PROPOSED SUBDIVISION LOTS 429 AND 501

KRUGER AVENUE, WINDANG, NSW, 2528

DRAWING LIST

No.	DRAWING TITLE
C001	COVER SHEET AND LOCALITY PLAN
C002	GENERAL NOTES
C010	EROSION AND SEDIMENT CONTROL PLAN
C011	EROSION AND SEDIMENT CONTROL DETAILS
C100	CAPPING PLAN - BULK EARTHWORKS
C101	CAPPING - BULK EARTHWORKS SECTIONS - SHEET 1
C102	CAPPING - BULK EARTHWORKS SECTIONS - SHEET 2
C103	CAPPING - BULK EARTHWORKS SECTIONS - SHEET 3
C200	FLOOD STORAGE PLAN - EXISTING
C201	FLOOD STORAGE PLAN - EXISTING LOT 501
C202	FLOOD STORAGE PLAN - EXISTING LOT 429
C203	FLOOD STORAGE PLAN - DESIGN
C204	FLOOD STORAGE PLAN - DESIGN 501
C205	FLOOD STORAGE PLAN - DESIGN 429
C300	SITEWORKS PLAN
C301	CAPPING LAYER MAKE UP LAYOUT PLAN
C400	VEHICLE TURNING PATH PLAN - SHEET 1
C401	VEHICLE TURNING PATH PLAN - SHEET 2

LOCALITY PLAN

SCALE 1:1000

LOCALITY PLAN LEGEND

- APPROXIMATE EXTENT OF WORKS

0 20 40 60 80 100m

20 15 10 5

SCALE 1:1000

NOT TO BE USED FOR CONSTRUCTION

AMDT	DATE	DESCRIPTION	BY
2	29.11.21	ISSUED FOR DA	DM
1	05.08.21	PRELIMINARY ISSUE	LAP

JN Responsive Engineering

CLIENT
WINDANG KRUGER UNIT TRUST

STATUS
PRELIMINARY DA ISSUE

DISCIPLINE
CIVIL DESIGN

DRAWING TITLE
COVER SHEET AND LOCALITY PLAN

PROJECT
PROPOSED SUBDIVISION LOTS 429 AND 501

ADDRESS
KRUGER AVENUE, WINDANG NSW, 2528

PROJECT DETAILS

DESIGN	DM
DRAWN	DM
DATE	JUL 2021
DRG SIZE	A1
SCALE	AS SHOWN
PROJECT MGR	BA

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PROPOSED SUBDIVISION LOTS 429 AND 501

KRUGER AVENUE, WINDANG, NSW, 2528

GENERAL

1. ALL WORKS SHALL BE CARRIED OUT IN ACCORDANCE WITH THE NOMINATED OR APPLICABLE COUNCIL SPECIFICATION. WHERE A SPECIFICATION HAS NOT BEEN NOMINATED THEN THE CURRENT NSW DEPARTMENT OF HOUSING CONSTRUCTION SPECIFICATION IS TO BE USED. THE NOMINATED SPECIFICATION SHALL TAKE PRECEDENCE TO THESE NOTES.
2. ALL DRAWINGS SHOULD BE READ IN CONJUNCTION WITH THE RELEVANT ARCHITECTURAL DRAWINGS & DRAWINGS FROM OTHER CONSULTANTS.
3. THE CONTRACTOR SHOULD REPORT ANY DISCREPANCIES ON THE DRAWINGS TO THE ENGINEER RESPONSIBLE FOR THE DESIGN.
4. THE CONTRACTOR SHOULD LOCATE AND LEVEL ALL EXISTING SERVICES PRIOR TO COMMENCING CONSTRUCTION AND PROTECT AND MAKE ARRANGEMENTS WITH THE RELEVANT AUTHORITY TO RELOCATE AND/OR ADJUST IF NECESSARY. INFORMATION GIVEN ON THE DRAWINGS IN RESPECT TO SERVICES IS FOR GUIDANCE ONLY AND IS NOT GUARANTEED COMPLETE NOR CORRECT.
5. CONTRACTOR IS NOT TO ENTER UPON NOR DO ANY WORK WITHIN ADJACENT LANDS WITHOUT THE PERMISSION OF THE OWNER.
6. SURPLUS EXCAVATED MATERIAL SHALL BE PLACED WHERE DIRECTED.
7. ALL NEW WORKS SHALL MAKE A SMOOTH JUNCTION WITH EXISTING.
8. ALL DRAINAGE LINES THROUGH ADJACENT LOTS SHALL BE CONTAINED WITHIN EASEMENTS CONFORMING TO COUNCIL'S STANDARDS.
9. THE CONTRACTOR SHALL CLEAR THE SITE BY REMOVING ALL RUBBISH, FENCES AND DEBRIS ETC. TO THE EXTENT SPECIFIED.
10. PRIOR TO COMMENCEMENT OF WORK, THE CONTRACTOR SHALL PROVIDE A TRAFFIC MANAGEMENT PLAN PREPARED BY AN ACCREDITED PERSON IN ACCORDANCE WITH RMS REQUIREMENTS, FOR ANY WORK ON OR ADJACENT TO PUBLIC ROADS. PLAN TO BE SUBMITTED TO COUNCIL & RMS.

SURVEY

1. JN ARE NOT RESPONSIBLE FOR THE ACCURACY OF ANY 3RD PARTY INFORMATION PROVIDED ON THIS DRAWING.
2. ALL LEVELS ARE TO A.H.D.
3. ALL CHAINAGES AND LEVELS ARE IN METRES, AND DIMENSIONS IN MILLIMETRES.
4. SET OUT COORDINATES ARE BASED ON SURVEY DRAWINGS PROVIDED FOR THE PURPOSE OF CARRYING OUT THE ENGINEERING DESIGN.
5. CONTRACTOR SHALL VERIFY ALL SET OUT COORDINATES SHOWN ON THE PLANS WITH A REGISTERED SURVEYOR.
6. CONTRACTOR SHALL ARRANGE FOR THE WORKS TO BE SET OUT BY A REGISTERED SURVEYOR.
7. ANY DISCREPANCIES SHOULD BE CLARIFIED IN WRITING WITH THE ENGINEER PRIOR TO COMENCEMENT OF THE WORK FOR CONFIRMATION OF THE SURVEY.

EARTHWORKS

1. PROVIDE PROTECTION BARRIERS TO PROTECTED/SENSITIVE AREAS PRIOR TO ANY BULK EXCAVATION.
2. PRIOR TO ANY FILLING IN AREAS OF CUT OR IN EXISTING GROUND, PROOF ROLL THE EXPOSED SURFACE WITH A ROLLER OF MINIMUM WEIGHT OF 5 TONNES WITH A MINIMUM OF 10 PASSES.
3. FILL IN 200mm MAXIMUM (LOOSE THICKNESS) AND COMPACTED TO 98% STANDARD (AS 1289 5.1.1), MAXIMUM DRY DENSITY AT OPTIMUM MOISTURE CONTENT ± 2%.
4. COMPACTION TESTING SHALL BE CARRIED OUT AT THE RATE OF 2 TESTS PER 1000SQ METRES PER LAYER BY A REGISTERED NATA LABORATORY. THE COSTS OF TESTING AND RE-TESTING ARE TO BE ALLOWED FOR BY THE BUILDER.
5. BATTERS TO BE AS SHOWN, OR MAXIMUM 1 VERT : 4 HORIZ.
6. ALL BATTERS AND FOOTPATHS ADJACENT TO ROADS SHALL BE TOP SOILED WITH 150mm APPROVED LOAM AND SEEDED UNLESS OTHERWISE SPECIFIED.

DRAWING STATUS

PRELIMINARY

PRELIMINARY DRAWINGS ARE NOT TO BE USED FOR TENDER OR CONSTRUCTION PURPOSES.

TENDER

TENDER DRAWINGS ARE NOT TO BE USED FOR CONSTRUCTION PURPOSES AND ARE INTENDED FOR AN EXTENT OF WORKS. ALL OTHER CONSULTANT DRAWINGS AND CONTRACT DOCUMENTS SHOULD BE READ IN CONJUNCTION WITH THESE DOCUMENTS TO DETERMINE THE FULL EXTENT OF WORKS.

CONSTRUCTION CERTIFICATE

CONSTRUCTION CERTIFICATE DRAWINGS ARE NOT TO BE USED FOR CONSTRUCTION UNLESS APPROVED & STAMPED BY THE PCA.

CONSTRUCTION

CONSTRUCTION DRAWINGS CAN BE USED FOR CONSTRUCTION PURPOSES AND/OR FOR THE CREATION OF FABRICATION DRAWINGS.

PROJECT INFORMATION TABLE

THE TABLES BELOW ARE TO BE READ IN CONJUNCTION WITH THE ADJACENT NOTES.

SITE AUDITOR INFORMATION

COMPANY	REPORT No.	DATED
C.M. JEWELL & ASSOCIATES PTY LTD	J1755.5L	11.03.2020

SURVEY INFORMATION

COMPANY	DATED
C. ROBSON & ASSOCIATES PTY. LTD.	12.12.19

PROOF ROLLING

PROOF ROLLING SPECIFICATION

(min) ROLLER WEIGHT	(min) NUMBER OF PASSES
5 TONNE	10

COMPACTION TESTING

RATE OF TESTS	TEST AREA PER LAYER
2	1000m^2

- TESTING SHALL BE CARRIED OUT BY A REGISTERED NATA LABORATORY

RIGID PAVEMENT DESIGN

- DESIGN LIFE 40 YEARS

DESIGN VEHICLE	DESIGN CBR	DESIGN TRAFFIC
MRV	--------	____ ESA

FLEXIBLE PAVEMENT DESIGN

- DESIGN LIFE 20 YEARS

DESIGN VEHICLE	DESIGN CBR	DESIGN TRAFFIC
MRV	--------	____ ESA

STORMWATER DRAINAGE

1. STORMWATER DRAINAGE SHALL BE GENERALLY IN ACCORDANCE WITH CURRENT AUSTRALIAN STANDARDS AND COUNCIL'S SPECIFICATION.
2. PIPES OF 225mm DIA. AND UNDER SHALL BE UPVC
3. PIPES OF 300mm DIA. AND LARGER SHALL BE FRC OR CONCRETE CLASS 2 RUBBER RING JOINTED UNO.
4. ALL FRC OR RCP STORMWATER PIPES WITHIN ROAD RESERVE AREAS TO BE CLASS 3 U.N.O.
5. PIPES SHALL GENERALLY BE LAID AT THE GRADES INDICATED ON THE DRAWINGS.
6. MINIMUM COVER TO PIPES 300mm DIA. AND OVER GENERALLY SHALL BE 600mm IN CARPARK & ROADWAY AREAS UNO.
7. PIPES UP TO 150mm DIA SHALL BE LAID AT 1.0% MIN. GRADE U.N.O
8. PIPES 225mm DIA AND OVER SHALL BE LAID AT 0.5% MIN. GRADE U.N.O.
9. BACKFILL TRENCHES WITH APPROVED FILL COMPACTED IN 200mm LAYERS TO 98% OF STANDARD DENSITY.
10. ANY PIPES OVER 16% GRADE SHALL HAVE CONCRETE BULKHEADS AT ALL JOINTS.
11. PITS SHALL BE AS DETAILED WITH METAL GRATES AT LEVELS INDICATED. ALL PITS DEEPER THAN 1000mm TO HAVE CLIMB IRONS.
12. BUILD INTO UPSTREAM FACE OF ALL PITS A 3.0m SUBSOIL LINE FALLING TO PITS TO MATCH PIT INVERTS.
13. ALL COURTYARD & LANDSCAPED PITS TO BE 450 SQUARE, LOAD CLASS A, UNLESS NOTED OTHERWISE.
14. ALL DRIVEWAY & OSD PITS TO BE 600 SQUARE. LOAD CLASS D, UNLESS NOTED OTHERWISE.
15. INSTALL TEMPORARY SEDIMENT BARRIERS TO INLET PITS, TO COUNCIL'S STANDARDS UNTIL SURROUNDING AREAS ARE PAVED OR GRASSED.
16. PITS & DOWNPIPE LOCATIONS AND LEVELS MAY BE VARIED TO SUIT SITE CONDITIONS AFTER CONSULTING THE ENGINEER.
17. DOWNPIPES SHOWN ARE INDICATIVE ONLY, ALL ROOF GUTTERING AND DOWNPIPES TO THE CURRENT AUSTRALIAN STANDARDS.
18. ALL PLANTER BOXES AND BALCONIES TO BE CONNECTED TO THE PROPOSED STORMWATER DRAINAGE LINE.
19. HAND EXCAVATE STORMWATER PIPES IN VICINITY OF TREE ROOTS.
20. FOOTPATH CROSSING LEVELS SHOWN ARE TO BE ADJUSTED TO FINAL COUNCIL'S ISSUED LEVELS.
21. GEOTEXTILE FABRIC TO BE PLACED UNDER RIP RAP SCOUR PROTECTION.
22. ALL BASES OF PITS TO BE BENCHED TO HALF PIPE DEPTH AND PROVIDE GALVANISED ANGLE SURROUNDINGS TO GRATE.
23. SUBSOIL LINE:
    PIPES AND FITTINGS SHALL BE PERFORATED PLASTIC TO CURRENT AUSTRALIAN STANDARDS. LAY PIPES ON FLOOR OF TRENCH GRADED AT 1% MIN. AND OVERLAY WITH FILTER MATERIAL EXTENDING TO WITHIN 200mm OF SURFACE. PROVIDE FILTER FABRIC OF PERMEABLE POLYPROPYLENE BETWEEN FILTER MATERIAL AND TOPSOIL. PROVIDE FLUSHING EYE'S AT HIGH POINTS OR TO COUNCILS REQUIREMENTS.
24. SHOULD THE CONTRACTOR ELECT TO INSTALL PRECAST STORMWATER PITS AND THEY ARE PERMITTED BY COUNCIL AND THE CLIENT, THE PRECAST PITS ARE TO BE CONSTRUCTED IN ACCORDANCE WITH RMS STANDARDS INCLUDING:
    a. SEAL THE SEGMENTS TOGETHER USING A SITE-APPROVED NON-SHRINK GROUT OR MASTIC-TYPE PRODUCT. APPLY THE SEALANT IN ACCORDANCE WITH THE PRODUCT MANUFACTURER'S REQUIREMENTS.
    b. ENSURE THAT NO GAPS REMAIN AND THAT A SMOOTH FACE EXISTS BETWEEN MULTIPLE UNITS.
    c. LEAVE THE SEGMENTS UNDISTURBED UNTIL THE PERIOD OF CURING IS COMPLETED IN ACCORDANCE WITH THE GROUT OR SEALANT PRODUCT MANUFACTURER'S REQUIREMENTS.

DRAINAGE INSTALLATION

RCP CONVENTIONAL INSTALLATIONS & ROAD CROSSINGS

1. SUPPLY & INSTALLATION OF DRAINAGE WORKS TO BE IN ACCORDANCE WITH THESE DRAWINGS, THE COUNCIL SPECIFICATION AND THE CURRENT APPLICABLE AUSTRALIAN STANDARDS.
2. BEDDING OF THE PIPELINES IS TO BE TYPE 'HS2' IN ACCORDANCE WITH THE STANDARDS AND AS FOLLOWS:
   a. COMPACTED GRANULAR MATERIAL IS TO COMPLY WITH THE FOLLOWING GRADINGS:

SIEVE SIZE (mm)	19	2.36	0.60	0.30	0.15	0.075
% MASS PASSING	100	50-100	20-90	10-60	0-25	0-10

   - AND THE MATERIAL PASSING THE 0.075 SIEVE HAVING LOW PLASTICITY AS DESCRIBED IN APPENDIX D OF AS1726.
   b. BEDDING DEPTH UNDER THE PIPE TO BE 100mm.
   c. BEDDING MATERIAL TO BE EXTENDED FROM THE TOP OF THE BEDDING ZONE UP TO 0.3 TIMES PIPE OUTSIDE DIAMETER. THIS REPRESENTS THE 'HAUNCH ZONE.'
   d. THE BEDDING & HAUNCH ZONE MATERIAL IS TO BE COMPACTED TO A MINIMUM RELATIVE COMPACTION OF 98% WITHIN ROAD RESERVES AND TRAFFICABLE AREAS AND 95% ELSEWHERE FOR COHESIVE MATERIAL OR A MINIMUM DENSITY INDEX OF 70% IN ACCORDANCE WITH THE STANDARDS FOR COHESIONLESS MATERIAL.
   e. COMPACTION TESTING SHALL BE CARRIED OUT BY AN APPROVED ORGANISATION WITH A NATA CERTIFIED LABORATORY FOR ALL DRAINAGE LINES LAID WHOLLY OR IN PART UNDER THE KERB & GUTTER OR PAVEMENT.
3. BACKFILL SHALL BE PLACED & COMPACTED IN ACCORDANCE WITH THE SPECIFICATION. A GRANULAR GRAVEL AGGREGATE MATERIAL (<10mm) BACKFILL IS RECOMMENDED FOR THE BEDDING, HAUNCH SUPPORT AND SIDE ZONE DUE TO IT'S SELF COMPACTING ABILITY.
4. A MINIMUM OF 150mm CLEARANCE IS TO BE PROVIDED BETWEEN THE OUTSIDE OF THE PIPE BARREL AND THE TRENCH WALL FOR PIPES < 600 DIA. 200mm CLEARANCE FOR PIPES 600 TO 1200 DIA AND D/6 CLEARANCE FOR PIPES > 1200 DIA.

SAFETY IN DESIGN

1. THERE ARE INHERENT RISKS WITH CONSTRUCTING, MAINTAINING, OPERATING, DEMOLISHING, DISMANTLING AND DISPOSING THIS DESIGN THAT ARE TYPICAL OF SIMILAR DESIGNS. AS FAR AS IS REASONABLY PRACTICABLE RISKS HAVE BEEN ELIMINATED OR MINIMISED THROUGH THE DESIGN PROCESS. HAZARD CONTROLS MUST STILL BE IMPLEMENTED BY THE CONTRACTOR, OWNER OR OPERATOR TO ENSURE THE SAFETY OF WORKERS.
2. JN'S ASSESSMENT DID NOT IDENTIFY ANY UNIQUE RISKS ASSOCIATED WITH THE DESIGN.

PAVEMENT - FLEXIBLE

1. THE PAVEMENT DESIGN AS DETAILED ASSUMES A PROPERLY PREPARED UNIFORM AND STABLE SUBGRADE. CONFIRMATION OF DESIGN CBR RATIO IS REQUIRED BY A GEOTEHCNICAL ENGINEER PRIOR TO WORKS COMMENCING.
2. ASSUMED DESIGN CBR TO BE CONFIRMED ONSITE DURING CONSTRUCTION PRIOR TO PLACEMENT OF PAVEMENT MATERIALS. THE CONTRACTOR IS TO UNDERTAKE SUFFICIENT CBR TESTING TO CONFIRM THE ASSUMED VALUE. WHERE LESSER VALUE HAS BEEN DETERMINED, THE SUPERVISING ENGINEER IS TO BE NOTIFIED TO DETERMINE A REVISED PAVEMENT DESIGN.
3. PAVEMENT TO BE CONSTRUCTED AS FOLLOWS:
   SURFACE COURSE - DENSE GRADED ASPHALT
   PRIMERSEAL - EMULSION BASED HOT BITUMEN
   BASE COURSE - DGB 20
   SUB BASE - DGS 40
4. SUBGRADE SHALL BE COMPACTED TO 100% STANDARD MAXIMUM DRY DENSITY RATIO AT OPTIMUM MOISTURE CONTENT ±2%. IN ACCORDANCE WITH CURRENT AUSTRALIAN STANDARDS.
5. SUBBASE COURSE SHALL BE COMPACTED TO 95% MODIFIED MAXIMUM DRY DENSITY.
6. BASECOURSE SHALL BE COMPACTED TO 98% MODIFIED MAXIMUM DRY DENSITY.
7. PRIOR TO THE PLACEMENT OF THE PRIMERSEAL AND AFTER THE REQUIRED DENSITY IS ACHIEVED, THE PAVEMENT IS TO BE ALLOWED TO DRY BACK TO APPROXIMATELY 60% TO 70% OPTIMUM MOISTURE CONTENT.
8. ALL SUBGRADES TO BE ROOF ROLLED & APPROVED BY SUPERVISING ENGINEER.
9. COMPACTION TESTS ARE TO BE UNDERTAKEN FOR ALL PAVEMENT LAYERS INCLUDING SUBGRADE AT A RATE TO BE DETERMINED BY THE SUPERVISING ENGINEER & THE RESULTS TO BE SUPPLIED TO THE ENGINEER PRIOR TO PLACEMENT OF THE NEXT PAVEMENT LAYER.

PAVEMENT - RIGID

1. PREPARATION FOR PAVEMENT: CLEAR SITE, STRIP TOPSOIL, CUT AND FILL AND PREPARATION OF SUBGRADE SHALL BE AS DESCRIBED IN "EARTHWORKS" NOTES.
2. SUBGRADE SHALL BE COMPACTED TO 98% STANDARD MAXIMUM DRY DENSITY AT OPTIMUM MOISTURE CONTENT ± 2% IN ACCORDANCE WITH AS 1289 5.1.1.
3. BASE COURSE SHALL BE CONSTRUCTED FROM FINE CRUSHED ROCK DGB20 COMPACTED TO 100% STANDARD MAXIMUM DRY DENSITY AT OPTIMUM MOISTURE CONTENT ± 2% IN ACCORDANCE WITH AS 1289 5.1.11
4. CONCRETE PAVEMENT SLABS SHALL BE AS DETAILED ON THE DRAWINGS.
5. ALL WORKMANSHIP AND MATERIALS FOR CONCRETE WORK SHALL BE IN ACCORDANCE WITH AS 3600 AND AS 3610 CURRENT EDITIONS WITH AMENDMENTS, EXCEPT WHERE VARIED BY THE CONTRACT DOCUMENTS.
6. CONCRETE QUALITY ALL CEMENT SHALL BE TYPE SL SHRINKAGE LIMITED CEMENT IN ACCORDANCE WITH AS3972

ELEMENT	STRENGTH GRADE (MPa)	SLUMP	MAXIMUM AGGREG. SIZE (mm)
PAVEMENT	32	80	20

7. PROJECT CONTROL TESTING SHALL BE CARRIED OUT IN ACCORDANCE WITH AS 3600.
8. NO ADMIXTURES SHALL BE USED IN CONCRETE UNLESS APPROVED IN WRITING.
9. CLEAR CONCRETE COVER TO ALL REINFORCEMENT FOR DURABILITY SHALL BE 40mm.
10. CONSTRUCTION JOINTS WHERE NOT SHOWN SHALL BE LOCATED TO THE APPROVAL OF THE ENGINEER.
11. THE FINISHED CONCRETE SHALL BE MECHANICALLY VIBRATED TO ACHIEVE A DENSE HOMOGENEOUS MASS, COMPLETELY FILLING THE FORMWORK THOROUGHLY EMBEDDING THE REINFORCEMENT AND FREE OF STONE POCKETS. CONCRETE SHALL BE COMPACTED WITH MECHANICAL VIBRATORS.
12. CURING OF ALL CONCRETE IS TO BE ACHIEVED BY KEEPING SURFACES CONTINUOUSLY WET FOR A PERIOD OF THREE DAYS, AND THE PREVENTION OF LOSS OF MOISTURE FOR A TOTAL OF 7 DAYS FOLLOWED BY A GRADUAL DRYING OUT.
13. REPAIRS TO CONCRETE SHALL NOT BE ATTEMPTED WITHOUT THE PERMISSION OF THE ENGINEER.

ENVIRONMENTAL SITE MANAGEMENT

1. EROSION & SEDIMENT CONTROLS TO BE INSTALLED IN ACCORDANCE WITH COUNCIL'S SPECIFICATION & THE NSW DEPARTMENT OF HOUSING "BLUE BOOK" - SOILS AND CONSTRUCTION - MANAGING URBAN STORMWATER, 2004. REFER TO THE BLUE BOOK FOR STANDARD DRAWINGS "SD"
2. SEDIMENT & EROSION CONTROLS MUST BE IN PLACE PRIOR TO THE COMMENCEMENT OF ANY EARTHWORKS OR DEMOLITION ACTIVITY. THE LOCATION OF SUCH DEVICES IS INDICATIVE ONLY AND FINAL POSITION SHOULD BE DETERMINED ON SITE.
3. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO ENSURE THAT ALL MEASURES ARE TAKEN DURING THE COURSE OF CONSTRUCTION TO PREVENT SEDIMENT EROSION AND POLLUTION OF THE DOWNSTREAM SYSTEM. SUPERVISING ENGINEER SHOULD BE CONTACTED IF IN DOUBT. ALL SEDIMENT CONTROL STRUCTURES TO BE INSPECTED AFTER EACH RAINFALL EVENT FOR STRUCTURAL DAMAGE AND ALL TRAPPED SEDIMENT TO BE REMOVED TO A NOMINATED SOIL STOCKPILE SITE.
4. RETAIN ALL EXISTING GRASS COVER WHEREVER POSSIBLE. A SEDIMENT FENCE TO BE PLACED DOWNHILL OF STOCKPILE.
5. AREAS OF SITE REGRADING ARE TO BE COMPLETED PROGRESSIVELY DURING THE WORKS AND STABILISED AS EARLY AS POSSIBLE. THE SUPERVISING ENGINEER MAY DIRECT THE CONTRACTOR TO HAVE AREAS OF DISTURBANCE COMPLETED AND STABILISED DURING THE COURSE OF THE WORKS.
6. INSTALL TEMPORARY SEDIMENT BARRIERS TO ALL INLET PITS LIKELY TO COLLECT SILT LADEN WATER, UNTIL SURROUNDING AREAS ARE PAVED OR REGRASSED. GRAVEL OR GEOTEXTILE INLET FILTERS TO SD6-11 & SD6-12.
7. ALL SILT FENCES & BARRIERS ARE TO BE MAINTAINED IN GOOD ORDER & REGULARLY DESILTED DURING THE CONSTRUCTION PERIOD. SILT FENCES TO SD6-8 OR SD6-9.
8. STOCKPILES OF LOOSE MATERIALS SUCH AS SAND, SOIL, GRAVEL MUST BE COVERED WITH GEOTEXTILE SILT FENCE MATERIAL. PLASTIC SHEETING OR MEMBRANE MUST NOT BE USED. SAFETY BARRICADING SHOULD BE USED TO ISOLATE STOCKPILES OF SOLID MATERIALS SUCH AS STEEL REINFORCING, FORMWORK AND SCAFFOLDING.
9. WASTE MATERIALS ARE TO BE STOCKPILED OR LOADED INTO SKIP-BINS LOCATED ON SITE AS SHOWN ON PLAN.
10. NO MORE THAN 150m OF TRENCHING TO BE OPEN AT ANY ONE TIME. IMMEDIATELY AFTER TRENCH BACKFILLING, PROVIDE SANDBAGS OR SAUSAGE FILTERS ACROSS EACH TRENCH AT MAXIMUM 20m SPACINGS. FILTERS TO REMAIN IN PLACE UNTIL REVEGETATION HAS OCCURRED.
11. ALL VEHICLES LEAVING THE SITE MUST PASS OVER THE STABILISED SITE ACCESS BALLAST AREA (SIMILAR TO SD6-14) TO SHAKE OFF SITE CLAY AND SOIL. IF NECESSARY WHEELS AND AXLES ARE TO BE HOSED DOWN. BALLAST IS TO BE MAINTAINED & REPLACED AS NECESSARY DURING THE CONSTRUCTION PERIOD.
12. THE HEAD CONTRACTOR IS TO INFORM ALL SITE STAFF AND SUB-CONTRACTORS OF THEIR OBLIGATIONS UNDER THE EROSION AND SEDIMENT CONTROL PLAN.
13. ANY SEDIMENT DEPOSITED ON THE PUBLIC WAY, INCLUDING FOOTPATH RESERVE AND ROAD SURFACE, IS TO BE REMOVED IMMEDIATELY.
14. PROVIDE BARRIERS AROUND ALL CONSTRUCTION WORKS WITHIN THE FOOTPATH AREA TO PROVIDE SAFE ACCESS FOR PEDESTRIANS.
15. CONCRETE PUMPS AND CRANES ARE TO OPERATE FROM WITHIN THE BALLAST ENTRY DRIVEWAY AREA AND ARE NOT TO OPERATE FROM THE PUBLIC ROADWAY UNLESS SPECIFIC COUNCIL PERMISSION IS OBTAINED.
16. DELIVERY VEHICLES MUST NOT STAND WITHIN THE PUBLIC ROADWAY.
17. TRUCKS REMOVING EXCAVATED / DEMOLISHED MATERIAL SHOULD TRAVEL ON STABILISED CONSTRUCTION PATHS. MATERIAL TO BE TAKEN TO THE TRUCK TO REDUCE TRUCK MOVEMENT ON SITE. TRUCKS TO BE LIMITED TO TRUCK AND DOG HEAVY RIGID VEHICLES.
18. ANY EXCAVATION WORK ADJACENT TO ADJOINING PROPERTIES OR THE PUBLIC ROADWAY IS NOT TO BE COMMENCED UNTIL THE STRUCTURAL ENGINEER IS CONSULTED AND SPECIFIC INSTRUCTIONS RECEIVED FROM THE ENGINEER.
19. TOILET FACILITIES MUST BE EITHER A FLUSHING TYPE OR APPROVED PORTABLE CHEMICAL CLOSET. CHEMICAL CLOSETS ARE TO BE MAINTAINED & SERVICED ON A REGULAR BASIS SO THAT OFFENSIVE ODOUR IS NOT EMITTED.
20. DURING TRENCH EXCAVATION ALL SPOIL SHALL BE MOUNDED ON THE UPHILL SIDE OF TRENCHES AND PLACEMENT IS TO COMPLY WITH THE SUPERINTENDENTS REQUIREMENT.
21. DIVERSION BANKS SHOULD BE CONSTRUCTED BY MOUNDING STRIPPED TOPSOIL (MIN HEIGHT 600mm) WHERE DIRECTED. MATERIAL TO BE RESPREAD ON FOOTWAYS AFTER FINAL TRIMMING.
22. TRAFFIC MANAGEMENT MEASURES ARE REQUIRED TO BE IMPLEMENTED AND MAINTAINED DURING CONSTRUCTION, IN ACCORDANCE WITH 'R.T.A. TRAFFIC CONTROL AT WORK SITES - CURRENT EDITION' AND AS 1742 'MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES.'
23. PEDESTRIAN CONTROL MEASURES ARE REQUIRED TO BE IMPLEMENTED AND MAINTAINED DURING CONSTRUCTION, IN ACCORDANCE WITH AS 1742 'MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES.'
24. NUISANCE DUST TO BE KEPT TO A MINIMUM VIA THE USE OF A WATER CART AND SPRINKLER SYSTEM ON SITE.

NOT TO BE USED FOR CONSTRUCTION

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2	29.11.21	ISSUED FOR DA	DM
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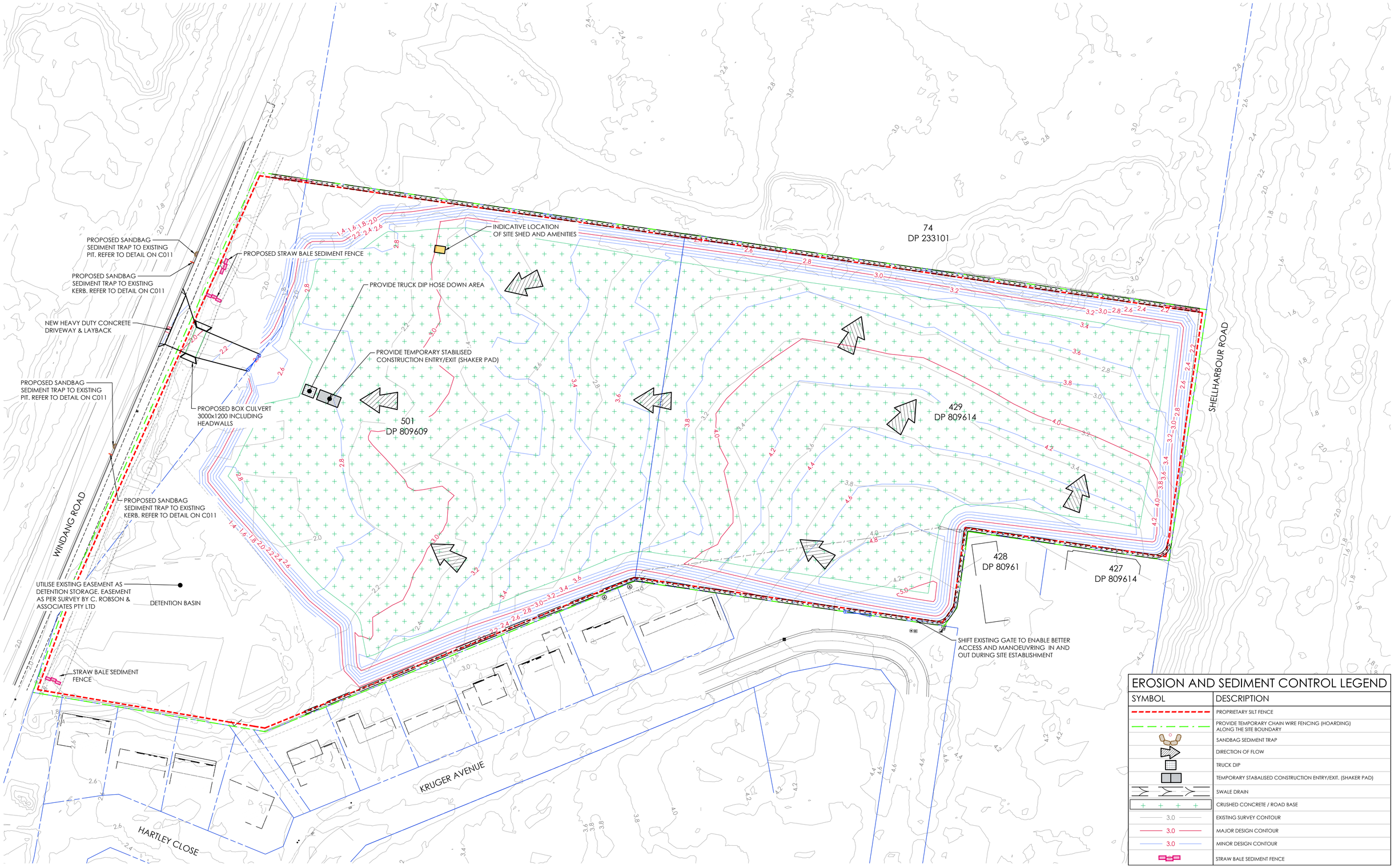
C002 2



EROSION AND SEDIMENT CONTROL LEGEND

SYMBOL	DESCRIPTION
	PROPRIETARY SILT FENCE
	PROVIDE TEMPORARY CHAIN WIRE FENCING (HOARDING) ALONG THE SITE BOUNDARY
	SANDBAG SEDIMENT TRAP
	DIRECTION OF FLOW
	TRUCK DIP
	TEMPORARY STABALISED CONSTRUCTION ENTRY/EXIT. (SHAKER PAD)
	SWALE DRAIN
	CRUSHED CONCRETE / ROAD BASE
3.0	EXISTING SURVEY CONTOUR
3.0	MAJOR DESIGN CONTOUR
3.0	MINOR DESIGN CONTOUR
	STRAW BALE SEDIMENT FENCE

EROSION AND SEDIMENT CONTROL PLAN

SCALE 1:500

0 10 20 30 40 50m

10 8 6 4 2

SCALE 1:500

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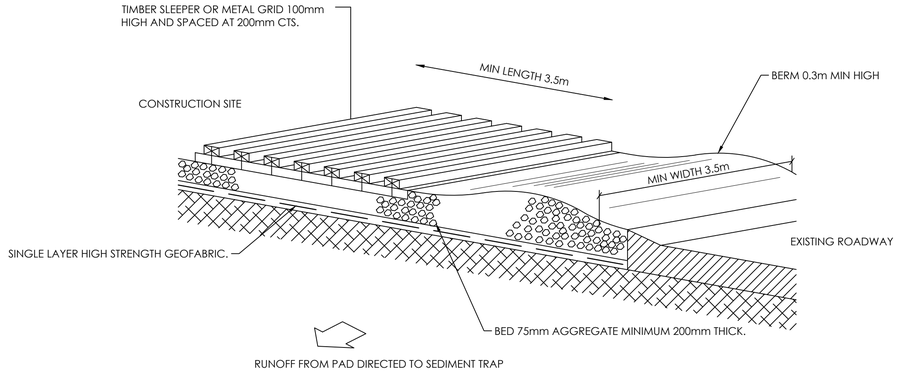
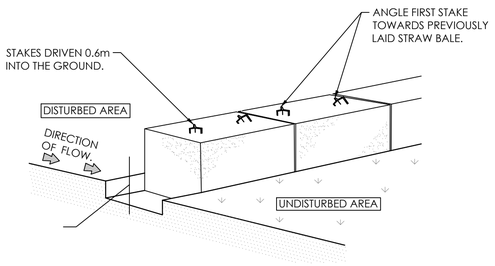


STABLISED SITE ACCESS

N.T.S



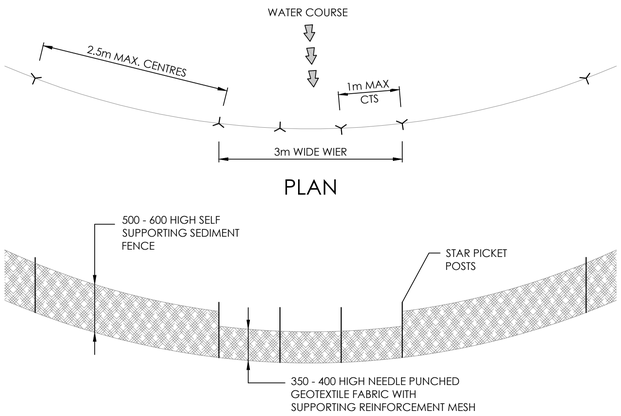
* DRAINAGE AREA 0.4HA MAX. SLOPE GRADIENT 1:2 MAX. SLOPE LENGTH 40m MAX.

STRAW BALE SEDIMENT FILTER

N.T.S.

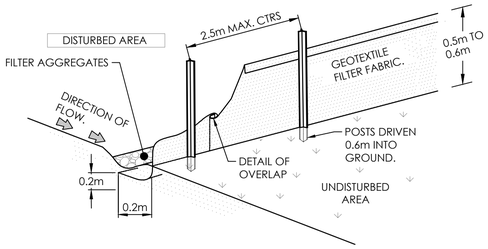
STRAW BALE CONSTRUCTION NOTES

1. CONSTRUCT STRAW BALE FILTER AS CLOSE AS POSSIBLE TO PARALLEL TO THE CONTOURS OF THE SITE OR THE TOE OF A SLOPE.
2. PLACE BALES LENGTHWISE IN A ROW WITH ENDS TIGHTLY ABUTTING. USE STRAW TO FILL ANY GAPS BETWEEN BALES. STRAWS TO BE PLACED PARALLEL TO GROUND.
3. MAXIMUM HEIGHT OF FILTER IS ONE BALE.
4. ON SOFT MATERIALS EMBED EACH BALE IN THE GROUND 75mm TO 100mm AND ANCHOR WITH TWO 1.2m STAR PICKETS. ANGLE THE FIRST STAKE IN EACH BALE TOWARDS THE PREVIOUSLY LAID BALE. DRIVE STAKES 600mm INTO THE GROUND AND FLUSH WITH THE TOP OF THE BALES.
5. WHERE A STRAW BALE FILTER IS CONSTRUCTED DOWNSLOPE FROM A DISTURBED BATTER THE BALES SHOULD BE LOCATED 1.5 TO 2m DOWNSLOPE FROM THE TOE OF THE BATTER.
6. STRAW BALES TO BE WRAPPED IN APPROVED GEOTEXTILE FABRIC.



SEDIMENT FENCE WEIR AT CONCENTRATED FLOW LOCATIONS

N.T.S.



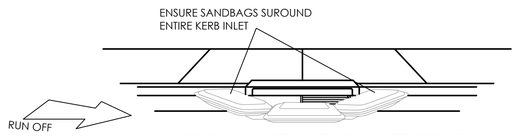
NOTE: DRAINAGE AREA 0.6HA. MAX.
SLOPE GRADIENT 1:2 MAX. SLOPE LENGTH 60M MAX.

SEDIMENT FENCE

N.T.S

GENERAL CONSTRUCTION NOTES

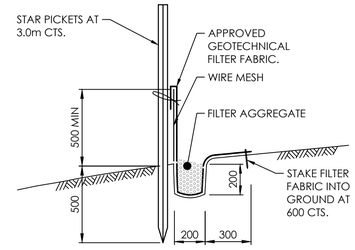
1. CONSTRUCT SEDIMENT FENCE AS CLOSE AS POSSIBLE TO PARALLEL TO THE CONTOURS OF THE SITE.
2. DRIVE 1.5m LONG STAR PICKETS IN GROUND 3m APART.
3. DIG A 200mm DEEP TRENCH ALONG THE UPSLOPE LINE OF THE FENCE FOR THE FABRIC TO BE ENTRENCHED.
4. BACKFILL TRENCH OVER BASE OF FABRIC
5. FIX SELF-SUPPORTING GEOTEXTILE TO UPSLOPE SIDE OF POSTS WITH WIRE TIES OR AS RECOMMENDED BY GEOTEXTILE MANUFACTURER.
6. JOIN SECTIONS OF FABRIC AT A SUPPORT WITH A 150mm OVERLAP.



SANDBAG SEDIMENT INLET TRAP

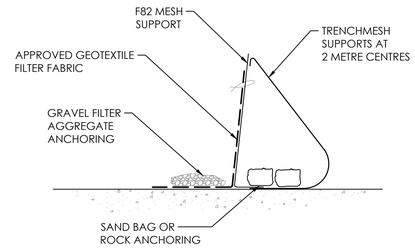
N.T.S.

1. FABRICATE A SLEEVE MADE FROM GEOTEXTILE OR WIRE MESH LONGER THAN THE LENGTH OF THE INLET PIT.
2. FILL THE SLEEVE WITH 25mm TO 50MM GRAVEL.
3. FORM AN ELIPTICAL CROSS SECTION ABOUT 150mm HIGH X 400mm WIDE.
4. PLACE THE FILTER AT THE OPNEING OF THE KERB INLET LEAVING A 100MM GAP AT THE TOP TO ACT AS AN EMERGENCY SPILL WAY.
5. MAINTAIN A CLEAR DISTANCE AWAY FROM THE PIT WITH SPACER BLOCKS.
6. FORM A SEAL WITH THE KERBING AND PREVENT SEDIMENT BYPASSING THE FILTER.
7. FIT TO ALL KERB INLETS AS SHOWN.



SILT FENCE DETAIL

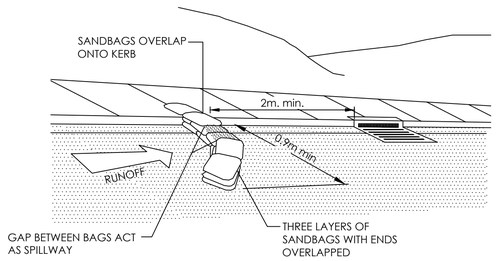
N.T.S



ALTERNATIVE SEDIMENT FENCE (ON CONCRETE)

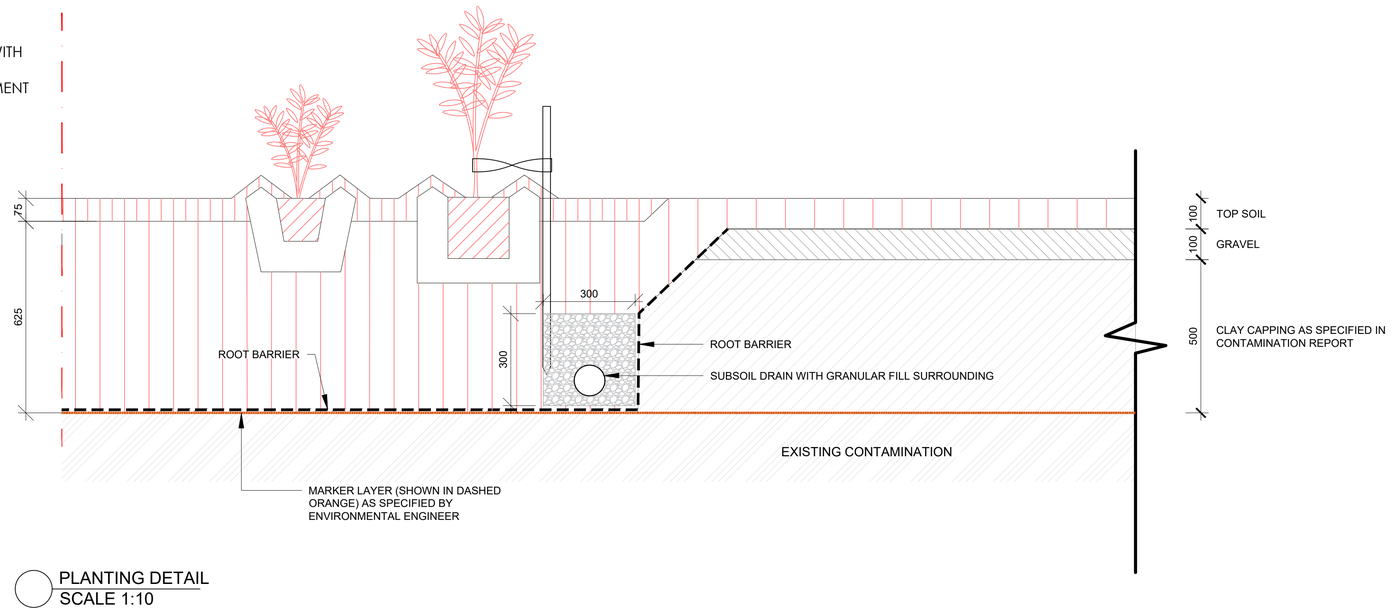
GENERAL CONSTRUCTION NOTES

1. CONSTRUCT SEDIMENT FENCE AS CLOSE AS POSSIBLE TO PARALLEL TO THE CONTOURS OF THE SITE.
2. FIX SELF-SUPPORTING GEOTEXTILE TO UPSLOPE SIDE OF POSTS WITH WIRE TIES OR AS RECOMMENDED BY GEOTEXTILE MANUFACTURER.
3. JOIN SECTIONS OF FABRIC AT A SUPPORT WITH A 150mm OVERLAP.



SANDBAG KERB SEDIMENT TRAP

N.T.S.



PLANTING DETAIL
SCALE 1:10

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

NOT TO BE USED FOR CONSTRUCTION

AMDT	DATE	DESCRIPTION	BY
3	09.12.21	RE-ISSUED FOR DA	DM
2	29.11.21	ISSUED FOR DA	DM
1	05.08.21	PRELIMINARY ISSUE	LAP

JN Responsive Engineering

CLIENT
WINDANG KRUGER UNIT TRUST
STATUS
PRELIMINARY DA ISSUE

DISCIPLINE
CIVIL DESIGN
DRAWING TITLE
EROSION AND SEDIMENT DETAILS

PROJECT
PROPOSED SUBDIVISION LOTS 429 AND 501
ADDRESS
KRUGER AVENUE, WINDANG
NSW, 2528

PROJECT DETAILS
DESIGN DM
DRAWN DM
DATE JUL 2021
DRG SIZE A1
SCALE AS SHOWN
PROJECT BA
MGR
WWW.JN.COM.AU

N0210053
C011 3

LEVELS TABLE		
MIN. LEVEL	MAX. LEVEL	COLOUR
-300	-1.0	
-1.0	-0.9	
-0.9	-0.8	
-0.8	-0.7	
-0.7	-0.6	
-0.6	-0.5	
-0.5	-0.4	
-0.4	-0.3	
-0.3	-0.2	
-0.2	-0.1	
-0.1	0	
0.0	0.1	
0.1	0.2	
0.2	0.3	
0.3	0.4	
0.4	0.5	
0.5	0.6	
0.6	0.7	
0.7	300	

VOLUMES

CUT VOLUME: -1,118.579m^3
FILL VOLUME: 16,565.371m^3
BALANCE: 15,446.792m^3
(FILL)

CAPPING PLAN LEGEND	
SYMBOL	DESCRIPTION
3.0	MAJOR DESIGN CONTOUR
3.0	MINOR DESIGN CONTOUR

CAPPING PLAN - BULK EARTHWORKS

SCALE 1:500

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

NOT TO BE USED FOR CONSTRUCTION

AMDT	DATE	DESCRIPTION	BY
2	29.11.21	ISSUED FOR DA	DM
1	05.08.21	PRELIMINARY ISSUE	LAP

JN Responsive Engineering

CLIENT
WINDANG KRUGER UNIT TRUST

STATUS
PRELIMINARY DA ISSUE

DISCIPLINE
CIVIL DESIGN

DRAWING TITLE
CAPPING PLAN
BULK EARTHWORKS

PROJECT
PROPOSED SUBDIVISION
LOTS 429 AND 501

ADDRESS
KRUGER AVENUE, WINDANG
NSW, 2528

PROJECT DETAILS

DESIGN	DM
DRAWN	DM
DATE	JUL 2021
DRG SIZE	A1
SCALE	1:500
PROJECT MGR	BA

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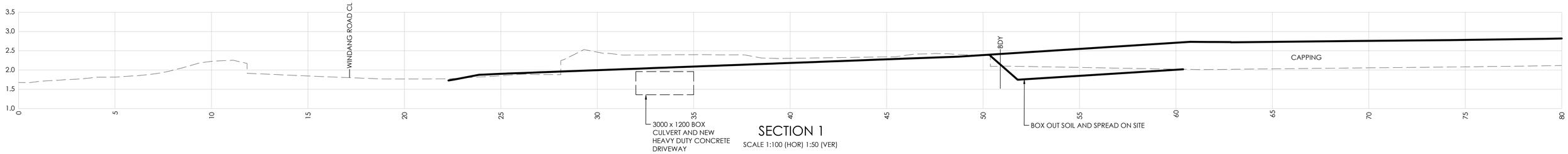
N0210053
C100 2

LEGEND

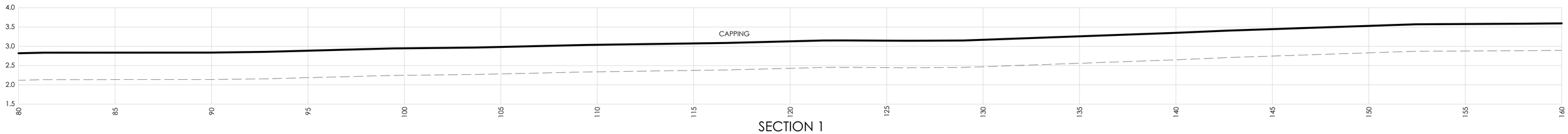
DESIGN SURFACE

EXISTING SURFACE



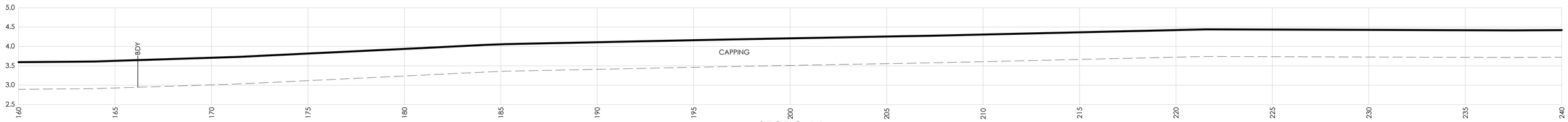
SECTION 1

SCALE 1:100 (HOR) 1:50 (VER)



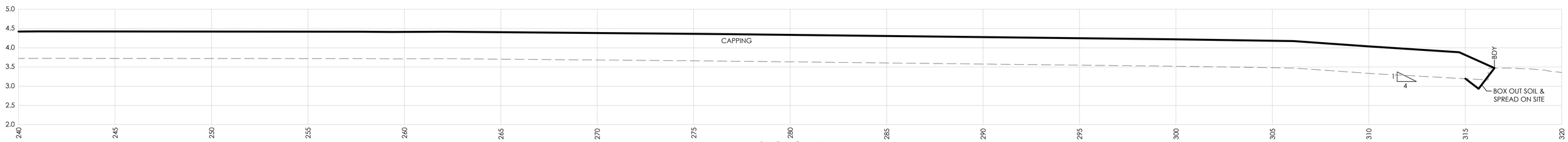
SECTION 1

SCALE 1:100 (HOR) 1:50 (VER)



SECTION 1

SCALE 1:100 (HOR) 1:50 (VER)



SECTION 1

SCALE 1:100 (HOR) 1:50 (VER)

SCALE 1:50

SCALE 1:100

NOT TO BE USED FOR CONSTRUCTION

AMDT	DATE	DESCRIPTION	BY
2	29.11.21	ISSUED FOR DA	DM
1	05.08.21	PRELIMINARY ISSUE	LAP

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WINDANG KRUGER UNIT TRUST

STATUS
PRELIMINARY DA ISSUE

DISCIPLINE
CIVIL DESIGN

DRAWING TITLE
CAPPING BULK EARTHWORKS SECTIONS - SHEET 1

PROJECT
PROPOSED SUBDIVISION LOTS 429 AND 501

ADDRESS
KRUGER AVENUE, WINDANG NSW, 2528

PROJECT DETAILS

DESIGN	DM
DRAWN	DM
DATE	JUL 2021
DRG SIZE	A1
SCALE	AS SHOWN
PROJECT MGR	BA

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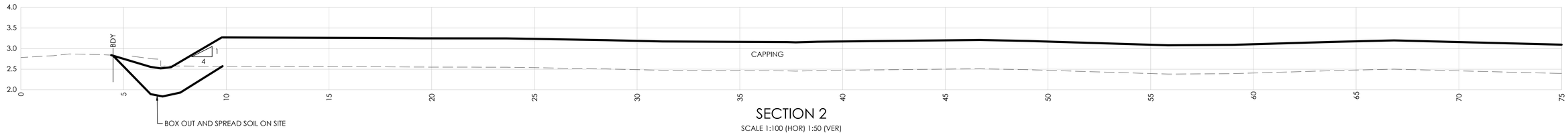
C101 2

LEGEND

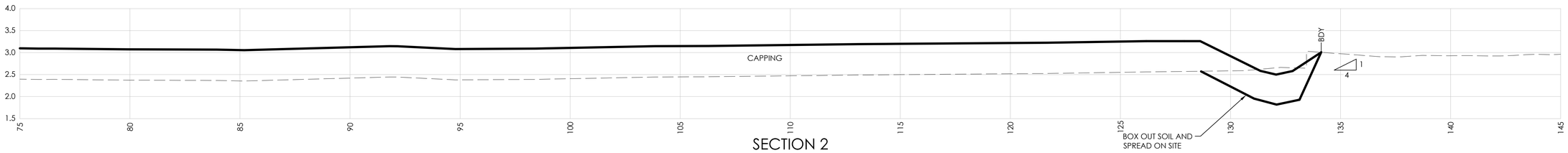
DESIGN SURFACE

EXISTING SURFACE



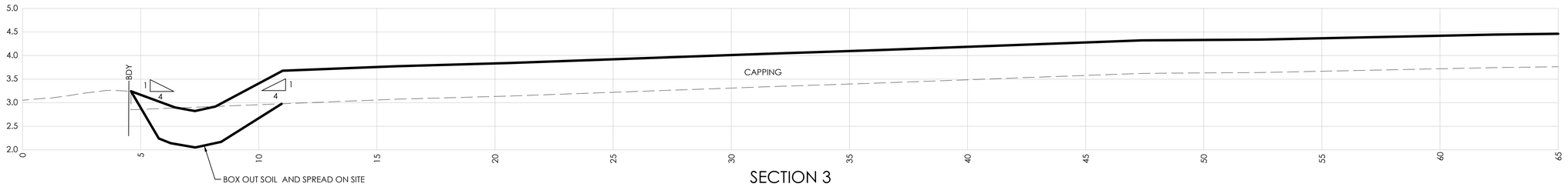
SECTION 2

SCALE 1:100 (HOR) 1:50 (VER)



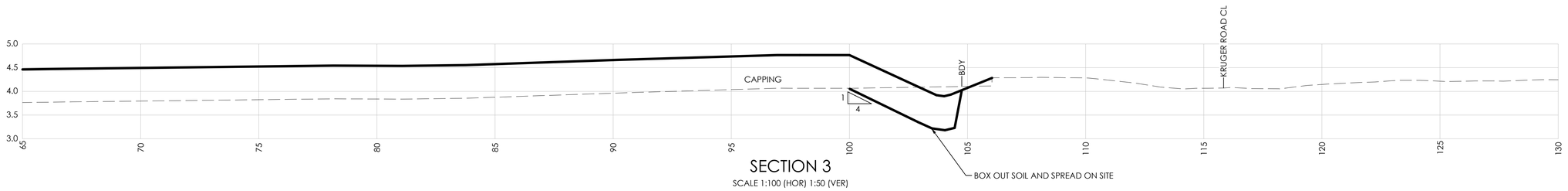
SECTION 2

SCALE 1:100 (HOR) 1:50 (VER)



SECTION 3

SCALE 1:100 (HOR) 1:50 (VER)



SECTION 3

SCALE 1:100 (HOR) 1:50 (VER)

0 1 2 3 4 5m

10 6 2

SCALE 1:50

0 2 4 6 8 10m

2 1

SCALE 1:100

NOT TO BE USED FOR CONSTRUCTION

AMDT	DATE	DESCRIPTION	BY
2	29.11.21	ISSUED FOR DA	DM
1	05.08.21	PRELIMINARY ISSUE	LAP

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WINDANG KRUGER UNIT TRUST

STATUS
PRELIMINARY DA ISSUE

DISCIPLINE
CIVIL DESIGN

DRAWING TITLE
CAPPING BULK EARTHWORKS SECTIONS - SHEET 2

PROJECT
PROPOSED SUBDIVISION LOTS 429 AND 501

ADDRESS
KRUGER AVENUE, WINDANG
NSW, 2528

PROJECT DETAILS

DESIGN	DM
DRAWN	DM
DATE	JUL 2021
DRG SIZE	A1
SCALE	AS SHOWN
PROJECT MGR	BA

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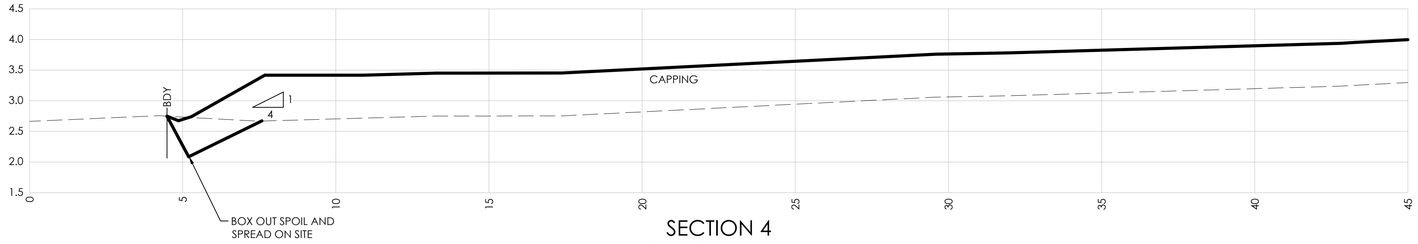
C102 2

LEGEND

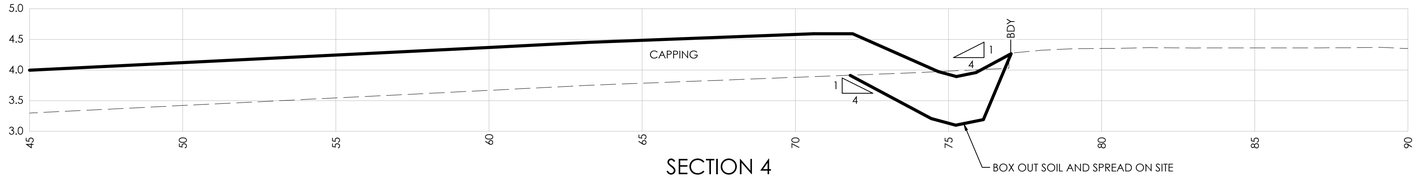
DESIGN SURFACE

EXISTING SURFACE



SECTION 4

SCALE 1:100 (HOR) 1:50 (VER)

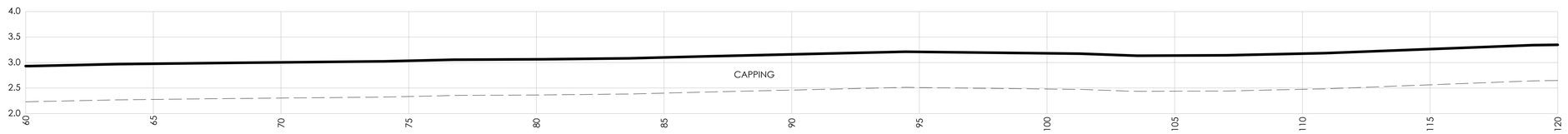


SECTION 4

SCALE 1:100 (HOR) 1:50 (VER)

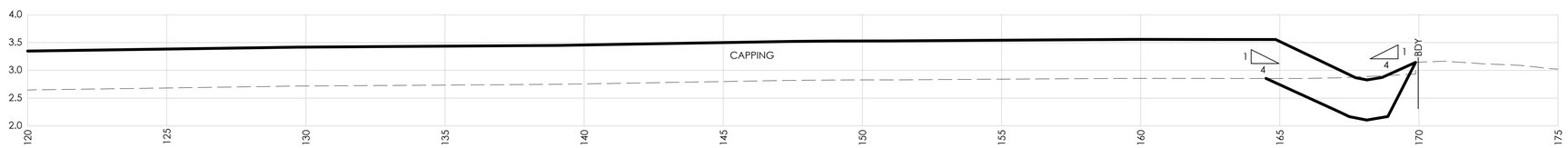
SECTION 5

SCALE 1:100 (HOR) 1:50 (VER)



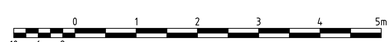
SECTION 5

SCALE 1:100 (HOR) 1:50 (VER)

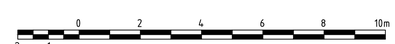


SECTION 5

SCALE 1:100 (HOR) 1:50 (VER)



SCALE 1:50



SCALE 1:100

NOT TO BE USED FOR CONSTRUCTION

AMDT	DATE	DESCRIPTION	BY
2	29.11.21	ISSUED FOR DA	DM
1	05.08.21	PRELIMINARY ISSUE	LAP

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WINDANG KRUGER UNIT TRUST

STATUS

PRELIMINARY DA ISSUE

DISCIPLINE

CIVIL DESIGN

DRAWING TITLE

CAPPING BULK EARTHWORKS SECTIONS - SHEET 3

PROJECT

PROPOSED SUBDIVISION LOTS 429 AND 501

ADDRESS

KRUGER AVENUE, WINDANG NSW, 2528

PROJECT DETAILS

DESIGN	DM
DRAWN	DM
DATE	JUL 2021
DRG SIZE	A1
SCALE	AS SHOWN
PROJECT MGR	BA

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C103 2

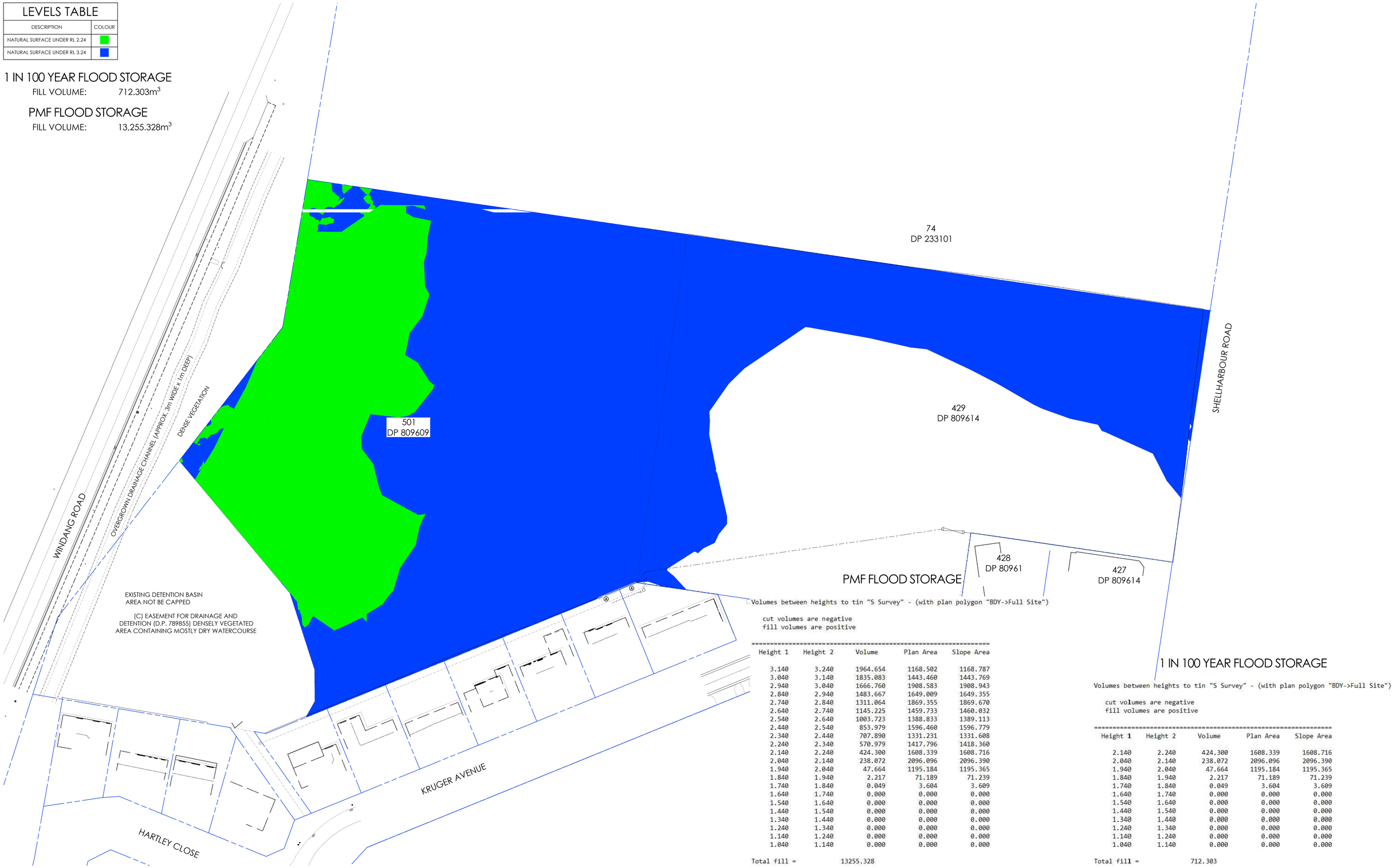
LEVELS TABLE	
DESCRIPTION	COLOUR
NATURAL SURFACE UNDER RL 2.24	
NATURAL SURFACE UNDER RL 3.24	

1 IN 100 YEAR FLOOD STORAGE

FILL VOLUME: 712.303m^3

PMF FLOOD STORAGE

FILL VOLUME: 13,255.328m^3



PMF FLOOD STORAGE

Volumes between heights to tin "S Survey" - (with plan polygon "BDY->Full Site")

cut volumes are negative
fill volumes are positive

Height 1	Height 2	Volume	Plan Area	Slope Area
3.140	3.240	1964.654	1168.502	1168.787
3.040	3.140	1835.083	1443.460	1443.769
2.940	3.040	1666.760	1908.583	1908.943
2.840	2.940	1483.667	1649.009	1649.355
2.740	2.840	1311.064	1869.355	1869.670
2.640	2.740	1145.225	1459.733	1460.032
2.540	2.640	1003.723	1388.833	1389.113
2.440	2.540	853.979	1596.460	1596.779
2.340	2.440	707.890	1331.231	1331.608
2.240	2.340	570.979	1417.796	1418.360
2.140	2.240	424.300	1608.339	1608.716
2.040	2.140	238.072	2096.096	2096.390
1.940	2.040	47.664	1195.184	1195.365
1.840	1.940	2.217	71.189	71.239
1.740	1.840	0.049	3.604	3.609
1.640	1.740	0.000	0.000	0.000
1.540	1.640	0.000	0.000	0.000
1.440	1.540	0.000	0.000	0.000
1.340	1.440	0.000	0.000	0.000
1.240	1.340	0.000	0.000	0.000
1.140	1.240	0.000	0.000	0.000
1.040	1.140	0.000	0.000	0.000

Total fill = 13255.328

1 IN 100 YEAR FLOOD STORAGE

Volumes between heights to tin "S Survey" - (with plan polygon "BDY->Full Site")

cut volumes are negative
fill volumes are positive

Height 1	Height 2	Volume	Plan Area	Slope Area
2.140	2.240	424.300	1608.339	1608.716
2.040	2.140	238.072	2096.096	2096.390
1.940	2.040	47.664	1195.184	1195.365
1.840	1.940	2.217	71.189	71.239
1.740	1.840	0.049	3.604	3.609
1.640	1.740	0.000	0.000	0.000
1.540	1.640	0.000	0.000	0.000
1.440	1.540	0.000	0.000	0.000
1.340	1.440	0.000	0.000	0.000
1.240	1.340	0.000	0.000	0.000
1.140	1.240	0.000	0.000	0.000
1.040	1.140	0.000	0.000	0.000

Total fill = 712.303

FLOOD STORAGE PLAN - EXISTING

SCALE 1:500

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

NOT TO BE USED FOR CONSTRUCTION

AMDT	DATE	DESCRIPTION	BY
2	29.11.21	ISSUED FOR DA	DM
1	05.08.21	PRELIMINARY ISSUE	LAP

JN Responsive Engineering

CLIENT
WINDANG KRUGER UNIT TRUST

STATUS
PRELIMINARY DA ISSUE

DISCIPLINE
CIVIL DESIGN

DRAWING TITLE
FLOOD STORAGE PLAN
EXISTING

PROJECT
PROPOSED SUBDIVISION
LOTS 429 AND 501

ADDRESS
KRUGER AVENUE, WINDANG
NSW, 2528

PROJECT DETAILS

DESIGN	DM
DRAWN	DM
DATE	JUL 2021
DRG SIZE	A1
SCALE	1:500
PROJECT	BA
MGR	

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N0210053
C200 2

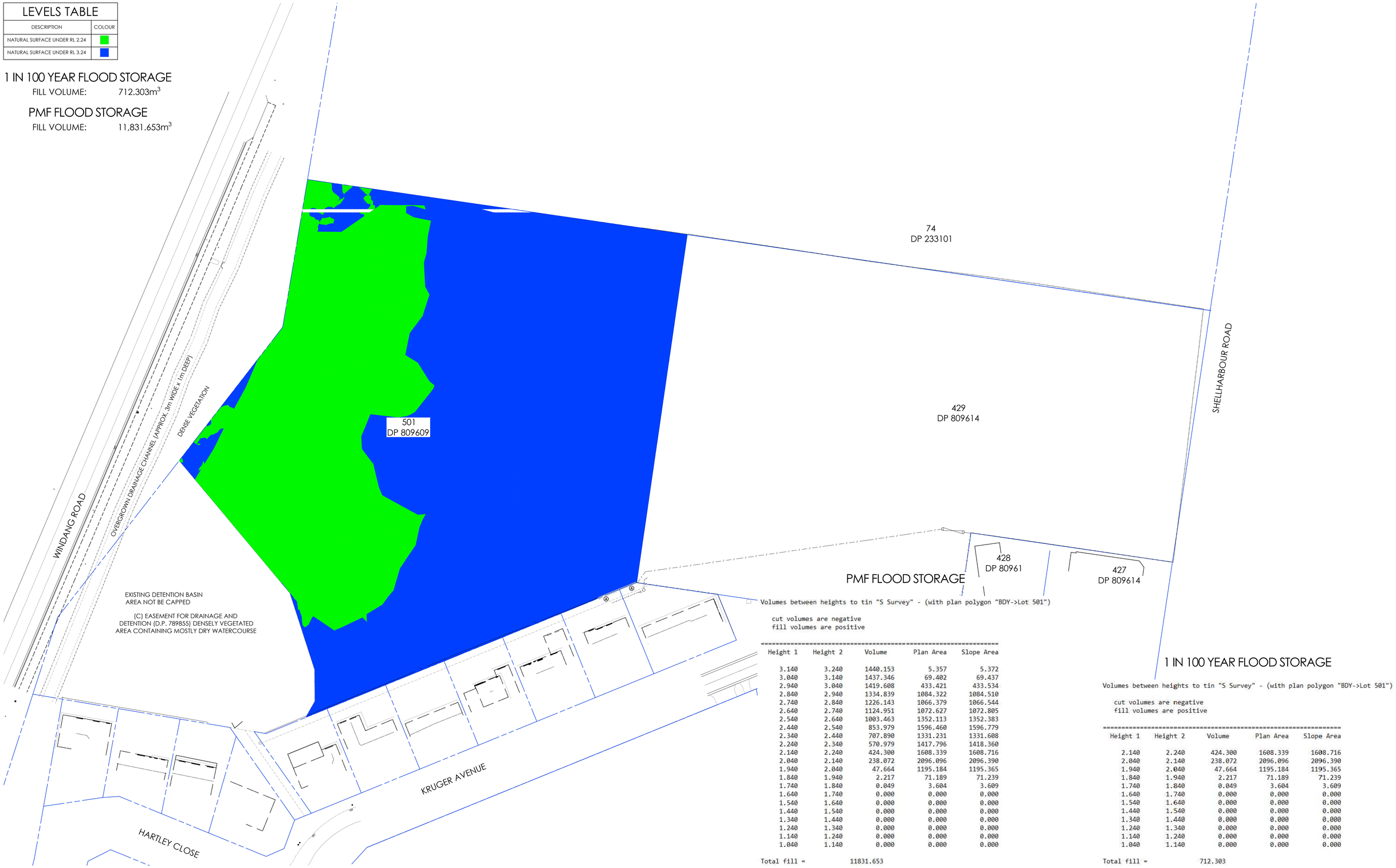
LEVELS TABLE	
DESCRIPTION	COLOUR
NATURAL SURFACE UNDER RL 2.24	
NATURAL SURFACE UNDER RL 3.24	

1 IN 100 YEAR FLOOD STORAGE

FILL VOLUME: 712.303m^3

PMF FLOOD STORAGE

FILL VOLUME: 11,831.653m^3



PMF FLOOD STORAGE

Volumes between heights to tin "S Survey" - (with plan polygon "BDY->Lot 501")

cut volumes are negative
fill volumes are positive

Height 1	Height 2	Volume	Plan Area	Slope Area
3.140	3.240	1440.153	5.357	5.372
3.040	3.140	1437.346	69.402	69.437
2.940	3.040	1419.608	433.421	433.534
2.840	2.940	1334.839	1084.322	1084.510
2.740	2.840	1226.143	1066.379	1066.544
2.640	2.740	1124.951	1072.627	1072.805
2.540	2.640	1003.463	1352.113	1352.383
2.440	2.540	853.979	1596.460	1596.779
2.340	2.440	707.890	1331.231	1331.608
2.240	2.340	570.979	1417.796	1418.360
2.140	2.240	424.300	1608.339	1608.716
2.040	2.140	238.072	2096.096	2096.390
1.940	2.040	47.664	1195.184	1195.365
1.840	1.940	2.217	71.189	71.239
1.740	1.840	0.049	3.604	3.609
1.640	1.740	0.000	0.000	0.000
1.540	1.640	0.000	0.000	0.000
1.440	1.540	0.000	0.000	0.000
1.340	1.440	0.000	0.000	0.000
1.240	1.340	0.000	0.000	0.000
1.140	1.240	0.000	0.000	0.000
1.040	1.140	0.000	0.000	0.000

Total fill = 11831.653

1 IN 100 YEAR FLOOD STORAGE

Volumes between heights to tin "S Survey" - (with plan polygon "BDY->Lot 501")

cut volumes are negative
fill volumes are positive

Height 1	Height 2	Volume	Plan Area	Slope Area
2.140	2.240	424.300	1608.339	1608.716
2.040	2.140	238.072	2096.096	2096.390
1.940	2.040	47.664	1195.184	1195.365
1.840	1.940	2.217	71.189	71.239
1.740	1.840	0.049	3.604	3.609
1.640	1.740	0.000	0.000	0.000
1.540	1.640	0.000	0.000	0.000
1.440	1.540	0.000	0.000	0.000
1.340	1.440	0.000	0.000	0.000
1.240	1.340	0.000	0.000	0.000
1.140	1.240	0.000	0.000	0.000
1.040	1.140	0.000	0.000	0.000

Total fill = 712.303

FLOOD STORAGE PLAN - EXISTING LOT 501

SCALE 1:500

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

NOT TO BE USED FOR CONSTRUCTION

AMDT	DATE	DESCRIPTION	BY
2	29.11.21	ISSUED FOR DA	DM
1	05.08.21	PRELIMINARY ISSUE	LAP

JN Responsive Engineering

CLIENT
WINDANG KRUGER UNIT TRUST

STATUS
PRELIMINARY DA ISSUE

DISCIPLINE
CIVIL DESIGN

DRAWING TITLE
FLOOD STORAGE PLAN
EXISTING LOT 501

PROJECT
PROPOSED SUBDIVISION
LOTS 429 AND 501

ADDRESS
KRUGER AVENUE, WINDANG
NSW, 2528

PROJECT DETAILS

DESIGN	DM
DRAWN	DM
DATE	JUL 2021
DRG SIZE	A1
SCALE	1:500
PROJECT MGR	BA

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N0210053
C201 2

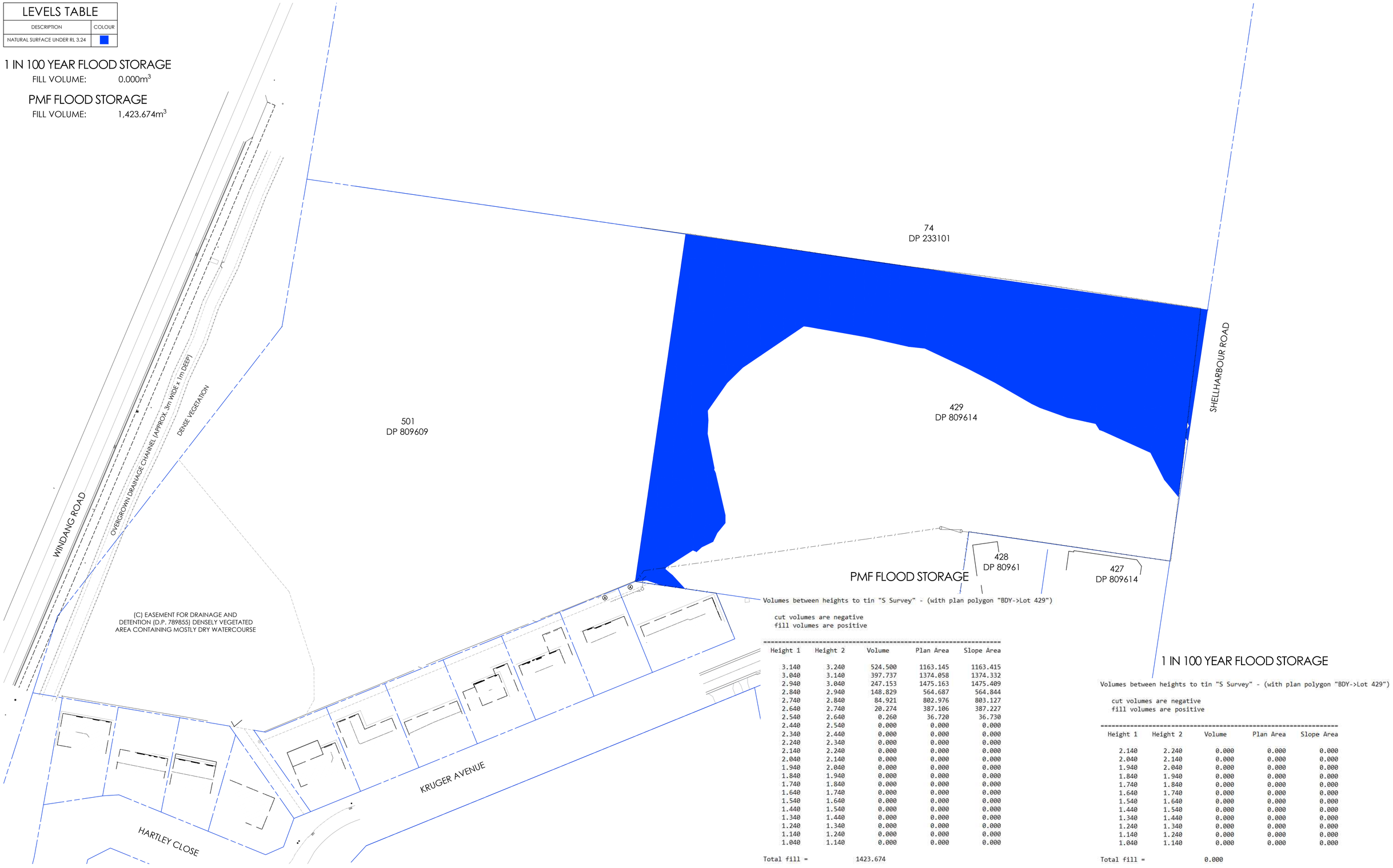
LEVELS TABLE	
DESCRIPTION	COLOUR
NATURAL SURFACE UNDER RL 3.24	

1 IN 100 YEAR FLOOD STORAGE

FILL VOLUME: 0.000m^3

PMF FLOOD STORAGE

FILL VOLUME: 1,423.674m^3



PMF FLOOD STORAGE

Volumes between heights to tin "S Survey" - (with plan polygon "BDY->Lot 429")

cut volumes are negative
fill volumes are positive

Height 1	Height 2	Volume	Plan Area	Slope Area
3.140	3.240	524.500	1163.145	1163.415
3.040	3.140	397.737	1374.058	1374.332
2.940	3.040	247.153	1475.163	1475.409
2.840	2.940	148.829	564.687	564.844
2.740	2.840	84.921	802.976	803.127
2.640	2.740	20.274	387.106	387.227
2.540	2.640	0.260	36.720	36.730
2.440	2.540	0.000	0.000	0.000
2.340	2.440	0.000	0.000	0.000
2.240	2.340	0.000	0.000	0.000
2.140	2.240	0.000	0.000	0.000
2.040	2.140	0.000	0.000	0.000
1.940	2.040	0.000	0.000	0.000
1.840	1.940	0.000	0.000	0.000
1.740	1.840	0.000	0.000	0.000
1.640	1.740	0.000	0.000	0.000
1.540	1.640	0.000	0.000	0.000
1.440	1.540	0.000	0.000	0.000
1.340	1.440	0.000	0.000	0.000
1.240	1.340	0.000	0.000	0.000
1.140	1.240	0.000	0.000	0.000
1.040	1.140	0.000	0.000	0.000

Total fill = 1423.674

1 IN 100 YEAR FLOOD STORAGE

Volumes between heights to tin "S Survey" - (with plan polygon "BDY->Lot 429")

cut volumes are negative
fill volumes are positive

Height 1	Height 2	Volume	Plan Area	Slope Area
2.140	2.240	0.000	0.000	0.000
2.040	2.140	0.000	0.000	0.000
1.940	2.040	0.000	0.000	0.000
1.840	1.940	0.000	0.000	0.000
1.740	1.840	0.000	0.000	0.000
1.640	1.740	0.000	0.000	0.000
1.540	1.640	0.000	0.000	0.000
1.440	1.540	0.000	0.000	0.000
1.340	1.440	0.000	0.000	0.000
1.240	1.340	0.000	0.000	0.000
1.140	1.240	0.000	0.000	0.000
1.040	1.140	0.000	0.000	0.000

Total fill = 0.000

FLOOD STORAGE PLAN - EXISTING LOT 429

SCALE 1:500

10 8 6 4 2 0 10 20 30 40 50m

SCALE 1:500

NOT TO BE USED FOR CONSTRUCTION

AMDT	DATE	DESCRIPTION	BY
2	29.11.21	ISSUED FOR DA	DM
1	05.08.21	PRELIMINARY ISSUE	LAP

JN Responsive Engineering

CLIENT
WINDANG KRUGER UNIT TRUST

STATUS
PRELIMINARY DA ISSUE

DISCIPLINE
CIVIL DESIGN

DRAWING TITLE
FLOOD STORAGE PLAN
EXISTING LOT 429

PROJECT
PROPOSED SUBDIVISION
LOTS 429 AND 501

ADDRESS
KRUGER AVENUE, WINDANG
NSW, 2528

PROJECT DETAILS	
DESIGN	DM
DRAWN	DM
DATE	JUL 2021
DRG SIZE	A1
SCALE	1:500
PROJECT MGR	BA

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N0210053

C202 2

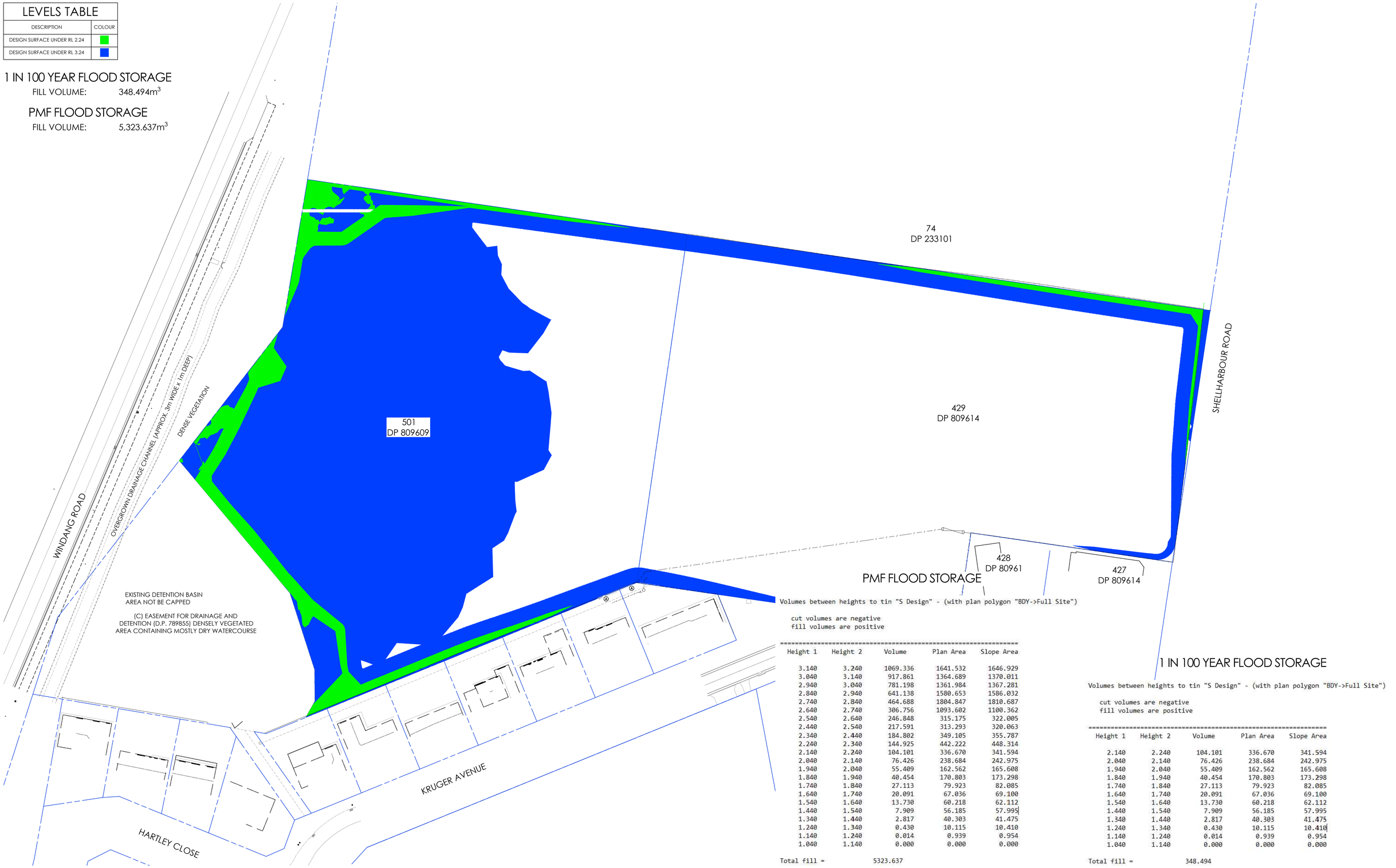
LEVELS TABLE	
DESCRIPTION	COLOUR
DESIGN SURFACE UNDER RL 2.24	
DESIGN SURFACE UNDER RL 3.24	

1 IN 100 YEAR FLOOD STORAGE

FILL VOLUME: 348.494m^3

PMF FLOOD STORAGE

FILL VOLUME: 5,323.637m^3



PMF FLOOD STORAGE

Volumes between heights to tin "S Design" - (with plan polygon "BDY->Full Site")

cut volumes are negative
fill volumes are positive

Height 1	Height 2	Volume	Plan Area	Slope Area
3.140	3.240	1069.336	1641.532	1646.929
3.040	3.140	917.861	1364.689	1370.011
2.940	3.040	781.198	1361.984	1367.281
2.840	2.940	641.138	1580.653	1586.032
2.740	2.840	464.688	1804.847	1810.687
2.640	2.740	306.756	1093.602	1100.362
2.540	2.640	246.848	315.175	322.005
2.440	2.540	217.591	313.293	320.063
2.340	2.440	184.802	349.105	355.787
2.240	2.340	144.925	442.222	448.314
2.140	2.240	104.101	336.670	341.594
2.040	2.140	76.426	238.684	242.975
1.940	2.040	55.409	162.562	165.608
1.840	1.940	40.454	170.803	173.298
1.740	1.840	27.113	79.923	82.085
1.640	1.740	20.091	67.036	69.100
1.540	1.640	13.730	60.218	62.112
1.440	1.540	7.909	56.185	57.995
1.340	1.440	2.817	40.303	41.475
1.240	1.340	0.430	10.115	10.410
1.140	1.240	0.014	0.939	0.954
1.040	1.140	0.000	0.000	0.000

Total fill = 5323.637

1 IN 100 YEAR FLOOD STORAGE

Volumes between heights to tin "S Design" - (with plan polygon "BDY->Full Site")

cut volumes are negative
fill volumes are positive

Height 1	Height 2	Volume	Plan Area	Slope Area
2.140	2.240	104.101	336.670	341.594
2.040	2.140	76.426	238.684	242.975
1.940	2.040	55.409	162.562	165.608
1.840	1.940	40.454	170.803	173.298
1.740	1.840	27.113	79.923	82.085
1.640	1.740	20.091	67.036	69.100
1.540	1.640	13.730	60.218	62.112
1.440	1.540	7.909	56.185	57.995
1.340	1.440	2.817	40.303	41.475
1.240	1.340	0.430	10.115	10.410
1.140	1.240	0.014	0.939	0.954
1.040	1.140	0.000	0.000	0.000

Total fill = 348.494

FLOOD STORAGE PLAN - DESIGN

SCALE 1:500

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

NOT TO BE USED FOR CONSTRUCTION

AMDT	DATE	DESCRIPTION	BY
2	29.11.21	ISSUED FOR DA	DM
1	05.08.21	PRELIMINARY ISSUE	LAP

JN Responsive Engineering

CLIENT
WINDANG KRUGER UNIT TRUST

STATUS
PRELIMINARY DA ISSUE

DISCIPLINE
CIVIL DESIGN

DRAWING TITLE
FLOOD STORAGE PLAN
DESIGN

PROJECT
PROPOSED SUBDIVISION
LOTS 429 AND 501

ADDRESS
KRUGER AVENUE, WINDANG
NSW, 2528

PROJECT DETAILS

DESIGN	DM
DRAWN	DM
DATE	JUL 2021
DRG SIZE	A1
SCALE	1:500
PROJECT MGR	BA

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N0210053
C203 2

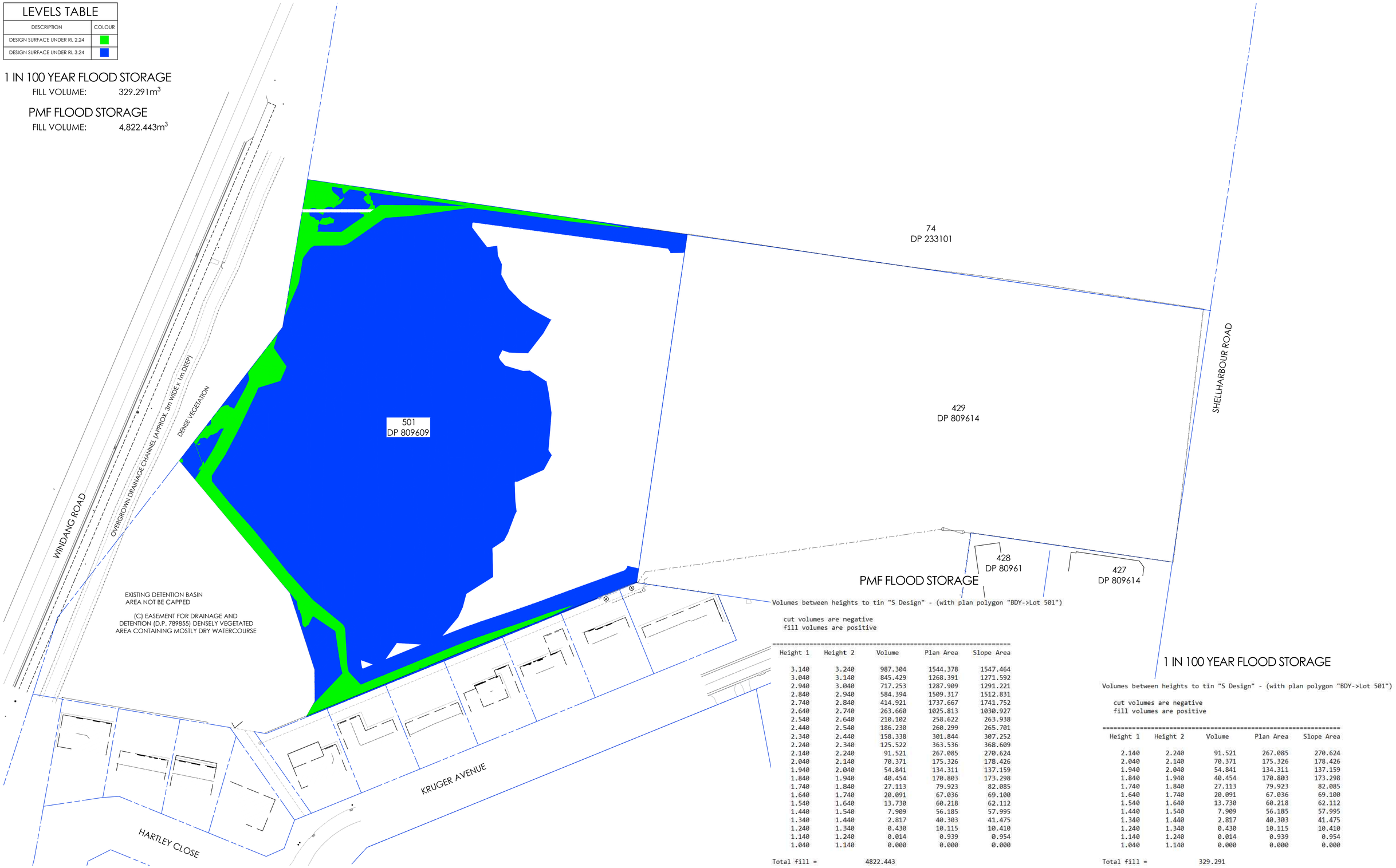
LEVELS TABLE	
DESCRIPTION	COLOUR
DESIGN SURFACE UNDER RL 2.24	
DESIGN SURFACE UNDER RL 3.24	

1 IN 100 YEAR FLOOD STORAGE

FILL VOLUME: 329.291m^3

PMF FLOOD STORAGE

FILL VOLUME: 4,822.443m^3



PMF FLOOD STORAGE

Volumes between heights to tin "S Design" - (with plan polygon "BDY->Lot 501")

cut volumes are negative
fill volumes are positive

Height 1	Height 2	Volume	Plan Area	Slope Area
3.140	3.240	987.304	1544.378	1547.464
3.040	3.140	845.429	1268.391	1271.592
2.940	3.040	717.253	1287.909	1291.221
2.840	2.940	584.394	1509.317	1512.831
2.740	2.840	414.921	1737.667	1741.752
2.640	2.740	263.660	1025.813	1030.927
2.540	2.640	210.102	258.622	263.938
2.440	2.540	186.230	260.299	265.701
2.340	2.440	158.338	301.844	307.252
2.240	2.340	125.522	363.536	368.609
2.140	2.240	91.521	267.085	270.624
2.040	2.140	70.371	175.326	178.426
1.940	2.040	54.841	134.311	137.159
1.840	1.940	40.454	170.803	173.298
1.740	1.840	27.113	79.923	82.085
1.640	1.740	20.091	67.036	69.100
1.540	1.640	13.730	60.218	62.112
1.440	1.540	7.909	56.185	57.995
1.340	1.440	2.817	40.303	41.475
1.240	1.340	0.430	10.115	10.410
1.140	1.240	0.014	0.939	0.954
1.040	1.140	0.000	0.000	0.000

Total fill = 4822.443

1 IN 100 YEAR FLOOD STORAGE

Volumes between heights to tin "S Design" - (with plan polygon "BDY->Lot 501")

cut volumes are negative
fill volumes are positive

Height 1	Height 2	Volume	Plan Area	Slope Area
2.140	2.240	91.521	267.085	270.624
2.040	2.140	70.371	175.326	178.426
1.940	2.040	54.841	134.311	137.159
1.840	1.940	40.454	170.803	173.298
1.740	1.840	27.113	79.923	82.085
1.640	1.740	20.091	67.036	69.100
1.540	1.640	13.730	60.218	62.112
1.440	1.540	7.909	56.185	57.995
1.340	1.440	2.817	40.303	41.475
1.240	1.340	0.430	10.115	10.410
1.140	1.240	0.014	0.939	0.954
1.040	1.140	0.000	0.000	0.000

Total fill = 329.291

FLOOD STORAGE PLAN - DESIGN

SCALE 1:500

0 10 20 30 40 50m

10 8 6 4 2

SCALE 1:500

NOT TO BE USED FOR CONSTRUCTION

AMDT	DATE	DESCRIPTION	BY
2	29.11.21	ISSUED FOR DA	DM
1	05.08.21	PRELIMINARY ISSUE	LAP

JN Responsive Engineering

CLIENT
WINDANG KRUGER UNIT TRUST

STATUS
PRELIMINARY DA ISSUE

DISCIPLINE
CIVIL DESIGN

DRAWING TITLE
FLOOD STORAGE PLAN
DESIGN LOT 501

PROJECT
PROPOSED SUBDIVISION
LOTS 429 AND 501

ADDRESS
KRUGER AVENUE, WINDANG
NSW, 2528

PROJECT DETAILS

DESIGN	DM
DRAWN	DM
DATE	JUL 2021
DRG SIZE	A1
SCALE	1:500
PROJECT MGR	BA

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N0210053
C204 2

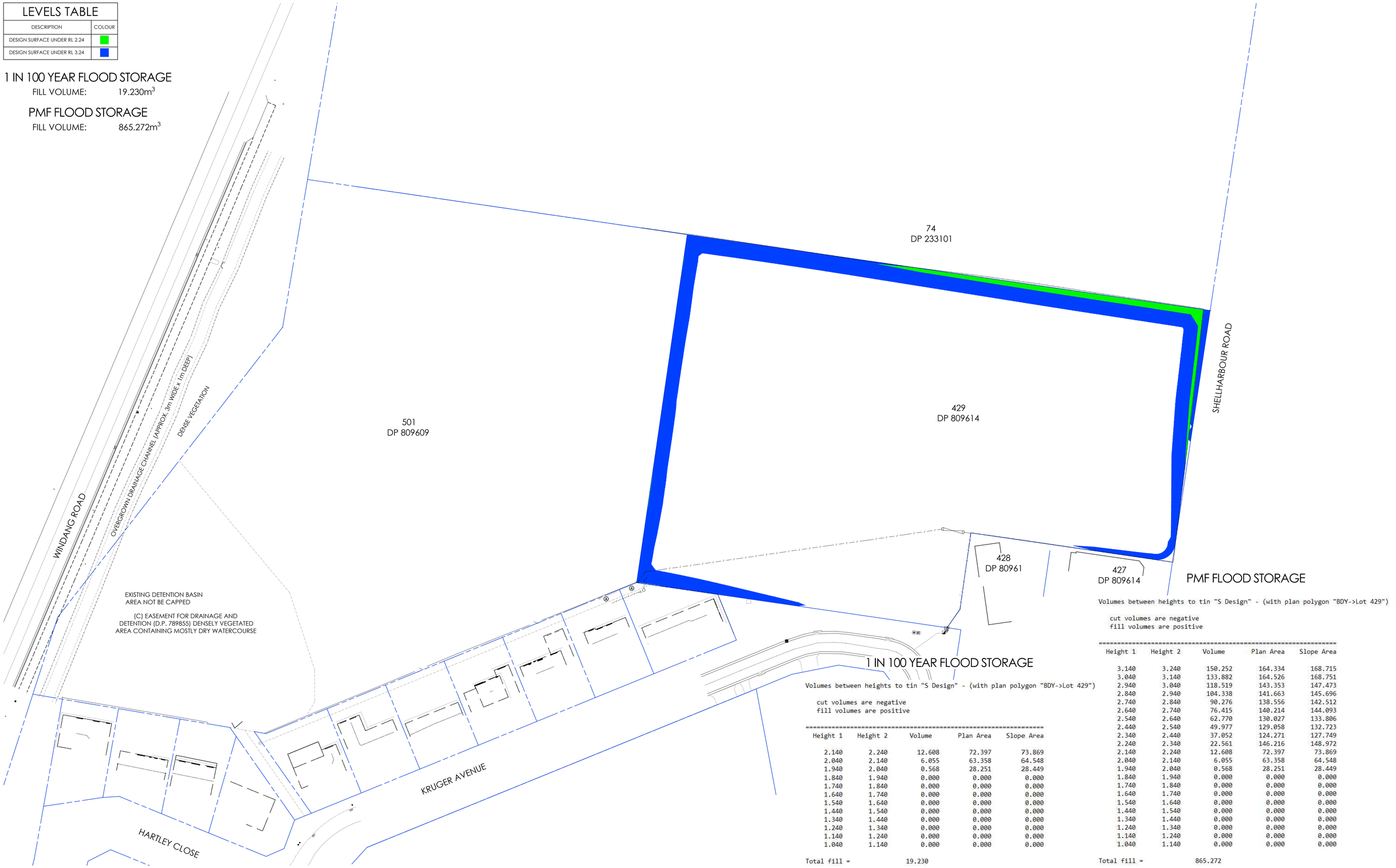
LEVELS TABLE	
DESCRIPTION	COLOUR
DESIGN SURFACE UNDER RL 2.24	
DESIGN SURFACE UNDER RL 3.24	

1 IN 100 YEAR FLOOD STORAGE

FILL VOLUME: 19.230m^3

PMF FLOOD STORAGE

FILL VOLUME: 865.272m^3



1 IN 100 YEAR FLOOD STORAGE

Volumes between heights to tin "S Design" - (with plan polygon "BDY->Lot 429")

cut volumes are negative
fill volumes are positive

Height 1	Height 2	Volume	Plan Area	Slope Area
2.140	2.240	12.608	72.397	73.869
2.040	2.140	6.055	63.358	64.548
1.940	2.040	0.568	28.251	28.449
1.840	1.940	0.000	0.000	0.000
1.740	1.840	0.000	0.000	0.000
1.640	1.740	0.000	0.000	0.000
1.540	1.640	0.000	0.000	0.000
1.440	1.540	0.000	0.000	0.000
1.340	1.440	0.000	0.000	0.000
1.240	1.340	0.000	0.000	0.000
1.140	1.240	0.000	0.000	0.000
1.040	1.140	0.000	0.000	0.000

Total fill = 19.230

PMF FLOOD STORAGE

Volumes between heights to tin "S Design" - (with plan polygon "BDY->Lot 429")

cut volumes are negative
fill volumes are positive

Height 1	Height 2	Volume	Plan Area	Slope Area
3.140	3.240	150.252	164.334	168.715
3.040	3.140	133.882	164.526	168.751
2.940	3.040	118.519	143.353	147.473
2.840	2.940	104.338	141.663	145.696
2.740	2.840	90.276	138.556	142.512
2.640	2.740	76.415	140.214	144.093
2.540	2.640	62.770	130.027	133.806
2.440	2.540	49.977	129.058	132.723
2.340	2.440	37.052	124.271	127.749
2.240	2.340	22.561	146.216	148.972
2.140	2.240	12.608	72.397	73.869
2.040	2.140	6.055	63.358	64.548
1.940	2.040	0.568	28.251	28.449
1.840	1.940	0.000	0.000	0.000
1.740	1.840	0.000	0.000	0.000
1.640	1.740	0.000	0.000	0.000
1.540	1.640	0.000	0.000	0.000
1.440	1.540	0.000	0.000	0.000
1.340	1.440	0.000	0.000	0.000
1.240	1.340	0.000	0.000	0.000
1.140	1.240	0.000	0.000	0.000
1.040	1.140	0.000	0.000	0.000

Total fill = 865.272

FLOOD STORAGE PLAN - DESIGN LOT 429

SCALE 1:500

0 10 20 30 40 50m

10 8 6 4 2

SCALE 1:500

NOT TO BE USED FOR CONSTRUCTION

AMDT	DATE	DESCRIPTION	BY
2	29.11.21	ISSUED FOR DA	DM
1	05.08.21	PRELIMINARY ISSUE	LAP

JN Responsive Engineering

CLIENT
WINDANG KRUGER UNIT TRUST

STATUS
PRELIMINARY DA ISSUE

DISCIPLINE
CIVIL DESIGN

DRAWING TITLE
FLOOD STORAGE PLAN
DESIGN LOT 429

PROJECT
PROPOSED SUBDIVISION
LOTS 429 AND 501

ADDRESS
KRUGER AVENUE, WINDANG
NSW, 2528

PROJECT DETAILS

DESIGN	DM
DRAWN	DM
DATE	JUL 2021
DRG SIZE	A1
SCALE	1:500
PROJECT MGR	BA

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N0210053
C205 2

SITEWORKS PLAN - WINDANG ROAD

SCALE 1:100

SITEWORKS PLAN - KRUGER AVENUE

SCALE 1:100

0 2 4 6 8 10m

2 1

SCALE 1:100

NOT TO BE USED FOR CONSTRUCTION

AMDT	DATE	DESCRIPTION	BY
2	29.11.21	ISSUED FOR DA	DM
1	05.08.21	PRELIMINARY ISSUE	LAP

JN Responsive Engineering

CLIENT
WINDANG KRUGER UNIT TRUST

STATUS
PRELIMINARY DA ISSUE

DISCIPLINE
CIVIL DESIGN

DRAWING TITLE
SITEWORKS PLAN

PROJECT
PROPOSED SUBDIVISION
LOTS 429 AND 501

ADDRESS
KRUGER AVENUE, WINDANG
NSW, 2528

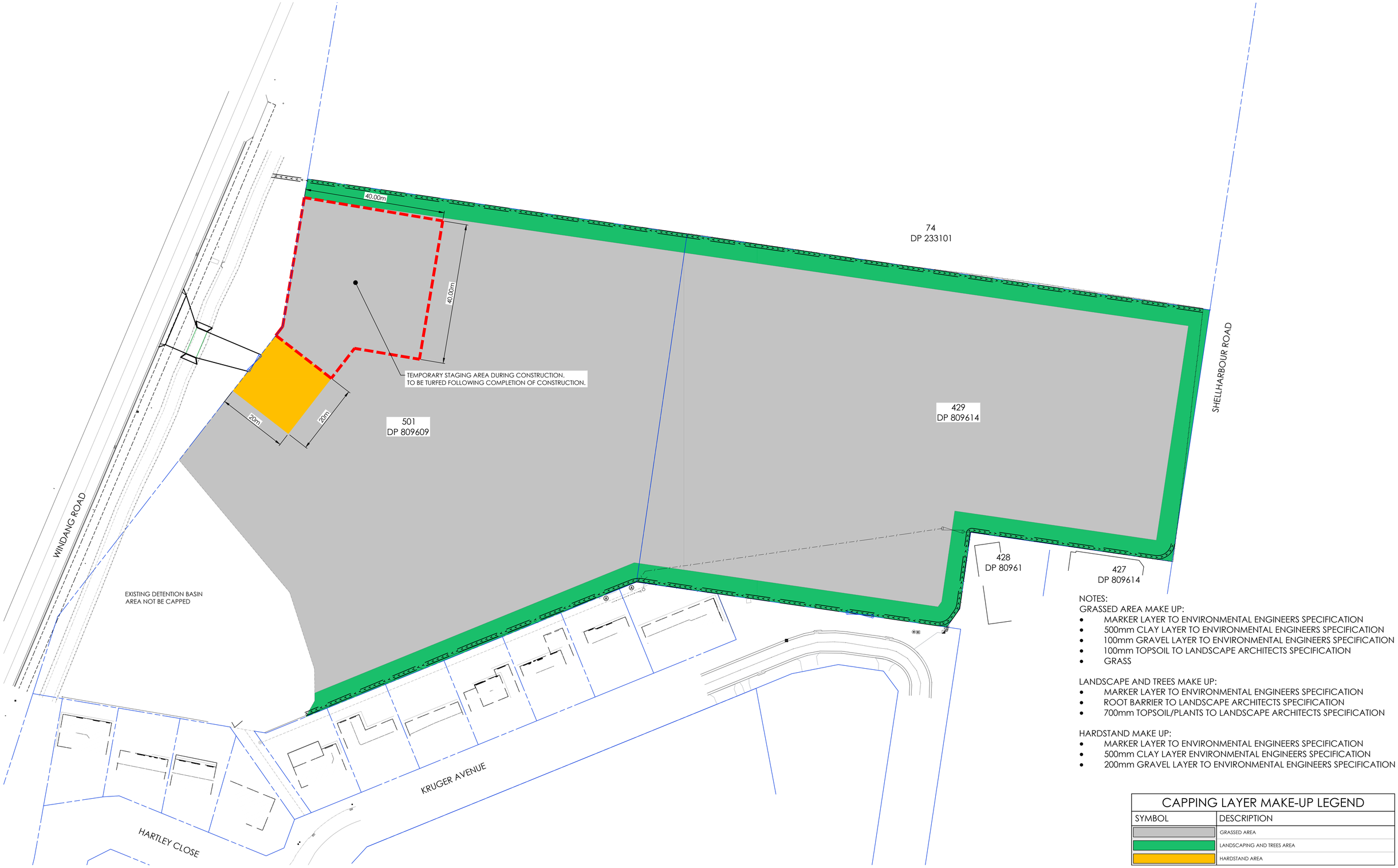
PROJECT DETAILS

DESIGN	DM
DRAWN	DM
DATE	JUL 2021
DRG SIZE	A1
SCALE	1:150
PROJECT MGR	BA

WWW.JN.COM.AU

N0210053

C300 2



NOTES:

GRASSED AREA MAKE UP:

- MARKER LAYER TO ENVIRONMENTAL ENGINEERS SPECIFICATION
- 500mm CLAY LAYER TO ENVIRONMENTAL ENGINEERS SPECIFICATION
- 100mm GRAVEL LAYER TO ENVIRONMENTAL ENGINEERS SPECIFICATION
- 100mm TOPSOIL TO LANDSCAPE ARCHITECTS SPECIFICATION
- GRASS

LANDSCAPE AND TREES MAKE UP:

- MARKER LAYER TO ENVIRONMENTAL ENGINEERS SPECIFICATION
- ROOT BARRIER TO LANDSCAPE ARCHITECTS SPECIFICATION
- 700mm TOPSOIL/PLANTS TO LANDSCAPE ARCHITECTS SPECIFICATION

HARDSTAND MAKE UP:

- MARKER LAYER TO ENVIRONMENTAL ENGINEERS SPECIFICATION
- 500mm CLAY LAYER ENVIRONMENTAL ENGINEERS SPECIFICATION
- 200mm GRAVEL LAYER TO ENVIRONMENTAL ENGINEERS SPECIFICATION

CAPPING LAYER MAKE-UP LEGEND	
SYMBOL	DESCRIPTION
	GRASSED AREA
	LANDSCAPING AND TREES AREA
	HARDSTAND AREA

CAPPING LAYER MAKE UP LAYOUT PLAN

SCALE 1:500

0 10 20 30 40 50m

10 8 6 4 2

SCALE 1:500

NOT TO BE USED FOR CONSTRUCTION

AMDT	DATE	DESCRIPTION	BY
2	09.12.21	RE-ISSUED FOR DA	DM
1	29.11.21	ISSUED FOR DA	DM

JN Responsive Engineering

CLIENT
WINDANG KRUGER UNIT TRUST

STATUS
PRELIMINARY DA ISSUE

DISCIPLINE
CIVIL DESIGN

DRAWING TITLE
CAPPING LAYER MAKE UP LAYOUT PLAN

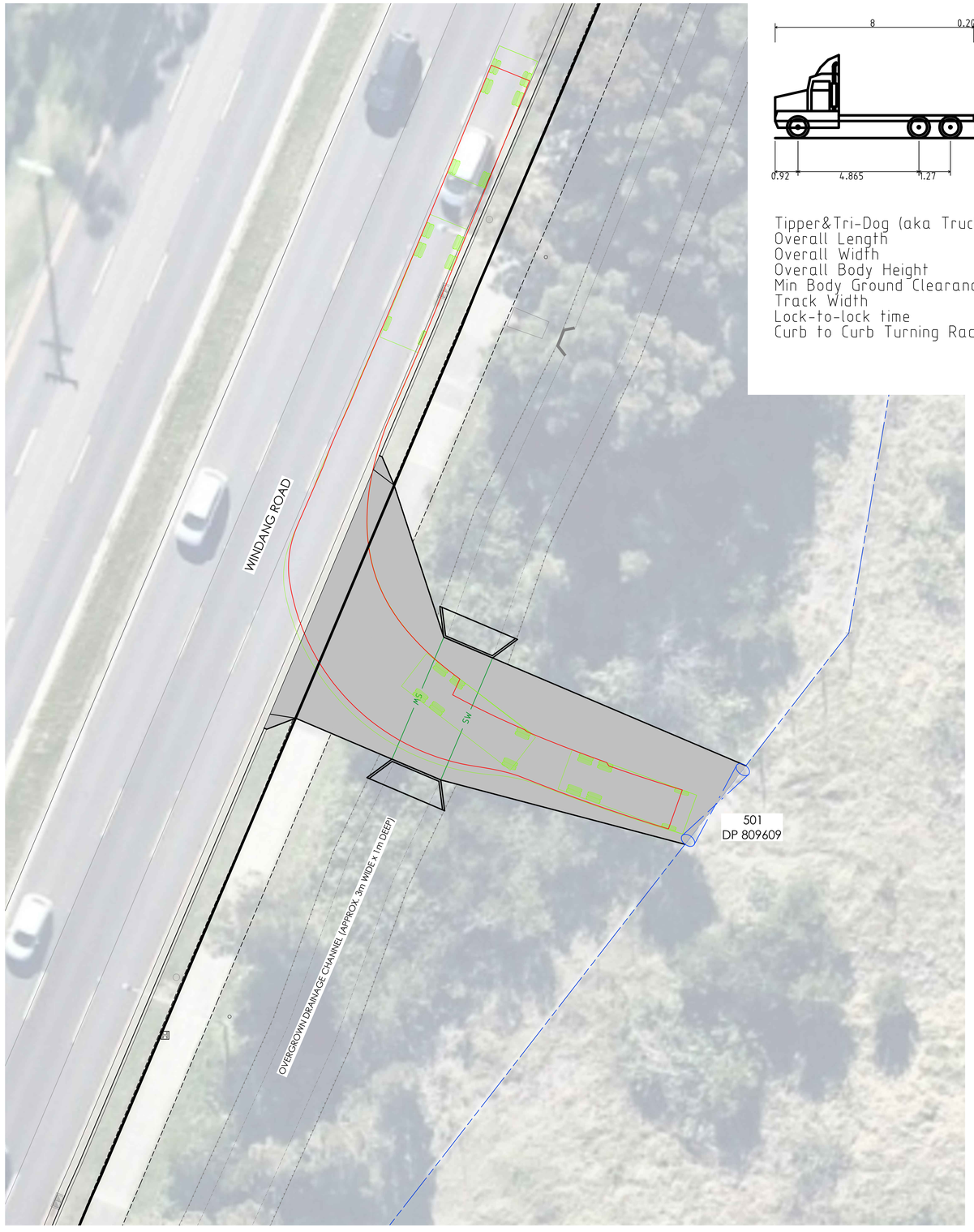
PROJECT
PROPOSED SUBDIVISION
LOTS 429 AND 501

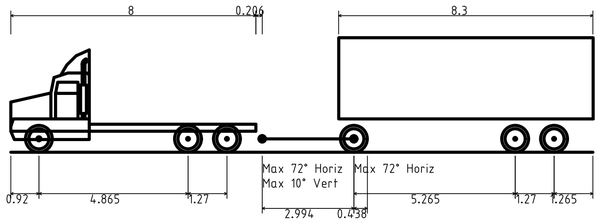
ADDRESS
KRUGER AVENUE, WINDANG
NSW, 2528

PROJECT DETAILS	
DESIGN	DM
DRAWN	DM
DATE	NOV 2021
DRG SIZE	A1
SCALE	1:500
PROJECT MGR	BA
WWW.JN.COM.AU	

N0210053

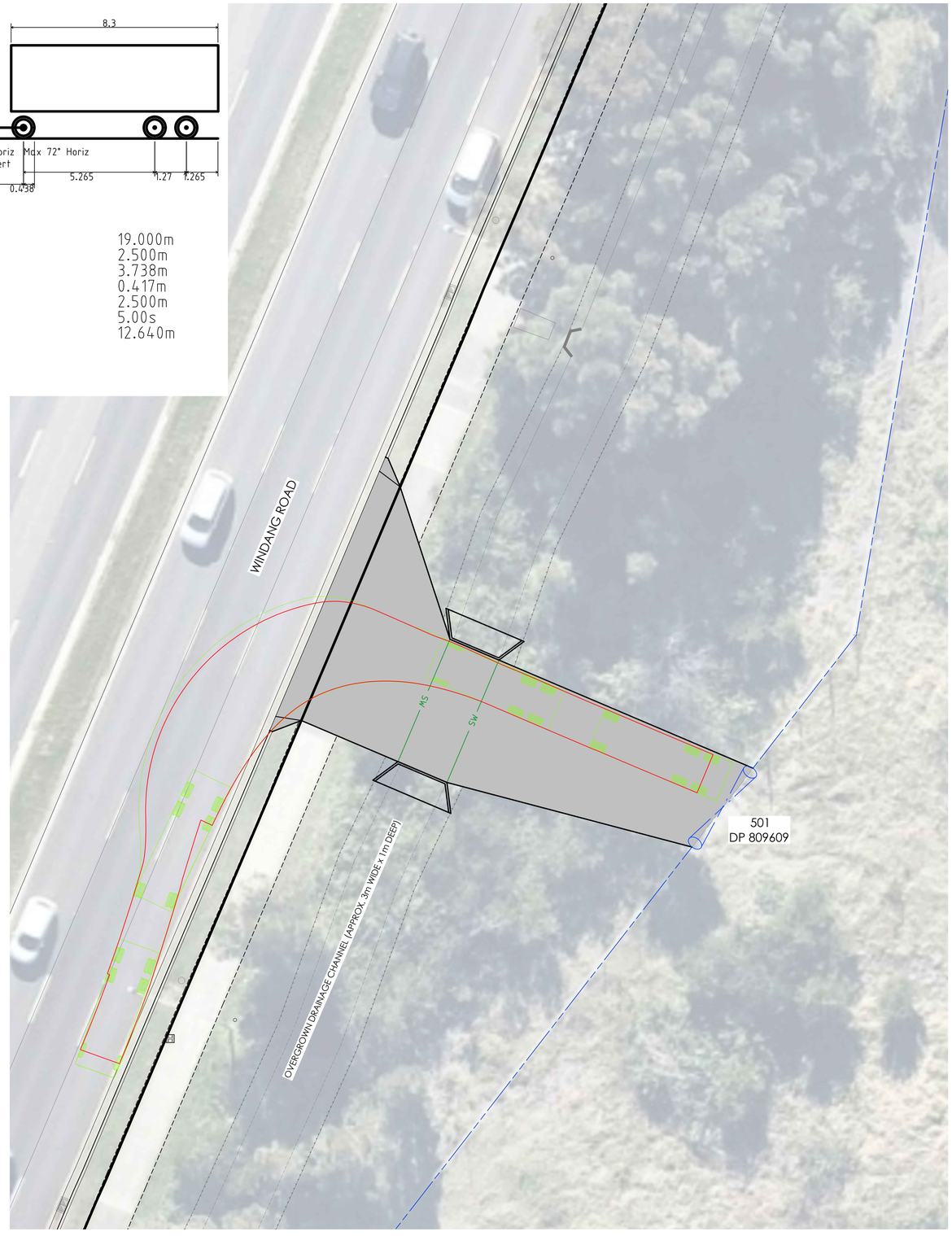
C301 2





Tipper&Tri-Dog (aka Truck&Dog)

Overall Length	19.000m
Overall Width	2.500m
Overall Body Height	3.738m
Min Body Ground Clearance	0.417m
Track Width	2.500m
Lock-to-lock time	5.00s
Curb to Curb Turning Radius	12.640m



VEHICLE TURNING PATH PLAN - ENTRY

SCALE 1:150

VEHICLE TURNING PATH PLAN - EXIT

SCALE 1:150

0 5 10 15m

3 2 1

SCALE 1:150

NOT TO BE USED FOR CONSTRUCTION

AMDT	DATE	DESCRIPTION	BY
2	29.11.21	ISSUED FOR DA	DM
1	05.08.21	PRELIMINARY ISSUE	LAP

JN Responsive Engineering

CLIENT
WINDANG KRUGER UNIT TRUST

STATUS
PRELIMINARY DA ISSUE

DISCIPLINE
CIVIL DESIGN

DRAWING TITLE
VEHICLE TURNING PATH PLAN - SHEET 1

PROJECT
PROPOSED SUBDIVISION
LOTS 429 AND 501

ADDRESS
KRUGER AVENUE, WINDANG
NSW, 2528

PROJECT DETAILS

DESIGN	DM
DRAWN	DM
DATE	JUL 2021
DRG SIZE	A1
SCALE	1:150
PROJECT MGR	BA

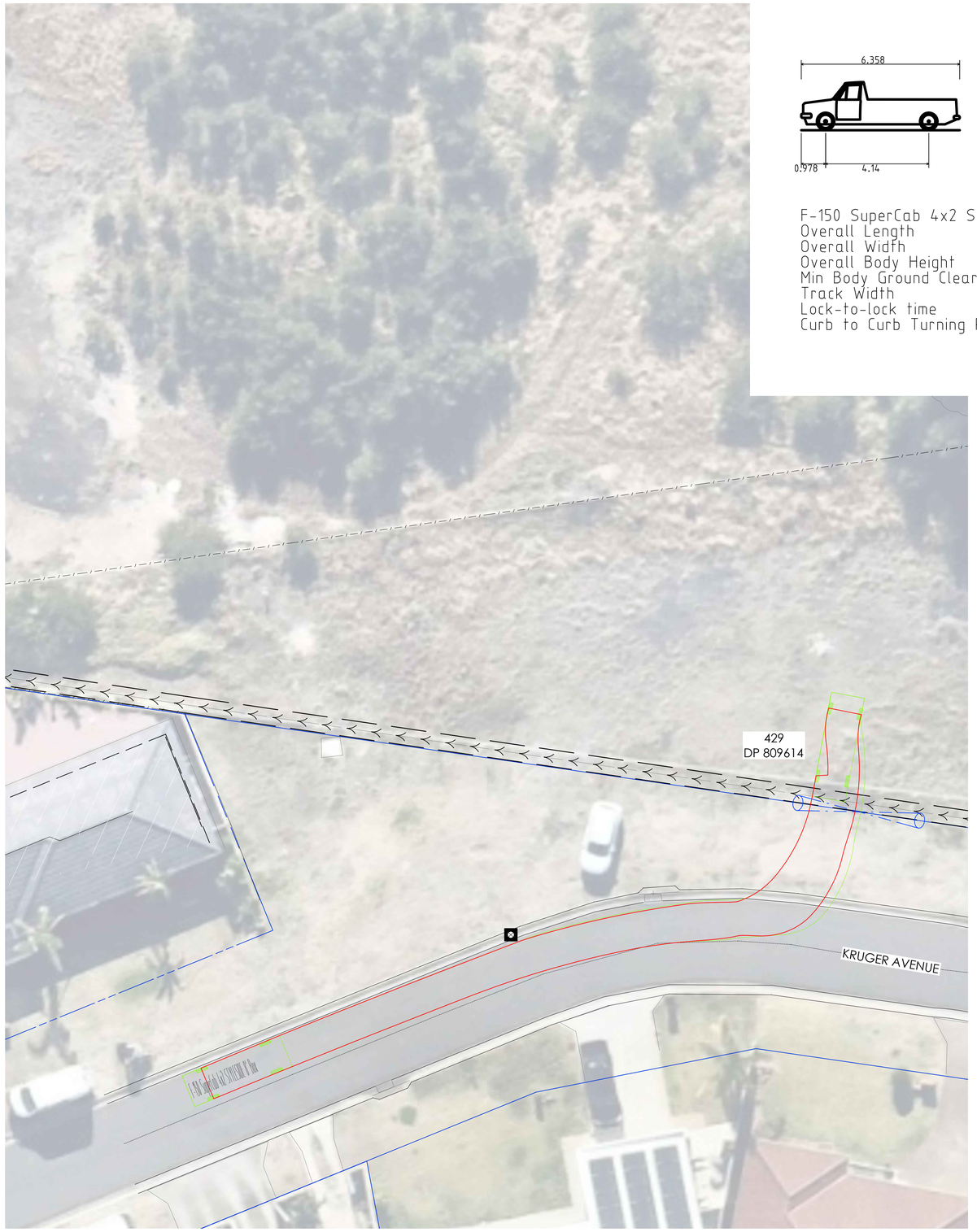
WWW.JN.COM.AU

N0210053

C400 2

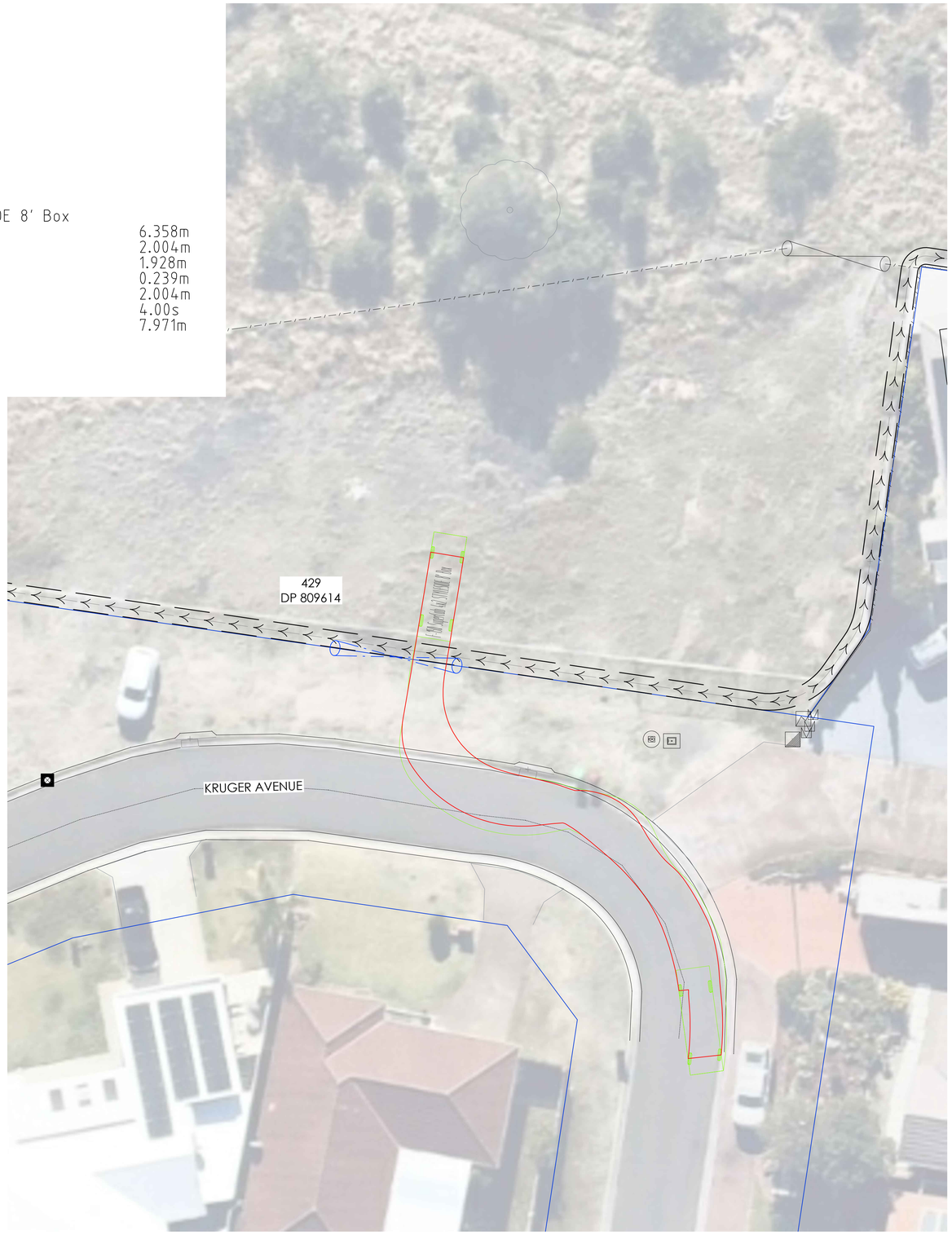
F-150 SuperCab 4x2 STYLESIDE 8' Box

Overall Length	6.358m
Overall Width	2.004m
Overall Body Height	1.928m
Min Body Ground Clearance	0.239m
Track Width	2.004m
Lock-to-lock time	4.00s
Curb to Curb Turning Radius	7.971m



VEHICLE TURNING PATH PLAN - ENTRY

SCALE 1:150



VEHICLE TURNING PATH PLAN - EXIT

SCALE 1:150

SCALE 1:150

NOT TO BE USED FOR CONSTRUCTION

AMDT	DATE	DESCRIPTION	BY
2	29.11.21	ISSUED FOR DA	DM
1	05.08.21	PRELIMINARY ISSUE	LAP

JN
Responsive Engineering

CLIENT
WINDANG KRUGER UNIT TRUST

STATUS
PRELIMINARY DA ISSUE

DISCIPLINE
CIVIL DESIGN

DRAWING TITLE
VEHICLE TURNING PATH PLAN - SHEET 2

PROJECT
PROPOSED SUBDIVISION LOTS 429 AND 501

ADDRESS
KRUGER AVENUE, WINDANG NSW, 2528

PROJECT DETAILS

DESIGN	DM
DRAWN	DM
DATE	JUL 2021
DRG SIZE	A1
SCALE	1:150
PROJECT MGR	BA

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