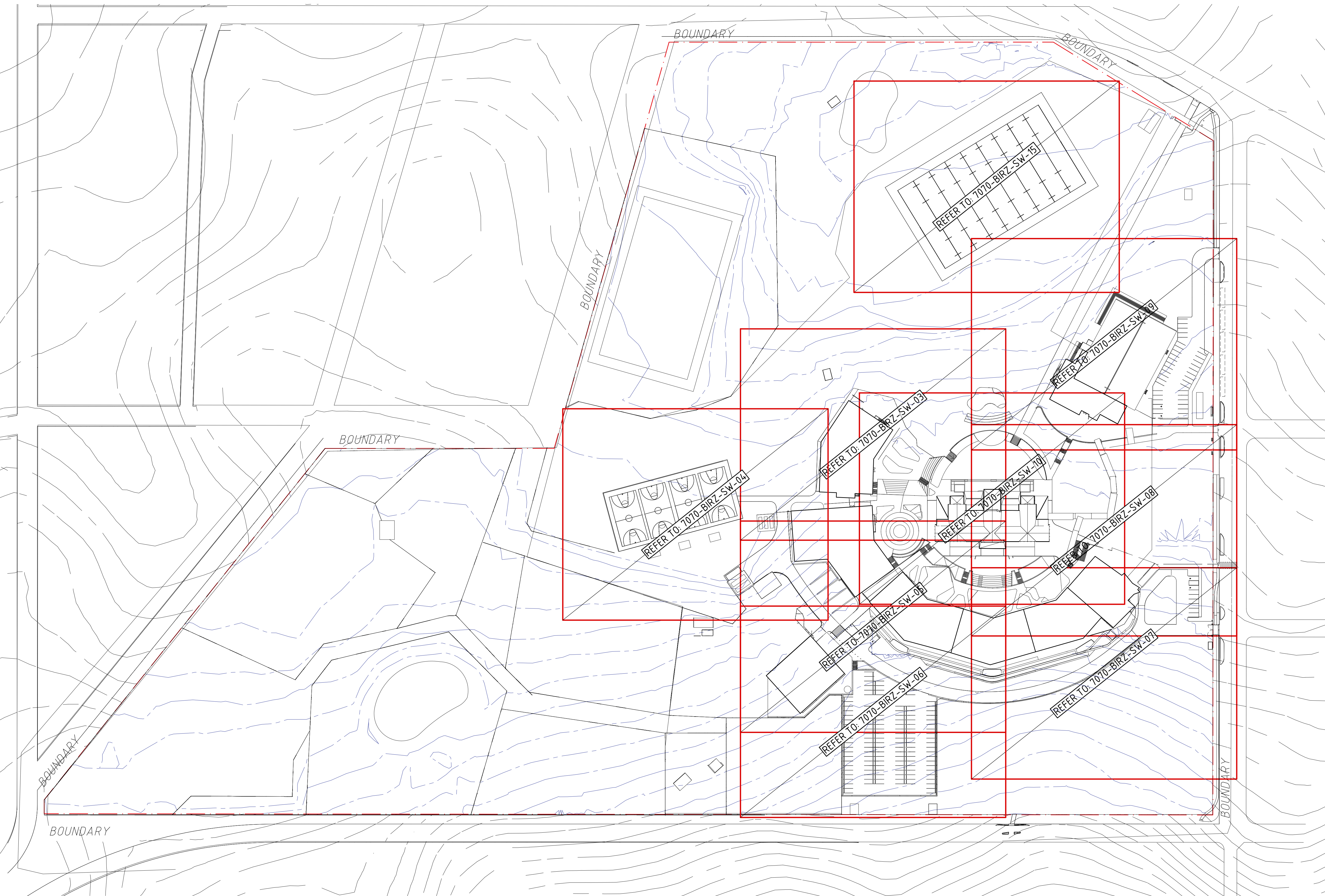






MASTERPLAN  
SCALE 1:1000

| Issue |          |                      |      |
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| No.   | Date     | Description          | Chkd |
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| C     | 12.10.18 | SSD DA V2 SUBMISSION | -    |
| B     | 24.08.18 | TENDER ADDENDUM      | -    |
| A     | 25.07.18 | TENDER ISSUE         | -    |

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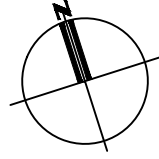
**SECURITY**  
DEPARTMENT OF EDUCATION NSW  
Architect

**NBR**SARCHITECTURE.

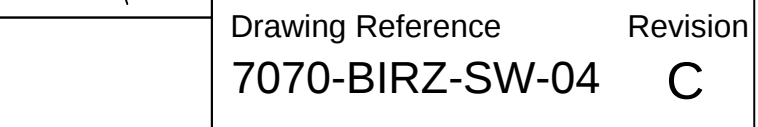
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Project  
**ARMIDALE SECONDARY COLLEGE**  
at  
BUTLER STREET, ARMIDALE, NSW, 2350  
for  
NSW Department of Education

Drawing Title  
**OVERALL SITE MASTERPLAN**

|                                                                                       |                      |
|---------------------------------------------------------------------------------------|----------------------|
|  | Date: 14/03/2018     |
|                                                                                       | Scale:1:1000 @ A1    |
| Drawing Reference<br><b>7070-BIRZ-SW-02</b>                                           | Revision<br><b>C</b> |







7 CM

REF ID: A57670

THIS DRAWING  
SHOWS SLAB U.N.O.

A line drawing of a person standing on a horizontal slab. The person is looking down at a drawing on the slab's surface. The drawing on the slab shows a circular shape with a vertical line passing through its center, and some horizontal lines extending from the center. The person's head is at the top right, and their feet are on the slab. The drawing on the slab is positioned directly in front of the person's feet.

NEW CARPARK SUBJECT TO  
SEPERATE PLANNING PATHWAY  
THESE WORKS DO NOT FORM  
PART OF THIS PROPOSAL.

|     |   |          |                      |   |
|-----|---|----------|----------------------|---|
| 150 | C | 12.10.18 | SSD DA V2 SUBMISSION | - |
| RL  | B | 24.08.18 | TENDER ADDENDUM      | - |
|     | A | 25.07.18 | TENDER ISSUE         | - |

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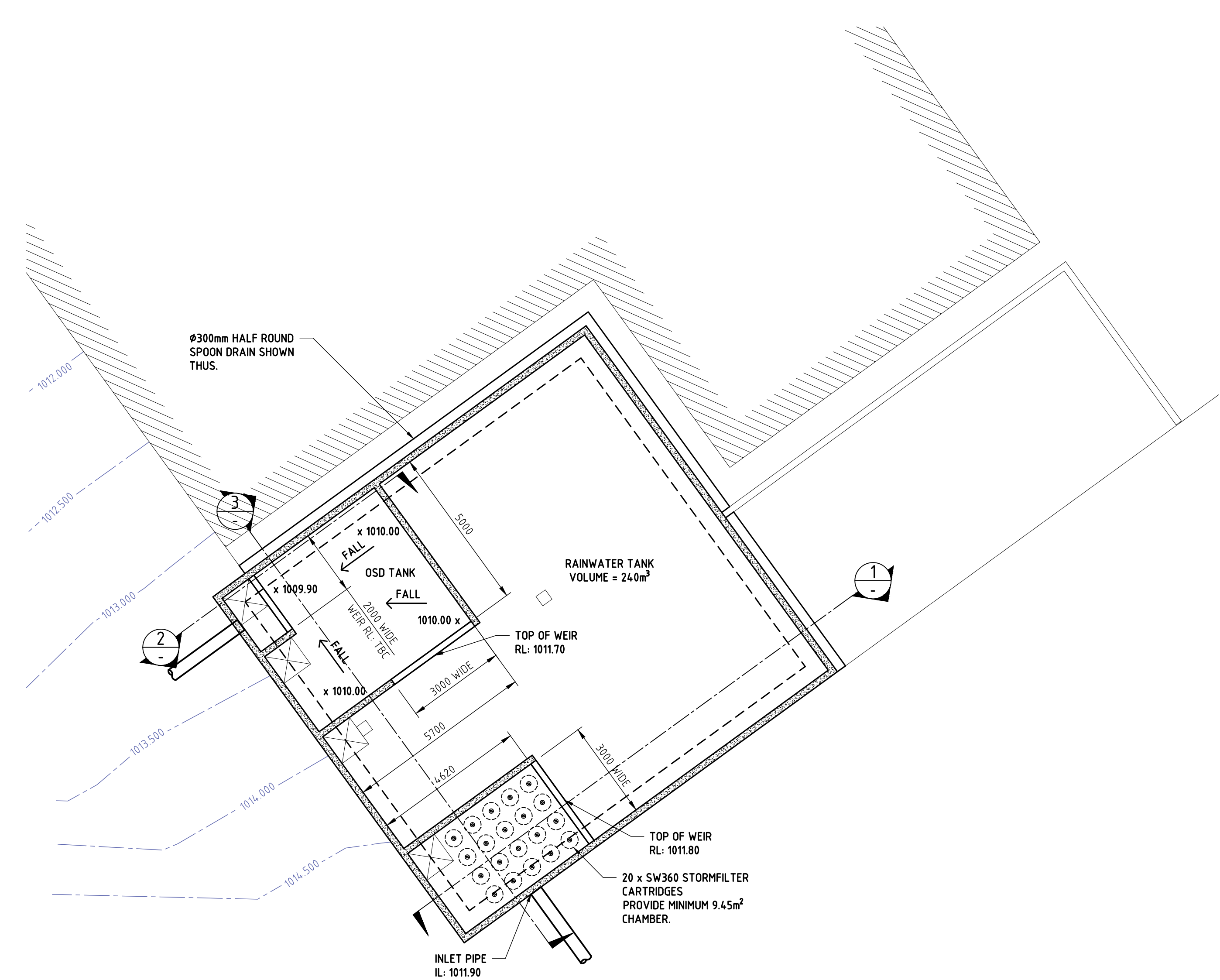
Architect











PLAN ON OSD TANK 1 BASE SLAB

SCALE 1:100

KERB INLET PIT NOTES:

- KERB INLET PITS TO BE CONSTRUCTED TO ARMIDALE REGIONAL COUNCIL'S STANDARDS
- ALL KERB INLET PITS TO BE CAST IN-SITU.
- ALL CONCRETE SHALL BE 32MPa STRENGTH AT 28 DAYS WITH SL82 MESH CENTRALLY PLACED.

DESIGN NOTES:

- THE PRE/POST-DEVELOPMENT IMPERVIOUS AREA WAS MEASURED THROUGH AUTOCAD.
- THE POST-DEVELOPMENT IMPERVIOUS AREA WAS DESIGNATED A VALUE OF 85% FOR A MORE CONSERVATIVE VALUE AND TO REPLICATE THE PROPOSED IMPERVIOUS AREA FOR SIZING OSD ON DRAINS.
- THE RAINFALL DATA WAS CALCULATED AND OBTAINED BY THE BUREAU OF METEOROLOGY, AUSTRALIA FOR THE RESPECTIVE LOCATION OF THE SITE.
  - LATITUDE: -30.519903
  - LONGITUDE: 151.652334

DESIGN NOTES:

THE SITE IS LOCATED IN ARMIDALE REGIONAL COUNCIL. THE OSD STORAGE SYSTEM AND RETENTION SYSTEM WILL BE BELOW GROUND. OSD WAS DESIGNED USING DRAINS. THE RESULTS ARE SHOWN BELOW.

DRAIN MODELLING PARAMETERS:

THE STORAGE CAPACITY AND PERMISSIBLE SITE DISCHARGE OF THE OSD WAS CALCULATED THROUGH A DRAINS MODEL WITH REGARDS TO ARMIDALE REGIONAL COUNCIL DCP REQUIREMENTS LISTED BELOW. POST DEVELOPMENT FLOWS RESTRICTED TO PRE-DEVELOPMENT FLOWS (IN ACCORDANCE WITH COUNCIL DCP).

SITE AREA CONSIDERED = 55,000m<sup>2</sup>

PRE-DEVELOPMENT CATCHMENT= 36.00% IMPERVIOUS.

64.00% PERVIOUS.

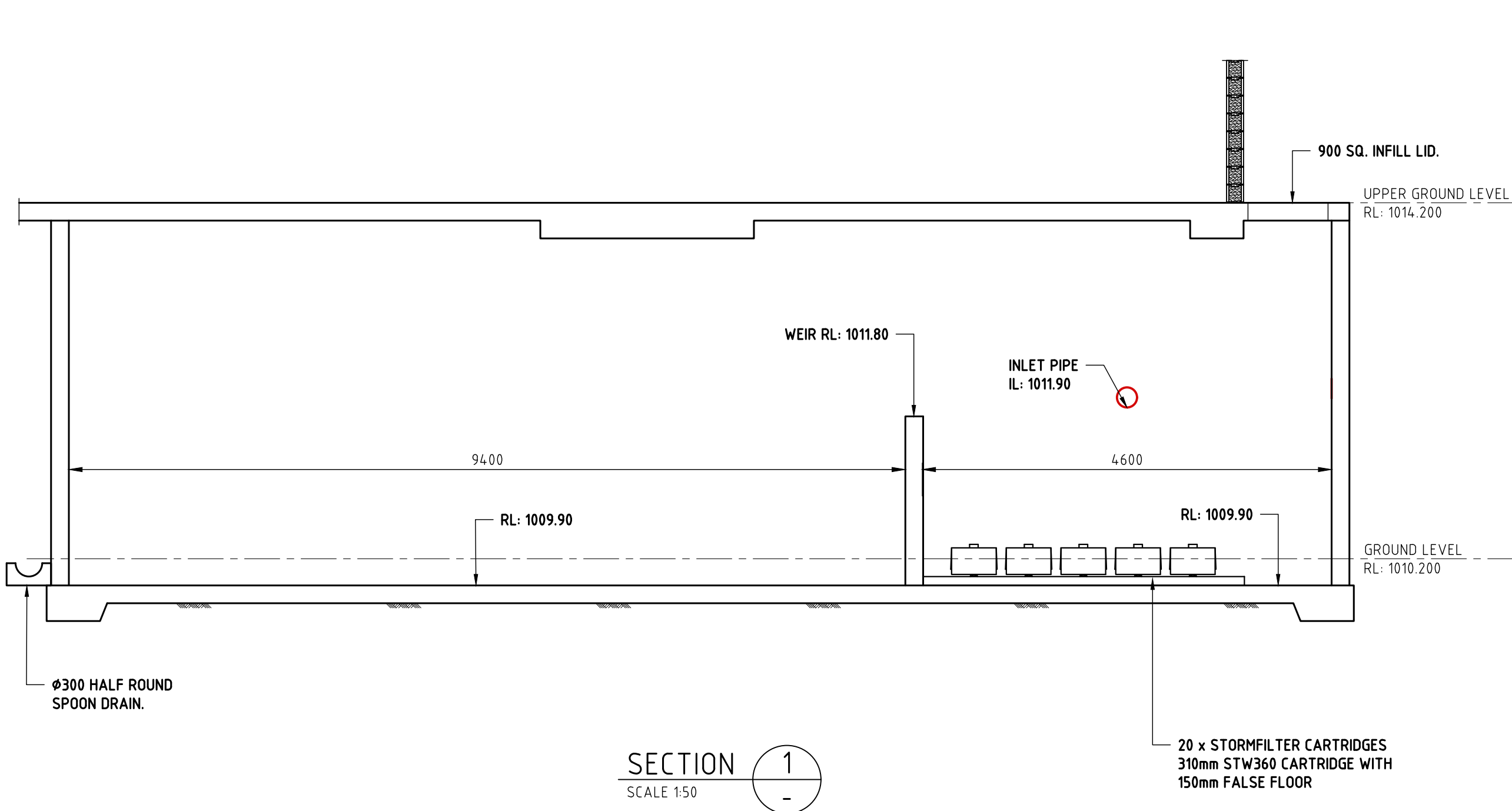
POST-DEVELOPMENT CATCHMENT= 51.00% IMPERVIOUS.

49.00% PERVIOUS.

POST-DEVELOPMENT OSD REQUIREMENTS (TANK 1 + RETENTION TANK)

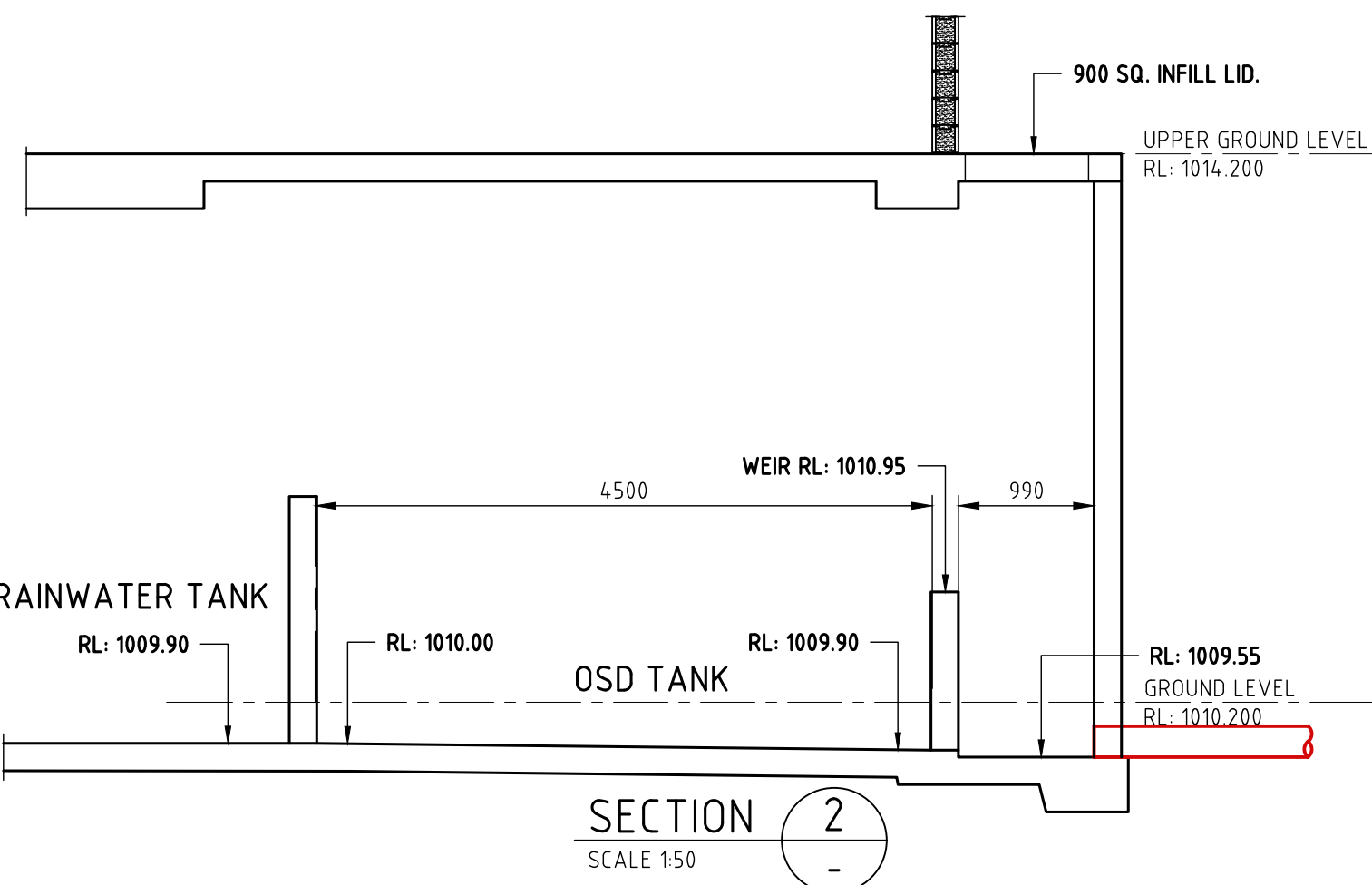
| LOT AREA (m <sup>2</sup> ) | PRE-DEV. IMPERVIOUS (%) | POST-DEV. IMPERVIOUS (%) | STORM (YR) | PRE-DEV. FLOW (m <sup>3</sup> /s) | POST-DEV. FLOW (m <sup>3</sup> /s) | PIPE OUTFLOW (m <sup>3</sup> /s) | WIER OUTFLOW (m <sup>3</sup> /s) | TOTAL PSD (m <sup>3</sup> /s) | OSD VOLUME (m <sup>3</sup> ) |
|----------------------------|-------------------------|--------------------------|------------|-----------------------------------|------------------------------------|----------------------------------|----------------------------------|-------------------------------|------------------------------|
| 55,000                     | 36                      | 51                       | 5          | 0.596                             | 0.803                              | 0.217                            | 0.000                            | 0.217                         | 24.0 (RETENTION)             |
|                            |                         |                          | 20         | 1.150                             | 1.340                              | 0.293                            | 0.002                            | 0.295                         | 21 (OSD)                     |

SERVICES SHOWN ON PLAN ARE INDICATIVE, EXACT DEPTH AND LOCATION TO BE CONFIRMED ONSITE. CONTRACTOR TO CARRY OUT DIAL BEFORE YOU DIG APPLICATION AND ENGAGE A REGISTERED SURVEYOR TO PEG OUT ALL EXISTING SERVICES PRIOR TO ANY WORK COMMENCING ONSITE.



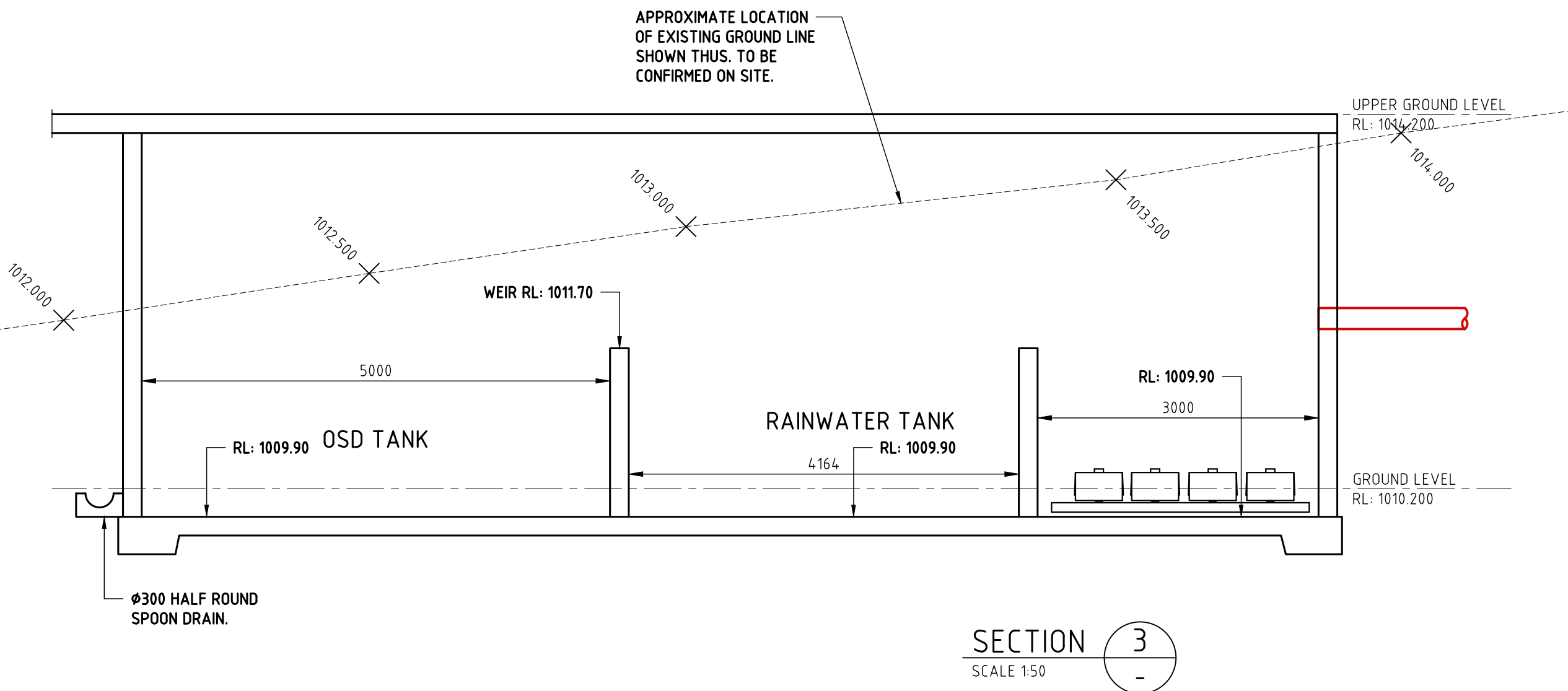
SECTION 1

SCALE 1:50



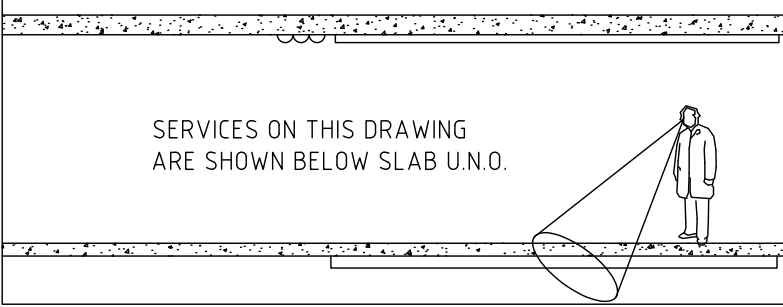
SECTION 2

SCALE 1:50



SECTION 3

SCALE 1:50



| Issue |          |                      |      |
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Project  
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at  
BUTLER STREET, ARMIDALE, NSW, 2350  
for  
NSW Department of Education

Drawing Title  
**OSD TANK PLAN AND SECTIONS**

Date: 14/03/2018

Scale:REFER TO  
DETAILS @ A1

Drawing Reference  
**7070-BIRZ-SW-11**

Revision  
**C**

- KERB INLET PIT NOTES:**
1. KERB INLET PITS TO BE CONSTRUCTED TO ARMIDALE REGIONAL COUNCIL'S STANDARDS
  2. ALL KERB INLET PITS TO BE CAST IN-SITU.
  3. ALL CONCRETE SHALL BE 32MPa STRENGTH AT 28 DAYS WITH SL82 MESH CENTRALLY PLACED.

- DESIGN NOTES:**
1. THE PRE/POST-DEVELOPMENT IMPERVIOUS AREA WAS MEASURED THROUGH AUTOCAD
  2. THE POST-DEVELOPMENT IMPERVIOUS AREA WAS DESIGNATED A VALUE OF 85% FOR A MORE CONSERVATIVE VALUE AND TO REPLICATE THE PROPOSED IMPERVIOUS AREA FOR SIZING OSD ON DRAINS
  3. THE RAINFALL DATA WAS CALCULATED AND OBTAINED BY THE BUREAU OF METEOROLOGY, AUSTRALIA FOR THE RESPECTIVE LOCATION OF THE SITE.  
- LATITUDE: -30.519903  
- LONGITUDE: 151.652334

- DESIGN NOTES:**
- THE SITE IS LOCATED IN ARMIDALE REGIONAL COUNCIL. THE OSD STORAGE SYSTEM AND RETENTION SYSTEM WILL BE BELOW GROUND. OSD WAS DESIGNED USING DRAINS. THE RESULTS ARE SHOWN BELOW.
- DRAIN MODELLING PARAMETERS:  
THE STORAGE CAPACITY AND PERMISSIBLE SITE DISCHARGE OF THE OSD WAS CALCULATED THROUGHOUT A DRAINS MODEL WITH REGARDS TO ARMIDALE REGIONAL COUNCIL DCP REQUIREMENTS LISTED BELOW.  
POST DEVELOPMENT FLOWS RESTRICTED TO PRE-DEVELOPMENT FLOWS (IN ACCORDANCE WITH COUNCIL DCP).
- SITE AREA CONSIDERED = 55,000m<sup>2</sup>
- PRE-DEVELOPMENT CATCHMENT= 36.00% IMPERVIOUS.  
64.00% PERVIOUS.
- POST-DEVELOPMENT CATCHMENT= 51.00% IMPERVIOUS.  
49.00% PERVIOUS.

- DRAINAGE NOTES:**
- ALL PIPES TO BE LAID ON 75mm SAND BED WITH THE BARRELS FULLY SUPPORTED.
- 100mm AND 150mm DIAMETER PIPES TO BE LAID ON MINIMUM 1% GRADE (U.N.O.).
- ALL WORKS ARE TO BE UNDERTAKEN IN ACCORDANCE WITH THE FOLLOWING AUSTRALIAN STANDARDS AS2032, AS3500, AND AS3725 AS A MINIMUM.
- ALL PIPES LESS THAN OR EQUAL TO Ø300mm IN SIZE ARE TO BE SOLVENT WELD-JOINTED uPVC CLASS SN8 U.N.O.
- ALL PIPES Ø375mm OR GREATER IN SIZE ARE TO BE MIN. CLASS 2 REINFORCED CONCRETE PIPE (ICP) OR FIBRE REINFORCED CONCRETE (IFRC) RUBBER RING JOINTED (RRJ) U.N.O.
- MINIMUM COVER FROM THE OBVERT OF THE STORMWATER PIPE OF 300mm IS TO BE PROVIDED IN LANDSCAPED AREAS AND 600mm IN VEHICULAR TRAFFICKED AREAS U.N.O.
- WHERE MINIMUM COVER CANNOT BE ACHIEVED CONCRETE ENCASEMENT OF THE AFFECTED PIPE IS MAY BE UNDERTAKEN WITH 32MPa CONCRETE WITH A MIN. COVER OF 150mm TO ALL SIDES OF THE PIPE. THE CONTRACTOR SHALL CONFIRM THIS REQUIREMENT WITH THE ENGINEER OR SUPERINTENDENT.
- ALL DRAINAGE PIPES LAID UNDER PAVEMENT SHALL BE REINFORCED CONCRETE WITH RUBBER RING JOINTS.
- BACKFILL TRENCHES WITH COMPACTED SAND OR APPROVED AGGREGATE MATERIAL.
- ALL PITS TO HAVE 600 x 600mm INTERNAL DIMENSIONS (U.N.O.).
- SILT ARRESTORS TO HAVE 900 x 900mm INTERNAL DIMENSIONS.
- HEAVY DUTY GRATES AND COVERS ARE TO BE PROVIDED IN TRAFFICABLE AREAS.
- PIT GRATE TO BE TYPE WELDLOK OR APPROVED EQUIVALENT.
- ALL PITS SHALL BE PROVIDED WITH A LOCKING LIP.
- ALL PITS SHALL BE MAINTAINED REGULARLY.
- TOP OF BENCHING SHALL BE TO THE HALF OF THE OUTLET PIPE DIAMETER.
- Ø100 SUBSOIL DRAINAGE PIPE 3000mm LONG WRAPPED IN FABRIC SOCK TO BE PROVIDED ADJACENT TO INLET PIPES.
- COMPRESSIVE STRENGTH f'c FOR CAST IN SITU CONCRETE TO BE A MINIMUM OF 32 MPa AT 28 DAYS.
- PROVIDE CLEANING EYES TO ALL DOWNPIPES NOT DIRECTLY CONNECTED TO PITS (U.N.O.).
- ISOLATED JOINTS TO BE PROVIDED TO ISOLATE CONCRETE PAVEMENTS FROM PITS.
- ALL TRENCH GRATES PROVIDED SHALL HAVE MINIMUM CLEAR WIDTH OF 200mm (U.N.O.).
- STORMWATER DRAINAGE CONNECTIONS TO THE MAIN SYSTEM SHALL BE TO THE REQUIREMENTS AND THE SATISFACTION OF LOCAL COUNCIL.

**LEGEND**

— S — S — S — AUTHORITY SEWER LINE

— E — E — E — E — E — AUTHORITY ELECTRICAL LINE

— TEL — TEL — TEL — AUTHORITY TELEPHONE LINE

— W — W — W — W — AUTHORITY WATER LINE

— G — G — G — G — AUTHORITY GAS LINE

--- SSD --- SSD --- SSD --- SSD --- SUBSOIL DRAINAGE LINE

— ExD — ExD — ExD — EXISTING STORMWATER LINE DEMOLISHED

— ExR — ExR — ExR — EXISTING STORMWATER LINE RETAIN

GRATED SURFACE INLET PIT

KERB INLET PIT

DP

Ex. DP

CO

RWO

FF

DOWNPIPE

EXISTING DOWNPIPE

CLEANING EYE/INSPECTION OPENING

RAINWATER OUTLET

FIRST FLUSH DIVERTER

SERVICES SHOWN ON PLAN ARE INDICATIVE, EXACT DEPTH AND LOCATION TO BE CONFIRMED ONSITE. CONTRACTOR TO CARRY OUT DIAL BEFORE YOU DIG APPLICATION AND ENGAGE A REGISTERED SURVEYOR TO PEG OUT ALL EXISTING SERVICES PRIOR TO ANY WORK COMMENCING ONSITE.

- AUTHORITY STORMWATER NOTES:**
1. IT IS THE CONTRACTOR'S RESPONSIBILITY TO CHECK ALL SET OUT AND LEVEL PRIOR TO COMMENCEMENT OF WORKS AND TO REPORT ANY DISCREPANCIES FOUND TO THE SUPERINTENDENT.
  2. ALL SET OUT DIMENSIONS ARE TO FACE OF KERB, CENTRELINE OF FENCE/BOLARD/PIPE.
  3. SMOOTH ALL TRANSITION BETWEEN NEW AND EXISTING WORK IN BOTH LEVEL AND ALIGNMENT.
  4. IT IS THE CONTRACTOR'S RESPONSIBILITY TO PROVIDE ALL SAFETY FENCES, WARNING SIGNS, TRAFFIC DIVERSIONS AND THE LIKE DURING CONSTRUCTION. ALL WORKS TO COMPLY WITH OCCUPATIONAL HEALTH AND SAFETY REQUIREMENTS AND OTHER RELEVANT AUTHORITY SAFETY REQUIREMENTS.
  5. NO TREES SHALL BE REMOVED, CUTBACK OR RELOCATED WITHOUT THE WRITTEN INSTRUCTION FROM THE SUPERINTENDENT.
  6. THE CONTRACTOR SHALL PROVIDE CERTIFICATION AND COMPACTONS AND PAVEMENT THICKNESS FROM A NATA REGISTERED TESTING AUTHORITY MINIMUM THREE TESTS PER LAYER AS FOLLOWS  
PIPE BACKFILL  
SELECT FILL (LESS THAN 300mm  
FOLLOW BASE COURSE)  
DENSITY INDEX 75  
95% STANDARD  
98% MODIFIED  
100% MODIFIED
  7. THE AUSPEC SPECIFICATION SHALL BE THE SPECIFICATION FOR THESE WORKS.

| LOT AREA (m <sup>2</sup> ) | PRE-DEV. IMPERVIOUS (%) | POST-DEV. IMPERVIOUS (%) | STORM (YR) | PRE-DEV. FLOW (m <sup>3</sup> /s) | POST-DEV. FLOW (m <sup>3</sup> /s) | PIPE OUTFLOW (m <sup>3</sup> /s) | WIER OUTFLOW (m <sup>3</sup> /s) | TOTAL PSD (m <sup>3</sup> /s) | OSD VOLUME (m <sup>3</sup> ) |
|----------------------------|-------------------------|--------------------------|------------|-----------------------------------|------------------------------------|----------------------------------|----------------------------------|-------------------------------|------------------------------|
| 1810                       | 75                      | 100                      | 5          | 0.035                             | 0.047                              | 0.018                            | 0.000                            | 0.018                         | 29                           |
|                            |                         |                          | 20         | 0.052                             | 0.065                              | 0.022                            | 0.000                            | 0.022                         |                              |

| LOT AREA (m <sup>2</sup> ) | PRE-DEV. IMPERVIOUS (%) | POST-DEV. IMPERVIOUS (%) | STORM (YR) | PRE-DEV. FLOW (m <sup>3</sup> /s) | POST-DEV. FLOW (m <sup>3</sup> /s) | PIPE OUTFLOW (m <sup>3</sup> /s) | WIER OUTFLOW (m <sup>3</sup> /s) | TOTAL PSD (m <sup>3</sup> /s) | OSD VOLUME (m <sup>3</sup> ) |
|----------------------------|-------------------------|--------------------------|------------|-----------------------------------|------------------------------------|----------------------------------|----------------------------------|-------------------------------|------------------------------|
| 3142                       | 0                       | 90                       | 5          | 0.021                             | 0.077                              | 0.020                            | 0.000                            | 0.020                         | 54                           |
|                            |                         |                          | 20         | 0.055                             | 0.106                              | 0.023                            | 0.022                            | 0.055                         |                              |

SERVICES SHOWN ON PLAN ARE INDICATIVE, EXACT DEPTH AND LOCATION TO BE CONFIRMED ONSITE. CONTRACTOR TO CARRY OUT DIAL BEFORE YOU DIG APPLICATION AND ENGAGE A REGISTERED SURVEYOR TO PEG OUT ALL EXISTING SERVICES PRIOR TO ANY WORK COMMENCING ONSITE.

CONSTRUCTION ON  
EARLY WORKS.

**TYPICAL SUBSOIL DRAINAGE DETAIL**  
SCALE 1:20

900 x 900 HEAVY DUTY GALV STEEL GRATE FOR ACCESS & VENTILATION.

LYSAIGHT MAXIMESH RH 3030 SCREEN.

STEP IRONS @ 300mm CENTRES TO AS1657.

ORIFICE PLATE (REFER DETAIL).

OUTLET PIPE.

REFER TO PLAN

LOCKING LATCH.

HANDLE TO ALLOW EASY REMOVAL.

TANK WALLS & SLABS TO STRUCTURAL ENGINEERS DETAILS.

CONCRETE BENCHING.

ANGLED TO ALLOW EASY REMOVAL OF SILT.

VAR

COURSE SAND COMPACTED IN 300mm LAYERS TO SURFACE LEVEL.

GEOTEXTILE FABRIC.

20mm BLUE METAL.

100mm PERFORATED PVC SUBSOIL DRAINAGE PIPE WRAPPED IN FABRIC SOCK.

UNDISTURBED SOIL.

100

100

150

300

**STORMWATER PIT DETAIL**  
SCALE 1:10

REFER TO PLAN FOR DETAIL

SL82 FABRIC STEEL REINFORCEMENT.

REBATE FOR FRAME.

LIGHT DUTY GALV. STEEL GRATE AND FRAME.

Ø225mm PVC INLET PIPE.

BENCHING

Ø225mm PVC OUTLET PIPE.

SECTION WITHOUT GRATE

REFER TO PLAN FOR DETAIL

LINE OF WALL BELOW.

LINE OF REBATE OVER FOR FRAME.

SECTION X

SCALE 1:10

**DOWNPIPE CONNECTION DETAIL**  
SCALE 1:10

DOWNPIPE TO FINISH ABOVE COLLAR TO EFGS & ARCH'S DETAIL.

STORMWATER PIPE COLLAR WITH NON-REMOVABLE GRATE.

**TYPICAL GRATED DRAIN DETAIL**  
NOT TO SCALE

HEAVY GALVANISED STEEL GRATE.

REFER TO PLAN

FINISHED LEVEL

100

150

MINIMUM 1% GRADE BASE FALL TO OUTLET.

N12 @ 300 CTS. CENTRAL  
4-N12 LONGITUDINAL.

|                                                                                       |                                                           |
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|  | Date: 14/03/2018                                          |
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| B            | 24 09 18 | TENDER ADDENDUM      | -    |
| A            | 26 07 18 | TENDER ISSUE         | -    |

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**NBRS**ARCHITECTURE.

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Project  
ARMIDALE SECONDARY COLLEGE

at  
BUTLER STREET, ARMIDALE, NSW, 2350

for  
NSW Department of Education

|                                                 |
|-------------------------------------------------|
| Drawing Title                                   |
| SOIL AND EROSION<br>SEDIMENT CONTROL<br>DETAILS |

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|  | Date: 14/03/2018                     |               |
|  | Scale:1:--- @ A1                     |               |
|  | Drawing Reference<br>7070-BIRZ-SW-14 | Revision<br>C |



SERVICES ON THIS DRAWING  
ARE SHOWN BELOW SLAB U.N.O.

| Issue |          |                      |      |
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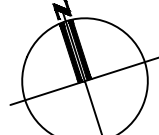
**NBR**SARCHITECTURE.

Structural/Civil Engineer

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NSW Department of Education

Drawing Title  
**STORMWATER CONCEPT  
DRAINAGE PLAN  
SHEET 9**



Date: 14/03/2018  
Scale:1:200 @ A1  
  
Drawing Reference  
**7070-BIRZ-SW-15**  
  
Revision  
**C**

REFER TO DWG. 7070-BIRZ-SW-09