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fitzroy residents' association

Established in 1969 to promote, protect and enhance residential amenity

Kathy Mitchell AM
Committee Lead and Chair
Planning Panels Victoria

Re: Priority Projects Standing Advisory Committee
Referral Call in of VCAT proceeding P488/2021
Aikenhead Center for Medical Discovery
27 and 31 Victoria Parade, Fitzroy, 3065

Dear Ms Mitchell,

On behalf of the Fitzroy Residents Association (FRA) I submit the following objection to the proposed construction of a new 11 storey (plus roof plant) for the St Vincent's Hospital Aikenhead Centre for Medical Discovery (ACMD) to 'provide an innovative hub for the purposes of Research and Development Centre, Education Centre, Health and Community Hospital' .

As I have informed your staff I am unable to attend the Committee Hearing due to a clash of dates for a VCAT Hearing that the FRA was committed to on behalf of its members. It is disappointing that the Committee was unable to liaise with VCAT and set dates that allowed original objectors to participate in your Committee Hearing process.

However I trust that the questions of clarification and justification that we have sought in our submission will be conveyed to the proponents of the re-development for their response.

The decision of the Minister for Planning, Richard Wynne to call in the development under-scores the high level of interest and deep concern with the proposed development.

The advice conveyed to the Minister to inform his decision needs to cover the range of matters that are clearly in play including the impact on the Royal Exhibition Building and Carlton Gardens and heritage values of the WHEA, the buildings responsive to place and the inadequacy of the Sustainable Management Plan.

The FRA's concerns are therefore focussed on two key issues:

- Heritage
- Environmental Sustainability Design

Heritage

The site is located to the west of the Royal Exhibition Building and Carlton Gardens (World Heritage Place). It is included within the Melbourne Planning Scheme and is affected by Schedule 69 of the Heritage Overlay which includes the Heritage place on the Victorian Heritage Register (Ref No. H1501).

The local provisions (Clause 22.14) of the Yarra Planning Scheme identify an 'area of greater sensitivity' associated with the World Heritage Environs Area (WHEA) which is currently under review.

The proposed development, given its height, mass and design (glass and steel construction), will be the most dominant building opposite the Royal Exhibition Building and Carlton Gardens and in the World Heritage and Environs Area of Greater Sensitivity.

The new building, rising to a height of 54 metres is 14.85 metres higher (excluding plant and lift overruns) than the existing building.

We believe that its height, mass and design will impact on the integrity of the World Heritage Environs Area and the viewing of the Royal Exhibition Building, its Drum and Dome.

We note that the architects for the development and its 'look at me' design of glass and steel construction were responsible for the design of the Melbourne Museum.



Fig 40: View of Proposal from southe west on Victoria Parade (Image from Planning Application Design Report for the Aikenhead Centre for Medical Discovery by DCM and dated 18 November 2020)



Sustainability

The FRA is also objecting to the proposed development because it fails to respond to the environmental impact of the building and address key sustainability issues that the St Vincent's Hospital Management and the Project Team have the knowledge, expertise and capacity to address.

This is a development that St Vincent's Hospital Management claims will provide a 'state of the art' medical research facility.

It is a development that has the backing of institutional partners including the University of Melbourne, Swinburne University of Technology and RMIT University. Each these universities is well known for their ground breaking research into sustainable and passive building design and acknowledge the threat of climate change.

'The centre' it is claimed, 'will be a landmark building designed to attract and retain biomedical expertise in Victoria. It will also act as a gateway to the St Vincent's Hospital Melbourne Campus, the Melbourne Central Business District, and the Melbourne Biomedical Precinct'.

It therefore beggars belief that this 'landmark building' has a performance score and overall functioning so lacking in ambition. It surely does not reflect well on the St Vincent's Hospital Management or its Partners including the State Government.

The Sustainable Management Plan submitted in support of the development is an inadequate response to state and local polices and requirements that seek to incorporate sustainable and passive design into new developments.

The proposed development falls well short of the Yarra City Council's adopted policies for sustainable and passive design including:

- energy efficiency
- water efficiency
- active transport
- indoor environment quality
- waste management

The current Yarra Planning Scheme (YPS) recognises 'Energy and resource efficiency' through environmentally sustainable development and improve energy efficiency in energy use through greater use of renewable energy technologies (15.02-1S); and to reduce greenhouse gas emissions and minimize water use (21.07).

The YPS also aims to promote Environmentally Sustainable development (21.07-1) by encouraging new development to incorporate environmentally sustainable design measures in the areas of energy and water efficiency, greenhouse gas emissions, passive solar design natural ventilation, storm water reduction and management solar access.'

The building has a Built Environment Sustainability Scorecard (BESS) rating of 59% covering management, water, energy, storm water, indoor environment quality, transport, urban ecology and innovation. The Indoor Quality BESS score is 33%.

A BESS score of 70% equates with 'excellence' so to fall well below this score reflects adversely on this 'state of the art' medical research facility. The BESS score lacks sustainability credibility in a health facility that seeks to be 'state of the art' in medical science in the 21st century.

The FRA would also remind the Committee that the BESS does not account for occupancy of a building which would account for around 50% of its sustainability performance. There is no doubt that BESS ratings will increase with changing policy settings in response to climate change and the need for buildings to be carbon neutral.

The building's lack of performance is not a question of 'how to?' There are many examples of better performing buildings that should have informed the DCM Project Team.

At the state policy level the development does not meet the intentions of the Planning and Environment Act which sets out clear directions for addressing the impact of development on the environment.

"What matters must a responsible authority consider?"

- (1) Before deciding on an application, the responsible authority must consider, inter alia (e0 any significant effects which the responsible authority considers the use of development may have on the environment or which the responsible authority considers the environment may have on the use or development."*

The Sustainability Management Plan prepared by LCI lacks a response that addresses the 'Guidelines for Sustainability in Capital Works' of the Victorian Health and Human Services Building Authority (VHSSBA). The guidelines provide a framework for assessing sustainable healthcare buildings and St Vincent's Hospital has failed to respond (Appendix).

We recommend the Committee require the Applicant to use the guidelines to assess the development and ensure that the building now and into the future can perform at the highest level of sustainability, as proposed by the Authority. For example the VHSSBA recommends that hospitals maximise their use of solar energy and seek passive design with an emphasis on low operating costs.

The solar energy sourced by the building (27Kw) will not meet the energy demands of the building's occupants. The addition of vertically mounted solar panels on the west facing wall would provide a greater amount of renewable and cheaper energy and also shading. The building would be recognisable as an example of what can be achieved using solar energy in a 'state of the art' medical research facility.

Passive design requires natural airflow. However the Applicant proposes that the building be sealed and thus will not take advantage of our moderate climate. Nor does this allow the building to be resilient and have the ability to ventilate during a time of power failure.

The failover mode of ventilation proposed is through a purge design which will open the building automatically to flush in the evenings. However there are also other ways to condition airflow which uses less power than the systems proscribed.

<https://www.munters.com/en/solutions/dehumidification/>

We recommend that windows be double glazed and are thermally broken so that heat is not transferred from the outside window glazing to the building envelope. The north and west facades we note have no external blinds or opaque parts of windows.

The use of gas for water heating cannot be supported in a 'state of the art' medical facility as it contributes to global warming and climate change. The use of gas also puts the facility at risk of fossil fuel uncertainty in the future with the resultant need to retrofit.

The use of electric hot water at the floor level is good though there is no indication if it has storage capacity. If it was to have storage it should be used by the solar system to capture excess energy.

The water chillers are sound as they will capture rainwater. However the >25,000L rainwater tank located in the basement plant room will require mechanical pumping to the top of the building to flush toilets.

The collection of rainwater should be captured near to the top of the building and gravity feed its use. The energy needed to pump water to toilets for example is unacceptable.

We would also recommend alternatives to using concrete and steel, such as fly ash concrete or structural engineered wood. The latter would sequester carbon and the former halve cement emissions.

We note that there is no embodied carbon analysis. The reuse or recycling of materials in the construction of the new building would result in less transport and lower energy.

We would also recommend the use of waste water (which is warm) via heat pump technology to heat the building. Our source is the City of Vancouver, a city that also lays claim to being the 'Most Liveable City'.

<http://vancouver.ca/files/cov/neighbourhood-energy-utility-heat-pump.pdf>

There are a number of issues to be addressed by St Vincent's Hospital and its partners, the State Government, RMIT University, Swinburne University of Technology and the University of Melbourne in relation to the environmental impact of the proposed development.

There is no doubting the knowledge, expertise and research capacity of those supporting the development and it is surely incumbent on them to ensure that the building sets the highest standard of excellence in Environmental Sustainable Design.

We also seek responses to the following questions:

Why is the mechanical ventilation system provided without the means for natural ventilation?

Why is passive design not a feature of the building including the use of thermal masses and appropriate shading?

Has the development examined lower energy cooling techniques like structural cooling?

How will heat recovery work given desiccant base systems do not work in high external heat?

Why does the building not use waste water source heat pumps?

Why is Cross Laminated Timber or other structural engineered wood that would sequester carbon not preferred to using concrete and steel?

What building energy management systems are proposed to message occupants and managers about energy use activities?

Conclusion

The proposed development by St Vincent's Hospital Management and its Partners will have a significant impact on the World Heritage Royal Exhibition Building and Carlton Gardens given its height, mass and materiality.

It fails to provide a design response to this highly visible and significant site for the City Yarra and City of Melbourne.

The City of Yarra has articulated in its Statement of Grounds significant grounds for refusal noting the impact of the buildings height, articulation and massing on the World heritage Environs Precinct and the South Fitzroy Heritage Precinct.

The FRA opposes the development on heritage values and protection.

The FRA is also opposed to the development due its failure to meet high order built and performance sustainability standards. A building to house a 'state of the art' medical research facility also should be a building that leads to a healthy and sustainable environment.

The Sustainable Management Plan lacks detail on key performance issues, inadequate coverage of operational matters and certainly ambition. It contains vague claims and reflects a failure of architectural design.

But do not take our word for that!

In a Statement of Evidence, Amanda King, Managing Director SJB Planning recommends 'That the environmental performance of the building be improved which will require a review of the submitted SMP'.

Mark O'Dwyer, Director H2O Architects in a Statement of Expert Evidence lists a range of shortcomings in the SMP –

'The proposal appears to incorporate high performance glazing and energy efficient building services, appliances and fixtures plus environmentally preferable internal finishes'.

'The proposal could have benefited from some areas of openable venting to allow cross ventilation that would be meaningful and beneficial for a Proposal with relatively small floor plates'.

'The SMP notes that the Proposal will should (sic) achieve 59% overall as a Public Building in BESS'.

'The proposal has a very good approaches to sustainability with the potential to achieve an excellent standard for sustainability'.

Faint praise indeed but together point to serious and systemic failings and shortcomings in a building to house a state of art medical research facility.

Such phrases as 'appears to incorporate', 'could have benefited', 'will should (sic) achieve', 'potential to achieve' are indicative of a seriously flawed SMP and architectural design response.

The performance of the building lacks rigor and commitment to sustainability goals in response to climate change as expressed by the Yarra City Council and the State Government and actioned by their departments.

There is an opportunity to achieve a re-development of this prominent and critical site that reflects architectural excellence and high sustainability performance .

We therefore call on the Advisory Committee to reject the proposed development in its current form and advise the Minister for Planning that he should refuse to grant a permit.

Submission on behalf of the Fitzroy Residents Association

Martin Brennan

Chair

Appendix

Victorian Health and Human Services Building Authority's 'Guidelines for Sustainability in Capital Works' - Delivering sustainable healthcare buildings.

[Guidelines for sustainability in capital works](#)

Creating healthier resilient buildings for a changing climate

[Delivering sustainable healthcare buildings](#)

Business as usual requirements

The most up to date version of the National Construction Code – Building Code of Australia is to be used. Projects moving through feasibility and schematic design are to actively plan for the introduction of revised codes and look to adopt them as soon as practically possible.

The list of business as usual requirements is provided in [Appendix 2](#). These requirements are to be implemented on all public healthcare capital projects in Victoria as part of the base budget.

Carbon and water design targets

All acute, in-patient and aged care facilities are to be designed to meet the following targets, which are equivalent to delivering a 5-Star NABERS hospital:

- less than 95 kilograms of CO₂-e per occupied bed-day
- less than 405 litres of water per occupied bed-day

It is recognised that not all healthcare buildings include in-patient and residential aged care beds, therefore these targets will not be applicable to all projects. Due to the way NABERS for hospitals is designed, it is not possible to convert the design targets to floor area.

To calculate the number of occupied bed-days, the number of in-patient and residential aged care beds is multiplied by 365 (number of days in the year) and by 0.95 (to assume the beds are occupied 95 per cent of the time). Points of care other than in-patient and residential aged care beds are not included in the calculation of occupied bed-days. Energy and water use associated with the whole building is included in the analysis.

Sustainability allowance

The cost plan is to allocate 2.5 per cent of the total construction cost for delivering sustainability initiatives above standard practice. This budget allowance is not to be rolled up into the overall project budget.

Where the sustainability allowance is used to exceed a standard practice requirement or replace a material with a more sustainable option, the allowance only covers the cost above that of implementing the standard option. For example, if the project was targeting wall insulation with an improvement of 10 per cent above the building code, the allowance could only be used to deliver the cost difference of delivering an additional R0.25 (that is, the difference between R2.5 and R2.75).

The sustainability allowance cannot be removed or reallocated without first implementing one of the following initiatives:

- installation of solar
- exceeding the NCC Section requirements by 10 to 20 per cent
- other suggestions listed in [Appendix 3](#).

In renovation projects where the built form is not significantly affected, the sustainability allowance can be used for improving the sustainability of site-wide infrastructure, such as more efficient HVAC (heating, ventilation and air conditioning) systems, improved BMS (building management system) or the installation of solar. A greater focus on fittings, furniture and equipment and total volatile organic compounds can also be targeted to improve the indoor environment quality.

The sustainability allowance can be used to support the adoption of new and innovative technologies. Examples of innovation include the use of on-site generation technology beyond the conventional solar panel, such as thin film technologies on glazing that can also reduce solar gain and glare.

Installing solar

Business as usual requires 60 per cent of the roof space to be designed for solar, such as orientation, areas of continuous space and lack of shading. The sustainability allowance can be used to install solar and arrays are to be sized to meet base load.

The VHHSBA's *Environmental Sustainability Strategy 2018-19 to 2022-23* has a target of delivering 5 per cent of the public health system's electricity use from behind the meter solar. It is recognised that metropolitan hospitals with a large base load and low availability of roof space may struggle to meet this, whereas rural and regional buildings with lower electrical demand and more roof space may be able to exceed 5 per cent.

Healthcare capital works should endeavour to source 5 per cent of electricity from on-site solar but it is not a design target – the VHHSBA measures performance against the target at the system level.

All solar arrays are to be configured for automatic export of generation data to the department's environmental data management system (EDMS). More detail on the requirements is in [Appendix 4](#).

Installing batteries

It is not recommended that batteries are integrated with solar as it is unlikely that any solar array installed on a hospital would have sufficient export to charge a battery. As the price of batteries reduce, they could potentially provide value in the following scenarios:

- where there is significant differential between the peak and off-peak rates, batteries may lower peak demand and associated costs
- providing energy security of supply to discrete areas of a hospital or pieces of equipment.

As both of these scenarios do not directly or materially reduce carbon emissions, batteries installed for these purposes are not eligible for the sustainability allowance.

Where modelling indicates that a solar array integrated with a battery could reduce carbon emissions, it should be discussed with the VHHSBA sustainability unit.

Transitioning to electric buildings

Moving to all-electric buildings will support the 2050 net zero carbon target. Sub-acute, primary and community health type buildings are to be all electric. Larger acute buildings are to investigate the opportunities to use more electric plant and equipment and minimise the use of natural gas. Steam for sterilisation and domestic hot water can generally be provided electrically, while heating hot water is still more viable to deliver through gas fired boilers.

In general terms thermal loads can be effectively and economically provided by electricity for buildings up to 10,000 sqm. When investigating the transition to all electric buildings for buildings greater than 10,000 sqm consideration must be given to the increased costs of peak demand charges and the sizing of emergency generators, where required.

The installation of LPG is to be adopted as a last resort and only be installed where electric heat pumps cannot provide the thermal energy and hot water needs, or the local electrical network cannot provide the required load. Where LPG is being proposed, this must be discussed with the VHHSBA sustainability unit prior to specification.

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