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Wando Conservation & Cultural Centre Inc

Submission to the NSW Net Zero Commission

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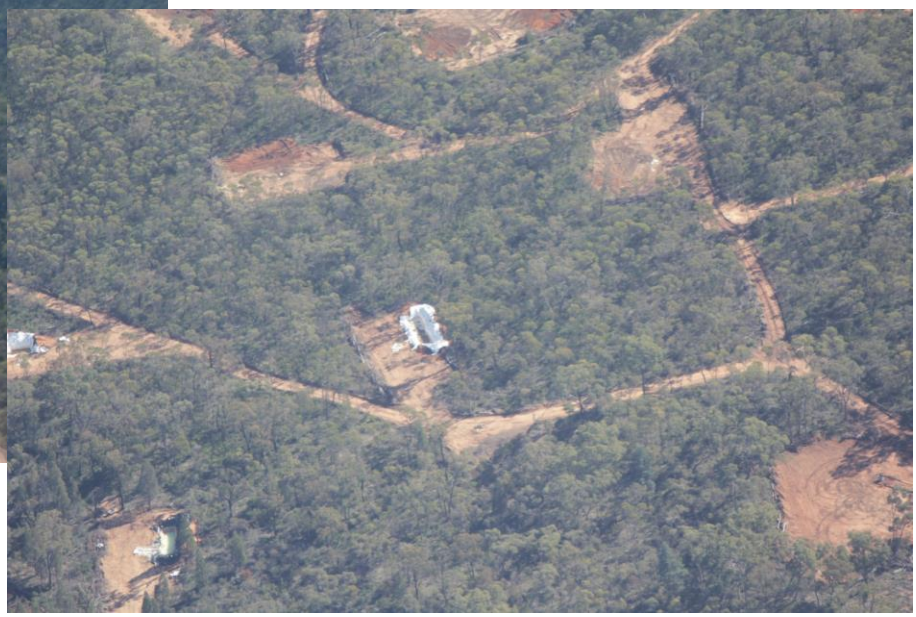
Maules Creek Coal Mine in Leard State Forest
Pic: credit Wando Conservation & Cultural Centre Inc (left)

Narrabri Underground Coal Mine Degassing Field in Pilliga Forest
Pic: credit Wando Conservation & Cultural Centre Inc (below)



Introduction

Wando Conservation and Cultural Centre Inc. (Wando) is a community-based organization committed to environmental protection, the promotion of sustainable practices, and the defence of natural systems from destructive industrial practices. Our objectives include:

- Observing and reporting environmental breaches.
- Supporting local communities in safeguarding their health and environment.
- Protecting rural farming communities such as Maules Creek, Liverpool Plains, and The Pilliga.
- Monitoring and reporting pollution and water quality concerns.
- Campaigning against coal and coal seam gas (CSG) projects due to their detrimental climate impacts.
- Promoting environmentally friendly innovations and alternative energy sources.

Chapter 1: Chapter: Monetisation of Nature and the Failure of Market-Based Climate Policy

The Net Zero Commission must reject the failed logic of market-based mechanisms such as carbon offsets and emissions intensity thresholds. These policies enable ongoing pollution and ecological destruction while presenting a misleading façade of progress.

Offsets, by definition, do not reduce actual emissions. They shift responsibility elsewhere and delay the fundamental transformation required to meet the climate crisis. Most concerning is the increasing trend to monetise ecosystems — to treat forests, soil, and biodiversity as tradable commodities — without accounting for the complex and irreplaceable ecological functions they provide.

We are extremely concerned about the accounting challenges of “stapled Offsets”, and the practice of “double-dipping”.

Stapled offsets are a relatively new and highly controversial form of environmental offsetting. As discussed at the 2024 Biodiversity Summit, these are products that combine a biodiversity offset with a carbon credit, typically in the same parcel of land or project, and are 'stapled' together for the purposes of trading or compliance.

In theory, stapled products are marketed as delivering multiple co-benefits — protecting habitat while also storing carbon. However, serious concerns have been raised about the integrity of these claims, particularly when the same hectare of forest is used to justify biodiversity gains and carbon sequestration simultaneously.

Critics, including multiple legal experts and ecologists at the Summit, warned that this double-counting risks inflating environmental outcomes without additionality. In other words, no new conservation or carbon storage is necessarily achieved, but it is treated as if there were two separate benefits delivered.

Stapled offsets can also obscure accountability. Because different regulatory agencies may govern the biodiversity and carbon aspects, no single authority has oversight over the whole product. This fragmentation of responsibility can result in poor enforcement and limited transparency for the public.

The Net Zero Commission must approach stapled products with great caution. At a minimum, rigorous independent audits, transparent additionality metrics, and public registers of credit usage are needed to prevent market manipulation and ensure real, measurable climate and biodiversity outcomes.

This is not a transition to a low-carbon economy. It is the continuation of extraction under a different name.

We call on the Net Zero Commission to:

1. Cease reliance on carbon offsets in net-zero planning.
2. Regulate emissions at the source with enforceable limits.
3. Recognise that nature cannot be monetised or offset — it must be protected.

Chapter 2: Native Vegetation Clearing and Carbon Accounting Failures

The Net Zero Commission must take responsibility for assessing and reporting the carbon consequences of native vegetation clearing. Forest destruction is a key driver of emissions in NSW, yet current frameworks ignore or underestimate this impact.

The Leard State Forest, for example, contains critically endangered White Box-Yellow Box-Blakely's Red Gum Woodland. This forest, cleared and fragmented by coal mining operations, sequesters an estimated 200–300 tonnes of CO2-equivalent per hectare. Every hectare destroyed results in an immediate release of carbon and the loss of a permanent carbon sink. We discuss the Leard State Forest below in Chapter 5. In relation to false GHG disclosures, a case study of Maules Creek mine's incorrect predictions of CO2 emissions was discovered by independent auditors in 2017. The issue concerned fugitive carbon emissions and arose from the MCCM Annual Review 2016, which was tabled in August 2017 at the Community Consultative Committee. It stated:

"there was an estimated 422,603 t CO_2 fugitive emissions from MCCM in the 2016 FY. This is higher than the EA estimate of 6,849 t CO_2. This discrepancy is a result of the emissions calculation methods used. Fugitive gas emissions for MCCM in the 2016 FY were estimated using Method 1 where the EA used a site specific emission factor derived from measurements of gas content for borehole samples taken for each coal seam."

The use of emissions factors in Australia remains one of the most significant loopholes in national carbon accounting. Emissions factors are averaged estimates applied across operations instead of direct measurements. This practice masks site-specific variations and allows polluters to underreport emissions while remaining technically compliant.

The case of Whitehaven Coal's Maules Creek Coal Mine (MCCM) demonstrates the consequences of relying on broad emissions factors. The operator's internal estimate of 422,603 tonnes of CO2 in fugitive emissions for FY2016 dwarfed the 6,849 tonnes approved under the Environmental Assessment. The discrepancy arose because regulators used a 'site-specific emission factor' from borehole gas content rather than requiring full monitoring or Method 1 calculation. This undermines both the credibility of the project approval process and the accuracy of NSW's emissions inventory.

Moreover, current emissions factors used in Australia are outdated and fail to reflect the changes in mine operations, gas content, and technology. Several independent reviews, including those cited by Ember and Common Capital, have shown that the methane content of Australian coal seams is often significantly higher than the assumptions embedded in national inventory protocols. Reform is urgently required: regulators must mandate real-time monitoring and dynamic emissions modelling based on actual performance rather than statistical proxies.

That figure is a huge discrepancy from what gained approval. However, it was only revealed 6 years after the EIS.

Even where areas are not physically cleared, emissions fallout from blasting and diesel exhausts, dust deposition, and edge effects severely damage forest ecosystems and reduce their ability to sequester carbon.

We urge the Commission to:

1. Mandate carbon accounting for all land clearing associated with industrial projects.
2. Require real-time emissions modelling for forest-adjacent operations.
3. Immediately halt land clearing in high-carbon-value forests such as Leard until proper assessments are conducted.

Chapter 3: The Narrabri Underground Coal Mine — A Failure of Climate Policy and Land Stewardship

The Narrabri Underground Coal Mine, operated by Whitehaven Coal, is emblematic of everything wrong with Australia's approach to climate and environmental regulation. It is a carbon-intensive fossil fuel project allowed to operate — and expand — under a veil of low-emissions language and offsets rhetoric, while it actively clears native forest and vents greenhouse gases into the atmosphere with little to no consequence.

Aerial images clearly show extensive surface disturbance related to gas drainage infrastructure associated with the Narrabri Underground Coal Mine. Key observations:

1. **Gridded Well Pads & Tracks**: The regular grid pattern indicates numerous vertical gas wells drilled directly into the coal seam. The light patches are cleared well pads and access tracks.
2. **Widespread Vegetation Clearing**: Significant native vegetation has been cleared to accommodate the infrastructure, with a lasting footprint across a broad landscape.
3. **Fragmentation of Habitat**: The network of cleared lines and pads fragments what was once continuous habitat, which can severely affect native wildlife and ecosystem integrity.
4. **Unmitigated Fugitive Emissions**: There are unmeasured and unmitigated gas emissions. If so, this raises concerns about:
    - Methane release (a potent greenhouse gas)
    - Air quality impacts
    - Lack of regulatory oversight or enforcement

Chapter 3.1 Land Clearing in Pilliga East: Carbon Loss That Cannot Be Bought Back

Whitehaven's degassing operations in the Pilliga East Forest have already caused extensive land clearing — visible in aerial photographs that show a spreading patchwork of scraped, degraded land throughout what was once intact woodland.

Chapter 3.2 Greenwashing Through Unproven Emissions Technologies

Whitehaven's own documentation confirms that:
- Methane concentrations are too low to flare or use for energy.
- VAM (ventilation air methane) capture is not viable because of gas dilution.
- CO_2 dominates the fugitive emissions, and there are no feasible technologies available to trap or reuse it in NSW.

Chapter 4: Emissions Modelling and the Transparency Crisis

Whitehaven Coal significantly underreported GHG emissions for Narrabri Mine, only exposed by an independent audit years later. Similarly, Whitehaven Coal mis-stated its CO2 emissions in its EIS.

We urge the Commission to:

1. Mandate third-party verification of all emissions modelling.
2. Require transparency in methodology and data.
3. Create a public registry of emissions audits.
4. Enforce penalties for misreporting.

Chapter 5: Leard State Forest, the carbon sink being destroyed by Whitehaven Coal and Idemitsu Resources.

The Net Zero Commission Must Actively Address the Relationship Between Atmospheric Carbon and Native Vegetation Clearing

The Net Zero Commission must expand its scope to include **active consideration of native vegetation clearing** as a key driver of greenhouse gas emissions. This is especially critical in the context of **native forest ecosystems** like the **Leard State Forest**, which provide significant long-term carbon sequestration, biodiversity, and climate resilience.

Leard State Forest: A Case in Point

Leard State Forest is home to:

- Critically Endangered White Box–Yellow Box–Blakely's Red Gum Woodland (EPBC-listed),
- Multiple threatened species,
- Important habitat corridors that cannot be replaced by offset plantings.

Yet this forest continues to be cleared and degraded for open-cut coal mining. Even where not physically cleared, the forest suffers from:

- **Emissions fallout** from blasting (including dust, heavy metals, and nitrogen oxides),
- **Fragmentation** of habitat and hydrology,
- **Loss of carbon stability** due to disturbance and edge effects.

Quantitative Value of Native Vegetation in Carbon Sequestration

Native forests — particularly mature and intact ones like Leard — sequester substantial amounts of atmospheric carbon:

- A **mature eucalypt woodland** can sequester **up to 200–300 tonnes of CO_2 equivalent per hectare** in biomass and soil carbon combined (Australian National University, CSIRO).
- Clearing one hectare of mature forest results in the **release of 100–150 tonnes of CO_2** almost immediately, depending on combustion and decay conditions.
- According to the **NSW Department of Planning, Industry and Environment**, **land clearing is a leading cause of emissions in NSW**, accounting for up to **14 million tonnes CO_2-e per year** nationally.

These emissions are often **unaccounted for in offset schemes** and **do not trigger safeguard mechanism thresholds** — yet they represent an irreplaceable carbon loss over policy-relevant timeframes.

Chapter 6: SANTOS GAS the forest polluter and GHG leaker, Pilliga Gasfield — Chronic Gas Leaks, Regulatory Retreat, and Structural Secrecy

Santos' Narrabri Gas Project, located in the Pilliga Forest, presents a growing climate and environmental hazard. Investigations and reports by North West Protection Advocacy (NWPA) have revealed a pattern of persistent methane emissions, regulatory failure, and deliberate concealment of gas industry infrastructure and operations.

1. Serial Pollution Events and Regulatory Inaction

- Wellhead Leaks and Vents: At well site Bohena 3, Santos vented methane for almost a week without being penalised. Despite public complaints and documented video evidence, the NSW Environment Protection Authority (EPA) took no enforcement action. This is not an isolated case but part of a wider trend of "unreported emissions events".

- Failure to Prosecute: These emissions have not been classified as breaches of the Environment Protection Licence, and Santos has never been prosecuted for these methane releases — undermining the credibility of environmental regulation in NSW.

2. Government Retreat on Reporting Obligations

- In 2022, the NSW Government relaxed gas leak reporting requirements for the coal seam gas industry. Changes to the Environment Protection Licences (EPLs) meant that companies like Santos were no longer required to report methane leaks unless certain thresholds were exceeded.

- This regulatory rollback reduces transparency and disables the ability of independent groups, scientists, and communities to track emissions or hold companies accountable.

3. Persistent Infrastructure Leaks and Poor Maintenance

- Numerous leaks from existing gas infrastructure in the Pilliga were documented over a multi-year period. Flares malfunctioned, gathering lines vented gas, and condensate tanks emitted volatile organic compounds, sometimes continuously.

- Leaks are structurally embedded in the system — not just accidents, but part of operational design.

4. HPVs: Hidden Emission Infrastructure

- High Point Vents (HPVs) are designed to release gas as part of pressure management in pipelines, yet they are entirely unaccounted for in emissions assessments.

- These structures are:
  - Not listed in environmental impact statements,

- Not monitored under leak detection systems,
- Often installed without landholder knowledge,
- Never subjected to independent measurement.

This represents a systemic design of invisibility, where emissions infrastructure is made deliberately opaque.

5. Pipeline Expansion Without Accountability

- Despite unresolved leakage issues, Santos is now constructing the Pilliga-Narrabri pipeline to export gas from the Pilliga region. This is proceeding even though:
- Emissions remain unaccounted for,
- No independent emissions audits are available,
- Local communities remain opposed,
- The gas is likely incompatible with NSW's 2050 Net Zero trajectory.

Operational emissions from coal seam gas infrastructure, including planned and unplanned methane emissions and leaks, are poorly understood within energy policy and regulation by a veil of deliberate information concealment. Key Commonwealth policy, the Safeguard Mechanism and the nation's achievement of Net Zero emissions by 2050 depend on accurate reporting of greenhouse gas emissions. However, there is scant visibility of whether the gas industry is using emissions factors faithfully based on its actual emissions. Information on emissions factors can be found here: https://www.epa.gov/climateleadership/ghg-emission-factors-hub

It is important to note that many releases of gas at the well-head, flares and all along the delivery route of gathering lines and pipelines are entirely deliberate and built-in to the operation of the gas supply system, but do not constitute "leaks" under the environmental regulation scheme for the coal seam gas industry. Planned and unplanned methane releases have the potential to derail the nation's international commitments towards reducing greenhouse gases as the incorrect information about the gases – often labelled "fugitive" emissions – undermines accurate carbon accounting which is the basis of energy transition. Large scale megaleaks can be viewed through satellites, but almost nothing is known outside the gas industry itself about the porosity of pipeline delivery systems, including vents, compressor stations and drains during transit.

https://nwprotectionadvocacy.com/serial-polluter-santos-vents-methane-and-is-not-charged-for-extra-emissions/

https://nwprotectionadvocacy.com/government-relaxes-gas-leak-reporting-requirements-for-coal-seam-gas-industry/

https://nwprotectionadvocacy.com/santos-pilliga-gasfield-still-leaking/

https://nwprotectionadvocacy.com/hpvs-the-leaking-gas-industry-infrastructure-that-is-being-kept-secret/

https://nwprotectionadvocacy.com/santos-gets-pilliga-gas-pipeline-underway-world-watches-tourdownunder/

https://commoncapital.com.au/publication/unlocking-cost-effective-methane-abatement-in-the-nsw-and-qld-coal-industry/

Policy Recommendations:

1. Mandatory Measurement of All Methane Sources: Require monitoring and public disclosure of emissions from all wellheads, vents, flares, compressors, and pipelines — including HPVs.
2. Ban Unmonitored Emission Devices: Phase out HPVs and unregulated flaring systems. Require alternatives that capture and reuse gas.
3. Restore and Strengthen Leak Reporting Laws: Reinstate stringent EPL reporting thresholds and require prompt public disclosure of all unplanned emissions.
4. Independent Verification: Establish third-party audits of methane emissions in CSG fields, published in full.
5. Immediate Moratorium on New Infrastructure in ecologically sensitive areas like the Pilliga until emissions systems are verified and proven safe.

Chapter 7: The need to reclassify methane as a pollutant

At present, methane emissions are not accounted for in NSW in part due to the fact that methane is not regarded as an industrial pollutant. Given the complicity of methane in climate disruption, this needs to be changed by legislation or, alternatively. subordinate legislation. Emissions from livestock should not be included as pollutants, as meat should not be conflated with gas as an energy source. There are alternatives to gas, but arguably no equivalent protein source as meat.

The National Pollutant Inventory must also be brought into alignment with this.

The international methane research and advocacy group Ember has spoken out against the previously ignored problem of methane emissions from coal mines.

Ember's report concludes that serious policy reform is required, including mandatory measurement of coal mine methane, bans on venting, and subsidies or obligations to implement abatement technologies. Without these, coal mine methane will continue to be a major and growing obstacle to Australia's climate goals.

Ember also documents that captured data is frequently based on estimates and industry self-reporting, with minimal third-party auditing. This undermines the reliability of Australia's national greenhouse gas inventory and compromises the credibility of its emissions reduction commitments.

One of the most troubling findings is the lack of regulatory compulsion to capture or flare methane. Technologies do exist for abatement—particularly for drainage gas—but Australia lags far behind

international peers in applying these solutions. Vents and goafs release vast quantities of methane directly into the atmosphere.

The report highlights that New South Wales and Queensland are the main sources of coal mine methane, yet the reporting and mitigation systems in place are deeply inadequate. Emissions factors used in Australia are outdated and significantly underestimate the volume of methane actually released.

The report 'Tackling Australia's Coal Mine Methane Problem: An in-depth briefing on the scale of methane emissions from Australia's coal mines and potential actions to reduce leaks and mitigate their impact on the climate ' by Ember (June 2022), led by Dr. Sabina Assan, provides a detailed analysis of methane emissions from Australia's coal sector (Reviewed by: Conal Campbell, Dave Jones & Sam Moorhead). It finds that Australian coal mines are among the world's top methane emitters, and many underground operations emit more methane per tonne of coal than global averages.

CONCLUSIONS

Policy Implications

To preserve the integrity of NSW's emissions reduction strategy:

The Net Zero Commission must have statutory responsibility for monitoring and preventing native vegetation clearing — particularly in regions targeted by fossil fuel projects. This includes not only cleared areas, but forests exposed to emissions fallout, fragmentation, and hydrological degradation.

Leard State Forest is a test case of this failure. Despite the known ecological and carbon values of the forest, open-cut coal operations continue with state approval. Offsets proposed in place of these ecosystems fail to replicate their carbon storage capacity or ecological complexity, and in many cases are not permanent.

Recommendations

1. **Carbon Accounting Reform**: Incorporate emissions from land clearing, including pre-mining vegetation removal, into NSW's official carbon accounts.
2. **No Net Loss Policy**: Mandate that any vegetation clearing for industrial projects must be offset at a **minimum 1:1 carbon basis**, verified by independent ecological audits.
3. **Immediate Moratorium on Clearing in High-Value Forests**: Protect remaining native forests, such as Leard, from further clearing. Moratorium on land clearing for fossil fuel infrastructure.
4. **Airborne Fallout Monitoring**: Require continuous air quality monitoring around mining areas, including impacts on adjacent forests, with mitigation and remediation strategies tied to consent conditions.
5. **Expose greenwashing in emissions plans**.

6. **Classify and regulate methane as a pollutant.**

7. Reject offset-based “net zero” claims.

Climate integrity demands more than paper promises. It demands ending native forest destruction and fossil fuel expansion.