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

## GENERAL NOTES:

1. ALL WORK TO BE CARRIED OUT IN ACCORDANCE WITH CUMBERLAND CITY COUNCIL'S SPECIFICATION. CONTRACTOR TO OBTAIN AND RETAIN A COPY ON SITE DURING THE COURSE OF THE WORKS.
2. ALL NEW WORKS ARE TO MAKE A SMOOTH JUNCTION WITH EXISTING CONDITIONS, AND MARRY IN A 'WORKMANLIKE' MANNER.
3. THE CONTRACTOR IS TO VERIFY THE LOCATION OF ALL SERVICES WITH EACH RELEVANT AUTHORITY. 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 EVIDENT 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 AT ALL TIMES DURING CONSTRUCTION.
5. ADJUST EXISTING SERVICE COVERS TO SUIT NEW FINISHED LEVELS TO RELEVANT AUTHORITY REQUIREMENTS WHERE NECESSARY.
6. REINSTATE AND STABILISE ALL DISTURBED LANDSCAPED AREAS.
7. MINIMUM GRADE OF SUBSOIL SHALL BE 0.5% (1:200) FALL TO OUTLETS.
8. ALL TEMPORARY SEDIMENT AND EROSION CONTROL DEVICES ARE TO BE CONSTRUCTED, PLACED AND MAINTAINED IN ACCORDANCE WITH THE TECHNICAL SPECIFICATIONS, EROSION AND SEDIMENTATION CONTROL PLAN AND CUMBERLAND CITY COUNCIL'S REQUIREMENTS WHERE APPLICABLE.
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 ACCESS IS LIKELY.

## EXISTING SERVICES & FEATURES

- THE CONTRACTOR SHALL ALLOW FOR THE CAPPING OFF, EXCAVATION AND REMOVAL (IF REQUIRED) 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 BY THE WORKS ARE NOT DISRUPTED.
- 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 SUPERINTENDENT.
- 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 SUPERINTENDENT FOR TIME OF INTERRUPTION.
- EXISTING SERVICES, BUILDINGS, EXTERNAL STRUCTURES AND TREES SHOWN ON THESE DRAWINGS ARE EXISTING FEATURES PRIOR TO ANY DEMOLITION WORKS.
- 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 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 GAS AND WATER SERVICES UNDER DRIVEWAYS AND BRICK PAVING SHALL BE LOCATED IN 80Ø uPVC SEWER GRADE CONDUITS EXTENDING A MINIMUM OF 500mm BEYOND EDGE OF PAVING.

## 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 GUARANTEE THE ACCURACY OR COMPLETENESS OF THE SURVEY BASE OR ITS SUITABILITY AS A BASIS FOR CONSTRUCTION DRAWINGS.
SHOULD DISCREPANCIES BE ENCOUNTERED DURING CONSTRUCTION BETWEEN THE SURVEY DATA AND ACTUAL FIELD DATA, CONTACT HENRY AND HYMAS PTY. LTD. THE FOLLOWING NOTES HAVE BEEN TAKEN DIRECTLY FROM ORIGINAL SURVEY DOCUMENTS.
DATUM A.H.D.

## LOCALITY SKETCH

SCALE: NTS

| DRAWING SCHEDULE | |
|---|---|
| 19513_DA_C000 | 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 MISCELLANEOUS DETAILS |
| 19513_DA_C201 | OSD TANK PLAN, SECTIONS AND DETAILS |
| 19513_DA_C202 | STORMWATER LONGITUDINAL SECTIONS |
| 19513_DA_C203 | STORMWATER DESIGN RESULTS |
| 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_BE01 | 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.

1. THE EXISTING SURFACE IS TO BE STRIPPED OF ANY PAVEMENTS, TOPSOIL OR OBVIOUS UNSUITABLE MATERIAL.
2. EXCAVATE TO ACHIEVE SUBGRADE LEVELS WHERE NECESSARY.
3. THE EXPOSED SUBGRADE AFTER STRIPPING AND/ OR EXCAVATION IS TO BE PROOF ROLLED USING NOT FEWER THAN 5 PASSES OF A MINIMUM 8 TONNE DEAD WEIGHT STEEL SMOOTH-DRUM ROLLER UNDER THE SUPERVISION OF AN EXPERIENCED GEOTECHNICAL ENGINEER OR AN EXPERIENCED CIVIL ENGINEER. 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.
4. ENGINEERED FILL FOR REPLACEMENT OF SOFT OR HEAVING AREAS OR FOR BULK FILLING TO COMPRISE ESSENTIALLY OF GRANULAR MATERIALS (EG. 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 98% AND 102% OF STANDARD MAXIMUM DRY DENSITY (SMDD) WITHIN ± 2% OF OPTIMUM MOISTURE CONTENT (OMC).
5. 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 PLACEMENT ON SITE.
6. 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 = 75mm
   MAXIMUM PLASTICITY INDEX = 15%

## SITEWORKS NOTES

- DATUM A.H.D.
- 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 DISCREPANCIES 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 PROFILE, FREE FROM ABRUPT CHANGES IS ACHIEVED.
- 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 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.
- THESE PLANS SHALL BE READ IN CONJUNCTION WITH APPROVED LANDSCAPE, ARCHITECTURAL, 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 DEPTH OF CONCRETE AND A MINIMUM OF 50mm IN BITUMINOUS PAVING.
- ALL BRANCH GAS AND WATER SERVICES UNDER DRIVEWAYS AND BRICK PAVING SHALL BE LOCATED IN 80Ø 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 WILL 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 FINISHED SURFACE LEVELS WHERE APPLICABLE

## SUBSOIL DRAINAGE NOTES

1. GENERAL PROVIDE SUBSOIL DRAINS TO INTERCEPT GROUNDWATER SEEPAGE AND PREVENT WATER BUILD-UP BEHIND WALLS AND UNDER FLOORS AND PAVEMENT. CONNECT SUBSOIL TO SURFACE DRAINS OR TO THE STORMWATER DRAINAGE SYSTEM AS APPLICABLE.
2. PIPE DEPTH:
   PROVIDE THE FOLLOWING MINIMUM CLEAR DEPTH, MEASURED TO THE CROWN OF THE PIPE, WHERE THE PIPE PASSES BELOW THE FOLLOWING ELEMENTS:
   - 100mm BELOW FORMATION LEVEL OF THE PAVEMENT, KERB OR CHANNEL.
   - 100mm BELOW THE AVERAGE GRADIENT OF THE BOTTOM OF FOOTINGS.
3. JOINTING:
   AT JUNCTIONS OF SUBSOIL PIPES PROVIDE TEES, COUPLINGS OR ADAPTORS TO AS2439.1.
4. TRENCH WIDTH MINIMUM 300mm
5. PIPE UNDERLAY
   GENERAL: GRADE THE TRENCH FLOOR EVENLY TO THE GRADIENT OF THE PIPELINE. IF THE TRENCH FLOOR IS ROCK, CORRECT ANY 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 SOCKETS 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 EQUAL TO 200mm LOOSE THICKNESS, AND COMPACT WITHOUT DAMAGING OR DISPLACING PIPING.
   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.
7. FILTER SOCKS PROVIDE POLYESTER PERMEABLE SOCKS CAPABLE OF RETAINING PARTICLES OF 0.25mm SIZES. SECURELY FIT OF JOIN THE SOCK AT EACH JOINT.

**ISSUED FOR APPROVAL**

SURVEY INFORMATION
SURVEYED BY: LTS
DATUM: AHD

| REVISION | AMENDMENT | DRAWN | DESIGNED | DATE | REVISION | AMENDMENT | DRAWN | DESIGNED | DATE |
|---|---|---|---|---|---|---|---|---|---|
| 03 | ISSUED FOR APPROVAL | JK | LV | 09.12.2020 | | | | | |
| 02 | ISSUED FOR APPROVAL | JK | LV | 14.09.2020 | | | | | |
| 01 | ISSUED FOR PRELIMINARY | JK | LV | 07.08.2020 | | | | | |

Client: WOOLWORTHS GROUP LIMITED
Architect: NETTLETON TRIBE

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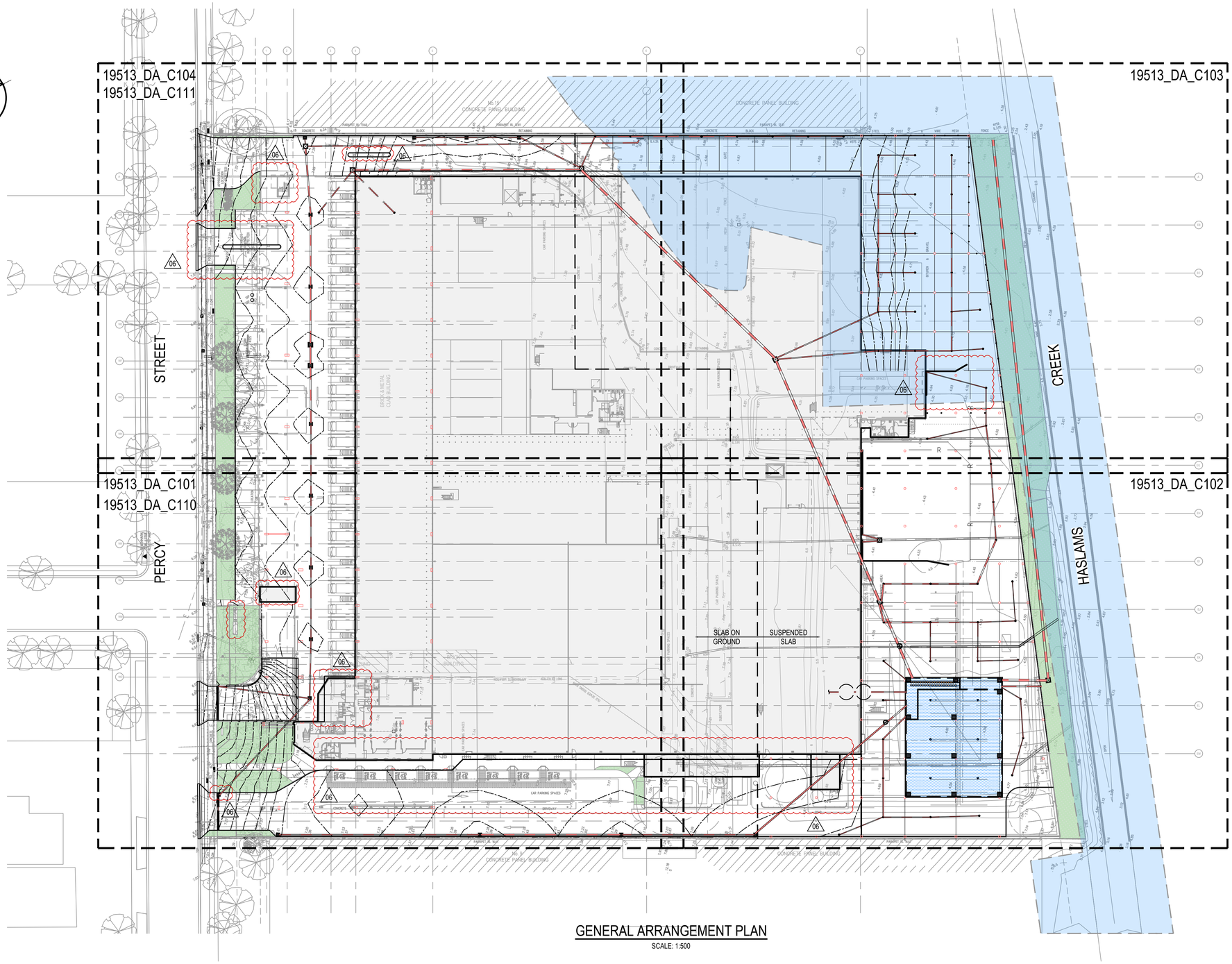
| | | | |
|---|---|---|---|
| Project: PROPOSED WAREHOUSE DARK STORE 11-13 PERCY STREET, AUBURN NSW | Drawn: J.Knight | Designed: L.Villa | Date: JULY 2020 |
| | Checked: B.Seizov | Approved: A.Francis | Scale @A1: NTS |
| Title: COVER SHEET, DRAWING SCHEDULE, NOTES AND LOCALITY SKETCH | Drawing number: 19513_DA_C000 | | Revision: 03 |




## GENERAL ARRANGEMENT PLAN

SCALE: 1:500

## LEGEND

- EXISTING BOUNDARY
- LINE OF EXISTING EASEMENT
- V — PROPOSED VALLEY LINE
- R — PROPOSED RIDGE LINE
- E — E — EXISTING ELECTRICAL MAINS LINE
- 6.90 — PROPOSED CONTOURS
- RL6.80 — PROPOSED SPOT LEVEL
- 4.45 — EXISTING SPOT LEVEL
- PROPOSED SURFACE INLET PITS
- PROPOSED STORMWATER PIPE
- EXISTING STORMWATER PIPE
- PROPOSED GRATED DRAIN
- IK — PROPOSED INTEGRAL KERB
- RW — PROPOSED RETAINING WALL
- FD — PROPOSED FLOOR DRAIN
- A-1 — LINE LETTER, PIT NUMBER — PROPOSED PIT TAG
- O/F — OVERLAND FLOW PATH
- 100 YEAR FLOOD EXTENT
- PROPOSED COLUMN LOCATIONS TO STRUCTURAL ENGINEERS DETAILS

**NOTE:**
CONTRACTOR TO INVESTIGATE PRESENCE OF EXISTING UTILITIES, SIZE AND DEPTH OF ALL IN-GROUND UTILITIES, PRIOR TO CONSTRUCTION. SERVICES SHOWN ON THIS DRAWING DEPICTED FROM SERVICES SEARCH PLANS AND CANNOT BE GUARANTEED.

**NOTE:**
ALL STORMWATER PITS TO HAVE Ø100 uPVC SLOTTED PIPES CONNECTEDTO THEM. THESE SUBSOILS TO EXTEND 3m UPSTREAM OF THE PIT AT A MINIMUM GRADE.

**NOTE:**
SERVICES SHOWN ON THIS DRAWING ARE DEPICTED FROM SERVICES SEARCH PLANS AND CAN NOT BE GUARANTEED. THE EXACT DEPTH AND LOCATION OF ALL IN-GROUND UTILITIES TO BE DETERMINED BY POT HOLING OR CABLE SEARCH.

**NOTE:**
INVERT LEVEL TO EXISTING STORMWATER DRAINAGE LINES TO BE CHECKED AND CONFIRMED PRIOR TO COMMENCEMENT OF WORKS.

0 10 20 30 40 50m
10 8 6 4 2
SCALE 1:500

**ISSUED FOR APPROVAL**

SURVEY INFORMATION
SURVEYED BY: LTS
DATUM: AHD

| REVISION | AMENDMENT | DRAWN | DESIGNED | DATE |
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| 06 | ISSUED FOR APPROVAL | SC | LV | 27.04.2022 |
| 05 | ISSUED FOR APPROVAL | JK | LV | 15.12.2020 |
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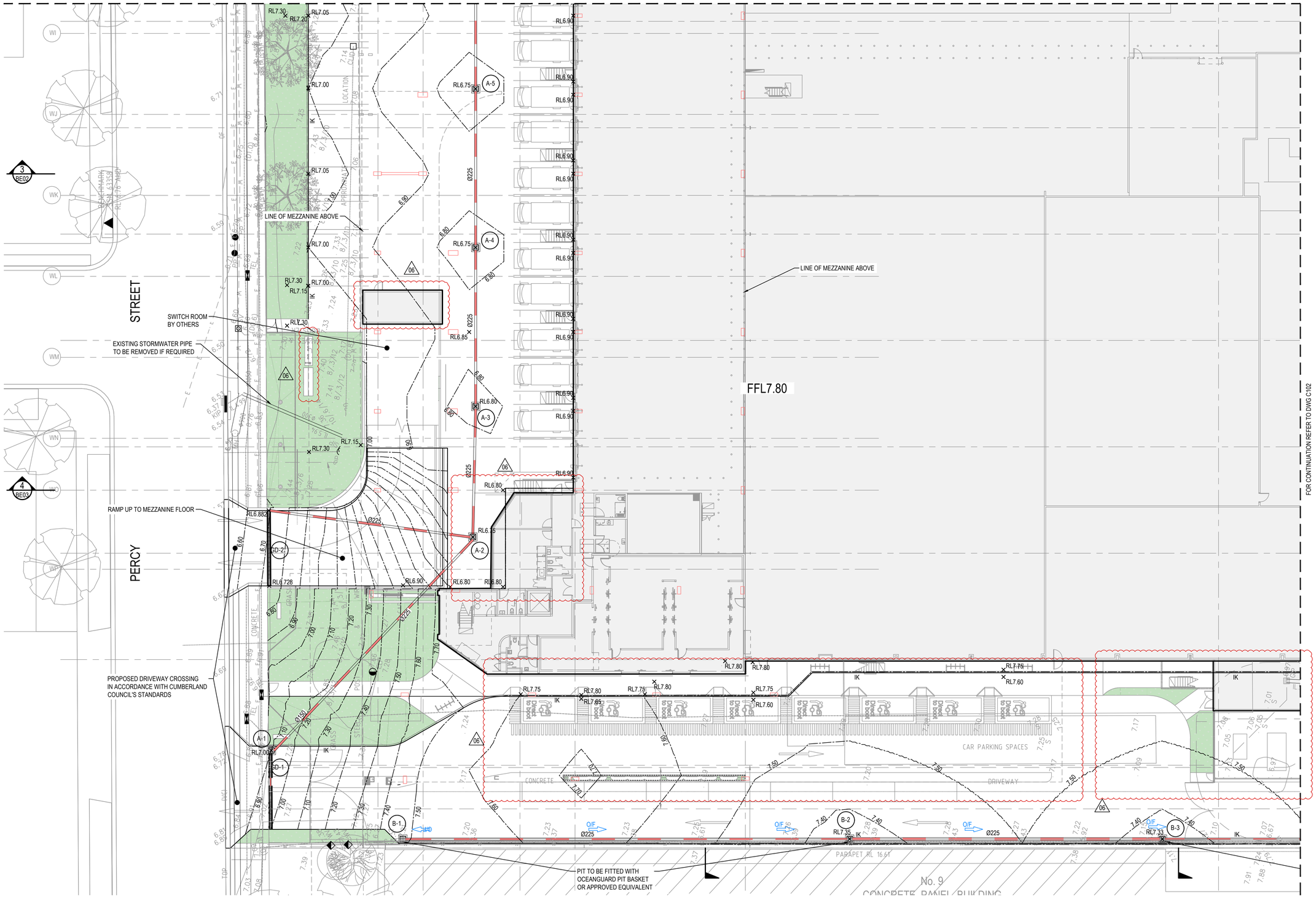
Project: PROPOSED WAREHOUSE DARK STORE
11-13 PERCY STREET, AUBURN NSW

Title: GENERAL ARRANGEMENT PLAN

| Drawn | Designed | Date |
|---|---|---|
| J.Knight | L.Villa | JULY 2020 |
| Checked | Approved | Scale @A1 |
| B.Seizov | A.Francis | 1:500 |

Drawing number: 19513_DA_C100
Revision: 06




0 4 8 12 16 20m

4 3 2 1

SCALE 1:200

## SITE DETAIL PLAN

SCALE: 1:200

**ISSUED FOR APPROVAL**

SURVEY INFORMATION

SURVEYED BY: LTS

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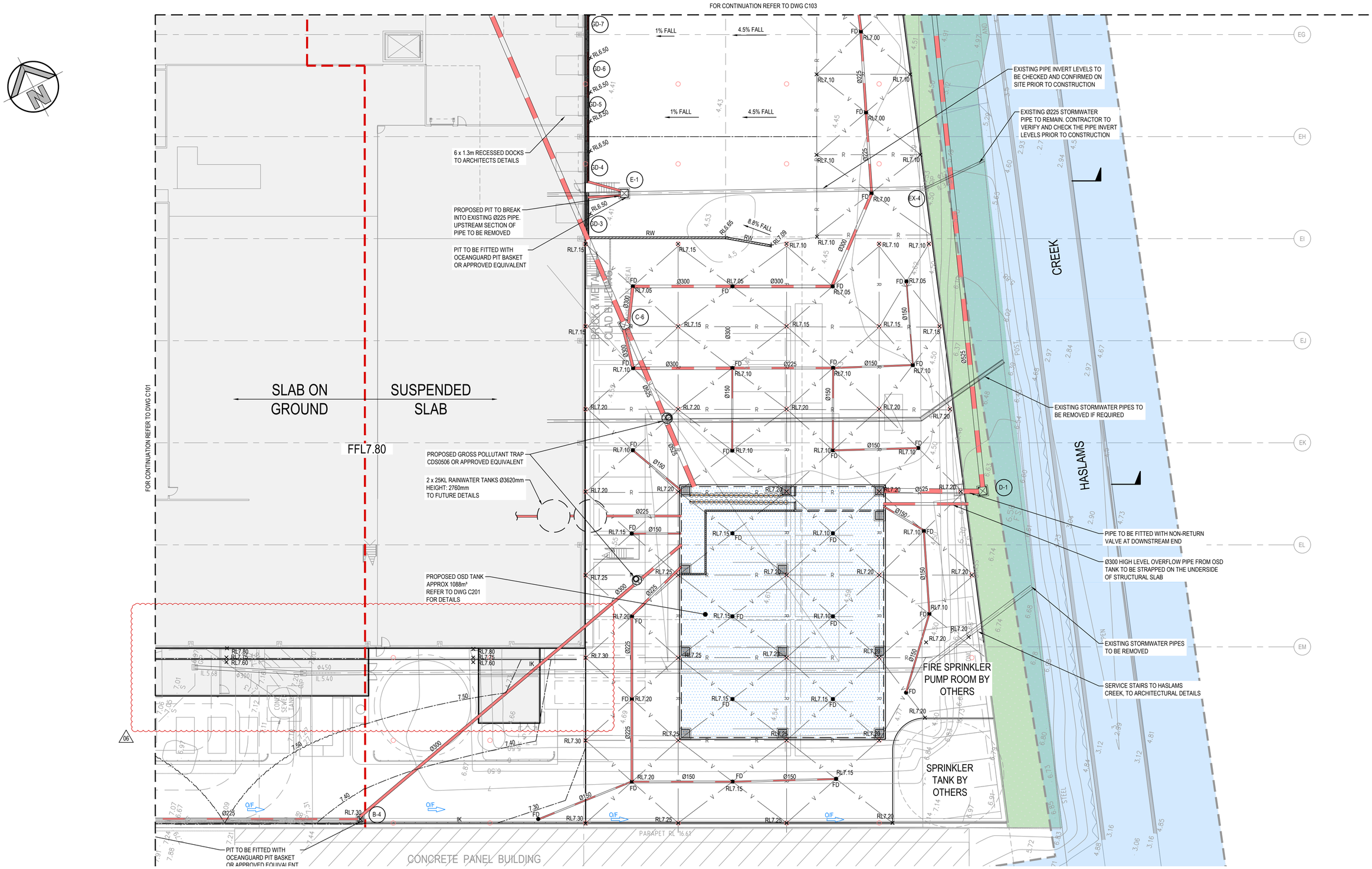
Project: PROPOSED WAREHOUSE DARK STORE
11-13 PERCY STREET, AUBURN NSW

Title: SITE DETAIL PLAN
SHEET 1 OF 4

| Drawn | Designed | Date |
|---|---|---|
| J.Knight | L.Villa | JULY 2020 |
| Checked | Approved | Scale @A1 |
| B.Seizov | A.Francis | 1:200 |

Drawing number: 19513_DA_C101

Revision: 06




## SITE DETAIL PLAN

SCALE: 1:200

0 4 8 12 16 20m

4 3 2 1

SCALE 1:200

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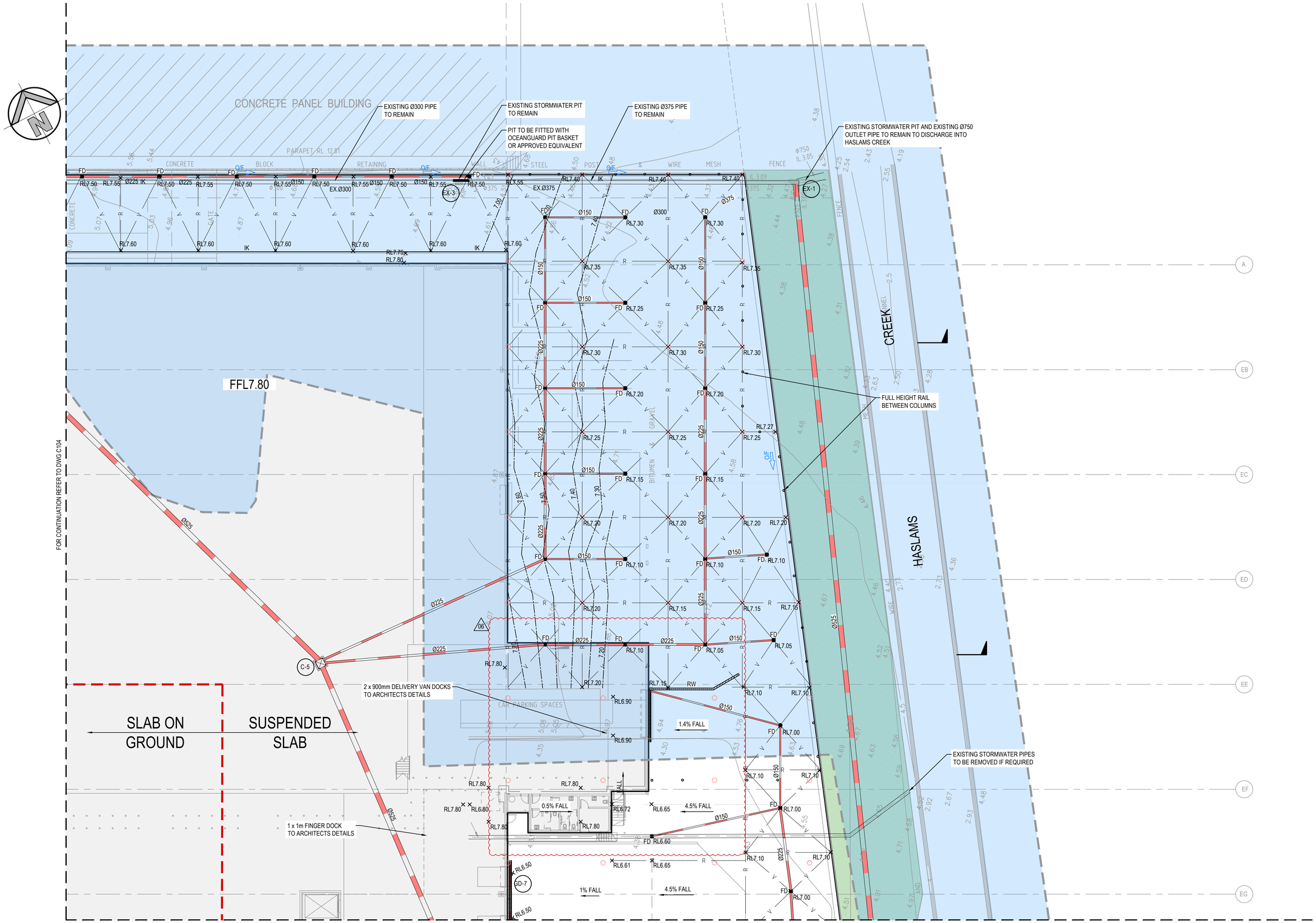
Project: PROPOSED WAREHOUSE DARK STORE
11-13 PERCY STREET, AUBURN NSW

Title: SITE DETAIL PLAN
SHEET 2 OF 4

| Drawn | Designed | Date |
|---|---|---|
| J.Knight | L.Villa | JULY 2020 |
| Checked | Approved | Scale @A1 |
| B.Seizov | A.Francis | 1:200 |

Drawing number: 19513_DA_C102

Revision: 06




## SITE DETAIL PLAN

SCALE: 1:200

0 4 8 12 16 20m

4 3 2 1

SCALE 1:200

**ISSUED FOR APPROVAL**

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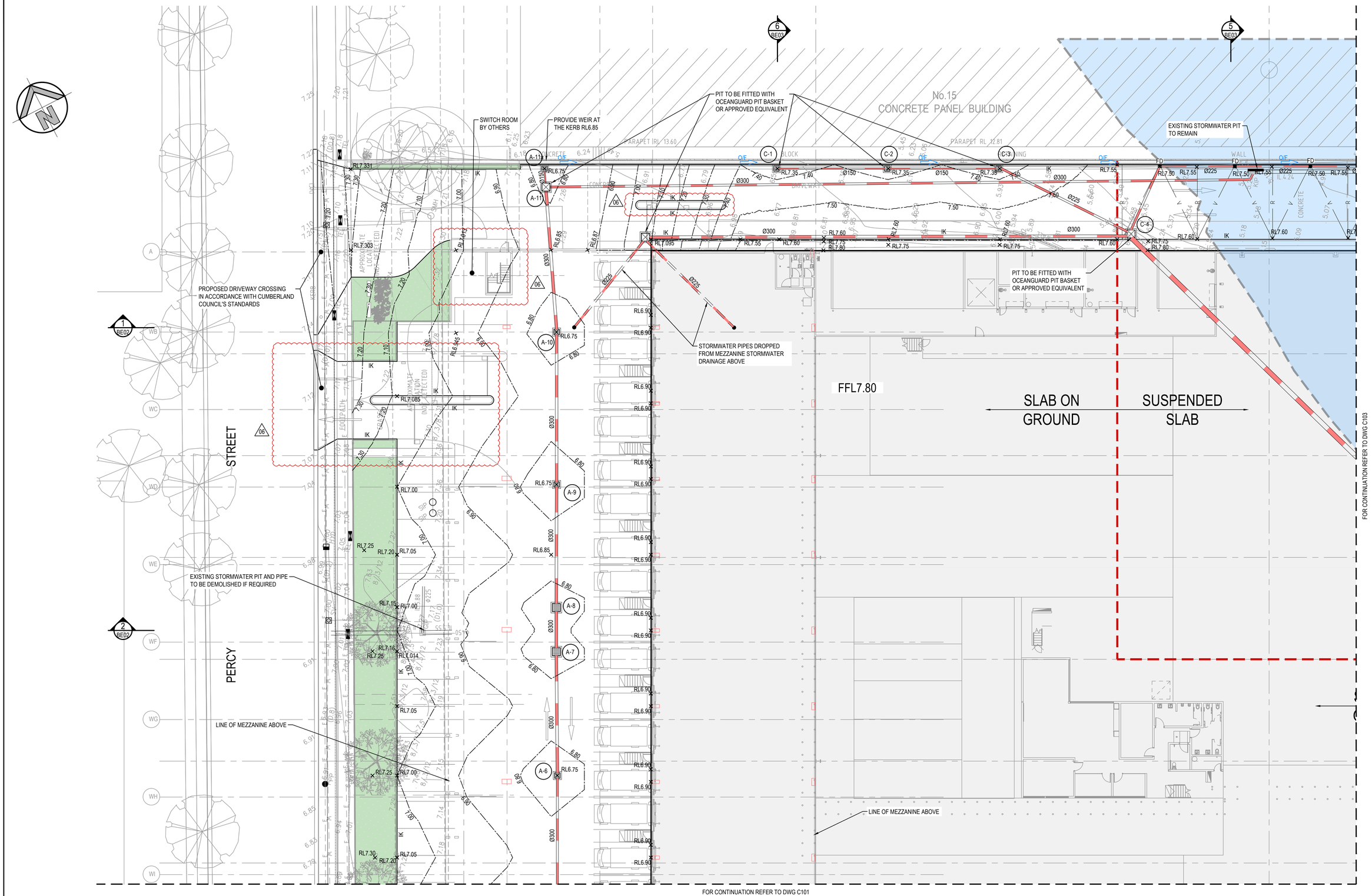
Project: PROPOSED WAREHOUSE DARK STORE
11-13 PERCY STREET, AUBURN NSW

Title: SITE DETAIL PLAN
SHEET 3 OF 4

| Drawn | Designed | Date |
|---|---|---|
| J.Knight | L.Villa | JULY 2020 |
| Checked | Approved | Scale @A1 |
| B.Seizov | A.Francis | 1:200 |

Drawing number: 19513_DA_C103

Revision: 06




0 4 8 12 16 20m

4 3 2 1

SCALE 1:200

## SITE DETAIL PLAN

SCALE: 1:200

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henry&hymas

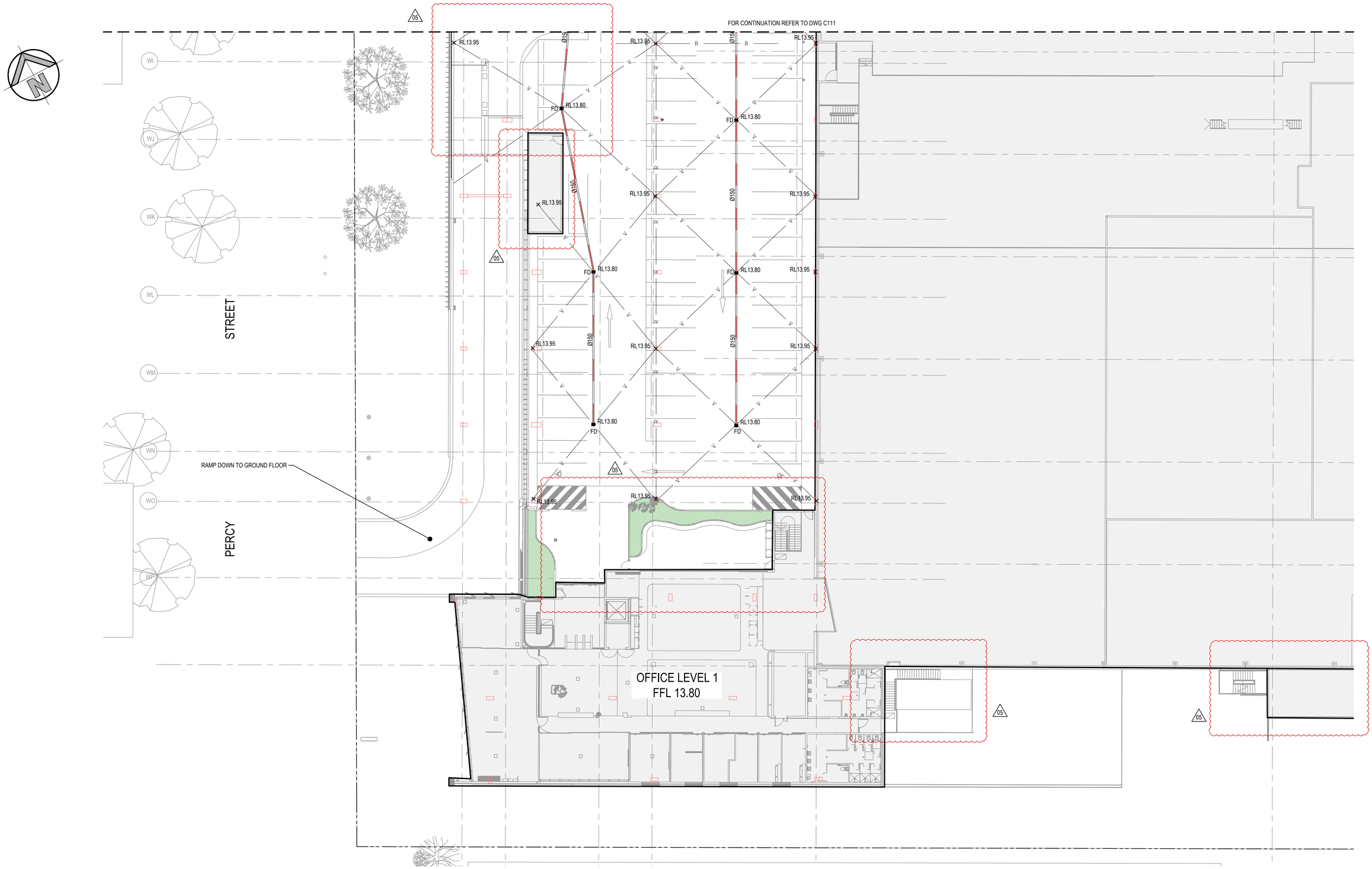
Project
PROPOSED WAREHOUSE DARK STORE
11-13 PERCY STREET, AUBURN NSW

Title
SITE DETAIL PLAN
SHEET 4 OF 4

| Drawn | Designed | Date |
|---|---|---|
| J.Knight | L.Villa | JULY 2020 |
| Checked | Approved | Scale @A1 |
| B.Seizov | A.Francis | 1:200 |

Drawing number: 19513_DA_C104

Revision: 06




## MEZZANINE LEVEL DETAIL PLAN

SCALE: 1:200

0 4 8 12 16 20m

4 3 2 1

SCALE 1:200

**ISSUED FOR APPROVAL**

SURVEY INFORMATION

SURVEYED BY: LTS

DATUM: AHD

| REVISION | AMENDMENT | DRAWN | DESIGNED | DATE | REVISION | AMENDMENT | DRAWN | DESIGNED | DATE |
|---|---|---|---|---|---|---|---|---|---|
| 05 | ISSUED FOR APPROVAL | SC | LV | 27.04.2022 | | | | | |
| 04 | ISSUED FOR APPROVAL | JK | LV | 09.12.2020 | | | | | |
| 03 | ISSUED FOR APPROVAL | JK | LV | 14.09.2020 | | | | | |
| 02 | ISSUED FOR CO-ORDINATION | JK | LV | 12.08.2020 | | | | | |
| 01 | ISSUED FOR PRELIMINARY | JK | LV | 07.08.2020 | | | | | |

Client: WOOLWORTHS GROUP LIMITED

Architect: NETTLETON TRIBE

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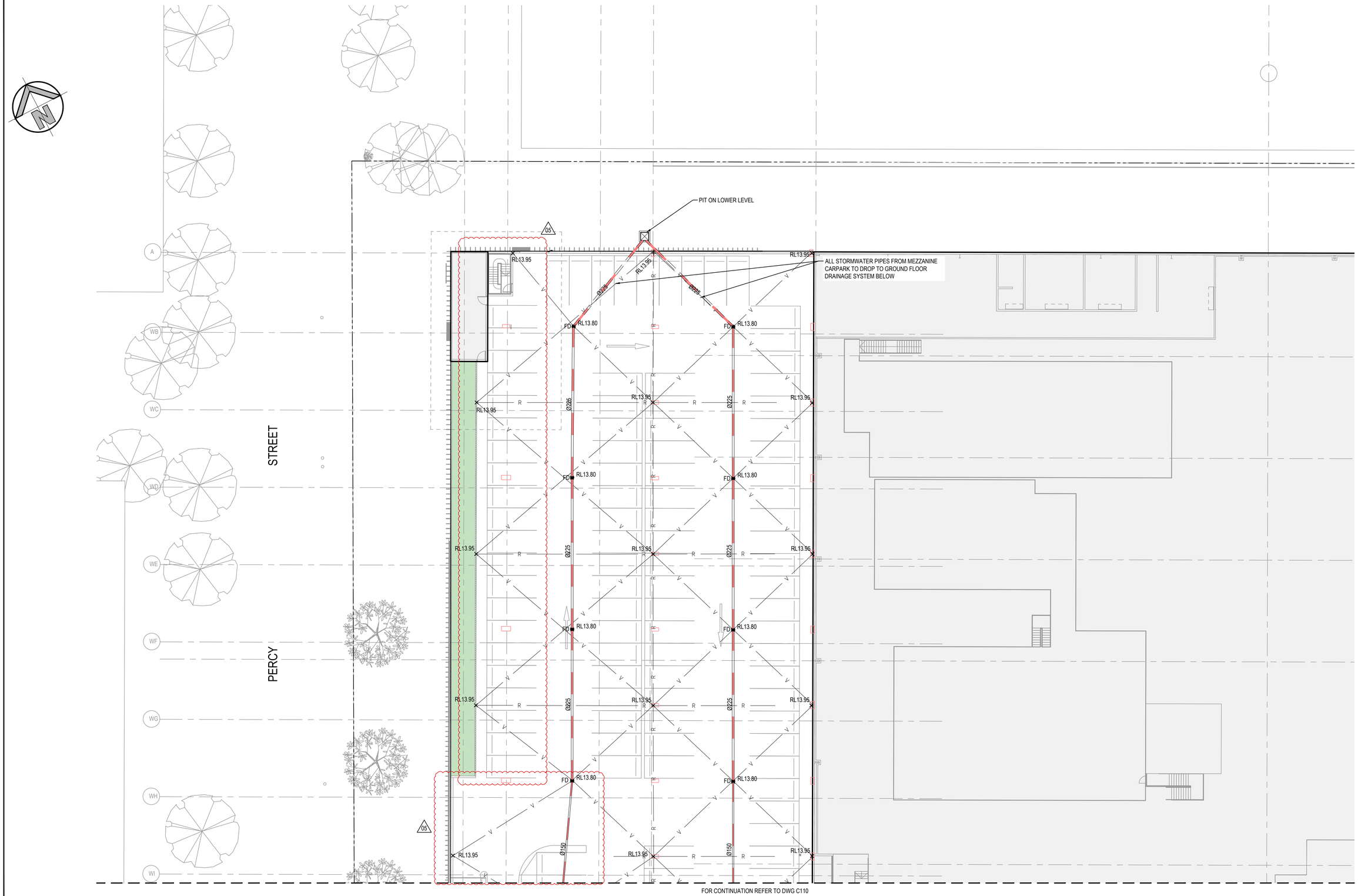
Project: PROPOSED WAREHOUSE DARK STORE
11-13 PERCY STREET, AUBURN NSW

Title: MEZZANINE LEVEL DETAIL PLAN
SHEET 1 OF 2

| Drawn | Designed | Date |
|---|---|---|
| J.Knight | L.Villa | JULY 2020 |
| Checked | Approved | Scale @A1 |
| B.Seizov | A.Francis | 1:200 |

Drawing number: 19513_DA_C110

Revision: 05




0 4 8 12 16 20m

4 3 2 1

SCALE 1:200

## MEZZANINE LEVEL DETAIL PLAN

SCALE: 1:200

**ISSUED FOR CO-ORDINATION**

SURVEY INFORMATION

SURVEYED BY: LTS

DATUM: AHD

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Client: WOOLWORTHS GROUP LIMITED

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

Title: MEZZANINE LEVEL DETAIL PLAN
SHEET 2 OF 2

| Drawn | Designed | Date |
|---|---|---|
| J.Knight | L.Villa | JULY 2020 |
| Checked | Approved | Scale @A1 |
| B.Seizov | A.Francis | 1:200 |

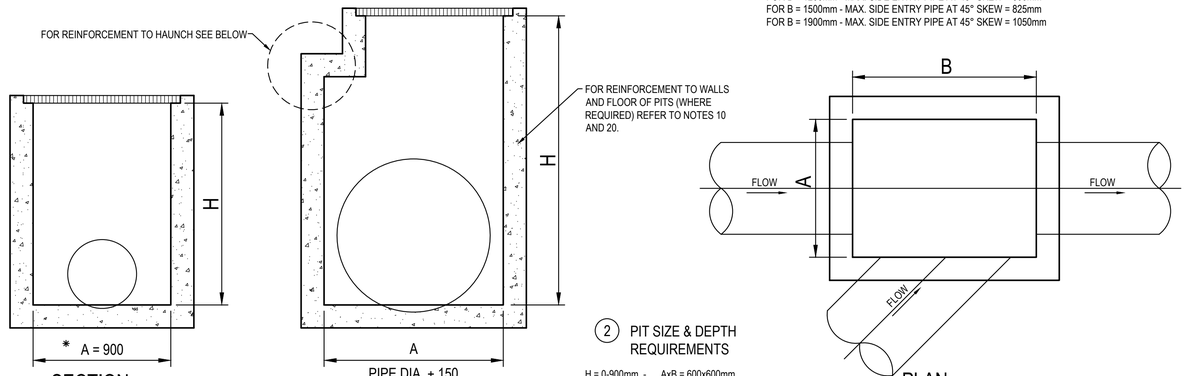
Drawing number: 19513_DA_C111

Revision: 05

# 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.

1. SELECT PIT CHAMBER USING THE STEPS BELOW:
2. SELECT PIT CHAMBER SIZE DEPENDING ON THE PIPE DIAMETERS.
3. CHECK PIT CHAMBER SIZE TO SATISFY DEPTH TO INVERT REQUIREMENTS.
   CHECK PIT CHAMBER DIMENSIONS TO SATISFY THE SKEW ANGLE IN THE TABLE.




SECTION
NTS

*A = 600 FOR PIPES UP TO 375 DIA.

1 PIT CHAMBER DIMENSIONS FOR PIPES UP TO 600 DIA.

PIPE DIA. + 150
SECTION
NTS

1 PIT CHAMBER FOR PIPES GREATER THAN 600 DIA.

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 = 825mm
FOR B = 1900mm - MAX. SIDE ENTRY PIPE AT 45° SKEW = 1050mm

2 PIT SIZE & DEPTH REQUIREMENTS

H = 0-900mm - AxB = 600x600mm
H = 900-1200mm - AxB = 900x600mm
H = >1200mm - AxB = 900x900mm

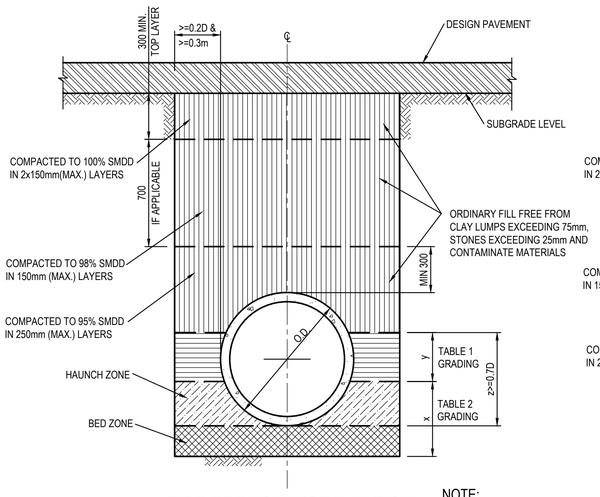
PLAN
NTS

3 PIT CHAMBER FOR SIDE ENTRY ON SKEW

| 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 |
| HS1 | 100 IF D<=1500, OR 150 IF D>=1500 | 0.1D | 50 | 2.0 |
| HS2 | | 0.3D | 60 | 2.5 |
| HS3 | | 0.3D | 70 | 4.0 |

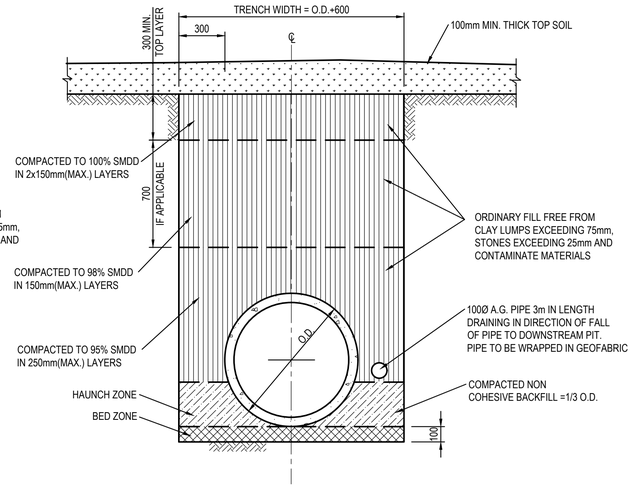



PIPE TRENCH INSTALLATION BENEATH PAVEMENT

(HS SUPPORT TO BE USED UNDER ROADWAY)

SCALE 1:20

NOTE:
TYPE HS2 TO BE USED AS A TYPICAL SUPPORT FOR TRENCHES UNDER ROADWAY UNLESS SPECIFIED SEPERATELY




PIPE TRENCH INSTALLATION IN LANDSCAPE AREAS

(H1 & H2 SUPPORT)

SCALE 1:20

## DRAINAGE NOTES:

1. ALL STORMWATER WORK TO COMPLY WITH AS 3500 PART 3.

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 RESPONSIBILITY.

4. BEDDING TYPE SHALL BE TYPE H2 FOR RCP. WHERE NECESSARY THE OVERLAY ZONE SHALL BE REDUCED TO ACCOMMODATE PAVEMENT REQUIREMENTS. REFER TO THIS DRAWING FOR DETAILS.

5. MINIMUM COVER OVER EXISTING PIPES FOR PROTECTION DURING CONSTRUCTION SHALL BE 800mm.

6. NO CONSTRUCTION LOADS SHALL BE APPLIED TO PLASTIC PIPES.

7. FINISHED SURFACE LEVELS SHOWN ON LAYOUT PLAN DRGS TAKE PRECEDENCE OVER DESIGN DRAINAGE SURFACE LEVELS.

8. ALL PIPES UP TO AND INCLUDING 300 DIA. SHALL BE SOLVENT OR RUBBER RING JOINTED PVC CLASS SH PIPE TO AS1260. ALL OTHER PIPES TO BE RCP USING CLASS 2 RUBBER RING JOINTED PIPE. HARDIES FRC PIPE MAY 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 "POLYCRETE" WITH "LIGHT DUTY" CLASS B GALV. MILD STEEL GRATING AND FRAME.
ALL PITS IN TRAFFICABLE AREAS (CLASS "D" LOADING MAX) TO HAVE 150mm THICK CONCRETE WALLS AND BASE CAST IN-SITU f'c=32 MPa, REINFORCED WITH N12-200 BOTH LOADING WAYS CENTRALLY PLACE .U.N.O. ON SEPARATE DESIGN DRAWINGS IN THIS SET. GALV.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 STANDARDS.

10. ALL PITS, GRATINGS AND FRAMES SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURERS SPECIFICATION AND TO BE IN ACCORDANCE WITH AS3500.3 AND AS3996.
11. PIT CHAMBER DIMENSIONS ARE TO BE SELECTED TO SATISFY THE FOLLOWING:
- PIPE SIZE
- DEPTH TO INVERT
- SKEW ANGLE
  REFER TYPICAL PIT 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 PIPES SHALL BE 100mm SLOTTED PVC IN A FILTER SOCK, UNO, WITH 3m INSTALLED UPSTREAM OF ALL PITS.

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.

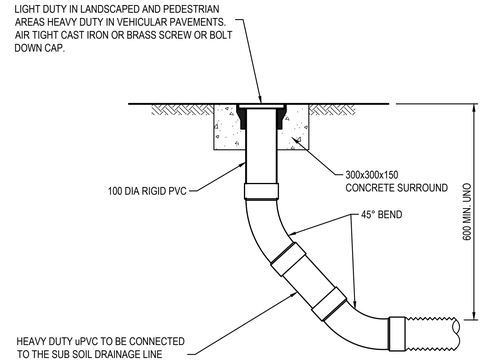
18. ALL ROOF DRAINAGE TO BE INSTALLED IN ACCORDANCE WITH AS3500, PART 3. TESTING TO BE UNDERTAKEN AND REPORTS PROVIDED TO THE SUPERINTENDENT.

19. LOCATION OF THE DIRECT DOWN PIPE CONNECTIONS MAY VARY ON SITE TO SUIT SITE CONDITIONS, WHERE 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@200 CTS CENTRALLY PLACED BOTH WAYS THROUGHOUT U.N.O.ON SEPARATE DESIGN DRAWINGS IN THIS SET. IF DEPTH EXCEEDS 5m CONTACT ENGINEER.

21. SUBSOIL DRAINAGE LINES FOR LANDSCAPE AREA NOT SHOWN ON THESE DRAWINGS. REFER TO LANDSCAPING PLANS FOR DETAILS.

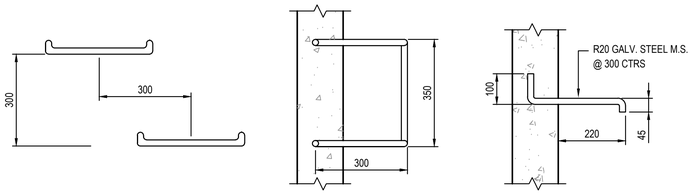
22. ALL STORMWATER PITS TO HAVE Ø100 uPVC SLOTTED SUBSOIL PIPES CONNECTED TO THEM. THESE SUBSOILS TO EXTEND 3m UPSTREAM OF THE PIT AT A MINIMUM GRADE.




FLUSHING POINT (FP)

SCALE 1:10

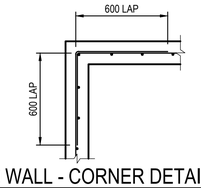
NOTE: SLOTTED RIGID PVC PIPE AND FITTINGS MAY BE USED




ELEVATION PLAN SECTION

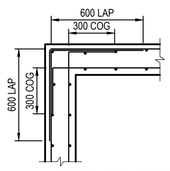
TYPICAL STEP IRON DETAIL

SCALE 1:10



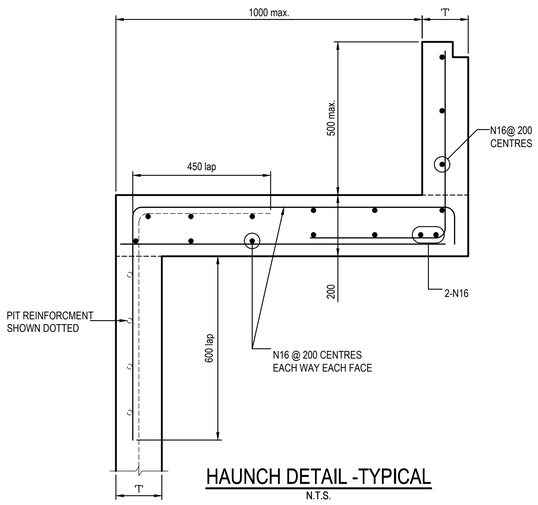

150 WALL - CORNER DETAIL

SCALE 1:20




200 WALL - CORNER DETAIL

SCALE 1:20




HAUNCH DETAIL -TYPICAL

N.T.S.

0 400 800 1200 1600 2000mm
400 200
SCALE 1:20

0 200 400 600 800 1000mm
200 100
SCALE 1:10

**ISSUED FOR APPROVAL**

SURVEY INFORMATION
SURVEYED BY: LTS
DATUM: AHD

| REVISION | AMENDMENT | DRAWN | DESIGNED | DATE |
|---|---|---|---|---|
| 03 | ISSUED FOR APPROVAL | JK | LV | 14.09.2020 |
| 02 | ISSUED FOR CO-ORDINATION | JK | LV | 12.08.2020 |
| 01 | ISSUED FOR PRELIMINARY | JK | LV | 07.08.2020 |

Client: WOOLWORTHS GROUP LIMITED

Architect: NETTLETON TRIBE

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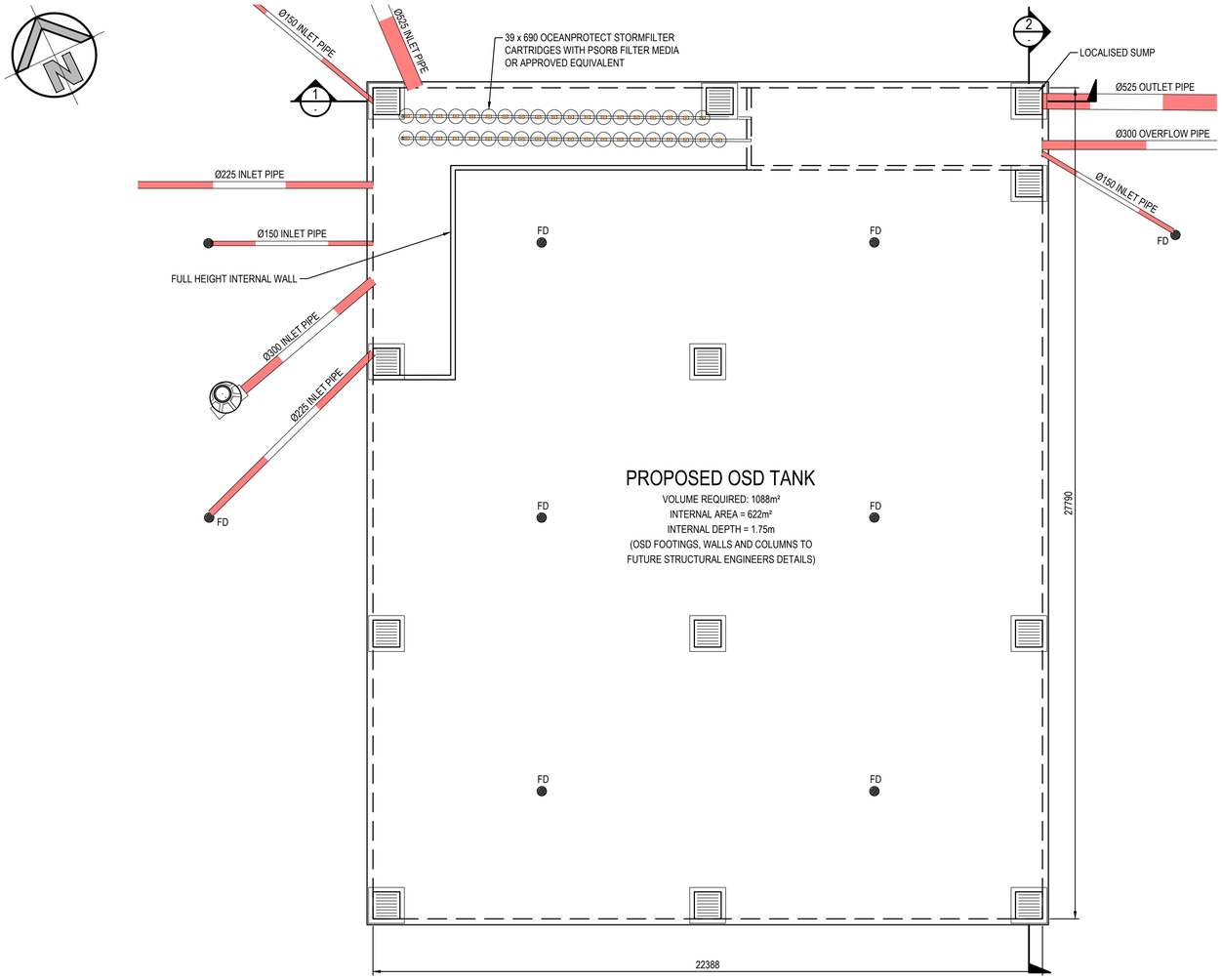
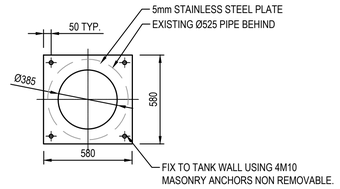
| Project | Drawn | Designed | Date |
|---|---|---|---|
| PROPOSED WAREHOUSE DARK STORE 11-13 PERCY STREET, AUBURN NSW | J.Knight | L.Villa | JULY 2020 |
| | Checked B.Seizov | Approved A.Francis | Scale @A1 AS NOTED |
| Title: STORMWATER MISCELLANEOUS DETAILS | Drawing number 19513_DA_C200 | | Revision 03 |




## OSD TANK PLAN

SCALE: 1:100



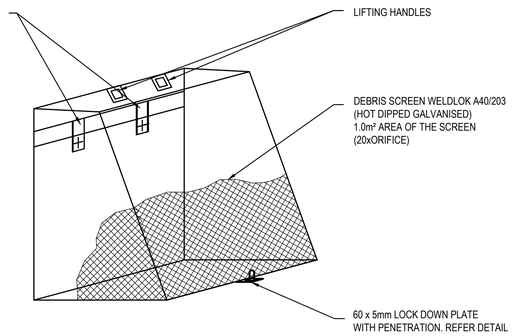

## ORIFICE PLATE DETAIL

SCALE 1:20

100 x 16 MOUNTING BAR WITH BRACKETS, SCREEN TO BE ATTACHED (GENERALLY ON A SLIDING MECHANISM) TO THE WALL, BUT SHOULD BE REMOVABLE (WITHOUT THE USE OF TOOLS) TO PERMIT CLEANSING AND EASY INSPECTION OF THE OUTLET CONTROL. ALL STEEL TO BE HOT DIPPED GALVANISED.

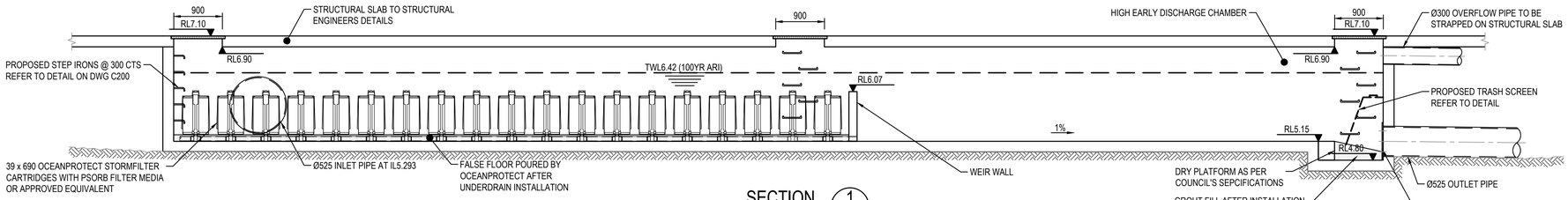
SCREEN TYPE WELDLOK A40/203 IS RECOMENDED FOR ORIFICES LARGER THAN 150mm AND SCREEN AREA 20 x THE ORIFICE AREA FOR THAT TYPE OF SCREEN - REFER UPRCT SECTION 4-13

MAXIMESH RH3030 IS RECOMMENDED FOR ORIFICES LESS THAN 150mm IN DIAMETER AND SCREEN AREA 50xTHE ORIFICE AREA REFER BURWOOD COUNCIL AND UPPER PARRAMATTA RIVER CATCHMENT TRUST HANDBOOK.



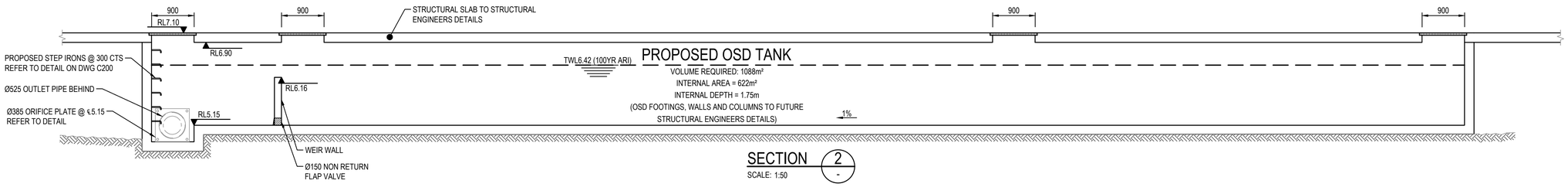

## DEBRIS SCREEN DETAIL

NOT TO SCALE
ALL STEEL TO BE HOT DIPPED GALVANISED




## SECTION 1

SCALE: 1:50




## SECTION 2

SCALE: 1:50

0 2 4 6 8 10m
2 1
SCALE 1:100

0 400 800 1200 1600 2000mm
400 200
SCALE 1:20

0 1000 2000 3000 4000 5000mm
1000 600 200
SCALE 1:50

**ISSUED FOR APPROVAL**

SURVEY INFORMATION
SURVEYED BY: LTS
DATUM: AHD

| REVISION | AMENDMENT | DRAWN | DESIGNED | DATE |
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Client: WOOLWORTHS GROUP LIMITED
Architect: NETTLETON TRIBE

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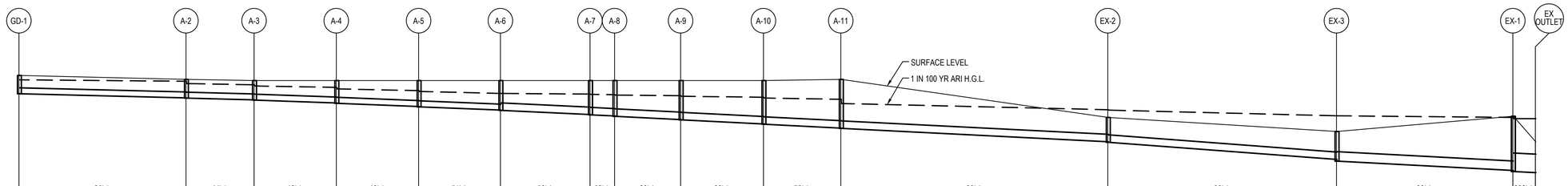
Project: PROPOSED WAREHOUSE DARK STORE
11-13 PERCY STREET, AUBURN NSW

Title: OSD TANK PLAN, SECTIONS AND DETAILS

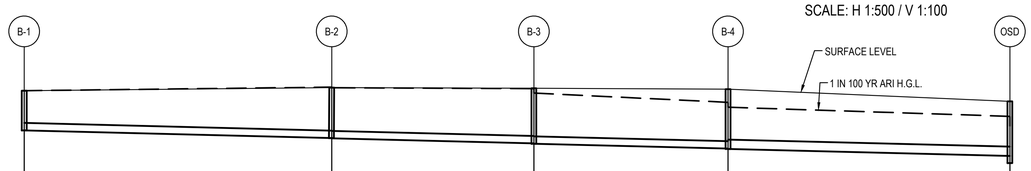
| Drawn | Designed | Date |
|---|---|---|
| J.Knight | L.Villa | JULY 2020 |
| Checked | Approved | Scale @A1 |
| B.Seizov | A.Francis | AS NOTED |

Drawing number: 19513_DA_C201
Revision: 03



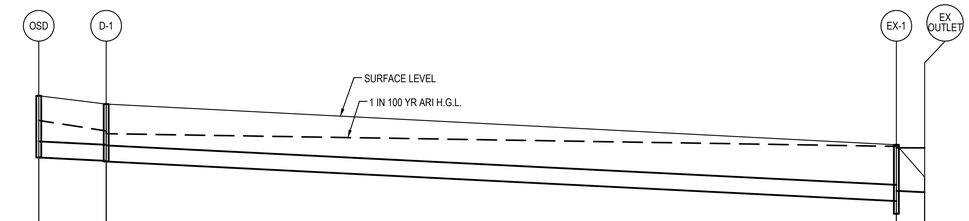

| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| FLOW (L/s) | 35L/s | | | 44L/s | | 42L/s | | 46L/s | | 51L/s | | 56L/s | | 58L/s | 60L/s | | 66L/s | | 70L/s | | 90L/s | | | 90L/s | | | 90L/s | | 332L/s | | |
| PIPE SIZE & CLASS | 225mm | | | 225mm | | 225mm | | 225mm | | 225mm | | 300mm | | 300mm | 300mm | | 300mm | | 300mm | | 300mm | | | 300mm | | | 375mm | | 750mm | | |
| GRADE (%) | 0.50% | | | 0.50% | | 0.70% | | 0.80% | | 0.80% | | 0.94% | | 1.00% | 1.00% | | 1.00% | | 1.00% | | 1.00% | | | 1.50% | | | 1.06% | | 1.00% | | |
| Datum R.L. 0 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| H.G.L. LEVELS 1 in 100 Year ARI | 6.783 | | 6.722 | 6.628 | 6.579 | 6.530 | 6.474 | 6.412 | 6.341 | 6.309 | 6.228 | 6.228 | 6.200 | 6.178 | 6.188 | 6.161 | 6.133 | 6.112 | 6.071 | 6.040 | 5.988 | 5.818 | 5.564 | 5.548 | 5.316 | 5.316 | 5.251 | 5.200 | 5.204 | | | |
| SURFACE R.L. | 6.96 | | | 6.80 | | 6.75 | | 6.75 | | 6.75 | | 6.75 | | 6.75 | 6.75 | | 6.75 | | 6.75 | | 6.8 | | | 5.25 | | 4.68 | | | 5.3 | | 4.25 |
| INVERT R.L. | 6.215 | | 6.045 | 6.035 | 5.965 | 5.955 | 5.837 | 5.827 | 5.693 | 5.683 | 5.549 | 5.539 | 5.367 | 5.307 | 5.357 | 5.297 | 5.162 | 5.152 | 4.983 | 4.973 | 4.815 | 4.805 | 4.260 | 4.240 | 3.539 | 3.470 | 3.090 | 3.004 | 3.050 | | | |
| PIPE CHAINAGE | 0 | | | 34.10 | | 48.00 | | 64.80 | | 81.60 | | 98.30 | | 116.60 | 121.60 | | 135.10 | | 152.00 | | 167.80 | | | 222.30 | | 269.00 | | | 305.00 | | 309.60 |

## LINE A
SCALE: H 1:500 / V 1:100



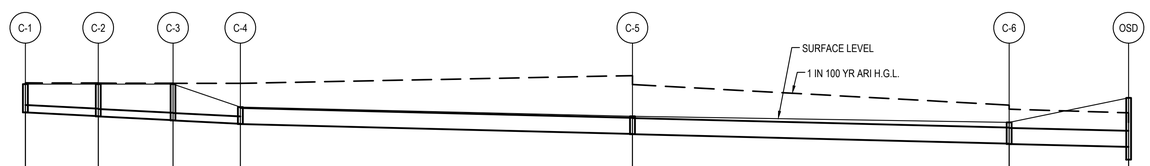

| | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| FLOW (L/s) | 16L/s | | | 44L/s | | | 72L/s | | | 98L/s | | | | |
| PIPE SIZE & CLASS | 225mm | | | 225mm | | | 225mm | | | 300mm | | | | |
| GRADE (%) | 0.50% | | | 0.50% | | | 0.50% | | | 0.50% | | | | |
| Datum R.L. 0 | | | | | | | | | | | | | | |
| H.G.L. LEVELS 1 in 100 Year ARI | 7.250 | | 7.366 | 7.346 | | 7.316 | 7.171 | | 6.870 | 6.710 | | 6.412 | | |
| SURFACE R.L. | 7.25 | | | 7.35 | | | 7.33 | | | 7.30 | | | 6.900 | |
| INVERT R.L. | 5.955 | | 5.704 | 5.694 | | 5.529 | 5.519 | | 5.360 | 5.350 | | 5.120 | | |
| PIPE CHAINAGE | 0 | | | 50.20 | | | 83.20 | | | 114.90 | | | | 160.90 |

## LINE B
SCALE: H 1:500 / V 1:100



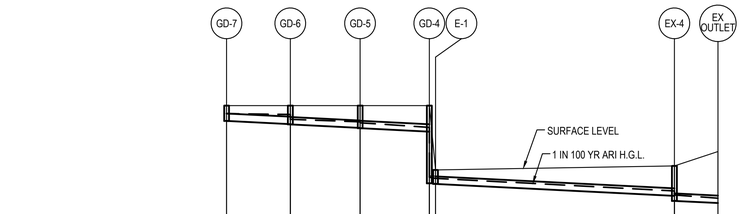

| | | | | | | |
|---|---|---|---|---|---|---|
| FLOW (L/s) | 249L/s | | 249L/s | | 332L/s | |
| PIPE SIZE & CLASS | 525mm | | 525mm | | 750mm | |
| GRADE (%) | 1.00% | | 1.00% | | 1.00% | |
| Datum R.L. 0 | | | | | | |
| H.G.L. LEVELS 1 in 100 Year ARI | 6.097 | 5.753 | 5.664 | 5.251 | 5.200 | 5.204 |
| SURFACE R.L. | 6.900 | 6.63 | | | 5.3 | 4.25 |
| INVERT R.L. | 4.887 | 4.777 | 4.757 | 3.467 | 3.004 | 3.050 |
| PIPE CHAINAGE | 0 | | 11.00 | | 140.00 | 144.60 |

## LINE D
SCALE: H 1:500 / V 1:100




| | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| FLOW (L/s) | 17L/s | | 23L/s | | 30L/s | | 265L/s | | | 313L/s | | | 362L/s | |
| PIPE SIZE & CLASS | 225mm | | 225mm | | 225mm | | 525mm | | | 525mm | | | 525mm | |
| GRADE (%) | 1.00% | | 1.00% | | 1.00% | | 0.50% | | | 0.50% | | | 0.50% | |
| Datum R.L. 0 | | | | | | | | | | | | | | |
| H.G.L. LEVELS 1 in 100 Year ARI | 7.390 | 7.385 | 7.381 | 7.379 | 7.375 | 7.374 | 7.374 | | 7.626 | 7.336 | | 6.664 | 6.531 | 6.412 |
| SURFACE R.L. | 7.35 | | 7.35 | | 7.35 | 6.6 | | | 6.3 | | | 6.1 | | 6.900 |
| INVERT R.L. | 6.424 | 6.305 | 6.295 | 6.173 | 6.163 | 6.053 | 6.043 | | 5.723 | 5.713 | | 5.405 | 5.395 | 5.298 |
| PIPE CHAINAGE | 0 | | 11.90 | | 24.10 | 35.10 | | | 99.10 | | | 160.60 | | 180.10 |

## LINE C
SCALE: H 1:500 / V 1:100




| | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| FLOW (L/s) | 35L/s | | 42L/s | | 46L/s | | 57L/s | | 55L/s | | | 55L/s | | |
| PIPE SIZE & CLASS | 225mm | | 225mm | | 225mm | | 225mm | | 225mm | | | 225mm | | |
| GRADE (%) | 1.00% | | 1.00% | | 1.00% | | 1.00% | | 1.00% | | | 1.00% | | |
| Datum R.L. 0 | | | | | | | | | | | | | | |
| H.G.L. LEVELS 1 in 100 Year ARI | 6.238 | 6.212 | 6.052 | 5.970 | 5.938 | 5.700 4.161 | 4.126 4.126 | | | | 3.714 | 3.581 | 3.478 | |
| SURFACE R.L. | 6.5 | | 6.5 | | 6.5 | | 6.5 4.40 | | | | | 4.53 | | 5 |
| INVERT R.L. | 6.000 | 5.896 | 5.886 | 5.772 | 5.762 | 5.649 3.955 | 3.945 3.945 | | | | 3.555 | 3.390 | 3.319 | |
| PIPE CHAINAGE | 0 | | 10.40 | | 21.80 | | 33.10 34.10 | | | | 73.10 | | | 80.20 |

## LINE E
SCALE: H 1:500 / V 1:100

0 2 4 6 8 10m
2 1
SCALE 1:100

0 10 20 30 40 50m
10 8 6 4 2
SCALE 1:500

**ISSUED FOR APPROVAL**

SURVEY INFORMATION
SURVEYED BY: LTS
DATUM: AHD

| REVISION | AMENDMENT | DRAWN | DESIGNED | DATE | REVISION | AMENDMENT | DRAWN | DESIGNED | DATE |
|---|---|---|---|---|---|---|---|---|---|
| 01 | ISSUED FOR APPROVAL | JK | LV | 09.12.2020 | | | | | |

Client: WOOLWORTHS GROUP LIMITED
Architect: NETTLETON TRIBE

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henry&hymas

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

Title: STORMWATER LONGITUDINAL SECTIONS

| Drawn | Designed | Date |
|---|---|---|
| J.Knight | L.Villa | JULY 2020 |
| Checked | Approved | Scale @A1 |
| B.Seizov | A.Francis | AS NOTED |

Drawing number: 19513_DA_C202
Revision: 01

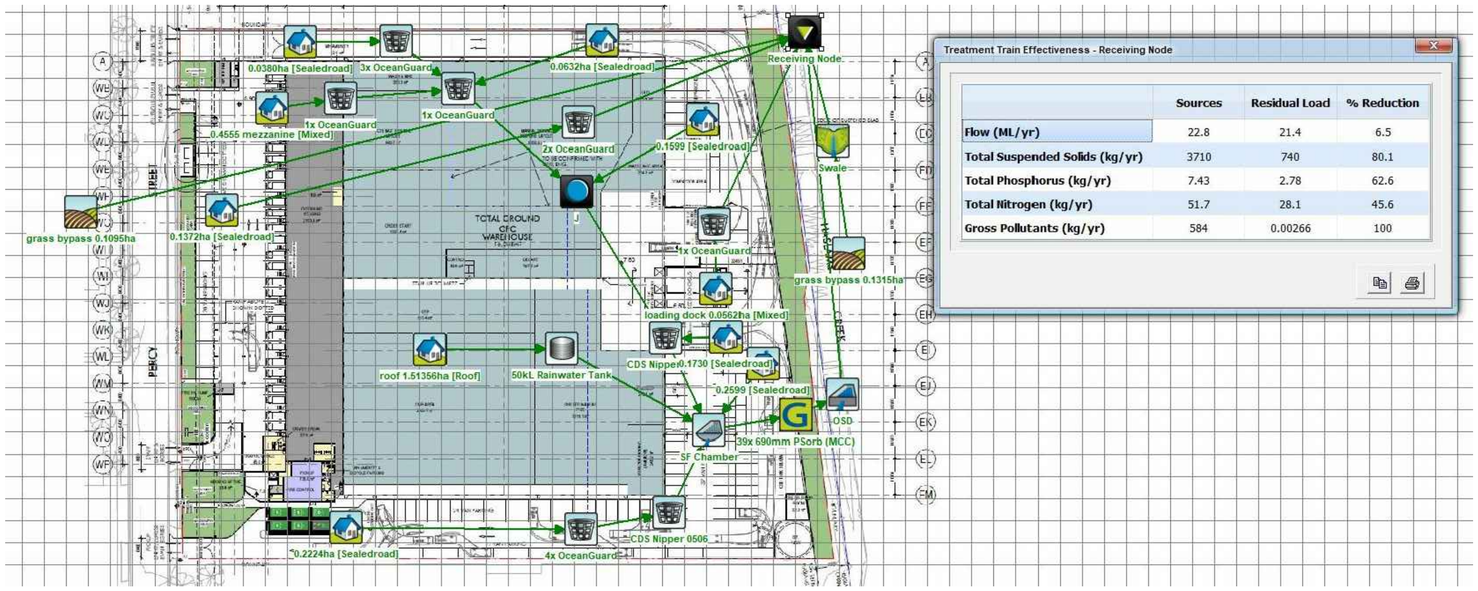
**Form B1[1] DRAINAGE DESIGN SUMMARY SUB/DA No.**

Project: Sorting Facility Location: 11-13 Percy Street, Auburn NSW

Designed by: LV, BS Company: Henry & Hymas Pty Ltd Phone: 02 9417 8400

| | | | |
|---|---|---|---|
| SITE AREA 3.2477 ha *See Section 3.4.3 for dual occupancy | | | [A] |
| Upstream catchment draining through site<br>See Section 4.1.3 for assessment of external flows. | = - | ha | [AA] |
| Basic storage volume 325 x [A] 0.8139 | = 1055.5 | $m^3$ | [B] |
| Basic discharge 0.15 x [A] 0.8139 | = 0.487 | $m^3/s$ | [C] |
| Area of site drained to storage<br>(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 ]/[ 3.2477 ] x 100 | = 87.1 | % | [E] |
| Storage per ha. of contributing area = [B]/[D] | = 373.33 | | [F] |
| Enter *volume/PSD adjustment chart* (Fig 5.1) using [F], and<br>Read new PSD in litres/second/ha (l/s/ha). | = 124.1 | l/s/ha | [G] |
| Determine PSD =[G] x [D] 124.1 x 2.8273 | = 351 | l/s | [H] |
| Maximum head to orifice centre | = 1.75 | m | [K] |
| Weir flow to storage $Q^{Weir} = CL(H^{Weir})^{1.5}$ $\therefore H^{Weir}$ | = 0.735 | m | [I] |
| Selected orifice diameter: $d = (0.464 \times Q / \sqrt{h})^{0.5} = (0.464 \times [H]/\sqrt{[K]})^{0.5}$ | = 385 | m | [J] |
| Maximum discharge | = 351.1 | l/s | [L] |
| Head for high early discharge | = 1.01 | m | [M] |
| High early discharge $\{[L] \times \sqrt{[M] / [K]}\}$ (min 75% of [L]) | = 323 | l/s | [N] |
| Approximate mean discharge = ([L]) + [N]) /2 | = 337 | l/s | [P] |
| Average discharge/ha = [P] / [D] = 337 / 2.8273 | = 119.1 | l/s/ha | [Q] |
| Enter *volume/P.S.D. adjustment chart* (Fig 5.1) using [Q]<br>And read off final storage volume per hectare | = 385 | $m^3$/ha | [R] |
| Determine final SSR = [R] x [D] = 385 x 2.8273 | = 1087.6 | $m^3$ | [S] |
| Primary storage proportion = [S] x 100 % | = 1087.6 | $m^3$ | [T] |
| Secondary storage proportion = [S] x - % | = - | $m^3$ | [U] |
| Tertiary storage proportion [S] x - % | = - | $m^3$ | [V] |
| Check [T] + [U] + [V] = [S] | = 1088 | $m^3$ | |

DRAINAGE RESULTS SUMMARY




| | Sources | Residual Load | % Reduction |
|---|---|---|---|
| Flow (ML/yr) | 22.8 | 21.4 | 6.5 |
| Total Suspended Solids (kg/yr) | 3710 | 740 | 80.1 |
| Total Phosphorus (kg/yr) | 7.43 | 2.78 | 62.6 |
| Total Nitrogen (kg/yr) | 51.7 | 28.1 | 45.6 |
| Gross Pollutants (kg/yr) | 584 | 0.00266 | 100 |

MUSIC RESULTS

SCALE: NTS

## STORMWATER DESIGN SUMMARY

TOTAL SITE AREA: 32,477 m²
BUILDING 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.

| | MINIMUM 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 QUALITY TREATMENT DEVICES AT REACHING THE REMOVAL RATES TARGETS SET BY CUMBERLAND COUNCIL'S WATER QUALITY TREATMENT TARGETS.
PROPOSED TREATMENT DEVICES:

- 50kL RAINWATER TANK
- 12x OCEANGUARD PIT BASKETS
- 39 x 690 STORMFILTER CARTIRDGES
- 2x CDS Nipper 0506

REFER TO 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 |
| GROSS POLLUTANTS | 584 | 0.00266 | 100 | 70 |

**ISSUED FOR APPROVAL**

SURVEY INFORMATION
SURVEYED BY: LTS
DATUM: AHD

| REVISION | AMENDMENT | DRAWN | DESIGNED | DATE | REVISION | AMENDMENT | DRAWN | DESIGNED | DATE |
|---|---|---|---|---|---|---|---|---|---|
| 02 | ISSUED FOR APPROVAL | JK | LV | 09.12.2020 | | | | | |
| 01 | ISSUED FOR APPROVAL | JK | LV | 14.09.2020 | | | | | |

Client: WOOLWORTHS GROUP LIMITED
Architect: NETTLETON TRIBE

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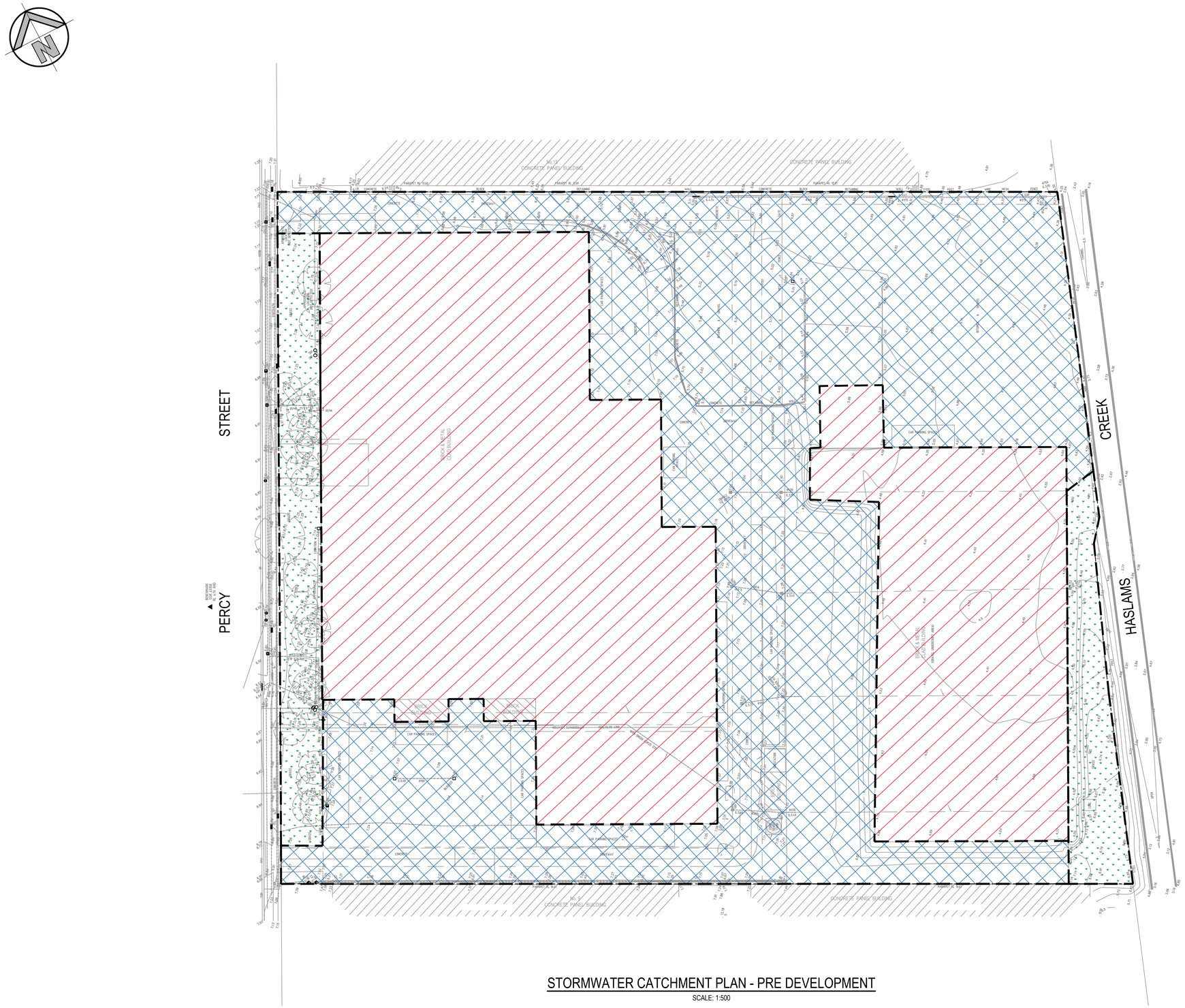
henry&hymas

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

Title: STORMWATER DESIGN RESULTS

| Drawn | Designed | Date |
|---|---|---|
| J.Knight | L.Villa | JULY 2020 |
| Checked | Approved | Scale @A1 |
| B.Seizov | A.Francis | NTS |

Drawing number: 19513_DA_C203
Revision: 02




STORMWATER CATCHMENT PLAN - PRE DEVELOPMENT

SCALE: 1:500

0 10 20 30 40 50m

10 8 6 4 2

SCALE 1:500

**ISSUED FOR APPROVAL**

SURVEY INFORMATION

SURVEYED BY: LTS

DATUM: AHD

| REVISION | AMENDMENT | DRAWN | DESIGNED | DATE | REVISION | AMENDMENT | DRAWN | DESIGNED | DATE |
|---|---|---|---|---|---|---|---|---|---|
| 03 | ISSUED FOR APPROVAL | JK | LV | 14.09.2020 | | | | | |
| 02 | ISSUED FOR CO-ORDINATION | JK | LV | 12.08.2020 | | | | | |
| 01 | ISSUED FOR PRELIMINARY | JK | LV | 07.08.2020 | | | | | |

Client: WOOLWORTHS GROUP LIMITED

Architect: NETTLETON TRIBE

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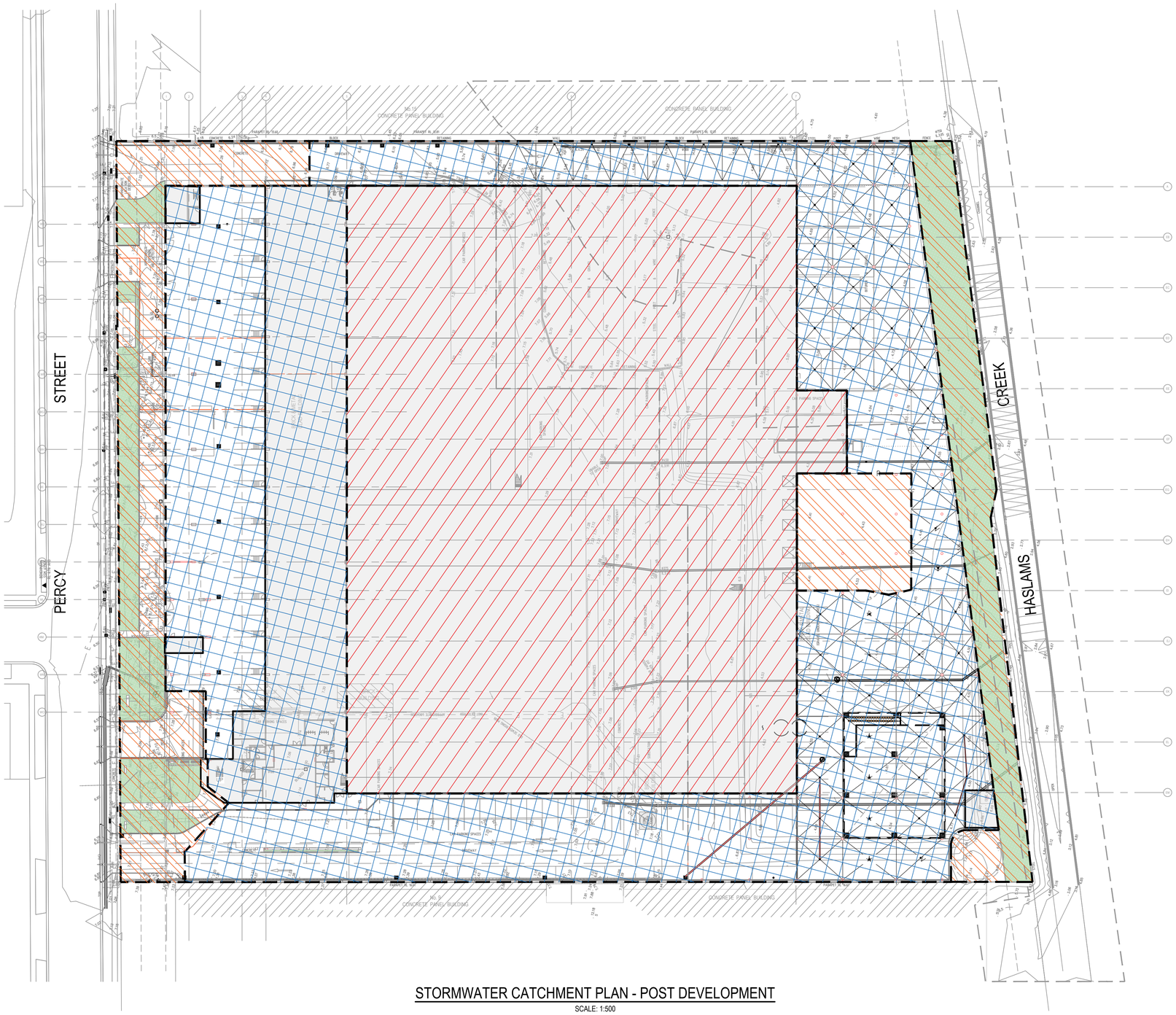
Project: PROPOSED WAREHOUSE DARK STORE
11-13 PERCY STREET, AUBURN NSW

Title: STORMWATER CATCHMENT PLAN
PRE DEVELOPMENT

| Drawn | Designed | Date |
|---|---|---|
| J.Knight | L.Villa | JULY 2020 |
| Checked | Approved | Scale @A1 |
| B.Seizov | A.Francis | 1:500 |

Drawing number: 19513_DA_C250

Revision: 03




## POST-DEVELOPMENT - TOTAL SITE = 32477m²

AREA TO OSD = 28273 m² (87%)

OSD BYPASS = 4204 m² (13%)

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

## STORMWATER CATCHMENT PLAN - POST DEVELOPMENT

SCALE: 1:500

0 10 20 30 40 50m
10 8 6 4 2
SCALE 1:500

**ISSUED FOR APPROVAL**

SURVEY INFORMATION
SURVEYED BY:
LTS
DATUM: AHD

| REVISION | AMENDMENT | DRAWN | DESIGNED | DATE |
|---|---|---|---|---|
| 05 | ISSUED FOR APPROVAL | JK | LV | 15.12.2020 |
| 04 | ISSUED FOR APPROVAL | JK | LV | 09.12.2020 |
| 03 | ISSUED FOR APPROVAL | JK | LV | 14.09.2020 |
| 02 | ISSUED FOR CO-ORDINATION | JK | LV | 12.08.2020 |
| 01 | ISSUED FOR PRELIMINARY | JK | LV | 07.08.2020 |

Client
WOOLWORTHS GROUP LIMITED

Architect
NETTLETON TRIBE

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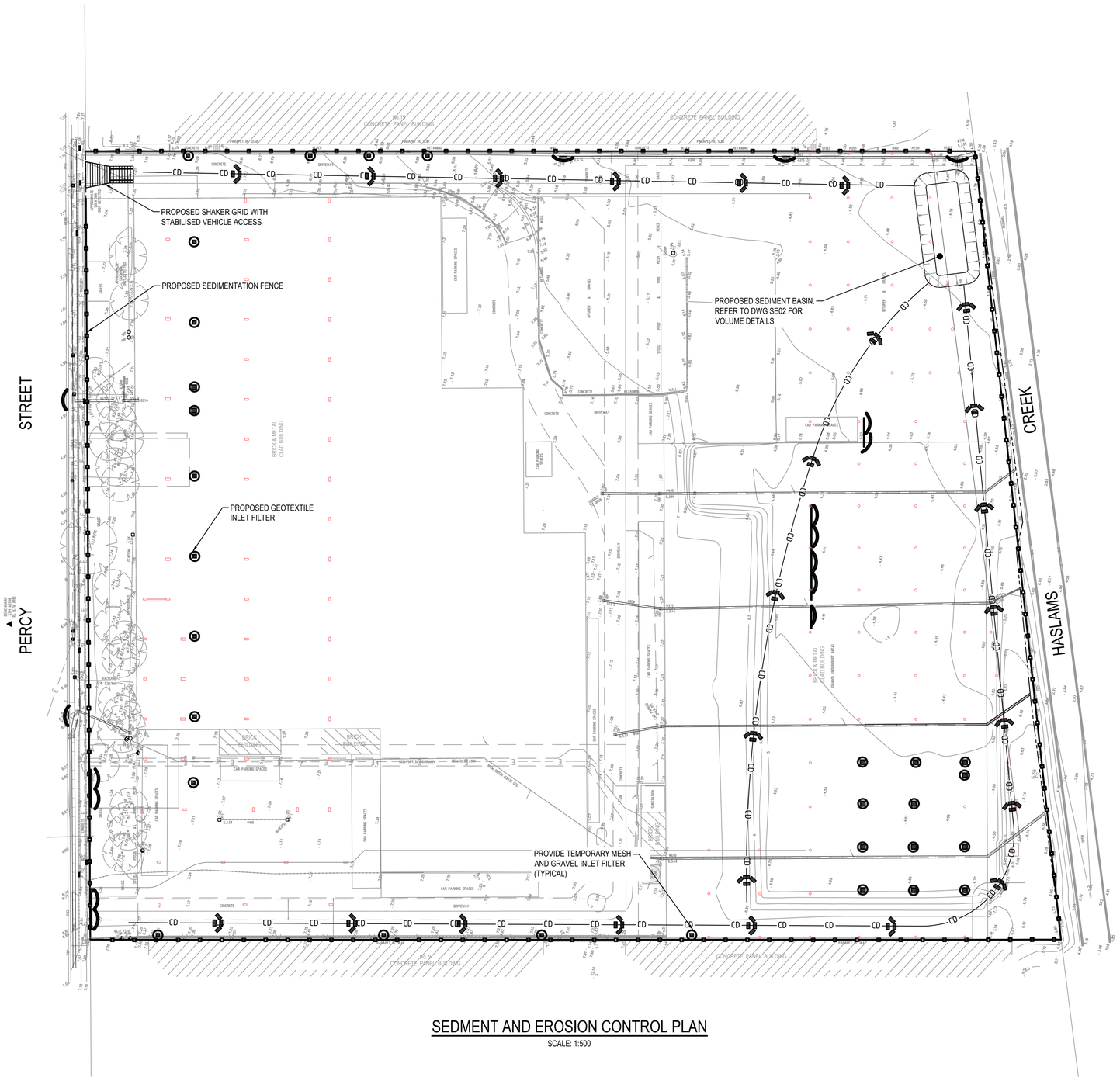
Project
PROPOSED WAREHOUSE DARK STORE
11-13 PERCY STREET, AUBURN NSW

Title
STORMWATER CATCHMENT PLAN
POST DEVELOPMENT

| Drawn | Designed | Date |
|---|---|---|
| J.Knight | L.Villa | JULY 2020 |
| Checked | Approved | Scale @A1 |
| B.Seizov | A.Francis | 1:500 |

Drawing number: 19513_DA_C251
Revision: 05




## SEDMENT AND EROSION CONTROL PLAN

SCALE: 1:500

## LEGEND

- PROPOSED BOUNDARY
- PROPOSED SEDIMENTATION FENCE
- GEOTEXTILE INLET FILTER
- PROPOSED MESH & GRAVEL INLET FILTER

## SEDIMENT & EROSION CONTROL NOTES

- ALL SEDIMENT CONTROL DEVICES ARE TO BE CONSTRUCTED, PLACED AND MAINTAINED IN ACCORDANCE WITH RESPECTIVE COUNCIL SPECIFICATIONS AND LANDCOM "SOIL AND CONSTRUCTION" MANUAL.
- ALL PERIMETER & SILTATION CONTROL MEASURES ARE TO BE PLACED PRIOR TO, OR AS THE FIRST STEP IN EARTH WORKS AND/OR CLEARING.
- THE SEDIMENT & EROSION CONTROL PLAN MAY REQUIRE FUTURE ADJUSTMENT TO REFLECT CONSTRUCTION STAGING. IT IS ALSO THE CONTRACTORS RESPONSIBILTY TO PREPARE THEIR OWN SEDIMENT AND EROSION CONTROL PLAN WHICH SUITS THE DESIGNED CONSTRUCTION STAGING.
- FILTRATION BUFFER ZONES ARE TO BE FENCED OFF AND ACCESS PROHIBITED TO ALL PLANT AND MACHINERY.
- ALL TEMPORARY EARTH BERMS, DIVERSIONS & SILT DAM EMBANKMENTS ARE TO BE MACHINE COMPACTED, SEEDED & MULCHED FOR TEMPORARY VEGETATION COVER AS SOON AS THEY HAVE BEEN FORMED.
- ALL SEDIMENT TRAPPING STRUCTURES AND DEVICES ARE TO BE INSPECTED AFTER STORMS FOR STRUCTURAL DAMAGE OR CLOGGING. TRAPPED MATERIAL IS TO BE REMOVED TO A SAFE LOCATION.
- ALL TOPSOIL IS TO BE STOCKPILED ON SITE FOR REUSE (AWAY FROM TREES AND DRAINAGE LINES). MEASURES SHALL BE APPLIED TO PREVENT EROSION OF THE STOCKPILES.
- ALL EARTHWORK AREAS SHALL BE ROLLED EACH EVENING TO SEAL THE EARTHWORKS.
- ALL FILLS ARE TO BE LEFT WITH A LIP AT THE TOP OF THE SLOPE AT THE END. ALL CUT AND FILL SLOPES AR TO BE SEEDED AND STRAW MULCHED WITHIN 14 DAYS OF COMPLETION OF FORMATION U.N.O. BY LANDSCAPE ARCHITECTS.
- UPON COMPLETION OF ALL EARTHWORKS OR AS DIRECTED BY COUNCIL SOIL CONSERVATION TREATMENTS SHALL BE APPLIED SO AS TO RENDER AREAS THAT HAVE BEEN DISTURBED, EROSION PROOF WITHIN 14 DAYS.
- EROSION AND SILT PROTECTION MEASURES ARE TO BE MAINTAINED AT ALL TIMES.
- EXCAVATION PLANT TO BE CRANED INTO SITE ONCE SITE ACCESS RAMP IS IMPRACTICAL.

## CONSTRUCTION SEQUENCE

WORKS SHALL BE UNDERTAKEN IN THE FOLLOWING SEQUENCE:

1. INSTALL SEDIMENT FENCING AND CUT DRAINS TO MEET THE REQUIREMENTS OF THE SEDIMENT AND EROSION CONTROL PLAN. WASTE COLLECTION BINS SHALL BE INSTALLED ADJACENT TO SITE OFFICE.
2. CONSTRUCT STABILISED SITE ACCESS IN ACCORDANCE WITH BLACKTOWN CITY COUNCIL'S REQUIREMENTS.
3. REDIRECT CLEAN WATER AROUND THE CONSTRUCTION SITE.
4. INSTALL SEDIMENT CONTROL PROTECTION MEASURES AT ALL NATURAL AND MAN-MADE DRAINAGE STRUCTURES. MAINTAIN UNTIL ALL THE DISTURBED AREAS ARE STABILISED.
5. CLEAR AND STRIP THE WORK AREAS. MINIMISE THE DAMAGE TO THE GRASS AND LOW GROUND COVER OF NON-DISTURBED AREAS.
6. ANY DISTURBED AREAS, OTHER THAN BUILDING PAD AREAS, SHALL IMMEDIATELY BE COVERED WITH SITE TOPSOIL WITHIN 7 DAYS OF CLEARING. BUILDING PAD AREAS SHALL BE COVERED WITH BITUMEN EMULSION AS SPECIFIED.
7. APPLY PERMANENT STABILISATION TO SITE (LANDSCAPING).

0 10 20 30 40 50m
10 8 6 4 2
SCALE 1:500

**ISSUED FOR APPROVAL**

SURVEY INFORMATION
SURVEYED BY: LTS
DATUM: AHD

| REVISION | AMENDMENT | DRAWN | DESIGNED | DATE |
|---|---|---|---|---|
| 05 | ISSUED FOR APPROVAL | JK | LV | 15.12.2020 |
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| 03 | ISSUED FOR APPROVAL | JK | LV | 14.09.2020 |
| 02 | ISSUED FOR CO-ORDINATION | JK | LV | 12.08.2020 |
| 01 | ISSUED FOR PRELIMINARY | JK | LV | 07.08.2020 |

Client: WOOLWORTHS GROUP LIMITED
Architect: NETTLETON TRIBE

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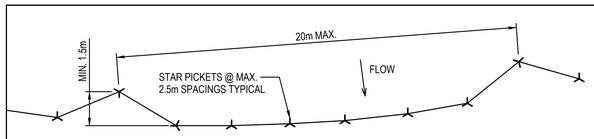
Project: PROPOSED WAREHOUSE DARK STORE
11-13 PERCY STREET, AUBURN NSW

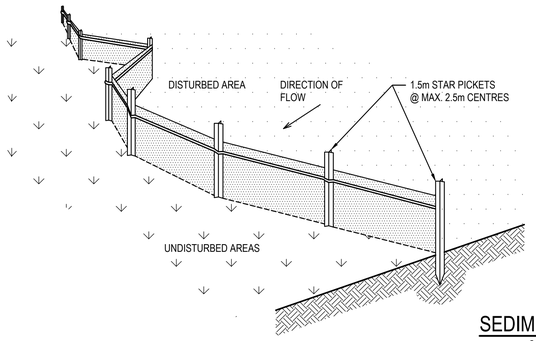
Title: SEDIMENT AND EROSION CONTROL PLAN

| Drawn | Designed | Date |
|---|---|---|
| J.Knight | L.Villa | JULY 2020 |
| Checked | Approved | Scale @A1 |
| B.Seizov | A.Francis | 1:500 |

Drawing number: 19513_DA_SE01
Revision: 05




PLAN

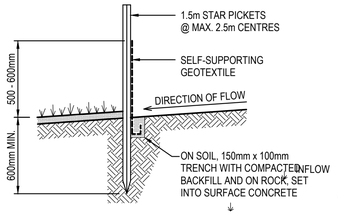



## SEDIMENT FENCE

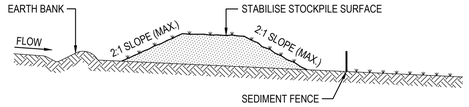
SCALE N.T.S.

### SEDIMENT FENCE CONSTRUCTION NOTES:

1. CONSTRUCT SEDIMENT FENCES AS CLOSE AS POSSIBLE TO BEING PARALLEL TO THE CONTOURS OF THE SITE, BUT WITH SMALL RETURNS AS SHOWN IN THE DRAWING TO LIMIT THE CATCHMENT AREA OF ANY ONE SECTION. THE CATCHMENT AREA SHOULD BE SMALL ENOUGH TO LIMIT WATER FLOW IF CONCENTRATED AT ONE POINT TO 50 LITRES PER SECOND IN THE DESIGN STORM EVENT, USUALLY THE 10-YEAR EVENT.
2. CUT A 150mm DEEP TRENCH ALONG THE UPSLOPE LINE OF THE FENCE FOR THE BOTTOM OF THE FABRIC TO BE ENTRENCHED.
3. 3. DRIVE 1.5m LONG STAR PICKETS INTO GROUND @ 2.5m INTERVALS (MAX.) AT THE DOWNSLOPE EDGE OF THE TRENCH. ENSURE ANY STAR PICKETS ARE FITTED WITH SAFETY CAPS.
4. 4. FIX SELF-SUPPORTING GEOTEXTILE TO THE UPSLOPE SIDE OF THE POSTS ENSURING IT GOES TO THE BASE OF THE TRENCH. FIX THE GEOTEXTILE WITH WIRE TIES OR AS RECOMMENDED BY THE MANUFACTURER. ONLY USE GEOTEXTILE SPECIFICALLY PRODUCED FOR SEDIMENT FENCING. THE USE OF SHADE CLOTH FOR THIS PURPOSE IS NOT SATISFACTORY.
5. 5. JOIN SECTIONS OF FABRIC AT A SUPPORT POST WITH A 150mm OVERLAP. 6. BACKFILL THE TRENCH OVER THE BASE OF THE FABRIC AND COMPACT IT THOROUGHLY OVER THE GEOTEXTILE.




SECTION DETAIL

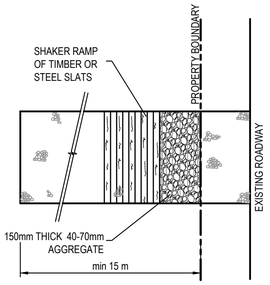



### STOCKPILE CONSTRUCTION NOTES:

1. PLACE STOCKPILES MORE THAN 2 (PREFERABLY 5) METRES FROM EXISTING VEGETATION, CONCENTRATED WATER FLOW, ROADS AND HAZARD AREAS.
2. CONSTRUCT ON THE CONTOUR AS LOW, FLAT, ELONGATED MOUNDS.
3. WHERE THERE IS SUFFICIENT AREA, TOPSOIL STOCKPILES SHALL BE LESS THAN 2 METRES IN HEIGHT.
4. WHERE THEY ARE TO BE PLACED FOR MORE THAN 10 DAYS, STABILISE FOLLOWING THE APPROVED E.S.C.P. OR S.W.M.P. TO REDUCE THE C-FACTOR TO LESS THAN 0.10.
5. CONSTRUCT EARTH BANKS ON THE UPSLOPE SIDE TO DIVERT WATER AROUND STOCKPILES AND SEDIMENT FENCES 1 TO 2 METRES DOWNSLOPE.

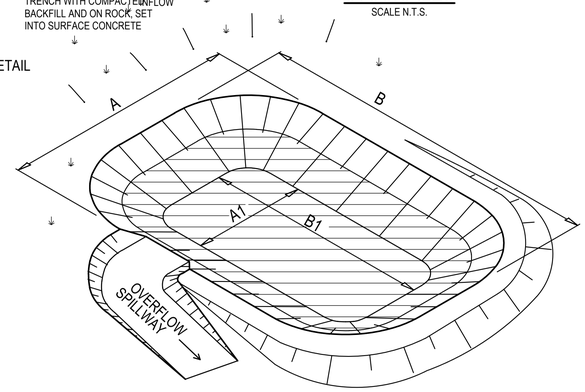
## STOCKPILES

SCALE N.T.S.

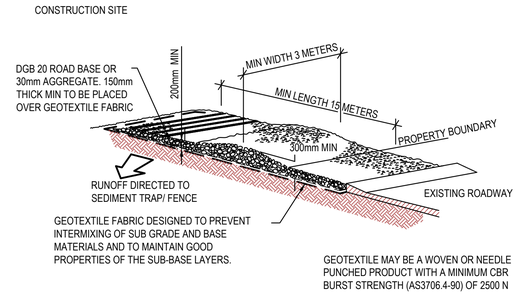



## PLAN
## STABILISED SITE ACCESS WITH SHAKER RAMP

N.T.S.




PERSPECTIVE VIEW

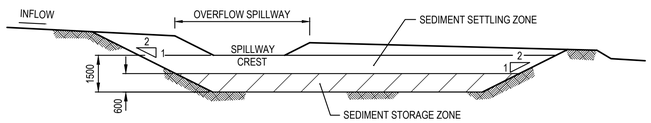



## STABILISED SITE ACCESS WITH SHAKER RAMP

N.T.S.

NOTES:

1. THIS DEVICE IS TO BE LOCATED AT ALL EXITS FROM CONSTRUCTION SITE.
2. THIS DEVICE IS TO BE REGULARLY CLEANED OF DEPOSITED MATERIAL SO AS TO MAINTAIN A 50mm DEEP SPACE BETWEEN PLANKS.
3. ANY UNSEALED ROAD BETWEEN THIS DEVICE AND NEAREST ROADWAY IS TO BE TOPPED WITH 100mm THICK 40-70mm SIZE AGGREGATE.
4. ALTERNATIVELY, THREE(3) PRECAST CONCRETE CATTLE GRIDS (AS MANUFACTURED BY "HUMES CONCRETE MAY BE USED. 1, 2 & 3 ABOVE ALSO APPLY.




TYPICAL SECTION

## TYPE 'D' & 'F' SEDIMENTATION BASIN

N.T.S.

## SEDIMENTATION BASIN CALCULATIONS: (FOR TYPE D & F SOILS) - PER 1 ha

### SEDIMENT BASIN SIZING

1. THE SEDIMENT BASIN SHALL BE CONSTRUCTED ON A RATE PER HECTARE BASIS AND HAS BEEN IN ACCORDANCE WITH THE REQUIREMENTS OF THE LANDCOM 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 CAN HANDLE. EACH BASIN SHALL BE SIZED IN ACCORDANCE WITH THE TABLE BELOW.

| SEDIMENT BASIN SIZING 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 $m^3$ |
| DISTURBED CATCHMENT AREA | 1 Ha (UNIT AREA) |
| R K LS P C | 30.38$m^3$ |
| SEDIMENT ZONE VOLUME (0.17 A (R K LS P C)/1.3 | 3.97$m^3$ < 50% SETTLING VOL |
| TOTAL SEDIMENT BASIN VOLUME REQUIRED : | 248.25 $m^3$/Ha |

* (LANDCOM MANAGING URBAN STORMWATER MANUAL REFERENCE)

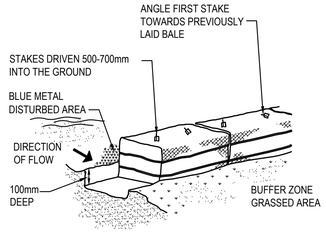
2. THE FOLLOWING DESIGN PARAMETERS HAVE BEEN ASSESSED FOR THE SITE:

| 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 |
| EROSION 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/Ha/YR | A = R K LS P C |
| SOIL HYDROLOGIC GROUP | GROUP B | APPENDIX C TABLE 20 |
| SEDIMENT TYPE | TYPE C | APPENDIX C TABLE 4 |
| 75TH PERCENTILE 5-DAY RAINFALL EVENT | 33.1mm | TABLE 6.3A |

* (LANDCOM MANAGING URBAN STORMWATER MANUAL REFERENCE)

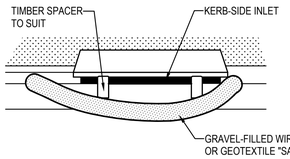
### BASIN MANAGEMENT

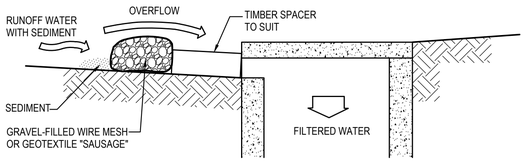
1. THE CAPTURED STORMWATER IN THE SETTLING ZONE SHOULD BE DRAINED TO MEET THE MINIMUM STORAGE CAPACITY REQUIRED WITHIN A FIVE (5) DAY PERIOD FOLLOWING RAINFALL, PROVIDED THE ACCEPTABLE WATER QUALITY (NFR) AND TURBIDITY HAVE BEEN ACHIEVED.
2. CHEMICAL FLOCCULENT SUCH AS GYPSUM MAY BE DOSED TO AID SETTLING 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.
3. INSPECT THE SEDIMENT BASINS AFTER EACH RAINFALL EVENT AND/OR WEEKLY. ENSURE THAT ALL SEDIMENT IS REMOVED ONCE THE SEDIMENT STORAGE ZONE IS FULL (REFER TO PEGS INSTALLED IN BASINS IN ACCORDANCE WITH THE SWMP). ENSURE THAT OUTLET AND EMERGENCY SPILLWAY WORKS ARE MAINTAINED IN A FULLY OPERATIONAL CONDITION AT ALL TIMES.




## HAYBALE BARRIERS

N.T.S.



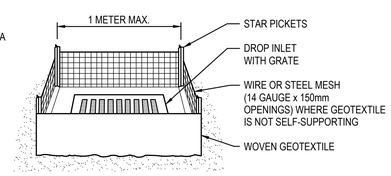



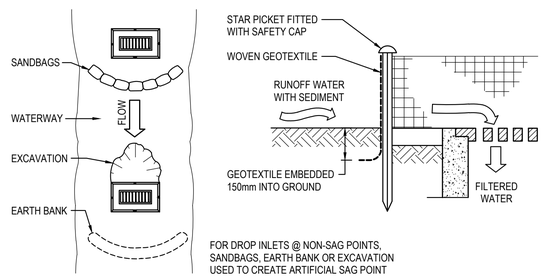

### MESH & GRAVEL INLET FILTER CONSTRUCTION NOTES:

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 ELLIPTICAL CROSS-SECTION ABOUT 150mm HIGH x 400mm WIDE.
3. PLACE THE FILTER AT THE OPENING LEAVING AT LEAST A 100mm SPACE BETWEEN IT AND THE KERB INLET. MAINTAIN THE OPENING WITH SPACER BLOCKS.
4. FORM A SEAL WITH THE KERB 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 CAN FIRMLY ABUT EACH OTHER AND SEDIMENT / LADEN WATERS CANNOT PASS BETWEEN.

## MESH & GRAVEL INLET FILTER

SCALE N.T.S.



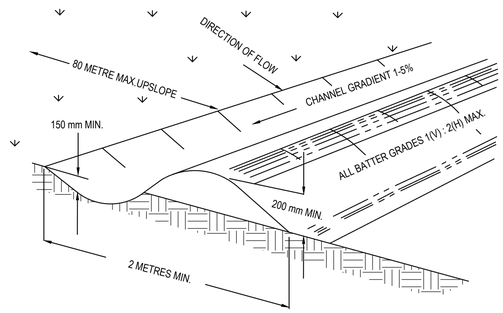




### GEOTEXTILE INLET FILTER CONSTRUCTION NOTES:

1. FABRICATE A SEDIMENT BARRIER MADE FROM GEOTEXTILE.
2. PICKET SPACING TO BE MAXIMUM 1.0m.
3. IN WATERWAYS, ARTIFICIAL SAG POINTS CAN BE CREATED WITH SANDBAGS OR EARTH BANKS AS SHOWN IN THE DRAWING.
4. DO NOT COVER THE INLET WITH GEOTEXTILES UNLESS THE DESIGN IS ADEQUATE TO ALLOW FOR ALL WATERS TO BYPASS IT.

## GEOTEXTILE INLET FILTER

SCALE N.T.S.




NOTE: ONLY TO BE USED AS TEMPORARY BANK WHERE MAC.UPSLOPE LENGTH IS 80 METERS.

### CATCH DRAIN CONSTRUCTION NOTES:

1. CONSTRUCT ALONG GRADIENT AS SPECIFIED.
2. MAXIMUM SPACING BETWEEN BANKS SHALL BE 80 METRES.
3. DRAINS TO BE OF PARABOLIC OR TRAPEZOIDAL CROSS SECTION NOT V-SHAPED.
4. EARTH BANKS TO BE ADEQUATELY COMPACTED IN ORDER TO PREVENT FAILURE.
5. CONSTRUCTION IS OF A TEMPRORARY NATURE AND SHALL BE COMPACTED AT THE END A DAYS WORK OR IMMEDIATELY PRIOR RAIN.
6. ALL OUTLETS FROM DISTURBED LANDS ARE TO FEED INTO SEDIMENT BASIN OR SIMILAR.
7. DISCHARGE RUNOFF COLLECTED FROM UNDISTURBED LANDS ONTO EITHER A STABILISED OR AN UNDISTURBED DISPOSAL AISTE WITHIN THE SAME SUBCATCHMENT AREA FROM WHICH THE WATER ORIGINATED.
8. COMPACT WITH A SUITABLE IMPLEMENT IN SITUATIONS WHERE THEY ARE REQUIRED TO FUNCTION FOR MORE THAN FIVE DAYS.
9. EARTH BANKS TO BE FREE OF PROJECTIONS OR OTHER IRREGULARITIES THAT WILL IMPEDE NORMAL FLOW.

## CATCH DRAINS SD 5-8

SCALE N.T.S.

### BASIN MANAGEMENT

| 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 ONLY. 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 AND 7.5kg/TONNE OF SUBSOIL.

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. |

**ISSUED FOR APPROVAL**

SURVEY INFORMATION
SURVEYED BY: LTS
DATUM: AHD

| REVISION | AMENDMENT | DRAWN | DESIGNED | DATE | REVISION | AMENDMENT | DRAWN | DESIGNED | DATE |
|---|---|---|---|---|---|---|---|---|---|
| 03 | ISSUED FOR APPROVAL | JK | LV | 14.09.2020 | | | | | |
| 02 | ISSUED FOR CO-ORDINATION | JK | LV | 12.08.2020 | | | | | |
| 01 | ISSUED FOR PRELIMINARY | JK | LV | 07.08.2020 | | | | | |

Client: WOOLWORTHS GROUP LIMITED
Architect: NETTLETON TRIBE

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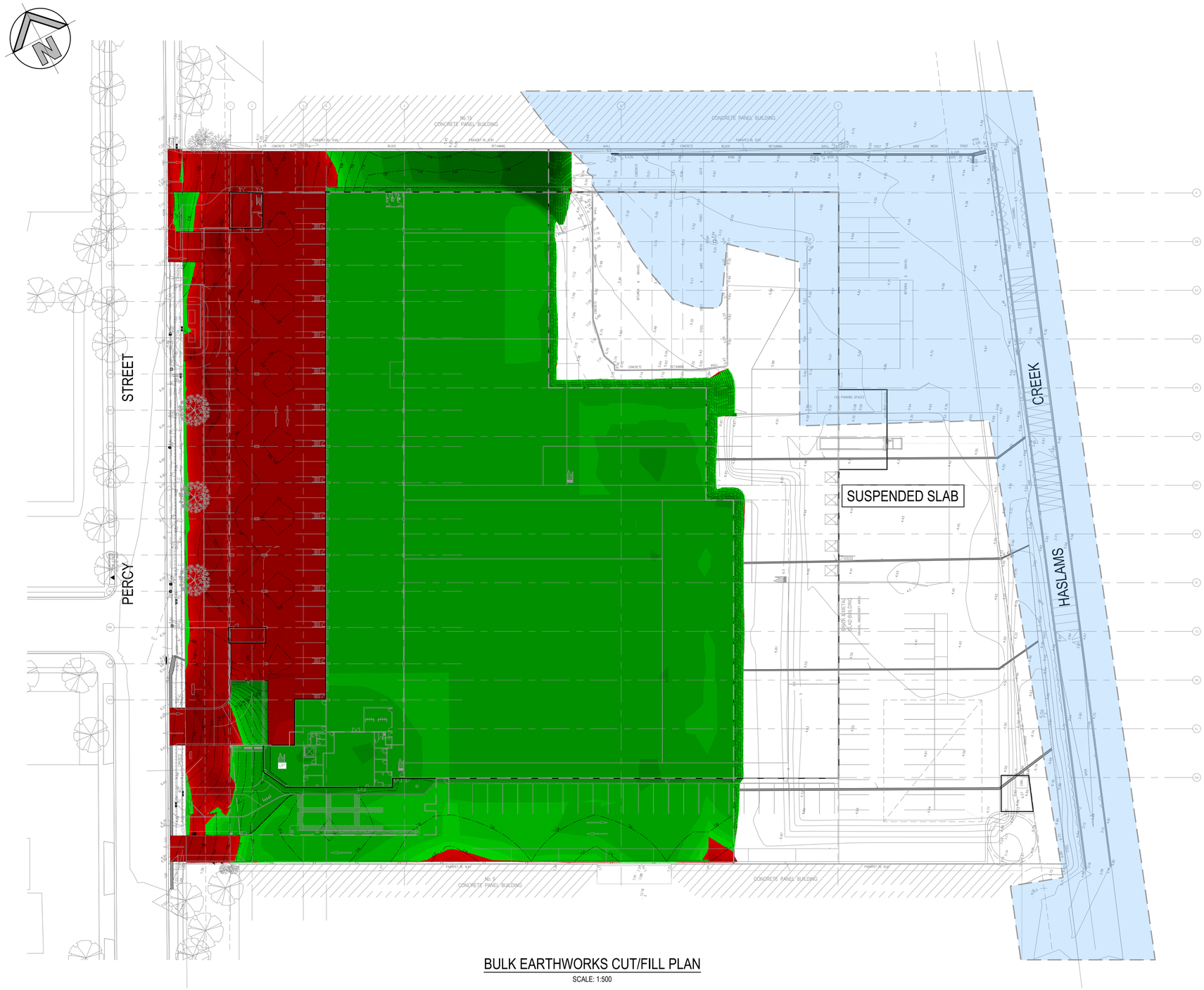
henry&hymas

Project: PROPOSED WAREHOUSE DARK STORE 11-13 PERCY STREET, AUBURN NSW
Title: SEDIMENT AND EROSION CONTROL DETAILS

| Drawn | Designed | Date |
|---|---|---|
| J.Knight | L.Villa | JULY 2020 |
| Checked | Approved | Scale @A1 |
| B.Seizov | A.Francis | NTS |

Drawing number: 19513_DA_SE02
Revision: 03




## BULK EARTHWORKS CUT/FILL PLAN

SCALE: 1:500

## LEGEND

- EXISTING BOUNDARY
- LINE OF EXISTING EASEMENT
- 6.90 PROPOSED CONTOURS

### DEPTH OF CUT & FILL RANGE

| LOWER VALUE | | UPPER VALUE | | COLOUR |
|---|---|---|---|---|
| -3.00 | to | -2.00 | m | |
| -2.00 | to | -1.50 | m | |
| -1.50 | to | -1.00 | m | |
| -1.00 | to | -0.80 | m | |
| -0.80 | to | -0.60 | m | |
| -0.60 | to | -0.40 | m | |
| -0.40 | to | -0.20 | m | |
| -0.20 | to | -0.10 | m | |
| -0.10 | to | -0.05 | m | |
| -0.05 | to | 0.00 | m | |
| 0.0 | to | 0.05 | m | |
| 0.05 | to | 0.10 | m | |
| 0.10 | to | 0.20 | m | |
| 0.20 | to | 0.40 | m | |
| 0.40 | to | 0.60 | m | |
| 0.60 | to | 0.80 | m | |
| 0.80 | to | 1.00 | m | |
| 1.00 | to | 1.50 | m | |
| 1.50 | to | 2.00 | m | |
| 2.00 | to | 3.00 | m | |

### BULK EARTHWORKS QUANTITIES

**TOTAL AREA (19,045m²)**

| | | |
|---|---|---|
| CUT | 1,892 | m³ |
| FILL | 6,220 | m³ |
| EXCESS OF FILL OVER CUT | 4,328 | m³ |

EXCAVATION FOR SERVICE TRENCHES NOT INCLUDED IN CALCULATION

EXCAVATION FOR RETAINING WALL FOOTINGS NOT INCLUDED IN CALCULATION

THE VOLUME SHOWN ABOVE HAS BEEN CALCULATED AFTER STRIPPING THE TOP SOIL AND EXISTING CONCRETE AND PAVEMENT AREAS OFF THE EXISTING SURFACE. STRIPPING HAS BEEN ASSUMED AT 150mm FOR TOPSOIL AND LIGHT DUTY PAVEMENT/HARDSTAND. 250mm HAS BEEN REMOVED FROM THE CALCULATIONS FOR THE EXISTING BUILDING SLAB.

### PAVEMENT THICKNESS "INCLUDING BEDDING THICKNESS"

| | | |
|---|---|---|
| CARPARK | 300 | mm |
| BUILDING | 300 | mm |
| FOOTPATHS/HARDSTAND AREAS | 150 | mm |
| LANDSCAPING/BATTER AREAS | 100 | mm |

0 10 20 30 40 50m

10 8 6 4 2

SCALE 1:500

**ISSUED FOR APPROVAL**

SURVEY INFORMATION

SURVEYED BY: LTS

DATUM: AHD

| REVISION | AMENDMENT | DRAWN | DESIGNED | DATE |
|---|---|---|---|---|
| 03 | ISSUED FOR APPROVAL | JK | LV | 17.12.2020 |
| 02 | ISSUED FOR APPROVAL | JK | LV | 14.09.2020 |
| 01 | ISSUED FOR CO-ORDINATION | JK | LV | 12.08.2020 |

Client: WOOLOWRTHS GROUP LIMITED

Architect: NETTLETON TRIBE

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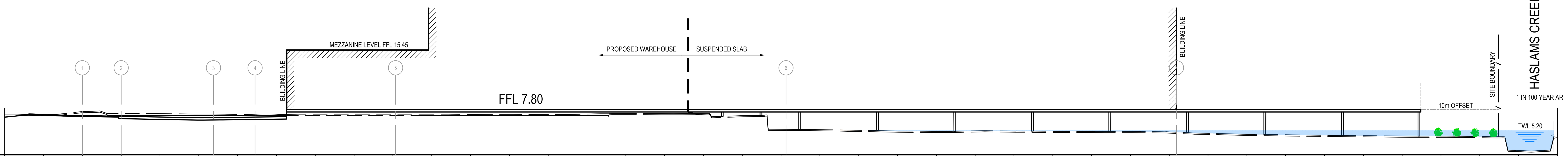
Project: PROPOSED WAREHOUSE DARK STORE 11-13 PERCY STREET, AUBURN NSW

Title: BULK EARTHWORKS CUT/FILL PLAN

| Drawn | Designed | Date |
|---|---|---|
| B.Hurlstone | B.Hurlstone | AUG 2020 |
| Checked | Approved | Scale @A1 |
| B.Seizov | A.Francis | 1:500 |

Drawing number: 19513_DA_BE01

Revision: 03

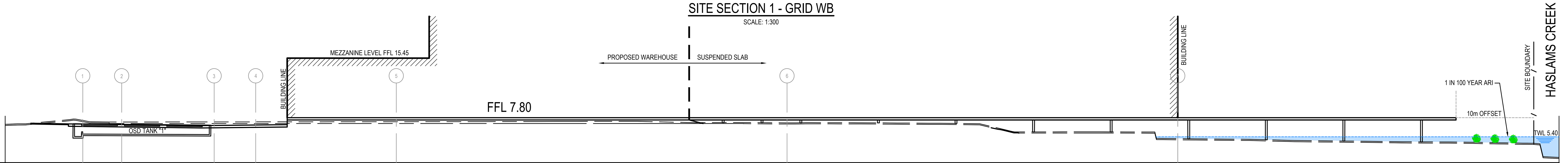



| | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| DESIGN LEVELS | | 7.18 | 7.04 | 6.94 | 6.85 | 6.76 | 6.81 | 6.88 | 7.80 | 7.80 | 7.80 | 7.80 | 7.80 | 7.80 | 7.80 | 7.80 | 7.80 | 7.80 | | | |
| DESIGN BULK LEVELS | 6.84 | 7.08 | 6.93 | 6.64 | 6.55 | 6.46 | 6.51 | 6.58 | 7.50 | 7.50 | 7.50 | 7.50 | 7.50 | 7.50 | 7.50 | 7.50 | 7.50 | 7.50 | | | |
| EXISTING LEVELS | 7.13 | 7.20 | 7.55 | 7.31 | 7.29 | 7.23 | 7.19 | 7.15 | 7.22 | 7.22 | 7.22 | 7.22 | 7.18 | 7.15 | 7.18 | 7.24 | 7.30 | 7.29 | 7.29 | 7.03 | 5.28 |
| EXISTING STRIPPED LEVELS | 6.98 | 7.05 | 7.40 | 7.05 | 7.05 | 7.05 | 7.05 | 7.05 | 7.05 | 7.05 | 7.05 | 7.05 | 7.05 | 7.05 | 7.05 | 7.05 | 7.15 | 7.14 | 7.14 | 6.88 | 5.13 |
| CHAINAGE | 0.000 | 5.000 | 10.000 | 15.000 | 20.000 | 25.000 | 30.000 | 35.000 | 40.000 | 45.000 | 50.000 | 55.000 | 60.000 | 65.000 | 70.000 | 75.000 | 80.000 | 85.000 | 90.000 | 95.000 | 100.000 |

| | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| DESIGN LEVELS | | | | | | | | | | | | | | | | | | | | |
| DESIGN BULK LEVELS | | | | | | | | | | | | | | | | | | | | |
| EXISTING LEVELS | 5.24 | 5.15 | 5.06 | 5.03 | 5.08 | 5.05 | 5.03 | 5.01 | 4.99 | 4.94 | 4.76 | 4.64 | 4.57 | 4.51 | 4.46 | 4.42 | 4.40 | 4.35 | 2.55 | |
| EXISTING STRIPPED LEVELS | 5.09 | 5.00 | 4.91 | 4.88 | 4.93 | 4.90 | 4.88 | 4.86 | 4.84 | 4.79 | 4.61 | 4.49 | 4.42 | 4.36 | 4.31 | 4.27 | 4.25 | 4.20 | 2.40 | |
| CHAINAGE | 105.000 | 110.000 | 115.000 | 120.000 | 125.000 | 130.000 | 135.000 | 140.000 | 145.000 | 150.000 | 155.000 | 160.000 | 165.000 | 170.000 | 175.000 | 180.000 | 185.000 | 190.000 | 195.000 | 200.000 |

SITE SECTION 1 - GRID WB

SCALE: 1:300

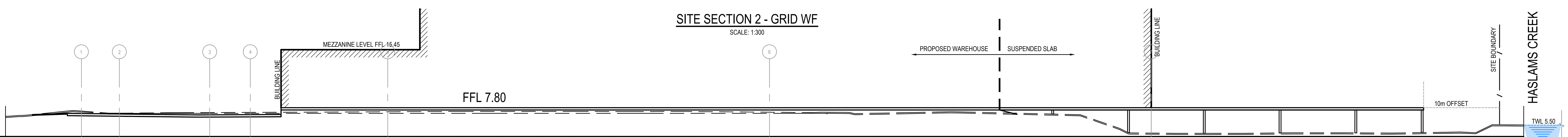



| | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| DESIGN LEVELS | | 7.05 | 6.98 | 6.91 | 6.84 | 6.78 | 6.83 | 6.89 | 7.80 | 7.80 | 7.80 | 7.80 | 7.80 | 7.80 | 7.80 | 7.80 | 7.80 | 7.80 | | | |
| DESIGN BULK LEVELS | | 6.95 | 6.68 | 6.61 | 6.54 | 6.48 | 6.53 | 6.59 | 7.50 | 7.50 | 7.50 | 7.50 | 7.50 | 7.50 | 7.50 | 7.50 | 7.50 | 7.50 | | | |
| EXISTING LEVELS | 6.95 | 7.24 | 7.44 | 7.24 | 7.25 | 7.25 | 7.26 | 7.26 | 7.27 | 7.27 | 7.28 | 7.29 | 7.29 | 7.30 | 7.31 | 7.32 | 7.33 | 7.24 | 7.16 | 7.18 | 7.14 |
| EXISTING STRIPPED LEVELS | 6.80 | 7.09 | 7.29 | 7.05 | 7.05 | 7.05 | 7.05 | 7.05 | 7.05 | 7.05 | 7.05 | 7.05 | 7.05 | 7.05 | 7.05 | 7.05 | 7.05 | 7.05 | 7.05 | 7.04 | 6.99 |
| CHAINAGE | 0.000 | 5.000 | 10.000 | 15.000 | 20.000 | 25.000 | 30.000 | 35.000 | 40.000 | 45.000 | 50.000 | 55.000 | 60.000 | 65.000 | 70.000 | 75.000 | 80.000 | 85.000 | 90.000 | 95.000 | 100.000 |

| | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| DESIGN LEVELS | | | | | | | | | | | | | | | | | | | | |
| DESIGN BULK LEVELS | | | | | | 5.92 | | | | | | | | | | | | | | |
| EXISTING LEVELS | 7.16 | 7.15 | 7.11 | 7.08 | 7.03 | 5.97 | 5.98 | 5.98 | 5.96 | 5.11 | 5.06 | 5.02 | 4.89 | 4.82 | 4.77 | 4.70 | 4.68 | 4.62 | 4.53 | 2.69 |
| EXISTING STRIPPED LEVELS | 7.01 | 7.00 | 6.96 | 6.93 | 6.88 | 5.82 | 5.83 | 5.83 | 5.81 | 4.96 | 4.91 | 4.87 | 4.74 | 4.67 | 4.62 | 4.55 | 4.53 | 4.47 | 4.38 | 2.54 |
| CHAINAGE | 105.000 | 110.000 | 115.000 | 120.000 | 125.000 | 130.000 | 135.000 | 140.000 | 145.000 | 150.000 | 155.000 | 160.000 | 165.000 | 170.000 | 175.000 | 180.000 | 185.000 | 190.000 | 195.000 | 200.000 |

SITE SECTION 2 - GRID WF

SCALE: 1:300




| | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| DESIGN LEVELS | | 6.94 | 7.03 | 6.97 | 6.91 | 6.85 | 6.87 | 6.89 | 7.80 | 7.80 | 7.80 | 7.80 | 7.80 | 7.80 | 7.80 | 7.80 | 7.80 | 7.80 | 7.80 | 7.80 | 7.80 |
| DESIGN BULK LEVELS | | 6.84 | 6.73 | 6.67 | 6.61 | 6.55 | 6.57 | 6.59 | 7.50 | 7.50 | 7.50 | 7.50 | 7.50 | 7.50 | 7.50 | 7.50 | 7.50 | 7.50 | 7.50 | 7.50 | 7.50 |
| EXISTING LEVELS | 6.66 | 7.04 | 7.35 | 7.07 | 7.12 | 7.14 | 7.17 | 7.19 | 7.21 | 7.24 | 7.26 | 7.28 | 7.31 | 7.31 | 7.31 | 7.30 | 7.30 | 7.30 | 7.30 | 7.25 | 7.21 |
| EXISTING STRIPPED LEVELS | 6.51 | 6.89 | 7.22 | 7.05 | 7.05 | 7.05 | 7.05 | 7.05 | 7.05 | 7.05 | 7.05 | 7.05 | 7.05 | 7.05 | 7.05 | 7.05 | 7.05 | 7.05 | 7.05 | 7.05 | 7.05 |
| CHAINAGE | 0.000 | 5.000 | 10.000 | 15.000 | 20.000 | 25.000 | 30.000 | 35.000 | 40.000 | 45.000 | 50.000 | 55.000 | 60.000 | 65.000 | 70.000 | 75.000 | 80.000 | 85.000 | 90.000 | 95.000 | 100.000 |

| | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| DESIGN LEVELS | 7.80 | 7.80 | 7.80 | 7.80 | 7.80 | 7.80 | | | | | | | | | | | | | | |
| DESIGN BULK LEVELS | 7.50 | 7.50 | 7.50 | 7.50 | 7.50 | 7.50 | | | | | | | | | | | | | | |
| EXISTING LEVELS | 7.17 | 7.19 | 7.08 | 7.18 | 7.26 | 7.15 | 7.03 | 6.91 | 5.68 | 4.46 | 4.42 | 4.41 | 4.44 | 4.48 | 4.49 | 4.47 | 4.49 | 4.56 | 5.14 | 5.52 |
| EXISTING STRIPPED LEVELS | 7.05 | 7.04 | 6.93 | 7.03 | 7.11 | 7.00 | 6.88 | 6.76 | 5.53 | 4.31 | 4.27 | 4.26 | 4.29 | 4.33 | 4.34 | 4.32 | 4.34 | 4.41 | 4.99 | 5.37 |
| CHAINAGE | 105.000 | 110.000 | 115.000 | 120.000 | 125.000 | 130.000 | 135.000 | 140.000 | 145.000 | 150.000 | 155.000 | 160.000 | 165.000 | 170.000 | 175.000 | 180.000 | 185.000 | 190.000 | 195.000 | 200.000 |

0 5 10 15 20 25 30m
6 4 2
SCALE 1:300

SITE SECTION 3 - GRID WK

SCALE: 1:300

ISSUED FOR APPROVAL

SURVEY INFORMATION
SURVEYED BY:
LTS
DATUM: AHD

| REVISION | AMENDMENT | DRAWN | DESIGNED | DATE |
|---|---|---|---|---|
| 02 | ISSUED FOR APPROVAL | JK | LV | 14.09.2020 |
| 01 | ISSUED FOR CO-ORDINATION | JK | LV | 12.08.2020 |

Client
WOOLOWRTHS GROUP LIMITED

Architect
NETTLETON TRIBE

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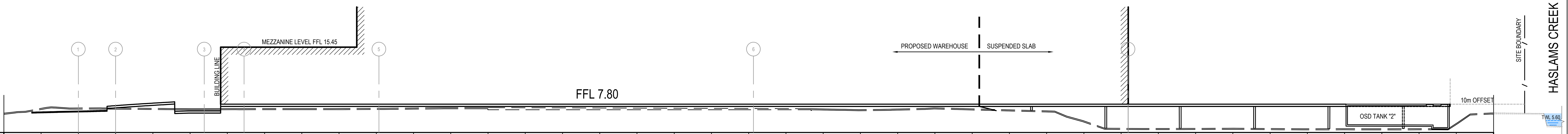
henry&hymas

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

Title
BULK EARTHWORKS SECTIONS
SHEET 1 OF 2

| Drawn | Designed | Date |
|---|---|---|
| B.Hurlstone | B.Hurlstone | AUG 2020 |
| Checked | Approved | Scale @A1 |
| B.Seizov | A.Francis | 1:300 |

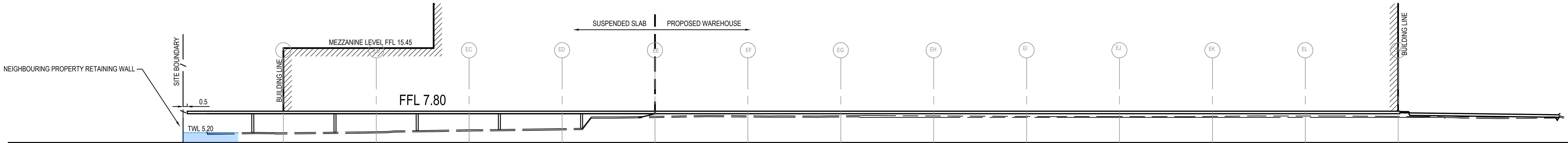
Drawing number: 19513_DA_BE02
Revision: 02




| CHAINAGE | DESIGN LEVELS | DESIGN BULK LEVELS | EXISTING LEVELS | EXISTING STRIPPED LEVELS |
|---|---|---|---|---|
| 0.000 | | | 6.59 | 6.44 |
| 5.000 | 6.75 | 6.65 | 7.24 | 7.09 |
| 10.000 | 6.86 | 6.76 | 7.29 | 7.14 |
| 15.000 | 7.60 | 7.30 | 7.28 | 7.13 |
| 20.000 | 7.94 | 7.64 | 7.23 | 7.08 |
| 25.000 | 6.90 | 6.60 | 7.20 | 7.05 |
| 30.000 | 7.80 | 7.50 | 7.21 | 7.06 |
| 35.000 | 7.80 | 7.50 | 7.21 | 7.06 |
| 40.000 | 7.80 | 7.50 | 7.21 | 7.06 |
| 45.000 | 7.80 | 7.50 | 7.22 | 7.07 |
| 50.000 | 7.80 | 7.50 | 7.24 | 7.09 |
| 55.000 | 7.80 | 7.50 | 7.29 | 7.14 |
| 60.000 | 7.80 | 7.50 | 7.33 | 7.18 |
| 65.000 | 7.80 | 7.50 | 7.34 | 7.05 |
| 70.000 | 7.80 | 7.50 | 7.32 | 7.05 |
| 75.000 | 7.80 | 7.50 | 7.31 | 7.05 |
| 80.000 | 7.80 | 7.50 | 7.29 | 7.05 |
| 85.000 | 7.80 | 7.50 | 7.27 | 7.05 |
| 90.000 | 7.80 | 7.50 | 7.26 | 7.05 |
| 95.000 | 7.80 | 7.50 | 7.24 | 7.05 |
| 100.000 | 7.80 | 7.50 | 7.22 | 7.05 |
| 105.000 | 7.80 | 7.50 | 7.21 | 7.05 |
| 110.000 | 7.80 | 7.50 | 7.16 | 7.01 |
| 115.000 | 7.80 | 7.50 | 7.07 | 6.92 |
| 120.000 | 7.80 | 7.50 | 7.16 | 7.01 |
| 125.000 | 7.80 | 7.50 | 7.31 | 7.16 |
| 130.000 | 7.80 | 7.50 | 7.17 | 7.02 |
| 135.000 | | | 7.04 | 6.89 |
| 140.000 | | | 6.90 | 6.75 |
| 145.000 | | | 5.56 | 5.41 |
| 150.000 | | | 4.56 | 4.41 |
| 155.000 | | | 4.54 | 4.39 |
| 160.000 | | | 4.55 | 4.40 |
| 165.000 | | | 4.57 | 4.42 |
| 170.000 | | | 4.53 | 4.38 |
| 175.000 | | | 4.50 | 4.35 |
| 180.000 | | | 4.51 | 4.36 |
| 185.000 | | | 4.50 | 4.35 |
| 190.000 | | | 4.51 | 4.36 |
| 195.000 | | | 5.22 | 5.07 |
| 200.000 | | | 6.62 | 6.47 |

## SITE SECTION 4 - GRID WO

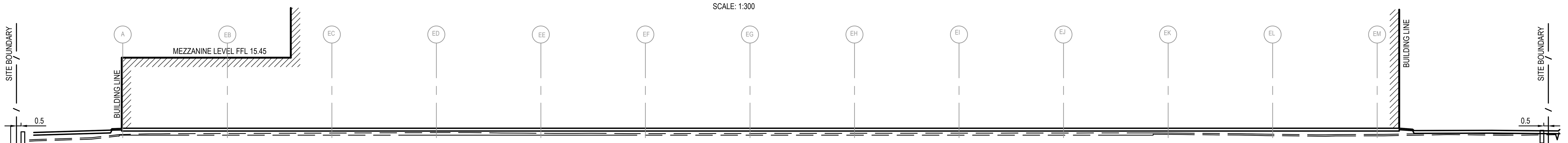
SCALE: 1:300




| CHAINAGE | DESIGN LEVELS | DESIGN BULK LEVELS | EXISTING LEVELS | EXISTING STRIPPED LEVELS |
|---|---|---|---|---|
| 0.000 | | | | |
| 5.000 | | | 5.17 | 5.02 |
| 10.000 | | | 5.22 | 5.07 |
| 15.000 | | | 5.22 | 5.07 |
| 20.000 | | | 5.27 | 5.12 |
| 25.000 | | | 5.36 | 5.21 |
| 30.000 | | | 5.47 | 5.32 |
| 35.000 | | | 5.56 | 5.41 |
| 40.000 | | | 5.60 | 5.45 |
| 45.000 | | | 5.67 | 5.52 |
| 50.000 | | | 7.11 | 6.96 |
| 55.000 | | | 7.14 | 6.99 |
| 60.000 | 7.80 | 7.50 | 7.22 | 7.07 |
| 65.000 | 7.80 | 7.50 | 7.28 | 7.13 |
| 70.000 | 7.80 | 7.50 | 7.24 | 7.09 |
| 75.000 | 7.80 | 7.50 | 7.22 | 7.07 |
| 80.000 | 7.80 | 7.50 | 7.25 | 7.10 |
| 85.000 | 7.80 | 7.50 | 7.26 | 7.05 |
| 90.000 | 7.80 | 7.50 | 7.24 | 7.05 |
| 95.000 | 7.80 | 7.50 | 7.21 | 7.05 |
| 100.000 | 7.80 | 7.50 | 7.18 | 7.05 |
| 105.000 | 7.80 | 7.50 | 7.16 | 7.05 |
| 110.000 | 7.80 | 7.50 | 7.16 | 7.05 |
| 115.000 | 7.80 | 7.50 | 7.16 | 7.05 |
| 120.000 | 7.80 | 7.50 | 7.15 | 7.05 |
| 125.000 | 7.80 | 7.50 | 7.17 | 7.05 |
| 130.000 | 7.80 | 7.50 | 7.22 | 7.05 |
| 135.000 | 7.80 | 7.50 | 7.23 | 7.05 |
| 140.000 | 7.80 | 7.50 | 7.23 | 7.05 |
| 145.000 | 7.80 | 7.50 | 7.19 | 7.05 |
| 150.000 | 7.59 | 7.29 | 7.14 | 7.05 |
| 155.000 | 7.53 | 7.23 | 7.15 | 7.00 |
| 160.000 | 7.46 | 7.16 | 7.06 | 6.91 |
| 165.000 | 7.40 | 7.10 | 7.11 | 6.96 |
| 169.818 | | | | |

## SITE SECTION 5 - GRID 6

SCALE: 1:300




| CHAINAGE | DESIGN LEVELS | DESIGN BULK LEVELS | EXISTING LEVELS | EXISTING STRIPPED LEVELS |
|---|---|---|---|---|
| 0.000 | | | | |
| 5.000 | 7.43 | 7.13 | 6.66 | 6.51 |
| 10.000 | 7.58 | 7.28 | 6.92 | 6.77 |
| 15.000 | 7.80 | 7.50 | 7.20 | 7.05 |
| 20.000 | 7.80 | 7.50 | 7.22 | 7.05 |
| 25.000 | 7.80 | 7.50 | 7.24 | 7.05 |
| 30.000 | 7.80 | 7.50 | 7.26 | 7.05 |
| 35.000 | 7.80 | 7.50 | 7.28 | 7.05 |
| 40.000 | 7.80 | 7.50 | 7.30 | 7.05 |
| 45.000 | 7.80 | 7.50 | 7.33 | 7.05 |
| 50.000 | 7.80 | 7.50 | 7.33 | 7.05 |
| 55.000 | 7.80 | 7.50 | 7.28 | 7.05 |
| 60.000 | 7.80 | 7.50 | 7.25 | 7.05 |
| 65.000 | 7.80 | 7.50 | 7.24 | 7.05 |
| 70.000 | 7.80 | 7.50 | 7.23 | 7.05 |
| 75.000 | 7.80 | 7.50 | 7.23 | 7.05 |
| 80.000 | 7.80 | 7.50 | 7.24 | 7.05 |
| 85.000 | 7.80 | 7.50 | 7.25 | 7.05 |
| 90.000 | 7.80 | 7.50 | 7.25 | 7.05 |
| 95.000 | 7.80 | 7.50 | 7.26 | 7.05 |
| 100.000 | 7.80 | 7.50 | 7.27 | 7.05 |
| 105.000 | 7.80 | 7.50 | 7.28 | 7.05 |
| 110.000 | 7.80 | 7.50 | 7.28 | 7.05 |
| 115.000 | 7.80 | 7.50 | 7.29 | 7.05 |
| 120.000 | 7.80 | 7.50 | 7.30 | 7.05 |
| 125.000 | 7.80 | 7.50 | 7.29 | 7.14 |
| 130.000 | 7.80 | 7.50 | 7.24 | 7.09 |
| 135.000 | 7.80 | 7.50 | 7.18 | 7.03 |
| 140.000 | 7.80 | 7.50 | 7.11 | 6.96 |
| 145.000 | 7.80 | 7.50 | 7.12 | 6.97 |
| 150.000 | 7.80 | 7.50 | 7.17 | 7.02 |
| 155.000 | 7.56 | 7.26 | 7.26 | 7.11 |
| 160.000 | 7.57 | 7.27 | 7.21 | 7.06 |
| 165.000 | 7.53 | 7.23 | 7.23 | 7.08 |
| 169.823 | | | | |

## SITE SECTION 6 - GRID 5

SCALE: 1:300

0 5 10 15 20 25 30m
6 4 2
SCALE 1:300

**ISSUED FOR APPROVAL**

SURVEY INFORMATION
SURVEYED BY:
LTS
DATUM: AHD

| REVISION | AMENDMENT | DRAWN | DESIGNED | DATE |
|---|---|---|---|---|
| 02 | ISSUED FOR APPROVAL | JK | LV | 14.09.2020 |
| 01 | ISSUED FOR CO-ORDINATION | JK | LV | 12.08.2020 |

Client: WOOLOWRTHS GROUP LIMITED
woolworths
Architect: NETTLETON TRIBE

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henry&hymas

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

Title: BULK EARTHWORKS SECTIONS
SHEET 2 OF 2

| Drawn | Designed | Date |
|---|---|---|
| B.Hurlstone | B.Hurlstone | AUG 2020 |
| Checked | Approved | Scale @A1 |
| B.Seizov | A.Francis | 1:300 |

Drawing number: 19513_DA_BE03
Revision: 02