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RE: Feedback on Powerhouse Museum State Significant Development Application (SSDA)

I have read all the documents provided as part of the SSDA and I object to the approval of the SSDA for the Powerhouse Museum 'revitalisation'. There are positive attributes and aims within the documents and architectural plans but there are also significant questions, omissions and missed opportunities that must be addressed before the project proceeds.

There are 3 critical areas which I address in greater detail further on:

1. The omission of education (at all levels) as a fundamental function of a museum and in particular STEM (Science, Technology, Engineering and Maths) education which is a high priority for the NSW government and the society it represents. The Powerhouse Museum was founded on public education in science and technology and applied sciences in the decorative arts.
2. There are a plethora of contemporary art galleries and creative spaces within Greater Sydney, but there is no other museum which brings together science, technology and its application in the decorative arts, and social history. It is the combination of the Powerhouse Museum collection areas in the central area of Sydney that is vital to providing the State of NSW with a great museum.
3. The demolition of the front of the Wran Building, and the idea that large voids make a great museum has led to proposed unnecessary and costly demolition. Where are the funds for the museum exhibitions, collection display and interpretation? A complete project model is necessary for a redevelopment of this scale.

Detailed Response and questions:

Environment Impact Statement (EIS)

<u>Objectives of the revitalisation</u>
The objectives are reasonable, if a little uninspiring, except the ninth paragraph (page 3) which infers that adaptive re-use is not already inherent in the existing museum structures and that the heritage is better presented with large void spaces. The Turbine and Boiler Halls had mezzanines and floors in them originally which you can see now. Therefore the statement 'reinstating the volume' is incorrect and misleading. Will the revitalisation include the fit-out of spaces suitable for exhibitions? This is unclear and a full project budget including 'base-build' and 'public offer' vision and budget should be an intrinsic part of the museum revitalisation and made transparent as part of the SSDA.

<u>EIS Key findings</u>
The statement about providing a world class *museum* (page 6) is not substantiated within the SSDA. The definition of a *museum* includes education as a core value. NSW has a crisis in STEM education, and STEM was one of the core values of the Powerhouse Museum which does not appear to be included in the EIS. In Prague, on 24 August 2022, the Extraordinary General Assembly of International Council of Museums (ICOM) approved the museum definition which must be at the core of any redevelopment proposal:

> "A museum is a not-for-profit, permanent institution in the service of society that researches, collects, conserves, interprets and exhibits tangible and intangible heritage. Open to the public, accessible and inclusive, museums foster diversity and sustainability. They operate and communicate ethically, professionally and with the participation of

communities, offering varied experiences for education, enjoyment, reflection and knowledge sharing."

More about this point in the critique of the Social Impact Report.

Key Project Benefits
The benefits listed on page 7 are positive but there are omissions such as:

- To provide public access to collections in a curated museum environment, with NSW curriculum connections, inclusive of Indigenous culture and technologies.
- To provide education benefit for all students and begin at pre-school, infants and primary school. With a high focus on STEM education and the long history and site connections to innovative science and technology, the project must contribute to growing a diverse workforce inclusive of minorities and engaging everyone with STEM. The Academy is a good idea but will it include families with pre-schoolers and those in primary school because there is strong evidence that cultural change must have a focus on young learners in their formative years as embedded within the NSW School curriculum https://education.nsw.gov.au/teaching-and-learning/curriculum/stem.
- To implement leading museum sustainability principles. There is no mention of the project being informed by leading museum sustainability research, such as the Bizot Green Protocol. [1]

Social Impact Statement

Why is the NSW Creative Communities Policy the only driver of value as stated in point 3.2.1? This misses STEM priorities which were the foundation of Museum of Applied Arts and Sciences and are of NSW state strategic significance. This document fails to address the balance of art and science museums and other creative industry providers in Greater Sydney. The Powerhouse Museum Ultimo had a unique role in STEM education by providing historic and contemporary technology showing the application of STEM in fields such as medicine and health, food technology, farming, sanitation, engineering, environmental technologies, energy, sport, astronomy and space science to name a few.

By comparison the UK Science Museum Group's mission is 'to Inspire Futures, and central to inspiring the next generation of scientists, inventors and engineers is our work towards a society where all people feel that science is "for them" and have opportunities to access the social and economic benefits it brings.'

Why STEM education is a critical omission in the Powerhouse Museum Ultimo SSDA
STEM education should have been embedded within the SSDA because the NSW Government has identified STEM as a training and curriculum priority to:
' Challenge and equip students with science, technology, engineering and mathematics (STEM) skills to solve authentic problems for the complex world around them. In NSW, we aim to:

- raise expectations and enhance the quality of student learning in STEM
- foster quality teaching and leadership in STEM
- provide innovative ways of delivering STEM education

Through science, technology, engineering and mathematics (STEM) we encourage students to:

- be confident in their ability to design and engineer creative solutions
- apply their understandings in mathematics, science and technology
- engage in collaborative teams

[1] https://www.cimam.org/documents/238/Bizot_Green_Protocol_-_2023_refresh_-_Sept_2023.pdf

- take on more challenging STEM subjects.'

A 2019 independent report[2] about Australia's performance in STEM identified key issues which NSW is experiencing:

> " When we compare our current STEM education performance to international counterparts, Australia looks to be falling behind … (where) a growing 'knowledge generated' gap where the number of students developing STEM skills through the education system is not meeting growing demands from industry. A key challenge facing STEM education in Australia is participation rates. Many STEM subjects, particularly in secondary schools, are experiencing declining participation rates in areas such as advanced mathematics and science…
>
> A gender imbalance in STEM education participation rates is one cause (amongst many) why only 12 per cent of Australia's engineering workforce are women. Women and girls currently face a number of barriers to participating in STEM education, such as gendered views on education choices and disengagement due to content being perceived as not inclusive or relevant. Many of these factors can be linked to broader cultural perceptions in Australia where there are engrained views across society on gender and career paths."

The Powerhouse Museum Ultimo, once easily accessed by many schools and families, with a collection rich in STEM related artefacts, has a unique future role to play in changing these engrained views and partnering with NSW Education to address the STEM crisis.

Heritage Report

The NSW Heritage Report focuses on the heritage of the building in providing power for Sydney's tramway system from 1899 to 1963, a very significant part of Sydney history. The Powerhouse building has been a museum for 36 years and is one of the early examples of a successfully re-purposed heritage site in the state. The assessment appears to not have considered this.

In conclusion, a revitalised Powerhouse Museum for the people of NSW, for families and to support teaching, to attract tourism and meet other public benefits requires a publicly accessible design brief and a complete project budget. I have worked on large projects and museum revitalisations and constructions in Australia and in the UK and assessing this project without making the design brief and whole project plan transparent is not the usual practise.

The views expressed in this document are my own and based on my experience and research in museums in Australia and the UK and in the University sector.

Yours sincerely,

Dr Toner Stevenson

[2] https://www.consultaustralia.com.au/docs/default-source/people/people-page/australia%27s-stem-education-challenges-discussion-paper.pdf?sfvrsn=652a4ab9_2