

# Oxley Residential Development – Sustainability Summary Brief

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**Project No:** 22514

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## Project Scope and Sustainable Design Aims

This Sustainability Summary Brief has been prepared by Floth on behalf of Honeycombes Developments to outline the proposed best practice sustainability principles for the Oxley Residential Development project.

The proposed project includes 34 new townhouses and a community centre to benefit it's future residents in Oxley.

A primary aim of the new development will be to provide townhouses to the Oxley Residential Development with leading yet practical sustainable design for a sub-tropical climate.

Accordingly significant design work will be undertaken, and leading sustainability initiatives incorporated to firmly establish best practice thermal, energy, water and materials performance into the residential development.

## Sustainability Targets

For Oxley Residential Development project (Townhouses and community centre), QDCMP4.1v1.13, NCC 2019 volume 2 for townhouses, and NCC 2019 volume 1 Section J Energy Efficiency Architectural Deemed to Satisfy compliance for communal areas are proposed. Furthermore, the sustainable design for townhouses will target the following thermal performance:

- + **6 star NatHERS Star rating for individual Townhouses**

NatHERS – the Nationwide House Energy Rating Scheme– provides energy ratings for dwellings to achieve energy efficient, resilient and comfortable homes for the future that will also reduce the occupants' ongoing operating costs. A 6 Star NatHERS rating achieves a higher level of thermal comfort and energy efficiency, representing 24% energy reduction for heating and cooling compared to a 5-star NatHERS rating.



Additional ESD performance will be achieved by the holistic integration of best practice sustainability elements throughout the townhouse designs. Wherever possible the proposed sustainability elements will be integrated into each dwelling to achieve optimal thermal, energy, water and materials environmental performance outcomes.

### **ESD Strategies Summary**

The following summary outlines the ESD strategies and associated best practice initiatives proposed for the new residential development:

Thermal performance improvement strategies include:

- Light coloured roofs with solar absorption rating of 0.5 or less
- Individual Townhouses will achieve at least 6 Stars NatHERS star rating
- Insulated constructions to minimise thermal gains, losses and leakage to the external environment.
- Glazed windows and doors with optimised solar heat gain coefficient (SHGC) and visual light transmittance (VLT) to control solar ingress while benefiting daylight penetration and views.
- Passive solar design including shading of glazing areas to reduce solar penetration to be considered as required, informed by NatHERS thermal modelling approaches
- Ceiling fans in bedrooms and living areas as required, informed by NatHERS thermal modelling approach

Energy efficiency and future proofing strategies include:

- Digital utility metered solar PV system with battery storage and inverter optimised for each townhouse
- General purpose outlet (GPO) provided in garages or carports suitable for electric vehicle charging
- Heat pump hot water systems to be used
- Ducted kitchen rangehoods to be used
- Dishwashers with an energy consumption of no more than 245kWh per annum.
- Ducted air-conditioners to meet AS4755 demand response standard with at least a 5 star cooling energy rating (if provided)
- Energy efficient LED internal lighting
- All electric services enabling purchase and powering by Greenpower (no mains gas to the development)



Water conservation strategies include:

- Taps to bathrooms, kitchen and laundry to be minimum 3-star WELS rated that use no more than 6 litres per minute
- Low flow dual flush toilets to be minimum 4-star WELS rated that use no more than 4.5 litres per full flush and 3 litres per half flush
- All shower heads to be minimum 3-star WELS rated that use no more than 9 litres per minute
- A dishwasher with a water consumption of no more than 14 litres per use

Materials sustainability strategies include:

- Low emission low-VOC paints and floor finishes to be considered and/or used
- Low formaldehyde engineered wood products to be considered and/or used
- Local manufacturers and suppliers to be considered and/or used
- Use of sealant to all external door frames as required

The above ESD strategies are intended to be considered through the design of the new Townhouse development.