APPENDIX B

Site Plans and maps

B-1 Northern Water Project Site Plans

B-2 Marine Works

B-3 Desalination Plant

B-4 Transfer System and Electricty Infrastructure

NORTHERN
WATER PROJECT

JBS&G
A Geosyntec Company

Appendix B Relevant Project Plans and Drawings

Plans and drawings provided in this Appendix are from the *Reference Design Report Northern Water Project* prepared by GHD for Department for Infrastructure and Transport, 3 October 2025.

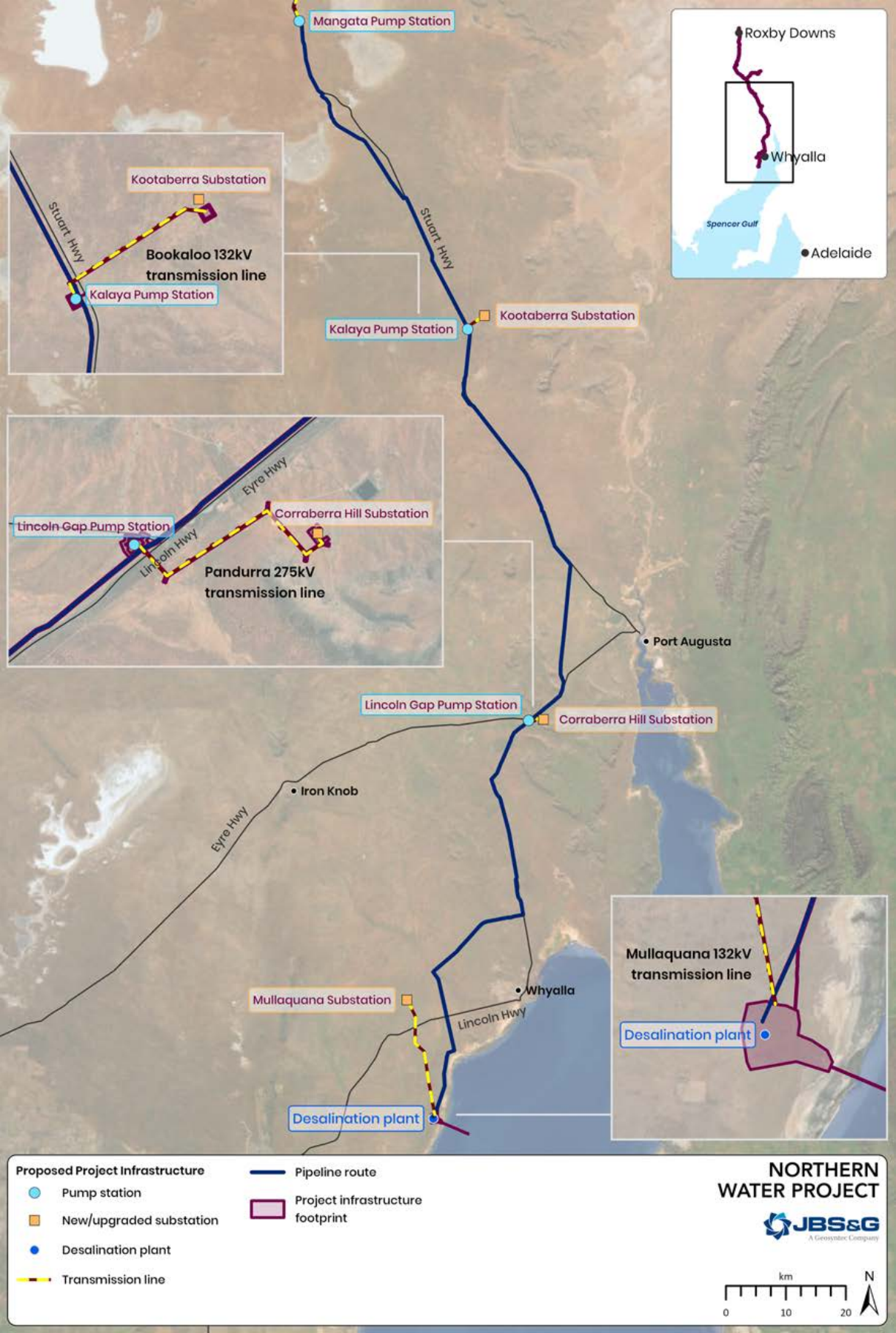
Document number	Title
Reference Design	
NW-DIT-BAS-0000-GEN-DRG-001-A	GENERAL COVER SHEET AND LOCALITY PLAN
- Marine Works (Civil design)	
NW-DIT-BAS-0000-CIV-DRG-1001-E	INTAKE TUNNEL PLAN AND LONGITUDINAL SECTION
NW-DIT-BAS-1000-CIV-DRG-1002-E	OUTLET TUNNEL PLAN AND LONGITUDINAL SECTION
NW-DIT-BAS-1000-CIV-DRG-1003-B	TBM DECLINE AND LAUNCH BOX PLAN AND ELEVATION
NW-DIT-BAS-1000-CIV-DRG-1101-B	INTAKE RISER DETAILS
NW-DIT-BAS-1000-CIV-DRG-1102-B	INTAKE STRUCTURE DETAILS
NW-DIT-BAS-1000-CIV-DRG-1103-B	OUTLET RISER DETAILS
NW-DIT-BAS-1000-CIV-DRG-1104-B	OUTLET DIFFUSER MANIFOLD DETAILS
Desalination plant (General arrangement and architecture)	
NW-DIT-BAS-2000-GEN-DRG-0001-C	DESALINATION PLANT OVERALL SITE PLAN
NW-DIT-BAS-2000-GEN-DRG-0002-C	MULLAQUANA DESALINATION PLANT GENERAL ARRANGEMENT PLAN
NW-DIT-BAS-2000-GEN-DRG-0003-C	INTAKE PMP STATION GENERAL ARRANGEMENT PLAN
NW-DIT-BAS-2100-ARC-DRG-0002-B	DESALINATION PLANT ULTRAFILTRATION (UF BUILDING) ARCHITECTURE - ELEVATIONS AND SECTIONS
NW-DIT-BAS-2050-ARC-DRG-0002-B	INTAKE PUMP STATION BUILDING
NW-DIT-BAS-2060-ARC-DRG-0003-B	REVERSE OSMOSIS (RO) BUILDING ARCHITECTURE - ELEVATIONS AND SECTIONS
Transfer system) (Civil design and architecture)	
NW-DIT-BAS-3160-CIV-DRG-2002-B	LINCOLN GAP PUMP STATION CIVIL GENERAL ARRANGEMENT
NW-DIT-BAS-3150-CIV-DRG-2012-C	KALAYA (KOOTABERRA) PUMP STATION CIVIL GENERAL ARRANGEMENT
NW-DIT-BAS-3200-CIV-DRG-2022-C	MANGATA (OAKDEN HILLS) PUMP STATION CIVIL GENERAL ARRANGEMENT
NW-DIT-BAS-3220-CIV-DRG-2032-C	BIMBA (PIMBA) STORAGE TANK CIVIL GENERAL ARRANGEMENT
NW-DIT-BAS-3000-CIV-DRG-2101-B	TANK TYPICAL DETAILS PLAN AND SECTION
NW-DIT-BAS-3000-CIV-DRG-3003-B	PIPELINE TRENCH DETAIL
NW-DIT-BAS-3120-ARC-DRG-0004-B	PUMP STATION 1 ARCHITECTURE - ELEVATIONS
NW-DIT-BAS-3000-ARC-DRG-0104-B	PUMP STATION 2, 3 AND 4 ARCHITECTURE - ELEVATIONS

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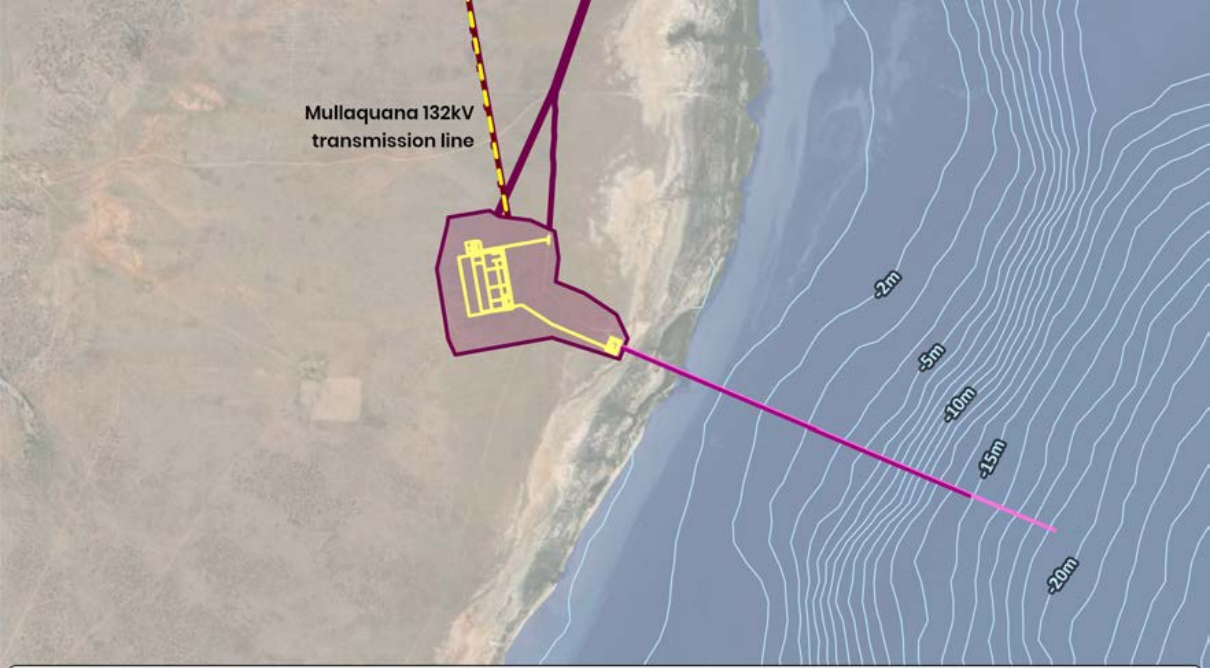
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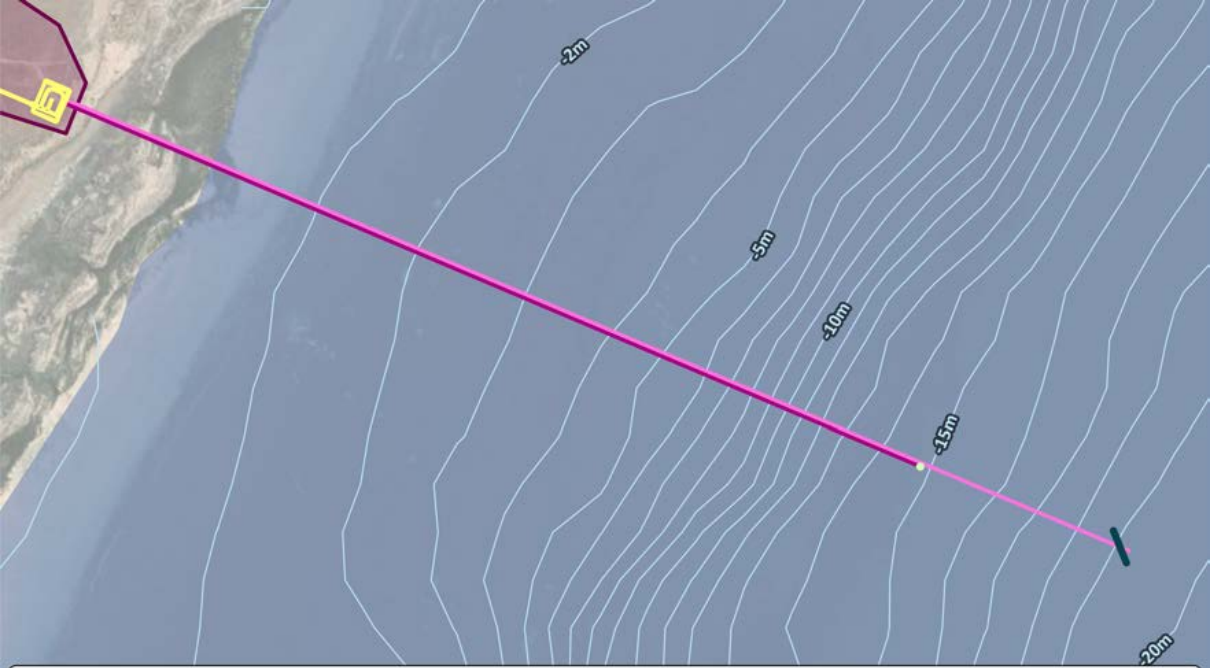
Northern Water Project Site Plans

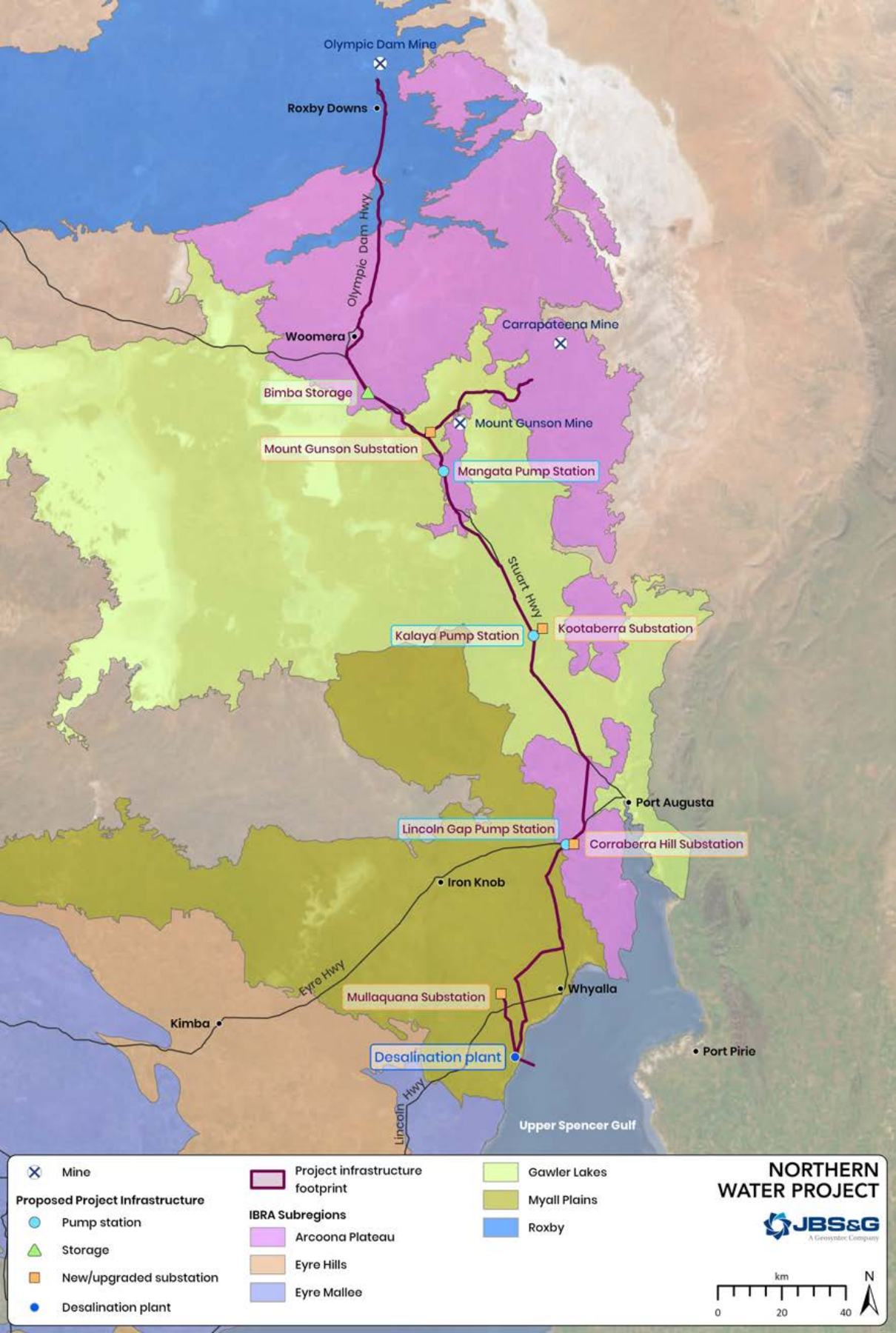

Olympic Dam Mine
Roxby Downs
Olympic Dam Hwy
Woomera
Carrapateena Mine
Bimba Storage
Mount Gunson Mine
Mount Gunson Substation
Mangata Pump Station
Stuart Hwy
Kalaya Pump Station
Kootaberra Substation
Port Augusta
Lincoln Gap Pump Station
Corraberra Hill Substation
Iron Knob
Eyre Hwy
Whyalla
Mullaquana Substation
Kimba
Desalination plant
Port Pirie
Lincoln Hwy
Upper Spencer Gulf
Mine
Proposed Project Infrastructure
Pump station
Storage
New/upgraded substation
Desalination plant
Project infrastructure footprint
Project area
NORTHERN WATER PROJECT
JBS&G
A Geosyntec Company
km
0
20
40
N

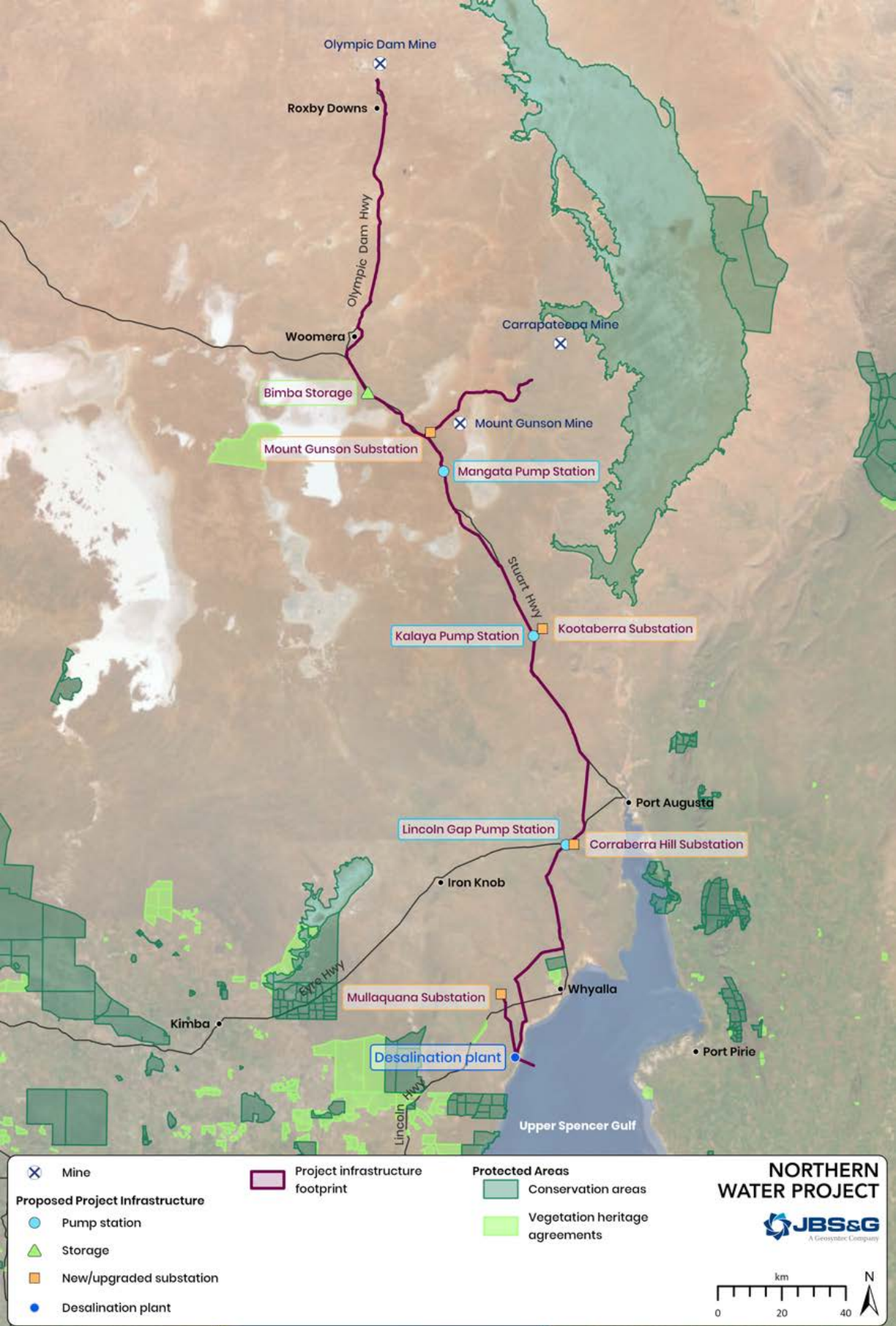

Mangata Pump Station
Roxby Downs
Whyalla
Spencer Gulf
Adelaide
Kootaberra Substation
Stuart Hwy
Bookaloo 132kV transmission line
Kalaya Pump Station
Stuart Hwy
Kalaya Pump Station
Kootaberra Substation
Eyre Hwy
Lincoln Gap Pump Station
Corraberra Hill Substation
Lincoln Hwy
Pandurra 275kV transmission line
Port Augusta
Lincoln Gap Pump Station
Corraberra Hill Substation
Iron Knob
Eyre Hwy
Mullaquana 132kV transmission line
Desalination plant
Whyalla
Mullaquana Substation
Lincoln Hwy
Desalination plant
Proposed Project Infrastructure
Pump station
New/upgraded substation
Desalination plant
Transmission line
Pipeline route
Project infrastructure footprint
NORTHERN WATER PROJECT
JBS&G
A Geosyntec Company
km
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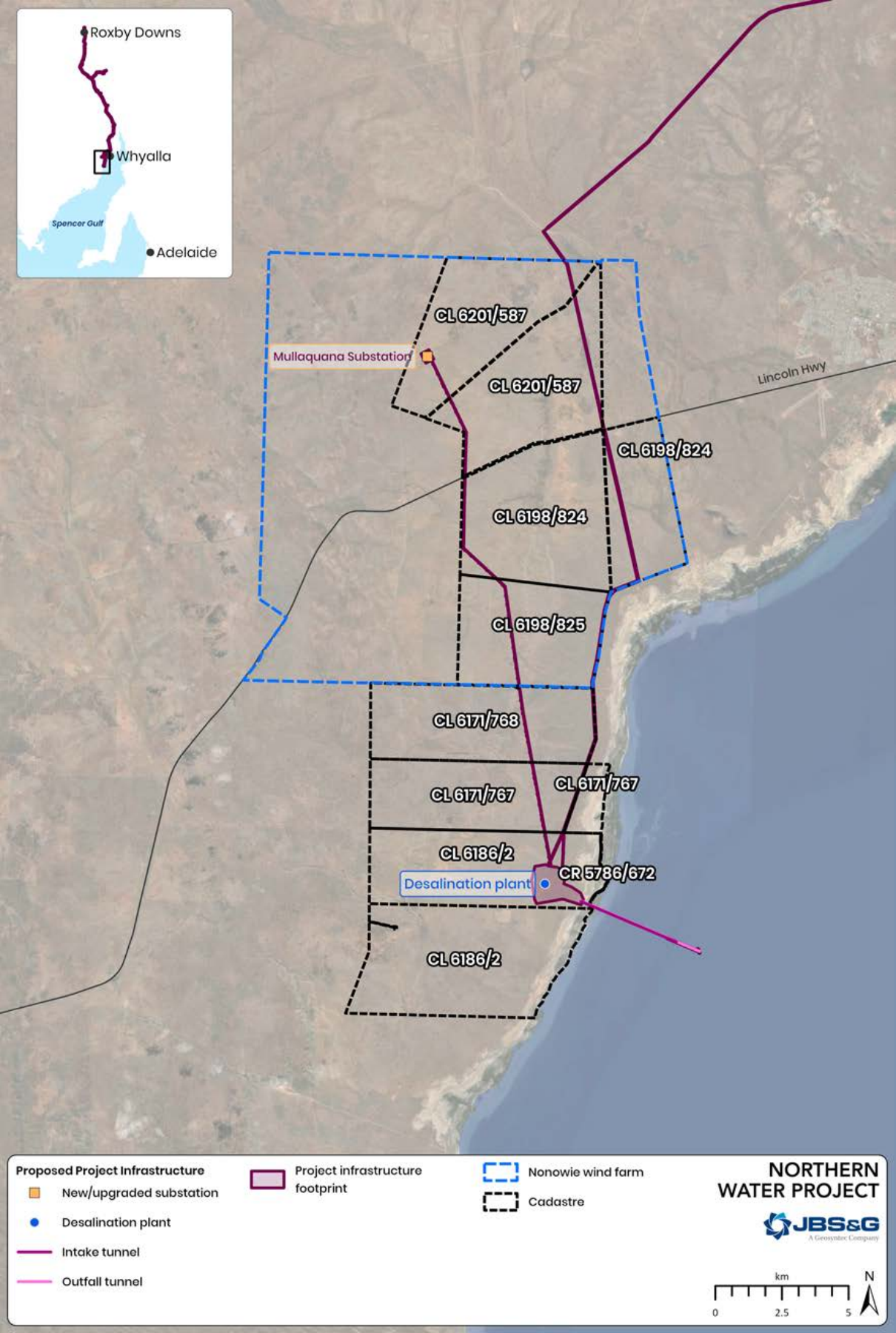

Olympic Dam Mine
Roxby Downs
Olympic Dam Hwy
Woomera
Carrapateena Mine
Bimba Storage
Stuart Hwy
Mount Gunson Mine
Mount Gunson Substation
Stuart Hwy
Oakden Hills 33kV transmission line
Mangata Pump Station
Mount Gunson Mine
Mount Gunson Substation
Mangata Pump Station
Roxby Downs
Whyalla
Spencer Gulf
Adelaide
Mine
Proposed Project Infrastructure
Pump station
Storage
New/upgraded substation
Transmission line
Pipeline route
Project infrastructure footprint
NORTHERN WATER PROJECT
JBS&G
A Geosyntec Company
km
0
10
20
N


Mullaquana 132kV
transmission line
-2m
-5m
-10m
-15m
-20m
Proposed Project Infrastructure
Transmission line
Desal plant design
Project infrastructure
footprint
Intake tunnel
Outfall tunnel
Bathymetry
NORTHERN
WATER PROJECT
JBS&G
km
0
1
2
N


-2m
-5m
-10m
-15m
-20m
Proposed Project Infrastructure
Desal plant design
Intake tunnel
Outfall tunnel
Intake
Diffuser
Project infrastructure footprint
Bathymetry
NORTHERN WATER PROJECT
JBS&G
km
0
0.5
1
N


Olympic Dam Mine
Roxby Downs
Olympic Dam Hwy
Woomera
Carrapateena Mine
Bimba Storage
Mount Gunson Mine
Mount Gunson Substation
Mangata Pump Station
Stuart Hwy
Kalaya Pump Station
Kootaberra Substation
Port Augusta
Lincoln Gap Pump Station
Corraberra Hill Substation
Iron Knob
Eyre Hwy
Whyalla
Mullaquana Substation
Kimba
Desalination plant
Port Pirie
Lincoln Hwy
Upper Spencer Gulf
Mine
Proposed Project Infrastructure
Pump station
Storage
New/upgraded substation
Desalination plant
Project infrastructure footprint
IBRA Subregions
Arcoona Plateau
Eyre Hills
Eyre Mallee
Gawler Lakes
Myall Plains
Roxby
NORTHERN WATER PROJECT
JBS&G
A Geosyntec Company
km
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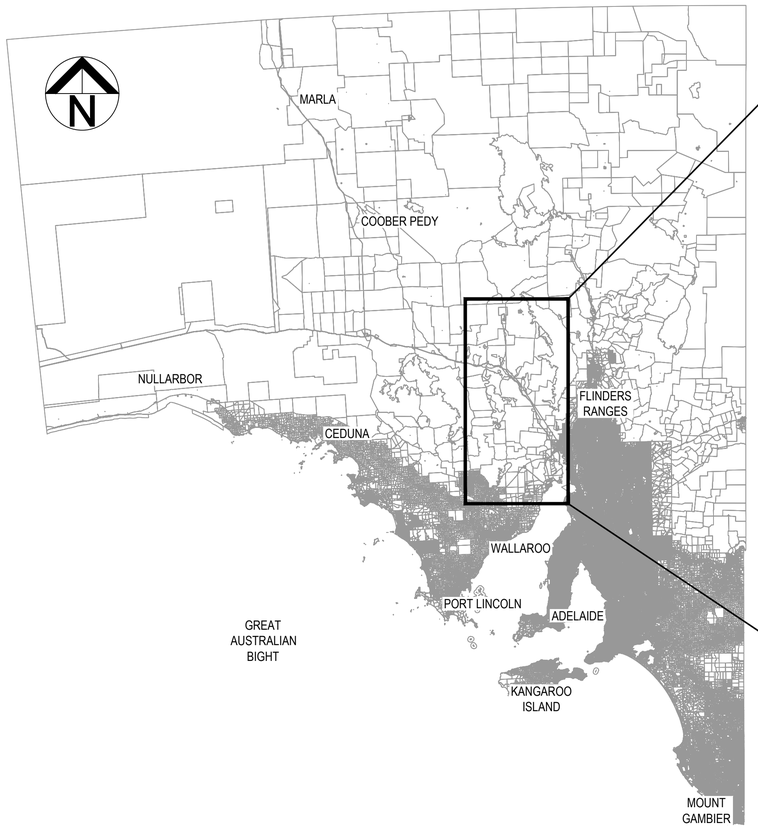

Olympic Dam Mine
Roxby Downs
Olympic Dam Hwy
Woomera
Carrapateena Mine
Bimba Storage
Mount Gunson Mine
Mount Gunson Substation
Mangata Pump Station
Stuart Hwy
Kalaya Pump Station
Kootaberra Substation
Port Augusta
Lincoln Gap Pump Station
Corraberra Hill Substation
Iron Knob
Eyre Hwy
Mullaquana Substation
Whyalla
Kimba
Desalination plant
Port Pirie
Lincoln Hwy
Upper Spencer Gulf
Mine
Proposed Project Infrastructure
Pump station
Storage
New/upgraded substation
Desalination plant
Project infrastructure footprint
Protected Areas
Conservation areas
Vegetation heritage agreements
NORTHERN WATER PROJECT
JBS&G
A Geosyntec Company
km
0
20
40
N


Roxby Downs
Whyalla
Spencer Gulf
Adelaide
CL 6201/587
Mullaquana Substation
CL 6201/587
Lincoln Hwy
CL 6198/824
CL 6198/824
CL 6198/825
CL 6171/768
CL 6171/767
CL 6171/767
CL 6186/2
CR 5786/672
Desalination plant
CL 6186/2
Proposed Project Infrastructure
New/upgraded substation
Desalination plant
Intake tunnel
Outfall tunnel
Project infrastructure footprint
Nonowie wind farm
Cadastre
NORTHERN WATER PROJECT
JBS&G
A Geosyntec Company
km
0
2.5
5
N

Roxby Downs
Whyalla
Spencer Gulf
Adelaide
Kalaya Pump Station
Kootaberra Substation
Stuart Hwy
Port Augusta
Lincoln Gap Pump Station
Corraberra Hill Substation
Iron Knob
Eyre Hwy
Mullaquana Substation
Whyalla
Upper Spencer Gulf Marine Park
Port Pirie
Desalination plant
Lincoln Hwy
Upper Spencer Gulf
Cowell
Franklin Harbor Marine Park
Proposed Project Infrastructure
Pump station
New/upgraded substation
Project infrastructure footprint
Marine Protected Areas
Shipwrecks
State marine park
National heritage places
Aquaculture Zones, Leases and Licences
Aquaculture zone
Aquaculture exclusion zone
Licence - application
Lease - active
Licence - active
NORTHERN WATER PROJECT
JBS&G
A Geosyntec Company
km
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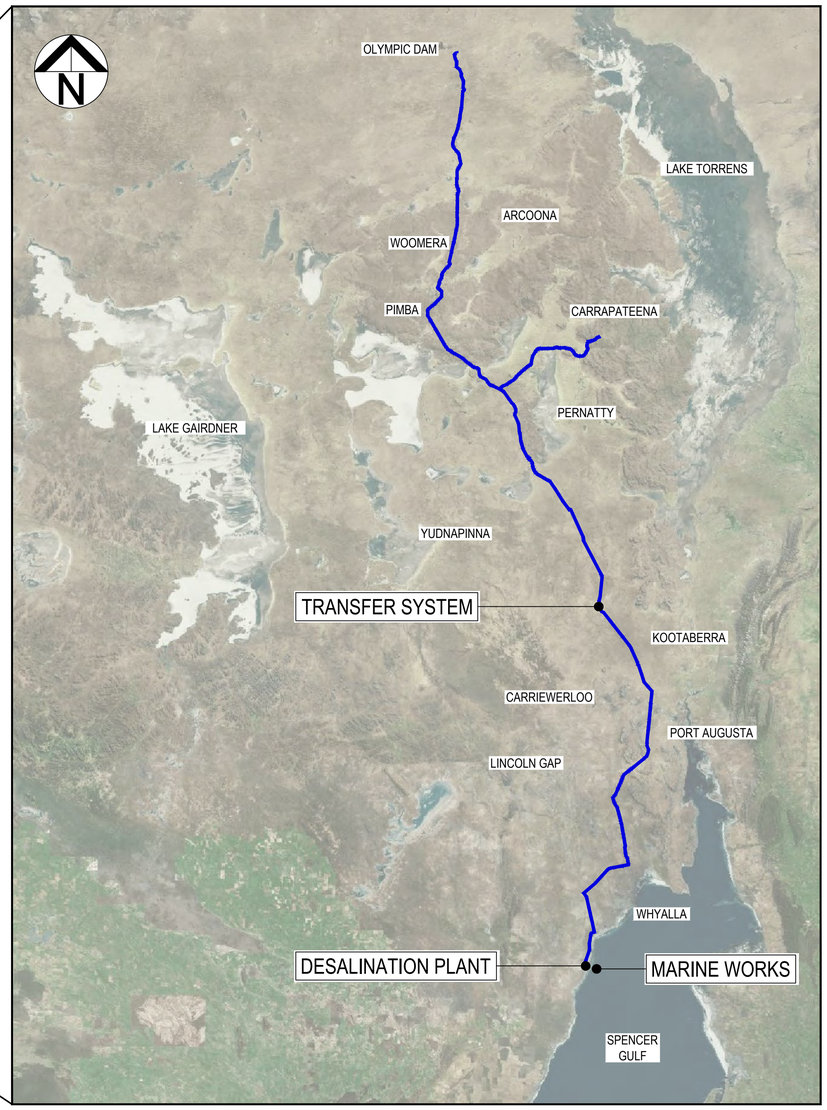
Roxby Downs
Whyalla
Spencer Gulf
Adelaide
Kalaya Pump Station
Kootaberra Substation
Stuart Hwy
Port Augusta
Lincoln Gap Pump Station
Corraberra Hill Substation
Iron Knob
Eyre Hwy
Mullaquana Substation
Whyalla
Desalination plant
Lincoln Hwy
Port Pirie
Upper Spencer Gulf
Cowell
11
21
23
22
20
19
Proposed Project Infrastructure
Pump station
New/upgraded substation
Project infrastructure footprint
Juvenile prawn nursery sites
Prawn commercial fisheries blocks
Marine scalefish fishery zones
NORTHERN WATER PROJECT
JBS&G
A Geosyntec Company
km
0
15
30
N

REFERENCE DESIGN
NORTHERN WATER



MAP OF SOUTH AUSTRALIA

NOT TO SCALE



LOCALITY PLAN

NOT TO SCALE

FOR INFORMATION ONLY

NOT FOR CONSTRUCTION

SCALES:

No.	AMENDMENT DESCRIPTION	BY	DATE
A	FOR INFORMATION ONLY	AC	30.06.25

Government of South Australia

Department for Infrastructure and Transport

ALL DIMENSIONS ARE IN METRES UNLESS SHOWN OTHERWISE ◄ 100 MILLIMETRES ON ORIGINAL DRAWING ► UNCONTROLLED COPY WHEN PRINTED

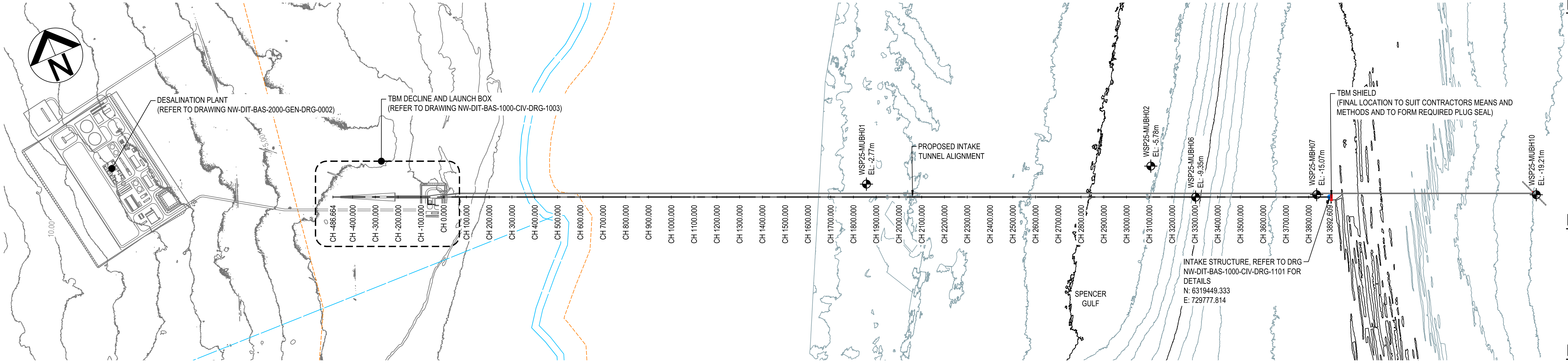
REFERENCE DESIGN
NORTHERN WATER
GENERAL
COVER SHEET AND LOCALITY PLAN

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Appendix B-2:

Marine Works



PLAN

SCALE 1:10000

NOTES:

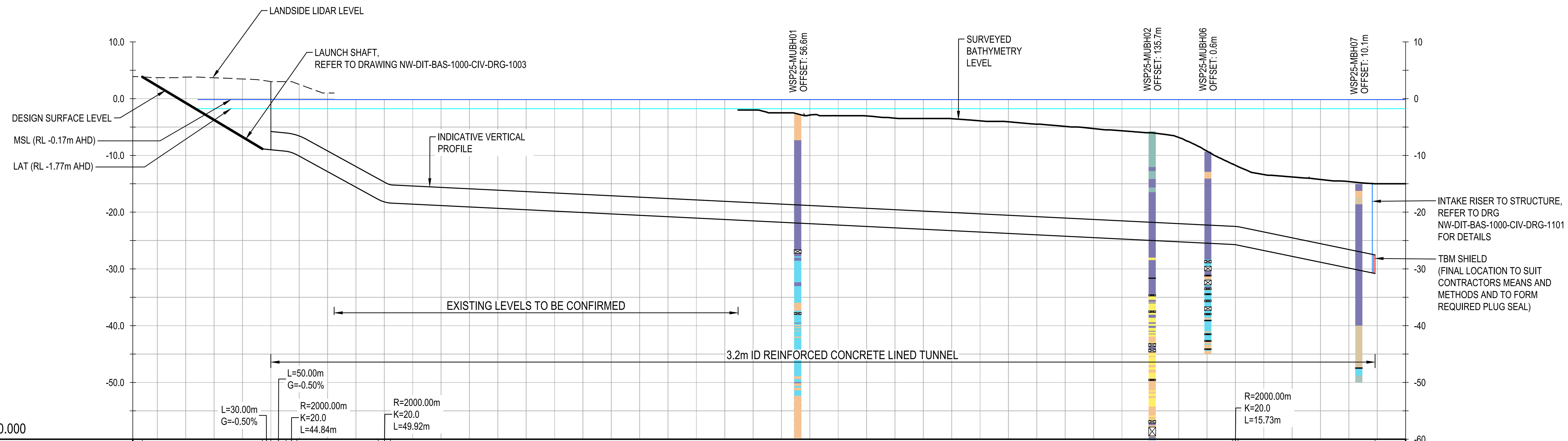
1. ALL LEVELS ARE IN m AHD (AUSTRALIAN HEIGHT DATUM) UNLESS NOTED OTHERWISE. CHART DATUM (CD) 0.0 LEVEL IS EQUIVALENT TO LOWEST ASTRONOMICAL TIDE (LAT) AND -1.77 m AHD) MGA2020 ZONE 53.
2. VERTICAL ALIGNMENT AND GROUND COVER TO TUNNEL IS INDICATIVE ONLY AND REQUIRES FURTHER GEOTECHNICAL INFORMATION TO CONFIRM.
3. HORIZONTAL ALIGNMENT INDICATIVELY SHOWN TO PROVIDE 3 TBM DIAMETER SEPARATION. THE HORIZONTAL AND VERTICAL RADII, AND SEPARATION OF THE TUNNELS SHOULD BE ADJUSTED TO SUIT THE CONTRACTORS DESIGN, INCLUDING INTERFACE OF TBM TUNNELING WITH ANY GROUND TREATMENT BLOCKS FOR INTAKE AND OUTFALL RISER CONNECTIONS.
4. BOREHOLE DATA EXTRACTED FROM DIT SHAREPOINT 4/06/2025. BOREHOLE DATA IS PRELIMINARY. GEOTECHNICAL INVESTIGATIONS ARE ON GOING.

LEGEND:

- CADASTRAL BOUNDARY
- COASTAL CONVERTION ZONE
- 0.00 LANDSIDE LIDAR CONTOUR
- SURVEYED BATHYMETRY (MAJOR)
- SURVEYED BATHYMETRY (MINOR)

BOREHOLE LOG:

- SAND
- GRAVEL
- CLAY
- SILT
- PEAT
- CORE LOSS
- CALCARENITE
- SHALE
- SANDSTONE



DATUM -60.000

VERTICAL ALIGNMENT: L=423.06m G=-3.00%; L=280.21m G=-2.74%; L=2967.17m G=-0.25%; L=484.74m G=-1.03%

HORIZONTAL ALIGNMENT: L=4486.66m B=112° 59' 16"

CHAINAGE (m)	DESIGN SURFACE INVERT	DEPTH TO INVERT	SURVEYED BATHYMETRY (mAHD)	LANDSIDE LIDAR (mAHD)
-486.664	3.842	0.000		3.904
-400.000	2.250	-1.447		3.697
-300.000	-0.750	-4.544		3.794
-200.000	-3.750	-7.423		3.673
-100.000	-6.750	-10.214		3.464
0.000	-9.000	-12.014		3.014
100.000	-10.118	-12.624		2.506
200.000	-12.861	-13.861		1.000
300.000	-15.603			
400.000	-18.190			
500.000	-18.591			
600.000	-18.837			
700.000	-19.082			
800.000	-19.328			
900.000	-19.574			
1000.000	-19.819			
1100.000	-20.065			
1200.000	-20.311			
1300.000	-20.556			
1400.000	-20.802			
1500.000	-21.048			
1600.000	-21.293			
1700.000	-21.539	-19.536	-2.003	
1800.000	-21.785	-19.285	-2.500	
1900.000	-22.030	-19.127	-2.903	
2000.000	-22.276	-19.276	-3.000	
2100.000	-22.522	-19.479	-3.042	
2200.000	-22.767	-19.329	-3.438	
2300.000	-23.013	-19.513	-3.500	
2400.000	-23.259	-19.728	-3.530	
2500.000	-23.504	-19.598	-3.906	
2600.000	-23.750	-19.679	-4.071	
2700.000	-23.996	-19.495	-4.500	
2800.000	-24.241	-19.354	-4.887	
2900.000	-24.487	-19.207	-5.279	
3000.000	-24.732	-19.066	-5.666	
3100.000	-24.978	-18.978	-6.000	
3200.000	-25.224	-18.388	-6.836	
3300.000	-25.469	-16.224	-9.245	
3400.000	-25.731	-13.989	-11.741	
3500.000	-26.747	-13.375	-13.372	
3600.000	-27.780	-13.976	-13.804	
3700.000	-28.812	-14.567	-14.245	
3800.000	-29.844	-15.231	-14.613	
3892.609	-30.800	-15.800	-15.000	
3900.000			-15.000	
4000.000			-15.000	

LONGITUDINAL SECTION

H SCALE 1:10000; V SCALE 1:500

SCALES: 10 0 5 10 15 20 V; 200 0 100 200 300 400 H

No.	AMENDMENT DESCRIPTION	BY	DATE
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D	FOR INFORMATION ONLY	AC	30.06.25
C	DRAFT FOR COMMENT	AM	06.06.25
B	DRAFT FOR COMMENT	NA	16.05.25
A	DRAFT - WORK IN PROGRESS	HS	06.05.25

Government of South Australia
Department for Infrastructure and Transport

REFERENCE DESIGN
NORTHERN WATER
MARINE WORKS
INTAKE TUNNEL
PLAN AND LONGITUDINAL SECTION

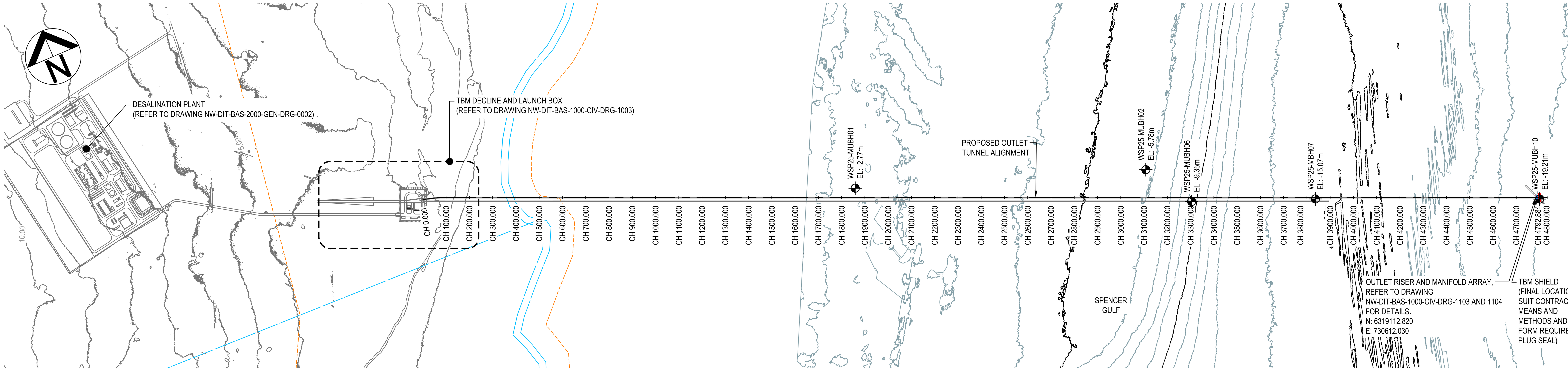
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ALL DIMENSIONS ARE IN METRES UNLESS SHOWN OTHERWISE — 100 MILLIMETRES ON ORIGINAL DRAWING — UNCONTROLLED COPY WHEN PRINTED

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PLAN

SCALE 1:10000

NOTES:

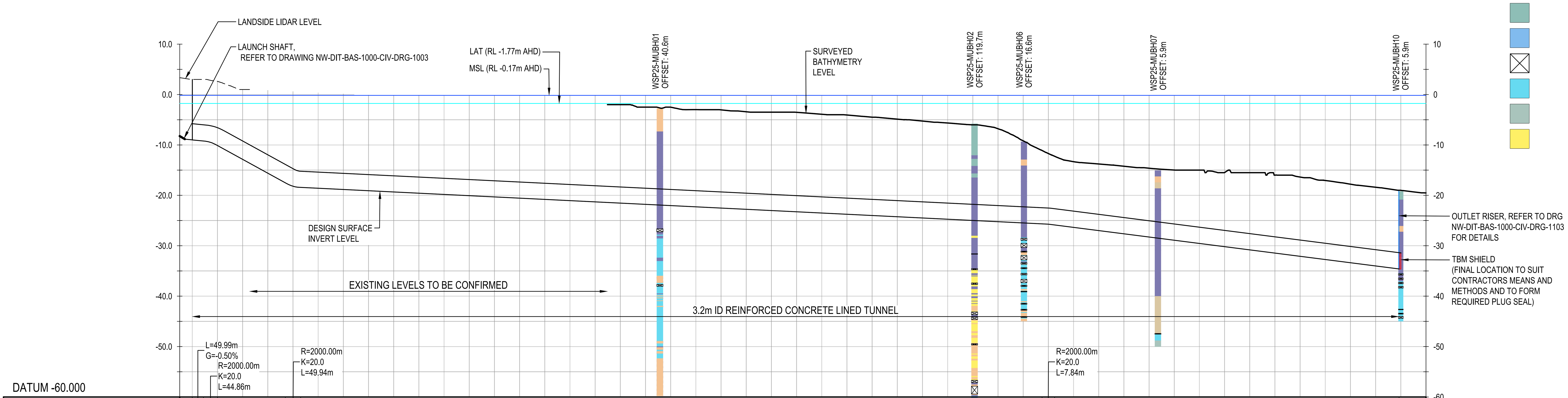
1. ALL LEVELS ARE IN m AHD (AUSTRALIAN HEIGHT DATUM) UNLESS NOTED OTHERWISE. CHART DATUM (CD) 0.0 LEVEL IS EQUIVALENT TO LOWEST ASTRONOMICAL TIDE (LAT) AND -1.77m AHD) MGA2020 ZONE 53.
2. VERTICAL ALIGNMENT AND GROUND COVER TO TUNNEL IS INDICATIVE ONLY AND REQUIRES GEOTECHNICAL INFORMATION TO CONFIRM.
3. HORIZONTAL ALIGNMENT INDICATIVELY SHOWN TO PROVIDE 3 TBM DIAMETER SEPARATION. THE HORIZONTAL AND VERTICAL RADII, AND SEPARATION OF THE TUNNELS SHOULD BE ADJUSTED TO SUIT THE CONTRACTORS DESIGN, INCLUDING INTERFACE OF TBM TUNNELING WITH ANY GROUND TREATMENT BLOCKS FOR INTAKE AND OUTFALL RISER CONNECTIONS.
4. BOREHOLE DATA EXTRACTED FROM DIT SHAREPOINT 4/06/2025. BOREHOLE DATA IS PRELIMINARY. GEOTECHNICAL INVESTIGATIONS ARE ON GOING.

LEGEND:

- CADASTRAL BOUNDARY
- COASTAL CONVERTION ZONE
- 0.00 LANDSIDE LIDAR CONTOUR
- SURVEYED BATHYMETRY (MAJOR)
- SURVEYED BATHYMETRY (MINOR)

BOREHOLE LOG:

- SAND
- GRAVEL
- CLAY
- SILT
- PEAT
- CORE LOSS
- CALCARENITE
- SHALE
- SANDSTONE



VERTICAL ALIGNMENT: L=280.18m G=-2.74%; L=2971.11m G=-0.25%; L=1388.96m G=-0.64%

HORIZONTAL ALIGNMENT: L=24.43m; 65.889; R=200.00m; B=105° 59' 16"; L=103.66m; L=4821.91m; B=112° 59' 16"

CHAINAGE	DESIGN SURFACE INVERT	DEPTH TO INVERT	SURVEYED BATHYMETRY (mAHD)	LANDSIDE LIDAR (mAHD)
-50.000				3.340
0.000	-9.000	-12.000		3.000
100.000	-10.118	-12.731		2.612
200.000	-12.861	-13.861		1.000
300.000	-15.603			
400.000	-18.190			
500.000	-18.591			
600.000	-18.837			
700.000	-19.082			
800.000	-19.328			
900.000	-19.574			
1000.000	-19.819			
1100.000	-20.065			
1200.000	-20.311			
1300.000	-20.556			
1400.000	-20.802			
1500.000	-21.048			
1600.000	-21.293			
1700.000	-21.539	-19.537	-2.002	
1800.000	-21.785	-19.286	-2.499	
1900.000	-22.030	-19.519	-2.511	
2000.000	-22.276	-19.278	-2.998	
2100.000	-22.522	-19.485	-3.036	
2200.000	-22.767	-19.348	-3.419	
2300.000	-23.013	-19.513	-3.500	
2400.000	-23.259	-19.729	-3.530	
2500.000	-23.504	-19.585	-3.919	
2600.000	-23.750	-19.687	-4.062	
2700.000	-23.996	-19.501	-4.495	
2800.000	-24.241	-19.358	-4.883	
2900.000	-24.487	-19.220	-5.267	
3000.000	-24.732	-19.083	-5.649	
3100.000	-24.978	-18.979	-6.000	
3200.000	-25.224	-18.445	-6.779	
3300.000	-25.469	-16.288	-9.182	
3400.000	-25.719	-14.015	-11.704	
3500.000	-26.353	-13.031	-13.322	
3600.000	-26.991	-13.207	-13.784	
3700.000	-27.629	-13.406	-14.223	
3800.000	-28.267	-13.648	-14.618	
3900.000	-28.904	-13.918	-14.986	
4000.000	-29.542	-14.542	-15.000	
4100.000	-30.180	-14.709	-15.472	
4200.000	-30.818	-15.318	-15.500	
4300.000	-31.456	-15.456	-16.000	
4400.000	-32.094	-15.722	-16.372	
4500.000	-32.732	-15.683	-17.048	
4600.000	-33.370	-15.585	-17.785	
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4900.000			-19.520	

LONGITUDINAL SECTION

H SCALE 1:10000; V SCALE 1:500

SCALES: V 10 0 5 10 15 20; H 200 0 100 200 300 400

No.	AMENDMENT DESCRIPTION	BY	DATE
E	RE-ISSUE FOR INFORMATION ONLY	AC	26.09.25
D	FOR INFORMATION ONLY	AC	30.06.25
C	DRAFT FOR COMMENT	AM	06.06.25
B	DRAFT FOR COMMENT	NA	16.05.25
A	DRAFT - WORK IN PROGRESS	HS	06.05.25

FOR INFORMATION ONLY

NOT FOR CONSTRUCTION

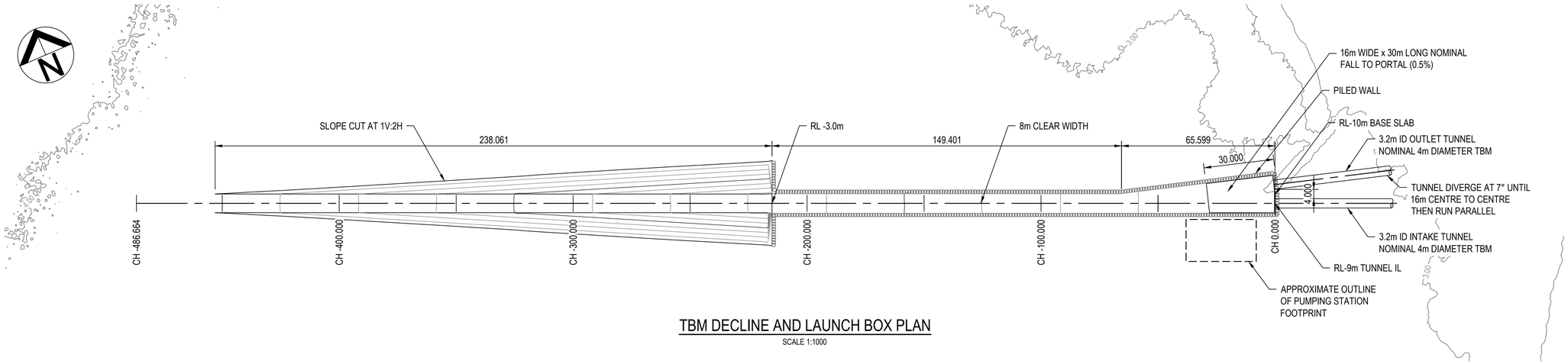
Government of South Australia
Department for Infrastructure and Transport

REFERENCE DESIGN
NORTHERN WATER
MARINE WORKS
OUTLET TUNNEL
PLAN AND LONGITUDINAL SECTION

DESIGNED	DRAFTED	CHECKED	PATCHS No	SKETCH No.	AMEND No.:
IL/DO	NA	BH	24C347	NW-DIT-BAS-1000-CIV-DRG-1002	E

ALL DIMENSIONS ARE IN METRES UNLESS SHOWN OTHERWISE — 100 MILLIMETRES ON ORIGINAL DRAWING — UNCONTROLLED COPY WHEN PRINTED

CAD FILE NAME: NW-DIT-BAS-1000-CIV-DRG-1002.dwg

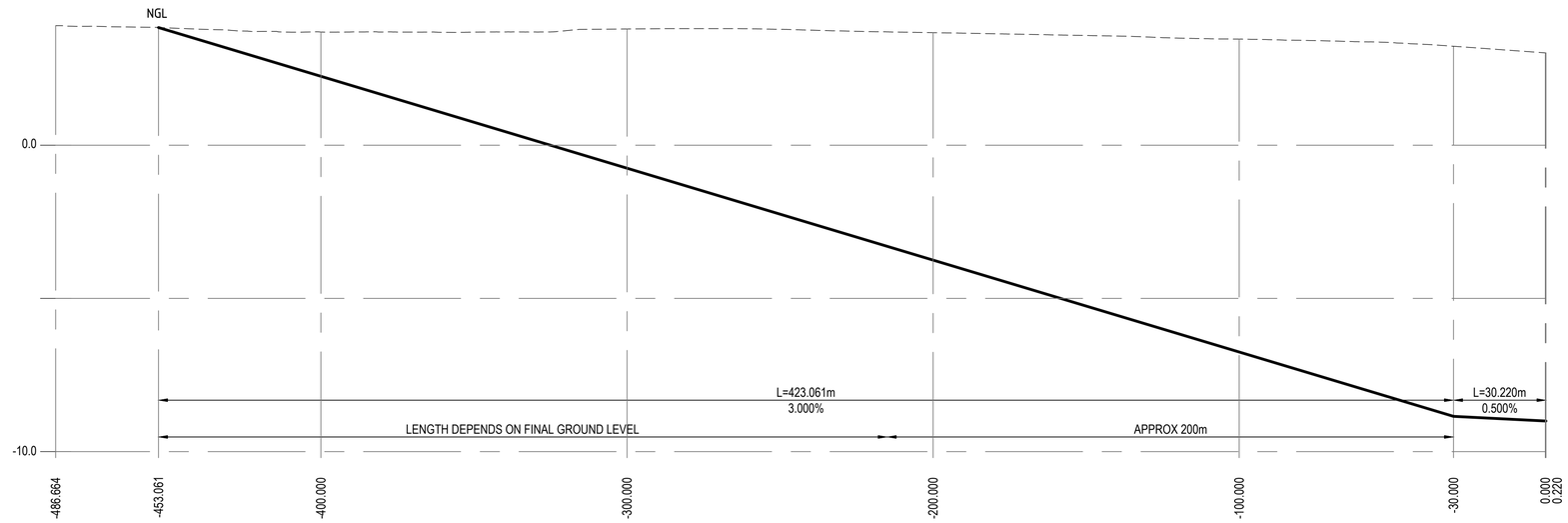


TBM DECLINE AND LAUNCH BOX PLAN

SCALE 1:1000

NOTES:

1. ALL DIMENSIONS ARE IN METRES UNLESS OTHERWISE SPECIFIED.
2. THIS DRAWING SHOWS PRELIMINARY INDICATIVE DIMENSIONS FOR A POSSIBLE BOX CUT AND ITS RELATIONSHIP TO OTHER PROPOSED INFRASTRUCTURE. THIS IS NOT A TEMPORARY WORKS DESIGN (TO BE COMPLETED AS PART OF DETAILED DESIGN).
3. FOR OTHER NOTES, REFER TO DRAWINGS NW-DIT-BAS-1000-CIV-DRG-1001 AND 1002.



TBM DECLINE AND LAUNCH BOX - ELEVATION

H SCALE 1:1000; V SCALE 1:100

FOR INFORMATION ONLY

NOT FOR CONSTRUCTION

SCALES: 2 0 1 2 3 4 V; 20 0 10 20 30 40 H

No.	AMENDMENT DESCRIPTION	BY	DATE
B	FOR INFORMATION ONLY	AC	30.06.25
A	DRAFT FOR COMMENT	NA	16.05.25

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ALL DIMENSIONS ARE IN METRES UNLESS SHOWN OTHERWISE | 100 MILLIMETRES ON ORIGINAL DRAWING | UNCONTROLLED COPY WHEN PRINTED

REFERENCE DESIGN

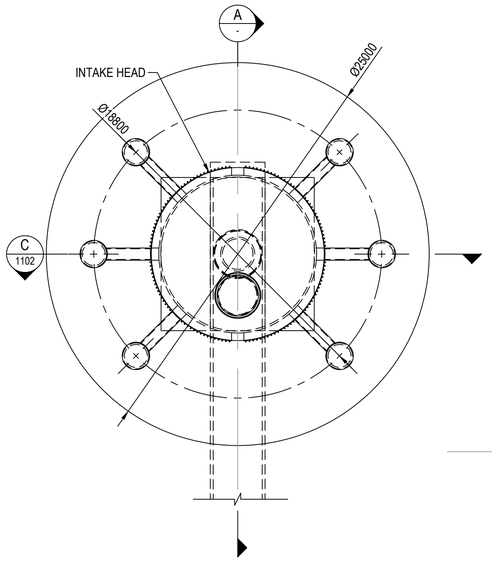
NORTHERN WATER

MARINE WORKS

TBM DECLINE AND LAUNCH BOX PLAN AND ELEVATION

DESIGNED	DRAFTED	CHECKED	PATCHS No	SKETCH No.	AMEND No.:
IL/DO	NA	BH	24C347	NW-DIT-BAS-1000-CIV-DRG-1003	B

CAD FILE NAME: NW-DIT-BAS-1000-CIV-DRG-1003.dwg



INTAKE HEAD PLAN

SCALE 1:200

A SECTION

SCALE 1:50

INTAKE RISER AND HEAD DETAILS

NOTES:

1. ALL DIMENSIONS ARE IN MILLIMETRES UNLESS OTHERWISE SPECIFIED.
2. DESIGN AND STABILITY OF THE INTAKE AND OUTFALL SUBJECT TO VERIFICATION OF GROUND CONDITIONS AND STABILITY ANALYSIS BASED ON SITE SPECIFIC GEOTECHNICAL, BATHYMETRIC AND METOCEAN CONDITIONS.
3. DEPTH TO TUNNEL FROM SEA BED SUBJECT TO VERIFICATION OF GROUND CONDITIONS AND STABILITY ANALYSIS BASED ON SITE SPECIFIC GEOTECHNICAL, BATHYMETRIC AND METOCEAN CONDITIONS.
4. MIN WATER DEPTH AND LOCATION/DETAIL OF INTAKE, OUTFALL STRUCTURES SUBJECT TO ENVIRONMENTAL STUDIES, GEOTECHNICAL ASSESSMENT AND NEARFIELD/FARFIELD DISPERSION STUDY.
5. FOR OTHER NOTES, REFER TO DRAWING NW-DIT-BAS-1000-CIV-DRG-1001.

FOR INFORMATION ONLY

NOT FOR CONSTRUCTION

SCALES: 1 0 0.5 1 1.5 2 4 0 2 4 6 8

No.	AMENDMENT DESCRIPTION	BY	DATE
B	FOR INFORMATION ONLY	AC	30.06.25
A	DRAFT FOR COMMENT	NA	16.05.25

Government of South Australia

Department for Infrastructure and Transport

REFERENCE DESIGN

NORTHERN WATER

MARINE WORKS

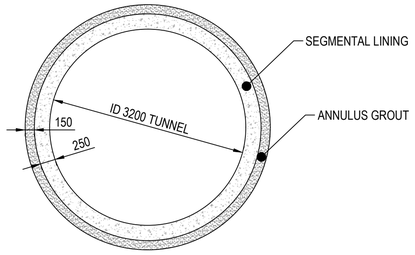
INTAKE RISER

DETAILS

DESIGNED	DRAFTED	CHECKED	PATCHS No	SKETCH No.	AMEND No.:
IL/DO	NA	BH/SH	24C347	NW-DIT-BAS-1000-CIV-DRG-1101	B

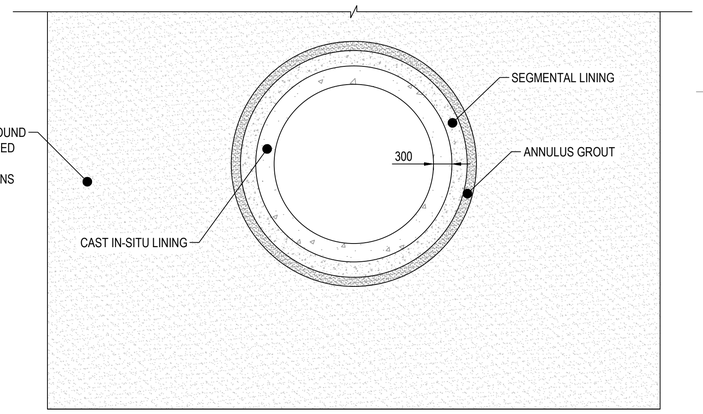
ALL DIMENSIONS ARE IN METRES UNLESS SHOWN OTHERWISE ◄ 100 MILLIMETRES ON ORIGINAL DRAWING ► UNCONTROLLED COPY WHEN PRINTED

CAD FILE NAME: NW-DIT-BAS-1000-CIV-DRG-1101.dwg



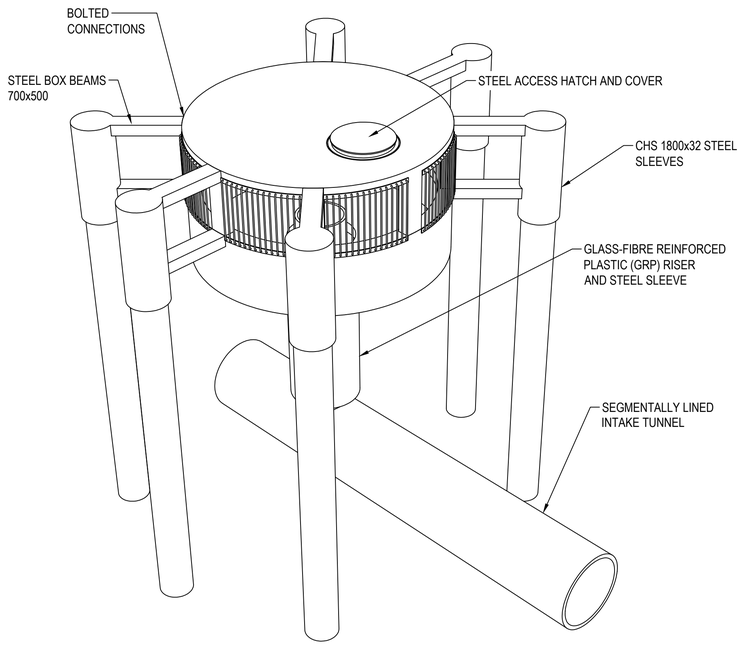
A 1101 SECTION
SCALE 1:50

INTAKE TUNNEL CROSS SECTION

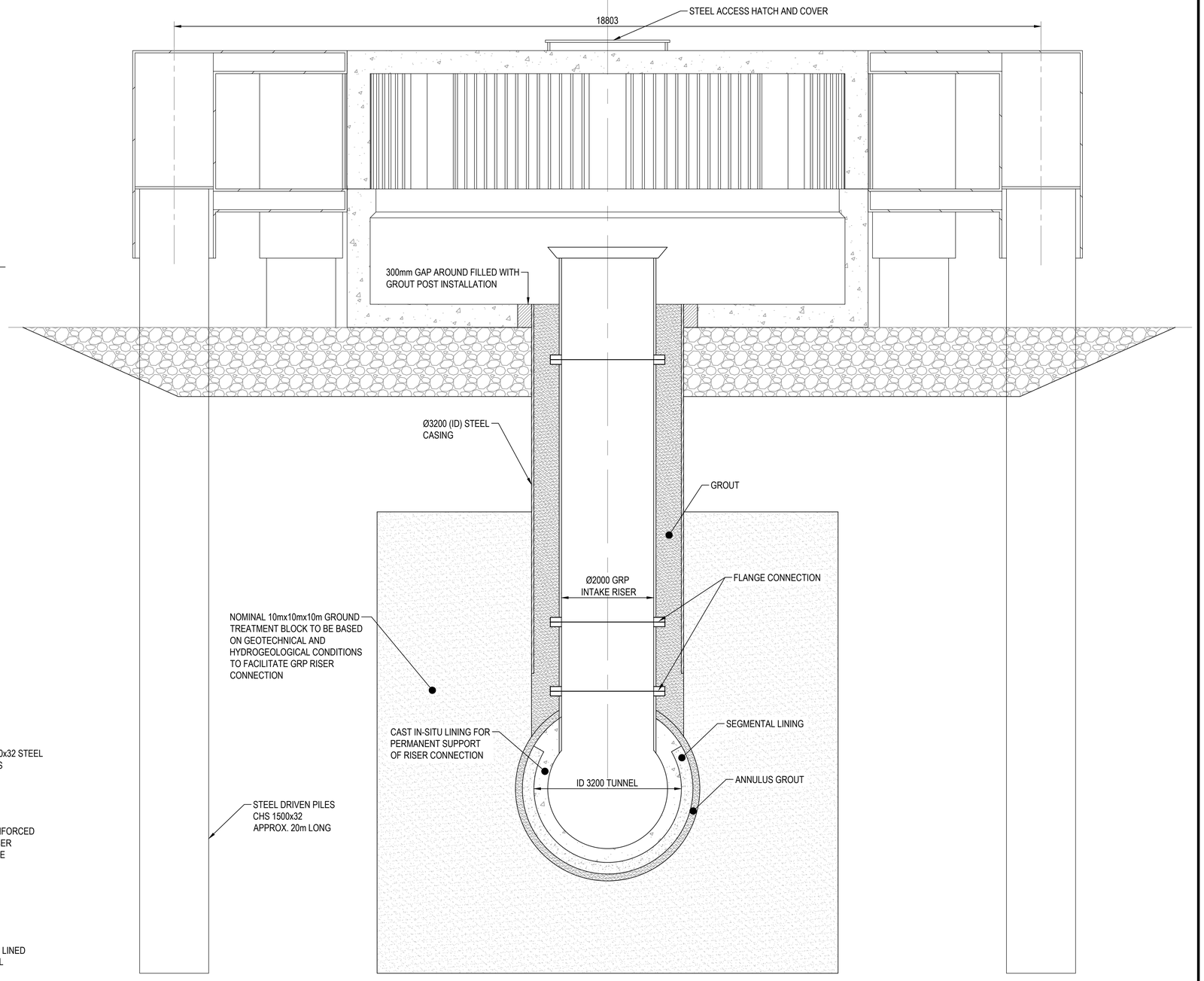


B 1101 SECTION
SCALE 1:50

INTAKE TUNNEL CROSS SECTION



INTAKE RISER AND HEAD PERSPECTIVE VIEW
N.T.S.



C 1101 SECTION
SCALE 1:50

INTAKE TUNNEL CROSS SECTION

NOTES:

1. ALL DIMENSIONS ARE IN MILLIMETRES UNLESS OTHERWISE SPECIFIED.
2. FOR OTHER NOTES, REFER TO DRAWING NW-DIT-BAS-1000-CIV-DRG-1001.

FOR INFORMATION ONLY

NOT FOR CONSTRUCTION

SCALES: 1 0 0.5 1 1.5 2

No.	AMENDMENT DESCRIPTION	BY	DATE
B	FOR INFORMATION ONLY	AC	30.06.25
A	DRAFT FOR COMMENT	NA	16.05.25

Government of South Australia
Department for Infrastructure and Transport

REFERENCE DESIGN
NORTHERN WATER
MARINE WORKS
INTAKE STRUCTURE
DETAILS

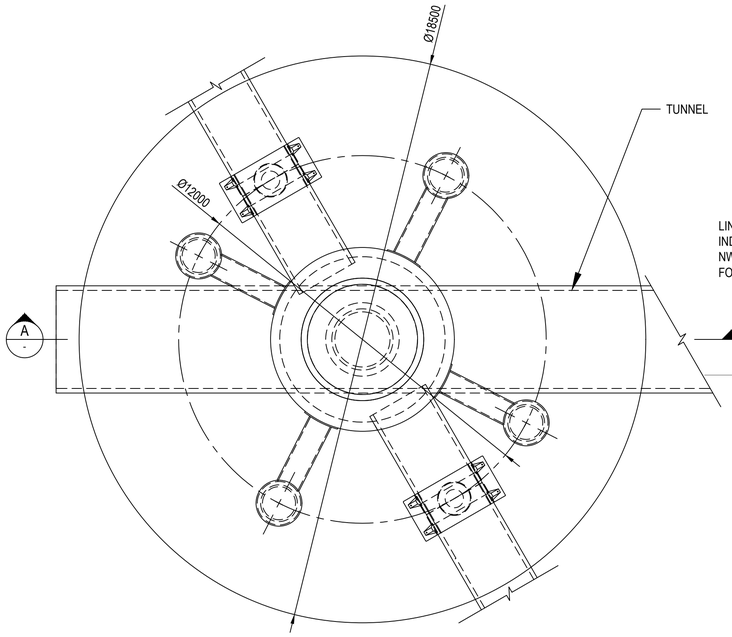
DESIGNED	DRAFTED	CHECKED	PATCHS No	SKETCH No.	AMEND No.:
IL/DO	NA	BH/SH	24C347	NW-DIT-BAS-1000-CIV-DRG-1102	B

ALL DIMENSIONS ARE IN METRES UNLESS SHOWN OTHERWISE | 100 MILLIMETRES ON ORIGINAL DRAWING | UNCONTROLLED COPY WHEN PRINTED

CAD FILE NAME: NW-DIT-BAS-1000-CIV-DRG-1102.dwg

NOTES:

1. ALL DIMENSIONS ARE IN MILLIMETRES UNLESS OTHERWISE SPECIFIED.
2. FOR OTHER NOTES, REFER TO DRAWING NW-DIT-BAS-1000-CIV-DRG-1002.



OUTLET HEAD PLAN

SCALE 1:100

A SECTION

SCALE 1:50

OUTLET RISER DETAILS

FOR INFORMATION ONLY

NOT FOR CONSTRUCTION

SCALES: 1 0 0.5 1 1.5 2

No.	AMENDMENT DESCRIPTION	BY	DATE
B	FOR INFORMATION ONLY	AC	30.06.25
A	DRAFT FOR COMMENT	NA	16.05.25

ALL DIMENSIONS ARE IN METRES UNLESS SHOWN OTHERWISE

Government of South Australia

Department for Infrastructure and Transport

REFERENCE DESIGN

NORTHERN WATER

MARINE WORKS

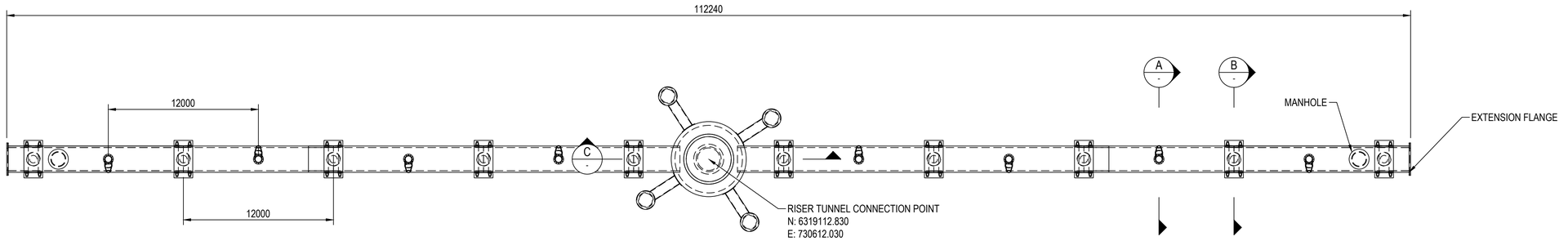
OUTLET RISER DETAILS

DESIGNED	DRAFTED	CHECKED	PATCHS No	SKETCH No.	AMEND No.:
IL/DO	NA	BH/SH	24C347	NW-DIT-BAS-1000-CIV-DRG-1103	B

100 MILLIMETRES ON ORIGINAL DRAWING

UNCONTROLLED COPY WHEN PRINTED

CAD FILE NAME: NW-DIT-BAS-1000-CIV-DRG-1103.dwg

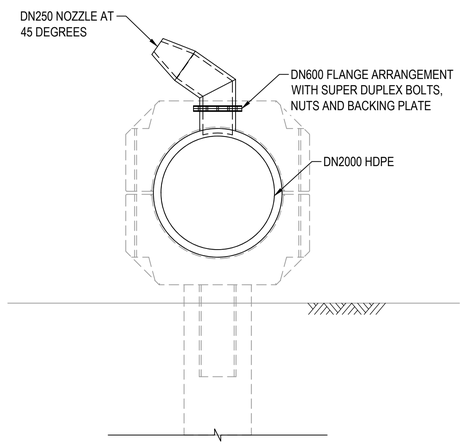


DIFFUSER MANIFOLD PLAN

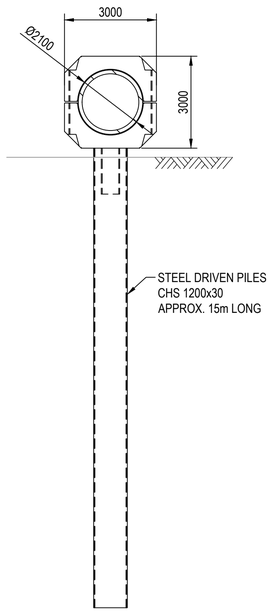
SCALE 1:200

NOTES:

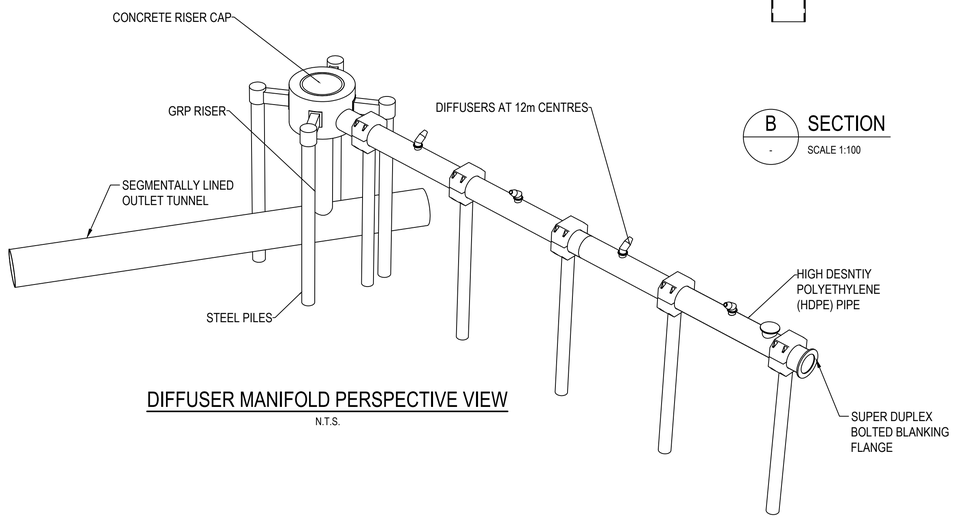
1. ALL LEVELS ARE IN m AHD (AUSTRALIAN HEIGHT DATUM).
2. ALL DIMENSIONS ARE IN MILLIMETRES UNLESS OTHERWISE SPECIFIED.
3. FOR INFORMATION, CHART DATUM IS 1.7m ABOVE AHD.
4. BACKFILL OVER EXCAVATED SECTION OF TRENCH TO REQUIRED LEVEL PRIOR TO PIPE PLACEMENT. BACKFILLED SURFACE SHALL BE ADEQUATELY LEVELED TO ENSURE STABILITY OF THE SELFSTANDING COLLARS. USE DREDGED ROCK AS FILL MATERIAL.



A SECTION
- SCALE 1:50

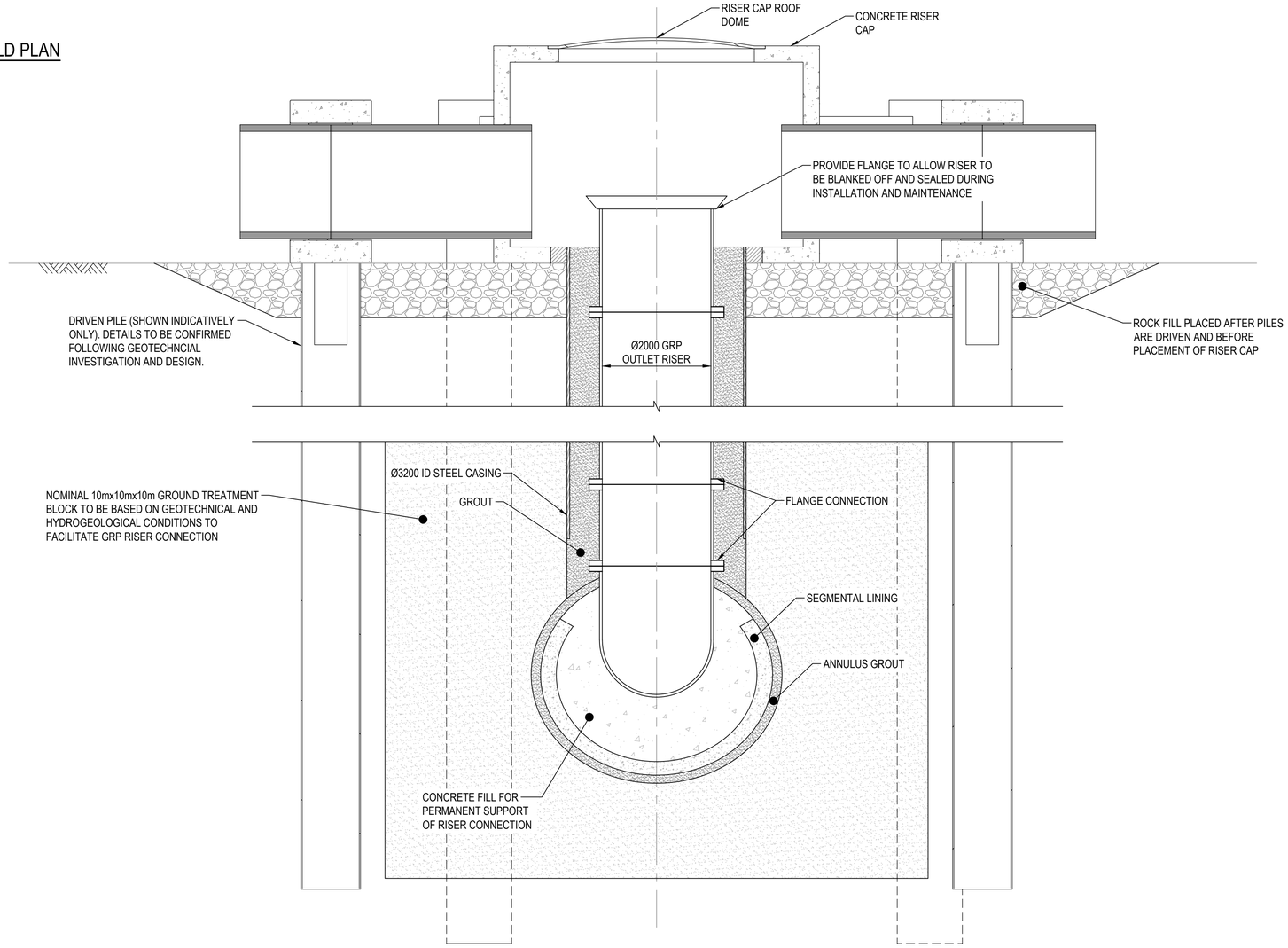


B SECTION
- SCALE 1:100



DIFFUSER MANIFOLD PERSPECTIVE VIEW

N.T.S.



C SECTION
- SCALE 1:50

FOR INFORMATION ONLY

NOT FOR CONSTRUCTION

SCALES: 1 0 0.5 1 1.5 2 / 2 0 1 2 3 4 — 4 0 2 4 6 8

No.	AMENDMENT DESCRIPTION	BY	DATE
B	FOR INFORMATION ONLY	AC	30.06.25
A	DRAFT FOR COMMENT	NA	16.05.25

ALL DIMENSIONS ARE IN METRES UNLESS SHOWN OTHERWISE — 100 MILLIMETRES ON ORIGINAL DRAWING — UNCONTROLLED COPY WHEN PRINTED

Government of South Australia

Department for Infrastructure and Transport

REFERENCE DESIGN

NORTHERN WATER

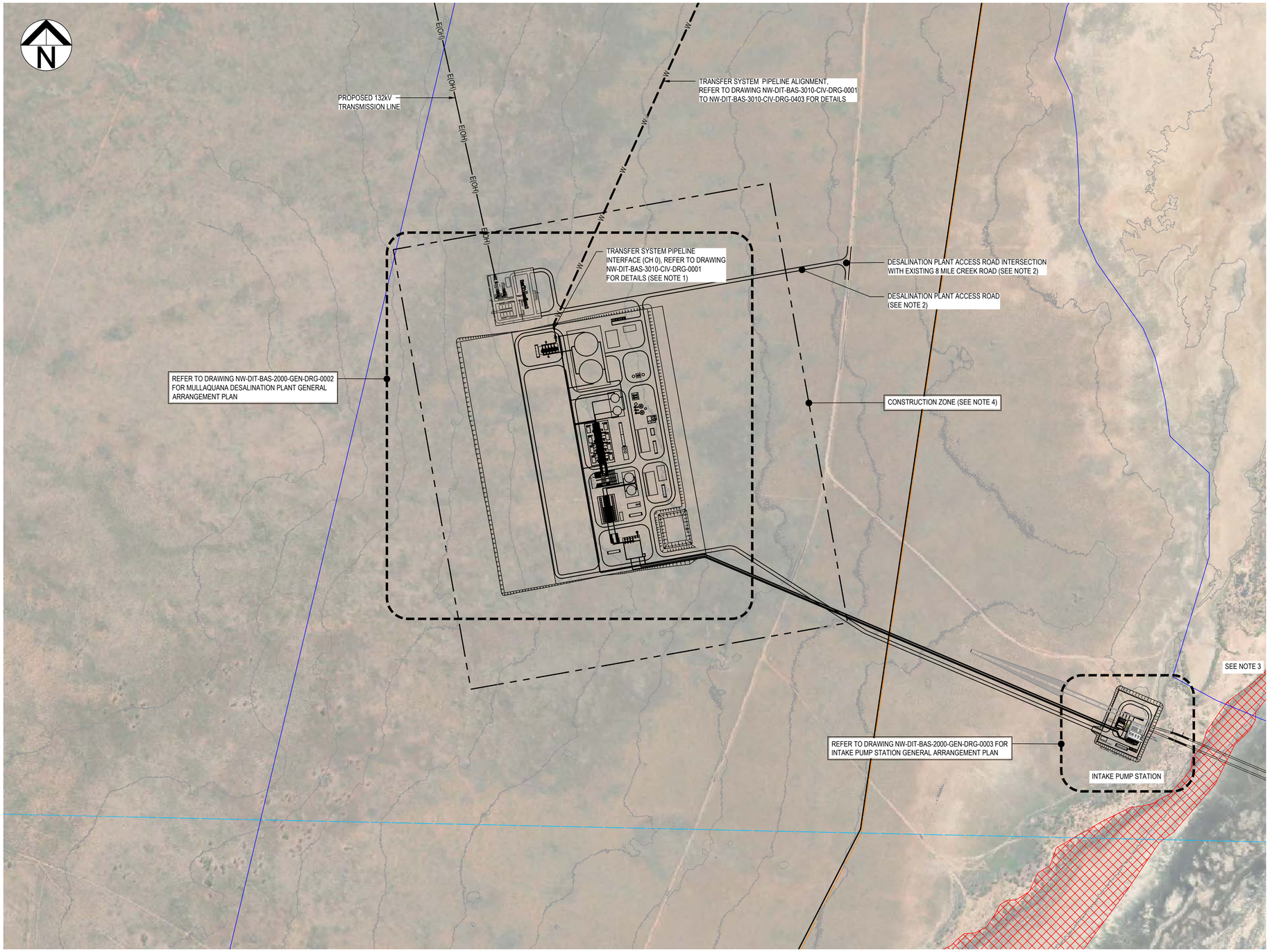
MARINE WORKS

OUTLET DIFFUSER MANIFOLD DETAILS

DESIGNED	DRAFTED	CHECKED	PATCHS No	SKETCH No.	AMEND No.:
IL/DO	NA	BH/SH	24C347	NW-DIT-BAS-1000-CIV-DRG-1104	B

CAD FILE NAME: NW-DIT-BAS-1000-CIV-DRG-1104.dwg

Appendix B-3:
Desalination Plant



NOTES:

1. LAYOUT SHOWN FOR FINAL DESALINATION PLANT AT DESIGN CAPACITY OF 140 MLD. FOR TRANSFER PIPELINE DETAILS REFER TO DRAWING SET NW-DIT-BAS-3010-CIV-DRG-001 TO 0403 AND FOR MARINE AND TUNNELING DETAILS, REFER TO DRAWING SET NWP-GHD-DBO-1000-CIV-DRG-1001 TO 1002.
2. INDICATIVE ACCESS ROAD ALIGNMENT SHOWN. TO BE CONFIRMED BY DIT.
3. EXTENT OF NO GO ZONE EXTRACTED FROM NORTHERN WATER GIS ON 9 MAY 2025. TO BE CONFIRMED BY DIT.
4. CONSTRUCTION ZONE SHOWN IS INDICATIVE ONLY FOR PLANNING PURPOSES. FINAL EXTENT TO BE CONFIRMED IN THE NEXT PROJECT PHASE.

LEGEND:

- CADASTRAL BOUNDARY
- BDAC EXTENT OF SURVEY
- COASTAL CONSERVATION ZONE
- NO GO ZONE

OVERALL SITE PLAN

SCALE 1:5000

FOR INFORMATION ONLY

NOT FOR CONSTRUCTION

SCALES: 100 0 50 100 150 200

No.	AMENDMENT DESCRIPTION	BY	DATE
C	RE-ISSUE FOR INFORMATION ONLY	AC	26.09.25
B	FOR INFORMATION ONLY	AC	30.06.25
A	DRAFT FOR COMMENT	PE	16.05.25

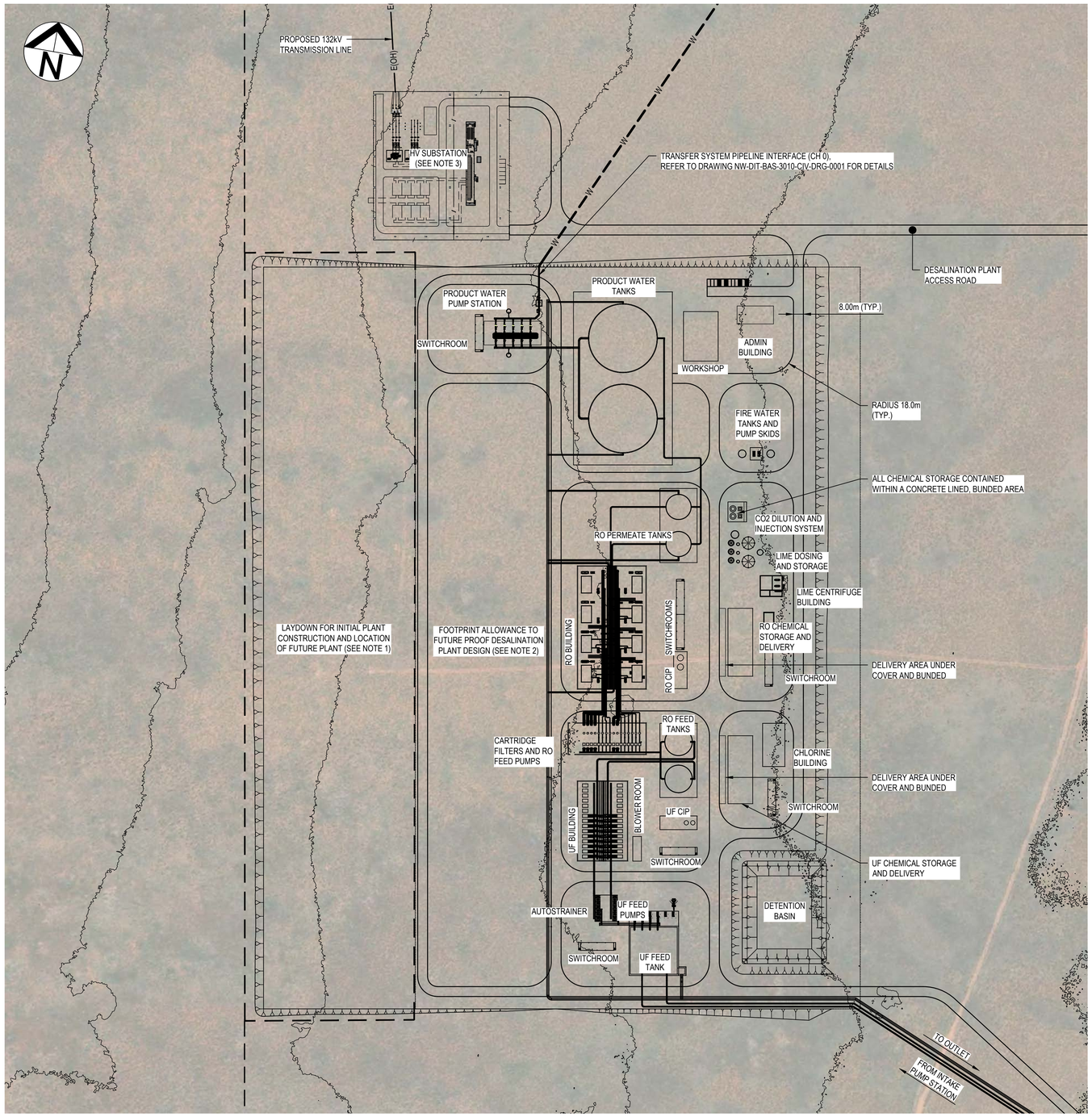
Government of South Australia
Department for Infrastructure and Transport

ALL DIMENSIONS ARE IN METRES UNLESS SHOWN OTHERWISE ◄ 100 MILLIMETRES ON ORIGINAL DRAWING ► UNCONTROLLED COPY WHEN PRINTED

REFERENCE DESIGN
NORTHERN WATER
OVERALL SITE PLAN
MULLAQUANA DESALATION PLANT
OVERALL SITE PLAN

DESIGNED	DRAFTED	CHECKED	PATCHS No	SKETCH No.	AMEND No.:
DR	LR	CL	24C347	NW-DIT-BAS-2000-GEN-DRG-0001	C

CAD FILE NAME: NW-DIT-BAS-2000-GEN-DRG-0001.dwg



GENERAL ARRANGEMENT PLAN

SCALE 1:2000

NOTES:

1. SPACE ALLOWANCE FOR FUTURE SEPARATE PLANT TO ACHIEVE AN ULTIMATE NOMINAL SITE OUTPUT OF 200 MLD. FOR THE REFERENCE DESIGN A FUTURE SEPARATE PLANT PRODUCING UP T0 60 MLD OF DESALINATED WATER HAS BEEN ASSUMED. SPACE ALLOWANCE PERMITTED TO BE USED FOR CONSTRUCTION LAYDOWN OF REFERENCE DESIGN FACILITY.
2. SPACE ALLOWANCE FOR FUTURE UPGRADES OF REFERENCE DESIGN PLANT – SUCH AS ENABLING 2ND PASS RO OR ADDITIONAL SITE STORAGE – WHICH ARE NOT CURRENT REQUIREMENTS OF THE FACILITY. PURPOSE OF THIS IS TO ENABLE ALTERNATIVE FUTURE OPERATIONAL MODES.
3. HV SUBSTATION LOCATED SEPARATELY TO DESALINATION PLANT TO ENABLE ACCESS FOR THIRD PARTY OPERATORS.

FOR INFORMATION ONLY

NOT FOR CONSTRUCTION

SCALES: 40 0 20 40 60 80

No.	AMENDMENT DESCRIPTION	BY	DATE
C	RE-ISSUE FOR INFORMATION ONLY	AC	26.09.25
B	FOR INFORMATION ONLY	AC	30.06.25
A	DRAFT FOR COMMENT	PE	16.05.25

Government of South Australia

Department for Infrastructure and Transport

REFERENCE DESIGN

NORTHERN WATER

DESALINATION PLANT

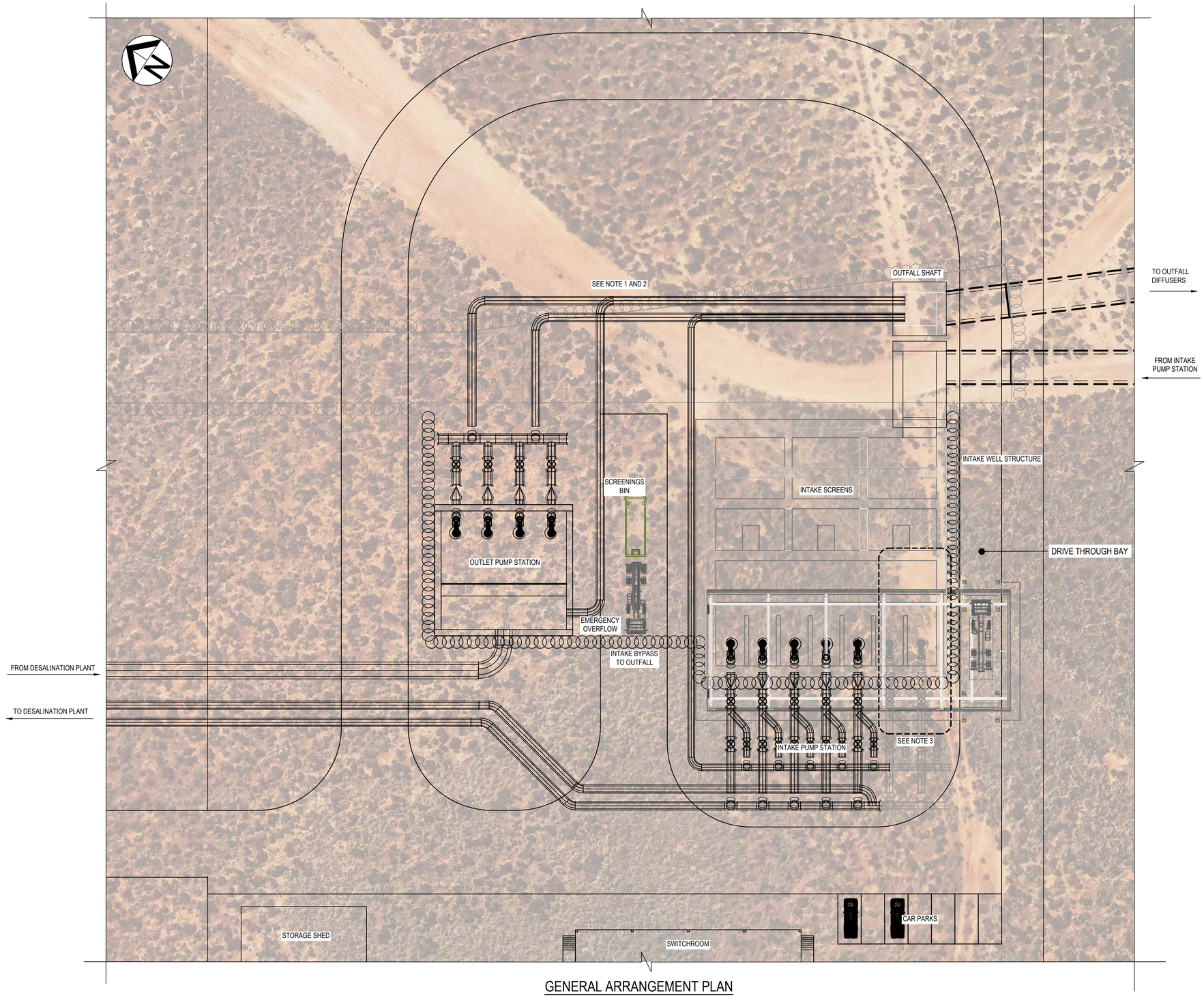
MULLAQUANA DESALINATION PLANT

GENERAL ARRANGEMENT PLAN

DESIGNED	DRAFTED	CHECKED	PATCHS No	SKETCH No.	AMEND No.:
CL	LR	CL	24C347	NW-DIT-BAS-2000-GEN-DRG-0002	C

ALL DIMENSIONS ARE IN METRES UNLESS SHOWN OTHERWISE ◄ 100 MILLIMETRES ON ORIGINAL DRAWING ► UNCONTROLLED COPY WHEN PRINTED

CAD FILE NAME: NW-DIT-BAS-2000-GEN-DRG-0002.dwg



GENERAL ARRANGEMENT PLAN

SCALE 1:250

NOTES:

1. REFER TUNNEL WORKS DRAWINGS NW-DIT-BAS-1000-CIV-DRG-1001 TO 1002 FOR CONSTRUCTION PHASE TEMPORARY WORKS OF INTAKE PUMP STATION.
2. ALLOWANCE FOR FUTURE PUMPS TO SUPPLY FUTURE PLANT AUGMENTATION. FUTURE PLANT AUGMENTATION REQUIREMENTS ARE NOT CURRENTLY DEFINED. FOR THE REFERENCE DESIGN A FUTURE PLANT PRODUCING UP TO 60 MLD OF DESALINATED WATER HAS BEEN ASSUMED.

FOR INFORMATION ONLY

NOT FOR CONSTRUCTION

SCALES: 5 0 2.5 5 7.5 10

No.	AMENDMENT DESCRIPTION	BY	DATE
C	RE-ISSUE FOR INFORMATION ONLY	AC	26.09.25
B	FOR INFORMATION ONLY	AC	30.06.25
A	DRAFT FOR COMMENT	PE	16.05.25

Government of South Australia

Department for Infrastructure and Transport

ALL DIMENSIONS ARE IN METRES UNLESS SHOWN OTHERWISE ◄ 100 MILLIMETRES ON ORIGINAL DRAWING ► UNCONTROLLED COPY WHEN PRINTED

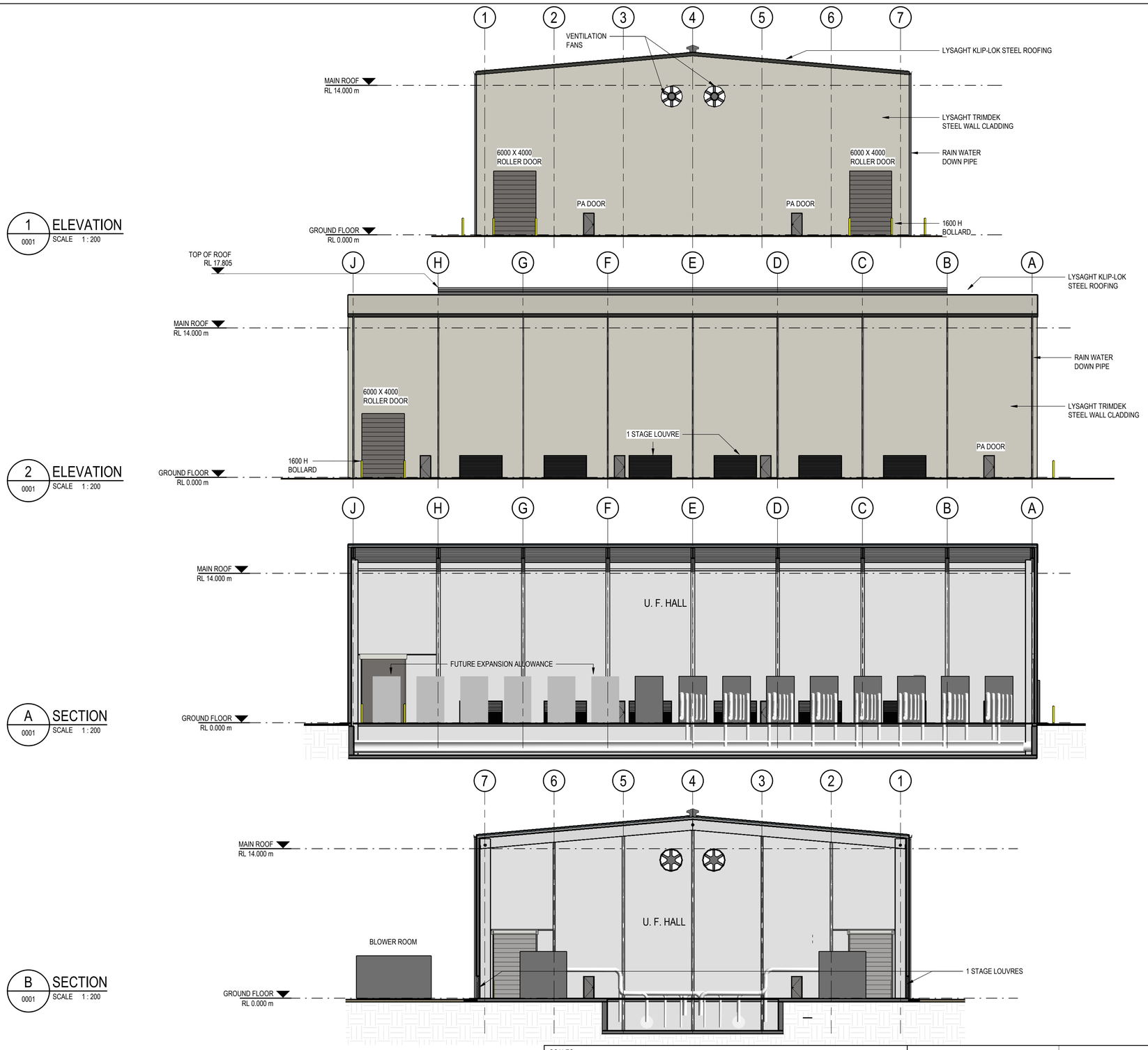
REFERENCE DESIGN

NORTHERN WATER

DESALINATION PLANT
INTAKE PUMPSTATION
GENERAL ARRANGEMENT PLAN

DESIGNED	DRAFTED	CHECKED	PATCHS No	SKETCH No.	AMEND No.:
DR	TR	CL	24C347	NW-DIT-BAS-2000-GEN-DRG-0003	C

CAD FILE NAME: NW-DIT-BAS-2000-GEN-DRG-0003.dwg



NOTES
ALL LYSAGHT STEEL CLADDING IS COLORBOND ULTRA STEEL.

COLORBOND STEEL COLOUR GUIDE:
SURFMIST: ROOF/WALLS
WALLABY: DOORS, FASCIAS AND GUTTERS

LAYOUT OF MACHINERY & PIPEWORK INDICATIVE ONLY.
UNITS FOR INITIAL CAPACITY SHOWN IN LIGHT GREY.
UNITS FOR DESING CAPACITY SHOWN IN DARK GREY.

FOR INFORMATION ONLY

NOT FOR CONSTRUCTION

SCALES: 2000 0 2000 4000 6000 8000 10000 mm

No.	AMENDMENT DESCRIPTION	BY	DATE
B	FOR INFORMATION ONLY	AC	30.06.25
A	DRAFT FOR COMMENT	KR	23.05.25

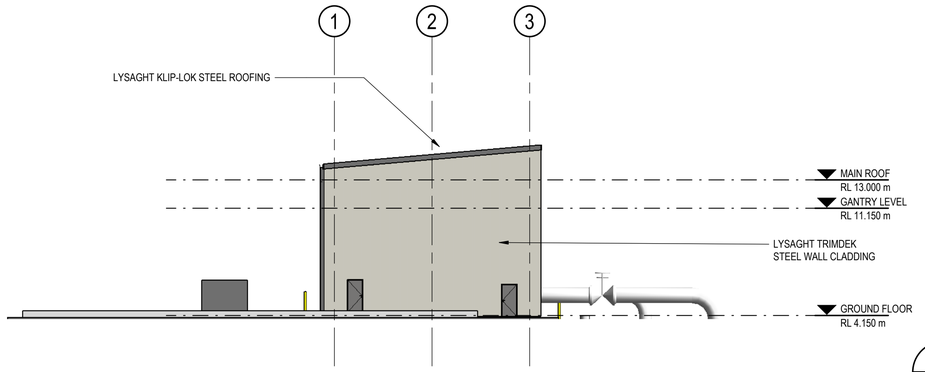
Government of South Australia
Department for Infrastructure and Transport

REFERENCE DESIGN
NORTHERN WATER
DESALINATION PLANT
ULTRAFILTRATION (UF) BUILDING
ARCHITECTURE - ELEVATIONS & SECTIONS

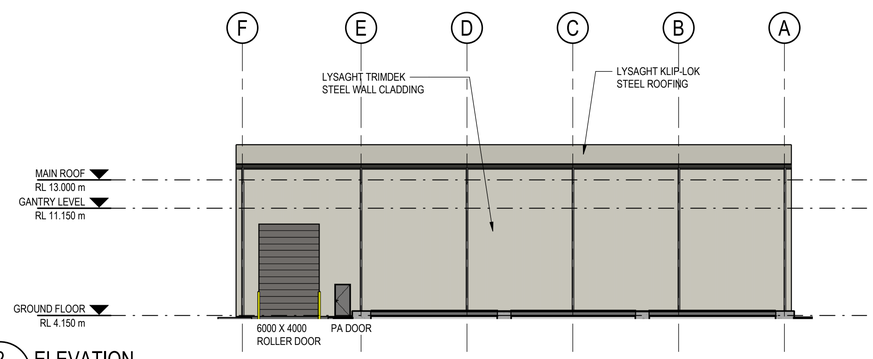
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JW	KR	SZ	24C347	NW-DIT-BAS-2100-ARC-DRG-0002	B

ALL DIMENSIONS ARE IN MILLIMETRES UNLESS SHOWN OTHERWISE ◀ 1000 MILLIMETRES ON ORIGINAL DRAWING ▶ UNCONTROLLED COPY WHEN PRINTED

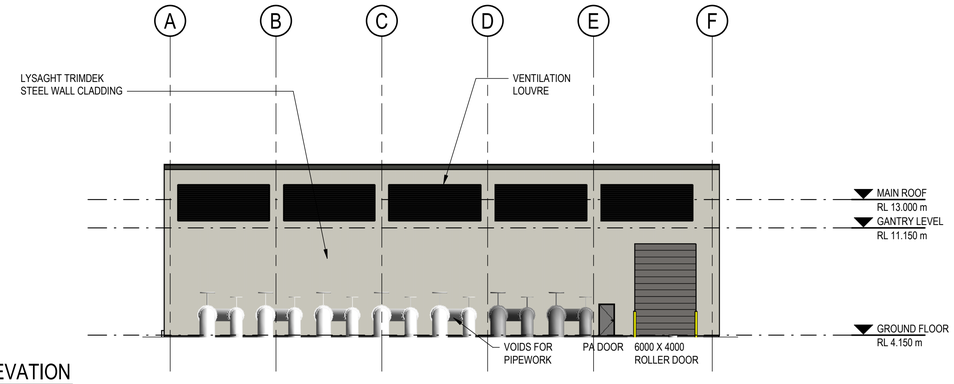
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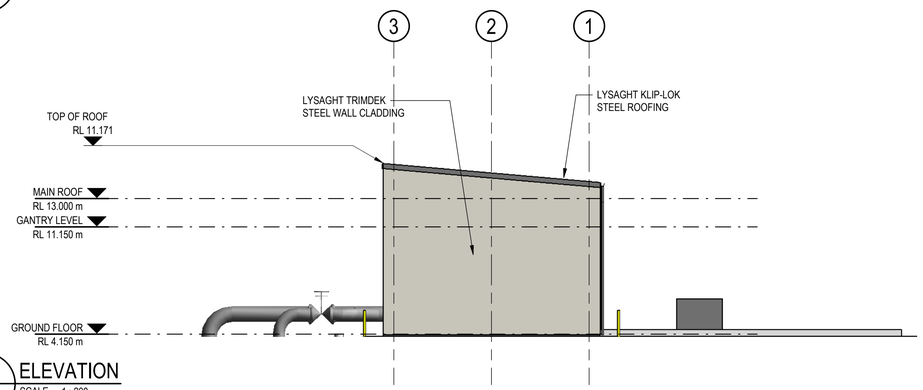
1 ELEVATION
0001 SCALE 1 : 200



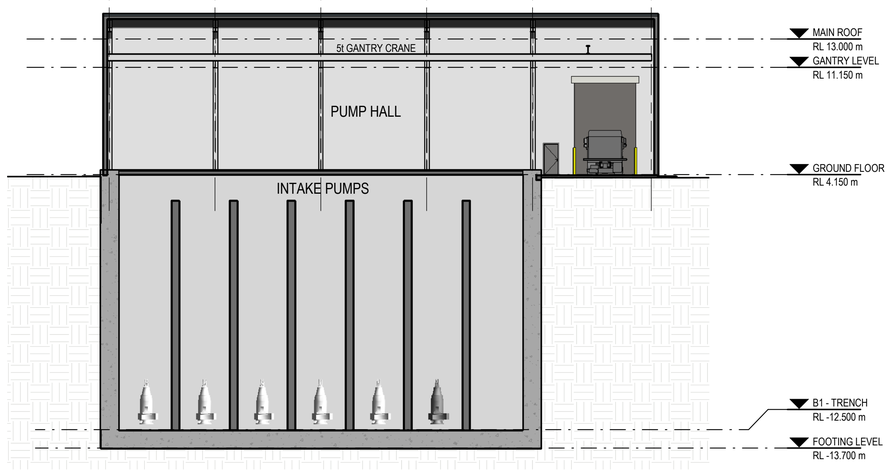
2 ELEVATION
0001 SCALE 1 : 200



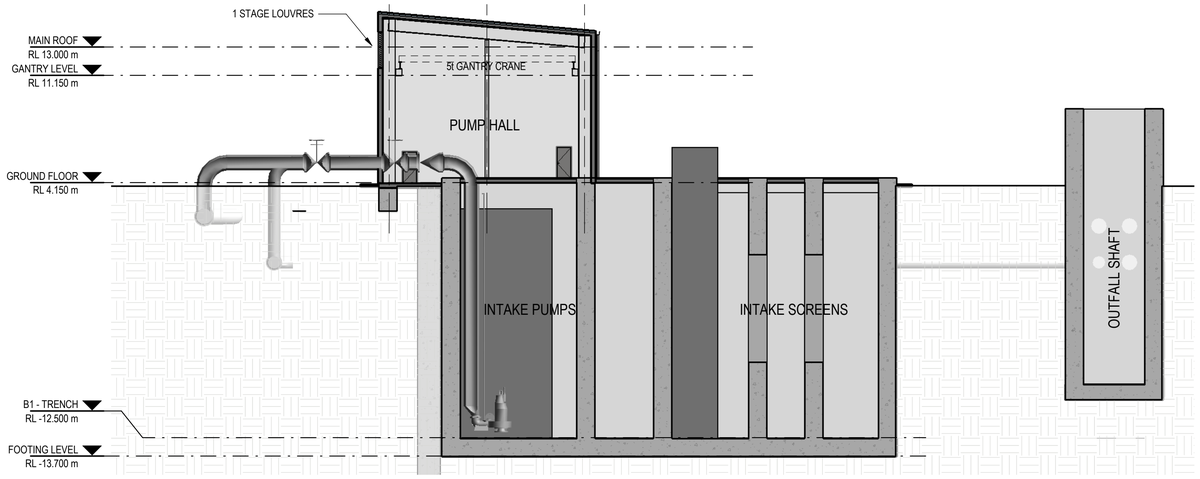
3 ELEVATION
0001 SCALE 1 : 200



4 ELEVATION
0001 SCALE 1 : 200



A SECTION
0001 SCALE 1 : 200



B SECTION
0001 SCALE 1 : 200

NOTES
ALL LYSAGHT STEEL CLADDING IS COLORBOND ULTRA STEEL.

COLORBOND STEEL COLOUR GUIDE:
SURFMIST: ROOF, WALLS
WALLABY: DOORS, FASCIAS AND GUTTERS

FOR INFORMATION ONLY

NOT FOR CONSTRUCTION

SCALES: 2000 0 2000 4000 6000 8000 10000 mm

No.	AMENDMENT DESCRIPTION	BY	DATE
B	FOR INFORMATION ONLY	AC	30.06.25
A	DRAFT FOR COMMENT	KR	23.05.25

Government of South Australia
Department for Infrastructure and Transport

REFERENCE DESIGN
NORTHERN WATER
DESALINATION PLANT
INTAKE PUMP STATION BUILDING
ARCHITECTURE - ELEVATIONS & SECTIONS

DESIGNED	DRAFTED	CHECKED	PATCHS No.	SKETCH No.	AMEND No:
JW	KR	SZ	24C347	NW-DIT-BAS-2050-ARC-DRG-0002	B

ALL DIMENSIONS ARE IN MILLIMETRES UNLESS SHOWN OTHERWISE ◀ 1000 MILLIMETRES ON ORIGINAL DRAWING ▶ UNCONTROLLED COPY WHEN PRINTED

CAD FILE NAME:NW-DIT-BAS-2050-ARC-DRG-0002

LEGEND - EXISTING:

- CADASTRAL BOUNDARY
- WATER MAIN
- ELECTRICAL CONDUIT
- ELECTRICAL OVERHEAD LINE
- OVERHEAD OVERHEAD ELECTRICAL TOWER / STOBIE POLE
- TELSTRA COMMUNICATIONS CABLE
- OPTUS FIBRE OPTIC CABLE
- AARNET FIBRE OPTIC CABLE
- STORMWATER LINE
- ARTC RAIL
- SURFACE MAJOR CONTOUR (1.00m INTERVAL)
- SURFACE MINOR CONTOUR (0.20m INTERVAL)
- WATER COURSE
- WATER BODY

LEGEND - AREAS OF INTEREST:

- NO GO ZONE - AVOID
- CONDITIONAL ACCESS

LEGEND - PROPOSED:

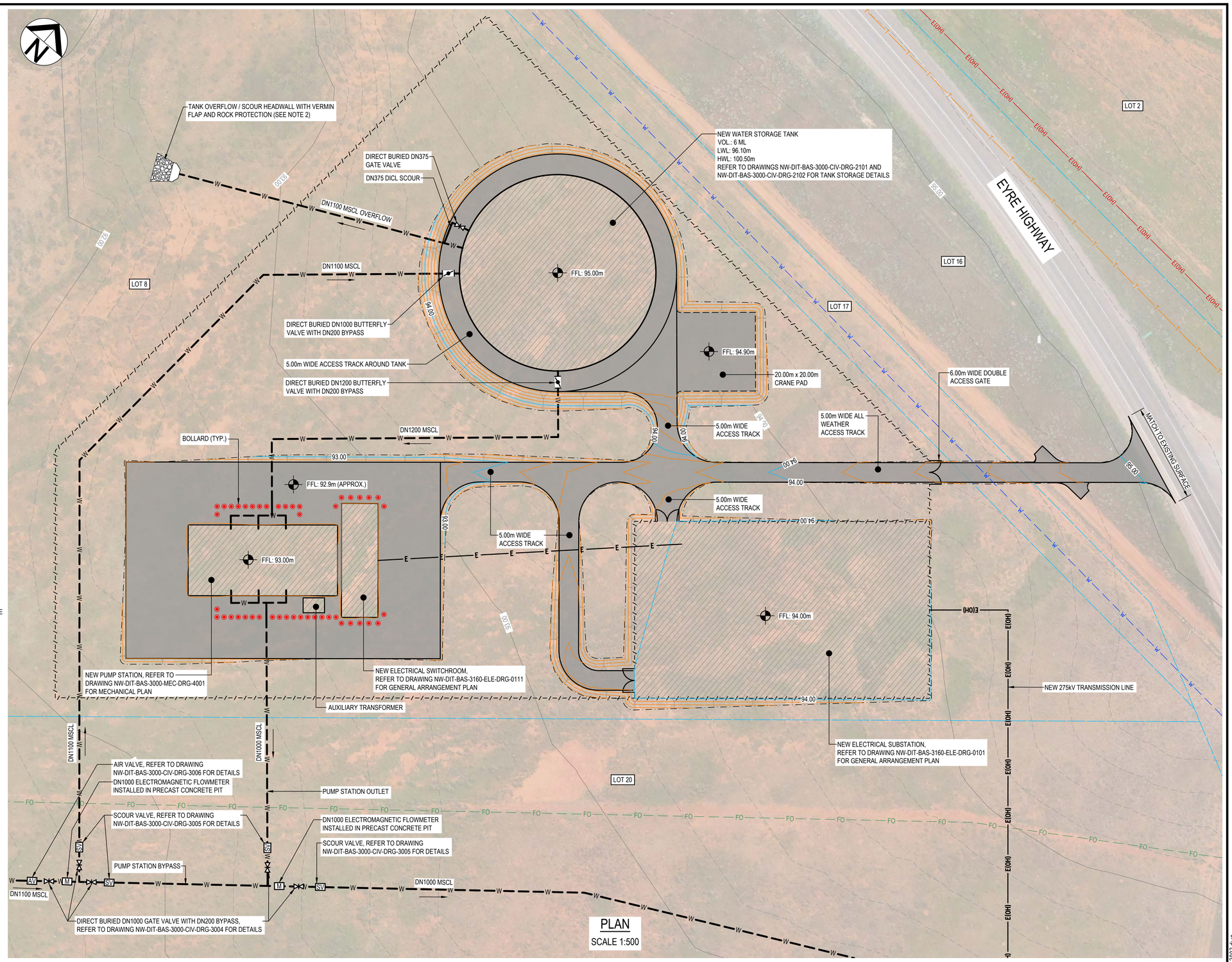
- WATER MAIN
- OFFTAKER MAIN
- ELECTRICAL TRANSMISSION OVERHEAD LINE
- ELECTRICAL CONDUIT
- EARTHWORKS BATTER (FILL)
- EARTHWORKS BATTER (CUT)
- FINISHED FLOOR LEVEL (FFL)
- SECURITY CHAIN MESH FENCE
- DOUBLE ACCESS GATE
- ALL WEATHER ACCESS TRACK / PAVEMENT
- BOLLARD
- SURFACE MAJOR CONTOUR (1.00m INTERVAL)
- SURFACE MINOR CONTOUR (0.20m INTERVAL)
- DIRECTION OF FLOW

NOTES:

1. LAND PARCEL BOUNDARIES AND LOCATIONS OF EXISTING SERVICES ARE INDICATIVE ONLY AND NOT TO BE RELIED UPON.
2. LOCATION OF PIPEWORK, VALVES, OVERFLOW PIPING, HEADWALL, AND ASSOCIATED INFRASTRUCTURE INDICATIVELY SHOWN. LOCATION, ALIGNMENTS AND SAFE ACCESS TO ALL INFRASTRUCTURE, INCLUDING FORMATION OF VEHICLE ACCESS TRACKS, LAYDOWN AREAS AND TURNAROUNDS TO BE CONFIRMED IN FUTURE DESIGN PHASES.
3. THE SIZE AND LOCATION OF SWITCHYARD COMPOUNDS SHOWN IS INDICATIVE ONLY AND SUBJECT TO FINAL DESIGN OF THIRD PARTY INFRASTRUCTURE.
4. PIPING ALIGNMENTS AND ASSOCIATED INFRASTRUCTURE SHOWN INDICATIVELY, TO BE CONFIRMED DURING FUTURE DESIGN PHASES.
5. REFER TO DRAWING NW-DIT-BAS-3000-CIV-DRG-3001 FOR ALL WEATHER ACCESS TRACK PAVEMENT DETAILS.
6. THE REQUIREMENT FOR AND SIZING OF STORMWATER DRAINAGE INFRASTRUCTURE ASSOCIATED WITH ALL WEATHER ACCESS ROADS AND STRUCTURES TO BE DETERMINED DURING LATER STAGES OF THE DESIGN, ONCE FINAL ALIGNMENT AND LOCATIONS ARE KNOWN.

EARTHWORKS VOLUME TABLE

AREA OF WORKS (m^2)	CUT (m^3)	FILL (m^3)	NET (m^3)
14232.72	564.85	5754.76	5189.91 <FILL>



PLAN
SCALE 1:500

FOR INFORMATION ONLY

NOT FOR CONSTRUCTION

SCALES: 10 0 5 10 15 20

No.	AMENDMENT DESCRIPTION	BY	DATE
B	FOR INFORMATION ONLY	AC	30.06.25
A	DRAFT FOR COMMENT	AM	21.03.25

Government of South Australia
Department for Infrastructure and Transport

REFERENCE DESIGN
NORTHERN WATER
TRANSFER SYSTEM
LINCOLN GAP PUMP STATION
CIVIL GENERAL ARRANGEMENT PLAN

DESIGNED	DRAFTED	CHECKED	PATCHS No	SKETCH No.	AMEND No.:
SS	AM	SC	24C347	NW-DIT-BAS-3160-CIV-DRG-2002	B

ALL DIMENSIONS ARE IN METRES UNLESS SHOWN OTHERWISE | 100 MILLIMETRES ON ORIGINAL DRAWING | UNCONTROLLED COPY WHEN PRINTED

CAD FILE NAME: NW-DIT-BAS-3160-CIV-DRG-2002.dwg

Appendix B-4:

Transfer System and Electricity Infrastructure

LEGEND - EXISTING:

- CADASTRAL BOUNDARY
- W — WATER MAIN
- E — ELECTRICAL CONDUIT
- E(OH) — ELECTRICAL OVERHEAD LINE
- OVERHEAD ELECTRICAL TOWER / STOBIE POLE
- T — TELSTRA COMMUNICATIONS CABLE
- FO — OPTUS FIBRE OPTIC CABLE
- FO — AARNET FIBRE OPTIC CABLE
- SW — STORMWATER LINE
- ARTC RAIL
- 0.00 — SURFACE MAJOR CONTOUR (1.00m INTERVAL)
- SURFACE MINOR CONTOUR (0.20m INTERVAL)
- WATER COURSE
- WATER BODY

LEGEND - AREAS OF INTEREST:

- NO GO ZONE - AVOID
- CONDITIONAL ACCESS

LEGEND - PROPOSED:

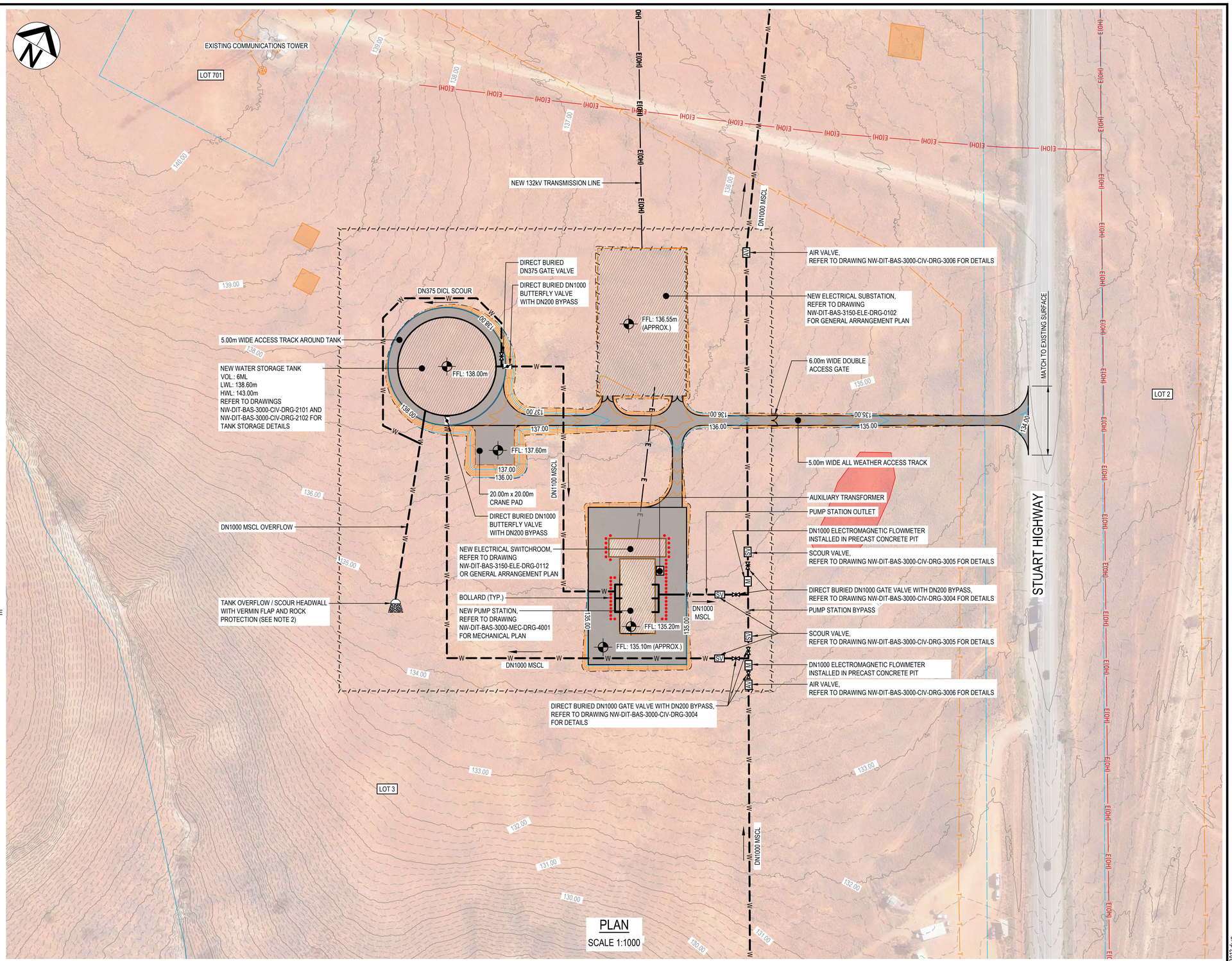
- W — WATER MAIN
- W(OT) — OFFTAKER MAIN
- E(OH) — ELECTRICAL TRANSMISSION OVERHEAD LINE
- E — ELECTRICAL CONDUIT
- EARTHWORKS BATTER (FILL)
- EARTHWORKS BATTER (CUT)
- 0.00m — FINISHED FLOOR LEVEL (FFL)
- SECURITY CHAIN MESH FENCE
- DOUBLE ACCESS GATE
- ALL WEATHER ACCESS TRACK / PAVEMENT
- BOLLARD
- 0.00 — SURFACE MAJOR CONTOUR (1.00m INTERVAL)
- SURFACE MINOR CONTOUR (0.20m INTERVAL)
- DIRECTION OF FLOW

NOTES:

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EARTHWORKS VOLUME TABLE

AREA OF WORKS (m^2)	CUT (m^3)	FILL (m^3)	NET (m^3)
15184.37	626.99	5809.94	5182.94 <FILL>



PLAN
SCALE 1:1000

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SCALES: 20 0 10 20 30 40

No.	AMENDMENT DESCRIPTION	BY	DATE
C	RE-ISSUE FOR INFORMATION ONLY	AC	26.09.25
B	FOR INFORMATION ONLY	AC	30.06.25
A	DRAFT FOR COMMENT	AM	21.03.25

Government of South Australia
Department for Infrastructure and Transport

REFERENCE DESIGN
NORTHERN WATER
TRANSFER SYSTEM
KALAYA (KOOTABERRA) PUMP STATION
CIVIL GENERAL ARRANGEMENT PLAN

DESIGNED	DRAFTED	CHECKED	PATCHS No	SKETCH No.	AMEND No.:
AS	AM	SC	24C347	NW-DIT-BAS-3150-CIV-DRG-2012	C

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CAD FILE NAME: NW-DIT-BAS-3150-CIV-DRG-2012.dwg

LEGEND - EXISTING:

- CADASTRAL BOUNDARY
- WATER MAIN
- ELECTRICAL CONDUIT
- ELECTRICAL OVERHEAD LINE
- OVERHEAD ELECTRICAL TOWER / STOBIE POLE
- TELSTRA COMMUNICATIONS CABLE
- OPTUS FIBRE OPTIC CABLE
- AARNET FIBRE OPTIC CABLE
- STORMWATER LINE
- ARTC RAIL
- SURFACE MAJOR CONTOUR (1.00m INTERVAL)
- SURFACE MINOR CONTOUR (0.20m INTERVAL)
- WATER COURSE
- WATER BODY

LEGEND - AREAS OF INTEREST:

- NO GO ZONE - AVOID
- CONDITIONAL ACCESS

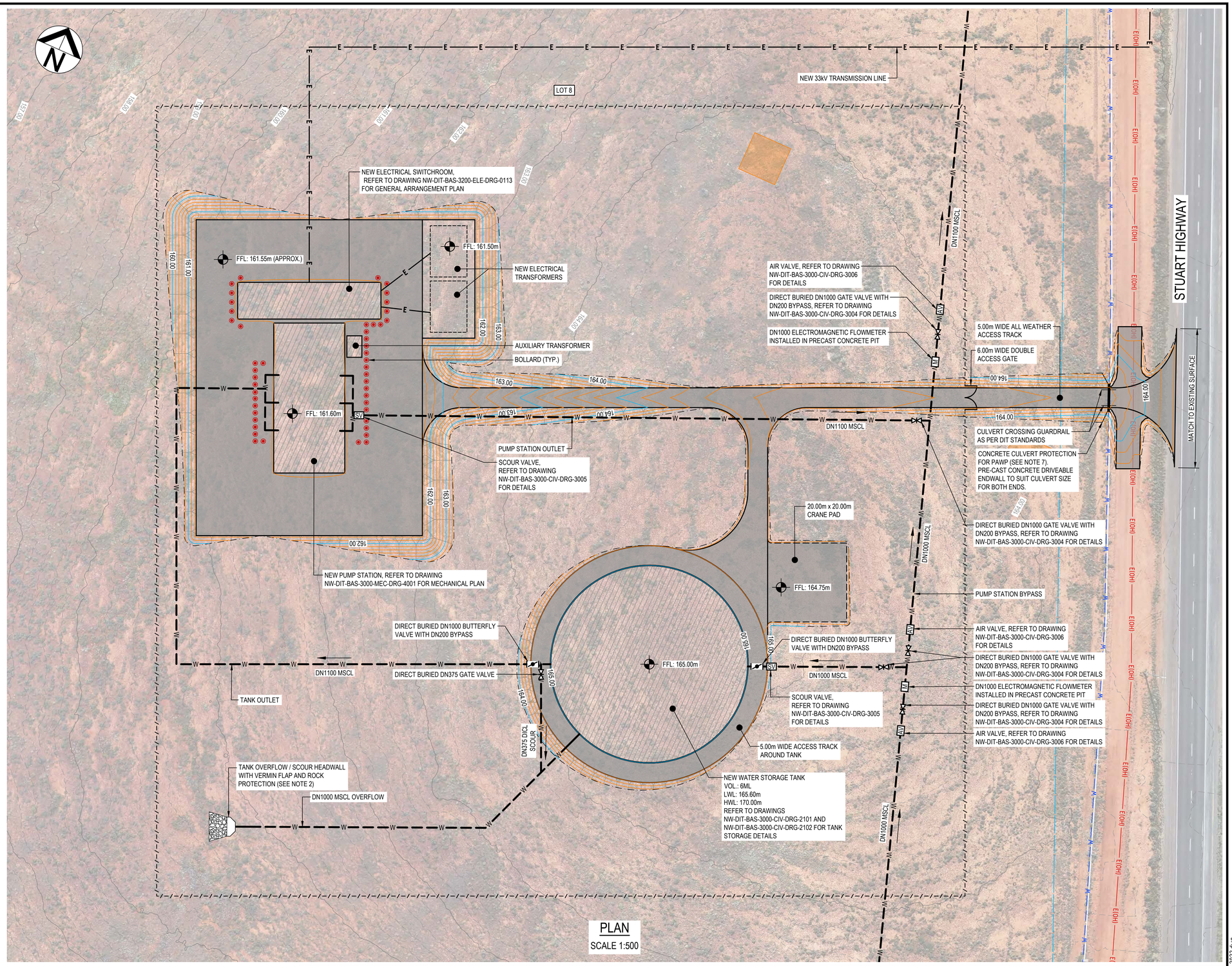
LEGEND - PROPOSED:

- WATER MAIN
- OFFTAKER MAIN
- ELECTRICAL TRANSMISSION OVERHEAD LINE
- ELECTRICAL CONDUIT
- EARTHWORKS BATTER (FILL)
- EARTHWORKS BATTER (CUT)
- 0.00m — FINISHED FLOOR LEVEL (FFL)
- SECURITY CHAIN MESH FENCE
- DOUBLE ACCESS GATE
- ALL WEATHER ACCESS TRACK / PAVEMENT
- BOLLARD
- 0.00 — SURFACE MAJOR CONTOUR (1.00m INTERVAL)
- SURFACE MINOR CONTOUR (0.20m INTERVAL)
- DIRECTION OF FLOW

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7. CONCRETE CULVERT PROTECTION FOR PAWP, CONCRETE STRIP FOOTINGS FOR LENGTH OF CULVERT:
   - SIZE = 750 mm W x 600 mm H RCBC CLASS 4
   - LENGTH = 7.00m
   - COVER = 0.15m MINIMUM

EARTHWORKS VOLUME TABLE			
AREA OF WORKS (m^2)	CUT (m^3)	FILL (m^3)	NET (m^3)
12642.35	3377.52	2975.53	401.99 <CUT>



PLAN
SCALE 1:500

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B	FOR INFORMATION ONLY	AC	30.06.25
A	DRAFT FOR COMMENT	AM	21.03.25

Government of South Australia
Department for Infrastructure and Transport

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REFERENCE DESIGN
NORTHERN WATER
TRANSFER SYSTEM
MANGATA (OAKDEN HILLS) PUMP STATION
CIVIL GENERAL ARRANGEMENT PLAN

DESIGNED	DRAFTED	CHECKED	PATCHS No	SKETCH No.	AMEND No.:
AS	AM	SC	24C347	NW-DIT-BAS-3200-CIV-DRG-2022	C

CAD FILE NAME: NW-DIT-BAS-3200-CIV-DRG-2022.dwg

LEGEND - EXISTING:

- CADASTRAL BOUNDARY
- W — WATER MAIN
- E — ELECTRICAL CONDUIT
- E(OH) — ELECTRICAL OVERHEAD LINE
- OVERHEAD ELECTRICAL TOWER / STOBIE POLE
- T — TELSTRA COMMUNICATIONS CABLE
- FO — OPTUS FIBRE OPTIC CABLE
- FO — AARNET FIBRE OPTIC CABLE
- SW — STORMWATER LINE
- ARTC RAIL
- 0.00 — SURFACE MAJOR CONTOUR (1.00m INTERVAL)
- SURFACE MINOR CONTOUR (0.20m INTERVAL)
- WATER COURSE
- WATER BODY

LEGEND - AREAS OF INTEREST:

- NO GO ZONE - AVOID
- CONDITIONAL ACCESS

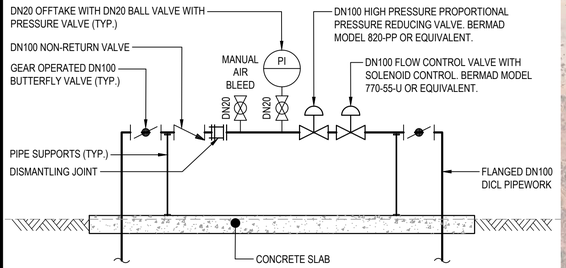
LEGEND - PROPOSED:

- WATER MAIN
- W(OT) — OFFTAKER MAIN
- EARTHWORKS BATTER (FILL)
- EARTHWORKS BATTER (CUT)
- 0.00m — FINISHED FLOOR LEVEL (FFL)
- SECURITY CHAIN MESH FENCE
- DOUBLE ACCESS GATE
- ALL WEATHER ACCESS TRACK / PAVEMENT
- BOLLARD
- 0.00 — SURFACE MAJOR CONTOUR (1.00m INTERVAL)
- SURFACE MINOR CONTOUR (0.20m INTERVAL)
- DIRECTION OF FLOW

NOTES:

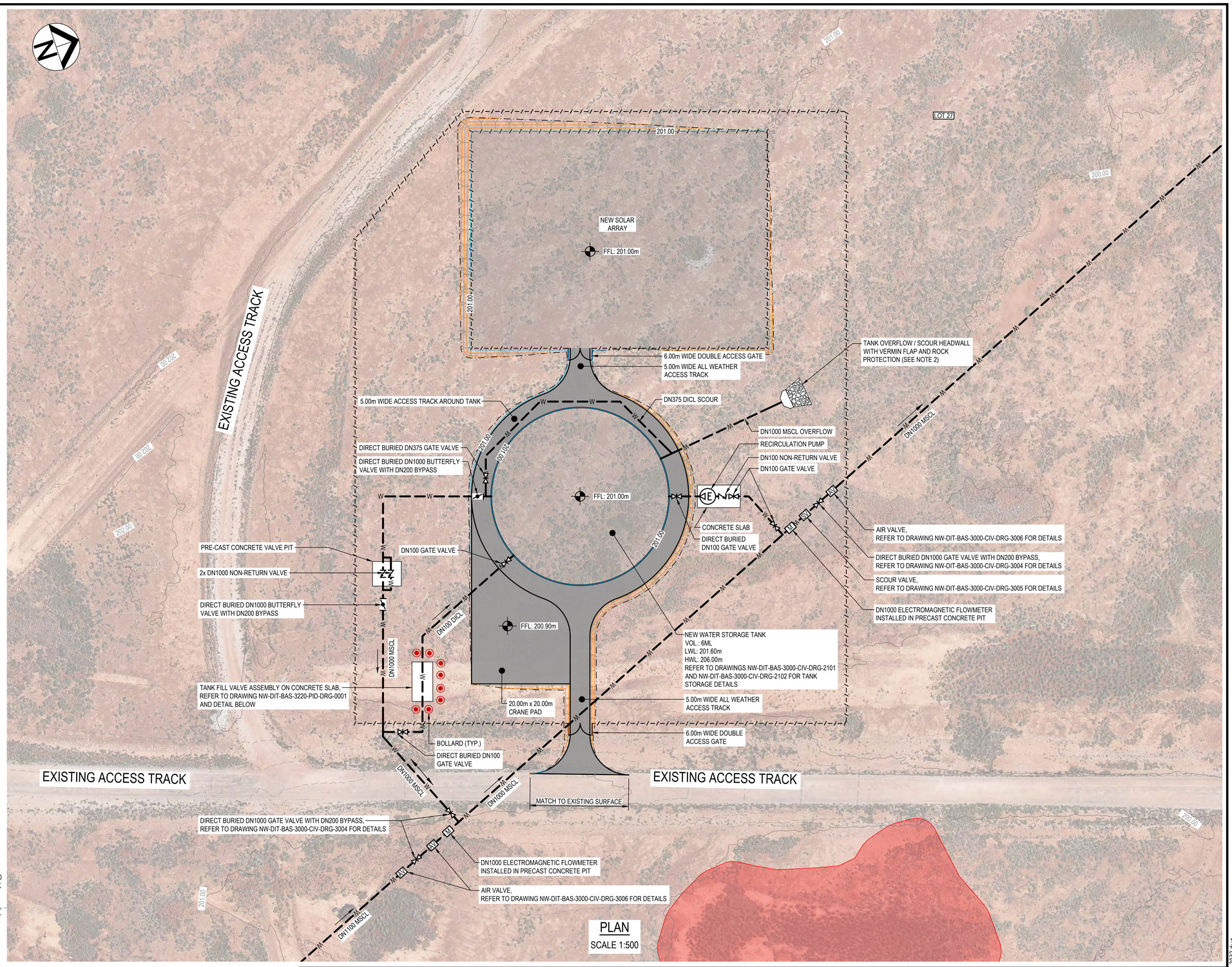
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EARTHWORKS VOLUME TABLE			
AREA OF WORKS (m^2)	CUT (m^3)	FILL (m^3)	NET (m^3)
8232.94	1421.03	1080.70	340.32 <CUT>



TANK INLET FLOW CONTROL DETAIL

NOT TO SCALE



PLAN

SCALE 1:500

FOR INFORMATION ONLY

NOT FOR CONSTRUCTION

SCALES: 10 0 5 10 15 20

No.	AMENDMENT DESCRIPTION	BY	DATE
C	RE-ISSUE FOR INFORMATION ONLY	AC	26.09.25
B	FOR INFORMATION ONLY	AC	30.06.25
A	DRAFT FOR COMMENT	AM	21.03.25

Government of South Australia

Department for Infrastructure and Transport

ALL DIMENSIONS ARE IN METRES UNLESS SHOWN OTHERWISE ◄ 100 MILLIMETRES ON ORIGINAL DRAWING ► UNCONTROLLED COPY WHEN PRINTED

REFERENCE DESIGN

NORTHERN WATER

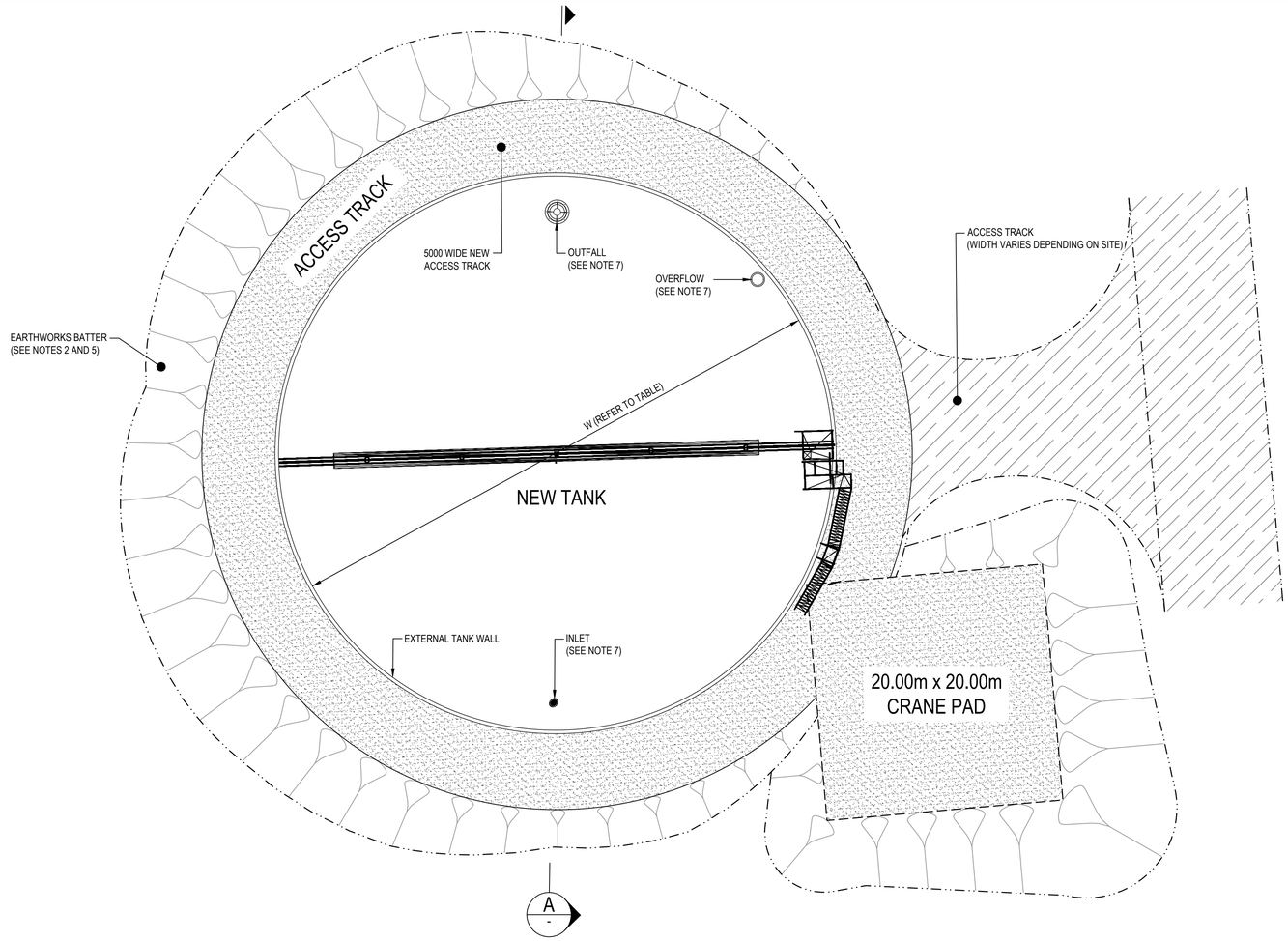
TRANSFER SYSTEM

BIMBA (PIMBA) STORAGE TANK

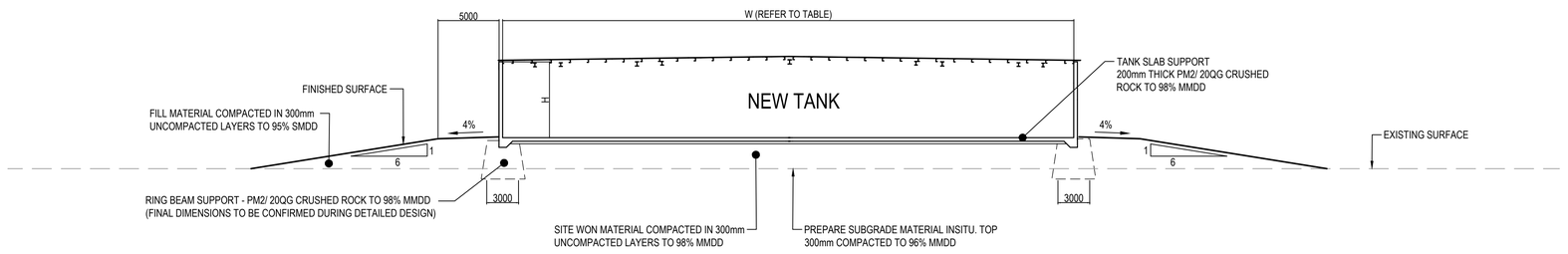
CIVIL GENERAL ARRANGEMENT PLAN

DESIGNED	DRAFTED	CHECKED	PATCHS No	SKETCH No.	AMEND No.:
SS	AM	SC	24C347	NW-DIT-BAS-3220-CIV-DRG-2032	C

CAD FILE NAME: NW-DIT-BAS-3220-CIV-DRG-2032.dwg



PLAN
SCALE 1:250



A SECTION
SCALE 1:250

NOTES:

1. STORMWATER INFRASTRUCTURE NOT SHOWN, TO BE DETERMINED DURING DETAILED DESIGN. INDICATIVE SCOUR AND OVERFLOW OUTLET LOCATION SHOWN ON RESPECTIVE SITE GENERAL ARRANGEMENT PLANS.
2. MAXIMUM FILL BATTER SLOPE IS 1:3 FOR SITE WON MATERIAL AND 1:2 FOR ENGINEERED FILL MATERIAL. THE EXPOSED SURFACE OF ALL BATTERS SHALL BE STABILISED WITH GRASSROOTS EROSION CONTROL MATTING OR APPROVED EQUIVALENT.
3. DESIGN VEHICLE - 12.5m RIGID FLAT BED TRUCK - ALL MOVEMENTS.
4. FOR TANK ACCESS AND ROOF STRUCTURE REFER TO STRUCTURE DRAWING.
5. FILL BATTER ABOVE THE RETAINING WALL, COMPACTED PM2/ 20QG TO BE USED FOR FILL MATERIAL AT A MAX. GRADE OF 1:1.5.
6. RIP-RAP TO CONSIST OF THE FOLLOWING:
   - ROCK DIAMETER 100mm
   - THICKNESS 200mm
   - LENGTH 6 x OUTLET DIAMETER
   - WIDTH TO TAPER AT GRADE OF 1:5.
8. PIPEWORK SHOWN INDICATIVELY. REFER TO CIVIL GENERAL ARRANGEMENT PLAN DRAWINGS FOR LOCATION OF PIPEWORK TIE-INS.

NEW TANK SCHEDULE			
TANK LOCATION	STORAGE (ML)	W (m)	H (mm)
LINCOLN GAP PUMP STATION	6	45	6000
KOOTABERRA PUMP STATION	6	45	5500
OAKDEN HILLS PUMP STATION	6	45	5500
PIMBA STORAGE TANK	6	45	5500

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SCALES: 5 0 2.5 5 7.5 10

No.	AMENDMENT DESCRIPTION	BY	DATE
B	FOR INFORMATION ONLY	AC	30.06.25
A	DRAFT FOR COMMENT	AM	21.03.25

Government of South Australia
Department for Infrastructure and Transport

REFERENCE DESIGN
NORTHERN WATER
TRANSFER SYSTEM
TANK TYPICAL DETAILS
PLAN AND SECTION

DESIGNED	DRAFTED	CHECKED	PATCHS No	SKETCH No.	AMEND No.:
AS	AM	SC	24C347	NW-DIT-BAS-3000-CIV-DRG-2101	B

ALL DIMENSIONS ARE IN MILLIMETRES UNLESS SHOWN OTHERWISE ◄ 1000 MILLIMETRES ON ORIGINAL DRAWING ► UNCONTROLLED COPY WHEN PRINTED

CAD FILE NAME: NW-DIT-BAS-3000-CIV-DRG-2101.dwg

ZONE	NON-TRAFFICABLE AREAS		TRAFFICABLE AREAS	
	MATERIAL	COMPACTION	MATERIAL	COMPACTION
A	COHESIONLESS MATERIAL MEETING AS/NZS 2566.2 APPENDIX G AND MAXIMUM PARTICLE SIZE 20mm.	1 LAYER TO 60% DENSITY INDEX	COHESIONLESS MATERIAL MEETING AS/NZS 2566.2 APPENDIX G AND MAXIMUM PARTICLE SIZE 20mm.	1 LAYER TO 70% DENSITY INDEX
B	COHESIONLESS MATERIAL MEETING AS/NZS 2566.2 APPENDIX G, OR SELECT NATIVE EMBEDMENT MATERIAL. SEE NOTE 5. MAXIMUM PARTICLE SIZE 20mm.	COMPACTED IN 150mm LIFTS TO 90% SMDD FOR COHESIVE MATERIALS, AND 60% DENSITY INDEX FOR COHESIONLESS MATERIALS	COHESIONLESS MATERIAL MEETING AS/NZS 2566.2 APPENDIX G AND MAXIMUM PARTICLE SIZE 20mm.	COMPACTED IN 150mm LIFTS TO 70% DENSITY INDEX
C	COHESIONLESS MATERIAL MEETING AS/NZS 2566.2 APPENDIX G, OR SELECT NATIVE EMBEDMENT MATERIAL. SEE NOTE 5. MAXIMUM PARTICLE SIZE 20mm.	COMPACTED IN 150mm LIFTS TO 90% SMDD FOR COHESIVE MATERIALS, AND 60% DENSITY INDEX FOR COHESIONLESS MATERIALS	COHESIONLESS MATERIAL MEETING AS/NZS 2566.2 APPENDIX G AND MAXIMUM PARTICLE SIZE 20mm.	COMPACTED IN 150mm LIFTS TO 70% DENSITY INDEX
D	EXCAVATED MATERIAL	COMPACTED IN 250mm LIFTS TO 85% SMDD	REFER TO DRAWING NW-DIT-BAS-3000-CIV-DRG-3001	REFER TO DRAWING NW-DIT-BAS-3000-CIV-DRG-3001

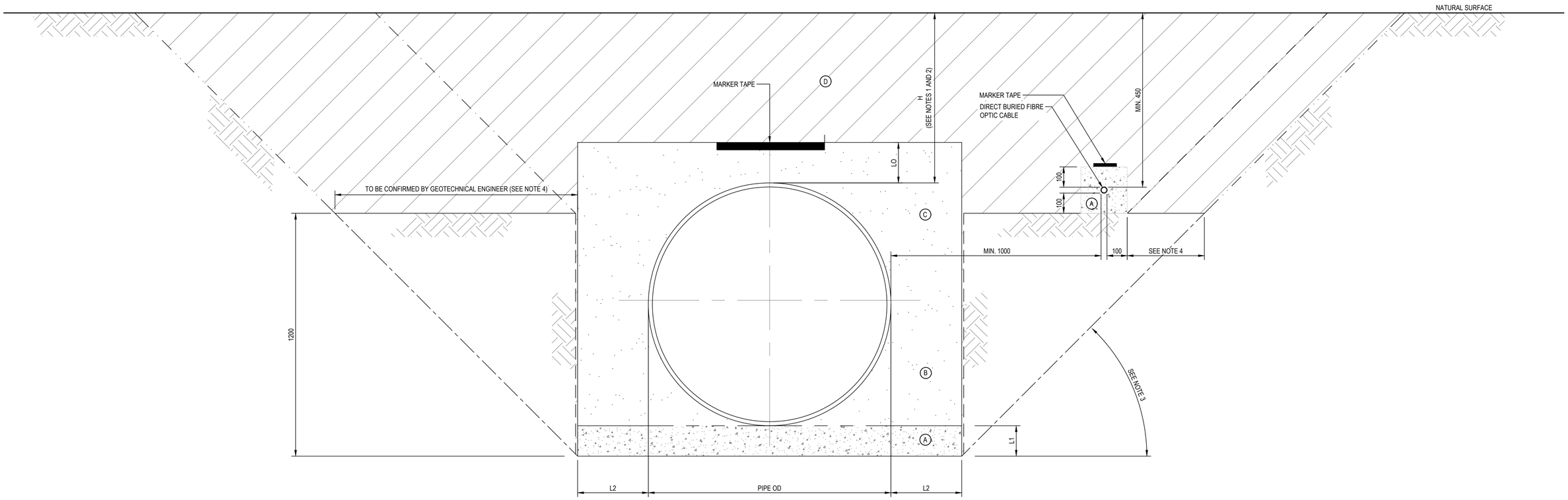
DIMENSIONS(mm)					H (MIN. COVER DEPTH)			
PIPE DN	PIPE OD	LO	L1	L2	NON- TRAFFICABLE AREAS	TRAFFICABLE AREAS (LOCAL SEALED)	TRAFFICABLE AREAS (UNSEALED ROADS)	TRAFFICABLE AREAS (DIT ROADS)
1200	1200	200	150	350	700	1000	1000	1000
1100	1125	200	150	350	600	600	750	1000
1000	1016	200	150	350	600	600	750	1000
450	507	150	150	300	600	600	750	1000

LEGEND - TRENCHING OPTIONS:

- STANDARD TRENCH
- BENCHED/BATTERED TRENCH (MAX. EXTENT)
- BENCHED/BATTERED TRENCH (MIN. EXTENT)
- NATURAL ANGLE OF REPOSE

NOTES:

1. MINIMUM COVER DEPTH IS BASED ON W80/A160 DESIGN VEHICLE LOAD, AND DOES NOT CONSIDER LOADING DUE TO CONSTRUCTION MACHINERY OR EQUIPMENT.
2. MINIMUM COVER DEPTHS ARE SHOWN. AVERAGE PIPELINE COVER WILL EXCEED THE MINIMUM COVER DEPTH. MAXIMUM COVER 1500mm.
3. EXCAVATION ANGLE TO BE EQUAL OR LESS THAN THE NATURAL ANGLE OF REPOSE OF SOIL TO PREVENT COLLAPSE OF TRENCH SIDES.
4. TRENCHING TO BE BENCHED AND/OR SHORED TO MINIMIZE THE RISK TO ANY PERSON ARISING FROM THE COLLAPSE OF THE TRENCH. SLOPE OF BATTERS AND WIDTH OF BENCH REQUIRED TO BE DETERMINED BY GEOTECHNICAL ENGINEER, AND WILL VARY DEPENDING ON EXISTING GEOTECHNICAL CONDITIONS.
5. SELECT NATIVE EMBEDMENT MATERIAL MUST BE SUITABLE TO MEET A MINIMUM SOIL MODULUS OF 3 MPA IN ACCORDANCE WITH AS/NZS 2566.1 TABLE 3.2, CONTAIN MORE THAN 30% COARSE-GRAINED PARTICLES, AND WHERE IT IS FINE GRAINED, HAVE A LIQUID LIMIT OF LESS THAN 50% AND MEDIUM TO NO PLASTICITY.



TRENCH CROSS SECTION

SCALE 1:10

FOR INFORMATION ONLY

NOT FOR CONSTRUCTION

SCALES: 0.2 0 0.1 0.2 0.3 0.4

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B	FOR INFORMATION ONLY	AC	30.06.25
A	DRAFT FOR COMMENT	AM	07.03.25

Government of South Australia

Department for Infrastructure and Transport

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REFERENCE DESIGN

NORTHERN WATER

TRANSFER SYSTEM

PIPELINE DETAILS

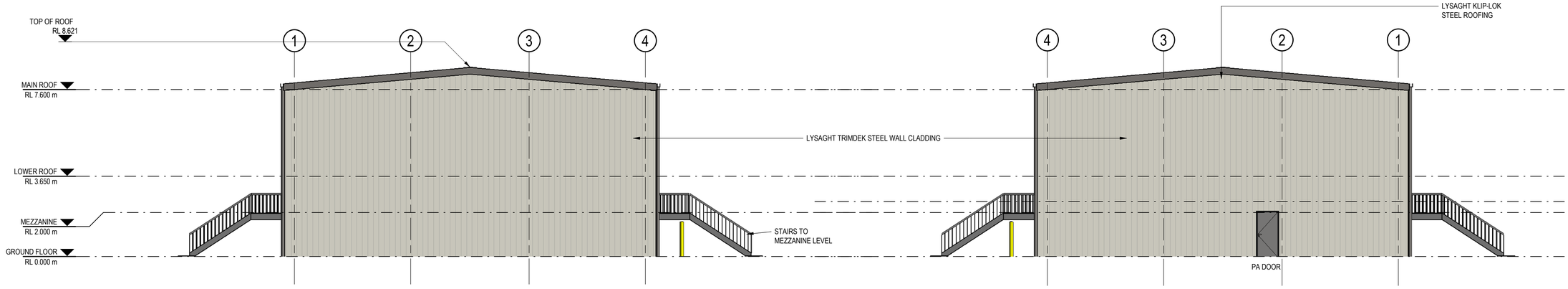
PIPELINE TRENCH DETAIL

DESIGNED	DRAFTED	CHECKED	PATCHS No	SKETCH No.	AMEND No.:
AS	AM	SC	24C347	NW-DIT-BAS-3000-CIV-DRG-3003	B

CAD FILE NAME: NW-DIT-BAS-3000-CIV-DRG-3003.dwg

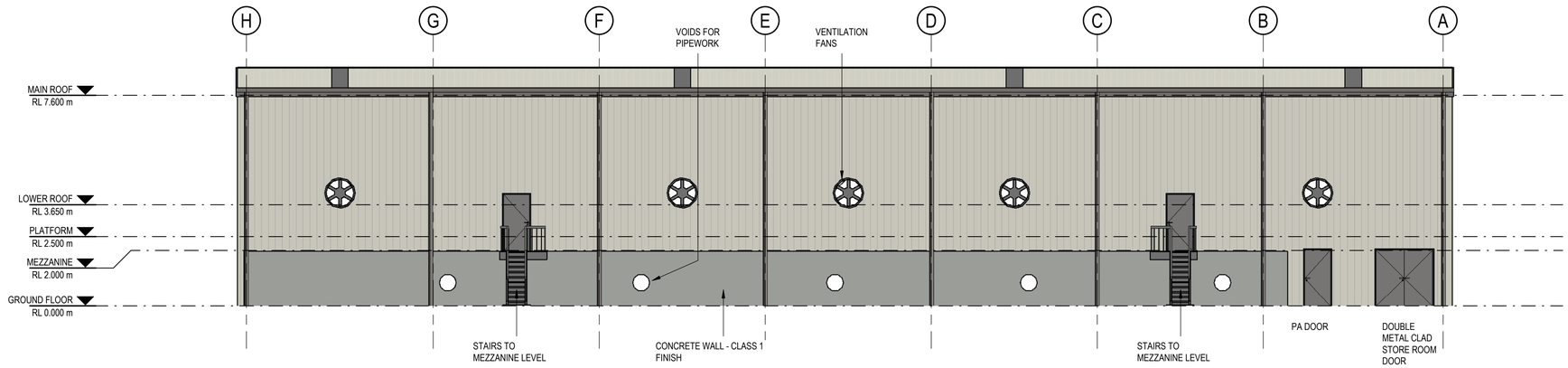
NOTES
ALL LYSAGHT STEEL CLADDING IS COLORBOND ULTRA STEEL.

COLORBOND STEEL COLOUR GUIDE:
SURFMIST: ROOF/WALLS
WALLABY: STEELWORK, FASCIAS, FLASHINGS AND GUTTERS

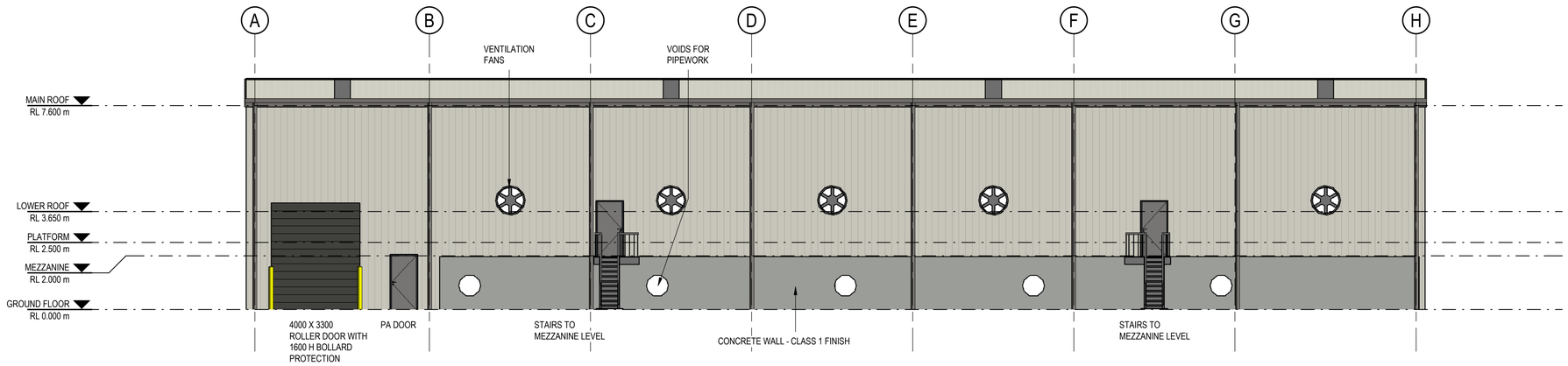


1 / 0001 ELEVATION
SCALE 1 : 100

2 / 0001 ELEVATION
SCALE 1 : 100



3 / 0001 ELEVATION
SCALE 1 : 100



4 / 0001 ELEVATION
SCALE 1 : 100

FOR INFORMATION ONLY

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SCALES: 1000 0 1000 2000 3000 4000 5000 mm

No.	AMENDMENT DESCRIPTION	BY	DATE
B	FOR INFORMATION ONLY	AC	30.06.25
A	DRAFT FOR COMMENT	KR	21.03.25

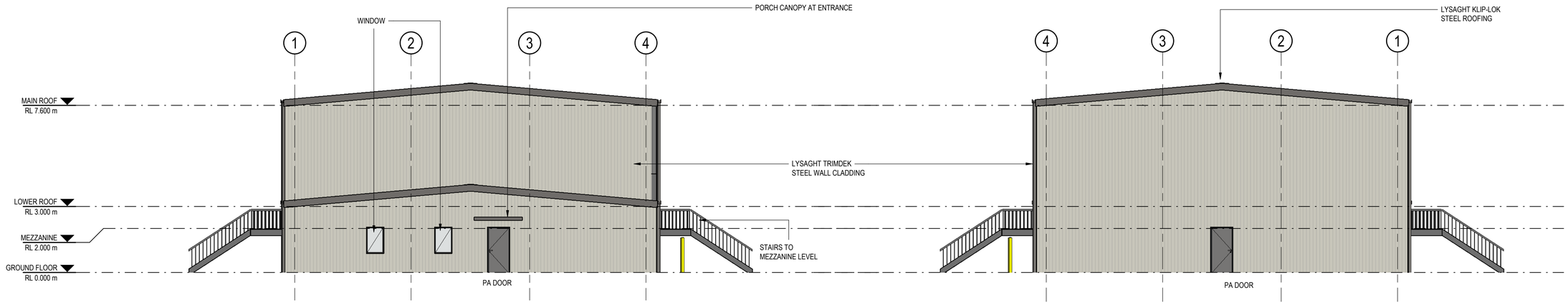
Government of South Australia
Department for Infrastructure and Transport

REFERENCE DESIGN
NORTHERN WATER
TRANSFER SYSTEM
PUMP STATION 1
ARCHITECTURE - ELEVATIONS

DESIGNED	DRAFTED	CHECKED	PATCHS No.	SKETCH No.	AMEND No:
JW	KR	SZ	24C347	NW-DIT-BAS-3120-ARC-DRG-0004	B

ALL DIMENSIONS ARE IN MILLIMETRES UNLESS SHOWN OTHERWISE ◀ 1000 MILLIMETRES ON ORIGINAL DRAWING ▶ UNCONTROLLED COPY WHEN PRINTED

CAD FILE NAME:NW-DIT-BAS-3120-ARC-DRG-0004

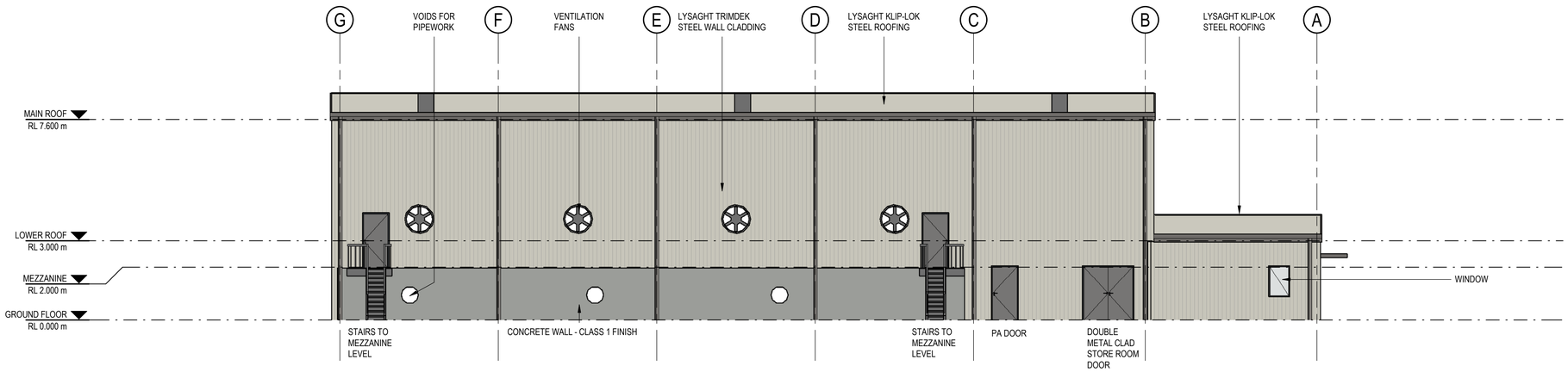


1 / 0101 ELEVATION
SCALE 1 : 100

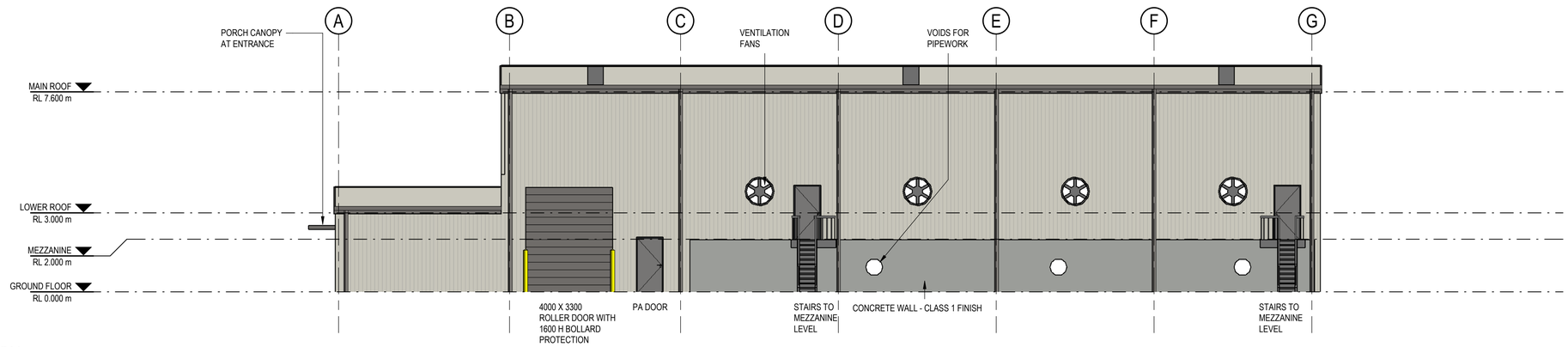
2 / 0101 ELEVATION
SCALE 1 : 100

NOTES
ALL LYSAGHT STEEL CLADDING IS COLORBOND ULTRA STEEL.

COLORBOND STEEL COLOUR GUIDE:
SURFMIST: ROOF/WALLS
WALLABY: STEELWORK, FASCIAS, FLASHINGS AND GUTTERS



3 / 0101 ELEVATION
SCALE 1 : 100



4 / 0101 ELEVATION
SCALE 1 : 100

FOR INFORMATION ONLY

NOT FOR CONSTRUCTION

SCALES: 1000 0 1000 2000 3000 4000 5000 mm

No.	AMENDMENT DESCRIPTION	BY	DATE
B	FOR INFORMATION ONLY	AC	30.06.25
A	DRAFT FOR COMMENT	KR	21.03.25

Government of South Australia
Department for Infrastructure and Transport

REFERENCE DESIGN
NORTHERN WATER
TRANSFER SYSTEM
PUMP STATIONS 2, 3 AND 4
ARCHITECTURE - ELEVATIONS

DESIGNED	DRAFTED	CHECKED	PATCHS No.	SKETCH No.	AMEND No:
JW	KR	SZ	24C347	NW-DIT-BAS-3000-ARC-DRG-0104	B

ALL DIMENSIONS ARE IN MILLIMETRES UNLESS SHOWN OTHERWISE ◀ 1000 MILLIMETRES ON ORIGINAL DRAWING ▶ UNCONTROLLED COPY WHEN PRINTED

CAD FILE NAME:NW-DIT-BAS-3000-ARC-DRG-0104