

STORMWATER MANAGEMENT REPORT STATE SIGNIFICANT DEVELOPMENT APPLICATION

Thompson Health Aged Care - Beecroft House

Seniors Housing at 132-134 Beecroft Road, Beecroft

Prepared for: Thompsons Health Care

Issue no: B

Revision	Date	Purpose	Prepared By	Reviewed By
A	21/11/25	Issue for Draft SSDA	N.Pearce	
B	24/11/25	Issue for SSDA	N.Pearce	

This report has been prepared by Nathan Pearce (NER 4425065) who is a chartered engineer on the national engineering register in the field of Civil Engineering and is a suitably qualified person to provide stormwater drainage and flooding advice for this project.

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1 Introduction

ENTEC Consultants have been engaged by Thompson Health Care as the Civil Stormwater consultant on the Beecroft House Seniors Housing development at 132-134 Beecroft Road, Beecroft.

This report has been prepared to outline the State Significant Development Application (SSDA) stormwater requirements for the project which have been noted in the Planning Secretary's Environmental Assessment Requirements (SEARs), as outlined in Section 1.3 below.

1.1 Project Scope

The proposal seeks approval for the redevelopment of the existing Thompson Health Care Beecroft House seniors housing facility at 132-134 Beecroft Road, Beecroft.

The development includes a new 3-storey Residential Aged Care Facility incorporating 134 bedrooms in four resident households, resident community facilities, associated service rooms, administration, basement parking & loading bay

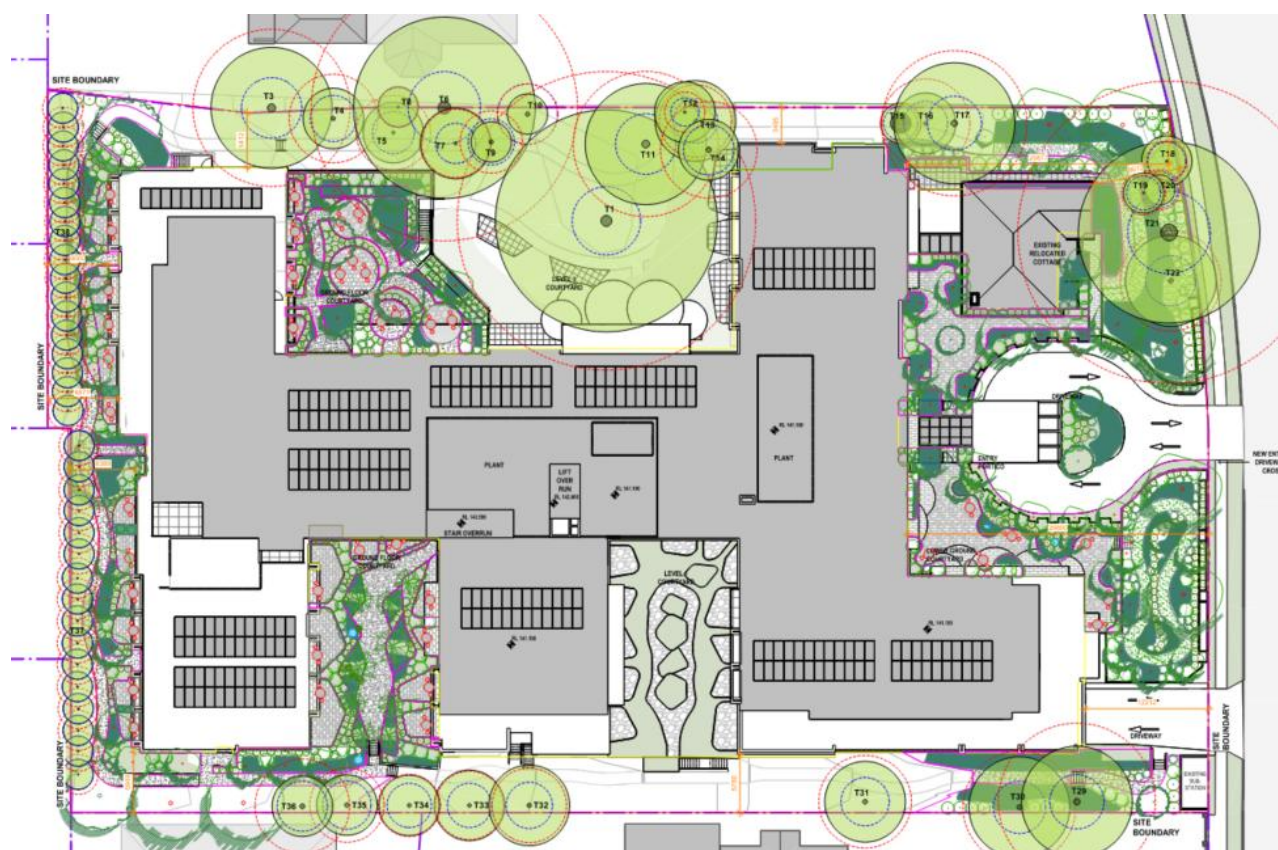


Figure 1 – Architectural site plan

1.2 Existing Site Description

The existing Thompson Health Care Beecroft House seniors housing facility, located at 132-134 Beecroft Road, Beecroft, is to be redeveloped. The proposed works involve the knockdown and rebuild of a new seniors' housing building and the relocation of an existing residential cottage on the site. The site area will also be expanded to include the additional neighbouring lot at 132 Beecroft Road, which will be consolidated as part of the works.

The site is 7,911m² in area and located at the top of the crest on Beecroft Road, which is a classified TfNSW road, with vehicular access on the northern boundary. It is bounded by residential homes on the three other boundaries. The crest is located near the centre of the site and as such the site generally falls in both a north and south direction.

An existing 225mm diameter Sydney Water sewer is located within the southern site boundary and is proposed to be diverted as part of the proposed development works.

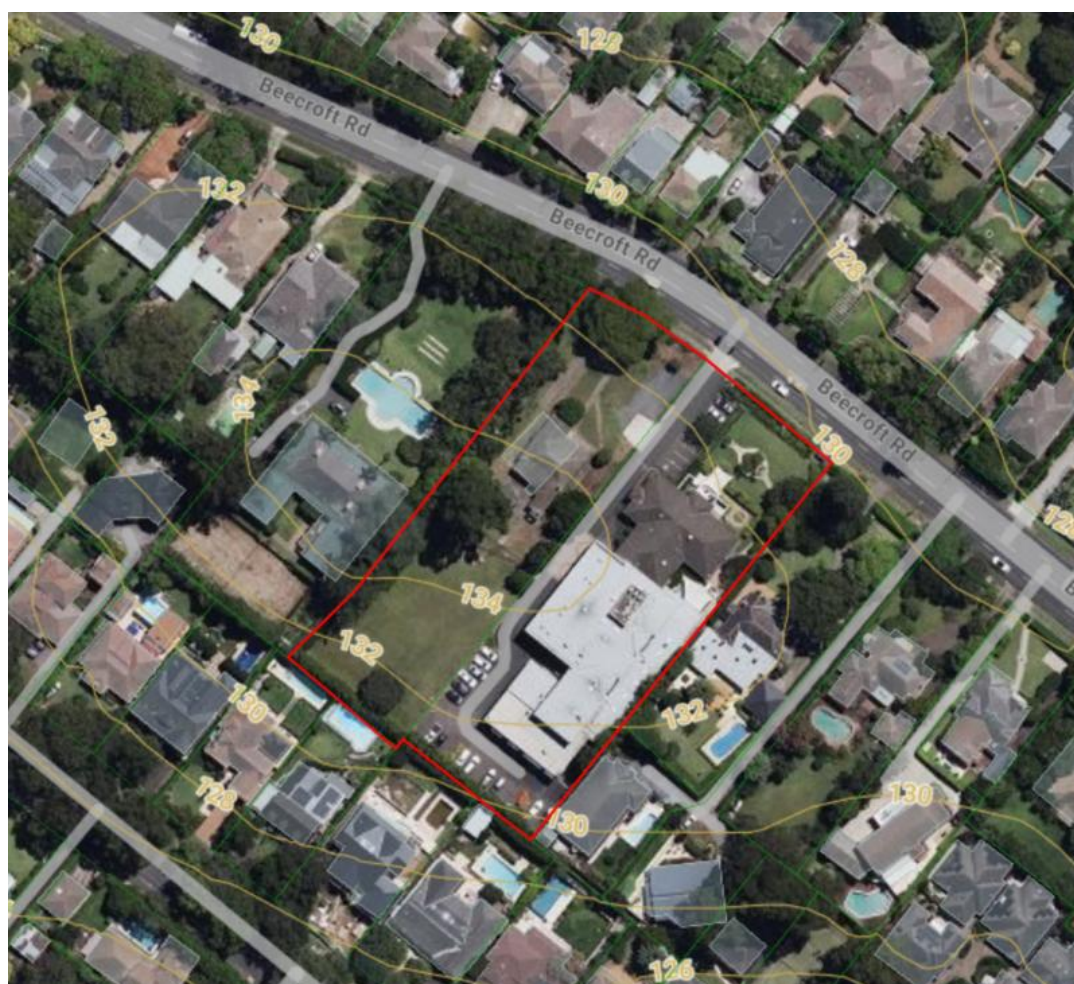


Figure 2 - Site aerial image (Source: Mecone Mosaic)

1.3 SEARs Requirements

SEARs requirements for the preparation of an Environmental Impact Statement (EIS) for the SSDA submission (Application No.:SSD-86878982) and the applicable Civil items are summarised in Table 1 below.

Table 1 – SEAR’s Requirements

SEARs Requirements	Relevant Section of Report
11. Water Management - Detail the proposed drainage design and servicing infrastructure to be incorporated as part of the development - Demonstrate how the development complies with council’s drainage requirements and identify proposed stormwater treatment and water quality management measures to minimise adverse environmental impacts.	Section 2.3 Section 2.3.3
19. Flooding - Identify the flood planning area and level as set out in the relevant EPI and other supporting documents to determine; - The flood extent and velocity up to the Probable Maximum Flood and risk on-site having regard to adopted flood studies and, floodplain risk management studies and plans - The site access and egress routes - The potential effects of climate change, - Any relevant provisions of the NSW Flood Risk Management Manual, and any other relevant guidelines - Where the development is occurring on flood prone land a flood impact and risk assessment (FIRA) must be prepared having regard to the Flood Impact and Risk Assessment – Flood Risk Management Guide LU01. When determining the scope and category of the FIRA the requirements outlined in the FIRA guide must be considered. - Detail any flood risk management measures that are to be incorporated as part of the development having regard to relevant guidelines (including any design solutions, flood modification measures, property modification measures, operational procedures or Flood Emergency Response Plan).	Section 3

2 Integrated Water Management Plan - Stormwater Drainage

2.1 Design Requirements

All stormwater drainage design will be in accordance with the following:

- Australian Rainfall and Runoff (2019) – with AR&R (2019) rainfall datasets sourced from the ARR Data Hub and Bureau of Meteorology (BOM);
- Hornsby Shire Council DCP 2024
- Hornsby Shire Council Development Design Specification 0074 – Stormwater Drainage Design
- Hornsby Shire Council WSUD Reference Guidelines
- AS3500.3 Plumbing and Drainage: Stormwater Drainage
- Managing Urban Stormwater: Soils and Construction, “The Blue Book” – 4th edition 2004.

Liaison and consultation with Council has not been undertaken as part of this concept design and will be completed in the next phase of work.

2.1.1 Stormwater Quantity

On-site Detention (OSD) is required for the proposed multi-dwelling development in accordance with 1.3.1.2 of Hornsby DCP 2024.

The stormwater drainage for the development will need to be designed in accordance with Hornsby Shire Council Design Specification 0074 – Stormwater Drainage Design.

The OSD is to be designed to ensure that the Q20(5% AEP) post-development outflow from the site is restricted to the Q5(20% AEP) pre-development flow. All designs are to be modelled using the full computation method utilising the design program DRAINS.

The inground civil stormwater drainage is to be designed for the 20% AEP minor storm. This site’s drainage system is designed as per Council’s stormwater design requirements, Australian Rainfall and Runoff, and AS3500.3. The major overland stormwater drainage system is to be designed for flows above the 20% AEP storm event, up to and including the 1% AEP storm event.

Proposed roofs will collect stormwater via gutters and downpipes which will be connected to the inground drainage system. The hydraulic consultant will document the building’s stormwater drainage, including roof gutters, downpipes, roof overflow measures and the internal courtyard on ground level over the basement.

2.1.2 Stormwater Quality

The development will be required to meet Stormwater Quality Control targets to reduce pollutants and sediments discharged offsite via the stormwater system as stated in the Council WSUD Reference Guidelines

Council stormwater reduction targets from the baseline mean annual pollutant loads are as follows;

- 100% reduction of Gross Pollutants
- 85% reduction of Total Suspended Solids (TSS)
- 60% reduction of Total Phosphorus (TP)
- 45% reduction of Total Nitrogen (TN)

2.2 Existing Stormwater Infrastructure

The topography falls towards both the south and north due to a crest located in the centre of the lot. Stormwater overland flow and inground drainage are therefore split into two catchments.

The approximate catchment areas draining to each street are represented in figure 6 below

- Beecroft Road Catchment – 4,183m²
- Boronia Avenue Catchment - 3,714m²

No council drainage infrastructure is present in the site frontage on Beecroft Road with the closest kerb inlet pit located approximately 35m downstream of the site. The northern portion of the existing building drains to Beecroft Road and discharges to the kerb via kerb outlets.

The southern rear end of the existing building drains towards Boronia Avenue via an existing 225 mm diameter private easement drain which traverse through the neighbouring lot of 21 Boronia Avenue. An existing above-ground OSD is located in the carpark at the southwestern corner of the site which detains site flow prior to discharge to the existing easement drain. A CCTV inspection has been conducted on the existing easement pipe, confirming it is a 225mm diameter pipe with an approximate 5% gradient. At this grade, the pipe provides an estimated capacity of 116 L/s.



Figure 3 – Council stormwater drainage map

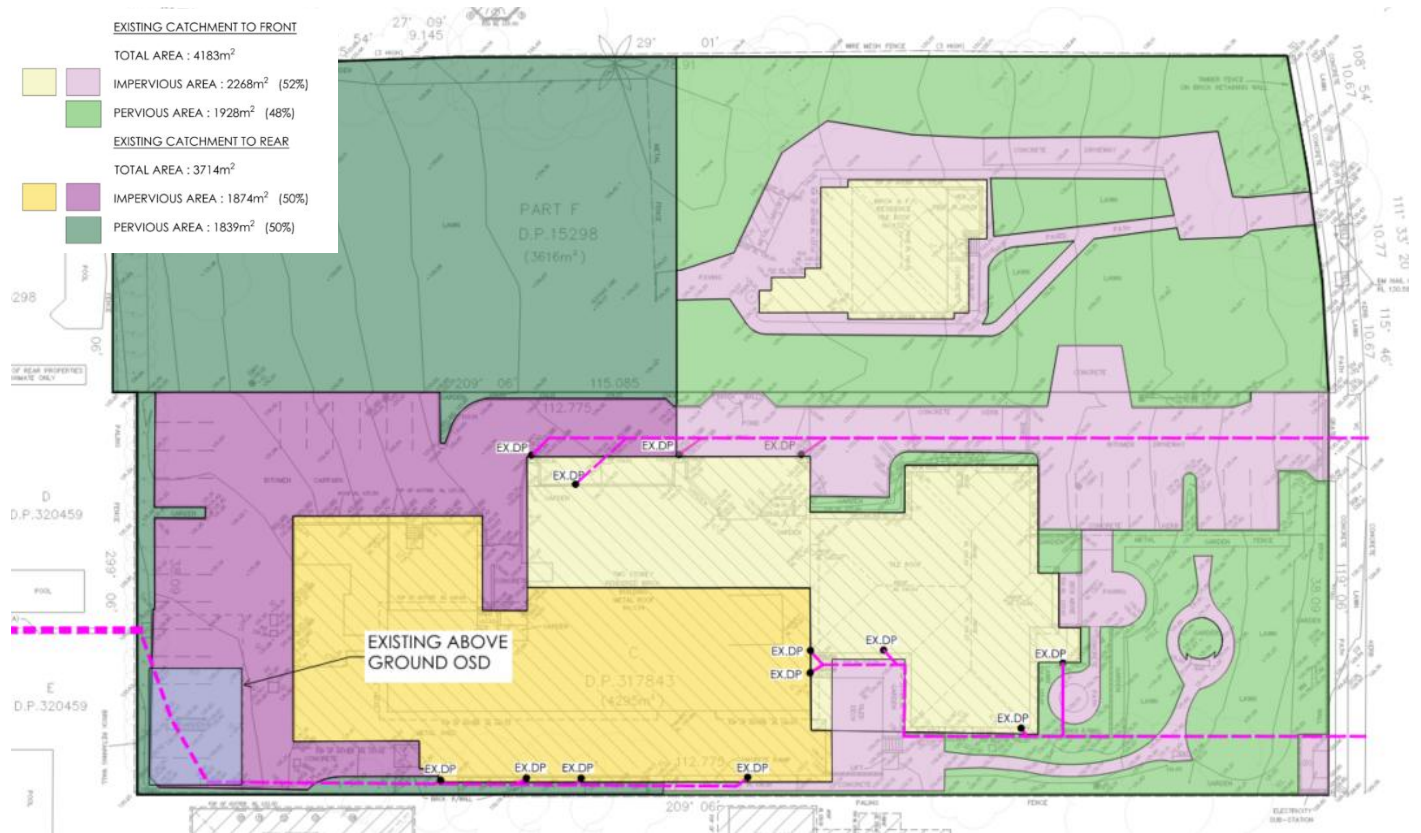


Figure 4 – Existing catchment plan

It is proposed that the development maintain the existing catchment areas as much as possible to avoid diverting stormwater from either Beecroft Road or Boronia Street. The catchment boundaries have, however, been adjusted with an additional 730m² directed to the rear easement. The revised catchment boundaries are shown in figure 6 below.

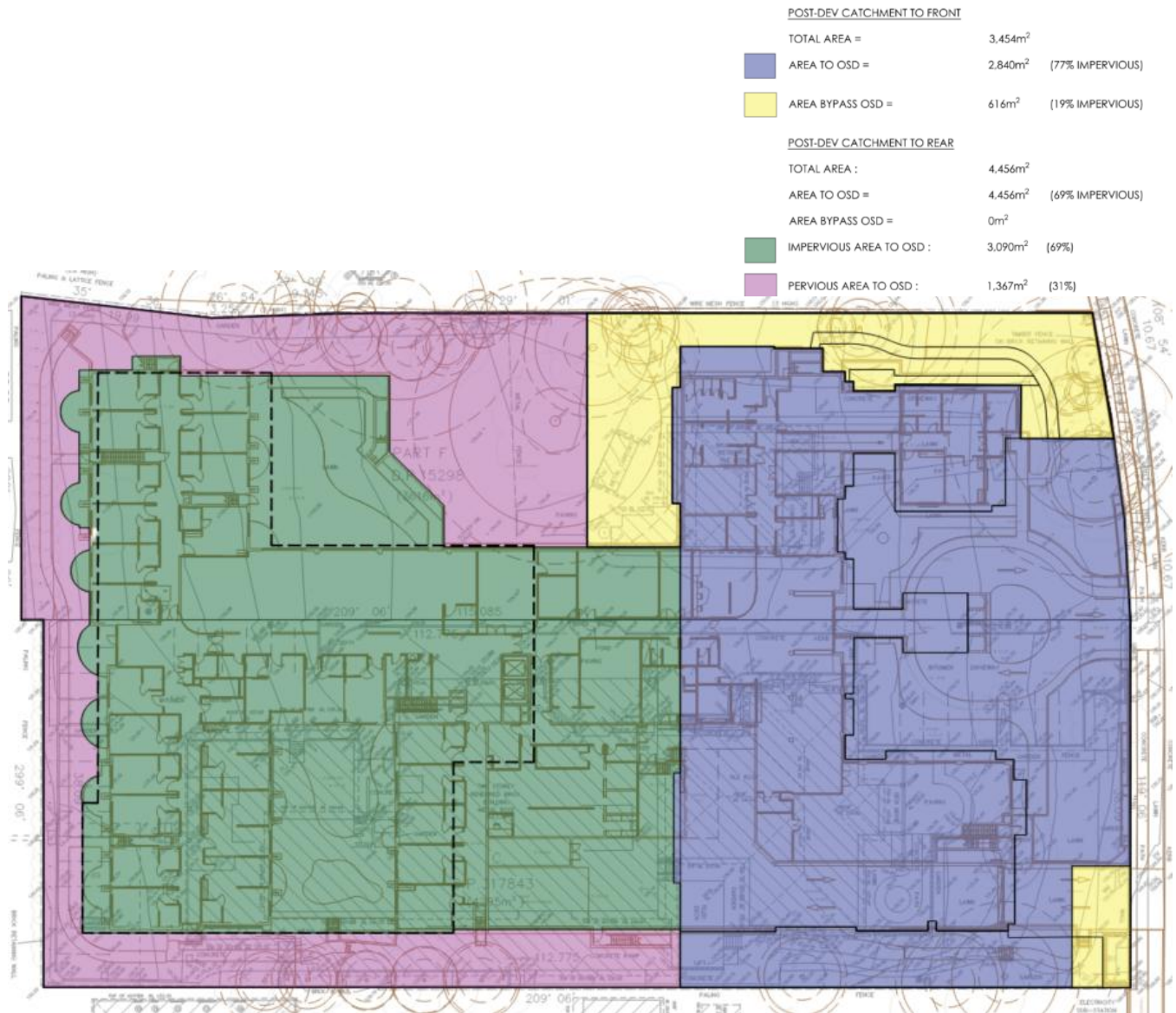


Figure 6 – Proposed catchment plan

2.3.1 Onsite Detention

Onsite detention (OSD) has been designed in accordance with Council requirements to reduce the 5% AEP post-development stormwater runoff to the pre-development 20% AEP flow.

An OSD is proposed to be utilised to restrict the flows being discharged to each sub-catchment to meet Council permissible discharge rates and reduce the impacts on downstream properties. The OSD tanks are proposed to be located in the following locations;

- OSD 1 - Volume 24m³
 - restricting flows to Beecroft Road and located in the driveway
- OSD 2 - Volume 68m³
 - restricting flows to the rear easement and located in the southwest corner of the basement

OSD 1 is located at the site boundary in the access driveway and has been designed to discharge to the in-ground stormwater drainage in Beecroft Road which is planned to be extended as part of the development works.

The OSD is designed to fully detain the 5% AEP event. During 1% AEP storm, surcharge will be distributed across four rear boundary pits to prevent concentrated flows from entering the neighbouring site.

OSD 2 is located at the rear of the site partially in the basement structure. It has been provided in accordance with Councils DCP to restrict the post-development flows from the site to be below the capacity of the existing easement.

The tank has been designed with a single orifice and no internal weir, allowing overflow from the tanks during extreme storm events including the 1% AEP. During the 1%, the site drainage network is proposed to surcharge at multiple pits along the southern boundary which will disperse the flow overland. This is to act as a level spreader to prevent concentration of overland flows over the neighbours boundary and therefore maintains the existing overland flow arrangement.

Table 2 – Site stormwater discharge rates

AEP Rainfall Event	Beecroft Road Catchment (OSD 1 – Volume 24m ³)		Rear Easement Catchment (OSD 2 – Volume 68m ³)	
	Pre-Development Discharge (L/s)	Post Development Discharge (L/s)	Pre-Development Discharge (L/s)	Post Development Discharge (L/s)
20% (5 Year)	107	78	95	78
5% (20 Year)	155	107	136	95
1% (100 year)	221	191	195	221

2.3.2 Stormwater Quality

MUSIC Modelling has been undertaken for the site in accordance with Councils WSUD Reference Guidelines to ensure that the proposed water quality treatment train is in accordance with the Council pollutant reduction targets.

Due to the site topography and building footprint, there is limited surface area available on the site for bio-retention basins and other natural water quality treatment. As such, water quality treatment is generally undertaken through propriety products such as filter basket pit inserts and filter cartridges, which are able to be incorporated into the inground stormwater drainage network

It is proposed that surface flows be directed to stormwater pits with filter basket inserts to collect gross pollutants. The drainage will then be directed to the OSD which will include a separate chamber comprising cartridge filters.

MUSIC Modelling has been undertaken for the site to ensure that the proposed water quality treatment train is achieving the Council pollutant reduction targets. Figure 9 shows the treatment train set up in MUSIC and the results in table 3



Figure 9 – MUSIC Model

Table 3 – Stormwater quality reduction results

Stormwater Pollutant	Council Target %	Site Reduction %
Gross Pollutants	100	100
Total Suspended Solids (TSS)	85	85
Total Phosphorus (TP)	60	69.5
Total Nitrogen (TN)	45	47.6

3 Flooding

A review of the Council GIS flood maps available on the Council website, indicates that the site is not subject to flooding in either the 1% AEP or the Probable Maximum Flood (PMF), as indicated in figure 10 below.

The site is therefore not affected by flood and as such no flood-related planning levels for finished floor levels or structural design requirements should be imposed on the site as part of the development consent.

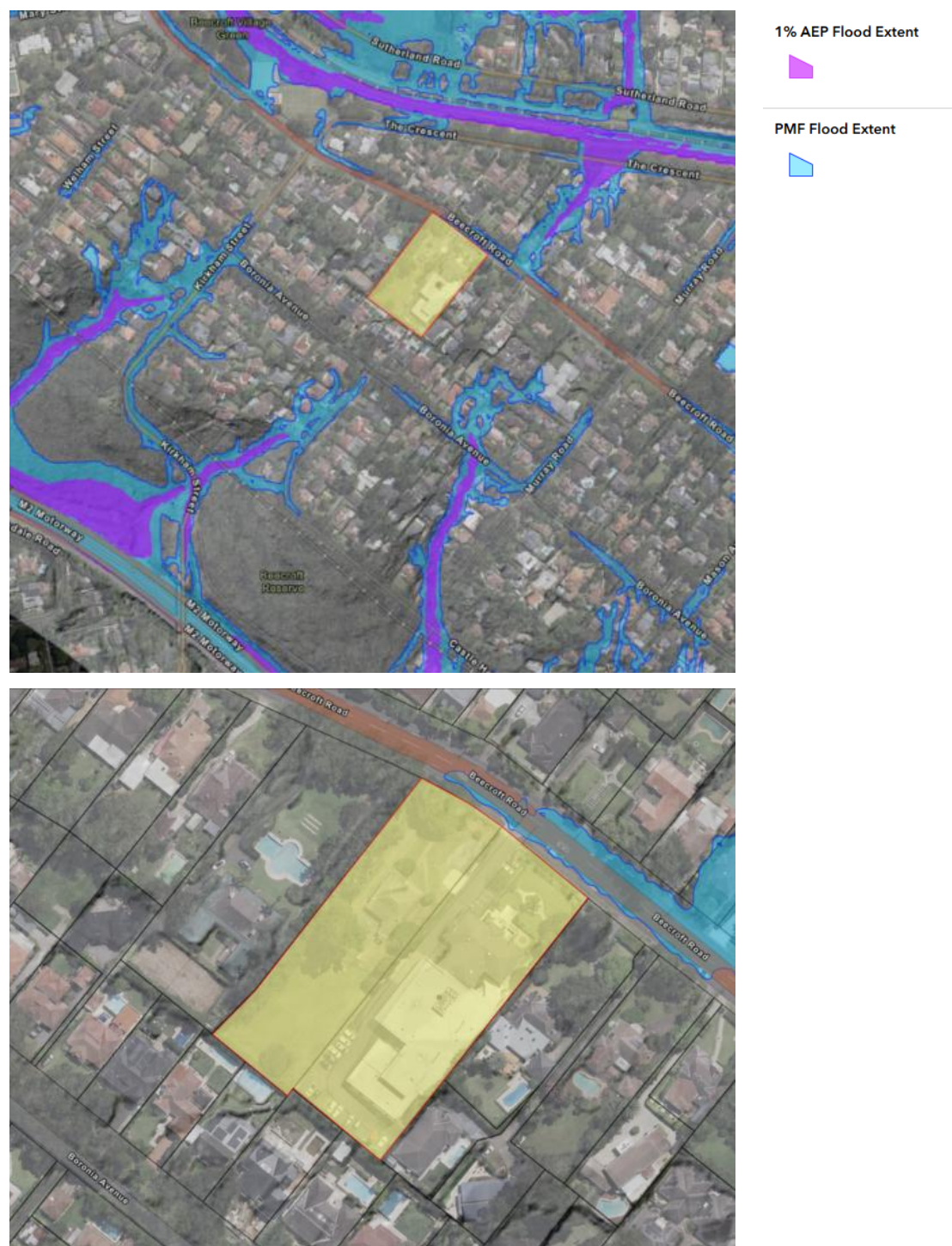


Figure 10 - Council flood hazard mapping – Council GIS Mapping

<https://experience.arcgis.com/experience/a8fb5da68c3c4fe4a9c02cba468eee61>

A review of flood evacuation routes has also been undertaken in case of emergency health requirements during a flood event.

Beecroft and the wider Horsby Shire Council area is flood prone and during large storm events, including the 1% AEP and PMF, major arterial roads such as the M2 motorway and Pennant Hills Road being inundated during these events.

Access from site via Beecroft Road is available in the northern direction during the 1% AEP but becomes inundated during the PMF. Beecroft Road heading south becomes inaccessible to near the intersection of Mason Avenue during the 1% AEP. As such access to the site can be achieved from the north during the 1% AEP but becomes difficult during the PMF.

Notwithstanding, the site is above both the 1% AEP and PMF and is not affected by flooding during these events. As such residents and staff can shelter in place until such time that flood levels within the roads recede and external access becomes safe.

The site is an existing seniors housing development and as such the flood emergency response for the site will remain unchanged.

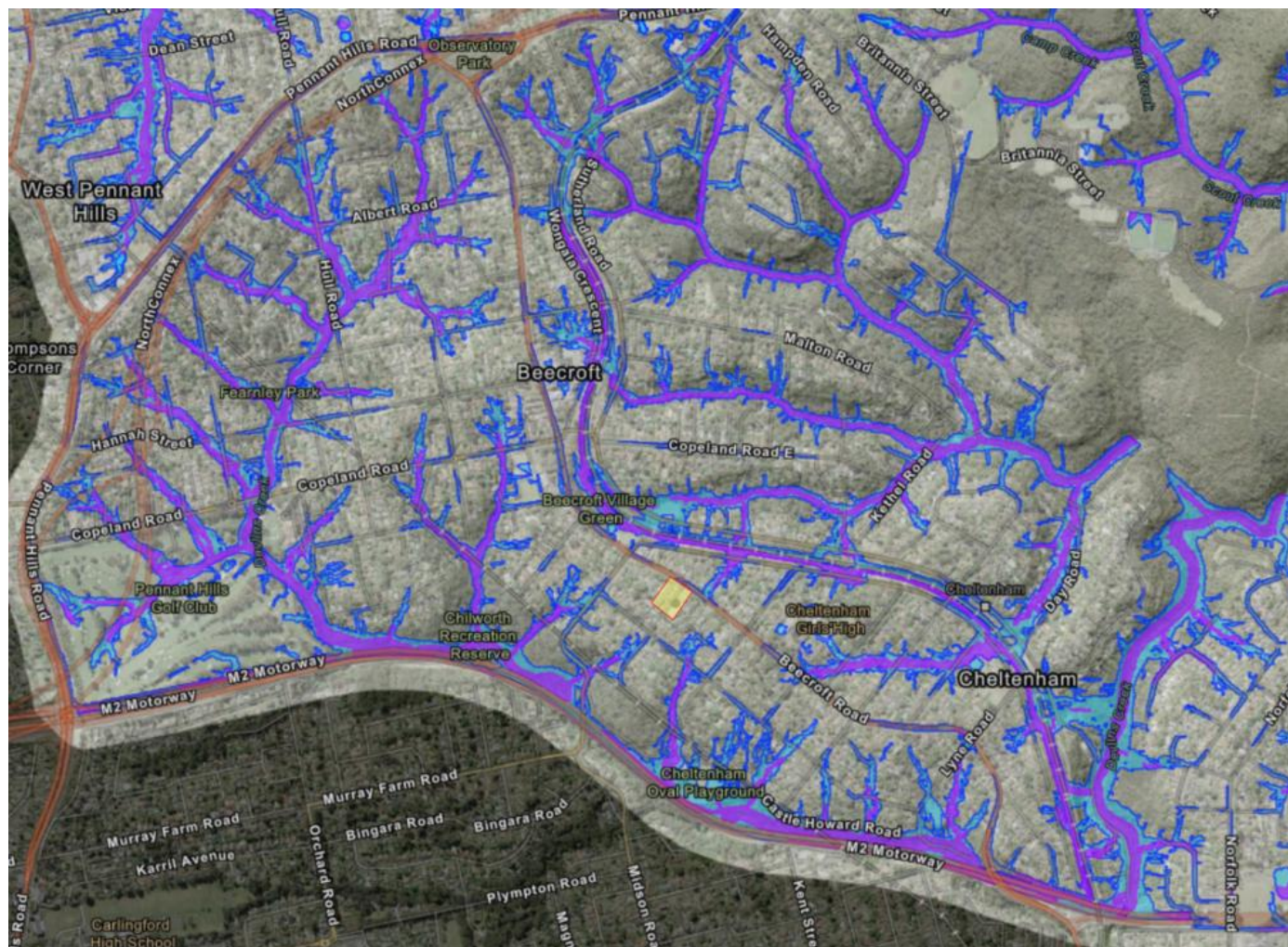


Figure 11 - Council mapping indicating flood evacuation route

4 Soil Erosion and Sedimentation Control

4.1 General Principles

The following general principles of soil and water management have been developed and will be applied to the re-development works:

- Minimise the area of soil disturbed and exposed to erosion
- Conserve topsoil for later site rehabilitation/revegetation
- Control water flow from the top of, and through the development area
- Rehabilitate disturbed lands quickly
- Maintain soil and water management measures appropriately during the construction phase

4.2 Sources of Pollution

Based on the proposed development activities, the following sources of pollution during construction that could lead to earthworks erosion, sediment and silt transportation and contamination of downstream stormwater systems have been considered:

- Earthworks undertaken prior to rainfall events without sufficient auxiliary measures to manage drainage
- Earthworks areas that have not been stabilised or are exposed prior to temporary or permanent ground cover
- Establishment time for rehabilitation / revegetation of exposed earthworks
- Localised groundwater dewatering activities during earthworks excavations
- Construction works to existing stormwater pipelines and overland flow paths
- Vehicle entry and exit to the construction site and associated tracking of debris out of the site
- Clearing and grubbing of vegetation / organic matter and stripping of topsoil
- Stockpiling of excavated materials or construction materials (e.g. road base, ordinary and select fill, etc)
- Re-fuelling and general maintenance of construction plant and equipment
- Storage of chemicals, fuel and other hazardous materials
- Ineffective / incorrect installation or maintenance of soil erosion and sedimentation control measures

4.3 Soil and Water Management Strategy

The following construction management methodology has been developed for the re-development works and should be included in the soil erosion and sediment control for the site:

- Establish sediment fencing to the downstream perimeter of the zone of disturbed works to protect downstream assets and properties
- Installation of stabilised construction entry and exit grids to prevent construction vehicles tracking debris into adjacent Authority roadways and stormwater systems
- Construction of “clean water” diversion drains with rock check dams to divert unpolluted water to the existing stormwater system in a controlled manner
- Construction of “dirty water” catch drains with rock check dams to divert sediment-laden and silt-laden water to proposed sedimentation basins

- Construction of appropriately sized and maintained sedimentation basins to promote settling of gross pollutants and suspended solids. Dosing and flocculation of fine suspended particulates will also be undertaken depending on tested water quality profiles within the sedimentation basin
- Protection of materials stockpiles by suitable wind protection fencing and / or temporary covering of stockpiles
- Protection of existing and recently constructed surface inlet pits with temporary sediment traps using geotextile filter fabric and sandbags
- Protection of existing and recently constructed overland flow paths with vegetated ground cover
- General expedited revegetation and stabilisation of exposed earthworks to prevent sedimentation of stormwater runoff

Appendix A – Civil Stormwater Management Plan

THOMPSON HEALTH BEECROFT PROPOSED AGED CARE FACILITY

132-134 BEECROFT ROAD, BEECROFT

CIVIL SERVICES

SITeworks Notes

- ORIGIN OF LEVELS :- AUSTRALIAN HEIGHT DATUM (A.H.D.)
- CONTRACTOR MUST VERIFY ALL DIMENSIONS AND EXISTING LEVELS ON SITE PRIOR TO COMMENCEMENT OF WORK.
- ALL WORK IS TO BE UNDERTAKEN IN ACCORDANCE WITH THE DETAILS SHOWN ON THE DRAWINGS, THE SPECIFICATIONS AND THE DIRECTIONS OF THE PRINCIPAL'S REPRESENTATIVE.
- EXISTING SERVICES HAVE BEEN PLOTTED FROM SUPPLIED DATA 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 PRINCIPAL'S REPRESENTATIVE. CLEARANCES SHALL BE OBTAINED FROM THE RELEVANT SERVICE AUTHORITY.
- WHERE NEW WORKS ABUT EXISTING THE CONTRACTOR SHALL ENSURE THAT A SMOOTH EVEN PROFILE, FREE FROM ABRUPT CHANGES IS OBTAINED.
- THE CONTRACTOR SHALL ARRANGE ALL SURVEY SETOUT TO BE CARRIED OUT BY A REGISTERED SURVEYOR.
- CARE IS TO BE TAKEN WHEN EXCAVATING NEAR EXISTING SERVICES. NO MECHANICAL EXCAVATIONS ARE TO BE UNDERTAKEN OVER COMMUNICATIONS OR ELECTRICAL SERVICES. HAND EXCAVATE IN THESE AREAS.
- ALL SERVICE TRENCHES UNDER VEHICULAR PAVEMENTS SHALL BE BACKFILLED WITH AN APPROVED NON-NATURAL GRANULAR MATERIAL AND COMPACTED TO 98% STANDARD MAXIMUM DRY DENSITY IN ACCORDANCE WITH AS.1289.5.1.1.
- ALL TRENCH BACKFILL MATERIAL SHALL BE COMPACTED TO THE SAME DENSITY AS THE ADJACENT MATERIAL.
- ON COMPLETION OF PIPE INSTALLATION ALL DISTURBED AREAS MUST BE RESTORED TO ORIGINAL, INCLUDING KERBS, FOOTPATHS, CONCRETE AREAS, GRAVEL AND GRASSED AREAS AND ROAD PAVEMENTS.
- PROVIDE 10mm WIDE ABELFLEX JOINTS BETWEEN CONCRETE PAVEMENTS AND ALL BUILDINGS , WALLS, FOOTINGS, COLUMNS, KERBS, DISH DRAINS, GRATED DRAINS, BOLLARD FOOTINGS ETC.
- CONTRACTOR TO OBTAIN ALL AUTHORITY APPROVALS.
- ALL BATTERS TO BE GRASSED LINED WITH MINIMUM 100 TOPSOIL AND APPROVED COUCH LAID AS TURF.
- MAKE SMOOTH TRANSITION TO EXISTING SERVICES AND MAKE GOOD.
- THE CONTRACTOR SHALL PROVIDE ALL TEMPORARY DIVERSION DRAINS AND MOUNDS TO ENSURE THAT AT ALL TIMES EXPOSED SURFACES ARE FREE DRAINING AND WHERE NECESSARY EXCAVATE SUMPS AND PROVIDE PUMPING EQUIPMENT TO DRAIN EXPOSED AREAS.
- ON COMPLETION OF WORKS ALL DISTURBED AREAS MUST BE RESTORED TO ORIGINAL INCLUDING, BUT NOT LIMITED TO, KERBS, FOOTPATHS, CONCRETE AREAS, GRASS AND LANDSCAPED AREAS.

EXISTING SERVICES AND FEATURES

- THE CONTRACTOR SHALL ALLOW FOR THE CAPPING OFF, EXCAVATION, REMOVAL AND DISPOSAL IF REQUIRED OF ALL EXISTING SERVICES IN AREAS AFFECTED BY WORKS WITHIN THE CONTRACT AREA, AS SHOWN ON THE DRAWINGS UNLESS DIRECTED OTHERWISE BY THE SUPERINTENDENT.
- THE CONTRACTOR SHALL ENSURE THAT AT ALL TIMES SERVICES TO ALL BUILDINGS NOT AFFECTED BY THE WORKS ARE NOT DISRUPTED.
- PRIOR TO COMMENCEMENT OF ANY WORKS THE CONTRACTOR SHALL GAIN WRITTEN APPROVAL OF HIS PROGRAMME FOR THE RELOCATION/CONSTRUCTION OF TEMPORARY SERVICES.
- EXISTING BUILDINGS, EXTERNAL STRUCTURES, AND TREES SHOWN ON THESE DRAWINGS ARE FEATURES EXISTING PRIOR TO ANY DEMOLITION WORKS.
- CONTRACTOR SHALL CONSTRUCT TEMPORARY SERVICES TO MAINTAIN EXISTING SUPPLY TO BUILDINGS REMAINING IN OPERATION DURING WORKS TO THE SATISFACTION AND APPROVAL OF THE SUPERINTENDENT. ONCE DIVERSION IS COMPLETE AND COMMISSIONED THE CONTRACTOR SHALL REMOVE ALL SUCH TEMPORARY SERVICES AND MAKE GOOD TO THE SATISFACTION OF THE SUPERINTENDENT.
- INTERRUPTION TO SUPPLY OF EXISTING SERVICES SHALL BE DONE SO AS NOT TO CAUSE ANY INCONVENIENCE TO THE PRINCIPAL. CONTRACTOR TO GAIN APPROVAL OF SUPERINTENDENT FOR TIME OF INTERRUPTION.

GENERAL NOTES

- THESE DRAWINGS SHALL BE READ IN CONJUNCTION WITH ALL ARCHITECTURAL AND OTHER CONSULTANTS DRAWINGS AND SPECIFICATIONS AND WITH SUCH OTHER WRITTEN INSTRUCTIONS AS MAY BE ISSUED.
- ALL DIMENSIONS RELEVANT TO SETTING OUT AND OFF-SITE WORK SHALL BE VERIFIED BY THE CONTRACTOR BEFORE CONSTRUCTION
- DIMENSIONS SHALL NOT BE OBTAINED BY SCALING THE DRAWINGS.
- ALL DIMENSIONS ON DETAILS ARE IN MILLIMETRES UNLESS STATED OTHERWISE. ALL PLANS AND LEVELS ARE EXPRESSED IN METRES.
- DURING CONSTRUCTION THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING THE STRUCTURAL STABILITY OF THE WORKS AND ENSURE NO PARTS BE OVER STRESSED UNDER CONSTRUCTION ACTIVITIES.
- WORKMANSHIP AND MATERIALS ARE TO BE IN ACCORDANCE WITH THE RELEVANT CURRENT AUSTRALIAN STANDARDS INCLUDING ALL AMENDMENTS, AND THE LOCAL STATUTORY AUTHORITIES, EXCEPT WHERE VARIED BY THE CONTRACT DOCUMENTS.
- THE APPROVAL OF A SUBSTITUTION SHALL BE SOUGHT FROM THE ENGINEER BUT IS NOT AN AUTHORISATION FOR A VARIATION. ANY VARIATIONS INVOLVED MUST BE TAKEN UP WITH THE ARCHITECT OR PROJECT MANAGER BEFORE THE WORK COMMENCES.
- ANY DISCREPANCIES OR OMISSIONS SHALL BE REFERRED TO THE ENGINEER FOR A DECISION BEFORE PROCEEDING WITH THE WORK.
- THE BUILDER SHALL GIVE 48 HOURS NOTICE FOR ALL ENGINEERING INSPECTIONS.
- BUILDING FROM THESE DRAWINGS IS NOT TO COMMENCE UNTIL APPROVED BY THE LOCAL AUTHORITIES
- THE WORD 'ENGINEER' USED IN THESE NOTES REFER TO AN EMPLOYEE OR NOMINATED REPRESENTATIVE OF **ENTEC CONSULTANTS PTY.LTD.**

STORMWATER NOTES

- ALL 300 DIA. DRAINAGE PIPES AND LARGER SHALL BE CLASS "Z" APPROVED SPIGOT AND SOCKET FRC OR RCP. PIPES WITH RUBBER RING JOINTS. (U.N.O.) ALL DOWNPIPE DRAINAGE LINES SHALL BE SEWER GRADE UPVC WITH SOLVENT WELD JOINTS. (U.N.O.)
- EQUIVALENT STRENGTH REINFORCED CONCRETE PIPES MAY BE USED.
- ALL PIPE JUNCTIONS UP TO AND INCLUDING 450 DIA. AND TAPERS SHALL BE VIA PURPOSE MADE FITTINGS.
- MINIMUM GRADE TO STORMWATER LINES TO BE IN ACCORDANCE WITH AS/NZS 3500.3-2018 TABLE 6.3.4. (U.N.O.)
- CONTRACTOR TO SUPPLY AND INSTALL ALL FITTINGS AND SPECIALS INCLUDING VARIOUS PIPE ADAPTORS TO ENSURE PROPER CONNECTION BETWEEN DISSIMILAR PIPEWORK.
- ALL CONNECTIONS TO EXISTING DRAINAGE PITS SHALL BE MADE IN A TRADESMAN-LIKE MANNER AND THE INTERNAL WALL OF THE PIT AT THE POINT OF ENTRY SHALL BE CEMENT RENDERED TO ENSURE A SMOOTH FINISH.
- PRECAST PITS SHALL NOT BE USED UNLESS WRITTEN APPROVAL IS OBTAINED FROM THE SUPERINTENDENT.
- WHERE TRENCHES ARE IN ROCK, THE PIPE SHALL BE BEDDED ON A MIN. 50MM CONCRETE BED (OR 75MM THICK BED OF 12MM BLUE METAL) UNDER THE BARREL OF THE PIPE. THE PIPE COLLAR AT NO POINT SHALL BEAR ON THE ROCK. IN OTHER THAN ROCK, PIPES SHALL BE LAID ON A 75MM THICK SAND BED. IN ALL CASES BACKFILL THE TRENCH WITH SAND TO 200MM ABOVE THE PIPE. WHERE THE PIPE IS UNDER PAVEMENTS BACKFILL REMAINDER OF TRENCH WITH SAND OR APPROVED GRANULAR BACKFILL COMPACTED IN 150MM LAYERS TO 98% STANDARD MAX. DRY DENSITY.
- BEDDING SHALL BE TYPE H51, IN ACCORDANCE WITH CURRENT RELEVANT AUSTRALIAN STANDARDS.
- WHERE UPVC STORMWATER LINES PASS UNDER FLOOR SLABS, SEWER GRADE RUBBER RING JOINTS ARE TO BE USED.
- 100 DIA SLOTTED UPVC SUBSOIL DRAINAGE LINES SHALL BE INSTALLED BEHIND ALL RETAINING WALLS, KERBS AND WITHIN PLANTERS.
- WHERE SUBSOIL DRAINAGE LINES PASS UNDER FLOOR SLABS AND VEHICULAR PAVEMENTS UNSLOTTED UPVC SEWER GRADE PIPE SHALL BE USED.
- PROVIDE 3.0M LENGTH OF 100 DIA. SUBSOIL DRAINAGE PIPE WRAPPED IN FABRIC SOCK, AT UPSTREAM END OF EACH PIT.

RAINWATER REUSE SYSTEM

MARKING & LABELLING

- THE WATER SUPPLY SYSTEM FROM A RAINWATER TANK SHALL BE CLEARLY MARKED 'RAINWATER' AT INTERVALS NOT EXCEEDING 1m WITH CONTRASTING COLOURED WORDING. WATER OUTLETS SHALL BE IDENTIFIED AS 'RAINWATER' WITH A LABEL OR A RAINWATER TAP IDENTIFIED BY A GREEN COLOURED INDICATOR WITH THE LETTERS 'RW'.

NON-DRINKING WATER SERVICES - HOSE TAP OUTLETS

- HOSE TAP OUTLETS SHALL:-
 - BE CLEARLY MARKED "WARNING: NOT FOR DRINKING" IN ACCORDANCE WITH THE REQUIREMENTS OF AS 1319.
 - BE OF A TYPE THAT HAS A REMOVABLE HANDLE.

PROXIMITY TO OTHER SERVICES

- THE FOLLOWING APPLIES:
 - ABOVEGROUND INSTALLATION OF NON-DRINKING WATER SERVICES SHALL NOT BE INSTALLED WITHIN 100mm OF ANY PARALLEL DRINKING WATER SERVICE, EXCEPT WHEN INSTALLED IN PIPE DUCT OR STRUCTURALLY SEPARATED
 - BELOW-GROUND INSTALLATIONS OF NON-DRINKING WATER SERVICES SHALL NOT BE INSTALLED WITHIN 300mm OF ANY PARALLEL DRINKING WATER SUPPLY.

MARKING & LABELLING OF NON-DRINKING WATER PIPES & OUTLETS

GENERAL

- ALL PIPES, PIPE SLEEVES, IDENTIFICATION TAPES, & OUTLETS SHALL BE COLOURED LILAC (P23) IN ACCORDANCE WITH AS 2700
- ALL PIPES, PIPE SLEEVES & IDENTIFICATION TAPES, IN ACCORDANCE WITH AS 1345, SHALL BE MARKED WITH THE FOLLOWING, WARNING: RECYCLED OR RECLAIMED - WATER - DO NOT DRINK

BELOW GROUND PIPES

- ALL BELOW GROUND PIPES SHALL HAVE AN IDENTIFICATION TAPE IN ACCORDANCE WITH CLAUSE GENERAL INSTALLED ON TOP OF THE WATER PIPELINE, RUNNING LONGITUDINALLY, & FASTENED TO THE PIPE AT NOT MORE THAN 3m INTERVALS.

OUTLET POINTS

- ALL OUTLET POINTS SHALL BE CLEARLY & PERMANENTLY MARKED "WARNING: NOT FOR DRINKING" WITH SAFETY SIGNS TO COMPLY WITH AS 1319 & AS 1345.

PRE-TREATMENT

- ALL GUTTERS SHALL BE FITTED WITH PROPRIETARY GUTTER SCREENS IN ACCORDANCE WITH THE MANUFACTURERS SPECIFICATIONS
- BELOW-GROUND FIRST FLUSH DIVERTER SHALL BE INSTALLED TO ALL INLET PIPELINE(S) PRIOR TO ENTERING THE RAINWATER TANK. FIRST FLUSH DIVERTER TO BE SIZED BY THE HYDRAULIC CONSULTANT.
- REFER THE THE HYDRAULIC CONSULTANTS DRAWINGS FOR FURTHER DETAILS OF RAINWATER RE-USE PRE-TREATMENT MEASURES.

EROSION AND SEDIMENT CONTROL NOTES

GENERAL INSTRUCTIONS

- THIS PLAN IS TO BE READ IN CONJUNCTION WITH THE ENGINEERING PLANS, AND ANY OTHER PLANS OR WRITTEN INSTRUCTIONS THAT MAY BE ISSUED AND RELATING TO DEVELOPMENT AT THE SUBJECT SITE.
- THE SITE SUPERINTENDENT WILL ENSURE THAT ALL SOIL AND WATER MANAGEMENT WORKS ARE LOCATED AS INSTRUCTED IN THIS SPECIFICATION.
- ALL BUILDERS AND SUB-CONTRACTORS WILL BE INFORMED OF THEIR RESPONSIBILITIES IN MINIMISING THE POTENTIAL FOR SOIL EROSION AND POLLUTION TO DOWNSLOPE LANDS AND WATERWAYS.

CONSTRUCTION SEQUENCE

- THE SOIL EROSION POTENTIAL ON THIS SITE SHALL BE MINIMISED, HENCE WORKS SHALL BE UNDERTAKEN IN THE FOLLOWING SEQUENCE :
 - INSTALL SEDIMENT FENCES, TEMPORARY CONSTRUCTION EXIT AND SANDBAG KERB INLET SEDIMENT TRAP.
 - UNDERTAKE SITE DEVELOPMENT WORKS IN ACCORDANCE WITH THE ENGINEERING PLANS. PHASE DEVELOPMENT SO THAT LAND DISTURBANCE IS CONFINED TO AREAS OF WORKABLE SIZE.

EROSION CONTROL

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

FENCING

- 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.

- 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.

- 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.

- TEMPORARY SOIL AND WATER MANAGEMENT STRUCTURES WILL BE REMOVED ONLY AFTER THE LANDS THEY ARE PROTECTING ARE REHABILITATED.

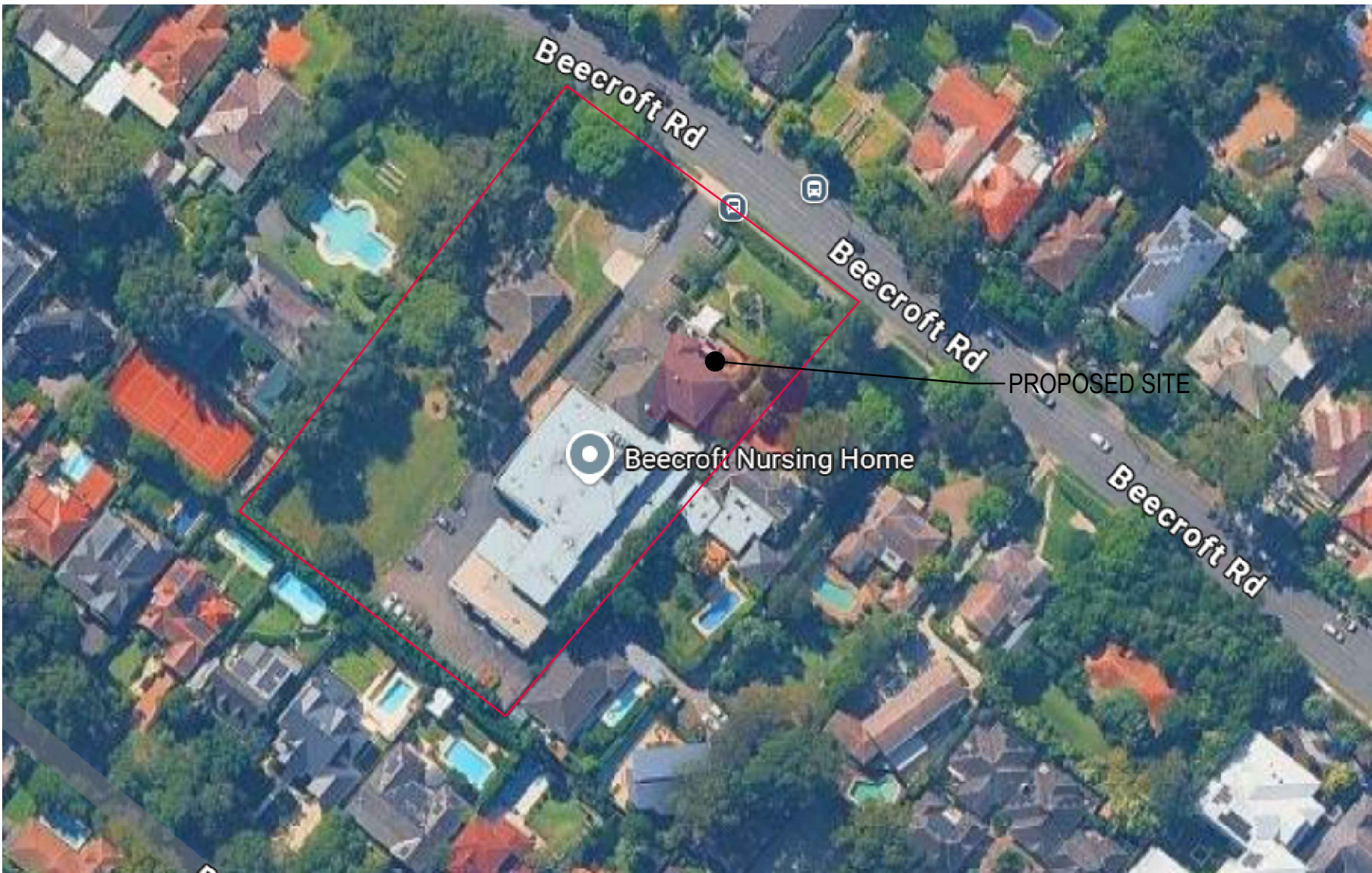
OTHER MATTERS

- ACCEPTABLE RECEPTORS WILL BE PROVIDED FOR CONCRETE AND MORTAR SLURRIES, PAINTS, ACID WASHINGS, LIGHT-WEIGHT WASTE MATERIALS AND LITTER.

- RECEPTORS FOR CONCRETE AND MORTAR SLURRIES, PAINTS, ACID WASHINGS, LIGHT-WEIGHT WASTE MATERIALS AND LITTER ARE TO BE EMPTIED AS NECESSARY. DISPOSAL OF WASTE SHALL BE IN A MANNER APPROVED BY THE SITE SUPERINTENDENT.

SITE INSPECTION & MAINTENANCE

- EROSION AND SEDIMENT CONTROL MEASURES SHALL BE INSPECTED AFTER RAINFALL EVENTS TO ENSURE THAT THEY OPERATE EFFECTIVELY. REPAIR AND OR MAINTENANCE SHALL BE UNDERTAKEN AS REQUIRED.



LOCALITY PLAN

CIVIL LEGEND

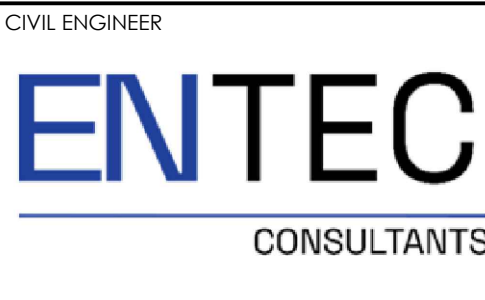
	RETAINING WALL
	INDICATIVE DIRECTION OF FALL TO RWO OR PIT
- CL56.20 - P56.20 - EX56.20	PROPOSED COVER LEVEL
	PROPOSED SURFACE LEVEL
	EXISTING SURFACE LEVEL
	RAINWATER OUTLET, Ø150 ROUND PUSH-IN FLOOR DRAIN. SPS R150SR4 OR APPROVED EQUIVALENT
	STORMWATER DRAINAGE STRUCTURE WITH NUMBER (REFER TO PLANS AND STORMWATER DRAINAGE STRUCTURES SCHEDULE)
	STORMWATER DRAINAGE LINE WITH: - INVERT LEVEL UPSTREAM - PIPE SIZE AND MATERIAL CLASS - PIPE GRADE - PIPE LENGTH - INVERT LEVEL DOWNSTREAM
	PROPOSED GRATED DRAIN
	GD1 = ACO KS100 WITH CLASS B' HEELSAFE GRATE
	GD2 = ACO K200 WITH CLASS D' GRATE
	OVERLAND FLOW PATH
	EXISTING 0.5m WIDE DRAINAGE EASEMENT
	CREST LINE

DIAL BEFORE YOU DIG

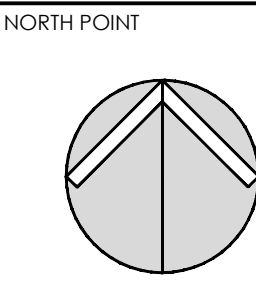


IMPORTANT: THE CONTRACTOR IS TO MAINTAIN A CURRENT SET OF "DIAL BEFORE YOU DIG" DRAWINGS ON SITE AT ALL TIMES.

B	ISSUE FOR SSDA	14.11.25	DR	NP	
A	ISSUE FOR DRAFT SSDA	07.10.25	DR	NP	
ISSUE	AMENDMENT	DATE	DRAWN	APP	

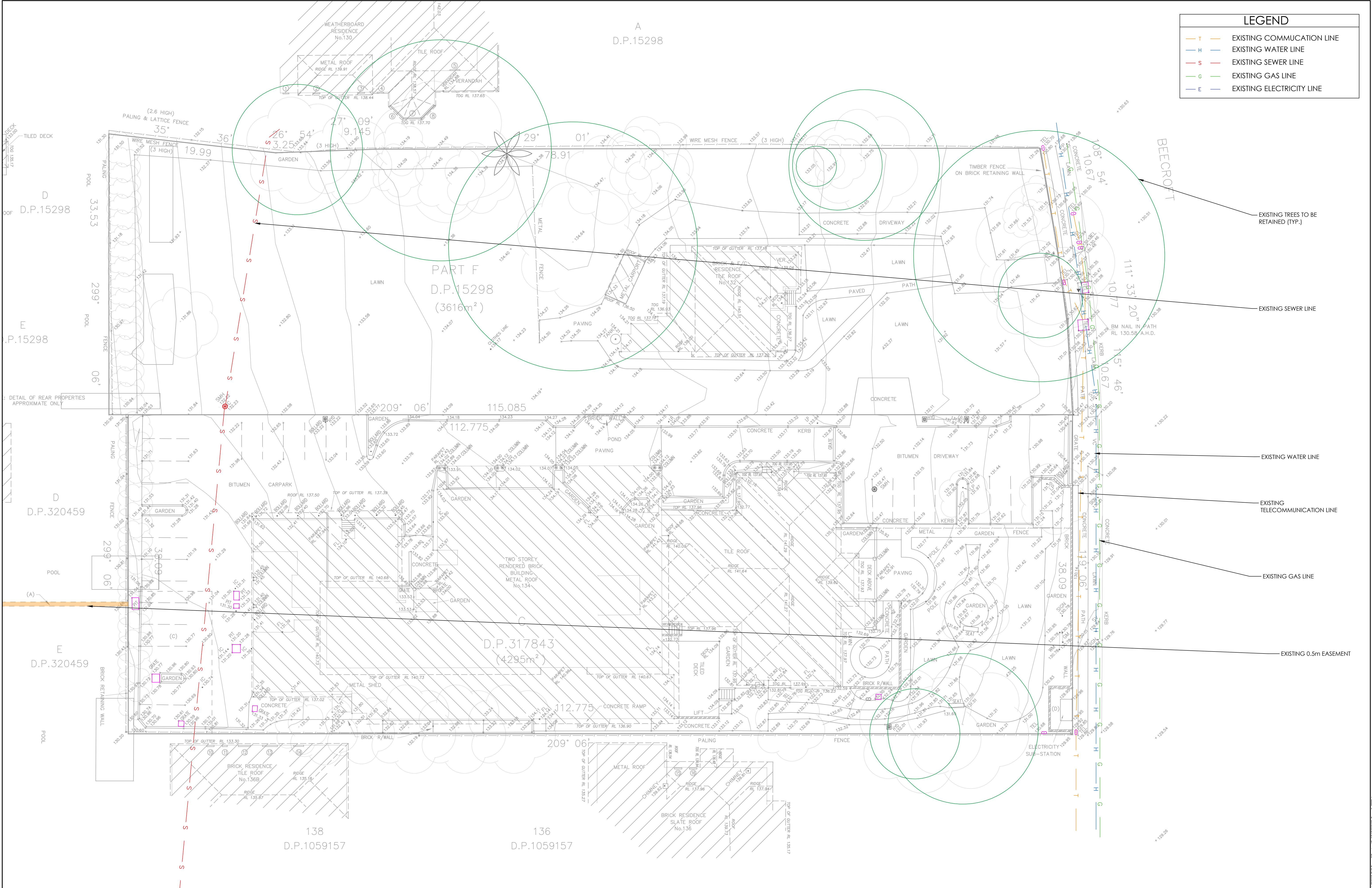


PROJECT
THOMPSON HEALTH CARE BEECROFT
132-134 BEECROFT ROAD,
BEECROFT



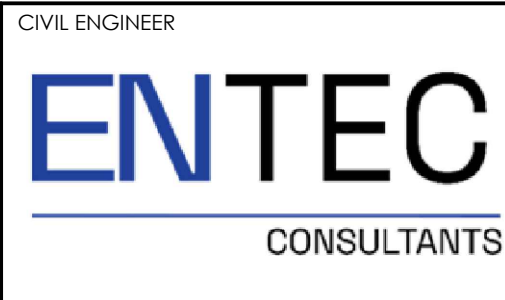
DRAWING TITLE
COVER SHEET AND LEGEND

DRAWN DR	DATE OCT 2025	SCALE A1	QA CHECK NP	DATE
DESIGNED DR	PROJECT NO. 250159	DRAWING NO. C100	ISSUE B	

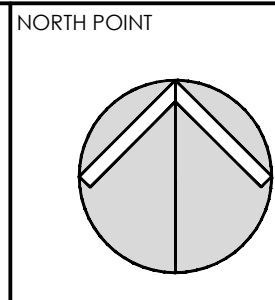


LEGEND	
T	EXISTING COMMUNICATION LINE
H	EXISTING WATER LINE
S	EXISTING SEWER LINE
G	EXISTING GAS LINE
E	EXISTING ELECTRICITY LINE

B	ISSUE FOR SSDA	14.11.25	DR	NP	
A	ISSUE FOR DRAFT SSDA	07.10.25	DR	NP	
ISSUE	AMENDMENT	DATE	DRAWN	APP	



PROJECT
**THOMPSON HEALTH CARE
BEECROFT**
132-134 BEECROFT ROAD,
BEECROFT



DRAWING TITLE					
EXISTING SERVICES PLAN					
DRAWN DR	DATE AUG 25	SCALE 1:200	AI	QA CHECK NP	DATE
DESIGNED DR	PROJECT NO. 250159	DRAWING NO. C200		ISSUE B	

Project: Thompson Health Care BEECROFT, 132-134 BEECROFT ROAD, BEECROFT, VIC 3083
Drawing: 250159-C200-01
Date: 25/08/2025
Scale: 1:200
Author: [Redacted]
Checked: [Redacted]
Approved: [Redacted]

CONSTRUCTION SITE

MIN WIDTH 3m

MIN LENGTH 15m

PROPERTY BOUNDARY

300mm MIN

200mm MIN

RUNOFF DIRECTED TO SEDIMENT TRAP/FENCE

DGB 20 ROADBASE OR 30mm AGGREGATE

EXISTING ROADWAY

GEOTEXTILE FABRIC DESIGNED TO PREVENT INTERMING OF SUBGRADE AND BASE MATERIALS AND TO MAINTAIN GOOD PROPERTIES OF THE SUB-BASE LAYERS.
GEOTEXTILE MAY BE A WOVEN OR NEEDLE PUNCHED PRODUCT WITH A MINIMUM CBR BURST STRENGTH (AS3706.9-90) OF 2500 N

1. STRIP TOPSOIL AND LEVEL SITE.
2. COMPACT SUBGRADE.
3. COVER AREA WITH NEEDLE-PUNCHED GEOTEXTILE.
4. CONSTRUCT 200MM THICK PAD OVER GEOTEXTILE USING ROADBASE OR 30MM AGGREGATE, MINIMUM LENGTH 15M OR TO BUILDING ALIGNMENT, MINIMUM WIDTH 3 METRES.
5. CONSTRUCT HUMP IMMEDIATELY WITHIN BOUNDARY TO DIVERT WATER TO A SEDIMENT FENCE OR OTHER SEDIMENT TRAP.

SOURCE: MANAGING URBAN STORMWATER SOILS AND CONSTRUCTION THIRD EDITION, AUGUST 1998 PRODUCED BY THE DEPARTMENT OF HOUSING.

Labels for the top diagram:

- STAR PICKETS
- 1m MAX
- DROP INLET WITH GRATE
- WIRE OR STEEL MESH (14 GAUGE X 150 MM OPENINGS) WHERE GEOTEXTILE IS NOT SELF-SUPPORTING
- WOVEN GEOTEXTILE

Labels for the bottom left diagram:

- SANDBAGS
- WATERWAY
- EXCAVATION
- EARTH BANK

Labels for the bottom right diagram:

- STAR PICKET FITTED WITH SAFETY CAP
- WOVEN GEOTEXTILE
- RUNOFF WATER WITH SEDIMENT
- GEOTEXTILE EMBEDDED 150 MM INTO GROUND
- FILTERED WATER

FOR DROP INLETS AT NON-SAG POINTS, SANDBAGS, EARTH BANK OR EXCAVATION USED TO CREATE ARTIFICIAL SAG POINT

1. FABRICATE A SEDIMENT BARRIER FROM GEOTEXTILE OR STRAW BALES.
2. SUPPORT GEOTEXTILE WITH MESH TIED TO POSTS AT 1 METRE CENTRES.
3. DO NOT COVER INLET WITH GEOTEXTILE.
4. CONSTRUCTION DETAILS ARE SIMILAR TO TYPICAL SEDIMENT FENCING DETAIL.

The technical drawing illustrates the installation of a silt fence system. It includes a plan view and a section detail.

Plan View:

- Shows a silt fence line separating a **DISTURBED AREA** (top left) from an **UNDISTURBED AREA** (bottom left).
- Arrows indicate the **DIRECTION OF FLOW** from the disturbed area towards the undisturbed area.
- The fence is constructed using **1.5m STAR PICKETS AT MAX 3m CENTRES**.
- A dimension line indicates a maximum length of **20m MAX** for a section, with the note **UNLESS STATED OTHERWISE ON SWMP/ESCP**.
- A detail view shows the pickets are **STAR PICKETS AT MAXIMUM 3m SPACINGS**.
- A vertical dimension of **1.5m MIN** is shown for the picket height.

SECTION DETAIL:

- Shows a cross-section of the fence post and picket.
- The picket is **ON SOIL, 150mm X 100mm TRENCH WITH COMPACTED BACKFILL AND ON ROCK, SET INTO SURFACE CONCRETE**.
- The picket height is dimensioned as **600mm MIN**.

1. CONSTRUCT SEDIMENT FENCE AS CLOSE AS POSSIBLE TO PARALLEL TO THE CONTOURS OF THE SITE.
2. DRIVE 1.5 METRE LONG STAR PICKETS INTO GROUND, 3 METRES APART.
3. DIG A 150 MM DEEP TRENCH ALONG THE UPSLOPE LINE OF THE FENCE FOR THE BOTTOM OF THE FABRIC TO BE ENTRENCHED.
4. BACKFILL TRENCH OVER BASE OF FABRIC.
5. FIX SELF-SUPPORTING GEOTEXTILE TO UPSLOPE SIDE OF POSTS WITH WIRE TIES OR AS RECOMMENDED BY GEOTEXTILE MANUFACTURER.
6. JOIN SECTIONS OF FABRIC AT A SUPPORT POST WITH A 150 MM OVERLAP.

SOURCE: MANAGING URBAN STORMWATER
SOILS AND CONSTRUCTION
THIRD EDITION, AUGUST 1998
PRODUCED BY THE DEPARTMENT OF
HOUSING.

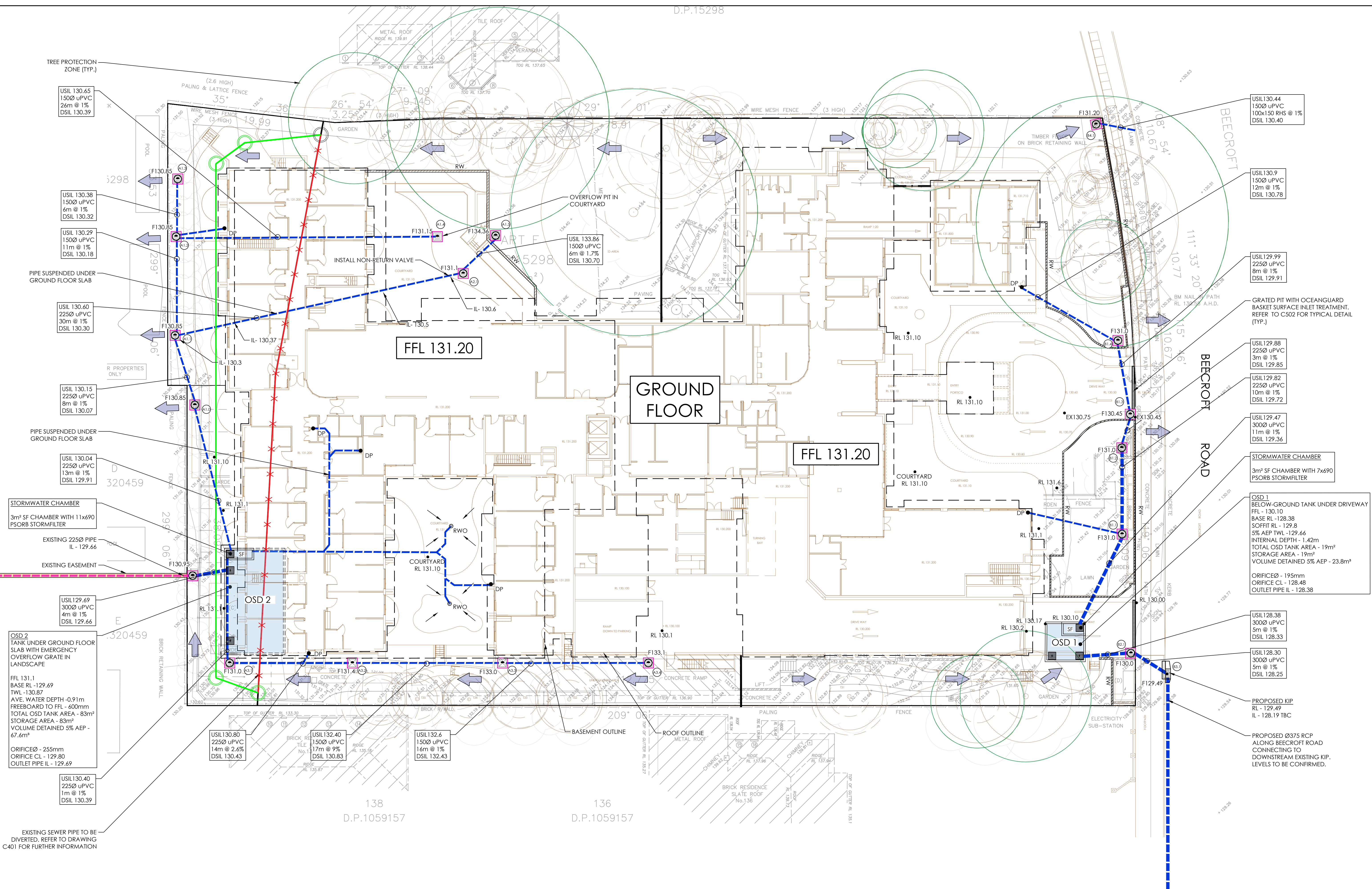
The diagram illustrates a cross-section of a sediment control system. From left to right, it shows: a 'FLOW' line indicating water direction; an 'EARTH BANK' with a dashed line representing its profile; a '2:1 SLOPE MAX' section with a dashed line and a stippled fill pattern; a 'STABILISE STOCKPILE SURFACE' indicated by a dashed line; another '2:1 SLOPE MAX' section with a dashed line and stippled fill; and a 'SEDIMENT FENCE' represented by a vertical line. To the right of the fence is a tree. The ground surface is indicated by a solid line.

1. LOCATE STOCKPILE AT LEAST 5 METRES FROM EXISTING VEGETATION, CONCENTRATED WATER FLOWS, ROADS AND HAZARD AREAS.
2. CONSTRUCT ON THE CONTOUR AS A LOW, FLAT, ELONGATED MOUND.
3. WHERE THERE IS SUFFICIENT AREA TOPSOIL STOCKPILES SHALL BE LESS THAN 2 METERS IN HEIGHT.
4. REHABILITATE IN ACCORDANCE WITH THE SWAMP/ESCP.
5. CONSTRUCT EARTH BANK (STANDARD DRAWING 5-2) ON THE UPSLOPE SIDE TO DIVERT RUN OFF AROUND THE STOCKPILE AND A SEDIMENT FENCE (STANDARD DRAWING 6-7) 1 TO 2 METRES DOWNSLOPE OF STOCKPILE.

— SELF-SUPPORTING GEOTEXTILE

ON SOIL, 150mm X 100mm TRENCH WITH COMPACTED BACKFILL AND ON ROCK, SET INTO SURFACE CONCRETE

Nov 14, 2025 - 4:22am P:\2025 Projects\250159 THC Bioactive Omissions\CivilCAD\250159 Bioactive_C3D1.dwg



					CLIENT		ARCHITECT		CIVIL ENGINEER		PROJECT		NORTH POINT		DRAWING TITLE			
											THOMPSON HEALTH CARE BEECROFT				STORMWATER MANAGEMENT PLAN			
											132-134 BEECROFT ROAD, BEECROFT				DRAWN DR			
															DATE OCT 25			
															SCALE 1:200			
															QA CHECK NP			
															DATE			
															DESIGNED DR			
															PROJECT NO. 250159			
															DRAWING NO. C400			
															ISSUE B			



CLIENT



THOMPSON
HEALTH CARE

CIVIL ENGINEER

ENTEC

CONSULTANTS

NORTH POINT	
-------------	--

DRAWING TITLE				
OSD 2 DETAILS				
DRAWN DR	DATE OCT 25	SCALE AS SHOWN	QA CHECK NP	DATE
DESIGNED DR	PROJECT NO. 250159	DRAWING NO. C500	ISSUE B	

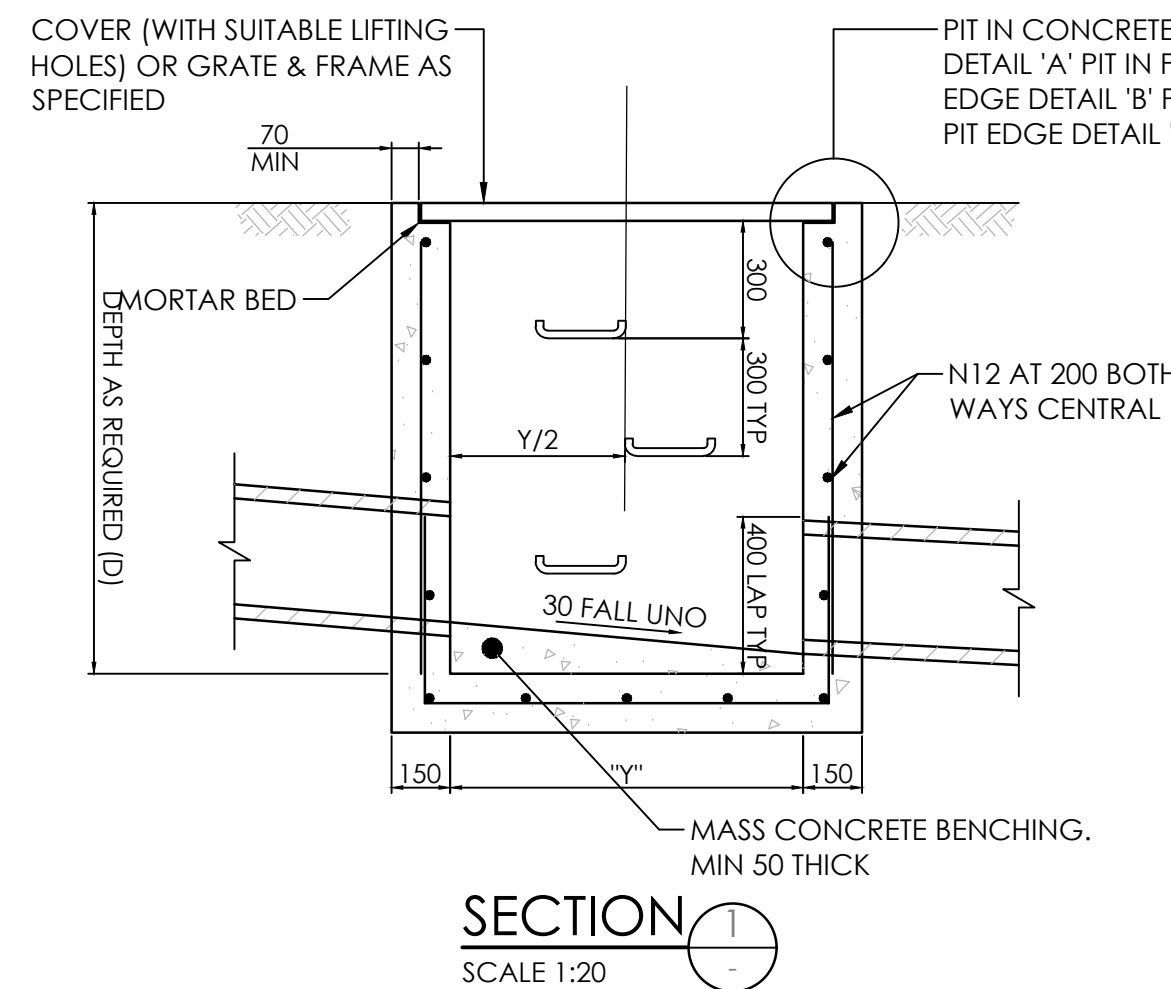
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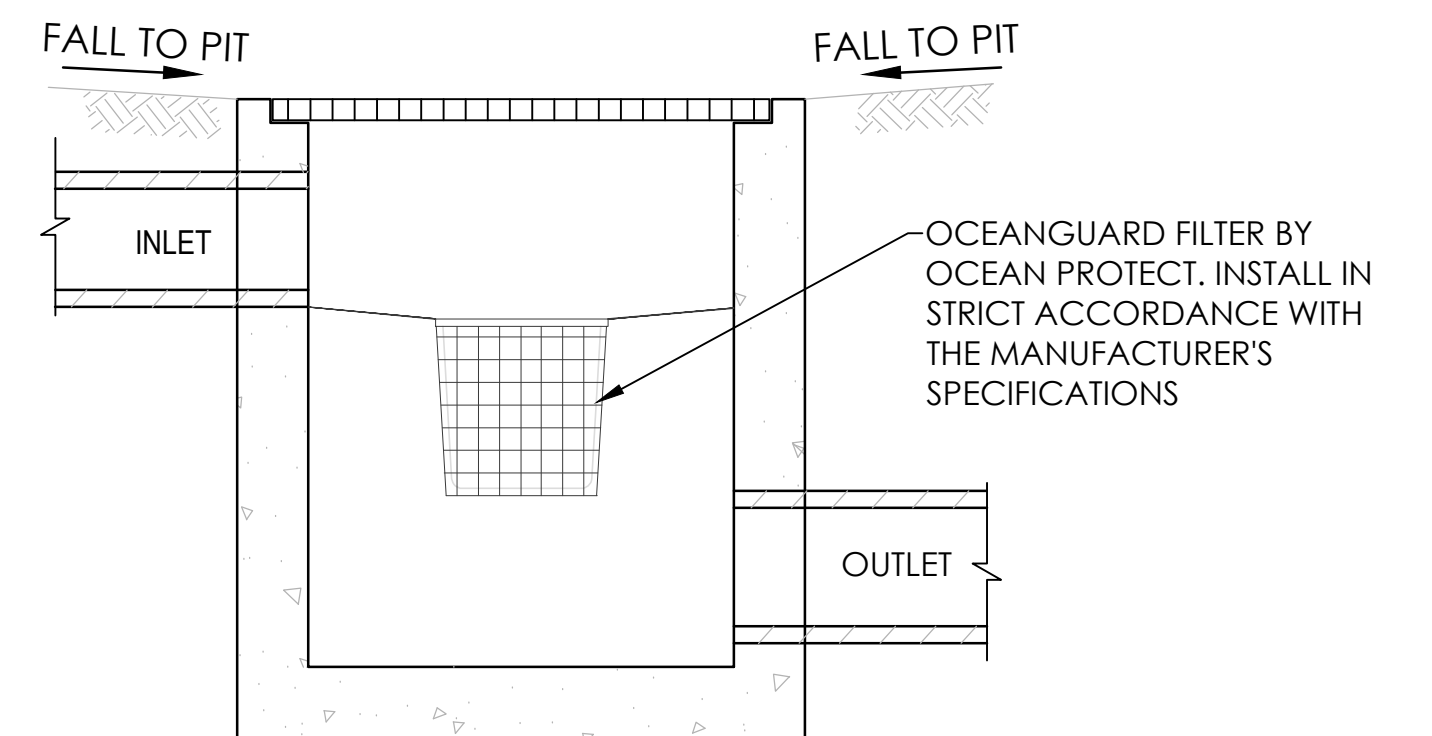


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OSD 2 DETAILS				
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DESIGNED NP	PROJECT NO. 250159		DRAWING NO. C501	ISSUE B



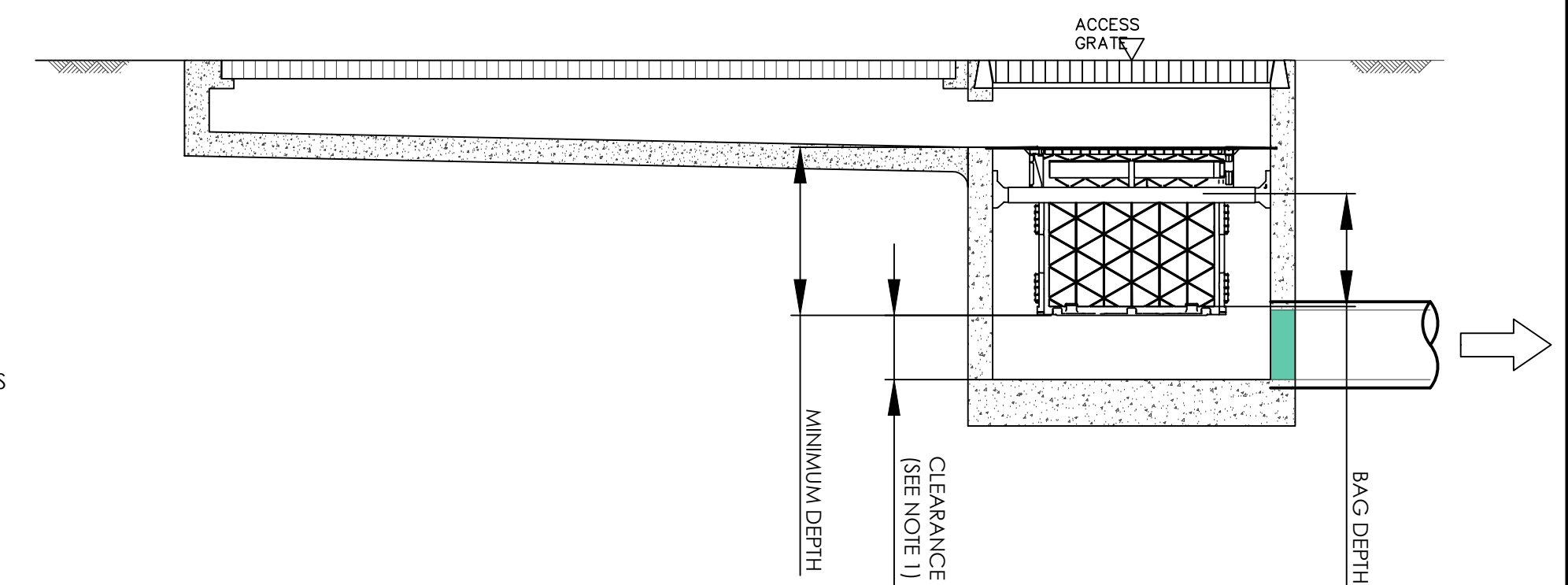
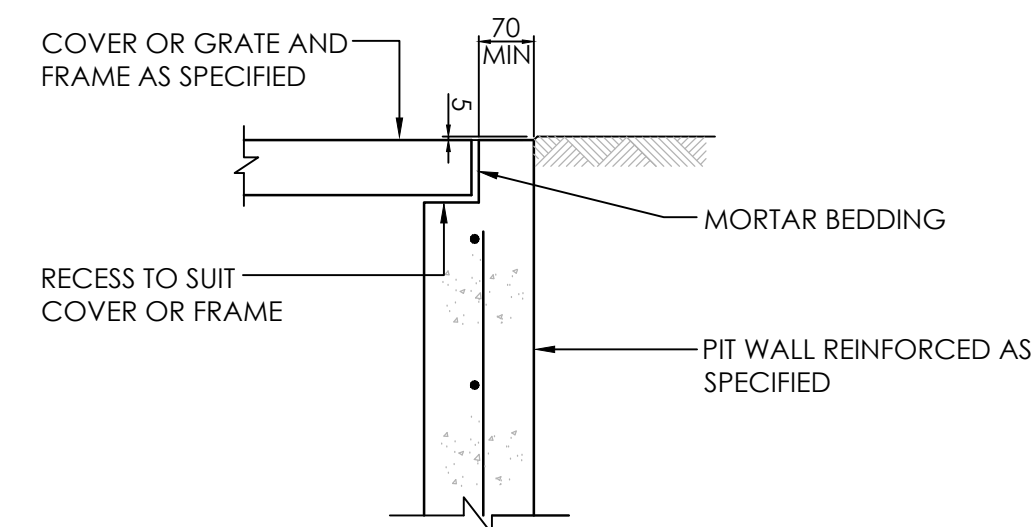
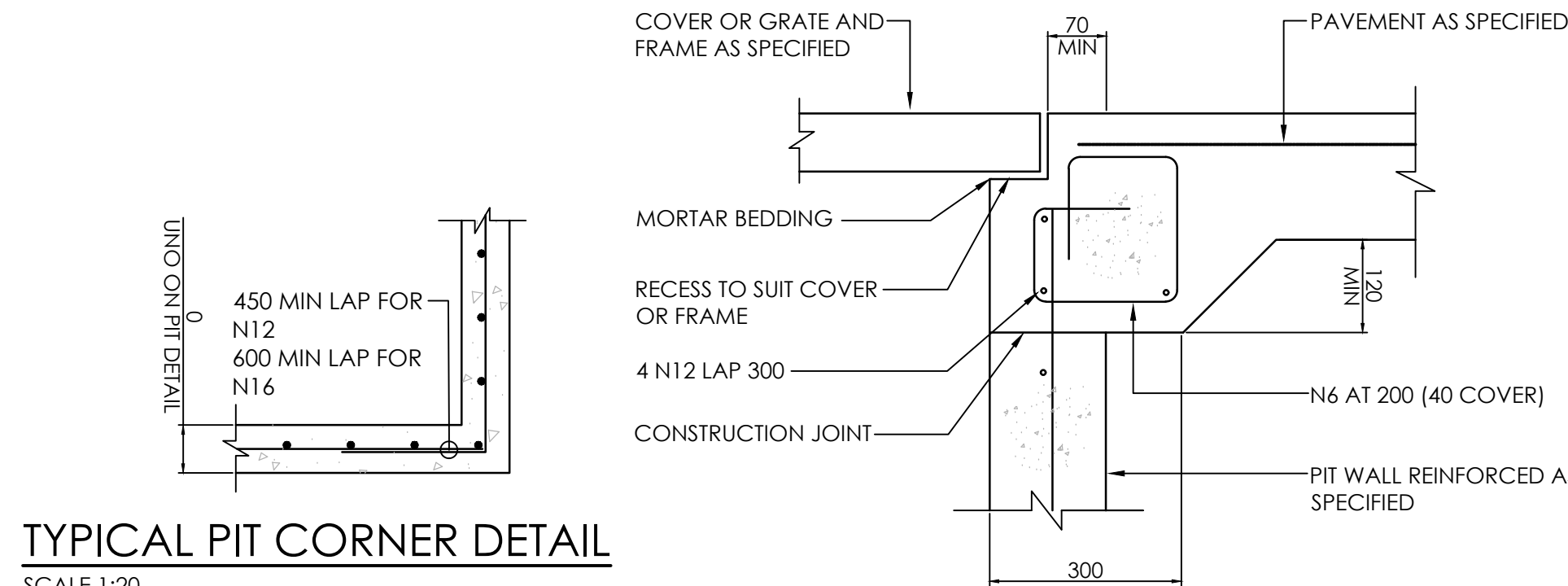
MINIMUM INTERNAL PIT DIMENSIONS		
"D"	"X"	"Y"
D ≤ 600	450	450*
D ≤ 900	600	600*
D ≤ 1200	600	900
D > 1200	900	900

NOTE
PITS DENOTED * SHALL BE USED ONLY WHERE SPECIFIED IN DRAINAGE SCHEDULE OR ON PLAN.



TYPICAL OCEANGUARD ARRANGEMENT
DETAIL - DOWNPIPE CONNECTION / DROP PIT

NOT TO SCALE
NOTE:
REFER TO MANUFACTURER'S DRAWINGS FOR
OCEANGUARD FILTER ARRANGEMENT AND
COMPONENTS DETAILS



STORMWATER TRENCH DETAIL

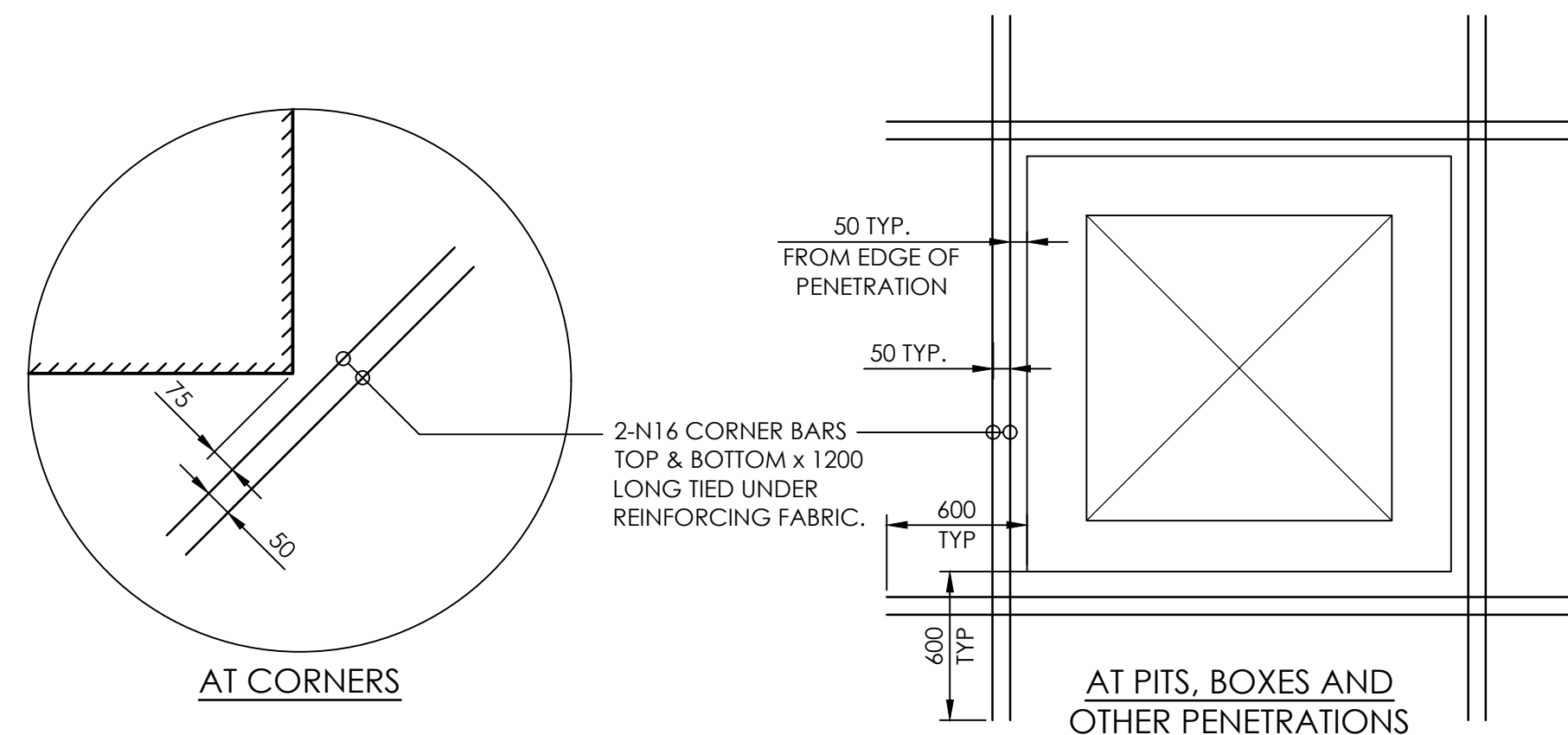
BEDDING MATERIAL FOR THE BED, HAUNCH AND SIDE ZONES AND OVERLAY UP TO A MINIMUM OF 150mm FROM TOP OF THE PIPE SHALL CONSIST OF 20mm AGGREGATE CONSISTING OF CLEAN HARD DURABLE MATERIAL HAVING A GRADING COMPLYING WITH TABLE BELOW

RECYCLED CONCRETE AGGREGATE SHALL ONLY BE USED WHERE THE MATERIAL IS CERTIFIED FREE FROM FOREIGN MATTER SUCH AS REINFORCING STEEL, CEMENT DUST, TIMBER AND OTHER WASTE MATERIALS.

		PIPE SUPPORT						
		U	H1	H2	H3	HS1	HS2	HS3
Dimension (minimum)	X	75 on rock Nil on soil	100 for D < 150 150 for D > 1500		0.25 D BUT < 100	100 for D < 150 150 for D > 1500		
	Y	-	0.1D	0.3D	0.3D	0.1D	0.3D	0.3D
	Z	-	-	-	-			≥ 0.7D

D = External diameter of pipe

PIPE INSTALLATION DIMENSIONS



TYPICAL TRIMMER BAR DETAIL

1. TRIMMER BARS TO BE CONSTRUCTED AT ALL PENETRATIONS IN VEHICULAR CONCRETE PAVEMENTS INCLUDING BUT NOT LIMITED TO:
 - ALL SERVICE PITS
 - ALL DRAINAGE STRUCTURES
 - ALL VALVE BOXES
 - ALL BOLLARDS
 - ALL PROTRUDING CORNERS OF STRUCTURES OR SLABS
 - ALL COLUMNS PENETRATING CONCRETE PAVEMENT
2. CONSTRUCT 2-N16 TRIMMER BARS (1200LONG, TOP AND BOTTOM) AT ALL MISMATCHED OR DISCONTINUOUS JOINTS, TYPICAL

PIT SCHEDULE				
SIZE	PIT AND LID TYPE	CLASS	PIT NUMBER	COMMENT
450 x450	SURFACE INLET PIT	B	A3.4, A1.5, A2.1, A1.4,A1.3, A1.2	
450 x450	JUNCTION PIT WITH CONCRETE INFILL LID	B	A3.3,A3.2	
600 x 600	SURFACE INLET PIT	B	A3.1,A1.1, A1.0	
600 x 600	SURFACE INLET PIT	D	B1.3	
900 x 900	SURFACE INLET PIT	D	B2.1	
900 x 900	SURFACE INLET PIT	B	B4.1, B1.4, B1.2, B1.1, A4.1	
KIP	KERB INLET PIT		B3.1	IN ACCORDANCE WITH COUNCIL'S STANDARD DRAWINGS

PIT SCHEDULE

B	ISSUE FOR SSDA	14.11.25	DR	NP
A	ISSUE FOR DRAFT SSDA	07.10.25	DR	NP
ISSUE	AMENDMENT	DATE	DRAWN	APP

CLIENT



ARCHITECT

mdp
architecture

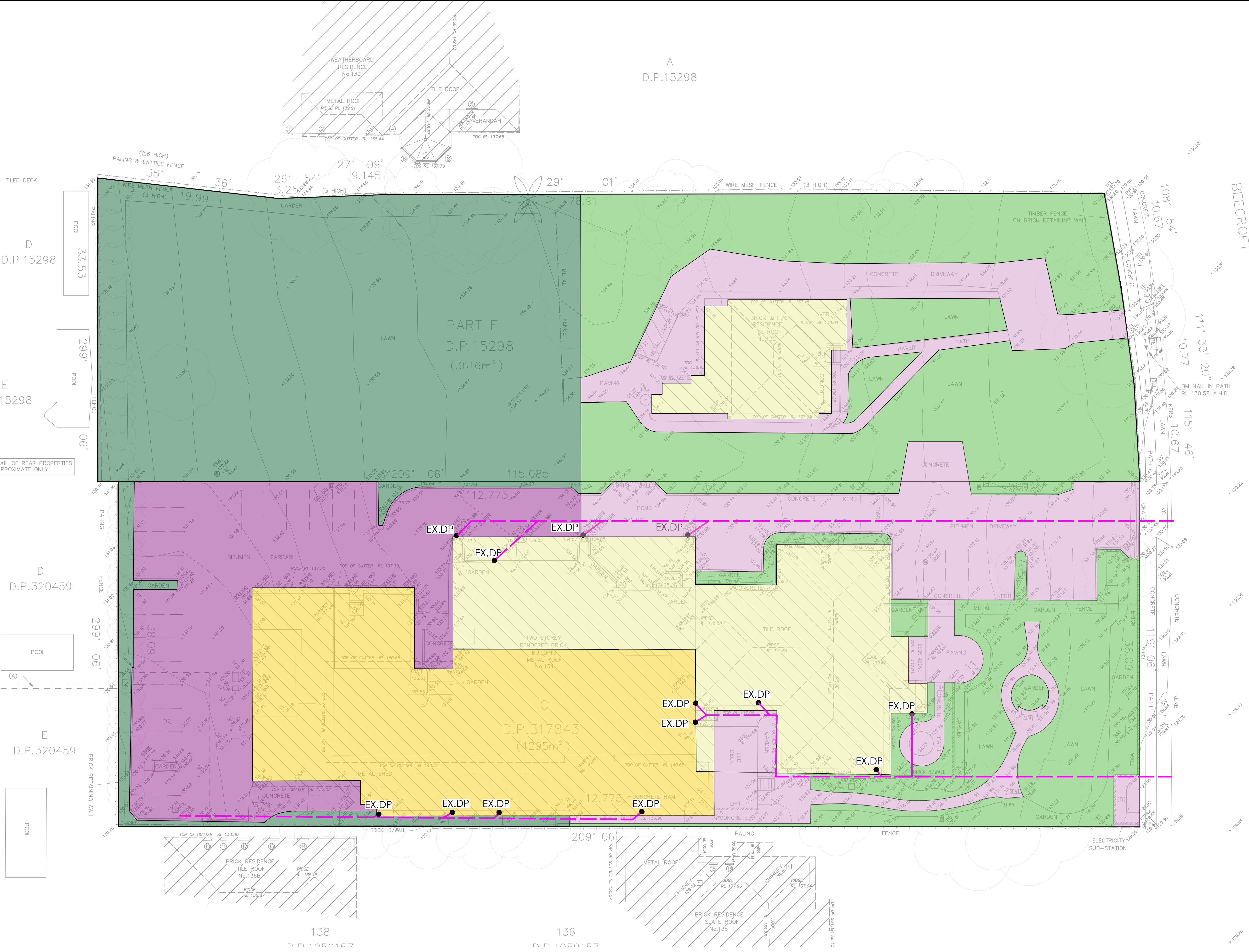
CIVIL ENGINEER

ENTEC

CONSULTANTS

PROJECT
THOMPSON HEALTH CARE
BEECROFT
132-134 BEECROFT ROAD,
BEECROFT

NORTH POINT	DRAWING TITLE				
	TYPICAL DETAILS				
	DRAWN DR	DATE OCT 25	SCALE AS SHOWN	QA CHECK NP	DATE
	DESIGNED DR	PROJECT NO. 250159	DRAWING NO. C502		ISSUE B



LEGEND

PRE - DEVELOPMENT AREA

TOTAL SITE AREA = 7911 (m²)

EXISTING CATCHMENT TO FRONT

TOTAL AREA : 4183m²

IMPERVIOUS AREA : 2268m² (52%)

PERVIOUS AREA : 1928m² (48%)

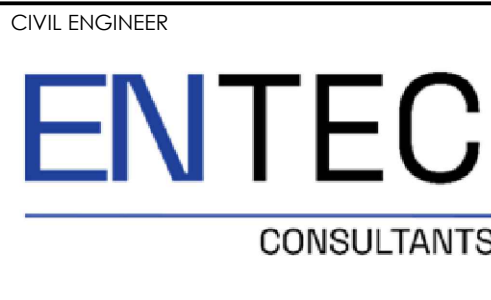
EXISTING CATCHMENT TO REAR

TOTAL AREA : 3714m²

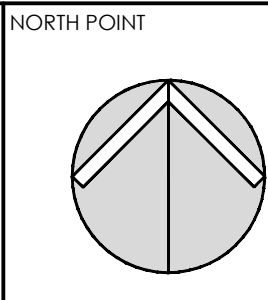
IMPERVIOUS AREA : 1874m² (50%)

PERVIOUS AREA : 1839m² (50%)

ISSUE	AMENDMENT	DATE	DRAWN	APP
B	ISSUE FOR SSDA	14.11.25	DR	NP
A	ISSUE FOR SSDA	07.10.25	DR	NP



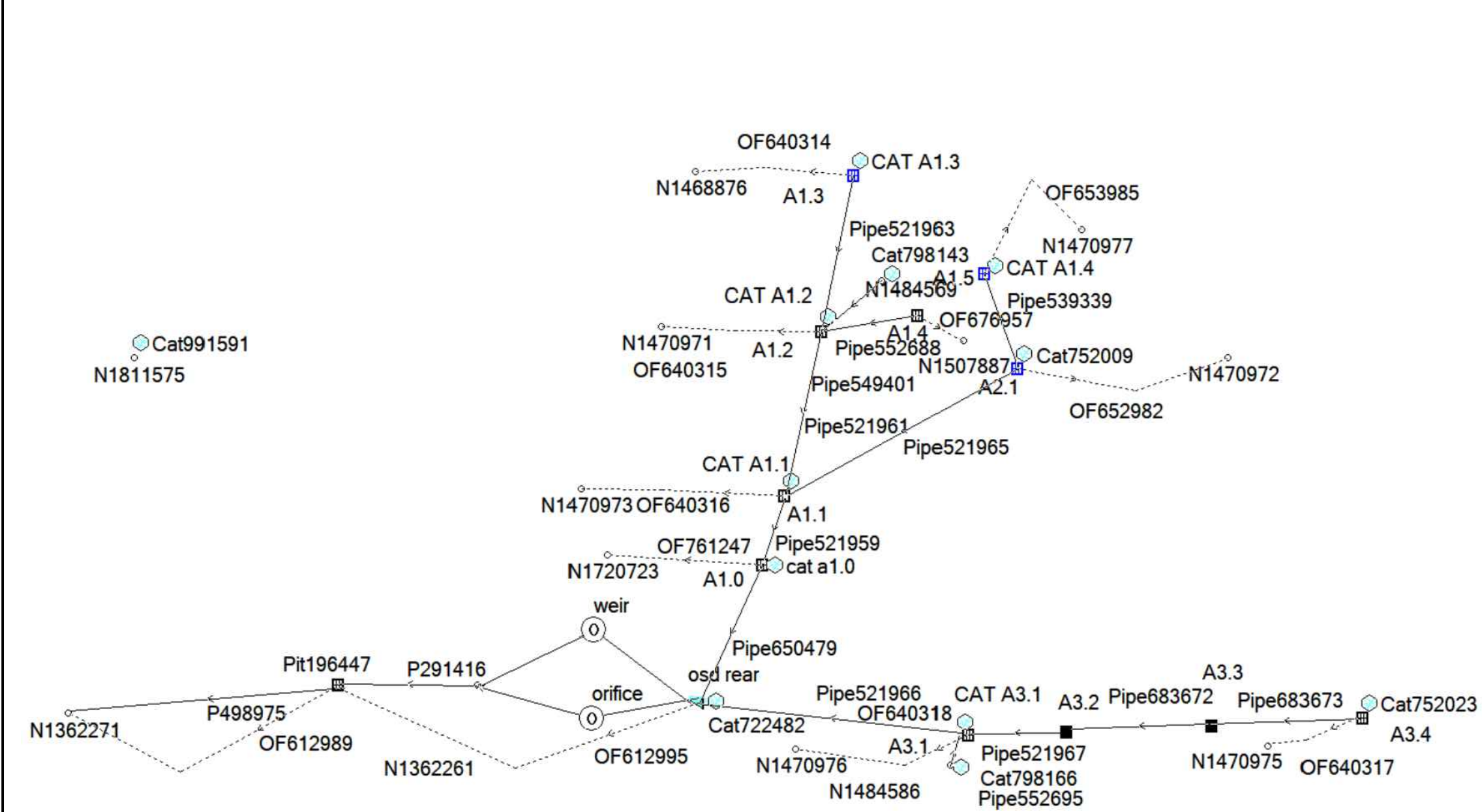
PROJECT
THOMPSON HEALTH CARE
BEECROFT
132-134 BEECROFT ROAD,
BEECROFT



DRAWING TITLE					
PRE-DEV CATCHMENT PLAN					
DRAWN DR	DATE OCT 25	SCALE 1:200	A1	QA CHECK NP	DATE
DESIGNED NP	PROJECT NO. 250159	DRAWING NO. C600	ISSUE B		

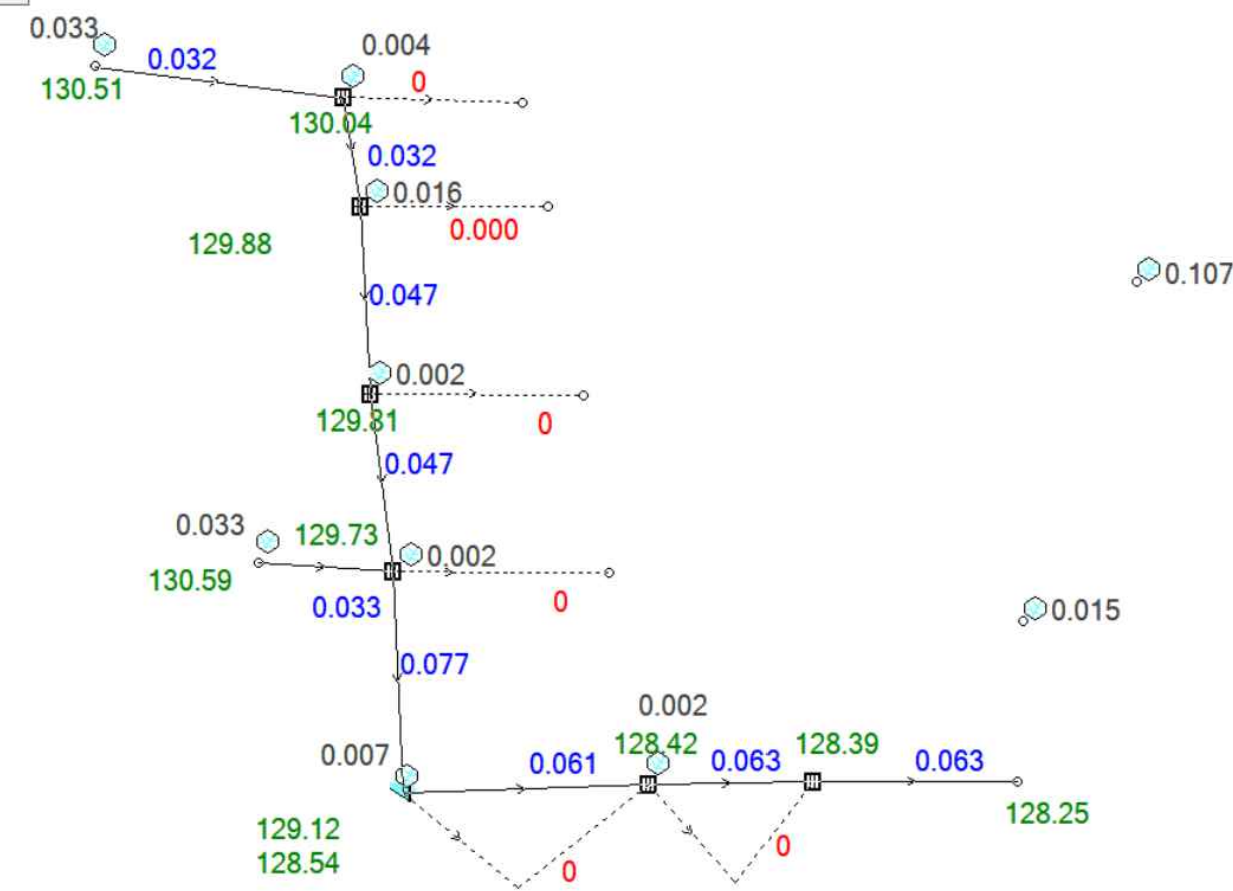


DRAWING TITLE				
POST-DEV CATCHMENT PLAN				
DRAWN DR	DATE AUG 25	SCALE 1:200	QA CHECK NP	DATE
DESIGNED NP	PROJECT NO. 250159		DRAWING NO. C601	ISSUE B



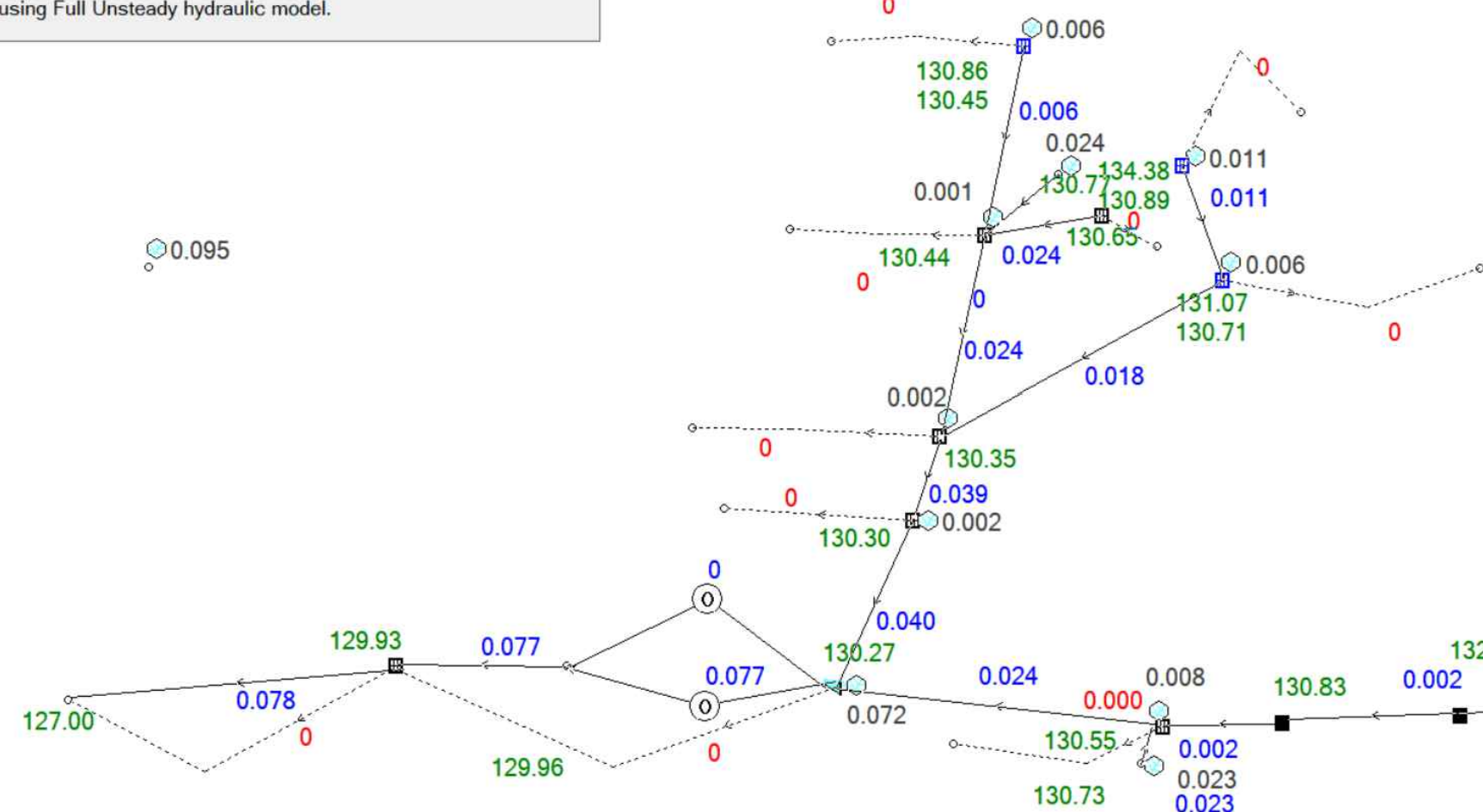
Drains Model - OSD 2

Results for median storm in critical 20% AEP ensembles using Full Unsteady hydraulic model.



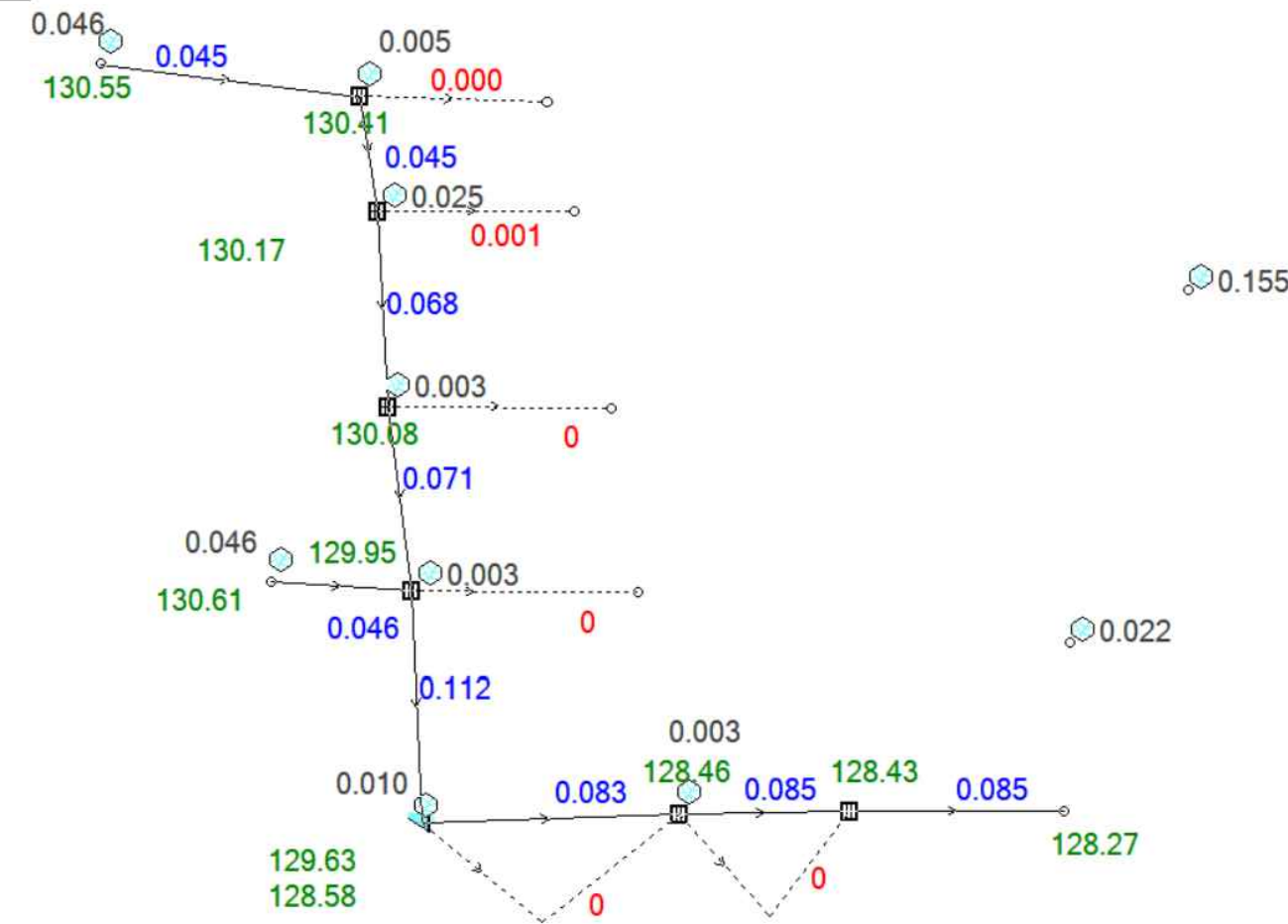
Drains Model Result - OSD 1 20% AEP

Results for median storm in critical 20% AEP ensembles using Full Unsteady hydraulic model.



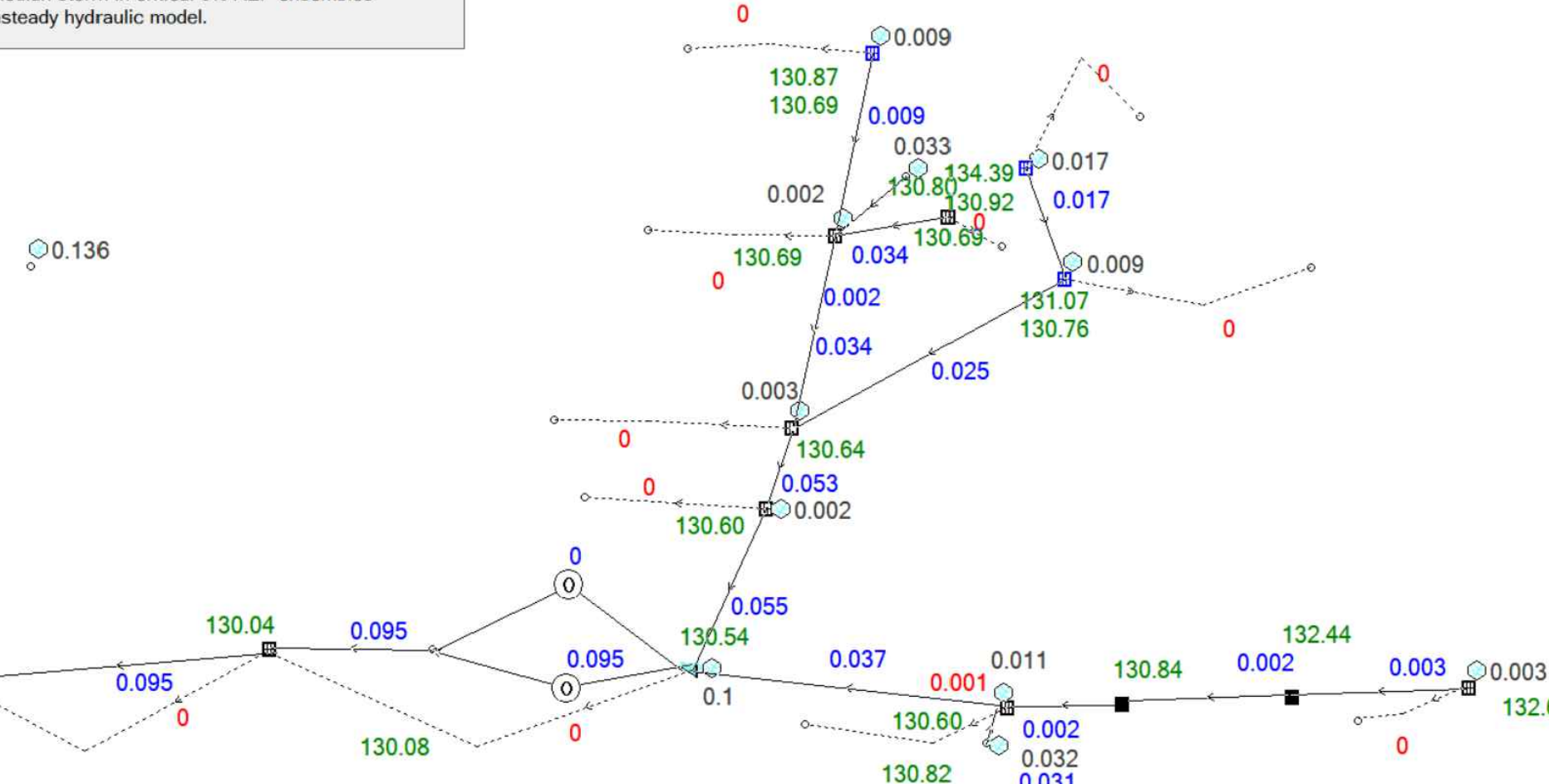
Drains Model Result - OSD 2 20% AEP

Results for median storm in critical 5% AEP ensembles using Full Unsteady hydraulic model.

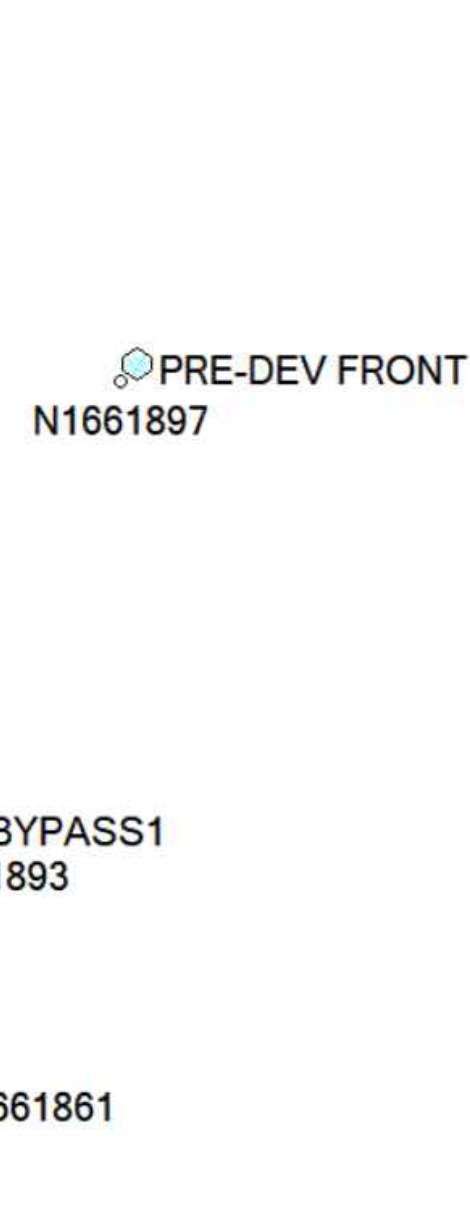


Drains Model Result - OSD 1 5% AEP

Results for median storm in critical 5% AEP ensembles using Full Unsteady hydraulic model.

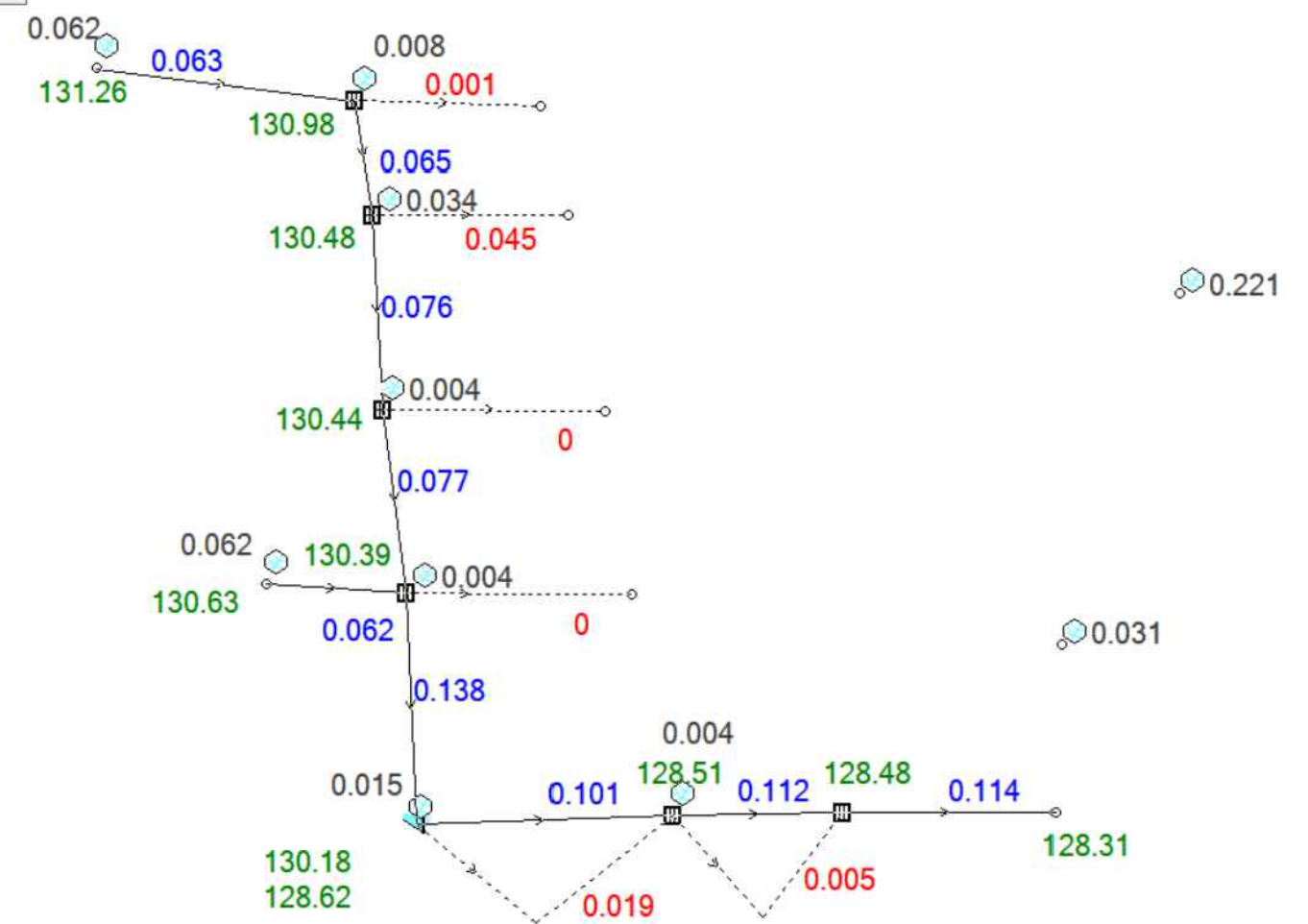


Drains Model Result - OSD 2 5% AEP



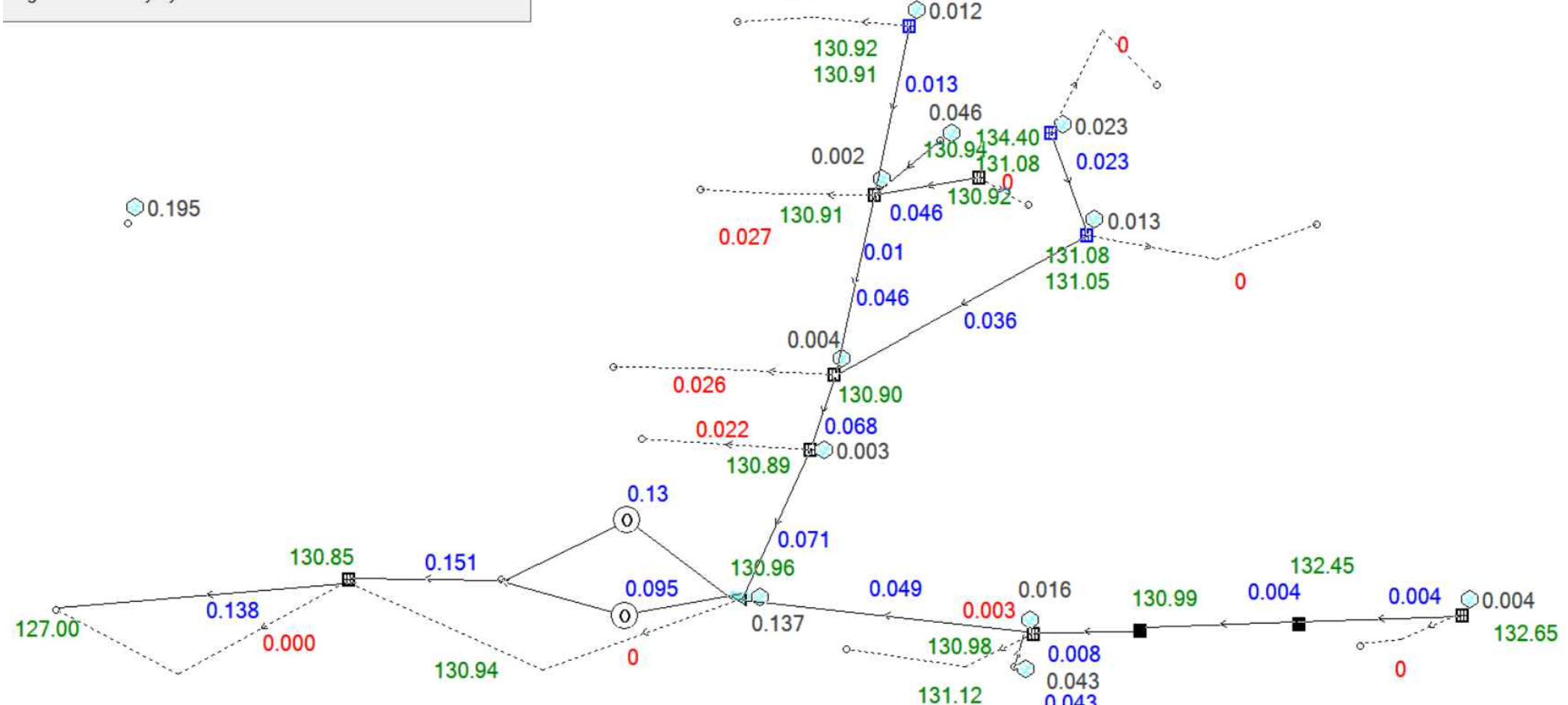
Drains Model - OSD 1

Results for median storm in critical 1% AEP ensembles using Full Unsteady hydraulic model.



Drains Model Result - OSD 1 1% AEP

Results for median storm in critical 1% AEP ensembles using Full Unsteady hydraulic model.



Drains Model Result - OSD 2 1% AEP

PRE - DEVELOPMENT	FLOWS (L/s)
Q ₅ = 20% AEP	107
Q ₂₀ = 5% AEP	155
Q ₁₀₀ = 1% AEP	221
POST - DEVELOPMENT	FLOWS (L/s)
Q ₅ = 20% AEP	78
Q ₂₀ = 5% AEP	107
Q ₁₀₀ = 1% AEP	191

OSD 1 DRAINS RESULT SUMMARY

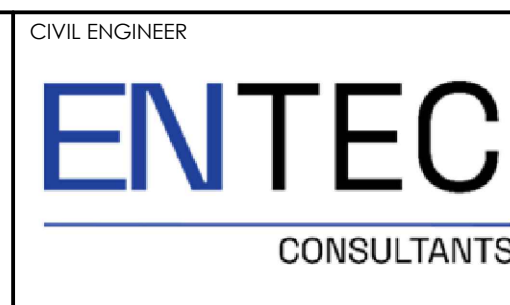
PRE - DEVELOPMENT	FLOWS (L/s)
Q ₅ = 20% AEP	95
Q ₂₀ = 5% AEP	136
Q ₁₀₀ = 1% AEP	195
POST - DEVELOPMENT	FLOWS (L/s)
Q ₅ = 20% AEP	78
Q ₂₀ = 5% AEP	95
Q ₁₀₀ = 1% AEP	221

OSD 2 DRAINS RESULT SUMMARY

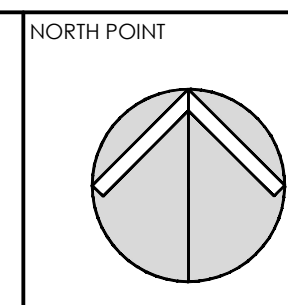
PRE - DEVELOPMENT	FLOWS (L/s)
Q ₅ = 20% AEP	202
Q ₂₀ = 5% AEP	291
Q ₁₀₀ = 1% AEP	416
POST - DEVELOPMENT	FLOWS (L/s)
Q ₅ = 20% AEP	156
Q ₂₀ = 5% AEP	202
Q ₁₀₀ = 1% AEP	412

DRAINS RESULT SUMMARY - SITE TOTAL

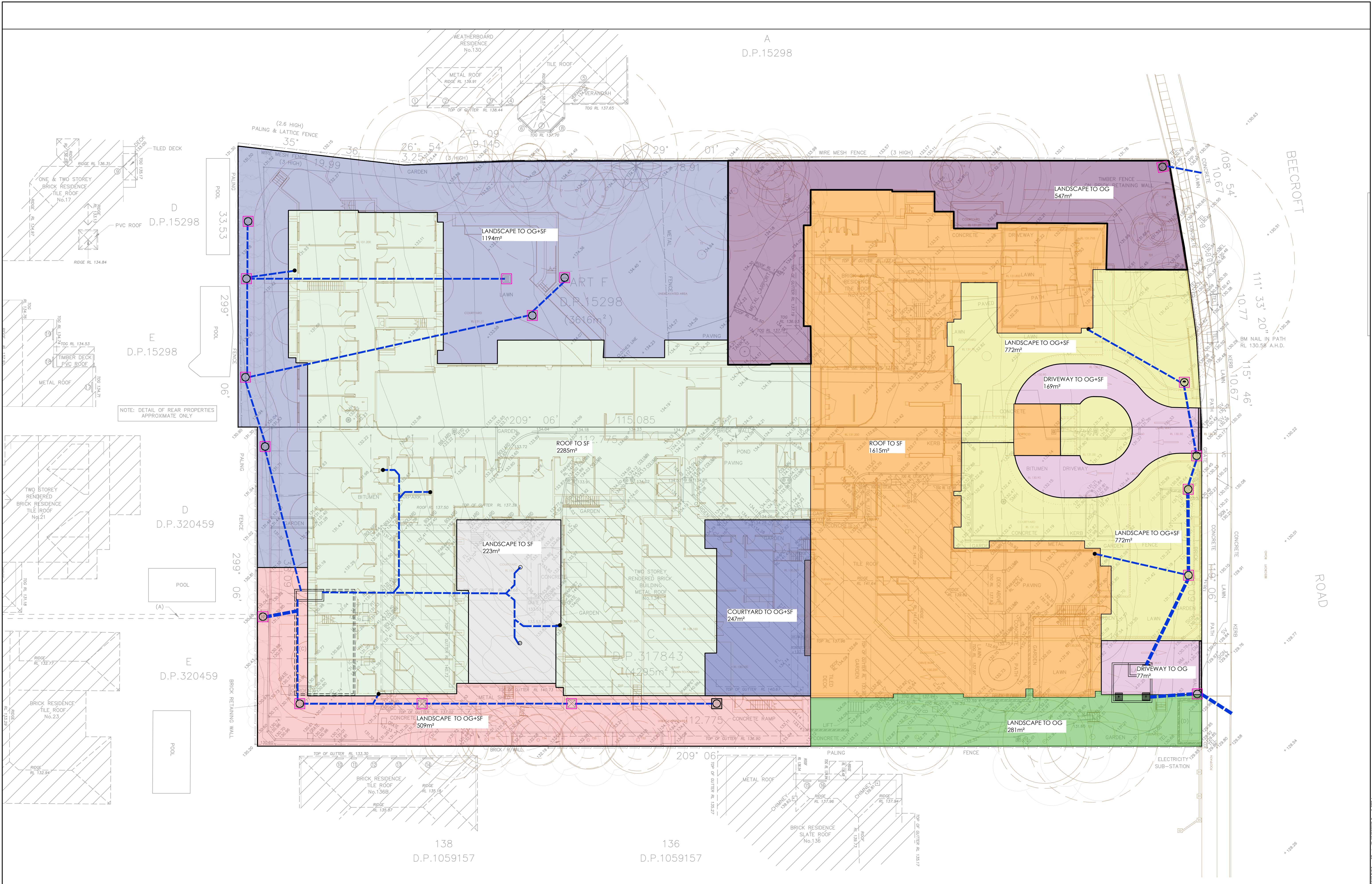
B	ISSUE FOR SSDA	14.11.25	DR	NP	
A	ISSUE FOR DRAFT SSDA	07.10.25	DR	NP	
ISSUE	AMENDMENT	DATE	DRAWN	APP	



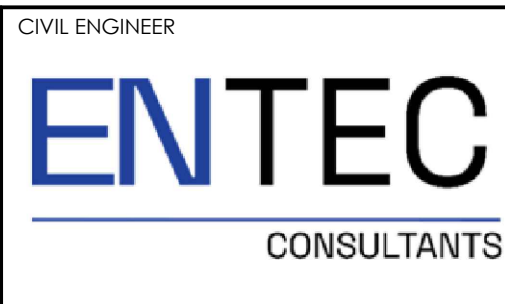
PROJECT
THOMPSON HEALTH CARE
BEECROFT
132-134 BEECROFT ROAD,
BEECROFT



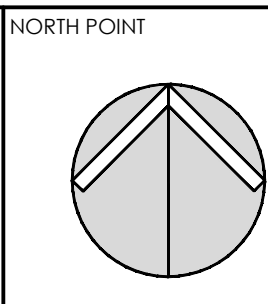
DRAWING TITLE					
DRAINS MODEL RESULTS					
DRAWN DR	DATE OCT 25	SCALE 1:200	A1	QA CHECK NP	DATE
DESIGNED DR	PROJECT NO. 250159	DRAWING NO. C602	ISSUE B		



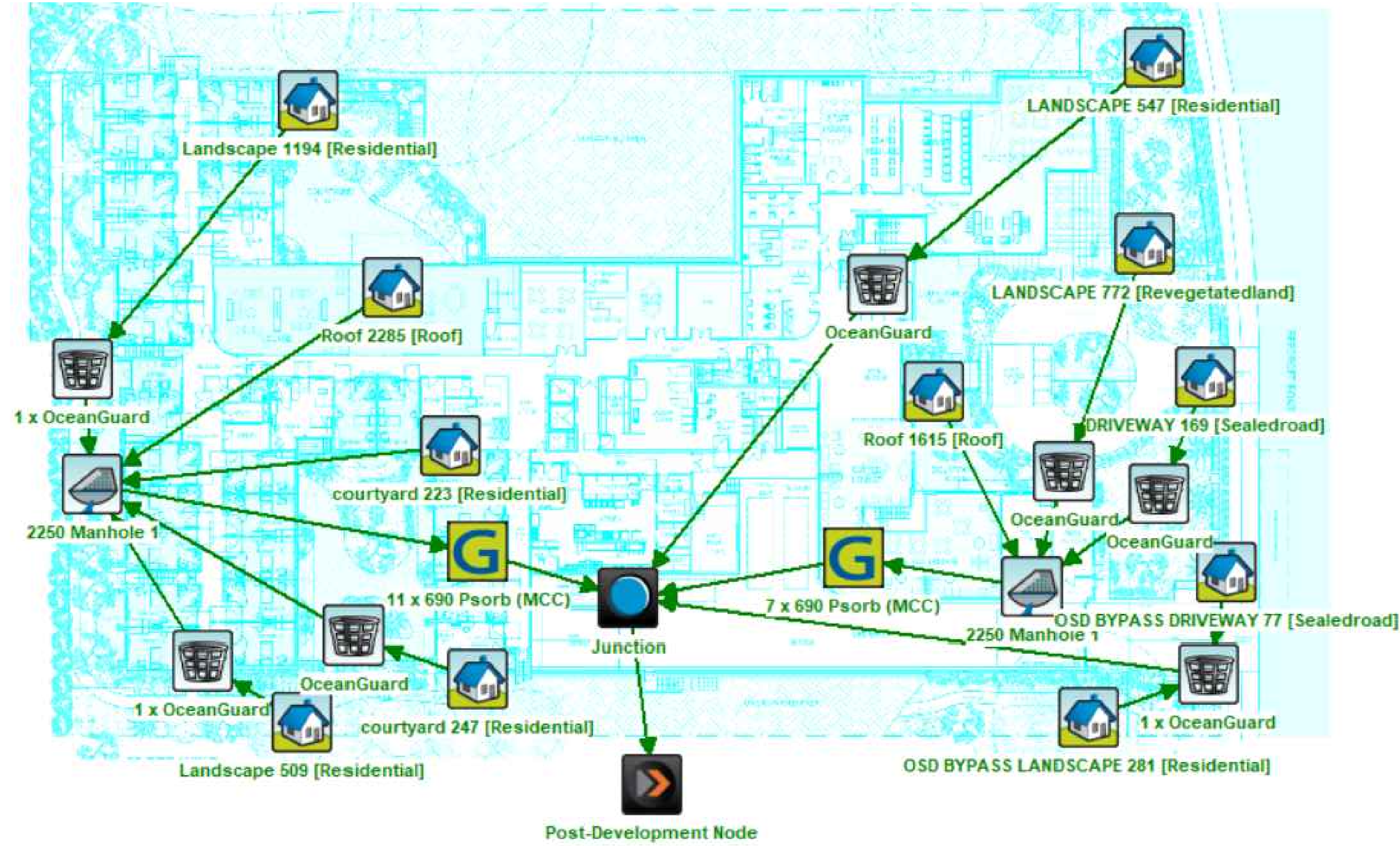
B	ISSUE FOR SSDA	14.11.25	DR	NP	
A	ISSUE FOR DRAFT SSDA	07.10.25	DR	NP	
ISSUE	AMENDMENT	DATE	DRAWN	APP	



PROJECT
THOMPSON HEALTH CARE
BEECROFT
132-134 BEECROFT ROAD,
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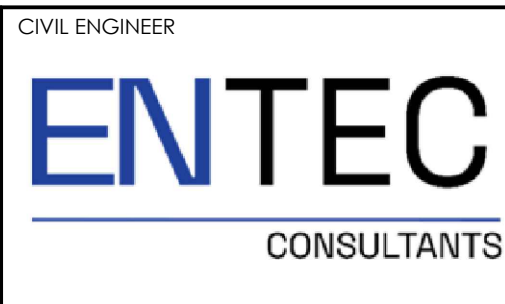
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DRAWN DR	DATE OCT 2025	SCALE 1:200	A1	QA CHECK NP	DATE
DESIGNED DR	PROJECT NO. 250159	DRAWING NO. C700	ISSUE B		



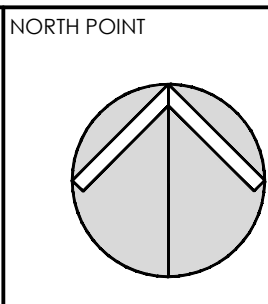
Treatment Train Effectiveness - Post-Development Node			
	Sources	Residual Load	% Reduction
Flow (ML/yr)	6.7	6.7	0
Total Suspended Solids (kg/yr)	419	62.8	85
Total Phosphorus (kg/yr)	1.29	0.393	69.5
Total Nitrogen (kg/yr)	13.9	7.26	47.6
Gross Pollutants (kg/yr)	145	0.00232	100

Parameter	Target
Flow (ML/yr)	
Total Suspended Solids (kg/yr)	85%
Total Phosphorus (kg/yr)	60%
Total Nitrogen (kg/yr)	45%
Gross Pollutants (kg/yr)	100%

B	ISSUE FOR SSDA	14.11.25	DR	NP	
A	ISSUE FOR DRAFT SSDA	07.10.25	DR	NP	
ISSUE	AMENDMENT	DATE	DRAWN	APP	



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DRAWING TITLE MUSIC MODEL RESULTS					
DRAWN DR	DATE OCT 2025	SCALE A1	QA CHECK NP	DATE	
DESIGNED DR	PROJECT NO. 250159	DRAWING NO. C701	ISSUE B		