Southbank Residents Association

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Submission to City of Melbourne

C376 – Planning Scheme Amendment – Sustainable Building Design

Southbank Residents' Association is pleased to be able to participate in the discussion of sustainable design and have engaged Cogency – an urban planning and design consultancy which specialises in sustainable outcomes, to compile our response to this specialised proposed planning scheme amendment.

Please find following our submission.

If you have any questions, please reach out to myself.

Regards

Tony Penna
President
Southbank Residents Association

17 April 2023

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17 April 2023

Tony Penna
Southbank Residents Association
By email
president@southbankresidents.org.au

Our Project Ref: 2308

Dear Tony,

Introduction

This submission has been prepared by Cogency Australia, on behalf of the Southbank Residents Association and is a conditional submission of support for the proposed amendment to the Melbourne Planning Scheme (Amendment C376: Sustainable Building Design). We recognise the importance of addressing climate change through contemporary, best-practice sustainable building design practices that not only deliver environmentally conscious benefits for private development but also contribute to the public realm.

Southbank is an area that has undergone rapid population growth, doubling in population since 2011, and has been subjected to an enormous concentration of hyperdense and rapid development which has impacted the quality of urban design and the public realm. With this in mind, we believe it is important that residents have the opportunity to demonstrate their support for the measures included in Amendment C376 and their potential for improving the environmentally sustainable value of future development and in turn improving the quality life for residents and visitors alike.

The Southbank Residents Association is a volunteer, non-for-profit organisation composed of Southbank Residents that has advocated for and represented community interest since 1998. The Association has advocated on behalf of the local community on a variety of relevant matters including the use and maintenance of local parks and green spaces as well as environmental, health and well-being issues. Improving the liveability and environmental quality of Southbank is a key focus of the association who have regularly made submissions to both the Future Melbourne Committee and City of Melbourne to ensure that residents have a voice in the planning of their local community. This submission continues a historical trend of advocating for greater outcomes for the built and non-built environment of Southbank, particularly as the worsening impacts of climate change threaten the area's liveability.

The Association supports the measures included within Amendment C376 and believe that they will strengthen the planning system's ability to deliver a more sustainable long-term environmental, health and economic outcomes.

Long term environmental, health and economic benefits

The declaration of a climate emergency in 2019 and ongoing commitment to zero carbon emissions by 2040 are signs of positive action taken by City of Melbourne. Embedding further requirements for environmentally sustainable design (ESD) into the planning scheme expands existing action undertaken by Council. Southbank is an area of dense built development that has occurred rapidly within the space of a few decades with implications for the environmental, health and economic wellbeing of residents. As growth is expected to continue into the future, it will be crucial to ensure future development improves the liveability of the local community, while contributing to climate change mitigation and adaptation.

Currently, buildings account for two-thirds of emissions across the municipality, and direct action must be taken to ensure than future construction contributes to addressing both climate and biodiversity emergencies. The use of energy efficient principles such as insulation and passive solar heating and cooling reduces the energy needs of buildings, in turn reducing greenhouse gas emissions. The incorporation of renewable energy generation, the recycling and use of rainwater and the use of renewable building materials are further actions that can reduce the environmental impact of new construction. Applying best-practice minimum ESD standards for new built development will significantly decrease the level of building emissions, mitigating future impacts of climate change.

Furthermore, a strong evidence base highlights that ESD has a positive effect on health and wellbeing, as well as reducing operational costs. Reducing building emissions and the use of low-emissions materials can

provide better indoor air quality for occupants, maximise natural light and promote a closer connection to nature through the use of urban greening. The use of renewable energy, as well as passive solar design can significantly reduce the energy consumption and operational costs of buildings. Sustainable water management and waste reduction can furthermore reduce operational costs through the effective re-use of water and waste. Embedding ESD principles into the design of future buildings can also reduce the risk and of infrastructural damage from extreme weather events, reducing recovery cost to both government and community. Furthermore, ESD increases the possibility of creating more liveable and vibrant communities that support local economies, increase connections to nature and improve mental and physical health which can lead to long term economic benefits. The new standards proposed by the amendment, such as the minimum requirements for buildings to meet energy efficiency and ESD minimums will positively contribute to the health and wellbeing of the Southbank community.

New standards for ESD introduced through Amendment C376 will encourage all new residential buildings to achieve a 6-Star Green Star rating and require all new residential and non-residential buildings to achieve a minimum 5-Star Green Star rating. Energy efficiency of new buildings will be regulated through the requirement of at least a 7.5 star NatHERS rating for residential buildings up to 5,000sqm and a minimum 5.5 star NABERS energy rating non-residential buildings above 5,000sqm. These mandatory minimum requirements represent current State government climate change mitigation and adaptation policy for new buildings, and the Amendment goes further to encourage new development proposals to exceed these minimum requirements. It is our opinion that applying the best practice standards for ESD through Amendment C376 will have demonstrably positive environmental impacts through the reduction of building emissions, improving health and wellbeing of building occupants, and reducing future costs to the community related to responses to flooding or extreme heat and weather events.

Reducing the urban heat island effect

We support the inclusion of the urban heat island effect as one of the key focus areas of Amendment C376. Southbank represents the most densely populated part of Melbourne, where compact urban form consistently traps heat due to reduced vegetation and increased hard surfaces. Existing research has identified that the scale of high-rise development within Southbank is comparable if not in excess of hyperdense cities like Hong Kong and urgent attention to addressing the urban heat island effect is needed to ensure a sustainable future for Southbank. The majority of the built environment within Southbank was constructed prior to the global focus on encouraging environmentally sustainable building design, and the suburb features large areas of impervious concrete. Therefore, Southbank's liveability has the potential to be particularly compromised as climate change increases average temperatures and the number of extremely hot days unless sustainability measures are implemented.

Given the expected increase in average temperatures and days of extreme heat, the planning system must appropriately respond to mitigate the impacts of urban heat, particularly for already vulnerable areas. Amendment C376 intends to respond to the increased urban heat by requiring new development to provide the equivalent of at least 75% of the development's total site area as building or landscape elements that reduce the impact of the urban heat island effect. This includes the provision of more vegetation for shading and the use of less heat-absorbent materials on roofs, facades and pavement areas. We support the Amendment's inclusion of measures that mitigate future development's impact on urban heat. An area for improvement, however, would be to provide greater detail on what types of building or landscape elements are preferred for heat mitigation, considering that the urban heat island effect is often a complicated combination of morphological and climatic conditions.

Enhancing urban ecology

Furthermore, we are strongly supportive of the proposed amendment's introduction of urban greening requirements that will positively impact the ecological and biodiversity value of Southbank. Urban green spaces significantly enhance the aesthetic and ecological value of an area by creating habitats for flora and fauna species, providing ecosystem services, positively impacting physical and mental health, and mitigating the urban heat island effect. Southbank is a highly urbanised part of Melbourne, and this has come at the expense of provision and access to adequate green space.

City of Melbourne has consistently promoted innovative methods for increasing the amount of urban greening throughout the municipality through policy that recognises the crucial role of green infrastructure. Promoting the multitude of benefits provided by a strong urban ecology will have overwhelmingly positive impacts of Southbank, which is currently the most densely populated suburb in Melbourne. While current policy dictates the preferred vision for Southbank as an urban forest, Amendment C376 will provide the specific planning regulations necessary for ensuring private development contributes to improving future ecological and biodiversity conditions.

Increasing the amount of green covering on private land will be crucial in the effort to create a greener, cooler and more biodiverse municipality. We believe this can be achieved through the proposed mandate that all

new development, regardless of its use must be designed and constructed to achieve a minimum score of 0.55 using City of Melbourne's Green Factor Tool, which is equivalent to 40% horizontal greening. We believe that the use of a minimum rating determined by the Green Factor Tool for new development is an appropriate measure for increasing the amount of green coverage across the municipality given that it has been developed through industry and academic collaboration and is simple for developers to use. We believe that the use of an innovative, user-friendly and evidence-based tool would not only set a precedent for ESD in Southbank and the wider municipality but will also demonstrate City of Melbourne's potential to be a global leader in the provision of green infrastructure. Protecting and enhancing biodiversity values is one of the most pressing challenges facing our city, and amendment C376 represents a genuine opportunity to embed positive action into planning policy.

Increasing green coverage supplied by new development will not only help support local biodiversity and ecosystem services, but also help mitigate the worsening impacts of the urban heat island effect.

Improving integrated water management

We also support the focus integrated water management practices, particularly for residents of an area that is prone to flooding during heavy rainfall events. Torrential rain within Southbank in late-2018 resulted in widespread-flash flooding at street level and significant disruptions to transport networks. The increased number of heavy rain events exacerbated by climate change will demand that future development adequately addresses stormwater management. Ensuring that new buildings are designed to reduce the total amount of stormwater flowing out to waterways will reduce the localised impacts of flash flooding in Southbank. This can also lead to improved water quality, reduced erosion of the natural environment and the use of stormwater as a source of irrigation for urban greenery. We believe Amendment C376 will contribute to the creation of a sustainable and resilient Southbank by embedding appropriate water management guidelines for future development.

The Amendment's requirement for future development to re-utilise storm water and a minimum requirement of a 50% BESS water rating represent current best practice in regard to current ESD policies and should assist in mitigating flooding impacts during heavy rains. However, requiring new buildings to achieve best practice water quality performance objectives set out in the *Urban Stormwater Best Practice Environmental Management Guidelines* (CSIRO, 1999) should be revised considering the Guidelines' relative age and lack of reference to climate change impacts on storm water systems. We believe that the inclusion of Water Sensitive Urban Design in these guidelines represents an appropriate approach, but a more contemporary series of Guidelines should be utilised to more accurately reflect the climatic conditions of the area in the future.

Lack of embodied carbon measures

The purpose of this letter is to provide support to the City of Melbourne's proposed Amendment C376 for the reasons outlined above. One area for possible improvement, however, would be to include strategies that aim to reduce the amount of embodied carbon within future development. The benefits of encouraging ESD may be compromised if strategies or incentives to reduce embodied carbon are not addressed in the planning process. Building and construction are responsible for a significant portion of global carbon emissions, and embodied carbon is often an overlooked aspect. Incentivising low-carbon and recycled building materials, or encouraging the adaptive reuse of existing buildings rather than demolition and new construction are examples of potential approaches that could strengthen ESD requirements. This issue could be addressed in a follow-up amendment to the Melbourne Planning Scheme in the near future.

How does this amendment align with state policy and international best practice?

The Victorian State Government has supported the introduction of new policies and standards for improving the environmental performance and resilience of buildings in response to climate change and urban growth. Both Plan Melbourne and the respective implementation plan recognise a broad range of actions and approaches to cooling and greening Melbourne, including the creation of systems to support ESD outcomes (Action 80). We believe that the baselines for ESD incorporated into Amendment C376 appropriately align with state planning policy and set a precedent for future municipalities to follow as Metropolitan Melbourne grows. Appropriate systems need to be put in place to ensure that future development does not compromise on environmental sustainability, particularly in areas of rapid and dense development like Southbank. With this in mind, we are strongly supportive of the proposed inclusion of the Built Environment Sustainability Scorecard (BESS) and Green Star rating requirements for all new developments and particularly that the mandatory and preferred ratings meet national and global best practice respectively.
Furthermore, Amendment C376 aligns with numerous international agreements and policies such as the United Nations Sustainable Development Goals and the Paris Agreement on Climate Change which emphasise the importance of environmentally sustainable design in reducing greenhouse gas emissions, improving resource efficiency and promoting sustainable and healthy lifestyles. As climate change begins to impact cities worldwide, it is important that local ESD policy continues to reflect global best practice and provide opportunities for local communities to be involved in development and implementation.

Conclusion

In conclusion, Amendment C376 represents a positive first step forward in ensuring a sustainable future for the Southbank community. We support the amendment based on its capacity to embed climate change adaptation and mitigation through best practice minimum requirements for sustainable building design, which has positive environmental, social and economic effects. The amendment also proposes further action to reduce the impacts of increasing temperatures by mandating green infrastructure for new development, in turn enhancing Southbank's ecology and biodiversity.

While the amendment addresses integrated water management through CSIRO guidelines, more up to date guidelines should be utilised to accurately reflect the likely future conditions of an already flood prone area. Furthermore, actions to reduce the amount of embodied carbon in new development are a notable omission considering the contribution that construction of new buildings make towards climate change.
The Southbank Residents Association is pleased to see City of Melbourne leading the way on the built environment's response to climate change action and we hope that the successful amendment to the Melbourne Planning Scheme will assist in creating a more sustainable and liveable future for Southbank.

Rebecca Wardle

Director and Co-Founder

Cogency Australia