

Documentation of design and construction (suitability or evidence of suitability)

Project Name: Quay Waterfront	
Project address: 47 Shyring Terrace	Site Plan attached:
Prepared by: Anya English	
Date: 19/10/23	
Description of project: Quay waterfront is a 25 level luxury resort-style amenities residential building	
Site Classification/s: class 2 - accommodation with 2 or more sole-occupancy units	

Documentation of design and construction (suitability or evidence of suitability)		
Site preparation		
Site preparation	NCC / Australian Standards requirements	Compliant Performance solution
Earthworks	AS 3798 - 2007 Safe guard people from loss of amenity caused by structural behaviour from physical damage caused by structural damage.	Must sustain against all repeated and expected design actions inclusive of Rainwater, earthquake snow action
Site preparation		
Site preparation	NCC / Australian Standards requirements	Compliant Performance solution
Earth retaining structures	AS 4678 Safe guard people from loss of amenity caused by structural behaviour from physical damage caused by structural damage	Must sustain against all expected and repeated design action, wind action, rainwater action, earthquake action
Drainage	A Building including any associated site work is to be constructed in a way that protects people and other property from the adverse effects of redirected surface water	A drainage system for the disposal of surface water resulting from a storm having an annual recurrence Probability of 5% must convey surface water to an appropriate out fall and avoid surface water overflowing the building and 1-1. Must avoid the entry of surface water into building.

Site preparation	NCC / Australian Standards requirements	Compliant Performance solution
Termite risk management	Must comply with AS 3660.1 Durable notice permanently fixed materials that are not subject used entirely or combination of.	Durable notice fixed on meter box, termite management used/date of installation/where chemical used/installer recommendations.
Materials	Steel/aluminium Materials not subject to termite attack under 3660.1 Timber - in accordance with AS 3660.1 - Appendix D 3660.1 Appendix C	Steel, aluminium or other metals, concrete, masonry, fibre reinforcement cement, Timber
Footings and slabs		
Site classification		
Footings and slabs	NCC / Australian Standards requirements	Compliant Performance solution
Footings and slabs	Footings + slabs must be designed/constructed to withstand flotation, collapse or significant permanent movement caused from the action of hydrostatic, hydrodynamic, erosion wind and other.	Withstand against flotation, collapse, or significant permanent movement.

Footings and slabs	NCC / Australian Standards requirements	Compliant Performance solution
Moisture Barrier	Ensure occupants are safe from illness/injury from external moisture entering building/accumulation internal moisture in building drainage compliant with AS 3500.3	Surface water, resulting from a storm having an annual exceedance probability of 1% must not enter building drainage system for the disposal of surface water resulting from a storm having an annual exceedance probability of 5%. Must cover surface water to an appropriate embossed block polyethylene film - Polyethylene coated aluminium - Bitumen impregnated materials no less than 2.5mm thick.
Materials	Barriers to prevent moisture from air must have high resistance to moisture penetration + high resistance to damage during construction + high resistance to degradation by dissolved salts AS 2904-2 materials.	
Concrete and reinforcement	NCC / Australian Standards requirements	Compliant Performance solution
Concrete and reinforcement	Concrete construction AS 3600 Autoclaved aerated concrete AS 5146.1 + 5146.3 Post-installed + cast-in fastening AS 5146.	Concrete external walls that could collapse as concrete panels in a building having a rise in storeys of not more than 2 must comply with specification 8.
Materials	are non-combustible & used whenever a non-combustible material is required	- Concrete + autoclaved aerated concrete, mortar

entry of surface water into building must avoid the entry of surface water into building

Masonry		
Masonry	NCC / Australian Standards requirements	Compliant Performance solution
Masonry	The requirements of a apply in a class 2 building where a path of travel to an exit passes an external wall of a another sole-occupancy unit or a room not within a sole-occupancy unit must be constructed of concrete or masonry or be lined internally with a fire-protective covering	The lowest storey is constructed of masonry including the floor between it and the class 2 part of the building above.
Moisture Barrier	sole-occupancy unit must be safeguarded occupants from illness or injury and protect the building from damage caused by surface water and external moisture entering a building and the occupation of internal moisture in a building.	Concrete external mortar/brick are not water resistant + damp / excess moisture can lead to mould or internal damage. Silane sealers will be the best way to water proof.
Materials	Ashlar stone masonry must not be used in more than 2-store buildings	A lintel need not comply with it does not contribute to the support of a fire door, fire window or fire shutter and it spans an opening in masonry which is not more than 150mm thick and not more than 3m wide if the masonry is non-loadbearing or not more than 1.8m wide if the masonry is loadbearing

Framing/Structure		
Framing/Structure	NCC / Australian Standards requirements	Compliant Performance solution
Framing	Building is to withstand the combination of loads and other actions to which it may be reasonably subjected	where component has a calculated resistance coefficient of variation of less than 10%. then a minimum value of 10% must be used.
Materials	Residential + low rise steel framing: NASH Standard - Residential + low rise steel framing part 1 or part 2 Masonry - AS3700 Concrete - AS3600 Autoclaved aerated concrete - AS5146.1 Steel structure - AS4100 Timber Structures - AS1684.2 1684.33 1684.4	Timber or steel framed construction - Perimeter members must securely fixed to the adjoining structure and bedded in resilient compound or the joint must be caulked so that there are no voids between the framing members and the adjoining structure.

Roof and Wall Cladding		
Roof and wall cladding	NCC / Australian Standards requirements	Compliant Performance solution
Roof and wall cladding	must be compliant with AS2049 and fixed in accordance with AS2049 sarking AS4200.1 + AS2002 stop water penetration - class 2 + is to be constructed to prevent Penetration of water from the outside	weatherproofing - roof + external wall must prevent the penetration of water that could cause unhealthy or dangerous conditions or loss of amenity and undue dampness or deterioration of building element Roof coverings - must be compliant with AS2049 fixed in accordance with AS2050 sarking. Glazed assemblies resistant of water penetration - windows/sliding/sliding glazed doors with a frame adjuster lowers/shop fronts (window walls with core piece framing)
Materials	Roof tiles - AS2049 metal sheet roofing compliant with ISG2.1 plastic sheet roofing + terracotta fibre cement and timber slates and shingles designed and installed in accordance with AS4597 sarking type materials must comply with AS4200.1 + AS2002 materials for resistance water penetration	Roof must be covered with either roof tiles, metal sheeting, plastic sheets, terracotta, fibre cement and timber slates, external waterproofing membrane. Sarking type material.

Glazing		
Glazing	NCC / Australian Standards requirements	Compliant Performance solution
Glazing Breaching and is Protected or Involved in a way that will reduce the likelihood of human impact with complying with AS 2047	Glazing is to be installed in a building to avoid undue risk of injury to people glazing in a building should not cause injury to people due to its failure or people impacting with it because they did not see it. Glass installation that are at being subjected to human impact must have glazing that if broken on impact will break in a way that is not likely to cause injury to people and results a reasonably foreseeable human impact without	must perform adequately under all reasonably expected design actions and be designed to sustain local damage, with the structural system as a whole remaining stable and not being damaged to an extent disproportionate to the original local damage and avoid causing damage to other properties -
Materials	Lift shaft vision panels more than 65,000mm ² , door panels + lift shafts, laminated glass, toughened/laminated glass, annealed glass with security polyester film coating, safety wire glass, polycarbonate sheet.	laminated 10mm (0.76mm interlayer) toughened/laminated 10mm (0.76mm interlayer) Annealed glass with security polyester film coating 10mm Safety wire glass - N/A polycarbonate sheet - 13mm

Fire Safety		
Fire Safety	NCC / Australian Standards requirements	Compliant Performance solution
Fire Safety	Automatic fire detection + alarm systems in a building containing an atrium must comply with AS 1670.1 Smoke detection system 1668.1 comply with 1670.4.	-Smoke detection system must not operate at an obscuration level not greater than 0.5% p/m with compensation for external airborne contamination as necessary Alarm systems
	A performance-based design brief (PBD) must be completed as it defines the scope of work for the fire engineering analysis.	Performance-based design brief (PBD) must involve all stakeholders relevant to the building design and outline the fire strategy to be adopted, must cover the fire safety strategy for the building outlining the philosophy and approach that will be adopted to achieve the required level of performance
	Occupants in a building must be protected from a fire with exits isolated from fire	The fire safety system installed in the building, fire brigade intervention, the number of storeys passed through by the exits must be fire-isolated from the occupants of the building in the case of a fire.

Access/Stairs/Lifts/Ramps		
Access/Stairs/Lifts/Ramps	NCC / Australian Standards requirements	Compliant Performance solution
Access	Carparking is to be provided for people with a disability for safe access A building is to provide as far as is reasonable safe and equitable and designated access for people to the service and facilities	carparking spaces must be provided to the degree necessary to give equitable access for carparking and designated and easy to find.
	A required fire-isolated stairway, including any associated fire-isolated passageway or fire-isolated ramp serving any storey above an effective height of 25m. AS1668.1	an automatic air pressurisation system for fire-isolated exits in accordance with AS1668.1 open balconies or access ramps.
Materials	people can walk safely to within a building, having safe gradients stairways and ramps must have slip-resistant walking surfaces	Gradient no steeper than 1:8 non-combustible materials

Ancillary Provisions		
Ancillary Provisions	NCC / Australian Standards requirements	Compliant Performance solution
Accidental locking in small spaces	Any refrigerated or cooling chamber strong-room and vault or the like that is capable of accommodating a person is to have safety measures to facilitate escape and for alerting people outside such a space in the event of an emergency	Any cooling room at sufficient size for a person to enter must have adequate means of communicating with or alerting other occupants in the building in the case of an emergency and have a door which is of adequate dimensions to allow occupants to readily escape and open from inside without key
Combustion Heating appliances	Combustion appliances using controlled combustion located in a building are to be installed in a way which reduces the likelihood of fire spreading beyond the appliance	Where provided in a building a combustion appliance must be installed to withstand the temperature likely to be generated by the appliance and so that it does not raise the temperature of any building elements
Bushfire Prone Areas	Safeguard occupants from injury from the effects of a bushfire and protect buildings from the effects of a bushfire and facilitate temporary shelter for building occupants who may be unable to readily evacuate the building prior to a bushfire	Must be designed to reduce the risk of ignition from a design bushfire with an annual exceedance probability not more than 1:100 and take account of the assessed duration and intensity of the fire action of the design bushfire and be designed to prevent internal ignition of the building and its contents and maintain the structural integrity of the building for the duration of the design bushfire.

Energy Efficiency		
Energy Efficiency	NCC / Australian Standards requirements	Compliant Performance solution
	A Building must reduce the energy consumption and energy peak demand of key energy using equipment	The total heating load of the habitable rooms and conditioned spaces in a sole-occupancy unit of a class 2 part of a building must not exceed the heating load limit. The total cooling load of the habitable rooms and conditioned spaces in a sole-occupancy unit of a class 2 of a building must not exceed the cooling load. The total thermal energy load of the habitable room and conditioned spaces must not exceed the thermal energy load.
	Reduce the green house gas emissions that occur as a result of a buildings energy consumption and energy source	For common area of class 2 it is determined that the annual greenhouse gas emissions of the proposed building are not more than the annual greenhouse gas emissions of a referenced building when the proposed building is modelled with the proposed services and as the reference building.
	for sole-occupancy unit 2, improve occupant health and amenity by mitigating the impact of extreme hot and cold weather events and energy blackouts.	in climate zones 3, 4, 5, 6, 7 + 8 has a heating load less than or equal to that of a reference building and 120% of JP2.

Health and Safety

Natural light is to be provided in all habitable rooms by windows.

Ventilation is to be provided in all habitable rooms. Shower, sanitary compartment, bathroom, shower + laundry water to be prevented from penetrating behind fittings + linings or concealed spaces.

Consultation	-Movers - hire of new men for higher level construction -Gross - is it grossing to hold against human impact. -alarm systems / smoke alarms -materials that used are termite and mould prevented.
Policies	- HSEPOL001 Environmental management and sustainability policy - HSEPOL002 Risk management policy - HSEPOL004 contractor management - HSEPOL008 hazardous substances Policy HSEPOL007 first aid policy - HSEPOL010 induction and further training policy - HSEPOL012 manual handling policy - HSEPOL013 mobile phone policy - HSEPOL014 personal protective equipment policy - HSEPOL016 workplace wellness policy - HSEPOL019 workplace health and safety policy.

Procedures

HSEBP000 - Access/Egress - workers must provide access from scaffold	
HSEP001 - Sorebars	
HSEP002 - Basejacks.	
HSEP003 - Stagger requirements	
HSEP004 - Transoms + ledgers	
HSEP005 - Boxing out a bay	
HSEP006 - Build ladder	
HSEP007 - Ladder beams	
HSEP008 - Heal + toe braces	
HSEP009 - Wall ties	
HSEP013 - Rafter ties	
HSEP014 - installation of containment	
HSEP015 - construction stair	
HSEP016 - stretcher	
HSEP020 - working in the heat	
HSEP024 - Hilti dust removal system	
HSEP028 - installation of bolt down handrail	
HSEP031 - Scaffold inspections	
	HSEP033 - damaged/non-compliant equipment
	HSEP047 - Working near electrical powerlines.

Issues to be addressed and consultation				
Issue	Who to consult	Improvements for consideration	Feedback following consideration	Supporting Resources
Is there enough workforce	Nichelle	hire 3 more men to complete build of higher levels	2 more blokes added. 1 casual will have more work.	N/A.
Glass is graded for levels	R.L.	get the glass safe for use on high levels	Specs will be delivered with glass	N/A.
Is there alarm systems organised	R.L.	smoke detectors alarm systems	invoice sent + added to specifications	N/A.
Materials used reported terminate prevention	R.L.	steel to be used	steel is to be used. in specification	N/A.