I hereby express my staunch opposition to the proposal for the Restart of Redbank Power Station, encapsulated under Application Number: SSD-56284960, a project aiming to pivot towards electricity generation through what is presented as a sustainable biomass fuel approach within Singleton Shire. This submission is driven by a deep concern for the environment and the sustainable health of our local and global ecosystems. The proposal, while cloaked in the promise of renewable energy and reduction of carbon emissions, raises significant alarms regarding the potential for widespread wildlife habitat destruction and an alarming increase in native tree clearing within our community and beyond.

My reservations are deeply rooted in the understanding that the proposed biomass fuel strategy, rather than offering a genuine solution to our energy and environmental challenges, actually poses significant risks by potentially creating a new market for wildlife habitat destruction. This is compounded by the likelihood of accelerating native tree clearing, actions which stand in stark contrast to our collective need for environmental conservation and sustainable living practices.

Furthermore, I contend that the purported benefits of utilizing biomass for fuel are significantly overstated, failing to acknowledge the intricate dynamics of the existing carbon lifecycle. This oversight includes the critical role of natural sequestration processes and the gradual release of carbon emissions over time—factors that are vital to our ecological balance and the fight against climate change.

The following arguments are outlined to challenge the viability of the Restart of Redbank Power Station from an environmental, ecological, and sustainable development perspective. It is my intention to bring to light the overlooked consequences of this proposal, advocating for a reevaluation of our energy strategies in favour of truly sustainable and ecologically responsible alternatives.

Misleading Net Carbon Calculations

1. **Carbon Sequestration Dismissal:** The argument put forward by Verdant Earth fails to consider the carbon sequestration potential of the vegetation being cleared. Even if considered invasive, the trees and shrubs in question actively sequester carbon dioxide from the atmosphere. Removing these plants for biomass energy production eliminates their future sequestration capacity, thereby contributing to increased net carbon emissions over time.
2. **Carbon Release from Soil Disturbance:** The process of clearing land, including the removal of trees and shrubs classified as noxious weeds, disturbs soil layers, potentially releasing significant amounts of stored carbon into the atmosphere. Soil carbon, a critical component of the global carbon cycle, can be adversely affected by such land clearing activities, negating any perceived short-term benefits from using the cleared biomass as fuel.
3. **Incomplete Combustion Emissions:** Burning biomass for energy produces CO2 emissions. While part of the biomass lifecycle, the assumption that these emissions are completely offset by the carbon sequestration of new plant growth is overly optimistic. The time lag between the emission release and the subsequent uptake of CO2 by new vegetation can create a carbon debt, worsening the atmospheric CO2 concentration in the short to medium term.
4. **Opportunity Costs and Alternative Uses:** The argument does not account for the opportunity costs of not using the land for reforestation or regenerative practices that could

sequester more carbon over time than the biomass used for energy production. Additionally, the burning of cleared vegetation in situ, while not ideal, contributes less to carbon emissions than transporting and processing it for biomass energy, considering the full lifecycle emissions of biomass energy production, including harvest, transportation, and processing.

5. **Biodiversity and Ecosystem Services Loss:** Clearing native scrub vegetation, even if it has reached unnatural densities, ignores the biodiversity and ecosystem services these plants provide, including habitat for wildlife, soil stabilization, and water regulation. The conversion of these lands into agricultural use or for biomass production can lead to a loss of biodiversity, further impacting the carbon cycle and ecosystem resilience.
6. **Sustainability and Management Practices:** The sustainable management of agricultural lands encompasses more than just the removal of invasive species for biomass energy. Integrating conservation and regenerative agricultural practices can achieve better long-term environmental and carbon sequestration outcomes. These practices may include maintaining buffer zones of native vegetation, employing no-till farming to preserve soil carbon, and implementing integrated pest management to reduce the reliance on clearing vegetation.
7. **Energy Crops: Unsustainable Land Use and Carbon Debt**
    a. The cultivation of energy crops introduces a significant time lag in carbon neutrality. The initial planting, growing, and harvesting cycle, which spans approximately four years, creates a carbon debt where the carbon sequestered by these crops does not immediately offset the CO2 emissions released upon their combustion.
    b. The repeated cycle of coppicing and harvesting every four years, while theoretically allowing for regrowth and carbon sequestration, fails to account for the full lifecycle carbon emissions, including soil disturbance, fertilizer use, and the energy inputs required for planting, harvesting, and transportation.
    c. Utilizing semi-arable land or buffer zones of mines risks converting land that could otherwise serve as natural carbon sinks or be rehabilitated into ecologically beneficial landscapes. The assumption that this land has no alternative economic or ecological value is shortsighted and overlooks the potential for regenerative land uses.
8. **Approved Land Clearing for Infrastructure Works: Missed Opportunities for Carbon Sequestration**
    a. The targeting of residues from approved land clearing for infrastructure projects as a biomass source ignores the carbon sequestration potential of the vegetation being removed. This practice not only contributes to habitat loss but also eliminates these plants' future capacity to absorb CO2.
    b. Current practices of mulching and incorporating cleared vegetation into the soil can enhance soil carbon stocks and improve soil health, offering a more sustainable alternative to biomass energy production in terms of carbon balance.
9. **Agricultural Residues: Overlooked Ecological Functions**

a. Agricultural residues, such as straw from cereal crops, play crucial roles in maintaining soil health by providing organic matter, enhancing soil structure, and reducing erosion. Removing these residues for biomass energy production disrupts these ecological functions, potentially leading to soil degradation and loss of soil carbon stocks.

b. The collection, grinding, and pelletization of agricultural residues for energy production require significant energy inputs, further increasing the carbon footprint of this biomass source. The practice of burning residues, while not ideal, may in some contexts release fewer emissions than the full lifecycle of biomass energy production, from collection to combustion.

In Conclusion

The proposal by Verdant Earth to use various biomass sources for energy production at the Redbank Power Station, while presented as a sustainable and carbon-neutral solution, fails to fully account for the complex carbon dynamics and ecological impacts associated with energy crops, land clearing for infrastructure works, and agricultural residues. A more holistic assessment reveals that these practices may not offer a genuine path to carbon neutrality and could lead to environmental degradation, loss of biodiversity, and missed opportunities for more sustainable land management and carbon sequestration efforts. The focus should shift towards energy solutions that offer clear long-term environmental benefits without compromising soil health, biodiversity, or the ecological services that undisturbed land and agricultural residues provide.