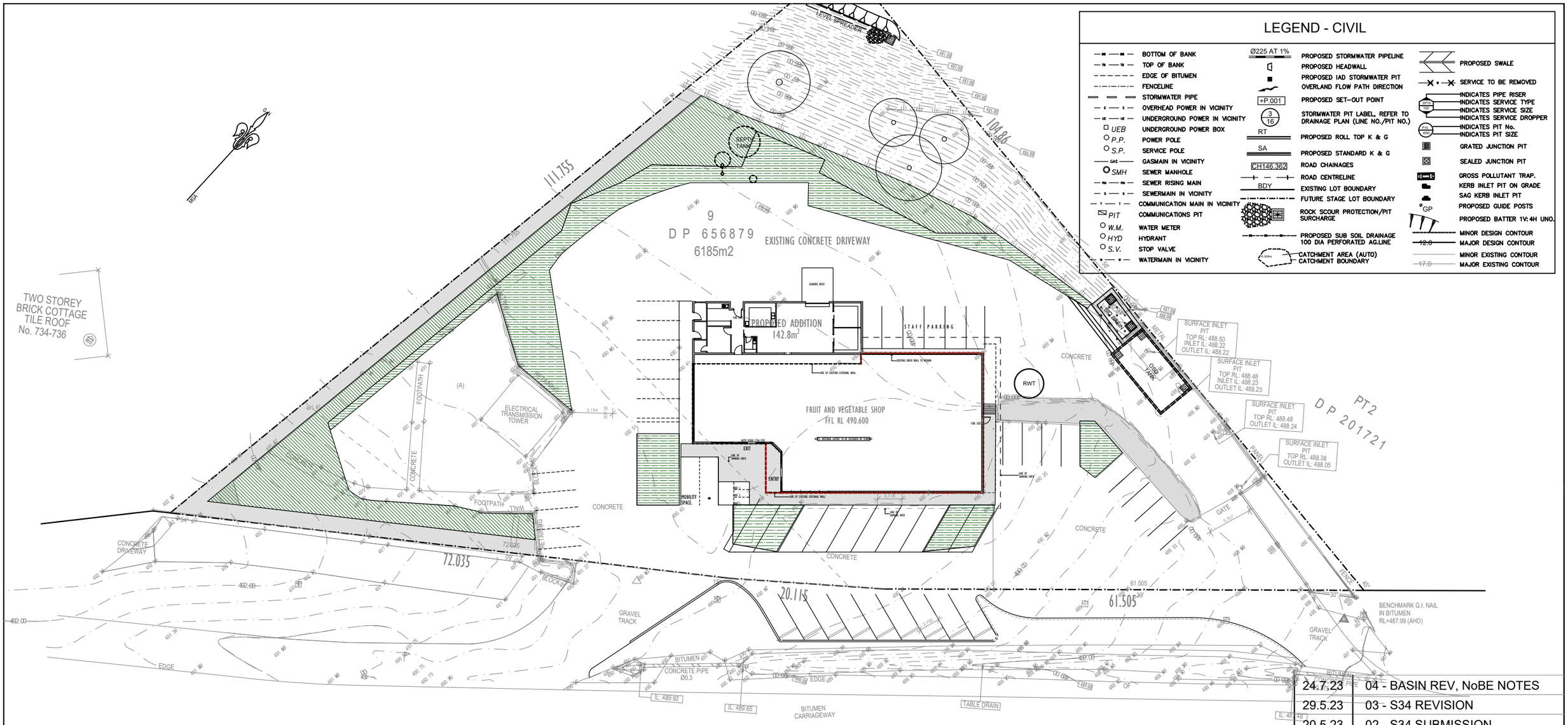

WATER CYCLE MANAGEMENT CONCEPT PLAN

STORMWATER MANAGEMENT STRATEGY:
SITE AREA: 6185 m2
ROOF AREA: 891 m2
DRIVEWAY AREA TO REAR: 1810 m2
(970m2 PRE-APPROVED / 840m2 ADDITIONAL)
DRIVEWAY AREA TO HWAY: 1016 m2

WATER QUALITY TREATMENT SYSTEM:

1. ROOF WATER 55.6m3 RAINWATER RE-USE OSR TANK
   : 20,000 BUSHFIRE, TO RFS SPEC AND COUNCIL DA.
   : 35,600 REUSE TO COUNCIL DCP. IRRIGATION 1kL/day.
   ROOF 891m2: 4000L/100m2: 35.6m3
2. ON-SITE DETENTION. 75.7m3: 54m2 x 1.46m DEEP.
   : PRE DEVELOPED IMP: 891m2 (ROOF AREA);
   : POST DEVELOPED IMP: 2701m2 (ROOF & DRIVEWAY).
   : LANDSCAPE TO OSD: 344m2
   REFER OSD MODEL AND SUMMARY.
3. FIRST FLUSH AND GUTTER GUARD PRE FILTER TREATMENT OSR AND OSR TANK STORAGE.
4. RE-USE TANK TO COUNCIL DCP COMPLIANCE. IRRIGATION 1kL/day.
5. DRIVEWAY FILTER SEDIMENT SUMP AND TRASH RACK.
   DRIVEWAY PIT FILTER 'STORMSACK' & OIL ARRESTOR OR EQUAL.
6. BIORETENTION FILTER-RAINGARDEN: 10m2 MIN.
   : PRE DEVELOPED IMP: 970m2 (PAVED PRE-APPROVED AREA);
   : POST DEVELOPED IMP: 1810m2 (DRIVEWAY). - 840m2 ADDITIONAL.
   : POST DEVELOPED IMP: 891m2 (ROOF).
   BIOFILTER REFER MUSIC MODEL AND SUMMARY.
7. OUTFLOW TO EXISTING DRAINAGE SYSTEM, VIA OSD REDUCED DISCHARGE.
   :DISPERSAL LEVEL SPREADER SYSTEM ON-SITE/EXISTING SYSTEM.

OSD SUMMARY

STORM (AEP)	PRE-DEVELOPMENT (L/s)	POST-DEVELOPMENT (L/s)
20%	32	32
10%	48	36
5%	67	64
2%	91	90
1%	117	104

TANK IL: 486.50. 1% AEP TOP WATER LEVEL = RL.487.90.
1% AEP STORAGE VOLUME = 75.7m³ (SA: 54m2)
ORIFICE = 135mm, CL 486.61
REFER OSD TANK DETAIL C08.

WATER QUALITY MODELLING RESULTS

	Sources		Residual Load		% Reduction	
	Pre	Post	Pre	Post	Pre	Post
Flow (ML/yr)	8.19	8.78	8.19	8.37	-	10.80
Total Suspended Solids (kg/yr)	654.00	908.00	654.00	64.20	-	90.70
Total Phosphorus (kg/yr)	1.23	1.63	1.23	0.44	-	72.80
Total Nitrogen (kg/yr)	7.46	8.99	7.46	4.47	-	50.30
Gross Pollutants (kg/yr)	66.20	87.80	66.20	-	-	100.00

REFER BIORETENTION FILTER - RAINGARDEN DETAIL C07.
NEUTAL OR BENIFICIAL EFFECT (NOrBE), WATER NSW GUIDELINES.
BASIN IL 486.45. TWL 486.95. REFER TYPICAL SECTIONS C07.

REFER DRAINS OSD MODEL: 2021246.drn
REFER MUSIC WATER MODEL: 2021246.sqz

OVERALL SITE PLAN

SCALE 1:250 (A1), 1:500 (A3)

-5 -2.5 0m 2.5 5 7.5 10 12.5
BASE SCALE 1:250
FOR A1 PLAN

24.7.23	04 - BASIN REV, NoBE NOTES
29.5.23	03 - S34 REVISION
20.5.23	02 - S34 SUBMISSION
27.1.22	01 - CONCEPT ISSUE
DATE:	DRAWING ISSUE:

CLIENT:
TODERELLO

PROJECT:
PROPOSED ADDITION & ANCILLIARY DEPARTMENT
731 GREAT WESTERN HIGHWAY
FALCONBRIDGE, NSW

CivilCol Consulting Pty Ltd
ABN: 74636805920 | EMAIL: civilcolconsulting@gmail.com
PH: 0413 857 887 | P.O. BOX 3176, WAMBERAL NSW 2260

DRAWN: JF	APPROVED:	
CHECKED: CF		
DATE: 27.1.22		
JOB: 2021_246	C FISHER. BE, MIEAust, CPEng, NER 719120. (CIVIL AND STRUCTURAL)	
DRG: C 02	REV: 03	SH: 2 of 8