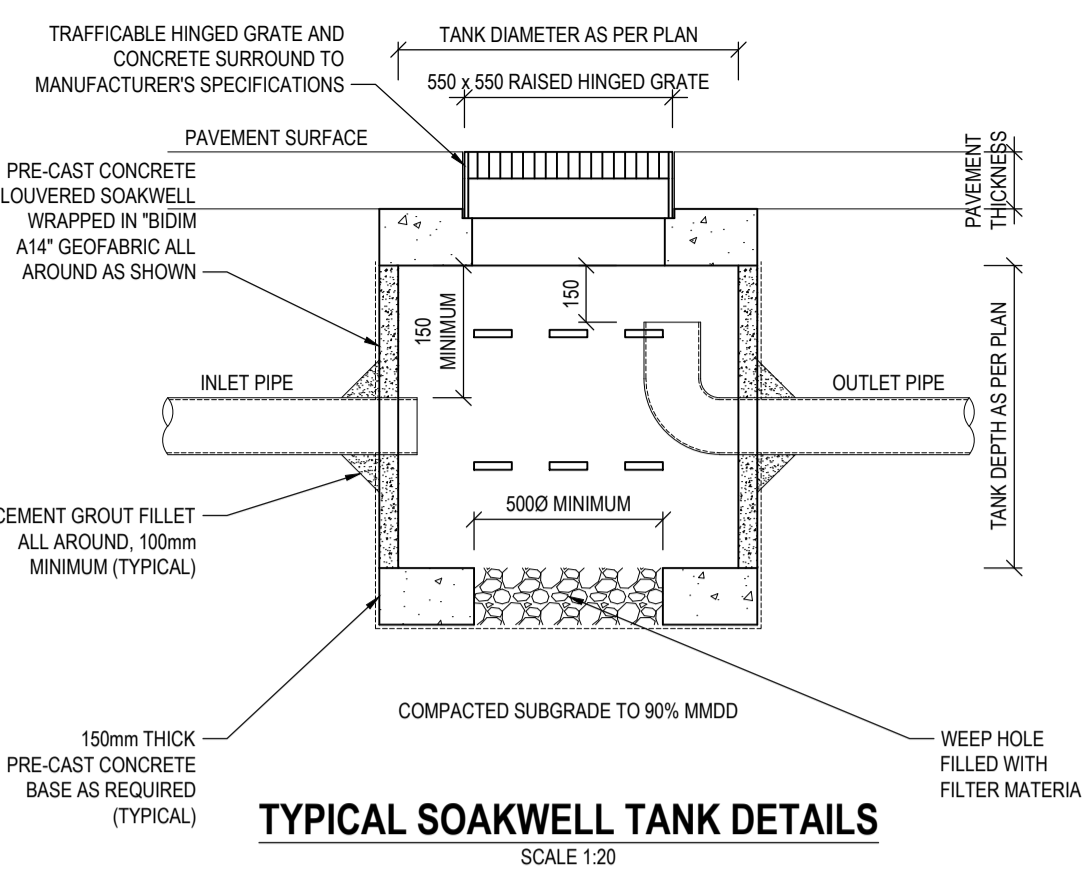
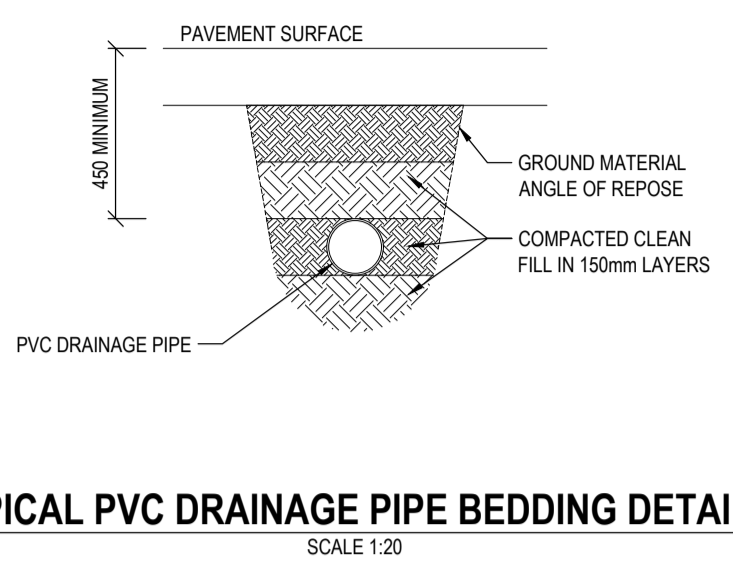


**TYPICAL SOAKWELL TANK PLAN**  
SCALE 1:20



**TYPICAL SOAKWELL TANK DETAILS**  
SCALE 1:20



**TYPICAL PVC DRAINAGE PIPE BEDDING DETAILS**  
SCALE 1:20

**STORMWATER DRAINAGE CALCULATIONS (TYPICAL PER BUILDING)**

ARI 1:100

Total Impervious Area 1400 sqm  
Run-off Coefficient 0.9  
Factored Impervious Area 1260 sqm

Time of Concentration (tc) Calculation  
Maximum Distance 20 m  
Roughness Factor (n) 0.016  
Slope 0.025 m/m

Duration (mins)	Duration (hrs)	Intensity (mm/hr)	tc (minutes)
6	0.10	176.00	1.34
10	0.17	139.00	1.47
15	0.25	112.00	1.60
30	0.50	74.10	1.89
60	1.00	48.30	2.25
120	2.00	31.80	2.66
180	3.00	25.00	2.92
360	6.00	16.40	3.46
720	12.00	10.20	4.18
1440	24.00	5.92	5.20
2880	48.00	3.16	6.69
4320	72.00	2.17	7.77
<b>Maximum</b>			<b>7.77</b>

- GENERAL NOTES:**
- DATUM IS LOCAL AND TO BE VERIFIED ON SITE.
  - CHECK ALL DIMENSIONS ON SITE. READ ALL ENGINEERING DRAWINGS IN CONJUNCTION WITH ARCHITECTURAL & SURVEY DRAWINGS. ANY DISCREPANCIES BETWEEN ENGINEERING DRAWINGS AND ARCHITECTURAL DRAWINGS SHALL BE CONFIRMED PRIOR TO COMMENCING CONSTRUCTION. DO NOT SCALE FROM THESE DRAWINGS.
  - ALL WORK TO BE IN ACCORDANCE WITH "AS3500-2003 PLUMBING & DRAINAGE", THE "BUILDING CODE OF AUSTRALIA" AND THE LOCAL AUTHORITY'S STANDARD SPECIFICATIONS.
  - LOT CONNECTION PIT (WHEN APPLICABLE) TO LOCAL AUTHORITY SPECIFICATIONS.
  - WHERE MANHOLES ARE LOCATED IN THE AREAS SUBJECT TO VEHICULAR LOADING, STANDARD TRAFFICABLE LIDS ARE TO BE INSTALLED & BASED TO BUILDER'S DETAIL.
  - ALL DRAINAGE PIPEWORK SHALL BE PVC CLASS HD STORMWATER, UNLESS WHERE LOCATED UNDERNEATH ANY STRUCTURES PIPEWORK SHALL BE PVC SEWER CLASS S8.
  - ALIGNMENT OF PIPES SHALL BE AS SHOWN ON THE PLAN & SHALL BE TO THE PIPE OR MANHOLE CENTRELINE.
  - BEFORE CONSTRUCTION COMMENCES, THE CONTRACTOR SHALL:
    - CHECK ON SITE THE LOCATION OF THE EXISTING SERVICES WITH THE APPROPRIATE AUTHORITY. ENSURE PROPOSED STORMWATER PIPE DOES NOT CLASH WITH ANY EXISTING SERVICES.
    - ARRANGE FOR THE LOCATION AND THE LEVEL OF THE CONNECTION POINT TO EXISTING STORMWATER MANHOLE TO BE VERIFIED BY A SURVEYOR.
    - CONFIRM THAT BOUNDARY PEGS OR OTHER SURVEY REFERENCE POINTS TO BE USED IN SETTING OUT OF THE PROJECT ARE LOCATED IN THE CORRECT POSITIONS.
    - ENSURE A PERMIT & REINSTATEMENT SPECIFICATIONS ARE OBTAINED FROM THE LOCAL AUTHORITY IF EXCAVATION WILL BE IN A ROAD RESERVE OR RIGHT OF WAY.
    - ENSURE ALL DETAILS HAVE BEEN CHECKED AND THAT NO DISCREPANCIES EXIST. ALL QUERIES AND DISCREPANCIES ARE TO BE RESOLVED PRIOR TO COMMENCING WORKS.
  - ALL EXCAVATIONS SHALL BE SECURED & MADE SAFE IN ACCORDANCE WITH REQUIREMENTS OF THE OCCUPATIONAL SAFETY & HEALTH ACT OF 1984, THE OCCUPATIONAL SAFETY & HEALTH REGULATION 1996 & OF ANY RELEVANT REGULATORY BODY.
  - PROPERTIES WHICH HAVE BEEN EXCAVATED SHALL BE RETURNED TO AT LEAST A SIMILAR CONDITION TO THAT WHICH EXISTED PRIOR TO CONSTRUCTION.
  - TRENCH BACKFILL SHALL BE CLEAN GRANULAR MATERIAL, COMPACTED TO A LEVEL NOT LESS THAN THAT OF THE SURROUNDING UNDISTURBED GROUND. FOR THE FULL DEPTH OF EXCAVATION. BACKFILL UNDER ROADS SHALL BE COMPACTED TO THE REQUIREMENTS OF THE LOCAL AUTHORITY.
  - ALL CONNECTION INTO EXISTING LOCAL AUTHORITY STORMWATER ARE TO BE CARRIED OUT BY THE CONTRACTOR TO LOCAL AUTHORITY SPECIFICATIONS.
  - THIS STORM WATER DESIGN IS TO BE READ IN CONJUNCTION WITH THE BUILDER'S ARCHITECTURAL DRAWINGS (PARTIALLY REPRODUCED HERE).
  - CLIENT IS TO ENSURE LOCAL AUTHORITY HAVE APPROVED THESE DRAWINGS BEFORE BEING ISSUED FOR PRICING, TENDER & CONSTRUCTION.

Storm Duration 8 minutes  
Rainfall Intensity 155 mm/hr  
Volume for On-site Storage 26.04 cum

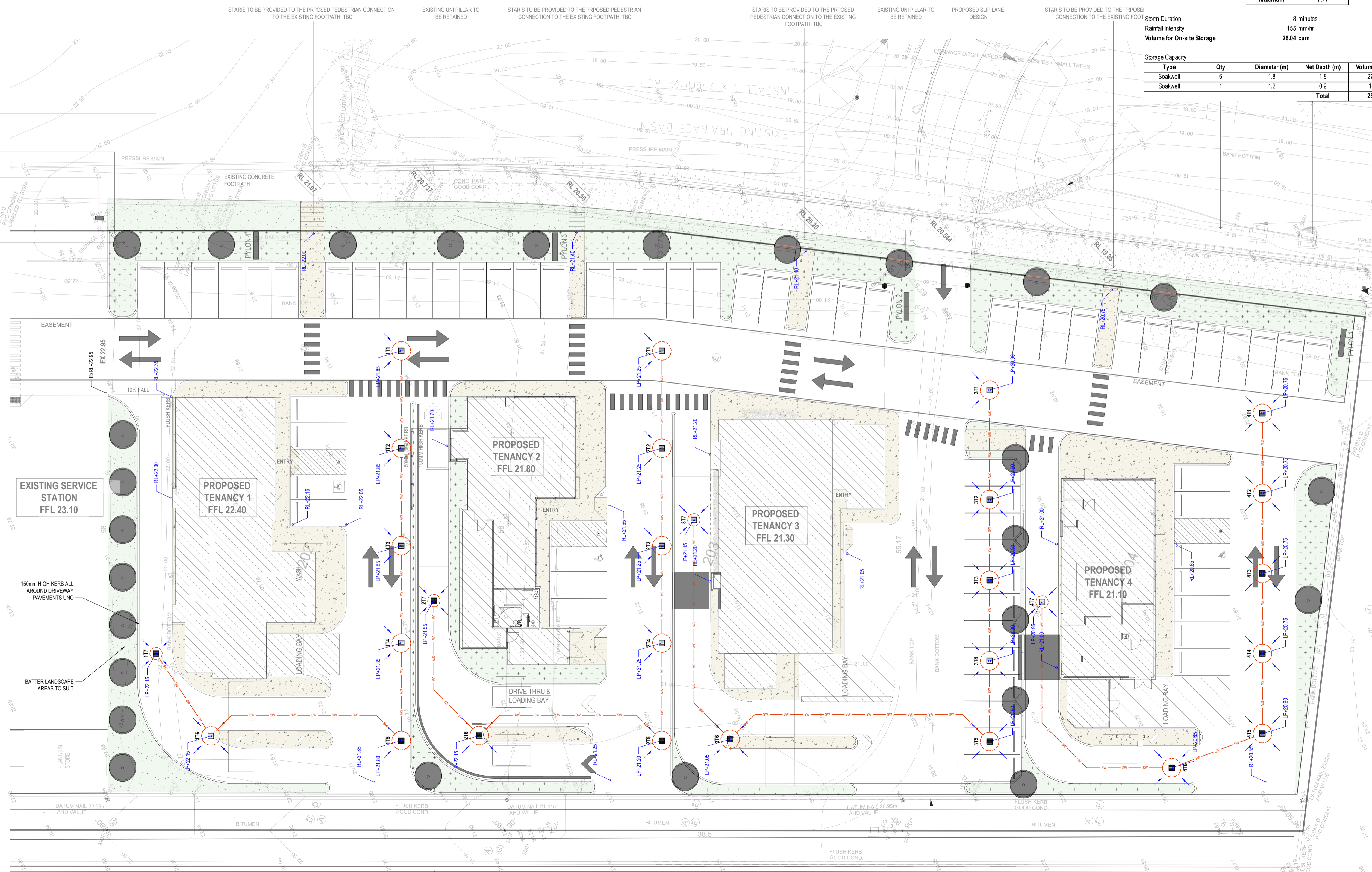
Storage Capacity

Type	Qty	Diameter (m)	Net Depth (m)	Volume (cum)
Soakwell	6	1.8	1.8	27.47
Soakwell	1	1.2	0.9	1.02
<b>Total</b>				<b>28.49</b>

- LEGEND:**
- 1500 uPVC CLASS S8 PIPE
  - 1500 uPVC CLASS S8 PIPE FROM BUILDING DOWNPIPE UNO
  - TRAFFICABLE STORMWATER TANK WITH GRATE COVER
  - TRAFFICABLE STORMWATER TANK WITH CONCRETE COVER
  - TRAFFICABLE PRECAST SUMP PIT WITH SOLID CONCRETE COVER (SOLID WALL AND BASE)
  - FALL DIRECTION
  - IL+10.00 PIPE INVERT LEVEL
  - TT+10.00 TOP OF TANK LEVEL
  - RL+10.00 PAVEMENT LEVEL
  - HP+10.00 PAVEMENT HIGH POINT
  - LP+10.00 PAVEMENT LOW POINT

**TANK SCHEDULE**

TANK NUMBER	TANK SIZE	TOP OF TANK LEVEL	INLET/OUTLET PIPE INVERT LEVEL
1T1 - 1T6	18000 x 1800DEEP	PAVEMENT LEVEL	PAVEMENT LEVEL - 800mm
1T7	12000 x 900DEEP	PAVEMENT LEVEL	PAVEMENT LEVEL - 800mm
2T1 - 2T6	18000 x 1800DEEP	PAVEMENT LEVEL	PAVEMENT LEVEL - 800mm
2T7	12000 x 900DEEP	PAVEMENT LEVEL	PAVEMENT LEVEL - 800mm
3T1 - 3T6	18000 x 1800DEEP	PAVEMENT LEVEL	PAVEMENT LEVEL - 800mm
3T7	12000 x 900DEEP	PAVEMENT LEVEL	PAVEMENT LEVEL - 800mm
4T1 - 4T6	18000 x 1800DEEP	PAVEMENT LEVEL	PAVEMENT LEVEL - 800mm
4T7	12000 x 900DEEP	PAVEMENT LEVEL	PAVEMENT LEVEL - 800mm



**STORMWATER DRAINAGE PLAN**  
SCALE 1:200

RE-ISSUE FOR DEVELOPMENT APPROVAL  
ISSUE FOR DEVELOPMENT APPROVAL

REV	DESCRIPTION	BY	DATE
B		JC	11-DEC-2023
A		JC	27-OCT-2023

**ISSUE FOR DEVELOPMENT APPROVAL**

PROJECT:  
**MIXED COMMERCIAL DEVELOPMENT**  
LOT 201 - 203 WANNEROO ROAD, WANNEROO, WESTERN AUSTRALIA

TITLE:  
**STORMWATER DRAINAGE PLAN AND DETAILS**

DRAWING:	SCALE:	PROJECT #:	REVISION:
J. GABRIEL	AS NOTED	21220	B
DESIGN:	PAPER SIZE:	DRAWING #:	
J. CUBONG	A1	C1	

NOTE: ALL UNITS ARE IN MILLIMETERS UNO

