

STATEMENT OF ENVIRONMENTAL EFFECTS

Installation of a 265kW Solar Photovoltaic
cell system on the roof of
Manly Andrew 'Boy' Charlton Aquatic Centre

1 Kenneth Road, Manly

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Prepared by

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1. SUMMARY & BACKGROUND

This Statement of Environmental Effects accompanies plans and details as follows:

- Plan of Roof Survey over Andrew Boy Charlton Aquatic Centre, Kenneth Road, Manly, Sheets 1, 2, & 3, Revision B drawn by LTS and dated 13/09/2019
- Construction Methodology & Traffic Management Plan prepared by Monique Nichols August 2019
- Waste Management Plan
- Waste Management Site Plan and Traffic Management Plan dated 13/09/2019
- Structural Assessment of Solar PV Array on Roofs at Manly Andrew Boy Charlton Swimming Centre – Prepared by Geoff Ninnis, Fong & Partners Pty Ltd dated 29 May 2019
- Northern Beaches Council Renewable Energy Options Study – Prepared by 100% Renewables, dated 31 August 2017

The proposal is for installation of a 265kW Solar Photovoltaic (PV) cell system on the roof of the Manly Andrew 'Boy' Charlton Aquatic Centre (MABC).

The building is owned by Northern Beaches Council.

2. RELEVANT PLANNING LEGISLATION

The following planning legislation is

- Environmental Planning & Assessment Act, 1979 (as amended)
- Environmental Planning & Assessment Regulations 2000
- Manly Local Environmental Plan 2013
- Manly Development Control Plan

3. PROPERTY DESCRIPTION & LOCATION

The subject site is known as Manly Andrew 'Boy' Charlton Aquatic Centre and is located at 1 Kenneth Street Manly. It is located at the intersection of Kenneth Road and Balgowlah Road with recreational uses, being LM Graham oval and Manly Golf Course to the west and north, and mixed residential including apartment blocks and single houses to the south and east.

The site itself comprises two outdoor pools, 25 metres and 50 metres, and a paddling area while the main building comprises a 25 metre pool, program pool children's water play, spa, sauna, fitness centre and associated offices.



Figure 1: Aerial photo of Manly Andrew 'Boy' Charlton Aquatic Centre and surrounds

Under the Manly LEP 2013, the site is zoned Public Recreation RE1.

4. PROPOSAL

The proposal is to install a 265 kW solar photovoltaic cell system on the roof of the main building at the MABC. The main building of MABC has a sawtooth roof with the sloping panels facing north, and a flat roof on the western side. The cells will be located on each of the roof panels on the building, with associated infrastructure being located within the existing building. An assessment of the structural suitability of the roof and its ability to hold the PV system has been undertaken and the roof is able to support the additional load.

5. PROJECT RATIONALE

Council's Community Strategic Plan 2018-2028 (CSP) provides a vision for the Northern Beaches for the next decade, with sustainability being central to this. Goal 4 of the CSP includes looking at strategies for Council to explore and invest in technologies and processes such as renewable energy that deliver long term environmental benefits.

In 2017/18 a solar feasibility study of Council's eight most suitable, high energy consuming sites, including MABC, was undertaken to determine the feasibility of installing solar PV to offset electricity consumed from the grid, which would deliver associated electricity cost savings and emission reduction.

The feasibility study identified the MABC as a priority site, recommending installation of a 265 kW system that can achieve a 93% self-consumption and offset more than

23% of the sites electricity demand. It is anticipated the project will abate over 300 tonnes of carbon emissions each year, deliver electricity cost savings of \$63,000 per annum and a favourable payback period of 6.7 years. Note: the outcomes of the feasibility study were updated in July 2019 based on recent electricity consumption and advances in solar technology, with the original study recommending a smaller 224 kW system.

6. DEVELOPMENT HISTORY

DA177/13: Consent granted on 18/12/2013 for alterations and additions to the existing Andrew “Boy” Charlton Manly Swim Centre including partial demolition of existing facility structures, construction of an all purpose aquatic centre comprising of a twenty-five (25) metre eight (8) lane lap pool, seating for one hundred and fifty (150) spectators, program pool, leisure pool, spa pool, sauna and steam room, administration rooms, plant rooms, gymnasium and group fitness/multipurpose space, kiosk, amenities, with the retention of the outdoor 50 metre pool, outdoor toddlers pool, outdoor twenty-five 25 metre pool and plant rooms, on-site parking for 46 cars, 170 car parking spaces in Kenneth Road and a separate community facilities building containing change rooms, amenities, storage and a bus shelter.

DA261/13: Consent granted on 20/03/2014 for demolition of existing 25 metre pool and construction of a new water polo swimming pool, retaining wall, screening, landscaping, spectator seating for Swim Centre (DA0177/2013) - Andrew Boy Charlton Swim Centre

7. MANLY LOCAL ENVIRONMENTAL PLAN 2013

Clause 2.3 Zone objectives and land use table

The site is zoned RE1 - Public Recreation and the MABC, as a recreation centre (indoor) is a permitted use in the zoning. The installation of solar PV cells on the roof of the building, which are being installed for the building, are ancillary to that use and thus permitted with consent.

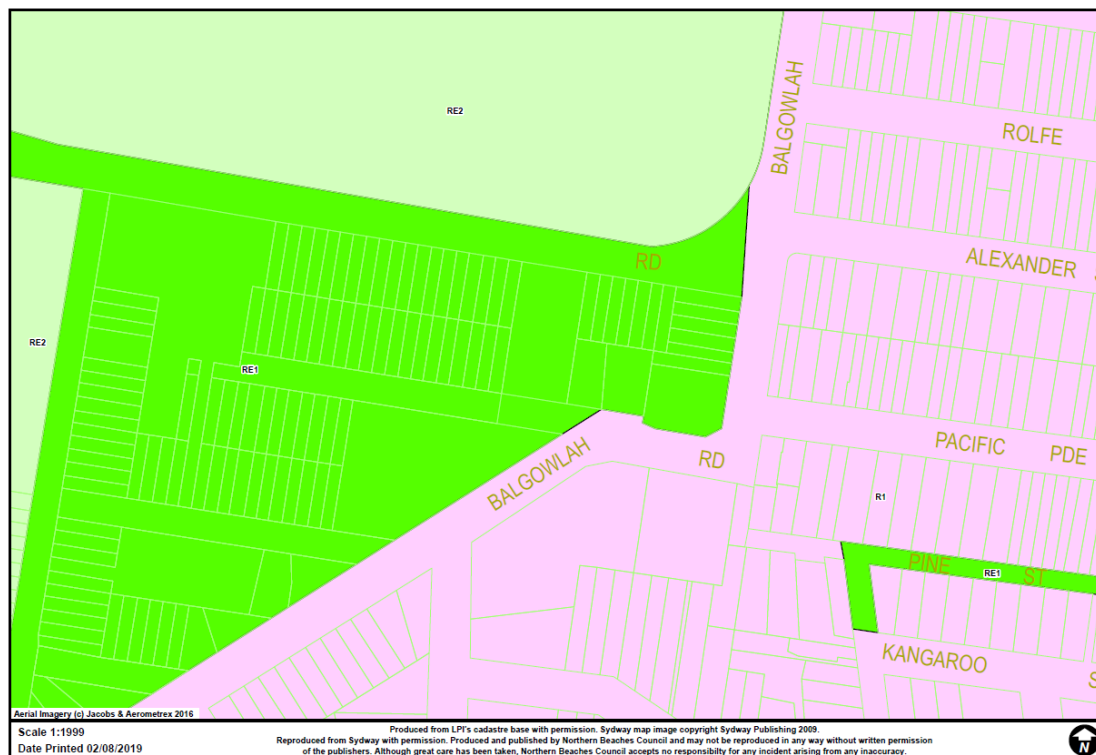


Figure 2: Extract of Zoning Map – Manly LEP 2013

Clause 4.3 Height of buildings

The site has no allocated height limit. The solar panels will sit directly on top of the roof structure (flush mount) and will not add additional height to the building itself.

8. MANLY DEVELOPMENT CONTROL PLAN

Council's Manly Development Control Plan provides a range of outcomes and controls which form the primary criteria control for development within the subject locality.

Part 3 – General Principles of Development

Section 3.4 Amenity (View, Overshadowing, Overlooking/Privacy, Noise)

The installation of Solar PV cells on the roof of the MABC will not cause amenity issues to surrounding neighbours. There will be no view loss, overshadowing or privacy issues, and noise related issues will only occur during the construction phase.

The issue of reflectivity has been examined, as this is likely to be of concern to some people, given that the MABC sits at the base of the hill with housing further up the hill to the south. Solar photovoltaic (PV) panels are designed to absorb light not reflect light. Solar PV panels are constructed of dark-coloured (usually blue or black) materials and are covered with anti-reflective coatings. Modern PV panels reflect as little as two percent of incoming sunlight, about the same as water and less than soil. Therefore, there are very few situations where the glass surfaces of solar PV systems will actually produce a glint (a momentary flash of bright light) or glare.

The roof panels of the MABC pool are angled north (with the exception of the flat western panel), and so the solar panels will be angled away from the closest residences. It should also be noted that the current roof colour of the MABC is white, which as a light colour can be reflective and since the building has been completed Council has not received any indication that this is an issue for residents further up the hill.

Section 3.5 Sustainability – (Greenhouse Energy Efficiency, Thermal Performance, and Water Sensitive Urban Design)

Manly DCP encourages the use of solar PV cells on building to encourage energy efficiency and reduce energy consumption. The installation of solar PV cells on the roof of the MABC will offset almost a quarter of the current electricity usage, will save Council over \$63,000 in electricity costs each year and will pay for itself within 7 years.

Section 3.8 Waste Management

A Waste Management Plan detailing how demolition and construction waste will be managed and removed has been attached to this application.

Section 3.9 Mechanical Plant Equipment

Additional mechanical plant equipment associated with the solar PV cells will be located within the existing plant room at the MABC.

Part 4 Development Controls and Development Types

Section 4.4 Other Development (all LEP zones)

4.4.1 Demolition - No demolition is proposed as part of this application.

4.4.2 Alterations and Additions – The application proposes only minor alterations to the fabric of the building which do not involve demolition.

4.4.3 Signage – No signage is proposed as part of this application.

4.4.4 Awnings – No awnings are proposed as part of this application.

9. MATTERS FOR CONSIDERATION UNDER SECTION 4.15 OF THE ENVIRONMENTAL PLANNING AND ASSESSMENT ACT, 1979

The provisions of any environmental planning instrument

The proposal is subject to the provisions of the Manly Local Environmental Plan 2013 and the relevant supporting Council policies. It is considered that the provisions of this environmental planning instrument have been satisfactorily addressed within this report and that the proposal achieves compliance with its provisions.

There are no other environmental planning instruments applying to the site.

Any draft environmental planning instrument that is or has been placed on public exhibition and details of which have been notified to the consent authority

There are no draft EPIs applicable to the site.

Any development control plan

The application has been prepared having regard to the requirements of the Manly DCP.

The proposal seeks to implement sustainability principles through the installation of solar PV. This is in accordance with the provisions of the DCP.

Any planning agreement that has been entered into under section 7.4, or any draft planning agreement that a developer has offered to enter into under section 7.4.

No matters of relevance are raised in regard to the proposed development.

Any matter prescribed by the regulations that apply to the land to which the development relates.

No matters of relevance are raised in regard to the proposed development.

Any coastal zone management plan (within the meaning of the Coastal Protection Act 1979).

No matters of relevance are raised in regard to the proposed development.

The likely impacts of that development, including environmental impacts on both the natural and built environments, and the social and economic impacts in the locality.

The installation of solar PV panels on the MABC will have negligible, if any impacts on the natural or built environment. There will be a positive social and economic impact as the reduction in electricity costs at the pool will allow Council to save ratepayers money in addition to leading the way in sustainable practices.

The suitability of the site for the development

The subject land is flat and unshaded and this suitable for the installation of solar PV cells

Submissions made in accordance with this Act or the regulations

This is a matter for Council in the consideration of this proposal.

The Public Interest

The proposal will not impact upon the environment, the character of the locality or upon the amenity of adjoining properties and will moreover enable council to practice sustainability and save ratepayers money. It is therefore considered to be within the public interest.

10. CONCLUSION

The principal objective of this development is to provide for the installation of solar PV cells on the roof of the MABC so as to achieve sustainability in accordance with Council's Community Strategic Plan 2018-2029 and satisfy the stated objectives of Council's Development Controls.

As the proposed development will not have any significant impact on the environment, scenic quality of the area or the amenity of the adjoining properties, the issue of Development Consent is requested.