SSD-81555720

McCullys Gap Battery Energy Storage System

Complete Evidence Portfolio — Current Findings

SEARs-to-EIS audit, project definition, technical consistency, cross-discipline interfaces and response framework

Project	McCullys Gap Battery Energy Storage System
Application	SSD-81555720
Applicant	Muswellbrook Pro Unit Holdings Pty Ltd / BW ESS
Location	380 and 578 Sandy Creek Road, McCullys Gap, NSW
Nominal capacity	Approximately 400 MW / 1,600 MWh (four-hour system)
Review date	16 September 2026
Status	Working evidence portfolio — current findings, not exhaustive
Purpose	Preserve the evidence chain and frame discrete questions capable of written response before findings are finalised for DPHI.

Evidence caution. This portfolio distinguishes confirmed documentary inconsistencies from technical questions, apparent omissions and matters requiring agency or specialist verification. It does not allege deliberate falsification, corruption or intentional redaction unless evidence later establishes that proposition.

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1. Purpose, scope and evidence standard

This portfolio applies the same forensic format previously used for the Upper Hunter review, but the evidence base is strictly confined to McCullys Gap BESS SSD-81555720 and relevant official public records. The only named cross-project reference retained is Bannaby Battery Energy Storage System SSD-78810458 because that live SSD identifier appears within the McCullys Gap EIS and is therefore itself part of the McCullys Gap document-control issue.

The audit method is: requirement → claimed EIS response → primary evidence → conflict, omission or deferred dependency → environmental significance → information required → applicant response required → DPHI assessment implication. A statement that Appendix A says a requirement is 'addressed' is not treated as the end of the inquiry; the cited chapter and technical report are tested against the substantive requirement.

- CONFIRMED — the proposition is directly supported by the exhibited project record or an official public record.
- DOCUMENT CONFLICT — two or more project records cannot both be correct as written.
- OPEN — the evidence raises a material question and a complete response has not yet been located.
- PARTIALLY RESOLVED — part of the issue is evidenced or addressed, but a material element remains open.
- DEFERRED — the EIS expressly leaves a material matter to later design, study, plan, permit or consultation.
- NEEDS AGENCY CONFIRMATION — the project record is insufficient and an agency/authority record is needed.
- NEEDS TECHNICAL VERIFICATION — specialist or product-specific evidence is required before the conclusion can be relied upon.

2. Executive issue map

The strongest current theme is not a single error. It is whether the development actually sought for consent is bounded by the environmental assessments exhibited to the public. Several favourable conclusions rely on a particular concept layout, equipment count, acoustic orientation, separation distance, route, drainage arrangement or mitigation assumption while the final design retains flexibility.

Thread	Current finding	Status	Significance
Assessment integrity / SEARs	The EIS contains inconsistent SEARs dates and the live identifier SSD-78810458, which belongs to Bannaby BESS. Appendix A simultaneously states that project information is consistent across the EIS and Technical Reports 1–11.	DOCUMENT CONFLICT	High / foundational
Approval envelope	Final battery supplier, count/configuration, layout, some fire systems, acoustic inputs, route works and staging remain capable of later refinement.	OPEN / DEFERRED	Critical
Hazard arithmetic / equipment count	PHA charge-frequency arithmetic does not reconcile with its stated 1.7 charges/day assumption; PHA arithmetic implies 296 containers while noise modelling uses 336.	DOCUMENT CONFLICT	Critical
Operational noise	R5 is predicted at the 35 dBA night trigger in the optimised layout, leaving no whole-decibel model margin.	NEEDS TECHNICAL VERIFICATION	Critical
Bushfire / BESS hazard	Bushfire is treated as a credible site event in the bushfire report, while the PHA treatment of bushfire-initiated battery failure is not internally consistent.	DOCUMENT CONFLICT	Critical
Flood / emergency access	Sandy Creek Road reaches H5 hazard in the 1% AEP near the tributary crossing; PMF conditions affect the road and project area. Integrated emergency operation under access loss is not demonstrated.	OPEN	Critical
Firewater / fisheries	Mapped Key Fish Habitat lies close to the site and the project drains toward the eastern tributary/Sandy Creek. Firewater	OPEN	Critical

Thread	Current finding	Status	Significance
	containment and aquatic consequence are not demonstrated as one integrated design basis.		
Traffic / OSOM / bypass	OSOM route is concept-level; the Muswellbrook Bypass includes a 367 m bridge over Sandy Creek Road, Sandy Creek and the Main North line. Final loaded height and bridge/program interface remain open.	OPEN / NEEDS AGENCY CONFIRMATION	Critical
610 Sandy Creek Road	DA 2026-89 for a new dwelling/garage at Lot 4 DP802081 was publicly exhibited 29 July–19 August 2026. The EIS was signed 13 August 2026; no explicit 610 receiver entry has been located in the reviewed exhibited schedules.	CONFIRMED public record; assessment consequence OPEN	High / cross-discipline
Biodiversity / EPBC	The project is a controlled action EPBC 2025/10406. The assessed footprint and avoidance measures must remain stable through detailed design.	CONFIRMED	Critical

3. Source documents currently available

Ref	Document	Use in portfolio
P1	Environmental Impact Statement, GHD project 12627183, August 2026	Primary project narrative; declaration; Chapters 1–22. EIS declaration signed 13 August 2026.
P2	Scoping Report, GHD/BW ESS, March 2025	Original ~13.38 ha concept, early receiver environment, early project description and consultation.
P3	Issued SEARs, SSD-81555720, 16 April 2025	Primary NSW assessment requirements.
P4	Supplementary SEARs / EPBC bilateral requirements, 24 March 2026	MNES requirements following controlled-action decision EPBC 2025/10406.
P5	Appendix A — SEARs Compliance Table	Applicant's claimed SEARs response; includes explicit consistency requirement.
P6	Appendix B — Statutory Compliance Table	EP&A Regulation / EIS content and declaration framework.
P7	Appendix C — Consolidated	Project commitments and matters

Ref	Document	Use in portfolio
	Mitigation Measures	deferred to design, pre-construction and operation.
P8	SSD Application submitted 14 August 2026	Applicant, EDC, site fields, landowner consent, amendment description and statutory fields.
P9	TR1 — Biodiversity Development Assessment Report, August 2026	BDAR, MNES, habitat, impacts, connectivity, fisheries/KFH context.
P10	TR2 — Noise and Vibration Impact Assessment, August 2026	Construction and operational modelling, equipment inputs, receivers, R5 critical result.
P11	TR3 — Landscape and Visual Impact Assessment, August 2026	46 visual receivers, viewpoints, photomontage method, R4/R5 impacts.
P12	TR4 — Aboriginal Cultural Heritage Assessment	Referenced by EIS; direct source not yet held in this working file set.
P13	TR5 — Historic Heritage Impact Assessment	Referenced by EIS; direct source not yet held in this working file set.
P14	TR6 — Land Use and Agriculture Assessment, August 2026	RU1 context, agricultural capability, BSAL/CIC context and land-use conflict.
P15	TR7 — Traffic and Transport Impact Assessment, August 2026	Construction traffic, Sandy Creek Road, rail crossing, OSOM route and concept treatments.
P16	TR8 — Water Impact Assessment, August 2026	Hydrology, water quality, firewater, flood modelling and Sandy Creek Road hazard.
P17	TR9 — Preliminary Hazard Assessment, August 2026	Thermal runaway, fire/explosion, heat radiation, event frequency and risk conclusions.
P18	TR10 — Bushfire Hazard Assessment, August 2026	APZ, access, bushfire attack, fire preparedness and operational bushfire context.
P19	TR11 — Social Impact Assessment, August 2026	Community baseline, engagement, amenity, rural character and perceived safety impacts.
W1	NSW Planning Portal — SSD-81555720	Current public project page, 400 MW / 1,600 MWh, controlled-action status, exhibition.
W2	NSW Planning Portal — Bannaby BESS SSD-78810458	Confirms the cross-project identifier appearing in the McCullys EIS belongs to a separate BESS in Upper Lachlan Shire.
W3	NSW Planning Portal — DA 2026-89 / PAN-656832, 610 Sandy Creek Road	Confirms Lot 4 DP802081 dwelling/garage proposal and 29 July–19 August 2026 exhibition.

Ref	Document	Use in portfolio
W4	Transport for NSW — New England Highway Muswellbrook Bypass REF	Confirms 367 m bridge over Sandy Creek Road, Sandy Creek, Main North railway and southbound exit ramp.
A1	SSD-81555720 Deep Audit Register — Fisheries Updated	Working index only; primary claims are traced back to the above project documents.

4. Evidence gaps and documents still required

- DPHI adequacy-review comments issued before exhibition, the applicant's complete response matrix, and the change register showing what changed before the 14 August 2026 amended application.
- Every superseded SSD application form, EIS draft and technical-report revision replaced during adequacy review.
- A controlled SEARs/document-transmittal schedule identifying the exact requirements issued to every specialist consultant and the project/layout revision each report assessed.
- TR4 Aboriginal Cultural Heritage Assessment and TR5 Historic Heritage Assessment as standalone final exhibited reports in the working evidence library.
- Final equipment schedule: maximum battery-container count, rack/cell inventory, PCS count, transformer count, HVAC/cooling equipment, dimensions, sound-power limits, chemistry/OEM performance and separation distances.
- Final fire-safety design basis: firefighting water demand, hydrant arrangement, responder access, containment volume, isolation logic, contaminated-water management, post-incident monitoring and final OEM fire-test evidence.
- Final OSOM transport envelope: length, width, axle geometry, articulation/steering, platform height, loaded transformer height, route vertical-clearance survey and temporary-work requirements.
- Current Transport for NSW bypass construction programme/staging and bridge soffit/road/deck levels at Sandy Creek Road.
- Receiver register and Planning Portal/council search used for final EIS sign-off, including whether DA 2026-89 at 610 Sandy Creek Road was identified before 13 August 2026.
- Local baseline water-quality data for Sandy Creek and the eastern KFH tributary, or a technical justification for relying on more distant regional data.
- Any targeted fish survey/eDNA/electrofishing/fyke-netting or other aquatic survey undertaken in Sandy Creek or the adjacent KFH tributary.
- Any project-specific blast/overpressure analysis and toxic-plume/dispersion analysis used to support the PHA conclusions.
- Evidence supporting the 25°C/100% RH worst-case operational noise assumption, including final OEM fan/chiller duty and sound-power curves.
- Final landscape plan, planting maturity assumptions, maintenance/replacement requirements and property-specific verification at R4/R5.
- Any VPA, community benefit agreement or benefit-sharing deed relied upon as a public-interest benefit. If none exists, that should be stated expressly.

5. Formal project baseline and approval envelope

Correct application number	SSD-81555720.
Applicant	Muswellbrook Pro Unit Holdings Pty Ltd / BW ESS.
Location	Parts of 380 and 578 Sandy Creek Road, McCullys Gap,

	approximately six kilometres north-east of Muswellbrook.
Land use zone	RU1 Primary Production under the Muswellbrook LEP 2009.
Nominal BESS capacity	Approximately 400 MW / 1,600 MWh, four-hour storage duration.
Connection	Project substation, approximately 800 m 330 kV transmission connection and works at the existing Transgrid Muswellbrook 330 kV substation.
Construction	Anticipated from 2027, about 18 months; EIS allows construction in one or more stages.
Operation	Planned from 2029; remote 24/7 operation for at least 30 years is stated in technical reports.
Correct issued SEARs	16 April 2025.
Supplementary SEARs	24 March 2026 for EPBC 2025/10406.
Commonwealth status	Controlled action under the EPBC Act for listed threatened species and communities.
Application EDC	AUD 498,665,869 excluding GST.
Application site field	430,000 m²; application identifies Lot 5 DP802081 while final project material also includes connection/subject land beyond that single lot.

The consent envelope should not merely repeat '400 MW / 1,600 MWh'. It should define the physical and environmental parameters that the exhibited assessments rely upon. The present record contains different equipment-count signals: the noise model uses 336 battery containers and 112 PCS, while the PHA arithmetic implies 296 containers. That difference is not a basis to choose one number ourselves; it is a reason to require one authoritative maximum equipment schedule.

- maximum battery-container count and installed energy inventory;
- battery chemistry / product performance envelope and relevant fire-test standard;
- maximum PCS, transformer and cooling/HVAC counts;
- maximum equipment dimensions and heights;
- minimum separation distances required to preserve modelled hazard outcomes;
- maximum sound-power and directivity limits for final plant;
- fixed or bounded equipment orientation/layout where noise compliance depends on optimisation;
- maximum project-substation and connection infrastructure dimensions;
- stormwater and firewater design capacities and isolation performance;
- maximum construction staging case;
- maximum OSOM load/vehicle envelope and all route works;
- operational life, replacement/repowering assumptions and decommissioning obligations;
- trigger requiring further assessment for any material departure from the exhibited envelope.

Issue	Approval-envelope principle
Finding	Detailed design is not inherently a defect. The issue arises where detailed design is allowed to determine whether a noise, hazard, biodiversity, water, access or visual outcome relied upon at EIS stage is achievable.

Why it matters	The public and decision maker should be able to identify the development actually being approved, not only one concept capable of a favourable assessment result.
Information needed	A Design and Environmental Assessment Reconciliation Schedule tying every material assumption to a maximum consent parameter and reassessment trigger.
Status	OPEN
Significance	Critical
Primary evidence	P1, P5, P7, P9–P19

6. Project evolution, site selection and alternatives

Stage	Evidence-based chronology
Late 2024	Early project engagement begins. A letter was sent to direct and near neighbours on 5 December 2024.
March 2025 Scoping	400 MW / 1,600 MWh four-hour BESS; project site at 578 Sandy Creek Road; about 13.38 ha; immediately east of Transgrid Muswellbrook 330 kV substation. Concept included BESS/substation, access and 330 kV connection.
16 April 2025	Issued SEARs for SSD-81555720.
2025 EIS development	Specialist studies and targeted engagement progress; project layout is refined to respond to biodiversity, heritage, noise, visual, access and engineering constraints.
27 February 2026	Commonwealth delegate determines EPBC 2025/10406 is a controlled action.
24 March 2026	Supplementary SEARs issued for MNES under the bilateral assessment.
June–August 2026	Final specialist reports and late design refinement. Bushfire mapping dated 7 August 2026; final EIS signed 13 August 2026.
29 July–19 August 2026	DA 2026-89 for 610 Sandy Creek Road publicly exhibited, overlapping the EIS finalisation period.
14 August 2026	Amended SSD application submitted with change description 'Addresses Adequacy comments'.
15 September–13 October 2026	Current NSW Planning Portal exhibition period.

6.1 Alternatives test

Grid proximity is a legitimate siting advantage: the project is immediately adjacent to the existing Muswellbrook 330 kV substation. That supports the general locality, but does not by itself establish that every selected micro-location, access arrangement and final footprint is environmentally preferable. The final EIS should demonstrate how the selected footprint was chosen among feasible alternatives after balancing grid, environmental, engineering, planning, land-tenure, landholder and commercial constraints.

Reason category	Current evidence	Finding
Grid / engineering	Direct proximity to the existing 330 kV substation reduces connection length and complexity.	Supported by project description and strategic context.
Biodiversity	Final footprint was refined to avoid some biodiversity values and identified PAD; controlled-action impacts remain material.	Supported; final footprint must remain bounded.
Noise	Equipment orientation/layout was optimised to reduce receiver noise.	Supported; creates an approval-envelope dependency.
Visual / social	R4 and R5 retain moderate operational visual impacts; rural character remains socially valued.	Supported; residual receiver impacts remain.
Flood / drainage	Site and Sandy Creek Road have modelled flood constraints, particularly in extreme events.	Supported; not shown to make site unusable, but relevant to emergency/access design.
Traffic / OSOM	Sandy Creek Road access is feasible only with temporary speed management, local treatments and later permit/detail work.	Partly supported; final route/clearance remains open.
Land tenure / agreements	Application says written consent of all landowners has been obtained; final project spans more than the original single-lot scoping concept.	Supported in part; full tenure/easement chronology not yet assembled.
Commercial factors	Commercial feasibility is likely a normal project factor, but the exact role of commercial/landholder constraints in rejecting alternatives is not established in the public material reviewed.	UNKNOWN / NOT DISCLOSED.

7. Site, statutory and land-use context

7.1 Zoning, permissibility and site suitability are different questions

The project land is RU1 Primary Production. The scoping and application material treat the proposal as State Significant Development and as electricity generating works permissible with consent through the relevant NSW planning framework. That statutory permissibility does not remove the separate site-suitability inquiry required by the SEARs and the EP&A assessment framework.

The agricultural assessment indicates that the project footprint avoids mapped BSAL and Critical Industry Cluster land, while the nearest mapped BSAL is about 80 m north and Equine CIC land lies immediately to the east/north. The present portfolio therefore does not frame direct loss of BSAL/CIC as the leading objection; it uses those areas as surrounding land-use sensitivity and as context for water, flood, construction and cumulative effects.

7.2 Cadastral and area evolution

Record	Area / cadastral signal
Scoping Report	~13.38 ha project site at 578 Sandy Creek Road.
14 Aug 2026 SSD application	Site area field 430,000 m²; GFA field 133,800 m². The latter is numerically 13.38 ha and matches the scoping-

	era area.
Final BDAR / expert biodiversity material	Subject land described as parts of Lot 5 DP802081 and Lot 1621 DP852356, approximately 20.02 ha.
Final EIS	Project description incorporates 380 and 578 Sandy Creek Road and connection works to the existing Muswellbrook 330 kV substation.

The numeric match between the amended application's 133,800 m² GFA field and the original 13.38 ha scoping area is a version-control indicator, not proof of a false application. The applicant should identify what the GFA field was intended to represent and provide the adequacy/change record that reconciles it with the final project area and subject land.

7.3 Benefits and public interest

The project identifies strategic electricity-system benefits, construction employment and local economic activity. Those are legitimate merits. No final VPA or community-benefit agreement has been established in the public material reviewed for this portfolio. Any such agreement should be assessed as an additional public benefit and should not be treated as a substitute for demonstrating site suitability or acceptable residual impacts.

8. BESS facility and project substation

The proposed development is a 400 MW / 1,600 MWh BESS with associated power conversion equipment, transformers, switchgear, safety systems, internal access, drainage, firewater facilities and a project substation. Technical reports do not all use one transparently identical equipment inventory.

Parameter	Current evidence	Status	Required boundary
Equipment inventory	Noise model uses 336 battery containers, 112 PCS and two HV transformers; PHA arithmetic implies 296 containers.	DOCUMENT CONFLICT	Require one maximum equipment schedule used across all disciplines.
Battery technology	Final manufacturer/product remains capable of refinement.	DEFERRED	Define a chemistry/performance/fire-test envelope or reassess final product.
Separation	PHA consequence conclusion relies on concept geometry while mitigation language includes a 3 m minimum boundary separation.	OPEN	Consent should preserve the minimum separation needed for the exhibited consequence result, not merely a generic minimum.
Staging	Construction may occur in one or more stages without a fully defined maximum staging case.	OPEN	Assess duplicated mobilisation/temporary works, peak traffic/noise and extended duration.
Repowering / replacement	Detailed public limits on repowering, equipment replacement and any increase in installed inventory have not been located.	OPEN	Consent should distinguish like-for-like replacement from material capacity/equipment changes requiring further assessment.
Operational duration	At least 30 years is stated in technical material.	CONFIRMED	Decommissioning and rehabilitation obligations

Parameter	Current evidence	Status	Required boundary
			should attach to the full operational period and replacements.

9. Connection infrastructure and Muswellbrook 330 kV interface

The final project description includes a project substation, an approximately 800 metre transmission line and associated works at the existing Transgrid Muswellbrook 330 kV substation. Because connection infrastructure crosses the same environmental setting as the BESS, later detailed design should not introduce clearing, heritage, visual, drainage, bushfire or access impacts outside the exhibited envelope.

- Final maximum height and number of transmission structures are not established in the material reviewed here and should be tied to the visual/biodiversity assessment.
- Any final line/easement shift should be checked against threatened ecological communities, mapped MNES habitat, Aboriginal heritage and the cumulative connectivity conclusion.
- Works inside the existing Transgrid substation should be distinguished from works within the SSD project footprint so responsibility and environmental controls are clear.
- Any future augmentation beyond the current 400 MW / 1,600 MWh project should not be assumed permissible merely because it can physically connect to the same substation. Material changes should follow the applicable modification or new-assessment pathway.

10. Biodiversity, EPBC and fisheries receiving environment

Biodiversity is a primary approval issue. The Commonwealth controlled-action decision and supplementary SEARs require assessment of protected matters. The BDAR identifies likely significant impacts to Hunter Valley Delma, Large-eared Pied Bat and Central Hunter Valley eucalypt forest and woodland. The portfolio also identifies a separate aquatic receiving-environment issue: project drainage pathways lead toward mapped Key Fish Habitat close to the subject land.

Issue	KFH receiving-environment boundary
Finding	Sandy Creek is mapped as Key Fish Habitat about 30 m north of the subject land and an unnamed third-order tributary about 50 m east. The water assessment records that most of the project area drains toward the eastern tributary, which flows to Sandy Creek.
Why it matters	A conclusion based on absence of suitable aquatic habitat inside the project footprint does not by itself address indirect sediment, routine runoff, spill or incident-water pathways to protected receiving waters.
Information needed	Explicit indirect-impact assessment for construction runoff, operational drainage and incident/firewater; local baseline and trigger-response criteria; any targeted fish survey/eDNA evidence.
Status	OPEN
Significance	Critical
Primary evidence	P9, P16, P17

Issue	Southern Purple-spotted Gudgeon

Finding	The BDAR identifies Southern Purple-spotted Gudgeon as endangered and notes mapped distribution associated with Sandy Creek, while assigning nil impact based on habitat absence in the subject land / 'not impacting Sandy Creek'.
Why it matters	The project hydrology establishes a surface-water pathway to Sandy Creek. The species conclusion should therefore be reconciled with indirect water-quality pathways rather than only footprint habitat.
Information needed	Confirm the exact listed population/distribution assessed and provide the indirect-effects analysis for Sandy Creek habitat.
Status	NEEDS TECHNICAL VERIFICATION
Significance	Critical
Primary evidence	P9 Appendix B; P16

Issue	Firewater / aquatic toxicity
Finding	The PHA discusses fluorinated hydrocarbons/acids in battery-fire smoke; the Water Impact Assessment separately recognises firewater as a higher water-quality risk and relies on basin isolation controls. No integrated aquatic contaminant-fate assessment has been located.
Why it matters	A containment failure or overflow is a different exposure pathway from routine stormwater and the receiving pathway leads toward mapped KFH.
Information needed	Credible firewater contaminant profile, firefighting flow/volume, basin capacity, pre-event water level, concurrent rainfall/freeboard, isolation reliability and downstream aquatic consequence.
Status	OPEN
Significance	Critical
Primary evidence	P16, P17, P9

11. Noise, visual amenity and social impacts

The noise, visual and social reports each reach broadly manageable/acceptable conclusions, but the receptor-specific evidence is more qualified. R5 is at the operational night trigger in the noise model; R4 and R5 retain moderate visual impacts; and the SIA records that rural character is valued locally.

ID	Issue	Evidence	Audit implication	Significance
NOI-01	R5 operational noise	35 dBA predicted total against 35 dBA night project noise trigger.	No whole-decibel model margin; final source/layout changes matter.	Critical
NOI-02	Optimised orientation	Alternative equipment orientations/locations	The compliant layout is not interchangeable	Critical

ID	Issue	Evidence	Audit implication	Significance
		were reported as 1–3 dBA louder.	with every layout fitting inside the site.	
NOI-03	Temperature / cooling duty	25°C and 100% RH used as worst-case summer cooling/noise condition.	Need OEM duty/noise curves to demonstrate hotter ambient conditions do not produce a louder case.	Critical
NOI-04	Charge/discharge profile	SEARs seek likely load profile and worst-case charge/discharge scenarios; separate acoustic duty cases are not transparent.	Need operating-mode link to noise source levels.	High
NOI-06	Low frequency	Some source spectra below 25 Hz are absent while modifying-factor assessment framework extends lower.	Final OEM spectral data needed.	High
NOI-09	Road-widening construction noise	R5 modelled around 78 dBA dry / 81 dBA wet against 45 dBA construction NML.	Requires property-specific notification, respite and controls.	High
VIS-01	R4/R5 visual impact	Moderate operational visual impacts remain at most affected residences.	Project-wide 'low residual' language should not erase receptor-specific result.	High
VIS-02	R5 representative viewpoint	VP03 is representative of R5 rather than necessarily the dwelling itself.	Verify equivalent elevation, screening, line of sight and viewing angle.	Medium-High
SOC-01	Rural character	Visual report characterises modified infrastructure-influenced rural landscape; SIA says rural character is valued.	Existing infrastructure does not automatically equate to low social value.	High
SOC-02	Adaptation assumption	SIA expects most people to adapt, particularly as screen planting matures.	Behavioural assumption should not replace evidence of magnitude/duration.	Medium

12. Hazards, fire, toxic emissions, water and emergency management

Issue	PHA charging-frequency arithmetic
Finding	TR9 states 1.7 charges per 24 hours but uses 365 charges/container/year in the event calculation. Those premises cannot both be correct as written.
Why it matters	Separate discipline conclusions are not enough where the controls depend on one another.
Information needed	Corrected PHA arithmetic using the intended operating profile and final maximum equipment count.
Status	DOCUMENT CONFLICT
Significance	Critical
Primary evidence	P16–P18; P15 where access is relevant

Issue	Container count
Finding	PHA arithmetic implies 296 containers while TR2 models 336 battery containers.
Why it matters	Separate discipline conclusions are not enough where the controls depend on one another.
Information needed	One controlled equipment schedule and revised/validated PHA if the final count differs.
Status	DOCUMENT CONFLICT
Significance	Critical
Primary evidence	P16–P18; P15 where access is relevant

Issue	External bushfire initiation
Finding	PHA and Bushfire Assessment do not present one consistent treatment of external bushfire as an initiator/aggravator of battery failure.
Why it matters	Separate discipline conclusions are not enough where the controls depend on one another.
Information needed	Integrated external-bushfire-to-BESS failure scenario and control basis.
Status	DOCUMENT CONFLICT
Significance	Critical
Primary evidence	P16–P18; P15 where access is relevant

Issue	Explosion / deflagration
Finding	Explosion from flammable gas accumulation is recognised, but a transparent project-specific quantitative blast/overpressure consequence basis has not been

	located.
Why it matters	Separate discipline conclusions are not enough where the controls depend on one another.
Information needed	Identify existing analysis or provide final-product basis explaining why quantitative modelling is unnecessary.
Status	OPEN
Significance	High
Primary evidence	P16–P18; P15 where access is relevant

Issue	Toxic smoke / plume
Finding	Fluorinated hydrocarbons/acids are discussed qualitatively; project-specific toxic plume consequence modelling has not been located.
Why it matters	Separate discipline conclusions are not enough where the controls depend on one another.
Information needed	Final-technology source term and quantitative/qualitative basis for off-site and emergency conclusions.
Status	OPEN
Significance	High
Primary evidence	P16–P18; P15 where access is relevant

Issue	Final fire systems
Finding	Hydrant and detailed fire-safety arrangements are deferred to a later Fire Safety Study and consultation.
Why it matters	Separate discipline conclusions are not enough where the controls depend on one another.
Information needed	Minimum performance criteria should be fixed before/through consent so later study verifies, rather than invents, the safety envelope.
Status	DEFERRED
Significance	High
Primary evidence	P16–P18; P15 where access is relevant

Issue	Firewater containment
Finding	A complete design-basis volume balance for firefighting water + existing basin water + rainfall/runoff + freeboard has not been located.
Why it matters	Separate discipline conclusions are not enough where the controls depend on one another.
Information needed	Quantitative containment and isolation calculation tied to

	final firefighting strategy.
Status	OPEN
Significance	Critical
Primary evidence	P16–P18; P15 where access is relevant

Issue	Flood + emergency access
Finding	Sandy Creek Road reaches H5 hazard in major flooding; PMF can inundate BESS area and road.
Why it matters	Separate discipline conclusions are not enough where the controls depend on one another.
Information needed	Integrated scenario for responder access, remote safe state, staff evacuation, communications and containment when normal access is unavailable.
Status	OPEN
Significance	Critical
Primary evidence	P16–P18; P15 where access is relevant

13. Traffic, OSOM, rail and Muswellbrook Bypass interface

TR7 concludes that the road network can accommodate project traffic with mitigation, but the OSOM component remains concept-level and requires later permits, route refinement and temporary works. The route also crosses the Main Northern Line and must interface with the separate Muswellbrook Bypass project.

Issue	OSOM route detail
Finding	Concept assessment identifies localised works; final loaded vehicle dimensions and some physical treatments remain to be confirmed.
Why it matters	Route feasibility is both a traffic question and an environmental-footprint question.
Information needed	Final route design, all road works, permits, structure checks and environmental footprint overlay.
Status	DEFERRED
Significance	High
Primary evidence	P15; W4

Issue	Vertical clearance
Finding	The assessed design vehicle is approximately 65.8 m long, but the reviewed material does not establish final loaded transformer height or a route-wide vertical-clearance verification.
Why it matters	Route feasibility is both a traffic question and an

	environmental-footprint question.
Information needed	Final loaded envelope and vertical-clearance survey.
Status	OPEN
Significance	High
Primary evidence	P15; W4

Issue	Muswellbrook Bypass bridge
Finding	Transport for NSW's bypass includes a 367 m bridge over Sandy Creek Road, Sandy Creek, the Main North railway and southbound exit ramp. BESS and bypass programmes may overlap.
Why it matters	Route feasibility is both a traffic question and an environmental-footprint question.
Information needed	Bridge staging/programme, soffit/road levels and demonstration of OSOM route availability both during construction and after completion.
Status	NEEDS AGENCY CONFIRMATION
Significance	Critical
Primary evidence	P15; W4

Issue	Rail crossing
Finding	Sandy Creek Road crosses the Main Northern Line close to the New England Highway; train closures/delays affect access reliability.
Why it matters	Route feasibility is both a traffic question and an environmental-footprint question.
Information needed	ARTC coordination and construction/emergency access contingency.
Status	OPEN
Significance	Medium
Primary evidence	P15; W4

Issue	School transport
Finding	Existing school-bus/heavy-vehicle timing restrictions are identified.
Why it matters	Route feasibility is both a traffic question and an environmental-footprint question.
Information needed	Explicit heavy-vehicle timing controls in CTAMP/consent.
Status	OPEN

Significance	Medium
Primary evidence	P15; W4

Issue	Final road works and environmental footprint
Finding	Any later widening, hardstand, drainage or clearing can create biodiversity, heritage, water and noise impacts.
Why it matters	Route feasibility is both a traffic question and an environmental-footprint question.
Information needed	Final route works must remain inside the assessed disturbance envelope or trigger further environmental assessment.
Status	OPEN
Significance	Critical
Primary evidence	P15; W4

14. 610 Sandy Creek Road and receiver-environment completeness

The NSW Planning Portal now confirms DA 2026-89 / PAN-656832 for 610 Sandy Creek Road, McCullys Gap, Lot 4 DP802081, for a secondary dwelling, garage/carparking and a new structure. The DA was publicly exhibited from 29 July to 19 August 2026. The EIS declaration was signed on 13 August 2026, while the Landscape and Visual Assessment records a Planning Portal receiver search current to 15 May 2026.

No explicit 610 Sandy Creek Road receiver entry has been located in the exhibited receiver schedules reviewed to date. That is a confirmed timing/completeness question. It is not presently proof that a receiver was deliberately removed or 'redacted'. The document trail is needed to determine whether the DA was not captured, was considered but not reported, or appeared in an earlier internal version.

- Noise: map the proposed dwelling against operational contours, construction activities and any road works.
- Visual: assess the actual dwelling/site location, screening and line of sight rather than relying only on the May receiver search.
- Social: determine whether the future household forms part of the local group likely to experience amenity, access or perceived-risk impacts.
- Traffic: identify whether the dwelling access is exposed to construction/OSOM traffic or temporary traffic control.
- Bushfire / emergency / hazard: test whether occupancy changes any notification, consequence or emergency-planning assumptions.
- Cumulative impact: state whether the final baseline included reasonably foreseeable development publicly known before EIS certification.

Evidence: *P1 declaration dated 13 August 2026; P11 receiver-search methodology; P10 receiver schedules; W3 DA 2026-89 / PAN-656832.*

15. Cross-discipline conflicts

15.1 Noise ↔ detailed design

EIS / Appendix A says	TR2 models a compliant optimised layout at R5.
EIS / Appendix B says	EIS permits final equipment/layout refinement.

Conflict	A later layout or source increase can remove the modelled margin.
Why it matters	Final OEM/layout verification and hard acoustic limits.
Information needed	Applicant to demonstrate final design is no worse than exhibited model.
Applicant response required	DPHI should condition maximum source/orientation or require reassessment.

15.2 Thermal ↔ noise

EIS / Appendix A says	TR2 treats 25°C/100% RH as worst-case cooling/noise.
EIS / Appendix B says	Regional climate material records hotter summer maxima; final OEM duty is not fixed.
Conflict	Worst acoustic case may depend on final fan/chiller controls.
Why it matters	OEM duty/sound-power curves across operating temperatures and charge/discharge modes.
Information needed	Reconcile adopted meteorology with actual cooling control.
Applicant response required	DPHI should not rely on a worst-case label without evidence.

15.3 Bushfire ↔ BESS hazard

EIS / Appendix A says	TR10 treats large/intense bushfire affecting the site as credible albeit infrequent.
EIS / Appendix B says	TR9 treatment of bushfire-initiated thermal runaway is inconsistent.
Conflict	One report's initiating event affects another report's scenario selection.
Why it matters	Integrated bushfire-to-BESS hazard pathway.
Information needed	Provide one agreed scenario and mitigation basis.
Applicant response required	DPHI should require consistent hazard/bushfire assumptions.

15.4 Fire ↔ water

EIS / Appendix A says	Fire Safety Study and firefighting design are later.
EIS / Appendix B says	TR8 relies on containment/isolation for firewater.
Conflict	Containment capacity cannot be proven without the firefighting design basis.
Why it matters	Firewater flow/duration, rainfall/freeboard and isolation calculation.
Information needed	Demonstrate quantitative capacity.

Applicant response required	Condition capacity/verification before energisation.

15.5 Flood ↔ emergency access

EIS / Appendix A says	TR8 identifies H5/PMF access constraints.
EIS / Appendix B says	Emergency plans and detailed fire response are deferred.
Conflict	Access failure may coincide with BESS/bushfire/medical incident.
Why it matters	Compound emergency scenario.
Information needed	Demonstrate remote safe state, egress, responder strategy and communications.
Applicant response required	Require integrated emergency verification.

15.6 Traffic/OSOM ↔ biodiversity/heritage

EIS / Appendix A says	TR7 leaves some route works to later refinement.
EIS / Appendix B says	SEARs/BDAR/heritage assess a defined disturbance footprint.
Conflict	Later widening/clearing can escape the exhibited environmental envelope.
Why it matters	Final road-work overlay.
Information needed	Confirm all works are within assessed footprint.
Applicant response required	Any departure should trigger environmental check/reassessment.

15.7 Biodiversity ↔ detailed design

EIS / Appendix A says	BDAR impact/avoidance calculations rely on final mapped footprint.
EIS / Appendix B says	Project design remains capable of refinement.
Conflict	Small shifts can alter TEC/MNES/credit and connectivity outcomes.
Why it matters	Detailed-design biodiversity reconciliation.
Information needed	Demonstrate no additional impact.
Applicant response required	Condition footprint cap.

15.8 Visual ↔ social

EIS / Appendix A says	TR3 describes modified, infrastructure-influenced landscape.
EIS / Appendix B says	TR11 records rural character as locally valued.
Conflict	Landscape modification and social value are different concepts.
Why it matters	Separate social-value assessment.

Information needed	Do not use existing infrastructure as proxy for low community value.
Applicant response required	DPHI should carry receptor-specific social/visual findings.

15.9 Fisheries ↔ surface water

EIS / Appendix A says	BDAR assigns no aquatic impact based on footprint habitat.
EIS / Appendix B says	TR8 documents drainage to KFH tributary/Sandy Creek.
Conflict	Assessment boundary may be narrower than impact pathway.
Why it matters	Indirect receiving-water assessment and baseline.
Information needed	Reconcile 'no impact' with runoff pathway.
Applicant response required	Require additional aquatic evidence if unresolved.

15.10 Fire/toxic ↔ fisheries

EIS / Appendix A says	PHA identifies fire products; TR8 recognises firewater risk.
EIS / Appendix B says	No integrated aquatic toxicity/fate analysis located.
Conflict	Human-health plume and water-quality conclusions do not answer aquatic incident pathway.
Why it matters	Contaminant/source-term and downstream consequence analysis.
Information needed	Demonstrate containment and ecological protection.
Applicant response required	Potential supplementary assessment issue.

15.11 Receiver baseline ↔ final EIS

EIS / Appendix A says	Visual search current to 15 May 2026.
EIS / Appendix B says	610 DA exhibited from 29 July 2026 before EIS signature 13 August.
Conflict	Final receptor environment may have changed after specialist snapshot.
Why it matters	Final receiver/update audit.
Information needed	State whether 610 was known/assessed.
Applicant response required	DPHI should require addendum if materially affected.

16. Document consistency, SEARs integrity and design lineage

16.1 Foundational SEARs / project-identifier inconsistency

The correct project is SSD-81555720. The main EIS nevertheless contains inconsistent SEARs dates and a reference to SSD-78810458. The NSW Planning Portal identifies SSD-78810458 as Bannaby Battery Energy Storage System in

Upper Lachlan Shire. Because the wrong identifier belongs to a real, separate BESS project, the applicant should demonstrate that the error is confined to drafting and did not propagate into the requirement set, agency advice, consultant briefs, templates or technical assumptions used for McCullys Gap.

This does not establish deliberate 'corruption' of the SEARs. It creates a document-control and assessment-integrity question. If a clean consultant-by-consultant traceability audit cannot be produced, there is a public-interest basis for DPHI to consider formally clarifying or reissuing the operative SEARs and requiring affected disciplines to reconfirm compliance before determination.

16.2 Design-lineage register

Document	Date / revision	Design basis relied upon	Later change / dependency	Lineage check required
Scoping Report	21 Mar 2025, Rev 0	2024 concept layout / 13.38 ha site	Superseded by final EIS layout	No; scoping document.
Issued SEARs	16 Apr 2025	Scoping-stage project	Supplemented 24 Mar 2026	N/A.
Supplementary SEARs	24 Mar 2026	EPBC/MNES scope	Final EIS should address both sets	N/A.
TR1 BDAR	Aug 2026	Final subject land / refined biodiversity footprint	Late design must remain within BDAR envelope	Requires final design check.
TR2 Noise	Aug 2026	336 battery containers, 112 PCS, 2 HV transformers; optimised orientation	Final supplier/layout can change	Needs pre-construction acoustic verification.
TR3 Visual	Aug 2026	Final visual layout / 46 receivers; search snapshot to 15 May 2026	610 DA arose later	Receiver baseline needs update check.
TR6 Land Use	Aug 2026	Final project area context	Detailed design/refinement may continue	Check final footprint/land disturbance.
TR7 Traffic	Aug 2026	Concept OSOM design vehicle and route works	Final vehicle/permits/works later	Needs route and footprint verification.
TR8 Water	Aug 2026	Final hydrology concept and flood model	Final drainage/firewater detail later	Needs design-basis containment verification.
TR9 PHA	Aug 2026	Concept battery technology and count assumptions	Final OEM/product/count may change	Needs corrected arithmetic and final design validation.
TR10 Bushfire	Aug 2026; figures 7 Aug	Indicative operational footprint/APZ	Controls refined in later phases	Needs consistency with final site/fire design.
TR11 SIA	Aug 2026	Community/technical baseline incl Oct 2025 targeted consultation	Final receiver environment may have changed	Needs 610 / later-baseline check.
SSD Application	14 Aug 2026	Amended application; 'Addresses Adequacy	Post-dates EIS signature by one day	Needs adequacy/change

Document	Date / revision	Design basis relied upon	Later change / dependency	Lineage check required
		comments'		register.

17. Engagement and information disclosure

The scoping report recorded early neighbour engagement from December 2024 and anticipated that detailed infrastructure location, landscape mitigation, construction methods, benefit sharing and access/haulage routes could be shaped during the EIS phase. The SIA records targeted consultation in October 2025. The final EIS was signed in August 2026 after substantial specialist work and project refinement.

- Identify what material project changes occurred after the last direct-neighbour engagement and how those changes were communicated before exhibition.
- Identify the date on which the receiver environment was last checked across noise, visual and social disciplines.
- Explain whether the July 2026 DA at 610 Sandy Creek Road was identified before the EIS was signed and, if not, why the final-update process did not capture it.
- Provide the adequacy-review change summary so the public can distinguish corrections made before exhibition from design changes still intended after consent.
- Where early information differs from final lot, footprint, access, equipment or mitigation descriptions, provide a simple 'then versus now' schedule.

18. Consolidated issue register

The register below preserves the current finding and the response pathway. It is not exhaustive and should be updated without overwriting earlier findings as new evidence or applicant responses arrive.

Issue ID	Project component	EIS chapter	SEAR requirement	Source document	Exact page / section	What the EIS says	Contradictory or additional evidence	Finding	Status	Significance	Response required from applicant	Response required from DPHI	Suggested consent condition if relevant	Confidence	Outstanding research
A1	Document control	EIS Ch 1 / 4; Appendix A	SEARs general consistency	P1, P3–P5	See cited report section / register source	The main EIS contains references that do not align with the formal project baseline. The issued SEARs are for SSD-81555720 dated 16 April 2025, while the EIS also refers to other dates and to SSD-78810458.		Incorrect SSD number and SEARs dates	DOCUMENT CONFLICT	High	The applicant should identify the SEARs version used by each specialist report and reconcile every incorrect project identifier and date before determination.	Require a discrete written reconciliation before relying on the relevant conclusion.	Where unresolved post-determination detail remains, set measurable limits, verification hold points and reassessment triggers.	High	Obtain the outstanding primary evidence identified in Parts 4 and 19.
A2	Document control	EIS Ch 3; SSD application	Full development description / footprint	P2, P8, P9	See cited report section / register source	The 14 August 2026 application records 133,800 m² (13.38 ha), matching the approximate site area used in the March 2025 scoping material, while the final BDAR describes about 20.02 ha of subject land across Lot 5 DP802081 and Lot 1621 DP852356.		Earlier footprint data appears to remain in the amended application	OPEN	High	The adequacy comments, response matrix, superseded application material and change register should be reconciled so the final approval footprint is unambiguous.	Require a discrete written reconciliation before relying on the relevant conclusion.	Where unresolved post-determination detail remains, set measurable limits, verification hold points and reassessment triggers.	Moderate–High	Obtain the outstanding primary evidence identified in Parts 4 and 19.
A3	Document control	Multiple	Consistency	P1, P5, P16	See cited report section / register source	Terminology and cross-reference anomalies appear to be legacy or template residue. They do not independently prove the technical assessments are wrong, but they increase the need for final QA reconciliation.		Residual template/version-control indicators	DOCUMENT CONFLICT	Medium	A final controlled-document schedule should confirm project name, SSD number, statutory test, catchment, report number and revision across the exhibited set.	Require a discrete written reconciliation before relying on the relevant conclusion.	Where unresolved post-determination detail remains, set measurable limits, verification hold points and reassessment triggers.	High	Obtain the outstanding primary evidence identified in Parts 4 and 19.
B1	Hazard / fire	EIS Ch 15 / TR9	Hazards	P17	See cited report section / register source	TR9 Appendix B states 365 charges per container per year while also stating an assumption of 1.7 charges in a 24-hour period. At 1.7 charges/day the annual figure is 620.5 charges per container.		Charging-frequency arithmetic does not reconcile	DOCUMENT CONFLICT	Critical	Identify the intended cycling profile and rerun the hazard arithmetic using the final operating profile and final equipment count.	Require a discrete written reconciliation before relying on the relevant conclusion.	Where unresolved post-determination detail remains, set measurable limits, verification hold points and reassessment triggers.	High	Obtain the outstanding primary evidence identified in Parts 4 and 19.
B2	Hazard / fire	EIS Ch 8 & 15	Project consistency	P10, P17	See cited report section / register source	The PHA arithmetic implies 296 containers. The noise model uses 336 battery containers - a difference of 40 containers, about 13.5%.		PHA and noise assessment use different container counts	DOCUMENT CONFLICT	Critical	Use one maximum equipment schedule across hazard, noise, fire, water and layout assessments, or clearly identify any superseded design.	Require a discrete written reconciliation before relying on the relevant conclusion.	Where unresolved post-determination detail remains, set measurable limits, verification hold points and reassessment triggers.	High	Obtain the outstanding primary evidence identified in Parts 4 and 19.
B3	Hazard / fire	EIS Ch 15 / mitigation	Hazards	P1, P7, P17	See cited report section / register source	The PHA says the closest battery-to-boundary separation in the concept layout is about 20 m and models an injury heat-radiation distance of 6.1 m. The EIS mitigation wording refers to a minimum 3 m boundary separation subject to later supplier testing/modelling.		Boundary separation does not obviously preserve the exhibited consequence case	OPEN	Critical	Preserve the consequence containment demonstrated by the exhibited geometry or quantitatively reassess any reduced separation/final product before construction or energisation.	Require a discrete written reconciliation before relying on the relevant conclusion.	Where unresolved post-determination detail remains, set measurable limits, verification hold points and reassessment triggers.	Moderate–High	Obtain the outstanding primary evidence identified in Parts 4 and 19.
B4	Hazard / fire	EIS Ch 15–16	Hazards / bushfire	P17, P18	See cited report section / register source	The PHA recognises bushfire as capable of initiating secondary battery events, but later excludes bushfire-initiated thermal runaway as not plausible. The bushfire report describes a large high-intensity bushfire affecting the site as a credible, if infrequent, scenario.		Bushfire initiation pathway is inconsistent	DOCUMENT CONFLICT	Critical	Reconcile the bushfire and PHA assumptions into one explicit external-bushfire-to-BESS-failure scenario.	Require a discrete written reconciliation before relying on the relevant conclusion.	Where unresolved post-determination detail remains, set measurable limits, verification hold points and reassessment triggers.	High	Obtain the outstanding primary evidence identified in Parts 4 and 19.
C1	Toxic plume / fire safety	EIS Ch 15 / TR9	Hazards	P17	See cited report section / register source	The PHA discusses fluorinated hydrocarbons/acids and smoke qualitatively. A project-specific quantitative toxic-plume analysis was not located in the material reviewed.		Toxic smoke/plume basis remains qualitative	OPEN	High	Explain why qualitative treatment is sufficient for the selected final technology and credible fire case, or provide the consequence analysis needed to support off-site and emergency-planning conclusions.	Require a discrete written reconciliation before relying on the relevant conclusion.	Where unresolved post-determination detail remains, set measurable limits, verification hold points and reassessment triggers.	Moderate–High	Obtain the outstanding primary evidence identified in Parts 4 and 19.
C2	Toxic plume / fire safety	EIS Ch 15 / TR9	Hazards	P17	See cited report section / register source	Explosion from flammable gas accumulation is identified as a credible hazard, while the located consequence discussion is more developed for thermal radiation than blast/overpressure.		Explosion/deflagration consequence treatment is not transparent	OPEN	High	Identify the quantitative blast/overpressure basis or explain why additional modelling is not required for the final technology.	Require a discrete written reconciliation before relying on the relevant conclusion.	Where unresolved post-determination detail remains, set measurable limits, verification hold points and reassessment triggers.	Moderate–High	Obtain the outstanding primary evidence identified in Parts 4 and 19.
C3	Toxic plume / fire safety	EIS Ch 15 / mitigation	Hazards / emergency	P7, P17	See cited report section / register source	Hydrant arrangements and other fire-safety detail are left to a later Fire Safety Study and consultation.		Final fire-safety systems are deferred	DEFERRED	High	Where project acceptability depends on later systems, define minimum performance requirements and make them enforceable rather than leaving them entirely open after determination.	Require a discrete written reconciliation before relying on the relevant conclusion.	Where unresolved post-determination detail remains, set measurable limits, verification hold points and reassessment triggers.	Moderate–High	Obtain the outstanding primary evidence identified in Parts 4 and 19.

Issue ID	Project component	EIS chapter	SEAR requirement	Source document	Exact page / section	What the EIS says	Contradictory or additional evidence	Finding	Status	Significance	Response required from applicant	Response required from DPHI	Suggested consent condition if relevant	Confidence	Outstanding research
D1	Noise / amenity	EIS Ch 8 / TR2 App G	Noise	P10	See cited report section / register source	At R5, 551 Sandy Creek Road, the night project noise trigger is 35 dBA and the predicted total is also 35 dBA.		R5 has no whole-decibel margin	NEEDS TECHNICAL VERIFICATION	Critical	Final design verification should demonstrate that actual equipment and layout remain within the applicable criterion.	Require a discrete written reconciliation before relying on the relevant conclusion.	Where unresolved post-determination detail remains, set measurable limits, verification hold points and reassessment triggers.	Moderate–High	Obtain the outstanding primary evidence identified in Parts 4 and 19.
D2	Noise / amenity	EIS Ch 8 / TR2	Noise	P10	See cited report section / register source	The noise assessment reports that alternative equipment orientations/locations could be 1-3 dBA louder.		Compliance depends on optimised orientation	DEFERRED	Critical	Preserve the acoustically favourable assessed orientation/layout or undertake revised modelling.	Require a discrete written reconciliation before relying on the relevant conclusion.	Where unresolved post-determination detail remains, set measurable limits, verification hold points and reassessment triggers.	Moderate–High	Obtain the outstanding primary evidence identified in Parts 4 and 19.
D3	Noise / amenity	EIS Ch 8 / TR2	Noise	P10, P16	See cited report section / register source	The noise assessment uses 25°C and 100% RH as its worst-case summer cooling/noise condition, while project climate material records hotter summer maximums.		25°C worst-case cooling/noise premise requires evidence	NEEDS TECHNICAL VERIFICATION	Critical	Provide manufacturer fan/chiller duty and sound-power data across relevant temperatures and operating ranges to demonstrate the adopted noise case bounds the final equipment.	Require a discrete written reconciliation before relying on the relevant conclusion.	Where unresolved post-determination detail remains, set measurable limits, verification hold points and reassessment triggers.	Moderate–High	Obtain the outstanding primary evidence identified in Parts 4 and 19.
D4	Noise / amenity	EIS Ch 8 / TR2 App F	Construction noise	P10	See cited report section / register source	The audit records road-widening predictions at nearby receivers far above the construction management level.		Construction road works create major temporary noise impacts	OPEN	High	Define specific notice, respite, work-hour, quieter-method and complaint-response measures for affected residences.	Require a discrete written reconciliation before relying on the relevant conclusion.	Where unresolved post-determination detail remains, set measurable limits, verification hold points and reassessment triggers.	Moderate–High	Obtain the outstanding primary evidence identified in Parts 4 and 19.
E1	Flood / emergency	EIS Ch 14 / TR8 App A	Water / flood	P16	See cited report section / register source	The water assessment identifies H5 conditions on Sandy Creek Road in the 1% AEP and more severe events. H5 is an access constraint even if the project itself does not worsen flooding.		Sandy Creek Road reaches H5 flood hazard	OPEN	Critical	Show how staff, responders, isolation and safe-state arrangements work when road access is unsafe or unavailable.	Require a discrete written reconciliation before relying on the relevant conclusion.	Where unresolved post-determination detail remains, set measurable limits, verification hold points and reassessment triggers.	Moderate–High	Obtain the outstanding primary evidence identified in Parts 4 and 19.
E2	Flood / emergency	EIS Ch 14–15	Water / hazards	P16, P17	See cited report section / register source	The project relies on stormwater infrastructure and isolation valves to contain contaminated firewater, but a complete design-basis storage balance was not located covering firefighting flow/duration, existing basin level, concurrent rainfall/runoff and freeboard.		Firewater containment is asserted but not quantitatively demonstrated	OPEN	Critical	Provide a quantitative containment calculation demonstrating that the credible firewater case can be retained and isolated without uncontrolled discharge.	Require a discrete written reconciliation before relying on the relevant conclusion.	Where unresolved post-determination detail remains, set measurable limits, verification hold points and reassessment triggers.	Moderate–High	Obtain the outstanding primary evidence identified in Parts 4 and 19.
E3	Flood / emergency	EIS Ch 13–16	Cumulative / emergency interfaces	P15–P18	See cited report section / register source	Fire, bushfire, flooding, road access, responder access and water-quality management appear in different technical reports.		Emergency issues are assessed in separate silos	OPEN	Critical	Provide a single integrated emergency demonstration testing the combined scenario rather than assuming each discipline works independently.	Require a discrete written reconciliation before relying on the relevant conclusion.	Where unresolved post-determination detail remains, set measurable limits, verification hold points and reassessment triggers.	Moderate–High	Obtain the outstanding primary evidence identified in Parts 4 and 19.
F1	Waterways / fisheries	EIS Ch 7 & 14	Biodiversity / fisheries / water	P9, P16	See cited report section / register source	Mapped Key Fish Habitat is recorded about 30 m north of the subject land and an eastern tributary about 50 m east. Most project runoff is recorded as draining toward the eastern KFH tributary.		Key Fish Habitat is very close to the subject land	OPEN	Critical	Assess ordinary stormwater, construction runoff and contaminated firewater pathways together.	Require a discrete written reconciliation before relying on the relevant conclusion.	Where unresolved post-determination detail remains, set measurable limits, verification hold points and reassessment triggers.	Moderate–High	Obtain the outstanding primary evidence identified in Parts 4 and 19.
F2	Waterways / fisheries	TR1 App B / TR8	Fisheries	P9, P16	See cited report section / register source	The fisheries review identifies threatened-fish relevance associated with Sandy Creek.		Threatened-fish context increases the importance of water-pathway certainty	OPEN	Critical	Demonstrate how final drainage, erosion controls, spill/firewater isolation and emergency response protect the downstream aquatic environment under credible incident conditions.	Require a discrete written reconciliation before relying on the relevant conclusion.	Where unresolved post-determination detail remains, set measurable limits, verification hold points and reassessment triggers.	Moderate–High	Obtain the outstanding primary evidence identified in Parts 4 and 19.
F3	Waterways / fisheries	TR8	Water baseline	P16	See cited report section / register source	The current review did not locate a dedicated Sandy Creek baseline monitoring program tailored to the project downstream pathway.		No dedicated Sandy Creek baseline monitoring located	OPEN	High	Establish a clear baseline and incident-response monitoring framework so project-related water-quality change can be identified and responded to.	Require a discrete written reconciliation before relying on the relevant conclusion.	Where unresolved post-determination detail remains, set measurable limits, verification hold points and reassessment triggers.	Moderate–High	Obtain the outstanding primary evidence identified in Parts 4 and 19.
G1	Traffic / OSOM	EIS Ch 13 / TR7	Traffic / road works	P15	See cited report section / register source	The traffic assessment identifies a design vehicle and local treatments, but final vehicle/load configuration, detailed route study, permits and some physical works remain to be confirmed later.		OSOM route remains concept-level	DEFERRED	High	Ensure final road works remain within the environmentally assessed footprint; assess any new widening, clearing, drainage or hardstand outside that envelope.	Require a discrete written reconciliation before relying on the relevant conclusion.	Where unresolved post-determination detail remains, set measurable limits, verification hold points and reassessment triggers.	Moderate–High	Obtain the outstanding primary evidence identified in Parts 4 and 19.
G2	Traffic / OSOM	TR7 Appendix C	Traffic / OSOM	P15	See cited report section / register source	The assessed OSOM combination is 65.8 m long, but the swept-path assessment does not establish the final loaded height.		Vertical clearance is unresolved	OPEN	High	Demonstrate final loaded height and route clearance; horizontal swept-path success does not establish vertical clearance.	Require a discrete written reconciliation before relying on the relevant conclusion.	Where unresolved post-determination detail remains, set measurable limits, verification hold points and reassessment triggers.	Moderate–High	Obtain the outstanding primary evidence identified in Parts 4 and 19.
G3	Traffic / OSOM	EIS Ch 20 / TR7	Cumulative / traffic	P15, W4	See cited report section / register source	The project material identifies a proposed approximately 367 m		Muswellbrook Bypass / Sandy Creek Road bridge creates a timing	NEEDS AGENCY CONFIRMATION	Critical	Demonstrate the transformer-delivery route during each relevant	Require a discrete written reconciliation before relying on the relevant	Where unresolved post-determination detail remains, set measurable	Moderate–High	Obtain the outstanding primary evidence identified in Parts 4 and

Issue ID	Project component	EIS chapter	SEAR requirement	Source document	Exact page / section	What the EIS says	Contradictory or additional evidence	Finding	Status	Significance	Response required from applicant	Response required from DPHI	Suggested consent condition if relevant	Confidence	Outstanding research
						bridge over Sandy Creek Road and the Main North railway line. BESS construction and bypass works may overlap from around 2027.		dependency			bridge construction stage and after completion, including vertical clearance and temporary-work restrictions.	conclusion.	limits, verification hold points and reassessment triggers.		19.
G4	Traffic / OSOM	EIS Ch 13 / TR7	Traffic / access	P15	See cited report section / register source	The route includes a Main Northern Line crossing and existing school-bus restrictions/heavy-vehicle timing considerations.		Rail crossing and school transport add operational constraints	OPEN	Medium	Construction and emergency arrangements should explicitly account for these known access constraints rather than relying only on intersection capacity.	Require a discrete written reconciliation before relying on the relevant conclusion.	Where unresolved post-determination detail remains, set measurable limits, verification hold points and reassessment triggers.	Moderate–High	Obtain the outstanding primary evidence identified in Parts 4 and 19.
H1	Biodiversity / EPBC	EIS Ch 7 / TR1	Biodiversity / MNES	P4, P9	See cited report section / register source	The project was determined a controlled action on 27 February 2026 under EPBC 2025/10406 for listed threatened species and communities. Supplementary SEARs identify likely significant impacts to Central Hunter Valley eucalypt forest and woodland, Hunter Valley Delma and Large-eared Pied Bat.		Commonwealth controlled action	CONFIRMED	Critical	Keep final project layout and ancillary works inside the assessed biodiversity envelope, and test any material change against the Commonwealth and NSW assessment basis.	Require a discrete written reconciliation before relying on the relevant conclusion.	Where unresolved post-determination detail remains, set measurable limits, verification hold points and reassessment triggers.	High	Obtain the outstanding primary evidence identified in Parts 4 and 19.
H2	Biodiversity / EPBC	EIS Ch 7 / TR1	Biodiversity	P9	See cited report section / register source	The audit records up to about 16.92 ha of native vegetation impact, including about 9 ha of threatened ecological communities.		Native vegetation impact is substantial	CONFIRMED	High	Detailed design should not silently move impacts outside the exhibited footprint because even small shifts can change credit, avoidance and cumulative-impact outcomes.	Require a discrete written reconciliation before relying on the relevant conclusion.	Where unresolved post-determination detail remains, set measurable limits, verification hold points and reassessment triggers.	High	Obtain the outstanding primary evidence identified in Parts 4 and 19.
H3	Biodiversity / EPBC	EIS Ch 7 / Ch 20 / TR1	Cumulative biodiversity	P9	See cited report section / register source	The BDAR records a significant cumulative effect on east-west ecological connectivity between Bells Mountain and the Muswellbrook lowlands, while describing this project contribution as minor.		Regional connectivity is a cumulative issue	OPEN	High	Keep that conclusion tied to the final clearing, fencing and transmission footprint rather than a superseded concept layout.	Require a discrete written reconciliation before relying on the relevant conclusion.	Where unresolved post-determination detail remains, set measurable limits, verification hold points and reassessment triggers.	Moderate–High	Obtain the outstanding primary evidence identified in Parts 4 and 19.
I1	Agricultural / rural land	EIS Ch 12 / TR6	Land use / agriculture	P14	See cited report section / register source	The footprint avoids mapped Biophysical Strategic Agricultural Land and Critical Industry Cluster footprint, but the nearest BSAL is about 80 m north and Equine CIC land lies immediately east/north. A small area of Land and Soil Capability Class 3 land is recorded near the existing entrance.		Mapped BSAL / CIC context	PARTIALLY RESOLVED	Medium	Treat this as context for edge effects, construction disturbance, adjoining land use and cumulative rural-land impacts; it is not presently a finding that the project directly occupies mapped BSAL/CIC land.	Require a discrete written reconciliation before relying on the relevant conclusion.	Where unresolved post-determination detail remains, set measurable limits, verification hold points and reassessment triggers.	Moderate–High	Obtain the outstanding primary evidence identified in Parts 4 and 19.
I2	Agricultural / rural land	EIS Ch 9 & 17	Visual / social	P11, P19	See cited report section / register source	The visual/social material records moderate operational impacts at the most affected residential receivers and recognises rural amenity value despite existing infrastructure.		Rural character remains a resident issue	CONFIRMED	High	Add property-specific visibility, noise, access and amenity impacts where relevant; project-wide labels should not obscure receptor-specific impacts.	Require a discrete written reconciliation before relying on the relevant conclusion.	Where unresolved post-determination detail remains, set measurable limits, verification hold points and reassessment triggers.	High	Obtain the outstanding primary evidence identified in Parts 4 and 19.
J1	Neighbouring receivers	EIS Ch 8,9,17	Receiver consistency / site suitability	P1, P10, P11, P19, W3	See cited report section / register source	DA 2026-89 / PAN-656832 for 610 Sandy Creek Road, Lot 4 DP802081, was publicly exhibited 29 July–19 August 2026. EIS declaration signed 13 August 2026; Landscape and Visual Planning Portal search snapshot was current to 15 May 2026. No explicit 610 receiver entry located in reviewed exhibited schedules.	Official NSW Planning Portal DA record confirms the dwelling/garage proposal. The timing overlaps final EIS certification.	610 Sandy Creek Road DA timing may post-date the visual report search cut-off	CONFIRMED	High	State whether DA 2026-89 was known before EIS certification; identify where it was assessed; if not, provide cross-discipline receiver addendum.	Require a discrete written reconciliation before relying on the relevant conclusion.	Where unresolved post-determination detail remains, set measurable limits, verification hold points and reassessment triggers.	High	Obtain DA site plan and overlay exact dwelling location against noise, visual, traffic, flood/hazard and project infrastructure.
J2	Neighbouring receivers	Multiple	Consistency / baseline	P1, P10, P11, P19, W3	See cited report section / register source	The absence of an explicit receiver entry is confirmed in the reviewed schedules, but the present evidence does not establish deliberate removal or redaction.	The appropriate test is documentary: receiver registers, superseded drafts, adequacy comments and change logs.	610 Sandy Creek Road remains a verification item	OPEN	High	Produce the record showing whether 610 was never captured, captured but not reported, or appeared in a superseded draft.	Require a discrete written reconciliation before relying on the relevant conclusion.	Where unresolved post-determination detail remains, set measurable limits, verification hold points and reassessment triggers.	Moderate–High	Obtain the outstanding primary evidence identified in Parts 4 and 19.
K1	Approval envelope	Multiple	Full description / consistency	P1, P5, P7–P19	See cited report section / register source	Compliance or containment repeatedly depends on a selected equipment count, layout, orientation, separation, source level, route or other parameter while the project retains later design flexibility.		Many favourable conclusions depend on concept assumptions	OPEN	Critical	Detailed design is not itself a flaw; the issue is where later design determines whether an environmental outcome relied on at EIS stage remains achievable.	Require a discrete written reconciliation before relying on the relevant conclusion.	Where unresolved post-determination detail remains, set measurable limits, verification hold points and reassessment triggers.	Moderate–High	Obtain the outstanding primary evidence identified in Parts 4 and 19.

Issue ID	Project component	EIS chapter	SEAR requirement	Source document	Exact page / section	What the EIS says	Contradictory or additional evidence	Finding	Status	Significance	Response required from applicant	Response required from DPHI	Suggested consent condition if relevant	Confidence	Outstanding research
K2	Approval envelope	Multiple	Full description / monitoring	P5, P7–P19	See cited report section / register source	The current audit recommends a Design and Environmental Assessment Reconciliation Schedule identifying the exhibited assumption, maximum consent limit, affected technical reports, verification method, hold point and reassessment trigger for each material parameter.		A reconciliation schedule would make the consent envelope transparent	OPEN	Critical	Use the schedule to show which design features are fixed because environmental conclusions depend on them, and when reassessment is required.	Require a discrete written reconciliation before relying on the relevant conclusion.	Where unresolved post-determination detail remains, set measurable limits, verification hold points and reassessment triggers.	Moderate–High	Obtain the outstanding primary evidence identified in Parts 4 and 19.
A4	Assessment integrity	EIS Ch 1 / 4	Correct project requirements / consistency	P1, P3–P5, W2	EIS §§1.2.5, 1.4 and §4.6.1; Appendix A	The EIS refers to SSD-78810458 in connection with SEARs; the official Planning Portal identifies SSD-78810458 as Bannaby Battery Energy Storage System, a separate project in Upper Lachlan Shire.	The error is therefore a cross-project identifier, not an obviously meaningless digit string.	Live Bannaby SSD identifier appears in the McCullys EIS.	DOCUMENT CONFLICT	High	Explain how the Bannaby SSD number entered the EIS and confirm whether any Bannaby requirement, agency advice, template or assumption entered the McCullys assessment chain.	Require a controlled SEARs/document-transmittal audit. If traceability cannot be proven, consider formal clarification/reissue and specialist reconfirmation.	Not primarily a consent-condition issue; should be resolved before determination.	High	Obtain adequacy review and consultant transmittal records.
A5	Assessment integrity	EIS declaration / Appendix B	EIS completeness / accuracy	P1, P6, W3	EIS declaration p.i; Appendix B Reg 190/192	The signed declaration states the EIS contains all available information relevant to the assessment and accurate summaries. The 610 DA was publicly exhibited before the declaration date.	Whether that DA was actually known to the EIS team is not established.	Final-update process for publicly available receiver information requires explanation.	OPEN	High	Identify the final receiver/update checks undertaken immediately before 13 August 2026 and whether DA 2026-89 was captured.	Test the declaration against the actual update/change-control process, without assuming intent.	If material, require updated receiver assessment before determination.	High on dates; moderate on knowledge	Receiver register, search logs, adequacy comments.
F4	Waterways / fisheries	TR1 / TR8	Fisheries / likely impacts / baseline	P9, P16	BDAR §2.1.2 / Appendix B; TR8 §§4.8, 4.11	No dedicated Sandy Creek/adjacent tributary monitoring point has been identified; regional Hunter River data is used as contextual baseline.	Mapped KFH is approximately 30–50 m from subject land and receives project drainage.	Local receiving-water baseline and incident trigger criteria are not demonstrated.	OPEN	High	Provide or justify local baseline monitoring and define trigger/response parameters relevant to sediment, metals and credible firewater contaminants.	Consider whether the Fisheries/water SEARs require supplementary local baseline evidence.	Require pre-construction baseline and incident monitoring if not supplied before determination.	Moderate–High	Exhaust full TR1/TR8 appendices for any targeted aquatic sampling.
STG-01	Staging	EIS Ch 3	Description and assessment of staging	P1, P5	EIS §§3.3–3.4; Appendix A	Project may be constructed in one or more stages, but a maximum staging scenario is not clearly defined across all technical assessments.		Staging flexibility is not transparently bounded.	OPEN	High	Define the maximum staging case, including duplicated mobilisation, temporary compounds, peak traffic/noise, duration and mitigation timing.	Ensure all impact assessments bound the consented staging flexibility.	No staging outside the assessed maximum without written environmental verification / modification pathway.	High	Adequacy comments and construction programme.

19. Formal questions to the applicant

The questions below are framed so each issue can be answered separately in writing. If the applicant considers a matter already resolved, the response should identify the exact exhibited EIS section, technical report, page, model, drawing or dataset that resolves it.

Q1 — SEARs traceability. Please provide a controlled chronology of every issued and supplementary SEARs document for SSD-81555720 and identify the exact version supplied to each specialist consultant. Please reconcile the EIS references to 23 January 2025, SSD-78810458 and 24 March 2025 with the correct issued SEARs dated 16 April 2025 and supplementary SEARs dated 24 March 2026.

Q2 — Bannaby identifier. Please explain how SSD-78810458, which is the NSW Planning identifier for Bannaby Battery Energy Storage System, entered the McCullys Gap EIS. Please confirm whether any Bannaby SEARs, agency advice, template wording, assumptions or metadata were used in preparing SSD-81555720.

Q3 — Adequacy/change record. Please provide the DPHI adequacy comments, the complete applicant response matrix, the controlled change register and the superseded application/EIS/report versions necessary to trace the changes made before the 14 August 2026 amended application.

Q4 — Final approval envelope. Please provide one schedule stating the maximum battery-container, rack/cell, PCS, transformer and HVAC/cooling inventory; maximum dimensions/heights; minimum separation distances; maximum sound-power/directivity; final battery technology/performance envelope; drainage/firewater capacities; staging limits; operational life; replacement/repowering limits; and the reassessment trigger for any departure.

Q5 — PHA arithmetic. Please reconcile the PHA statement of 1.7 charges per 24 hours with the 365 charges/container/year used in its calculation and rerun the relevant event-frequency calculation using the intended final operating profile.

Q6 — Container-count conflict. Please reconcile the approximately 296-container count implied by the PHA arithmetic with the 336 battery containers modelled in TR2. Please identify the maximum count sought for approval and confirm that hazard, fire, noise, water and layout assessments all bound that count.

Q7 — Hazard geometry. Please identify the minimum battery-to-boundary and battery-to-battery separations required to preserve the exhibited thermal-radiation/risk conclusions. Please explain whether the 3 m minimum wording can ever produce a less favourable consequence case than the concept geometry used in TR9.

Q8 — Bushfire initiation. Please reconcile TR9 and TR10 on the pathway from an external bushfire to battery thermal runaway or other BESS failure. Please provide one integrated scenario selection and control basis.

Q9 — Explosion / toxic plume. Please identify the project-specific blast/overpressure and toxic-plume consequence analyses relied upon. If quantitative modelling was not undertaken, please provide the technical basis demonstrating why qualitative treatment is sufficient for the final battery technology and credible fire scenarios.

Q10 — Firewater containment. Please provide the design-basis firefighting water demand and contaminated-water containment calculation, including existing basin level, rainfall/runoff allowance, freeboard, valve/isolation logic, failure contingency and downstream discharge prevention.

Q11 — Flood / emergency. Please demonstrate how responder access, staff evacuation, remote safe-state/shutdown, communications, firefighting water and contaminated-water isolation operate during foreseeable flood conditions in which Sandy Creek Road reaches H5 hazard or is unavailable.

Q12 — Fisheries / KFH. Please reconcile the conclusion that no listed aquatic habitat/biota is impacted with the mapped Key Fish Habitat approximately 30–50 m from the subject land and the documented drainage pathway to the eastern tributary and Sandy Creek. Please provide any targeted aquatic survey and the indirect-impact assessment.

Q13 — Local water-quality baseline. Please identify any project-specific baseline monitoring undertaken in Sandy Creek or the adjacent KFH tributary. If none was undertaken, please explain why the regional monitoring relied upon is sufficient and how incident trigger/response criteria will be established.

Q14 — Operational noise. Please provide the final OEM source levels, complete one-third-octave spectra, directivity and fan/chiller duty curves across relevant ambient temperatures and charge/discharge modes. Please demonstrate that the final design remains at or below the applicable receiver criteria, including R5.

Q15 — R5 / orientation. Please confirm whether the optimised orientation modelled in TR2 is a fixed design requirement. If not, please remodel the maximum flexibility sought for approval.

Q16 — Construction noise. Please provide property-specific controls for the road-widening scenario predicted to materially exceed construction NMLs, including notification, respite, work hours, quieter methods and escalation.

Q17 — OSOM. Please provide the final transformer transport envelope, detailed route study, vertical-clearance verification, structural checks, final road works and environmental-footprint overlay.

Q18 — Muswellbrook Bypass interface. Please reconcile the proposed transformer delivery programme with the Transport for NSW bypass works and the 367 m bridge over Sandy Creek Road/Main North railway. Please demonstrate route availability during bridge construction and after completion, including loaded-height clearance.

Q19 — 610 Sandy Creek Road. Please confirm whether the project team knew of DA 2026-89 / PAN-656832 before the EIS was signed on 13 August 2026. If it was known, identify where the proposed dwelling was assessed. If not, provide an updated noise, visual, social, traffic/construction, hazard/emergency and cumulative-impact check using the DA site plan.

Q20 — Receiver/change record. Please provide the final receiver register, the dates of the last Planning Portal/council searches used by each specialist discipline, and any superseded receiver schedules or adequacy comments. This is requested to establish whether 610 was never captured, considered but not reported, or appeared in an earlier draft.

Q21 — Biodiversity design lock. Please confirm that all detailed design, connection works, access/road works, APZ/fire controls and drainage remain within the BDAR/MNES assessed disturbance envelope. Identify the process if any final change increases clearing, affects mapped habitat or alters connectivity.

Q22 — Visual / social. Please confirm the basis on which VP03 is representative of R5 and provide property-specific assessment if elevation, screening, line of sight or viewing angle differ materially. Please also identify the evidence basis for the SIA expectation that most people will adapt to visual change.

Q23 — Staging. Please define the maximum construction staging scenario and demonstrate that construction noise, traffic, workforce, temporary facilities, disturbance duration and mitigation timing are bounded by the exhibited assessments.

Q24 — Replacement / repowering. Please identify what battery replacement, repowering, technology substitution or increase in installed inventory could occur under the approval without further assessment, and the threshold at which a modification or new approval pathway would be required.

20. Response tracker

This matrix is intentionally left ready for correspondence. Do not overwrite the original finding when a response arrives; add the response and evidence check as a new layer.

Issue	Original finding	Question sent	Date sent	Applicant response	Document supplied	Does response answer question?	New inconsistency created?	Further question required?	DPHI relevance	Final status
A1	Incorrect SSD number and SEARs dates								Require a discrete written reconciliation before relying on the relevant conclusion.	DOCUMENT CONFLICT
A2	Earlier footprint data appears to remain in the amended application								Require a discrete written reconciliation before relying on the relevant conclusion.	OPEN
A3	Residual template/version-control indicators								Require a discrete written reconciliation before relying on the relevant conclusion.	DOCUMENT CONFLICT

Issue	Original finding	Question sent	Date sent	Applicant response	Document supplied	Does response answer question?	New inconsistency created?	Further question required?	DPHI relevance	Final status
B1	Charging-frequency arithmetic does not reconcile								Require a discrete written reconciliation before relying on the relevant conclusion.	DOCUMENT CONFLICT
B2	PHA and noise assessment use different container counts								Require a discrete written reconciliation before relying on the relevant conclusion.	DOCUMENT CONFLICT
B3	Boundary separation does not obviously preserve the exhibited consequence case								Require a discrete written reconciliation before relying on the relevant conclusion.	OPEN
B4	Bushfire initiation pathway is inconsistent								Require a discrete written reconciliation before relying on the relevant conclusion.	DOCUMENT CONFLICT
C1	Toxic smoke/plume basis remains qualitative								Require a discrete written reconciliation before relying on the relevant conclusion.	OPEN
C2	Explosion/deflagration consequence treatment is not transparent								Require a discrete written reconciliation before relying on the relevant conclusion.	OPEN
C3	Final fire-safety systems are deferred								Require a discrete written reconciliation before relying on the relevant conclusion.	DEFERRED
D1	R5 has no whole-decibel margin								Require a discrete written reconciliation before relying on the relevant conclusion.	NEEDS TECHNICAL VERIFICATION
D2	Compliance depends on optimised orientation								Require a discrete written reconciliation before relying on the relevant conclusion.	DEFERRED

21. Current assessment by resolution pathway

A. Adequately addressed in exhibited material

- The general strategic need for grid-scale storage and the project's nominal 400 MW / 1,600 MWh purpose are clearly described.
- The RU1 agricultural context and direct BSAL/CIC position are comparatively well described; current evidence does not support claiming the BESS footprint is on mapped BSAL or Equine CIC.
- The project acknowledges receptor-specific visual effects and major construction-noise effects rather than claiming no impacts exist.

B. Capable of resolution by written clarification

- Technical-report cross-references and numbering errors where the underlying correct report can be unambiguously identified.
- The intended meaning of the 133,800 m² GFA field if the adequacy/change record confirms it is a stale or mislabelled administrative field rather than the approval footprint.
- The basis for the 25°C acoustic operating case if final OEM data demonstrates it is genuinely conservative.

C. Requires additional evidence before determination

- Corrected PHA charge-frequency arithmetic and one final maximum equipment schedule.
- Final acoustic/OEM verification at R5 and confirmation of layout/orientation constraints.
- Integrated flood/fire/emergency-access demonstration.
- Quantitative firewater containment basis and KFH receiving-environment assessment.
- Final OSOM envelope and Muswellbrook Bypass interface evidence.
- 610 Sandy Creek Road cross-discipline receiver check if the applicant cannot show it was already assessed.

D. Appears suitable for enforceable consent conditions

- Hard cap on assessed disturbance footprint and biodiversity/MNES impacts.
- Maximum noise source levels/orientation and pre-construction acoustic verification.
- No OSOM or road works outside the assessed environmental footprint without environmental review.
- Firewater containment volume, isolation and verification hold point before energisation.
- Construction-noise respite/notification controls and school-period heavy-vehicle restrictions.

E. Material issue potentially requiring supplementary assessment or amended information

- Any inability to prove that the correct SSD-81555720 SEARs governed each specialist report.
- Any final design materially exceeding the exhibited equipment/layout/hazard/noise envelope.
- A 610 Sandy Creek Road reassessment that materially changes receiver conclusions.
- Evidence that the aquatic/KFH pathway was not substantively assessed despite being required.
- A final OSOM route or road works materially outside the exhibited disturbance footprint.

F. Unresolved after applicant response

- To be completed after written responses and supplied documents are checked against the primary evidence.

Appendix A. Calculation checks

Check	Calculation	Meaning
Application area numeric check	133,800 m² ÷ 10,000 = 13.38 ha.	Matches the March 2025 scoping-era site area; significance is version-control only until the applicant explains the GFA field.
PHA container-count check	985,088 battery units ÷ (416 batteries/rack × 8 racks/container) = 296 containers.	TR2 uses 336 containers; difference = 40 containers, about 13.5%.

PHA charging-frequency check	1.7 charges/day × 365 = 620.5 charges/container/year.	Cannot reconcile with the 365 charges/container/year used in the PHA table as written.
PHA illustrative total cycling	296 × 620.5 = 183,668 charge events/year.	This arithmetic check does not establish true failure frequency; it demonstrates the published premises are inconsistent.
OSOM length comparison	65.8 m assessed design vehicle versus an example 63 m combination: difference 2.8 m, about 4.3%.	Length alone does not resolve loaded height, width, axle geometry, articulation or bridge clearance.

Appendix B. Suggested consent / verification framework

- Before construction: controlled final design schedule demonstrating that final infrastructure remains within the EIS/BDAR/noise/PHA/traffic/water envelopes.
- Before bulk earthworks: final disturbance and road-work GIS overlay against biodiversity, heritage and water assessment footprints.
- Before equipment procurement: final OEM acoustic, thermal and fire-performance evidence; revised modelling if any input is less favourable.
- Before energisation: Fire Safety Study, Emergency Plan, firewater containment verification, hydrant/access verification and integrated flood-access contingency.
- Before OSOM movement: final vehicle/load envelope, route permit, bridge/culvert structural and vertical-clearance verification, bypass-program interface and required temporary works.
- During operation: noise verification under representative worst-case operating and meteorological conditions; water-quality/incident monitoring; complaint and corrective-action process.
- Change control: any increase in installed inventory, equipment count, footprint, height, source level, hazard consequence, clearing, firewater demand or route disturbance beyond the assessed envelope triggers documented environmental review and the applicable modification/new approval pathway.

Appendix C. Source register and official public records

Primary evidence should be cited by document title, revision/date, section and page whenever this portfolio is converted into a submission or formal request.

P1 — Environmental Impact Statement, GHD project 12627183, August 2026. Primary project narrative; declaration; Chapters 1–22. EIS declaration signed 13 August 2026.

P2 — Scoping Report, GHD/BW ESS, March 2025. Original ~13.38 ha concept, early receiver environment, early project description and consultation.

P3 — Issued SEARs, SSD-81555720, 16 April 2025. Primary NSW assessment requirements.

P4 — Supplementary SEARs / EPBC bilateral requirements, 24 March 2026. MNES requirements following controlled-action decision EPBC 2025/10406.

P5 — Appendix A — SEARs Compliance Table. Applicant's claimed SEARs response; includes explicit consistency requirement.

P6 — Appendix B — Statutory Compliance Table. EP&A Regulation / EIS content and declaration framework.

P7 — Appendix C — Consolidated Mitigation Measures. Project commitments and matters deferred to design, pre-construction and operation.

P8 — SSD Application submitted 14 August 2026. Applicant, EDC, site fields, landowner consent, amendment description and statutory fields.

P9 — TR1 — Biodiversity Development Assessment Report, August 2026. BDAR, MNES, habitat, impacts, connectivity, fisheries/KFH context.

P10 — TR2 — Noise and Vibration Impact Assessment, August 2026. Construction and operational modelling, equipment inputs, receivers, R5 critical result.

P11 — TR3 — Landscape and Visual Impact Assessment, August 2026. 46 visual receivers, viewpoints, photomontage method, R4/R5 impacts.

P12 — TR4 — Aboriginal Cultural Heritage Assessment. Referenced by EIS; direct source not yet held in this working file set.

P13 — TR5 — Historic Heritage Impact Assessment. Referenced by EIS; direct source not yet held in this working file set.

P14 — TR6 — Land Use and Agriculture Assessment, August 2026. RU1 context, agricultural capability, BSAL/CIC context and land-use conflict.

P15 — TR7 — Traffic and Transport Impact Assessment, August 2026. Construction traffic, Sandy Creek Road, rail crossing, OSOM route and concept treatments.

P16 — TR8 — Water Impact Assessment, August 2026. Hydrology, water quality, firewater, flood modelling and Sandy Creek Road hazard.

P17 — TR9 — Preliminary Hazard Assessment, August 2026. Thermal runaway, fire/explosion, heat radiation, event frequency and risk conclusions.

P18 — TR10 — Bushfire Hazard Assessment, August 2026. APZ, access, bushfire attack, fire preparedness and operational bushfire context.

P19 — TR11 — Social Impact Assessment, August 2026. Community baseline, engagement, amenity, rural character and perceived safety impacts.

W1 — NSW Planning Portal — SSD-81555720. Current public project page, 400 MW / 1,600 MWh, controlled-action status, exhibition.

W2 — NSW Planning Portal — Bannaby BESS SSD-78810458. Confirms the cross-project identifier appearing in the McCullys EIS belongs to a separate BESS in Upper Lachlan Shire.

W3 — NSW Planning Portal — DA 2026-89 / PAN-656832, 610 Sandy Creek Road. Confirms Lot 4 DP802081 dwelling/garage proposal and 29 July–19 August 2026 exhibition.

W4 — Transport for NSW — New England Highway Muswellbrook Bypass REF. Confirms 367 m bridge over Sandy Creek Road, Sandy Creek, Main North railway and southbound exit ramp.

A1 — SSD-81555720 Deep Audit Register — Fisheries Updated. Working index only; primary claims are traced back to the above project documents.

Working conclusion. The present evidence does not require a binary declaration that the EIS is adequate or inadequate. It identifies a set of discrete documentary, technical and cross-discipline matters that should be reconciled before the decision maker relies on the favourable conclusions. Where the applicant can provide the missing evidence, the issue can be closed. Where a response changes a material assessment assumption, the appropriate response may be amended information, supplementary assessment or an enforceable consent limit.