DEVELOPMENT PROJECT AT 61 BROOKES STREET, BOWEN HILLS

STATEMENT OF PROPOSED SUPERIOR DESIGN OUTCOMES

SUPERIOR DESIGN OUTCOME	SUPPORTING FACTS AND CIRCUMSTANCES
1.0 Sustainable Design and Architecture	
1.1 NatHERS 8 star rating	▪ Passive and active ESD principles incorporated into the project to achieve average of at least 8 star NatHERS rating to all units through considered design approach ▪ Places building at best practice and well in excess of current industry standard of 5 stars ▪ Benefits include ongoing sustainable building use and operation which results in lower energy consumption, reduced building carbon footprint and lower impact on global warming.
1.2 Construction impact	▪ Intentional design strategy to minimise basement and similarly limit extent of site excavation ▪ Site geology comprises extremely hard rock as evidenced by construction of adjacent site and supporting analysis ▪ Broader community benefits are: ▫ Limit construction impact of noise and vibration arising from excavation (for adjacent business, residents and funeral chapel) ▫ Minimise construction timeframes and remove potential to adjacent heritage premises
1.3 High ratio of per dwelling landscape amenity	▪ Significant quantum of landscape and open space amenity via large rooftop landscaping, 3 storey vertical gardens, podium planting and ground plane landscaping to deliver over 3.2m^2 per unit. ▪ Significant delivery over and above the following nearby approved projects which achieve 1.1m^2 to 1.2m^2 per unit: ▫ 63 Skyring Terrace, Newstead ▫ 237 Barry Parade, Fortitude Valley ▫ 25-29 Fortescue Street, Spring Hill ▪ Resident benefits are self-evident, whilst the broader community benefits include a more attractive and visually appealing building
1.4 Living walls and rooves	▪ Use of traditionally under-utilised urban spaces through incorporation of living walls and rooves ▪ Greening the facades and rooves of buildings contributes to reduction in heat loading, cleaner air, reduced noise and creation of urban habitat.
1.5 Ground level activation and CPTED	▪ Incorporation of multiple building elements which facilitate a highly activated address to Brookes Street and achieves CPTED outcomes. Elements include: ▫ Large retail / café uses over two levels to secondary frontage area (where such uses are generally not required) ▫ Resident gymnasium, pilates room and music /arts room to further activate the street

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2.0 Energy Use and Consumption	
2.1 Centralised energy consumption monitoring and management	▪ Building management system (BMS) to monitor and control mechanical, electrical and security systems and incorporate techniques to reduce waste and demand ▪ System to provide individual unit energy consumption data on a www interface to facilitate user awareness of energy use / cost and empowerment to manage and reduce consumption ▪ Use of EPCM contracts for PVT, HVAC integration, HWS, lighting for lower OPEX ▪ Preparation of a supporting Building Users Guide for building managers providing operational details of the BMS and principles surrounding waste management, recycling, energy and water efficiency.
2.2 Bulk electrical supply and metering	▪ Purchase electricity as a single bulk supply to capitalise on bulk purchase savings ▪ Focus to acquisition of certified green power to further reduce greenhouse gas impact of the development ▪ Sub-metering of electrical consumption linked to the BMS www interface
2.3 Air conditioning efficiency and control	▪ Utilise HVAC split system load lopping air conditioning specified as DRED type and linked to BMS / Energex for load and consumption control ▪ Systems to be individual controlled with usage monitoring data linked to the BMS www interface ▪ Use of inverter technology to minimise power usage ▪ Individual toilet exhaust to each apartment to minimise conditioned air loss through exhaust system
2.4 Lighting efficiency and control	▪ Average lighting will be provided with efficiency better tan 5.0 w/m^2 ▪ To ensure the lighting is not over-designed consuming excess raw materials and excess energy the lighting will be designed to meet the minimum appropriate requirements without excess spill or over lighting. ▪ A typical 80m^2 unit with 20% fluorescent iron core lighting and 80% incandescent lighting will have an efficiency of 15.2 W/m^2 (Approximately 26,400kwh over 15 years) ▪ The project will utilise 100% LED and electronic ballasted fluorescent lighting or better in the residences with an efficiency of 4.4w/m^2 (Approximately 7,700kwh per unit over 15 years) ▪ To provide greater flexibility for light switching, making it easier to light only occupied areas and thus reduce the environmental impact, the lighting control will be as follows: ▫ All non-public individual or enclosed spaces have individual switches; ▫ Switching function that is clear and easily accessible by building occupants and managers. ▫ The apartments will be provided with a room access control system that disables the apartment lighting when the room is not occupied.
2.5 Roof level solar and battery system	▪ Rooftop solar PVT linked to compact lithium ion storage batteries and a DC/AC rectifier unit to increase proportion of energy sourced through renewables

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	▪ Capture and store energy to feed the hot water system and rooftop energy consumption (pool heating and lighting) ▪ Deliver an 'energy neutral' rooftop
2.6 Car park natural ventilation	▪ Achieve natural ventilation to four (4) levels of podium car parking ▪ Avoids mechanical exhaust ventilation and significantly reduces building energy consumption of between $30,000 and $60,000 operating costs per year.
2.7 Hot water system	▪ Central gas hot water system linked to PVT ▪ Consumption metering for each apartment connected to BMS www interface
2.8 Thermal performance	▪ High level thermal performance has been achieved by the development incorporating: ▫ A high performance low E glazing system. ▫ The buildings orientation maximising the northern aspect, while treating west-facing units with deep balconies and operable screening. ▫ Deep balconies, sun-shading and overhangs providing protection from solar heat gain. ▫ High performance insulation in all external walls and ceiling spaces below an external roof. ▫ Ceiling fans in all living spaces and all bedrooms. ▫ Operable windows. ▫ Appropriate levels of glazing and shading to capitalise on the different winter and summer solar loads
2.9 Energy efficient appliances	▪ All of the following appliances supplied as part of the base building will have the following minimum MEPS rating: ▫ Air-conditioning cooling - 5 Star. ▫ Air-conditioning heating - 4 Star. ▫ Clothes dryer - 2 Star. ▫ Washing machine - 4 Star. ▫ Dish washer - 3 Star. ▫ Refrigerator / freezer - 4 Star.
2.10 Carbon reduction	▪ To reduce the amount of carbon dioxide that is discharged into the atmosphere by the operation of the development the following measures will be adopted: ▫ Energy efficient lighting. ▫ Energy efficient appliances. ▫ Occupancy control of apartments lighting and air-conditioning. ▫ Ceiling fans in all bedrooms and living spaces. ▫ Individual toilets exhaust system per apartment. ▫ Natural ventilation for all car parking.

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3.0 Community and Resident Engagement	
3.1 Public realm enhancement	▪ Creation of a public node / realm at the building frontage through: ▫ Seamless integration of public and private land and widening of the building entry to maximise the 'public realm' space ▫ Provision of seating, shelter and significant landscaping, to provide a climatically responsive and comfortable space
3.2 Public art	▪ Provision of dynamic architecture, including: ▫ Sculptural / structural elements to enhance the visual quality of the podium facades ▫ Detailed precast panel elements specifically to northern façade of podium and all frontages of the tower. ▪ Provision of public art opportunities in locations such as booster cupboard, letter-boxes and select walls on rooftop terrace. Engage with local artists to commission works.
3.3 Free public wifi	▪ Provision of free wifi to the following locations: ▫ Ground level public realm, retail and building foyer ▫ Rooftop for residents and their guests
3.4 Rooftop recreation	▪ The creation of a high quality recreation space for residents and public guests including: ▫ Yoga / exercise / stretching / well-being deck ▫ Swimming pool / recreation deck; ▫ Outdoor dining solutions ▫ Multiple lounge areas ▫ Communal fire pit ▫ Communal garden spaces / micro farming opportunities
3.5 Arts room	▪ Inclusion of the 'Arts Room', a large scale insulated volume located on the southern side of the podium used as a multi-purpose space offering a range of potential recreational activities for resident and guests including: ▫ Music rehearsal / performance / production ▫ Art creation / gallery space ▫ Film production / presentation ▫ Interactive tech activities – ie virtual golf / "Wii" or similar interactive computer games etc. ▫ Conference / meeting space ▫ General function space

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4.0 Ecology and Landscape	
4.1 Raingardens	▪ Provision of garden beds that use native plants and specialist soils to capture, filter and treat stormwater runoff from driveways or rooves ▪ Reduces impact on the local catchment and aids in educating residents of such potential environmental benefit
4.2 Herb and food gardens	▪ Provision of community gardens / eco-bank on rooftop terrace which achieves: ▫ Ability for residents to participate in gardening as both a hobby and a self-sustainable process to procure fresh food and obtain the associated health benefits ▫ Possible employment generator (note accepted rate of 2 FTE per 750m^2 of space).
4.3 Living green walls	▪ Greening the facades and rooves of buildings contributes to reduction in heat loading, cleaner air, reduced noise and creation of urban habitat