

Submission on Redbank Power Station

April 11, 2024

1 Introduction

I am OBJECTING to the proposed Restart of Redbank Power Station (SSD-56284960).

I am a retired physicist. I am particularly concerned that:

1. The amount of land clearing that this project could cause is far beyond reasonable (about 7 times more than is currently cleared as “invasive native species”, authorized under the NSW Local Land Services Act). The project would have a huge and entirely unacceptable ecological impact.
2. From a scientific standpoint, burning biomass for electricity generation is a completely inappropriate response to the climate crisis.

Individually, each of the above points are sufficient to warrant REJECTION of this project proposal.

2 Land clearing and biodiversity loss

2.1 Vaguely specified fuel mix (biomass feedstock)

The fuel mix for the project has not been fully specified. Only an “indication” of the fuel mix has been given in Table 3.4 page 63 of the [Environmental Impact Statement \(EIS\)](#), together with a qualification that none of the fuel type quantities given in that table can be taken to be “caps” on what would actually be used.

In other words, if the project were approved (without additional imposed conditions) then Verdant Earth would be free to use any of the specified biomass types in any quantities they can obtain. For example, in Year 1 they indicate using 500,000 tonnes of “invasive native species”, 150,000 tonnes from “other approved land clearing activities”, and 50,000 tonnes of “purpose grown fuel crops”. However, there is no grantee that Verdant Earth will not use a fuel mix that is 100% from land clearing for every year of the project.

2.2 Definition of “invasive native species”

[Invasive Native Species](#) is a classification of native woodland and forest with species composition and densities that are considered *not optimal for grazing*. These native woodlands provide natural habitat and biodiversity benefits and also represent a significant carbon sink.

The latest government data for NSW land clearing can be found at www.environment.nsw.gov.au/topics/animals-and-plants/native-vegetation/landcover-science/2021-nsw-vegetation-clearing-report.

Under the section “Vegetation clearing authorised under the Local Land Services Act on Category 2 regulated land” one finds a bar graph that shows that approximately 5,000 hectares of invasive native species was approved for clearing in 2021 (most recent data).

2.3 Land area for 500,000 tonnes of “invasive native species”

How much land would be cleared for Verdant Earth to obtain the 500,000 tonnes of “invasive native species” that is indicated for Year 1?

To answer the above question, one needs an estimate for the tonnes of fuel per hectare. Data for this estimate can be found in the NSW Government document [Comprehensive Vegetation Fuel Loads](#),

published by the NSW Rural Fire Service.

Using an estimated fuel load of 14.5 tonnes/hectare for the western peneplain woodlands (the region being targeted), one finds that 500,000 tonnes of “invasive native species” would correspond to clearing a land area of

$$500,000 \text{ tonnes} / (14.5 \text{ tonnes/hectare}) = 34,500 \text{ hectare}.$$

This land area is almost **7 times larger** than the area (5,000 hectares) of invasive native species (INS) that was approved for clearing in 2021 under the NSW Local Land Services Act. Therefore:

Almost all of the fuel in Year 1 (and possibly all later years too) would be from **unauthorised, unregulated, or illegal land clearing**. This is a recipe for ecological disaster!

BTW, the company Western Regeneration, mentioned on page 64 of the EIS as the supplier of “up to 500,000 tonnes per annum of biomass from their approved INS clearing” is listed by ASIC as being [deregistered in Nov 2018](#).

3 Climate change

3.1 According to Verdant, burning biomass produces zero CO₂ emissions (!!)

If Verdant Earth burns 700,000 tonnes of carbon per year they will produce 2,569,000 tonnes of CO₂ per year (i.e., multiply by 3.67).

Verdant Earth claims that none of the CO₂ emissions from burning 700,000 tonnes of biomass should be counted towards their Scope 1 emissions. This claim is rubbish. The only emissions that could be claimed to be balanced by biomass re-growth are those from burning “purpose grown fuel crops”.

In Year 1, Verdant Earth proposes to burn 650,000 tonnes of biomass from land clearing, producing 2,385,500 tonnes of CO₂, none of which will ever be balanced by biomass regrowth within the cleared areas.

3.2 Burning biomass is not an appropriate response to the climate crisis

Burning biomass for electricity will never make sense in terms of climate change. Not even under best circumstances, where 100% of fuel is purpose grown, and where there is no decades-long delay before biomass re-growth can balance emissions. This is because the electricity generated will be replacing true renewable generation of electricity (via solar, wind, etc.). It will not be replacing coal or gas generation, because those will be long gone.

Dr Andrew H. Norton
Loftus, NSW 2232
norton.ah@gmail.com