

General Specification Upgrade and Minor New Work

November 2011

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This General Specification for Upgrade and Minor New Works is to be read in conjunction with the Scope of Works. Where conflict exists between the two documents, then the Scope of Works is to prevail.

Items documented in this specification are only required if requested in the accompanying Scope of Works

Background

Defence Housing Australia (DHA) undertakes upgrade and minor new work to managed stock throughout all regions of Australia.

Internal work will generally consist of cosmetic changes to kitchens, bathrooms, floor coverings, heating and cooling, painting, electrical, finishes etc.

External works may consist of such items as façade repairs, plumbing and electrical upgrades, external painting, hard and soft landscaping.

Also included may be new works such as additional rooms, provision of en-suites, conversion of carports to secure garages, increased room sizes, changes to configurations, improvements in sustainability attributes etc.

Preliminaries

Site Conditions

Where possible, houses will be vacant prior to works commencing. When houses are vacant, power will be disconnected from the site and it will be the contractor's responsibility to connect power and pay all associated fees and charges, then disconnect supply at the completion of the work. When houses are occupied, the contractor will need to provide their own power via generators. No tenant power is to be used. Water will normally be connected to site, however the contractor will need to pay any fees and charges if this service is not available.

Site Access

Vacant properties will be accessed via a lock box either fitted to the front security door or at another designated location. Access arrangements will be provided prior to the commencement of the project.

If the property is tenanted, the contractor will be provided with the tenant's contact numbers. It is the contractor's responsibility to make access arrangements with any tenants. A minimum of 24 hours notice of arrival is to be provided to the tenant and access times are to be arranged by mutual agreement.

Work on base will require the contractor to comply with base access requirements. Costs associated with access arrangements are to be met by the contractor.

Hours of Work

Hours of work will be from 7.30am to 5.30pm Monday to Friday. Permission must be sought from the DHA project manager to work outside these times.

Standards for Contractors

Contractors must comply with all applicable national, state or local requirements. All upgrade and minor new work activities must comply with the requirements of:

- o Building Code of Australia (BCA) and the Deemed to Satisfy provisions;
- o Australian Standards (AS and ASNZ) relevant to the work;
- o State or Territory, Local Authority and Statutory Requirements;
- o House Building Certification Fund, owners and Contractors contributions;
- o National Code of Practice for the Construction Industry;
- o Building and Construction Industry Improvement Act 2005;
- o Utility companies power, water, gas, telecommunications; and
- o Specific estate design guidelines, encumbrances and covenants.
- All work to be conducted as per best trade practice and manufacturer's recommendations.

Special Conditions

The Contractor must ensure:

- o Loud music is not played on site;
- o No pets are to be brought on site;
- Rubbish is controlled, removed and disposed of by the contractor in a responsible manner and;
- o The site is secure.

Trade Section

Fencing and Gates

Fenced yards must meet the following requirements, unless other requirements are nominated in estate covenants or local Authority requirements:

- o minimum one pedestrian (single) gate and one double gate;
- o all gates constructed to swing open to a minimum of 90 degrees;
- o gates must not obstruct services;
- o no side boundary fence forward of the wing fences, or the front building line;
- o wing fences and gates located behind meter boxes;
- o completed height 1.8m maximum (1.5m minimum) when measured from the adjacent finished ground levels; and
- o base of the fence clear of ground surfaces, including mulch materials, for its entire extent, with a bottom gap no greater than 50mm.

Fences and gates must be designed with materials as per local conditions and practices. If timber is used, it must be durable and treated. Metal components must be galvanised or zinc and or powder coated e.g. steel posts, bracket fittings and nails. Posts and stays must have concrete footings designed to suit site specific conditions and functional requirements.

Fences and gates must be designed and constructed to last at least 15 years.

Letterbox

The letterbox must be directly accessible on pavements from the front door and or driveway. Australia Post approved type and position of letter box (located on the street address side of the house and just inside property boundary), sturdy construction and have large metal number(s) fixed to street face. As a minimum, must have provision for a padlock.

Covered Outdoor Area (COA)

Design and materials integrated with house and including storm water drainage and impermeable pavement to whole area. Minimum size of COA is 15m². Where COA is not under the house roofline, provide an impermeable roof with sufficient clear panels to allow adequate light transmission. Finished surface pavement is impermeable with 1:100 slope away from the house (minimum standard is in-situ concrete with light broom finish).

Security Screens, Insect Screens, Window Locks

All doors leading from the house to the outside must have combined security/insect screens. Security doors to be powder coated aluminium framed, fitted with interior expanded aluminium combined security and insect screens.

All opening windows to have either:

- Security/insect screen with powder coated aluminium frames with interior expanded aluminium mesh, or
- Window locks (all keyed alike). Where evaporative cooling is installed, windows should be lockable in an open position

Refer to regional requirements as to which option applies

Storage

An area of 9m² for storage must be provided. This can be in the form of a second car space in a lock up double garage, in a colourbond steel shed located in the rear yard or in storage areas under the house roof line, but cannot include one of the required storage areas for the house e.g. linen press, broom cupboard etc.

If a colour bond shed is provided, the shed must be fixed down to a rebated concrete slab or footings to local requirements and have an access door with provision for a lock.

Water Storage Tank & Pump

Supply and install a plastic water tank to area designated and provide:

- o Concrete slab under the water tank (slab engineered to suit)
- o Tap outlet and a leaf trap just below the spouting;
- Australian made pump as approved by DHA Project Manager with external GPO and purpose made cover for pump. Pump to be suitable for the size of the rain water tank Pump is to be fully operational and tank filled with water before handover to DHA; and
- O Signage to the side of the water tank at a height of 1.5m reading "Water not fit for human consumption". Letters to be approximately 40mm high.

Insulation

Insulating sheet materials and or batts as required to meet statutory energy requirements.

Ceilings

Plasterboard on timber/metal battens installed in accordance with plaster board manufacturer's specification.

Walls

Brick veneer construction - plasterboard on timber/metal battens installed in accordance with plaster board manufacturer's specification. Water resistant wall sheeting to be used in all wet areas.

Double brick construction – rendered, floated and set masonry. Internal garage walls - to be face brickwork when using double brick construction.

Floor Coverings

North of Tropic of Capricorn

Ceramic floor tiles to all areas including all cupboards. No carpet permitted.

South of Tropic of Capricorn

Ceramic floor tiles to all areas except bedrooms and separated dining room, lounge room and study. Bedrooms, separated dining room, lounge room and study to have carpet.

Carpets

Carpets must be minimum four star rating (Residential Extra Heavy Duty) as set out under the Australian Carpet Classification System (ACCS). Quality new underlay to be used.

Carpet and underlay must have a minimum 5 year warranty.

Ceramic Tiles

Ceramic tiles to be non porous, non slip with coloured sealant as necessary to joints with kickboards and skirtings plus metal join strips to adjoining surfaces if levels are not flush. Grouting to floor tiles to be mid range colours so as to minimise colour changes due to soiling.

Required minimum height of tiles:

- o Bathroom, laundry, toilet & ensuite, skirting 150mm;
- o Bath, 600 mm above the top of the bath;
- Kitchen, 600mm above bench top or, where overhead cupboards exist, tile between bench top and cupboard;
- o Shower recess, minimum 2000mm height above shower base; and
- o Laundry, 450mm above the tub.

Laundry and bathroom, graded to floor waste with grate to meet BCA requirements.

Waterproofing

Waterproofing required in all wet areas, in accordance with BCA. An accredited waterproofing contractor must be used. There must be a minimum 7 year warranty on products and workmanship.

Window Glazing

Obscure glazing to all laundry, front door side panels, en-suite and bathroom windows.

Window Coverings

Where obscure glazing is used then widow coverings are not required except in the en-suite and bathroom.

In wet areas provide slim line (mini) venetians, fixed at base.

All other areas must have vertical blinds, polyester, rated at 100% block out, child safe chords and chainless bottom, with weights sewn into each blade.

Kitchen

Kitchen to contain:

- o Cupboards to DHA approved design and including;
 - Where practical, overhead cupboards including bulkheads;
 - Minimum 32mm thick bench tops;
 - Stainless steel sink 1080 nominal length, one and half bowls, single side drainer, plug, flick mixer tap;
 - 4 draw unit with cutlery insert;
 - Separate pantry;
 - Dishwasher space, including connections and connection access;
 - Microwave space; and
 - Refrigerator space, minimum 1000mm wide by 2000mm high.
- o Range hood with exhaust fan and light that is directly vented externally;
- Electric oven, 600mm width with minimum 55 litre capacity, Must, as a minimum, have timer and fan forced cooking mode; and
- o Cooktop, 4 positions, mandatory gas where gas is reticulated.

All appliances must have a minimum 2 year warranty, access to spare parts and warranty service is crucial.

Bathroom

Bathrooms to contain:

- o Bath, minimum 1500mm long;
- Shower, separate from bath. Minimum 2000mm high, frame to be chrome or powder coated metal finish aluminium with clear laminated glass and single pivoting door, door is to have seal on bottom edge to prevent water splashing onto adjacent floor. Sliders allowed where conflicting with entry doors;
- Vanity unit, minimum 900mm long with storage cupboards under, constructed of high moisture resistant materials, vitreous china basin;
- o Double towel rail, minimum 900mm long chrome or powder coated metal;
- o Extraction fan;
- Soap holders for bath and shower; and

Mirror to be placed above vanity, sized to be full width of vanity and height aligned with top of shower screen.

Toilets are not to be contained in the bathroom.

Ensuite

Ensuite to contain:

- o As for Bathroom, except no bath required;
- o Toilet pan and cistern, dual flush; and
- o Toilet roll holder, chrome or powder coated metal.

Toilets to have minimum two year warranty.

Laundry

Laundry to contain:

- o Wash tub in a cabinet, 70L capacity, washing machine by-pass drain and plug;
- o Space for washing machine, including dedicated washing machine taps;
- o Broom cupboard, minimum 600mm wide with top shelf over; and
- Clothes dryer hanging board, located over top of washing machine space.
 Board to be minimum 800 x800 x20mm, securely fixed to studs and painted to match wall colour.

Toilet

Toilet to contain:

- o Toilet pan and cistern, dual flush; and
- o Toilet roll holder, chrome or powder coated metal.

Toilets to have minimum two year warranty.

Tapware

Kitchen – single flick mixer tap.

Dishwasher – cold water tap.

Laundry – swivel spout, separate hot and cold water taps outlets to wash tub and separate connections for washing machine.

External taps: minimum one to front yard and one to back yard.

Contractor to nominate other tapware not detailed. All tapware must be minimum 4 star WELS rating, have a chrome finish and a minimum 2 year warranty.

Broom Cupboard

A built in cupboard for brooms, mops, vacuum cleaners etc shall be provided approximately 450 mm x 450 mm x 1.8 metres high (if not already there). This cupboard should generally be located in the laundry and be built in. The cupboard space should have one shelf at a height suitable for poisonous substances, cleaning materials and equipment and of adequate height for brooms, ironing board etc.

Coat Cupboard

A built in cupboard with a hanging rod for coats shall be provided. Minimum width 700mm, minimum depth 600mm. This cupboard should generally be located in the

entrance passage, under a stairwell or other locations convenient to entry and exit from the property.

Hot Water Systems

Gas hot water systems are preferred where reticulated gas is available however one of the following systems sized for house is acceptable where permitted by local authorities:

- O Storage gas system minimum 180 litres;
- o Gas/solar hybrid systems minimum storage is 180 litres;
- o Solar system with an electric booster, minimum storage is 300 litre; and
- o Solar heat pumps, minimum storage is 250 litres.

Wardrobes

Where requested in individual house specifications:

- Wardrobe should extend from floor to ceiling height where practical;
- Provide a set of four fixed melamine finished drawers or shelf units to each wardrobe. Two sets are to be provided to main bedroom;
- o Robes are to have a clear internal depth of 600mm where practical;
- o Doors to be purpose made vinyl clad gyprock sliders with adjustable rollers;
- Provide a minimum of 3000mm hanging space in main bedroom and 1500mm hanging space in others where practical; and
- At least one door in bedroom one is to be mirrored.

Doors

Door Location	Door Type
Internal	Hollow core
Internal cavity slider	Hollow core, jump proof roller track
Front door	Solid core, decorative
External	Solid core with weather seal to bottom of
	door – water proof
Internal garage to house	Solid core with weather seal to bottom of
	door
Garage – external access	Hollow core with weather seal to bottom
	of door – waterproof
External sliding	Powder coated aluminium

Door Hardware & Security

Location	Hardware	Security
External doors	Double cylinder deadlocks	Security door & insect
	Entrance set	screen combination with
		pneumatic closer
External sliding doors	Double cylinder deadlocks	Sliding security door &
	and latch	insect screen combination
Internal doors:		
Bedroom 1	Privacy set	n/a
Bathroom	Privacy set	
Toilet	Privacy set	
Ensuite	Passage set	
Other rooms	Passage set	

All doors to include door	
stopper or hold open device	

Note:

- 1. all locks to be keyed alike;
- 2. no ceramic or sharp or pointy handles to be used that may cause injury;
- 3. all hardware must have a minimum 5 year warranty;
- 4. Provide door closers to all hinged security doors.
- 5. Provide door stops to all hinged doors.

Garage Doors

Roller or panel lift doors must be powder coated sheet metal colour coordinated. If double roller door or panel lift doors are used, automate and provide three handsets (one being fixed on internal garage wall). Minimum requirement is single roller door (not automated).

Electrical Schedule

Power

General purpose outlets (GPO) to be installed as listed below:

- Kitchen 2 plus 1 in either the kitchen island bench or kitchen return, Dining
 1, lounge 2, hall 1, study 1, meals 1, rumpus, 2, family 2
- Bedroom 1-2 and all other bedrooms -2
- Bathroom − 1, en-suite − 1, laundry − 1 power room − 1
- Dishwasher, microwave and refrigerator cavities 1 each
- Cover outdoor area "water proof" 1 and garage or carport 1

For any rooms not listed, install a minimum of one GPO per room.

All GPOs to be double, except appliance hardwired or requiring a dedicated GPO, including refrigerator, dishwasher, microwave, air conditioning, HWS, garage door motors, water tanks, reticulation units and heating units.

Internal Lighting

All fixtures, fittings, levels of illumination and colour rendering to be fit for purpose for the size and function of the rooms. Lights must be provided with batten holders and shades (including energy efficient globes). Use only down lights (2 off) where ceiling fans to be installed (to avoid strobe affect). Kitchen to have circular fluorescent light.

In wet areas such as bathroom, en-suite and laundry to have fluorescent lights.

All light fixtures and fittings to be approved by DHA project manager before installation.

External Lighting

Lights suitable for external use (e.g. bunker style), with all components and switches, eaves or soffit mounted to provide adequate light levels to following minimum areas:

1 x front door, 1 x laundry door, 1 x clothes line area (e.g. flood light) Cover outdoor area to have fluorescent lights (minimum 1200mm single).

All fixtures and fittings to be approved by DHA project manager before installation.

Ventilation

Install one exhaust fan for both bathroom and en-suite. All exhaust fans separately switched from lights unless required by BCA.

Refer regional requirements for when ceiling fans are required.

All ceiling fans to have variable speed control. Where COA requires a circulation fan, then ceiling and mounting height is to be minimum 2700mm from floor level.

Television System

Minimum 2 outlets to be provided adjacent to GPOs in lounge and family, located to suit indicative furniture layout.

Television aerial (antennae) to be installed externally and located to achieve maximum quality reception for all free to air television stations to suit both analogue and digital reception (gutter mounted aerials not permitted).

Telephone System

Minimum 2 telephone outlets to be provided, adjacent to GPOs, in kitchen (1) and bedroom1 (1).

Smoke Detectors

Installed to meet Australian Standards.

Painting

Internal

The pallet of interior colours, materials and finishes should be contemporary and timeless in style with an emphasis on neutral tones to accommodate the furnishings of tenants. Coloured paints must be prepared by the manufacturer from a recognised colour pallet, and as per the colour schedule approved for the contract.

Paint system is 2 coats. Coats to be applied as per manufacturer's directions to achieve recommended dry film thickness. If paints are applied by spraying, the top coat must be rolled.

Ceiling – white, flat

Walls – wash and wear low sheen

Trims and architraves – gloss or semi gloss

Door – gloss or semi gloss to all vertical surfaces; top and base to be primer plus minimum two coats.

Wet areas (including their ceilings) – wash and wear semi gloss.

External

External high quality systems fit for purpose, with primer/undercoat plus 2 coats. Wall – matt or low sheen

Doors and trim - gloss

Preparation

All surfaces to be painted (internally and externally) are to be sanded and prepared for painting. Allow for additional preparation such as filling, patching, sanding and priming of any gaps or surface imperfections to make all surfaces and junctions (door and window frames or other material) flat, seamless, gap-free, clean and otherwise blemish free. Work to be conducted as per best trade practice and manufacturer's recommendations.

Warranty

Contractors are required to warranty workmanship for two years against peeling, cracking, and blistering and insufficient paint coverage.

Landscaping - Soft

<u>Topsoil</u>

Certification of imported topsoils is required for supply source and composition. Fertilisers – type and quantity of soil additives are to suit site specific conditions and plants proposed, nominate specific products such as fertilisers, composts plus additives such as water absorbing crystals, soil wetters and minerals laid to a depth of 75mm.

Turf

Nominate species and cultivar and provide certification for supply source.

All lawn grass species must be suited to the climatic area. Summer active grass must be planted in summer; winter active must be planted in winter. Turf must be weed free. Area within property boundaries must be fully established on completion of the 4 week establishment period.

Garden Beds

Cultivate to a depth of 300mm below finished levels, add organic topsoil as necessary to bring the sub-grade surface to 75mm below the required finished levels. Excavate for each plant, fertilise and place it in its final position, and spread mulch evenly to a depth of 75mm.

Plants

Plants must be drought resistant, native to the area and suitable for the soil type, low maintenance, good form consistent with species or variety, free from disease and insect pests, with healthy roots and shoots and no evidence of having been restricted and damaged.

A minimum of 50% of all plants are to be native and plant species if nominated on lists provided in estate or council guidelines must be used. Plants that are highly toxic are not to be used.

Plants that have a short life, less than 10 years, must be avoided or minimised. Climbing plants must not be plated against walls and fences. Plant beds must not be placed against house walls.

The plant species selection and the density of planting are to provide fully covered plant beds (at five years growth).

Edge Strips

All edge strips must be constructed to finish flush with surrounding surfaces and where adjacent to grass, must serve as a mowing edge and inhibitor of grass crossing onto adjacent areas.

Timber edge strips to be 50mm width by 75mm depth.

Masonry (in-situ concrete or unit pavers on a mortar bed) edge strips to be a minimum 75mm width by 100mm depth.

Mulch

All areas, except for lawns and pavements, must be mulched beds. Mulch must be placed as the finished surface treatment to all garden beds. Organic mulch products must be a weed free product. Inorganic mulches, such as washed gravel or pebbles may be used.

Mulched areas to be minimum 75mm thickness for wood base system, minimum 50mm for gravel or pebble based system. Supply should be weed free, and provide certification as to type, supply source, composition.

Weed mat or other geotextile fabric must not be used under mulch materials in any planted area. However, where washed gravel or pebbles are used as a permeable pavement, weed mat or other geotextile fabric must be used.

Establishment Period

Following achievement of practical completion, an establishment period (period) will commence for plants and lawn. The contractor must undertake all work during this period to ensure plant and lawn's healthy and continued growth.

This work may include, but not limited to, replacement of dead/dying plants or lawn, topdressing, weeding, staking, pruning/tying, mowing, fertilising and watering, all activities as relevant to the season. The contractor must supply and apply at their cost adequate water to plants and lawns during the period. All local water restrictions apply.

The period continues for duration of four (4) weeks. If more than 20% of either the plants or the lawn is replaced within the first two (2) weeks of the period, the period will extend. The period will extend until:

- 80% of either the plants or the lawn areas have been in place for four (4) weeks; and
- Any replaced items have been in place for two (2) weeks.

No additional payment is due for any cost incurred by the contractor for the extension of the period.

Landscaping - Hard

Footpaths

Impermeable pavement surface with subsurface preparation and base course as required for:

- Minimum 800mm wide pedestrian access linking front entry to driveway and letterbox; and
- Access from the laundry to the cloth line (a path to the clothes line as a continuous pavement with no steps).

The path to a rotary hoist clothes line must be a minimum 800mm width and extend past the post. Wall attached clothes lines and extended clothes lines must have pavement underneath the line and the pavement must extend 600 mm past the side furthest from the wall and the side adjacent to the path.

Driveways

Driveways must be impermeable pavements constructed from unit pavers or reinforced, uncoloured concrete, unless otherwise required in specific estate covenants or local Authority regulations.

The driveway must stop at the property boundary so that any installed public footpath is continuous and not cut by the driveway. Vehicle access over the verge to the kerb crossing, if installed as part of the scope of work, is to match the driveway and any local Authority requirements.

Retaining Walls

Retaining walls to be designed in accordance with the relevant codes and certified by an engineer where required by local Authority to do so. Retaining wall materials must be robust masonry.

Retaining walls 1 meter and over in height must be certified by structural engineers and are to have integrated child safety barriers or handrails. The use of natural stone (rocks) to form retaining walls is permitted. The materials must be finished in a colour to match the walls of the house or in an earth or vegetation colour.

The materials and construction must be designed to last at least 20 years.

Clothesline

The clothes line should not be visible from the street and must be near as practicable to the laundry door. The clothes line should receive sunlight for most of the day in temperate climates, and be shielded from the sun in tropical climates.

Clothesline must have minimum 33 lineal metres of unobstructed hanging length, Contractor to nominate type of line (rotary hoist preferred where space allows). Clothes line to have minimum 1 meter clearance to any obstruction.

Cleaning

DHA requires cleaning to be performed to a high standard. Houses and their surroundings are to be cleaned to a standard sufficient to allow the tenant to move into the house without any further cleaning required. The required extent of cleaning will be specified in the Scope of Works, however when a full internal or external clean is specified, the following works are required as a minimum to meet the required standard.

Full Internal Clean

- All cobwebs and dust must be removed:
- All non-carpet floors must be mopped/thoroughly cleaned to remove grime, marks and stains;
- o Carpeted areas must be vacuumed;
- All walls, ceilings, doors, kitchen bench tops and internal and external surfaces of cupboards, robes and vanities must be washed/thoroughly cleaned to remove grime, marks and stains;
- o All tiled areas must be cleaned and polished to a dry surface with no streaks;
- All architraves, skirtings, window, door frames and furnishings must be thoroughly cleaned to remove grime, marks and stains;
- External and internal surfaces of all window frames and glass and door frames and glass must be cleaned, including tracks;
- Shower glass must be cleaned and polished to a dry surface with all streaks and calcium deposits removed and wiped dry;
- Mirrors and all glazing frames must be cleaned and polished to a dry surface with all streaks removed;
- All window coverings must be dusted, cleaned and washed where fabric permits;
- o All mildew is to be treated;
- All fixtures, filters to air-conditioners, open fire places, pot belly stoves and external surfaces of flues must be thoroughly cleaned to remove grime, grease, marks and stains. All burnt on grease or carbon deposits in ovens to be removed;
- Internal and external surfaces of light fittings, surfaces of light and fan switches and power points must be wiped down. Insects must be removed from light fittings;
- O Unattached buildings (e.g. garages, carports, sheds) must be cleaned internally as per above;
- Check that drain plugs are present for each fixture and provide a suitable plug where missing. This applies to all sinks, basins, baths and troughs or tubs. One plug is required per fixture; and
- o All builder's rubbish must be removed.

Full External Clean

- All external surfaces including, but not limited to, walls, eaves/soffits, doors, porches, patios, garage or carport floors, concrete floors and driveways, paving, pool surrounds, glazing frames and sills must be cleaned to remove cob webs, heavy grime, dirt and dust, grease and oil and marks and stains;
- Rubbish must be collected and removed, including from sheds, garages, carports, under floor areas and from waste and recycling bins;
- Garden prunings must also be removed;
- Side gates and fences internal to the property (exclude fencing aligned with boundary) must be cleaned;
- All window and door frames must be thoroughly cleaned to remove heavy grime, grease and marks;
- External surfaces of gutters and downpipes must be cleaned to remove dirt and mould build-up. Clean gutters, valleys and downpipes of all leaves and debris. Clean and remove debris from all stormwater pits;
- All fly screens must be removed, cleaned and re-install to same opening. All security screens must be cleaned;

- Clean and disinfect waste and recycling bins and ensure that no rubbish is left in them. Bins must be placed within the carport or garage; and
- All mildew is to be treated.

Practical Completion and Handover

At the Practical Completion inspections, the Contractor must have:

- o All prescribed works complete including any agreed variation works;
- o The house and site cleaned (inside and out) to the standards set by DHA;
- o Any verge restoration (if required) completed; and
- All services including electricity, gas, water and sewer connected, approved and tested ready for occupation where these services form part of the works.

As part of the requirements for Practical Completion, the contractor must provide to DHA the following documents and items:

- A folder with appliance (or fittings) manuals and warranties (where new items supplied as part of the works). All such guarantees/warranties must be filled in and nominating Defence Housing Australia (DHA) as the beneficiary and must be dated as per day of installation.
- Two complete sets of keys each on three separate key rings that have labels for purpose plus the address:
 - Key ring 1 all external doors including security screens;
 - Key ring 2 all windows; and
 - Key ring 3 garage, letterbox (and any others); and
- Certificates and plans (as appropriate)
- o Electrical certificate (if applicable)
- o Plumbing certificate (if applicable)
- Glazing certificate (if applicable)
- Waterproofing certificate (if applicable)

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Regional Requirements

General Requirements - Cooling

Systems serving bedrooms must have a minimum five star rating for cooling. Reverse systems dedicated to shared rooms must be a minimum of five stars for cooling except where such units are not commercially available, and then a minimum energy rating of four stars for cooling applies (there is no relaxation of the requirement on the overall house energy rating as a result). All units must comply with noise level restrictions applicable in the jurisdiction.

Warranty to be minimum of five years on parts and 12 months on installation.

Refer to regional requirements below for applicable cooling systems.

General Requirements - Heating

Where heating is specified and individual rooms are not nominated, all Bedrooms, Living Areas, Wet Areas (except the Laundry) are to be heated.

The location of units and the enclosure must be marked on the house plans to be submitted to council. If mechanical units are located within the roof space, the Contractor must provide a suitable platform/walkway and a light for ease of maintenance, and ensure adequate structural strength to support the unit. All units must comply with noise level restrictions applicable in the jurisdiction.

All systems must be a minimum 5 star energy rating. All products and systems must be selected to be robust, with minimum 5 year warranties, and have maintenance service (call out) available in that location.

Refer to regional requirements below for applicable heating systems.

South Australia

ITEM	REQUIREMENT
Adelaide	
Heating	RC gas ducted heating (minimum two zones). Ducted heating and ducted evaporative cooling may be provided as an equivalent alternative. For Bathrooms and en-suites, heating to be other than infrared lamps embedded within ceiling fans.
Cooling	Minimum ducted evaporative cooling. RC split system air conditioning may be provided as an equivalent alternative.
Security	Locks to all opening windows.
Adelaide H	ills
Heating and Cooling	Reverse cycle split system Bedroom 1 and living rooms plus ceiling fans to bedrooms and other living rooms. For Bathrooms and en-suites, heating to be supplemented via infrared lamps embedded within ceiling fans.
Security	Locks to all opening windows.

Victoria & Tasmania

ITEM	REQUIREMENT	
Melbourne,	Melbourne, Sale, Frankston, Queenscliff	
Heating	Ducted heating. RC split system air conditioning may be provided as an equivalent alternative.	
	For Bathrooms and en-suites, heating to be supplemented via infrared lamps embedded within ceiling fans.	
Cooling	Ceiling fans to bedrooms and living rooms. Ducted evaporative cooling may be substituted in place of ceiling fans to all bedrooms and living areas.	
Security	Locks to all opening windows.	
Puckapunyal		
Heating	Ducted heating. RC split system air conditioning may be provided as an equivalent alternative. For Bathrooms and en-suites, heating to be supplemented via infrared lamps embedded within ceiling fans.	
Cooling	Ducted evaporative cooling. RC split system air conditioning may be provided as an equivalent alternative	
Security	Locks to all opening windows.	
Tasmania		

Heating	Minimum reverse cycle split system to living rooms plus
and Cooling	panel heating to bedrooms.
Security	Locks to all opening windows.

ACT

ITEM	REQUIREMENT
Canberra 8	Queanbeyan
Heating	Ducted heating. RC split system air conditioning may be provided as an equivalent alternative. For Bathrooms and en-suites, heating to be supplemented via infrared lamps embedded within ceiling fans.
Cooling	Minimum ducted evaporative cooling. RC split system air conditioning may be provided as an equivalent alternative.
Security	Security screens to all opening windows.

NSW

ITEM	REQUIREMENT
Armidale & Tamworth	
Heating	Ducted heating. RC split system air conditioning may be provided as an equivalent alternative. For Bathrooms and en-suites, heating to be supplemented via infrared lamps embedded within ceiling fans.
Cooling	Minimum ducted evaporative cooling. RC split system air conditioning may be provided as an equivalent alternative.
Security	Security screens to all opening windows.
Hunter & N	Northern NSW
Heating Cooling	Reverse cycle split system Bedroom 1 and living room plus ceiling fans to bedrooms and other living rooms.
Security	Security screens to all opening windows.
Nowra	· · · · · · · · · · · · · · · · · · ·
Heating	1x relocatable 25mj gas heater with bayonet connections to living rooms (incl. associated GPO).
Cooling	Ceiling fans to bedrooms and living rooms.
Security	Locks to all opening windows.
Riverina	
Heating	Ducted heating. RC split system air conditioning may be provided as an equivalent alternative. For Bathrooms and en-suites, heating to be supplemented via infrared lamps embedded within ceiling fans.
Cooling	Minimum ducted evaporative cooling. RC split system air conditioning may be provided as an equivalent alternative.
Security	Locks to all opening windows.
Sydney & I	Blue Mountains
Heating Cooling	Reverse cycle split system Bedroom 1 and living rooms plus ceiling fans to bedrooms and living rooms.

Security	Security screens to all opening windows.
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South East Queensland

ITEM	REQUIREMENT		
Brisbane &	Ipswich		
Heating Cooling	Reverse cycle split system Bedroom 1 and living rooms plus ceiling fans to bedrooms and living rooms.		
Security	Security screens to all opening windows.		
Toowoomb	Toowoomba		
Heating Cooling	Reverse cycle split system Bedroom 1 and living rooms plus ceiling fans to bedrooms and living rooms.		
Security	Locks to all opening windows. Where security screens not used.		

North Queensland

ITEM	REQUIREMENT	
Townsville, Rockhampton & Cairns		
Ceilings	Internal ceiling height must be a minimum 2700mm.	
Drainage	All down pipes to be directly connected to the stormwater system.	
Cooling	Refrigerated air conditioning (central or split system) plus ceiling fans to bedrooms and living rooms.	
Security	Security screens to all opening windows.	
Windows	Can be Louvre style with built in insect screen and security bars to meet WERS 2 stars cooling rating.	
COA	COA to be placed under roofline. Circulation fan required.	
Eaves (Soffit)	Eaves width minimum 900mm, plus to meet DHA shade expectations plus local Authority and estate requirements, with materials, finishes and colour to coordinate with walls.	

Western Australia

ITEM	REQUIREMENT	
Perth & Geraldton		
Heating	1x relocatable 25mj gas heater with bayonet connections to living rooms (incl. associated GPO).	
Cooling	Minimum ducted evaporative cooling. RC split system air conditioning may be provided as an equivalent alternative.	
Security	Supply and fix security screens to all opening windows.	
Karratha & NW Region		
Ceilings	Internal ceiling height must be a minimum 2700mm.	
Cooling	Refrigerated air conditioning (central or split system) plus ceiling	

	fans to all bedrooms and living rooms.
Security	Security screens to all opening windows.
COA	COA to be placed under roofline. Circulation fan required.
Eaves (Soffit)	Eaves width minimum 900mm, plus to meet DHA shade expectations plus local Authority and estate requirements, with materials, finishes and colour to coordinate with walls.

Northern Territory

ITEM	REQUIREMENT		
Darwin			
Ceilings	Internal ceiling height must be a minimum 2700mm.		
Drainage	Roof guttering over entry ways, with associated SW management. Any down pipes to be fitted with 2 x 45 degree elbows at the bottom to ensure SW is discharged with minimum 75mm clearance between elbow and surface of gully pits		
Cooling	Refrigerated air conditioning (central or split system) plus ceiling fans to bedrooms and living rooms.		
COA	COA to be placed under roofline. Circulation fan required.		
Security	Security screens to all opening windows.		
Windows	Can be Louvre style with built in insect screen and security bars to meet WERS 2 stars cooling rating.		
Eaves (Soffit)	Eaves width minimum 900mm, plus to meet DHA shade expectations plus local Authority and estate requirements, with materials, finishes and colour to coordinate with walls.		
Carport and Storage OR Garage	Either carport with secured storage shed or a garage- provided that the garage sufficient ventilation to ensure temperature inside is not greater than ambient external temperature; with natural light including secure storage area.		
Katherine			
Ceilings	Internal ceiling height must be a minimum 2700mm.		
Drainage	Roof guttering over entry ways, with associated downpipes. All down pipes to be fitted with 2 x 45 degree elbows at the bottom to ensure SW is discharged with minimum 75mm clearance between elbow and surface of gravel filled soakage pits.		
Cooling	Refrigerated air conditioning (central or split system) plus ceiling fans to all bedrooms and living rooms.		
COA	COA to be placed under roofline. Circulation fan required.		
Security	Security screens to all opening windows.		
Windows	Can be Louvre style with built in insect screen and security bars to meet WERS 2 stars cooling rating.		
Eaves	Eaves width minimum 900mm, plus to meet DHA shade		
(Soffit)	expectations plus local Authority and estate requirements, with materials, finishes and colour to coordinate with walls.		
Tindal requ	Tindal requirements as for Katherine except		
Security	Insect screens to all opening windows.		
Alice Springs			
Cooling	RC split system air conditioning Bedroom 1 and living plus ceiling fans to all bedrooms and living rooms.		

Security	Security screens to all opening windows.
Eaves	Eaves width minimum 900mm, plus to meet DHA shade
(Soffit)	expectations plus local Authority and estate requirements, with materials, finishes and colour to coordinate with walls.