

Ningaloo Lighthouse Resort Project - Submission

10 June 2022

In a time when the IPCC (IPCC, 2022) amongst others urges everyone to act on climate change **now** because there is no time to waste, the EPA ought ¹ to follow these requests. The author acknowledges that legislation and regulations, are probably 5 to 10 years behind the current needs, in terms of the extent to which the EPA can force project proponents on environmental measures. However, there is no reason why the EPA cannot give advice to the proponent of the Ningaloo Lighthouse Resort Project (NLRP) on which measures would enhance sustainability, as circumstances have changed in relation to so their environmental, social and governance responsibilities.

The project proponents indicate that the redevelopment is sustainable. It is very disappointing when viewing the development's animation on the proponent's website, the first thing to notice there are no solar panels to be seen anywhere. To be more energy stable and independent all available roof space should be used for PV-panels and have batteries for storage, creating a mini-grid. With an eye on the future install charging stations for EVs. Just hot of the press the reporting is that the ACT will be lowering energy prices because their energy is renewable sourced, this is against the trend of the rest of eastern Australia (ABC, 2022).

The documents show NLRP has still gas as part of the energy supply. Gas is a fossil fuel, therefore not sustainable, and must not be used. The latest IPCC (2022) report tells us that we need to get of gas as quick as possible. With the development of NLRP there is an opportunity to go fully electrical ². If NLRP is allowed to have gas installed it will still be there for the life of the project 20-25 years that is nearly 2050, the time of the zero-carbon emissions target; to emit GHGs by then is unacceptable. Dr Andrew Forrest as indirect

1 Some of the wording used in this submission can be perceived as condescending. That is not the intention. In a lot of government (local, state and federal) documentation words like preferred, advised or maybe are used asking for a desired outcome. The practical result is that the recommendations in their paragraphs are ignored straightaway. UN Secretary General António Guterres did not use this type of words when launching the latest IPCC report he demanded action now.

2 Cooking with induction stove increases the air quality and lowers the temperature in a kitchen. This benefits the work environment.

owner of this project is very vocal about green hydrogen and other renewables, indicating where possible there must be a switch to renewable energy. The NLRP development is a prime opportunity for such switch.

The Tattarang (owner of NLRP) website (2022) states “*We believe in investing for growth and pursue opportunities in both the listed and unlisted space with a long term investment horizon*” (author’s underline). Quoting the Reserve Bank of New Zealand Statement of Intent 2021-2024 “*Climate change presents a long-term risk to financial stability, with the physical impacts of climate change likely to increase.*” So, to be consistent with these statements the project must move in a more sustainable direction, to achieve that the suggestions as raised in this document need to be followed. Using life cycle assessment (LCA) will facilitate to achieve long-term sustainable investments.

As for the EPA’s responsibility it is more than checking if development proposals are complying with the legislation and regulations, it needs also to promote environmental wellbeing. For the latter reason the EPA should add to the regulatory comments a supplement that provides suggestions on how a project could become more sustainable and therefore likely more profitable over the life of the project.

A likely first reaction when asked to carry out more sustainable construction is that it will cost more. Here are two examples that show costs savings instead. First the One One Five Hamilton Hill project in WA where money was saved during the demolition of the old senior highschool (115HH, 2022; Murray, 2019). Second is the Venlo City Hall project in the Netherlands (Venlo, 2022; Venlo-nl, 2022) that made changes to their construction budget by increasing it so to improve the financial benefits over the life of the project (see also appendix).

It is not clear from the documents what the Construction & Demolition waste flow of the project will be? The site is large enough to carry out onsite recycling and stockpiling like at One One Five Hamilton Hill (Murray, 2019). Figure 1 shows what has been achieved at One One Five Hamilton Hill in relation to demolition.

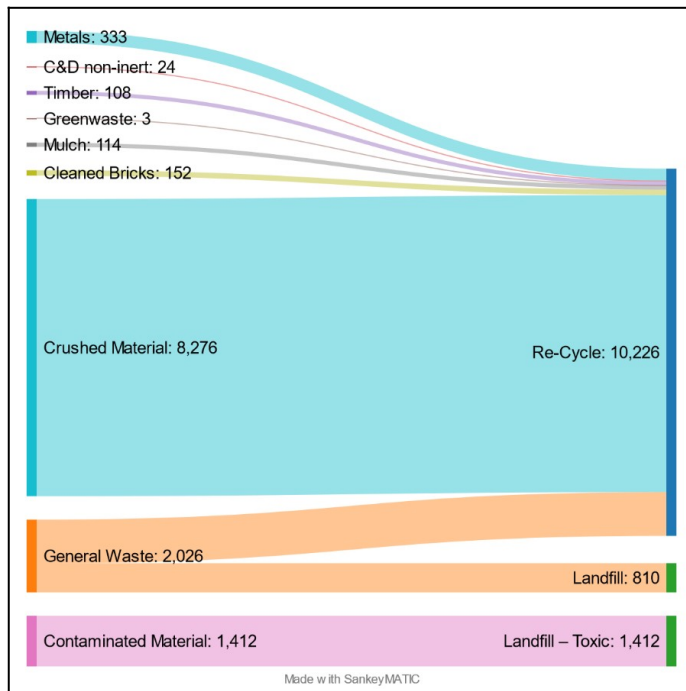


Fig 1. This is tons of the demolition waste flow at the 115 Hamilton Hill project where 92% of the non-toxic material was recycled on site (Murray, 2019)

Nowhere in the documents are the concepts such as circular economy and cradle-to-cradle (C2C) discussed (McDonough & Braungart, 2002). The appendix has an example of a building based on the C2C concept. The author understands that the EPA does not directly get involved in the built form, but any development has a direct impact on the environment and over the lifetime of the project, and therefore needs to follow the C2C principles. Even though the Venlo City Hall is a 45m high building in a city, the underlying sustainable design principles are still valid for NLRP.

For these reasons life cycle analysis (LCA) is an essential method to use to meet the C2C goals. There is no indication that LCA is used for the project's sustainability assessment to evaluate its environmental impact over the life of the project. To achieve that LCA tools like eTool or OpenLCA provide a method to carry out such an assessment (eTool, 2022; OpenLCA, 2022). The EPA must insist that a LCA is part of the process for any project.

A project like NLRP would also benefit from a green star rating which could be used for marketing purposes. The Green Star program from the Green Building Council of Australia is comprehensible (GBCA, 2022).

In conclusion for the longterm impact on the environment the EPA should impose the highest possible standards. Request that LCA is required for all parts of the project over the envisaged life of the project. Add supplementary information about how to make the project more sustainable. We are convinced that the EPA understands all that, to achieve this it must be more innovative and assertive in advocating the battle against climate change.

Humphrey Boogaardt

PaYUng Contracting

Climate change presents a long-term risk to financial stability, with the physical impacts of climate change likely to increase.

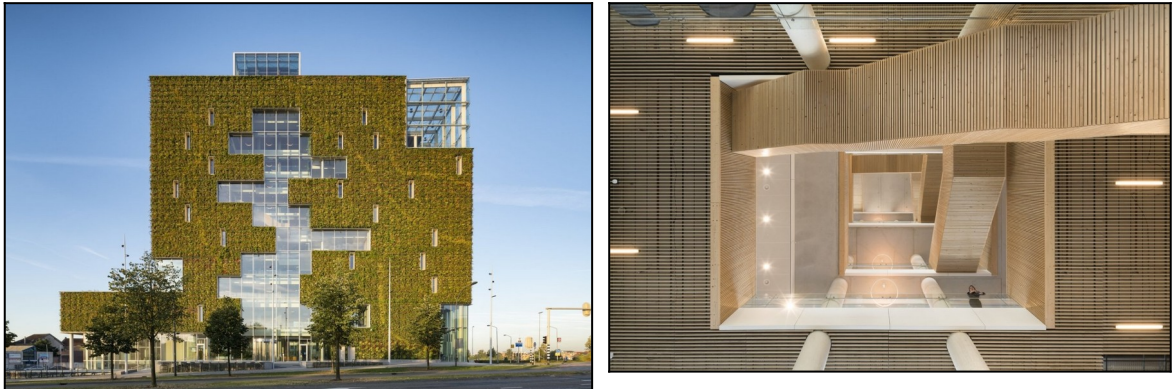
Reserve Bank of New Zealand Statement of Intent 2021-2024

PO Box 271
Floreat WA 6014
Australia

Mb +61 4 0296 0253
www.payung.biz

Appendix - Case Study Example

Located on the banks of the river Maas in the south of the Netherlands in the city of Venlo the high-rise of its City Hall has a natural ventilation tower and uses PV panels as shades for sunlight. The city hall is also part of a precinct re-development. In the design brief the City Council stipulated that the City Hall had to be "open, accessible and transparent" for both staff and visiting public (BAMB, 2022).



City Hall in Venlo, The Netherlands. On left central solar chimney and clean green face and on right looking up in the central void with stairs.

The municipality of Venlo commissioned Kraaijvanger to design its new stadskantoor (council offices). With 630 flexible workplaces and public functions, the building embodies the ambition to have the entire city and region function on the basis of Cradle to Cradle (C2C) principles (McDonough & Braungart, 2002).

Wellbeing is the starting point: a good building makes people happier and boosts productivity. The spatial design is based on three goals:

- 1. to bring as much daylight and greenery into the interior as possible,*
- 2. to create routes through the building that stimulate people to move around,*
- 3. encounter others, and to use only healthy materials.*

The design includes an organic kitchen with a restaurant situated at the heart of the tower. Along with the spiral staircase system in the atrium, this encourages the use of the stairs. The parking garage with its green voids and building cooling system is the foundation on which the meeting functions are organized from the street level upward.

Our ideal design produces energy, purifies air and water, invites biodiversity and produces no waste. We try to achieve this by using as many healthy and sustainable materials as feasible and by making all cycles in the building (of water, materials, food, energy and air) as healthy as possible (Kraaijvanger, 2022).

During construction the budget needed to be adjusted, normally meaning cost-cutting but here after LCA modelling they spent extra money with the aim to save millions of €€ over the life of the building.

For more information about the Circular-Economy and the Cradle-to-Cradle concepts can be found on websites of the Ellen MacArthur Foundation (EMF, 2022), architects William McDonough + Partners (2022) and Rau Architects (2022).

References

- 115HH, 2022. *One One Five Hamilton Hill innovative residential estate*.
<https://developmentwa.com.au/projects/residential/oneonefive-hamilton-hill/overview>
- ABC, 2022. *Why Canberrans' electricity bills are falling while other Australians' power costs soar*. <https://www.abc.net.au/news/2022-06-06/why-arent-canberrans-paying-high-electricity-prices/101126274>
- BAMB, 2022. *Buildings as Material Banks*. <https://www.bamb2020.eu/about-bamb/> .
- Boogaerdt, Humphrey. 2018. *Submission_Independent-Scientific-Panel-Inquiry-Hydraulic-Fracture-Stimulation-WA-2017_Boogaerdt_2018_combo*. Payung Contracting. www.payung.biz .
- EMF, 2022. *What Is a Circular Economy?* Ellen MacArthur Foundation.
<https://ellenmacarthurfoundation.org/topics/circular-economy-introduction/overview> .
- Etool, 2022. *eTool – Achieving high performance with Life Cycle Design*.
<https://etoolglobal.com/> .
- GBCA, 2022. *Green Building Council Australia*. <https://new.gbca.org.au/>
- IPCC, 2022. *Climate Change 2022 Mitigation of Climate Change : Summary for Policymakers*. AR6 Report by Intergovernmental Panel on Climate Change.
<https://www.ipcc.ch/report/sixth-assessment-report-working-group-3/> .
- McDonough, William and Braungart, Michael. 2002. *Cradle to Cradle : Remaking the Way We Make Things*. New York: North Point Press.
- Murray, Rachel. 2019. *Construction and Demolition Waste in Western Australia: A Case Study on Best Practice Demolition*. Murdoch University.
- OpenLCA, 2022. *Open source Life Cycle and Sustainability Software*.
<https://www.openlca.org/>
- Rau, 2022. <https://www.rau.eu/portfolio/triodos-bank-nederland/>.
- Rau, Thomas, Sabine Oberhuber, and Roos van Hennekeler. 2019. *Material matters: het alternatief voor onze roofbouwmaatschappij*. Amsterdam: Bertram+ de Leeuw Uitgevers.
- Tattarang, 2022. <https://www.tattarang.com/who-we-are/> .
- Venlo, 2022. *Venlo City Hall* <https://c2cvenlo.nl/en/city-hall-venlo/> .
- Venlo-nl. 2022. *The Making of Venlo City Hall*.
<https://www.kraaijvanger.nl/en/projects/city-hall-venlo/> .

William McDonough + Partners, 2020. *Design Approach : a delightful diverse, safe, healthy and just world – with clean air, soil, water and power – economically, equitably, ecologically, and elegantly enjoyed.*
<https://mcdonoughpartners.com/cradle-to-cradle-design/> .

