Issued under the Environmental Planning and Assessment Act 1979

Approved Application No: SSD-10470

Granted on: 25 June 2021

Signed: JE CONTRACTOR TO COMMAND RETAIN A CONTROL STEED URBE TO COURSE OF THE COURSE O

- THE CONTRACTOR IS TO VERIFY THE LOCATION OF ALL SERVICES WITH EACH RELEVANT AUTHORIT' ANY DAMAGE TO SERVICES SHALL BE RECTIFIED BY THE CONTRACTOR OR THE RELEVANT AUTHORITY AT THE CONTRACTOR'S EXPENSE. SERVICES SHOWN ON THESE PLANS ARE ONLY THOSE EVICENT AT THE TIME OF SURVEY OR AS DETERMINED FROM SERVICE DIAGRAMS. HENRY AND HYMAS CONSULTING PTY LTD. CANNOT GUARANTEE THE INFORMATION SHOWN NOR ACCEPT ANY RESPONSIBILITY FOR INACCURACIES OR INCOMPLETE DATA.
- 4. SERVICES & ACCESSES TO THE EXISTING PROPERTIES ARE TO BE MAINTAINED IN WORKING ORDER
- ADJUST EXISTING SERVICE COVERS TO SUIT NEW FINISHED LEVELS TO RELEVANT AUTHORITY REQUIREMENTS WHERE NECESSARY.
- REINSTATE AND STABILISE ALL DISTURBED LANDSCAPED AREAS.
- 7. MINIMUM GRADE OF SUBSOIL SHALL BE 0.5% (1:200) FALL TO OUTLETS.
- II ALL TEMPORARY SEDIMENT AND EROSION CONTROL DEVICES ARE TO BE CONSTRUCTED, PLACED SEDIMENTATION CONTROL PLAN AND CUMBERLAND CITY COUNCIL'S REQUIREMENTS WHERE
- 9 CONTRACTOR TO CHECK AND CONFIRM SITE DRAINAGE CONNECTIONS ACROSS THE VERGE PRIOR TO COMMENCEMENT OF SITE DRAINAGE WORKS.
- 10. PROPERTIES AFFECTED BY THE WORKS ARE TO BE NOTIFIED IN ADVANCE WHERE DISRUPTION TO

EXISTING SERVICES & FEATURES

- THE CONTRACTOR SHALL ALLOW FOR THE CAPPING OFF, EXCAVATION AND REMOVAL (IF REQUIR OF ALL EXISTING SERVICES IN AREAS AFFECTED BY WORKS WITHIN THE CONTRACT AREA OR 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
- PRIOR TO COMMENCEMENT OF ANY WORKS THE CONTRACTOR SHALL GAIN APPROVAL OF HIS PROGRAM FOR THE RELOCATION CONSTRUCTION OF TEMPORARY SERVICES.
- CONTRACTOR SHALL CONSTRUCT TEMPORARY SERVICES TO MAINTAIN SUPPLY TO EXISTING BUILDING'S 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
- . INTERRUPTION TO SUPPLY OF EXISTING SERVICES SHALL BE DONE SO AS NOT TO CAUSE ANY INCONVENIENCE TO THE PRINCIPAL CONTRACTOR TO GAIN APPROVAL FROM THE SUPERINTENDEN FOR TIME OF INTERRUPTION
- EXISTING SERVICES BUILDINGS EXTERNAL STRUCTURES AND TREES SHOWN ON THESE DRAWINGS
- EXISTING SERVICES UNLESS SHOWN ON SURVEY PLAN HAVE BEEN PLOTTED FROM SERVICES SEARCH PLANS AND AS SUCH THEY ACCURACY CANNOT BE GUARANTEED. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO COMPLETE A DIAL BEFORE YOU DIG SEARCH AND TO ESTABLISH THE LOCATION AND LEVEL OF ALL EXISTING SERVICES PRIOR TO THE COMMENCEMENT OF ANY WORK ANY DISCREPANCIES SHALL BE REPORTED TO THE SUPERINTENDENT. CLEARANCES SHALL BE OBTAINED FROM THE RELEVANT SERVICE AUTHORITY.
- ALL BRANCH (SAS AND WATER SERVICES LINDER DRIVEWAYS AND BRICK PAVING SHALL BE LOCATED

SURVEY NOTES

THE EXISTING SITE CONDITIONS SHOWN ON THE FOLLOWING DRAWINGS HAVE BEEN INVESTIGATED BY THE SURVEYOR SPECIFIED IN THE TITLE BLOCK.
THE INFORMATION IS SHOWN TO PROVIDE A BASIS FOR DESIGN. HENRY AND HYMAS PTY. LTD. DOES

NOT GUARANTÉE THE ACCURACY OR COMPLETENESS OF THE SURVEY BASE OR ITS SUITABILITY AS

NOT GURRANTIES THE ACCURACY ON COMPLETENESS OF THE SURVEY BASE OF ITS SUBJECT AS A BASIS FOR CONSTRUCTION DRAWINGS SHOULD DISCREPANCIES BE ENCOUNTERED DURING CONSTRUCTION BETWEEN THE SURVEY DATA AND ACTUAL PIELD DATA. CONTACT HENRY AND HYMAS PTY. LTD. THE FOLLOWING NOTES HAVE BEEN TAKEN DIRECTLY FROM ORIGINAL SURVEY DOCUMENTS.

PROPOSED WAREHOUSE DARK STORE 11-13 PERCY STREET, AUBURN NSW CIVIL ENGINEERING WORKS





LOCALITY SKETCH

	DRAWING SCHEDULE
19513_DA_0000	COVER SHEET, DRAWING SCHEDULE, NOTES & LOCALITY SKETCH
19513_DA_C100	GENERAL ARRANGEMENT PLAN
19513_DA_C101	SITE DETAIL PLAN - SHEET 1 OF 4
19513_DA_C102	SITE DETAIL PLAN - SHEET 2 OF 4
19513_DA_C103	SITE DETAIL PLAN - SHEET 3 OF 4
19513_DA_C104	SITE DETAIL PLAN - SHEET 4 OF 4
19513_DA_C110	MEZZANINE LEVEL DETAIL PLAN - SHEET 1 OF 2
19513_DA_C111	MEZZANINE LEVEL DETAIL PLAN - SHEET 2 OF 2
19513_DA_C200	STORMWATER MISCELIANEOUS DETAILS
19513_DA_C201	OSD TANK PLAN, SECTIONS AND DETAILS
19513 DA_C202	STORMWATER LONGITUDINAL SECTIONS
19513_DA_C203	STORMWATER DESIGNRESULTS
19513 DA_C250	STORMWATER CATCHMENT PLAN - PRE DEVELOPMENT
19513_DA_C251	STORMWATER CATCHMENT PLAN - POST DEVELOPMENT
19513_DA_SE01	SEDIMENT AND EROSION CONTROL PLAN
19513_DA_SE02	SEDIMENT AND EROSION CONTROL DETAILS
19513_DA_BED1	BULK EARTHWORKS - CUT/FILL PLAN
19513 DA BE02	BULK EARTHWORKS SECTIONS - SHEET 1 OF 2
19513_DA_BE03	BULK EARTHWORKS SECTIONS - SHEET 2 OF 2

SUBGRADE PREPARATION - SITEWORKS.

- THE EXISTING SURFACE IS TO BE STRIPPED OF ANY PAVEMENTS, TOPSOIL OR OBVIOUS UNSUITABLE MATERIAL
- EXCAVATE TO ACHIEVE SUBGRADE LEVELS WHERE NECESSARY.
- THE EXPOSED SUBGRADE AFTER STRIPPING AND/ OR EXCAVATION IS TO BE THE EXPOSED SUBGRADE AFTER STRIPPING AND/OR EXCAVATION IS TO BE PROOF ROLLED USING NOT FEWER THAM 5 PASSES OF A IMMINUME TONNE DEAD WEIGHT STEEL SMOOTH-ORUM ROLLER UNDER THE SUPERVISION OF AN EXPERIENCED GEOTECHNICAL ENGINEER OR AN EXPERIENCED CIVIL ENCINEER. ANY AREAS ON THE SUBGRADE EXHIBITING EXCESSIVE DEFLECTION / MOVEMENT UNDER ROLLER TO BE EXCAVATED TO A MIN. DEPTH OF 0.5m AND REPLACED WITH APPROVED GRANULAR MATERIAL COMPACTED IN 250mm LOOSE LAYERS OR AS DIRECTED BY THE GEOTECHNICAL ENGINEER
- ENGINEERED FILL FOR REPLACEMENT OF SOFT OR HEAVING AREAS OR FOR BULK FILLING TO COMPRISE ESSENTIALLY OF GRANULAR MATERIALS (EC. EXCAVATED SHALE), WITH A PARTICLE SIZE NOT GREATER THAN 75mm DIAMETER, ENGINEERED FILL TO BE PLACED IN LAYERS NOT EXCEEDING. 250mm LOOSE THICKNESS AND COMPACTED TO BETWEEN 96% AND 102% OF STANDARD MAXIMUM DRY DENSITY (SMDD) WITHIN ± 2% OF OPTIMUM MOISTURE CONTENT (OMC).
- IMPORTED FILLING (IF REQUIRED) IS TO BE TO THE APPROVAL OF THE GEOTECHNICAL ENGINEER. THE CONTRACTOR IS TO NOMINATE THE SOURCE AND PROVIDE A SAMPLE FOR APPROVAL PRIOR TO IMPORTATION AND BY ACSTRENCE ON SITE.
- ALL FILL MATERIAL SHALL BE FROM A SOURCE APPROVED BY THE SUPERINTENDENT AND SHALL COMPLY WITH THE FOLLOWING. FREE FORM ORGANIC AND PERISHABLE MATTER MAXIMUM PARTICLE SIZE = 75m

SITEWORKS NOTES

- ORIGIN OF LEVELS. REFER TO BENCH OR STATE SURVEY MARKS WHERE SHOWN ON PLAN
- CONTRACTOR MUST VERIFY ALL DIMENSIONS AND EXISTING LEVELS ON SITE PRIOR TO COMMENCEMENT OF WORK
- ALL WORKS TO BE UNDERTAKEN IN ACCORDANCE WITH THE DETAILS SHOWN ON THE DRAWINGS & THE DIRECTIONS OF THE SUPERINTENDENT
- EXISTING SERVICES UNLESS SHOWN ON SURVEY PLAN HAVE BEEN PLOTTED FROM SERVICES SEARCH PLANS 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 DISCREPANCES SHALL BE REPORTED TO THE SUPERINTENDENT CLEARANCES SHALL BE OBTAINED FROM THE RELEVANT SERVICE AUTHORITY.
- . WHERE NEW WORKS ABUT EXISTING THE CONTRACTOR SHALL ENSURE THAT A SMOOTH EVEN
- THE CONTRACTOR SHALL ARRANGE ALL SURVEY SETOUT TO BE CARRIED OUT BY A REGISTERED
- . CARE IS TO BE TAKEN WHEN EXCAVATING NEAR EXISTING SERVCES. NO MECHANICAL EXCAVATION IS TO BE UNDERTAKEN OVER TELSTRA OR ELECTRICAL SERVICES HAND EXCAVATE IN THESE AREAS.
- CONTRACTOR TO OBTAIN AUTHORITY APPROVALS WHERE APPLICABLE.
- MAKE SMOOTH TRANSITION TO EXISTING SURFACES AND MAKE GOOD.
- STRUCTURAL HYDRAULIC AND MECHANICAL DRAWINGS AND SPECIFICATIONS OR WRITTEN INSTRUCTIONS THAT MAY BE ISSUED RELATING TO DEVELOPMENT AT THE SITE.
- . TRENCHES THROUGH EXISTING ROAD AND CONCRETE PAVEMENTS SHALL BE SAWCUT TO FULL
- ALL BRANCH GAS AND WATER SERVICES UNDER DRIVEWAYS AND BRICK PAVING SHALL BE LOCATED IN 8000 UPVC SEWER GRADE CONDUITS EXTENDING A MINIMUM OF 500mm BEYOND EDGE OF PAVING.
- GRADES TO PAVEMENTS TO BE AS IMPLIED BY RL'S ON PLAN. GRADE EVENLY BETWEEN NOMINATED RL'S AREAS EXHIBITING PONDING GREATER THAN 5mm DEPTH WLL NOT BE ACCEPTED/ UNLESS IN A DESIGNATED SAG POINT
- ALL COVERS AND GRATES ETC TO EXISTING SERVICE UTILITIES ARE TO BE ADJUSTED TO SUIT NEW

SUBSOIL DRAINAGE NOTES

- GENERAL PROVIDE SUBSOIL DRAINS TO INTERCEPT GROUNDWATER SEEPAGE AND PREVENT WATER BUILDOUP BEHIND WALLS AND UNDER FLOORS AND PAVEMENT. CONNECT SUBSOIL TO SURFACE DRAINS OR TO THE STORMWATER DRAINAGE SYSTEM AS APPLICABLE
- 100mm BELOW FORMATION LEVEL OF THE PAVEMENT, KERB OR CHANNEL
- <u>JOINTING:</u> AT JUNCTIONS OF SUBSOIL PIPES PROVIDE TEES, COUPLINGS OR
- 4. TRENCH WIDTH MINIMUM 300mm
- PIPE UNDERLAY
 GENERAL GRADE THE TRENCH PLOOR EYENLY TO THE GRADIENT OF THE
 PIPELINE, IF THE TRENCH PLOOR IS ROCK, CORRECT MAY IRREGULARITIES
 WITH COMPACTED BEDDING MATERIAL BED PIPING ON A CONTINUOUS
 UNDERLAY OF BEDDING MATERIAL, AT LEAST 75mm THICK AFTER COMPACTION. LAY THE PIPE WITH ONE LINE OF PERFORATIONS AT THE BOTTOM.
- CHASES: IF NECESSARY TO PREVENT PROJECTIONS SUCH AS SCCKETS AND FLANGES FROM BEARING ON THE TRENCH BOTTOM OR UNDERLAY
- 6. PIPE SURROUNDS:
 GENERAL PLACE THE MATERIAL IN THE PIPE SURROUND IN LAYERS SMALLER
 THAN OR COUAL TO 200mm/LOOSE THICKNESS, AND COMPACT WITHOUT
 DAMAGING OR DISPLACING PIPING
 DEPTH OF OVERLAY TO THE UNDERSIDE OF THE BASE OF OVERLYING
 DEPTH OF OVERLAY TO THE UNDERSIDE OF THE BASE OF OVERLYING
 - STRUCTURES SUCH AS PAVEMENTS, SLABS AND CHANNELS, TO WITHIN 150mm OF THE FINISHED SURFACE OF UNPAVED OR LANDSCAPED AREAS.
- FILTER SOCKS PROVIDE POLYESTER PERMEABLE SOCKS CAPABLE OF RETAINING PARTICLES OF 0.25mm SIZES. SECURELY FIT OF JUINTHE SOCK AT EACH JOINT.

ISSUED FOR APPROVAL



WOOLWORTHS GROUP LIMITED

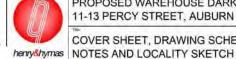
This drawing and design remains the property of Henry & Hymas and may not be copied in whole or in part without the prior written approval of Henry & Hymas.









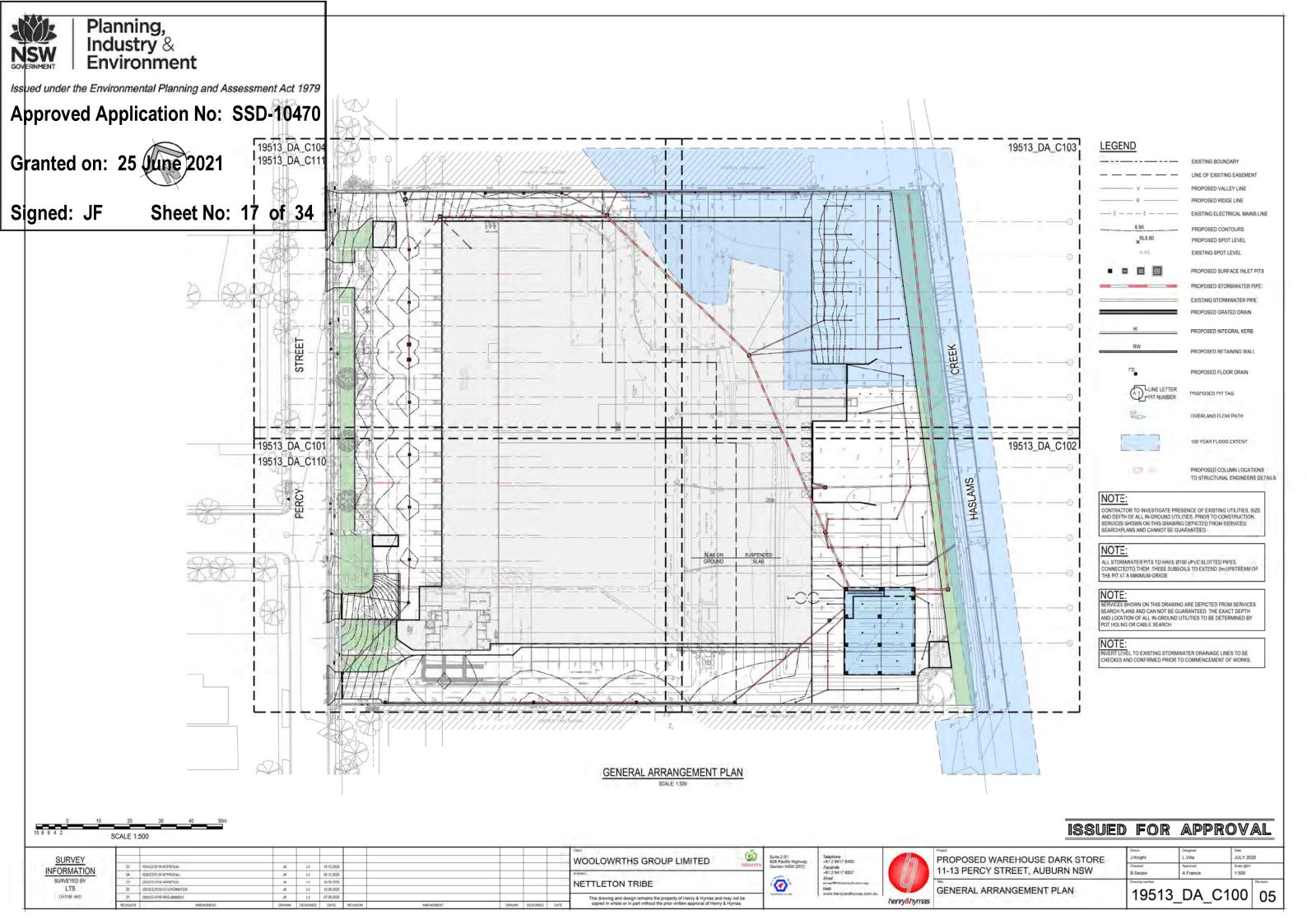


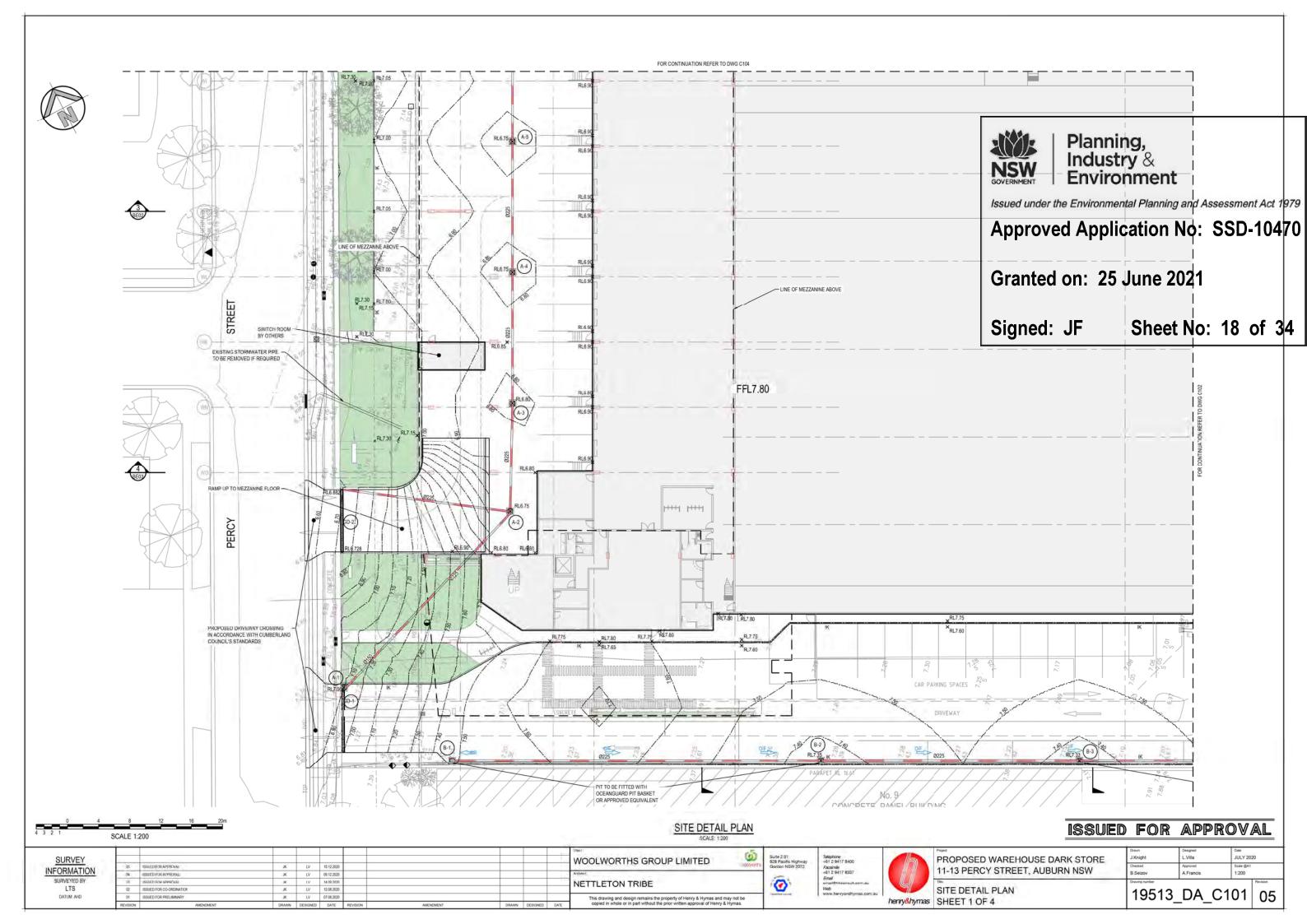
PROPOSED WAREHOUSE DARK STORE 11-13 PERCY STREET, AUBURN NSW

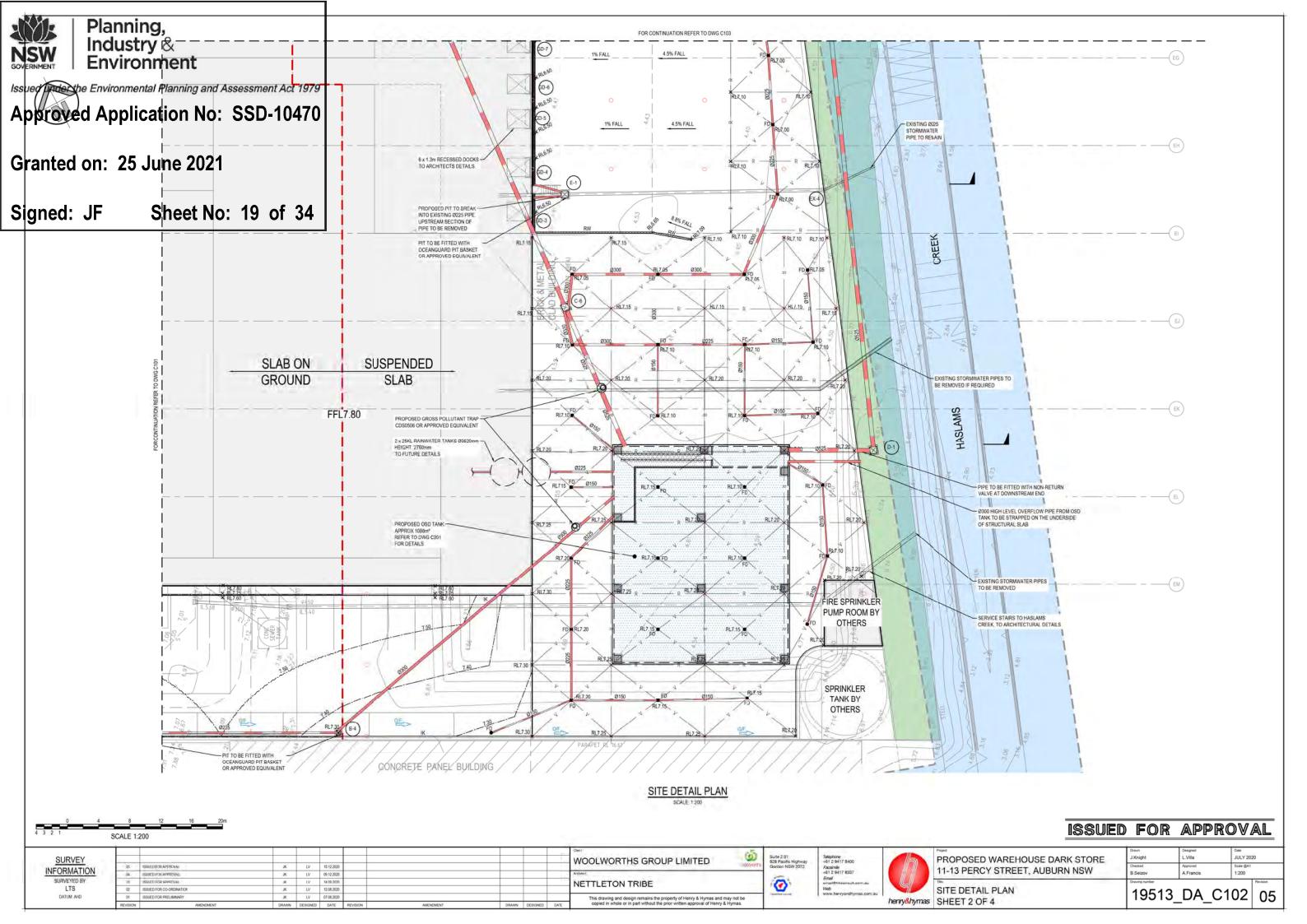
COVER SHEET, DRAWING SCHEDULE,

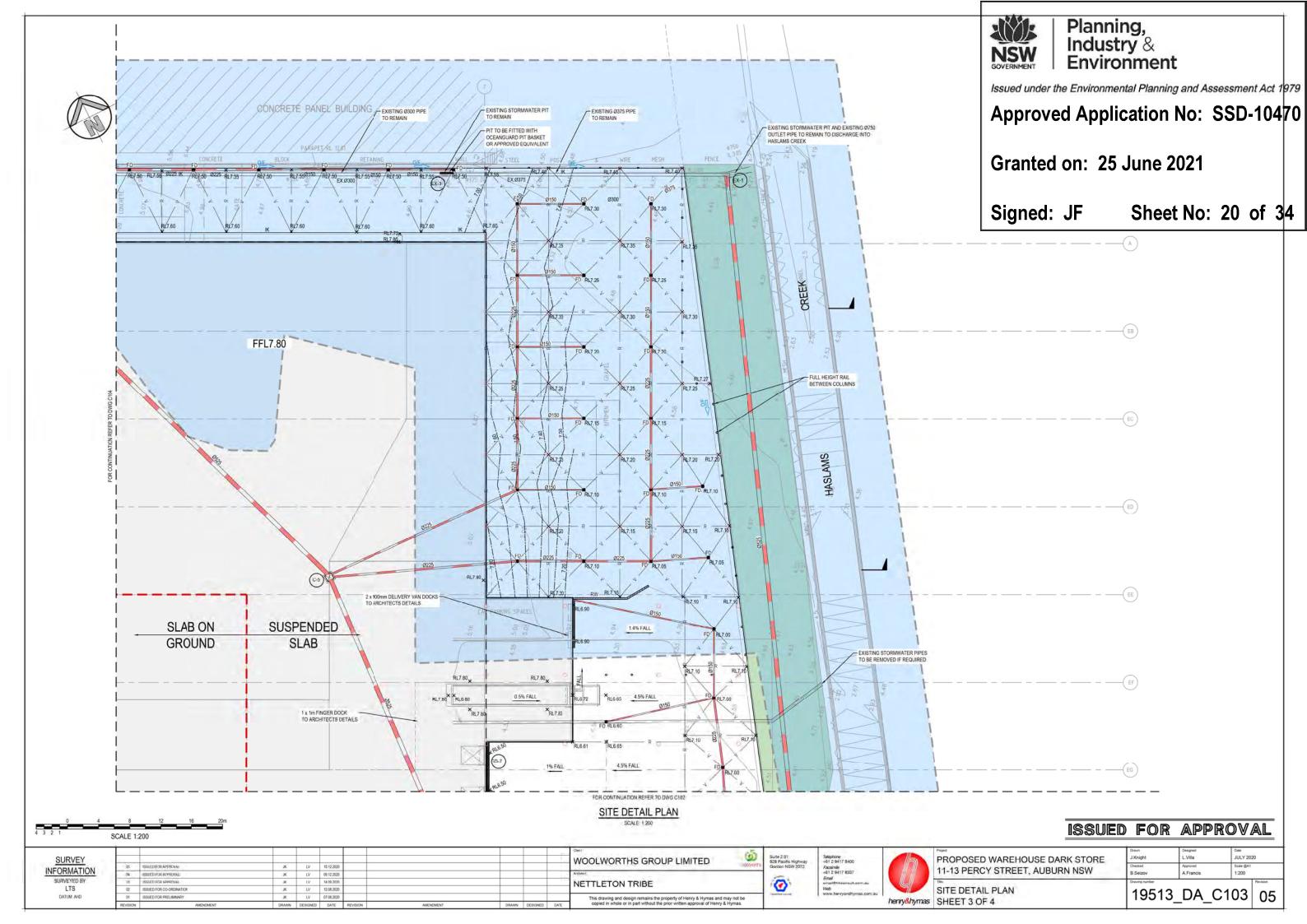
JULY 2020

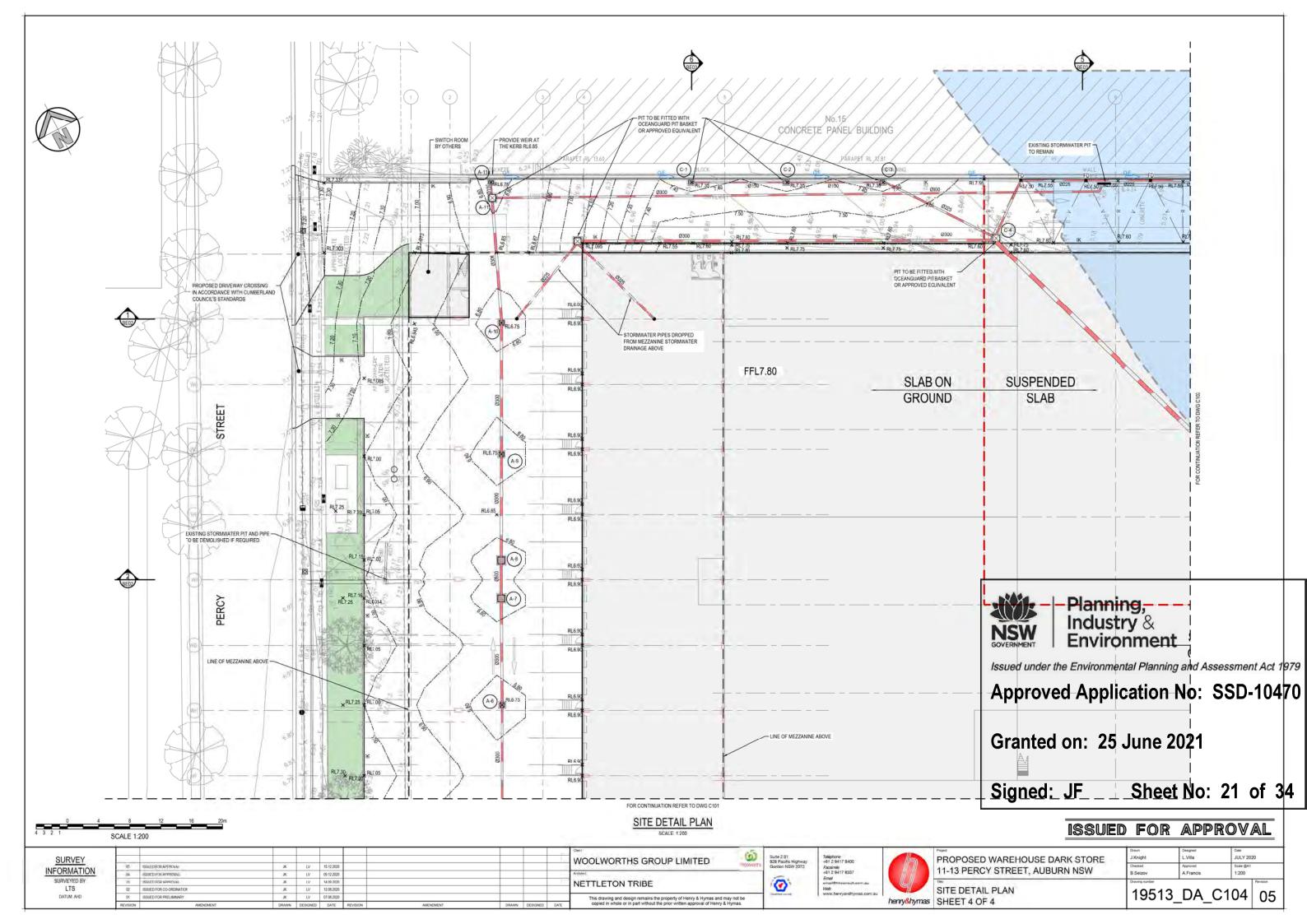
19513 DA C000 03

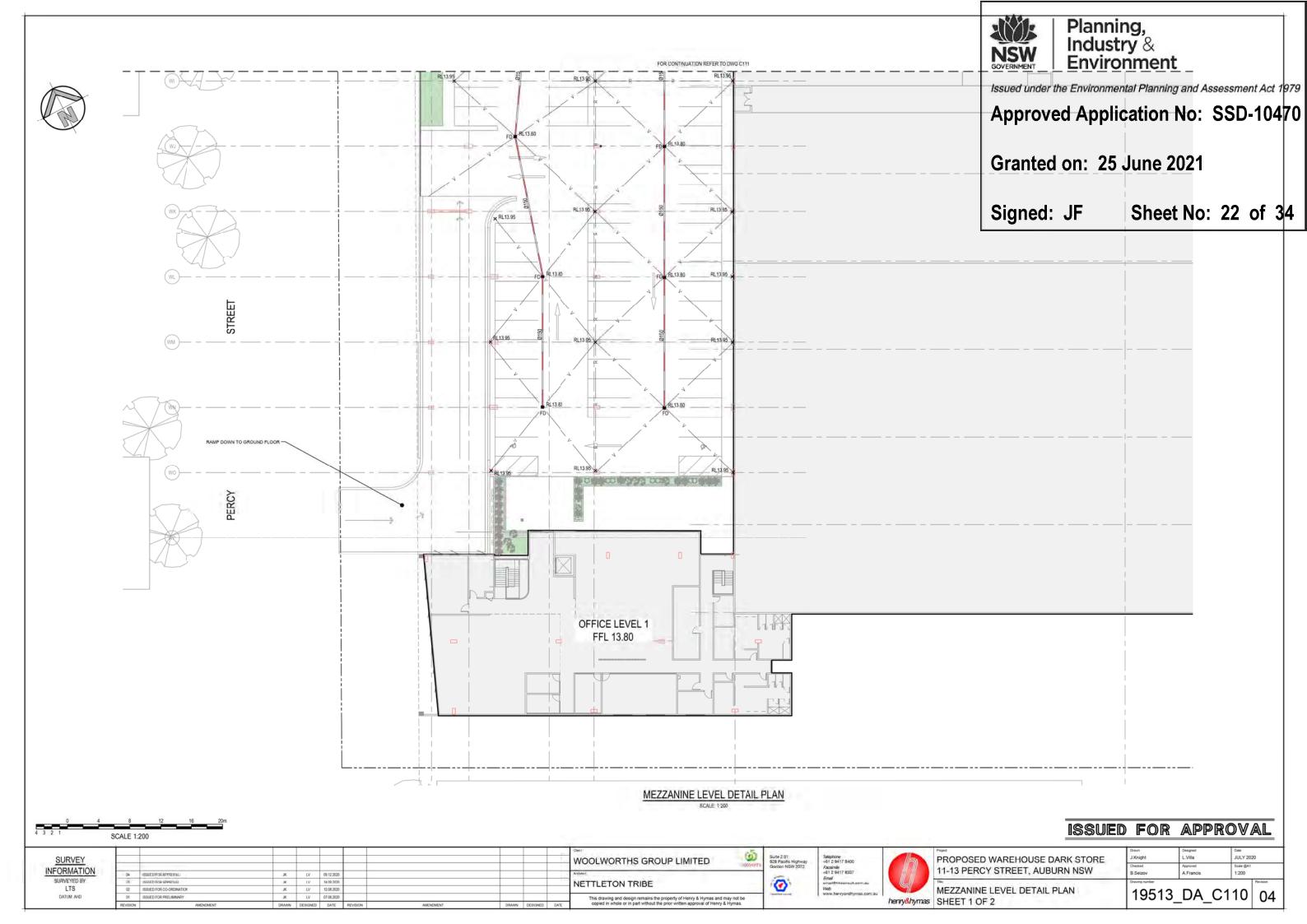


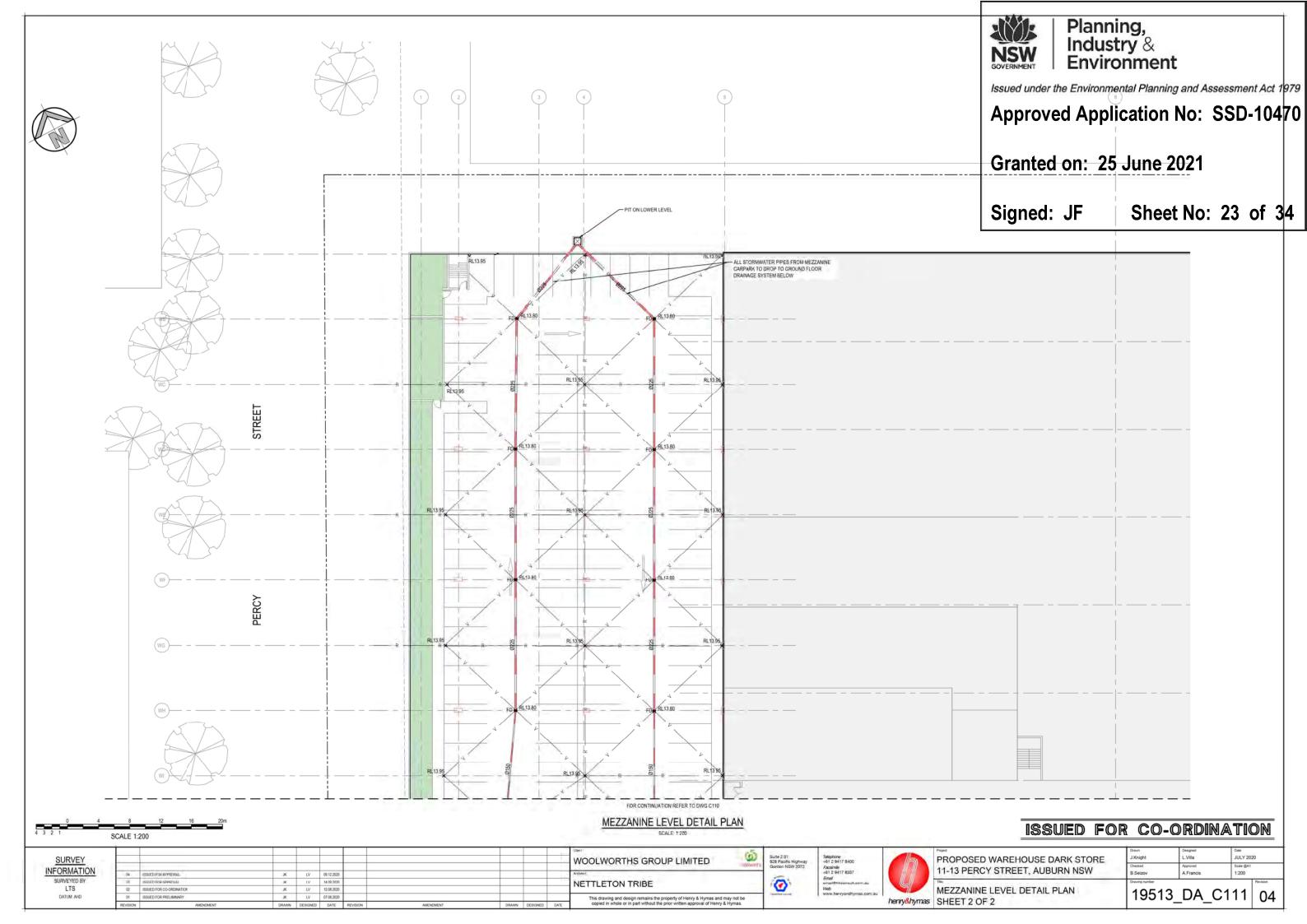












TYPICAL PIT CHAMBER SIZES IT IS THE CONTRACTORS RESPONSIBILITY TO SELECT PIT CHAMBER SIZE WITH REGARDS TO PIPE SIZE, DEPTH TO INVERT AND SKEW ANGLE, REFER SKETCHES BELOW. O SELECT PIT CHAMBER USING THE STEPS BELOW: SELECT PIT CHAMBER SIZE DEPENDING ON THE PIPE DIAMETERS. CHECK PIT CHAMBER SIZE TO SATISFY DEPTH TO INVERTREQUIREMENTS. FOR B = 600mm - MAX. SIDE ENTRY PIPE AT 45° SKEW = 225mm FOR B = 900mm - MAX. SIDE ENTRY PIPE AT 45° SKEW = 375mm FOR B = 1200mm - MAX. SIDE ENTRY PIPE AT 45° SKEW = 600mm FOR B = 1500mm - MAX. SIDE ENTRY PIPE AT 45° SKEW = 225mm FOR B = 1500mm - MAX. SIDE ENTRY PIPE AT 45° SKEW = 1050mm CHECK PIT CHAMBER DIMENSIONS TO SATISFY THE SKEW ANGLE IN THE TABLE. FOR REINFORCEMENT TO HAUNCH SEE BELOW-AND FLOOR OF PITS (WHERE REGUIRED) REFER TO NOTES 10 2 PIT SIZE & DEPTH * A = 900 REQUIREMENTS PIPE DIA. + 150 H = 0-900mm - AxB = 600x600mm SECTION PLAN H = 900-1200mm - AxB = 900x600mm H = >1200mm - AxB = 900x900mm SECTION *A = 600 FOR PIPES UP TO 375 DIA. 1 PIT CHAMBER DIMENSIONS 1) PIT CHAMBER FOR PIPES (3) PIT CHAMBER FOR GREATER THAN 600 DIA. FOR PIPES UP TO 600 DIA.

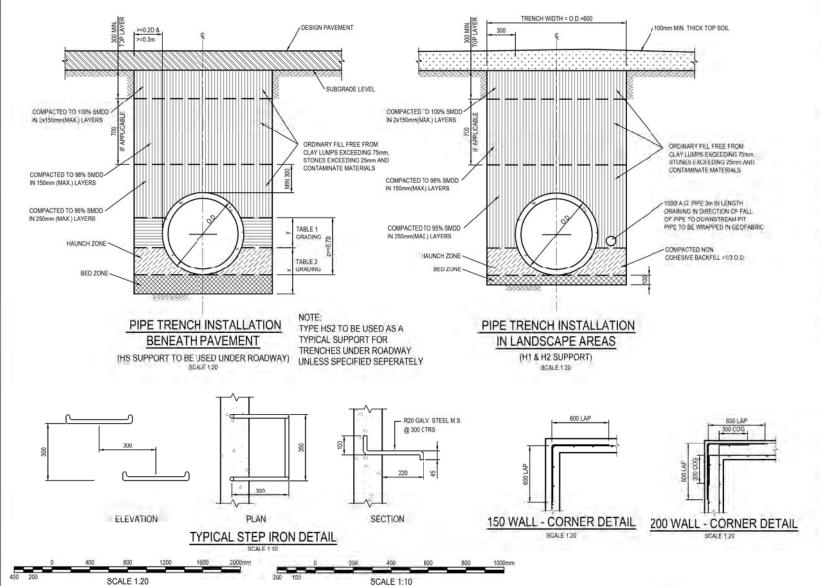


TABLE 1			
SIEVE SIZE (MM)	WEIGHT PASISNG (%		
75.0	100		
9.5	100 TO 50		
2.36	100 TO 30		
0.60	50 TO 15		
0.075	25 TO 0		

TABLE 2			
SIEVE SIZE (MM)	WEIGHT PASISNG (%)		
19.0	100		
2.36	100 TO 50		
0.60	90 TO 20		
0.30	60 TO 10		
0.15	25 TO 0		
0.075	10 TO 0		

		TABLE 3		
SUPPORT TYPE	BED ZONE X	HAUNCH ZONE Y	BED AND HAUNCH ZONES COMPACTION	MAX BEDDING FACTOR
H21		0.1D	.50	2.0
HS2	100 IF D<=1500, OR 150 IF D>=1500	030	60	2.5
HS3	100 (* 102 - 100)	63D	70	4.0

DRAINAGE NOTES:

- 2. CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING THE MINIMUM COVER OF 600mm ON ALL PIPES.
- 3. PROTECTION OF PIPES DUE TO LOADS EXCEEDING W7 WHEEL LOAD SHALL BE THE CONTRACTOR'S
- 4 BEDDING TYPE SHALL BE TYPE H2 FOR RCP. WHERE NECESSARY THE OVERLAY ZONE SHALL BE REDUCED TO
- 5. MINIMUM COVER OVER EXISTING PIPES FOR PROTECTION DURING CONSTRUCTION SHALL BE BOOMIN.
- 6. NO CONSTRUCTION LOADS SHALL BE APPLIED TO PLASTIC PIPES.
- 7 FINISHED SURFACE LEVELS SHOWN ON LAYOUT PLAN DRGS TAKE PRECEDENCE OVER DESIGN DRAINAGE
- 8. ALL PIPES UP TO AND INCLUDING 300 DIA. SHALL BE SOLVENT OR RUBBER RING JOINTED PVC CLASS SH PIPE TO AS 1260. ALL OTHER PIPES TO BE RCP USING CLASS 2 RUBBER RING JOINTED PIPE. HARDIES FRC PIPEMAY BE USED IN LIEU OF RCP IF DESIRED IN GROUND, ALL AERIAL PIPES TO BE PVC CLASS SH
- 9 ALL PITS IN NON TRAFFICABLE AREAS TO BE PREFABRICATED POLYESTER CONCRETE "POLYGRETE" WITH "LIGHT DUTY* CLASS B GALV. MILD STEEL GRATING AND FRAME.
 ALL PITS IN TRAFFICABLE AREAS (CLASS "O" LOADING MAX) TO HAVE 150mm THICK CONCRETE WALLSAND BASE.
- CAST, N-STUT UT-5/2 MPa, REINFORCED WITH N12-200 BOTH LOADING WAYS CENTRALLY PLACE UNIO, ON SEPARATE
 DESIGN DRAWINGS IN THIS SET, GALY MILD STEEL GRATING AND FRAME TO SUIT DESIGN LOADING. PRECAST PITS,
 RECTANGULAR OR CIRCULAR IN SHAPE, MAY BE USED IN LIEU AND SHALL COMPLY WITH RELEVANT AUSTRALIAN
- 10. ALL PITS, GRATINGS AND FRAMES SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURERS SPECIFICATION AND TO BE IN ACCORDANCE WITH AS350.3 AND AS3996
 11. PIT CHAMBER DIMENSIONS ARE TO BE SELECTED TO SATISFY THE FOLLOWING.
- PIPE SIZE DEPTH TO INVERT

- DIEP IN TO INVENT.
 ORIGIN AND THE CHAMBER DETAILS BELOW
 IF PIT LID SIZE IS SMALLER THAN THE PIT CHAMBER SIZE THEN THE PIT LID IS TO BE CONSTRUCTED ON THE CORNER
 OF THE PIT CHAMBER WITH THE STEP IRONS DIRECTLY BELOW ALTERNATIVELY. THE PIT LID TO BE USED, IS TO BE THE SAME SIZE AS THE PIT CHAMBER.
- 12: FOR PIPE SIZES GREATER THAN Ø300mm, PIT FLOOR IS TO BE BENCHED TO FACILITATE FLOW.
- 13. GALVANISED STEP IRONS SHALL BE PROVIDED AT 300 CTS FOR PITS HAVING A DEPTH EXCEEDING 1200mm.
 SUBSOIL DRAINAGE PIPE SHALL BE PROVIDED IN PIPE TRENCHES ADJACENT TO INLET PIPES, (MINIMUM LENGTH 3m).
- 14. ALL SUBSOIL FIPES SHALL BE 100mm SLOTTED PVC IN A FILTER SOCK, UNO, WITH 3m INSTALLED UPSTREAM OF
- 15. ALL PIPEWORK SHALL HAVE MINIMUM DIAMETER 100.
- 16. MINIMUM GRADE FOR ROOFWATER DRAINAGE LINES SHALL BE 1%.
- 17: ALL PIPE JUNCTIONS AND TAPER UP TO AND INCLUDING 300 DIA. SHALL BE VIA PURPOSE MADE FITTINGS
- 18. ALL ROOF DRAINAGE TO BE INSTALLED IN ACCORDANCE (WITH AS3500, PART 3: TESTING TO BE UNDERTAKEN AND REPORTS PROVIDED TO THE SUPERINTENDENT.
- CONNECTION SHOWN ON LONG SECTIONS CHAINAGES ARE INDICATIVE ONLY
- 20 PITS IN EXCESS OF 1.5 m DEEP TO HAVE WALL AND FLOOR THICKNESS INCREASED TO 200mm. REINFORCED WITH N12/g200 GTS CENTRALLY PLACED BOTH WATS THROUGHOUT U.N.Q.ON SEPARATE DESIGN DRAWINGS IN THIS SET. IF DEPTH EXCEEDS 5m CONTACT ENGINEER.
- 2) SUBSOIL DRAINAGE LINES FOR LANDSCAPE AREA NOT SHOWN ON THESE DRAWINGS, REFER TO LANDSCAPING PLANS FOR DETALS.
- $22\,$ ALL STORMWATER PITS TO HAVE Ø100 uPVC SLOTTED SUBSOIL PIPES CONNECTED TO THEM. THESE SUBSOILS TO EXTEND 3 III UPSTREAM OF THE PIT AT A MINIMUM GRADE.

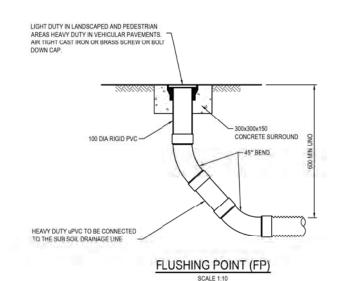


Issued under the Environmental Planning and Assessment Act 1979

Approved Application No: SSD-10470

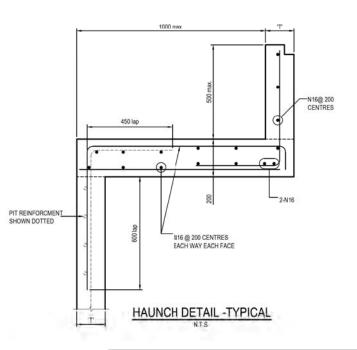
Granted on: 25 June 2021

Signed: JF Sheet No: 24 of 34



NOTE: SLOTTED RIGID PVC PIPE AND

FITTINGS MAY BE USED



ISSUED FOR APPROVAL

SURVEY INFORMATION LTS

WOOLWORTHS GROUP LIMITED



NETTLETON TRIBE

Facsimile +61 2 9417 8337 0

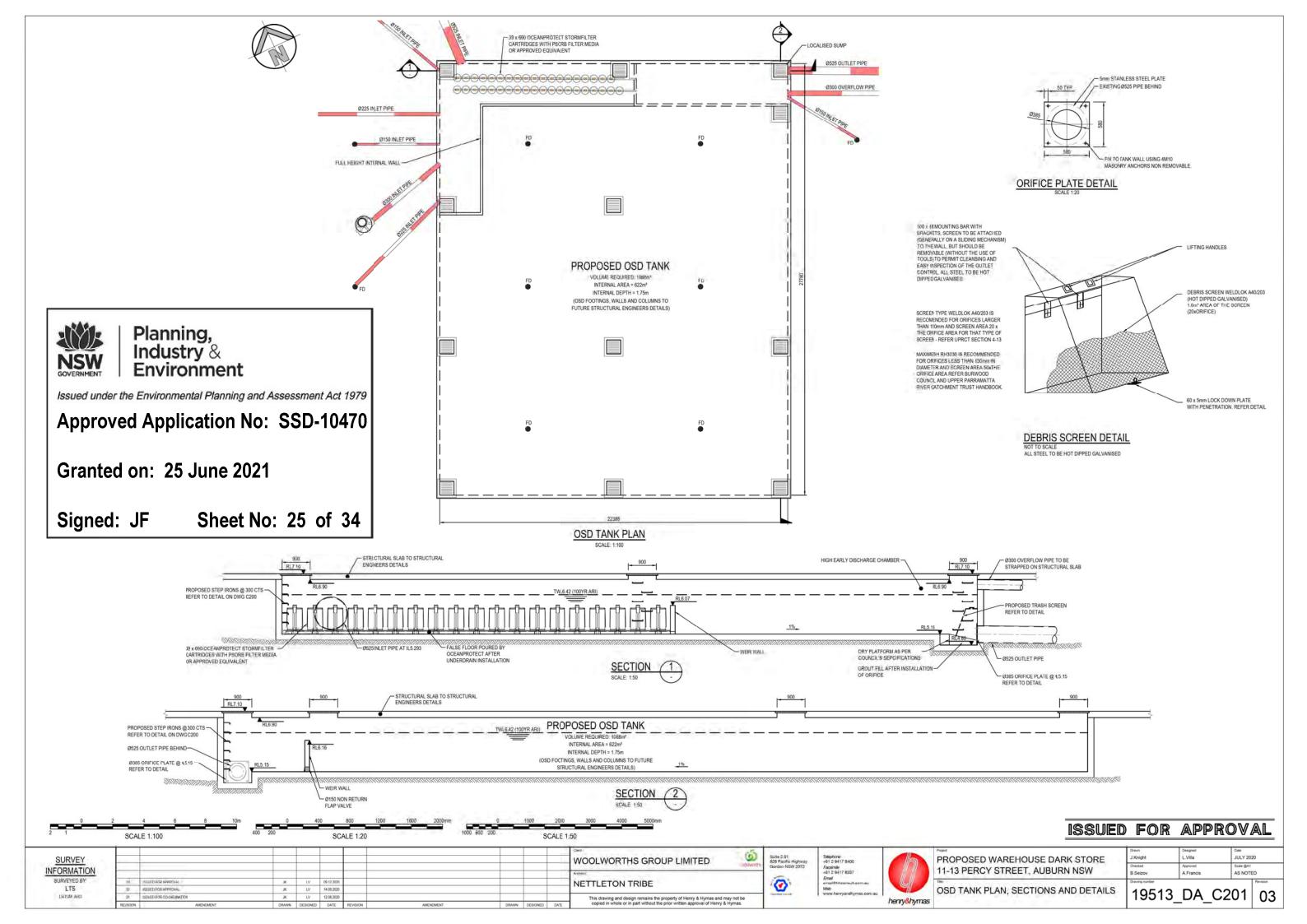


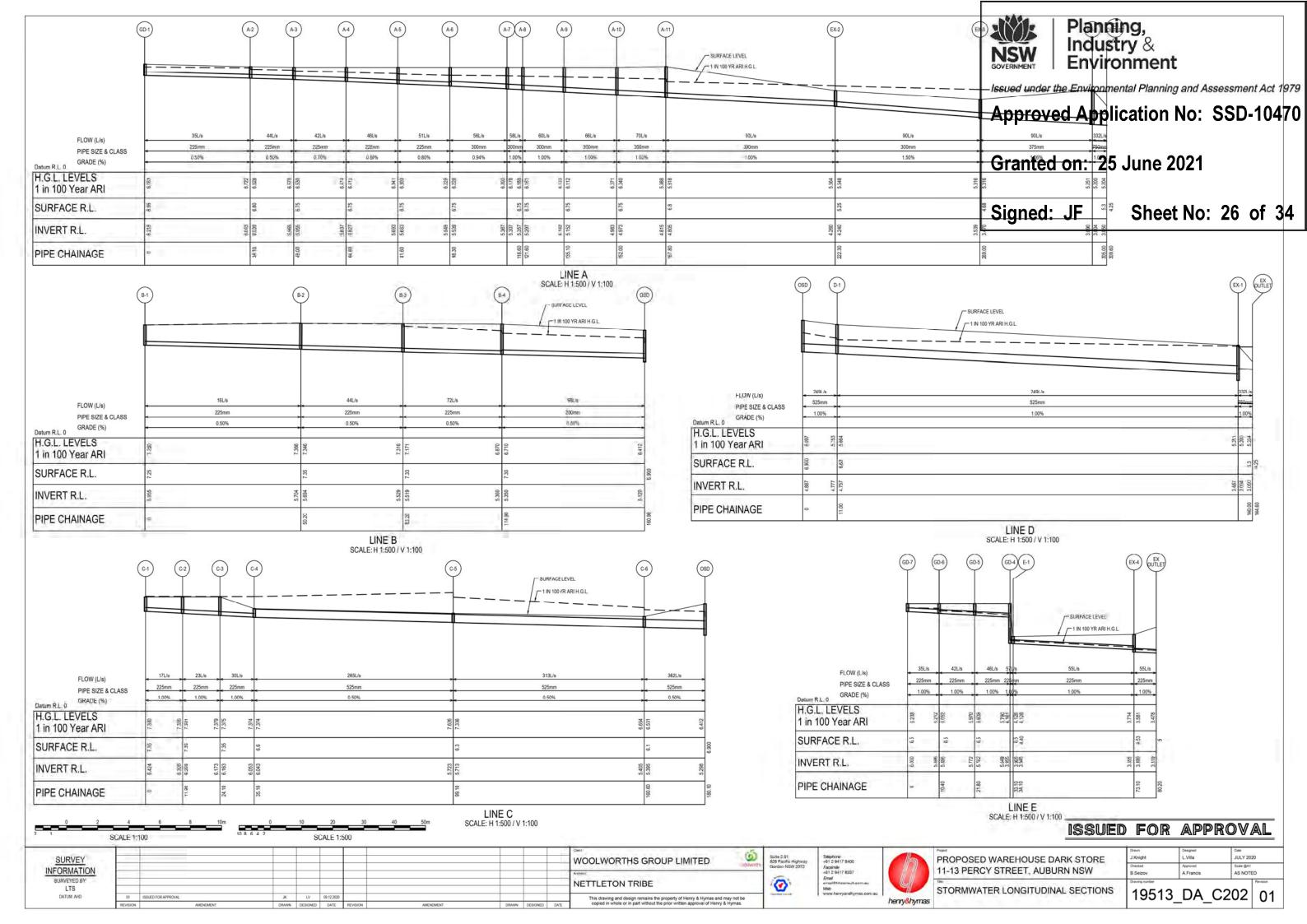
PROPOSED WAREHOUSE DARK STORE 11-13 PERCY STREET, AUBURN NSW

JULY 2020 A.Francis AS NOTED

STORMWATER MISCELLANEOUS DETAILS

19513 DA C200 03





Project: Sorting Facility Location: 11-13 Percy Street, A	uburn NSW	
Designed by: LV, BS Company: Henry & Hymas Pty	Ltd_Phone:	2 9417 840
SITE AREA 3,2477 ha *See Section 3,4,3 for dual occupa	incy	[A]
Upstream catchment draining through site		ha [AA]
See Section 4.1.3 for assessment of external flows. Basic storage volume 325 x [A] 0.8139	= 1055.5	_m ³ [B]
Basic discharge 0.15 x [A] 0.8139	= 0.487	_m3/s [C]
Area of site drained to storage (Must be as much as possible and not be less than 85% of the total site without written Council approval).	= 2.8273	_ha [D]
[D/[A]+[2.8273	= 87.1	_% [E]
Storage per ha, of contributing area = [B]/[D]	= 373.33	(F)
Enter volume/PSD adjustment chirt (Fig 5.1) using [F], and Read new PSD in litres/second/ha (Vs/ha).	=124,1	_l/s/ha [G]
Determine PSD =[G] x [D] 124.1 x 2.8273	= 351	_1/s [H]
Maximum head to orifice centre	= 1.75	_m [K]
Weir flow to storage Q ^{Weir} =CL(H ^{Weir}) ^{1.5} ∴ H ^{Weir}	0.735	-m [I]
Selected orifice diameter: $d = (0.464 \times Q / \sqrt{h})^{0.5} = (0.464 \times [H]/\sqrt{[K]})^0$	h = 385	m [J]
Maximum discharge	= 351.1	_1/s [L]
Head for high early discharge	= 1,01	_m [M]
High early discharge ([L] $\times \sqrt{[M]/[K]}$) (min 75% of [L])	= 323	/s [N]
Approximate mean discharge = ((L)) + [N]) /2	= 337	_1/s [P]
Average discharge/ha = [P] / [D] = 337 / 2.8273	= 119.1	1/s/ha [Q]

On-site Stormwater Detention Handbook

= 385 m³/ha[R]

= 1087.6 m³ [S]

= 1087.6 m³ [T]

= 1088 m³

m3 [V]

This page last updated June 2004

DRAINAGE DESIGN SUMMARY

DRAINAGE RESULTS SUMMARY

Enter volume/P.S.D. adjustment chart (Fig 5.1) using [Q] And read off final storage volume per hectare

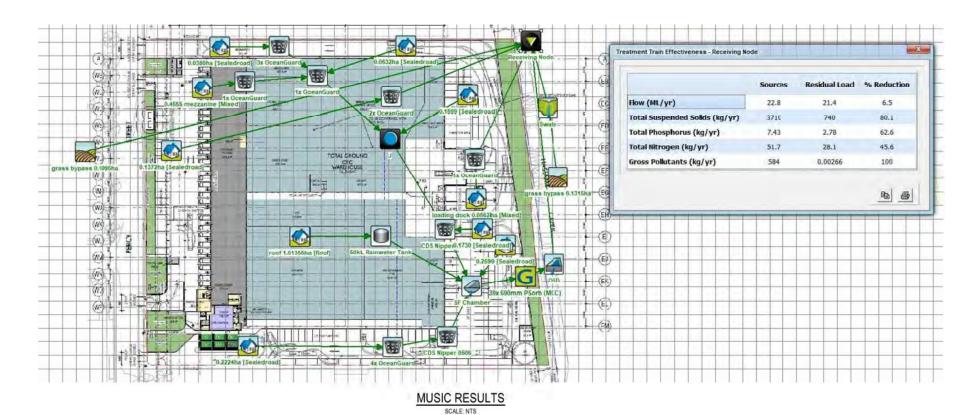
Determine final SSR = [R] x [D] = 385 x 2.8273

Primary storage proportion = [S] x 100 %

Secondary storage proportion = [S] x _____%

Tertiary storage proportion [S] x - %

Check [T] + [U] + [V] = [S]



STORMWATER DESIGN SUMMARY

TOTAL STE AREA; 32,477 m²
BULDING ROOF STORMWATER DIRECTED TO 50KL RAINWATER TANK FOR RE-USE PURPOSES, HIGH LEVEL OVERFLOW AND SITE DISCHARGE DIRECTED TO NEARBY FILTERS CHAMBER, AS SPECIFIED ON DRAWING C102, VIA GRAVITY IN ACCORDANCE WITH COUNCIL REQUIREMENTS

ON-SITE DETENTION DESIGN SUMMARY

THE PROPOSED ON-SITE DETENTION TANK HAS BEEN SIZED TO COMPLY WITH THE REQUIREMENT FOR THE DEVELOPED STORMWATER RUNOFF TO BE LIMITED TO THE PSD NOMINATED IN THE AUBURN DEVELOPMENT CONTROL PLAN 2010 FOR SITES LOCATED IN ZONE 4 IN ACCORDANCE WITH THE TABLE BELOW.

	MNIMUM REQUIREMENT
PSD	150 L/s/ha
SSR	325 m³/ha

THE OSD HAS BEEN DESIGNED BASED ON THE RESULTS FROM THE UPPER PARRAMATTA RIVER CATCHMENT ON-SITE STORMWATER DETENTION HANDBOOK

WATER SENSITIVE URBAN DESIGN SUMMARY

A STORMWATER MANAGEMENT PLAN HAS BEEN PREPARED TO LIMIT AND ELIMINATE ANY ADVERSE EFFECT ON THE ADJACENT ECOSYSTEM RESULTING FROM THE PROPOSED DEVELOPMENT. A MUSIC MODEL HAS BEEN PREPARED TO DETERMINE THE EFFECTIVENESS OF THE WATER CUALITY TREATMENT DEVICES AT REACHING THE REMOVAL RATES TARGETS SET BY CUMBERLAND COUNCILS WATER CUALITY TREATMENT TARGETS.

PROPOSED TREATMENT DEVICES:

5 DOR RAINWATER TANK

122 DCEANGUARD PIT BASKETS

3 9/ 690 STORMFLITER CARTIRDGES

7. ICCS THEORY DOES

1. ICCS THEORY DOES

1.

- Zx CDS Nipper 0506
 REFER T0 RESULT SUMMARY AND SCREENSHOT:

POLLUTANT	SOURCES	RESIDUAL LOAD	% REDUCTION	% TARGETS
TOTAL SUSPENDED SOLIDS	3710	740	80.1	80
TOTAL PHOSPHORUS	7,43	2.78	62.6	45
TOTAL NITROGEN	51.7	28.1	45.6	45



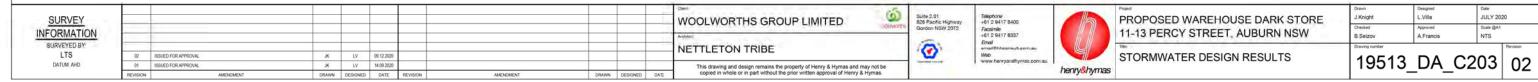
Issued under the Environmental Planning and Assessment Act 1979

Approved Application No: SSD-10470

Granted on: 25 June 2021

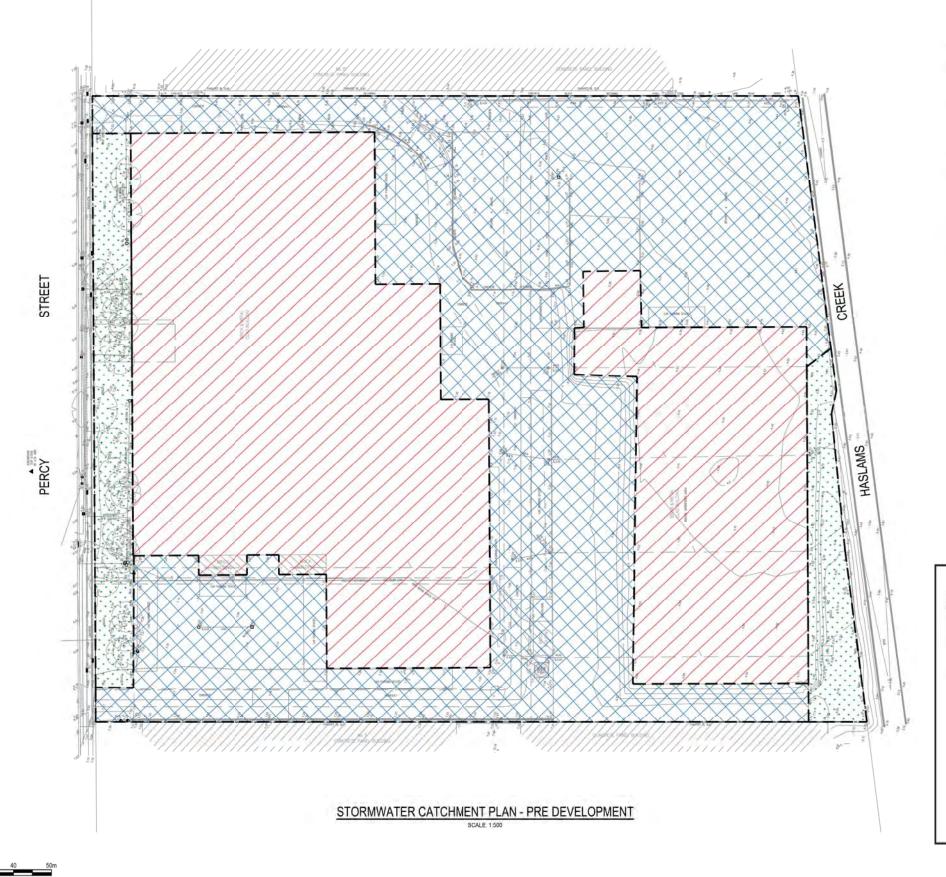
Sheet No: 27 of 34 Signed: JF

ISSUED FOR APPROVAL





SCALE 1:500



PRE-DEVELOPMENT - TOTAL SITE = 32477m2



PERVIOUS AREA = 2483m² (7%)



ROOF AREA = 15156m² (47%)



PAVED AREA = 14838m² (46%



Planning, Industry & Environment

Issued under the Environmental Planning and Assessment Act 1979

Approved Application No: SSD-10470

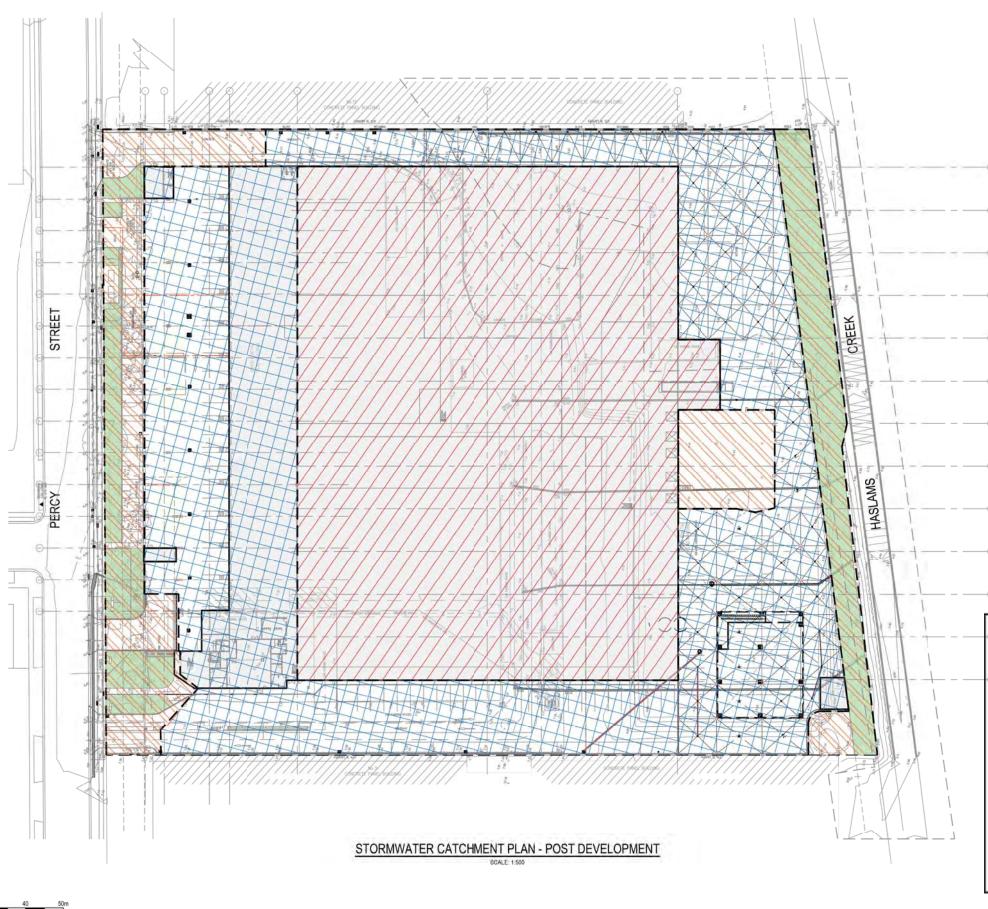
Granted on: 25 June 2021

Signed: JF Sheet No: 28 of 34

ISSUED FOR APPROVAL

SURVEY												WOOLWORTHS GROUP LIMITED	0	Suite 2.01 828 Pacific Highway	Telephone +81 2 9417 8400		PROPOSED WAREHOUSE DARK STORE	J.Knight	Designed L.Villa	JULY 2020
INFORMATION												Archine:	oths	Gordon NSW 2072	Facsinile +61 2 9417 8337		11-13 PERCY STREET, AUBURN NSW	Checked B.Seizov	Approved A.Francis	Scale @A1 1:500
SURVEYED BY LTS	03	ISSUED FOR CO-DRIDINATION		.K	LV	14 09 2020 12 08 2020						NETTLETON TRIBE		(7)	Email email@hheionsult.com.au Web	Y	STORMWATER CATCHMENT PLAN	10513	DA C2	FO Revision
- DATIMA AREX	D) REVISION	SISUED FOR PRELAWARY	AMENDMENT	JK DRAWN	LV DESIGNED	07 08 2020 D DATE	REVISION	AMENOMENT	DRAWN	DESIGNED	DATE	This drawing and design remains the property of Henry & Hymas and may not be copied in whole or in part without the prior written approval of Henry & Hymas.		Teacher (mark)	www.henryandhymaa.com.au	henry&hymas	PRE DEVELOPMENT	19513	_DA_C2	50 03





POST-DEVELOPMENT - TOTAL SITE = 32477m²

ROOF AREA TO RAINWATER TANK = 15135 m² (47%)



Issued under the Environmental Planning and Assessment Act 1979

Approved Application No: SSD-10470

Granted on: 25 June 2021

Signed: JF Sheet No: 29 of 34

ISSUED FOR APPROVAL

SURVEY INFORMATION	
SURVEYED BY	
LTS	
DATUM: AHD	

SCALE 1:500

WOOLWORTHS GROUP LIMITED NETTLETON TRIBE

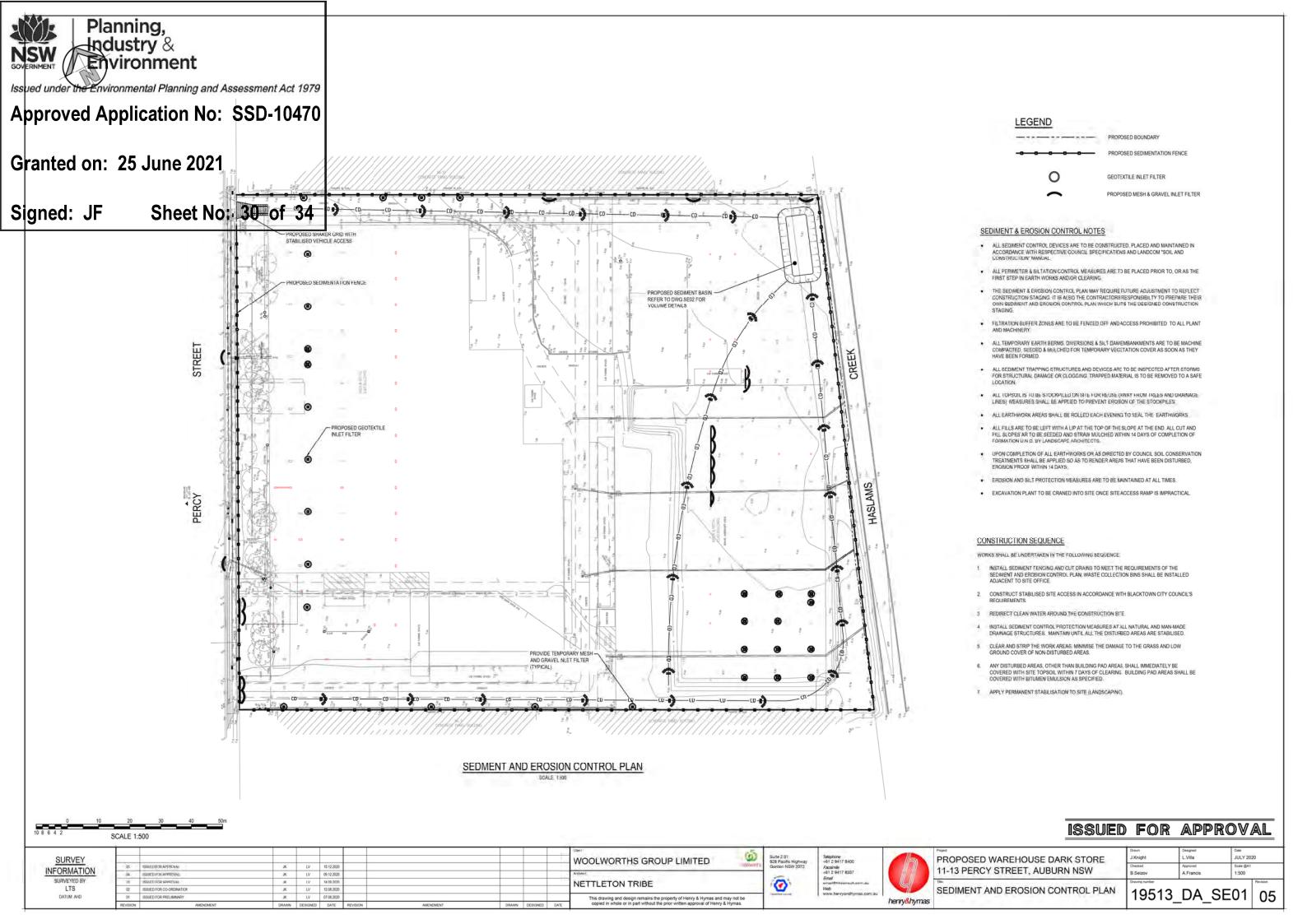


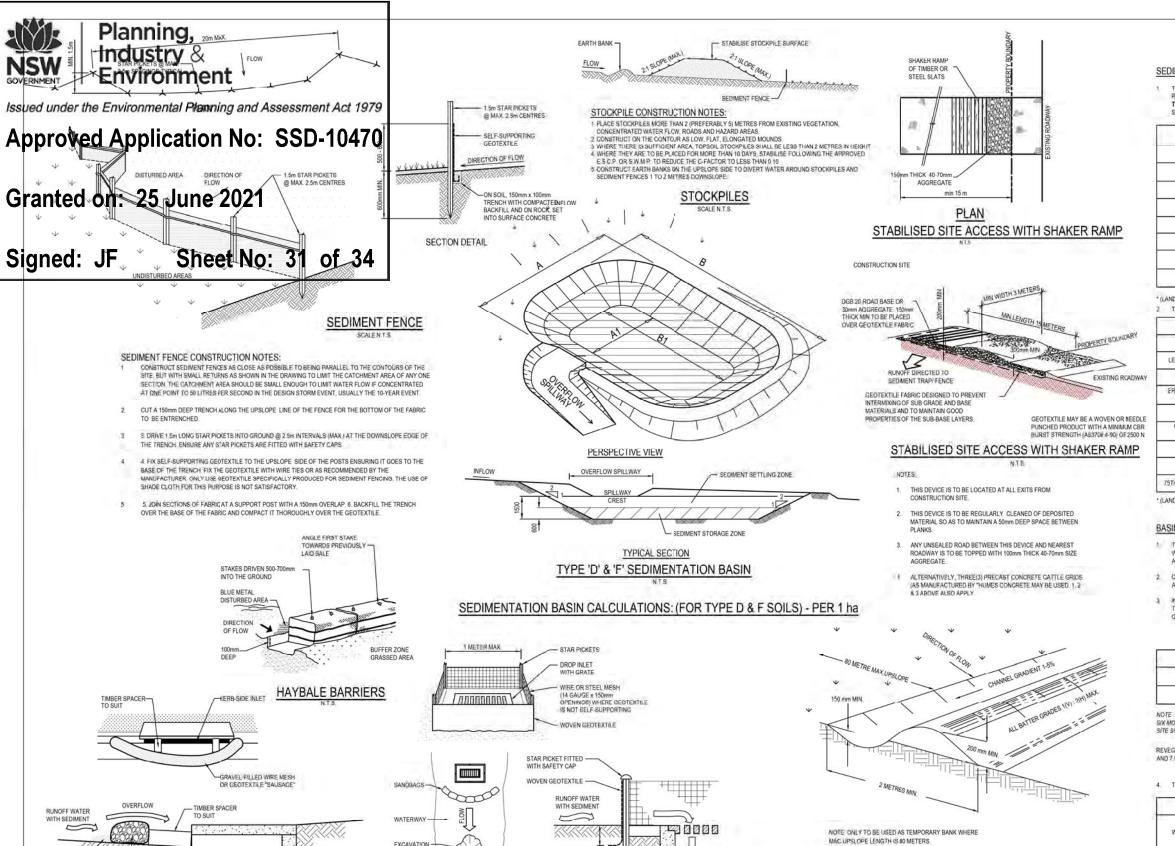


PROPOSED WAREHOUSE DARK STORE 11-13 PERCY STREET, AUBURN NSW

STORMWATER CATCHMENT PLAN henry&hymas POST DEVELOPMENT

19513_DA_C251 05





SEDIMENT BASIN SIZING

THE SEDIMENT BASIN SHALL BE CONSTRUCTED ON A RATE PER HECTARE BASIS AND HAS BEEN IN ACCORDANCE WITH THE REQUIREMENTS OF THE LANCOM MANUAL "MANAGING URBAN STORMWATER". SOILS AND CONSTRUCTION: FOR SEDIMENTATION
TYPE D SOILS THE DISTURBED AREA WITHIN THIS CATCHMENT AT ANY ONE TIME SHOULD BE LIMITED TO AN AREA FOR WHICH EACH
SEDIMENT BASIN GAN HANDLE. EACH BASIN SHALL BE SIZED IN ACCORDANCE WITH THE TABLE BELOW.

SEDIMENT BASIN SIZIN	G TYPE D SOILS
VOLUMETRIC RUNOFF COEFFICIENT, CV	0.50 (APPENDIX F - TABLE F2)
75TH PERCENTILE 5 DAY TOTAL RAINFALL DEPTH, R	33.1 mm
CATCHMENT AREA, A	1 Ha (UNIT AREA)
SETTLING ZONE VOLUME (PER HECTARE) 10 CV A R	165.5 m³
DISTURBED CATCHMENT AREA	1 Ha (UNIT AREA)
RKLSPC	30.38m³
SEDIMENT ZONE VOLUME (0.17 A (R K LS P C)/1.3	3.97m³ < 50% SETTLING VOL
TOTAL SEDIMENT BASIN VOLUME REQUIRED :	248.25 m³/Ha

(LANDCOM MANAGING URBAN STORMWATER MANUAL REFERENCE

2 THE FOLLOWING DESIGN PARAMETERS HAVE BEEN ASSESSED FOR THE SITE

CONSTRAINT	VALUE	(SOURCE)*
RAINFALL EROSIVITY (R-FACTOR)	3000	APPENDIX B
LENGTH/SLOPE GRADIENT FACTOR, LS	0.41	APPENDIX A - TABLE A1
SOIL ERODIBILITY (K-FACTOR)	0.019	TABLE C20
ROSION CONTROL PRACTICE FACTOR (P. FACTOR)	1.3 (COMPACTED)	APPENDIX A - TABLE A2
COVER FACTOR (C-FACTOR)	1.0 (DURING EARTHWORKS)	APPENDIX A - FIGURE A5
CALCULATED SOIL LOSS, A (RUSLE EQUATION)	30.38t/HaYR	A = RKLSPC
SOIL HYDROLOGIC GROUP	GROUPB	APPENDIX C TABLE 20
SEDIMENT TYPE	TYPE C	APPENDIX C TABLE 4
TH PERCENTILE 5-DAY RAINFALL EVENT	33 Imm	TABLE 6.3A

· (LANDCOM MANAGING URBAN STORMWATER MANUAL REFERENCE)

- THE CAPTURED STORMWATER IN THE SETTLING ZONE SHOULD BE DRAINED TO MEET THE MINIMUM STORAGE CAPACITY REQUIRED WITHIN A FIVE (5) DAY PERIOD FOLLOWING RAINFALL, PROVIDED THE ACCEPTABLE WATER QUALITY (NFR) AND TURBIDITY HAVE BEEN
- 2 CHEMICAL FLOCCULENT SUCH AS GYPSUM MAY BE DOSED TO AID SETTLING WITHIN 24 HOURS OF CONCLUSION OF EACH STORM. THE APPLIED DOSING RATES SHOULD ACHIEVE THE TARGET QUALITY WITHIN 36 TO 72 HOURS OF THE STORM EVENT
- INSPECT THE SEDIMENT BASINS AFTER EACH RAINFALL EVENT ANDOR WEEKLY. ENSURE THAT ALL SEDIMENT IS REMOVED ONCE THE SEDIMENT STORAGE ZONE IS FULL IREFER TO PEGS INSTALLED IN BASINS IN ACCORDANCE WITH THE SWIMP). ENSURE THAT OUTLET AND EMERGENCY SPILLWAY WORKS ARE MAINTAINED IN A FULLY OPERATIONAL CONDITION AT ALL TIMES.

SOWING SEASON	SEED MIX
AUTUMN/WINTER	OATS@40KG/Ha + JAPANESE MILLET@10kg/Ha
SPRING/SUMMER	OATS@20kg/Ha + JAPANESE MILLET@20kg/Ha

NOTE THESE PLANT SPECIES ARE FOR TEMPORARY REVEGETATION CM.V. THEY WILL ONLY PROVIDE PROTECTION FROM EROSION FOR SIX MONTHS. WHERE THE LOTS ARE TO BE LEFT UNDEVELOPED FOR A LONGER PERIOD, THE CONTRACTOR SHALL SEEK ADVICE FROM THE SITE SUPERINTENDENT AS TO MORE APPROPRIATE REVEGETATION METHODS.

REVEGETATION IN ACCORDANCE WITH THE ABOVE TABLE WILL BE ENHANCED BY ADDING LIME AT A RATE OF 4kg/TONNE OF TOPSOIL

4. THE LONG TERM GROUND COVER FACTORS FOR THE CONSTRUCTION WORKS IS NOT TO EXCEED THE FOLLOWING LIMITS:

LAND	MAXIMUM C-FACTOR	REMARKS
WATERWAYS AND OTHER AREAS OF CONCENTRATED FLOWS, POST CONSTRUCTION	0.05	APPLIES AFTER TEN WORKING DAYS OF COMPLETION OF FORMATION AND BEFORE CONCENTRATED FLOWS ARE APPLIED. FOOT AND VEHICULAR TRAFFIC IS PROHIBITED IN THIS AREA AND 70% GROUND COVER IS REQUIRED.
STOCKPILES, POST CONSTRUCTION	0.10	APPLIES AFTER TEN WORKING DAYS FROM COMPLETION OF FORMATION. 60% GROUND COVER IS REQUIRED.
ALL LANDS. INCLUDING WATERWAYS AND STOCKPILES, DURING CONSTRUCTION.	0.15	APPLIES AFTER 20 DAYS OF INACTIVITY, EVEN THOUGH WORKS MAY BE INCOMPLETE 50% GROUND COVER IS REQUIRED.

CATCH DRAIN CONSTRUCTION NOTES:

- CONSTRUCT ALONG GRADIENT AS SPECIFIED
- MAXIMUM SPACING BETWEEN BANKS SHALL BE 80 METRES.
 DRAINS TO BE OF PARABOLIC OR TRAPEZOIDAL CROSS SECTION NOT V-SHAPED.
- EARTH BANKS TO BE ADEQUATELY COMPACTED IN ORDER TO PREVENT FAILURE.
- CONSTRUCTION IS DE A TEMPRORARY NATURE AND SHALL BE COMPACTED AT THE END A DAYS WORK OR IMMEDIATELY PRIOR RAIN.

 ALL OUTLETS FROM DISTURBED LANDS ARE TO FEED INTO SEDIMENT BASIN OR SIMILAR.
- DISCHARGE RUNDEF COLLECTED FROM UNDISTURBED LANDS ONTO FITHER A STABILISED OR AN UNDISTURBED
- DISPOSAL AISTE WITHIN THE SAME SUBCATCHMENT AREA FROM WHICH THE WATER ORIGINATED. COMPACT WITH A SUITABLE IMPLEMENT IN SITUATIONS WHERE THEY ARE REQUIRED TO FUNCTION FOR MORE
- THAN FIVE DAYS.
- EARTH BANKS TO BE FREE OF PROJECTIONS OR OTHER IRREGULARITIES THAT WILL IMPEDE NORMAL FLOW

CATCH DRAINS SD 5-8

ISSUED FOR APPROVAL

SURVEY INFORMATION LTS

MESH & GRAVEL INLET FILTER CONSTRUCTION NOTES

1 FABRICATE A SLEEVE MADE FROM GEOTEXTILE OR WIRE MESH LONGER THAN THE LENGTH OF THE INLET PIT AND FILL IT WITH 25mm TO 50mm GRAVEL 2 FORM AN ELIPTICAL CROSS-SECTION ABOUT 150mm HIGH & 400mm WIDE 3 PLACET HE FILTER AT THE OPENING LEAVING AT LEAST A 100mm SFACE BETWEEN IT AND THE KERB INLET MAINTAIN THE OPENING WITH SPACER BLOCKS.

1 FORM A SEL WITH THE WERE OF TO DESCRIPT SECTION AND ADMINISTRATION OF THE SECTION AS A 100mm SFACE BETWEEN IT AND THE KERB INLET. MAINTAIN THE OPENING WITH SPACER BLOCKS.

4-FORM A SEAL WITH THE KERE TO PREVENT SEDIMENT BYPASSING THE FILTER.

5. SANDBAGS FILLED WITH GRAVEL CAN SUBSTITUTE FOR THE MESH OR GEOTEXTILE PROVIDING THEY ARE PLACED SO THAT THEY GAN PIRMLY ABUT EACH OTHER AND SEDIMENT / LADEN WATERS CANNOT PAGE.

BETWEEN.

MESH & GRAVEL INLET FILTER

SCALE N.T.S.

FILTERED WATER

GEOTEXTILE INLET FILTER

FABRICATE A SECIMENT BARRIER MADE FROM GEOTEXTILE
 PICKET SPACING TO BE MAXIMUM 10 in
 IN WATERWAYS, ARTIFICIAL SAS POINTS CAN BE CREATED WITH SANDBAGS OR EARTH BANKS AS SHOWN IN THE DRAWING
 AD NOT COVER THE INLET WITH GEOTEXTILES UNLESS THE DESIGN IS ADEQUATE TO ALLOW FOR ALL WATERS TO EYPASS IT.

FOR DROP INLETS @ NON-SAG POINTS, SANDBAGS, EARTH BANK OR EXCAVATION

GEOTEXTILE INLET FILTER CONSTRUCTION NOTES:

WOOLWORTHS GROUP LIMITED

NETTLETON TRIBE









PROPOSED WAREHOUSE DARK STORE 11-13 PERCY STREET, AUBURN NSW

JULY 2020 A.Francis

SEDIMENT AND EROSION CONTROL DETAILS 19513 DA SE02 03

