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Legend

- Lot 152 /-/ DP659519 (2.085 ha; Land zoning: C3 - Environmental Management)
- Lot
- Road
- Railway tracks
- Watercourse

Scale at A3: 1:2,000 Magnetic North:12.28°E Name: GDA2020 MGA Zone 56

Consulting & Environmental Services
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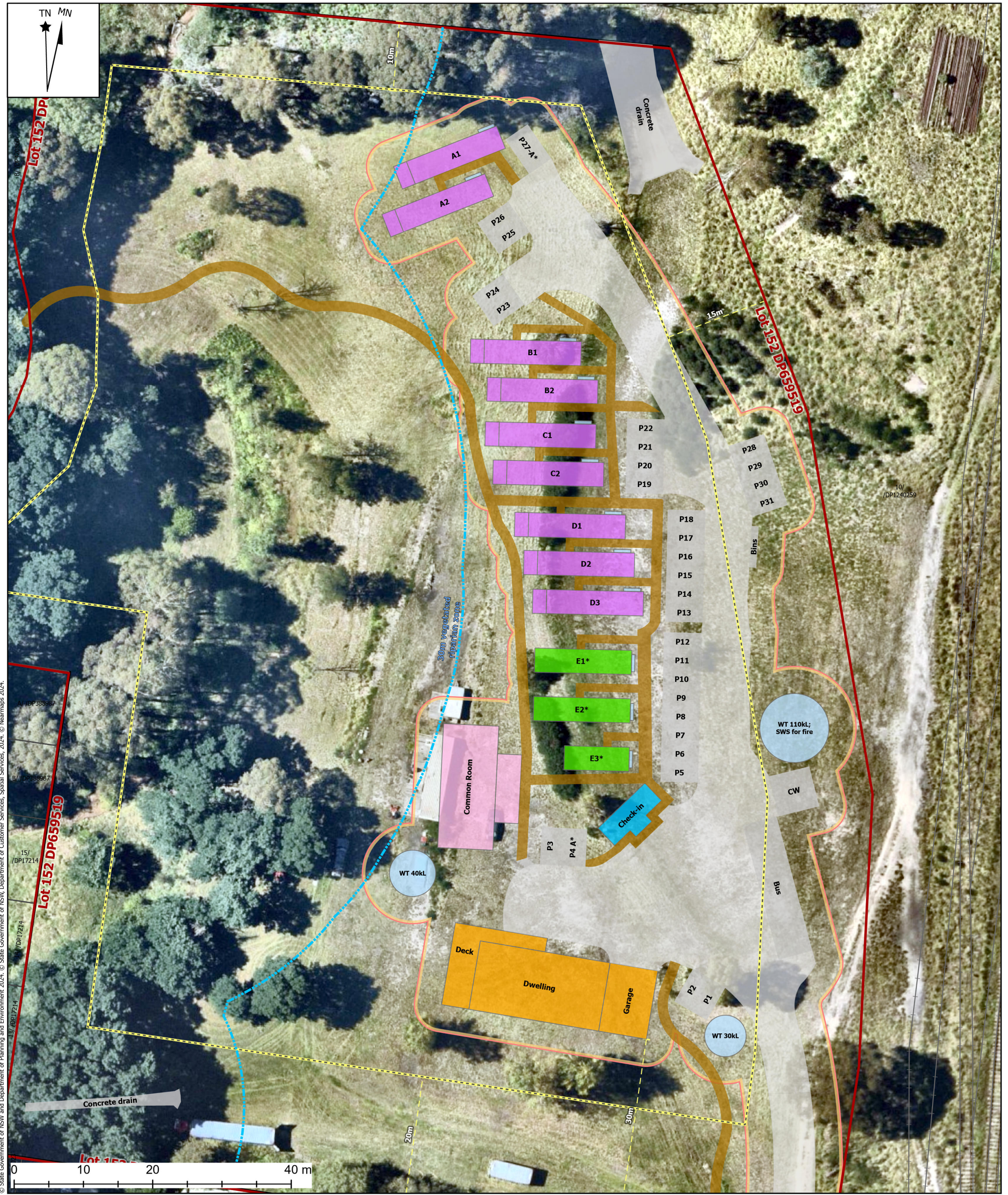
This design plan proposed must be verified accurately when used for construction purposes.

Drawing title: Location Plan for Flood Impact Assessment
EXPERIENCE OZ ECOTOURISM FACILITY

Lot 152, DP 659519
Client: Ben Harris
Site address: 51 Atkinson Street Mort's Estate Lithgow 2790 NSW

Project number: 136-2107
Drawing number: 41-2107

Drawn by: M.H. Environmental Drafting. Date:20/03/2024 11:40 AM



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Legend

- Lot 152 /- DP659519 (2.085 ha; Land zoning: C3 - Environmental Management)
- Lot
- Railway tracks
- Setbacks (DCP 2022 Cl. 6.3.1)
- Construction Zone (6,989sqm)
- Driveway
- Walkways
- Water tank
- Cabins A1&2, B1&2, C1&2 and D1-3
- Cabins E1-3 (*One-Bedroom)
- Manager's residence
- Check-in office
- Common room / bushfire refuge
- Car spaces P1-31
- Edge of vegetated riparian zone (VRZ) (30m from top of bank)

Scale at A3: 1:500 Magnetic North:12.28°E Name: GDA2020 MGA Zone 56

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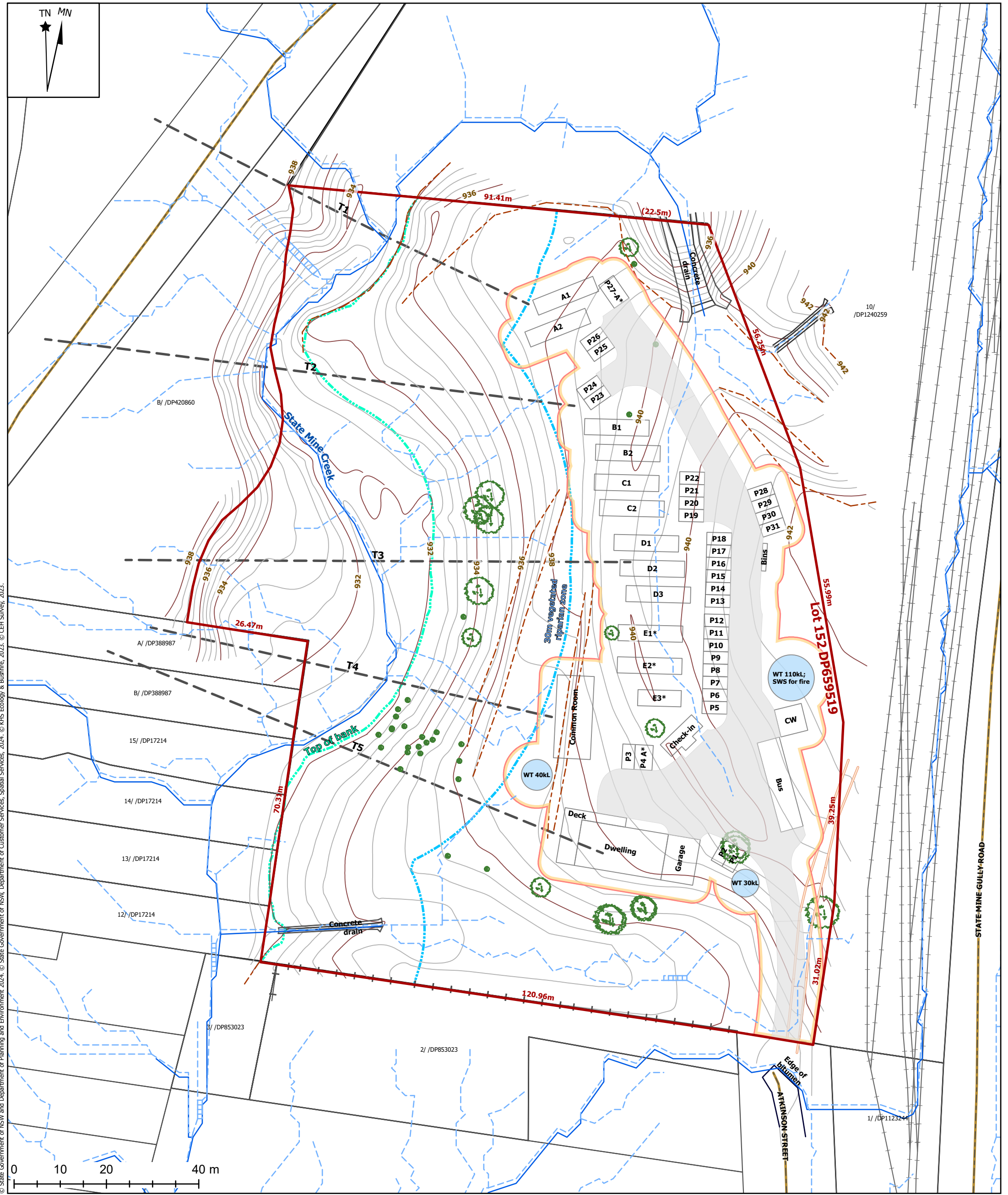
This design plan proposed must be verified accurately when used for construction purposes.

Drawing title: Project Proposal Concept Plan
EXPERIENCE OZ ECOTOURISM FACILITY

Lot 152, DP 659519
Client: Ben Harris
Site address: 51 Atkinson Street Mort's Estate Lithgow 2790 NSW

Project number: 136-2107
Drawing number: 41-2107

Drawn by: M.H. Environmental Drafting. Date: 14/05/2024



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Scale at A3: 1:750 Magnetic North:12.29°E Name: GDA2020 MGA Zone 56

Legend

- Lot 152 /- DP659519 (2.085 ha; Land zoning: C3 - Environmental Management)
- Construction Zone (6,989sqm)
- Driveway
- Proposed buildings and carparks
- Water tank
- Cross-sections for topographic site analysis (T1-5)
- Top of bank
- Edge of vegetated riparian zone (VRZ) (30m from top of bank)
- Watercourse and drainage lines (modelled)
- Modelled drainage lines (catchment)

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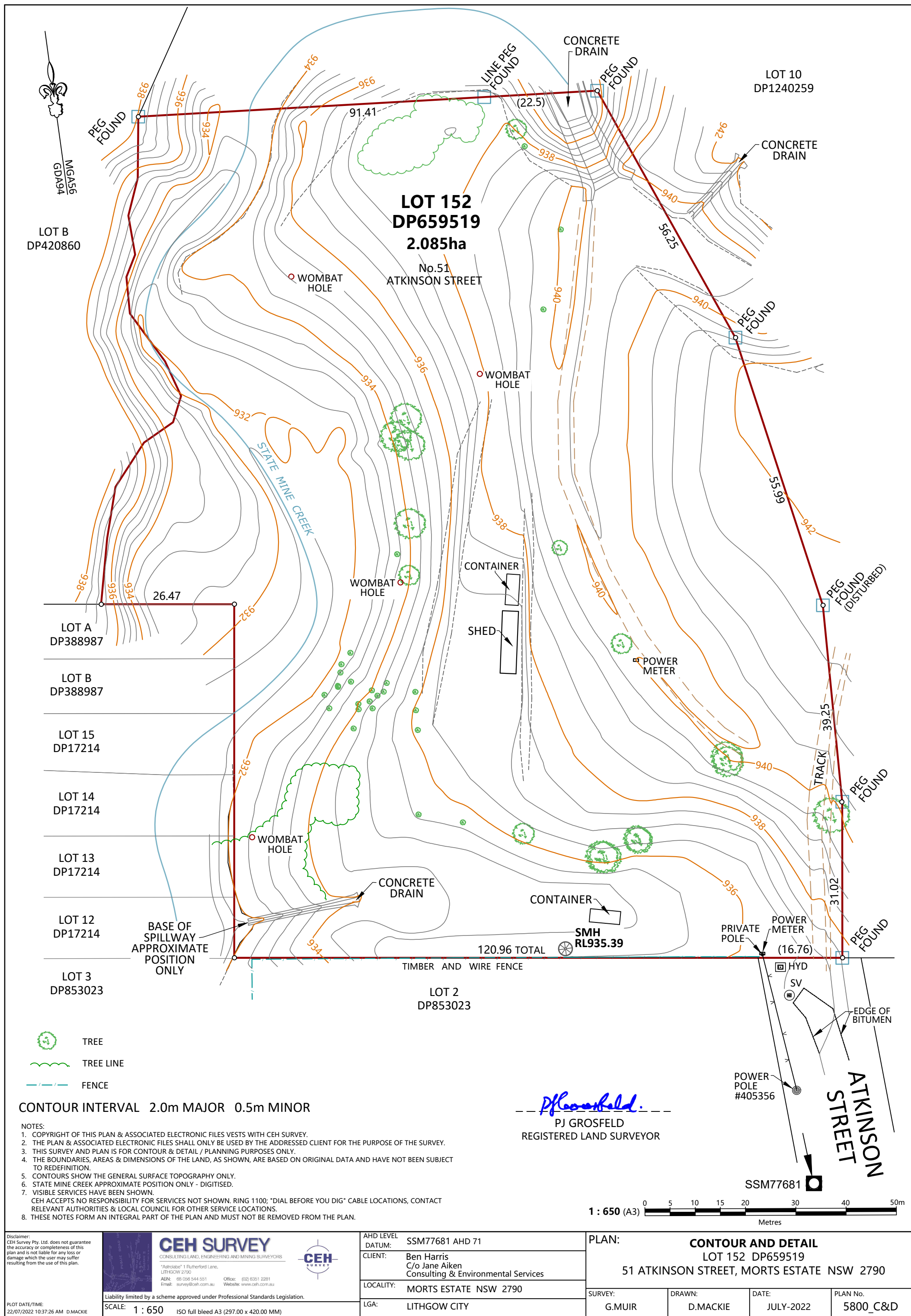
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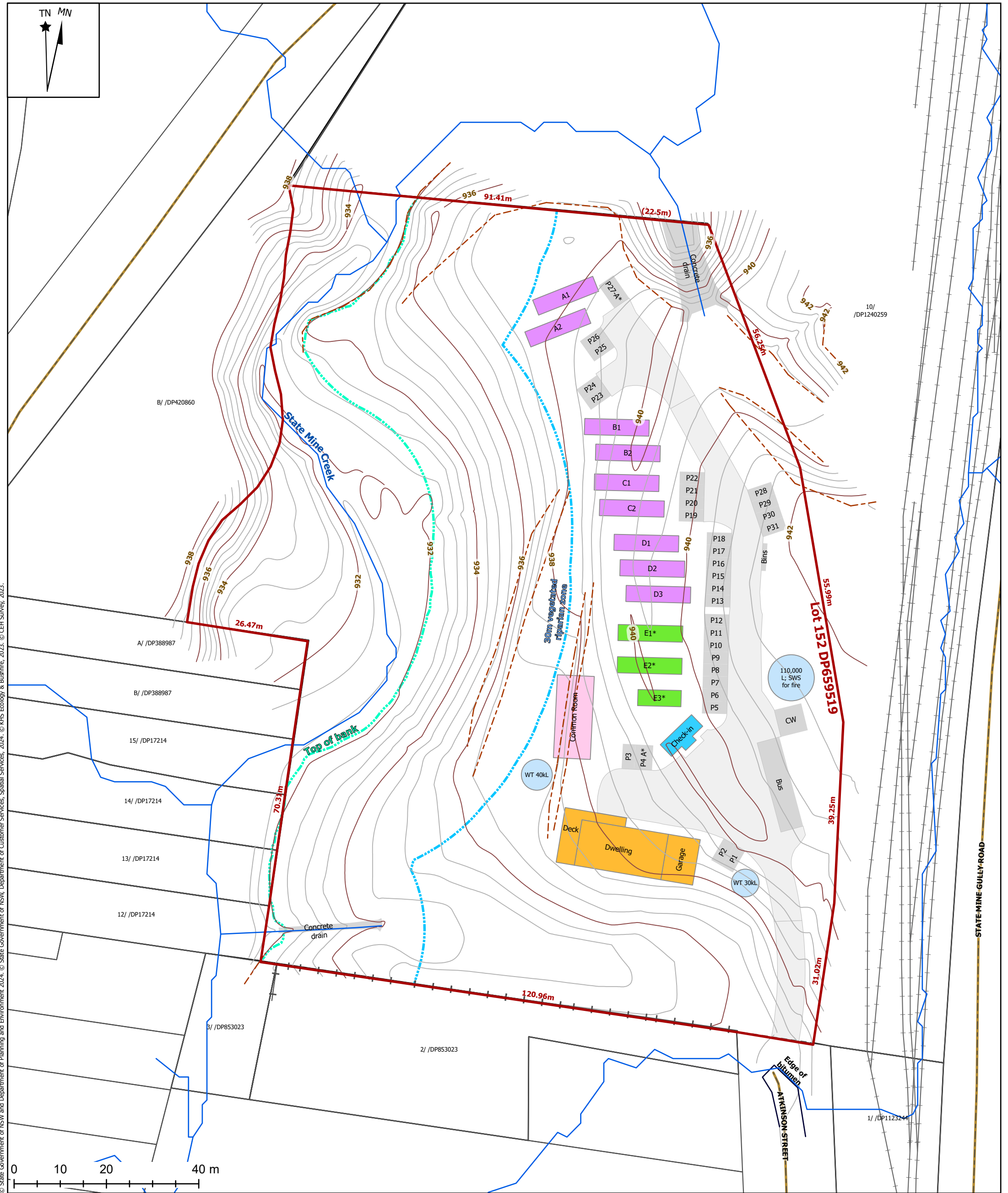
Landform and Drainage (Pre-Development)
EXPERIENCE OZ ECOTOURISM FACILITY

Lot 152, DP 659519
Client: Ben Harris
Site address: 51 Atkinson Street Mort's Estate Lithgow 2790 NSW

Project number: 136-2107
Drawing number: 41-2107

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Legend

- Lot 152 /- DP659519 (2.085 ha; Land zoning: C3 - Environmental Management)
- Watercourse and drainage lines (modelled)
- Driveway
- Water tank
- Top of bank
- Edge of vegetated riparian zone (VRZ) (30m from top of bank)
- Bank
- Contour 2m
- Contour 0.5m

- Buildings
- Cabins A1&2, B1&2, C1&2 and D1-3
 - Cabins E1-3 (*One-Bedroom)
 - Manager's residence
 - Check-in office
 - Common room / bushfire refuge
 - Car spaces P1-31

Consulting & Environmental Services
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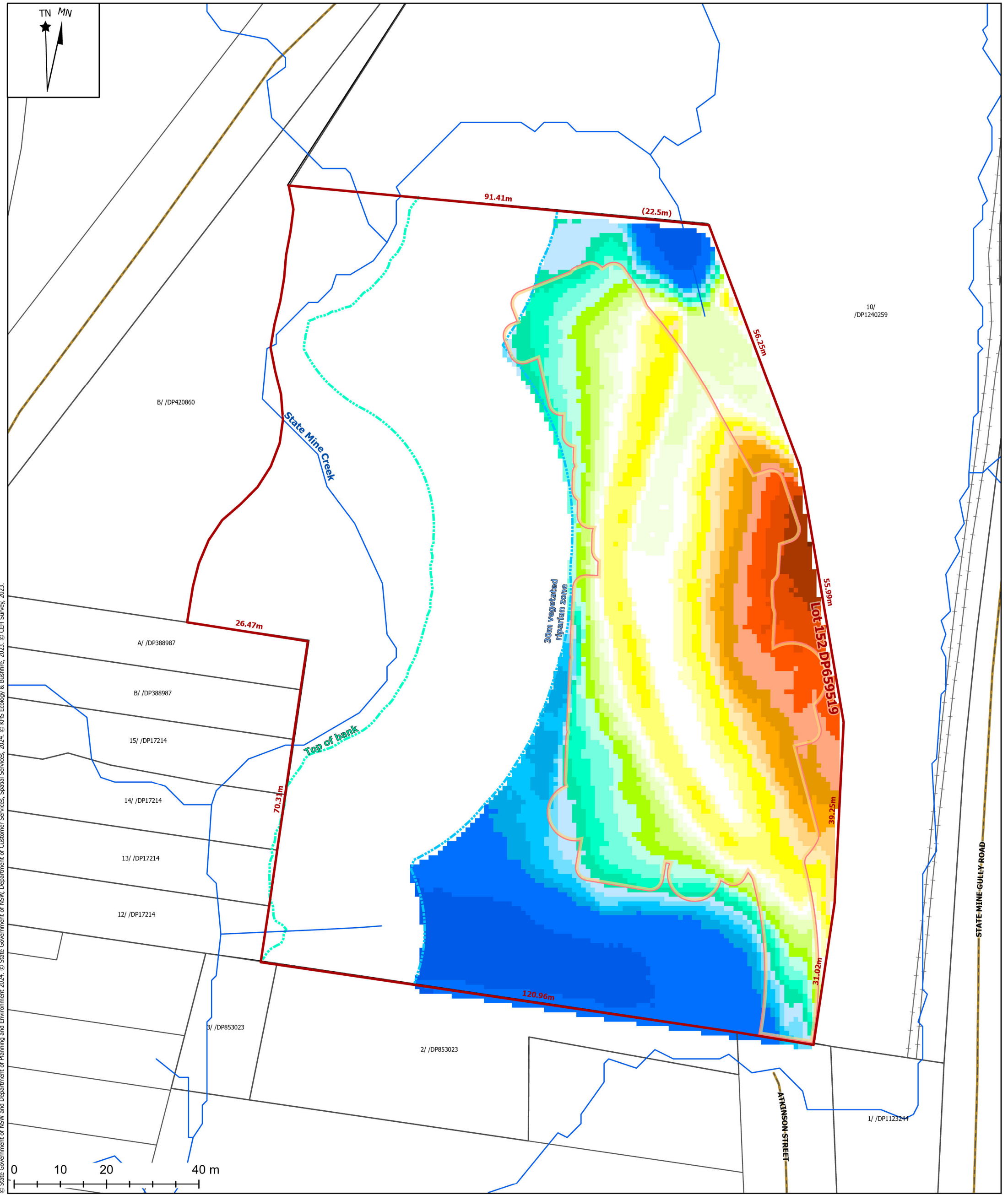
This design plan proposed must be verified accurately when used for construction purposes.

Proposed development on existing contours
EXPERIENCE OZ ECOTOURISM FACILITY

Lot 152, DP 659519
Client: Ben Harris
Site address: 51 Atkinson Street Mort's Estate Lithgow 2790 NSW

Project number: 136-2107
Drawing number: 41-2107

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Legend

- Lot 152 /- DP659519 (2.085 ha; Land zoning: C3 - Environmental Management)
- Watercourse and drainage lines (modelled)
- Lot
- Road
- Railway tracks
- Construction zone (6,403 sqm)
- Top of bank
- Edge of vegetated riparian zone (VRZ) (30m from top of bank)

- Pre-Development Levels
- 934.569 - 935.454
 - 935.455 - 937
 - 937.001 - 937.25
 - 937.251 - 937.5
 - 937.501 - 937.75
 - 937.751 - 938
 - 938.001 - 938.25
 - 938.251 - 938.5
 - 938.501 - 938.75

- 938.751 - 939
- 939.001 - 939.25
- 939.251 - 939.5
- 939.501 - 939.75
- 939.751 - 939.9
- 939.901 - 940.1
- 940.101 - 940.25
- 940.251 - 940.5
- 940.501 - 940.75
- 940.751 - 941

- 941.001 - 941.25
- 941.251 - 941.5
- 941.501 - 941.75
- 941.751 - 942
- 942.001 - 942.25
- 942.251 - 942.5
- 942.501 - 942.75
- 942.751 - 943

Scale at A3: 1:750 Magnetic North:12.28°E Name: GDA2020 MGA Zone 56

Consulting & Environmental Services
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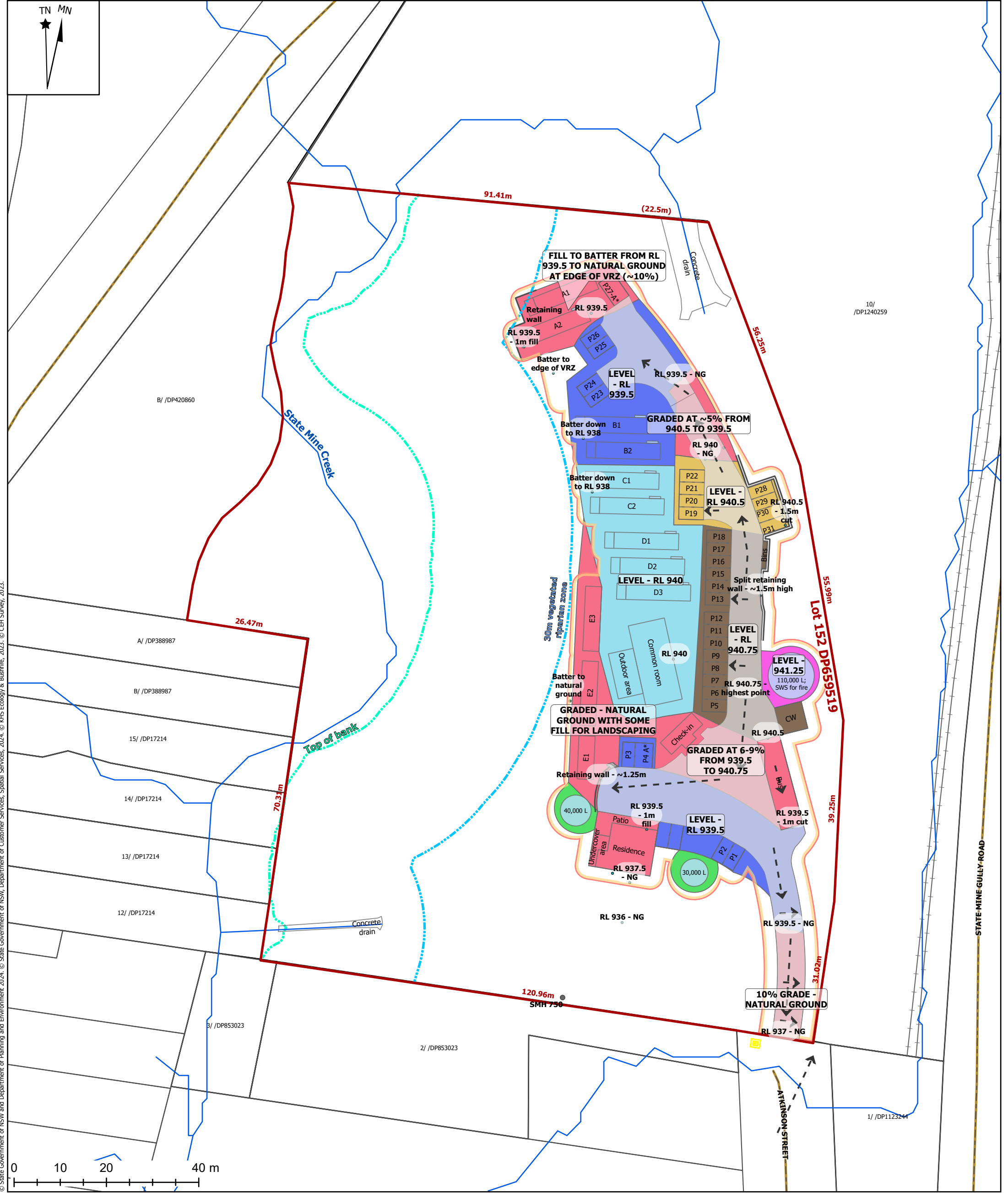
This design plan proposed must be verified accurately when used for construction purposes.

Earthworks: Pre-Development Levels
EXPERIENCE OZ ECOTOURISM FACILITY

Lot 152, DP 659519
Client: Ben Harris
Site address: 51 Atkinson Street Mort's Estate Lithgow 2790 NSW

Project number: 136-2107
Drawing number: 41-2107

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Legend

- Lot 152 /-/ DP659519 (2.085 ha; Land zoning: C3 - Environmental Management)
- Watercourse and drainage lines (modelled)
- Lot
- Road
- Railway tracks
- Construction zone (6,403 sqm)
- Proposed buildings and car spaces
- Driveway
- Water tank
- Top of bank
- Edge of vegetated riparian zone (VRZ) (30m from top of bank)

- Design finish levels
- Graded
- Level 938.5
- Level 939.5
- Level 940
- Level 940.5
- Level 940.75
- Level 941.25
- Direction of slope/drainage

Consulting & Environmental Services
cessoils.com.au – on behalf of the client.

This design plan proposed must be verified accurately when used for construction purposes.

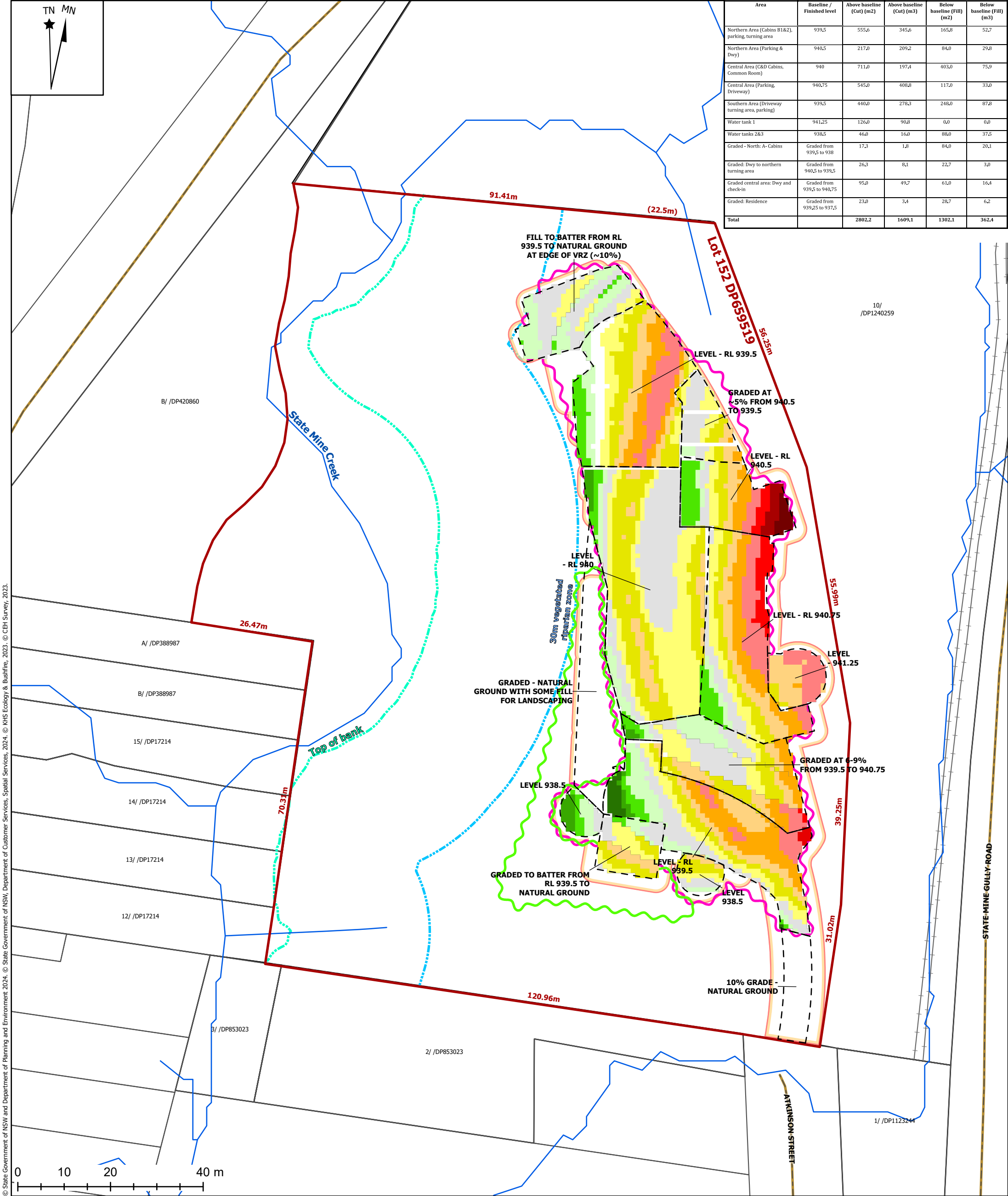
Earthworks: Conceptual Design Finish Levels
EXPERIENCE OZ ECOTOURISM FACILITY

Lot 152, DP 659519
Client: Ben Harris
Site address: 51 Atkinson Street Mort's Estate Lithgow 2790 NSW

Project number: 136-2107
Drawing number: 41-2107

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Area	Baseline / Finished level	Above baseline (Cut) (m2)	Above baseline (Cut) (m3)	Below baseline (Fill) (m2)	Below baseline (Fill) (m3)
Northern Area (Cabins B1&2), parking, turning area	939.5	555.6	345.6	165.8	52.7
Northern Area (Parking & Dwy)	940.5	217.0	209.2	84.0	29.8
Central Area (C&D Cabins, Common Room)	940	711.0	197.4	403.0	75.9
Central Area (Parking, Driveway)	940.75	545.0	408.8	117.0	33.0
Southern Area (Driveway turning area, parking)	939.5	440.0	278.3	248.0	87.8
Water tank 1	941.25	126.0	90.8	0.0	0.0
Water tanks 2&3	938.5	46.0	16.0	88.0	37.5
Graded - North: A- Cabins	Graded from 939.5 to 938	17.3	1.8	84.0	20.1
Graded: Dwy to northern turning area	Graded from 940.5 to 939.5	26.3	8.1	22.7	3.0
Graded central area: Dwy and check-in	Graded from 939.5 to 940.75	95.0	49.7	61.0	16.4
Graded: Residence	Graded from 939.25 to 937.5	23.0	3.4	28.7	6.2
Total		2802.2	1609.1	1302.1	362.4



Legend

- Lot 152 /- DP659519 (2.085 ha; Land zoning: C3 - Environmental Management)
- Lot
- Road
- Railway tracks
- Construction zone (6,403 sqm)

- Top of bank
- Edge of vegetated riparian zone (VRZ) (30m from top of bank)
- Approximate extent of earthworks
- Landscaping
- Earthworks
- Design finish levels

- Conceptual cut and fill
- Fill 0.75-1m
 - Fill 0.5-0.75m
 - Fill 0.25-0.5m
 - Fill <0.25m

- Cut <0.25m
- Cut 0.25-0.5m
- Cut 0.5-0.75m
- Cut 0.75-1m
- Cut 1-1.25m
- Cut 1.25-1.5m
- Cut 1.5-1.75m
- Cut 1.75-2m

Consulting & Environmental Services
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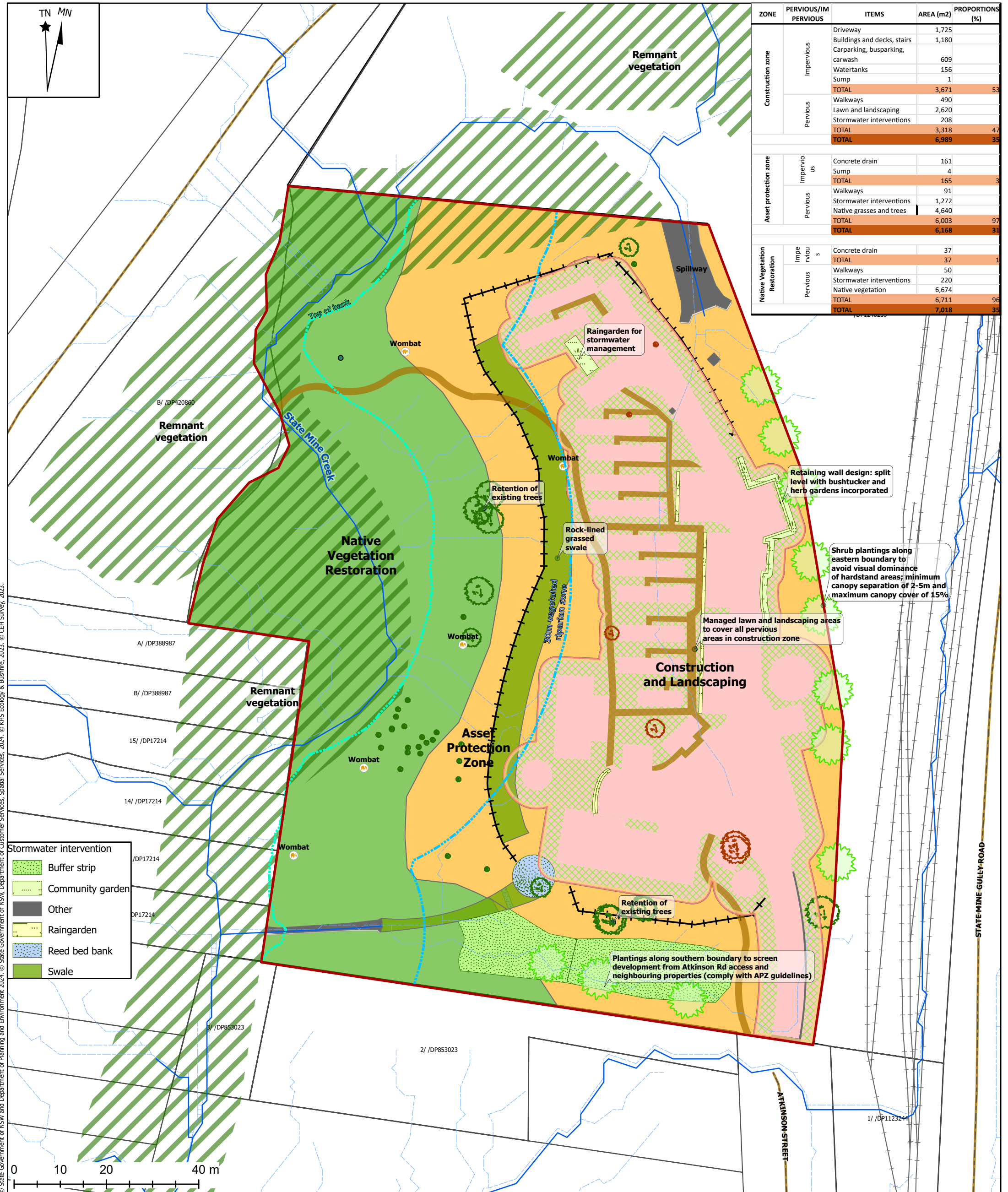
This design plan proposed must be verified accurately when used for construction purposes.

Earthworks: Conceptual Cut and Fill
EXPERIENCE OZ ECOTOURISM FACILITY

Lot 152, DP 659519
Client: Ben Harris
Site address: 51 Atkinson Street Mort's Estate Lithgow 2790 NSW

Project number: 136-2107
Drawing number: 41-2107

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ZONE	PERVIOUS/IM PERVIOUS	ITEMS	AREA (m2)	PROPORTIONS (%)
Construction zone	Impervious	Driveway	1,725	
		Buildings and decks, stairs	1,180	
		Carparking, busparking, carwash	609	
		Watertanks	156	
		Sump	1	
		TOTAL	3,671	53
	Pervious	Walkways	490	
		Lawn and landscaping	2,620	
		Stormwater interventions	208	
		TOTAL	3,318	47
TOTAL		6,989	35	
Asset protection zone	Impervious	Concrete drain	161	
		Sump	4	
		TOTAL	165	3
	Pervious	Walkways	91	
		Stormwater interventions	1,272	
		Native grasses and trees	4,640	
		TOTAL	6,003	97
		TOTAL	6,168	31
Native Vegetation Restoration	Impervious	Concrete drain	37	
		TOTAL	37	1
	Pervious	Walkways	50	
		Stormwater interventions	220	
		Native vegetation	6,674	
		TOTAL	6,711	96
		TOTAL	7,018	33

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Legend

Lot 152 /- DP659519 (2.085 ha; Land zoning: C3 - Environmental Management)

Lot

Road

Watercourse and drainage lines (modelled)

Railway tracks

Vegetation Management Zones (KHS)

Construction and Landscaping: 6,403 sqm

Asset Protection Zone: 6,749 sqm

Native Vegetation Restoration: 7,027 sqm

Managed Lawn and Landscaping within Construction Zone

Sediment fence

Proposed plantings

Existing trees

To be retained

To be removed

Top of bank

Edge of vegetated riparian zone (VRZ) (30m from top of bank)

Vegetation (KHS Ecology & Bushfire)

Remnant vegetation

Scale at A3: 1:750 Magnetic North:12.29°E Name: GDA2020 MGA Zone 56

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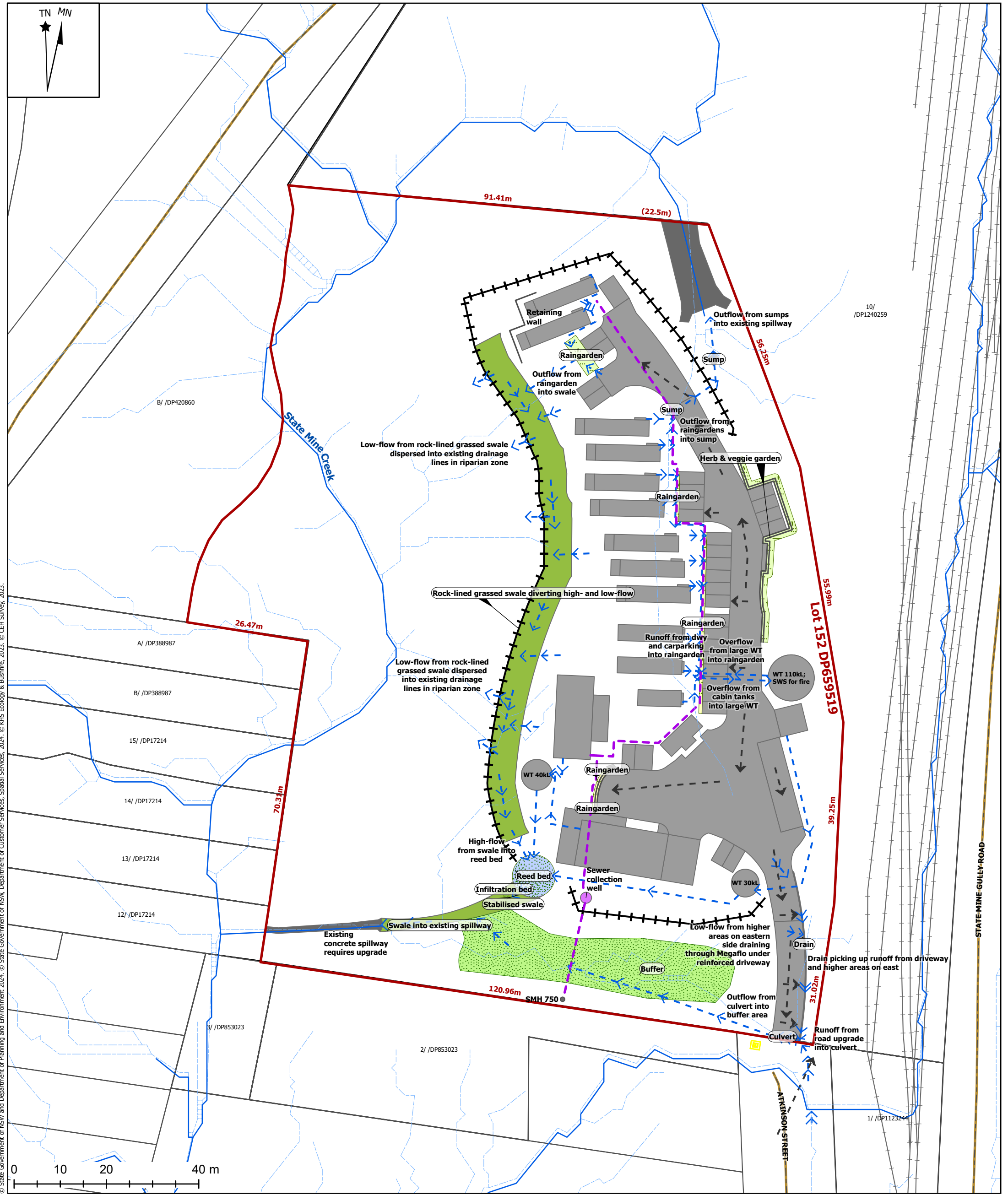
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Concept Landscaping Plan
EXPERIENCE OZ ECOTOURISM FACILITY

Lot 152, DP 659519
Client: Ben Harris
Site address: 51 Atkinson Street Mort's Estate Lithgow 2790 NSW

Project number: 136-2107
Drawing number: 41-2107

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- Legend**

 - Lot 152 /- DP659519 (2.085 ha; Land zoning: C3 - Environmental Management)
 - Lot
 - Road
 - Railway tracks
 - Watercourse and drainage lines (modelled)
 - Drainage lines
 - Impervious surfaces
- Direction of grade
 - Sewer line
 - Stormwater lines
 - Sediment fence (260m)

- Stormwater interventions**
- Buffer strip
 - Community garden
 - Other
 - Raingarden
 - Reed bed bank
 - Swale
 - Water tank

Consulting & Environmental Services
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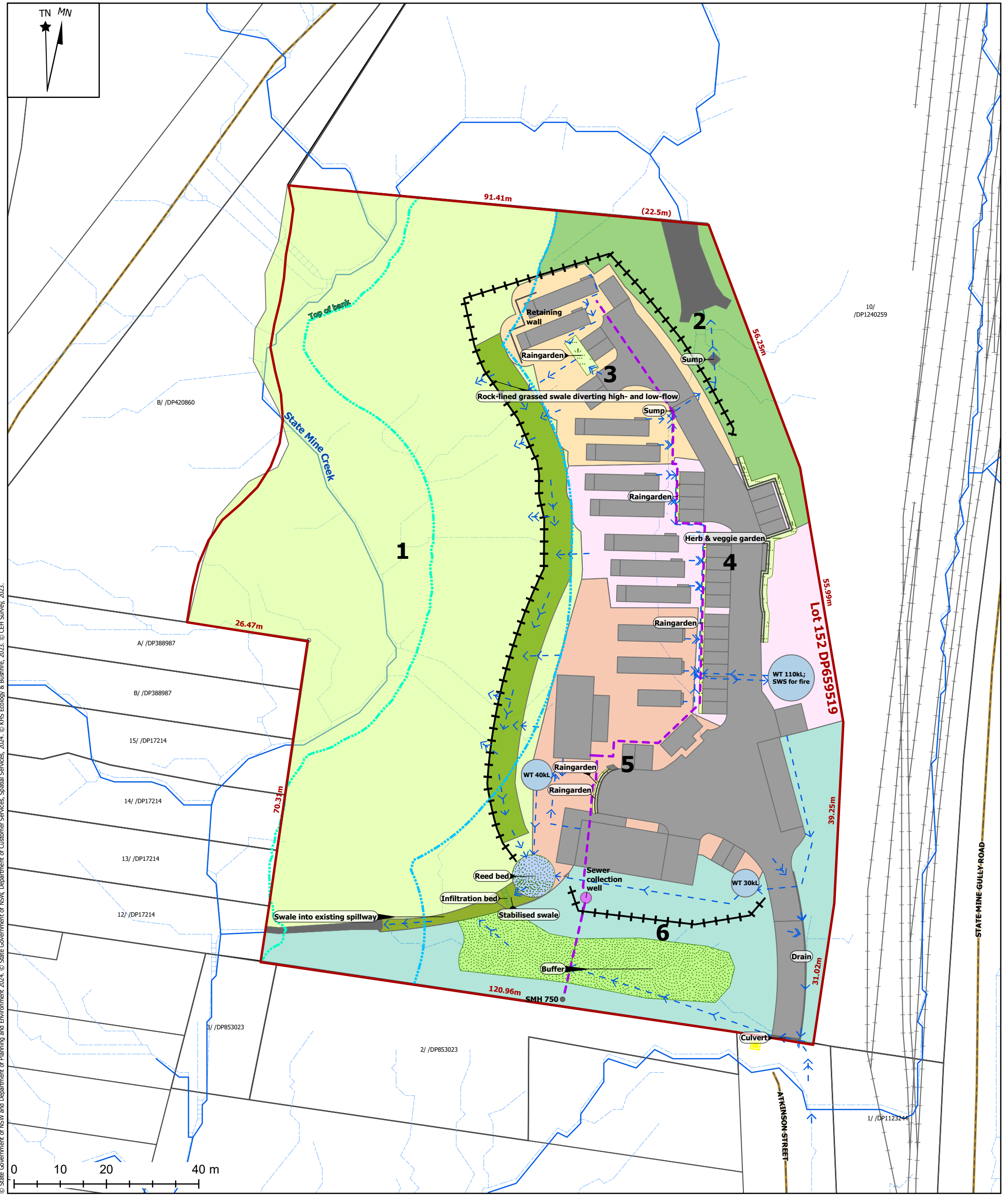
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Water and Soil Management Plan
EXPERIENCE OZ ECOTOURISM FACILITY

Lot 152, DP 659519
Client: Ben Harris
Site address: 51 Atkinson Street Mort's Estate Lithgow 2790 NSW

Project number: 136-2107
Drawing number: 41-2107

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Legend

- Lot 152 /- DP659519 (2.085 ha; Land zoning: C3 - Environmental Management)
- Lot
- Road
- Railway tracks
- Watercourse and drainage lines (modelled)
- Drainage lines
- Impervious surfaces

- Water tank
- Top of bank
- Edge of vegetated riparian zone (VRZ) (30m from top of bank)
- Sewer line
- Stormwater lines
- Sediment fence (260m)

- Stormwater interventions
- Buffer strip
 - Community garden
 - Other
 - Raingarden
 - Reed bed bank
 - Swale

- MUSIC Catchments
- Catchment 1
 - Catchment 2
 - Catchment 3
 - Catchment 4
 - Catchment 5
 - Catchment 6

Consulting & Environmental Services
cessoils.com.au – on behalf of the client.

This design plan proposed must be verified accurately when used for construction purposes.

MUSIC Catchments
EXPERIENCE OZ ECOTOURISM FACILITY

Lot 152, DP 659519
Client: Ben Harris
Site address: 51 Atkinson Street Mort's Estate Lithgow 2790 NSW

Project number: 136-2107
Drawing number: 41-2107

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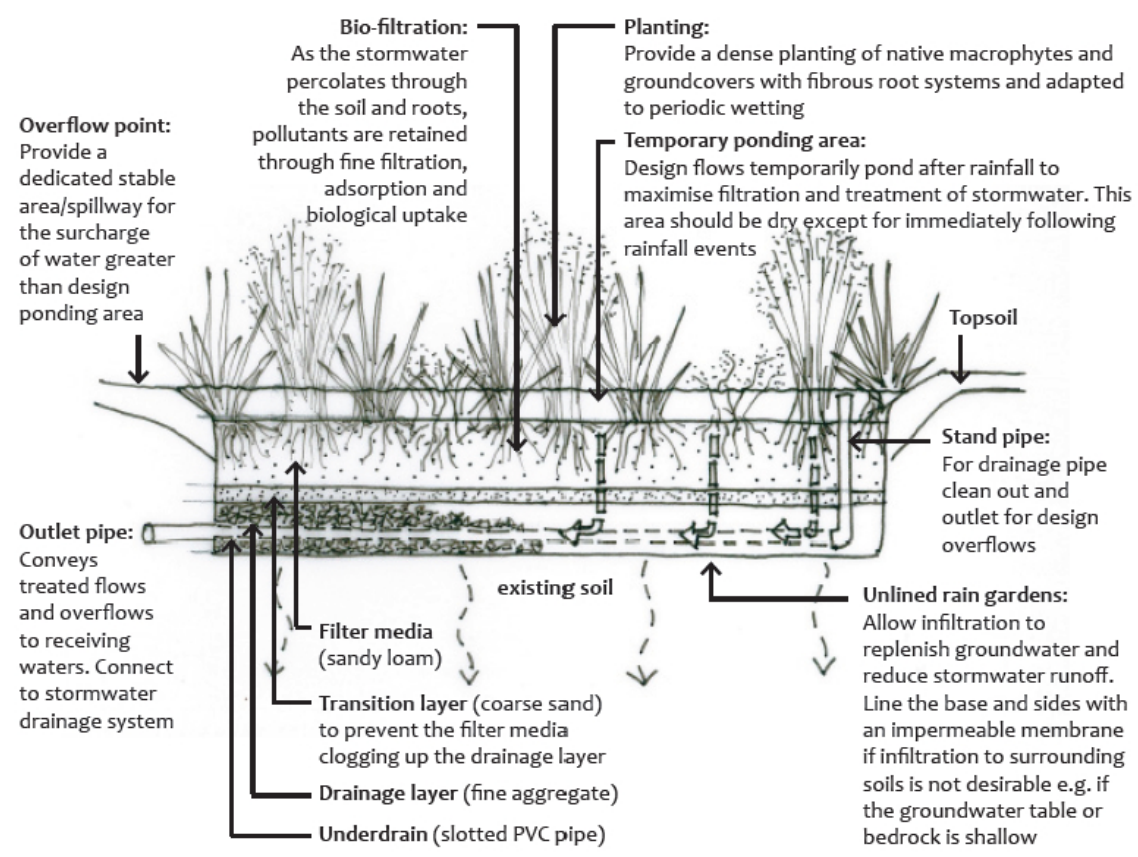


Figure 1 - Typical raingarden cross-section (BMCC DCP 2015 - Part C6 - Figure 3)

Figure 2 - Typical sediment fence (Managing Urban Stormwater: Soils for Construction, 2004).

Construction Notes

1. Construct sediment fences as close as possible to being parallel to the contours of the site, but with small returns as shown in the drawing to limit the catchment area of any one section. The catchment area should be small enough to limit water flow if concentrated at one point to 50 litres per second in the design storm event, usually the 10-year event.
2. Cut a 150-mm deep trench along the upslope line of the fence for the bottom of the fabric to be entrenched.
3. Drive 1.5 metre long star pickets into ground at 2.5 metre intervals (max) at the downslope edge of the trench. Ensure any star pickets are fitted with safety caps.
4. Fix self-supporting geotextile to the upslope side of the posts ensuring it goes to the base of the trench. Fix the geotextile with wire ties or as recommended by the manufacturer. Only use geotextile specifically produced for sediment fencing. The use of shade cloth for this purpose is not satisfactory.
5. Join sections of fabric at a support post with a 150-mm overlap.
6. Backfill the trench over the base of the fabric and compact it thoroughly over the geotextile.

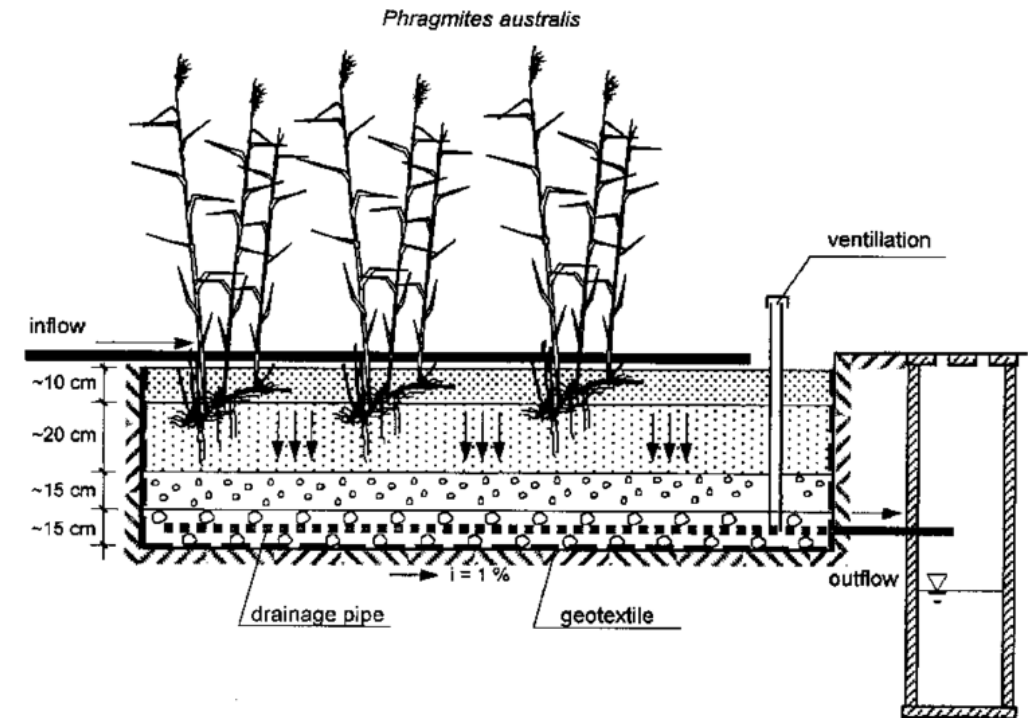
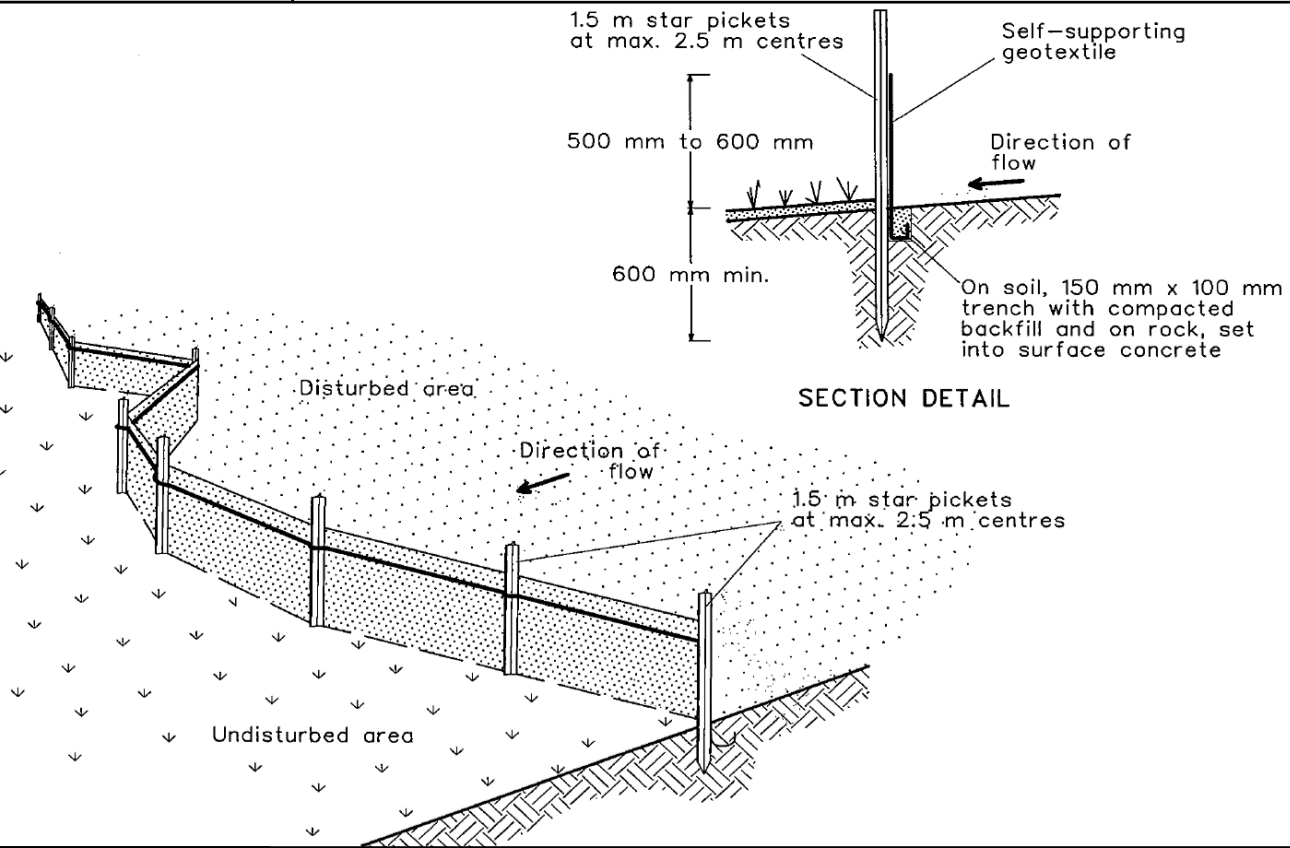


Figure 3: Kowalik, Piotr & Mierzejewski, Michał & Randerson, Peter & Williams, Haydn. (2004). Performance of Subsurface Vertical Flow Constructed Wetlands Receiving Municipal Wastewater. Archives of Hydroengineering and Environmental Mechanics. 51.



Consulting & Environmental Services
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Drawing title:
SOIL AND WATER MANAGEMENT PLAN
- PAGE 2 - DETAILS

EXPERIENCE OZ ECOTOURISM FACILITY

Client: Ben Harris
Lot/DP: Lot 152 DP659519
Site address: 51 Atkinson St
Mort's Estate Lithgow 2790 NSW

Project number: 136-2107
Drawing number: 41-2107
Date: 10/11/2023, Version: 2

Drawn by: M.H. Environmental Drafting.

Figure 4 - Perspective view of swale (Using MUSCI in Sydney Drinking Water Catchment, A Water NSW Standard, 2019 - second edition)

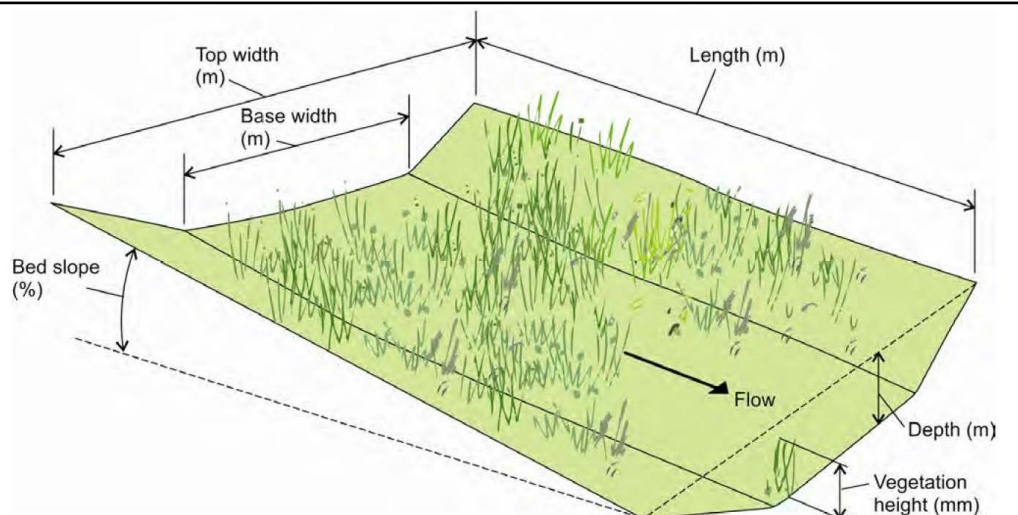


Figure 5.11: A perspective view of a swale as used in MUSIC (<https://wiki.ewater.org.au/display/MD6/Vegetated+Swales>)