



SECTION 5

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5.1 Dwelling mix and flexible housing

Objectives

- O1. Provide a range of housing types and sizes to support diverse households including single person families, multi-generational families, group households, students and seniors.
- O2. Ensure for equitable access to new housing and opportunities for culturally and socio-economically diverse groups.
- O3. Encourage the design of buildings that are adaptable and flexible to accommodate residents' changing housing needs over their lifetimes.
- O4. Deliver a place-based dwelling mix that suites the needs of the Punchbowl and Wiley Park residents.

Principles

- P1. Encourage a diversity of housing that meets the needs of the Punchbowl and Wiley Park residents to cater to different social groups.

Controls

- C1. The following dwelling mix is required for residential flat buildings and shop top housing developments containing 20 or more dwellings:
 - a) Studio: 5-10%.
 - b) 1 bedroom: 10-30%.
 - c) 2 bedroom: 40-75%.
 - d) 3 or more bedroom: minimum 10%.
- C2. The dwelling mix requirements may be altered only if the development serves the purpose of public housing or if the applicant represents a community housing or non-profit organisation.
- C3. Residential flat buildings should provide accessible apartments for people with a disability and who are elderly and family sized apartments that have level and easy access to adjoining communal space. These apartments should be located at the lower levels of the building to provide ease of access to the street.



Bellevue Hill Apartments, NSW, Glyde Bautovich
(Source: Brett Boardman)



5.2 Parking

5.2.1 On-site parking

Objectives

- O1. Promote sustainable transport and limit vehicular movements by restricting private parking and facilitating increasing access to, and use of, communal modes of transport within the Precinct.
- O2. Require a lower minimum parking rate in the Local Village 'Core' near the Punchbowl and Wiley Park Metro stations, with a slightly higher minimum parking rate outside of the Local Village 'Cores' to minimise a reliance on private motor vehicle trips.

Principles

- P1. Encourage basement vehicular parking instead of at-grade or above ground parking.
- P2. Provide flexibility for the efficient use of car parking in development by allowing off-site users to use car parking.
- P3. Where provided, design above ground car parking so that it can be adapted to alternate uses over time.
- P4. Consider the location of car park and service vehicle entrances and exits to ensure the amenity of public domain is maintained and improved where possible.
- P5. To facilitate adaptation of car parking to other uses in the long term, above ground car parking is to remain as part of the common property and not part of, or attached to, individual strata units.



Riverside Quay, Southbank, VIC, by Architectus (Source: Architectus)



Controls

- C1. All car parking within the Precinct must be provided in accordance with the rates as specified in Table 6 and Figure 49. If a land use is not included in Table 6, the car parking rates in [Chapter 3.2 of the CBDP 2023](#) will apply.
- C2. Parking for non-residential uses, and non-staff related parking can be considered collectively and be shared if parking is accessible to the public and the hours of use have different peak demand times.
- C3. If the total Gross Floor Area (GFA) of retail premises exceeds 2,000m², a Transport Impact Assessment for the development proposed is to be prepared and submitted.
- C4. Any car parks containing more than 50 spaces must provide a minimum 10% of spaces for electric vehicle fast charging.
- C5. Accessible parking is required to be designed and constructed in accordance with Chapter 3.2-Parking of the CBDP 2023.

Land Use	Size/ Description	Inside Punchbowl and Wiley Park Village Centre Core		Outside of Punchbowl and Wiley Park Village Centre Cores	
		Minimum car parking rate	Maximum car parking rate	Minimum car parking rate	Maximum car parking rate
Detached dwelling		N/A	1 space per dwelling	N/A	1 space per dwelling
Residential flat buildings/ Shop top housing	Studio	0	0.5 space per dwelling	0	0.75 space per dwelling
	1 Bedroom	0	0.5 space per dwelling	0.2 space per dwellings	0.75 space per dwelling
	2 Bedroom	0.25	1 space per dwelling	0.5 space per dwellings	1.5 spaces per dwelling
	3 Bedroom	0.75	1.5 spaces per dwelling	1 space per dwellings	2 spaces per dwelling
	Visitor	1 per 20 dwellings	1 space per 10 dwellings	1 space per 10 dwellings	1 space per 5 dwellings
Office premises	N/A	0	1.25 spaces per 1000m ²	1 space per 100m ²	2 spaces per 100m ²
Retail premises	Shops	0	1.25 spaces per 100m ²	1 space per 100m ²	2 spaces per 100m ²
Education establishments	Schools, Universities, TAFE	0	1.25 spaces per 100m ²	1 space per 100m ²	2 spaces per 100m ²
All other land uses	N/A	Refer to Chapter 3.2- Parking of the CBDP 2023			

Table 6. Car parking requirements for the Punchbowl and Wiley Park Precinct 'core' and outside of 'core' areas.

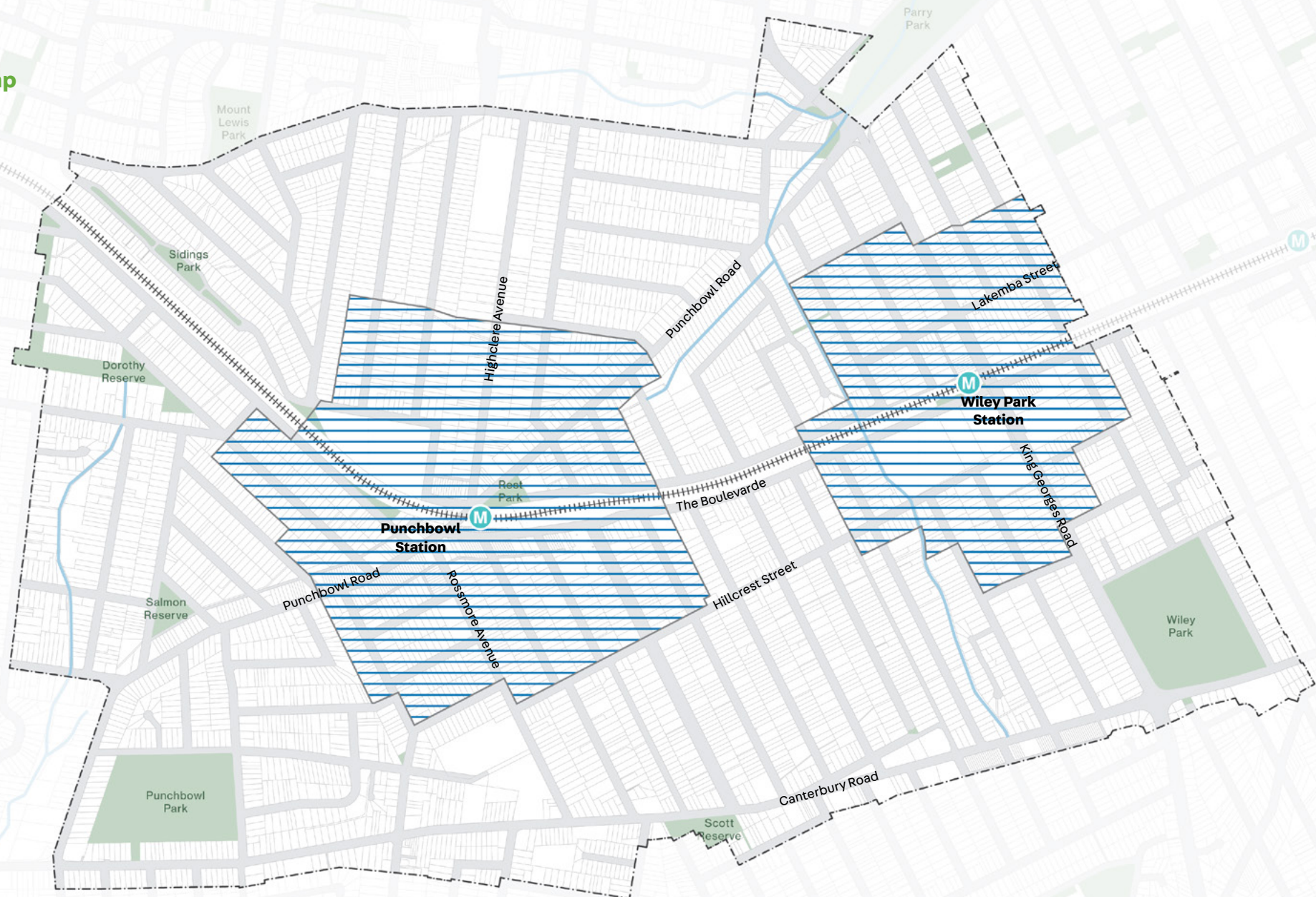


Car Parking Map

Legend

- Application of DCP
- Core car parking areas

Figure 49. Parking map





5.3 Underground floor space

Objectives

- O1. To facilitate large floorplate uses underground while maximising activation and permeability at street level.

Principles

- P1. Uses permitted for underground floor space generally require large floor areas, including neighbourhood supermarkets, larger floorplate retail premises over 1000m² GFA, gym and entertainment facilities.
- P2. Larger sites can accommodate the above mentioned uses as long as it is demonstrated with improved streetscape and public domain impacts.
- P3. The underground uses should not expand beyond the building footprint to ensure that deep soil planting and open space in setback areas are maintained.
- P4. Entries to the underground floor space should have an appropriate, active, ground floor frontage.

Image - Riverside Quay, Southbank, NSW, by Architectus (Source: Architectus)





5.4 Sustainability

5.4.1 Urban cooling and environmental sustainability

Overview

Urban heat or the Urban heat Island effect refers to the higher temperatures experienced in urban areas compared to rural or natural areas. As more development occurs, the build-up of heat in the environment occurs through heat being trapped in streets, increased hard surfaces, reduced vegetation and heat from air conditioning units.

Objectives

- O1. To reduce the contribution of development to urban heat.
- O2. To improve comfort for residents, workers and visitors in the local urban environment.
- O3. To improve the passive comfort of dwellings and reduce the reliance on mechanical systems for amenity.
- O4. To reduce the greenhouse gas emission release to the atmosphere through leakage, or improper disposal, of synthetic refrigerant gases with high Global Warming Potential (GWP).

Controls

- C1. Glazing in the external facade of an enclosed balcony or wintergarden must have a solar absorption of less than 10%.
- C2. Solar absorption of glazing must be marked on plans, and verified through inclusion of window specifications with DA.
- C3. All new air conditioning and refrigeration equipment are to use refrigerants with a GWP of less than 10 if the equipment can be supplied on similar terms to conventional systems. Confirmation prior to the release of the construction certificate is required.
- C4. Solid fuel heating and cooking systems are not permitted in any development.
- C5. Gas cooktops, gas ovens or gas internal space heating systems are not permitted in any residential development. Instead, electric systems must be installed and clearly marked on development application plans.
- C6. Basement carparks must be contained within building footprints and allow for deep soil beneath forecourts and courtyards for large canopy tree planting.

The compliance of a Development Application with the controls in 5.4 is to be shown on the drawings and plans submitted with the Development Application and included in the Statement of Environmental Effects.

Image - The Langston Sydney, NSW, by Architectus (Source: Brett Broadman)





5.4.2 Reduction of the Urban Heat Island Effect

Objectives

- O1. To minimise the reflection of solar heat downward from the building façade into private open space or the public domain.
- O2. To reduce the contribution of development to urban heat and to improve user comfort in the local urban environment.
- O3. To avoid or minimise the impact of heat rejection from air conditioning and refrigeration systems on the urban heat island effect and user comfort in private open space and the public domain.

Controls

- C1. The extent of the vertical façade of street walls (or if no street wall, as measured from the first 12 metres from the ground plane) that comprise Reflective Surfaces must demonstrate a minimum percentage of shading as defined in Table 7 as calculated at the relevant time of year in Table 9 and Table 10.
- C2. The extent of the vertical façade of the tower (above the street wall or if no street wall, as measured above the first 12 metres from the ground plane) that comprise Reflective Surfaces must demonstrate a minimum percentage of shading as defined in Table 8 as calculated at the relevant time of year in Table 9 and Table 10.
- C3. Compliance with C1 and C2 above is demonstrated on 21 December on the eastfacing façade at 10 AM, northeast and southeast facing façade at 11.30 AM, north-facing façade at 1 PM, northwest and southwest facing façade at 2.30 PM and the west-facing façade at 4 PM as shown in Table 9.
- C4. Compliance with C1 and C2 above is demonstrated on 21 July on the northeastfacing façade at 10 AM, north northeast facing façade at 11.30 AM and 1 PM, and northwest facing façade at 2.30 PM and 4 PM as shown in Table 10.
- C5. Shading may be provided by:
 - a) External feature shading with non-reflective surfaces.
 - b) Intrinsic features of the building form such as reveals and returns.
 - c) Shading from vegetation such as green walls, where requirements for upkeep is covered by a positive covenant.
- C6. Where it is demonstrated that shading cannot be achieved in accordance with C1-C4, development must provide:
 - a) A maximum external solar reflectance as defined in Table 8 is required for all Reflective surfaces;
 - b) Applicants must provide elevations illustrating facade surface areas, indicating the location of any shading devices and external finishes, and the solar reflectance value of the cladding;
 - c) Applicants must submit technical information that verifies the solar reflectance value of the cladding; and
 - d) Additional deep soil requirements to offset and reduce urban heat. The additional requirements will be determined by Council on a case by case basis.

The compliance of a Development Application with the controls in 5.4 is to be shown on the drawings and plans submitted with the Development Application and included in the Statement of Environmental Effects.



C7. Shadow diagrams must be submitted with the development application quantifying the extent of shading at 10 AM, 11.30 AM, 1 PM, 2.30 PM and 4 PM on 21 December and 21 June for each relevant façade. Shadows from existing buildings, structures and vegetation are not considered in the calculations. These shadow diagrams are required in addition to, and not instead of, the requisite shadow diagrams to assess solar amenity and compliance with ADG requirements. Note: Refer to Table 9 and Table 10 for sun angles corresponding to shading reference times. Calculation of RSR for each relevant façade must also be submitted with the Development Application.

- C8. Where surfaces on rooftops or podiums are used for communal open space or other active purposes, the development must demonstrate at least 50% of the accessible roof area complies with one or a combination of the following:
- Be shaded by a shade structure, or/and;
 - Be shaded by a solar panel or/and;
 - Be covered by vegetation consistent with the controls on Green Roofs or Walls or/and;
 - Provide shading through canopy tree planting, to be measured on the extent of the canopy cover 2 years after planting.

Part A - Street Wall			
Reflective Surface Ration (RSR)	<30%	30-70%	≥70%
Minimum Shading (%)	0	1.5*RSR-45	75

Part B - Tower			
Reflective Surface Ration (RSR)	<30%	30-70%	≥70%
Minimum Shading (%)	0	0.8*RSR-24	75

Table 7. Shading Requirements

Reflective Surface Ration (RSR)	<30%	30-70%	≥70%
Maximum External Solar Reflectance (%)	No Maximum	62.5-0.75*RSR	10

Table 8. Maximum External Surface Reflection

Facade Orientation	Sun Angles - 21 December (Summer Solstice)
East ± 22.5°	10 am AEDT Sun Elevation: 51° Azimuth: 66°
Northeast / Southeast ± 22.5°	11:30 am AEDT Sun Elevation: 69° Azimuth: 66°
North ± 22.5°	1 pm AEDT Sun Elevation: 80° Azimuth: 352°
Northeast / Southeast ± 22.5°	2:30 pm AEDT Sun Elevation: 67° Azimuth: 290°
West ± 22.5°	4 pm AEDT Sun Elevation: 48° Azimuth: 272°

Table 9. Sun Angles during Summer Solstice



Facade Orientation	Sun Angles - 21 July (Winter Solstice)
Northeast $\pm 30^\circ$	10 am AEDT Sun Elevation: 28° Azimuth: 32°
North northeast $\pm 22.5^\circ$	11:30 am AEDT Sun Elevation: 35° Azimuth: 9°
North northwest $\pm 22.5^\circ$	1 pm AEDT Sun Elevation: 30° Azimuth: 343°
Northwest $\pm 22.5^\circ$	2:30 pm AEDT Sun Elevation: 25° Azimuth: 321°
Northwest $\pm 22.5^\circ$	4 pm AEDT Sun Elevation: 12° Azimuth: 304°

Table 10. Sun Angles during Winter Solstice

- C9. Where surfaces on rooftops or podiums are not used for private or public open space, for solar panels or heat rejection plant, the development must demonstrate the following:
- a) Materials used have a minimum solar reflectivity index (SRI) of 82 if a horizontal surface or a minimum SRI of 39 for sloped surface greater than 15 degrees.
 - b) 75% of the total roof or podium surface be covered by vegetation.
 - c) A combination of (a) and (b) for the total roof surface.
 - d) Applicants must provide a plan illustrating all roof surface areas, indicating the location of any green roofs, flat mounted PV panels, and the SRI value of the roofing.
 - e) Applicants must submit technical information that verifies the SRI performance of roofing.
- C10. Residential apartments within a mixed-use development or residential flat building must incorporate efficient heating, ventilation and cooling systems which reject heat from a centralised source on the upper-most roof.
- C11. No heat rejection units shall be located on the street wall frontage on the primary street.





5.4.3 Energy efficient (BASIX affected buildings)

Objectives

- O1. Promote sustainable development which uses energy efficiently and minimises non-renewable energy usage during the construction and use of buildings.
- O2. Ensure all new developments to actively contribute to the collective effort of reducing energy consumption throughout the Precinct.
- O3. Decrease dependency on the main grid energy supply within the Precinct by implementing alternative energy sources and strategies.

Controls

- C1. For developments not covered by BASIX, compliance with the energy efficiency provisions of the Building Code of Australia (Section J) is mandatory. A Section J report, along with annotated plans demonstrating compliance with fabric and service requirements, must be submitted.
- C2. All development not subject to BASIX must issue documentation from a suitably qualified consultant is to be submitted with Development Applications demonstrating the measures that will be used to achieve the relevant energy efficiency scheme rating. Evidence of a formal commitment agreement or registration with the relevant scheme administrator is required to be submitted prior to the issuing of a construction certificate.
- C3. All new developments must future proof the integration of smart technologies for the purposes of monitoring energy usage (e.g. Lighting, heat, ventilation and air conditioning).
- C4. Verification of energy target achievement requires the submission of a signed Commitment Agreement from the National Australian Built Environment Rating System (NABERS).
- C5. Targets for mixed-use developments must be tailored to the specific mix and proportion of land uses, determined on a site-specific basis and at the discretion of the Council.





5.4.4 Water efficiency

Objectives

- O1. Reduce the consumption of drinking water.
- O2. Increase the amount of water harvested from rainwater and urban stormwater runoff for use.
- O3. Increase resilience to the impacts of water scarcity by providing sustainable alternative water supplies.
- O4. Decrease the technical and financial barriers to retrospective upgrades to buildings to connect to future non drinking water supply infrastructure.

Controls

- C1. All new developments must include submetering and future proof for smart technologies to minimise water consumption.
- C2. Cooling towers must be designed in accordance with best practice guidelines to reduce water consumption.
- C3. All development not subject to BASIX will need to incorporate the following water-saving measures:
 - a) Plumbing fixtures are to meet minimum Water Efficiency Labelling and Standards (WELS) Scheme Standards including 4 star rated showerheads, 4 star rated toilet cisterns, 5 star rated urinals and 6 star rated water tap outlets.
 - b) Appliances (dishwashers, clothes washers etc) are to be 5 stars (WELS Scheme) or better rated for water use efficiency.
- C4. All development not subject to BASIX must issue documentation from a suitably qualified consultant is to be submitted with development Applications demonstrating the measures that will be used to achieve the relevant water efficiency scheme rating. Evidence of a formal commitment agreement or registration with the relevant scheme administrator is required to be submitted prior to the issuing of a construction certificate.
- C5. Verification of energy target achievement requires the submission of a signed Commitment Agreement from the National Australian Built Environment Rating System (NABERS).
- C6. Targets for mixed-use developments must be tailored to the specific mix and proportion of land uses, determined on a site-specific basis and at the discretion of the Council.



5.4.5 Electric Buildings

Objectives

- O1. To minimise the reliance on the consumption of fossil fuels in new development.
- O2. To prevent indoor pollutants associated with combustion.

Controls

- C1. All new mixed-use development, residential development, commercial premises, tourist and visitor accommodation, health services facilities and educational establishments are to use only electricity for all energy requirements associated with normal operations.
- C2. The use of fossil fuels for any purpose is not to exceed 1% of the projected annual energy demand for the building. **

* Note: BASIX certification for residential developments at a DA stage must not rely on gas for heating or hot water to comply with Control C1.

** Note: This control excludes emergency services and emergency infrastructure such as pumps and generators utilised in the case of emergencies (flood, fire, etc). 1% of projected annual energy demand for fossil fuels allows for the use of diesel for standby generation.





5.4.6 Solar energy requirements

Objectives

- O1. Maximise the on-site collection of renewable energy.
- O2. Minimise the consumption of electricity generated from non-renewable resources.

Controls

- C1. Development must include the installation of a solar PV system of no less capacity than:
 - a) For sites with multiple electricity meters; rooftop photovoltaic (solar) panel system is connected to the common meter and the system is sized to offset 90-100% of estimated base building maximum demand.
 - b) For sites with a central electricity meter; the rooftop photovoltaic (solar) panels systems is sized to offset 30% of estimated maximum demand.
- C2. With any DA plans submitted, the roof plan must show the area(s) allocated to PVs and necessary access requirements for cleaning and routine maintenance. PV solar panels must be setback at least 2m from the edge of the build roof or parapet.

