

2020-21 Mental Health and Alcohol and Other Drugs Facilities Renewal Fund

Environmental sustainability

requirements and checklist

This list of business as usual sustainability requirements is a sub-set of the requirements in VHBA’s *Guidelines for sustainability in capital works* that are most applicable to the types of projects supported through the Mental Health & Alcohol and Other Drugs Facilities Renewal Fund. Applicants are encouraged to refer to VHBA’s *Guidelines for sustainability in capital works* for broader environmental sustainability principles and other initiatives that may be applicable.

The checklist below is to be completed and included in your submission. Initiatives which are included in the proposal are to be marked “Yes”. Initiatives which are not be applicable can be marked “NA”. The submission is to provide reasoning for any initiatives that are applicable but are not included.

| **Environmental sustainability initiative** | **Included in proposal** |
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| **Systems, processes and guidance** |  |
| The building is to be commissioned in compliance with the Chartered Institute of Building Services Engineers (CIBSE) commissioning code M. |  |
| A building user guide is to be provided to the operator detailing: * energy and environmental strategy for the building
* modelled performance targets
* building monitoring system
* details of sustainable features and any operational requirements.
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| Provide VHBA, via email to **edms@health.vic.gov.au**, the environmental data management system (EDMS) requirements template (see Appendix 5 of VHBA’s sustainability guidelines) if the floor area, building use, or energy supply of the asset changes. |  |
| **Indoor environment quality** |  |
| Design and internal layout to provide daylight for occupied functional areas (all areas likely to be occupied for at least one continuous hour per day). |  |
| Internal layout to reduce excessive solar heat gain for patient areas. |  |
| Treat doorways and other external openings to manage prevailing winds and draughts. |  |
| Use of electrolysed water systems or equivalent for surface cleaning in commercial kitchens. |  |
| Design for a potential wider and more variable internal temperature band (such as 19 to 26° Celsius) adjusted for seasonal variation, unless contraindicated for clinical or operational reasons. |  |
| All paints, adhesives, sealants, wall and ceiling coverings to meet the following total volatile organic compounds (TVOC) in g/L of ready to use products: * Interior wall and ceiling paint – 5g/L
* General purpose adhesives and sealants, trims, varnishes, wood stains, primers, sealers and prep coats – 75g/L
* One and two pack performance coating for floors, acoustic sealants, architectural sealant, waterproofing membrane and sealant, fire retardant sealants and adhesives, structural glazing adhesive, wood flooring and laminate adhesives and sealants – 250g/L
* Carpets: 0.5mg/m2/hour under ASTM D5116 test protocol for Total VOC; 0.05mg/m2/hour under ASTM D5116 test protocol for 4-PC
* All plywood, particleboard, MDF and LVL to meet formaldehyde limits of no more than 1mg/L
* All high pressure and compact laminates to meet formaldehyde limits of no more than 0.1 mg/m²hr
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| Acoustic treatment to meet best practice guidelines for noise levels, reverberation and acoustic separation as per current AS/NZS 2107:2016 standard. |  |
| A minimum of 30 per cent by cost of loose furniture to be third party-certified by a recognised environmental certification scheme, such as GECA, Green Rate, Eco specifier, SMaRT 4.0, Green Tick or equivalent. |  |
| Glare control for all occupied spaces unless it can be demonstrated that glare is eliminated by external shading features or glazing treatments. If blinds are installed, they are to be able to be controlled by affected occupants and have a visual light transmittance (VLT) of less than 5 per cent. |  |
| **Energy efficiency** |  |
| All window systems to be double glazed and thermally broken with light-coloured window frames. |  |
| Design of skylights to harvest daylight in single storey buildings and top floors of multi-storey buildings within transit routes and stairs must include appropriate insulation properties to minimise thermal heat gain and or heat loss. |  |
| Provide operable windows for natural ventilation in sub-acute patient and administration areas, where feasible. |  |
| Use of heat pump or high efficiency equivalent technology to provide domestic hot water for sites below 10,000 sqm. |  |
| All boiling water units to have operational timer controls installed and set to Monday to Friday 7 am to 7 pm, unless otherwise required, and not require supplier or specialist service engineer expertise to change time settings. |  |
| Air conditioners (single phase, non-ducted), clothes washers, clothes dryers, dishwashers, televisions, refrigerators, freezers, computer monitors and pool pumps to have a minimum 5-star energy rating. |  |
| Over door air heaters or curtains to be designed out. |  |
| Internal artificial light sources to have a minimum colour rendering index (CRI) of 80. |  |
| External and internal artificial lighting to employ occupancy sensors, lux level sensors, lux/occupancy combined sensor or BMS transition dimming and shutdown as appropriate to building type and work area use. Include local control for light zones of up to 75 sqm. |  |
| Artificial lighting efficiency benchmark must not exceed the NCC-BCA minimum requirements per square meter averaged across the building net floor area (at maximum wattage). |  |
| Glare from lamps to be managed, for example, by: * fitting bare lamps with baffles, translucent diffusers
* complying with clause 8.3.4 of AS/NZS 1680.1-2006, or
* not exceeding the maximum Unified Glare Rating (UGR) values listed in Table 8.2 of AS/NZS 1680.1-2006, calculated in line with Clause 8.3.3.
 |  |
| LED technology to be used for all lighting, unless clinical practices dictate specialist lighting solutions. Flicker from LED lights to be managed so as not to affect residents. |  |
| Reverse cycle split system air-conditioning units to be within one star of highest available for output (kW). |  |
| **Water management** |  |
| Install tapware with maximum flow rate equivalent to 6-Star WELS rating or above in all bathrooms, en-suites and general amenity areas.  |  |
| Install dual flush toilets with flush rates equivalent to 4-Star WELS rating or above. |  |
| Install showers with maximum flow rate equivalent to 3-Star WELS rating or above.  |  |
| Urinals for staff and visitors to be fitted with demand driven or smart demand operation and have flush rates equivalent to 5-Star WELS rating or above. No cyclic flushing urinals to be installed.  |  |
| Patient amenities taps to include flow rates equivalent to 6-Star WELS rating or above.  |  |
| Drinking water fountains to be installed in internal and external public areas to minimise use of bottled water.  |  |
| Water using appliances, such as dish washers and washing machines to be equivalent to 4.5-Star WELS rating or above. |  |
| Design landscaping to be water efficient, including use of mulching, plant selection and water-efficient irrigation system, comprising subsoil drip systems and automatic timers with rainwater or soil moisture sensor over-ride. |  |
| **Materials specification and selection** |  |
| Re-usable fittings compliant to current performance requirements, furniture and workstations from vacated and/or demolished premises to be re-used or donated to third party uses. |  |
| Design for re-use of existing structures or facilities on-site, where feasible.  |  |
| Minimise use of paint or finishes on exterior surfaces. |  |
| Use of post-consumer waste or post-industrial waste, such as recycled aggregate, fly ash and silica fume for concrete and post-consumer recycled content or re-used steel. A proportion of recycled content to be used in the following: * tarmacked areas, including on-site access roads, at-grade carparks and footpaths
* non-structural concrete, including kerbing and footpaths, with concrete aggregates to contain a minimum 15 per cent recycled or substitute materials fly ash, crushed recycled aggregate
* car park wheel-stops, landscaping elements, decking, bollards and fixed outdoor furniture.
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| Maximise use of locally produced building materials, construction workers and facilities. |  |
| All timber (structural and architectural) to be Forest Stewardship Council (FSC) certified or recognised equivalent. |  |
| Preference carpet squares with a recycled content for ease of replacement. |  |
| Preference stainless steel, concrete or bamboo bench tops in food preparation areas. Stone or composite stone products are to be avoided. |  |
| Preference for recycled content for plumbing and drainage reticulation pipework. |  |
| **Waste and resource recovery** |  |
| 95 per cent by weight target for demolition and construction materials (excluding hazardous waste) to be re-used or recycled (or both). |  |
| Commingled, paper and cardboard, confidential paper, e-waste and organics recycling streams to be provided. |  |
| **Ecology and landscaping** |  |
| Maximise use of sensory and well-being gardens for interaction with staff, visitors and patients/residents. |  |
| Maximise use of outdoor spaces and activities for patient rehabilitation. |  |
| **Transport** |  |
| Provide tele- and video-conferencing facilities for staff use.  |  |
| **Emissions to land, water and air** |  |
| Install noise attenuation on engineering plant and other noise sources to meet required noise emission standards. Location of engineering plant to be considerate of local noise sensitive receptors, including residential housing and other community facilities. |  |
| Avoid ozone-depleting chemicals by sourcing recognised alternatives with low ozone-depleting potential (ODP), for example, hydrocarbon gases in air conditioning and thermal insulants. |  |
| Non-blown insulation (thermal, pipe, fire, acoustic) to have a global warming potential (GWP) of less than or equal to 5. Blown insulation to preference low GWP products. |  |