

Appendix I

# **Addendum Water Resources Impact Assessment**



20 March 2026

2521-01-B2

Bharat Gordhan  
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**Re: Addendum Water Resources Impact Assessment - Mallee Wind Farm Project (SSD-53293710) WRM 2067-03-B3, September 2024 - Water Demand Clarification**

Dear Bharat,

This letter constitutes an Addendum to the Water Resources Impact Assessment (WRIA) prepared by WRM Water & Environment (WRM) for the Mallee Wind Farm Project (WRM 2067-03-B3, September 2024). It is issued in response to advice from the NSW Department of Climate Change, Energy, the Environment and Water (DCCEE) Water Group to the Department of Planning, Housing and Infrastructure dated 18 December 2024 (ref OUT24/19402, Attachment A, Sections 1.1 and 1.2).

DCCEE identified discrepancies between water demand figures in the WRIA and the Main Environmental Impact Statement (EIS). This Addendum addresses these discrepancies specifically. The figures in Tables 1 and 2 below supersede WRIA Tables 4.2 and 4.3, respectively.

All other matters raised by DCCEE are addressed in the Submissions Report (Umwelt, 2026).

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## **1 WATER DEMAND**

### **1.1 CONSTRUCTION WATER DEMAND**

The discrepancy between the WRIA (140 ML) and EIS Section 3.4.11 (219 ML stated) arises because the two volumes are estimates based on different methodologies. The WRIA figure is a net demand estimate; the EIS figure is a gross consumption estimate that does not account for rainfall offset or on-site reuse. The EIS quotes a conservative upper-bound 90<sup>th</sup> percentile (P90) estimate.

The median, 50<sup>th</sup> percentile (P50), estimate reflects the most likely outcome. The WRIA figure of 140 ML represents a median estimate of the external water supply that must be sourced and trucked to the Project Area. This figure is the appropriate basis for water supply procurement, regional water resource impact assessment, and sizing of Council supply agreements for potable and bulk non-potable water. It is consistent with EIS Section 6.9.2 and all EIS summary tables.

The EIS Section 3.4.11 line-item total of 229 ML<sup>1</sup> represents a gross-consumption P90 estimate of total site water throughput. It applies demand factors to workforce numbers and construction duration, with no deduction for rainfall offset, on-site reuse, or the recirculation of treated effluent. This approach is appropriate for sizing on-site treatment and storage systems. This value does not represent the volume of water sourced externally.

The two volumes are reconciled by introducing a three-tier water quality framework, which reflects the on-site water management systems described in WRIA Sections 4.3.1 and 4.3.2. Construction water demands are summarised in Table 1 below.

**Table 1 Summary of estimated construction water demands (supersedes WRIA Table 4.2)**

Component	Water tier	P50 (ML)	P90 (ML)	Notes
<b>Tier 1 — Potable (sourced externally)</b>				
Drinking water construction workforce	I	18	18	400 FTE × 40 L/day × 1,096 days. Must meet ADWG. Trucked from off-site sources (subject to commercial agreement with Council)
<b>Tier 2 — Clean water supply (reuse or harvested, where possible)</b>				
TWA amenities (shower, toilet, laundry, kitchen)	II	—	95*	Managed by on-site treatment system (WRIA s.4.3.2). (*) 95 is gross, not net demand.
Concrete batching (all concrete works)	II	15	12	Clean water, not potable. AS 1379 s. 2.3 allows mixing, subject to a suitability test.
<b>Tier 3 — Non-potable (harvested on-site sources, where possible)</b>				
Dust suppression — access tracks and disturbed areas	III	38	84	Evap-balanced (P50) vs conservative application rate (P90) assuming never rains.
Access track formation and conditioning	III	57	—	P50 is only one-off soil conditioning. Included in the P90 general earthworks scope.
General operations and earthworks conditioning	III	—	20	P90 only. Includes vehicle washdown and miscellaneous. Different categorisation boundary to P50.
Vehicle washdown	III	11	—	P50 only — see above.
Turbine foundations and concrete plant washdown	III	<1	—	Minor item. Included in the P90 concrete batching scope.
<b>TOTAL CONSTRUCTION DEMAND</b>		<b>140 ML</b>	<b>229 ML</b>	

P50 = in WRIA is WRM’s first-principles methodology, representing a median estimate.

P90 = in EIS is Spark Renewables’ parameters, (\*) representing a conservative total water throughput.

Both estimates are valid for their intended purpose.

\*Concrete batching water does not require a potable supply — AS 1379 Section 2.3 permits non-potable mixing water subject to suitability testing. Temporary Workers Accommodation (TWA) amenities water (shower, toilet, laundry, kitchen) is managed through the on-site treatment system described at WRIA Section 4.3.2 and does not require a potable supply.

The critical supply chain dependency is Tier 1 supply, approximately 18 ML of potable drinking water sourced from the Wentworth Shire Council infrastructure over the construction period.

<sup>1</sup> WRM notes that EIS Section 3.4.11 contains an arithmetic error, the stated total of 219 ML does not correspond to the sum of the line items, which correctly totals 229 ML. The figure of 229 ML was adopted above.

This is a manageable and well-defined supply requirement. How the remaining demands are met is discussed in Section 3.

## 1.2 OPERATIONAL WATER DEMAND

Operational water demand is estimated at up to 1 ML per year under median climatic conditions (P50 estimate), consistent with WRIA Section 4.2.2 and EIS Section 6.9.2. A conservative planning allowance of up to 2 ML per year (P90 estimate) is appropriate for supply contract sizing, consistent with WRIA Section 4.1 and EIS Section 3.4.11.

The P50 estimate of approximately 1 ML per year comprises three components: potable supply for 30 operational staff (approximately 0.4 ML per year); incidental dust suppression (approximately 0.5 ML per year under median climate conditions); and an allowance for intermittent equipment washdown (0.1 ML per year). This estimate is independently supported by SILO median climate statistics for the Project Area (WRIA Table 3.2).

The figure of 2 ML per year in WRIA Table 4.3 was a drafting error inconsistent with WRIA Section 4.2.2 and the Main EIS. This Addendum corrects that error. The operational demand is not considered material to regional water resource availability.

General operations include provision for maintaining a minimum 100,000 litre dedicated static water supply for firefighting purposes. This is a stored reserve, not a continuous consumptive demand; the volume stated reflects the minimum reserve to be maintained at all times. Firefighting water supply adequacy will be confirmed at detailed design in accordance with NSW Rural Fire Service requirements.

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## 2 SITE WATER BALANCE AND SUPPLY SECURITY

The Project will source water from a combination of external and on-site sources. The three-tier framework set out in Table 1 reflects the water management systems described in WRIA Sections 4.3.1 and 4.3.2. An updated indicative site water balance is provided in Table 2 below. This table supersedes WRIA Table 4.3.

**Table 2 Indicative site water balance (supersedes WRIA Table 4.3)**

Type	Source	Construction (total, ML)	Operation (annual, ML)	Notes
<b>WATER DEMANDS</b>				
Tier I Potable	Wentworth Shire Council	18	<1	Drinking water only. Must meet ADWG.
Tier II Clean	On-site treatment system (WRIA s.4.3.2); rainwater harvesting from TWA and site building roofs; Wentworth Shire Council (where required)	~110	<1	Treated effluent is reused on-site.
Tier III Non-potable (on-site)	Wentworth Shire Council, Sediment basins; treated effluent	~100	<1	Opportunistic supplementary sources. Other supplementary sources may be investigated during detailed design, including: - use from existing dams where harvestable rights apply - existing groundwater bores under agreement with relevant landholders.
Total demand (P50 / P90)		140 / 229 ML	<1 / <2 ML/yr	P50 = expected P90 = conservative
<b>WATER SUPPLY</b>				
External potable and non-potable supply	Wentworth Shire Council <sup>2</sup>	18	<1	Subject to commercial agreement (refer to Submissions Report (Umwelt, 2026))
Rainwater harvesting	Roof runoff from TWA and site buildings	Supplementary	Supplementary	Reduces demand on Council supply and on-site storage.
Sediment basin reuse	On-site stormwater collection during the earthworks phase	Supplementary	—	Reduces non-potable demand.

Supplementary sources reduce demand on external supply but are not relied upon as primary sources. Quantities are indicative only and will be confirmed at detailed design.

<sup>2</sup> Existing fill points at Modica Crescent Buronga and Beverley Street Wentworth

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### 3 CONCLUSION

The water demand discrepancies identified by DCCEEW are resolved as follows.

#### 3.1 CONSTRUCTION DEMAND:

The WRIA figure of 140 ML and the EIS Section 3.4.11 total of 229 ML represent different probabilities. The 140 ML figure represents the median supply requirement and is the appropriate basis for impact assessment. The 229 ML figure represents the total site water throughput, a top-down calculation that excludes rainfall and reuse. This is the appropriate basis for conservative sizing of supply contracts.

#### 3.2 OPERATIONAL DEMAND

Operational demand is up to 1 ML per year (P50, expected), consistent with WRIA Section 4.2.2 and EIS Section 6.9.2. A conservative planning allowance of up to 2 ML per year (P90, conservative) is appropriate for supply contract sizing. The value of 2 ML in WRIA Table 4.3 was a typographical mistake and is hereby corrected.

These clarifications do not alter the WRIA's impact assessment conclusions. Project water demands remain well within available supply across the full P90 range, and the operational demand is not material to regional water resource availability.

Please contact the undersigned if any further clarification is required.

Yours sincerely,

**Lindsay Millard**  
Principal Engineer

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### 4 REFERENCES

NSW Department of Climate Change, Energy, the Environment and Water (2024). Advice to DPHI Planning and Assessment — Mallee Wind Farm EIS (SSD-53293710). Letter ref OUT24/19402, 18 December 2024. Signed R. Brownbill, Manager Water Assessments.

Standards Australia (2010). AS 1379:2007 Specification and Supply of Concrete. Standards Australia, Sydney.

Umwelt (2024). Mallee Wind Farm Environmental Impact Statement. Prepared for Spark Renewables.

Umwelt (2026). Mallee Wind Farm Submissions Report. Prepared for Spark Renewables

WRM Water & Environment (2024). Water Resources Impact Assessment — Mallee Wind Farm. Report 2067-03-B3, September 2024. Prepared for Umwelt (Australia) Pty Ltd.



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