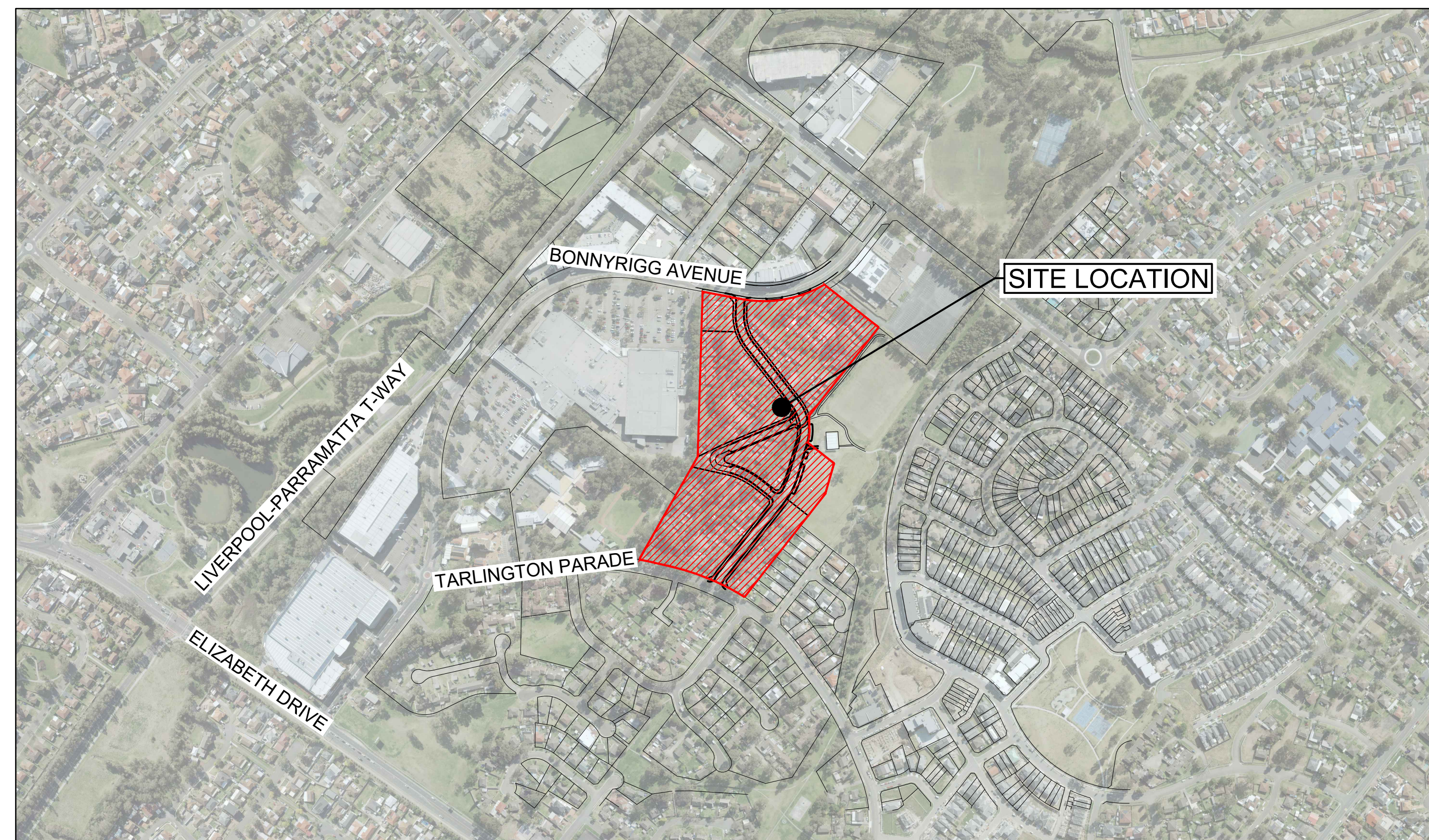


BONNYRIGG LIVING COMMUNITIES PROJECT

DEVELOPMENT APPLICATION - STAGE 12 &13

PROPOSED STORMWATER, LOT & ROAD WORKS



Plotted: 12 October, 2022 2:30:53 PM File Name: J:\110808 - Bonnyrigg Stages 12 And 13\01 - Stages 12 And 13\CD\DA\110808-01-DA001.dwg

						J. WYNDHAM PRINCE CONSULTING CIVIL INFRASTRUCTURE ENGINEERS & PROJECT MANAGERS <small>PO Box 4366 PENRITH WESTFIELD NSW 2750 P 02 4720 3300 W www.jwprince.com.au E jwp@jwprince.com.au</small>				CLIENT:  Land & Housing Corporation		STATUS: ISSUE FOR DA APPROVAL NOT FOR CONSTRUCTION <small>THIS DRAWING MUST NOT BE USED FOR CONSTRUCTION UNLESS SIGNED AS PART OF AN APPROVED CONSTRUCTION CERTIFICATE.</small>		BONNYRIGG STAGE 12 & 13 COVER SHEET			PROJECT No: 110808-01	
																	SHEET No: DA001	
A ISSUED FOR DA APPROVAL						DG	JM	JB	MS	29/09/22				PLAN No: 110808-01-DA001				
AMENDMENT						DES	DRN	CKD	APR	DATE							A	

Plotted: 10 April, 2023 4:49:16 PM File Name: J:\110808 - Bonnyrigg Stages 12 And 13\01 - Stages 12 And 13\CDD\DA\110808-01-DA002.dwg

LEGEND			
DESCRIPTION	PROPOSED	EXISTING	FUTURE
EXTENT OF WORKS	//////////		
SITE BOUNDARY	-----		
STAGE BOUNDARY	-----		
KERB & GUTTER	KG		
ROLL KERB	RK		
KERB ONLY	KO		
DISH CROSSING	DC		
PRAM RAMP			
DRAINAGE LINE, PIT & EASEMENT	05/05 Ø225		
DRAINAGE LINE & PIT	05/06 Ø600		
HEADWALL			
GPT	GPT		
CONCRETE DRIVEWAY WITH VEHICULAR CROSSING			
CONTOURS	46.0	47.0	
ELECTRICITY, POWER POLE	E E E E	eE eE eE	
TELECOM, BOX	T T T T	eT eT eT	
WATER, STOP VALVE, HYDRANT	W W W W	eW eW eW	
SEWER, MANHOLE	S S S S	eS eS eS	
GAS	G G G G	eG eG eG	
TREES TO BE RETAINED			
TREES TO BE REMOVED			
RETAINING WALL			

GENERAL NOTES

- THESE PLANS ARE ONLY FOR THE PURPOSE OF LODGING A DEVELOPMENT APPLICATION TO COUNCIL.
- THE PROPERTY BOUNDARIES, LAYOUT AND EASEMENTS 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 AND CONFIGURATION OF ANY ROAD, THE LEVEL AND EXTENT OF ANY FILLING AREA, AND 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.
- ALL DRAINAGE LINES THROUGH LOTS SHALL BE CONTAINED WITHIN EASEMENTS IN ACCORDANCE WITH COUNCIL'S STORMWATER MANAGEMENT POLICY
a) ALL OTHER DRAINS - REFER TO COUNCIL'S STORMWATER MANAGEMENT POLICY.

SURVEYED BY:
PREMISE
CAD REFERENCE: 320300 DETAIL SURVEY REV C.dwg
DATE RECEIVED 03/08/22

CIVIL PLAN INDEX		
PLAN NO.	PLAN NAME	REV
110808-01-DA001	COVER SHEET	A
110808-01-DA002	INDEX, NOTES & LEGEND	C
110808-01-DA003	OVERALL SITE & PAVEMENT PLAN	C
110808-01-DA004	STAGING PLAN	D
110808-01-DA005	TYPICAL SECTIONS	B
110808-01-DA010	CUT & FILL PLAN	B
110808-01-DA050	ENGINEERING PLAN SHEET 1	C
110808-01-DA051	ENGINEERING PLAN SHEET 2	C
110808-01-DA052	ENGINEERING PLAN SHEET 3	B
110808-01-DA100	ROAD LONGITUDINAL SECTIONS SHEET 1	B
110808-01-DA101	ROAD LONGITUDINAL SECTIONS SHEET 2	B
110808-01-DA102	SITE SECTIONS & TURNING PATH	B
110808-01-DA200	CATCHMENT PLAN	B
110808-01-DA300	DRAINAGE LONGITUDINAL SECTIONS SHEET 1	A
110808-01-DA301	DRAINAGE LONGITUDINAL SECTIONS SHEET 2	A
110808-01-DA302	DRAINAGE LONGITUDINAL SECTIONS SHEET 3	B
110808-01-DA303	DRAINAGE LONGITUDINAL SECTIONS SHEET 4	A
110808-01-DA304	DRAINAGE LONGITUDINAL SECTIONS SHEET 5	A
110808-01-DA400	SOIL & WATER MANAGEMENT PLAN	B
110808-01-DA401	SOIL & WATER MANAGEMENT NOTES	A
110808-01-DA600	TREE PLAN	B
110808-01-DA601	SERVICES PLAN	B



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

D	ISSUED FOR DA APPROVAL	DG	DG	JB	MS	19/04/23	
C	ISSUED FOR DA APPROVAL	DG	JM	JB	MS	13/10/22	
B	ISSUED FOR DA APPROVAL	DG	JM	JB	MS	12/10/22	
A	ISSUED FOR DA APPROVAL	DG	JM	JB	MS	29/09/22	
	AMENDMENT	DES	DRN	CKD	APR	DATE	

J. WYNDHAM PRINCE
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BONNYRIGG
STAGE 12 & 13
INDEX, NOTES & LEGEND

PROJECT No:

110808-01

SHEET No:

DA002

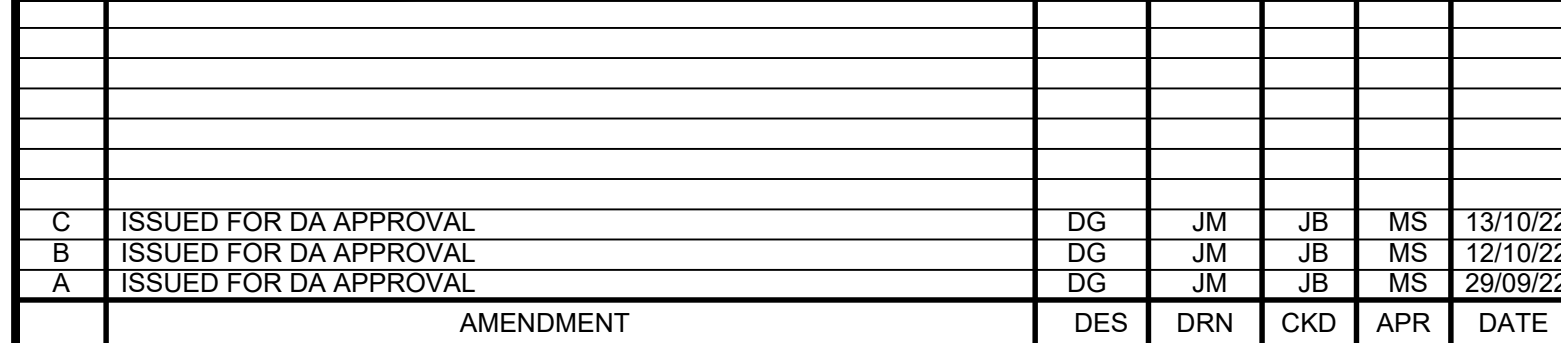
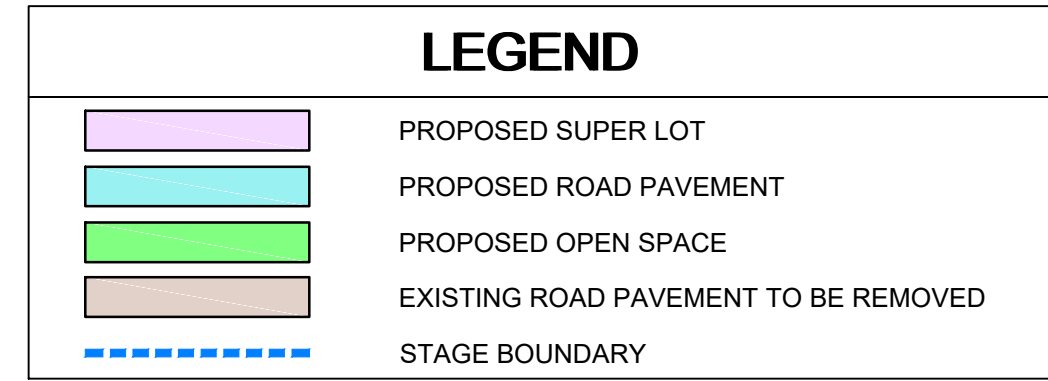
AZIMUTH: M.G.A.

DATUM: A.H.D.

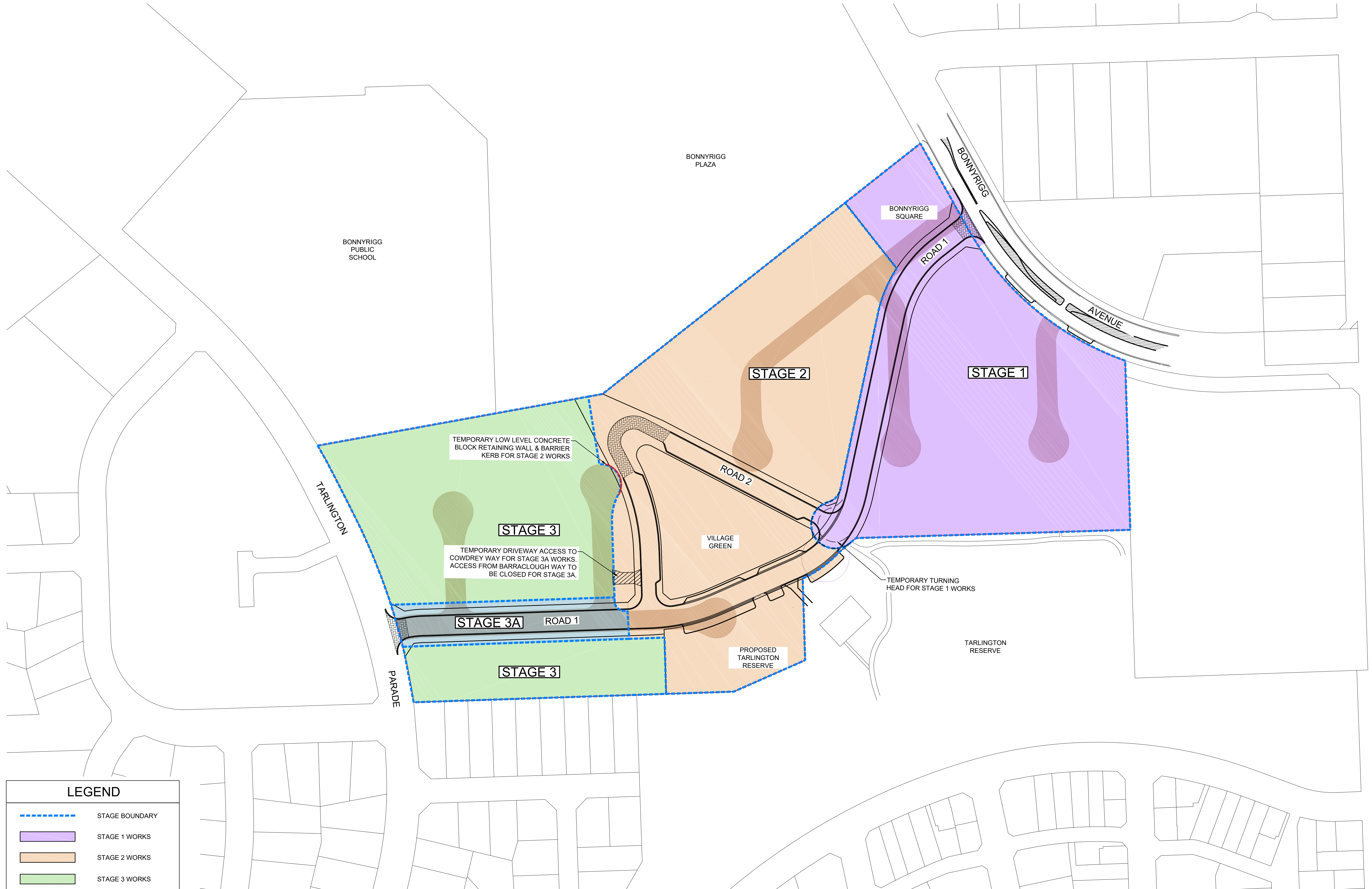
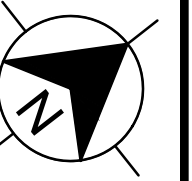
ORIGIN:

PLAN No: 110808-01-DA002

D



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	 Land & Housing Corporation	CLIENT: STATUS: <div style="text-align: center;"> ISSUE FOR DA APPROVAL NOT FOR CONSTRUCTION </div> <small>THIS DRAWING MUST NOT BE USED FOR CONSTRUCTION UNLESS SIGNED AS PART OF AN APPROVED CONSTRUCTION CERTIFICATE.</small>	BONNYRIGG STAGE 12 & 13 OVERALL SITE & PAVEMENT PLAN			PROJECT No: <div style="text-align: center;">110808-01</div>		
						SHEET No: <div style="text-align: center;">DA003</div>		
			AZIMUTH: M.G.A.	DATUM: A.H.D.	ORIGIN:	PLAN No: 110808-01-DA003		C



LEGEND

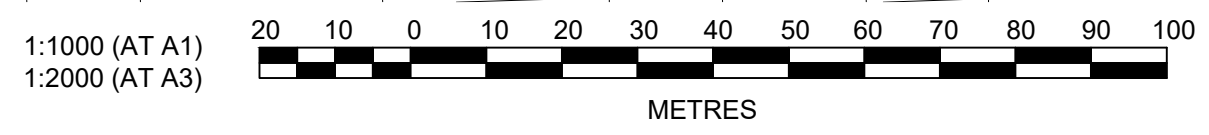
STAGE BOUNDARY

STAGE 1 WORKS

STAGE 2 WORKS

STAGE 3 WORKS

STAGE 3A WORKS



D	COUNCIL COMMENTS	DG	DG	JB	MS	19/04/23			
C	ISSUED FOR DA APPROVAL	DG	JM	JB	MS	13/10/22			
B	ISSUED FOR DA APPROVAL	DG	JM	JB	MS	12/10/22			
A	ISSUED FOR DA APPROVAL	DG	JM	JB	MS	29/09/22			
	AMENDMENT	DES	DRN	CKD	APR	DATE			

J. WYNDHAM PRINCE

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BONNYRIGG STAGE 12 & 13 STAGING PLAN

PROJECT No: 110808-01

SHEET No: DA004

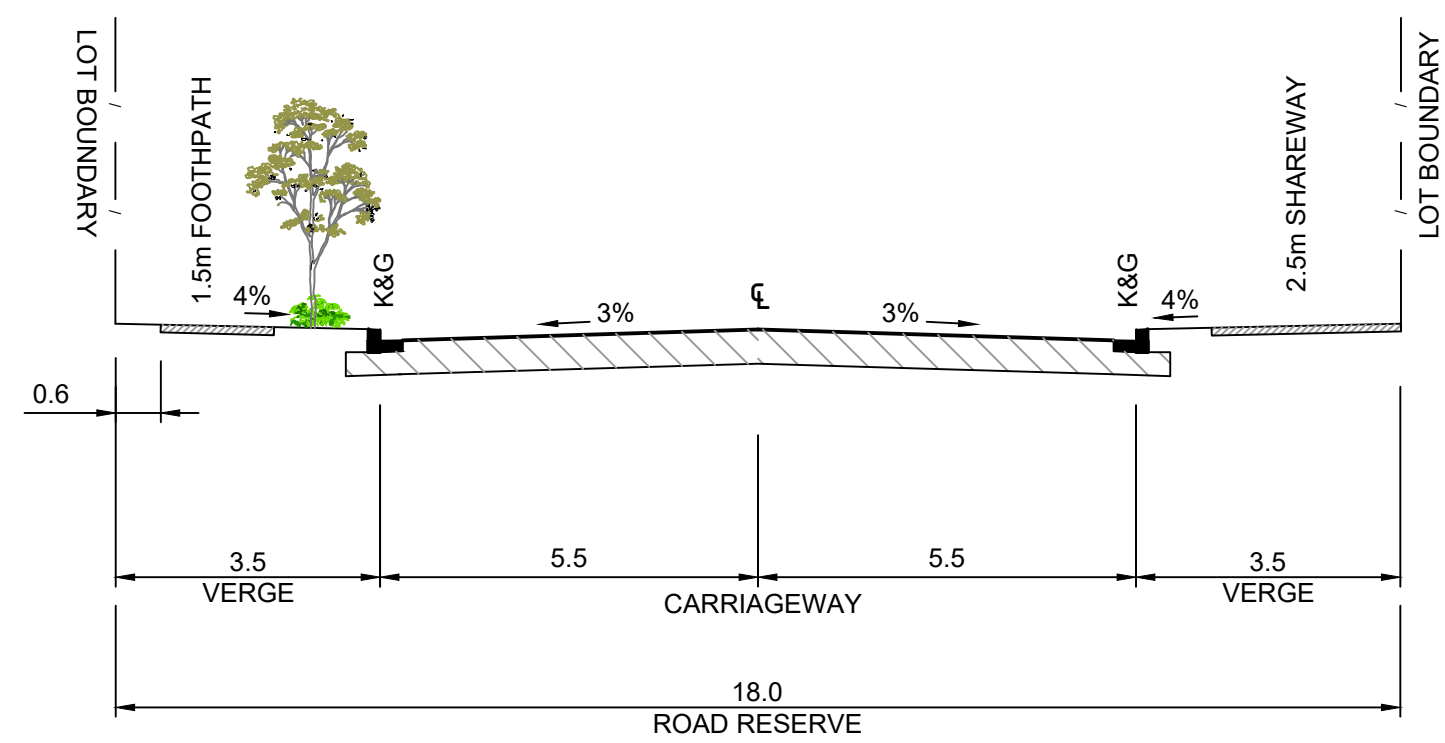
AZIMUTH: M.G.A.

DATUM: A.H.D.

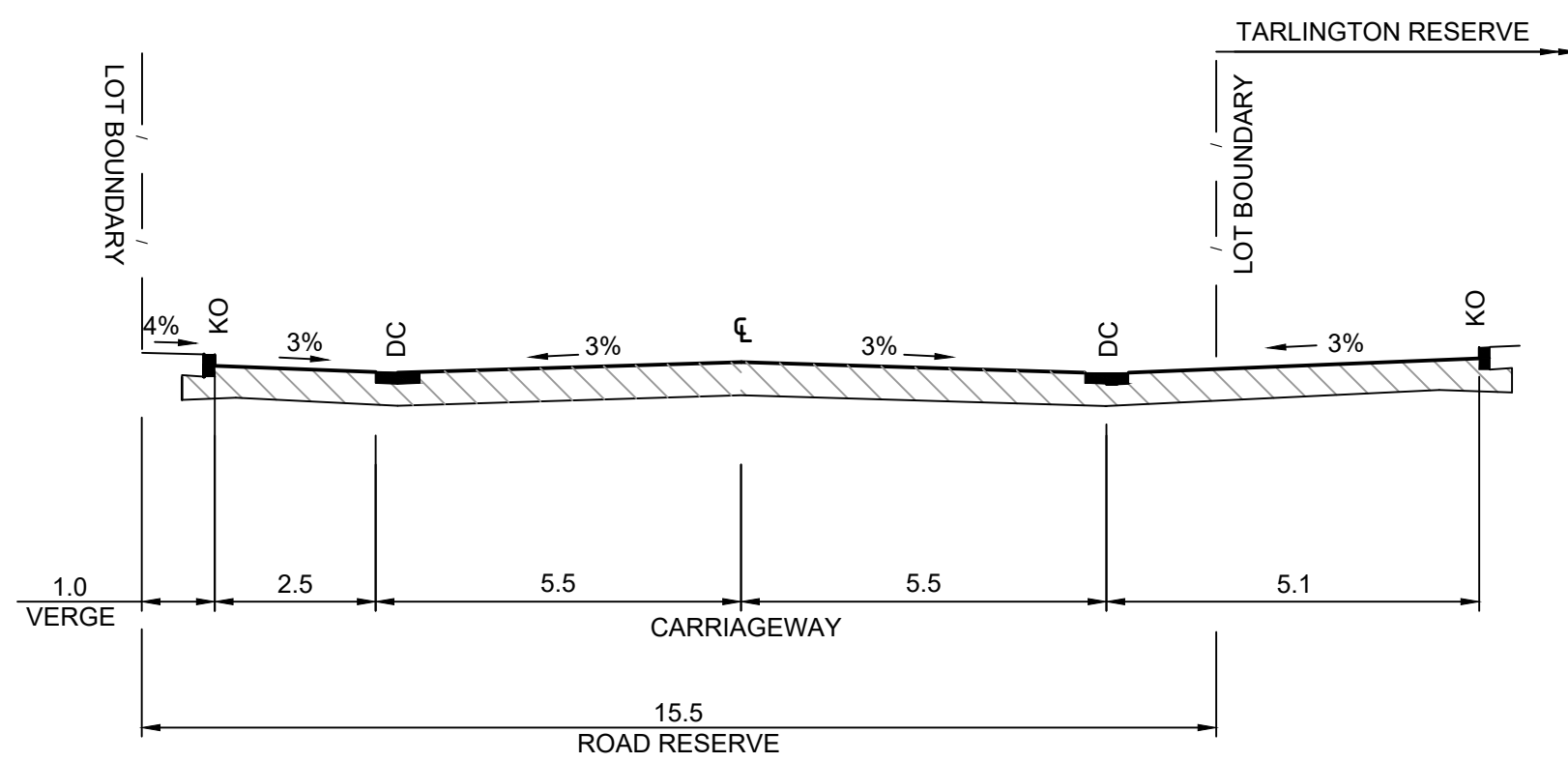
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PLAN No: 110808-01-DA004

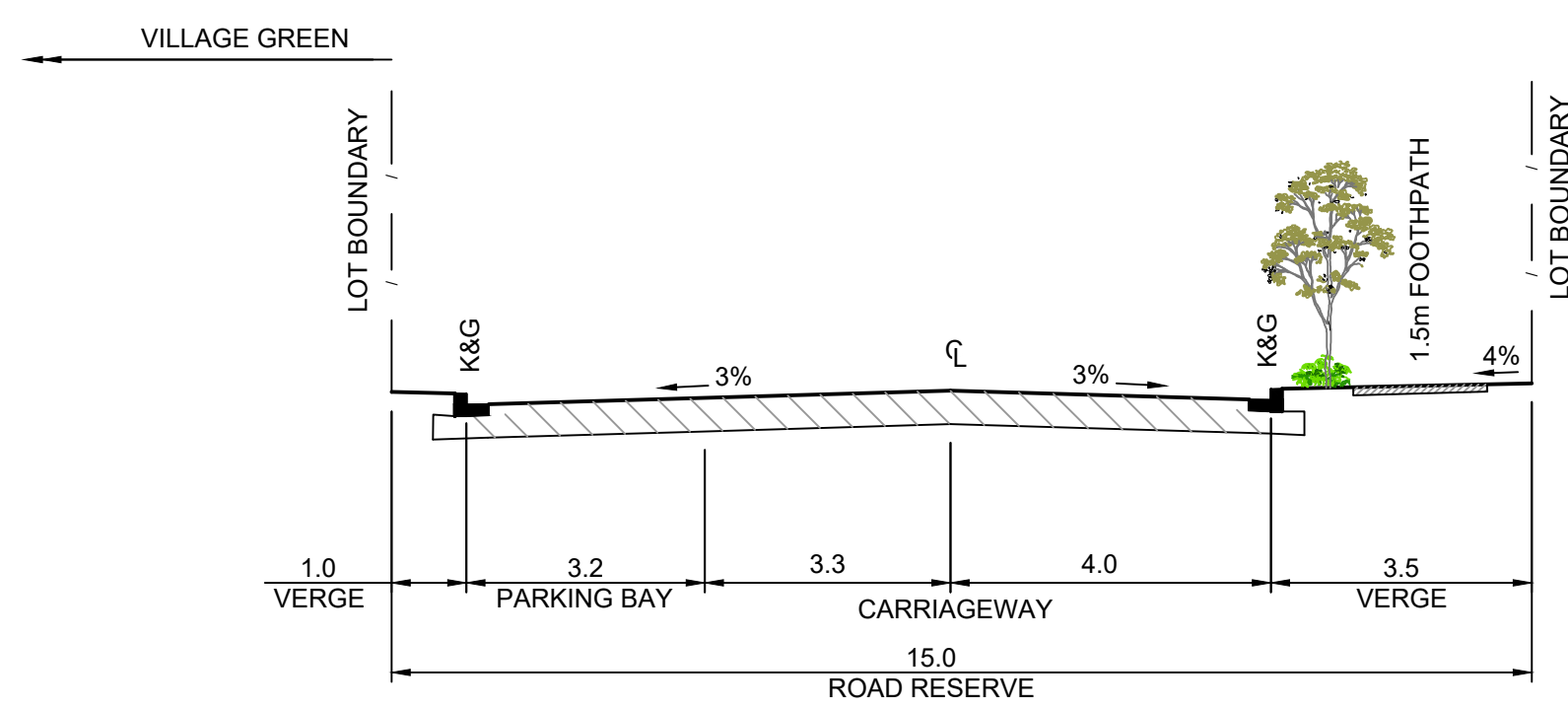
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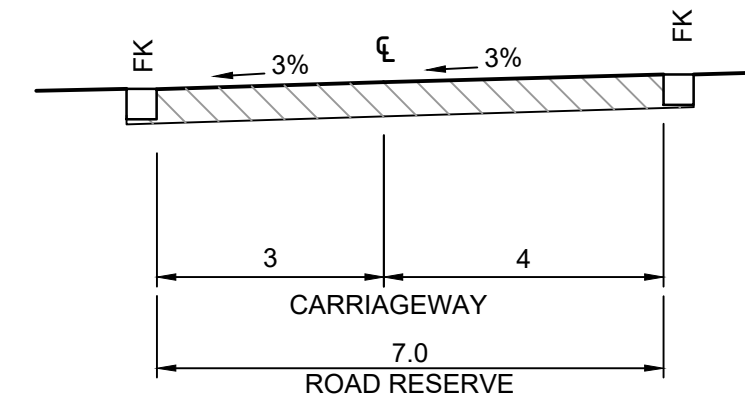
TYPICAL CROSS SECTION
ROAD 1 (CH0-CH160, CH262-CH439)
SCALE 1:100 NATURAL



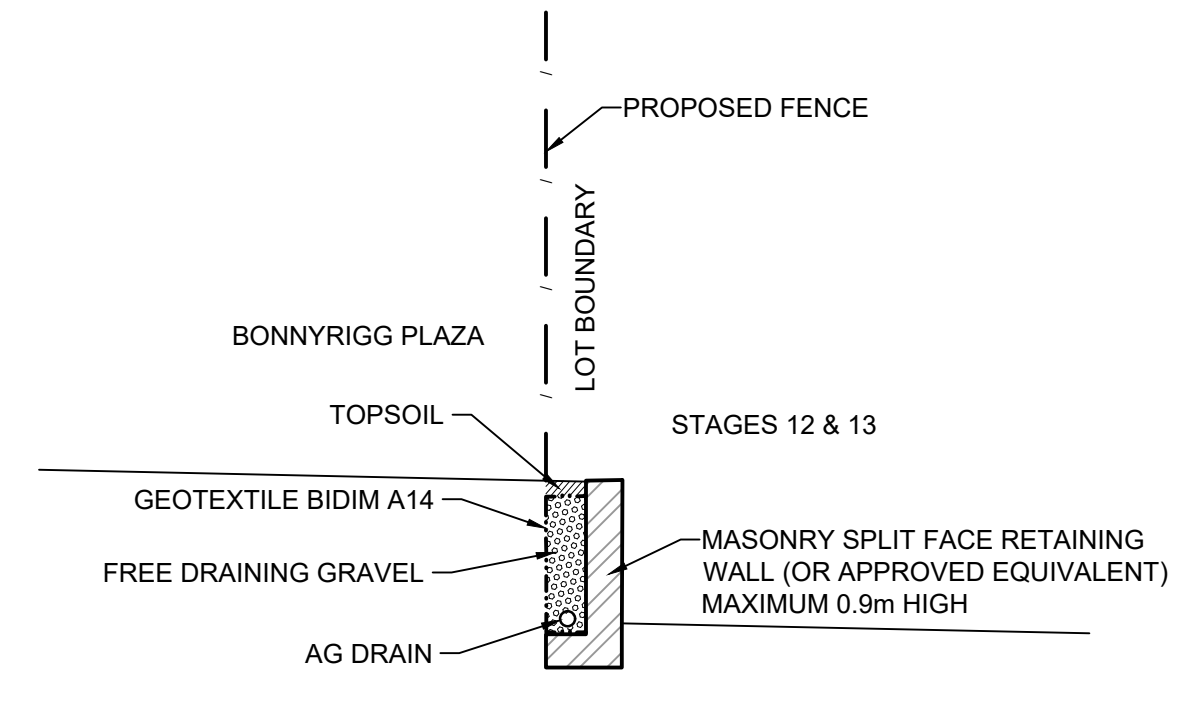
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ROAD 1 (CH160-CH262)
SCALE 1:100 NATURAL



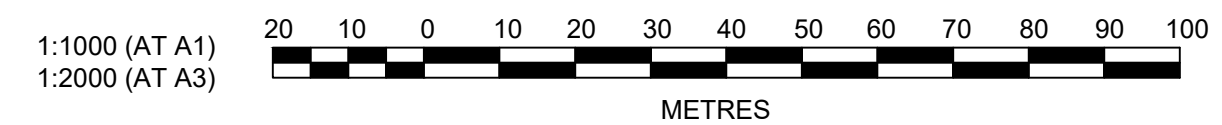
TYPICAL CROSS SECTION
ROAD 2 (CH0-CH106, CH162-CH240)
SCALE 1:100 NATURAL



TYPICAL CROSS SECTION
ROAD 2 (CH106-CH162)
SCALE 1:100 NATURAL



TYPICAL MASONRY
RETAINING WALL
N.T.S.



Plotted: 19 April, 2023 4:37:22 PM File Name: J:\110808 - Bonnyrigg Stages 12 And 13\CD\DA\110808-01-DA005.dwg

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A	ISSUED FOR DA APPROVAL	DG	JM	JB	MS	29/09/22	
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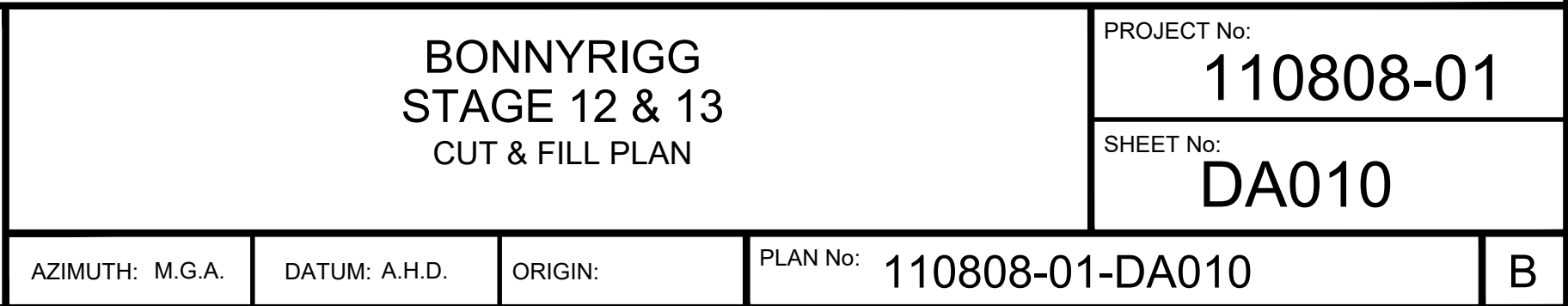
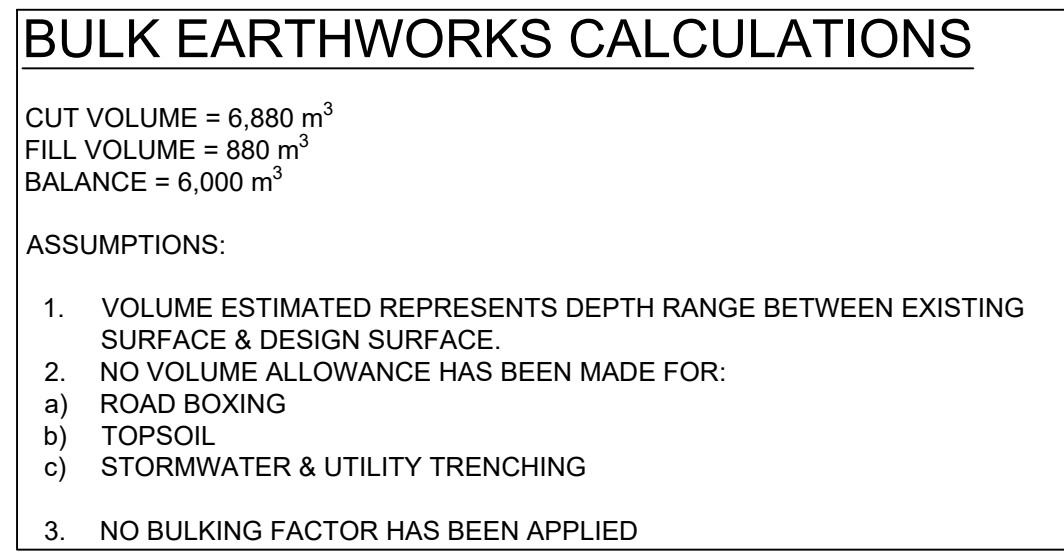
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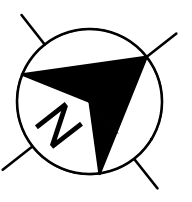
BONNYRIGG STAGE 12 & 13 TYPICAL SECTIONS

PROJECT No:
110808-01
SHEET No:
DA005

AZIMUTH: M.G.A. DATUM: A.H.D. ORIGIN: PLAN No: **110808-01-DA005**

B





- NOTES
1. ALL NEW WORKS TO MAKE SMOOTH CONNECTION TO EXISTING KERB, PAVEMENT, & FOOTPATH.
 2. ALL KERB RETURNS ARE 7.5M RADII.
 3. TREES REMOVED ON THIS PLAN FOR CLARITY. REFER TO DA600 FOR TREE RETENTION PLAN & ARBORISTS REPORT.
 4. ALL EXISTING STORMWATER PITS & PIPES THAT DO NOT FORM PART OF THE STORMWATER SYSTEM ARE TO BE DEMOLISHED & DISPOSED OF.

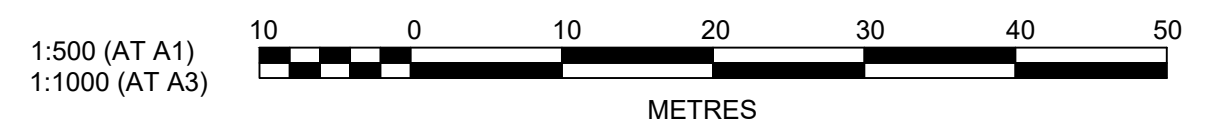
LEGEND

AREA OF MEDIAN TO BE EXTENDED

AREA OF MEDIAN TO BE REMOVED

REFER TO DRAWING DA052 FOR CONTINUATION

REFER TO DRAWING DA051 FOR CONTINUATION



Plotted: 19 April, 2023 4:35:52 PM File Name: J:\110808 - Bonnyrigg Stages 12 And 1301 - Stages 12 And 13\CD\DA\110808-01-DA050.dwg

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A	ISSUED FOR DA APPROVAL	DG	JM	JB	MS	29/09/22
	AMENDMENT	DES	DRN	CKD	APR	DATE

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BONNYRIGG STAGE 12 & 13
ENGINEERING PLAN
SHEET 1

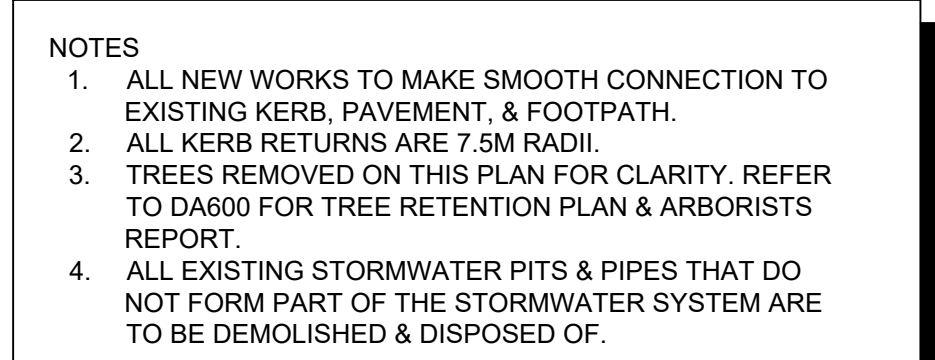
PROJECT No:
110808-01
SHEET No:
DA050

AZIMUTH: M.G.A. DATUM: A.H.D. ORIGIN:

PLAN No: **110808-01-DA050**

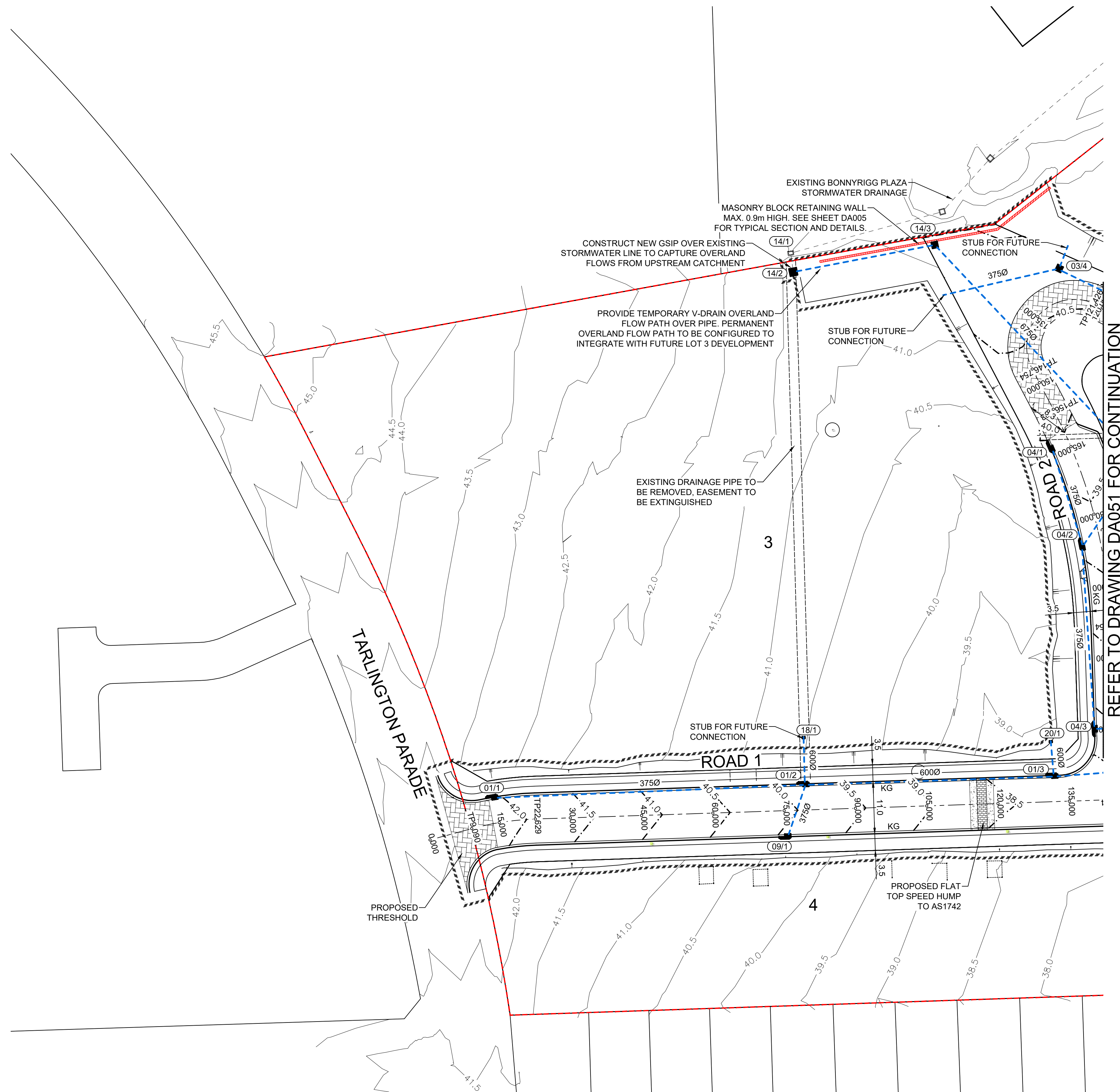
C

REFER TO DRAWING DA052 FOR CONTINUATION



METRES

c

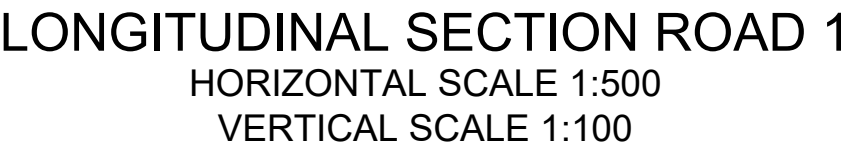
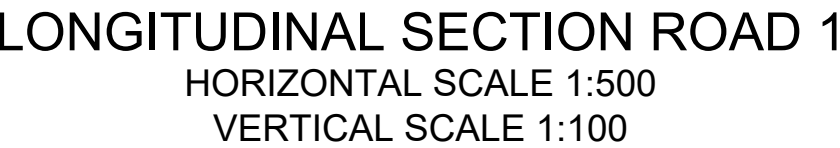


NOTES

1. ALL NEW WORKS TO MAKE SMOOTH CONNECTION TO EXISTING KERB, PAVEMENT, & FOOTPATH.
2. ALL KERB RETURNS ARE 7.5M RADIUS.
3. TREES REMOVED ON THIS PLAN FOR CLARITY. REFER TO DA600 FOR TREE RETENTION PLAN & ARBORISTS REPORT.
4. ALL EXISTING STORMWATER PITS & PIPES THAT DO NOT FORM PART OF THE STORMWATER SYSTEM ARE TO BE DEMOLISHED & DISPOSED OF.

METRES

AZIMUTH: M.G.A.	DATUM: A.H.D.	ORIGIN:	PLAN No: 110808-01-DA052
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B	ISSUED FOR DA APPROVAL	DG	JM	JB	MS	12/10/22
A	ISSUED FOR DA APPROVAL	DG	JM	JB	MS	29/09/22
	AMENDMENT	DES	DRN	CKD	APR	DATE

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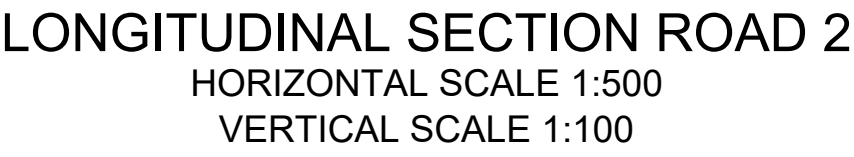
 **Land & Housing Corporation**

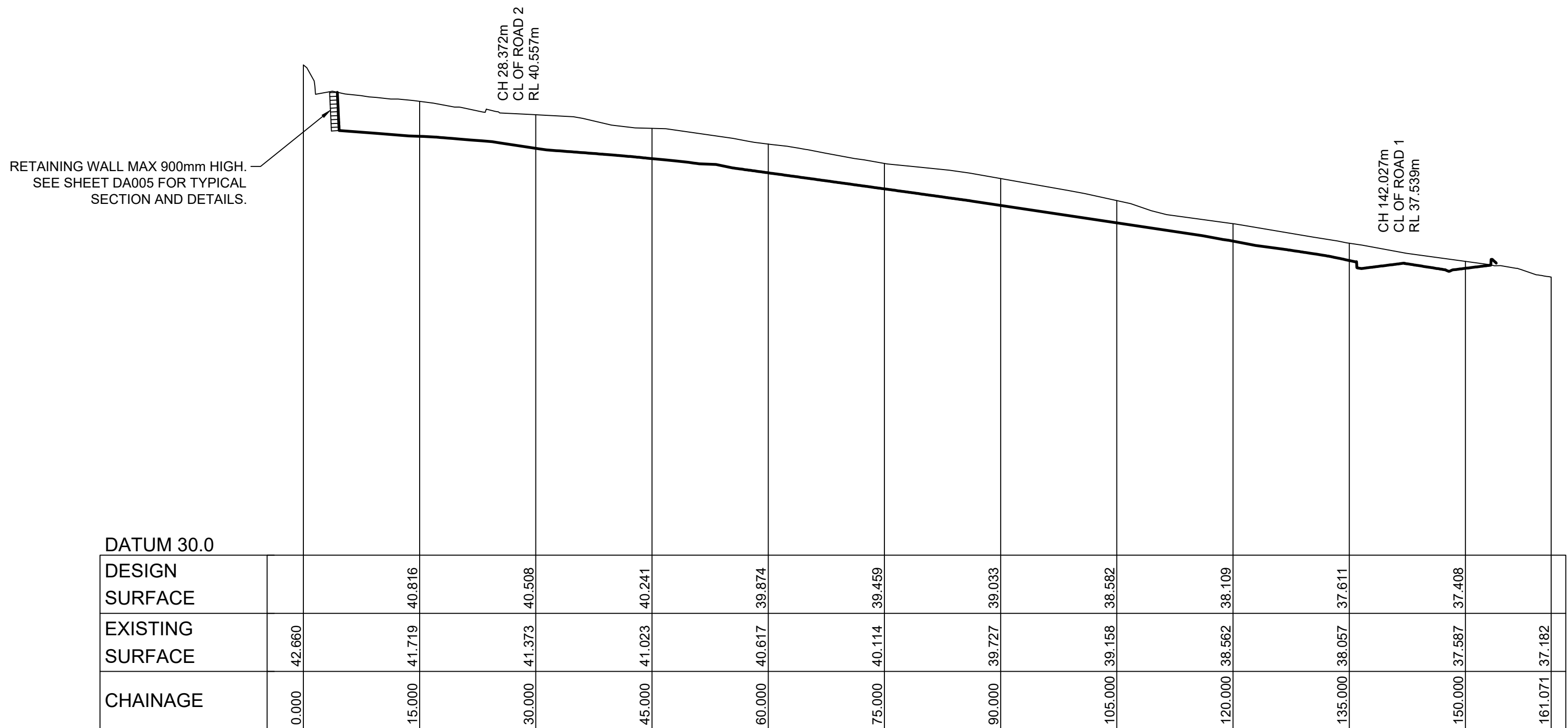
STATUS:

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<p style="text-align: center;">BONNYRIGG STAGE 12 & 13 ROAD LONGITUDINAL SECTIONS SHEET 1</p>				PROJECT No: <p style="text-align: center;">110808-01</p>		
				SHEET No: <p style="text-align: center;">DA100</p>		
AZIMUTH: M.G.A.		DATUM: A.H.D.	ORIGIN:	PLAN No: 110808-01-DA100		B

[illegible]



DATUM 34.0						
DESIGN SURFACE		42.888	42.411	41.863	41.954	
EXISTING SURFACE	43.518	42.550	42.258	42.017	41.655	41.050
CHAINAGE	0.000	15.000	30.000	45.000	60.000	71.730

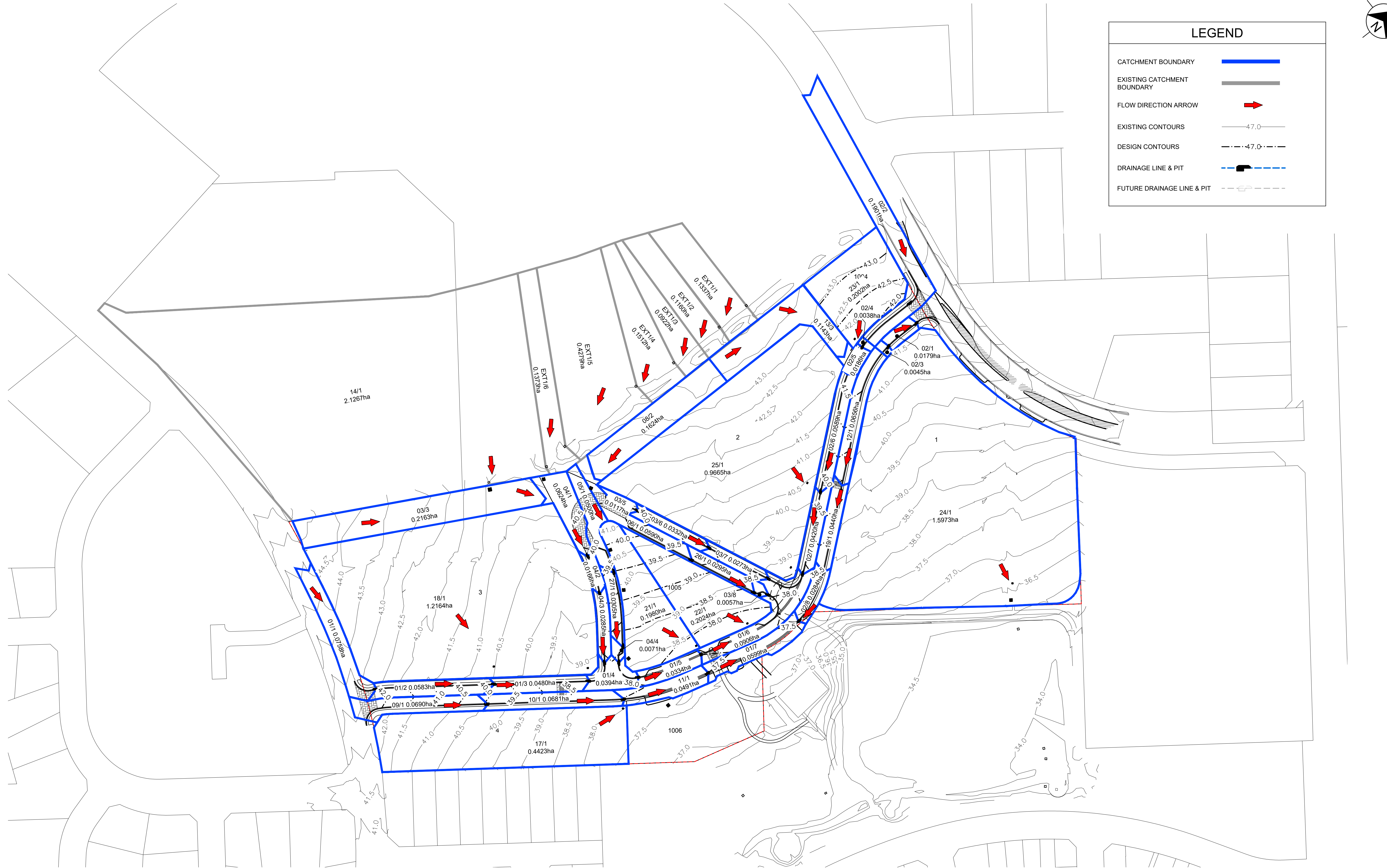
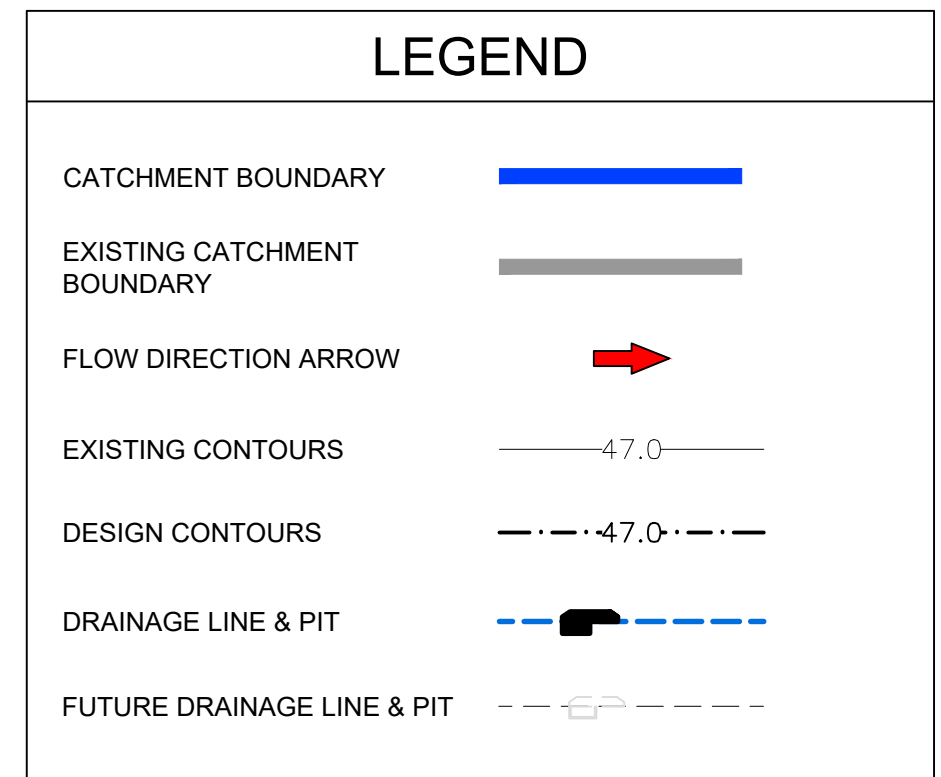
CH 51.328m
CL OF ROAD 1
RL 41.876m

A side-view diagram of a truck. The total length is indicated as 8.80. The distance between the front and rear wheels (wheelbase) is 5.00. The distance from the front of the truck to the front wheel is 1.50.

Plotted: 19 April , 2023 4:43:03 PM File Name: J:\110808 - Bonnyrigg Stages 12 And 13\1 - Stages 12 And 13\CD\DA\110808-01-DA102.dwg

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	AMENDMENT	DES	DRN	CKD	APR	DATE		

<p align="center">BONNYRIGG STAGE 12 & 13 SITE SECTIONS & TURNING PATH</p>				PROJECT No: <p align="center">110808-01</p>		
				SHEET No: <p align="center">DA102</p>		
AZIMUTH: M.G.A.	DATUM: A.H.D.	ORIGIN:	PLAN No: 110808-01-DA102			B



METRES

B	ISSUED FOR DA APPROVAL	DG	JM		
A	ISSUED FOR DA APPROVAL	DG	JM	JB	MS
	AMENDMENT	DES	DRN	CKD	APR DATE

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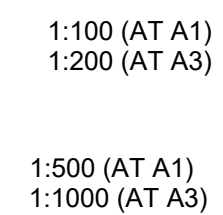
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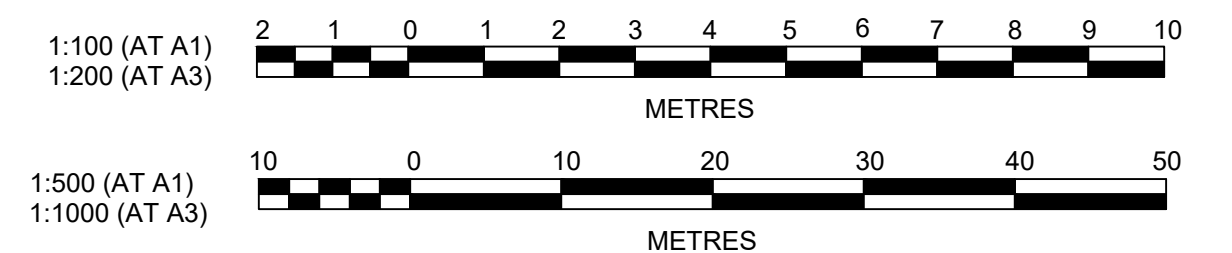
AZIMUTH: M.G.A.	DATUM: A.H.D.	ORIGIN:	PLAN No: 110808-01-DA200	B
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PROJECT No:	110808-01
SHEET No:	DA200

3



PROJECT No: 110808-01	
SHEET No: DA300	
1-DA300	A



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. ALL TAIL-OUT DRAINS SHALL BE COUGH GRASSED AND TRAPEZOIDAL IN SECTION. STRAW BALES SHALL BE PLACED AS A SEDIMENT CONTROL DEVICE WHERE REQUIRED.
5. 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.
6. ROADS SHALL BE PAVED AS EARLY AS POSSIBLE AFTER FORMATION.
7. 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.
8. ALL DISTURBED AREAS SHALL BE REVEGETATED AS SOON AS THE RELEVANT WORKS ARE COMPLETED.
9. ALL SEDIMENT BASINS AND TRAPS SHALL BE CLEANED WHEN THE STRUCTURES ARE A MAXIMUM 60% FULL OF SOLID MATERIALS, INCLUDING DURING THE MAINTENANCE PERIOD.
10. 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.
11. 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").
12. ALL CONTRACTORS AND SUBCONTRACTORS ARE RESPONSIBLE FOR REDUCING THE SOIL EROSION AND POLLUTION OF DOWNSLOPE AREAS.
13. 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.

14. 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.
15. CLEARLY VISIBLE BARRIER FENCING SHALL BE INSTALLED WHERE DIRECTED BY THE SITE SUPERINTENDENT TO CONTROL AND PROHIBIT UNNECESSARY SITE DISTURBANCE
16. EARTH BATTERS SHALL BE CONSTRUCTED WITH AS LOW A GRADIENT AS PRACTICABLE BUT NO STEEPER THAN:-
- a. 2(h) - 1(v) WHERE SLOPE LENGTH IS LESS THAN 7m

b. 2.5(h) - 1(v) WHERE SLOPE LENGTH IS BETWEEN 7m AND 10m

c. 3(h) - 1(v) WHERE SLOPE LENGTH IS BETWEEN 10m AND 12m

d. 4(h) - 1(v) WHERE SLOPE LENGTH IS BETWEEN 12m AND 18m

e. 5(h) - 1(v) WHERE SLOPE LENGTH IS BETWEEN 18m AND 27m

f. 6(h) - 1(v) WHERE SLOPE LENGTH IS GREATER THAN 27m
- SLOPE LENGTHS CAN BE SHORTENED BY USING LOW FLOW EARTH BANKS AS CATCH DRAINS ABOVE THE EARTH BATTER AREA.

17. 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.
18. TEMPORARY GROUND COVER SHOULD BE MINIMUM 70%. FOOT AND VEHICULAR TRAFFIC SHALL BE KEPT AWAY FROM REHABILITATED AREAS.
19. 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..
20. 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.
21. STOCKPILES (SD) 4-1 SHALL BE LOCATED AS SHOWN ON THE PLANS AND AT THE DISCRETION OF THE SITE SUPERINTENDENT.
22. 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.
23. STOCKPILES SHALL NOT BE LOCATED WITHIN 5m OF HAZARD AREAS, INCLUDING LIKELY AREAS OF HIGH VELOCITY FLOWS SUCH AS WATERWAYS, PAVED AREAS OR DRIVEWAYS.
24. 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.
25. 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.
26. 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.
27. 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.
28. TEMPORARY SOIL AND WATER MANAGEMENT STRUCTURES SHALL BE REMOVED ONLY AFTER THE LANDS THEY ARE PROTECTING ARE STABILISED.
29. 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. ALL STRAW BALES SHALL BE BOUND WITH WIRE. STRAW BALES SHALL BE PLACED END TO END IN A SINGLE ROW AND EMBEDDED INTO THE SOIL TO A DEPTH OF 100mm. EACH BALE SHALL BE SECURELY ANCHORED WITH TWO STEEL STAKES DRIVEN 600mm INTO THE GROUND AND LOCKED ON THE BALE CENTRELINE.
2. 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 ITS LOWER EDGE.
3. PROVIDE STRIP OF TURF MIN. 300mm WIDE BEHIND KERB + 1m WIDE AROUND ALL SURFACE INLET PITS

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.

A	ISSUED FOR DA APPROVAL	DG	JM	JB	MS	29/09/22			
	AMENDMENT	DES	DRN	CKD	APR	DATE			

J. WYNDHAM PRINCE
CONSULTING CIVIL INFRASTRUCTURE ENGINEERS & PROJECT MANAGERS

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CLIENT:



STATUS:

ISSUE FOR
DA APPROVAL
NOT FOR CONSTRUCTION

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BONNYRIGG
STAGE 12 & 13
SOIL & WATER MANAGEMENT NOTES

PROJECT No:

110808-01

SHEET No:

DA401

AZIMUTH: M.G.A.

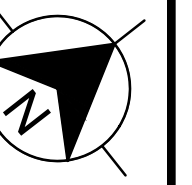
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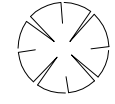
PLAN No:

110808-01-DA401

A



LEGEND



TREES TO BE RETAINED



TREES TO BE REMOVED

NOTE - ALSO REFER TO ARBORIST DOCUMENTATION
PREPARED BY DISTINCTIVE LIVING DESIGN



1:1000 (AT A1)
1:2000 (AT A3)

METRES

B	ISSUED FOR DA APPROVAL	DG	JM		
A	ISSUED FOR DA APPROVAL	DG	JM	JB	MS
	AMENDMENT	DES	DRN	CKD	APR
					DATE

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STATUS:	
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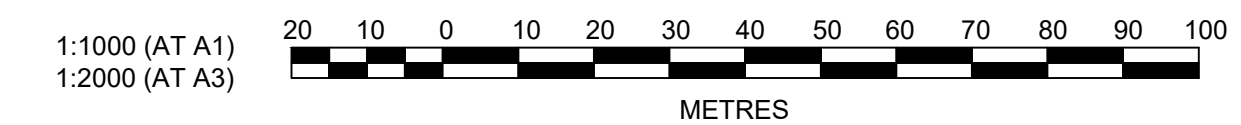
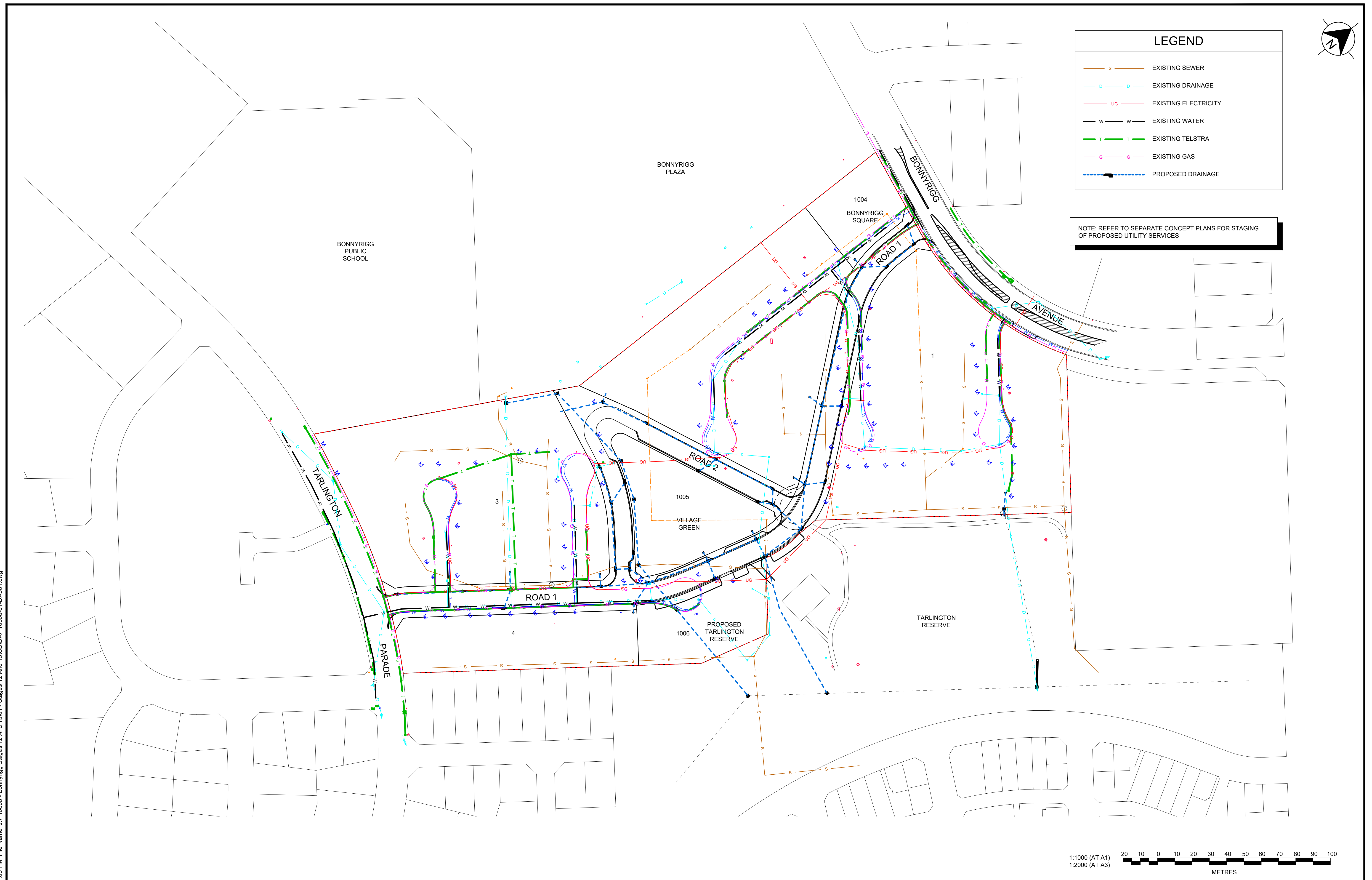
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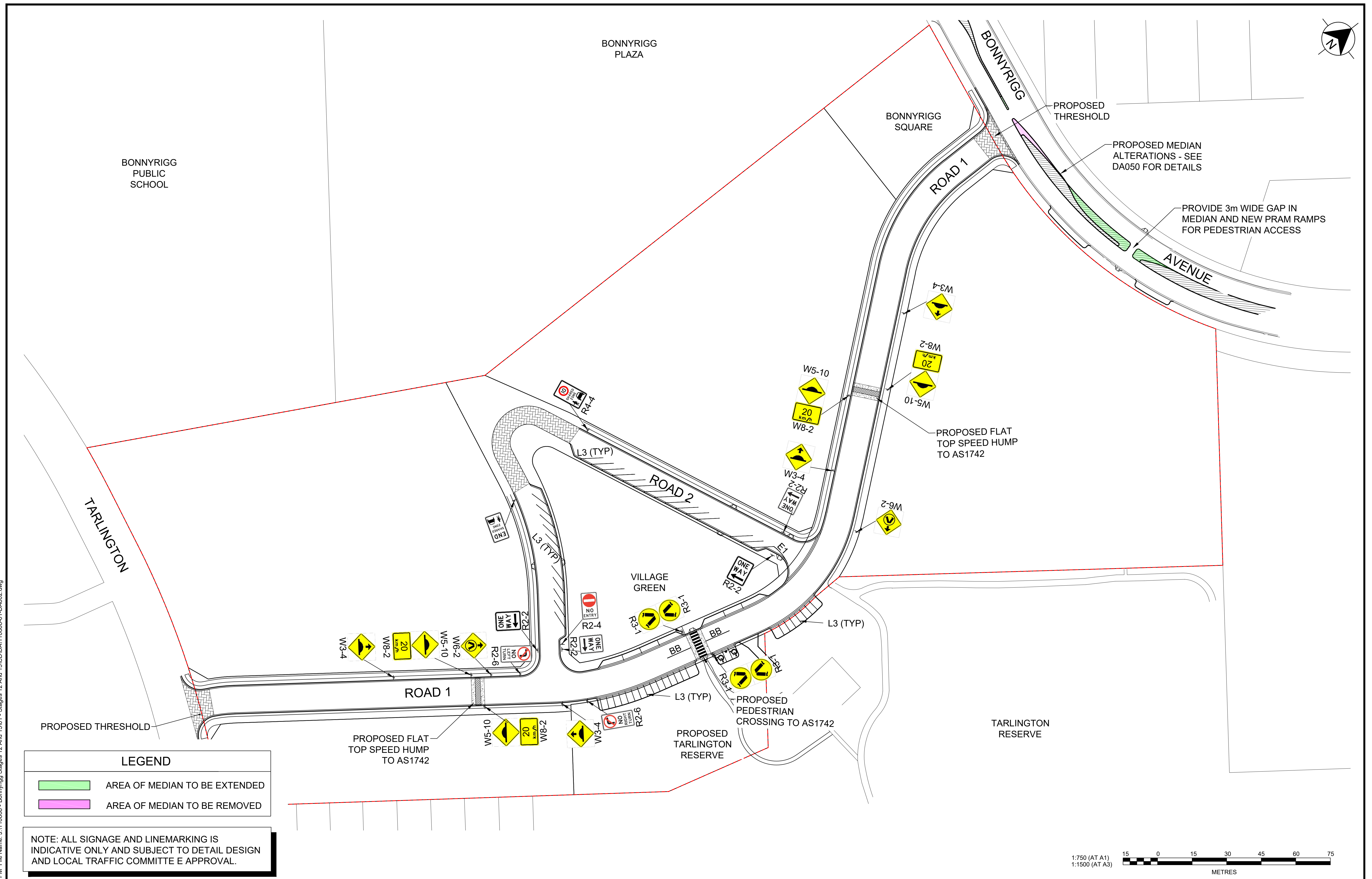
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BONNYRIGG
STAGE 12 & 13
TREE PLAN

PROJECT No:	110808-01
SHEET No:	DA600

AZIMUTH: M.G.A.	DATUM: A.H.D.	ORIGIN:	PLAN No: 110808-01-DA600	B
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A	ISSUED FOR DA APPROVAL	DG	DG	JB	MS
	AMENDMENT	DES	DRN	CKD	APR
					DATE