EDINGLASSIE VILLAGE NEW RAC BUILDING
1-3 EMERALD STREET, EMU PLAINS

DA Statement

www.jhaservices.com Ph: (02) 9437 1000
Sydney | Brisbane
Level 23, 101 Miller St, North Sydney NSW 2060

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Document Control Sheet

Title	Edinglassie Village ESD DA Statement
Project	Edinglassie Village New RAC
Description	ESD DA Statement
Key Contact	Lawrence Yu

Prepared By

Company	JHA
Address	Level 23, 101 Miller Street, North Sydney NSW 2060
Phone	61-2-9437 1000
Email	Danny.Leslie@jhaengineers.com.au
Website	www.jhaservices.com
Author	Danny Leslie
Checked	Lawrence Yu
Authorised	Helen Li

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1. INTRODUCTION

This Ecologically Sustainable Design (ESD) report identifies and summarises the key ESD initiatives that will make up the overall approach to sustainable design for the Edinglassie Village project in Emu Plains, New South Wales. The development team is committed to maintaining a focus on sustainability throughout the phases of design, construction and operation/occupancy.

The report is a holistic and dynamic document which provides an assessment of applicable ESD strategies by which all stakeholders can review JHA's considerations and provide feedback for further discussion and review.

2. PROJECT INFORMATION

The site is situated in Emu Plains. This suburb of Sydney is located 58 km west of the Sydney CBD. Emu Plains lies in close proximity to the Blue Mountains and is located on the western side of the Nepean River. The site is defined by three streets, Troy Street to the West, the Great Western Highway to the North and Emerald Street to the East. The majority of land uses are residential along Troy and Emerald Streets. The segment of the Great Western Hwy that faces the site is commercial.

The project vision is to create a quality residential aged care facility that incorporates ESD principles into the design, construction and operational stages and contributes to the well-being of residents, staff and visitors as well as the well-being of the natural environment.

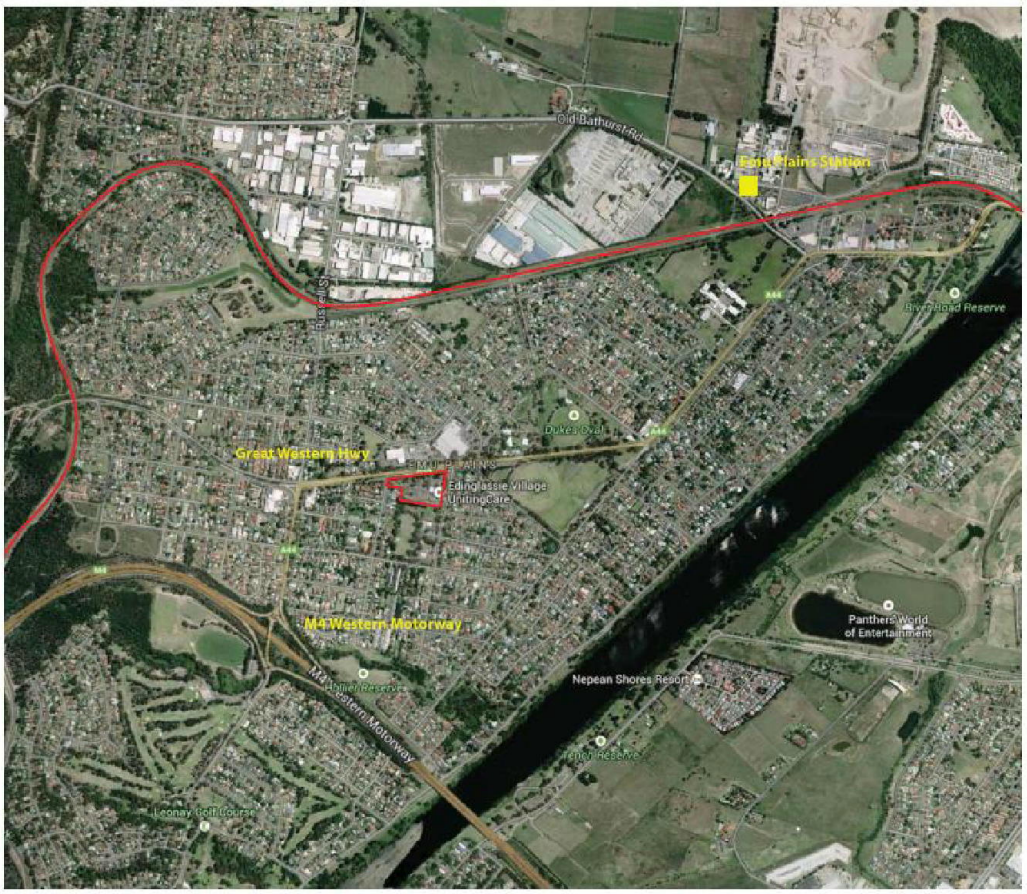

Figure 1 Arial View of Existing Site Location

3. ELECTRICAL ESD STRATEGIES

3.1 Submetering

Submetering is the installation and use of metering devices that have the capability to measure energy usage after the main utility meter. Submetering offers the ability to monitor energy usage for individual tenants, building areas, pieces of equipment or other loads individually to account for their actual energy usage.

Energy management is a burgeoning practice among companies. Proper energy management requires detailed information on how the energy is being used. For successful energy management, it is essential for facility managers to understand how and where energy is being consumed. Energy use submetering is applicable for independent living units only.

3.2 Lighting

3.2.1 Automation

Lighting automation in circulation areas by use of movement sensors will ensure that lighting remains off when no occupancy is sensed. This minor feature of the overall lighting scheme will significantly reduce energy used for lighting purposes in common areas.

3.2.2 LEDs

Luminaires will be predominantly LED throughout. We project that this will contribute to an estimated 15% reduction from lighting power density allowances specified in BCA Section JC.

3.2.3 External Lighting

All external lighting will be controlled by a daylight sensor and timers.

3.3 Photovoltaic Panels

There are existing solar panels throughout the site. Some of this solar energy will be applicable for the new building. The existing PV system size is approximately 50kW and is feeding independent living units outside the demolition zone of the current stage. For the new RAC building, it is likely that the development can pursue a 20kW system based on the available roof space.

4. MECHANICAL ESD STRATEGIES

4.1 Air Conditioning

Air conditioning and ventilation system will be provided in compliance with NCC Section J requirement. The air conditioning system will be an environmentally friendly variable refrigerant flow (VRF) heat recovery system. All air conditioning units not required to run continuously will be operated on time clock or run-on timer.

4.2 Toilet Exhaust

The toilet exhaust system to small WCs and disable toilets will be interlocked with lighting switches to ensure that exhaust system energy is only expended when lighting activation is engaged.

4.3 Laundry Room Exhaust

The laundry room exhaust fans will be interlocked with the dryers to ensure that exhaust system energy is only expended when the laundry drying facilities are actively in use.

4.4 Other Ventilation Fans

All other ventilation fans not required to run 24/7 will operate on time clock.

5. HYDRAULICS ESD STRATEGIES

5.1 Rainwater Collection

There may be an opportunity to collect roof water for landscaping usage if the investment in rain water tanks is deemed worthwhile. With limited space for above ground tanks, the underground option adds significant costs that may not be justifiable. Above ground budget for 50m3 tank system is $40,000 while a below ground system of the same size is $75,000

5.2 Plumbing Fixtures

The project will also feature water efficient taps, showers and toilets rated under the Australian government's Water Efficiency Labelling Scheme (WELS) as four stars or higher.

6. LANDSCAPE

Landscaping will feature the use of native or well adapted plants. The landscape design has been formulated to minimise the amount of potable water used for irrigation purposes. The landscaping will add a visual amenity to residents while also minimising and mitigating the development's contribution to stormwater runoff and the urban heat island effect. The landscaped areas will also provide habitat to a variety of local bird and insect species.

7. BUILDING ENVELOPE

The building envelope, including glazing, walls, roof and floors has been designed to comply with BCA Section J Building Envelope Requirements. The Section J Declaration is contained in Appendix A.

8. INDOOR AIR QUALITY

Volatile Organic Compounds or VOCs are harmful substances that, when exposed to occupants can lead to irritating symptoms and even serious long term issues such as cancer. The following materials will be low / no VOC for indoor applications.

- Adhesives
- Sealants
- Paints
- Coatings
- Flooring
- Furniture

9. APPENDIX - SECTION J DECLARATION

JHA

ABN 48 612 666 172

Sydney | Brisbane

Level 23, 101 Miller St
North Sydney NSW 2060

PO Box 3
North Sydney NSW 2059
Ph (02) 94371000

5 March 2018

Uniting
Level 4/ 222 Pitt Street
SYDNEY NSW 2000

Attention: **Mr J. Phillpott**

Dear John,

NCC Section J Part J1 and J2 Statement of Compliance

SUBJECT PREMISES : Edinglassie Village New RAC Building, 1-3 Emerald Street, Emu Plains

This NCC Section J declaration has been prepared for the Edinglassie Village development at Emu Plains.

The proposed class 9c aged care development is located in NCC climate zone 6.

We confirm that the proposed design can comply with all applicable requirements of NCC 2016 Section J, specifically:

- Part J1 Building Fabric
- Part J2 Glazing
- Part J3 Building Sealing
- Part J5 Air-Conditioning and Ventilation Systems
- Part J6 Artificial Lighting and Power
- Part J7 Hot Water Supply and Swimming Pool and Spa Pool Plant
- Part J8 Access for Maintenance and Facilities for Monitoring

Full Name of Designer:	Lawrence Yu
Qualifications:	BEng, MEngSci
Address of Designer:	JHA Level 23, 101 Miller Street, NORTH SYDNEY NSW 2060
Business Telephone No:	(02) 9437 1000
Name of Employer:	JHA

Yours sincerely,

Lawrence Yu
Senior Sustainability Engineer