEM TO MINIMISE MOSQUITO NUISANCE.


(D) THE DESIGN AND INSTALLATION SHALL COMPLY WITH HB 230 - RAINWATER TANK DESIGN AND INSTALLATION HANDBOOK.

DRAWING SCHEDULE	
DRAWING NUMBER	DRAWING NAME
221083 C1.00	GENERAL NOTES AND DRAWING SCHEDULE
221083 C2.00	SITE STORMWATER DRAINAGE COCNEPT PLAN
221083 C3.00	UPPER FLOOR STORMWATER DRAINAGE CONCEPT PLAN



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1	FOR D.A. SUBMISSION	KZ	KZ	19/04/2022
REVISION	AMENDMENT	DRAWN	DESIGNED	DATE

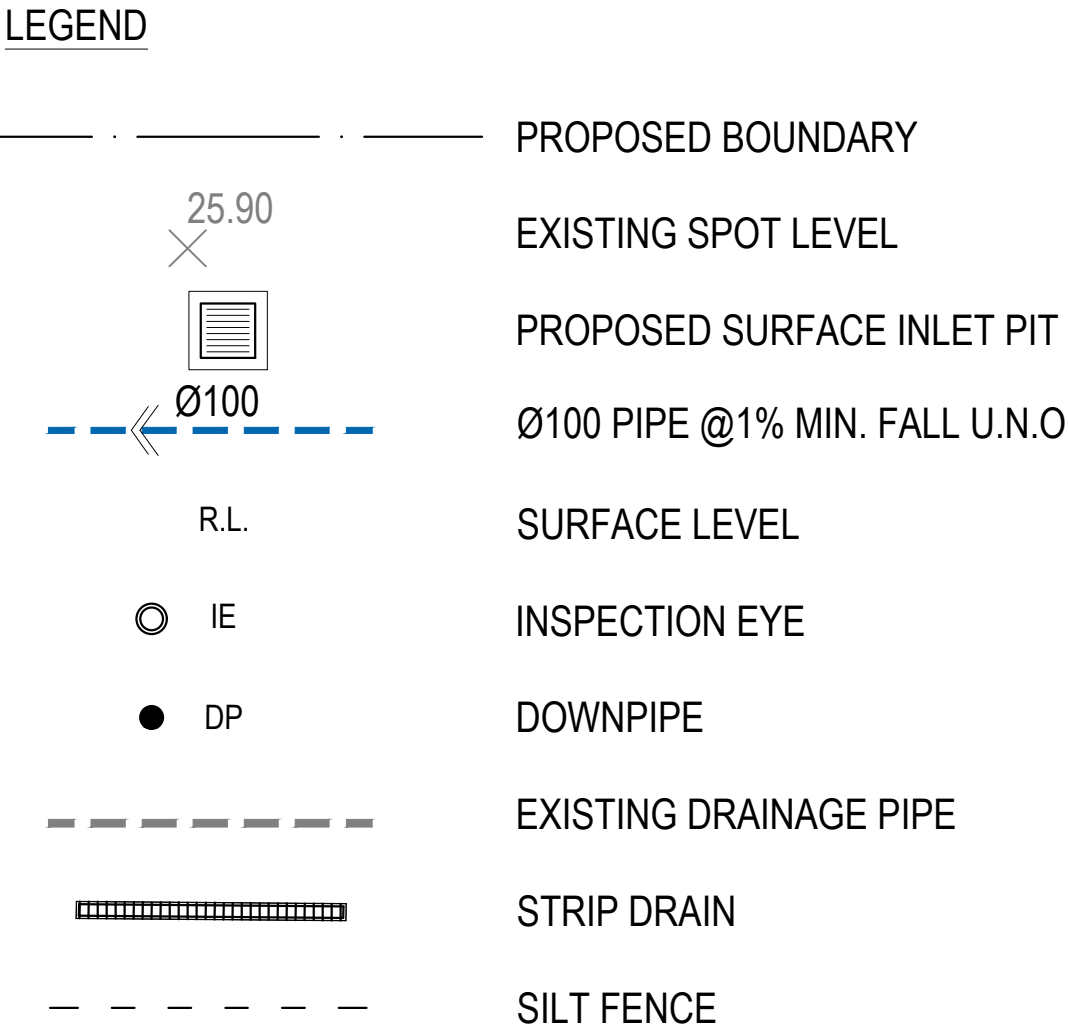
CLIENT	YIWEN SUN
ARCHITECT	GARY TEH ARCHITECTS PTY LTD
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**FLY ENGINEERING PTY LTD**

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Telephone: +61 2 9446 3202
Email: info@flyengineering.com.au

PROJECT	PROPOSED GARAGE AND ALTERARIONS DEVELOPMENT NO.88 DUKE STREET, CAMPSIE
TITLE	GENERAL NOTES AND DRAWING SCHEDULE

DRAWN KZ	DESIGNED KZ	DATE APRIL 2022
CHECKED BG	APPROVED BG	SCALE 1:100
DRAWING NUMBER		REVISION
221083 C1.00		1



1. SITE CALCULATIONS:

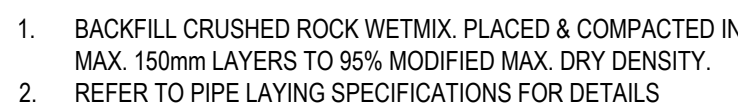
SITE AREA:	448.9 sqm
PRE-DEV: IMPERVIOUS AREA:	184.8 sqm
POST-DEV: IMPERVIOUS AREA:	305.2 sqm
POST-DEV: IMPERVIOUS AREA:	68.0%
INCREASED IMPERVIOUS AREA:	120.4 sqm

ON-SITE DETENTION WILL NOT BE REQUIRED WHERE THE PROPOSED IMPERVIOUS AREA IS GREATER THAN OR EQUAL TO 70% OF THE TOTAL SITE AREA AS PER SECTION B5.5 OF CANTERBURY DEVELOPMENT CONTROL PLAN 2012

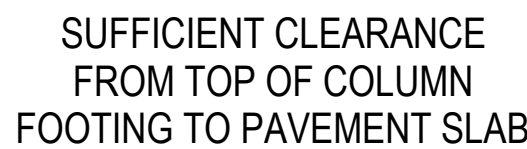
ALL EXISTING STORMWATER DRAINAGE SYSTEM MUST
BE CCTV INSPECTED BY A LICENSED PLUMBER OR
BUILDER FOR BLOCKAGE OR DAMAGE PRIOR TO
CONNECTION.



NOTE: DRAINAGE AREA 0.4Ha MAX. SLOPE GRADIENT 1:2 MAX.
SLOPE LENGTH 60m MAX.

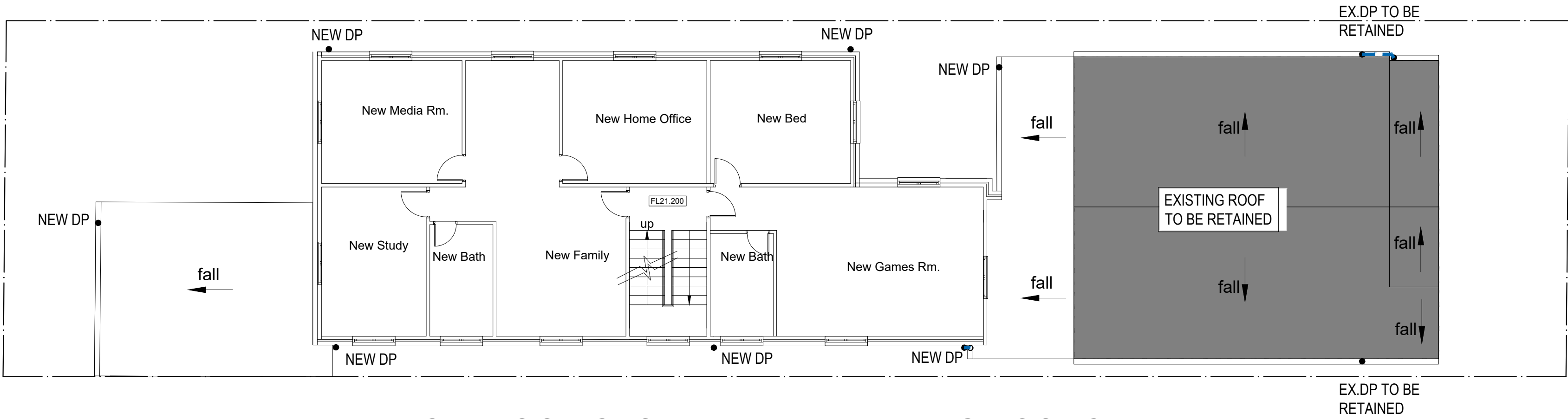


TYPICAL PIPE LAYING DETAILS



DOWNPIPE ADJACENT TO COLUMN - TYPICAL DETAIL

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FIRST FLOOR STORMWATER DRAINAGE CONCPET PLAN

SCALE 1:100

LEGEND

- PROPOSED BOUNDARY
- EXISTING SPOT LEVEL
- PROPOSED SURFACE INLET PIT
- Ø100 PIPE @1% MIN. FALL U.N.O
- R.L.
- SURFACE LEVEL
- IE
- INSPECTION EYE
- DP
- DOWNPIPE
- EXISTING DRAINAGE PIPE
- STRIP DRAIN
- SILT FENCE



ROOF STORMWATER DRAINAGE CONCPET PLAN

SCALE 1:100

Appendix 1 Engineering Specifications

1: On-Site Stormwater Detention (OSD) Checklist

For Dual Occupancy and Single Dwelling including Additions and Alterations

This form is to be used to determine if OSD will be required for residential developments and must be completed before the submission of any Application. Please read the reverse side of this form carefully for its applications and definitions.

Part A. Address and type of proposed development

Lot...B...DP.....151282
No...88...Street...Duke St
Suburb...Campsie

Type of development (tick relevant boxes):

- ☐ Dual Occupancy
- ☐ Single Dwelling
- ☒ Extensions
- ☐ Garage, outbuildings and others (specify).....

Part B. Exemption for flood affected areas

Is the subject site located within an established 100 year floodplain and the site also floods in 20 and 50 year storm events (tick one only):

☐ Yes

☒ No

If yes, OSD is not required. If no, go to Part C.

Part C. Exemption for minimum allowable size of site impervious area

Refer to the back of this page for definitions and explanations.

(a) Site area =.....448.9.....(m²)

(b1) Total existing impervious area =.....84.8.....(m²)

(b2) Total remaining existing impervious area =.....105.0.....(m²)

(C1) Proposed impervious area:.....(m²)

(C2) paved areas =.....(m²)

(C3) supplementary areas =.....(m²)

(d) Total post-development impervious area (b2) + (C1 + C2 + C3) =.....305.2.....(m²)

(e) Total proposed impervious area (C1 + C2 + C3) x 100 / (a) =.....209.3.....(%)

(f) Existing impervious area percentage (b1) x 100 / (a) =.....41.2.....(%)

(g) Post-development impervious area percentage (d) x 100 / (a) =.....68.0.....(%)

OSD will not be required if either of the following is satisfied:

☒ (g) is less than 70%

☐ (f) is greater than 70% and (e) is less than or equal to 5%

Notes:

Developments covered by this form are for dual occupancy, single dwelling including alterations and additions and works that involve driveways, garage, outbuildings and hardstand areas. Commercial and multiple occupancy developments are not exempt from OSD.

Definitions:

Site Area (a): This is the total area of the site for which the development is proposed for residential development, the total site area is taken to be the area as shown on the Deposited Plan (DP).

Existing impervious Area (b1): This refers to all of the impervious areas, within the site of the development, prior to any proposed works. This includes, calculated in plan view, all of the existing roofed areas, paved surfaces, hardstand areas, garages, outbuildings, etc.

Remaining existing impervious Area (b2): This refers to the existing impervious areas of the site which will not be removed or demolished as part of the proposed works, but will remain after the proposed works have been carried out. If a building is to be altered internally, that is, works involving only the removal/demolition of internal non-structural members/walls within the footprint of the building, then the remaining impervious areas shall be calculated as the total area of the building. Existing Dwelling

Proposed impervious Area (C): This includes all new impervious areas created as part of the proposed development, such as; all proposed roofed, paved, supplementary (i.e. In-ground swimming pools), garages, outbuildings and hardstand areas.

Post-development impervious Area (d): This includes ALL of the impervious areas within the site that are to remain after the development is completed, that is, the finished works and includes all of the remaining existing and proposed impervious areas.

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TITLE	UPPER FLOOR STORMWATER DRAINAGE CONCEPT PLAN

DRAWN KZ	DESIGNED KZ	DATE APRIL 2022
CHECKED BG	APPROVED BG	SCALE 1:100
DRAWING NUMBER 221083 C3.00		REVISION 1