

COUNCIL REF: DA



PO Box 4366 PENRITH WESTFIELD NSW 2750  
P 02 4720 3300 W [www.jwprince.com.au](http://www.jwprince.com.au) E [jwp@jwprince.com.au](mailto:jwp@jwprince.com.au)

CLIENT:



STATUS:
---------

**ADVANCE COPY**  
**DESIGN SUBJECT TO CHANGE**  
**NOT FOR CONSTRUCTION**

THIS DRAWING MUST NOT BE USED FOR CONSTRUCTION UNLESS  
SIGNED AS PART OF AN APPROVED CONSTRUCTION CERTIFICATE

ESQ 1818  
STAGES 4 & 5 DEVELOPMENT  
COVER SHEET

PROJECT No:

110251-10

SHEET No:

No:  
DA4001

AZIMUTH: M.G.A.

DATUM: A.H.D.
---------------

ORIGIN:
---------

PLAN No:	110251-10-DA4001
----------	------------------

1



Plotted: 10 December , 2021 2:45:07 PM File Name: J:\110251 - Panthers North Precinct\10 - Stage 4 And 5\DA\110251-10\DA4002.Dwg

LEGEND		
DESCRIPTION	PROPOSED	EXISTING
STAGE 5		
STAGE 4		
INLET PIT AND DRAINAGE LINE		
PIT AND DRAINAGE LINE		
KERB INLET PIT AND DRAINAGE LINE		
600mm x 600mm GRATED PIT AND DRAINAGE LINE		
EXISTING CULVERT		
FLOW PATH		
PLANTING/TREES (FUTURE)		
BASEMENT 1 EXTENT		
DOWNPIPE		
SUBSOIL DRAINAGE		
PUMP-OUT PIT AND WELL		
GRAVEL TRENCH DRAIN		
CHANNEL GRATE		
WATER		
SEWER		
TELECOMM		
ELECTRICITY		
LIGHT POLE		
BUILDING STRUCTURE		
FILTER ROLLS (AT KERB INLET PIT)		
SURFACE INLET SEDIMENT TRAP		
SEDIMENT FENCE		
STOCKPILE / BUND		
STABILISED SITE ACCESS & WHEEL WASH BAY		
ELECTRICAL PAD MOUNT AND CLEARANCE		
RODDING POINT		

### GENERAL NOTES

- THESE PLANS ARE ONLY FOR THE PURPOSE OF LODGING A DEVELOPMENT APPLICATION TO COUNCIL.
- THE PROPERTY BOUNDARIES AND LAYOUT SHOWN ARE SUBJECT TO CHANGE DURING THE DETAIL PROCESS OF THE DEVELOPMENT AND FINAL CADASTRAL SURVEY AND BOUNDARY 'FIX' TO MEET THE REQUIREMENTS OF NSW LRS SERVICE.
- THE LEVEL, LOCATION AND SIZE OF ANY STORMWATER DRAINS ARE ALSO SUBJECT TO CHANGE DURING THE DETAIL DESIGN PROCESS OF THE DEVELOPMENT. ACCORDINGLY EVERY DIMENSION, DISTANCE, LEVEL OR SIMILAR IS APPROXIMATE ONLY.
- DO NOT SCALE ANY DIMENSION FROM THESE PLANS. CHECK WITH J.WYNDHAM PRINCE REGARDING ANY UNDIMENSIONED DISTANCE.
- THE WORKS SHOWN ON THESE PLANS WILL BE CONSTRUCTED TO COUNCIL'S ADOPTED ENGINEERING STANDARD.

### STORMWATER NOTES

- STORMWATER IS SUBJECT TO DETAIL DESIGN. 2D LAYOUT SHOWN ON PLANS ONLY.

CIVIL PLAN INDEX		
PLAN NO.	PLAN NAME	REV
110251-10-DA4001	COVER SHEET	1
110251-10-DA4002	INDEX, LEGEND AND GENERAL NOTES	3
110251-10-DA4003	OVERALL SITE PLAN	1
110251-10-DA4020	ENGINEERING PLAN SHEET 1 GROUND FLOOR	1
110251-10-DA4021	ENGINEERING PLAN SHEET 2 GROUND FLOOR	1
110251-10-DA4022	ENGINEERING PLAN SHEET 3 BASEMENT 1	2
110251-10-DA4023	ENGINEERING PLAN SHEET 4 BASEMENT 2	2
110251-10-DA4100	RAMP LONGITUDINAL SECTION AND PUMP-OUT PIT TYPICAL DETAILS	1
110251-10-DA4401	CATCHMENT PLAN	1
110251-10-DA4700	SOIL AND WATER MANAGEMENT PLAN	1
110251-10-DA4701	SOIL AND WATER MANAGEMENT NOTES	1

**DRAFT ISSUE ONLY**  
**PRELIMINARY DESIGNS SUBJECT TO CHANGE**

SURVEYED BY:  
FREEBURN SURVEYORS  
CAD REFERENCE: 14443 STAGE PROPOSAL WITH SERVICES (DETAIL SURVEY).DWG  
DATE RECEIVED: 8/05/20



UTILITIES SHOWN ARE DIAGRAMMATIC ONLY. CONTRACTORS ARE RESPONSIBLE TO LOCATE AND AVOID DAMAGE TO THEM AS SPECIFIED BY EACH UTILITIES EXCAVATION GUIDE LINES & STANDARDS.

NOTE: UTILITIES SHOWN MAY NOT INCLUDE ALL SERVICES WITHIN THE LIMIT OF WORKS

3	ISSUED FOR COORDINATION	GA	NM	DG	MS	10/12/21	
2	ISSUED FOR COORDINATION	GA	NM	DG	MS	10/12/21	
1	ISSUED FOR COORDINATION	GA	NM	DG	MS	26/11/21	
	AMENDMENT	DES	DRN	CKD	APR	DATE	

**J. WYNDHAM PRINCE**  
CONSULTING CIVIL INFRASTRUCTURE ENGINEERS & PROJECT MANAGERS

PO Box 4366 PENRITH WESTFIELD NSW 2750  
P 02 4720 3300 W [www.jwprince.com.au](http://www.jwprince.com.au) E [jwp@jwprince.com.au](mailto:jwp@jwprince.com.au)

CLIENT:



STATUS:

**ADVANCE COPY**  
**DESIGN SUBJECT TO CHANGE**  
**NOT FOR CONSTRUCTION**

THIS DRAWING MUST NOT BE USED FOR CONSTRUCTION UNLESS SIGNED AS PART OF AN APPROVED CONSTRUCTION CERTIFICATE.

ESQ 1818  
STAGES 4 & 5 DEVELOPMENT  
INDEX, LEGEND AND GENERAL NOTES

PROJECT No:

**110251-10**

SHEET No:

**DA4002**

AZIMUTH: M.G.A.

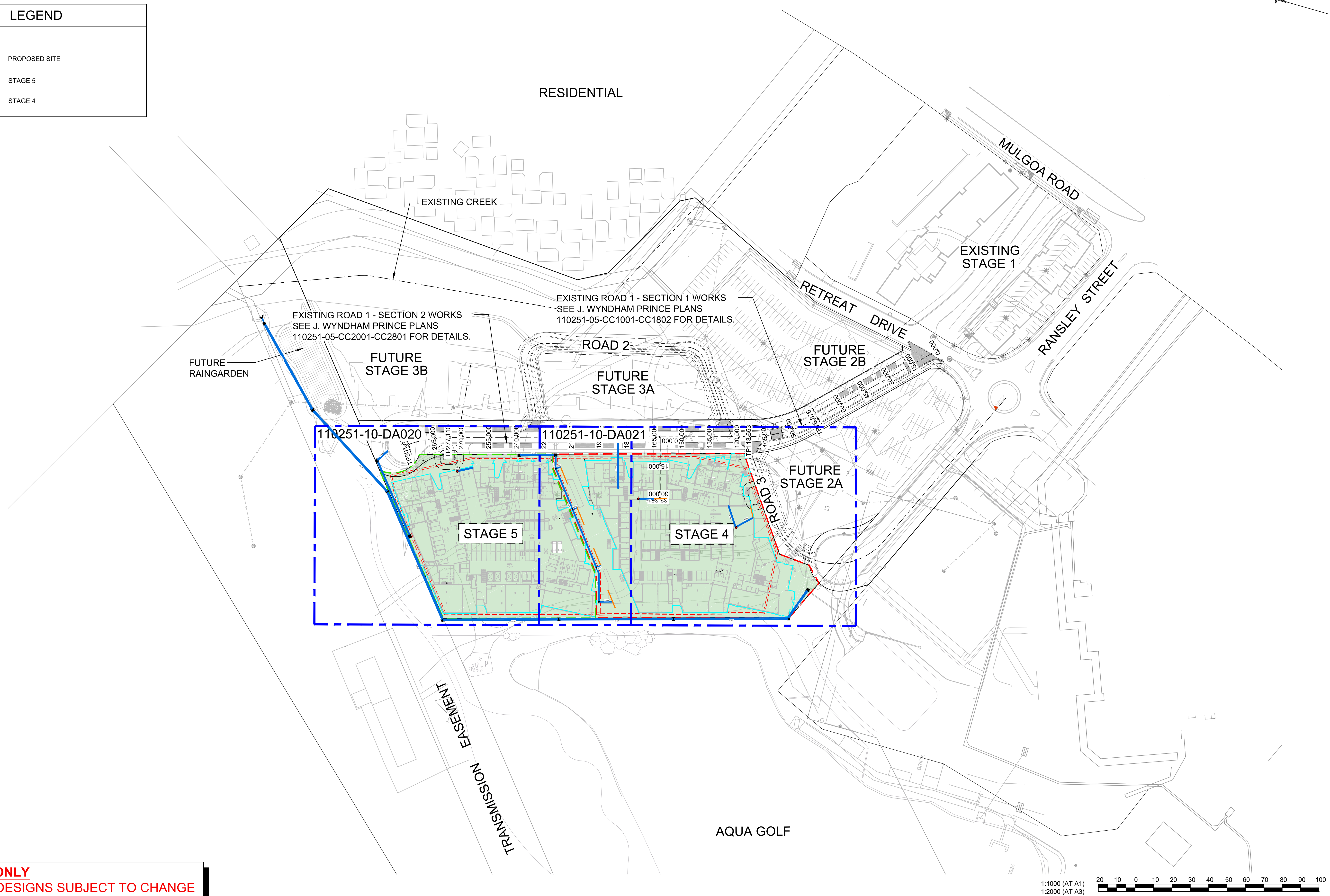
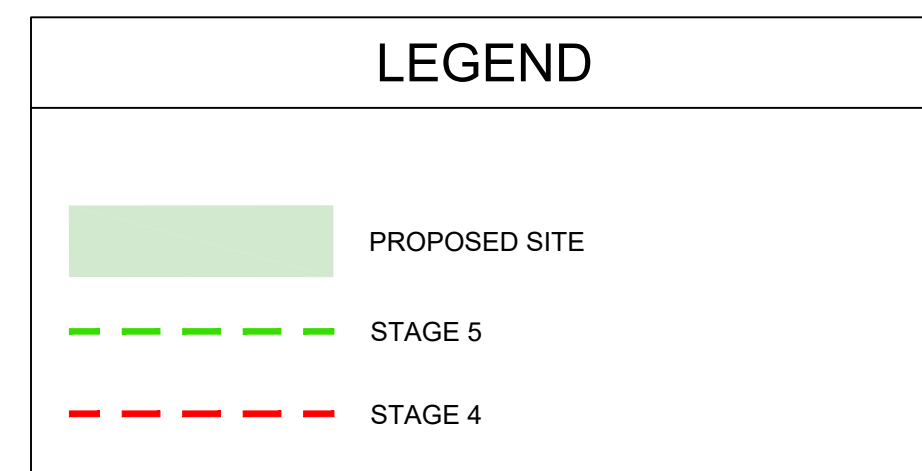
DATUM: A.H.D.

ORIGIN:

PLAN No: =A4

3





**DRAFT ISSUE ONLY**  
**PRELIMINARY DESIGNS SUBJECT TO CHANGE**

1	ISSUED FOR COORDINATION	GA	NM	DG	MS
	AMENDMENT	DES	DRN	CKD	APR
					26/11/21
					DATE

**J. WYNDHAM PRINCE**  
CONSULTING CIVIL INFRASTRUCTURE ENGINEERS & PROJECT MANAGERS

---

PO Box 4366 PENRITH WESTFIELD NSW 2750  
P 02 4720 3300 W [www.jwprince.com.au](http://www.jwprince.com.au) E [jwp@jwprince.com.au](mailto:jwp@jwprince.com.au)

CLIENT:

**CABE**  
SINCE 1999

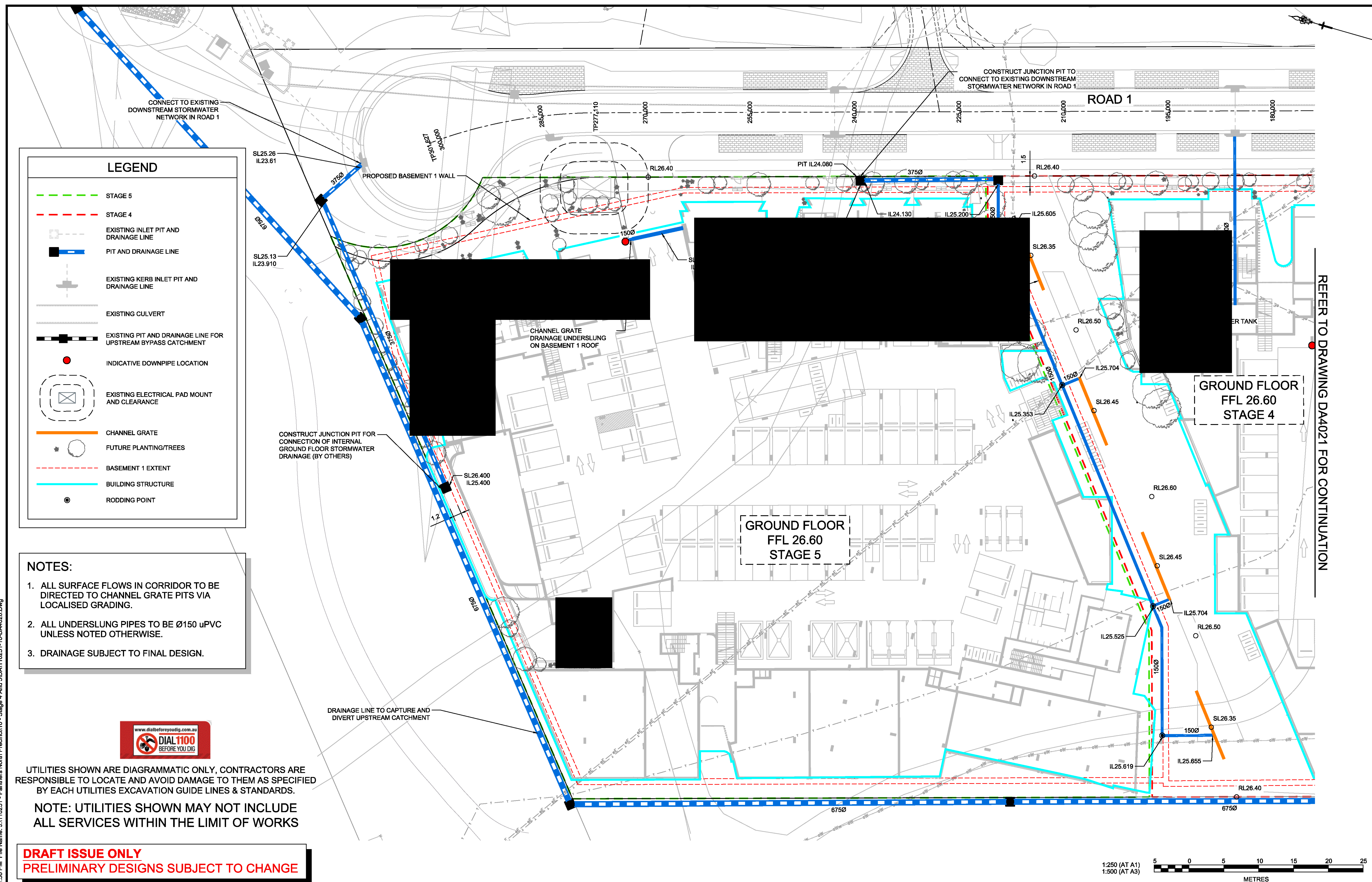
STATUS:

**ADVANCE COPY**  
**DESIGN SUBJECT TO CHANGE**  
**NOT FOR CONSTRUCTION**

THIS DRAWING MUST NOT BE USED FOR CONSTRUCTION UNLESS  
SIGNED AS PART OF AN APPROVED CONSTRUCTION CERTIFICATE.

<p style="text-align: center;">ESQ 1818 STAGES 4 &amp; 5 DEVELOPMENT OVERALL SITE PLAN</p>				PROJECT No: <p style="text-align: center; font-size: 1.5em;">110251-10</p>					
				SHEET No: <p style="text-align: center; font-size: 1.5em;">DA4003</p>					
AZIMUTH: M.G.A.		DATUM: A.H.D.		ORIGIN:		PLAN No: 110251-10-DA4003		1	



[illegible]

CLIENT:

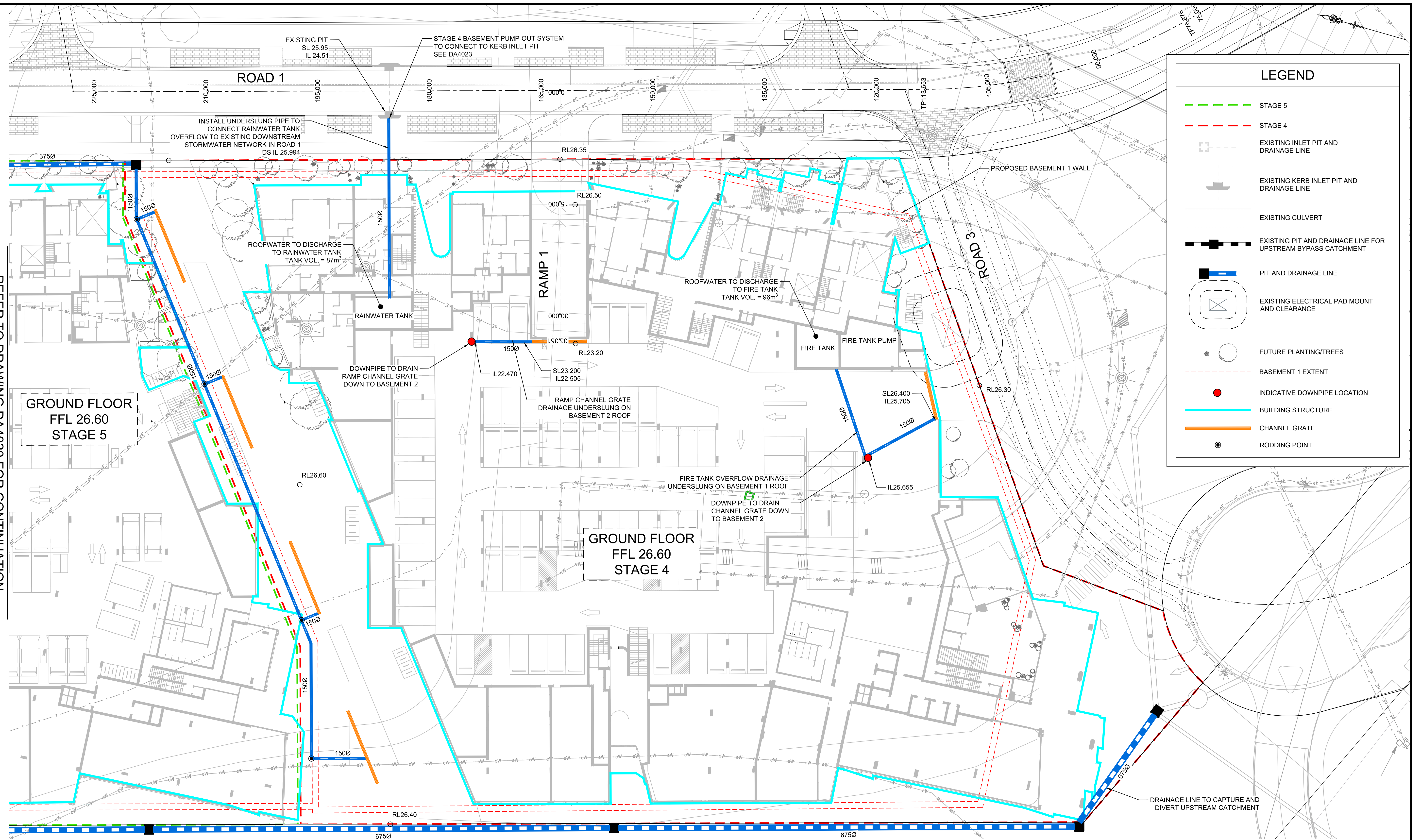
**CABE**  
SINCE 1999

<p align="center"><b>ESQ 1818</b>  <b>STAGES 4 &amp; 5 DEVELOPMENT</b>  <b>ENGINEERING PLAN SHEET 1</b>  <b>GROUND FLOOR</b></p>			
<b>AZIMUTH: M.G.A.</b>	<b>DATUM: A.H.D.</b>	<b>ORIGIN:</b>	<b>PLAN No: 110251-1</b>



Plotted: 26 November, 2021 2:46:14 PM File Name: J:\110251 - Panthers North Precinct\10 - Stage 4 And 5\DA\110251-10-DA4021.Dwg

REFER TO DRAWING DA4020 FOR CONTINUATION



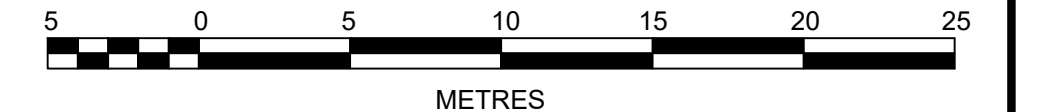
- NOTES:
1. ALL UNDERSLUNG PIPES TO BE Ø150 uPVC UNLESS NOTED OTHERWISE.
  2. DRAINAGE SUBJECT TO FINAL DESIGN.
  3. REFER TO DA4100 FOR RAMP 1 LONGITUDINAL SECTION



UTILITIES SHOWN ARE DIAGRAMMATIC ONLY, CONTRACTORS ARE RESPONSIBLE TO LOCATE AND AVOID DAMAGE TO THEM AS SPECIFIED BY EACH UTILITIES EXCAVATION GUIDE LINES & STANDARDS.

NOTE: UTILITIES SHOWN MAY NOT INCLUDE ALL SERVICES WITHIN THE LIMIT OF WORKS

1:250 (AT A1)  
1:500 (AT A3)



**DRAFT ISSUE ONLY**  
**PRELIMINARY DESIGNS SUBJECT TO CHANGE**

1	ISSUED FOR COORDINATION	GA	NM	DG	MS	26/11/21
	AMENDMENT	DES	DRN	CKD	APR	DATE

**J. WYNDHAM PRINCE**  
CONSULTING CIVIL INFRASTRUCTURE ENGINEERS & PROJECT MANAGERS

PO Box 4366 PENRITH WESTFIELD NSW 2750  
P 02 4720 3300 W [www.jwprince.com.au](http://www.jwprince.com.au) E [jwp@jwprince.com.au](mailto:jwp@jwprince.com.au)

CLIENT:



STATUS:

**ADVANCE COPY**  
**DESIGN SUBJECT TO CHANGE**  
**NOT FOR CONSTRUCTION**

THIS DRAWING MUST NOT BE USED FOR CONSTRUCTION UNLESS SIGNED AS PART OF AN APPROVED CONSTRUCTION CERTIFICATE.

ESQ 1818  
STAGES 4 & 5 DEVELOPMENT  
ENGINEERING PLAN SHEET 2  
GROUND FLOOR

PROJECT No:

**110251-10**

SHEET No:

**DA4021**

AZIMUTH: M.G.A.

DATUM: A.H.D.

ORIGIN:

PLAN No: 110251-10-DA4021

1

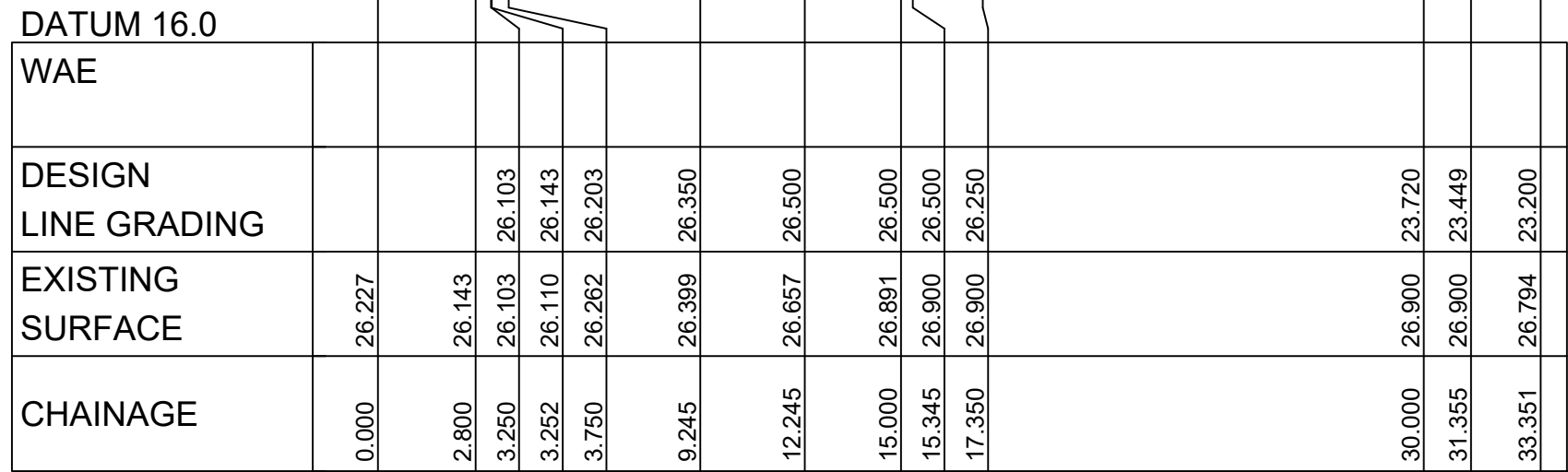




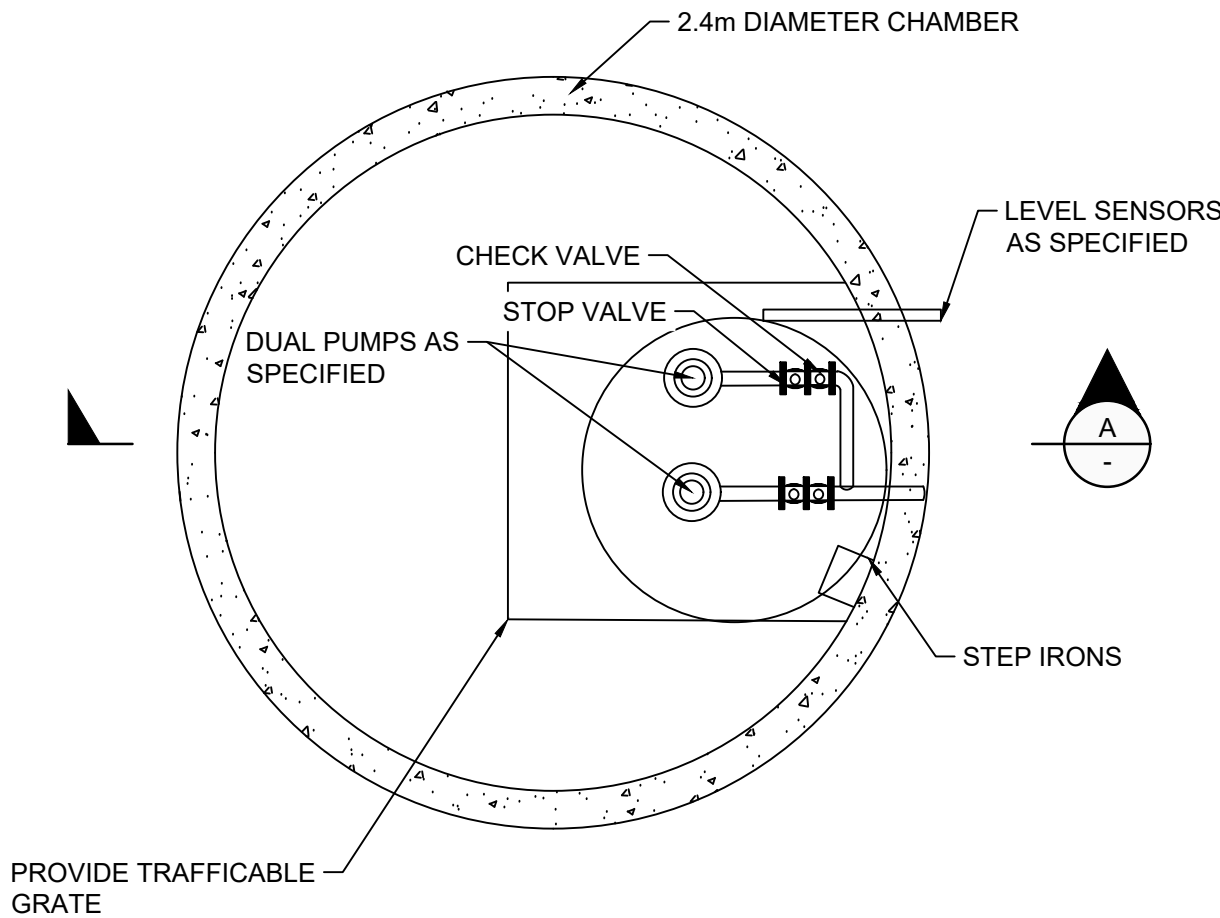








LONGITUDINAL SECTION RAMP 1  
HORIZONTAL SCALE 1:200  
VERTICAL SCALE 1:100



PUMP-OUT PIT AND WELL  
SCALE 1:20

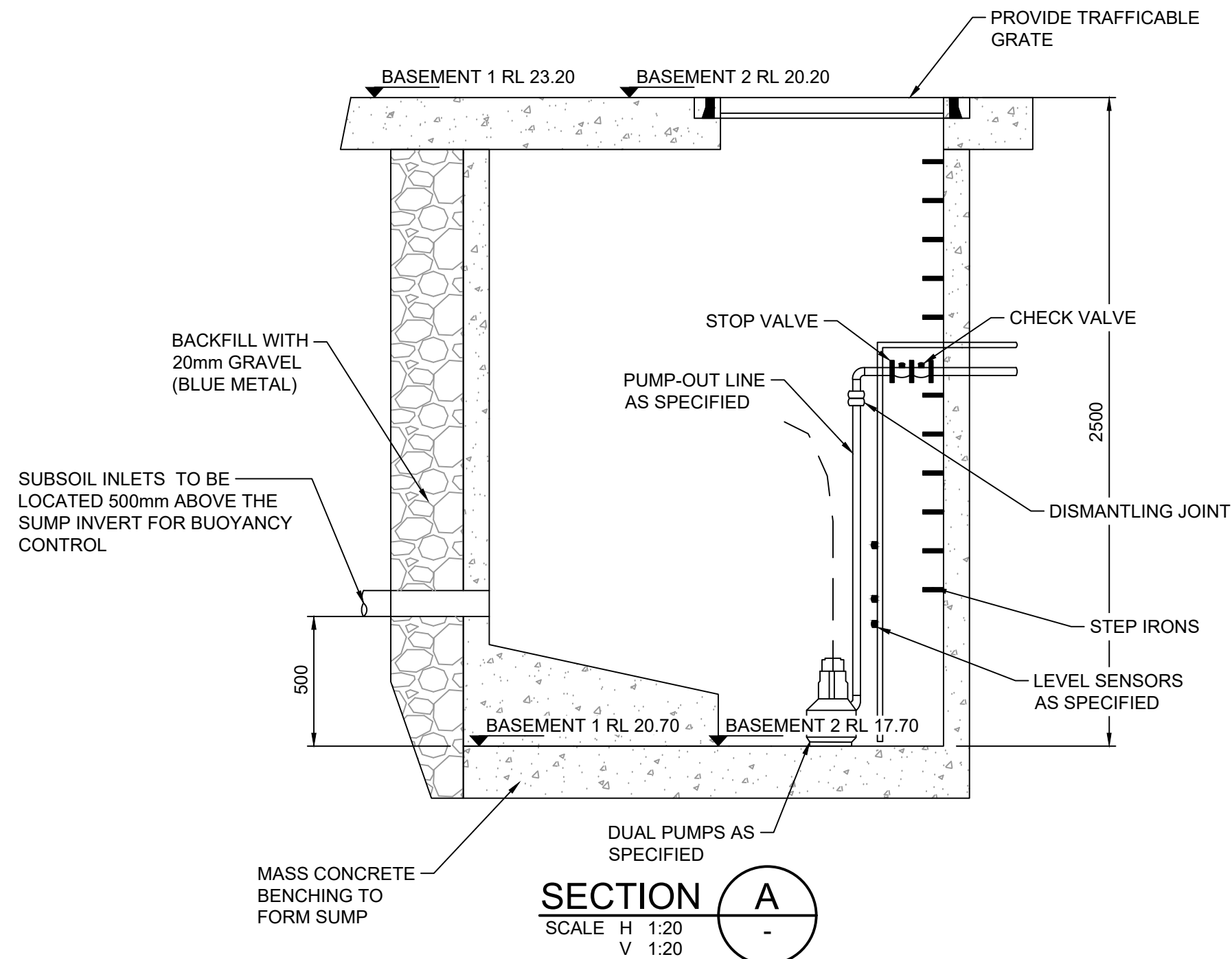
## PUMP - OUT SYSTEM SPECIFICATION

ALL COMPONENTS OF THE PUMP-OUT SYSTEM SHALL BE INSTALLED TO THE MANUFACTURER'S SPECIFICATION CONSISTING OF THE FOLLOWING MINIMUM COMPONENTS:

- PUMPS: DUAL PUMPS (CLASS 1 ZONE 2) INSTALLED TO THE MANUFACTURE'S ALTERNATING DUTY AND STANDBY ARRANGEMENT
- PUMP DUTIES AND TANK SIZE:  
MAIN TANK STORAGE SHALL BE 10m<sup>3</sup>

PUMP DUTY (EACH)	TANK STORAGE
2 PUMPS	90MIN 100YR VOL = 4.5m <sup>3</sup> ADOPT 10m <sup>3</sup> STORAGE
10 L/S @ 15m HEAD	
- COVERS: HEAVY DUTY CAST-IRON SEALED INFILL COVER
- SENSORS: LEVEL SENSORS FOR PUMP ON, PUMP OFF, HIGH LEVEL ALARM AND LOW LEVEL ALARM
- SWITCHGEAR HOUSING: VANDAL PROOF CABINET LOCATED ADJACENT TO THE PUMPING STATION IN A LOCATION TO BE APPROVE BY ARCHITECT
- CONTROLS: FMC MONITORING AND CONTROL UNIT
- INDICATORS: POWER ON LIGHT, PUMP RUN LIGHT, FLASHING LIGHT AND AUDIBLE ALARMS, VOLTMETER, HOURS RUN METER
- POWER SUPPLY: THE CONTRACTOR SHALL PROVIDE ALL NECESSARY POWER SUPPLY AND METERING TO THE PUMP-OUT SYSTEM AND SHALL BE RESPONSIBLE FOR MAKING ALL APPLICATIONS AND PAYING ALL FEES AND CHARGERS TO THE ELECTRICITY SUPPLY AUTHORITY

PUMP DUTY (EACH)	TANK STORAGE
2 PUMPS	90MIN 100YR VOL = 4.5m³ ADOPT 10m³ STORAGE
10 L/S @ 15m HEAD	



**DRAFT ISSUE ONLY**  
**PRELIMINARY DESIGNS SUBJECT TO CHANGE**

1	ISSUED FOR COORDINATION	GA	NM	DG	MS
	AMENDMENT	DES	DRN	CKD	APR
					26/11/20
					DATE

# J. WYNDHAM PRINCE

PO Box 4366 PENRITH WESTFIELD NSW 2750  
P 02 4720 3300 W [www.jwprince.com.au](http://www.jwprince.com.au) E [jwp@jwprince.com.au](mailto:jwp@jwprince.com.au)

CLIENT:

**CABE**  
— SINCE 1999 —

## STATUS

ADVANCE COPY  
DESIGN SUBJECT TO CHANGE  
NOT FOR CONSTRUCTION

THIS DRAWING MUST NOT BE USED FOR CONSTRUCTION UNLESS  
SIGNED AS PART OF AN APPROVED CONSTRUCTION CERTIFICATE

ESQ 1818  
STAGES 4 & 5 DEVELOPMENT  
RAMP LONGITUDINAL SECTION  
AND PUMP-OUT PIT TYPICAL DETAILS

PROJECT No:

110251-10

SHEET No:

# DA4100

AZIMUTH: M.G.A

DATUM: A.H.D

ORIGIN:

PLAN No.

110251-10-DA4100



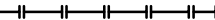



1







## LEGEND

	FILTER ROLLS (AT KERB INLET PIT)
	SURFACE INLET SEDIMENT TRAP.
	SEDIMENT FENCE.
	STOCKPILE / BUND
	STABILISED SITE ACCESS & WHEEL WASH BAY
	ATF FENCE



**NOTE: PRELIMINARY DESIGNS SUBJECT TO CHANGE**  
EXISTING BASEMENT EXCAVATION TO BE USED AS SEDIMENT BASIN.

1	ISSUED FOR COORDINATION		GA	NM	DG	MS	26/11/20			
	AMENDMENT		DES	DRN	CKD	APR	DATE			

PO Box 4366 PENRITH WESTFIELD NSW 2750  
P 02 4720 3300 W [www.jwprince.com.au](http://www.jwprince.com.au) E [jwp@jwprince.com.au](mailto:jwp@jwprince.com.au)

**CABE**  
SINCE 1999

**ADVANCE COPY**  
**DESIGN SUBJECT TO CHANGE**  
**NOT FOR CONSTRUCTION**

THIS DRAWING MUST NOT BE USED FOR CONSTRUCTION UNLESS  
SIGNED AS PART OF AN APPROVED CONSTRUCTION CERTIFICATE.

ESQ 1818  
STAGES 4 & 5 DEVELOPMENT  
SOIL AND WATER MANAGEMENT PLAN

PROJECT No:	110251-10
SHEET No:	DA4700

AZIMUTH: M.G.A.	DATUM: A.H.D.	ORIGIN:	PLAN No: 110251-10-DA4700	1
-----------------	---------------	---------	---------------------------	---



SOIL AND WATER MANAGEMENT NOTES

GENERAL NOTES:

1. ALL EROSION AND SEDIMENT CONTROL MEASURES, INCLUDING REVEGETATION AND STORAGE OF SOIL AND TOPSOIL, SHALL BE IMPLEMENTED TO THE REQUIREMENTS OF THE " SOILS AND CONSTRUCTION - VOLUME 1, 4TH EDITION, MARCH 2004 ".
2. TOPSOIL FROM ALL AREAS TO BE DISTURBED SHALL BE STOCKPILED AND LATER RESPREAD TO AID REVEGETATION IN THOSE AREAS.
3. ALL DRAINAGE WORKS SHALL BE CONSTRUCTED AND STABILISED AS EARLY AS POSSIBLE DURING DEVELOPMENT.
4. VEHICULAR TRAFFIC SHALL BE CONTROLLED DURING DEVELOPMENT CONFINING ACCESS WHERE POSSIBLE TO PROPOSED OR EXISTING ROAD ALIGNMENTS. AREAS TO BE LEFT UNDISTURBED SHALL BE MARKED OFF.
5. DISTURBANCE OF VEGETATION SHALL BE LIMITED TO FILL AREAS, ROADWAYS AND DRAINAGE LINES. NO LOT GRADING SHALL BE CARRIED OUT IN UNDISTURBED AREAS WITHOUT CONSULTATION WITH COUNCIL'S ENGINEER.
6. ALL DISTURBED AREAS SHALL BE REVEGETATED AS SOON AS THE RELEVANT WORKS ARE COMPLETED.
7. ALL SEDIMENT BASINS AND TRAPS SHALL BE CLEANED WHEN THE STRUCTURES ARE A MAXIMUM 60% FULL OF SOLID MATERIALS, INCLUDING DURING THE MAINTENANCE PERIOD.
8. THE SOIL AND WATER MANAGEMENT PLAN IS TO BE READ IN CONJUNCTION WITH THE ENGINEERING PLANS, AND COUNCIL'S WRITTEN GUIDELINES FOR THE DEVELOPMENT OF LAND.
9. CONTRACTORS SHALL ENSURE THAT ALL SOIL AND WATER MANAGEMENT WORKS ARE UNDERTAKEN AS SPECIFIED ON THE PLAN AND IN ACCORDANCE WITH THE GUIDELINES SHOWN IN "MANAGING URBAN STORMWATER - SOILS AND CONSTRUCTION 4TH EDITION" ("THE BLUE BOOK").
10. ALL CONTRACTORS AND SUBCONTRACTORS ARE RESPONSIBLE FOR REDUCING THE SOIL EROSION AND POLLUTION OF DOWNSLOPE AREAS.
11. THE SOIL EROSION HAZARD ON THE SITE IS TO BE KEPT AS LOW AS POSSIBLE AND GENERALLY IN ACCORDANCE WITH THE FOLLOWING SCHEDULE:

LAND USE	LIMITATION	COMMENTS
CONSTRUCTION AREAS	DISTURBANCE TO BE NO FURTHER THAN 5m (PREF 2m) FROM THE EDGE OF ANY ESSENTIAL ENGINEERING ACTIVITY AS SHOWN ON THESE PLANS	ALL SITE WORKERS WILL CLEARLY RECOGNISE THESE ZONES - WHERE APPROPRIATE THE CONSTRUCTION AREAS ARE TO BE IDENTIFIED WITH BARRIER FENCING (DOWNSLOPE) OR SIMILAR MATERIAL.
ACCESS AREAS	LIMITED TO A MAXIMUM WIDTH OF 10m	THE SITE MANAGER SHALL DETERMINE AND MARK THE LOCATION OF THESE ZONES ONSITE. THEY CAN VARY IN POSITION TO BEST CONSERVE THE EXISTING VEGETATION AND PROTECT DOWNSTREAM AREAS WHILE BEING CONSIDERATE OF THE NEEDS OF EFFICIENT WORKS ACTIVITIES. ALL SITE WORKERS SHALL CLEARLY RECOGNISE THEIR BOUNDARIES. WHERE APPROPRIATE THE ACCESS AREAS ARE TO BE MARKED WITH BARRIER MESH, SEDIMENT FENCING OR SIMILAR MATERIALS.
REMAINING LANDS	ENTRY PROHIBITED EXCEPT FOR ESSENTIAL THINNING OF PLANT GROWTH	THINNING OF GROWTH MAY BE REQUIRED FOR FIRE HAZARD REDUCTION.

NOTE:  
WORKS WITHIN WATERWAYS AND CREEKS SHALL BE RESTRICTED AS DIRECTED - ALL LANDS WITHIN CREEKS AND WATERWAYS SHALL HAVE A GROUNDCOVER MORE THAN 70%, USING MATERIALS THAT CAN CATER FOR CONCENTRATED FLOWS.

12. WORKS ARE TO BE UNDERTAKEN IN THE FOLLOWING SEQUENCE. EACH SUBSEQUENT STAGE IS NOT TO COMMENCE UNTIL THE PREVIOUS ONE IS COMPLETE:-
- a. INSTALL ALL BARRIER AND SEDIMENT FENCING WHERE SHOWN ON THE PLAN AND TO DETAIL(SD) 6-8.

b. CONSTRUCT STABILISED SITE ACCESS AS SHOWN ON THE PLAN AND TO DETAIL (SD) 6-14.

c. CONSTRUCT LOW FLOW EARTH BANKS WHERE SHOWN ON THE PLAN AND TO DETAIL (SD) 5-5.

d. PROVIDE TEMP. ACCESS TO THE SEDIMENT BASIN(S)AND PROTECT THIS WITH SEDIMENT FENCING (SD) 6-8 OR BARRIER FENCING AND EARTH BANKS (SD) 5-5.

e. PLACE SEDIMENT FENCING (SD) 6-8 DOWNSLOPE OF LANDS TO BE DISTURBED FOR CONSTRUCTION OF THE SEDIMENT BASINS.

f. CONSTRUCT SEDIMENT BASIN(S) GENERALLY IN ACCORDANCE WITH (SD) 6-4

g. STABILISE LAND SURFACES DISTURBED BY CONSTRUCTION OF THE SEDIMENT BASIN(S) AS SOON AS FINAL LEVELS ARE ESTABLISHED

h. CLEAR THE SITE AND STRIP AND STOCKPILE THE TOPSOIL IN THE LOCATIONS SHOWN ON THE PLAN OR AS DIRECTED BY THE SITE SUPERINTENDENT TO DETAIL (SD) 4-1.

i. UNDERTAKE ALL ESSENTIAL CONSTRUCTION WORKS.

j. GRADE LOT AREAS TO FINAL GRADES AND APPLY PERMANENT STABILISATION (LANDSCAPING) WITHIN 14 DAYS OF COMPLETION OF CONSTRUCTION WORKS.

k. REMOVE TEMPORARY EROSION CONTROL MEASURES AFTER THE PERMANENT LANDSCAPING HAS BEEN COMPLETED.
13. CLEARLY VISIBLE BARRIER FENCING SHALL BE INSTALLED WHERE DIRECTED BY THE SITE SUPERINTENDENT TO CONTROL AND PROHIBIT UNNECESSARY SITE DISTURBANCE

14. PROTECTION FROM EROSION FORCES SHALL BE UNDERTAKEN ON ALL LANDS. GROUND COVER TO BE IN PLACE WITHIN 10 WORKING DAYS FROM COMPLETION OF FORMATION AND BEFORE THEY ARE ALLOWED TO CARRY ANY CONCENTRATED FLOWS.
15. TEMPORARY GROUND COVER SHOULD BE MINIMUM 70%. FOOT AND VEHICULAR TRAFFIC SHALL BE KEPT AWAY FROM REHABILITATED AREAS.
16. WHERE POSSIBLE THE CONSTRUCTION PROGRAM IS TO SCHEDULE WORKS SUCH THAT LAND DISTURBANCE ACTIVITIES ARE COMPLETED IN LESS THAN 6 MONTHS. REVEGETATION WORKS MUST BE CARRIED OUT AS STIPULATED IN THE RELEVANT COUNCIL GUIDELINES / SPECIFICATIONS SUCH THAT A SATISFACTORY GROUND COVER IS PROVIDED TO AT LEAST 60% OF THE DISTURBED AREA WITHIN 10 DAYS AND AT LEAST 70% OF THE DISTURBED AREA WITHIN A FURTHER 60 DAYS..
17. SEDIMENT FENCES (SD) 6-8 SHALL:-
- a. BE INSTALLED WHERE SHOWN ON THE PLAN AND AS DIRECTED AT THE DISCRETION OF THE SITE SUPERINTENDENT DURING THE COURSE OF CONSTRUCTION TO CONTAIN THE COARSER SEDIMENT FRACTIONS AS NEAR AS POSSIBLE TO THEIR SOURCE.

b. HAVE A CATCHMENT AREA NOT EXCEEDING 720sq.m, AND A STORAGE DEPTH OF AT LEAST 0.6m.

c. PROVIDE AN UPSLOPE RETURN OF 1m AT INTERVALS ALONG THE FENCE WHERE THE CATCHMENT AREA EXCEEDS 720sq.m. TO LIMIT THE DISCHARGE REACHING EACH SECTION TO 50litres/sec IN A MAX. 10yr Tc DISCHARGE.
18. STOCKPILES (SD) 4-1 SHALL BE LOCATED AS SHOWN ON THE PLANS AND AT THE DISCRETION OF THE SITE SUPERINTENDENT.
19. DURING WINDY WEATHER LARGE UNPROTECTED AREAS ARE TO BE KEPT MOIST (NOT WET) BY SPRINKLING WITH WATER TO KEEP DUST UNDER CONTROL. IN THE EVENT WATER IS NOT AVAILABLE IN SUFFICIENT QUANTITIES SOIL BINDERS AND/OR DUST RETARDANTS SHALL BE USED OR THE SURFACE SHALL BE LEFT IN A CLODDY STATE THAT RESISTS REMOVAL BY WIND.
20. STOCKPILES SHALL NOT BE LOCATED WITHIN 5m OF HAZARD AREAS, INCLUDING LIKELY AREAS OF HIGH VELOCITY FLOWS SUCH AS WATERWAYS, PAVED AREAS OR DRIVEWAYS.
21. THE SEDIMENT RETENTION BASINS (SD) 6-4 SHALL:-
- a. BE CONSTRUCTED WHERE SHOWN ON THE PLANS.

b. BE FLOCCULATED (APPENDIX E MANAGING URBAN STORMWATER SOILS & CONSTRUCTION 4TH ED.) BEFORE DISCHARGE OCCURS (UNLESS THE DESIGN STORM EVENT IS EXCEEDED)

c. HAVE ONE OR MORE PEGS PLACED ON THE FLOOR TO CLEARLY INDICATE THE LEVEL AT WHICH DESIGN CAPACITY OCCURS AND WHEN SEDIMENT SHALL BE REMOVED.
22. STORED CONTENTS OF THE BASINS SHALL BE TREATED WITH GYPSUM (APPENDIX E MANAGING URBAN STORMWATER SOILS & CONSTRUCTION 4TH ED.) OR OTHER FLOCCULATING AGENTS WHERE THEY CONTAIN MORE THAN 50mg/litre OF SUSPENDED SOLIDS. TREATMENT SHALL BE AS FOLLOWS:-
- a. LOWER SUSPENDED SOLIDS TO LESS THAN 50mg/litre WITHIN 24hrs OF FILLING

b. THE BASINS SHALL THEN BE ALLOWED TO STAND 36 TO 48hrs FOR FLOCCULATED PARTICLES TO SETTLE

c. THE BASINS SHALL THEN BE DRAINED SO THAT FULL STORAGE CAPACITY IS REGAINED WITHOUT DISCHARGING SEDIMENT FROM THE SITE.
23. SEDIMENT REMOVED FROM ANY TRAPPING DEVICE SHALL BE DISPOSED IN LOCATIONS WHERE FURTHER EROSION AND CONSEQUENT POLLUTION TO DOWNSLOPE LANDS AND WATERWAYS SHALL NOT OCCUR.
24. WATER SHALL BE PREVENTED FROM DIRECTLY ENTERING THE PERMANENT DRAINAGE SYSTEM UNLESS IT IS RELATIVELY SEDIMENT FREE (ie THE CATCHMENT HAS BEEN LANDSCAPED AND/OR ANY LIKELY SEDIMENT HAS BEEN TREATED IN AN APPROVED DEVICE) NEVERTHELESS STORMWATER INLETS SHALL BE PROTECTED (SD) 6-11 & 6-12.
25. TEMPORARY SOIL AND WATER MANAGEMENT STRUCTURES SHALL BE REMOVED ONLY AFTER THE LANDS THEY ARE PROTECTING ARE STABILISED.
26. ACCEPTABLE BINS SHALL BE PROVIDED FOR ANY CONCRETE AND MORTAR SLURRIES, PAINTS, ACID WASHINGS, LIGHTWEIGHT WASTE MATERIALS AND LITTER. CLEARANCE SERVICES SHALL BE PROVIDED AT LEAST ONCE A WEEK.

STOCKPILE NOTES:

1. SPOIL AND TOPSOIL STOCKPILES SHALL BE LOCATED AWAY FROM DRAINAGE LINES AND AREAS WHERE WATER MAY CONCENTRATE.
2. IF STOCKPILES ARE TO BE IN PLACE FOR LONGER THAN 14 DAYS THEN THEY SHALL BE STABILIZED BY COVERING WITH A MULCH OR WITH TEMPORARY VEGETATION.
3. FOLLOWING CONSTRUCTION, TOPSOIL SHALL BE RESPREAD TO A MINIMUM DEPTH OF 100mm ON THE BARE SOIL SURFACES AND REVEGETATED.

SEDIMENTATION CONTROL DEVICES:

1. SILT FENCES SHALL BE CONSTRUCTED BY STRETCHING A FILTER FABRIC (PROPEX OR SIMILAR) BETWEEN POSTS AT 2.5m CENTRES. FABRIC SHALL BE BURIED 150mm ALONG IT'S LOWER EDGE.

SITE INSPECTION AND MAINTENANCE:

1. A SELF-AUDITING PROGRAM SHALL BE ESTABLISHED BASED ON A INSPECTION TEST PLAN (ITP) OR LOG BOOK. A SITE INSPECTION USING THE ITP SHALL BE MADE BY THE SITE MANAGER:-
- a. AT LEAST WEEKLY

b. IMMEDIATELY BEFORE SITE CLOSURE

c. IMMEDIATELY FOLLOWING RAINFALL EVENTS IN EXCESS OF 5mm IN ANY 24hr PERIOD.
- THE SELF AUDIT SHALL INCLUDE:-
- a. RECORDING THE CONDITION OF EVERY 'BEST MANAGEMENT PRACTICE' EMPLOYED

b. RECORDING MAINTENANCE REQUIREMENTS (IF ANY) FOR EACH 'BEST MANAGEMENT PRACTICE'

c. RECORDING THE VOLUMES OF SEDIMENT REMOVED FROM SEDIMENT RETENTION SYSTEMS WHERE APPLICABLE

d. RECORDING THE SITE WHERE SEDIMENT IS DISPOSED

e. FORWARDING A SIGNED DUPLICATE OF THE COMPLETED CHECK SHEET TO THE PROJECT MANAGER/DEVELOPER FOR THEIR INFORMATION.
2. IN ADDITION A SUITABLY QUALIFIED PERSON SHALL BE RESPONSIBLE FOR OVERSEEING THE INSTALLATION AND MAINTENANCE OF ALL SOIL AND WATER MANAGEMENT WORKS ON THE SITE. THE PERSON SHALL BE REQUIRED TO SPEND A MINIMUM OF:-
- a. 2hrs ONSITE EACH FORTNIGHT UP UNTIL COMPLETION OF ROAD AND DRAINAGE WORKS AND/OR THE COMMISSIONING OF SEDIMENT BASIN(S)/WATER QUALITY CONTROL FACILITIES, AND DURING THE DECOMMISSIONING OF SAME AND/OR FINAL SITE STABILISATION. TO PROVIDE A SHORT MONTHLY WRITTEN REPORT.

b. ONE HOUR ONSITE EACH 2 MONTHS DURING THAT PHASE WHERE THE DEVELOPERS RESPONSIBILITIES ARE LIMITED TO MAINTENANCE OF THE SDS DEVICES AND/OR SEDIMENT BASINS (ie DURING THE STAGE WHEN BUILDING WORKS CAN BE UNDERTAKEN) TO PROVIDE A SHORT WRITTEN REPORT EACH 4 MONTHS
- THE RESPONSIBLE PERSON SHALL ENSURE THAT:-
- a. THIS PLAN IS BEING IMPLEMENTED CORRECTLY

b. REPAIRS ARE BEING UNDERTAKEN AS REQUIRED

c. ESSENTIAL MODIFICATIONS TO THIS PLAN ARE BEING MADE IF AND WHEN NECESSARY. EACH REPORT SHALL CERTIFY THAT WORKS HAVE BEEN CARRIED OUT ACCORDING TO THE APPROVED PLANS.
3. WASTE BINS SHALL BE EMPTIED AS NECESSARY, DISPOSAL OF WASTE SHALL BE IN A MANNER APPROVED BY THE SITE SUPERINTENDENT
4. PROPER DRAINAGE OF THE SITE SHALL BE MAINTAINED. DRAINS (INCLUDING INLET AND OUTLET WORKS) SHALL BE CHECKED TO ENSURE THAT THEY ARE OPERATING AS INTENDED,ESPECIALLY THAT:-
- a. NO LOW POINTS EXIST WHICH CAN OVERTOP IN A LARGE STORM EVENT.

b. AREAS OF EROSION ARE REPAIRED (e.g LINED WITH SUITABLE MATERIAL) AND/OR VELOCITY OF FLOW IS REDUCED APPROPRIATELY THROUGH CONSTRUCTION OF SMALL CHECK DAMS OR INSTALLING ADDITIONAL DIVERSIONS UPSLOPE

c. BLOCKAGES ARE CLEARED (THESE MIGHT OCCUR BECAUSE OF SEDIMENT POLLUTION, SAND/SOIL/SPOIL BEING DEPOSITED IN OR TOO CLOSE TO THEM, BREACHED BY VEHICLE WHEELS etc)
5. SAND/SOIL/SPOIL MATERIALS PLACED CLOSER THAN 2m FROM HAZARD AREAS SHALL BE REMOVED SUCH HAZARD AREAS INCLUDE ANY AREAS OF HIGH VELOCITY WATER FLOWS (eg WATERWAYS AND GUTTERS) PAVED AREAS AND DRIVEWAYS.
6. RECENTLY STABILISED LANDS SHALL BE CHECKED TO ENSURE THAT THE EROSION HAZARD HAS BEEN EFFECTIVELY REDUCED. ANY REPAIRS SHALL BE INITIATED AS APPROPRIATE.
7. EXCESSIVE VEGETATIVE GROWTH SHALL BE CONTROLLED THROUGH MOWING OR SLASHING.
8. ALL SEDIMENT DETENTION SYSTEMS SHALL BE KEPT IN GOOD WORKING CONDITION. IN PARTICULAR ATTENTION SHALL BE GIVEN TO:-
- a. RECENT WORKS TO ENSURE THAT THEY HAVE NOT RESULTED IN DIVERSION OF SEDIMENT LADEN WATER AWAY FROM THEM.

b. DEGRADABLE PRODUCTS TO ENSURE THAT THEY ARE REPLACED AS REQUIRED

c. SEDIMENT REMOVAL TO ENSURE THE DESIGN CAPACITY OR LESS REMAINS IN THE SETTLING ZONE.
9. ADDITIONAL EROSION AND/OR SEDIMENT CONTROL WORKS SHALL BE CONSTRUCTED AS MIGHT BECOME NECESSARY TO ENSURE THE DESIRED PROTECTION IS GIVEN TO DOWNSLOPE LANDS AND WATERWAYS (ie MAKE ONGOING CHANGES TO THIS PLAN WHERE IT PROVES INADEQUATE IN PRACTICE OR IS SUBJECTED TO CHANGES IN CONDITIONS AT THE WORKS SITE OR ELSEWHERE IN THE CATCHMENT.
10. EROSION AND SEDIMENT CONTROL MEASURES SHALL BE MAINTAINED IN A FUNCTIONING CONDITION UNTIL ALL EARTHWORKS ACTIVITIES ARE COMPLETED AND THE SITE STABILISED.
11. WATERS IN SEDIMENT RETENTION BASIN(S) THAT OCCUPY MORE THAN 1/4 OF THE DESIGN CAPACITY DURING THAT STAGE OF THE WORKS UP UNTIL COMMISSIONING OF THE BASIN(s) SHALL BE:-
- a. TREATED WITH A FLOCCULATING AGENT (APPENDIX E MANAGING URBAN STORMWATER SOILS & CONSTRUCTION 4TH ED.)

b. DISCHARGED WITHIN 5 days FROM THE CONCLUSION OF ANY STORM EVENT LARGE ENOUGH TO FILL THE BASIN TO THAT LEVEL.
12. LITTER, DEBRIS AND COARSE SEDIMENT SHALL BE REMOVED FROM THE GROSS POLLUTANT TRAPS AND TRASH RACKS AS REQUIRED.

DRAFT ISSUE ONLY  
PRELIMINARY DESIGNS SUBJECT TO CHANGE

Plotted: 26 November , 2021 2:27:55 PM File Name: J:\110251 - Panthers North Precinct\10 - Stage 4 And 5\DA\110251-10\DA4701.Dwg

1	ISSUED FOR COORDINATION	GA	NM	DG	MS	26/11/21	
	AMENDMENT	DES	DRN	CKD	APR	DATE	

J. WYNDHAM PRINCE  
CONSULTING CIVIL INFRASTRUCTURE ENGINEERS & PROJECT MANAGERS

PO Box 4366 PENRITH WESTFIELD NSW 2750  
P 02 4720 3300 W www.jwprince.com.au E jwp@jwprince.com.au

CLIENT:



STATUS:

ADVANCE COPY  
DESIGN SUBJECT TO CHANGE  
NOT FOR CONSTRUCTION

THIS DRAWING MUST NOT BE USED FOR CONSTRUCTION UNLESS SIGNED AS PART OF AN APPROVED CONSTRUCTION CERTIFICATE.

ESQ 1818  
STAGES 4 & 5 DEVELOPMENT  
SOIL AND WATER MANAGEMENT NOTES

PROJECT No:

110251-10

SHEET No:

DA4701

AZIMUTH: M.G.A.

DATUM: A.H.D.

ORIGIN:

PLAN No:

110251-10-DA4701

1