ESD Memo

Project Number: 610192.000_SAC Rozelle Campus

Project Name: St. Aloysius College-Rozelle Campus

Date: 11 October 2021

To: PMDL Architecture & Design

Attention: Andrew Pender

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1. Introduction

St Aloysius College (SAC) proposes to create a remote campus for decanting purposes during the construction works at Kirribilli, but also as a dedicated campus for a secondary year group. The purpose of this ESD Memo is to address the items identified in part "6. Ecologically Sustainable Development (ESD)" of the Planning Secretary's Environmental Assessment Requirements (SEARs), application number SSD-27208140. It is understood that these requirements are only applicable to the works proposed for the site located at 48 Victoria Rd, Rozelle. A snapshot of the site plan is shown in Figure 1.

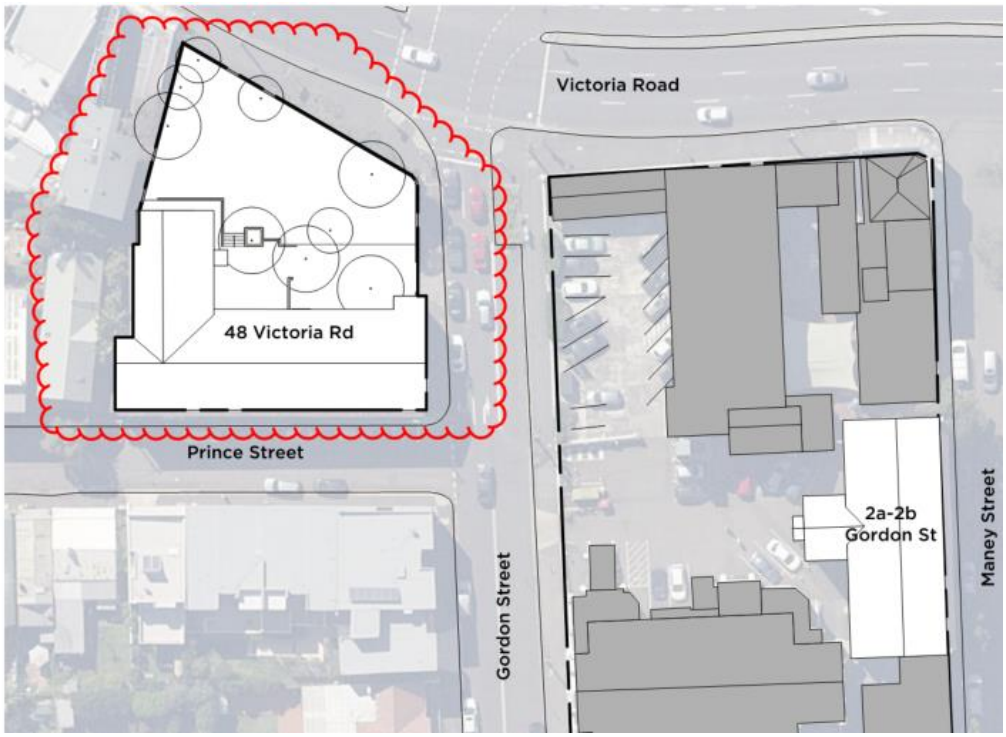

Figure 1 *Site Plan- 48 Victoria Rd, Rozelle*

Table 1 outlines the SEARs requirements for SAC-Rozelle Campus specifically relating to the Ecological Sustainable Development (ESD).

Table 1 *SEARS Requirements*

Key Sustainability Items	Relevant Memo Section
Identify how ESD principles (as defined in clause 7(4) of Schedule 2 of the Regulation) will be incorporated in the design and ongoing operation phases of the development.	Section 2
Identify proposed measures to minimise consumption of resources and water, where applicable.	Section 3

2. Schedule 2 of EP&A Regulation 2000

This section details how the proposed St. Aloysius College (48 Victoria Rd, Rozelle) incorporates the principles of ecologically sustainable development (ESD) in accordance with Schedule 2 Clause 7(4) of the Environmental Planning and Assessment Regulation 2000 (EP&A Regulation).

Item 1: The Precautionary Principle

Per Schedule 2 Clause 7(4) of the EP&A Regulation:

> (a) the "precautionary principle", namely, that if there are threats of serious or irreversible environmental damage, lack of full scientific certainty should not be used as a reason for postponing measures to prevent environmental degradation. In the application of the precautionary principle, public and private decisions should be guided by:
>
> > (i) careful evaluation to avoid, wherever practicable, serious or irreversible damage to the environment, and
> >
> > (ii) an assessment of the risk-weighted consequences of various options.

Item 1: Project Response

The precautionary principle has been adopted and all potential impacts have been considered and mitigated where a risk is present and the scope of works allows, as outlined in this memo.

To mitigate the impact of urban heat island effect, the proposed upgrade incorporates introduction of additional soft scape. It is yet to be determined if existing hardscape areas will be replaced. However, the replacement of any hardscape will seek to use high albedo materials to further reduce the impacts of urban heat island. Areas to be landscaped will consider raingardens to help reduce stormwater discharge and the use of low water use species will provide better water efficiency. South Facing windows (away from the street) are currently openable, these will be maintained and made good where necessary. This will allow for the provision of outdoor air via natural ventilation for better indoor environment quality and to potentially reduce health risks that may arise due to COVID-19. Furthermore, CO_2 sensors and ambient temperature monitoring will be considered, linked to a simple display system to better inform occupants on the appropriate times to utilise these windows.

Item 2: Inter-Generational Equity

Per Schedule 2 Clause 7(4) of the EP&A Regulation:

> (b) "inter-generational equity", namely, that the present generation should ensure that the health, diversity and productivity of the environment are maintained or enhanced for the benefit of future generations.

Item 2: Project Response

Good architecture often outlasts the architect, great architecture may endure ten times as long. The impact of architecture on its environment is enduring and significant. What architects do today will shape the environment for future generations; St Aloysius College- Rozelle Rd embodies this approach.

The proposed upgrades have embraced Indoor Environmental Quality as a key focus for the project. The levers by which this can be accomplished are as follows:

- Operable windows to delivering fresh air (as noted above),
- Materials and finishes procured such as paints, adhesives, sealants, carpets and engineered wood products will have low Volatile Organic Compound (VOC) content, formaldehyde content
- Internal lighting design will utilise LED lighting throughout, which will be flicker-free, achieve a minimum Colour Rendering Index (CRI) of 80 and generally achieve best practice lighting levels for each task with each space
- Opportunities will be explored to improve the sealing of existing building fabric (e.g. window seals) to reduce infiltration and potentially improve the acoustic comfort of the spaces

Opportunities for increased energy and water efficiency have will also form part of the strategy, noting that a reduction in the consumption of these resources will benefit future generation. Energy efficient LED lighting will be installed and new mechanical systems (if installed) will also look to achieve energy efficiency that is above current code requirements. An all-electric approach to building services will be adopted to ensure the project is best placed to transition to a net zero project in the future by the procurement of certified sustainable energy and on-site generation (if feasible). Water efficient fixtures will be installed throughout and the addition of small rainwater tanks will be considered for landscape irrigation.

Item 3: Conservation of Biological Diversity and Ecological Integrity

Per Schedule 2 Clause 7(4) of the EP&A Regulation:

> (c) "conservation of biological diversity and ecological integrity", namely, that conservation of biological diversity and ecological integrity should be a fundamental consideration.

Item 3: Project Response

The poor existing ecological value of the site is noted and the proposed landscape design will improve upon this. The design will seek opportunities (albeit limited) to enhance biodiversity through the use of endemic species and generate an improved biophilic response from occupants with additional planting. Outside of the site boundaries the project will address ecological integrity through procurement. Recycled materials will be considered for landscaping works. Furnitures and Fixtures will be responsibly sourced and certified schemes such as Environmental Product Declaration (EPD), Forest Stewardship Council (FSC) and other third-party certifications will be considered.

Item 4: Improved Valuation, Pricing and Incentive Mechanisms

Per Schedule 2 Clause 7(4) of the EP&A Regulation:

> (d) "improved valuation, pricing and incentive mechanisms", namely, that environmental factors should be included in the valuation of assets and services, such as:
>
> > (i) polluter pays, that is, those who generate pollution and waste should bear the cost of containment, avoidance or abatement,
> >
> > (ii) the users of goods and services should pay prices based on the full life cycle of costs of providing goods and services, including the use of natural resources and assets and the ultimate disposal of any waste,
> >
> > (iii) environmental goals, having been established, should be pursued in the most cost effective way, by establishing incentive structures, including market mechanisms, that enable

those best placed to maximise benefits or minimise costs to develop their own solutions and responses to environmental problems.

Item 4: Project Response

The very nature of this project promotes circular economy principles by refurbishing and existing buildings. Wherever possible existing materials and building services will be maintained. This will result in a reduction of waste directed to landfill providing both environmental and economic benefits.

The aforementioned energy and water efficiency measures will deliver economic benefits by virtue of their reduced consumption. Increased softscape and the potential inclusion of raingardens will ensure the rate of stormwater discharge is not increased and hence will place no greater strain on existing infrastructure. The cost of which ultimately gets passed onto the rate payer in the medium to long term.

3. Measures to Minimise Consumption of Resources and Water

This section of the memo covers the second item identified in part "6. Ecologically Sustainable Development (ESD)" of the Planning Secretary's Environmental Assessment Requirements. This is "Identify proposed measures to minimise consumption of resources and water, where applicable".

Project Response

The above responses capture many initiatives that will be adopted to minimise the consumption of resources and water. A summary of those initiatives can be found below:

- Adoption of circular economy principles
  - Refurbishment of existing building
  - Use of recycled material
- Urban heat island mitigation, resulting in reduced cooling loads during prolong periods of heat
- Energy efficiency measures
  - LED lighting throughout with control strategies (motion sensors etc)
  - HVAC systems (if replaced) to meet above minimum code requirements
  - CO_2 sensors and consider ambient temperature monitoring link to simple display to encourage the use of natural ventilation
  - Building sealing improvements to reduce infiltration
  - All electric building services
- Water efficiency measures
  - Water efficient fixtures and fittings
  - Low water use species in landscape design
  - Potential inclusion of small rainwater tanks for landscape irrigation

4. Conclusion

This Memo has addressed the items identified in part "6. Ecologically Sustainable Development (ESD)" of the Planning Secretary's Environmental Assessment Requirements (SEARs) document. The memo has addressed and provided project specific responses to the items identified in the SEARs.

Should you require any additional information, please do not hesitate to contact the undersigned.

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