Detail issues:

Works in Progress update of: 9th October 2023

For those wishing to delve into more detailed issues of the Oven Mountain Pumped Hydro Project… *Below are some detail issues / concerns, from SOMR following and understanding of the Project, for your consideration. They are arranged in sequence of; 1) Planning DA/EIS Document issues; 2) Construction; 3) Post Construction Operation and Maintenance; and 4) Decommissioning.*

Time will tell the DA and EIS review and assessment (by SOMR and others), if these issues are addressed adequately.'

Planning DA/EIS Document issues:

1. **Dept of Planning and Environment EIS Public Exhibition for comment/submissions:** The DA and EIS were lodged at the end of March 2023, while more works/information was requested, the DA and EIS (a massive 9000+ page document) was finally placed on Public Exhibition by DPE for review & comment 19th September until 16th October, the minimum 28day period. Not only were there problems down-loading the large documents from the Portal, the period coincided with School holidays, the October long-week-end and the distraction of the Voice referendum. – Requests for an extension of time were denied, though it is advised submissions can only be 'added-to' for another 28days. - *This, intentionally or not, has restricted the review, coordination and preparation of well-considered submissions*
2. **Statutory Compliance:** Some of the Government Policies/Strategies such as the New England Renewable Energy Zone (NEREZ) area and the North Coast Water Management strategy have been modified to incorporate the Proposal. – Not the policies guiding the proposal. – As a Critical State Significant Infrastructure (CSSI) DA it appears the Govt is determined it go ahead.
3. **Project Site Sensitivity:** The Project aims to disturb a large (440Ha) of the very steep Site in a highly culturally and environmentally significant areas? – Surrounded by National Park, Gondwana world heritage area, State Forests and adjacent to the Macleay River. Additionally; the site has a fault and fractures (Geo- assessments). - *Are the safeguards adequately addressed for you in the DA/EIS, or do you still have concerns?*
4. **Alternatives to this Project:** There are several alternatives including: 1) A large battery storage in Armidale (near the sub-station)? 2) Or Gravity, green hydrogen or 3) Less sensitive and isolated/ accessible Sites for pumped hydro in less damaging and costly 'Brown-field' (already disturbed) sites *(such as the existing Hunter Valley coal mine infrastructure)* which are closer to the transmission lines and distribution sub-stations for greater efficiency. *Refer below Power Efficiency.*

   The assessment of alternative technologies/projects is left to State Govt. as this is not part of the proposal. So; this needs to be put to the Minister in any Submission, to holistically investigate and evaluate alternative economic and viability options as a matter of Govt Renewables Strategy.
5. **New England Renewable Energy Zone** (REZ) This Project area was later and specifically included in an 'arm' of the New England REZ. If this Project is Approved, does it concern you that this DA is leading Govt policy and may pave the way for other PHS projects in the environmentally sensitive and difficult to access escarpment/Gorge Country area? – Leading to cumulative impacts? - *Does the DA/EIS address this sufficiently?*
6. **Public Consultation and Community engagement**, including and specifically First Nations. – SOMR has observed; nearly all the 'Consultations' have been 'drop-in sessions' and 'you come to us and we will answer your questions' as with the shop-front. There has never a physical OMPS "Presentation of the Project" to the broader community. Importantly; formal written and emailed questions from SOMR's Forum were twice sent to OMPHS but never responded to. The only 'Project presentations' hosted by OMPS has been to engage 'Contractor'/'Worker' support and this before DA/EIS Lodgement or Approval. - *Is this adequate and appropriate for such a project?*
7. **Social Impacts:** are generally well recognised and stated in the EIS, though two issues stand out.
   i) **Accommodation**: is a significant issue pre- and during construction: The EIS states that >70% of the required workforce will be recruited from outside the local and regional areas and require accommodation even before the onsite accommodation is constructed; also, for long term local housing for some of the workforce and their families. And that this workforce will be accommodated in existing houses, tourist accommodation and short-term accommodation.

   For many reasons *(e.g., Renewables developments in New England and emergency housing and jail in Kempsey)* there is already a dire shortage of, short or longer term, rental housing and tourist accommodation in Kempsey and Armidale, both about 1.5 and 1.0 hours drive from the site. In

such a rural area, there's very limited supply closer to the site**. A Strategy to address the worker Accommodation issue needs address before DA Assessment and Determination, not after.**

ii) **Health and Medical Services:** are also in very short supply and distant from the isolated site. Doctors and Kempsey District Hospital (especially ED) are already under pressure for many reasons *(e.g., lack of doctors, low socio-economic area and servicing rapidly growing coastal townships.)* General health issues and serious construction site accidents would likely over-load the towns medical and hospital services combined with the distance time-frame from the site makes this a serious issue to satisfactorily address, prior to Assessment; or Condition that general health medical emergencies be provided on the Site.

8. **The Business Case and cost/benefit evaluation:** The cost of The Project is valued at $1.8billion and has already been granted more than $12million by State & Federal Government *(taxpayer funds, with some conditions)* for feasibility, assessments and DA preparation.

   The example of Snowy 2 Pumped Hydro *(EIS prepared by the same EMM)* and other PH projects indicates this is very over-conservative, as with the technologies of tunnelling. - *Are there adequate assurances to ensure cost blow-outs will not occur (like Snowy 2.0 and using the same Consultancy preparing the EIS) to either leave the Project either unviable, a greater cost to the taxpayer and/or incomplete; leaving the disturbance only?*

   The Economic Assessment (Appendix Z) focuses on benefits to the region, LGAs, towns and other 'benefits;' It declines to give details of the Project costs, citing **'commercial in confidence'** reasons and it does not include costings of public road upgrades needed, inconvenience costs or loss of amenity for the region, towns and more local community. – This assessment appears at best 'unbalanced economic spin' and does not provide data for a holistic economic cost/benefit assessment. - *Is this acceptable?*

9. **Ownership:** The Proponent is Oven Mountain Pumped Hydro Storage Pty Ltd; a development company. The prime backer/owner 'Alinta,' a foreign (Hong Kong/Chinese) Company and EY are financing the project, along with some Govt. Grants and costs. - The Project, cost and returns/profits will transfer to Alinta at some stage. *(At this point this is unknown, perhaps before or after construction? But this should be relayed in the DA and EIS?)* Additionally, Alinta owns many of the renewables' energy facilities in Australia and this would add to their dominance. - *Is the value to NSW and our Community vs profit and liability to foreign 'Corporate Businesses' adequately addressed for you in the DA/EIS 'Business Case'?*

10. **Power Efficiency:** The Project claims to be able to produce 600 - 900MW over 12 hours when the top reservoir is full and released to the bottom one through the turbines. Power losses are expected to be 20 to 25%; though hydraulic and mechanical friction and transmission losses. This means that there will need to be a price differential of 20-25% to reach a 'break-even point' of cost/profit.

    Batteries e.g., at the Armidale substation would be more efficient and arguably cheaper and recyclable. *Many 'Alternative' batteries have greater efficiency, with much less cost disturbance & infrastructure needs. Refer Alternatives above.*

    The Economic assessment states that the project will save the State some $1billion, but no time-period - a year or over the life of project? - *How can the cost/benefit be evaluated without this?*

11. **Water uptake from the Macleay River:** Is a significant concern both for initial filling of the lower reservoir and for top-up in an increasingly unreliable river flow. The EIS states uptake will only be at 'high flows' - but makes no measurement of this, say in megalitres/hour. Prolonged dry periods, expected with climate change, may impact on available water and thus energy storage/generation. Or alternatively the lower dam may need to be even larger to buffer for extended low-flow periods. The EIS addresses some impacts of climate change, but are these precautionary enough? – Is this addressed adequately for you or the proponent?

12. **Existing Hydrology:** The EIS concurs there needs to be further research and analysis of impacts on both surface and ground water. This has resulted in the erosion control, stormwater run-off, geochemistry and geology mitigation measures being deferred to the detail design stage, but will very likely have impacts on Carrai and other water tables and water quality run-off, both on and off-site. These studies and mitigation plans should be finalised before assessment for Approval and Conditions. *Has this been adequately addressed in the DA/EIS for you?*

13. **Land and Soil Stability:** The Land, soils and erosion assessment states, and experts agree there is, "Very High" or ''Extremely high" erosivity, including tunnel erosion, due to the slope and the 'highly dispersive' clay soils. The EIS and experts agree 'Proper, careful, best practice, high quality soil erosion and sediment control works is needed' throughout the project the Macleay River, immediately below the project site from polluting run-off & turbidity. Further soil assessments essential to investigate the extent of dispersive clays and other erodible soils and whether soil stability constraints are a major issue for the proposal. **This is so important that it needs to be fully, properly assessed and convincingly addressed prior to Assessment and Determination.**

Also: If approved, who monitors and rectifies impacts. Sedimentation and undermining reservoirs and threats to other infrastructure from these processes require assessment or the costs of construction and follow up work could lead to project viability issues.

14. **Geological and Land stability:** From the Geo- components in the EIS there are faults and fissures leading to instability in the upper and lower reservoir wall areas. There will be significant site disturbance with massive cut and fill batters and reservoir walls, as well as tunnelling through the granite and likely (at least in parts) needing to be 'blasted' with explosives. Thus, raising the potential for further fissures, water penetration and major slips on the steep slopes, which occur naturally in the area. (e.g., Flying Fox cutting near Georges Junction on the Kempsey Armidale Road). – *Is the stability of the geology and site adequately addressed in the DA/EIS to 100% ensure stability and prevent dangerous slips etc.?*

15. **Antimony (Sb) and Arsenic (As) etc** occurs naturally in the geology of the area as well as having significant input from historic mining activities at Hillgrove. Associate Prof Sue Wilson UNE (arguably best qualified to advise) relays: Base line data of As & Sb in the Macleay at the site is based on very few (4) samples between Aug. 2021 and July 2022, with Sb being high. River sediment appears NOT to have been studied in the EIS. Generally; As is greater in sediment, whereas Sb is more mobile in the river system. Groundwater and Surface water quality testing data needs to be in greater detail over a longer period to assess effective analyte concentrations and project impacts.

    The Geochemistry leachate test used for As & Sb and analytes was appropriate for this catchment, but was limited to 9 boreholes and found some exceedances. Three analytes, (Al, Fe, Sb) exceeded 95% percentile. If present even in small amounts, disturbed rock and spoil will weather and infiltrate the run-off water and River. *SOMR is concerned this has potential to further contaminate water supplies to all downstream uptakes including KSC and any Macleay River users.* - *Are the test results and the proposed management of the run-off adequate to address pollution concerns?*

    Mindful that the tunnelled rock for reservoir walls (2million cubic metres) and hydrology can never be fully restored on decommissioning: any potential for contamination will be perpetual. - *Are the test results and mitigation in the EIS accurate and non-polluting?*

16. **Climate Change and Greenhouse emissions:** While the purpose of the project is to store 'Green Energy' there will be very large amounts of diesel, concrete and potentially explosives used in the extensive roading, Siteworks, tunnelling, construction and bridges. All high contributors to Greenhouse emissions and exacerbated by the isolated site's distance from major transport routes and service towns. The EIS (sec 10) claims some 64,523 tons of CO^2 / year emissions in the 4–5-year construction and some 15,922 tons of CO^2 / year in operation. – *Is the issue of 'Emissions' adequately accounted for and addressed in the Proposal? Or is it not and thus Green-washing? And are there less-emitting alternatives? An effort was made to compare this with Battery storage, but was not available in time-frame.*

17. **Environment; vegetation and wild-life:** The Development Site will be a 'Construction Site' fence-annexed from the surrounding areas; though the access roads and transmission lines are outside this. This will remove habitat and exclude wildlife from using past corridors or crossing to get between habitats. – *Has this been adequately addressed in the DA/EIS?*

    The project proposes the destruction and disturbance of some 4.5 square km of land and vegetation; a significant negative impact on the environmental and cultural assets. - *Is this addressed with adequate safeguards and restoration in the EIS?*

    Armidale NPA, are better to, and investigating this matter more than SOMR.

18. **Visual and noise/vibration:** The project EIS relays assessments of these elements. While it is true much of the project is not greatly visible and distant from 'receptors': It omits several impacts such as views of the 70m high reservoir walls from the National Trail and The Macleay. Both 'high experience value' recreational features. The visual assessment, for example shows images of the reservoirs from Marys View above, but not from below, where the lower dam wall will be some 250m from the river! Additionally; the adverse visual, noise/vibration & light impacts on the adjacent historic East Kunderang Station, a significant high-experience tourist accommodation facility, requires closer address for mitigation. - *Is this acceptable?*

    Additionally; Photographs and montages, used in the visual assessment, by their nature, are smaller and can never show the scale of impact of real on-country experience.

19. **The Bicentennial National/Macleay Trail:** Parts of this trail are located within the Development Site. The EIS claims there will be no impact. Yet the mapping shows it goes beside the proposed concrete batching plant, mechanical workshop sites and site office! Not as stated, a low visual and noise experience for trail and river users. - An alternative route and costs in a more suitable (more natural landscape) location has not been proposed. - *Is this acceptable?*

20. **Aboriginal Cultural Heritage:** The EIS recognises the project area and surrounds are rich in both pre-colonial and post-colonial cultural and historical sites; and that the health of the river, and its environments are key to the physical, cultural, and spiritual health of the Traditional Owners, the

Thunggutti/Dhunggutti nation. And, it frequently points out there are several significant pre-colonial cultural and ceremonial sites; but they are not within the project/disturbance area.

The ACHA outlines the range of impacts of contact with Europeans including; Cedar cutters; land 'take-up' by pastoralists, legislation which encouraged squatters to take up large runs along the Macleay River; thus, Traditional Owners "were forcefully disconnected from their food and water sources, sacred places, travel routes, and other members of their community." This 'Falls Country' was the last stand of Frontier Guerrilla warfare on the East Coast of NSW. The Thunggutti/ Dhunggutti people survived and now, through the Thunggutti Local Aboriginal Land Council (TLALC), own Long Flat Station, which is an integral part of developing appropriate access to the project site and providing access for transmission infrastructure.

In Nov 2021 the proponents recognised the issue of the "Who speaks for country?" Discussions lead to contention around the *Aboriginal Cultural Heritage Consultation Requirements for Proponents 2010*. The Proponents, congratulated for taking advice of the TLALC and Traditional Owners, in identifying the RAPS to be involved in 'on country' cultural investigation; leading to:

a. A local Liaison Officer being employed, and a question over how an apparent conflict of interest was managed. The Liaison Officer was also the Chairperson of TLALC, and a Registered Aboriginal Party. This unresolved conflict of interest caused some concern in the Thunggutti/ Dhunggutti community. And
b. A First Nations Engagement Manager was engaged In Dec 2022 by OMPS, who is not of Thunggutti/Dhunggutti heritage, but from Queensland.

This raises concerns regarding the efficacy of 'Community Engagement & Consultation' processes.

The ACHA describes how the field investigation documented 108 objects, sites and/or places, and identified the need for further investigations, with descriptions and methods of assessment 'to be determined'. These to: Validate 40 of the above objects, sites and/or places; Gain more information on past economic and social behaviour from high density artifact scatters; Assess visual impacts on significant cultural and heritage sites and; Test excavations as they are incomplete, with an assumption that further excavations would not significantly change interpretations.

The ACHA outlines the need to develop an Aboriginal Cultural Heritage Management Plan, and potentially develop a Cultural Flow Management Plan for the river, in recognition of the cultural importance of the river. There is concern that these plans have not been developed prior to exhibition of the EIS, and **strongly recommend completion prior to DA Assessment and Determination.**

21. **Decommissioning:** - The EIS covers 'Decommissioning' by **deferring the issue to a 'Decommissioning plan' to be developed at detail design stage. This is inadequate** to base Development Approval on ensure the area, environment and Community is not left with such a potentially dangerous 'stranded asset.' (Read 'liability.') - *Have the 'end-of-life' decommissioning methods and costs of leaving mostly 'stranded liability' infrastructure been adequately addressed and evaluated vs benefits to taxpayers?*

22. **Construction Phase:** is massive and stated to take some 4-5 years; in staged order…

i. **Site Establishment / Pre-Construction:** All forms of infrastructure will be needed to set-up water, sewerage accommodation, materials etc to facilitate construction phase is mentioned but not really addressed in the DA EIS. The logistics to set up the site for construction are difficult; a 'chicken and egg' scenario; **an explanation of how and its impacts need address prior to DA determination.** (Refer Social Impact: above.)

ii. **Access and Traffic:** The 4-5year construction period (*where 600 to 820 workers are to be employed working 24/7 365 days a year)* will be the most impact; for which the EIS states 85% of the traffic for the project will be via Kempsey, the balance coming from the west (Armidale) and a small amount via Carri. The main Kempsey-Armidale Road access extends from the highway to the start of the eastern access route, passing through Kempsey, Willawarrin, Bellbrook to Smiths Bluff, 11km east of Georges junction.

The traffic generated, estimated as an additional 250vpd on most sections, will be of all forms: from light workers vehicles, worker bus transport, delivery vehicles, heavy vehicles, low-loaders and Over-size Over-mass (OSOM) vehicles needed to transport concrete batching plants and the biggest items, the turbines. Other items needed include: construction & worker, accommodation, supplies and food, tunnelling and other machinery and maintenance equipment, transmission line infrastructure, fuel and explosives.

Main traffic issues and impacts highlighted in the EIS include: 1) Urban areas of Frederickton & Kempsey, school zones, intersections, railway crossing etc. 2) The Armidale Rd between Greenhill and Pee Dee, sealed section with 2 villages and school zones and 3) the 40km of unsealed section which is narrow, winding, prone to slips, has low-weight bearing bridges and will require significant upgrade beyond the current improvement works by Councils and funded

by the taxpayer. The further upgrades are stated as "*being done by Councils and paid for by the Project."* but relay the cost for this have not been budgeted for in the cost! – *So; how can the cost/benefit of the project be fully/holistically assessed?*

The EIS defers address of a Construction Traffic Management Plan (CTMP) to be developed at start of Construction stage and places onus of responsibility on 'all' road users for safety; i.e., To dive responsibly. – *Should the local communities be forced to endure the approximate additional 250vpd impacts?*

It is stated that there will be helicopter use; but the 'pad' for this cannot be found on the plans; neither is it accounted for in the Noise and Vibration assessment (Appendix Z) or the Traffic Impact assessment (Appendix R). Surely this is traffic by air; and will impact the local community and stock. – *This needs address in a DA and EIS re-assessment?*

iii. **Site Earthworks and Preparation:** Initial site earthworks will prepare the site for elements of construction. Off Site there will be the roading and connection to the grid for power and establish a water supply, 'facilities' etc. needed to run the many components of project construction. - On-Site: There will need to be perimeter Construction Site fencing, limiting access for humans and wildlife. Earthworks will disturb some 400ha of land (for construction workers' camp; some 16km of on-site roads; some 60ha for the top and bottom reservoirs and walls) and preparation for tunnelling for the water shafts, access tunnels and the turbine chamber.

The Geo-chemistry sections of the EIS and Appendices, backed up by experts, relay that there is minimal impact from the rock chemistry; being low in total sulphur/sulphides in most samples and metal leaching tests using water also yielded very low results, mostly below the limits of detection. The seismic tomography survey picked up a couple of zones of deeper weathering (both in the upper dam and lower dam zones) that they suggest may require further investigation, which is strongly supported; prior to DA Assessment and Determination.

This works will be greatly influenced by the Land and Soils section above; with "Very High'' or ''Extremely high" erosivity, including tunnel erosion, due to the slope and the clayey soils with high dispersivity; which needs further study and **an erosion and sediment plan to be fully assessed and convincingly addressed prior to Assessment and Determination.**

– *Are the sediment and other environmental safeguards adequate to eliminate risk of unacceptable environmental damage and pollution from soil movement and 'spills' (of say; fuel/oil/chemicals and waste) in the DA/EIS adequate or do you want more protection?*

iv. **Development of Site/Project infrastructure:** This will broadly include:

a) 'Accommodation Camp for 600 workers, with parking for machines and vehicles and 'accommodation'; with resultant sewerage and waste collection and treatment.
b) Tunnelling, with 'blasting,' of some many km though the rock to create the water shafts, access tunnels and the large underground turbine chamber.
c) Construction of the two off-river reservoir walls with some estimated 2million cubic metres of rock (yet to be determined from the EIS) and sealing them water-tight concrete is proposed for the walls and spillways.
d) The EIS claims (Table 4.2) there are six types of surface & ground water-use access licences required for 3 stages of the project. With pump and licence procedures to extract water for initial and top-up filling of the lower dam from the Macleay River.
e) Construction of the transmission lines with roading access, both on and off site, to carry the power from & to the grid and Armidale Sub-station.

Etc... - The potential implications of the above and more are many and varied: *- Are they adequately addressed in the DA/EIS for you?*

v. **Progressive Site stabilisation and restoration:** As each area is disturbed, re-graded and development infrastructure is installed, the areas need to be rehabilitated, stabilised, restored and in many cases re-vegetated. - *Are the proposed methods, compliance assurances in the DA/EIS that this will be done in a full and timely manner with contained impact adequate?*

vi. **Waste and Rubbish removal & treatment:** There will be many forms of waste and rubbish generated on and off Site, including but not limited to: sewerage, general rubbish, old oil from machinery, tyres, used/broken machines and their parts and consumables, wind and water run-off with dust/sediment and potentially pollutants etc. The Proposal's EIS defers the Waste Management Plan preparation to the detail design stage, and frequently states "to be removed to licenced disposal locations" and is the Contractors responsibility. – *Are the potential impacts of these waste pollutants adequately addressed and eliminated in the DA/EIS?*

vii. **Emergencies:** While never hoped for, events such as bushfires, explosions, accidents, general health and issues for the workers/contractors and community in this isolated area are inevitable at some stage. There are minimal existing services for appropriate and rapid response in such an isolated site, with such a large scale and potential dangers. And who will

responsible for the protection of the community and contractors/workers, in what situations? - *Are these emergency issues fully addressed in the DA/EIS?*

viii. **Health and medical services:** is addressed in EIS table 6.47 only stating: *"It is proposed that the Project consult with NSW Health to confirm capacity of existing service provision and implement measures such as provision of on-site medical facilities to prevent competition for the GP services most proximal to the site."*

With 600+ construction & admin workers, works 24/7 365 days a year, on a high-risk construction site; with earthworks, tunnelling etc; on a steep and isolated area; The site should have its own medical facilities of nurses, doctor and small hospital type facilities (not just first aid); to cater for the worker day to day GP issues and emergencies. – *Does this require full address in the EIS prior to Approval and inclusion in the Project budget/costing?*

Allied to the above is **'Policing:'** This is addressed in EIS and states: "the Project will liaise with NSW Police and NSW SES to ensure they are aware of potential resource requirements and negotiate provisional arrangements."

Considering the nearest Police station is 'one-person' part time and at Bellbrook, some hour away, 'liaising' as above resolves nothing. The Project, operating 24/7 365 days a year, should be responsible for policing criminal and/or anti-social behaviour amongst the '600' contractors/workers and factored into the Proposal and budget prior to approval. *Does this also require full address in the EIS prior to Approval and inclusion in the Project budget/costing.*

ix. **Approvals and Sign-offs on compliance:** Should the DA be Approved; Works will be 24/7 365 days a week for the 4–5-year construction period. Obviously, those responsible for monitoring and construction compliance with any Conditions of Consent and Licencing will not work 24/7 etc. This means that construction activities will not be monitored for many works days & hours. Also; will the relevant 'Departments' be sufficiently funded to ensure full assessment and compliance to protect the community and environment from adverse impacts? – *Is this appropriate and a sufficient safe-guard?*

x. **Decommissioning of 'Construction' works:** This will involve removal of much of the workers camp and associated infrastructure. These are not fully nominated (such as site fencing and sewerage treatment works etc.) nor addressed in the EIS. - *Are the proposals for 'end of construction' Site rehabilitation adequately addressed in the DA/EIS?*

23. **Post Construction Operation and Maintenance:** It is stated the development has a 70 to 100year life-span and some 30? employees/contractors will maintain the development with the switching etc. operations remotely. While this phase is less intensive, there will be need for top-ups of water; drainage/pumping of the tunnels and under-ground turbine chamber; monitoring and repair of the turbines, reservoir walls, electronics, substation, transmission lines and all the roading and infrastructure etc. – *Is this adequately catered for and addressed in the DA/EIS?*

It appears likely that this could be time of transfer of the Project from OMPS Pty Ltd (the Developer) to Alinta Energy (the Hong Kong/Chinese 'backer' and stated ultimate owner). - *Is this, transfer to foreign ownership, of concern and/or addressed adequately for you in the DA/EIS?*

Monitoring: (Allied with ix. above) There will need to be ongoing monitoring for compliance with the likely many safeguards of the operational Conditions of Approvals and Licences.

Given the potential many Licences, Conditions and requirements for compliance for the life of the project, combined with highly erosive soils, water uptake and quality leaving the site and into the Macleay, real-time continuous monitoring is essential.

Who is to carry this out and what agencies will be responsible for signing-off on 'compliance' – with adequate presence and funding? Self-monitoring for compliances is not acceptable.

Are these questions addressed with adequate assurances in the DA/EIS?

24. **Decommissioning and Site Rehabilitation:** at the 'end of viable life.' (70-100years stated.)

What is proposed in the 'Decommissioning' is for deferral to a 'Decommissioning Plan' to be developed at some later stage. Additionally; It is only proposed to remove the 'hardware,' it is verbally advised the proposal is to leave the reservoir walls, tunnels and earthworks in perpetuity: Thus, leaving the environment and Community with such a potentially dangerous 'stranded asset'/'liability.'

There are two ways this project could reach an 'End of Life':

1) It could soon, if not already, become economically unviable with advances of technology; political and economic changes both within Australia and internationally, thus causing an early unviability and/or

2) It could reach its stated 70-100 year ‘end of life’?

Either way: **The Project Site is not proposed to be and can never be fully restored** to its existing, prior to development, state. Tunnels cannot be filled-in to restore the hydrology reservoir walls removal is impractical and costly. - *Is this good enough as a Decommissioning in such an isolated and environmentally & visually high sensitivity area?*

SOMR's current Broad Conclusion.

9th October 2023

SOMR's order of preferred options for the Project DA Assessment and Determination are.

1. **Refused/Declined** (not be Approved).
2. **Deferred,** until the many important further studies and plans required to inform the Assessment are completed satisfactorily and re-exhibited for comment/submissions. – *The EIS proposes these be done after Approval, which will not assist holistic assessment of the project's feasibility, cost or impacts.*
3. **Conditional Approval,** subject to satisfactory resolution of the many important further studies and plans required to inform the Assessment, and subject to review, comment concurrence from all submitters.

Reasons for our submission for DA **Refusal/Decline** include:

- The Project's scale in this isolated and inaccessible area and amount of disturbance proposed makes this expensive to develop and will adversely impact on such a natural area surrounded by such significant natural assets, Macleay River water quality as well as existing infrastructure.
- Decommissioning of the Site at 'end of life' (un-viability or long term) in such a natural area with high environmental scenic and recreation values will not and can never be restored.
- There are already more efficient and cost-effective and less disturbing 'Alternative' methods of longer-term storage of electricity with less energy loss-factors. For example; Big Battery technologies; which develop a-pace and will be even more efficient by the estimated 5years timeframe for the Oven Mountain facility is estimated to come on-line and are largely recyclable.
- Alternative less disturbing and 'Brown-field' sites are available for Pumped Hydro are not investigated: and should be addressed in submissions to the NSW DPE Minister; as it is their job to assess alternatives strategically. Not the Proponent. – *But they should have, in their feasibility assessment.*
- The 'Business case' for the stated $1.8billion project is highly questionable; given Snowy 2 and other pumped hydro project examples have all had massive cost overruns, delays and 'unforeseen' problems. The cost estimate provided is likely only for 'The Site' and does not consider transmission costs. Kempsey/Armidale Road upgrades needed are stated as being paid for by the Project, but constructed by Council(s); these costs are stated as omitted from the Project costing. Off-site or associated public infrastructure maintenance costs to the tax-payer (i.e.: 'hidden' costs) are also not addressed in the EIS. If all these were included in the budget for cost/benefit and feasibility, the project would likely not stack-up. – *The Lendlease proposal for Pumped Hydro here, 20 odd years ago, was dropped because 'it did not stack-up.'*

Reasons for our submission for DA **Deferral** include:

The Proposal defers address of many important matters to the 'detail design stage;' many of which should be resolved at this DA stage to ensure all matters are fully addressed for over-all feasibility and holistic cost/benefit analysis in the Assessment process for Determination. These matters/plans for address should be re-exhibited for comment/submissions and include but are not limited to:

- Construction Traffic Management Plan,
- Aboriginal Cultural Heritage Management Plan;
- Additional Geology/Geochemical testing;
- Erosion and Sediment Control Plan,
- River level/flow to permit uptake,
- Social Impacts (Medical, Policing, School zones),
- Waste Management Plan,
- Project costings, and
- Decommissioning Plan at end of construction and 'End of Life.' etc…

Reasons for our submission for DA **Conditional Approval** are similar to the above, but this is not SOMR's preferred option, as there is an increased likelihood of the project going ahead without public consultation or scrutiny, due to no re-exhibition by stakeholders or submitters.

The matters for address in the DA & EIS to for you to formulate your submissions are, as best possible given the time-frame, included in our assessment of Summary and Detail issues for address. SOMR will develop its own submission based on these.

In summary: A few words for your consideration for inclusion your submission…

It is believed this Project is/will be redundant; as alternative technologies to store electricity at this scale and duration are improving at such a rate; if not quite now but certainly by the time (4-5 years?) the OMPHS is scheduled to become operational.

It is believed this Project Proposal development is already out-dated and it does not 'stack-up' on an overall and holistic cost/benefit assessment. - Especially as: Some significant costs have not been included, disclosed and are under-estimated; there is potential for downstream contamination and the site can never be fully restored on decommissioning. The Macleay, Local Council Areas' communities and high environmental, tourist experience and cultural values will be diminished; left with an ongoing cost burden and a 'Stranded Asset' - or should that be a 'Liability'?

The one positive/benefit to come out of the feasibility study and the DA an EIS is a potential alternative road route for the Kempsey - Armidale Road. OMPS proposes this Site access route for good reason: It is more reliable and cost efficient. While Government is funding and constructing a very expensive upgrade of the Flying Fox and Jobs Cuttings, which will never be stable. Whereas, the OMPS proposed 'eastern access route' (EAR) will not have ongoing significant landslips. While involving construction of 2 bridges across the Macleay and the cost of developing a 'Class 3' road along this alignment will be, or would have been, far less than what is being funded for upgrade of the cuttings.

This benefit could have happened (and possibly still can?) had the then State & Local Govt looked at alternatives! Importantly; this can happen with or without the OMPS Project and could still be a future option for the Kempsey to Armidale Road should/when the current landslip treatments fail.

RMH comment:
What is needed is short term good value resolve; as the technologies advance so rapidly. This and the variable options of large, medium and small-scale generation, storage and transmission; is already confusing AEMO, DPE and NSW strategists. Sadly, they cannot wrap their heads around it, and its delaying progress to renewables so urgently needed to stop climate change impacts affecting us all.