

14 April 2022

General Manager  
Northern Beaches Council  
725 Pittwater Rd  
DEE WHY NSW 2099

Dear Sir/Madam,

Re: Stormwater Management Plan – 120A Prince Alfred Parade, Newport

With reference to the development application for the above property please find enclosed a copy of the site Stormwater Management Plan & Details, STORM-1/A & STORM-2, for your perusal.

The plans show the roofed and landscaped areas draining into the Salt Pan Cove at the northern end of the site. Note that 1x 'SPEL Vault' incorporated with 1x 'SPEL Filter' & 1x 'SPEL Stormsack' devices have been shown on the plan for pollution control measures, with the MUSIC model and SPEL detail sheets attached.

Note that it is proposed to provide a 10000 litre rainwater storage tank for non-potable, domestic re-use in accordance with BASIX and Council requirements.

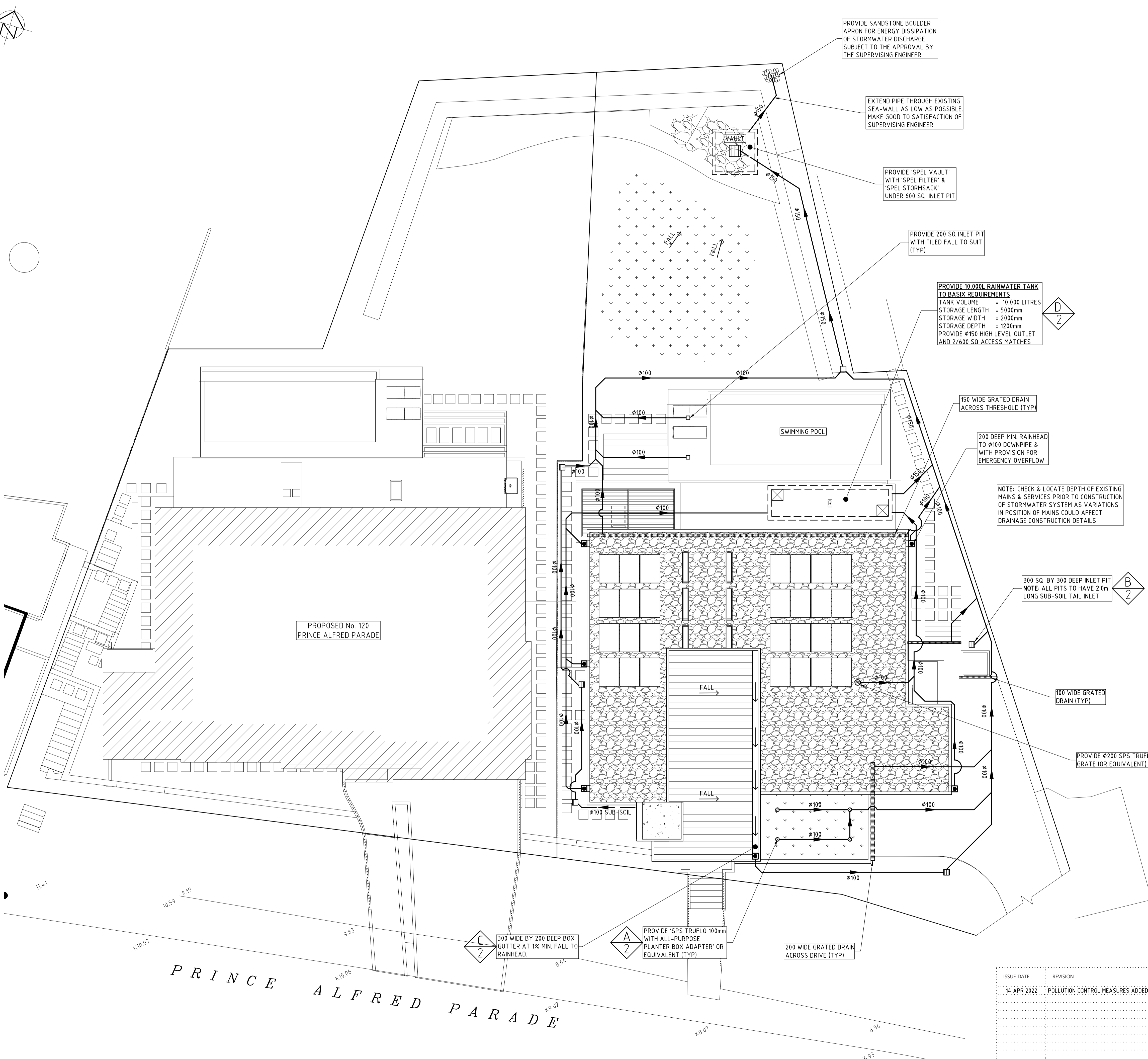
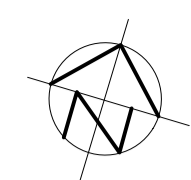
This is to certify that the Stormwater Management Plan layout as shown on plan STORM-1/A by Taylor Consulting Civil & Structural Engineers has been designed in accordance with section 3.1.2, 'Drainage', of the Building Code of Australia Housing Provision, AS/NZS 3500.3.2 – Stormwater Drainage and Northern Beaches Council - Water Management for Development Policy.

Should you require any further information please contact the undersigned.

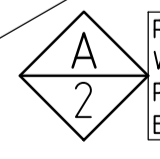
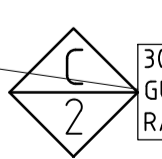
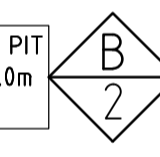
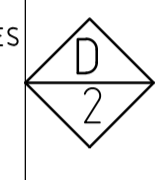
Yours faithfully  
TAYLOR CONSULTING

D M SCHAEFER – Director  
B.E. Civil (Hons) M.I.E. Aust. N.E.R.





- DRAINAGE NOTES**
- + DENOTES EXISTING GROUND LEVEL
  - FALL STORMWATER PIPES AT 1% MIN. UNLESS OTHERWISE NOTED.
  - SUB-SOIL DRAINAGE TO BE CONNECTED TO THE SITE DRAINAGE SYSTEM AS NECESSARY.
  - SURFACE GRATES 300 SQ. UNLESS OTHERWISE NOTED.
  - ALL STORMWATER PIPES TO HAVE SOLVENT CEMENT WATERTIGHT JOINTS.
  - CHECK & LOCATE DEPTH OF EXISTING MAINS & SERVICES PRIOR TO CONSTRUCTION OF STORMWATER SYSTEM AS VARIATIONS IN POSITION OF MAINS COULD AFFECT DRAINAGE CONSTRUCTION DETAILS.
  - INSPECTIONS MUST BE UNDERTAKEN BY THIS OFFICE (BY PRIOR ARRANGEMENT WITH ENGINEER) DURING CONSTRUCTION TO ENABLE FULL CERTIFICATION UPON COMPLETION OF WORKS.
  - ALL CONSTRUCTION OF COUNCIL DRAINAGE WORKS TO COMPLY WITH COUNCIL STANDARD.
  - REMOVE REDUNDANT DRAINAGE PITS AND SEAL PIPES.
  - PIT BENCHING TO BE HALF THE OUTGOING PIPE DIAMETER. CONCRETE FOR BENCHING TO BE 20 MPa MASS CONCRETE.
  - APPROVED PRE-CAST PITS MAY BE USED.
  - ALL PIPES TO BE LAID ON COMPACTED FINE CRUSHED ROCK OR SAND BEDDING 75mm THICK & PIPES BACKFILLED WITH COMPACTED SAND TO 300mm ABOVE TOP OF PIPE. ELSE ATTACHED TO UNDERSIDE OF STRUCTURE AT 600mm c/c AS NECESSARY.
  - PIPE ROUTES SHOWN ARE INDICATIVE ONLY AND SHOULD BE AS NECESSARY ACCORDING TO SITE CONDITIONS, TREE POSITIONS ETC. CONFIRM SIGNIFICANT CHANGES IN PIPES SYSTEM DETAILS WITH SUPERVISING ENGINEER PRIOR TO COMMENCEMENT OF DRAINAGE CONSTRUCTION WORKS.
  - CONTRACTOR SHALL ENSURE THAT SERVICES TO BUILDINGS NOT AFFECTED BY THE WORKS ARE NOT DISRUPTED. CONTRACTOR SHALL CONSTRUCT TEMPORARY SERVICES TO MAINTAIN EXISTING SUPPLY TO BUILDINGS WHERE REQUIRED. ONCE WORKS ARE COMPLETE AND COMMISSIONED THE CONTRACTOR SHALL REMOVE ALL TEMPORARY SERVICES AND MAKE GOOD ALL DISTURBED AREAS.
  - STORMWATER SYSTEM REQUIRES SIGNIFICANT MAINTENANCE DUE TO POTENTIAL HIGH POLLUTANT LOAD. FILTERS AND POLLUTANT TRAPS SHOULD BE CHECKED AFTER LARGE STORM EVENTS AND CLEANED EVERY 6 MONTHS.
  - PLUMBING AND DRAINAGE WORKS TO COMPLY WITH AS-3500, THE NATIONAL DRAINAGE & PLUMBING CODE.
  - WHERE POSSIBLE DRAINAGE LINES SHALL BE LAID IN AREAS PREVIOUSLY DISTURBED BY OTHER SITE WORKS AND FOLLOW TOPOGRAPHICAL FEATURES TO REDUCE IMPACT AND AVOID TREE ROOTS.
  - THIS STORMWATER MANAGEMENT PLAN HAS BEEN PREPARED FOR D.A. SUBMISSION TO COUNCIL AND DOES NOT NECESSARILY CONTAIN ALL APPROPRIATE INFORMATION TO ENABLE FOR ISSUE TO PLUMBER/BUILDER FOR CONSTRUCTION. CONTACT TAYLOR CONSULTING FOR MORE INFORMATION.
- RAINWATER RE-USE NOTES AND SPECIFICATIONS**
- ROOF WATER ONLY TO BE DRAINED TO THE RAINWATER STORAGE TANK.
  - THE RAINWATER STORAGE TANK NEEDS TO BE CONNECTED FOR RE-USE AS REQUIRED BY THE OWNER.
  - RAINWATER STORAGE TANK TO BE CONFIGURED IN ACCORDANCE WITH SYDNEY WATER SPECIFICATIONS 'GUIDELINES FOR RAINWATER TANK ON RESIDENTIAL PROPERTIES'.
  - PROVIDE MAINS 'TOP-UP' SUPPLY TO RAINWATER TANK. MAINS TOP-UP ZONE TO BE BASED ON THE DAILY NON-POTABLE USAGE THAT MAY BE EXPECTED FROM THE TANK.
  - PROVIDE A MECHANICAL PUMPING ARRANGEMENT (IN SOUND-PROOF HOUSING) TO PUMP SUPPLIER'S SPECIFICATION TO SUIT INTENDED USAGE OF RAINWATER STORAGE. PUMPING ARRANGEMENTS MUST COMPLY WITH EPA GUIDELINES.
  - INLETS TO RAINWATER TANK MUST BE SCREENED TO PREVENT THE ENTRY OF FOREIGN MATTER, ANIMALS OR INSECTS.
  - A SIGN MUST BE AFFIXED TO THE RAINWATER TANK CLEARLY STATING THAT THE WATER IN THE TANK IS RAINWATER AND IS NOT TO BE USED FOR HUMAN CONSUMPTION.
  - RAINWATER TANK TO BE PLACED ON A STRUCTURALLY ADEQUATE BASE IN ACCORDANCE WITH THE MANUFACTURER'S OR STRUCTURAL ENGINEER'S DETAILS.
  - THE TANK MUST NOT BE INSTALLED OVER ANY MAINTENANCE STRUCTURE OR FITTINGS USED BY A PUBLIC AUTHORITY.
  - RAINWATER TANK AND ASSOCIATED PLUMBING WORKS TO BE INSTALLED AND CONFIGURED BY A LICENSED PLUMBER. PUMP TO BE INSTALLED BY A LICENSED ELECTRICIAN.



**STORMWATER SYSTEM DESIGN DATA**

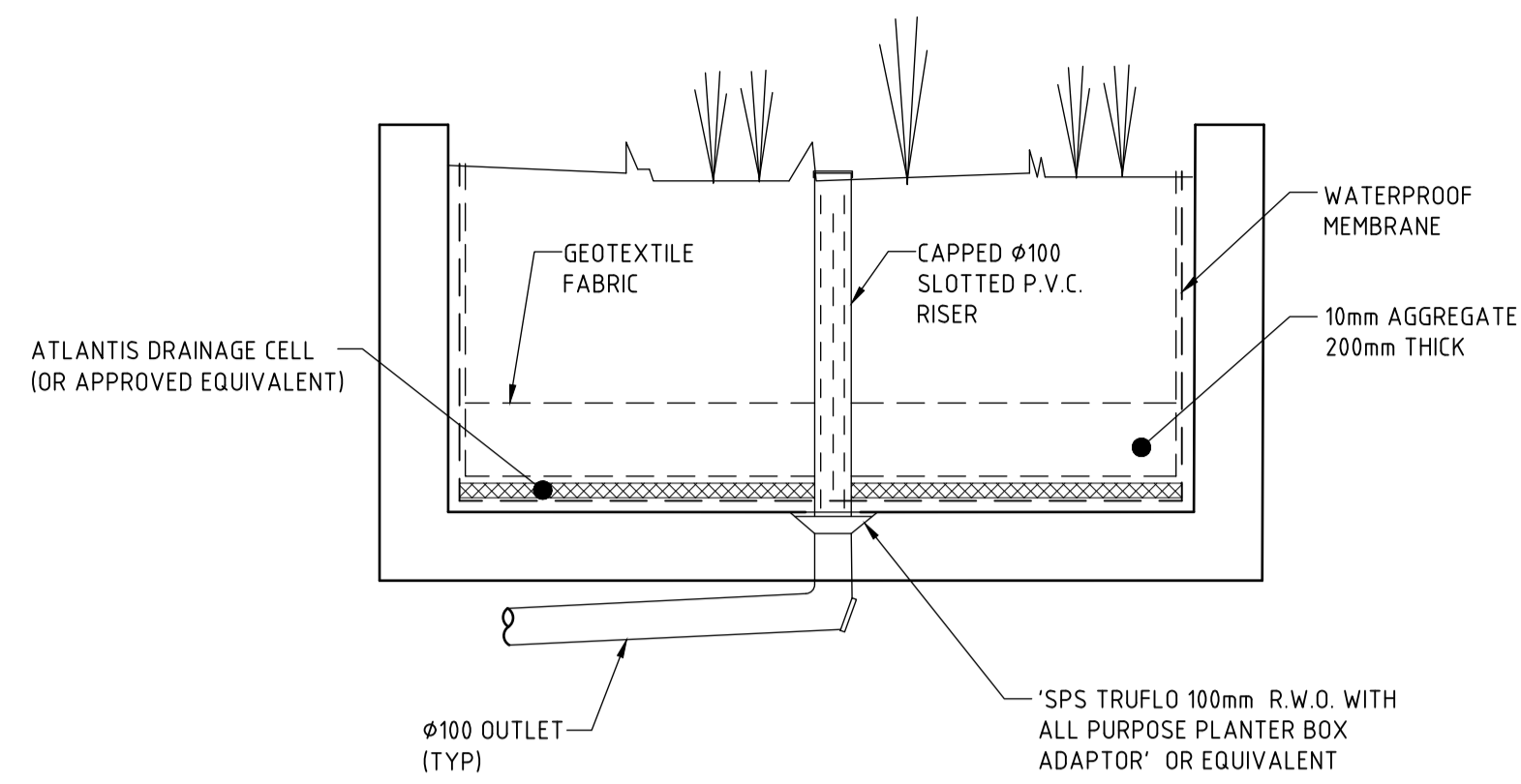
EXISTING SITE DATA	
SITE AREA	= 1632 m <sup>2</sup> (100%)
EXISTING IMPERVIOUS AREA	= 739 m <sup>2</sup> (45%)
EXISTING LANDSCAPED AREA	= 893 m <sup>2</sup> (55%)
PROPOSED SITE DATA	
SITE AREA	= 832 m <sup>2</sup> (100%)
PROPOSED IMPERVIOUS AREA	= 448 m <sup>2</sup> (54%)
PROPOSED LANDSCAPED AREA	= 384 m <sup>2</sup> (46%)

ISSUE DATE	REVISION
14 APR 2022	POLLUTION CONTROL MEASURES ADDED

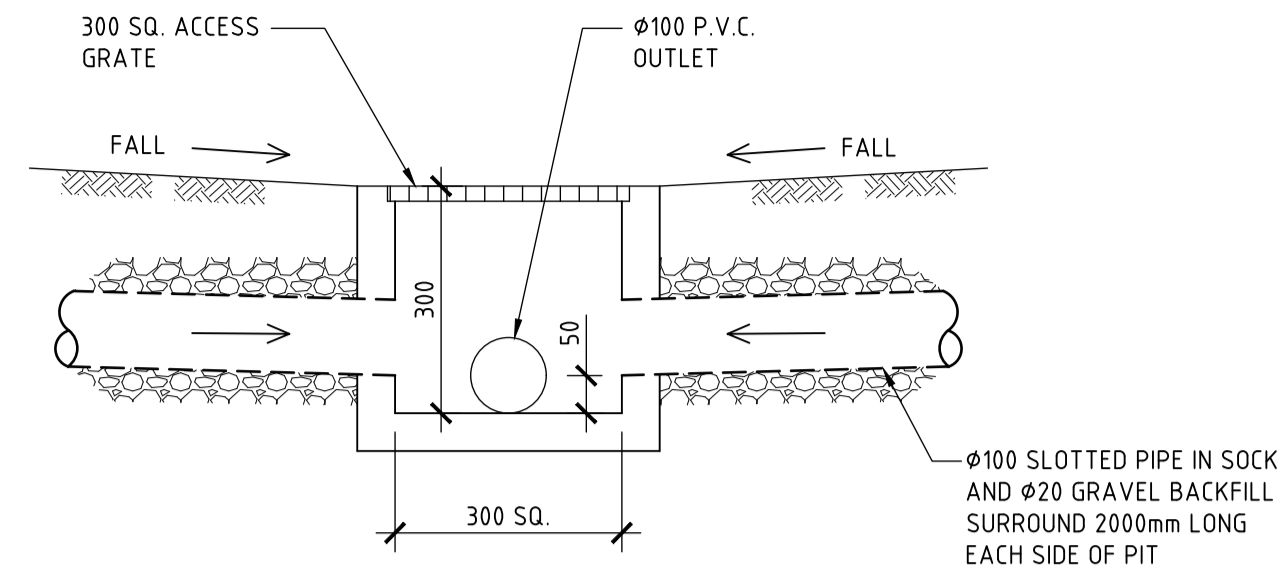
TITLE			
STORMWATER MANAGEMENT PLAN 120A PRINCE ALFRED PARADE, NEWPORT			
DRAWN	DATE	CHECKED	SCALE @ A1
RB	4 FEBRUARY 2022	<i>[Signature]</i>	1:100

**TAYLOR CONSULTING**  
CIVIL & STRUCTURAL ENGINEERS

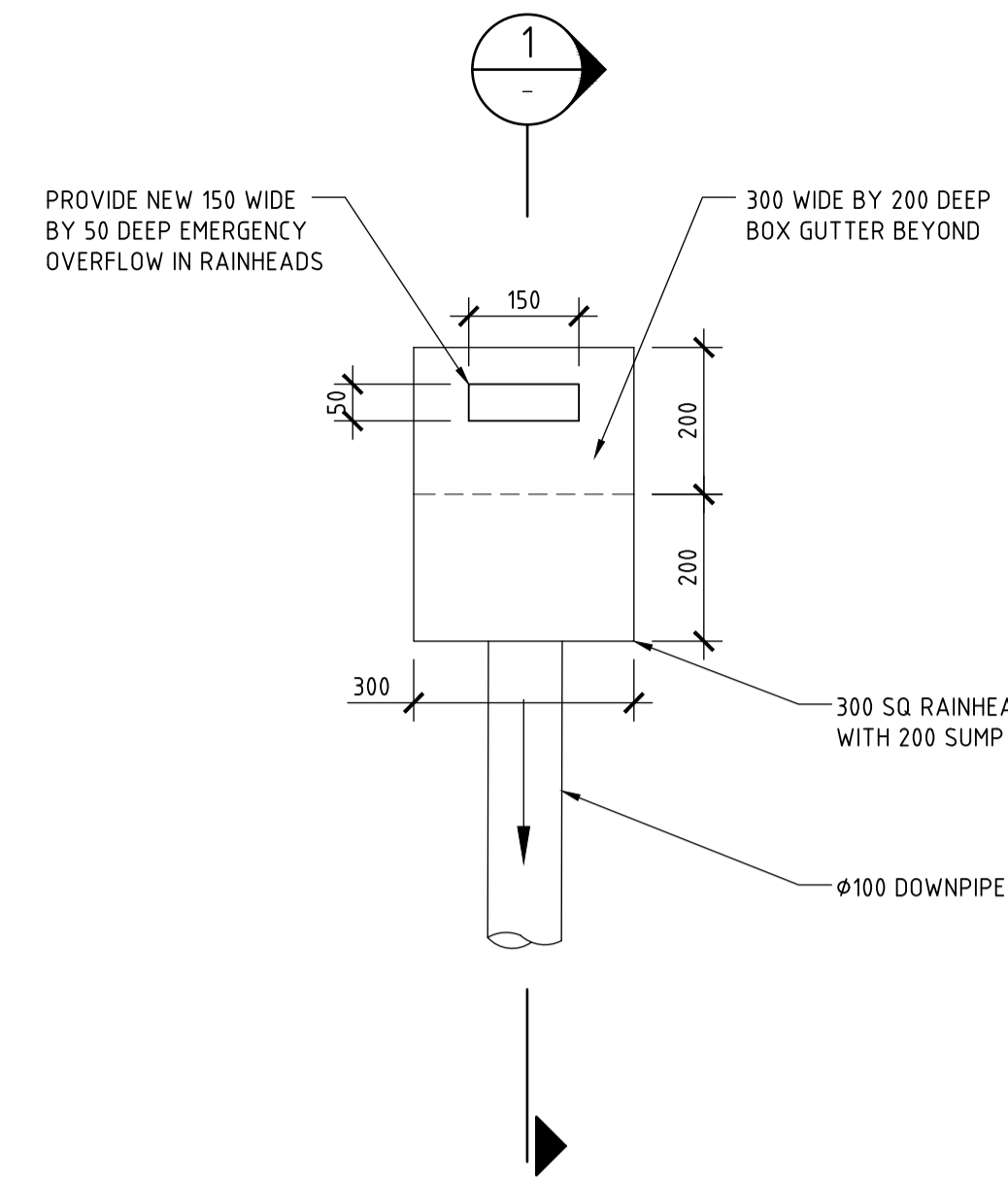
**STORM-1/A**



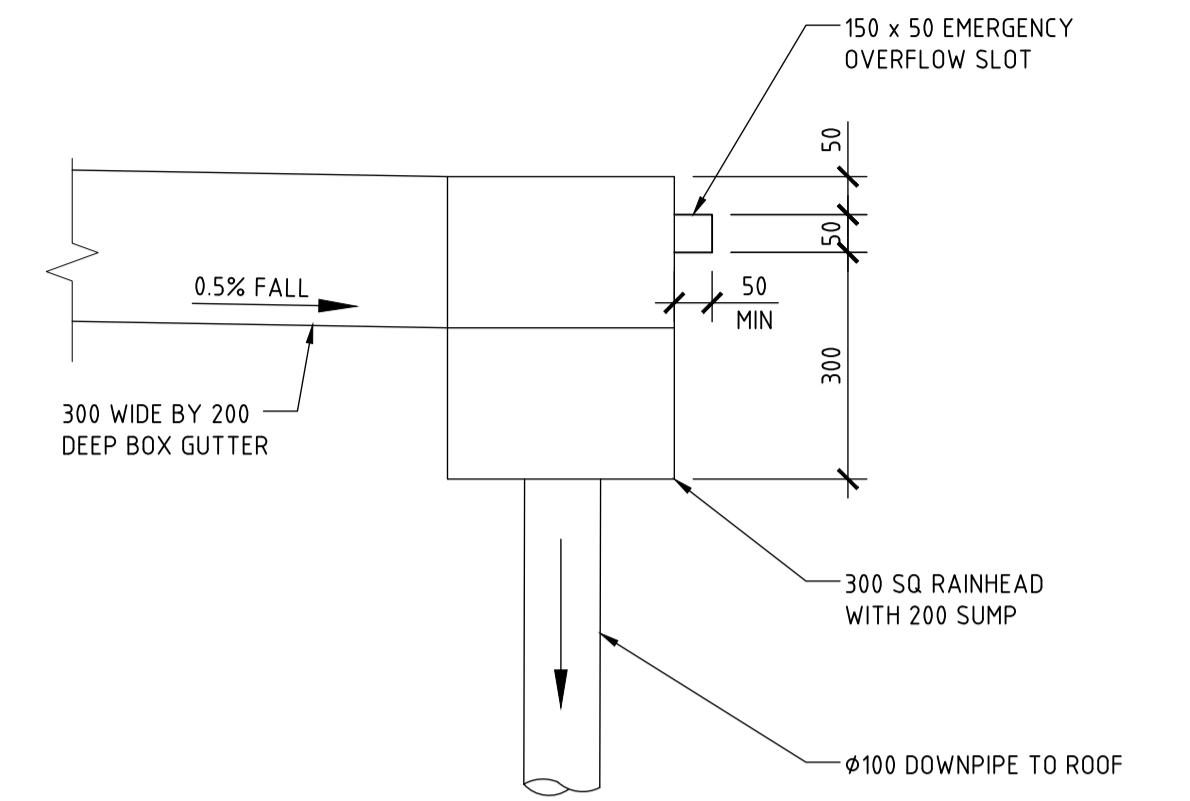
**DETAIL A**  
SCALE 1:20  
SHOWING TYPICAL PLANTER BOX DETAIL



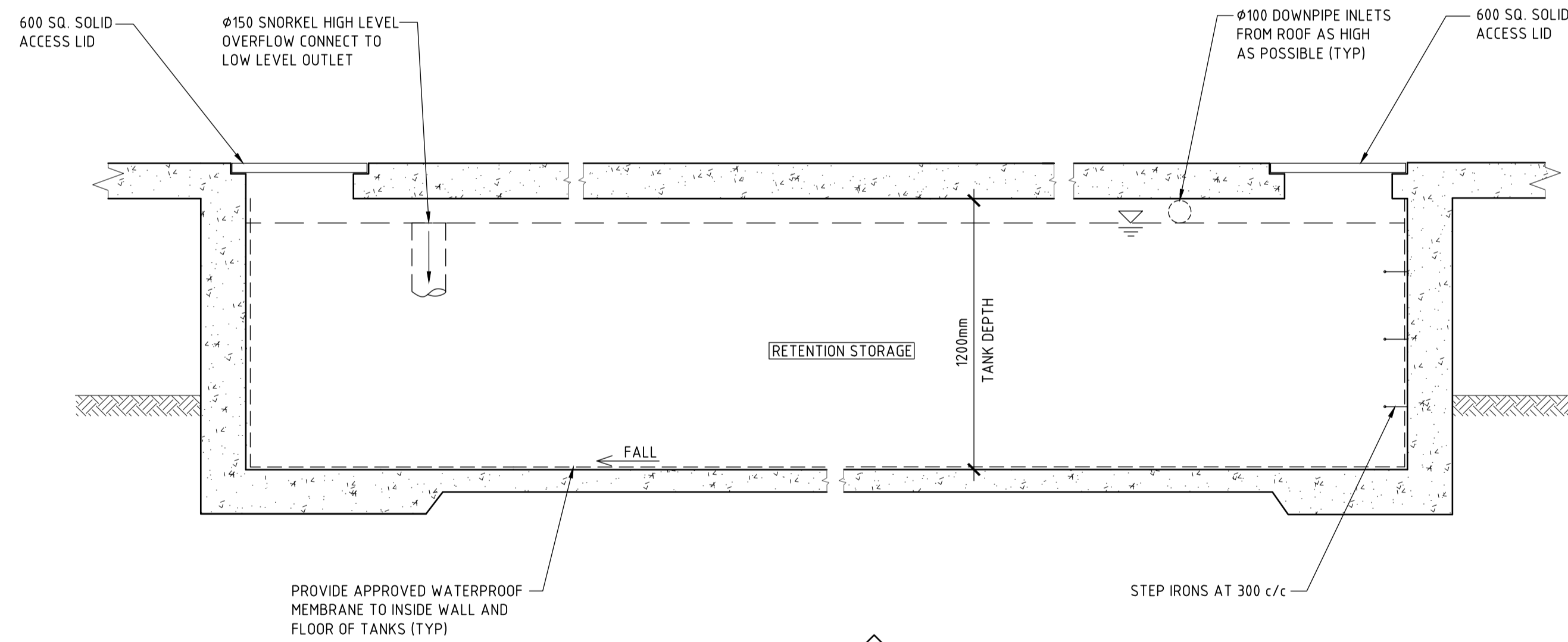
**DETAIL B**  
SCALE 1:10  
TYPICAL SURFACE INLET PIT DETAIL



**DETAIL C**  
SCALE 1:10  
TYPICAL RAINHEAD DETAIL (OR EQUIVALENT) SHOWING PROVISION FOR EMERGENCY OVERFLOW



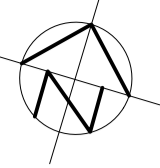
**SECTION 1**  
SCALE 1:10



**DETAIL D**  
SCALE 1:20  
SHOWING SCHEMATIC LAYOUT OF RETENTION SYSTEM

ISSUE DATE	REVISION

<b>TITLE</b> STORMWATER MANAGEMENT DETAILS 120A PRINCE ALFRED PARADE, NEWPORT			
<b>DRAWN</b> RB	<b>DATE</b> 4 FEBRUARY 2022	<b>CHECKED</b> <i>[Signature]</i>	<b>SCALE</b> @ A1 1:20 1:10
<b>TAYLOR CONSULTING</b> CIVIL & STRUCTURAL ENGINEERS			
<b>STORM-2</b>			



**EROSION & SEDIMENT CONTROL NOTES**

**PLAN TO BE READ IN CONJUNCTION WITH DWG STORM-3 EXCAVATION PLAN**

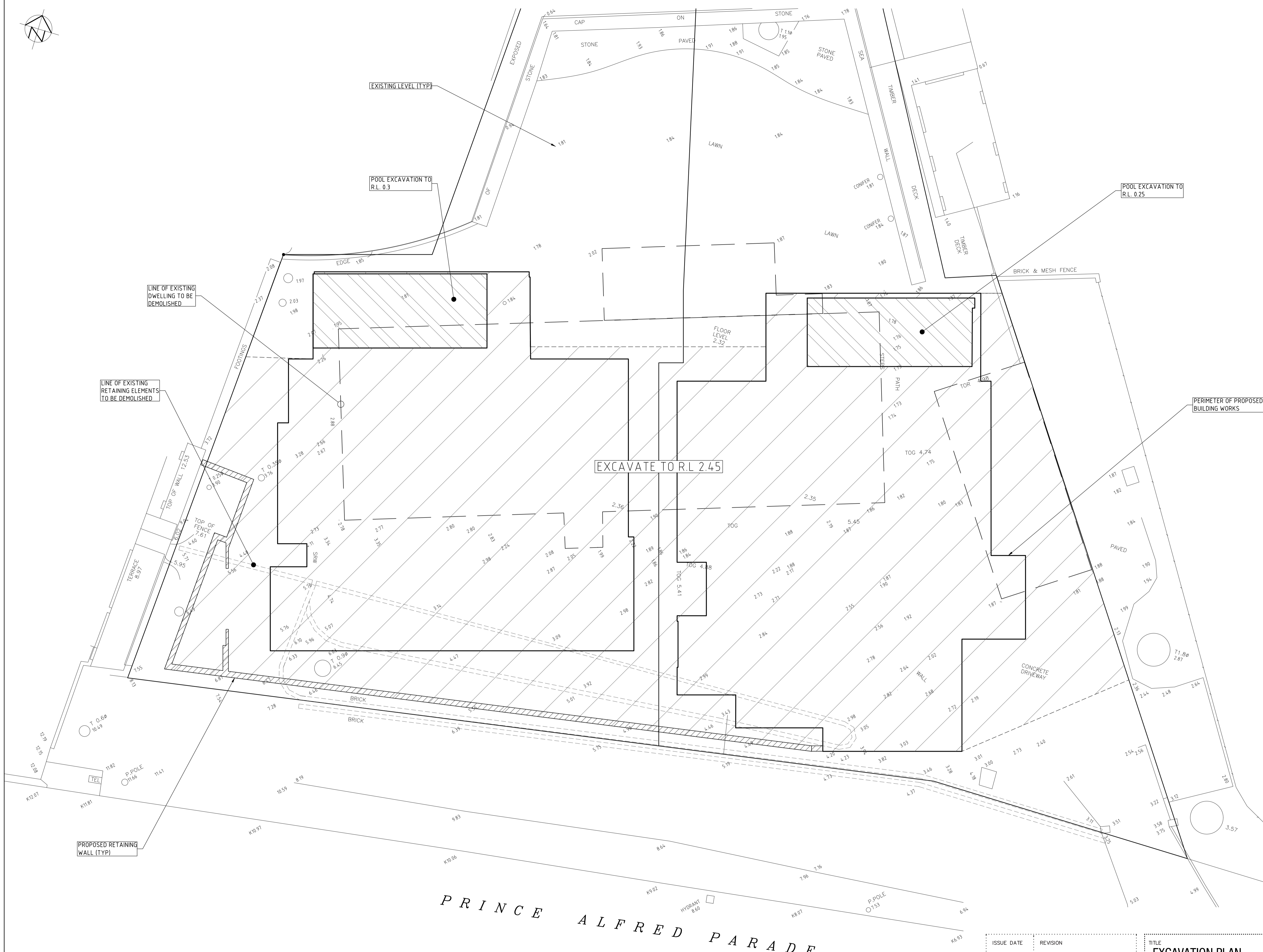
**DESCRIPTION**  
THE PROJECT IS THE PROVISION OF A NEW RESIDENTIAL. THE TOTAL DISTURBED AREA IS APPROXIMATELY 0.105 Ha.

**EROSION**  
NO AREA IS TO BE DISTURBED OTHER THEN THAT DIRECTLY AFFECTED BY ACCESS, SITE REGRADING, SERVICING, ROAD WORKS AND DRAINAGE WORKS. FOR ALL OTHER AREAS ENTRY IS PROHIBITED AND IS TO BE CLEARLY DEFINED WITH THE INSTALLATION OF BARRIER FENCING. UPSTREAM WATER IS TO BE DIRECTED AROUND THE SITE WITHOUT CONTAMINATION.

**SEDIMENT CONTROL**  
CONTROL WILL BE VIA THE INSTALLATION OF SILT FENCES AS SHOWN ON PLAN. STOCK PILES ARE TO BE LOCATED IN AREAS SHOWN ON THE PLAN (CLEAR OF SERVICING, WATERCOURSES, ROAD AND DRAINAGE WORKS) AND PROVIDED WITH SILT FENCES ON THEIR DOWNSTREAM SIDE.

**SCHEDULE OF WORKS**

1. INSTALL ALL BARRIER AND SILT FENCING. BARRIER FENCING MAY BE ERECTED AND REMOVED AS NECESSARY TO SUIT STAGING OF WORKS.
2. INSTALL ALL TEMPORARY DRAINAGE STRUCTURES AS NECESSARY.
3. STRIP & STOCKPILE TOPSOIL.
4. UNDERTAKE SITE DEVELOPMENT.
5. AS EARTHWORKS ARE COMPLETED THESE AREAS ARE TO BE TOPSOILED, SEEDED AND MULCHED OR PAVED WITHIN 20 WORKING DAYS.
6. ONLY AT THE COMPLETION OF WORKS AND STABILIZATION OF AREAS UPSTREAM ANY CONTROL DEVICES TO BE REMOVED.



PRINCE ALFRED PARADE

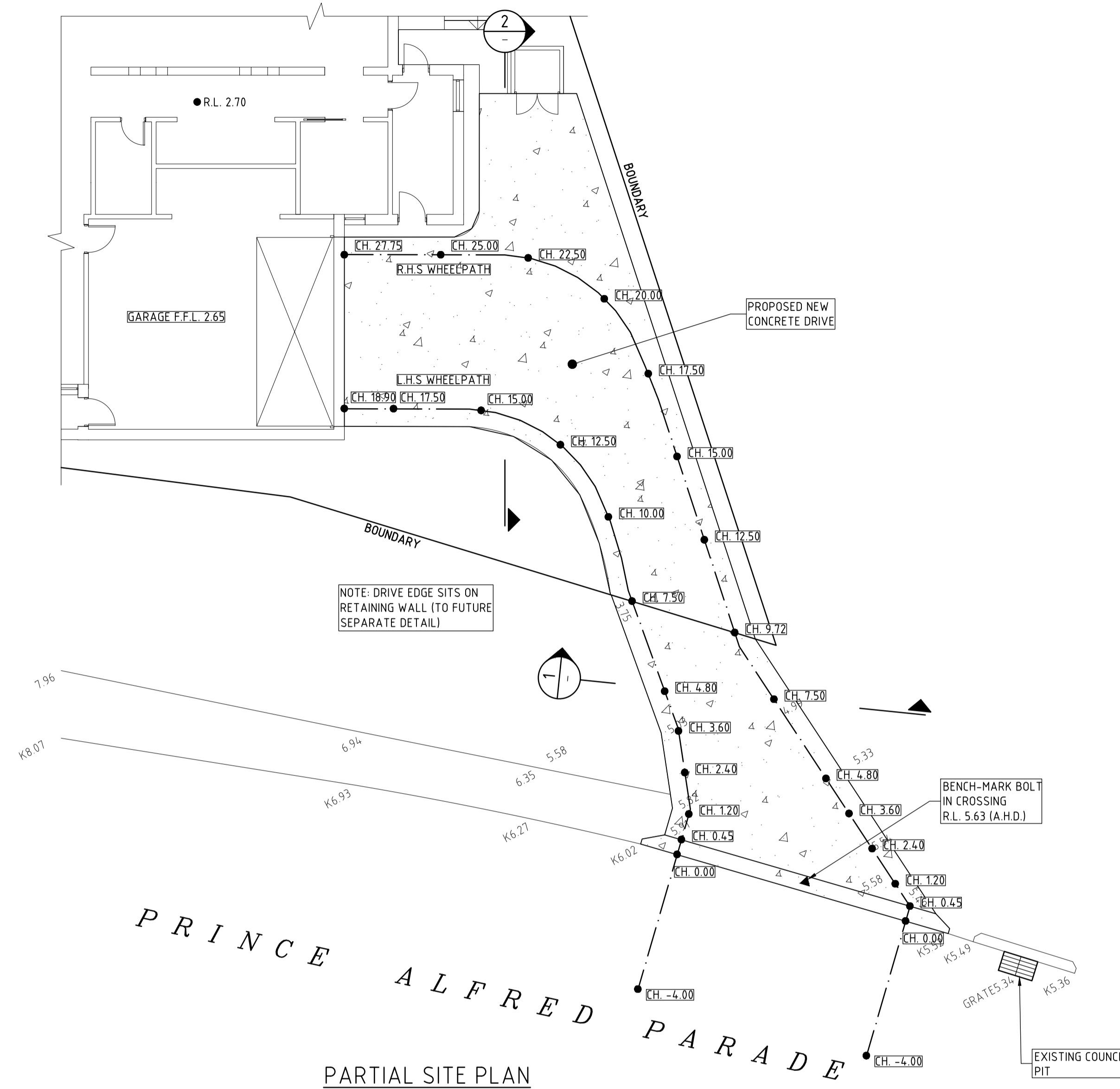
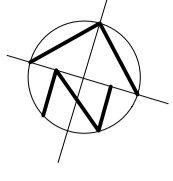
**SITE PLAN**  
SCALE 1:100  
SHOWING BOTH EXISTING & PROPOSED BUILT ELEMENTS & EXTENT & LEVEL OF PROPOSED EXCAVATIONS

ISSUE DATE	REVISION

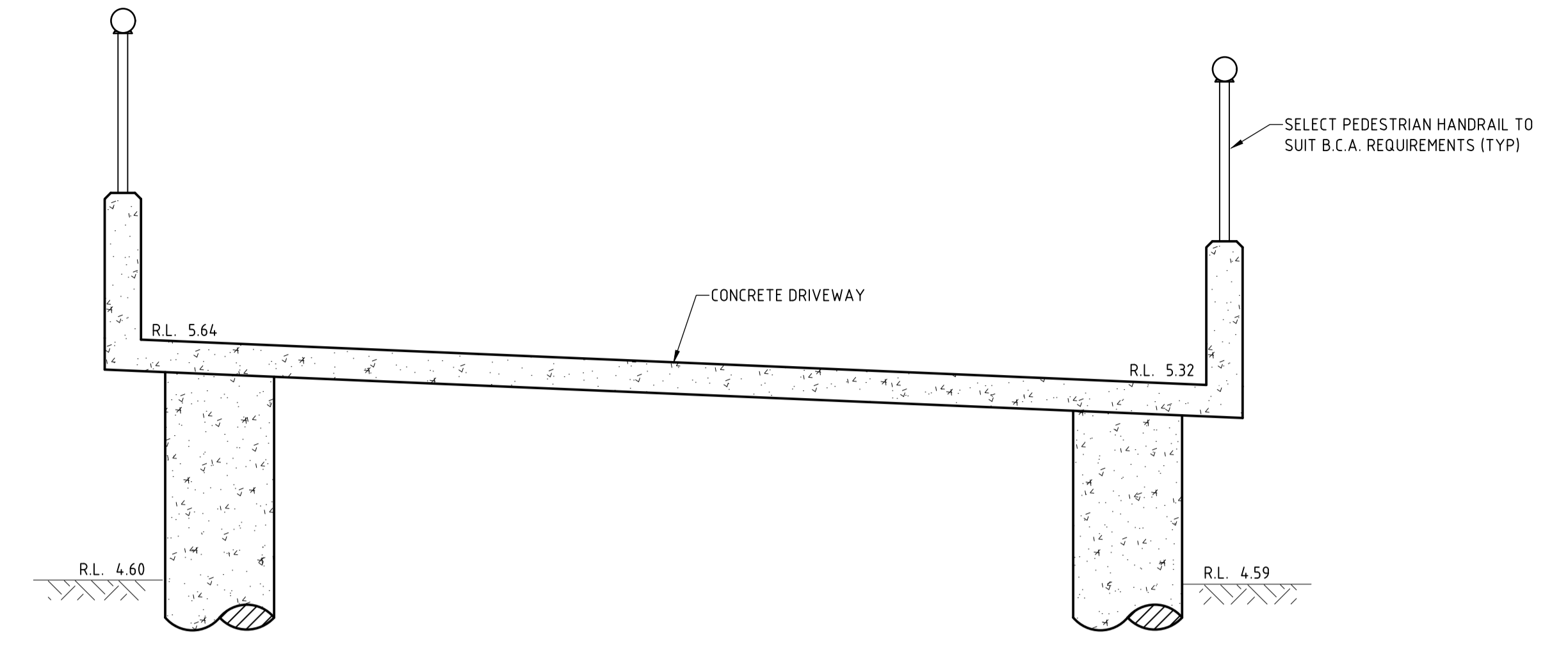
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DRAWN RB	DATE 4 FEBRUARY 2022	CHECKED <i>[Signature]</i> BE Civil (Hons) MIE Aust.	SCALE @ A1 1:100

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CIVIL & STRUCTURAL ENGINEERS

STORM-3

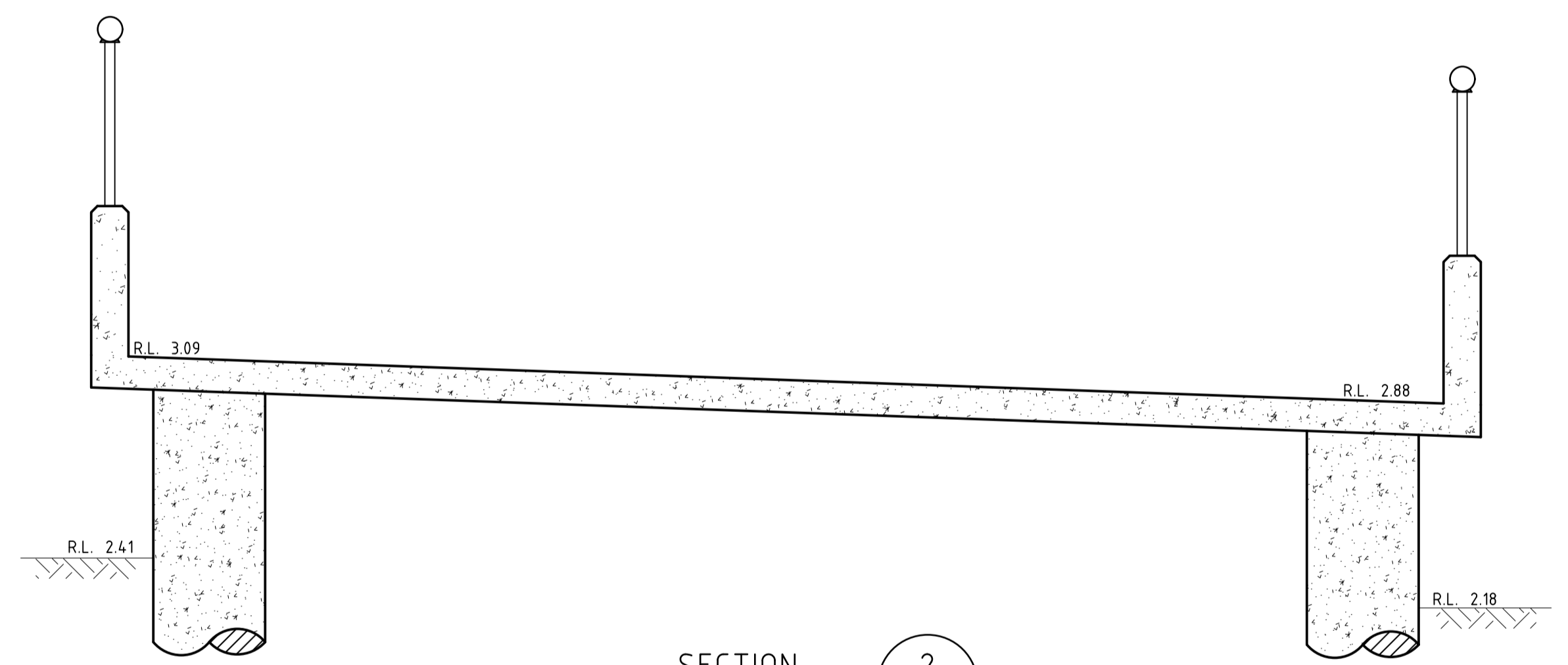


**PARTIAL SITE PLAN**  
 SCALE 1:100  
 SHOWING PROPOSED NEW DRIVEWAY & LINE OF  
 CRITICAL LEFT & RIGHT WHEELPATHS



**SECTION 1**  
 SCALE 1:20

SHOWING TYPICAL TRANSVERSE DRIVEWAY SECTION  
 NOTE: STRUCTURAL DESIGN TO SEPARATE FUTURE DETAIL



**SECTION 2**  
 SCALE 1:20

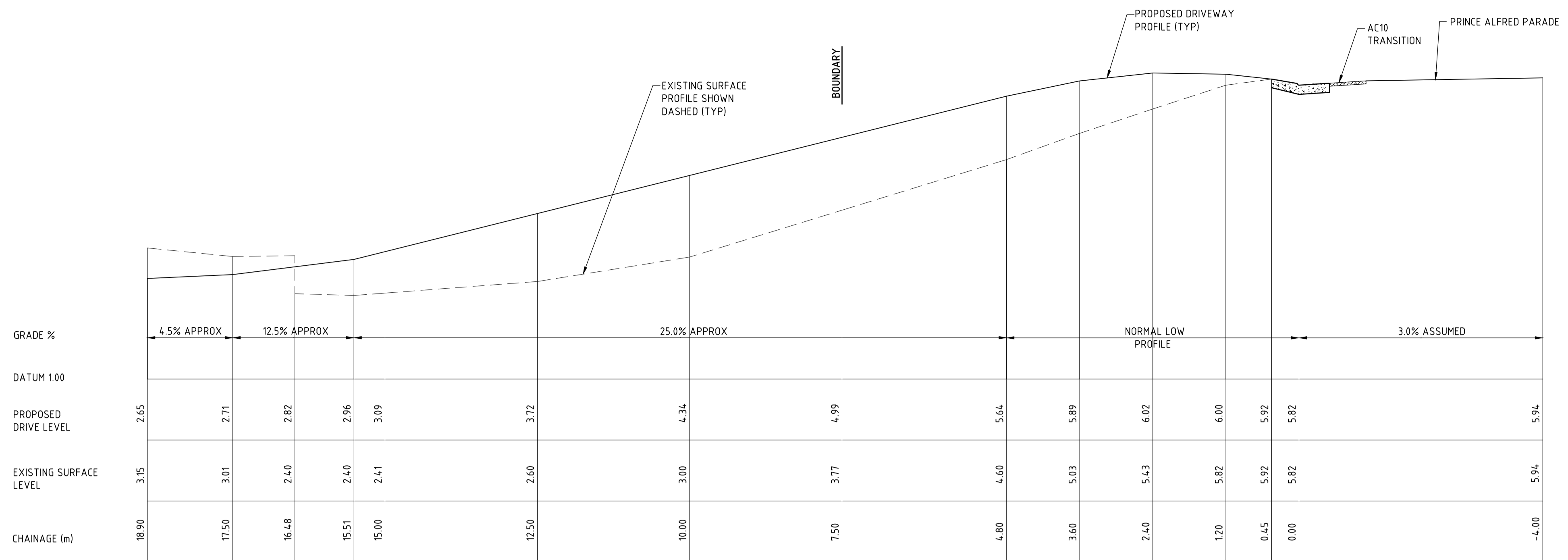
SHOWING TYPICAL TRANSVERSE DRIVEWAY SECTION  
 NOTE: STRUCTURAL DESIGN TO SEPARATE FUTURE DETAIL

ISSUE DATE	REVISION

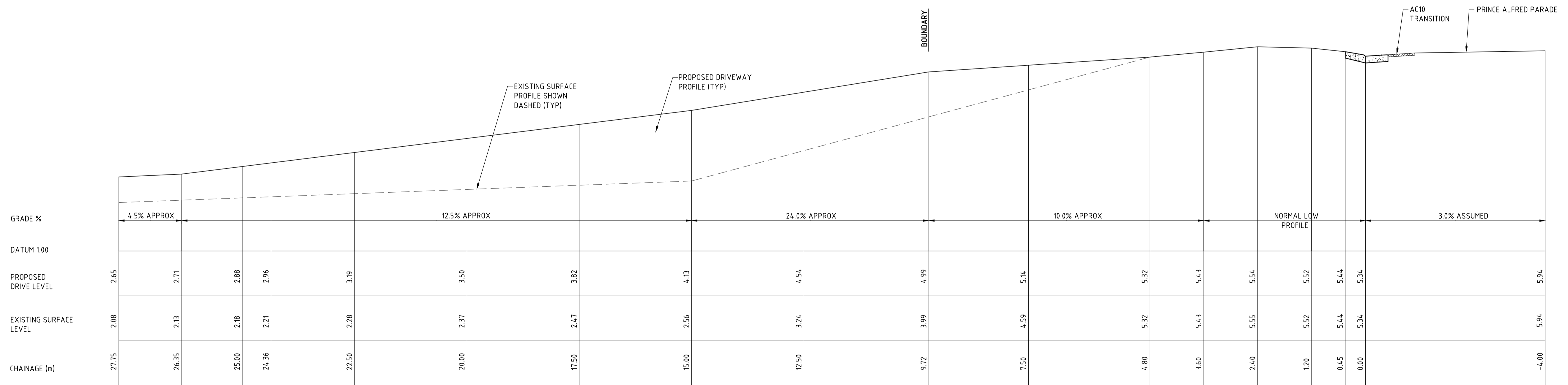
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<b>DRAWN</b> RB	<b>DATE</b> 4 FEBRUARY 2022	<b>CHECKED</b> <i>[Signature]</i>	<b>SCALE</b> @ A1 1:100 1:20
<b>BE Civil (Hons) MIE Aust.</b>			



DRAWING NO.  
**CIVIL-1**



**L.H.S. DRIVEWAY LONG-SECTION**  
SCALE 1:50 NATURAL



**R.H.S. DRIVEWAY LONG-SECTION**  
SCALE 1:50 NATURAL

ISSUE DATE	REVISION

TITLE <b>DRIVEWAY LONG-SECTIONS 120A PRINCE ALFRED PARADE, NEWPORT</b>			
DRAWN RB	DATE 4 FEBRUARY 2022	CHECKED <i>[Signature]</i>	SCALE @ A1 1:50
BE Civil (Hons) MIE Aust.			



DRAWING NO  
**CIVIL-2**