



Government of **Western Australia**
Department of **Health**
Licensing and Accreditation Regulatory Unit

Building Guidelines

Western Australia Health Facility Guidelines for Architectural Requirements

Guidelines for the construction, establishment and maintenance of

Private Hospitals

Day Hospitals – Class A

Day Hospitals – Class B

Day Hospitals – Class C

Day Hospitals – Class D

Psychiatric Day Hospitals – Class D

Nursing Post

Nursing Home

Licensing and Accreditation Regulatory Unit

Department of Health
189 Royal Street
East Perth WA 6004

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A. Introduction

A1. Background

This document, *Western Australia Health Facility Guidelines for Architectural Requirements*, details the architectural design and operating guidelines for health facilities in Western Australia.

To be referred to herein as “the Guidelines”, it replaces (and updates) *Private Hospital Guidelines. Guidelines for the Construction, Establishment and Maintenance of Private Hospital and Day Procedure Facilities*.

The Guidelines are presented in the form of minimum requirements. All requirements prefaced by the word “shall” or “must” are prescribed and therefore mandatory.

The first edition of the Guidelines was endorsed in 1992, with further updates having been released in 1994, 1996, 1998 and 1999.

In 2005, the Department of Health Licensing Standards and Review Unit – now the Licensing and Accreditation Regulatory Unit (LARU) – established an Engineering Services Working Party to undertake an extensive review of engineering guidelines for healthcare facilities. The working party consisted of more than 40 individuals representing all engineering disciplines as well as private enterprise and public and private healthcare facilities.

The party’s draft engineering guidelines were circulated for comment to public and private healthcare facilities prior to finalisation. In 2006, the then Director General of Health, endorsed the *Western Australia Health Facility Guidelines for Engineering Services 2006*, as a contemporary document to direct public and private health facilities throughout Western Australia.

The Guidelines are designed to provide guidance for the construction, establishment, and maintenance of private hospitals and a variety of related healthcare facilities.

The Guidelines are the **minimum** requirements and do not necessarily reflect ideal standards which may, in many instances, be above the acceptable minimum standard.

The Guidelines place emphasis on achieving facilities that reflect current healthcare procedures in a desirable environment for patient care.

The Guidelines are performance and service orientated. Where measurements have been prescribed, they have been considered carefully relative to generally recognised standards which are self-evident and do not require detailed specification. For example, experience has shown that it would be extremely difficult to design a patient bedroom smaller than the size suggested and still have space for the functions and procedures normally conducted within it.

In many instances it may be desirable to exceed minimum requirements to achieve optimum standards. For example, although a stated minimum patient bedroom door width will permit the passage of beds, greater widths may be desirable to minimise damage to beds and door frames where frequent traffic may occur.

The Guidelines are presented so as to encourage design innovation and include provision for dispensations where it can be demonstrated that the intent of the standard has been met.

A2. Compliance

Compliance with the Guidelines is mandatory when designing health facilities in Western Australia. These include the following licensing categories:

- Private hospitals
- Day hospitals – Class A
- Day hospitals – Class B
- Day hospitals – Class C
- Psychiatric day hospitals – Class D
- Private nursing post
- Nursing homes.

The Guidelines take precedence over any conflicting requirements in the Australasian Health Facility Guidelines.

Compliance with the Guidelines is required when:

- a new facility is built
- an existing facility is altered
- a new healthcare service or procedure is introduced to an existing facility
- maintenance is carried out to ensure compliance
- required by LARU policy (such as facility changes of ownership).

When alterations are to be undertaken to facilities supporting a particular medical/health service or services, all facilities used in the delivery of that service or services, shall be included in the alterations. A procedure room upgrade shall not be carried out in isolation from its support facilities.

The standards, quality and reliability of site services shall be appropriate to the required standards for the function being served.

Any alterations or works provided to increase life safety should always be extended to cover the whole facility in the shortest time period that practical operating considerations will permit. For example installation, may have to be staged for reasons of disruption to services but should not be otherwise delayed.

All building design and services shall meet the relevant requirements of Australian Standards and the National Construction Code. WA Health approval does not negate the need to comply with requirements of other statutory authorities such as Water Corporation, Western Power, local government, Economic Regulation Authority (ERA), Environmental Protection Authority (EPA) and Department of Fire and Emergency Services (DFES).

Where compliance with these requirements cannot be met, dispensations may be issued by the CEO of the Department of Health or his/her delegate. A dispensation specifies alternative steps, strategies, actions or solutions to be adopted, provided these do not pose a risk to patient safety.

For a dispensation to be considered, a written request shall be submitted by the Proprietor to LARU and include, as a minimum:

- identification of the area for which a dispensation is sought
- a detailed rationale for the dispensation
- confirmation of the process to minimise risk
- confirmation of the process for monitoring compliance and rectification
- an expected timeframe for the duration of the dispensation
- any additional documentation that supports the request
- the expected date by which compliance is to be obtained.

LARU will assess the evidence provided and may seek additional information. This may include a site inspection. Following a review, a recommendation will be put forward to the authorised delegate for approval.

Where additional clarification, policy and/or direction is required, LARU may issue appendices to the Guidelines.

A3. Boundaries of influence

The Guidelines apply to:

- private hospitals
- day hospitals – class A
- day hospitals – class B
- day hospitals – class C
- day hospitals – class D
- nursing post
- nursing home.

These guidelines are created under the auspices of the *Private Hospitals and Health Services Act 1927*.

If a site has a Hospital or Day Hospital and other classes of facility accommodation, and there is any sharing of accommodation or building services then dependent on the class of building required these Guidelines shall apply to all the facilities involved. For example, if there is a radiology unit in a medical consulting facility on the same site as a hospital and it is shared with the hospital then the radiology facility, its building services and the access ways to the radiology facility shall comply with the Guidelines.

A4. Definitions

Terms used throughout the Guidelines have the following meanings:

Act – The *Western Australian Private Hospitals and Health Services Act 1927*.

Acceptable Standard – Standards acceptable to the Director General.

Approval in Principle – the first of the following three-stage facility approval process required before a private facility is granted a licence to operate. The three stages are:

1. approval in principle
2. approval to construct
3. approval to occupy.

Architect – a registered member of the Architects Board of Western Australia.

Area, space – a dedicated area that is part of a larger space, such as a trolley park alcove off a corridor. Under the Guidelines it need not be fully enclosed.

Australian Council on Health Care Standards (ACHS) –

Australian Council on Health Care Standards

5 Macarthur Street

Ultimo NSW 2007

Tel: 02 9281 9955

Fax: 02 9211 9633

Email: achs@achs.org.au

Website: www.achs.org.au

Australian Standards (AS/NZS) –

Standards Australia

Level 10, The Exchange Centre

20 Bridge Street, Sydney

Tel: 02 9237 6000

Website: www.standards.org.au

Compliance – to act or provide in accordance with the requirements or recommendation of these Guidelines or referenced standards or regulations.

Concept approval – conceptual framework, building approval process and possible staging, to be discussed with LARU.

CSD/CSU – central sterilising department or unit.

Day hospital – a facility, described within the *Health Services Act 2016*, where surgery, procedures are performed under general, spinal anaesthesia or sedation, renal dialysis or psychiatric day programs where patients do not stay overnight.

Disabled facilities – facilities that are designed for use by the disabled, to AS 1428 series.

Egress – a safe means of escape in the event of an emergency (usually fire).

Ensuite – a room fitted out with a shower, toilet and basin/mirror combination. It does not necessarily open directly off a bedroom. Variations are “fully” and “semi-assisted” types. It is acknowledged that this is not the true dictionary definition.

Facility/facilities – A site and its buildings, building services, fittings, furnishings and equipment of any of the categories defined to be covered by these Guidelines.

FMP – facility maintenance plan.

FOP – facility operating plan.

Fully assisted – Facilities (for toileting, showering, bathing) that are designed to facilitate patient assistance by two staff members.

Guidelines – a collection of requirements and recommendations, some mandatory, which describes a minimum level of facility provision.

They include:

- *Western Australia Health Facility Guidelines for Engineering Services.*
- *Western Australia Health Facility Guidelines for Architectural Requirements* (this document).

Hospital – premises where medical, surgical or dental treatment, or nursing care, is provided for ill or injured persons and at which overnight accommodation may be provided; and a day hospital facility; and a nursing post.

Interpretation – in this instance, the meaning of something as understood by LARU.

LARU – Licensing and Accreditation Regulatory Unit.

Maintenance (when referring to facilities) – any work required for a facility to reliably, safely and efficiently support its intended function throughout its used life.

Minimum – the lowest level of provision considered safe for a given function. Anything below this level is considered unsatisfactory.

Minor works – works to licensed premises that are minor in nature and that are required to enhance assets and facilities to standards suitable for their intended function or change of function. They could include refurbishment, change of function, removal/replacement of redundant or out-of-date equipment, minor door and opening changes to improve flow efficiency and minor external and landscape works.

NCC – National Construction Code www.abcb.gov.au incorporates all on-site construction requirements into a single code. The Building Code of Australia (BCA) is part of the suite of documents comprising the NCC.

NHMRC –

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Canberra ACT 2601

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Nursing Unit – the module by which a hospital is developed to ensure cost efficient nurse coverage for patient safety and service. One (1) nursing unit = 30 to 35 acute patient bedrooms = One (1) ward.

Office, room – an area enclosed to create its own space such as a birth or operating room.

Operation (when referring to facilities) – any action required to reliably, safely and efficiently operating the sites, buildings, building services, and equipment to deliver each function carried out at a facility throughout its used life.

Operating policies – a formal statement of the policies governing the delivery of each function contributing to the services the facility will provide. These documents include, but are not limited to, defining inputs, outputs, organisation, authorities, service providers, service takers, normal and emergency operating conditions, performance requirements, performance reporting requirements, and the like, to fully describe input resources and workload, functional management arrangements and expectations, and output capacity and quality requirements.

Optimum – the preferred level of provision, not necessarily the best, but higher than the minimum level. It is acknowledged that this is not the true dictionary definition.

Partially assisted facilities – facilities for activities such as toileting, showering and bathing that are designed to facilitate patient assistance by one staff member.

Patient care area – an area, as defined in the Building Code of Australia as part of a healthcare building which is normally used for the treatment, care, accommodation, recreation, dining and holding of patients including a ward and treatment area.

PPE – Personal protective equipment.

Private hospital – a hospital that is not a public hospital, as defined in the Act.

Project – any project to build or alter a facility.

Proprietor – the executive officer of the party who will operate the facility.

Radiographer medical imaging technologist – a person registered with the Medical Radiation Practice Board of Australia who is permitted by the Radiological Council of Western Australia to operate irradiating apparatus for medical diagnostic purposes in WA, where the sources of radiation are subject to regulation under the *Radiation Safety Act 1975*. The person must hold a current licence or work lawfully under the direction and supervision of a licensee.

Replacement (when referring to facilities) – any replacement of a facility, facility component or equipment item required for a facility as a whole to reliably, safely and efficiently reach its planned life.

Risk – as defined in the “facility risk management plan” or “risk management plan”.

Anything associated with the project, operation or maintenance of a facility that requires a duty of care decision.

Risk Management Plan – Operating policies will define the risks to be mitigated related to each function contributing to the services the facility will provide.

In addition and to form part of a comprehensive risk management plan there shall be a facility risk management plan that addresses any functional risks requiring facility solutions for appropriate mitigation and identifies and mitigates facilities planning, cost control, environmental, contracting, construction, commissioning, operation and maintenance risks associated with the facility.

Shall and must – these words mean the requirement described is mandatory.

Should – means the requirement described is recommended but not mandatory.

Standards – the Standards of the Standards Association of Australia.

Treatment area – area as defined in National Construction Code which is an area within a patient care area, such as an operating room and other room used for recovery, minor procedures, resuscitation, intensive care and coronary care from which a patient may not be readily moved.

X-ray operator – a person who has received approval by the Radiological Council of Western Australia to perform x-ray examinations, limited to chests and extremities, using low-powered mobile x-ray equipment.

B. Construction – Standards and methods

B1. Provision for natural disaster

B1.1 General

All hospital facilities should be capable of continued operation during and after a natural disaster, except in instances where a facility sustains primary impact. This means that special design consideration is needed for the protection of essential services such as emergency power, heating and water. Typical problems such as disruption to the local authority water or sewer mains and energy supplies, may affect the operation of on-site services. Responsibility for maintaining these public utilities, however, lies with others.

Appropriate construction detailing and structural provision shall be made to protect occupants and to ensure continuity of essential services where there is a history of earthquakes, cyclones, flooding, bushfires or other natural disasters.

B1.2 Earthquakes

Refer to sections 5, 6 and 17 of the *Western Australia Health Facility Guidelines for Engineering Services*.

B1.3 Cyclones

Refer to sections 5, 6 and 17 of *Western Australia Health Facility Guidelines for Engineering Services*.

B1.4 Flooding

Consideration **shall** be given to possible flood effects when selecting and developing a site. Where possible, facilities **shall not** be located on designated flood plains.

Where this is unavoidable, however, extra care must be taken in selecting structural and construction methodology and protective measures against flooding must be incorporated into the design.

Refer to section 9 of *Western Australia Health Facility Guidelines for Engineering Services*.

B1.5 Bushfires

Facilities shall be designed and constructed to conform with AS3959 – Construction of buildings in bushfire prone areas, and in accordance with the Western Australian Planning Commission’s State Planning Policy 3.7 – December 2015.

The Department of Fire and Emergency Services keeps a Designated Bushfire Prone area map that can be found on the Department of Fire and Emergency Services' website. Any new development within a Designated Bushfire Prone area must comply with the NCC – Building Code Australia's Bushfire Attack Level (BAL) construction requirements, and a BAL assessment completed by an accredited Level 1 BAL Assessor.

A bushfire management plan shall be prepared by an accredited bushfire planning practitioner and integrated into the facility risk management plan and the facility operation plan.

B1.6 Emergency communications

Refer to sections 5, 6 and 10 of the *Western Australia Health Facility Guidelines for Engineering Services*. Consultation with the State Emergency Service is recommended to ensure arrangements are in place for emergency long-range communications assistance in the event of emergency situations or a major disaster.

B2. Construction and design standards

Refer to *Western Australia Health Facility Guidelines for Engineering Services*, Section 8 General and Environmental Requirements, Section 9 Engineering Services, Civil, Section 12 Engineering Services, Fire, Section 15 Engineering Services, Structural and Section 16 Engineering Services, Security.

Construction and design standards in new and remodelling projects shall comply with the requirements of the National Construction Code (NCC), Volume 1, and Class 2 to 9 Buildings. Note that where there is a conflict between the National Construction Code and these Guidelines, the Guidelines shall apply.

Further to the requirements of the National Construction Code, the following shall be complied with:

B2.1 Materials generally

All building material used in the construction of a Private Hospital shall be new and of a type suitable for use in the particular element of construction. Installation shall be to the manufacturers' recommendations, or as dictated by codes and Australian Standards. Exceptions to this rule are renovated or restored historical elements such as door units, leadlight glazing and elements suitable for re-use in a facility development such as existing doors or windows.

B2.2 Roof form and construction

B2.2.1 As for B2.1, roofing material used in the construction of a private hospital shall be new and of a type suitable to its particular application.

- B2.2.2 Where modifications are made to an existing tiled roof or where a new tiled roof abuts an existing tiled roof, existing tiles that are in good condition may be re-used.
- Metal roofing material cannot be reused except where it is carefully removed and refitted and complies with the fixing standards set by the manufacturer.
- B2.2.3 The specification of metal roof sheeting or decking shall have a life span that exceeds the projected life span of the healthcare facility, and constructed according to manufacturers' specifications. Metal roof sheeting or decking may not be used as a traverse path to access services. Access to services at roof level shall be via independent steel or aluminium structures supported independently of the roof sheeting or decking, and designed and manufactured according to AS1657 – fixed platforms, walkways, stairways and ladders – design, construction and installation.
- B2.2.4 All flashing to penetrations through steel roof sheeting or decking shall be in accordance with the manufacturers' specifications, NCC and Australian Standards.
- B2.2.5 Box gutter design shall be capable of handling a 100-year flood event, including suitable emergency overflow. Box gutters shall not pass over electrical switchboards, ICT rooms, lift machine rooms, operating rooms, set-up rooms, sterile store rooms, ICU, CSD and/or food preparation areas.
- B2.2.6 Consideration should also be given to box gutter expansion joints to ensure maximum spaces are not exceeded.
- B2.2.7 Box gutters, shall not be used as access paths to services.

B2.3 Corridors

Minimum corridor widths need to allow for the movement of trolleys, beds, wheelchairs and other mobile equipment, including the passing of such equipment. The over-riding principle in setting the minimum is the need to allow for a workable width that, in the event of an emergency evacuation procedure, does not impede egress.

- B2.3.1 In areas where regular trolley and stretcher movement is expected, such as nursing units, operating and birth suites and intensive care units, the minimum clear corridor width shall be 2100 mm.

The optimum corridor width is 2350 mm.

Even at this dimension, special consideration must be given to the width of doorways into adjacent rooms and the widening of corridors at the entry to the affected rooms to accommodate turning trolleys and beds.

- B2.3.2 Corridor widths in the above areas may be considered at lesser dimensions where an existing building is utilised but special design and planning detail must be incorporated to overcome the problems of congestion and the potential risk to patients and staff in an emergency evacuation. Written approval must be obtained from the LARU.
- B2.3.3 Corridor widths in areas where irregular trolley or bed movement is expected, e.g. radiology, can be reduced to 1800 mm.
- Special consideration must be given to door widths to ensure the unrestricted movement of the trolley or bed from the corridor to the adjacent room.
- B2.3.4 Corridor widths in outpatient suites and in areas not used for patient transportation on trolleys or stretchers may be reduced to 1500 mm clear width.
- B2.3.5 Corridor widths of 1200 mm clear width are acceptable where there is no patient transportation requirement and where corridor runs are no longer than 3 metres, such as corridor spurs to a group of offices.
- B2.3.6 Corridor widths of lesser dimensions are unacceptable, except where they are forming part of an existing facility, and where written approval has been obtained from LARU for the lesser width.
- B2.3.7 Widths of major arterial inter-department corridors and public corridors generally shall be as wide as is deemed necessary for the proposed traffic flow, but shall not be less than 2100 mm clear width.
- B2.3.8 Widths of lobbies within corridors shall be as wide as deemed necessary for the proposed traffic flow and shall comply with the NCC.
- B2.3.9 As a minimum, corridor widths shall comply with AS 1428.1, Design for access and mobility – clause 13 – doors, doorways and circulation spaces at doorways, and AS 1428 Part 2, Enhanced and additional requirements – Buildings and facilities.
- Refer to B.6-Environmental Design.
- B2.3.10 “Clear width” means clear, unobstructed widths. Obstructions such as handrails, drinking fountains, hand basins, telephone booths, vending machines and portable or mobile equipment of any type shall not reduce the minimum width or impede traffic flow.
- B2.3.11 Consideration shall be given to the elimination of potentially dangerous ‘blind spots’.

- B2.3.12 Refer NCC clause D.2.17 – in a class 9a building a handrail shall be provided along at least one side of every corridor and passageway used by patients. The handrail, where practicable, should be continuous for the full length.

B2.4 Ceiling heights

Refer to NCC Part F3, Room Heights as a minimum for any ceiling height not listed below.

- B2.4.1 The minimum ceiling height in occupied areas shall be 2400 mm but consideration should be given to the size and use of the room.

In work areas such as therapy rooms, conference rooms, intensive care and kitchens, 2700 mm is considered a more appropriate ceiling height.

Ceiling heights in ensuites can be reduced to 2250 mm where required, to accommodate building services and structure.

- B2.4.2 The minimum ceiling height in corridors, passages, and recesses shall be 2400 mm. In portions of remodelled existing facilities, the corridor ceiling height may be reduced to 2250 mm – but only over limited areas such as where a mechanical duct passes over a corridor. A reduced ceiling height for no greater corridor length than 3000 mm is acceptable. The extent of any such variation from the above recommendations must be approved in writing by LARU.
- B2.4.3 In areas where access is restricted, such as to accommodate a drinking fountain or a recessed bay, a minimum ceiling height of 2250 mm is acceptable.
- B2.4.4 Rooms with ceiling-mounted equipment may require increased ceiling heights. These could include x-ray rooms, procedure rooms and operating rooms. Heights should comply with equipment manufacturers' recommendations. The most common ceiling height in these areas is 3000 mm.
- B2.4.5 Minimum ceiling (eaves/soffit) heights of external areas such as entry porticoes, ambulance entries and delivery canopies should suit the requirements of the vehicles expected to use them. Consideration is to be given to the impact of whip aerials fitted to ambulances etc.
- B2.4.6 Ceiling heights in plant rooms are to suit equipment and safe access for service and maintenance. A minimum recommended height is 2400 mm.

B2.5 Doors

Refer to:

- NCC Part C3, Protection of openings
- Sections 8.3 and 16 of *Western Australia Health Facility Guidelines for Engineering Services*.
- AS 1428.1 Design for Access and Mobility.
- AS 1428.2 Enhanced and Additional Requirements.

- B2.5.1 The minimum dimensions of clear door openings to inpatient bedrooms in new areas shall be 1200 mm wide and 2030 mm high. Existing doors of lesser dimensions may be considered acceptable where function is not adversely affected and replacement is impractical. A 1200 mm clear opening is accommodated by either a single swing door or a double swing door where the inactive leaf remains secured, unless wider access is warranted. The clear path through the active leaf shall be a minimum of 850 mm. The clear width of door openings into bariatric patient bedrooms shall be 1500 mm and the clear height 2030 mm, with the active leaf providing a 1050 mm clear opening.
- B2.5.2 In general, clear door openings to rooms that may be accessed by stretchers (including wheeled bed stretchers), wheelchairs or disabled persons (including employees), shall be a minimum of 850 mm. For some situations, such as hoists and shower trolleys, a 950 mm minimum is recommended.
- B2.5.3 Clear door openings in corridors shall suit the requirements of traffic and equipment movement but shall not be less than 1250 mm.
- B2.5.4 While these standards are intended to facilitate access by personnel and mobile equipment, consideration must be given to the size of furniture and special equipment that is to be delivered.
- B2.5.5 With the exception of elevator doors, all doors between corridors and rooms, or spaces subject to constant patient or staff occupancy, shall be of the single or double leaf swing type. Openings to showers, baths, patient toilets, ICU, patient compartments, and other such areas, not subject to use as a fire exit, may be exempt from this standard. Sliding doors shall have suitable acoustic treatment and be fit for purpose. Sliding doors shall not have floor sliding tracks and top hung tracks shall have the ability to be cleaned.
- B2.5.6 Doors, except those to spaces such as ducts (which are not subject to constant patient or staff occupancy), shall not swing into corridors in a manner that might obstruct traffic flow or reduce the required corridor width.
- B2.5.7 All doors in corridors shall swing in the direction of egress.

- B2.5.8 Glazed panels, installed in accordance with AS 1288 – “Glass in Buildings – Selection and Installation” shall be provided in doors where visual observation for reasons of safety, security or patient observation is required but in fire doors the size must comply with AS 1905.1 “Components for the Protection of Openings in Fire Resistant Walls – Part 1 – Fire Resistant Door Sets”.
- B2.5.9 Beam activated automatic sliding or swing doors are considered highly desirable in high-traffic areas such as main entries and delivery points. They may also be successful in areas where “hands-off” access is necessary such as entries to operating suites. Where installed, they are to satisfy the requirements of emergency egress and to close at a rate which provides sufficient time for disabled and frail patients and visitors to enter/exit. Automatic doors are not mandatory.
- B2.5.10 Hardware shall be provided to suit the requirements of privacy, safety, security and function, such as indicator sets to toilet cubicles.
- B2.5.11 Consideration should be given to the particular requirements and special fittings needed for areas in which the disabled (lever action), psychiatric (concealed or flush) and paediatric patients (low level) might be accommodated.
- B2.5.12 Rooms identified for paediatric use may require multiple security measures. A single door for example may need to be fitted with both high and low-level handles.
- Refer to AS 1428.3 Design for access and mobility Part 3, requirements for children and adolescents with physical disabilities.
- B2.5.13 Special digital, magnetic card or key type locking systems should also be considered for use in psychiatric facilities.
- B2.5.14 Rooms that contain baths, showers and/or water closets shall be equipped with doors and hardware that permit emergency access from the outside.
- For rooms that have only one opening or are small, doors shall be capable of opening outwards or in a manner which will negate the need to push against a patient who may have collapsed within the room.
- B2.5.15 Master key system – refer to section 16 of *Western Australia Health Facility Guidelines for Engineering Services*.
- B2.5.16 For doors that should remain closed such as external doors, doors into operating rooms and the operating suite generally, door closers should be considered.
- Door closers are not recommended for toilet and ensuite doors, especially doors to accessible bathrooms. Self-closing gravity hinges should be used instead. If for privacy reasons door closers are required to be fitted to accessible or other toilet doors, the force needed to open the door shall be in accordance AS1428.1 – Design for access and mobility.

- B2.5.17 Door hold-open/closers should also be considered for doors that should remain open such as doors on main traffic routes and manual closing delivery doors.
- B2.5.18 Delayed action hold-open/closers should be considered for doors in corridors where regular trolley movement by single operators might cause door damage such as doors into kitchens.

B2.6 Windows

Refer to:

- NCC Part F4; Light and Ventilation,
- AS1288 “Glass in Buildings – Selection and Installation” AS2208 “Safety Glazing Materials for Use in Buildings”
- Section 16 of *Western Australia Health Facility Guidelines for Engineering Services*.

- B2.6.1 Where practicable, all rooms occupied by patients or staff on a regular basis shall have glazed windows or doors to achieve external views and/or make use of direct or borrowed natural light.

All patient bedrooms shall have external windows overlooking external areas. An external area is defined as the perimeter space around a building as well as naturally ventilated and lit atriums and courtyards.

- B2.6.2 Each external window and/or external glazed door panel area shall not be less than 10 per cent of the floor area of the room concerned. An opening component equal to not less than 5 per cent of the floor area of that same room is considered highly desirable. Together, these requirements will ensure natural light and ventilation in the event of an electrical or air-handling system failure.

- B2.6.3 With windows to facilitate energy management and conservation, artificial lighting and air-conditioning systems might not be necessary in certain rooms, at certain times of the day and year. Windows are also considered to be an important factor in the psychological wellbeing of some patients. Open windows, however, can create security problems. Refer to section 16 of the *Western Australia Health Facility Guidelines for Engineering Services*.

- B2.6.4 The inclusion of an openable window component in multi-level hospitals with ducted air conditioning systems, or in buildings in cyclone-prone areas, is not always possible. In these circumstances, fixed windows are acceptable, although access for external window cleaning should be considered. All openable external building perimeter windows and doors shall be lockable.

- B2.6.5 Hopper windows should not be used in multi-storey buildings because they can act as smoke/heat scoops from fires in storeys below.

- B2.6.6 Window cleaning cradle/securing points shall be considered.

- B2.6.7 Doors, sidelights, borrowed lights and windows in which the glazing extends to within or below 450 mm above the floor, and are subject to possible breakage, shall be glazed with safety glass in accordance with AS 1288 Glass in Buildings – Selection and Installation. Refer also to AS2208 “Safety Glazing Materials for Use in Buildings”.
- B2.6.8 Safety glass shall also be used in activity areas such as recreation and exercise rooms and for shower screens, internal doors and full height windows, including those in paediatric and psychiatric areas.

B2.7 Screens and grilles

Refer to section 16 of *Western Australia Health Facility Guidelines for Engineering Services*.

- B2.7.1 Generally, openable external windows, vents and doors shall be fitted with flyscreens. Doorways used on a regular basis, such as service or main entries, need not be flyscreened but shall be fitted with a self-closing device. Other exceptions to the above are openable windows, in multi-storey or fully air conditioned buildings that are permanently locked and used only for service access or cleaning purposes.
- B2.7.2 External doors that open directly into food preparation areas and are used for service deliveries or regular access shall be fitted with air curtains, flexible doors or an equal control system to restrict the ingress of insects. Flyscreen doors (which can be propped open), and electronic insect traps within the kitchen, are not suitable as the only means of insect control. See section G7.2.13, Insect Control (Catering).
- B2.7.3 Security grilles, an appropriate impact resistant glass or electronic security system should be installed wherever high-security areas have external windows such as pharmacy stores and workrooms, and medical records stores.
- B2.7.4 Security flyscreened doors, where installed, shall not compromise emergency egress.

B2.8 Ramps

Refer to:

- AS 1428.1 Design for access and mobility: General requirements
- AS1428.2 Design for Access and Mobility: Enhanced and Additional Requirements
- AS1428.4.1 Design for Access and Mobility: Tactile Ground Surface Indicators for the Orientation of People with Vision Impairment
- AS 2890 Part 1 Part 2 and Part 6 Off-street parking facilities.

B2.8.1 Where ramps are required for patient access, minimum gradients are as a minimum to comply with the requirements of the NCC and AS 1428.1, “Design for access and mobility.” Where there is a requirement for bed or patient trolley circulation, lower gradients shall be considered than those for a wheelchair. The gradient shall be based on the size and weight of occupied bed and the landing length shall be appropriate to accommodate a trolley bed.

Finishes shall have appropriate slip-resistance – refer AS 4586 – Slip Resistance classification of pedestrian surface materials.

B2.8.2 Ramps in other areas, e.g. service roadways, shall comply with good design practice and be suitable for the task. Australian Standards, wherever applicable, shall be used. Refer AS 2890.1 Off Street Parking Facilities and AS 2890.6 Off-Street Parking for people with disabilities.

B2.8.3 For ramp gradients for ambulances – Refer to G9.5.

B2.9 Floor joints

B2.9.1 Threshold and expansion joint covers shall be made flush with the floor surface to facilitate the use of wheelchairs and trolleys and to be cleaned easily (infection control). Expansion and seismic joints in multi-storey facilities shall be constructed to resist the passage of fire and smoke.

B2.10 Grip rails

B2.10.1 Grip rails, as referred to in the following sections, shall be detailed as described in AS1428.1, and AS1428.2 “Design for Access and Mobility” general and enhance requirements as applicable.

B2.10.2 Grip rail fixing and support – Refer to B2.12.

B2.10.3 Anti-ligature handrails shall be detailed in areas such as emergency departments and mental health units where patients may self-harm and where aged patients and comorbidity are issues.

B2.11 Plumbing fittings generally

Refer to section 13 Western Australia Health Facility Guidelines for Engineering Services.

B2.11.1 Location and arrangement of fittings for hand-washing shall permit their proper use and operation. Infection-control principles shall determine the appropriate selection of plumbing fittings generally.

Selection of spout and fitting shall ensure that the waterspout does not flow directly into the drain aperture, providing aerosol splashback onto the user.

Spray taps and hoses that create aerosols are not permitted in a clinical environment.

Toilet lids shall be included where possible, to contain aerosols during flushing.

Particular care should be given to the clearances required for elbow action type handles.

Non-thermal transmitting standard handles are preferred, with effective finger grips.

Heights are to suit the particular function such as paediatric, disabled or standard.

B2.12 Fixture support

B2.12.1 Grip rails, hand rails, vertical adjustable shower supports, towel rails, soap holders, foot rests and any other fixture which may be used for support, shall have sufficient anchorage and strength to resist the sustained load of a falling heavy human, as a minimum. AS1428.1 – Design for access and mobility – to withstand a force of 1100N.

B2.12.2 Handwashing facilities shall be anchored securely to withstand an applied vertical load of not less than 115kg on the front of the fixture.

B2.13 Mirrors

B2.13.1 Mirrors shall not be installed at hand-washing fixtures in food preparation areas, nurseries, clean and sterile supply areas, scrub sinks or other areas where asepsis control would be lessened by hair combing.

B2.13.2 Mirrors in accessible sanitary facilities shall be in accordance with AS1428.1 – Design for access and mobility – Section 15.4 and AS 1288 – Glass in Buildings Selection and Installation.

B2.14 Soap dispensing

B2.14.1 Provision for “hands off” liquid soap dispensing should be included at all hand-wash facilities. All standard basins should be fitted with “hand cleanser” liquid soap and all scrub-up basins (clinical hand washing) with “disinfectant” liquid soap. Soap dispensers shall be closed cartridge type mounted on or above the splashback. Refillable dispensers are not permitted.

B2.15 Hand drying

B2.15.1 Provision for hand drying shall be included at all hand-wash facilities, except operating suite scrub-up troughs. Hand-drying facilities shall be single use, separate and individual linen/paper units enclosed in such a way as to provide protection against dust or soil and ensure single-unit dispensing. Hot air dryers are not recommended in clinical areas and are permitted only in non-clinical areas provided that installation precludes possible contamination by re-circulation of air, and the location takes into account the acoustic isolation requirement given that they are noisy. Single-use paper towel hand drying units are preferred.

B3. Finishes

B3.1 Walls generally

- B3.1.1 Other than special treatments included as feature face work in public or staff relaxation areas, wall finishes shall be stable, and in the immediate vicinity of plumbing fixture, shall be smooth and impervious.
- B3.1.2 Wall finishes shall be fit for purpose. They should be durable and resist impact from furniture, trolleys and mobile equipment.
- B3.1.3 Wall finishes should meet the requirements for indoor environmental quality (IEQ) and meet acceptable criteria of fire hazard properties required by the NCC Part C for class 9a buildings.

B3.2 Ceilings generally

- B3.2.1 Ceiling types shall be selected and designed to support the level of infection-control management required in each space. All exposed ceilings and ceiling structures in areas occupied by patients or staff, and in food preparation or food storage areas, shall be finished so as to be readily cleanable with equipment routinely used in daily housekeeping activities. In food preparation and other areas where dust fallout would present a potential problem, there shall be a finished ceiling that covers all conduits, piping, duct work and open construction systems. Ceilings in operating, and delivery rooms, isolation rooms, nurseries, set-up and sterile processing and sterile store rooms shall be monolithic from wall to wall without fissures, open joints, or crevices that may retain or permit passage of dirt particles. Light fittings shall also be recessed and flush fitting and sealed to prevent dust ingress. Acoustic and/or lay-in ceilings shall not be used where particulate matter may interfere with asepsis control.
- B3.2.2 Ceiling construction in psychiatric patient and seclusion rooms shall minimise potential for injury or self-harm.
- B3.2.3 Access to services in ceiling voids through ceilings should be provided as required, except in areas such as operating and procedure rooms, isolation rooms and controlled environments. If access panels are required in these areas, they should be provided with an effective air pressure seal and should be opened only with a special key to prevent unauthorised access. Ceilings to patient areas in mental health units should be designed to prevent patients from accessing ceiling spaces. Areas requiring security or restricted access such as pharmacy, stores, records, medication should consider design measures to prevent unauthorised entry. These could include steel mesh or locked access panels.

B3.3 Wall and ceiling paint finishes

B3.3.1 Walls and ceilings are the largest visual element of an area and can have an impact on the aesthetic appeal of the space. Paint is an inexpensive finish which can help create a non-institutional atmosphere and assist in the healing process. Paint type should be appropriately specified and selection shall address aspects such as durability, ease of cleaning, indoor air quality, colour and retention of appearance. In areas where patient observation is critical, colours chosen shall not alter observers' perception of skin colour.

B3.4 Floors generally

B3.4.1 Floor materials shall be easily cleanable and have wear resistance appropriate to the location.

B3.4.2 Floors in areas used for food preparation or food assembly shall be water resistant and greaseproof to comply with the Food Regulations 2009 and ANZ Food Standard Code – Safety Standards (3.2.3 Food Premises and Equipment). Floor surfaces, including joints in tiles in such areas, shall be resistant to food acids (epoxy grout). In all areas subject to frequent wet cleaning methods, floor materials shall not be physically affected by germicidal cleaning solutions.

B3.4.3 Floors subject to traffic whilst wet (such as showers and bathrooms, kitchens and similar work areas) shall be capable of maintaining a non-slip surface in accordance with slip resistance in terms of AS 4586 Slip resistance classification of new pedestrian surface materials, HB 197 – A Guide to slip resistance of pedestrian surface materials and *Occupational Safety and Health Regulations 1996*, part 3.

B3.4.4 Wall bases in kitchens, operating and delivery rooms, clean and dirty utility rooms, C,S,D areas and other areas subject to frequent wet cleaning methods shall be made integral with the floor, tightly sealed against the wall, and constructed without voids forming a coved skirting. A skirting height of 150 mm recommended.

B3.4.5 Finish, trim, floor and wall construction in dietary and food preparation areas shall be free of spaces that can harbour rodents and insects. Details must comply with the relevant Public Health regulations.

B3.5 Floor finishes – responsibility

B3.5.1 The selection of floor finishes is very important. It has direct impact on safety (patients, staff and visitors) and potential legal implications such as workers compensation claims and tort law, if not correctly addressed. Fire safety compliance is also an important consideration. A “duty of care” exists where professionals such as purchasing officers, retailers and agents are involved in the selection of products. Responsibility must be addressed when purchasing replacement products. Floor finishes also have a direct impact on the whole-of-life costs of any building where cleaning and maintenance is concerned. This is especially true in a hospital. Low capital cost may result in high whole-of-life costs.

B3.6 Penetrations

B3.6.1 Floor and wall penetrations by pipes, ducts and conduits shall be tightly sealed to minimise entry by rodents and insects. Joints of structural elements shall be similarly sealed.

B3.7 Soft furnishings

B3.7.1 Use of materials for items such as mattresses and upholstery, as well as certain plastics in quantities known to produce large amounts of toxic gases, shall be avoided as far as possible.

B3.7.2 Cubicle screens, bed screens and curtains/window treatments shall be non-combustible or rendered flame retardant and shall comply with the NCC, Section C1.10.

B4. Energy conservation and management

B4.1 General

The cost of energy is a significant component in the operational costs of a hospital. These ongoing costs can be minimised by intelligent design and the adoption of effective operating and maintenance practices.

The following areas should be considered:

- climatic design
- natural ventilation
- service selection
- energy management.

B4.2 Climatic design

To minimise energy use and provide improved thermal comfort conditions, the building should be designed to reflect the climate of the site. The passive design issues, which should be considered during the design process to ensure an optimum thermal design include:

- site layout and orientation
- planning
- sun control
- air movement and wind shelter
- thermal capacity of construction.

B4.2.1 Site layout and orientation – site and orientation are important parts of every project's design because they affect the potential to capture or avoid natural energy. In general, building on an East/West axis provides a more energy efficient plan.

B4.2.2 Planning – the planning of rooms should also consider the influence of climate. Patient and habitable rooms should be located on North and South facades with service areas located on the East and West.

- B4.2.3 Sun Control – sun control is generally required on all windows facing North, East and West. Sun screening devices should be designed to ensure that direct sun does not occur on the working plane.
- B4.2.4 Air Movement and wind Shelter – consideration should be given in the design process to providing protection for cold winter and hot summer winds and utilising the cool prevailing breezes in summer.
- B4.2.5 Thermal capacity of construction – energy demands are affected by the building envelope configuration, fenestrations, wall materials, colours, insulation, sealing, area of exposure of roof and walls, overhangs and mass.
- B4.2.6 Condensation problems often occur when there are extremes between the outside temperature and the indoor controlled temperature. Where the site location has a climate with a risk of condensation on building surfaces or ductwork, the design must mitigate this risk.

B4.3 Natural ventilation

- B4.3.1 Consideration should be given to incorporating natural ventilation design to take advantage of possible energy savings. Ceiling fans used to augment conditioned air should also be considered in the northern latitudes.

Refer to section 14 of *Western Australia Health Facility Guidelines for Engineering Services*.

B4.4 Services selection

- B4.4.1 All aspects of mechanical, electrical and plumbing services should be investigated thoroughly by the design consultant to minimise the ongoing costs of energy consumption.

Refer to *Western Australia Health Facility Guidelines for Engineering Services* for specific requirements for engineering services.

B4.5 Energy management

All new buildings, including their services, are required to comply with Section J “Energy Efficiency” of the NCC. This facilitates efficient use of energy appropriate to the function and use of the building and services. A declaration of Section J compliance is a requirement for the issue of a Certificate of Design Compliance and Certificate of Construction Compliance by a registered Building Surveyor.

B5. Environmental design

See also C.10 – Environmental impact.

B5.1 General

The elements covered in an environmental design statement are:

- Climatic Design
- Natural Ventilation
- Energy Management
- Acoustics
- Day lighting
- Mechanical.

The first three are covered by Section B4, Energy Conservation and Management, which are considered important enough to highlight and treat independently.

This section will deal with the latter three elements.

B5.2 Acoustics

Refer to section 8, specifically sub-section 8.2 of *Western Australia Health Facility Guidelines for Engineering Services*.

B5.3 Day lighting

Refer also to B4.2.3 – Sun Control.

The extent of daylight design can be determined by considering:

- the subjective preference of people for daylight and views to the outside
- the energy savings achievable by utilising daylight.

The four major design issues to be considered in a daylight design are:

- level of illumination
- spatial distribution of illumination
- discomfort glare
- radiant heat.

B5.3.1 Level of Illumination

The level of illumination shall comply with the levels recommended in AS 1680.1 Interior lighting General principles and recommendations and refer to section 11.16 of *Western Australia Health Facility Guidelines for Engineering Services*.

B5.3.2 Spatial distribution of illumination

An even spatial distribution of light is difficult to achieve, particularly with a unilateral daylight design. Where skylight systems are used they should be designed to ensure that diversity of illumination does not exceed a ratio of 2.1. Refer AS1680.2.1 Interior lighting – Specific application – Circulation spaces and general areas.

B5.3.3 Discomfort Glare

Avoid glare discomfort by avoiding direct sun penetration onto the working plane and onto glazed external doors and windows at the end of corridors. Also ensure the correct orientation of digital display monitors or boards in offices and nursing work stations. Refer AS1680.2.2 – Interior lighting – Specific applications – Office and screen based tasks.

Note that the areas most suited to day lighting include patient areas, foyer/waiting areas, corridors and workshops.

B5.3.4 Radiant Heat

Radiant heat, also known as solar gain, is associated with day lighting systems that utilise direct sun.

Consideration shall be made to ensure comfort conditions are not exceeded in spaces day lit with direct sun systems. Sufficient solar protection should be included in the design to eliminate undue radiant heat.

B5.4 Mechanical

B5.4.1 Mechanical Acoustics

Refer to sections 8.2 and 14 of the *Western Australia Health Facility Guidelines for Engineering Services*.

B5.4.2 Vibration

Refer to sections 8.2 and 14 of the *Western Australia Health Facility Guidelines for Engineering Services*.

B6. Environmental design

B6.1 General

All organisations have a responsibility, under the federally legislated *Disability Discrimination Act (1992)* to provide equitable access to goods and services and premises used by the public. Premises are broadly defined and would include all areas within a building.

According to the NCC, Section D3.2, a class 9a building shall be accessible for people with a disability to, and within, all areas normally used by occupants.

Consideration must be given to the wide range of disabilities including:

- Mobility impairment
- Impaired or loss of sight
- Impaired or loss of hearing.

B6.2 References

- Disability (Access to Premises – Buildings) Standard 2010
- The *Disability Discrimination Act 1992* (DDA)
- AS1428.1 2009 – Design for access and mobility – General requirements for access – New building works
- AS1428.2 1992(2015) – Design for access and mobility – Enhanced and additional requirements – Buildings and facilities.

B6.3 Specific considerations

B6.3.1 Access and Use

Refer to B2.3 – Corridor Widths

The DDA provides uniform protection against unfair and unfavourable treatment for people with a disability in Australia. It also makes it unlawful to discriminate against a person who is an associate, such as a carer, friend or family member.

The Act supports the principle that people with a disability have the same fundamental rights as the rest of the community and this includes the opportunity to be employed, purchase goods and services, gain access to premises used by the public and the like.

Equitable and dignified access must be provided and a complaint can be made under the DDA if appropriate access is not provided.

B6.3.2 Planning

Compliance with the Premises Standard and referenced Australian Standards addresses the mandatory requirements for the provision of access for people with a disability. Meeting the intent of the DDA and therefore protecting your organisation against a complaint under the DDA may require consideration of provision of access to the following areas that fall out of the mandatory requirements of the Premises Standard, for example:

- counters
- staff tea preparation areas and the like
- operation of some controls
- non-mandatory application of luminance contrast
- non-mandatory application of directional tactile ground surface indicators
- emergency egress provisions
- way finding and associated signage.

B6.3.4 Lifts

Refer to section 18.5.11 of the *Western Australia Health Facility Guidelines for Engineering Services*.

B6.3.5 Unsafe design

Special attention shall be given to elimination of unsafe design. This might include shielding sharp projections, moving parts, and heated surfaces.

B6.3.6 Conveniences for the physically impaired

Refer to sections 10 and 13 of *Western Australia Health Facility Guidelines for Engineering Services*.

In addition:

Minimum provision of conveniences for disabled to comply with NCC Section F – Health and Amenity.

At least one drinking facility, toilet (unisex) and handwashing facility shall be available on each floor for use by physically impaired patients, staff and visitors.

Hot water to hand-washing facilities shall be temperature controlled.

A public telephone, for use by the physically impaired, shall be located in a convenient location within the building, preferably with the other public telephones installed at able persons' height. Where a single telephone is installed, it shall be installed for use by the physically impaired.

Notes: The accessible unisex toilet facility can also function as the general visitors' unisex toilet. An accessible toilet is not for the exclusive use of physically impaired persons.

B6.3.7 Exempted areas

Clause D3.4 of the NCC states that:

the following areas are not required to be accessible:

- (a) an area where access would be inappropriate because of the particular purpose for which the area is used
- (b) an area that would pose a health or safety risk for people with a disability
- (c) any path of travel providing access only to an area exempted by this clause.

The Guideline on the application of the Premises Standards provides additional clarity by way of the following examples:

“These areas could include cleaners store rooms, commercial kitchens, staff serving areas behind bars, cool rooms, rigging lofts, waste-containment areas, foundry floors, abattoir animal processing areas, railway shunting yards, electrical switch rooms, chemical and hazardous materials store areas, loading docks, fire lookouts, plant and equipment rooms and other similar areas.”

Exclusion of the physically impaired from any area may require justification for approval.

B6.3.8 Carpeting

All carpeting in areas subject to use by mobile impaired individuals shall be very high density with a low cut or uncut pile that will provide minimal resistance for wheelchair use. Underlay is permissible, provided it is installed firm or hard. Carpet and underlay shall be stretched taut and anchored securely at all edges to the floor to minimise resistance to wheelchair travel and to avoid tripping hazards. Edging strips shall be bevelled and shall not project higher than 1 cm above the floor line.

Carpet edge strips and underlay shall comply with AS1428.1 – Design for access and mobility – General requirements.

B6.3.9 Modernisation

In modernisation of, and additions to existing facilities, only that portion of the facility affected by the project, including adjacent areas used for access, must comply with this section. However, it is hoped that the total facility will be made accessible to physically impaired where practical.

B7. Fire safety

Refer to sections 12 and 22 of the *Western Australia Health Facility Guidelines for Engineering Services*.

B8. Statutory authority approval

The approval by the Director General to create or continue to operate a private hospital, under the *Private Hospitals and Health Services Act 1927*, does not exempt the owner/ builder of the necessity to comply with any statutory requirements established and controlled by other authorities.

Such authorities are:

- Federal Government (various Departments/ Authorities/ commissions)
- Water Corporation
- Western Power Corporation
- Alinta Gas
- Environmental Protection Authority
- Worksafe Western Australia
- Department of Mines (explosives, flammable storage)
- Department of Fire and Emergency Services
- Local Government
- Other bodies as authorised by jurisdiction.

It is also recommended that all State and local government planning approvals (see sections C1 – Site Planning Compliance), be obtained before submitting documents to LARU for approval.

B9. Standards and codes

B9.1 General

Codes, rules, standards and specifications of statutory organisations – or those specifically referred to in the text of this document – shall be deemed to be specific requirements of these Guidelines. The standards of Standards Australia are included.

Exclusions and special conditions applied to said codes, rules, standards and specifications by the NCC shall also apply to these Guidelines.

B9.2 Reference to standards

Where a code or standard is listed or referred to within these Guidelines and is not dated, the appropriate document shall be the latest edition of that code or standard and shall incorporate all revisions. Where the code or standard listed or referred to within these Guidelines is dated, then reference to that dated issue is necessary because later revisions may not be acceptable or relevant. Where the referenced code or standard has been replaced by a completely different code or standard, LARU, or a representative of LARU, shall be consulted to ascertain its relevance and acceptability.

B9.3 Differences between the Guidelines and codes and standards

Where there are differences between the detailed references in the Guidelines and the relevant codes and standards, the requirements of the Guidelines shall be the preferred requirement.

B9.4 Omitted relevant Australian Standards

Standards Australia documents specifically applicable to the requirements of hospital construction, equipment, service and practice, but that are not referred to in these Guidelines, should be seen as indicative of “good practice” and adopted.

B10. Construction and design flexibility

Demographic variables, epidemiological changes, technological change, changes in philosophy on methods of treatment, changes in a service due to economic viability or the need for that service, are all reasons for providing hospital facilities that are robust and imaginative enough to enable modification to support an unknown range of future activities and services. Form-following function should be tempered with an element of consideration for strategic response to growth and change.

As such, consideration should be given to the way the hospital can change and grow to accommodate all of the above variables.

B11. Construction phasing

Projects involving alterations and/or additions to existing buildings shall be programmed and phased to minimise disruption of retained existing functions.

Access, exits and fire protection shall be so maintained that the occupants' safety will not be jeopardised during construction.

B12. Modernisation compliance

Refer to section 12 of the *Western Australia Health Facility Guidelines for Engineering Services*.

Approval by LARU to renovate select elements of a facility may be given in cases where modernisation and extension of the entire facility, in accordance with these Guidelines, is not financially viable.

Such approval would be conditional upon the incorporation of appropriate measures or features that would guarantee the safety of patients, access by the physically impaired and effective operation of the facility.

LARU may also make it a condition of approval that outstanding items be resolved at a later date when finances become available. A timeframe might also be imposed.

When partially modernising a facility, those areas that do not comply with these Guidelines, must be separated from sections that are to be modernised by fire barriers of not less than two-hour fire resistant construction, extending through the full height of the building or compartment. **Doors in these barriers shall also be two-hour rated.** Remodelling of one or two rooms within an existing area is exempt, but written approval must be obtained from LARU.

Requests for partial modernisation must be submitted, in writing, to LARU for consideration.

B13. Signposting

Appropriate and comprehensive signposting shall be provided for all private hospitals. Sign posting shall clearly identify staff, patient and visitor areas, and draw attention to restricted areas.

The preferred lettering style is "Helvetica medium" Upper and lower case generally. Upper case only is preferred for building Main Entry Sign. This is not mandatory.

Internationally recognised symbols (pictograms) in lieu of room titles are acceptable to LARU.

Safety signs and symbols shall comply with AS 1319 Safety signs for the occupational environment.

Sizes of letters in relation to reading distances, mounting heights etc. shall comply with the relevant standards. Refer to the NSW Health TS2 "Wayfinding for healthcare Facilities" 2014 for assistance.

Signposting shall comply with the following parameters:

B13.1 External directional – non-illuminated

Colour – white reflective letters on a blue background (steel or aluminium construction preferred).

B13.2 Building main entry – feature sign

Form, location and colour to be determined by designer.

B13.3 External signs – illuminated

- Emergency Department, (if applicable). Colour – white letters on a red background.
- 'Main Entry' and 'Night Entry' (if applicable). Colour – white letters on a blue background.

B13.4 Internal signs – non-illuminated

- Internal Signs – non-Illuminated directional and area identification.
- Ceiling or wall mounted.
- Colours – no special requirements.

B13.5 Internal door frame numbering

- Maintenance reference, all door/frame combinations.
- Colours – no special requirements.

B13.6 Internal and external room function

- Internal and external room function identification signs
- Non-illuminated, located on doors.
- Consider format to allow easy replacement of sign or sign inset when room function changes.
- Patient rooms are to be identified on a wall projected corridor signs for easy reference by visitors. Door signs are not required.

B13.7 Egress signs

- In accordance with NCC Part E4 and with AS 2293.1 emergency escape lighting and exit signs in buildings
- Refer also to section 11.16 of *Western Australia Health Facility Guidelines for Engineering Services*.

B13.8 Fire services signs

In accordance with the following:

- Fire Extinguishers – AS 2444-(Portable Fire Extinguishers and Fire Blankets – Selection and Location
- Fire Hose Reel Cabinets
- Signposting on cabinet doors shall be 50 mm high, white letters on a contrasting background, to read “Fire Hose Reel”, or if equipment is together in a single cabinet, “Fire Equipment”.
- A pictogram (or pictograms) in accordance with International Standards is also an appropriate alternative.
- Hydrants – AS 2419 Part 1 “Fire Hydrant Installations, Systems Design, Installation and Commissioning”.

B13.9 Road markings

Parking bays, arrows, symbols, instructions, sign locations shall be in accordance with:

- AS2890.1 Parking Facilities – Part 1 Off street car parking
- AS2890.6 Parking Facilities – Part 6 Off-street parking for people with disabilities
- AS1428.1– Design for access and mobility – General requirements.
- Colour – White generally, white symbol on blue rectangle for accessible bay, yellow for restricted zones.

B13.10 Miscellaneous signs

Illuminated and non-Illuminated.

- As required, with colours to meet the requirements of the relevant code or regulating authority. “X-ray in use” signs, for example, should be illuminated.

B13.11 Bed numbering

- Bed Numbering/ Doctor Identification/ Special Instruction Signs
- Normally located at the bed head, although location and format at the discretion of the client and designer.

B13.12 Street directional signs

In accordance with the requirements of the local council and/or the appropriate section of the Main Roads Department.

Note that Accreditation Standards require that a facility has street directional signs sufficient to enable it to be located easily from the major road in the area.

B14. Security

Refer to section 16 of the *Western Australia Health Facility Guidelines for Engineering Services*.

Consideration shall be given to the additional facility requirements that result in a secure and safe environment for staff, patients and visitors.

The issue of security is raised throughout the guidelines. It can be found, for example, in the selection of door hardware and external lighting. Rather than resolve the issue at micro level only however, consideration shall be given to the macro. Good initial planning and design detail can discourage easy access and concealment of undesirable elements and help in the containment of certain categories of patients.

A private hospital, even without an Emergency Department, is a 24-hour operation with visitors and staff entering and leaving at all times but most likely on an informal and unscheduled basis. This increases the potential for unauthorised entry into the building and – especially at night – for attacks on visitors and staff when walking to and from car parks and bus stops.

Day hospital and Day procedure units especially stand-alone buildings that are limited to daytime operation, shall also be secured well to prevent unauthorised entry.

Issues that require consideration are addressed in section 16 of the *Western Australia Health Facility Guidelines for Engineering Services*.

C. Site – Development and impact

C1. Planning

The location and development of the site shall be in accordance with the requirements of the Local Authority Town Planning Scheme or, in the absence of a scheme, be approved by the Local Council or Authority and be to the satisfaction of the LARU.

C2. Accessibility

The site shall be conveniently accessible to the community.

That same convenience of access shall be afforded to service and emergency vehicles, including fire protection apparatus, keeping in mind the size and configuration of some of these vehicles.

C3. Area

The use of the site shall be in compliance with the Local Authority (LA) Town Planning Scheme and Policies. Concessions may be sought by application to LA, State Administrative Tribunal, and ultimately the Supreme Court.

C4. Site coverage

Site coverage shall comply with the Local Authority (LA) Town Planning Scheme and Policies, including parking and/or hard surfacing. Concessions may be sought by application to LA, State Administrative Tribunal, and ultimately the Supreme Court.

C5. Setbacks

Setbacks shall comply with the Local Authority (LA) Town Planning Scheme and Policies. Concessions may be sought by application to LA according to their policy documents, including possible advertising and stakeholder participation, State Administrative Tribunal, and ultimately the Supreme Court.

Exceptions to this requirement include small service outbuildings and setbacks where the nature of the shire and adjacent structures require special consideration. Each case will be dealt with on merit. An approval for concession must be obtained in writing from the LARU and the Local Authority.

Note that additional special features such as fire protection systems may be requested.

C6. Roads and pathways

The design should comply with Main Roads Western Australia, Standards and Guidelines, in terms of design and detailing, signs and markings, and lighting.

Refer to B13 – signposting.

Refer to section 9.2 of *Western Australia Health Facility Guidelines for Engineering Services*.

All roads and pedestrian paths shall be hardened surfaces certified by a registered Civil Engineer, and this includes access to all entrances, parking areas, service, delivery and maintenance access.

Refer to G9.5 – Ambulance Facilities.

All roads and pedestrian paths on the site shall comply with AS 1428.1 Design for access and mobility, and pedestrian paths cannot be accommodated on roads, except crossings.

Access for fire services shall be to DFES approval.

Pedestrian access should be facilitated from public transport nodes into the site.

C7. Parking

Refer to G9.5 – Ambulance facilities.

On-site parking shall be provided. When calculating the number and location of on-site parking bays, the following points should be considered:

- facility type (such as maternity or surgical)
- facility location (such as city, suburban or country)
- available off-site parking
- public transportation
- local council regulations.

Staff

- own transport
- maximum number on duty
- alternative modes of transport
- car pooling.

Visitors

- own transport
- open visiting hours
- peak times (5–8pm)
- alternative modes of transport.

Patients

- day patients (outpatients)
- inpatients (nature of patient, for example maternity patients often attract more visitors)
- deliveries and service – short-term parking
- emergencies – short-term parking (if applicable)
- ambulances – short and long-term parking
- doctors and visiting specialists/consultants bays
- disabled – close to building entry, minimal roads to traverse, compliance with regulations and codes in force
- allocation of space for bicycles and motorcycles on common covered “set down” area for patients, visitors and staff, short term parking
- future expansion.

A formal parking study is desirable but in the absence of such a study, the following “rule of thumb” guideline can apply. Provide:

- one parking space for each maternity bed plus one space per two beds for each other category of patient.
- four parking spaces for each procedure room in the day procedure unit.
- one space for each employee normally present on the largest weekday shift. This ratio may be reduced in areas convenient to public transport or public parking facilities, or where carpool or other arrangements to reduce traffic can be developed.
- sufficient “overflow” parking for staff shift changeovers. Consideration must be given to the number of staff members with cars. There is the potential for twice the number of staff-owned cars to be on site at this time.
- Spaces dedicated for use by doctors and visiting specialists/consultants only. The number determined by the maximum on site at one time.
- Car parking spaces for people with a disability. These must comply with NCC Section D3.5 “Car parking Spaces for people with a disability” or a minimum of two accessible parking spaces, whichever is the greater. Dedicated accessible parking spaces shall be located close to an accessible building entry point (not service), preferably the main entrance. The total number of disabled bays set aside, and their locations, will vary considerably between facilities, and must be reviewed in realistic detail to ascertain the final number.
- An area for bicycle parking, in accordance with Local Council requirements and AS2890.3 Bicycle parking facilities.
- Motorcycle parking (variable, consider one for every 30 beds).
- A covered “set down” area for disabled passengers, patients and staff in front of an accessible building entry point (not service), preferably the main entry.
- Short-term parking for emergency, delivery and service vehicles, with actual provision dependent upon size of service.

Where outpatient and emergency services are proposed, parking spaces shall be provided to suit the expected throughput. Availability of public transport can be factored in. Overflow impact on other types of hospital parking shall be avoided.

Expansion potential (if applicable).

Number, sizes, layout and setback of bays shall comply with local council regulations or by-laws. Where the facility is located in a country area, consider larger bays to cope with the prevalence of four-wheel drives fitted with roo bars and bull bars.

Separation of parking areas into dedicated zones such as staff, visitors, doctors, outpatients, short-term/ emergency and delivery **shall** be considered.

Construction of roadways **shall** also be considered in areas such as delivery/set down where heavy vehicles are used and where heavy equipment is lowered from vehicles (surface damage).

C8. Site grading and safety

The balance of a hospital site not covered by buildings should be graded to facilitate safe movement of the public and staff. Where this is not possible, access should be restricted.

C9. Landscaping

Undeveloped portions of the site should be landscaped, preferably with water-wise vegetation and reticulated irrigation, and care should be taken to adequately drain the site. No portion of the site shall be left as bare soil, and there should be no unstable banks or dips anywhere on site that could be subject to rainwater pooling.

A suitable landscaping scheme shall be provided to enhance outdoor spaces to create a visual and physical amenity for patients, visitors and staff.

Water conservation should be a primary consideration when designing layouts and selecting plants. Site stormwater drainage should be integrated with the landscaping design. Bore water (if available) for reticulation is recommended. Mains water use for reticulation is restricted. Water Corporation should be consulted for current regulations.

Local council verges (where applicable) should be considered an extension of the Hospital site and be landscaped and maintained accordingly.

C10. Environmental impact

Local council regulations covering type and extent of landscaping (if they exist) shall be taken into consideration.

An effort should be made to reinforce and integrate with a town's landscaping scheme where possible.

C11. Public transportation

Consultation with the local transport authority should be initiated in the early planning stage to facilitate connections with, and pedestrian access to, public transport. A hospital facility shall provide suitable pedestrian access to public transport.

C12. Public utilities

A hospital facility being established on any site must comply with the requirements and regulations of authorities that regulate water, electricity, gas, telephones, sewerage and any other responsible statutory or local authority.

C13. Structural considerations

Refer to sections 9 and 17 of the *Western Australia Health Facility Guidelines for Engineering Services*.

D. Furniture and equipment

D1. General

Furniture and equipment, both fixed and mobile, shall be provided in sufficient quantity and be of a quality that satisfies the requirements of the Statement of Function and to meet the minimum Occupational Health and Safety and Welfare Regulations. All furniture and equipment is to be maintained in a clean, safe and serviceable manner.

D2. Level of provision

It would not be considered feasible for these guidelines to specify all possible furniture and equipment requirements. The provision of an appropriate volume and quality of items, however, is deemed to be of great importance and shall be given serious consideration. Completed schedule must demonstrate not only that essential items will be provided but also that they will be available at a level consistent with good patient care, as determined by LARU.

D3. Layouts and spatial requirements

The design of the facility shall take into account the spatial requirements of furniture and equipment such as trolley bed impact on the design of corridors, doorways and room proportions service area for sterilisers etc.

Drawings submitted to LARU for approval are to show the locations and spatial requirements of said furniture and equipment, to enable an accurate assessment of the modus operandi of the facility or facility component. The furniture and equipment is to be drawn to the manufacturers' dimensions, taking into account all overhangs and projections.

Where final selection has not been made on an item of furniture or equipment, the dimensions of the largest option is to be used. Special service connections such as mechanical, electrical, and plumbing, should be considered when placing the equipment.

D4. Electro-medical equipment safety

Refer to sections 11 and 19 of the *Western Australia Health Facility Guidelines for Engineering Services*.

E/F. Building and engineering facilities management

Refer to sections 5, 6, 7, 20, 21 and 22 of the *Western Australia Health Facility Guidelines for Engineering Services*.

G. Facility planning requirements

G1. Whole facility

The following sections detail the specific spatial, room and functional requirements of the various types of nursing units, specialist departments and support areas. When using this section of the Guidelines, the role of the whole facility (statement of function) is to be constantly referred to so that duplication or unnecessary provision of spaces and functions does not occur.

The following sections are not to be read in isolation because they contain only part of the total package of information. They are to be read in conjunction with the other appropriate parts of this document – B Construction – Standards and Methods; D Furniture and Equipment; other relevant sections of G Facility Planning Requirements as well as in conjunction with the *Western Australia Health Facility Guidelines for Engineering Services*.

G1.1 General

The construction standards, finishes, minimum corridor widths, ceiling heights, door sizes, hardware requirements and window details are provided in Sections B2 and B3 – “Construction and Design Standards” and “Finishes” respectively.

Functional room areas are affected by the location of doors and the dimensions of rooms. This means minimum recommended floor areas, where given, are notional and must be used as a starting point.

Where neither areas nor dimensions are specified, common sense and good designer skills are to be used to convert the following functional requirements into floor areas.

Where minimum dimensions of rooms are considered essential, they have been included.

G1.2 Swing beds

For flexibility and added options for utilisation it may be desirable to include provisions for “swing beds” which might be a single bed, a group of beds or an entire unit that may be quickly converted from one category of use to another. An example might be long-stay beds which may be converted to acute beds. When this concept is included, care shall be taken to include facility requirements for all categories that are intended. Facility design for swing beds will often require additional corridor doors and provision for switching nurses call operation from one nurses station to another. Security is also an issue, e.g. General/ Medical to Paediatric.

G1.3 Department sizes

Department sizes will depend upon the perceived facility role, detailed in the Statement of Function, and organisation of services within the hospital. Some functions may be combined or shared, provided the layout does not compromise safety standards and medical and nursing practices.

G1.4 Infection control

All areas of the facility shall be designed, constructed, furnished and equipped in keeping with the principles of infection control.

Infection control involves the prevention of possible spread of infection by the minimisation of transfer of micro-organisms from person to person. A number of strategies contribute to the control of infection, such as hand washing, careful aseptic technique and the observance of “universal precautions”. *Australian Guidelines for the Prevention and Control of Infection in Healthcare*, 2010 published by NHMRC, and should be consulted for more detail on infection control specifics.

Key design features that minimise the spread of infection and which are covered elsewhere in these guidelines are:

- surface finishes easy to clean and maintain
- ventilation, air-conditioning, cooling towers and water systems that meet prescribed engineering standards – refer *Western Australia Health Facility Guidelines for Engineering Services*
- ability to physically isolate infectious patients
- provision for sterilisation and disinfection of equipment and instruments (refer AS4187)
- Workplace design features including:
 - access to hand-hygiene and washing facilities and PPE
 - separation of clean and dirty flows
 - adequate appropriate storage – stored like for like, not mixed
 - adequate procedures for waste management, cleaning and linen handling.

Handwashing is by far the most important of the infection-control strategies.

Handwashing facilities shall be installed in all patient-care areas and in all areas where careful attention to hygiene is essential, such as kitchens, laundries, clean and dirty utilities, cleaners’ rooms, pharmacies, laboratories and staff amenities, such as bathrooms, toilets and change rooms (refer HB 260). Hand basins for staff use shall be equipped with soap dispensers, hand-drying equipment and lever-action taps to allow hands-free operation. Refer to B2.14 – Soap Dispensing, B2.15 Hand Drying,

G – Facility Planning (staff, patient and clinical hand washing).

G2. Inpatient care

G2.1 Acute nursing unit

(General, Surgical, Maternity, Paediatric)

G2.1.1 General (Acute Nursing Unit) – Size

The number of beds in an acute nursing unit should not exceed 35, although the preferred maximum is 30. Note that Maternity and Paediatric are more likely to be 20-25 bed nursing units.

At least 25 per cent of the total bed complement shall be located in single bed rooms, each with a private ensuite.

Multiples and part multiples of these requirements go to make up a general hospital facility. Two 30 bed nursing units for example make up a 60-bed hospital. Support facilities are to be duplicated for each nursing unit except where it is functionally feasible to combine the total area requirements to provide common rooms and spaces.

G2.1.2 Patient rooms/ensuites

(a) Maximum Room Capacity

Maximum room capacity shall be four patients.

(b) Dimensions

Minimum dimensions exclusive of ensuites, built-in robes, alcoves, entrance lobbies and floor-mounted mechanical equipment shall be:

- single-bed rooms – 3450 mm wide x 3600 mm long
- two-bed rooms – 3450 mm wide x 5600 mm long
- four-bed rooms – 6100 mm wide x 5600 mm long.

(c) Bed Spacing/Clearances

- In multi-bed rooms, the minimum distance between bed centre lines shall be 2400 mm.
- For occupational health reasons, the minimum spacing between beds shall be 1200 mm.
- In multi-bed rooms, a clearance of 1200 mm shall be available at the foot of each bed to permit the passage of equipment and beds.
- Bed dimensions become a critical consideration in ascertaining final room sizes. The dimensions noted herein are intended as recognised minimums and do not prohibit use of larger rooms where required for needs and functions.
- Paediatric bedrooms which are set up with cots may have reduced bed centres, e.g. 2100 mm –from room centre to perimeter, but consideration must be given to the spatial needs of attendant relatives. The 2400 mm centre line is still recommended. It also allows flexibility of use of the room e.g. “swing bed” use for adult acute service. Additional floor area should also be considered for the children to play within the room.

(d) Functions

The room will provide for the following functions:

- medical and nursing care
- therapeutic and clinical attention
- patient to read, write, relax and eat meals
- nurse call
- patient to view T.V. (optional)
- patient to use radio/music system (optional)
- patient to use telephone (optional)
- storage of clothing and personal effects
- receiving of visitors
- patient privacy (bed screens)
- waste disposal.

(e) Observation Room

Acute patient rooms set up as observation rooms, usually adjacent to nurses stations shall be increased in width by 300 mm. This provides for additional space for monitoring and other special equipment and additional staff support as required. These rooms generally occur in smaller hospitals where an intensive care or isolation unit may not be warranted.

The observation room shall be provided with a viewing panel from the nurses station. The panel will be provided with visual privacy control (blinds or curtains) to both the room and nurses station sides.

The room shall have direct access to an ensuite.

(f) Maternity/Isolation

In lieu of the provision of a dedicated isolated nursery, at least one acute patient room in the maternity nursing unit shall be set up as a maternity/isolation room. In most instances, it will function as a normal acute patient bedroom. The room shall be increased in size to allow for the additional floor area required to provide a baby washing/changing facility within the room. Details and location of the washing/changing unit will determine the dimension changes.

The room shall have direct access to a dedicated ensuite.

(g) Windows

Each acute patient room shall have a window in accordance with Section B2.6.

(h) Patient nurse call

A nurse call system shall be provided in accordance with the section 10.8 of the *Western Australia Health Facility Guidelines for Engineering Services*.

(i) Patient hand washing

Patient hand washing facilities shall be provided in each patient room. Where the bedroom has direct access to an ensuite, the hand washing facility in the patient room may be omitted.

(j) Ensuite/toilet and shower

Refer to the “Definitions (A4) for the definition of “Ensuite” as applicable to these guidelines.

Each patient shall have access to an ensuite room or separate toilet and shower room. The rooms will provide shower, water closet, hand wash and grooming facilities. It is preferable, but not mandatory, that the ensuites are accessible directly from the patient rooms and not via the general corridor area.

Refer to B2.10 – Grip Rails – Design Detail.

One toilet room or ensuite shall serve no more than four beds. Grip bars shall be provided in the shower and water closet areas in accordance with AS 1428.1. The minimum dimensions of an ensuite are variable, but should equate to the useable floor area of an 1800 mm x 1900 mm room with a disabled shower dimension of 1000 x 1000 (corner location, no fixed panels, access to two sides), basin on the 1800 wall, disabled W.C. on the 1900 wall, and an outward opening door. Where, for instance, the shower is enclosed on three sides, consideration should be given to increasing the width of the shower recess. In addition, consideration must also be given to the provision of reasonable approach space to basins and water closets by patients experiencing various levels of difficulty.

Note that this section calls for a “disabled WC” This means that the top height of the seat shall be 460 mm to 480 mm (for ease of dismount) as for AS 1428.1, but given that these ensuites are not specifically set up for use by wheelchair-dependent patients (see k.), then the rear wall to front lip dimension can be reduced to 610 mm). Consideration must be given though to dimensions and configuration (cistern impact) to ensure commode access to pan.

Location of plumbing fittings, door position and swing, room truncation and configuration are all critical to the room’s performance.

Where paediatric patients are catered for, the heights of fittings and fixtures shall be reduced accordingly to suit the average anthropometric requirements of children.

(k) Disabled Ensuite

Refer to B6 – Environmental design

A minimum of one ensuite for each 30/35 bed-nursing unit shall be designed in accordance with the requirements of AS 1428.1, “Design for Access and Mobility”. Consideration should be given to locating this ensuite in a position where multiple users can access it, such as entry from a corridor. It is conceded that in a private hospital, all or most ensuites are generally accessed directly from the patient bedrooms, and this arrangement in relation to the disabled ensuite is also considered acceptable.

Height of WC pan is described in G2.1.2(j).

Note: The argument that disabled people can use the fully assisted showers, toilets and bathrooms is not valid. Of course, the fully assisted facilities are still available for use by the disabled as required.

(l) Patients’ belongings store

Each patient shall have within his/her room a dedicated wardrobe and bedside locker. The wardrobe must be suitable for hanging full length garments. The bedside locker is used for storing smaller personal effects, displaying of flowers, locating the telephone, shelf for water jug etc.

The bedside locker shall be fitted with a lockable drawer for patient use. The wardrobe and locker may be combined, and be fixed or mobile.

(m) Visual Privacy

In multiple-bed rooms, visual privacy shall be provided for each patient. Movable curtains are recommended. The design for privacy shall not restrict patient access to the entrance, ensuite, toilet, hand washing functions.

(n) Partial Blackout

Each room shall be provided with partial blackout facilities (blinds or lined curtains) for daytime sleeping.

G2.1.3 Service areas

Provision for the services noted below shall be located in, or be readily available to, each nursing unit. The size and location of each service area will depend upon the numbers and types of beds served.

Identifiable spaces are required for each of the indicated functions. Each service may be arranged and located to serve more than one nursing unit, but unless otherwise noted, at least one such service area shall be provided on each nursing floor. Where the words “room” or “office” are used, a separate, enclosed space for the one named function is intended; otherwise, the described area may be a specific space in another room or common area.

(a) Nurses' station or administrative centre

Centrally located within the nursing unit.

This area will provide for:

- bench-level activities
- reception of visitors
- receiving flowers and gifts
- storage of files and stationery
- use of various communications systems
- use of computer terminal (optional)
- displaying of notices
- storage of current medical records
- writing of notes, charting
- storage of resuscitation equipment and other mobile equipment (not necessarily within but certainly near)
- viewing of x-rays (optional)
- paper waste disposal.

Note that nursing staff may consider a separate (shared) office for the nurse manager and clinical nurse specialist (if one appointed) is necessary. The facility needs of the ward clerk (if one intended) shall also be determined.

(b) General purpose office

A general purpose office, preferably located near the Nurses Station, shall be provided for activities such as clerical support, staff handovers, doctors' write ups and interviews, staff conferences and education.

(c) Dangerous Drugs Store

Facilities for dangerous drugs storage (Schedule 8) shall be provided, located within or under direct supervision of the Nurses Station (senior nursing personnel).

Medication storage shall be in compliance with the requirements of legislation – *WA Poisons Act 2014: Medicines and Poisons Regulations 2016*.

(d) Clinical handwashing

Clinical handwashing (hands off) facilities shall be provided, conveniently located within the corridor space to serve all rooms. Minimum provision of one per 10 beds.

The handwashing facilities shall not impact on minimum clear corridor widths. At least one is to be conveniently accessible to the Nurses Station.

In multi-bed rooms, there shall be an accessible clinical hand basin so that the five moments of hand hygiene are observed and hand hygiene performed between attending to patients (refer HB 260).

(e) Storage alcoves

Storage space for stretchers and wheelchairs shall be provided, located out of normal traffic routes.

(f) Clean linen store

A room, trolley alcove or corridor imprest cupboard shall be provided for nursing unit level storage and distribution of clean linen.

Clean linen shall be stored in a clean, dry place that prevents contamination by aerosols, dust, moisture and vermin and separate from dirty linen.

(g) Clean utility room

A clean utility room shall be provided located adjacent to the Nurses Station. The room will accommodate the following functions:

- bench-level activities
- writing
- receiving and checking medicines and medical supplies, CSD stocks and medical consumables
- preparing and checking injections and medicines which are to be administered to patients
- storage of medicines and medical supplies (Schedule 4)
- storage of CSD stocks
- storage of medical consumables
- refrigerated storage of some drugs
- equipping trays and trolleys for use in clinical procedures
- equipping and storage of trolleys
- displaying and writing information
- staff hand washing (near door)
- waste disposal (general, dry).

(h) Dirty utility room

A dirty utility room located centrally within the nursing unit shall be provided.

This room will accommodate the following functions:

- bench-level activities
- setting up specimens such as urine for examination, testing and/or laboratory investigation
- washing of equipment such as trays and trolleys
- preparing pans, bottles and bowls for distribution to patients

- storage of things such as trays, cleaning agents and utensils and holding of items pending transfer to CSD or laboratory (if applicable)
- urinalysis of specimens and recording of results
- liquid waste disposal (slop hopper)
- receptacle sanitising (pan flusher sanitiser)
- storage of sanitised receptacles
- holding of soiled linen
- waste disposal (clinical and general)
- staff hand washing.

Note: Suitable space shall be provided if a “separation at source” policy is to be utilised. See Section G.8.4. Waste Management.

(i) Staff Toilet(s)

If the whole facility is sufficiently compact or appropriately designed, the central staff change/toileting provision may be adequate. If not, then separate facilities shall be provided at nursing Unit level.

(j) Drinks Preparation

An area shall be provided for the preparation and serving of hot and cold beverages; including space for storage of such things as raw materials, utensils, crockery. A wash up facility may be required, depending on operational policy. Waste disposal bins (paper cups) shall be provided.

The drinks preparation area may be positioned in part of the day room.

(k) Equipment Store Room(s)

Adequate storage space shall be provided for equipment such as IV stands, inhalators, air mattresses, cots, walking frames, “sitz” baths, commodes and crutches. The size of the store will be determined by the equipment needs of the particular nursing unit. Corridor storage, unless provided as a dedicated alcove, is not acceptable.

(l) Day Room(s)

A space suitable for the day activities of acute inpatients shall be provided. These activities may include reading and relaxing, conversing with visitors or other patients, and watching television. Nurse call, as described in section 10.8 of the *Western Australia Health Facility Guidelines for Engineering Services* shall be provided.

If the nursing unit caters for paediatric patients, then a day room will also be required to cater for games and activities suitable for children. Storage space will be necessary for play equipment.

The size of the acute day room for adult patients shall be determined by multiplying the number of beds by 0.8 m².

Day space is better provided as two small rooms rather than one large space, because not everyone wants to watch TV. Where this is not practicable, one room is acceptable. Common sense will dictate the smallest acceptable room size, but 16 m² is recommended.

This takes into account patients’:

- Reduced day room lengths increase in provision of single bed rooms with sitting space and patient access to television and other audio visual presentations.
- meals served at beds or in bedrooms
- who are non-ambulant (remain in bed)
- preference for privacy
- who may prefer to be outdoors or to leave the unit if ambulant.

Direct access to an external space is also highly desirable. This ensures that both indoor and outdoor patient preferences are catered for.

(m) Flower Preparation

A space shall be provided for the breaking down of floral gifts, placement in vases, storage, waste disposal, water source, wash-up and handwashing (over sink).

(n) Laundry

Facilities should be provided for the washing and drying of patients’ personal clothing. Storage for cleaning agents should also be provided. Consider acoustic privacy.

(o) Cleaners’ Room

A room or rooms shall be provided for the:

- storage of cleaning agents and materials
- storage of cleaning equipment and trolley
- liquid waste disposal (cleaners’ sink)
- washing of mops, buckets and other equipment.
- decanting of detergents
- storage of mops, brooms and other equipment
- staff handwashing
- waste disposal.

(p) Fully Assisted WC

A room shall be provided for the fully assisted toileting of semi and non-ambulant patients. Handwashing, hanging of clothes, nurse call (refer to section 10.8 of *Western Australia Health Facility Guidelines for Engineering Services*) and grooming activities are to be catered for.

Special attention shall be given to the size of the room given its “fully assisted” functions.

Adequate grip rails shall be installed and shall comply with AS 1428.1 – “Design for Access and Mobility”.

One fully assisted WC per 30-bed nursing unit is required. If multiple nursing unit configuration allows, the LARU may approve one fully assisted WC per 60 beds. This must be negotiated and confirmed in writing.

(p) Fully Assisted Shower/WC

A room shall be provided for the fully assisted showering and toileting (some patients require toileting prior to or during the showering exercise) of semi and non-ambulant patients. Handwashing, nurse call (see section 10.8 of *Western Australia Health Facility Guidelines for Engineering Services*), undressing, dressing, grooming and dirty linen disposal shall be catered for.

Special attention shall be given to the size of the room given its “fully assisted” functions.

Grip rails which comply with AS 1428.1 shall be provided. Provision shall also be made to limit the splashing of assisting staff. Privacy while showering is to be guaranteed (shower curtains around door). One assisted shower/WC per 30-bed nursing unit is required. Note the reference to trolley shower requirements in item G 2.1.3 (q) Bathroom.

If multiple nursing unit configuration allows, LARU may approve one fully assisted shower/WC per 60 beds. This must be negotiated and confirmed in writing.

(q) Bathroom

A bathroom need only be provided if the pre-determined function of the facility includes paediatric patients or those requiring special immersion treatments such as dermatology patients.

Mobile “sitz” chairs in ensuites will cater for most of the maternity and other similar needs.

In the absence of a bathroom, it is strongly recommended that a trolley shower provision be made in the assisted WC. Shower Room G 2.1.3 (q) by increasing the bathroom size to cater for the movement and operating space, and storage, of a shower trolley.

If a bathroom is provided, it shall allow for the following functions:

- patient bathing with staff assistance as required
- patient undressing, dressing and grooming
- patient handwashing
- use of nurse call (section 10.8 of *Western Australia Health Facility Guidelines for Engineering Services*)
- disposal of dirty towels
- patient privacy (curtain around door)
- use of staff assistance call (see section 10.9 of the *Western Australia Health Facility Guidelines for Engineering Services*).

The bath shall be a peninsula type. To ensure occupational health and safety issues are addressed, only the tap end may abut the wall and that must be sufficient space for multiple staff assistance.

Hoisting apparatus, either mobile or fixed, might also be necessary.

The installation design should accommodate the disabled user with grip rails on the end wall, recessed grip (tile detail) around the lip of the bath and toe space for assisting staff.

Hydraulic lift baths are considered a good occupational health investment if the proposed facility use warrants it.

The size of the room will be determined by the space required for both fixed and mobile fittings and equipment and free floor areas which ensure adequate circulation space for semi and non-ambulant patients.

If a paediatric bathroom is provided, the height, scale and type of fittings and fixtures shall be included to suit the average anthropometric requirements of children.

The grip bars, shall comply with AS 1428.1 – Design for access and mobility.

(r) Visitors Toilet

Public/visitors' toilets shall be provided on each floor and can be positioned in a shared space and shared with other IPU on the same level. There shall be a minimum of one accessible visitor's toilet (may be unisex) designed in accordance with AS 1428.1 – Design for access and mobility.

(s) Nursery

A room is to be provided for the medical and nursing care of newborn infants where a dedicated maternity or multi-function nursing unit is to be established. The following functions are to be allowed for:

- resuscitation (oxygen)
- ultra violet treatment
- sleeping of babies
- bathing of babies (controlled temperature water)
- changing, cleaning and drying of babies
- storage (nappies, towels, creams, powders etc.)
- weighing of babies
- waste disposal (refuse and dirty linen)
- handwashing (separate basin)
- bottle feeding of baby (a chair)
- use of nurse call (section 10.8 of *Western Australia Health Facility Guidelines for Engineering Services*)
- use of telephone (see section 10 of *Western Australia Health Facility Guidelines for Engineering Services*).

The room shall be located near to the nurses station to enable regular observation by duty staff. A corridor observation window shall be provided. Partial blackout for day-time sleeping shall also be provided.

The size and number of the nursery(s) will be determined by the maximum number of beds in the nursing unit(s) to be set aside for maternity use.

If the nursing unit is dedicated maternity, with say 30 beds, and a “rooming-in” policy exists, then space for a minimum of 10 bassinets shall be provided.

This must be seen as a “rule of thumb”.

Allow 2.3 m² of floor area per bassinet for a general nursery.

Where a dedicated isolation nursery is provided, a minimum of five bassinets per 30 beds is recommended, with a floor area of 3.0 m² per bassinet. Space, in both models, accommodates baby washing sinks, basins and storage.

Dependent upon the size and nature of the facility, and as determined by the statement of function, a separate nursery might also be provided for isolation purposes. As already mentioned at G2.1.2 (f), maternity/ isolation, where a separate isolation nursery is not provided, at least one patient room per maternity nursing unit will be set up as an isolation facility.

(t) Formula Preparation Room

A room is to be provided for preparation and bottling of formula for bottle feeding of infants. The following functions are to be allowed for:

- Bench-level activities involving chemical sterilisation of bottles and teats, preparation of milk formulas, demonstrations to mothers on formula preparation and washing of equipment
- storage of sanitised bottles and teats, dry goods and cutlery
- water boiling
- refrigerated storage of prepared milk acute formula, service areas and staff handwashing.

The room should be near the nursery, although where large-scale production is necessary, a centralised formula preparation room is acceptable. The formula preparation room cannot form part of the nursery.

The size of the room shall be determined by the size and number of nurseries.

(u) Corridors

All corridors in the acute nursing unit shall conform to Clause B2.3 Corridors.

Handrails shall be provided to all corridors serving patients in a patient care area (refer NCC clause D.2.17) and shall conform to Clause B2.12 – Fixture Support.

G2.1.4 Isolation rooms

Refer also to section 14 of *Western Australia Health Facility Guidelines for Engineering Services*.

Details and ratios in this section apply to those areas of the facility covered by new work, including replacement and/or major renovation. Existing nursing units and beds not affected by works and which have approved isolation facilities may be acceptable without changes or additions. Existing beds which are retained without change (including psychiatric beds) need not be counted in the ratios required below.

(a) Ratios

One isolation room designed to minimise infection hazards to or from the patient, shall be provided for each 30 acute care beds or fraction thereof, isolation rooms to be Type N (Type 5) isolation or Type P (Type 3) isolation (patient protection) – whichever is more appropriate for the facility or particular nursing unit. Type S (Type 4) isolation, which are standard pressure single bed rooms with ensuites for patients requiring contact or droplet isolation – shall not be counted as an isolation room as required in G2.1.4 (refer HB 260). The isolation rooms may be located within individual nursing units and used for normal acute care when not required for isolation cases or grouped as a separate isolation unit. Each isolation room shall contain only one bed and shall comply with the acute care patient room section of this document as well as the requirements of the following sections.

(b) Entry Control

The entry point shall be visually controlled from the nurses station and be near to the entries of both clean and dirty utility rooms and to a clinical handwashing facility.

Entry into the Type 3 isolation room shall be through a work area that provides for aseptic control, including facilities separate from patient areas for clinical handwashing, gowning and storage for clean and soiled materials. The work area may be a separate enclosed ante-room (preferred) or a vestibule that is open to the room. The use of vestibule work space open to the room may provide flexibility for other use when not needed for isolation.

Entry into the Type 5 isolation room shall be through an enclosed ante-room.

Ante-rooms should not be shared between rooms.

(c) Viewing Panels

Enclosed ante-room(s) for isolation rooms shall have viewing panels for observation of each patient from the ante-room. Care should be taken in placement of viewing panels to ensure that there is no direct line of sight from the corridor, through the ante-room, to the patient.

(d) Ensuite

Each isolation room shall be provided with a dedicated ensuite, directly accessible from the bed area without entering or passing through the work area of the vestibule or ante-room.

(e) Environmental Isolation

In facilities where special procedures will take place, such as those for organ transplants, burns patients, and patients receiving immunosuppressive treatments, special design provisions, including special ventilation, will be necessary to meet the needs of the Statement of Function.

G2.2 Long-term care nursing unit

G2.2.1 General

This section covers long-term care facilities where they are part of a general hospital such as nursing home type beds occupied for periods of more than 35 days by patients who do not require acute care. Such beds are not licensed by the Commonwealth Government.

A separate set of guidelines cover the requirements of standalone nursing home facilities.

Standards listed may also be suitable for other extended-care facilities such as assessment centres. However, each of these other facility types may have additional and unique functional needs. Judgement must be used to ensure that all functional needs are met without unnecessary restrictions.

The following issues should be addressed:

(a) Ancillary Services

Where the long-term care nursing unit is part of another facility, services such as catering, storage, pharmacy and laundry may be shared. Where feasible all ancillary service requirements may be met by the principal facility and the only modifications necessary will be within the nursing unit.

(b) Swing Beds

See Section G1.2.

Security for patients with dementia (wanderers) shall be considered.

(c) Special Needs

While there are similarities in the spatial arrangement of acute and long-term care nursing facilities, the service requirements of the latter will require unique and additional design considerations. When a section of an acute care facility is converted, it may be necessary to reduce the number of beds to provide space for long-term care services. Design shall facilitate patient mobility and independence and minimise the negative aspects of institutionalisation.

(d) Provision for the Disabled.

See section B6, Disabled Environmental Design

In addition to the required complement of grip bars and rails in toileting areas and handrails in corridors G2.133 (v), it is recommended that handrails are provided on both sides of the corridor.

(e) Parking

Refer to section C7.

(f) Services

Each long-term care facility shall, as a minimum, contain the elements described herein except that when the project includes the concept of sharing or “purchase” of services, appropriate modifications and deletions in space requirements can be made.

G2.2.2 Number of beds

The number of beds in a long-term care nursing unit shall not exceed 35, although the preferred maximum is 30.

At least 35 per cent of the total bed complement shall be located in single-bed rooms, each with access to semi assisted ensuite facilities. Direct access to ensuites is preferable but not mandatory.

G2.2.3 Patient rooms/ensuites

Requirements are generally as for Acute Patient Rooms/Ensuites, section G2.1.2, although the following adjustments are required.

(a) Dimensions

Minimum dimensions exclusive of ensuites, built in robes, alcoves, entrances, lobbies, floor mounted mechanical equipment shall be:

- single-bed room – 3600 mm wide x 3600 mm long
- two-bed rooms – 3600 mm wide x 5600 mm long
- four-bed rooms – 6400 mm wide x 5600 mm long.

Minor encroachments including columns and hand basins (as required) that do not interfere with room functions may be ignored when determining space requirements.

Please note that single and two-bed patient rooms are preferred for long-stay patients. Four-bed patient rooms tend to be too impersonal, noisy and not conducive to creating a “homelike” environment.

(b) Display

Facility shall be provided for the displaying of things such as photographs, cards and flowers. A shelf is adequate, but if a sideboard is used, floor area shall be increased accordingly.

(c) Personal Items

Patients’ rooms may be designed in such a way as to accommodate some patients’ personal items, such as a favourite chair, television or glass-fronted display cabinet. Again, floor area will have to be increased accordingly.

(d) Wardrobes

Wardrobe provision is to be increased to provide additional space for clothing for a long-term stay.

(e) Ensuite (assisted)

Further to item (j) in section G2.1.2, the ensuite should include extra floor area for ease of movement by patients requiring the assistance of a walking frame, wheelchair or commode). Partially-assisted toileting facilities shall be provided.

The shower provision within the ensuite does not need to be of “assisted” standard. Grip rails for disabled showering are adequate.

The distance to be travelled by the patient from bedroom door to ensuite door shall be no greater than 10 metres.

The minimum dimensions of an assisted ensuite are variable, but should equate to the useable floor area in a 2000 mm x 2000 mm room with a disabled shower dimension of 1000 x 1000 (corner location, no fixed panels, access to two sides), basin and partially assisted WC on the adjacent walls, and an outward opening door. Where, for instance, the shower is enclosed on three sides, consideration should be given to increasing the width of the shower recess. In addition, consideration must also be given to the provision of reasonable approach space to basins and assisted water closets for less independent patients.

Location of plumbing fittings, door position and swing, room truncation and configuration are all critical to the room’s performance.

G2.2.4 Service areas

Requirements are as for Acute Service Areas, section G2.1.3, although the following adjustments are required.

(a) Nursery and paediatrics

Special nursery and paediatric provisions are not required.

(b) Examination and treatment

A room for examination and treatment of patients is to be provided. This may be omitted if all patient rooms are single-bed rooms, or if there are available outpatient consult/treatment spaces for shared inpatient use.

The room, if provided, shall comply with the requirements outlined in *Rebirth of a Clinic: A Design workbook for architecture in general practice and primary care*, a design guide for architecture in general practice and primary care, prepared on behalf of the Royal Australian College of General Practitioners (RACGP) 2008.

Examination and treatment room(s) may be in a central location to serve more than one floor and/or nursing unit.

(c) Day/dining room

A day/dining room shall be provided at a minimum rate of:

- 2.8 m² per bed for day/dining functions if in one room. The minimum floor area shall be 30 m².
- 1.9 m² per bed for dining-only functions. The minimum floor area shall be 16 m².
- 0.9 m² per bed for day room functions. The minimum floor area shall be 16 m².

Note: Consideration of larger room sizes than the minimum areas shown above is recommended.

Additional space shall be provided, at the same rate, for outpatient day hospital functions. As determined by the Statement of Function.

(d) Therapies

Physical and occupational therapy services shall be provided for rehabilitation of long-term care patients. Areas and equipment shall be as necessary to meet the intent of the Statement of Function. Where the long-term care facility is part of a general hospital or other facility for patients, services may be shared as appropriate.

See section G5, Allied Health, for details of facility provision.

(e) Hair Care

Facilities and equipment for patient hair care and grooming shall be provided outside the patient rooms. In accordance with the Health Act, a separate room shall be provided. Waiting space shall also be considered. A central location is recommended so that it can serve more than one floor and/or nursing unit.

(f) Podiatry

Facilities and equipment for patient foot care (Podiatry) shall be provided outside the patient rooms. A podiatry service may be in a central location to serve more than one floor and/or nursing unit.

(g) Office/interview

A dedicated office/interview room shall be provided, if not available as part of shared outpatient or administrative facilities in a general hospital.

(h) Quiet room/chapel

Access to a quiet room/chapel is highly desirable.

(i) Storage

Extra space is required for the storage of long-term care patients' suitcases and extra clothing. The additional floor area should be calculated at 0.5 m² per long-term care bed.

(j) Remodelling

In remodelling projects only where it is not possible to provide a room of adequate size to fit out and provide for fully assisted showering and toileting partially assisted facilities will be considered. Automatic acceptance of this alternative must not be assumed.

(k) Bathrooms

Bathrooms in long-term care nursing units are to be designed to allow for the location and use of a patient hoisting apparatus, in addition to the fitout necessary as part of an acute nursing unit service. Hydraulic lift baths are considered a good occupational health investment.

G2.3 Intensive Care Unit (ICU)

G2.3.1 General

Intensive care units also known as intensive therapy units (ITUs), come in a variety of forms. The main types are as follows:

- medical/surgical
- coronary care (CCU)
- paediatric and neonatal
- burns and specialties.

The nature and extent of intensive care type facilities may vary greatly from hospital to hospital and will depend upon what is determined by the Statement of Function. In many instances, no intensive care facility will be provided at all.

In small hospitals, more intensive care may be provided in the form of “intensive nursing care” or “high-dependency nursing care” beds, within or attached to general nursing units. In these cases, few of the following requirements will be applicable. The exact level of provision will be established by the Statement of Function.

G2.3.2 Patient areas

The following shall apply to all intensive care units unless otherwise noted. Refer to sections G2.3.4, medical/surgical Intensive Care, G2.3.5, Coronary Intensive Care and G2.3.6, Paediatric and Neonatal Intensive Care for specific specialist ICU requirements.

(a) Access

The location of the ICU shall be conveniently accessible to and from:

- Emergency
- operating Suite
- pathology (service such as blood gas analysis)
- radiology (service such as mobile x-ray).

(b) Through traffic

The location shall be arranged to eliminate the need for through traffic.

(c) Bed numbers

The recommended minimum bed provision for an ICU is five. The recommended maximum is 15. The optimum is 10.

(d) Medical isolation

At least one medical isolation patient room (type N / type P) per ICU shall be provided. Entry shall be through an airlock. Direction of air flow shall be controllable.

Clinical handwashing, gown and mask storage and waste disposal shall be provided within the airlock. A partially assisted ensuite, directly accessible from the isolation room, shall also be provided.

(e) Nurses station

A nurses' station shall be provided. The nurses' station, with space for charting and central monitoring, shall be located so that nurses will be in visual contact with each patient.

In larger units, more than one nurses' station may be needed to provide for direct observation of all patients. The nurses' station as a raised dais is recommended.

(f) Monitoring

Each unit shall contain an approved patient monitoring system, with visual display for each patient at a central monitoring point, generally the nurses' station, see G2.3.2(e). Monitors with high/low alarm and the capability to provide hard copy of displays are recommended.

(g) Observation windows

To help staff observe patients in cubicles or single-patient rooms, observation windows, conveniently placed to ensure unobstructed vision from the nurses' station, shall be provided.

(h) Area provision (dimensions)

Where an open-plan arrangement is provided, bed spaces shall be arranged so that there is a clearance of at least 1200 mm from the side of the bed to the nearest fixed obstruction (including bed screens) or wall. At the head of the bed, at least 900 mm clearance shall be allowed between the bed and any fixed obstruction or wall.

To facilitate resuscitation procedures without restricting movement of staff, beds, and equipment, the available minimum clear distance between the head of the bed and any fixed obstruction or wall and between the foot of the bed and the bed screen shall be 900 mm.

When an open-plan arrangement is provided, a circulation space of 2200 mm minimum clear width shall be provided beyond dedicated cubicle space.

Separate cubicles (CCU) and single-patient rooms including isolation rooms, shall have minimum dimensions of 3900 mm X 3900 mm. If policy includes for the admission of bariatrics, additional spatial and equipment requirements of bariatrics shall be considered in the ICU/CCU (refer Appendix 4).

All entry points, doors or openings, shall be a minimum of 1200 mm wide, unobstructed. Larger openings may be required for special equipment, as determined by the Statement of Function.

(i) Patient privacy

Each patient bed area shall have provision for visual privacy from casual observation by other patients and visitors. Bed screens are recommended for the open-plan ICU. Blinds or curtains are recommended for cubicle areas or dedicated patient rooms.

(j) Natural daylight

Each bed shall have visual access, other than skylights, to the outside environment with not less than one outside window in each suite. Distance from the patient bed to the outside window shall not exceed 15 metres. When partitioned cubicles are used, patients' views to the outside shall be through no more than two separate glazed panels.

(k) Bedside storage/writing

Each bed location shall include storage and writing provision for staff use.

(l) Patients' property store

Each bed location shall include storage facilities for patients' clothing and toiletries. A mobile unit is recommended to facilitate transfer with the patient.

- (m) Nurse call

A patient-activated nurse call facility shall be provided at each bed for summoning assistance. Refer to section 10 of the *Western Australia Health Facility Guidelines for Engineering Services*.
- (n) Staff assistance

A staff assistance call facility shall be provided at each bed for summoning staff assistance. Refer to section 10 of the *Western Australia Health Facility Guidelines for Engineering Services*.
- (o) Bedhead services

A flexible bedhead services (Electrical and Mechanical) facility shall be provided. Refer to sections 11 and 15 of the *Western Australia Health Facility Guidelines for Engineering Services*.
- (p) Lighting

Appropriate lighting, both general and task, is to be provided. Refer to section 11 of the *Western Australia Health Facility Guidelines for Engineering Services*.
- (q) Services generally. Refer to the *Western Australia Health Facility Guidelines for Engineering Services* for the specific services requirements.
- (r) Clinical handwashing

Clinical handwashing facilities, convenient to nurse's station and patient bed areas, shall be provided. There shall be one clinical hand basin for every three patient beds in open plan areas and one clinical hand basin in each patient room or cubicle.
- (s) Equipment alcoves

Mobile equipment, used and located within the ICU such as cardiopulmonary resuscitation carts and mobile x-rays, shall have parking areas out of traffic paths but convenient for access. Consideration should be given to the ever-increasing amount of equipment used.
- (t) Fully assisted WC

One fully assisted unisex WC for every six patient beds in the open-plan arrangement shall be provided.
- (u) Partially assisted ensuite

One partially-assisted ensuite, as defined in section G2.1.2 (j), shall be provided per 15-bed ICU (or part thereof) for use by patients in the open-plan arrangement. The room size shall take into account the need for attached monitors and drip stands.

In addition, as requested in item G2.3.2 (c) "Medical Isolation", a partially assisted ensuite is to be provided for, and directly accessible from, each separate patient isolation room.

(v) Clock(s)

An analogue clock (or clocks) with seconds sweep hand(s) shall be provided and conveniently located for easy reference from all bed positions and the nurses' station.

(w) Communications

A comprehensive telephonic and intercom (combined or separate) communications system is to be provided. Refer to section 10 of the *Western Australia Health Facility Guidelines for Engineering Services*.

(x) Interior design/colours

In all areas where patient observation is critical, colours shall be chosen which do not alter the observer's perception of skin colour.

G2.3.3 Service areas/functions

The following additional service areas shall be immediately available within each intensive care suite. These may be shared by more than one intensive care nursing unit (of up to 15 beds each) provided that direct access to the service area is available from each unit.

(a) Clean utility/medical supplies

An area for the storage and preparation of medical consumables, readily accessible to staff working in the patient area, and designed to ensure speedy preparation of medications, shall be provided. It must be located within close proximity of the nurses' station. Refer to the Acute Nursing Unit Clean Utility, item G2.1.3 (g), for level of provision.

(b) Medical supplies store

A separate medical supplies store may also be provided if bulk medical stores are to be kept in the area. This area should be readily accessible from the clean utility area.

(c) Dirty utility room

A dirty utility room shall be provided. It shall be an enclosed area for contamination control. Refer to the Acute Nursing Unit Dirty Utility, item G2.1.3 (h), for level of provision.

(d) Cleaners' Room

A dedicated cleaners' room shall be provided. Refer to the Acute Nursing Unit Cleaner's Room, item G2.1.3 (o), for level of provision.

(e) Bathroom/Mobile Bath

The need to provide a bathroom or a mobile bath should be considered in relation to the policy adopted for the care of burns or other special cases at the particular hospital. Fitout and room size to suit specific needs as identified in the Statement of Function and item G2.1.3 (q).
Acute Nursing Unit – Bathroom.

(f) Visitors' Gowning Area

An area off the main traffic route may be provided for visitors to gown up prior to accessing the intensive care area. Storage provision for gowns, hanging space and disposal facilities are required.

The inclusion of the gowning area is dependent upon hospital policy regarding the need for visitors to gown up.

(g) Staff change/ensuite/toilets

If the ICU is large enough and if it is hospital policy to change prior to entering the unit, then separate male and female change rooms with ensuite facilities shall be provided.

Staff toilets shall be provided within the unit, in all cases.

(h) Staff lounge

A staff lounge shall be provided within the unit for staff relaxation and beverage preparation. A window to the outside is desirable.

Where an "intensive nursing" facility only is provided, the hospital staff dining room will suffice.

(i) Drinks preparation

Facilities shall be provided for the preparation and storage of patients' drinks.

(j) Equipment storage

In addition to equipment storage alcoves and medical supply stores, and dependent upon the size of the ICU, an equipment store shall be provided for the less frequently used equipment and bulky disposal items. Storage provision should be generous. Planning consideration must also be given to the storage requirements of the oxygen and air cylinders which are necessary emergency backups to the piped gases.

(k) Offices/secretarial service

An office or number of offices shall be provided, dependent upon the size of the ICU and hospital policy.

Provision of facilities for a secretarial service should also be considered, the need dependent upon the size of the ICU.

(l) Interview/distressed relatives' room

A small room should be provided for private interviews with relatives and to temporarily accommodate those who are distressed. Access should be discrete from waiting areas to ensure privacy. In a small ICU, the office could provide this function. Direct access to a WC is recommended. A telephone shall be provided.

(m) Reception/waiting/public toilets

As determined by the size of the ICU and hospital operating policy, a reception and visitors'/relatives' waiting area shall be provided immediately outside the entry to the ICU, but away from patient and staff traffic areas. A toilet facility for visitor use shall also be provided near the waiting area. These may be shared public toilets with the remainder of the general hospital.

Accessible toilet facilities shall be provided. Access to public telephones is essential. If a dedicated reception facility is not provided, restricted entry to the general public shall be ensured through, for example, the use of intercom and signposting with electronic door activation.

(n) Tutorial Room

Provision of a tutorial room for staff training is to be considered. In smaller ICUs the staff lounge may be used for this function.

(o) Relatives' overnight accommodation

Depending upon the availability of nearby commercial accommodation, consideration should be given to the provision of overnight accommodation for relatives, preferably near the unit. This will be dependent upon the size and intended function of the ICU. A motel-type bed-sitter level of provision is recommended.

(p) Staff overnight accommodation

A room shall be provided for the overnight accommodation of medical personnel on 24-hour call for emergency cases.

(q) Equipment maintenance service

Dependent upon the size and intended use of the ICU, a dedicated electronic and pneumatic equipment maintenance service may have to be accommodated within the hospital or a 24 hour on-call emergency service made available.

This same service would cover the operating suite, casualty and radiology.

If a dedicated workshop is provided, its location should be in an area that is equally accessible to all of the above-mentioned departments. The facility should have a degree of sound-proofing and be accessible from a non-sterile area.

G2.3.4 Medical/surgical intensive care

In addition to the above standards, the following applies to medical/surgical intensive care units.

(a) Open-plan/rooms/cubicles

May be set up as an open-plan nursing unit, with beds separated by curtains (ensuring compliance with privacy needs), or as separate enclosed rooms/cubicles only, or a combination of both.

(b) **Separate Patient Areas**

If the open plan is used there shall be at least one enclosed private patient room, or fixed cubicle, for every six patient beds to enable isolation for psychological needs.

This is in addition to the medical isolation requirement outlined in section G2.3.2(d).

Small ICUs (five-bed) can combine the medical and/or psychological isolation requirement into one dedicated room. Larger units must have two separate areas (rooms or room and cubicle).

G2.3.5 Coronary Intensive Care

Cardiac patients have special needs. They are often fully aware of their surroundings but still need immediate and critical emergency care. In addition to the standards for ICUs above, the following shall apply to the coronary care unit (CCU).

(a) **Bed Provision**

Bed numbers in the CCU shall be as for the general ICU. Open-plan bed layouts are not acceptable. It is preferable that each cardiac patient have a separate room or cubicle for acoustic and controlled visual privacy, although two-bed patient rooms are permitted.

A minimum of 50 per cent of CCU patients shall be accommodated in single-bed patient rooms.

Where a small five- bed combined ICU/CCU is provided, at least two beds shall be in rooms, or room and cubicle. This provides flexible ICU/CCU accommodation, including medical/psychological isolation.

Where a large 15-bed combined ICU/CCU is provided, it is advisable to arrange the beds in two (or more) adjacent but physically separated groups of coronary and non-coronary patients. Ancillary services should be shared between the bed areas.

(b) **Toileting**

Each cardiac patient shall have access to a shared partially assisted WC. The ratio of patient to WC shall be no greater than 4:1. Distance travelled shall be no greater than 15 metres from bed to facility.

(c) **Multiple equipment display**

Equipment for monitoring cardiac patients shall have provision for visual display at both the bed location and the nurses' station. Additional space requirements to be considered.

G2.3.6 Paediatric and neonatal intensive care

Critically ill paediatric patients, from neonates to adolescents, have unique physical and psychological needs. Not every hospital can or should attempt to have a separate paediatric intensive care unit. Many hospitals will be able to safely transfer their patients to other facilities with appropriate services. If a facility has a specific paediatric intensive care unit, the Statement of Function must include consideration for staffing, control and the safe transportation of critically ill paediatric patients with life support and environmental systems from other areas.

In addition to the standards listed for ICUs, each Paediatric ICU shall include:

(a) **Bed Ratios**

The Paediatric ICU may be open plan or may have all private patient rooms or a mix of both. Where open plan is provided, at least one in five beds must be located in a private room or cubicle for psychological needs – in addition to the medical isolation requirement G2.3.2(d).

(b) **Bedside Space**

Additional space at the bedside shall be provided for visiting parents.

(c) **Sleeping Space**

Sleeping space shall be provided for parents who may need to spend long hours with the patient. This space may be within the patient room or separate from the patient area when an open-plan bed layout is used, but must be directly accessible to the ICU staff.

(d) **Formula preparation**

An area shall be provided for the preparation and/or storage of infant formula. This may be outside the paediatric ICU suite but must be available for use at all times.

(e) **Consultation/demonstration room**

A consultation/demonstration room shall be provided within, or convenient to, the paediatric ICU suite for private discussions with parents.

(f) **Toys Store**

Separate storage cabinets or closets shall be provided for toys and games that may be utilised by the paediatric patients.

(g) **Additional Storage**

Additional storage space shall be provided for cots, bed linen and other items needed for overnight accommodation of parents.

(h) **Area provision (dimensions)**

Bassinets, incubators and warmers used for neonatal infants will need the same clearances as for adult beds.

In addition, because of the variations in paediatric bed and crib sizes and the potential for change, space allowances for each shall also be the same as that required for adult beds.

(i) Examination/treatment room

An examination and treatment room shall be provided separate from the paediatric bed area. Refer to appendices 5 and 6.

G2.3.7 Other specialty ICUs

Because of the unique requirements of specialty ICUs no attempt is made here to suggest standards for the variety of specialty units that may be found in the larger medical facility. As far as applicable, the preceding standards shall be used. Adaptations, adjustments, and additions shall be made as needed for the functional needs of staff and patients with special consideration for access and inclusion of necessary auxiliary services.

G2.4 Psychiatric nursing unit

G2.4.1 General

This section deals with:

- a standalone nursing unit or group of nursing units
- a dedicated nursing unit within a general hospital
- a number of dedicated patient rooms as an annexe to an acute nursing unit.

Where a psychiatric facility is to be provided, the inpatient environment shall be as non-institutional as possible. Colour, colour coding and graphics play an important part in defining areas, assisting to create a sense of wellbeing and facilitating the therapeutic process. Above all, a safe environment for both patients and staff shall be provided.

The Statement of Function shall determine the size and function of the psychiatric facility.

A psychiatric nursing unit shall comply with the requirements outlined for an Acute Nursing Unit, (section G2.1), but with the following modifications or additions.

G2.4.2 Security, safety and patient rights

Consider the following when determining the level of security provision in a psychiatric facility:

- safety of patients and staff
- patients' legal rights
- the status of the hospital or part thereof under the *Mental Health Act 2014*, or act in force at the time of development.

It is noted that, in general, voluntary patients cannot be secluded, restrained or held in security against their will, unless they are detained in a hospital or facility “approved” for that purpose under the *Mental Health Act 2014*.

However, in an emergency, where a person by reason of suffering from a mental illness, threatens their own safety or the safety of others, common law would support the restraint of such a person pending “referral” under the *Mental Health Act 2014*, and until they can be admitted to an “approved” facility. The need for security in such an emergency should be considered.

A psychiatric nursing unit providing services not covered by the *Mental Health Act 2014*, or equivalent, shall have general security provision as for an Acute Nursing Unit, although at least one seclusion room (section G2.4.6) per nursing unit shall be provided for emergency situations.

Where the psychiatric nursing unit is providing services covered by the *Mental Health Act 2014*, or equivalent, the facility shall be capable of secure lockable isolation, area by area within and as a complete nursing unit. This is to ensure containment of potentially dangerous situations expected with some patients, for example where they pose a danger to staff and other patients (aggression) or themselves (suicide). Refer also to “The Chief Psychiatrist’s Standards for the Authorisation of Hospitals under the *Mental Health Act 2014*” – specifically standard 4: Safety.

The ‘secure’ nursing unit or part nursing unit, depending upon the level of provision, must have integral impact resistant barriers (floor, walls, ceiling and penetrations – doors and windows) to ensure the above-mentioned containment. In addition, construction and fittings shall provide protection from self-injury and property damage. This could include flush-fitting door handles or vandal-proof lights. Door hardware selection must provide guaranteed patient security with ease of use by staff, particularly in emergency situations. It could involve digital push buttons in lieu of key activated systems for use in emergency locations.

Earth-leakage protection of electrical circuits and tamper-proof outlets shall also be provided in secure psychiatric facilities.

Consideration shall be given to the process of activation of any staff assistance call/duress alarm system. Activation would be from suitably concealed call points or transportable personal transmitters.

When the psychiatric facility is located within a multi-storey building, access to external above ground level spaces, such as a balcony or roof) is to be prevented.

G2.4.3 Number of beds

The maximum number of beds in a psychiatric nursing unit shall be 30. At least 50 per cent of psychiatric beds shall be located in single-bed rooms, each with access to ensuite facilities. Direct access to ensembles is preferable but not mandatory.

G2.4.4 Patient rooms/ensuites

Patient rooms shall comply with the following:

(a) Room Sizes

Minimum room size, exclusive of ensuites, built-in robes, desks, cupboards, alcoves and floor mounted mechanical equipment shall be:

- single-bed room – 10.5 m²
- two-bed room – 17.5 m²
- four-bed room – 30.0 m².

Variation of minimum room sizes may be considered by LARU dependent upon Statement of Function and type of admissions to occupy the rooms.

(b) Acoustic Privacy

Refer to section 8.2 of the *Western Australia Health Facility Guidelines for Engineering Services*.

(c) Security

Security as above shall be provided.

(d) Glazing

All windows and observation panels shall be glazed with safety glass or a suitable alternative material such as polycarbonate.

(e) Windows

Where windows are openable, effective security features such as narrow windows that will not allow patient escape, shall be provided. Locks, under the control of staff, shall be fitted. The prison aesthetic is to be eliminated wherever possible.

(f) Nurse Call

A nurse call system is not required.

(g) Ensuite

As for the Acute Nursing Unit, (section G2.1.2 j) each patient shall have access to an ensuite room. Fitout will afford protection from self-injury and property damage.

It is preferable, but not mandatory, that the ensuites be accessible directly from the patients' rooms and not via the general corridor areas.

In a psychiatric facility that's role is covered by the *Mental Health Act 2014* or equivalent, ensuite doors are to be fitted with locks, activated from without, that are solely under the control of staff.

(h) Mirrors

Mirrors shall be of safety glass or other appropriate impact-resistant and shatter-proof construction.

G2.4.5 Service areas

The requirements listed in the acute nursing unit service areas, section G2.1.3, shall also apply to service areas for psychiatric nursing units with the following modifications and additions:

(a) Nurses' station

The nurses' station shall be located so that staff engaged in routine activities can observe patients casually. This is to prevent the patients from feeling as though they are "constantly being watched".

In addition, the charting area shall be provided with provision for acoustical and visual privacy. An observation window over patient areas may be used if the arrangement is such that patient files cannot be read from outside the charting space.

(b) Social spaces (day rooms)

At least two separate social spaces shall be provided, one for quiet activities and one appropriate for noisy activities.

The combined area shall be 3.75 m² per patient with at least 12 m² per room. This space may be used for dining activities, if the unit policy dictates. Add 1.5 m² per patient for dining floor area provision. If dining activities are allowed for, a small pantry adjacent to the dining area shall also be provided. The pantry fitout and size will depend upon the type of catering service available to the facility.

(c) Group therapy

Space for group therapy shall be provided. This may be combined with the quiet space noted above, provided that an additional 0.7 m² per patient is added and a minimum room area of 21 m², enclosed for privacy, is available for therapy activities.

(d) Corridors

Corridor widths and heights are to be as prescribed in B2.3. Variation of minimum corridor widths may be considered by LARU dependent upon:

Statement of Function and type of admissions to use the facility.

(e) Drugs

The drug distribution station shall include extra provision for security against unauthorised access.

(f) Equipment storage

Storage space for equipment such as trolleys and wheelchairs may be outside the psychiatric unit provided provision is made for convenient access to equipment as needed.

(g) Examination and treatment

A minimum of one examination and treatment room shall be provided for each 30 bed psychiatric nursing unit, or part thereof. Refer to Appendices 5 and 6 for room requirements. The room can be a shared facility with other nursing units. Location within the psychiatric unit is not essential, but it is to be readily accessible to the unit.

(h) Consultation room

A minimum of one (1) consultation room shall be provided for each 30 bed psychiatric nursing unit, or part thereof. Refer to Appendix 5 for room requirements. The room shall be designed for acoustical and visual privacy. Construction to achieve a noise reduction of at least 45 dB.

The room can be a shared facility with other nursing units.

Location within the psychiatric unit is not essential, but it shall be readily accessible to the unit.

(i) Occupational Therapy

Each psychiatric unit shall contain 1.5 m² of separate space per patient for occupational therapy with a minimum total area of 20.0 m².

The space shall include provisions for:

- handwashing
- work tops
- storage
- displays.

Occupational therapy areas may serve more than one nursing unit.

When the psychiatric nursing unit contains less than 16 beds, the occupational therapy functions may be performed within the noisy activities area. In this instance, an additional 1 m² per patient is added to the total room area.

(j) Medical Isolation

Medical isolation rooms are not required (section G2.1.4). Psychiatric beds are not to be included in the bed count ratio when establishing the number of beds required for medical isolation.

G2.4.6 Seclusion room(s)

Within the psychiatric nursing unit there shall be a seclusion room or rooms for patients requiring security and protection. The room(s) shall be located to enable direct nursing staff supervision. Each room shall be for only one patient. The room may be set up as a day room or as a single patient room. Construction and planning to prevent patient hiding, escape, injury or suicide, e.g. full length curtains on windows to be avoided etc.

If a facility has more than one psychiatric nursing unit, the number of seclusion rooms shall be a function of the total number of psychiatric beds in the facility. Seclusion rooms may be grouped together. The seclusion room is intended for short-term occupancy by a patient who has become violent or suicidal. Finishes, fittings and construction are to comply with the 'secure' nursing unit provision under section G2.4.2, Security, Safety and Patient Rights. Doors shall open out and shall permit staff observation of the patient while maintaining provision for patient privacy.

G2.4.7 Day hospital (Refer to section G14. Psychiatric Hospital (Class D) where applicable)

Where an outpatient day hospital service is proposed, increase the overall provision in proportion to the increase in patients. In particular, consider the areas set aside for:

- social activities, dining
- group therapy
- occupational therapy
- patient rooms (resting, etc.)
- seclusion rooms (if considered necessary)
- toilets, showers
- storage
- waiting areas.

The dining provision will be determined by the unit policy on the type of day care patient accepted and length of stay for treatment/observation. Refer to the Statement of Function.

G3. Outpatient care

G3.1 Emergency

It is not mandatory for a private hospital to provide a dedicated emergency service, although a “first aid” service for staff, employees and visitors should be provided.

Emergency services are already provided by the major regional and district government run facilities, and unnecessary duplication of an expensive emergency trauma service requiring adequate equipment and 24 hour skilled staffing is not recommended.

It is recommended that hospitals which do not provide an Emergency Service display a prominent exterior sign at the main entrance stating this and giving the location of the nearest hospital with an Emergency Service.

In the event that an individual (who is unaware of or unable to immediately reach trauma services in other facilities) requires emergency treatment, duty of care dictates that assistance be given but that an ambulance service be called immediately for transfer of the individual to the closest trauma service. Special facilities for this type of trauma assistance are not required.

If the Statement of Function for a new or remodelled facility should include an emergency service, then details of requirement can be obtained from the Licensing and Accreditation Regulatory Unit, Department of Health WA.

G3.1.1 Emergency First Aid

At a minimum, each hospital should provide an emergency first aid treatment room. The treatment room, if provided, shall comply with requirements as detailed in Appendix 5.

The treatment room may be in a central location to serve other functions than just emergency first aid – e.g. long term care treatment room.

G3.2 Outpatient consultation

It is not mandatory for a private hospital to provide a dedicated outpatient consultation service. If it is to be provided, as listed in the Statement of Function, then the following shall apply.

G3.2.1 General

The type and size of this service is so variable, dependent upon the level of specialisation, that it would be impractical to list all of the requirements for all types. Therefore, it is suggested that the spaces outlined in the reference “Rebirth of a Clinic”, a design guide for architecture in general practice and primary care, prepared on behalf of the Royal Australian College of General Practitioners, be considered the minimum level of provision. Also refer Appendices 5 and 6 where noted below.

In summary, the following are listed:

(a) Entrance and Reception

This may be a shared facility with the hospital or other specialty departments.

(b) Waiting

May also be shared.

(c) Consulting/Examination room(s) – refer Appendix 5

(d) Treatment room(s) – refer Appendix 6

(e) Observation area/ward

(f) Sterilization area

(g) Computer/server room

(h) Storage – rooms/spaces/cupboards

As required – See Section G7.1.

(i) Medical Laboratory/Utility Room

The size and type of this facility will be determined by the size of the outpatient service and whether or not shared facilities are available within the hospital proper.

(j) Disposal Room (Dirty Utility)

(k) Meeting Rooms

May be shared with the hospital.

(l) Nurses Office

The need for this space is dependent upon the size of the outpatient service.

(m) Kitchen/Staff Room

May be shared with the hospital.

(n) Toilets (staff and patient)

May be shared with the hospital.

(o) Cleaners' Room

May be shared with the hospital.

(p) Environmental Requirements

Special attention is to be given to the visual and acoustic privacy of patients when being interviewed and also to the quality of light when being examined. The latter requires adequate natural light or colour corrected artificial lighting or task lighting.

(q) Miscellaneous

Construction, finishes, design for disabled access, parking, signposting etc., shall be in accordance with the other relevant sections of these guidelines.

G4. Clinical support

G4.1 Medical Imaging Suite

G4.1.1 General

Equipment and space shall be as necessary to accommodate the Statement of Function. Specialised procedures such as electron beam therapy, radiation treatment, magnetic resonance imaging, computed tomography, scan units, angiocardiology, etc., are not common to most facilities, and so are not covered in this document.

When these and other procedures are part of the facility, then function, design and construction considerations shall be given to the specific needs for effective operation, accessibility, safety and patient dignity.

Sonography and ultrasound are now present in most medical imaging departments and are therefore covered in these guidelines.

G4.1.2 Statutory requirements

Any radiological service in Western Australia shall comply with the requirements of:

- The *Radiation Safety Act 1975 – 1981*
- The *Radiation Safety (General) Regulations 1983*.

as administered by the Radiological Council of Western Australia.

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The Act and Regulations contain guides on how facilities and equipment are to be used, the required radiation protection, who uses it, etc.

The Radiation Health Section of the Environmental Health Branch of the Department of Health WA. shall be consulted to ensure that all steps have been taken to provide facility radiation protection. This consultation should commence during the very early stages of planning.

Once authorisation has been obtained from the Radiation Health Section, and the requirements of the Radiological Council have been satisfied, a registration for the premises and equipment will be issued by the Council.

G4.1.3 Basic service – General x-ray

A hospital shall provide, as a minimum, on-site facilities for diagnostic x-ray as a service to the operating suite, inpatients and outpatients, and as required by the activities outlined in the Statement of Function. Procedures normally carried out would be to chests and extremities.

The mobile x-ray unit would generally be a condenser discharge type and require a parking area. X-ray procedures would be carried out within patient rooms, operating rooms, nurseries and other designated areas. It is recommended that the x-ray unit parking area be located centrally within the facility and/or adjacent to the operating suite.

Appropriate ancillary equipment in line with the services provided will need to be catered for.

Where policy is to include admission of bariatric patients, then room size and access, appropriate diagnostic equipment and provision of additional lifting equipment shall be considered in the Medical Imaging Suite and this shall form part of the Bariatric Management Plan/Policy (see Appendix 7).

G4.1.4 Room dimensions and access

Rooms shall be sized to suit the design requirements of the equipment used, to provide a safe working environment and to allow the effective movement of staff and patients.

Ceiling heights shall suit equipment, but be generally no less than 3000 mm for ceiling tube mount installations.

Special consideration should also be given to the width and height of doorways to ensure delivery and removal of equipment is not impeded or prevented, and that patient trolley and bed movement is not hampered.

G4.1.5 Sonography/Ultrasound

A consult/examination room refer Appendix 5, shall be provided where Sonography/ultrasound is carried out.

Facilities shall be provided for:

- sonography/ultrasound equipment (mobile)
- patient examination/procedure
- patient privacy
- clerical activity (desk and chair)
- staff hand washing
- waste disposal (rubbish bins)
- storage (cupboards).

Services shall be as detailed in the other sections of the guidelines.

Refer to *Engineering Services Health Facilities Guidelines for WA*.

G4.1.6 Off-site services

Smaller hospitals cannot justify a full Radiological Service, therefore, access to off-site services is an important consideration in the planning phase, in particular, the selection of the site.

A planned or existing local or neighbourhood Radiological Service within close proximity to the hospital is essential to ensure minimum trauma when transferring a patient from the hospital to the off-site facility and back again.

A Radiological Suite on an adjacent site, or even as a tenant of the same building, would be ideal, enabling easy wheelchair transfer.

G4.1.7 Radiology suites – Size categories

Refer to the Department of Health WA, for information on a four (4) stage categorisation of radiological facilities.

G4.1.8 Location

The location of the Radiological facility, if provided, is variable. Consideration must be given to its proximity to Accident and Emergency, if provided, and to the Operating Suite, where dedicated in-theatre x-ray is not provided. Its role in Day Surgery and its function as an outpatient x-ray service, which in a private hospital is possibly its major role, will also dictate where in the facility it is located. In most instances, a compromise between travelling distance for inpatients (minor role) and convenience for outpatients (major role) will be made.

G4.1.9 Staff amenities

Dependent upon the size of the Radiological facility, the following staff amenities, either dedicated or shared with the remainder of the hospital, shall be provided:

- dining
- change room
- toilet.

G4.1.10 Public amenities

Public amenities such as the following shall be provided:

- waiting area (include space for disabled wheelchair park and bariatric chairs)
- change cubicles (one for disabled use)
- public telephones
- public toilets (accessible to the disabled)
- clean potable drinking water.

As for G4.1.9, they can be shared or dedicated.

G4.1.11 Special attention

In addition, special attention is to be given to the following:

- structural support for equipment
- level floor for equipment positioning and safe patient movement

- large diameter electrical cable support tray impact on room space (in floor and surface mounted)
- equipment ventilation
- lead shielding
- procedure timing (clocks)
- task lighting/dimming
- room blackout.
- Bariatric use and implications if included in hospital admission policy.

G4.2 Pathology suite

G4.2.1 General

As a basic requirement, hospitals providing surgical and/or obstetric services shall have access to an approved 24 hour on-call contracted pathology service for the performance of tests in:

- haematology
- clinical chemistry
- urinalysis
- microbiology
- anatomy pathology
- cytology
- blood banking.

The principal procedures to be carried out by the contract service include:

- blood counts
- blood glucose
- electrolytes
- blood urea and nitrogen
- coagulation
- transfusions (type and cross match capability).

Provision shall also be made for the collecting and processing of specimens. This can be mobile equipment for bedside or consulting room collection, or a dedicated specimen collection room.

G4.2.2 Refrigerated Blood Storage

All hospitals providing surgical and/or obstetric services shall provide an on-site refrigerated blood storage facility for transfusions. A blood storage refrigerator shall be equipped with temperature monitoring and alarm signals. It should be located to ensure easy staff control.

Consideration shall be given to its location in relation to external after hour's access and security.

G4.2.3 Hospital Based Pathology Service

Dependent upon the surgical and obstetric load, as dictated by the Statement of Function, it might well be necessary to provide a dedicated on-site pathology facility.

If the pathology service is based in the hospital, the following facilities shall be provided, as a minimum requirement:

- (a) Pathology Laboratory
 - Separate room(s), capable of secure isolation, specifically set up to provide a pathology service. Not to be shared. The size of the room(s) shall be appropriate to the function, and provide a safe working environment.
- (b) Laboratory work bench with space for microscopes, appropriate chemical analyser, incubator(s) centrifuge, etc. Work areas shall include access to vacuum, gas and electrical services as needed, and sinks with water.
- (c) Refrigerated blood storage as noted at G4.2.2 above.
- (d) Basin or bench sink for staff handwashing. The bench sink may also be used for the disposal of non-toxic fluids.
- (e) Storage facilities for reagents, standards, supplies, and stained specimen microscope slides, etc., including refrigeration, as needed.
- (f) Specimen (blood, urine and faeces) collection facilities. The blood collection area shall have a work bench, space for patient seating, and handwashing facilities. The urine and faeces collection room shall be equipped with a water closet and hand basin.
- (g) Chemical safety provisions including emergency shower, eye flushing devices, appropriate storage for flammable liquids etc.
- (h) Facilities and equipment for terminal sterilisation (autoclave or electric oven) of contaminated specimens before transport. (Terminal sterilisation is not required for specimens who are incinerated on site).
- (i) If radio-active materials are employed, the facility will need to be considered for possible registration under the *Radiation Safety Act 1975*. Verification of requirements shall be obtained from:
 - The Secretary Radiological Council
 - Locked Bag 2006
 - NEDLANDS WA 6009or telephone the Radiation Health Section of the Environmental Health Branch of the Department of Health WA on (08) 9388 4999.
- (j) Administrative area including offices as well as space for clerical work, filing a record maintenance.
- (k) Lounge, locker and toilet facilities shall be conveniently located for male and female laboratory staff.

These may be outside the laboratory area and shared with other departments.

- (l) The Statement of Function shall describe the extent of contracted and/or in-house pathology service.
- (m) Natural light is advantageous to laboratory procedures, if achievable.
- (n) The appropriate Australian Standards for laboratories shall apply.

G4.2.4 Location

The pathology facility, if in-house, is best located adjacent to the areas that utilise the service the most such as the operating and birth suites.

G4.2.5 Accreditation/licensing

As for non-hospital-based pathology laboratories, those in hospitals must be accredited and licensed by the National Pathology Accreditation Advisory Council (NPAAC).

G4.3 Obstetric delivery suite

G4.3.1 General

The number of birth preparation rooms and the size of the associated service areas shall be as required by the proposed obstetric workload as outlined in the Statement of Function.

The obstetrical suite (birth suite) shall be located and arranged to prohibit non-related traffic through the suite.

Provision shall be made for performing caesarean sections in accordance with the Statement of Function and as required by the appropriate authorities. The birth suite should be in close proximity to the operating suite for this reason, or have its own dedicated operating room and associated service areas and rooms.

When birth and operating rooms are in the same suite, access and service arrangements shall be such that neither staff nor patients need to travel through one area to reach another, corridor access exempt.

Refer to section G.4.4. for Operating Room requirements. The birth suite shall include the following elements.

G4.3.2 Birth/Preparation room(s)

Each designated birth/preparation room shall be for single occupancy and have minimum dimensions of 3900 mm x 4800 mm, with 3900 mm being the dimension from the head of the bed to the wall opposite. This size equates to a room with no window, maximum use of wall space, and doors located in positions that have the least impact on the activities within the room.

If the room has a window, which is the preferred option, to ensure optimum use of available wall and floor space, consideration shall be given to the impact of the position of the window (and window treatments) in relation to equipment and service locations. Additional floor space may be necessary.

A room size of 4000 mm x 5000 mm is recommended.

Selection of equipment, particularly the type of birthing bed or chair, will have a direct bearing on the final size of the room.

The main functions of the birth/preparation room(s), for which facilities shall be provided, are:

- patient preparation/relaxation during labour
- charting of medical records
- parking of dressings/treatment trolley
- bedhead services (electrical and mechanical)
- access to assisted ensuite adjacent
- use of nurse call
- use of staff assistance call
- use of telephone
- use of intercom (optional)
- area for delivery bed
- giving of analgesics
- task lighting (examination/minor theatre)
- colour-corrected lighting
- baby resuscitation (gases, power)
- soiled linen and waste disposal
- timing of procedures (clocks)
- space for additional equipment as necessary (infant incubator, mobile infant overhead heater)
- clinical handwashing (hands-off scrub up basin)
- high level of acoustic privacy
- space for spouse.

As mentioned above, the inclusion of a window is recommended, with external privacy screening (fence or heavy landscaping). Direct access to an enclosed and private courtyard has been provided in some instances to assist with the relaxation of the patient during the last stages of labour.

Attention to the level of interior design is also important, with emphasis on a “homelike” environment. Colours shall be chosen which do not alter the observer’s perception of skin colour. Finishes shall be selected for ease of cleaning and resistance to strong detergents.

Above all, the patient’s right to privacy and dignity must be respected. Curtained screening of entry doors may need to be considered.

G4.3.3 Assisted ensuite

Each birth/preparation room shall have direct access to an assisted ensuite for patient use with staff assistance. Refer to Section G2.2.3(e) for detailed requirements. A single ensuite may be shared between two birth/preparation rooms via a privacy lobby, although dedicated facilities are recommended.

G4.3.4 Staged delivery facilities.

The combined birth/preparation room is the recommended facility base module in the obstetrical suite.

Where there is a preference for a “staged” approach to the birthing procedure, then separate rooms may be provided. The separate rooms are:

- (a) Delivery Room – for the actual birth. The size and facility requirement is as for the birth/preparation Room. (G4.3.2).
- (b) Labour room – for the labour phase. This room may be multiple bedded, with screened privacy afforded each patient. Each screened cubicle size will be a minimum of 2300 mm wide by 3000 mm long. Additional floor space as required for things such as circulation, trolley movement and emergency procedures.

In facilities which have only one delivery room, at least two labour rooms shall be provided, one of which shall be set up to act as an emergency delivery room.

The main functions of the labour room(s) for which facilities are provided are:

- patient preparation/relaxation during labour
- charting of medical records
- parking of trolleys
- bedhead services (electrical and mechanical)
- access to assisted ensuite(s) adjacent (one per four beds)
- use of nurse call
- use of staff assistance call
- use of telephone
- use of intercom (optional)
- area for bed
- giving of analgesics
- task lighting, including reading
- colour-corrected lighting
- soiled linen and waste disposal
- timing of procedures (clocks)
- space for emergency resuscitation equipment
- clinical handwashing (hands-off scrub up basin)
- space for spouse.

The interior design is an important consideration, with emphasis on a “homelike” environment. Colours shall be chosen that do not alter the observer’s perception of skin colour. Finishes shall be selected for ease of cleaning and resistance to strong detergents.

Labour rooms shall have controlled access with doors that are arranged for observation from the nurses’ workstation.

Windows in labour rooms, if provided, shall be draped or otherwise arranged to preserve patient privacy from casual observation from the outside.

- (c) Birth/preparation room – for the full procedure. The staged-delivery facility type can be enhanced by the inclusion of a single or multiple-birth/preparation room(s). It allows flexibility and the potential for isolation of patients. Requirements as detailed in Section G4.3.2.

G4.3.5 Service areas/functions

The birth suite shall provide for the following support service areas and functions.

In some instances, alcoves or other open spaces which do not interfere with traffic may be used.

- (a) Control/nursing station

Located to permit observation of all traffic which enters and leaves the birth suite.

- (b) Supervisor’s office or station

Level of provision is dependent upon the size of the birth suite and the requirements of the Statement of Function. May form part of the control/nursing Station in smaller birth suites. (one or two-birth rooms).

- (c) Patients’ and fathers’ lounge

Located conveniently to the nurses station for personal communications between patients, fathers and staff. Toilets, telephones, drinking fountains, tea-making facilities, television, storage (tea preparation items) and comfortable chairs should be provided in, or be convenient to, the lounge. A window to the outside is also highly desirable. Decor to be “homelike”.

- (d) Sterile supply

Access to a supply of sterile equipment and consumables. Larger facilities may have direct access to a sterile supply department or store.

- (e) Drug distribution station

Provision shall be made for the controlled storage, preparation and distribution of medication, in smaller models, for example, at the nurses’ station or in the clean utility.

(f) Clean utility

A clean workroom is required within the birth suite. Requirements as for Section G2.1.3.(g).

A dedicated clean supply room may also be provided for the storage and distribution of clean and sterile supplies. A smaller storage provision within the clean utility is still required.

(g) Dirty utility

An enclosed Dirty Utility Room shall be provided in the Birth Suite. Requirements as for Section G2.1.3(h).

(h) Anaesthesia storage

Storage space for reserve cylinders of medical gases shall be provided as needed. If flammable anaesthetics are used, a separate room shall be provided in accordance with the relevant code and statutory requirements. May be shared with the operating suite.

(i) Anaesthesia Workroom (only in large Birth Suites)

For cleaning, testing and storing of anaesthesia equipment. It shall contain a work counter, sink and provisions for separation of clean and soiled items.

(j) Equipment storage area/room

A storage room for equipment and supplies used in a birth suite is required. In smaller facilities, an alcove or part of another area might suffice.

(k) Staff change/toilets/showers

Appropriate areas shall be provided for male and female personnel (technicians, nurses, aides, doctors) working within the birth suite. May be a shared central facility.

A minimum of one staff toilet should be located conveniently within or near the birth suite.

(l) Staff lounge

A lounge facility for obstetric staff, convenient to all areas within the suite, shall be provided in large birth suite facilities. Access to “on call” rooms for physicians in large facilities should also be considered. Lounge facilities for staff in smaller birth suites can be a shared central provision.

(m) Conference/handover room

(dependent upon the size of the birth suite and the requirements of the Statement of Function).

A room for conference, staff handover, interviews and staff training should be provided in the larger facilities for use by birth suite personnel. The staff lounge may double-up with this function, if policy allows.

- (n) Cleaners' room
A cleaners' room exclusively for use by the birth suite shall be provided. It should allow for items/activities as listed in section G2.1.3.(o).
- (o) Stretcher/trolley/equipment park
An area shall be provided (off the central birth suite corridor) for the storage of stretchers, trolleys and mobile equipment as dictated by the Statement of Function.
- (p) Nursery
If remote from the maternity ward, a separate nursery for post-birth observation is required adjacent to the birthing suite. Size will be determined by the Statement of Function.
- (q) Formula preparation room
A formula-preparation room to serve the nursery at (p) above, may also be required if the birth suite is remote from the maternity ward.
- (r) Intensive care (obstetric)
It is highly desirable that, if an intensive care facility is to be provided for obstetric use, then it be located as near as possible to the birth suite.

G4.3.6 Alternative birthing unit

Alternative birthing within the hospital environment is becoming more common. It is a midwife-based service which allows the choice of an alternative birthing arrangement without the clinical environment, but with specialist medical support close by.

The size of the unit shall demonstrate that both patient and staff health and safety issues have been considered.

The unit shall be located close to the birth suite and the operating suite (caesarean facility). This will facilitate safe transfer in an emergency situation.

The following rooms/areas are considered to be the minimum level of provision.

- (a) Birthing/lounge room
A room shall be provided which will be large enough to accommodate the following:
- relaxation in domestic lounge chairs
 - dining facilities (kitchen tables and chairs)
 - pantry facilities (including stainless steel sink)
 - birthing, either on a bed, birthing stool, mat or bean bag.
 - storage of equipment
 - storage of sterile stock
 - medical gases, either concealed within a cupboard or mobile (nitrous oxide, suction, oxygen)

- privacy
- clinical handwashing.

Direct access to an enclosed, landscaped private courtyard is considered highly desirable.

(b) Entry

A screened entry shall be provided, as a lobby or similar, to ensure privacy.

(c) Store

A separate area/room shall be provided for the storage of ancillary mobile equipment and stock that would detract from the residential environment within the birthing/loungeroom. It should be directly accessible from the birthing/lounge room or entry lobby.

(d) Ensuite/bathroom

A room shall be provided for assisted toileting, showering, bathing, handwashing and grooming. Consideration might be given to the provision of hydrotherapy facilities within the bath (a spa bath), for the relaxation effect. Fitout, including grip bars, shall be in accordance with AS1428.1, "Design for Access and Mobility".

(e) Fitout/Finishes

Fitout shall be in a domestic style with clinical items such as medical gases and equipment are concealed but within easy reach. Floor coverings within the birthing/lounge room are variable, but non-slip vinyl under the bed area is recommended. Floor covering in the ensuite/bathroom shall be non-slip (mosaic tiles, vinyl). Wall and ceiling finish shall be domestic in appearance. The provision of curtains is acceptable and recommended.

(f) Lighting

Lighting shall be domestic, although provision shall be made for a mobile examination light.

(g) Emergency Egress

Appropriately sized and located doors shall be provided for emergency bed transfer to the birth or operating suite.

(h) Air conditioning

The room shall be air conditioned, with temperature control within the birth/lounge room. This is an important consideration because the body temperature of the expectant/new mother tends to vary.

(i) Acoustics

The unit shall have high acoustic isolation from the surrounding areas, in accordance with section 8.2 of the *Western Australia Health Facility Guidelines for Engineering Services*.

G4.3.7 Construction standards and finishes

General and detailed birth suite requirements are provided in sections B2 and B3.

G4.3.8 Engineering services

General and detailed birth suite requirements are provided in the *Western Australia Health Facility Guidelines for Engineering Services*.

G4.4 Operating suite

G4.4.1 General

The number of operating theatres, recovery beds and support service areas shall be based on the expected surgical workload of the unit. The operating suite shall be located and arranged to prevent non-related traffic through the area.

Consideration shall also be given to location in relation to exit and evacuation points.

Where there is policy to include the admission of bariatric patients, consideration must be given to the implications on the size and specification of the operating theatre table and other supporting and lifting equipment in the design of the operating suite. This shall form part of the Bariatric Management Plan/Policy (see Appendix 7).

Appropriate colour selection shall be made for internal surfaces, walls, floors and the like. Refer to Section G.4.4.6.

The following areas are required:

G4.4.2 Operating room(s)

General purpose operating rooms, unless specified otherwise, shall have a preferred clear floor area of 36 square metres (30 square metres minimum), exclusive of any built-in items or shelves.

In cases where an operating room is to be used for orthopaedic or cardiothoracic surgery, the preferred clear floor area shall be 42 square metres (36 square metres minimum).

The above operating rooms, shall have a minimum width of 6000 mm.

Final levels of equipment provision, such as fixed 'C' arm, computer and audio-visual equipment, shall also have an impact on the final size of the room.

Variations and allowances to size will be considered by LARU where operating rooms are to provide a restricted service, or where large floor areas are not required, for example if they are going to be used for minor procedures such as endoscopies.

This will be as determined by the Statement of Function. (Refer also to Section G11.8 Endoscopy Units).

Where an operating room is commissioned for restricted service, it shall not be used for any other purpose.

If considered appropriate, LARU will issue a letter of approval confirming the inclusion of an operating room with a smaller floor area.

The main functions of the operating room for which facilities shall be provided are:

- surgical procedures
- administration of anaesthetics
- recording of operating information
- timing of procedures, both time of day and elapsed time
- shadowless illumination/task lighting
- viewing of x-rays with minimum provision of a double viewing screen
- communication.

A window to an external space is considered highly desirable. If a window is provided, it shall have a privacy/blackout facility such as an electric roller shutter fitted externally to the operating room.

G4.4.3 Anaesthetic room(s)

An anaesthetic room is not a mandatory requirement because pre-operative anaesthetic procedures can be carried out in the patient's bedroom with the final anaesthetic being delivered in the operating room.

If an anaesthetic room is part of the proposed facility design and described in the Statement of Function, then the following shall apply.

The room shall provide for the following main operating suite functions:

- anaesthetising of patient
- observation of patient including skin tone, blood pressure and pulse rate measurement
- resuscitation of patient, if required
- bench-level activities and storage
- storage of clean linen
- clinical handwashing
- drug storage
- nurse call and staff assistance call
- use of telephone
- timing of procedures.

The design of the anaesthetic room shall be such that suitable space is provided for all functions and equipment requirements. The location of the room will be as determined by the above requirements, the operating suite design and the proposed anaesthetic procedure.

Patient dignity and privacy shall be an important consideration.

G4.4.4 Recovery room

A recovery area shall be located close to the operating rooms and provide for the following main functions:

- recovery of patients from anaesthetic
- observation of patients including skin tone, blood pressure and pulse rate measurement
- resuscitation of patients, if required
- bench-level activities and storage
- storage of clean linen
- clinical hand washing
- storage of drugs, some of which may require refrigeration
- nurse call and staff assistance call
- use of telephone
- timing of procedures.

Privacy shall also be afforded the recovering patient. Bed screen curtains are recommended. Mobile curtain tracking between beds is also recommended to maximise the enclosed private floor area during a resuscitation procedure.

The design of the recovery room shall provide space for all functions and equipment requirements. Adequate space must be provided to cater for patient trolleys and their movement in and out of the room.

Minimum Dimensions shall be:

- between bed/trolley centres – 2300 mm
- clearance between bed/trolleys – 900 mm
- clearance between bed/trolley and side walls – 900 mm
- clearance from foot of bed/trolley to nearest obstruction (wall, bench or parked equipment) – 2100 mm.

A minimum of two bed/trolley spaces shall be provided per operating room, although where only one operating room is to be provided, consideration should be given to increasing the number to three. It is stressed that these are **minimum** requirements and the use of the operating suite, as determined by the Statement of Function, may increase this number.

G4.4.5 Service areas/functions

The operating suite shall provide for the following support service areas and functions.

- (a) Entry/exit control

The main entry and exit points of the operating suite should be capable of visual observation and control from within the suite.

(b) Staff change rooms

Separate male and female change areas shall be provided for all operating suite staff. Each room shall provide secure lockers, change areas, toilets, showers, uniform storage and handwashing facilities.

The operating suite shall be designed in a way that encourages a one-way traffic pattern which ensures that the change areas are accessible from outside the theatre suite.

(c) Staff base

A supervisory control point shall be provided in a prominent area within the suite. It shall have direct communication with all zones – visual, audio or electronic, or a combination of these.

Facilities shall be provided for:

- routine clerical and record functions
- doctors' write ups
- stationery storage
- communication.

(d) Scrub-up facilities

A scrub-up facility, with at least two (preferably three) scrub-up positions, shall be provided adjacent to the entrance to each operating room. In instances where two operating rooms are within close proximity of each other, the scrub-up facility may be shared, provided it is located adjacent to the entrance of each operating room, and the minimum allocation of two positions per operating room is observed, that is four positions for two rooms.

Studies indicate that operating rooms in multiple-room suites should be identical in layout and orientation, including the position of the scrub-up. This apparently enables staff to work in any operating room in the suite without confusion as to where scrub-up and set-up areas are located. Shared scrub-ups create mirror-imaged operating rooms. This information is included for consideration. It is not mandatory.

Elbow, foot or electronic sensor devices shall be considered for tap valve activation. Hands-off activation shall be provided.

Scrub-up troughs shall be designed and installed to prevent contaminated water from splashing back onto users.

(e) Holding Area

An area, close to the operating rooms, but out of the main operating suite traffic route, shall be provided to accommodate all patients awaiting surgery.

The holding areas shall accommodate:

- minimum of two patient spaces for one or two operating rooms
- one additional patient space for each additional two operating rooms.

Where possible this area should be under the visual control of the nurse station/control point.

A minimum of 2100 mm between centrelines of beds shall be provided.

In general, patients will be held on a trolley or bed prior to surgery.

Bed screen curtains, creating individual privacy for patients shall be provided.

Patient privacy shall be considered at all times. Pre-operative problems will require bed screen separation.

The main functions of this area, for which facilities shall be provided, are:

- clinical observation of patients including blood pressure, skin tone and pulse rate measurement.
- resuscitation of patients, if required
- nurse call and staff assistance call
- clinical handwashing
- consideration shall also be given to acoustic privacy from staff in scrub-up areas and the staff lounge, and to minimise the impact of recovery activities.

(f) Set-up/clean workroom

A set-up room, with direct access to the operating room, shall be provided. Sharing of one set-up room between two or more operating rooms is acceptable, provided layout and size of the room facilitates such sharing.

The set-up room is the clean workroom in the suite where clean or sterile materials are held and arranged prior to use in the operating rooms. The main functions, for which facilities shall be provided, are:

- sterilisation of dropped and specialised instruments. Where a theatre sterile supply unit (TSSU) service is available, this function may be omitted. Alternatives to flash sterilisation shall be sought.
- storage of instruments and materials
- holding of sterile supplies and packs
- storage of lotions in a special-purpose warming cabinet
- preparation of dressing and instrument trolleys
- storage of drugs including scheduled drugs
- dry waste disposal
- use of telephone.

g) General storage

An area shall be provided for storage of operating suite equipment and supplies. The design of this area should recognise the need for storage of specialised operating equipment including mobile x-ray apparatus, orthopaedic surgery and equipment.

Testing of operating equipment also requires consideration in the planning stage to determine on-site facility need. Part of the operating suite general store might be used for this function, or a dedicated room might even be necessary.

The design of the operating suite should allow for ease of access to the storage area for delivery of operating suite consumables. Controlled access from an external corridor is required.

(g) Sterile storage

An area shall be provided for storage of the sterile packs and items to be used in operating suite procedures. This may be provided as part of a theatre sterile unit/central sterile department (TSU/CSD) facility, if available, and shall be accessible and convenient to the operating suite.

Where a remote CSD is provided, or an external supply of sterile packs is envisaged, a dedicated sterile store shall be provided. The design of this area shall recognise the volume and range of surgical activity to be performed.

The design of the operating suite should allow ease of access to this area for supply deliveries. Controlled access from an external corridor is required.

(h) Lounge facilities

Within an operating suite there shall be a lounge area provided for staff. The lounge shall provide facilities for staff to relax and to prepare and consume beverages.

Attention shall be given to the acoustic isolation of this room to ensure that patients in recovery, or on transfer to the anaesthetic room (if provided), do not overhear confidential discussions or levity from within.

Provision shall also be made for staff communication via telephone, intercom, radio or page.

A window to an external space is considered highly desirable.

(i) Clean up/disposal

An operating suite shall have a clean-up area for the dedicated use of operating suite staff. A separate soiled holding (disposal) area may also be provided where central clean-up facilities are to be provided and a system exists for collection and disposal of soiled materials. Pickup from an external corridor is recommended.

The main functions of the clean-up area, for which facilities shall be provided, are:

- receiving and holding of soiled/contaminated operating instruments, materials and items for disposal
- disposal of fluids and body wastes in a slop hopper or equivalent disposal device

- cleansing of instruments for re-sterilising
- cleaning of trolleys and buckets prior to being returned to the operating suite
- dry-waste disposal
- hand washing.

Disposal and clean-up activities associated with the recovery function may be accommodated within the clean-up area if layout of the suite permits.

Alternatively, the disposal (dirty utility) functions associated with the recovery area should be provided for in a separate area, adjacent to recovery.

The functions of the disposal/dirty utility, for which facilities shall be provided, are:

- receiving and holding of soiled/contaminated material and items for disposal
- disposal of fluids and body wastes in a slop hopper or equivalent disposal device
- pan and bottle sanitising
- dry-waste disposal
- hand washing.

(j) Cleaners' Room

Within an operating suite there shall be a dedicated cleaners' room. This area shall be for the exclusive use of the operating suite and shall provide for storage of cleaning materials and equipment and disposal of cleaning wastes.

G4.4.6 Interior design/colours

In all areas where patient observation is critical, such as operating room, anaesthetic room, recovery area/room and holding area/room, colours shall be chosen which do not alter the observer's perception of skin colour.

G4.5 Mortuary/Autopsy

G4.5.1 General

A mortuary/autopsy unit is a facility for the holding of bodies, the conducting of post-mortem examinations or autopsies, and for the viewing of bodies by authorised persons.

The creation of a mortuary/autopsy unit, that included provision only for the holding or viewing of a body (with autopsies conducted elsewhere), would be at the discretion of the Private Health Services Management and shall be clearly defined in the Statement of Function.

G4.5.2 Classification of autopsy

Autopsies are classified as follows:

(a) Forensic (Coroner's) autopsies.

Carried out in the event of deaths due to unnatural causes such as suicide or motor vehicle accidents.

Also included are cases where the person has died from natural causes but where the actual cause of death is unknown.

These autopsies are directed by the 'Coroner' and are carried out by the Western Australian Centre for Pathology and Medical Research – Path West Centre – at the State Mortuary, located in the Queen Elizabeth II Medical Centre (QEII).

(b) Hospital autopsies

Carried out at the request of the attending Medical Practitioner. Permission shall be granted by the next of kin where Coronial direction is not given.

G4.5.3 Public health facility autopsy process

The process for public health facility 'hospital autopsies' in the country is for the small health facilities (Levels 1, 2 and 3) to provide a regional autopsy service with the 'Path Centre' (QEII) sending qualified mortuary technicians as required.

The process for the Level 5 health care facilities (major metropolitan hospitals) is similar – to provide a viewing facility only, with all autopsies being conducted at the State Mortuary (QEII).

This service is classified into four levels:

- Level one – holding only – no autopsy
- Level two – holding only (with viewing) – no autopsy
- Level three – holding (with viewing) and autopsy
- Level four – holding and autopsy (teaching capacity).

G4.5.4 Private health facility autopsy process

The extent of an autopsy/mortuary facility for a 'Private Health Facility' would generally be as for 'public health facilities (selected from levels one to four).

In the event of the 'Private Health Facility' providing holding/viewing only for the body and no provision for the conducting of autopsies, the State Mortuary (QEII), if requested to do so, will conduct the necessary autopsy at the expense of the Private Health Service Management.

The Director, Pathology Services, QEII Medical Centre, shall be consulted at the time of initial planning.

G4.6 Dental

G4.6.1 General

The facilities for major dental surgery, as a function of an operating suite, are described in this section.

Facilities for minor procedures and freestanding dental suites are not covered. Standards for the latter facilities are not controlled by the Department of Health WA.

The dental operating suite can be a standalone unit or attached to a general surgical facility.

The Statement of Function shall outline the role of the dental health facility. Only those rooms of an operating suite, which are directly affected by the dental surgery procedure, are covered here. As such, for the balance of requirements, refer to section G4.4 Operating Suite Service.

G4.6.2 Operating Room

The level of provision is as for section G4.4.2, Operating Rooms, although if the room is a dedicated dental operating room, then the minimum acceptable dimensions are 5000 mm by 5000 mm.

Support equipment will determine the final size of the room.

Besides the normal equipment required for surgical procedures such as operating tables, anaesthetic machines and trolleys, items considered essential for dental procedures are as follows:

- one compressed dental air outlet (Ryco or equivalent) situated close to the service panels for medical gases, suction and electrical outlets, with the provision of a regulated bottle of appropriate compressed air as emergency backup or secondary use
- a minimum of six power outlets with an additional four installed for an emergency, making a total of 10.
- facilities for dental x-ray.

G4.6.3 Equipment storage/x-ray developing

Additional space shall be required for the following:

- portable dental x-ray unit
- dental x-ray developing facility
- storage for lead aprons (patient, operator, anaesthetist) required for x-ray procedures during surgery
- dental chart with canister for distilled water and attachment for:
 - (a) electrically operated slow speed motor and handpiece triple syringe (air, water, air/water)

- (b) air turbine, high speed handpiece:
- ultrasonic cleaner
 - amalgamator for dental amalgams
 - curing light for synthetic fillings
 - mobile cupboard for medicaments and sundries
 - ultrasonic burr cleaner.

The Radiation Health Section of the Environmental Health Branch of the Department of Health WA shall be consulted to ensure that all steps have been taken to provide facility radiation protection.

The following are not mandatory, but are highly recommended:

- modified dental cart instead of the described unit above, with attachments for:
 - air-driven slow-speed handpiece
 - triple syringe as above
 - two lines for air turbine high-speed handpiece with fibre optics.
- electro-surgery unit
- cryotherapy unit.

G4.6.4 Set-up (trolley preparation)

The level of provision is as for section G4.4.5(f), set up. In addition, trolley setups should be available for:

- maxillo-facial surgery
- dento-alveolar surgery
- operative (conservative) procedures
- paediatric dentistry
- periodontics.

The following is optional:

- Trolley set up for osseo-integration procedure.

G5. Allied health care

General

Allied health care covers a range of services that are primarily concerned with the provision of rehabilitation therapy.

The Statement of Function for the proposed facility shall identify the extent to which therapy services shall be included in the project. Appropriate facilities and equipment shall be provided to ensure the effective function of the stated range and scope of services.

The extent of physical provision for most allied healthcare services may vary greatly, ranging from large, purpose-designed, central facilities for inpatients and/or outpatients, to basic onward or bedside services. In each instance, the appropriateness of proposed provision will be assessed in light of the service plan prescribed in the Statement of Function.

The minimum requirements for each allied healthcare service are set out in the following sections.

G5.1 Physiotherapy

Where a physiotherapy service is to be provided the following functions or facilities shall be allowed for:

- individual treatment area or areas which provide for patient privacy
- staff handwashing facilities within or in close proximity to each treatment space. One handwashing facility may serve several treatment spaces
- an exercise area with facilities appropriate for the level of intended service
- clean linen storage. This may be provided either in the form of built in cupboards, cabinets or on mobile storage trolleys
- storage for equipment and supplies
- storage for soiled linen and waste.
- facilities for patient dressing and changing; secure storage of clothing and valuables and showering and use of toilet facilities. These requirements shall apply where the physiotherapy service is also for outpatient use and they shall be capable of access and use by the disabled
- Ice-making facilities to be available in or near the department.

G5.2 Occupational Therapy

Where an occupational therapy service is to be provided the following functions or facilities shall be allowed for:

- handwashing facilities
- storage for equipment and supplies
- access to toilet facilities for the disabled
- group activity area(s).

G5.3 Allied health care – other

A range of other allied healthcare services may be provided. These may include podiatry, speech pathology, dietetics, psychology and social work.

In general, the minimum requirement for provision of these services shall be the availability of appropriate consultation space, waiting areas, and access to outpatient department facilities, as per G3.2 and Appendices 5 and 6.

Although consultation spaces should have a level of acoustic treatment, sufficient to ensure a good standard of privacy and confidentiality, the requirements of the speech pathology service, in particular, should be given special consideration since the effective provision of the service requires significant reductions in intrusive noise levels. Refer section 8.2 of the *Western Australia Health Facility Guidelines for Engineering Services*.

Psychological counselling and social worker interviews will also require speech privacy to be assured.

G6. Administration

The level and range of facilities provided for general office and executive administration functions will vary greatly depending on the size of the proposed facility, the range of services prescribed in the Statement of Function and the management arrangements which will apply.

Minimum requirements for administrative functions are set out in the following sections.

G6.1 Facility administration

This service should be provided, where possible, in reasonable proximity to the main entrance of the facility and in association with the following functions or activities:

- reception, direction and provision of information to visitors and patients
- public waiting area(s)
- public toilet facilities
- public telephone.

In addition, facilities shall be provided to accommodate the following administrative activities:

- admission of patients
- private interview space which may include admission procedures
- storage space for wheelchairs, out of the path of normal traffic, but near the entry point
- general and/or individual office accommodation for appropriate clerical, administrative, medical and nursing personnel, if required
- storage of office equipment, stationery and supplies
- multi-purpose conference room.

Consideration shall be given to the role of computers in the planning and design of the area. Ergonomic design, lighting, etc. shall address the very real occupational health issues.

G6.2 Medical records

Facilities shall be provided for the secure storage and retrieval of patient records. The following functions shall be allowed for:

- secure storage of all patient records, including secondary and tertiary storage, which includes fire-rated construction of enclosure as indicated in the NCC Clause C2.5 and section 12 of the *Western Australia Health Facility Guidelines for Engineering Services*.
- clerical and administrative activity associated with medical records management
- review of medical records and report preparation
- storage of ledgers, account forms, vouchers.

G6.3 Staff facilities

The Administrative and Clerical staff shall have access to toilet and dining facilities which may be shared with other hospital staff.

G7. Supply service

G7.1 Bulk storage

In addition to supply facilities in individual departments, a central store shall also be provided. General stores may be located in a separate building on site, but the preferred location is within the main building. Protection against inclement weather during transfer of supplies shall be provided. Fire protection and security are important considerations.

The following shall be provided:

- off-street unloading facilities
- a dedicated receiving area
- general storage room(s) with a total area appropriately sized to cope with the delivery and storage arrangements. Storage may be in separate concentrated areas within the institution or in one or more individual buildings on site. A centrally located facility is recommended.

G7.2 Catering

The food service facilities and equipment shall comply with the requirements of the:

- Food Act 2008 (Western Australia)
Food Regulations – Western Australia – 2009
Australia New Zealand Food Standards Code; Food safety standards
Chapter 3.2.3 Food Premises and Equipment
- Statement of Function.

The design of the food catering premises shall allow the flow of food in one direction from receipt, to storage, to preparation, to packing/serving/dispatch, incorporating in the design process provision for safe food-handling practices that minimise the risk of contamination.

These may consist of on or off-site conventional or convenience food preparation systems, or any appropriate combination thereof.

The following facilities shall be provided in size and number to implement the type of food service selected.

G7.2.1 Food preparation facilities

Conventional food preparation systems require space and equipment for receipt, storage, preparing, cooking and baking. Convenience food service systems such as frozen prepared meals, bulk packaged entrees, individual packaged portions, or systems using contractual commissary services, require space and equipment for refrigeration, holding, thawing, portioning, cooking and/or baking.

G7.2.2 Assembly and distribution

Facilities for assembly and distribution of meals. The distribution service must ensure food is delivered to the patient hot or cold as required.

G7.2.3 Warewashing

Dedicated crockery, utensil and cutlery washing (warewashing) facilities as remote as is practicable from the food preparation and serving area. It is recommended that where practical, a warewashing space be located in a separate room or alcove.

Commercial-type washing equipment is recommended.

Space shall also be provided for receiving, scraping, rinsing, sorting and stacking soiled tableware.

G7.2.4 Pot scrubbing

Pot-scrubbing facilities which incorporate emergency ware washing facilities in the event of equipment failure.

G7.2.5 Staff handwashing

Staff handwashing facilities shall be adequately sized and located in or close to the food preparation area. The food handler should not have to travel more than five metres to the nearest basin.

G7.2.6 Storage

Storage space for at least a four-day supply of food. Separate space will be required for refrigerated (cold and frozen) storage, dry foods storage and crockery, utensils and cutlery storage.

Note 1: Operating and food handling shall be in accordance with Australia New Zealand Food Standards Code; Food safety standards Chapter 3.2.3 Food Premises and Equipment.

Note 2: Facilities in remote areas may require proportionally more food-storage facilities than needed for the four days recommended.

G7.2.7 Cleaners' room

A cleaners' room shall be provided within the catering service area. A cleaners' sink, equipment storage (including shelving and trolley park floor area) is required.

G7.2.8 Staff toilets/lockers

These may be shared facilities with other hospital departments, provided they are within easy, undercover walking distance.

Storage/lockers for staff to store personal belongings shall be provided. Clothing and personal belongings which could be a source of contamination are not permitted to be stored in the catering area.

G7.2.9 Staff dining

A room or rooms shall be provided for staff dining and relaxation. Space provision shall be provided as required – *Occupational Safety and Health Regulations 1996*.

Space must be provided to cater for all staff potentially requiring sit down dining space during any single shift.

Staggered dining sessions is an acceptable way of reducing the size of this room.

G7.2.10 Office

Dependent upon the size of the hospital and catering facility, an office for the senior catering officer may be necessary. It is not mandatory. Standard desk, seating, lighting, power and communication provisions are required.

G7.2.11 Ice making

Self-dispensing ice-making facilities may be located in the food preparation area or in a separate room, but must be easily cleanable and convenient to the catering/dietary function.

G7.2.12 Unobstructed vision

To prevent accidents, all internal kitchen doors shall have clear glazing to the top half.

G7.2.13 Insect control

In addition to the requirements in section B2, where a door in a kitchen opens directly to an external space, and where that door is used for deliveries or regular traffic flow and therefore a flywire door is impractical, an air curtain shall be provided. This situation will only apply to the remodelling of existing facilities.

Planning of new facilities shall not include direct traffic routes from a kitchen to an external space.

G7.2.14 Garbage disposal

Provision shall be made for regular wet and dry garbage storage, removal and disposal. Refer to section G8 for details of the central facility garbage holding area. Garbage pickup from the kitchen shall be at the end of each day. All garbage, and in particular wet garbage, shall be stored in acceptable sealed containers. The bins shall be kept clean.

G7.2.15 Trolley wash

An area shall be provided for the washing and disinfection of trolleys, and carts. This provision should be remote from the food preparation and storage areas.

G7.3 Laundry and linen

Laundry services, either onsite or contracted, shall conform to AS 4146 Laundry Practice.

Each facility shall have provisions for storage and processing of clean and soiled linen for appropriate patient care. Processing may be done within the facility, in a separate building on or off the site, or in a commercial or shared laundry.

Specific facilities and equipment shall be as required for cost-effective operation as described in the Statement of Function.

G7.3.1 Minimum level of provision

As a minimum, the following elements shall be included:

- a separate room for receiving and holding soiled linen until ready for pick up or processing
- a central, clean linen storage and issuing room(s) in addition to the linen storage required at individual patient units. The central storage capacity shall be sufficient for the efficient operation of the hospital
- cart storage areas for separate parking of clean and soiled linen carts out of traffic paths, usually at patient unit level
- a clean linen inspection and mending room or area, located on or off the site, as part of the main linen service, all as determined by the system identified in the Statement of Function.
- Handwashing facilities shall be provided in each area where unbagged soiled linen is handled.

G7.3.2 Linen processing outside the building

If linen is processed outside the building, provision shall also be made for:

- service entrance protected from inclement weather for loading and unloading of linen. This may be a shared delivery service entrance
- a control station for pick-up and receiving.
- separate delivery and pick-up points for clean and soiled linen.

G7.3.3 Linen processing within the building

If linen is processed in a laundry facility which is part of the project (within or as a separate building), the following shall be provided in addition to G7.3.1 above:

- receiving, holding and sorting room for control and distribution of soiled linen. Discharge from soiled linen chutes may occur within this room or into a separate room
- laundry processing room with commercial-type equipment which can process at least a seven-day supply within the regular scheduled work week.

- storage for laundry supplies
- employee handwashing facilities in each separate room where clean or soiled linen is processed and handled
- arrangement of equipment shall permit an orderly work flow with a minimum of cross traffic that might mix clean and soiled operations
- compliance with all of the relevant statutory requirements and regulations is required
- lockers, showers and lounges that can be accessed conveniently by employees. These facilities are usually shared with the rest of the hospital staff.

G7.4 Pharmacy

G7.4.1 General

The size and type of service to be provided in the pharmacy will depend upon the type of drug distribution system used, number of patients to be served, and extent of shared or purchased services. This shall be described in the Statement of Function.

The pharmacy room or suite shall be located for convenient access, staff control, and security. Facilities (including satellite, if applicable) and equipment, shall be as necessary to accommodate the requirements of the Statement of Function.

Must comply with relevant State and Federal statutory requirements.

Note 1: If manufacturing, refer to the “Code of Good Manufacturing Practice for Therapeutic Goods”.

As a minimum, the following elements shall be included as required:

G7.4.2 Dispensing

- controlled pick up and receiving point (counter)
- area for review and recording of orders
- extemporaneous compounding area
- work counter and cabinets for pharmaceutical activities.

G7.4.3 Manufacturing

- bulk compounding area
- provision of packaging and labelling
- quality control area.

G7.4.4 Storage

In the form of cabinets, shelves, and/or separate rooms or closets:

- bulk storage
- active storage
- refrigerated storage
- volatile fluids and alcohol storage with construction as required by the relevant regulations for substances involved
- secure storage for narcotics and controlled drugs
- storage for general supplies and equipment not in use.

G7.4.5 Administration

- provision for cross check of medication and drug profile of individual patient
- cabinet or shelf storage for the drug information retrieval system
- separate room or area for office function including desk, filing, communication, and reference
- provisions for patient counselling and instruction (may be in room separate from the pharmacy)
- room for education and training (may be in a multi-purpose room shared with other departments).

G7.4.6 Other

- handwashing facilities shall be provided within each separate room where open medication is handled
- lockers, showers, and a lounge that can be conveniently accessed by employees. These facilities are usually shared with the remainder of the hospital staff
- If intravenous solutions are prepared in the pharmacy, a sterile work area with laminar flow bench and hood. Arrangement and construction shall comply with the relevant Australian Standards and statutory requirements. Consideration is to be given to the physical requirements of specialist activities such as cytotoxic preparations, if carried out.
- When dispensing of medication to outpatients is included in the Statement of Function, provision for consultation and patient education.

G7.5 Sterile goods supply

Refer also:

AS 4187.2014 Reprocessing of reusable medical devices in health organisations.

NHMRC, Australian Guidelines for the Prevention and Control of Infection in Healthcare 2010.

Infection Control in Endoscopy, 2012, GENCA.

The size and role of the sterile goods supply service shall be clearly defined in the Statement of Function.

The sterilisation process may be carried out entirely or partially on site, the latter relying on an external supply source to regularly restock the hospital sterile goods store. The scale of operation can be very small or very large, dependent upon the requirements of the serviced departments. An operating suite requires a Theatre Sterile Supply Unit (TSU) or full Central Sterile Supply Department (CSD) services, whereas an acute ward requires only a basic sterile supply service.

Infection control and good manufacturing principles are to be observed when designing the unit/department.

The planning of the facility must provide for security and separate clean and dirty working areas. Barrier planning principles of segregating dirty and clean activities by incorporating pass-through equipment to form a barrier between the work areas, are preferred. This ensures the workflow is unidirectional from dirty to clean and minimises risk of cross contamination of cleaned, disinfected and sterilised RMDs. The following are the principle facility requirements of a sterile goods supply service.

G7.5.1 Receiving and decontamination

A room shall be provided which shall contain work space and equipment for receiving and checking (including loan Reusable Medical Devices (RMD) and RMD return from repair), sorting, decontamination and cleaning medical and surgical equipment and for disposal of used/soiled material. It shall include handwashing facilities.

There will be a need to provide special types of cleaning equipment, such as ultrasonic cleaners, anaesthetic tubing washers and dryers, dependent on the level of service. Where provided, they shall be installed and commissioned to the requirements of all relevant Australian Standards and Occupational Health requirements.

G7.5.2 Clean workroom

A room shall be provided which will contain handwashing facilities, work space and equipment for terminal sterilising of medical and surgical equipment and supplies. Linen folding shall be carried out in a separate room. The air handling system shall be filtered or discharged direct to the outside to prevent lint build-up and related industrial and fire safety problems. High-level supply and low-level exhaust is the recommended air-flow pattern, with localised high level extraction for heat removal

only. It is preferable that linen folding is carried out in the laundry. Special attention shall be given to the height and depth of work benches to allow staff to work sitting or standing.

Consideration should be given to the provision of floor area for steriliser trolley parking. A cooling area for 'hot' trolleys following sterilisation should also be considered. Packs should not be handled until cool.

Views to the outside are considered highly desirable.

Sterilising shall be undertaken in appropriate porous load sterilisers, either downward displacement or high pre-vacuum.

Special consideration shall be given to the location of the sterilisers. External access (to a steriliser duct) is highly desirable so that repairs or routine maintenance do not interfere with the activities within the workroom. A duct enclosure can also minimise heat build-up within the Workroom. Exhaust over the front of the steriliser(s) shall also be considered, to extract both heat (cabinet) and steam (opening door).

Specialised sterilisers such as ethylene oxide, require separate installation and accommodation.

G7.5.3 Clerical

A separate room, or space within the workroom, shall be provided for routine clerical/administrative procedures. The provision of a separate office will depend upon the size of the unit/department. An area for write-up and storage of stationery and files shall be provided. A pin-up/whiteboard should also be considered.

G7.5.4 Storage

- (a) A room shall be provided for the storage of processed sterile packs. Ventilation, humidity and temperature control is required. Air supply shall be positive with surrounding areas and the level of filtration shall equal or exceed that of the operating room as defined in *Western Australia Health Facility Guidelines for Engineering Services*.
- (b) A separate room shall be provided for the storage of 'clean' stock (not sterile). Access to this room from without the unit/department (for stocking) and from within (for drawing stock to process) is required.
- (c) Other storage provision is required at nursing unit or specialist department (such as birth suite) level for storage of equipment and supplies used in the delivery of patient care. This normally constitutes a cupboard in the clean utility.
- (d) Space shall also be provided for the storage of distribution trolleys as required.
- (e) Facilities shall also be provided in the change room for the storage of caps, overalls and footwear protection. Controlled entry and 'barrier' principles are observed when entering the unit.

G7.5.5 Distribution

A distribution point, if required, shall be provided in the form of a staffed counter or stable door, or a pass through cupboard from the sterile store into an adjacent service corridor. No general access is allowed to the Department.

G7.5.6 Garbage

Garbage and soiled and damaged linen storage is to be provided in each respective area. Regular pickup and disposal routines are to be assured.

G7.5.7 Staff amenities

Showers, toilets and secure lockers shall be located conveniently for staff employed in this area. Conveniently located and shared facilities with the operating suite staff (where the sterile supply department is attached) is acceptable. Entry to the Department shall be controlled (barrier) to ensure the best possible infection control. A lunch room can be a shared central facility outside the sterile supply department.

G7.5.8 Air filtration

Refer section 14 of the *Western Australia Health Facility Guidelines for Engineering Services*.

G7.5.9 Communications

A telephone or intercom system should be installed within the clean workroom and/or office to allow communication with outside departments, without breaching the “clean barrier” regime which is achieved by good departmental management and observance of principles of good manufacturing practice.

G7.5.10 Light fittings/ceiling

The ceiling shall be of a flush type and sealed against the walls. Light fittings shall be of the fully recessed type and selected to prevent the ingress of dust and insects.

Refer section 11 of the *Western Australia Health Facility Guidelines for Engineering Services*.

G7.5.11 Floors/walls/windows

Floor finishes shall be easily cleaned. Welded sheet vinyl, covered up the wall, is recommended. Wall finishes shall also be easily cleaned, with special consideration for damage by trolleys. Windows, if provided, must not be openable.

G7.5.12 Signage

Door signs are required to provide instruction as to the closed nature of the department and the limited access points for services.

G8. Environmental support

G8.1 General

All facilities, regardless of size, will require environmental support services in the form of:

- cleaning services
- maintenance services
- waste disposal.

G8.2 Cleaning

The cleaning service may be contracted or in house. In addition to the cleaners' rooms already requested in the specialist departments, others may be required throughout the facility to maintain a clean and sanitary environment.

Refer to the Acute Nursing Unit Cleaner's Room, item G2.1.3 (o) for level of provision.

There shall be no less than one cleaners' room per floor.

G8.3 Maintenance service

Refer to section 22 of the *Western Australia Health Facility Guidelines for Engineering Services*.

Systems that require a 24/7 "on-call" maintenance service due to the potential for life-threatening consequences should they fail are:

- medical gases and suction systems
- lifts
- fire systems
- bio-electronic equipment
- life-support systems
- emergency power systems.

The following is considered the minimum facility provision to effect the above mentioned maintenance service. Add or subtract areas as dictated by the scope of service outlined in the Statement of Function.

G8.3.1 Engineer's/Facility office

If on staff, an engineer's office shall be provided with file space and provision for protected storage of facility drawings, records and manuals.

G8.3.2 Workshop

A general maintenance workshop shall be provided for repair and maintenance. Sufficient space is required for a workbench, drill press, angle grinder, stainless steel trough, tool peg board, storage cabinets, and floor space for the standing of equipment during repairs. Adequate lighting, power and ventilation are required.

Maintenance workshops incorporating carpentry, metal fabrication, plumbing, refrigeration or other noise generating trades shall be acoustically isolated from non-maintenance areas. Refer to section 8 of the *Western Australia Health Facility Guidelines for Engineering Services*.

G8.3.3 Storage room

A storage room shall be provided for the storage of building maintenance supplies. Storage for solvents and flammable liquids shall comply with the *Dangerous Goods Safety Act 2004* and *Dangerous Goods Safety Regulations 2007*.

G8.3.4 Electronics workshop

A separate workshop may be provided specifically for the storage, repair and testing of electronic and other medical equipment. The amount of space and type of utilities will vary with the type of equipment involved and types of service and maintenance contracts used.

G8.3.5 Service yard

Yard equipment and supply storage areas shall be located so that equipment may be moved directly to the exterior without interference with other work.

G8.3.6 Gardeners' store/facilities

A room (or shed) shall be provided for the storage of all the necessary gardening equipment and material. Depending upon the size of the grounds team, consideration should also be given to the provision of a head gardener's office, (if necessary), handwashing facilities, toilet and showering facilities.

G8.4 Waste management

Facilities shall be provided for the safe storage and disposal of waste according to the Facilities Operating Plan. Requirement will be determined by the policy on waste management in the Statement of Function. Effective waste management depends on staff awareness of waste minimisation and careful segregation of waste categories at source. Floor layout and the location of waste collection points are important in facilitating best waste-management practice.

Appropriately colour-coded and labelled containers and carts in accordance with AS 3816 shall be used to for the containment and collection of all healthcare waste. Similar matching bin liners are recommended to be used with each bin or container.

Various waste management plans have been effective at increasing efficiency and reducing costs, and should be investigated. These may include:

- bar code labelling and computerised weighing systems
- centrally managed sites operating on a 'user pays' principle based on measured waste quantities
- waste storage areas, which should be designed to secure the material, reduce organic decomposition, contain odours and allow hygienic cleaning of storage areas and bins
- mechanised bin washing facility (these may benefit larger institutions)
- reticulated steam, pressure cleaning systems and air blow drying facilities. Liquid waste emanating from disinfection procedures will require stabilisation before disposal in sewerage systems.

G8.4.1 Waste Management Policy

Refer to the Department of Health WA – Clinical and Related Waste Management Policy: 2016.

The principal legislation regulating waste management in WA is the Environmental Protection Controlled Waste Regulations (2004) which set standards for transportation and disposal of controlled waste. In addition, specific legislation applies to the management of radiological and pharmaceutical wastes – covered by the *Radiation Safety Act 1975* and the *Poisons Act 2016*.

The Water Corporation has waste water regulations that control chemical and bacterial discharge from hospital environments.

Other regulatory standards will apply to building specifications for waste disposal areas and liquid disposal routes associated with the waste management process.

G8.4.2 Work station collection points

G8.4.2.1 Clinical areas

Adequately sized, designated space needs to be allocated for storage of carts in strategic collection points for each clinical unit. Work station collection points need to be easily accessible to the staff responsible for disposal and those servicing the facility in removing and replacing the trolleys.

Walls and floors in areas used for cart storage should be impervious to allow easy cleaning.

Handwashing facilities should be located adjacent to the waste collection area where clinical material is handled.

The trolleys should not be accessible to the public and should be out of sight in a reasonably secure area.

Special waste-handling procedures must be provided for satisfactory sharps, human tissue, cytotoxic and radioactive materials disposal (AS/NZS 4304).

Sharps must be safely contained in either disposable (AS 4031 – non-reusable containers for the collection of sharps in healthcare areas) or recyclable containers manufactured for the purpose (AS/NZS 4261 reusable containers for the collection of sharps used in healthcare areas). Adequate disposal points are needed in treatment areas so that containment of sharps can be readily effected once they are ready for disposal.

Recycled sharps container disposal is usually effected by the contractor supplying the container and does not require a removal process other than contractor access.

Human tissue, cytotoxic and radioactive materials are likely only to occur irregularly and in small quantities unless the hospital has specialised facilities. Provision of storage space for these materials will not generally be necessary in treatment areas.

Small containers should be provided in sections producing human tissue for disposal. This material should be transported to the waste management handling area soon after discard for freezing if necessary and subsequent incineration.

Disposal of cytotoxic and radioactive materials should be supervised by qualified personnel.

G8.4.2.2 Clerical areas

Designated space needs to be allocated for storage of carts in strategic collection points for each clerical section. General waste disposal carts should always be located near recycled paper carts to overcome indiscriminate disposal of general waste with recycled material. Hospital Management Policy may call for shredding of confidential records prior to dispatch to the recycling area (waste management handling area). Strategically placed shredding facilities may need to be located adjacent to storage areas for bins in which confidential records are discarded.

G8.4.3 Trolley/Cart route

The efficient servicing of work station collection points within the various work areas will depend on ease of movement for sulo bins/ trolleys where multiple cart loads are transported.

Servicing of waste and linen storage areas should be undertaken via thoroughfares that avoid regular public, patients and staff facilities. Particular attention should be made to avoiding food handling and high profile public areas. A service lift that is devoted to materials movement within the hospital will enhance the efficiency and aesthetics of the hospital operation.

G8.4.4 Trolley/Cart storage

Adequate numbers of backup bins to replace those used over 24 hours need to be readily accessible to the various sections on each floor of the hospital. This will reduce the urgency for immediate servicing and allow variability of waste loads to be accommodated.

In the Waste Management Plan, projected waste loads should be made to indicate cart storage area requirements, including a safety margin.

Trolley/cart collection requirements for linen may also need to be estimated where soiled linen is to be housed within waste storage areas. The trolley/cart areas should be confined to waste handling so that a high level of cleanliness, orderly control of waste and efficient cart movement can be achieved.

The trolley/cart storage area will allow scheduled collection and replacements of sulo bins to be undertaken at low congestion periods during the day. Where possible the storage area should be adjacent to the service lift so that trolley/cart movement on each floor is minimised.

Doors accessing trolley/cart storage areas need to be 800 mm wide and need a closing and locking facility. Wall and floor surfaces need to be impervious. A graded floor with drainage should be provided although routine wash down of this area will not be necessary. A hand basin should be located near the access door.

Potential odours of trolley/cart storage areas need to be minimised by controlled temperatures and preferably negative air pressures to these areas. Refer to section 14 of the *Western Australia Health Facility Guidelines for Engineering Services*.

G8.4.5 Waste management handling area

Adequate, covered space needs to be provided for collection, storage and sorting of waste materials. This area needs to be exclusively used for waste-management purposes.

Depending on the size of the facility the following space allocations will be required within the waste management handling area:

- enclosed work management station
- a dust-free work space. This should have visual control of the waste-handling facility
- cart receiving
- a spacious area with room for pull tugs and trolley access
- bin weighing and recording station
- a floor-level digital cart weighbridge and bar code recorder
- general waste compaction with direct contractor access for removal.

General waste may be compacted on site. Projected general waste loads should be calculated to ensure that compaction is economic. Provision for front-load bins may need to be considered.

- Clinical waste cart storage; or
- Clinical waste receiving hopper including binlifter and direct access for removal.

There are two options for clinical waste disposal:

Carts can be emptied by contractors on site which entails storage of the waste in the carts pending collection area.

Discharge of the carts into a holding hopper pending removal. A mobile cart lifter is usually necessary with this system. Using this disposal method cart can be cleaned and returned to service immediately.

A decision regarding the preferred disposal method will need to be made or provision for either process included in the design.

- Recycling materials bin storage
- Recycling sorting area
- Clean bin storage area
- Freezer to store tissue pending disposal. A 240 L upright freezer will be required to store tissue pending dispatch for incineration
- Consumable storage space

e.g. Plastic bin liners and cleaning materials will need secure storage. This facility could be sited adjacent to the enclosed work management station.

Other requirements include:

- controlled temperature. Refer to section 14 of the *Western Australia Health Facility Guidelines for Engineering Services*.
- that the waste management handling area be vermin and rodent proof
- a wash down facility
- a high-pressure wash down unit for the adequate cleaning of the area
- cart washing facility (may require disinfection and drying).

Drainage to this area may include disinfectants. Liquid waste may require special treatment prior to discharge. Sealed floors and walls to 2 metres.

The waste-handling area will require frequent wash down. Walls and floors should be sealed to withstand this treatment and the floors graded to allow run off. Drainage to this area may include disinfectants and liquid waste may require special treatment prior to discharge.

G8.4.6 Bulk waste movement

Provision should be made for delivery and retrieval of bulk bins from within the enclosed waste-handling area. It is important that adequate traffic access is provided. Access roads need to be adequate and turning areas uncongested. Noise levels may be significant during waste collection periods.

G9. Amenities service

G9.1 Village amenities

The type and range of village amenities provided for the public, patients and staff will be as outlined in the Statement of Function.

The only mandatory requirement is for the provision of a cool palatable water supply (cold water drinking unit) in a convenient public location. Multiple units will be necessary to service large facilities. A minimum of one per floor shall be provided.

Larger facilities might provide other “village” amenities such as:

- florist
- snack bar/coffee shop
- gift shop
- pharmacy
- banks or agencies
- hairdresser.

Vending machines are also a popular way of providing 24-hour consumer services to the public, patients and staff.

The relevant health, council and statutory regulations are to be complied with when planning for any of the above.

G9.2 Staff amenities

Facilities shall be provided for the following staff functions:

- changing (change room)
- secure storage of street clothing and valuables
- grooming/handwashing
- toileting
- showering
- relaxation (lounge).

Staff is to be interpreted as meaning both employees and volunteers.

Staff lounges should be located with views to the outside and, if feasible, access to outdoor areas. They are to incorporate facilities for relaxation, the eating of meals and the preparation of hot beverages.

Staff amenity facilities as described above shall be in addition to and separate from those required for specialist department functional needs such as dedicated change rooms/showers/toilets and lounges for operating suites.

Facility provision shall comply with requirements outlined in the *Occupational Safety and Health Regulations 1996* and *WorkSafe WA Codes of practice* – unless detailed otherwise in these Guidelines.

G9.3 Quiet room/chapel

Dependent upon the size and nature of the facility, it is highly desirable, but not mandatory, to provide an acoustically private multi-use room, or separate rooms with singular functions, for:

- the consoling of distressed relatives
- confidential interviews
- multi denominational religious services.

Location and outlook are important considerations in the planning of such a facility. The room must allow for easy access by disabled persons.

G9.4 Child care

To enable the hospital to attract the best possible staff, it is recommended that consideration be given to the provision of facilities for child care.

This includes, but is not limited to:

- a playroom
- toilets suitable for children and staff
- coat hanging and shoe storage
- a restroom (for sleeping)
- storage for toys.
- an office
- a kitchen/pantry
- external secure play space
- views to the outside.

Compliance with any statutory requirement for the establishment of such a service is required.

G9.5 Ambulance facilities

Refer to C6 – Roads and Pathways.

Refer to C7 – Parking.

G9.5.1 Ambulance access

Access for ambulances shall not conflict with other vehicular or pedestrian traffic.

G9.5.2 Ramps

The specific requirements of the St John Ambulance Association shall be obtained in relation to ramp gradients and ambulances park/unloading area gradients.

G9.5.3 Ambulance pick up/delivery

Pickup and delivery points in any Hospital, Day Procedure/Hospital Unit at any facility covered by these Guidelines, must be discrete and shall be covered.

The entry/exit in the building shall be located away from public entrances and shall be screened from public view.

Access ways, suitable for ambulance trolley use shall be provided between the entry/exit and the departments requiring access.

Trolleys shall not pass through public areas.

G10. Teaching service

To improve the level of patient care, and to create a stimulating atmosphere in which staff can develop, it is recommended that opportunities and facilities be provided for staff training. This is not mandatory but a highly recommended provision. Opportunities and facilities to be provided shall be as determined by the Statement of Function.

Consideration should be given to the following areas:

G10.1 Conference/seminar/demonstration

A room should be provided on each floor for tutorials and group discussions. The room might be a multi-function space, for activities such as staff hand overs and therapies. Programming of room activities would be essential if a multi-function facility was preferred.

This room might also be set up as a demonstration ward, with a variety of ward-level fixtures for training purposes. The level of fitout would be determined by the commitment of the facility to all levels of staff training.

Recommended minimum room size is 28 m².

G10.2 Library

A room or space fitted out for the storage of, and referral to, all types of reference material is also recommended. A section of the conference/seminar/ demonstration room would be considered an appropriate minimum level of provision. Sufficient and appropriate desks/tables and chairs should be considered. Audio visual facilities should also be considered.

G10.3 Lecture room

Dependent upon the size of the hospital and the level of commitment to staff training, a lecture room would be considered beneficial, although certainly far from mandatory.

G10.4 Store

A room for the storage of demonstration equipment, attached to the conference/seminar/demonstration room, is considered highly desirable.

G10.5 Construction standards and finishes

Refer to Sections B2, "Construction and Design Standards", and B3, "Finishes".

G10.6 Engineering services

Refer to *Western Australia Health Facility Guidelines for Engineering Services*.

G10.7 Support services

Support services such as cleaning and supply would be shared facilities with the remainder of the hospital.

G11. Day hospitals (Class A)

G11.1 General (Day Procedures)

The day procedure unit/facility can be a standalone, attached or shared service. If the facility is part of an acute care hospital or other medical facility, services can be shared, as appropriate to minimise duplication.

The clinical accommodation of a day procedure unit relates to the facilities provided in the operating theatre area of a hospital. Clauses in this section shall be cross referenced with clauses in Section G4.4 – Operating Suite.

The *Private Hospitals and Health Services Act 1927* states: “Day Hospital Facility” means premises that are not attached to, or that are set apart from, a hospital being premises at which persons are received for professional attention or professional medical attention in a class of professional attention determined by the Minister under subsection (3) to be professional attention but not being premises at which overnight accommodation is provided: (interpretation).

Also under section 2 (3) of the Act – determine that any elective surgical or medical procedure which involves the administration of a general, spinal or epidural anaesthetic, is professional attention for the purposes of the definition of “day hospital facility” in section 2 (1) of the Act.

The Statement of Function is critical. It shall outline which procedures are to be performed in the operating and/or procedure rooms. Applicants shall receive approval from the Department of Health WA to carry out the nominated procedures before proceeding to the design phase.

The level of facility provision shall suit the need to ensure a safe working environment for the staff and a safe clinical environment for the patient.

Formal links between standalone day procedure centres and local hospitals shall cover emergency situations, including overnight observation.

The larger the facility (the more the operating/procedure rooms), the less the duplication of support provision needed, although the size and number of support areas must suit the operational need. The design principle of the operating suite will also have a bearing on the need for duplication of support areas.

A day procedure service, although providing a facility for procedures requiring general anaesthetic, is not a major acute service. This means that factors such as the size of the operating/procedures room; width of entry/exit corridors/doors; the nature and size of the pre-operative preparation and waiting area; hours of operation; relative/friend attendance during recovery and paediatric service all require consideration in the development of the design. The principles of asepsis control in the development of the design is still very important.

Where day procedures (outpatient surgical service) are provided within the same area as inpatient acute surgery (shared facility), the design shall consider the need to separate the two distinct functions at the incoming side and resolve a detailed schedule for the sharing of the operating rooms. This shall be identified in the Statement of Function. The design shall also preclude unrelated traffic from the operating suite.

The design shall separate waiting patients from those recovering or undergoing procedures. Waiting patients shall not be exposed to frightening and distasteful noises.

Consideration shall be given to patient privacy and dignity (bed screens).

To assist with the design of a Day Procedure Unit a Patient Flow Diagram and Design check list are included at the end of this section. Refer to:

- G11.9 – Patient Flow Diagram
- G11.10 – Design check list.

G11.2 Size

The type and size of diagnostic, clinical and administrative facilities to be provided will be determined by the service contemplated and the estimated patient load, as described in the Statement of Function.

G11.3 Access for physically impaired

Refer to section B6.

G11.4 Parking/Ambulance pick-up

Refer to Section C7 for car parking.

Refer to Section G9.5 and G11.7(o) for ambulance pickup.

G11.5 Administration and public areas

(a) General

Refer to Section G3.2 – Outpatient Consultation – for basic accommodation. A waiting area and public toilets including facilities for the physically impaired shall be included.

(b) Entrance

A covered entrance for pickup of patients after surgery shall be provided. It may be shared with other areas such as outpatients.

(c) Lobby Area

It shall include:

- convenient access to wheelchair storage
- reception and information counter or desk
- waiting spaces. Where an organised paediatric service is part of the outpatient facility, provisions shall be made for separation of paediatric and adult patients
- convenient access to public toilet facilities
- convenient access to public telephones
- convenient access to drinking fountains.

This area may be a shared outpatient facility.

(d) Interview rooms/cubicles

Interview rooms or cubicles for private interviews relating to things such as social services, credit and admission shall be provided.

Consideration shall be given to patient confidentiality. In smaller units, this might be a shared office.

(e) General and individual offices

General and individual offices shall be provided as required for business transactions, records and administrative and professional staff. These shall be separate from public and patient areas with provision for confidentiality of records. Provide enclosed office spaces for administration and consultation.

(f) Multi-purpose room(s)

Other rooms for functions such as staff conferences and library storage may be provided as required.

(g) Medical records

A secure room shall be provided with provision for storage, recording and retrieval of medical records.

If geographically appropriate, and if the day procedure unit is part of, or attached to, an acute hospital, the general medical records facility might be used in lieu of a dedicated and separate room. It might also be a shared outpatient facility.

(h) Secure storage

Secure storage, such as locked drawers and/or cabinets, shall be provided for employees' personal effects.

(i) General storage facilities

Secure storage facilities shall be provided for things such as equipment and stationery.

G11.6 Sterilising facilities

A system for sterilising equipment and supplies shall be provided. This may be off site or remote as long as provisions are made to ensure adequate sterile supplies are on hand for the maximum demand of one days' case load. If on-site, refer to requirements at G7.5.

Where endoscopic procedures, requiring entry into sterile body cavities/tissues, are performed, provision shall be made for sterilising equipment (not disinfection). See also G11.8.

G11.7 Clinical facilities

(a) Day procedure change areas

A separate area shall be provided where outpatients can change from street clothing into hospital gowns to prepare for surgery. It shall be convenient to the waiting area.

This shall include:

- waiting room(s)
- lockers
- toilets/showering facilities
- clothing change or gowning areas
- space for the administration of medications (if identified in the Statement of Function).

Provision shall also be made for the security of patients' personal effects.

A policy shall be established to manage patients' changing, clothing and personal effects in the facility. Consideration shall be given to patients' access pre- and post-operation.

Patients' clothing may be stored in keyed lockers or in sealed clothing bags/cases that travel with the patient on the bottom of the trolley throughout the operation process. Patients' personal effects such as, wallets, watches and jewellery, may be stored in keyed lockers in change rooms or at the reception area.

(b) Examination room(s)

At least one room shall be provided for examination and testing of patients prior to surgery. This may be an examination room or treatment room, refer to Appendices 5 and 6 for room requirements.

This room may be part of the day procedure facility if completely stand alone, or attached in consulting or outpatient suites, as appropriate.

(c) Anaesthetic room(s)

If the day procedure facility is a standalone type, a separate anaesthetic room may be considered necessary. If provided, the requirements are as for Section G4.4.3, Anaesthetic Room(s).

If the facility is connected to a surgical ward and/or the Statement of Function describes the anaesthesia procedure as being performed in the patient bedroom pre-operation area (pre-operation preparation) and the operating room (anaesthetising of patient), then a dedicated anaesthetic room is not necessary.

(d) Pre-operation preparation/holding

An area where gowned patients enter after changing and either wait for their procedure or are prepared for anaesthetising, as required.

A theatre trolley with privacy screening, work bench with sink, hand basin, trolley storage, seating, all as appropriate to the proposed service shall be provided.

The Statement of Function shall clearly set out the type of procedures to be used in the unit and the accommodation required to hold the waiting patients.

It is important to acknowledge that most patients are apprehensive about what is to occur and it is very important that the holding area is warm and friendly with comfortable seats, entertainment such as television, music and magazines and usually screened from any activity within the day procedure unit.

(e) Operating room(s)

Each room shall have a floor area compatible with the range of procedures to be carried out.

Where general surgical procedures (which require the general anaesthetising of patients), are to be performed, the requirements of the room (less plan dimension) shall be as described in Section G4.4.2, operating rooms.

Where rooms are being used exclusively for minor procedures not requiring major local or general anaesthetic, the requirements of the room shall be as required for the safe delivery of the service. Where the anaesthetising of patients for general surgical procedures occurs and optimum flexibility of use is required, the minimum size of the operating room is recommended to be 5000 mm by 5000 mm. Smaller rooms have, in practice, been utilised but staff comment indicates that the above is the preferred minimum.

As above, the minimum size of the minor procedures room shall be determined by the nature and size of the equipment to be used and the safe delivery of the service. An emergency communication system (intercom or similar) connecting the operating and minor procedures rooms to the surgical suite control station shall be provided.

Refer to section G11.8 for the requirements of Endoscopy Rooms/Units.

(f) Recovery room (stage 1)

Room(s) for post anaesthesia and procedure recovery of day procedure surgical patients shall be provided. Fitout shall be as described in Section G4.4.4, recovery room, although the width of a cubicle can be reduced to 1800 mm, conditional upon the exclusive use of theatre trolleys as recovery beds, with the inclusion of mobile intermediate bed screen tracking to provide for emergency procedures. Cubicle sizes are to be increased where trolley sizes are increased.

If paediatric surgery is part of the function, the recovery room shall provide for parents/attendants.

A disposal facility for bed pans and bed pan cleaning and storage shall be provided within easy access of recovery.

A resuscitation trolley shall be located in this unit.

The number of bed/trolley spaces will be dependent upon the nature of surgery or procedures as outlined in the Statement of Function and the proposed throughput, but as a minimum, two bed/trolley spaces per operating/procedures room shall be provided.

(g) Recovery room (stage 2)

A room to accommodate:

- patients who have regained consciousness after anaesthesia but require further observation
- patients who have undergone procedures with local anaesthetic.

The patient is required to remain under observation until ready to change into street clothes.

Minimum space requirement should be at least three bed/trolley spaces per procedures room and some comfortable seating for ambulant patients.

(h) Recovery Lounge

It is strongly recommended that a separate supervised room, or a second stage of the recovery room, be provided for patients who are mobile and do not require post anaesthesia recovery, but need additional time for vital signs to be stabilised before the patient may safely leave the facility. The area shall contain a control station, space for visitors, and provision for privacy.

In larger facilities it is often considered desirable to have a three- stage recovery area flowing from an intensive first stage supervision to a second stage with changing facilities in more casual surroundings and into a third stage where the patient is fully mobile and takes visitors. Supervision of the patient is vital at each stage.

Recovery lounges shall have convenient patient access to adjacent toilets and showers which are large enough for patient and assistant.

Patients in this area normally recover in recliners/chairs. A ratio of two chairs (minimum) to each operating/procedure room, in addition to the above bed requirement, is considered appropriate.

Views to external spaces, and even controlled access to external secure courtyards, is considered desirable.

Convenient access to the Day Procedures Change Areas (Clause G11.7A) for patient changing back into street clothes, shall be provided.

Facilities for the storage and preparation of hot and cold liquid refreshments and television/video should also be provided.

Consideration shall be given for direct access to this area by relatives/visitors/transport providers from the lobby/waiting area and additional chairs provided.

(i) Surgical Service Areas

The following areas shall also be provided, in accordance with detailed information in Section G4.4.5., Operating Suite Service Areas/Functions:

- entry/exit control
- staff change rooms (male and female)
- staff base
- scrub-up facilities
- holding area
- set-up
- general storage (including equipment)
- sterile storage
- staff lounge facilities
- clean-up
- cleaners' store.

In a standalone facility, the holding area listed above would probably be a pre-operation preparation/waiting area, refer to G11.7(d).

Consideration should be given to the provision of a separate work room for anaesthetic equipment storage, cleaning and testing, dependent upon the overall size of the day procedure facility. It should contain work counters, a sink and a hand basin.

(j) Trolley storage

An area shall be provided for trolley/wheelchair storage/parking which is convenient and out of the direct line of traffic.

(k) Staff toilet/lunch room

A toilet and lunch room shall be provided for staff working outside the operating suite, such as administrative/reception/pre-operative staff. This may be a shared facility with the remainder of the hospital, if attached.

(l) Cleaner's store

Separate cleaners' store shall be provided to service areas both outside and inside the operating suite.

(m) Emergency crash carts

Provision for immediate access to, and use of, emergency crash carts shall be made at both the surgical and recovery areas.

(n) Day procedures ward

Where a day procedures service is attached to an acute hospital inpatient operating suite, in addition to the recovery provision, a dedicated day procedure operating suite ward is normally established, although this is not mandatory. This nursing unit or part nursing unit, provides facilities for waiting, admission, changing, pre-operation preparation, toileting, showering, post-recovery waiting, disposal and utility, all as determined by the Statement of Function.

Requirements of each area are as for the relevant sections of this document.

The day procedure ward beds can be utilised as “swing beds”, providing acute accommodation when called upon to do so.

The location of the ward should be as close as practical to the operating suite.

All of the above should be considered when establishing a joint inpatient/outpatient surgical facility.

(o) Ambulance pick-up

A discreet pickup point, preferably under cover, shall be provided for the transfer of patients from recovery to a local hospital for emergency treatment or overnight observation. Refer to G9.5 Ambulance Facilities.

Access ways, suitable for ambulance trolley use, shall be provided between recovery and the pick-up point. This shall include corridor widths, ceiling heights, door widths, ramps and lift sizes. Refer to sections B2 and section 18 of the *Western Australia Health Facility Guidelines for Engineering Services*.

Trolleys shall not pass through public areas.

G11.8 Endoscopy Units

(a) General

Increasingly, endoscopic (diagnostic and some therapeutic) procedures are being carried out as an outpatient function. As such, endoscope rooms are now considered an important addition to most day procedure facilities. Standalone endoscopic units are also appearing in various sizes and forms overseas and in this state, hence the inclusion of this dedicated section. Where the endoscopic service is attached to an operating suite, then the recovery, recovery lounge and support services (sections d, e, and f following) can be “common”.

The following checklist of spaces shall be considered when setting up an endoscopic service:

- endoscope room(s)
- workroom (scope cleaning, disinfection and sterilising.)
- recovery
- recovery lounge
- holding
- waiting
- reception
- changing (patients and staff)
- toilets/showers (patients and staff)
- clerical/records
- manager’s office
- doctor’s office(s)
- interview/consulting room(s)
- staff lounge

- conference/library/multi-purpose
- staff duty station
- clean utility
- dirty utility/disposal
- store(s) – various
- workshop (scope maintenance, optional).

Also to be considered is the availability of Pathology and CSD Services.

Fitout and treatments shall be as for section G11.

The design shall separate waiting patients from those recovering or undergoing procedures. Waiting patients shall not be exposed to frightening and distasteful noises.

(b) Endoscope room(s)

The number and operation of endoscopy rooms shall be as determined by the proposed functionality room size will vary, dependent upon:

- the use of video equipment
- electrosurgical laser treatment
- fluoroscopy
- multiple-scope activity
- multiple observers
- the use of x-ray (image intensifying).

Where basic endoscopy is to be performed, however, the room size shall be no smaller than 4 metres by 5 metres. Where video equipment is used, the minimum room size shall be 5 metres by 6 metres. Larger sizes, where possible, are recommended for flexibility and future developments. The ceiling height shall be at least 2700 mm – 3000 mm is recommended.

The room shall be fitted out as for a minor theatre, that is suitable for general anaesthetic with appropriate medical gases, power, lighting, air conditioning, and ventilation. Staff assistance call shall be provided. Consideration shall also be given to the special requirements of laser equipment.

A scrub-up basin and sink shall also be provided within the endoscope room, for staff handwashing and initial scope cleaning (prior to transfer to the workroom) respectively.

Direct access to the workroom is strongly recommended.

Appropriate entry door widths shall be considered for trolley bed/trolley transfer. Impervious wall, floor and ceiling treatments are essential for ease of cleaning.

(c) Workroom

Scope preparation and cleaning shall be carried out in a separate and dedicated workroom which is directly connected to the endoscopy room or rooms. The preference for isolation is due to the use of disinfectant chemicals such as glutaraldehyde and the need for controlled ventilation. Refer to section 14 of the *Western Australia Health Facility Guidelines for Engineering Services*.

Peracetic acid (steris) process requires multiple units with possibly a glutaraldehyde back-up. Steris has specialised installation requirements and fittings.

Provision shall be made for sterilising endoscopic equipment intended for use in sterile body cavities or tissues. Glutaraldehyde is not acceptable for this purpose.

The workroom shall contain:

- facilities for the disposal of liquid and faecal waste (slop hopper)
- deep bowl sinks and drainer for the prewashing of scopes
- hot and cold water supply
- benches for benchtop activities including drying, checking and maintenance of scopes, and specimen preparation
- ventilated cupboards for the storage of scopes (or might be located in the endoscope room)
- fully automated scope disinfectant (highly recommended)
- manual scope disinfection space within a contained and ventilated (high and low-level) environment (fume hood)
- handwashing facilities (separate basin).
- waste disposal for general and infectious waste
- appropriate lighting, colour corrected
- drugs storage
- refrigerator/freezer
- ultrasonic cleaning equipment (optional, but recommended)
- ventilation in accordance with *Western Australia Health Facility Guidelines for Engineering Services*.
- compressed air and suction for scope cleaning
- power as required on earth leakage
- general storage for scope accessories and equipment
- sufficient floor area for unobstructed staff movement with scopes (to limit damage).

Mobile trolley or cylinder type scope disinfectants, which do not have directly connected exhaust and plumbing systems, shall not be considered. They encourage transportation of glutaraldehyde solution, may discourage regular changeover of glutaraldehyde-contaminated scope rinse solutions and may not have effective fume filters.

Where scope work is carried out within an operating room (in an operating suite), then consideration shall be given to the fitting out of the clean up, disposal/dirty utility or instrument wash Theatre Sterile Unit/Central Sterile Department (TSU/ CSD) rooms in accordance with the above. Consideration shall be given to the method of transfer of the disinfected scopes from the cleaning zone to the sterile zone. Design detail such as pass through exhaust hoods which contain the disinfectant solution should be considered between clean and sterile areas.

(d) Recovery

Fitout and design shall be in accordance with day-procedure recovery. Refer to section G11.7 (f).

As a guide, consider one recovery bed for every three patients per day, or one bed per 750 patients per year.

(e) Recovery lounge

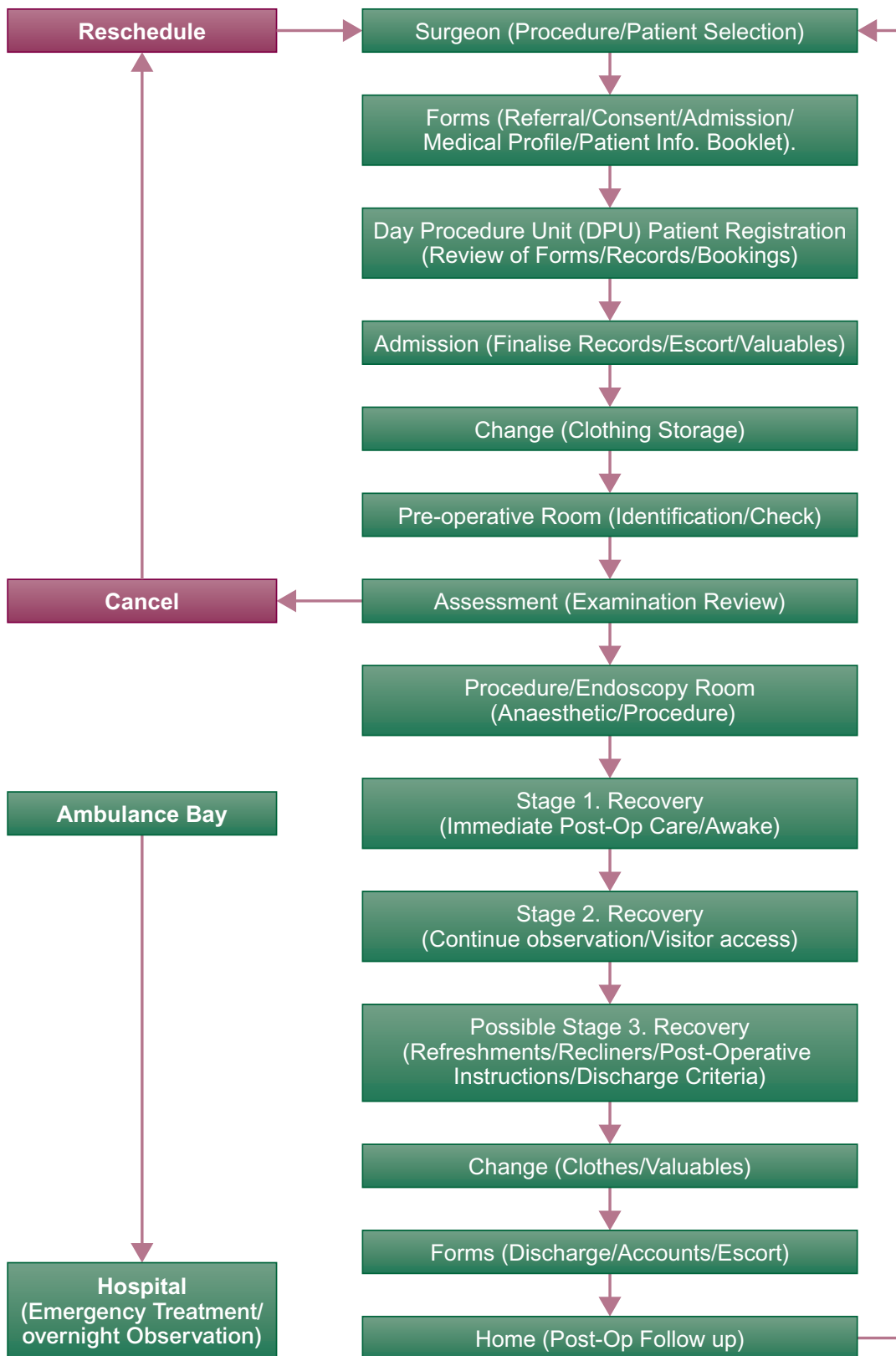
A recovery lounge (with chairs/recliners) can be provided where bed use is not required, and to relieve the recovery room on high-volume days. Patients at the end of their bed recovery time can be relocated to the lounge until ready to leave. Refer to section G11.7 (h).

(f) Support services

The balance of the spaces required on the checklist shall be as detailed in this section (Day Procedures, G11).

All other appropriate sections of this document shall apply to a day procedure facility, whether the facility is standalone or attached.

G11.9 Patient flow diagram



Ref: GENCA

G11.10 Check list design considerations

1. Level of service: standalone or attached or shared facility?
2. The location of a day procedure unit in relation to a main hospital particularly in the event of emergency patient transfer. Access to services such as CSD, medical imaging, pharmacy and pathology.
3. Surgeon: selection process:
 - procedure selection (duration of procedure, post-operative pain control)
 - patient selection (suitability for day procedure – health, person accompany patient home).
4. Examination room adjacent to pre-operative area.
5. Special admission and discharge procedure of day patients – information brochures.
6. Confidentiality of patient's information during admission/discharge.
7. Security of patient's belongings (such as wallet/purse, watch, clothing) during procedure.
8. The orderly flow of patients, visitors, staff, doctors and goods within the facility.
9. Privacy for patients'(pre-and post-operatively) in holding and recovery areas.
10. Possible staged recovery areas with patient transfer from intense first-stage supervision in clinical surroundings to second-stage recovery in more casual surroundings (and possibly a third stage) with lounge furniture/recliners, visitor access and beverage preparation, television.
11. Visitor/relative access and waiting area.
12. Responsible person to accompany patient home after certain procedures/sedation – patient not to drive a vehicle.
13. Friendly, non-institutional surroundings.
14. The location of key facilities in relation to each other.
15. The appropriate segregation of internal traffic – particularly pre- and post- operative patients.
16. Flexibility – planned operating room(s) capable of carrying out varied procedures.
17. Provision of adequate sterile and non-sterile storage areas.
18. Preparation and decontamination area adjacent to endoscopy room(s).
19. Recommended centre guidelines for safe patient care.
20. Future capacity to handle internal facility changes.
21. Capacity to handle expected and unexpected expansion of facilities.

G12. Day hospitals (Class B)

G12.1 General

To assist with the design of day hospitals – Class B, a patient flow diagram and a design checklist are included in the *West Australian Health Facility Guidelines for Architectural Requirements* – Sections G11.9 and G11.10.

G12.1.1 Construction and design

The construction standards, finishes, minimum corridor widths, ceiling heights, door sizes, hardware requirements and window details, shall comply with Sections B2 and B3 'construction and design standards' and 'finishes' respectively.

G12.1.2 The number, size and function

The number, size and function of all rooms available in the facility shall be consistent with the Statement of Function (that is, services to be provided, maximum number of patients to be treated at any one time and number of staff) delivery of safe patient care and emergency access and egress.

G12.1.3 Treatment, recovery

All treatment, recovery areas and toilets shall be adequate in size and function to:

- ensure patient safety
- enable staff to carry out their duties
- to provide privacy and confidentiality for patients.

G12.1.4 Corridors

The corridors shall be wide enough to allow access for a trolley/wheel chair (Section B2.3).

G12.1.5 Walls, floors, ceiling

The finishes of walls, floors, ceilings and soft furnishings in the facility shall comply with the Section B3.

G12.1.6 Acoustics

Acoustic issues need to be addressed throughout the design process to ensure patient privacy and confidentiality. Refer to section 8.2 of the *Western Australia Health Facility Guidelines for Engineering Services*.

G12.1.7 Signage

Appropriate and comprehensive sign posting is to be provided to clearly identify staff, patient and visitor areas to comply with Section B13.

G12.1.8 Safe and secure environment

A safe and secure environment shall be provided for patients and staff to comply with Section B14 and section 16 of the *Western Australia Health Facility Guidelines for Engineering Services*.

G12.2 Functions

The facility shall provide for the following functions:

- reception/waiting
- patient change area where necessary
- medical/surgical treatment
- clinical nursing care
- recovery
- nurse call system for patients
- patient privacy and confidentiality
- pantry facilities for staff/patients
- patient and staff toilets/showers, including disabled facilities
- sterilising facilities
- discrete clean and dirty areas
- storage for general consumables
- stock delivery
- control of waste.

G12.3 Infection control

G12.3.1 Design

All areas of the facility shall be designed, constructed, furnished and equipped in keeping with the principles of infection control. Refer to Section G1.4.

G12.3.2 Hand washing

Handwashing facilities shall be provided in all clinical and patient care areas where hygiene is essential. Clinical handwashing facilities shall be equipped with lever action taps, soap dispensers and a method for drying hands. There shall be access to handwashing for the clean and dirty utility areas.

G12.3.3 Layout

Configuration/layout and workflows shall meet the requirements of all facility operations and ensure delineation of “clean” and “dirty” areas.

G12.3.4 Construction

All construction and fitout shall be in accordance with infection-control guidelines. This will include ventilation, air-conditioning, soft furnishings, floor coverings, waste management, cleaning and the provision for cleaning and sterilising of equipment.

G12.4 General requirements

These requirements depend on the specific functions of the facility as outlined in the Statement of Function.

G12.4.1 Configuration/layout

Movement of patients, staff and materials/equipment shall be demonstrated and show clear lines of delineation between them.

Configuration/layout and workflows meet the requirements of all facility operations and ensure separation of “clean” and “dirty” areas.

G12.4.2 Endoscopy units

The design and planning of the Endoscopy Units shall be as for an Endoscopy Unit (Section G11.8).

G12.4.3 Waiting room

- There shall be a waiting area.
- There shall be access to public toilet facilities.
- There shall be facilities for people with disabilities.
- There shall be a reception desk.
- Dependant on functionality of the facility an interview room/cubicle area for privacy for patients may be required.

G12.4.4 General office

There shall be an office, which may be multi-functional, which is separate from patient areas.

- There shall be a secure and fire-proof storage for medical records. Section G6.2 and section 12.3.2 of the *Western Australia Health Facility Guidelines for Engineering Services*.
- There shall be storage for stationery and administrative equipment and supplies.

G12.4.5 Change facilities

There shall be adequate facilities for patient and staff to change where there is a need. Such facilities shall include provision for people with disabilities.

Secure storage shall be provided for patient and staff belongings.

G12.4.6 Patient holding area

A pre-procedure patient holding area shall be provided to accommodate patient waiting for procedure or treatment. This may be the waiting area if no change of clothing is required.

G12.4.7 Scrub-up facility

A scrub-up facility shall be provided where there is a procedure room.

G12.4.8 Set-up area

An area where set-up will occur shall be delineated, if set-up does not occur in the procedure/treatment room.

G12.4.9 Procedure room

Procedure room/s, unless specified otherwise, shall have a preferred clear floor area of a minimum of 25 square metres. Floor space should be clear with no built-in furniture.

Minimum ceiling height of the procedure room/s shall be 2.7 metres, however where ceiling pendants are installed the minimum ceiling height shall be 3 metres.

The procedure room/s shall be suitable for the procedures being performed and be of adequate size for the equipment, staff and patient.

The procedure room/s shall be of a suitable size to allow for the resuscitation of a patient.

Adequate lighting to all procedure rooms shall be provided to allow procedures to be performed safely Refer to section 11, *Western Australia Health Facility Guidelines for Engineering Services*.

There shall be patient monitoring equipment such as pulse oximetry.

There shall be oxygen and suction available, reticulated gases are preferred. Refer to section 15, of the *Western Australia Health Facility Guidelines for Engineering Services*.

There shall be general power outlets with residual current detection for all equipment used in the procedure room. Refer to section 11, *Western Australia Health Facility Guidelines for Engineering Services*.

A call system such as patient, staff assist, emergency or duress shall be provided to all patient and staff areas. Refer to section 10, *Western Australia Health Facility Guidelines for Engineering Services*.

The lighting shall be connected to the uninterrupted power supply. Refer to section 11, *Western Australia Health Facility Guidelines for Engineering Services*.

The floor shall be non-slip and not carpeted (Section B3.4 and B3.5). The walls shall be of a finish, which facilitates ease of cleaning (Section B3.1).

G12.4.10 Treatment room

Treatment room/s, unless specified otherwise, shall have a preferred clear floor area of a minimum of 16 square metres exclusive of built in items and shelves – refer Appendix 6.

Minimum ceiling height of the treatment room/s shall be 2.7 metres.

The treatment room/s shall be suitable for the procedures being performed and be of adequate size for the equipment, staff and patient.

The treatment room/s shall be of a suitable size to allow for the resuscitation of a patient.

There shall be ready access to a clinical handwashing facility.

Adequate lighting to all treatment rooms shall be provided to allow treatments to be performed safely. Refer to section 11 of the *Western Australia Health Facility Guidelines for Engineering Services*.

There shall be patient monitoring equipment such as pulse oximetry.

There shall be oxygen and suction available, reticulated gases are preferred. Refer to section 15 of the *Western Australia Health Facility Guidelines for Engineering Services*.

There shall be general power outlets with residual current detection for all equipment used in treatment room. Refer to section 11 of the *Western Australia Health Facility Guidelines for Engineering Services*.

A call system such as patient, staff assist, emergency or duress shall be provided to all patient and staff areas. Refer to section 10 of the *Western Australia Health Facility Guidelines for Engineering Services*.

The lighting shall be connected to the uninterrupted power supply Refer to section 11 of the *Western Australia Health Facility Guidelines for Engineering Services*.

The floor shall be non-slip and not carpeted (Section B3.4 and B3.5).

The walls shall be of a finish, which facilitates ease of cleaning (Section B3.1).

G12.4.11 Recovery Area

There shall be a designated recovery area with three spaces per procedure room, if the facility has more than one patient undergoing a procedure consecutively [Section G 11.7(g)].

The minimum width of a cubical shall be 1800 mm [Section G4.4.4 and G11.7 (f)].

There shall be privacy curtains between each space. There shall be resuscitation equipment readily available. There shall be easy access to a toilet.

There shall be access to a shower as appropriate.

There shall be access to oxygen and suction for the patients. Reticulated gases are preferred. Refer to section 15 of the *Western Australia Health Facility Guidelines for Engineering Services*.

There shall be a nurse call system available. Refer to section 10 of the *Western Australia Health Facility Guidelines for Engineering Services*.

There may be a discharge lounge (third-stage recovery area) if considered necessary for the type of procedures being carried out.

There shall be an adequate write-up area.

There shall be easy access to clean and dirty utility areas. There shall be access to hand-washing facilities.

The lighting shall be connected to the uninterrupted power supply. Refer to section 11 of the *Western Australia Health Facility Guidelines for Engineering Services*.

G12.4.12 Patient toilet/s

A unisex toilet complying with AS 1428.1 shall be provided for patient use. This shall be located in close proximity to the treatment/recovery area.

There shall be an appropriate number of toilets for patients and staff use.

G12.4.13 Sterilising facilities

Sterile supply either onsite or contracted out must comply with current standards AS 4815 AS 4187, AS3789.2.

If sterilising equipment is undertaken on site refer to Section G7.5.

There shall be a discrete area for sterilising instruments and equipment (Section G7.5).

Adequate storage for sterile stock must be on hand for the maximum demand of the services provided at the facility.

G12.4.14 Clean utility

There shall be a room/area for the storage and preparation of medical consumables which shall be readily accessible to staff working in the patient area.

The fitout of this area may vary depending on the function of the facility. There shall be a discrete room/area for the storage of medical equipment.

Medication storage shall comply with the legislation, *Medicines and Poisons Act 2014* and *Medicine and Poisons Regulation 2016*. This means Schedule 8 drugs must be in an approved safe, and the drug refrigerator must be locked or in a secure area (Section G2.1.3 (c)).

Hand-washing facilities shall be provided.

G12.4.15 Dirty utility room

There shall be discrete room/area for decanting, and for washing and drying instruments and equipment.

The fitout of this area may vary depending on the function of the facility.

Movement of staff and equipment shall show clear lines of delineation between clean and dirty areas.

There shall be an area for the storage of rubbish and sharps disposal. Regular pickup and disposal routines are to be assured.

Hand-washing facilities shall be provided.

G12.4.16 Food and beverage preparation

There shall be an area provided for the preparation and serving of drinks and this shall include a facility for washing crockery.

If food is to be prepared for patients, a special designated pantry area shall be provided for this purpose. It shall include refrigerator, sink, tea/coffee-making equipment, storage and access to hand-washing facility.

G12.4.17 Storage

Storage rooms, bays or cupboards shall be provided for facility equipment, linen and other clinical and medical consumables. Goods or items shall not be mixed in the same store area and shall be stored like for like.

G12.4.18 Specimen storage

There shall be designated space for the storage of specimens.

G12.4.19 Cleaner's room

A dedicated cleaners' area shall be provided with sufficient space for the storage of cleaning machines, cleaning equipment and cleaning trolley.

The fitout of this area may vary depending on the function of the facility.

A method for the disposal of fluids and used cleaning materials shall be available.

Hand-washing facility shall be available.

G12.4.20 Waste bin storage area

External waste bin storage area shall be provided. The arrangements for washing bins shall be detailed in an operational policy.

Clinical/medical waste shall be kept in a secure area.

G12.4.21 Service delivery area

An area with discreet access to the facility or operational policy shall be provided for the delivery and decanting of medical supplies, equipment and general consumables, or an operational policy shall be provided for the management of this service.

The fit out of this area may vary depending on the function of the facility.

G12.4.22 Ambulance access

There shall be ambulance access to enable patient pickup. This access shall be easily accessible to the exit door. The arrangements for ambulance access shall be detailed in an operational policy.

G12.4.23 Parking provision

Parking for patients and staff, including disabled parking, shall be provided for the facility. The arrangements for patient “drop off/pick up” shall be detailed in an operational policy.

G13. Day hospitals (Class C)

Renal Dialysis Units located in hospitals and/or as satellite units.

G13.1 Renal Dialysis Unit

G13.1.1 Minimal care facility (satellite unit)

These guidelines apply to the design of free-standing satellite dialysis unit(s), having clinical links with local or regional hospitals and ready access to emergency care in an emergency department of the local hospital. The satellite dialysis unit is suitable only for chronic haemodialysis patients who are independent and stable and can dialyse with minimal clinical support.

The main function of a satellite dialysis unit is to provide maintenance haemodialysis for patients with chronic end-stage renal failure. The satellite unit may also teach or support patients and/or relatives on how to carry out continuous ambulatory peritoneal dialysis.

Patients attending a satellite dialysis unit:

- are mainly ambulant
- may be of any age
- may have physically and sensory disabilities.

Renal dialysis involves the removal of waste products from the blood by allowing these products to diffuse across a thin membrane into dialysis fluid which is then discarded along with the toxic waste products across the membrane without the blood coming into contact with the dialysis fluid.

G13.1.2 Organisation of patient flow

The typical clinical management of patients may be as follows:

- On arrival at the unit, a patient will wait in the waiting area until the dialysis machine has been prepared for use.
- The patient then transfers to the monitoring area to be weighed and to have his or her blood pressure checked.
- At the treatment cubicle, the patient is attached by a series of blood tubing to the dialysis machine. Dialysis generally takes about four hours but varies according to the individual's situation and prescriptions.
- The patient's vital signs are monitored during the treatment.
- After treatment and final assessment, the patient returns to the waiting area before going home.

G13.1.3 Economy

The size of a dialysis unit will depend on local circumstances such as the dialysis population, community needs and treatment shift patterns. Project teams will need to consider the number of treatment cubicles required to ensure the economic viability of a central water treatment system. The use of individual bedside water treatment units is a matter for local decision.

G13.1.4 Opening hours/shifts

Satellite dialysis units are likely to operate at least a two-shift system. Running a third shift in the evenings is an option and dependent on dialysis treatment demand.

With one dialysis treatment taking between four and five hours, two to three patients can be dialysed per cubicle per day. Patients generally require three treatments per week.

G13.1.5 Functional relationships

A satellite dialysis unit contains three primary zones:

1. patient treatment cubicle
2. associated support facilities, such as a plant room, store rooms, patient toilet/disability shower
3. staff areas such as staff office, staff toilet and shower.

Both within and between these zones there are key functional relationships, which should be taken into account when designing accommodation. Details of these relationships are described as follows:

- Staff base to patient treatment cubicles – staff at the staff base must be able to see and hear patients in the dialysis area. A balance should be struck between providing adequate observation for staff and privacy for patients.
- Patient treatment cubicles to utilities and equipment storage – utility areas and equipment storage and maintenance areas should be located to provide ease of access to patient treatment cubicles. Storage and utility areas must be large enough for storage of all equipment and consumables.
- Patient treatment cubicles to staff areas – staff rest rooms and offices should be separate from – but close to – patient treatment cubicles.
- Treatment cubicles to treatment cubicle – the layout of the multi-station dialysis area should enable patients to talk to one another, be large enough to accommodate equipment, visitors, provide appropriate circulation space and allow for patient resuscitation in the case of an emergency.

G13.1.6 Functional and design requirements

The following is a checklist of spaces that shall be provided when setting up a satellite renal dialysis unit:

- reception area which should include provision for such things as stationery, photocopying, storage for medical records and payment of accounts
- waiting area which should be large enough to accommodate equipment such as waiting chairs, wheelchairs and patients on gophers
- patient property store room
- patient and visitors toilet including disabled toilet (in proximity to the waiting area)
- patient assessment area for weighing patients, measuring their height and monitoring blood pressure
- patient treatment cubicles (dialysis area). Number required would vary depending on demand and local conditions
- single patient treatment room. This should be located so that it can be observed easily from the nurse base
- patient toilet(s) with basin(s) including provision for patient with disabilities. A combined patient/staff shower should also be provided
- nurse staff base which includes space for patient records storage
- storage areas for equipment such as resuscitation and linen trolleys
- clinic nurse manager's office
- multi-disciplinary office/interview room
- staff/patient education and training room
- water treatment plant room
- maintenance room or work space for dialysis equipment maintenance
- clean utility room
- dirty utility room
- dialysis fluid store room
- staff room with pantry facilities
- patient pantry/beverage area
- staff change area, staff locker area and staff toilets with shower facilities
- general equipment store
- cleaners' room
- parking for patients, staff, visitors including disabled parking.

In addition space(s) shall be provided for basins, equipment parking, services switch boards and ducts.

- appropriate reticulated medical gases and air conditioning plant rooms.
- external waste bin storage areas which include bin wash down
- a discrete service delivery area with direct access to the unit for the delivery of dialysis fluids and general consumables.

The following spaces may be considered as optional and would be dependent on the requirements of the dialysis unit:

- additional office for visiting doctors
- additional store rooms for things such as spare equipment and bulk fluid storage
- medical records store room, including provision for long-term storage
- seminar room
- consulting/examination room. Refer Appendix 5 for room requirements
- treatment room. Refer to Appendix 6 for room requirements.

The design and planning of the satellite dialysis unit shall be as for a Day Hospital (Section G11).

(a) Reception area

A reception area shall be provided at the entrance to the unit and adjacent to the waiting area, for receiving and registering patients upon arrival to the unit and to serve as the administrative and communication centre of the unit. Confidential medical records will be stored in this area in lockable filing cabinets, cupboards, trolleys or in a dedicated lockable medical records store room.

(b) Waiting area

The waiting area shall offer a comfortable and relaxing environment with domestic-type finishes and furnishings. Different types of seating are required and should include those suitable for elderly people. The layout should be informal. There should be adequate space to accommodate patients in wheelchairs and for people using walking aids.

(c) Patient property store room

A patient property store room for storing patients' belongings such as blankets and pillows that they may use during each treatment, shall be provided. Keyed lockers may be required. For security, the patient property store should be within sight of the receptionist.

(d) Toilet and shower (Ensuite) for patients

A unisex toilet and shower (ensuite) complying with AS 1428.1 Design for access and mobility, shall be provided for patient use. This shall be located in close proximity to the treatment cubicles.

In addition a patient and visitor toilet shall be provided in close proximity to the reception/waiting areas for the use of patient/visitors as they enter the unit. Toilets shall provide facilities for people with disabilities.

(e) Patient monitoring area

This space is used to monitor and record patients' weight, blood pressure and general health before each dialysis treatment. This area shall be located next to the dialysis treatment area. Data may be recorded either on computer or on paper, depending on local policy.

(f) Treatment cubicles dialysis area

The dialysis treatment area consists of a number of treatment cubicles in an open-plan design. The minimum clear treatment cubicle floor area shall be 9 m². This is to allow space for things such as treatment trolley or chair, dialysis machine, visitor's chair and staff access to bed head services. Circulation/corridor space shall be allowed in front of the treatment cubicles for access and general circulation.

(g) One-bed patient treatment room

A minimum one-bed (single) patient treatment (dialysis) room shall be provided for each unit. Refer to Section G2.1 of these Guidelines for minimum sizes of patient rooms. Depending on the location of the dialysis unit more than one patient treatment room may be required. The patient treatment room is provided for a patient(s) requiring privacy or a patient who may need to be dialysed in isolation from other patients either temporarily or on every occasion.

(h) Staff base

The staff base shall be located so that staff sitting at the base can observe all patients in the dialysis area. The staff base shall also be large enough to accommodate work and storage spaces for the nursing staff of the unit.

(i) Resuscitation trolley holding bay

A resuscitation trolley holding bay, with space for the parking of a resuscitation trolley (with defibrillator) shall be located with easy access to all spaces used by patients.

(j) Linen storage

A linen store and/or area(s) for the parking of a linen trolley shall be provided for the unit. The linen store should be located in close proximity to the treatment areas.

(k) Staff training room/office

A staff/patient training room/office shall be provided. This room would be used for teaching patients how to perform continuous ambulatory peritoneal dialysis (CAPD), general patient and relative education, for carrying out administrative duties and staff training and education. Depending on the size or location of the dialysis unit this space could be combined with the multi-disciplinary office/interview room.

(l) Clinical nurse manager's office

This office is the administrative base for the unit manager. It shall be sufficiently private and large enough for confidential discussions with staff and the storage of operational manuals and reference material.

(m) Multi-disciplinary office/interview room

This office space may be shared on a sessional basis by dietitians, social workers and other members of the renal team. It may also be used for counselling and interviews. Depending on the size or location of the dialysis unit this space could be combined with the staff/patient training room/office.

(n) Water treatment plant room

Drinking water standards are inadequate for haemodialysis since patients are exposed to many thousands of litres of dialysis fluid annually. Water to be used for dialysis needs to be filtered to remove impurities and shall comply with all relevant standards. Refer to section 13 of the *Western Australia Health Facility Guidelines for Engineering Services*.

(o) Dialysis equipment maintenance room or work space

A workshop or dedicated maintenance work space shall be provided for the maintenance and repair of dialysis machines. The space provision shall be sufficient to park and manoeuvre equipment and accommodate a work bench with integral lockable cupboards.

(p) Clean utility room

A clean utility room is required for storing and preparing drugs, medicines and lotions and for holding a working supply of clean and sterile supplies. A lockable drugs cupboard may be located here along with a refrigerator for the storage of consumables requiring refrigeration. The clean utility room should be located in close proximity to the treatment cubicles. A clinical hand basin shall be provided with in the room.

(q) Dirty utility room

A dirty utility room shall be provided where items of equipment may be cleaned or for the disposal of liquid and solid waste, and for temporarily holding waste materials to be reprocessed and for disposal.

The room shall be fitted with a sluice sink, a sink unit with drainer, a hand-wash basin, a work surface, cupboards and shelves. An electrical sanitiser may be required depending on the requirements of the dialysis unit. Space should also be available to park trolleys and for temporarily holding bags of soiled linen. The dirty utility room shall also be large enough to accommodate large volumes of packing waste that is generated by the use of dialysis fluids.

(r) Staff room with pantry facilities

A staff room with pantry facilities shall be provided where staff can relax and take beverages and snacks.

(s) Patient pantry/tea preparation facility

A patient pantry/tea preparation facility shall be provided for the safe handling of food including the preparation of beverages and light snacks for patients, for washing and storing crockery and cutlery, for storing a limited quantity of dry goods, and for the refrigerated storage of milk and over beverages. A sink shall be provided. The provision of a small dishwasher may be considered.

(t) Staff change, locker room and toilets and shower

A unisex staff change/locker room shall be provided where staff can change into a uniform and store outdoor clothing and other personal items.

Sanitary facilities including WCs with hand basin(s) should be located adjacent to the staff change/locker room. A staff use shower shall also be provided.

(u) Dialysis fluid store

A dialysis fluid store shall be provided for the storage of dialysis fluids and disposables. This store should be large and include plenty of racking because dialysis fluid is consumed in high quantities. Manufacturers' requirements for store room temperature limits shall be considered.

(v) General equipment store

An equipment store for the storage of miscellaneous and/or spare equipment shall be provided for the unit.

(w) Cleaners' room

A dedicated cleaners room shall be provided with sufficient space for the storage of cleaning machines, cleaning equipment and cleaning trolleys. A slop hopper for the disposal of fluids and used cleaning materials shall be provided.

(x) Space for basins, equipment parking, services switch boards and ducts circulation corridors.

Appropriate spaces shall be provided within the unit for clinical staff hand basins, equipment parking, services switch boards and ducts and staff/patient/equipment circulation.

(y) Parking Provision

Provision should be made for patient, staff, and visitor parking and should include disabled bays.

(z) External waste bin storage area

External waste bin storage area, which is secure and includes bin wash down, shall be provided.

(aa) Services delivery area

A discrete services delivery area with direct access to the Unit for delivery of dialysis fluids and general consumables shall be provided.

(bb) Consulting/examination room (optional)

A combined consulting/examination room may be provided depending on the requirements of the dialysis unit for consultation and examination of patient pre or post treatments. Refer Appendix 5 for room requirements.

(cc) Treatment room (optional)

A treatment room may be required for nursing staff to perform minor diagnostic and treatment type procedures requiring a clinical environment. Such procedures could include the inserting and changing the lines and cannula of continuous ambulatory peritoneal dialysis (CAPD) patients. Refer Appendix 6 for room requirements.

(dd) Seminar room (optional)

A seminar room may be provided for teaching tutorials, meetings, case conferences and clinical instruction.

G13.1.7 Support services

Refer to sections 11 to 14 of the *Western Australia Health Facility Guidelines for Engineering Services*.

Appropriate medical gases and air conditioning plant rooms shall be provided.

G14. Psychiatric day hospitals (Class D)

G14.1 General

- G14.1.1 The psychiatric day hospitals are standalone facilities.
- G14.1.2 There shall be formal links between the facility and local hospitals to cover emergency situations, including overnight observation.
- G14.1.3 The function of the psychiatric day hospital unit is to provide, in a safe and therapeutic environment, appropriate facilities for the reception, assessment, diagnosis, treatment and rehabilitation of patients presenting with known or suspected psychiatric conditions and behavioural disorders.

G14.2 Functional and design requirements

- G14.2.1 The number, size and function of all rooms available in the facility shall be consistent with the functionality (that is services to be provided, maximum number of patients to be treated at any one time and number of staff), delivery of safe patient care and emergency access and egress.
- G14.2.2 All treatment, recovery areas and toilets shall be adequate in size and function to:
 - ensure patient safety
 - enable staff to carry out their duties
 - to provide safety, privacy and confidentiality for patients.
- G14.2.3 The construction standards, finishes, minimum corridor widths, ceiling heights, door sizes, hardware requirements and window details, shall comply with Sections B2 and B3 'construction and design standards' and 'finishes' respectively. When detailing and specifying finishes, it should be recognised and understood that the fabric of a mental health unit needs to be considerably more robust than for other healthcare units. Attention should be paid to walls, doors, door hardware, fixtures, ceilings and glazing, both in terms of the potential for damage by patients and for patients to self harm.
- G14.2.4 The corridors shall be wide enough to allow for wheelchair/ trolley access. (Section B2.3 – Corridors) A minimum of 1800 mm is recommended. All corridors and circulation at doors to access rooms shall also comply with AS1428.1 – Design for access and mobility.

To minimise safety/security risk, dead-end corridors and recesses where patients may be out of view should be avoided. The need for adequate space is essential and should not be overlooked as a means of reducing the potential for aggressive behaviour. This can be done by providing wide corridors and recreation areas that are large enough to avoid crowding.

- G14.2.5 The finishes of walls, floors, ceilings and soft furnishings in the facility shall comply with the Section B3 – Finishes. Finishes selection should create a therapeutic environment to assist in recovery by creating an appropriate atmosphere of hope and positive expectation.
- G14.2.6 Acoustic issues need to be addressed throughout the design process to ensure that patient privacy and confidentiality are provided. Refer to section 8 of *Western Australia Health Facility Guidelines for Engineering Services*.
- G14.2.7 Appropriate and comprehensive sign posting shall be provided to clearly identify staff, patient and visitor areas and assist in wayfinding – refer to Section B13.

G14.3 Safe and secure environment

- G14.3.1 A safe and secure environment shall be provided for patients and staff to comply with Section B14 and section 16 of the *Western Australia Health Facility Guidelines for Engineering Services*.
- G14.3.2 Settings for mental health services must be flexible and optimally therapeutic to provide a setting that will enhance the individual's capacity for reassurance and responsiveness to treatment.
- G14.3.3 Security and access control should be unobtrusive and not create a negative ambience, adding to the patient's agitation, fearfulness and depression.
- G14.3.4 Isolated spaces should be avoided for both patient and staff safety.
- G14.3.5 Exits to external spaces should have at least six metres of clear external space to discourage congregation and crowding outside perimeter doors.

G14.4 Infection control

- G14.4.1 All areas of the facility shall be designed, constructed, furnished and equipped in keeping with the principles of infection control. Refer to Section G1.4.
- G14.4.2 Hand washing facilities shall be provided in all clinical and patient care areas where hygiene is essential. Clinical handwashing facilities shall be equipped with lever-action taps, soap dispensers and a method for drying hands. There shall be access to hand washing for the clean and dirty utility areas.
- G14.4.3 Configuration/layout and workflows shall meet the requirements of all facility operations and ensure delineation of "clean and dirty" areas.
- G14.4.4 All construction and fitout shall be in accordance with Infection Control Guidelines. This will include ventilation, air-conditioning, soft furnishings, floor coverings, waste management, cleaning and provision for cleaning and sterilising of equipment.

G14.5 Special requirements and considerations

Specific factors to consider in a psychiatric day hospital:

G14.5.1 Fixtures and fittings

These should be selected to minimise the opportunity for patient self-harm or injury to others. Special attention should be given to rooms where a patient may be alone such as the bathroom and to fixtures in those room such as grab rails, taps, shower hoses and sanitary fixtures such as towel rails and soap dishes.

G14.5.2 Furniture

Consideration the type and quantity of furniture to be used. Preference should ,be given to fixed or heavy furniture so that it can't be used as a weapon. While selection should prevent an institutional atmosphere, factors such as cleaning, infection-control and fire safety still need to be considered.

G14.5.3 Colour selection:

- Some colours, particularly the bold primary colours and green should be avoided because many people find them disturbing.
- Extremes of colour and pattern, such as geometric designs and/ or animal prints, which may disturb perception, should be avoided. Note however that strong colours on floors might assist in orienting and way finding.
- Wall colour should be different to floor and door colour to define the floor plan and to assist patients with visual impairments.
- Lighting should be appropriate to the use of the room/area.
- Inclusion of art on walls for enhanced ambience is encouraged.

G14.5.4 All rooms should be lockable, including all corridor cupboard doors and fire hose reel cabinets.

G14.5.5 All meeting rooms used by patients, including counselling interview rooms, require two exits and duress alarms. Duress alarms should be fixed, personal or a combination of these.

G14.5.6 There should be a sufficient number of personal alarms to ensure all staff and relevant visiting personnel can carry one while in the unit. The charger for these personal alarms should be located in a staff-only area.

G14.5.7 The positioning of fixed duress alarms is important. It is critical to ensure that staff can reach them without having to cross the path of the patient or distressed family member and that they cannot be activated by patients, children or by accident, such as by a chair being pushed back.

G14.5.8 When the unit is located within a multi-storey building, ensure there can be no unauthorised or unsupervised access to external spaces above ground level such as balconies or roofs unless these are designed specifically for use by patients.

- G14.5.9 All mirrors, windows and observation panels shall be made of safety shatter-proof glass.
- G14.5.10 Any fitting or fixture capable of supporting a consumer's weight, should be avoided unless it is an item of furniture intended to bear a consumer's weight.
- G14.5.11 Fixtures and fittings selected for mental health units shall also be assessed to ensure that they do not create any additional safety hazards for consumers or staff. They should be safe, durable, tamperproof and, where possible, concealed.. Ensure they are flush with the surfaces to which they are attached or are designed in a way to prevent attachment of anything around them such as cords or belts. It is critical that if anything is, or can be attached to the fitting or fixture, it will break away when a weight of fifteen kilograms is applied.

Fixtures and fittings shall be assessed to ensure there is minimization of any potential for self-harm or use as a weapon: – no ligature points, no accessible electrical wires, and wall and ceiling fittings should be securely/secretly mounted.

G14.6 Functional requirements

These requirements depend on the specific functions of the facility as outlined in the functionality brief.

The configuration/layout shall allow movement of patients, staff and materials/equipment. It shall be demonstrated that there are clear lines of delineation between them.

Depending on the extent of services to be provided, the facility shall have the following zones:

G14.7 Reception, administration and public areas

- G14.7.1 There shall be a reception desk and area at the entrance to the unit for receiving and registering patients. Duress alarm for staff shall be provided.
- G14.7.2 There shall be a waiting area. Persons (patients and carers) waiting in the waiting area should have visual privacy from persons outside of the unit by use of window treatments or virtue of the arrangement and position of furniture in the wait area.
- G14.7.3 There shall be access to toilet facilities, including facilities for people with disabilities.
- G14.7.4 There shall be access to an interview room/cubicle area for the privacy of patients. All enclosed interview rooms shall have two doors for staff safety. Duress and emergency call shall be provided. Interview spaces should be readily available at reception for the prompt attention of persons presenting for care or attention, to reduce stressful or anxiety-producing situations.
- G14.7.5 There shall be a space for wheelchair storage.

- G14.7.6 There shall be a general clerical office, which may be multi-functional and which is separate from patient areas. Note that private telephone conversations or bookings shall not take place at the reception desk where conversations can be overheard.
- G14.7.7 Other offices as required for management of the facility as outlined in the Statement Of Function (SOF) shall be provided. These may include offices/workstations for visiting staff and therapists, however it may be preferred that these offices are co-located in the outpatient and allied health treatment zone.
- G14.7.8 There shall be secure, fire-proof storage for medical records. Refer to G6.2 and to section 12 of the *Western Australia Health Facility Guidelines for Engineering Services*.
- G14.7.9 There shall be storage for stationery and administrative equipment and supplies.

G14.8 Outpatient, allied health treatment/rehabilitation spaces

Functionality will determine the outpatient and allied health treatment spaces required. Good design and functional location will allow maximum use and sharing of multi-use spaces. The following are the minimum requirements to be met, depending on programs and services offered:

- G14.8.1 Access to the outpatient treatment and rehabilitation spaces shall be controlled and, for staff and patient safety, there shall not be free entry.
- G14.8.2 All rooms where a patient and staff member could be alone shall have two exit doors from the room. Duress alarms shall be provided.
- G14.8.3 For large meeting/activity rooms (for large group therapy and activity sessions), allow 1 m² per person, with a minimum room area of 21 m². (two doors required).
- G14.8.4 For small meeting/activity rooms (for smaller group therapy or activity sessions), allow 1 m² per person, with a minimum room area of 14 m². (two doors required).
- G14.8.5 Interview rooms (for individual interview and/or counselling sessions): Apart from the patient and therapist, the room may need to accommodate a carer, family member or another therapist team member. Recommended size 12 m², minimum 9 m². (two doors required).
- G14.8.6 Consult and examination rooms (used for interview, assessments and examinations). Floor area shall be a minimum 12 m². There shall be a clinical wash hand basin close to the examination area. Privacy screens/curtains shall be provided for patient privacy during examination or when changing. Refer to Consult/examination room – appendix 5. (two doors required).

- G14.8.7 Occupational therapy room – 1.5 m² per patient with a minimum of 20 m² excluding built-in fittings. A hand basin shall be provided, and a worktop and sink to wash equipment such as paintbrushes. Lockable storage for consumables and equipment shall be provided and safe provision for displays considered
- G14.8.8 Physiotherapy/exercise rooms – size to depend on equipment and purpose. Equipment to be carefully selected so that it will not be used as a weapon. A hand basin and drinking water shall be provided. A ceiling height of 3 m is recommended. Safe convenient storage for equipment shall be provided. A minimum of 50 m² is recommended.
- G14.8.9 ADL Kitchen – 10 m² recommended, with fitout resembling a domestic kitchen. Careful selection of fittings shall be considered. The room shall be locked when not in use and activities shall be directly supervised at all times.
- G14.8.10 ADL Computer Room – 12 m² with workstations and computers. The room shall be lockable and all electrical cords shall be of short length to prevent self-harm – wireless preferable.
- G14.8.11 A central dining room, located as part of the central amenities area, shall be large enough to accommodate the number of residents to use the room in one sitting. An area of 1.9 m² per person shall be allowed for dining. If the dining room is a combined dining/activity space, 2.8 m² per person shall be allowed. A minimum area of 30 m² shall be provided. A small pantry adjacent to the dining area shall be provided for preparing and serving beverages.
- G14.8.12 Beverage bay – if meals/dining are not provided by the facility, then a separate beverage bay shall be provided for preparing and serving of beverages to day patients. Depending on policy there shall be a space for patients to relax and consume a snack.
- G14.8.13 Patient ablutions – separate male and female ablutions shall be provided. A unisex accessible toilet shall be provided. The number of sanitary facilities to be provided shall comply with the NCC. Depending on programs offered, showers may also be required.
- G14.8.14 Patient lockers – the option for patients to secure their belongings for the duration of their program shall be provided.
- G14.8.15 Storage for equipment and consumables convenient to the therapy spaces shall be provided. Storage shall be separate, like for like and shall be secure.
- G14.8.16 External therapy spaces are recommended.
- G14.8.17 Smoking policy – refer specific policies are required.
- G14.8.18 All rooms shall be acoustically treated and furnishings and finishes shall be homelike, comfortable and low-stimuli.
- G14.8.19 Good lighting, natural daylight and views to the outside are essential.

G14.9 ECT unit/clinical treatment zone

If electroconvulsive therapy is part of the treatment offered at the psychiatric day hospital, then it shall be accommodated in a secure, controlled treatment zone. If other treatments are being considered such as repetitive transcranial magnetic stimulation (rTMS), this may be co-located within the ‘treatment zone’ to avoid unnecessary duplication of the required service and back-up spaces. Configuration/layout and workflows shall meet the requirements of all facility operations and ensure separation of “clean” and “dirty” areas.

- ECT – the spatial requirements for performing an electroconvulsive therapy procedure shall meet the minimum requirements of a procedure room, listed below and in the operating room matrix – appendix 2, and shall also be managed in accordance with the Office of the Chief Psychiatrist standards and guidelines, to provide a safe and quality environment for patients, visitors and staff. It is noted that although an ECT is performed under general anaesthetic, the procedure is non-invasive and the minimum requirements of a procedure room as opposed to a minor operating theatre in terms of the operating room matrix are considered adequate.
- rTMS – requires no sedation or anaesthetic and the room shall meet the minimum requirements of a treatment room, listed below and in the operating room matrix – appendix 2.

G14.9.1 Sub-wait

- A pre-procedure patient waiting shall be provided to accommodate patient waiting for procedure or treatment. Staff supervision of the wait area is required. A calm waiting environment is essential.
- Anaesthetic and clinical checks, prior to any procedure, shall be conducted in a private space/interview room or in the treatment space. For patient privacy, this shall not be conducted in the sub-wait area.
- The majority of patients are apprehensive about what is to occur so it is very important that the sub-wait area have comfortable seating and be warm, friendly, and suitably screened (visually and acoustically) from action in the procedure, treatment or recovery spaces.

G14.9.2 Change/storage facilities

- There shall be adequate facilities for patients (and staff) to change where there is a need, and provision shall include for people with disabilities.
- Secure storage and/or policy shall be provided for patient valuables and belongings.
- There shall be access to toilet facilities after changing without moving through public areas to ensure patient dignity and privacy is respected.

G14.9.3 Treatment room

- Treatment room/s, unless specified otherwise, shall have a preferred clear floor area minimum of 16 m², exclusive of any chairs, desks and built-in items, shelves etc.
- Minimum ceiling height of the treatment room/s shall be 2.7 metres.
- Treatment room/s shall be suitable for the procedures being performed and of adequate size for the equipment, staff and patient.
- Treatment room/s shall be of a suitable size to allow for the resuscitation of a patient.
- There shall be access to a clinical hand-washing facility within the room.
- Adequate lighting to all treatment rooms shall be provided to allow treatments to be performed safely. Refer to section 11 of the *Western Australia Health Facility Guidelines for Engineering Services*.
- There shall be patient monitoring equipment such as pulse oximetry.
- There shall be oxygen and suction available, reticulated gases preferred. Refer section 15 of the *Western Australia Health Facility Guidelines for Engineering Services*.
- There shall be general power outlets with residual current detection for all equipment used in the treatment room. Refer to section 11 of the *Western Australia Health Facility Guidelines for Engineering Services*.
- An emergency call system shall be provided. Refer to section 10 of the *Western Australia Health Facility Guidelines for Engineering Services*.
- Lighting shall be connected to the uninterrupted power supply. Refer to section 11 of the *Western Australia Health Facility Guidelines for Engineering Services*.
- The floor shall be non-slip and not carpeted (Section B3.4 and B3.5).
- The walls shall be of a finish, which facilitates ease of cleaning (Section B3.1).

G14.9.4 Procedure room

- Procedure room/s, unless specified otherwise, shall have a preferred clear floor area of 20 to 30 m² depending on the function of the room. Refer to Operating Room Matrix Appendix 2. Floor space should be clear with no built-in furniture.
- Minimum ceiling height of the procedure room/s shall be 2.7 metres, however where ceiling pendants are installed the minimum ceiling height shall be 3 metres.

- The procedure room/s shall be suitable for the procedures being performed and shall be of adequate size for the equipment, staff and patient.
- The procedure room/s shall be of a suitable size to allow for the resuscitation of a patient.
- Adequate lighting to all procedure rooms shall be provided to allow procedures to be performed safely. Refer to section 11 of the *Western Australia Health Facility Guidelines for Engineering Services*.
- There shall be patient monitoring equipment such as pulse oximetry.
- There shall be oxygen and suction available, reticulated gases preferred. Refer to section 15 of the *Western Australia Health Facility Guidelines for Engineering Services*.
- There shall be general power outlets with residual current detection for all equipment used in the procedure room. Refer to section 11 of the *Western Australia Health Facility Guidelines for Engineering Services*.
- An emergency call system shall be provided. Refer to section 10 of the *Western Australia Health Facility Guidelines for Engineering Services*.
- The lighting shall be connected to the uninterrupted power supply. Refer to section 11 of the *Western Australia Health Facility Guidelines for Engineering Services*.
- The floor shall be non-slip and not carpeted (Section B3.4 and B3.5). G14.13.12 The walls shall be of a finish, which facilitates ease of cleaning (Section B3.1).

G14.9.5 Recovery area

- There shall be a designated recovery area with two stage one bed/ trolley spaces per procedure room and three stage two recovery beds/recliners per procedure provided if the facility has more than one patient undergoing a treatment consecutively. [refer Section G4.4.4 and G11.7 (f)].
- There shall be privacy curtains between each recovery space.
- The minimum width of a cubicle shall be 1800 mm.
- There shall be resuscitation equipment readily available.
- There shall be easy access to a toilet (including access for people with disabilities).
- If patients are required to change back into street clothes, there shall be access to a private change area.
- There shall be access to oxygen and suction for the patients, reticulated gases preferred. Refer to section 15 of the *Western Australia Health Facility Guidelines for Engineering Services*.

- An emergency call system shall be provided. Refer to section 10 of the *Western Australia Health Facility Guidelines for Engineering Services*.
- A discharge lounge with couches (third stage recovery area) may be considered, depending on the number of treatments planned.
- A beverage bay for the preparation and serving of drinks shall be provided in the recovery area. If food is also to be provided, a designated pantry shall be provided for this purpose.
- There shall be staff supervision of all recovery stages and an adequate write up area.
- There shall be easy access to clean and dirty utility service areas. (refer 14.10 Service and support areas).
- All drugs and medications stored and administered in accordance with the relevant legislation *Medicine and Poisons Act 2014* and *Medicine and Poisons Regulations 2016*.
- There shall be access to clinical hand-washing facilities.
- Lighting shall be connected to the uninterrupted power supply. Refer to section 11 of the *Western Australia Health Facility Guidelines for Engineering Services*.

G14.9.6 Patient toilet/s

- A minimum of one unisex toilet within the secured Treatment/ECT unit complying with AS 1428.1 shall be provided for patient use. This shall be in close proximity to the treatment/recovery area. If design allows, this patient toilet may be shared with the patient sub-wait.
- If a large number of treatment rooms are proposed, there shall be an appropriate number of toilets for patients use in compliance with the NCC.

G14.10 Service and support areas

G14.10.1 Clean utility

- There shall be a room/area for the storage and preparation of medical consumables which shall be readily accessible to staff.
- The fitout of this area may vary depending on the function of the facility.
- There shall be a discrete room/area for the storage of medical equipment.
- Medication storage shall comply with the legislation, *Medicines and Poisons Act 2014* and *Medicine and Poisons Regulation 2016* i.e. Schedule 8 drugs in approved safe, and drug refrigerator locked or in a secure area (PM – Section G2.1.3 (f)).
- Hand-washing facilities shall be provided.

G14.10.2 Dirty utility room

- There shall be a discrete room/area for decanting, and for washing and drying instruments and equipment.
- The fitout of this area may vary depending on the function of the facility.
- Movement of staff and equipment in the room shall show clear lines of delineation between clean and dirty areas.
- There shall be an area for the storage of dirty linen, rubbish and sharps disposal. Regular pickup and disposal routines are to be assured.
- Hand-washing facilities shall be provided.

G14.10.3 Catering

- If catering for patients is included in the Statement of Function, it may be done on site or outsourced.
- A central production kitchen or localised reconstitution kitchen (as deemed appropriate) shall be designed and operated in accordance with the requirements of the:
 - *Food Act Western Australia – 2008*
 - Food Regulations – Western Australia – 2009
 - Australia New Zealand Food Standards Code; Food safety standards Chapter 3.2.3 Food Premises and Equipment
 - relevant WorkSafe WA requirements.
- Design of the central kitchen and associated storage areas should be considered carefully to ensure a high-quality food service.
- Where the central production kitchen utilises gas appliances, an emergency gas isolation valve shall be installed in a location that is easily accessible during emergency egress.

G14.10.4 Linen

- If a facility for on-site laundering of linen is to be provided, then it shall comply with AS 4146.
- If laundering is to be handled off-site, the contracted supplier shall also comply with AS 4146 and evidence of compliance shall be provided.
- If linen is outsourced, a designated holding/ pickup/ delivery area shall be provided.
- The dirty linen store shall be mechanically ventilated.

G14.10.5 Storage

- Storage rooms, bays or cupboards shall be provided for facility equipment, linen and other clinical and medical consumables.
- Goods or items shall be appropriately stored like for like and storage shall not be mixed in the same store area.
- There shall be designated space for the storage of specimens.

G14.10.6 Cleaners' room

- A dedicated cleaners' area shall be provided with sufficient space for the storage of cleaning machines, cleaning equipment and cleaning trolley.
- The fitout of this area may vary depending on the function of the facility.
- A method for the disposal of fluids and used cleaning materials shall be available.
- Hand washing facility shall be available.
- If a catering/commercial kitchen is part of the support service, this shall have its own dedicated cleaners' room in addition to a cleaners' room required for the remainder of the facility.

G14.10.7 Waste bin storage area

- External waste bin storage area shall be provided. The arrangements for washing bins shall be detailed in an operational policy.
- Clinical/medical waste shall be kept in a secure area.

G14.10.8 Service delivery area

- An area with discrete access to the facility for the delivery and decanting of medical supplies, equipment and general consumables, or an operational policy shall be provided for the management of this service.
- The fitout of this area may vary depending on the function of the facility.

G14.10.9 Ambulance access

- There shall be a discrete ambulance access to enable patient pickup. The pickup point shall be easily accessible from the treatment/recovery spaces and from an exit door.
- Trolleys shall not pass through public spaces.
- The arrangements for ambulance access shall be detailed in an operational policy.

G14.10.10 Parking provision

- Parking for patients and staff, including disabled parking, shall be provided for the facility. The arrangements for patient “drop off/pick up” shall be detailed in an operational policy.

G14.11 Staff areas

- A staff room with pantry facilities shall be provided where staff can relax and take beverages and snacks.
- A unisex staff change/locker room shall be provided where staff can change into a uniform if required and safely store outdoor clothing and other personal items.
- Sanitary facilities including WCs with hand basin(s) should be located next to the staff change/locker room. Staff toilets/wash hand basins shall be readily accessible from all restricted areas so as not to compromise patient safety/security by leaving the restricted area.
- A staff use shower /end of trip (EOT) facilities shall also be provided.

G15. Nursing Post

G15.1 General

- G15.1.1 A nursing post is a self-contained, usually standalone facility the purpose of which is to provide medical attention and deliver patient care to the community in a safe environment. A nursing post is not intended for the overnight accommodation of patients. Patients presenting may be scheduled, unscheduled or require emergency treatment. There shall be arrangements and policies in place for the transfer of patients to acute facilities when necessary.
- G15.1.2 The construction standards, finishes, minimum corridor widths, ceiling heights, door sizes, hardware requirements and window details, shall comply with Sections B2 and B3 'construction and design standards' and 'finishes' respectively.

G15.2 Functional and design requirements

- G15.2.1 The number, size and function of all rooms available in the facility shall be consistent with the facility's functionality (such as services to be provided, maximum number of patients to be treated at any one time and staff size), delivery of safe patient care and emergency access and egress.
- G15.2.2 All treatment areas, toilets and support service areas shall be adequate in size and function to:
- ensure patient safety
 - enable staff to carry out their duties
 - provide safety, privacy and confidentiality for patients.
- G15.2.3 Corridors shall be wide enough to allow for wheel chair/trolley access. (Section B2.3 – Corridors). All corridors and circulation at doors to access rooms shall also comply to AS1428.1, and all exit and escape doors shall comply with the NCC and section B2.5 – Doors.
- G15.2.4 The finishes of walls, floors, ceilings and soft furnishings in the facility shall comply with the Section B3 – Finishes.
- G15.2.5 Acoustic issues need to be addressed throughout the design process to ensure that patient privacy and confidentiality are provided. Refer to sections 8, specifically 8.2, of the *Western Australia Health Facility Guidelines for Engineering Services*.
- G15.2.6 Appropriate and comprehensive sign posting shall be provided to clearly identify staff, patient and visitor areas – refer to Section B13.

G15.3 Safe and secure environment

G15.3.1 A safe and secure environment shall be provided for patients and staff to comply with section B14 and to section 16 of the *Western Australia Health Facility Guidelines for Engineering Services*.

It should be noted that a nursing post is generally in a remote location, and retention and availability of adequate staff is often problematic. The facilities often function with minimal staff on duty at any one time. Staff security is paramount and access control into and within zones of the facility shall be addressed.

G15.3.2 A duress alarm for staff shall be provided. Detailing of the reception desk shall consider use by non-ambulant people. The reception area shall be designed and detailed to allow semi-private conversations at the reception desk, without being overheard in the wait area.

G15.4 Reception, waiting, administration

G15.4.1 There shall be controlled and monitored access into the facility, and access for disabled shall be provided.

G15.4.2 There shall be a reception desk and area at the entrance to the facility for receiving and registering patients.

G15.4.3 There shall be a waiting area, including waiting space for patients/ carers in wheelchairs.

G15.4.4 There shall be easy access to a room where a patient can be interviewed in private. This room may also double as a patient consult/ assessment room depending on the size of the facility, staffing and functionality. It should be accessible from the wait/reception area.

G15.4.5 There shall be access to toilet facilities, including facilities for people with disabilities.

G15.4.6 There shall be a space for wheelchair storage within easy access of the reception area.

G15.4.7 There shall be an area for general clerical office functions. This may be multi-functional and shall be separate and secured from patient wait areas.

G15.4.8 There shall be a policy in place for the storage of medical records. If paper copies are kept, they shall be stored in a secure and fire proof cabinet/room. Refer to Section G6.2 and section 12 of the *Western Australia Health Facility Guidelines for Engineering Services*.

G15.4.9 If cash is received, there shall be a policy on handling and storing cash.

G15.4.10 There shall be storage for stationery and administrative equipment and supplies

G15.5 Infection control

- G15.5.1 All areas of the facility shall be designed, constructed, furnished and equipped in keeping with the principles of infection control. Refer to Section G1.4.
- G15.5.2 Hand-washing facilities shall be provided in all clinical and patient care areas where hygiene is essential. Clinical hand washing facilities shall be equipped with lever-action taps, soap dispensers and a method for drying hands. There shall be access to hand washing for the clean and dirty utility areas.
- G15.5.3 Configuration/layout and workflows shall meet the requirements of all facility operations and ensure delineation of “clean and dirty” areas.
- G15.5.4 All construction and fitout shall be in accordance with infection-control guidelines. This will include ventilation, air-conditioning, soft furnishings, floor coverings, waste management, cleaning and provision for the cleaning and sterilising of equipment.
- G15.5.5 Policies shall be established to address management of a patient presenting for emergency treatment requiring isolation. It is generally not feasible or practical to provide a dedicated isolation treatment room in a nursing post.

G15.6 Patient treatment zone

The functionality of the space will determine the patient clinical treatment spaces required. Minimum clinical spaces required are a room to interview assess and examine a patient in private and a space for resuscitation/treatment of a patient in an emergency situation.

- G15.6.1 Access to the patient treatment zone shall be restricted and general access from the reception/wait area controlled. There shall be a separate emergency access to the treatment zone, from a dedicated ambulance/emergency drop-off bay.
- G15.6.2 The floor in the treatment zone shall be non-slip and not carpeted (Section B3.4 and B3.5).
- G15.6.3 The walls shall be of a finish, which facilitates ease of cleaning (Section B3.1).
- G15.6.4 Consulting/examination rooms – can be used for patient interview, assessments and examinations. A minimum floor area of 12 m² shall be provided. There shall be a clinical hand basin close to the examination couch. Privacy screens/curtains shall be provided for patient privacy during examination or when changing. Refer – Consult/ examination room – Appendix 5.
- G15.6.5 Treatment Room – a controlled environment which offers patient privacy and is used for assessments, consultation, examination and treatments. A minimum floor area of 16 m² shall be provided. There shall be a clinical hand wash basin in the room and privacy screens/curtains shall be provided. Refer Treatment room – Appendix 6 and refer to the Operating Room matrix – Appendix 2.

- G15.6.6 Treatment Bays – may be provided instead of a treatment room, and bays may be more appropriate where staffing levels are problematic and to ensure staff supervision of the general treatment area. Note that acoustic privacy and environmental control in an open-bay treatment area will be compromised. A minimum of 9 m² shall be provided for non-acute treatment bays (bedhead width of 2700 mm) and 12 m² for acute/emergency resuscitation bays (bedhead width of 3300 mm). There shall be privacy screens around the patient bays. Mobile intermediate bed screen tracking is preferred to provide for emergencies procedures. Clinical hand basins shall be provided within easy access of the treatment bays. Appropriate bedhead services shall be provided. Refer – Treatment Bay – Appendix 6.
- G15.6.7 Resuscitation equipment shall be readily available
- G15.6.8 There shall be patient monitoring equipment such as pulse oximetry.
- G15.6.9 There shall be easy access to a patient toilet from the treatment zone. The toilet shall be an accessible unisex toilet. There shall be access to a patient shower if appropriate.
- G15.6.10 There shall be an adequate write up area/staff control base with visual control of the treatment zone.
- G15.6.11 Medication and drugs shall be stored appropriately and securely in accordance with the relevant legislation.

G15.7 Compliance with engineering services

- G15.7.1 Nursing Posts shall comply with sections 11 to 14 of the *Western Australia Health Facility Guidelines for Engineering Services* in the provision of:
- reticulated oxygen and suction
 - storage of medical gases
 - nurse call, emergency call and duress alarm
 - lighting
 - general power outlets.

G15.8 Clean utility

- G15.8.1 There shall be a room/area accessible from the patient treatment zone for the storage and preparation of medical consumables.
- G15.8.2 The fit out of this area may vary depending on the function of the facility.
- G15.8.3 Medication storage shall comply with the legislation, *Medicines and Poisons Act 2014* and *Medicine and Poisons Regulation 2016*. These require Schedule 8 drugs to be stored in an approved safe, and for drug refrigerators to be locked or located in a secure area (Section G2.1.3 (c)).
- G15.8.4 Hand-washing facilities shall be provided.

G15.9 Dirty utility room

- G15.9.1 There shall be a discrete room/area for decanting, and for washing and drying instruments and equipment.
- G15.9.2 The fitout of this area may vary depending on the function of the facility.
- G15.9.3 Movement of staff and equipment in the room shall show clear lines of delineation between clean and dirty areas.
- G15.9.4 There shall be an area for the storage of dirty linen, rubbish and sharps disposal. Policy for pickup and disposal of dirty linen, medical and general waste shall be provided.
- G15.9.5 Hand-washing facilities shall be provided.

G15.10 Sterile goods supply

- G15.10.1 A system for reprocessing equipment and supplies shall be provided. This may be off-site, remote or on-site, as long as provisions are made to ensure adequate sterile supplies are on hand for maximum demand.
- G15.10.2 Sterile goods supply, storage and/or reprocessing, whether on-site or contracted out, shall comply with AS 4187 and/or AS4185.

G15.11 Linen

- G15.11.1 A linen policy shall be provided. The use of disposable linen is recommended.
- G15.11.2 If laundering of linen is required, this may be contracted out or done on-site. All processing of linen, whether contracted out or done on-site, shall comply with AS 4146.
- G15.11.3 If linen is outsourced, a designated holding/ pickup/ delivery area shall be provided.
- G15.11.4 The dirty linen store, if required, shall be mechanically ventilated.

G15.12 Catering

- G15.12.1 A beverage bay shall be provided for preparing and serving of beverages to patients. If policy is to provide patients with light snacks, a separate pantry shall be provided for the safe handling and storage of food.
- G15.12.2 If catering for patients is included in the Statement of Function, it may be done on site or outsourced. All food preparation areas and food handling shall be designed and operated in accordance with the requirements of the:
 - *Food Act Western Australia – 2008*
 - Food Regulations – Western Australia – 2009
 - Australia New Zealand Food Standards Code; Food safety standards Chapter 3.2.3 Food Premises and Equipment
 - relevant WorkSafe WA requirements.

G15.13 Storage

- G15.13.1 There shall be designated space for the storage of specimens.
- G15.13.2 Storage rooms, bays or cupboards shall be provided for safe storage of medical equipment, maintenance and garden equipment, chemicals, linen, medical and general consumables.
- G15.13.3 Storage facilities provided shall be appropriate for items to be stored.
- G15.13.4 All items shall be stored off the floor and items shall be stored like for like.

G15.14 Cleaners' room

- G15.14.1 A dedicated cleaners' area shall be provided with sufficient space for the storage of cleaning equipment and a cleaners' trolley.
- G15.14.2 The fitout of this area may vary depending on the function of the facility.
- G15.14.3 A method for the disposal of fluids and used cleaning materials shall be available.
- G15.14.4 Hand-washing facility shall be available.

G15.15 Service delivery area

- G15.15.1 An area with discrete access to the facility for the delivery, receipt, checking, deboxing and decanting of medical supplies, equipment and general consumables, or an operational policy shall be provided for the management of this service. The fitout of this area may vary depending on the functionality of the facility.

G15.16 Staff areas

- G15.16.1 Staff amenities shall be provided in accordance with the Occupational Health Safety Act, regulations and Worksafe WA Codes of practice.
- G15.16.2 A staff room with pantry facilities shall be provided where staff can safely relax and take beverages and snacks.
- G15.16.3 If staff are required to change, an accessible staff change/locker room shall be provided where staff can change into a uniform if required and store outdoor clothing and other personal items safely. Depending on staff numbers, this change room may be unisex.
- G15.16.4 Sanitary facilities including WCs with hand basin(s) shall be provided and should be located adjacent to the staff change/locker room.
- G15.16.5 A staff use shower/end of trip (EOT) facilities should also be considered.

G15.17 External areas

- G15.17.1 A secure external waste bin storage area shall be provided. The arrangements for washing bins shall be detailed in an operational policy.
- G15.17.2 Clinical/medical waste shall be kept in a separate secured area.
- G15.17.3 There shall be a dedicated, discrete parking bay for emergency drop-off and to enable ambulance pickup of patients. The pickup point shall be directly accessible from the treatment zone and via an exit door and trolleys should not pass through public spaces. Refer also to Ambulance Facilities.
- G15.17.4 Spatial and height clearance requirements for the ambulance bay should be confirmed with the ambulance service provider. It is preferable that the emergency/ambulance bay be covered.
- G15.17.5 Arrangements for ambulance access shall be detailed in an operational policy.
- G15.17.6 Parking for patients and staff including disabled parking shall be provided for the facility. The arrangements for patient “drop off/pick up” shall be detailed in an operational policy.

G16. Nursing Homes

G16.1 General

- G16.1.1 Nursing homes are premises in which persons who do not require constant medical attention are received as patients and lodged for the purpose of medical supervision and nursing care.
- G16.1.2 A nursing home operates primarily in a patient-care mode rather than a medical mode. Consequently its more important attributes are those focusing on the general well-being of its residents rather than high-tech considerations.
- G16.1.3 The main attributes and design objectives of a well-designed nursing home are to:
- create a home-like and therapeutic environment
 - building a residential size and scale with natural light and views and access to outdoors, preferably single storey
 - promote traditional residential qualities of privacy, choice, control and personalisation of space
 - create a warm reassuring, cheerful and light environment with familiar non-reflective finishes
 - create a building to which careful attention has been paid to proportions, colour, texture (sensory) and use of artwork
 - be able to accommodate loose furniture that is ergonomic, comfortable and has a domestic appearance— but not to the exclusion of function. Where appropriate, furniture should be stable and height adjustable, such as beds (for occupational health and safety reasons)
 - employ an architectural style that is sympathetic to the streetscape or adjacent buildings, be residential in scale and not have a hospital-like aesthetic
 - have a layout that is efficient and cost effective
 - allow easy visual supervision of patients by minimal staff
 - have multipurpose space/s with appropriate and positioning support spaces so that they can be shared
 - be clean and odour-free (many residents are incontinent)
 - have adequate toilets in key locations
 - have good ventilation
 - have adequate and appropriately located housekeeping
 - have appropriate cleanable and durable finishes, still homelike in aesthetic
 - have accessible spaces throughout, accommodating persons with disabilities (physical, sensory or mental)

- pay attention to wayfinding, through the use of colours, landmarks, signage, artwork and personalisation (bedroom doors could be personalised, for example to help maintain residents' dignity and avoid dis-orientation)
- create a secure and safe environment.

G16.1.4 Other important considerations are:

- acoustics
- continuous pathway design – eliminate dead-end corridors, provide continuous walkways for wanderers, which with good wayfinding will take them back to their residential facility
- appropriate location of controls to prevent resident interference
- Statement of Function to consider cultural and special needs of users
- the site – should be selected to facilitate community access and promote residents' independence and quality of life
- the interface between the privacy of nursing home and neighbouring areas should also be carefully considered.

G16.1.5 The construction standards, finishes, minimum corridor widths, ceiling heights, door sizes, hardware requirements and window details, shall comply with Sections B2 and B3 'construction and design standards' and 'finishes' respectively. Due to the nature of residents, including many with reduced visual capacity, the use of full-height glazed door and window panels, low level glazing and large panels of mirror are generally not recommended.

G16.1.6 The number, size and function of all rooms available in the facility shall be consistent with the Statement of Function (such as the maximum number of residents to be accommodated at any one time and the number of staff), delivery of safe nursing care and emergency access and egress.

G16.1.7 All resident areas, toilets and support service areas shall be adequate in size and function to:

- ensure resident safety
- enable staff to carry out their duties
- provide safety, privacy and confidentiality for residents.

G16.1.8 Corridors shall be wide enough to allow for wheelchair/trolley access and the passing of wheelchairs. A clear width of 1800 mm shall be provided. Clear width equates to the handrail-to-handrail dimension. Refer to Section B2.3 – Corridors. All major corridors shall have hand rails, for assisted resident movement, to both side walls. All corridors and circulation at doors to access rooms shall also comply to the NCC and AS1428.1. It is recommended that seating be provided in alcoves to corridors, where due to facility layout, long corridors are unavoidable. The seating provides a 'rest-stop' for the elderly ambulant and semi-ambulant.

- G16.1.9 Where ramps are required for resident access or egress, minimum gradients, kerbs and handrails are to comply with the NCC and AS 1428.1. Ramps in other areas, such as service roadways, shall comply with good design practice and be suitable for the task. Australian Standards, wherever applicable, shall be used.
- G16.1.10 Doors shall be in accordance with NCC requirements and section B2.5. It is recommended that the minimum dimension of clear door openings to resident bedrooms in new areas shall be the same as that required for an inpatient bedroom – that is 1200 mm wide and 2030 mm high, to ensure clearance for the movement of beds, trolleys and equipment and for ease of emergency egress. Similarly, it is recommended that door openings into fully assisted ensuites and any bathrooms with shower trolleys have a 1200 mm wide clear opening.
- G16.1.11 The finishes of walls, floors, ceilings and soft furnishings in the facility shall comply with Section B3 – Finishes, and shall be impervious and slip-resistant in wet areas and as deemed appropriate in the resident movement, living and relaxation areas (carpet or a residential patterned vinyl, for example). If carpet is used, consideration shall be given to the ease with which it can be cleaned (incontinent residents) and its ability to contain liquid spills (to prevent contamination of the sub floor). Note that floor finishes affect the acoustic performance of the building interior.
- G16.1.12 Acoustic issues need to be addressed throughout the design process to ensure that resident privacy and confidentiality are provided. Refer to section 8, particularly 8.2, of the *Western Australia Health Facility Guidelines for Engineering Services*.
- G16.1.13 Appropriate and comprehensive sign posting shall be provided to clearly identify staff, patient and visitor areas and to assist in wayfinding – refer to Section B13. External signage shall be discreet and all signage should not detract from home-like qualities of the nursing home.
- G16.1.14 A safe and secure environment shall be provided for residents and staff to comply with Section B14 and section 16 of the *Western Australia Health Facility Guidelines for Engineering Services*. A nursing home is a 24-hour operation with staff entering and leaving at all times, exposing a risk potential for unauthorised entry into the buildings. Attention should be given to home-like fencing, lighting (internal and external), locking systems, enclosed walkways, drug storage and security systems generally.

G16.2 Infection control

- G16.2.1 All areas of the facility shall be designed, constructed, furnished and equipped in keeping with the principles of infection control. Refer to Section G1.4.

G16.2.2 Hand-washing facilities shall be provided in all areas where hygiene is essential. There shall be access to hand washing in clean utility and dirty utility areas, kitchens, laundries, and at all patient and staff amenities areas such as toilets, showers and change rooms. Hand basins for staff use shall be equipped with lever-action taps to allow hands-free operation, soap dispensers and towel dispensers for hand drying.

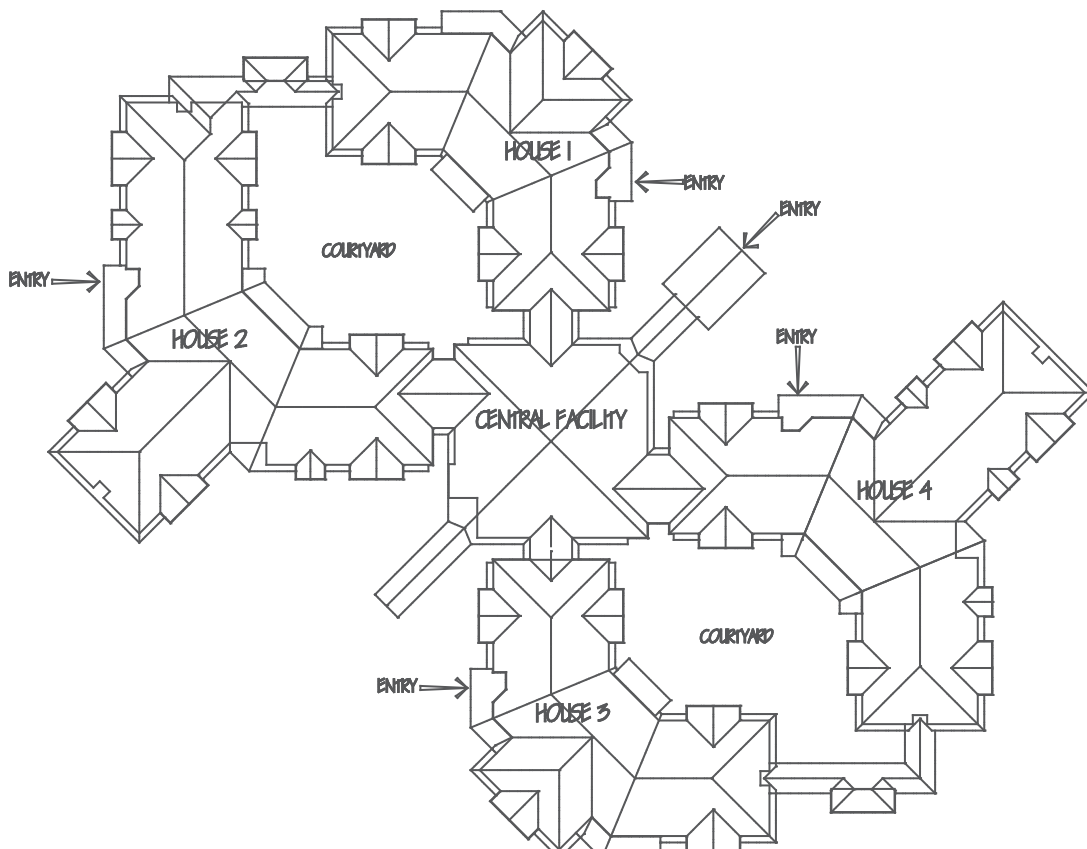
G16.2.3 Other facets of construction and fitout which contribute to effective infection control include ventilation, air-conditioning, soft furnishings, floor coverings, waste management, provision for ease of cleaning, provision for sterilisation and disinfection of equipment and instruments, and provision for the isolation of infectious residents as required.

G16.3 Functional requirements

These requirements depend on the specific functionality of the facility. The design of a new nursing home will have two distinct zones:

1. a home-like residential facilities/building
2. A non-residential central facilities building, that includes provision for administration and support services.

The configuration of the residential facility and the linkages to the central facility should give consideration to the particular resident requirements, number of residents to be accommodated, the operational philosophy, staffing and projected operational costings.

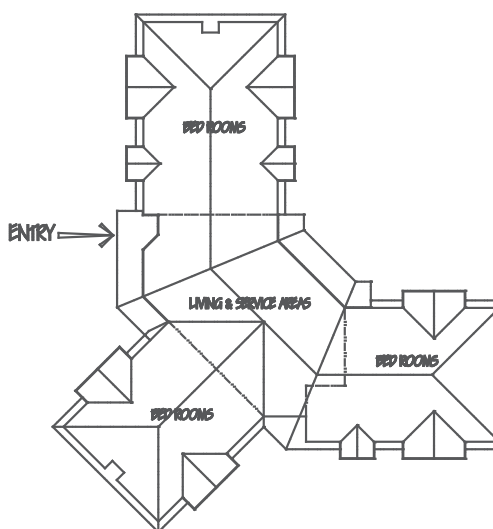


An example of a home-like nursing home

G16.4 A home-like residential facilities/building

G16.4.1 General principles

It is recommended that the individual residential facility accommodate a maximum of 15 residents. Consideration should be given to breaking the residential facility into two or three smaller modules (that is five to seven bedrooms per module with the living and service areas within the residence located at the centre of the modules).

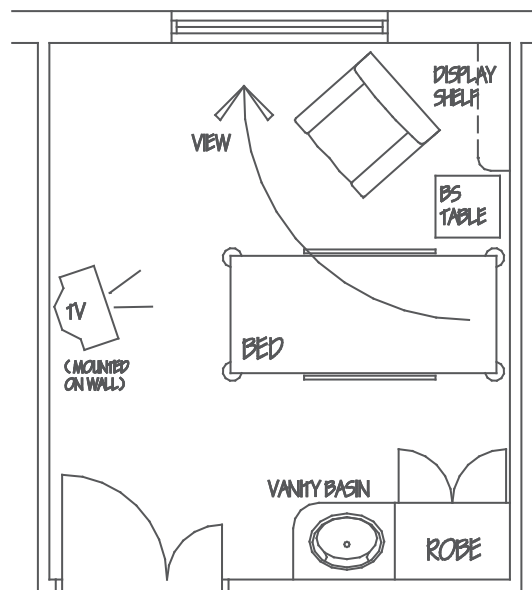


Arrangement of an individual residential facility

- G16.4.2 The links between the residential and the central facility should be secure and weather-proof. The links may include access to facilities that can be shared between residential facilities.
- G16.4.3 Each residential facility should be treated as a single 'house' form, and read as such from the street. It should have a separate entry, treated as a front door. Visitors should be encouraged to use the separate 'home' entry points rather than be channelled through a main reception point in the central facility. The multiple entry principle should not compromise the security of residents, or the safety of the 'wanderer'.
- G16.4.4 Consideration should also be given to a covered set-down area associated with the entry. A carport with undercover access to the entry would be appropriate.
- G16.4.5 It is desirable for each residential facility to have its own street frontage and letter box in addition to the mail box.

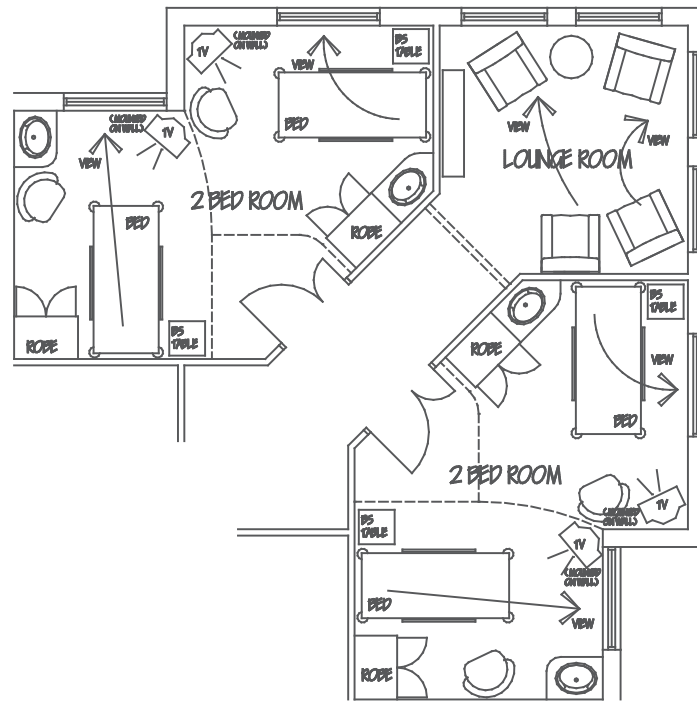
G16.5 Bedrooms

- G16.5.1 Bedrooms may accommodate one or two residents. Single bedrooms are preferred. At least 50 per cent of the residents shall be accommodated in single bedrooms.
- G16.5.2 The minimum size of a single bed resident room is 3600 x 3600 mm. This size may need to be increased dependent upon position of door(s) and window features, furniture layout, extent of additional furniture (china cabinets, TV), hoisting or lifting requirements. Bay windows are considered to be an advantage in that they provide additional useable floor space for sitting activities.



Example of single bed room

- G16.5.3 The minimum size of a two-bed resident room is 3600 x 5600 mm. Privacy measures in the form of bed screens shall be provided in two bed rooms. As for single bedrooms, the size may need to be increased dependent upon layout and fitout. In the case of the two-bed rooms detailed consideration should be given to the room arrangement to provide maximum possible privacy for each resident and their visitors. Access to the bedroom door, basin, private wardrobe and to ablutions shall be possible without having to transgress through the other resident's private space when the privacy curtain is drawn.



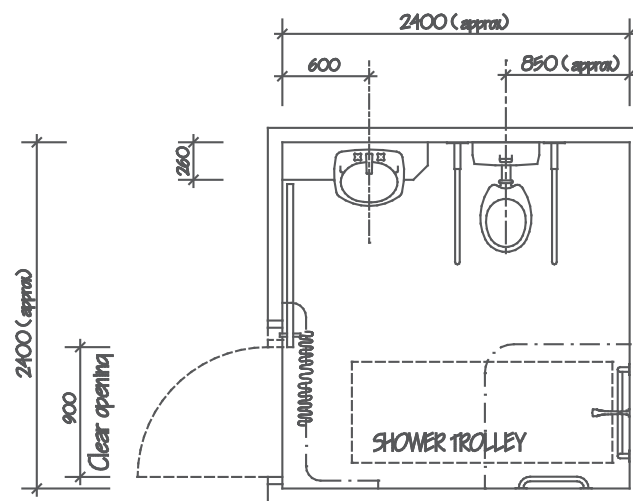
Example of two-bed room arrangement

G16.5.4 All bedrooms shall be sized to provide space for the bed, space for staff attendance and sitting space for personal and social activities. Residents and their relatives should be encouraged to personalise the resident bedrooms. Shelving for the display of personal items should be provided. Staff access into and within rooms, access to bathrooms from the bedrooms, access for equipment – such as wheelchairs, hoists, shower trolley and beds should be considered in the design and fitout of the bedroom.

G16.6 Showers, toilets, basins and baths

- G16.6.1 Minimum provision shall be one 'ensuite' (shower, toilet, and basin) for every four residents. A dedicated 'ensuite' for every bedroom with direct access from the bedroom is preferred. Ensuited shall be large enough to accommodate residents with impaired mobility and grab rails shall be provided.
- G16.6.2 A separate fully-assisted shower facility (with fully-assisted toilet and basin) shall be provided for each residential facility for the showering and toileting of highly dependent residents requiring substantial staff assistance. Where trolley showers are used, the fully assist ensuite shall be appropriately sized to allow storage of the trolley within the bathroom, without interfering with the operation of the room when not in use.
- G16.6.3 Accessible toilets and bathrooms for staff, visitors and residents for people with disabilities who don't require staff assistance as required by the NCC shall be provided. The argument that the disabled can use the fully assisted showers, toilets and bathrooms is not valid, because the detailing and positioning of accessible facilities allows user independence.

- G16.6.4 It is highly recommended that resident toilets, additional to the accessible bathrooms required in terms of the NCC, be fully assist wherever possible due to the increasing dependency levels of residents. Where this is not possible, partially assisted toilets, should be provided.
- G16.6.5 Showers in ensuites shall have grab rails and fittings detailed in accordance with AS1428.1, with the exception of the fold-up shower seat (a shower chair is normally used in nursing homes).
- G16.6.6 Where at least 50 per cent of the ensuites are designed to accommodate the access, and use of a shower trolley, a separate fully assisted shower may not be required, however a trolley storage bay should be provided in a central location in each residential facility.



Ensuite (fully assisted toilet and partially assisted shower)

- Placement of the 'ensuites' (shower, toilet, basin) shall take into account the need to limit to 15 metres the distance of travel from each bed to the nearest toilet.
- A separate communal-use fully-assisted toilet (with hand basin) shall be provided near the family/meals or dining area.
- A toilet suitable for use by staff and visitors shall be provided within each residential facility. This can also be used by residents.
- Toilet selection and installation throughout should have a design focus consistent with the requirements of AS 1428.1. This requires that the distance from the front of the cistern to the front of the pan shall be approximately 600 mm and the top of seat approximately 460 mm above the finished floor level.
- Toilet seats for all residents' toilets should be fixed securely, and load rated to 150 kg with lateral stability and fixings to comply with AS 1371. Accessible toilets shall comply with AS1428.1.
- Fully assisted toilets should have swing up grip bars which shall be provided to both sides of the toilet suite. 850 mm (minimum 835 mm) from the centre line of the pan to a wall or obstruction is required to allow sufficient room for staff assistance.

- The retention of privacy and dignity is the most important aspect in the design of showering, toileting and bathing facilities in a nursing home. The location of these facilities within the residential facility should promote privacy. The interior fitout should be as domestic as possible and encourage residents to achieve their maximum level of independence.
- In addition to the facilities described below, provision for individual storage of personal toiletries in the 'ensuite' should be considered. Multi-compartment bathroom cabinets are considered appropriate for shared 'ensuites'. Coat hooks should also be considered.
- Where 'ensuites' are shared and open into common space, privacy curtains shall be fitted inside the doorway with a 'step-in' area to enable staff to enter and leave without compromising resident dignity. In this instance curtains would not necessarily have to be provided around the shower recess.
- Acoustic privacy is also very important in shared bathrooms/ensuites. Solid core doors with acoustic seals shall be used and door grilles are not permitted.

G16.7 Living areas

- G16.7.1 A home-like lounge room shall be provided for each residential facility. The lounge shall be sized to provide comfortable seating and circulation space for the total number of residents and visitors expected to use it at any one time. The minimum lounge floor area shall be no less than 16 m².
- G16.7.2 A home-like family/meals room shall be provided for each residential facility. It shall be sized to provide space for normal residential type day activities (such as meals, morning/afternoon tea, cooking, craft and games). Adequate associated space, appropriately screened, for the parking of wheelchairs during meal activities, shall also be provided.
- The following areas shall be provided for family/dining areas:
- Family: 2.8 m² per resident (minimum of 20 m² total)
 - Dining: 1.5 m² per resident (minimum of 16 m² total).
- G16.7.3 A separate home-like formal dining room for use by residents and visitors (particularly for special occasions) is considered highly desirable but is not mandatory. It could also be used as a distressed relative retreat if a study is not provided.
- G16.7.4 A kitchen, pantry or tea preparation area shall be provided for each residential facility, depending on the facility type and food service policy.
- G16.7.5 Whether the function of the kitchen is preparing, reconstituting or serving, it should be the 'heart' of the house. The sensory stimulation of meal preparation and serving has the potential to be therapeutic. The location of the kitchen can also provide for observation of outdoor and communal indoor areas by staff.

- G16.7.6 The kitchen shall be capable of preparing or reconstituting main meals for the maximum number of occupants of the residential facility. The kitchen should include pantry provision, serving and clean-up facilities, and should have adequate refrigeration and dry-goods storage within each house. Main meals may be prepared from a central kitchen, but plating and serving should occur in the kitchen area to enable individual selection.
- G16.7.7 A tea preparation area for use by residents and visitors shall be provided and this can be part of the kitchen or separate. It should also be designed for partial access by the disabled, at least for morning and afternoon tea preparation.
- G16.7.8 The kitchen/pantry or tea preparation area should have direct access to the dining area.
- G16.7.9 Consideration should be given to the provision of alternative sitting areas such as a corridor nook with views to the outside.
- G16.7.10 The nursing home shall provide access to useable external spaces, incorporating disabled access. The external spaces should include pathways, fixed and moveable seating in sheltered and exposed locations, barbecues, pergolas, and hard and soft landscaping providing as home-like an environment as possible.

G16.8 Resident treatment zone

G16.8.1 Medication store/preparation

- Where the residential facilities are not directly connected, a small room or lockable and secure cupboard for the storage and/or preparation of medications, dressings and surgical supplies is required in each residential facility. Consideration must be given to central storage of medications and drugs and the supply and method of dispensing/delivery to residents in the residential unit. A policy shall be provided.
- All drugs shall be stored in accordance with the *Poisons Act 2014*.
- Where the residential facilities are securely connected a single centrally located room within the central facility is adequate. This room should be associated with the central staff duty base.

G16.8.2 Staff duty base

- The staff duty base within each residential facility should be in accordance with the development of a 'home-like' environment. The 'nurses station' principle is considered inappropriate. A staff duty base within each residential facility might be accommodated within a small staff study or with a lockable workstation/desk in a quiet communal area.

G16.8.3 Dirty utility

A dirty utility room shall be provided for each residential facility. The room should accommodate the following functions:

- bench-level activities
- liquid waste disposal (slop hopper)
- receptacle sanitising (pan flusher sanitiser)
- storage of sanitised receptacles
- preparing pans, bottles and bowls for distribution to patients
- washing and drying of equipment, trays and trolleys
- setting up of specimens, such as urine, for examination, testing and/or laboratory investigation
- holding of soiled linen
- waste disposal (clinical and general including sharps)
- hand washing.

Movement of staff and equipment in the room shall show clear lines of delineation between clean and dirty areas.

Policy for pickup and disposal of dirty linen, medical and general waste shall be provided.

G16.8.4 Dirty linen

- A storage area for dirty linen shall be provided within each residential facility. This may be provided in a dirty utility room with additional parking space for dirty linen trolleys. Alternatively, a separate mechanically ventilated cupboard or storeroom shall be provided for the holding of dirty linen, prior to transfer to the laundry or a central holding area.
- Convenient pickup of the dirty linen for transfer to an off-site laundry, central holding area or on-site laundry should influence the final location of the dirty linen store. The location should, for example, prevent bags or trolleys of dirty linen having to pass through residential areas.

G16.8.5 Laundry

- A small laundry for the washing of personal items should be included as a separate room within each residential facility. The laundry should provide space for a washing machine and clothes dryer and contain a trough, bench and space for an ironing board. External drying areas shall also be provided.

G16.8.6 Storage

- Clean linen store shall be provided in each residential facility. The clean linen store can be either a store room or a storage cupboard.
- Equipment store shall be provided for the storage of items of equipment such as shower trolleys, hoists, walking frames and wheelchairs. For some equipment, suitable out-of-the-way parking areas within bathrooms is preferable, however other items require dedicated spaces.
- General consumables store – in a cupboard or a dedicated store room.

G16.8.7 Cleaners' store/room

A room or rooms shall be provided for the:

- storage of cleaning agents and materials
- storage of cleaning equipment and trolley
- liquid waste disposal (cleaners' sink)
- washing of mops, buckets
- decanting of detergents
- storage of mops, brooms
- staff handwashing.

Depending on planning, size of facilities, these may be shared between residential facilities.

G16.9 Plant and equipment spaces

Provision shall be made for rooms or cupboards for the accommodation of plant and equipment. This includes spaces for concealed fire hose reels, electrical and tele-communications equipment, mechanical plant and plumbing services.

G16.10 Non-residential central facility building, including provision for administration and support services

In line with the philosophy of creating a more home-like environment, services such as administration, therapy rooms, main meeting room, the central kitchen and/or laundry areas shall be separated from residential facilities.

G16.10.1 Administration

- A separate administration area should be provided in the nursing home. The administration area may include reception, waiting area, Director of Nursing's office, staff office and staff facilities.
- There shall be a policy in place for the storage of medical records. If paper copies are kept, they shall be stored in a secure and fire-proof cabinet/room. (Section G6.2 and section 12 of the *Western Australia Health Facility Guidelines for Engineering Services*.)

G16.10.2 Staff facilities

- Staff amenities shall be provided in accordance with the *Occupational Health & Safety Act*, Regulations and Worksafe WA Codes of practice.
- A staff room with pantry facilities shall be provided where staff can relax safely and take beverages and snacks.
- If staff are required to change, an accessible staff change/locker room shall be provided where staff can change into a uniform if required and store outdoor clothing and other personal items safely. Depending on staff numbers, this change room may be unisex.
- Sanitary facilities including WCs with hand basin(s) shall be provided and should be located adjacent to the staff change/locker room.
- A staff use shower/end of Trip facilities should also be considered.

G16.10.3 Amenities/function room(s)

- A room in the central building for functions should be provided. This room should be multifunctional and capable of being used for meetings, group fitness, entertainment or events that involve staff and/or residents.

G16.10.4 Central staff duty base and medications store/clean utility

- A central staff duty room, to discuss residents, handover, store manuals, make private calls and store reference materials and manuals shall be provided in the central building.
- A central secure storage area for medications, drugs and medical consumables prior to dispensing or decanting to residential units shall be co-located with the central staff duty station. All drugs shall be stored and dispensed in accordance with the *Poisons Act 2014*.

G16.10.5 Consult/Examination

- A consult/examination room may be considered in the central facility for use by visiting doctors/specialists. The room can be used for patient interviews, assessments and examinations. A minimum floor area of 12 m² shall be provided. There shall be a clinical hand basin close to the examination couch. Privacy screens/curtains shall be provided for patient privacy during examination or when changing. Consult/examination room – Appendix 5.

G16.10.6 Therapies

- Depending on the Statement of Function and services provided, therapies provided in the nursing home may include physiotherapy, occupational, diversional and speech therapy.
- Occupational and diversional therapies are functions that can be carried out within each residential facility if the appropriate areas and storage facilities are provided. Physiotherapy and speech therapy require specialised rooms.

G16.10.7 Podiatry

- A separate room for use by a podiatrist may be included in the central facility. Provision shall be made for nurse call within the room in addition to a basin. Other specific requirements such as an adjustable chair and work bench should be discussed with management and/or the podiatrist.

G16.10.8 Hairdressing

- If hairdressing is included, it should be carried out in a separate, mechanically ventilated, room, all in accordance with the “Public Health Guideline for the hairdressing and barber industry,” 2016. Hairdressing may be carried out in the resident’s bedroom, where direct access to an ensuite is possible.

G16.10.9 Quiet room

- A quiet room that may also be used for distressed relatives’ overnight accommodation is considered highly desirable, but is not mandatory. Relatives overnight accommodation might consist of a couch/bed in the quiet room.

G16.10.10 Central laundry

- A linen policy shall be provided. Laundering may be contracted out or conducted on-site. All processing of linen, whether contracted out or done on-site, shall comply with AS 4146.
- If linen is outsourced, a designated holding/ pickup/ delivery area attached to the central administration facility, shall be provided.
- The central dirty linen depot for storage of dirty linen prior to collection is required. This is in addition to dirty linen stores in each residential facility. The room shall be mechanically ventilated.
- If a facility for on-site laundering of linen is to be provided, then it shall be visually and acoustically isolated from the residential cluster modules (that is, not directly attached). Attachment to a central administration facility is acceptable.

G16.10.11 Central production kitchen

A central production kitchen or localised reconstitution kitchen (as deemed appropriate) shall be designed and operated in accordance with the requirements of the:

- *Food Act Western Australia – 2008*
- Food Regulations – Western Australia – 2009
- Australia New Zealand Food Standards Code; Food safety standards Chapter 3.2.3 Food Premises and Equipment
- relevant WorkSafe WA requirements.

The design of the central kitchen and associated storage areas should be considered carefully to ensure a high-quality food service

Where the central production kitchen utilises gas appliances, an emergency gas isolation valve shall be installed in a location that can be accessed easily during an emergency.

Where central kitchens provide meals to other facilities, the Australia New Zealand Food Standards Code shall be observed.

G16.10.12 Cleaners' room

- A dedicated cleaners' area shall be provided with sufficient space for the storage of cleaning equipment, cleaning agents and materials, and a cleaners' trolley shall be positioned next to the central production kitchen where it can be used to service the central facilities' building.
- A method for the disposal of fluids and used cleaning materials shall be available.
- Hand-washing facility shall be available.

G16.10.13 Storage

- Adequate, accessible and secure storage areas shall be provided for the storage of supplies – medical and general consumables. medical equipment, linen, chemicals, maintenance and garden equipment. Some will be stored in the residential facility and in some cases a central store room prior to distribution, may be required.
- Storage facilities provided shall be appropriate for items to be stored.
- All items shall be stored off the floor and items shall be stored like for like and in accordance with OHS regulations and codes of practice.

G16.10.14 Service delivery point

- A service delivery point shall be included for delivery to service areas such as the kitchen, laundry and storage areas.
- An area with discrete access to the facility for the delivery, receipt, checking, deboxing and decanting of medical supplies, equipment and general consumables.
- The fit out of this area may vary depending on the function of the facility.

G16.10.15 Waste bin storage area

- Secure external waste bin storage area shall be provided. The arrangements for washing bins shall be detailed in an operational policy.
- Clinical/medical waste shall be kept in a separate secured area.

G16.10.16 Emergency/ambulance access

- There shall be access for emergency vehicles to the nursing home and a discrete parking bay for an ambulance. Depending on the size of the facility, this may double as a loading or short-term drop-off bay.
- The arrangements for ambulance access shall be detailed in an operational policy.

G16.10.17 Parking provision

- Car parking should be located discretely and not dominate views. Sufficient parking bays needs to be provided to satisfy applicable local authority requirements and the needs of staff and visitors. Parking should be dispersed around the site and associated with the entries to residential facilities. Transport arrangements for off-site travel should be considered. A covered drop-off point, such as a carport, near the front door should be considered.
- The location of internal roadways should be considered carefully in relation to bedrooms – taking account of the need to respect residents' acoustic and visual privacy.

For all engineering requirements, refer to the *Western Australia Health Facility Guidelines for Engineering Services*.

Appendix 1

Approval to occupy inspection

1. General

The Approval to Occupy Inspection, as carried out by the Licensing and Accreditation Regulatory Unit (LARU) of the Department of Health, is a random audit of the facility/area. It is the Licence Holder's and/or their representative's responsibility to do due diligence to ensure that the facility/area is fit for intended function/use and complies with the Western Australia Health Facility Guidelines for Architectural and Engineering, Building Code of Australia NCC and all relevant Australian Standards.

1A. Glossary of terms

Architect – an individual registered architect or licensed architectural corporation currently registered with the Architects Board of Western Australia.

Building Surveyor – a surveyor who is registered as a surveyor contractor under the *Building Services Registration Act 2011*.

Certification – certification of the design and installation by the engineer and certification of the installation by the installation contractor or specialist sub-contractor.

Date of Occupation – the date, nominated by the licence holder, on which the facility/area is fully commissioned (both building commissioning and clinical commissioning) and from which the service will commence.

DOH – Department of Health.

Engineer – an engineer as defined by the *Western Australia Health Facility Guidelines for Engineering Services*.

Hydraulic designer – a designer with relevant Association of Hydraulic Services Consultants Australia (AHSCA) membership.

LARU – Licensing and Accreditation Regulatory Unit of the Department of Health.

Practical completion – the stage at which all works are complete, except for defects or omissions that do not prevent the building from being used for its intended purpose. The building is handed over to the owner at practical completion.

Shall is used to preface requirements that are mandatory.

Submitted design(s) – plans and specifications submitted to LARU at Approval to Construct and modified to incorporate all agreed Approval to Construct mandatory items. Submitted design(s) shall include any approved variations submitted after approval was granted.

The following issues shall be addressed prior to the Health Department of Western Australia Approval to Occupy inspection.

- 1.1 An Approval to Occupy inspection will not be conducted by LARU until all components of the works have been certified as having reached “Practical Completion” and the facility/area is completed in accordance with documentation and plans approved by LARU at the Approval in Principle and Approval to Construct stages.

The certifications must be completed by the architect and all engineering consultants and contractors, and full services commissioning and certification data, as specified herein, shall be available on site on the day of inspection and retained on site whilst the facility is licensed.
- 1.2 The facility/area shall be fully commissioned and compliant with all relevant standards for patient, staff or intended function prior to the Approval to Occupy inspection.
- 1.3 Clinical commissioning – includes all furniture and equipment in situ:
 - 1.3.1 Consumables (medical and non-medical)
 - 1.3.2 Cleaning and environmental testing of sterile critical areas
 - 1.3.3 Staff training in emergency responses and use of medical equipment to be completed.
- 1.4 The ‘Declaration for Approval to Occupy Inspection’ form shall be completed and returned to LARU two weeks prior to the Approval to Occupy inspection.

2. Practical completion

- 2.1 The works shall have reached “Practical Completion”, and shall have been certified as such by the architect and engineering consultants.

Note: The ‘Practical Completion’ date is not the same as the ‘Date of Occupation’.
- 2.2 The architects and engineers certification of practical completion and the registered building surveyors certification of construction compliance (BA17) or the certificate of building compliance (BA18) as required by the as *West Australian Building Act 2011* shall be submitted and made available at the Approval to Occupy inspection.
- 2.3 The certifying statement(s) shall confirm that the design and completed works have been completed and that they comply (in the professional opinion of the certifier) with the statutory requirements of the various Government controlling agencies, with the *Department of Health Western Australia Health Facility Guidelines*, current NCC and relevant Australian Standards, any relevant fire engineering report, and with any mandatory items identified with the issue of the Approval in Principle and Approval to Construct.

- 2.4 A list of defects, omissions and outstanding items shall be available at then Approval To Occupy (ATO) inspection and these items shall be made evident during the inspection.

3. Clinical commissioning

The facility/area shall have been clinically commissioned and made ready for patient, staff or intended function prior to the Approval to Occupy inspection.

- 3.1 All medical consumables, equipment and furniture shall have been installed.
- 3.2 A hospital clean shall have been carried out for the area(s) to be inspected.
- 3.3 Staff fire evacuation and emergency training shall have been completed.
- 3.4 All operational and clinical policies and rosters for the facility/area shall have been completed and be available at the time of the inspection.
- 3.5 Cleaning and environmental testing of operating suites, operating rooms procedure rooms, CSD and other similar areas shall be completed and the results at the time of the inspection.
- 3.6 Staff orientation and equipment training to the facility/area shall be completed.
- 3.7 All builders' materials, hoardings, security fencing and site facilities shall be removed from the site prior to clinical commissioning.
- Prior to the Approval to Occupy inspection being conducted for operating and procedure rooms, the licence holder shall submit:
- 3.8 A statement of the procedures to be performed in each operating and procedure room.
- 3.9 Documentation that specifies the operational procedures for the cleaning and environmental testing of each operating and procedure room.
- In addition to the above, the following shall be made available at the Approval to Occupy inspection:
- 3.10 The Statement of Function for the facility/area to be inspected.
- 3.11 Any infection-control audits or reports that have been carried out for the facility/area.
- 3.12 Any occupational health and safety audits or reports that have been carried out for the facility/area.

4. Structural and civil certification

A statement by the design structural engineer who certifies that the building has been built in compliance with section 18 of the *Western Australia Health Facility Guidelines for Engineering Services*. The civil engineer shall similarly submit a statement that the building complies with Section 10. Similar certifications shall also be provided by independent Structural and Civil reviewers of the submitted design(s).

5. System testing

All building systems (such as fire, mechanical, electrical and hydraulic) shall have been fully tested and be working as designed/documentated (as approved by the DOH).

6. Engineering design certification

Refer – Consultant’s Certification Template (Attachment A).

Certified statements which confirm that the designed, documented and witnessed mechanical, electrical and hydraulic engineering systems comply (in the professional opinion of the Certifier) with the statutory requirements of the various Government controlling agencies (including the DOH) shall be provided to the DOH.

The statement shall be prepared by professional mechanical and electrical engineers and hydraulic designers. The professional mechanical or electrical engineer or hydraulic designer shall certify the design and that all commissioning and test data complies with the DOH *Western Australia Health Facility Guidelines for Engineering Services*, relevant Australian standards, relevant Fire Engineering Report(s) and the mandatory items that were established or implied with the issuing of the Approval in Principle, Approval to Construct, the DOH Guidelines and all other statutory requirements.

7. Engineering installation certification

Refer to the Installer’s Certification Template as per clause 35.

The installing contractors or specialist subcontractors for the mechanical, medical gas, electrical and hydraulic services, shall certify that the installation and construction complies with DOH *Western Australia Health Facility Guidelines for Engineering Services*, relevant Australian Standards, relevant Fire Engineering Report(s), and mandatory items that were established or implied with the issuing of the Approval to Construct. Certification of compliance with the other controlling statutory authorities, such as Water Corporation or Worksafe WA, shall also be provided.

Engineering scope

The scope of engineering services mentioned in clauses 5, 6 and 7 above include, but are not limited.

7.1 Mechanical systems:

- 7.1.1 Air conditioning
- 7.1.2 Heating
- 7.1.3 Ventilation
- 7.1.4 Exhaust
- 7.1.5 Special exhaust
- 7.1.6 Chilled and heating hot water
- 7.1.7 Medical gases and medical vacuum (including alarm systems)
- 7.1.8 Air filtration
- 7.1.9 Air pressure differentials
- 7.1.10 Sterilisers (typically steam)
- 7.1.11 Steam generators (or similar systems)
- 7.1.12 Mechanical switchboards and controls.

Note that where evaporative coolers are used, a statement is required certifying that a system for sanitation for Legionella control has been tested and is operational. The procedure shall be described in the Maintenance Manual (refer Clause 25).

Commissioning of medical gases and suction services shall be in strict accordance with the procedure outlined in AS 2896. This testing shall be witnessed and certified by the mechanical engineer and witnessed by a senior hospital representative.

7.2 Electrical and communication systems:

- 7.2.1 High-voltage installation
- 7.2.2 Vital power supplies
- 7.2.3 Earthing
- 7.2.4 Switchboards
- 7.2.5 Discrimination and cascading
- 7.2.6 Sub-mains and sub-circuit cabling
- 7.2.7 Internal and external lighting
- 7.2.8 Lighting for clinical observation
- 7.2.9 Emergency evacuation lighting
- 7.2.10 RCD protection
- 7.2.11 Body and cardiac protection
- 7.2.12 Lightning protection systems

- 7.2.13 Structured cabling installation
- 7.2.14 Messaging Systems
- 7.2.15 Assistance call systems
- 7.2.16 Fire detection and alarm systems.

7.3 Hydraulic systems:

- 7.3.1 Fire hydrants, hose reels and sprinklers systems
- 7.3.2 Potable and non-potable cold and hot water reticulation systems
- 7.3.3 Backflow prevention systems
- 7.3.4 Water softening and reverse osmosis water systems
- 7.3.5 Natural or LP gas systems
- 7.3.6 Sanitary fixtures and tapware
- 7.3.7 Hospital appliances such as flushing rim sinks, washer/ disinfectant and macerator
- 7.3.8 Siphonic or gravity storm water systems
- 7.3.9 Gravity or pump sewer systems
- 7.3.10 Industrial waste and drainage systems.

8. Mechanical ventilation and air conditioning systems

Specific written data shall be provided in tabulated form confirming commissioning figures for toilet and general exhaust, ventilation rates (supply and return air), supply air and outside air quantities. The following presentation style is required.

Measurement Location	Code Req't	Design	Actual	% of Design
Shared resident toilet and shower	10/Ls.m ²	45 L/s	47 L/s	104

Calibration data and the method of determination shall also be provided to enable assessment of the appropriateness of measurement.

Cold DOP testing of absolute (HEPA) filters shall be conducted in accordance with AS 1132.9. HEPA filters shall also be certified in accordance with AS1807.6 or AS 1807.7 as appropriate, after initial installation.

Air flow patterns within, to and from operating, set-up, cytotoxic and isolation rooms and other critical infection-control areas served by absolute filters, shall be verified by air-flow tests. Air-flow diagrams, showing the direction of flow to and from these areas, shall be provided.

9. Medical gas services

The specialist medical gases installation contractor shall certify in writing that they are experienced and competent installers as required by AS2896 “Medical Gas Systems Installation and Testing of Non Flammable Medical Gas Pipeline Systems” and the *Western Australia Health Facility Guidelines for Engineering Services*. Commissioning of gas and suction services shall be in strict accordance with the procedures outlined in the Australian Standard AS2896. Tests shall be witnessed by the mechanical engineer and a senior medical representative of the hospital. Flow test results of oxygen nitrous oxide, medical air and vacuum services shall be provided. Cross connection and purity tests shall be provided for each outlet. All test results shall be submitted in AS2896 format. Procedures for regular reliable ongoing replenishment and service of all systems and equipment shall be verified as appropriate.

10. Electrical systems

Specific written test data shall be provided for the electrical installation including the following:

- 10.1 routine testing to AS 3194 of all switchboards.
- 10.2 compliance with AS 3000 (such as earthing and RCD) and functional operation of the system.
- 10.3 where the electrical system incorporates a customer-owned HV supply, all testing and commissioning data shall be provided to the Australian Standards, statutory authority’s requirements and any other regulatory requirements for the HV system shall be provided.

The Operation and Maintenance manuals shall include (as a minimum) the following:

- 10.4 certifications of compliance to AS/NZS 3000 and all other mandatory standards.
- 10.5 all electrical test results required for compliance with AS/NZS 3000.
- 10.6 supply authority tickets.
- 10.7 a copy of all circuit schedules.
- 10.8 shop drawings for all switchboards, generators, transfer switches and the like.
- 10.9 a copy of all single-line diagrams (revved up to As-Constructed).
- 10.10 a copy of all electrical drawings (revved up to As-Constructed).

11. Emergency lighting systems

Emergency lighting systems shall be tested in accordance with AS 2293 and full test results in 'log book' format shall be provided.

Certifications shall be provided of compliance with AS/NZS 2293 and the Building Code of Australia.

12. Vital power supplies

Full commissioning data shall be provided for emergency diesel, UPS and any other vital power supplies. Full discharge test results shall be provided for all battery systems.

Certification shall be provided showing that the entire installation complies with AS 3009.

13. Electromedical areas

All electromedical areas shall be tested by an approved testing and commissioning company qualified to undertake testing to AS 3003.

Full test results to AS 3003 shall be provided including a complete and certified checklist.

Certifications shall be provided that the whole of the installation complies with AS 3003.

14. Assistance call systems

Functional test results shall be provided for the patient and emergency assistance call system.

A checklist for each point shall be provided indicating the operating status at the time of testing.

15. Fire-detection and alarm systems

Fire-detection and alarm systems shall be tested in accordance with the Australian Standards and statutory requirements, and any Fire Engineering Reports (if applicable). Full test results shall be provided.

Certification shall be provided showing that the entire installation complies with AS 1670.

16. Domestic hot water system and temperature

Hot water installation systems shall be tested in accordance with the Australian Standards and statutory requirements. Full pressure test results shall be provided.

Specific written data shall be provided in tabulated form confirming commissioning figures for all tempered water outlets and hot water heater to confirm commissioned exact water temperatures. The following presentation style is required.

Measurement Location	Design	Actual
eg: Level 1: Hand basin in room 1.02	45 °C	44.6 °C

A confirmation test certificate shall be provided, which includes laboratory test results, as proof that the hot water system is free of Legionella and within the limitations of the Australian Drinking water guideline. The procedure shall be described in the Maintenance Manual (refer Clause 25).

The testing requirements and sanitation procedures shall be covered in the maintenance manuals.

17. Cold water system

Cold water installation systems shall be tested in accordance with the Australian Standards and statutory requirements. Full pressure test results shall be provided.

A confirmation test certificate shall be provided, which includes laboratory test results, as proof that the cold water system is free of Legionella and within the limitations of the Australian Drinking water guideline. The procedure shall be described in the Maintenance Manual (refer Clause 25).

18. RO water systems

SAT shall be carried out and commissioning data shall be supplied to confirm that the system is fully operational and that the provided RO water quality complies with AS 4187.

19. All other hydraulic systems (including wet fire services)

All systems shall be tested in accordance with the relevant Australian Standards and statutory requirements. Full test results shall be provided.

20. Environmental tests

The cleanliness of operating suites, including operating rooms, set-up rooms, sterile stores, angiography and cardiac catheterisation rooms, any other room(s) in which such sterile procedures will be completed, and central sterile department/units (CSD) shall be verified by air-flow checks and bacterial sampling conducted by an appropriately NATA-certified professional. Before testing, the following are required:

- 20.1 completion of all building and engineering works.
- 20.2 ducting cleaned, absolute filters installed, cold dispersed oil particulate (DOP) tests satisfactorily completed and air-flows verified.
- 20.3 operating room/s thoroughly cleaned.
- 20.4 plant running under normal operating conditions for 24 hours.
- 20.5 no activity in the operating room/s/unit.

- 20.6 The room(s) shall be tested by:
- 20.6.1 noting the direction of air movement using a smoke test.
 - 20.6.2 performing counts of bacterial colony forming units in both the air and on surfaces.

This is to be repeated once to confirm that duplication of results is possible.

If the rooms fail the tests, the engineer (mechanical) shall be consulted to confirm air velocities and filter integrity. The tests shall be repeated once the criteria are met.

21. Steriliser tests

The results of commissioning and appropriate testing data shall be provided in accordance with AS/NZS 4187 Reprocessing of Reusable medical devices in health service organisations. These include the:

- validation program, which is performed to evaluate the reliability of a sterilisation process. Validation will demonstrate that a given sterilisation cycle in an identified steriliser will render a specified load sterile.
- Verification of satisfactory cycle checks tests and daily leak rate tests.
- Bowie-Dick type test (conforms to BS7720) where applicable.
- Access to suppliers tests.
- Calibration of gauges.

22. Washer/disinfector tests

Washer/disinfector machines, including pan washers, instrument washers and anaesthetic tubing washers shall pass appropriate cycle and challenge tests. These will be for mechanical action and disinfecting activity where applicable, artificial soil tests and thermocouple tests post installation where indicated. Foil and graphite tests for ultrasonic cleaners. The results of the validation tests shall be provided.

23. Anaesthetic equipment tests

Certification is required from a specialist anaesthetist that the facilities and equipment are in accordance with the Guidelines for Safe Anaesthetic Practice issued by the Faculty of Anaesthetists, Royal Australasian College of Surgeons, in particular:

- T1. – Recommended Minimum Facilities in Safe Anaesthetic Practice in Operating Suites.
- P4. – Guidelines for the Care of Patients Recovering From Anesthesia in the Recovery Room.

24. Fire safety

In addition to the fire alarm and detection system, emergency and exit lighting, and the firefighting (hydraulic) services mentioned earlier, certification of the following (where appropriate) shall be provided:

- integrity and completeness of fire and smoke barriers. This might/should include full compartment/isolated space separation as required, with penetrations fully sealed using a material capable of maintaining the fire/smoke resistance of the barrier, or protected by an approved device designed for the purpose. Fire and smoke barriers must extend from true floor to the underside of the roof/slab over, and a fire wall must be able to maintain its structural integrity in the event of a wall and roof collapse on one side. Appropriate fire-resistant packing between the top of a fire wall and roof cladding must be installed in a way that provides a continuous seal.
- fire dampers (in mechanical ductwork) tested and operational
- door closers (hydraulic or electromagnetic) on all fire and smoke doors being fully operational and closing speed adjusted for safe operation
- door sequence closing devices operational (where double fire/smoke doors are fitted)
- fire door certification plates fitted to all fire doors and frames which comply with AS 1905.1
- appropriate and permanent smoke seals fitted to all smoke doors
- appropriate fire extinguishers and fire blankets installed
- appropriate signposting installed in accordance with the relevant codes
- special fire suppression systems tested and operational
- use of fire resistance rated plasterboard to a tested system (such as Fyrchek or Boral) for the construction of fire barriers
- appropriate and unobstructed means of egress
- the installed floor coverings, window treatments and bed screen curtains in compliance with section C1.10 (specification), fire hazard indices, of the Building Code of Australia.
- the installation, completeness and operation of the early-warning fire system and its integration with all other associated systems.

25. Fire brigade facilities

Confirmation of the successful outcome of the following fire systems tests shall be forwarded to the DOH:

- 25.1 Testing of heating, ventilation and air conditioning (HVAC) systems in relation to smoke control to ensure compliance with section E2 of the BCA. These tests will involve the use of artificial smoke to assess the movement of smoke and gases produced by a fire, to the greatest extent possible, particularly as to:
- means of egress
 - exit passageways or other similar areas
 - operating suite
 - nurseries and birthing suites
 - time taken to activate alarms, fire and smoke doors to close, and for smoke evacuation.
- 25.2 Testing of hydrant flow and pressure in accordance with AS 2419.1 Section 7. Test results shall be provided.
- 25.3 Testing of hydrant hose reel flow and pressure in accordance with AS 2441.
- 25.4 Provision of appropriate access routes and hardstanding for fire trucks. Earlier discussions and agreement with the fire brigade as a requirement at the design stage is assumed.

Where a Direct Brigade Alarm (DBA) connection is required, the connection shall be approved by the fire brigade and operational at the time of the ATO.

Where a DBA connection is not implemented at the time of the ATO, details shall be provided of the measures or works required that will be implemented to address this issue. These required measures or works shall be implemented prior to ATO.

26. Security

A certified statement shall be provided that confirms the successful results of testing of any special electronic security systems, where provided.

27. Furniture and equipment

All furniture and equipment shall be installed prior to the Approval to Occupy inspection so that an evaluation can take place during the Approval to Occupy inspection. Where this is not possible, a written description of the type and quantity of loose furniture and equipment that is to be installed, shall be provided. This shall include its size, spatial requirements and intended location.

28. Other certification issues

Certification of successful testing of any other items or systems that have been installed **and** which have not had DOH approval, along with a description of the system, what is replaced, and why, shall be provided.

29. 'As constructed' drawings

A full set of 'as constructed' drawings (architectural, structural, interior design, landscaping and services) shall be available for perusal as required during the Approval to Occupy inspection.

All documentation that is required shall be labelled, sorted and placed into appropriate sections in folders to allow LARU consultants to access relevant information.

All of the above documentation shall be kept at the facility for future reference.

If there have been any changes to documentation after the Approval To Construct (ATO) approved set, a separate set of drawings that have changes clearly highlighted in colour shall be available on the day of the inspection. These changes shall be made evident to the LARU inspection team at the start of the inspection.

Six A3 floor plans (needn't be to scale) highlighting the areas to be inspected and with all rooms correctly labelled in accordance with installed signposting, shall be available for LARU use during the inspection.

30. BCA compliance report and fire engineering report

The final BCA Compliance Report and final Fire Engineering Report shall be available for perusal as required during the Approval to Occupy inspection. These documents shall also be kept on site at all times.

31. Consultant availability

The project architect, engineering design consultants, specialist sub-consultants, and/or appropriately skilled contract personnel, shall be available during the Approval to Occupy inspection to answer technical questions and assist DOH officers in the systems checking process.

If there have been any changes to the professional consultants that were listed in the contact list at the time of the AIP submission (AIP 2), LARU shall be notified in writing of this change together with a brief reason for the change prior to the ATO inspection.

32. Hospital personnel availability

The hospital/facility/area personnel who have been involved in the design, planning and commissioning of the hospital/facility/area and the senior staff who will be responsible for the day-to-day management/running of the hospital/facility/ area shall be available during the Approval to Occupy inspection to answer technical questions and assist DOH officers in the systems checking process.

33. Maintenance manual

Proof shall be provided that a manual exists which instructs the building proprietor on the maintenance requirements of the engineering systems and all equipment (including air conditioning plant, autoclaves, sterilisers and washer disinfectors, catering equipment and other plant). Availability of equipment manuals for operators and maintenance staff shall be confirmed.

34. Typical consultant's certification letter

Typical consultant's certification letter – template

Add other Services where relevant

**Re: Anywhere Private Hospital Electrical/mechanical/medical gases/
hydraulic services**

We advise that the electrical/mechanical/hydraulic services, documented for the *Anywhere Private Hospital*, have been effectively completed.

All engineering services have been tested and found to be working as designed.

To our knowledge the electrical/mechanical/medical gases/hydraulic/fire services installation, testing and commissioning complies with the contract documents and the Health Department of WA *Western Australia Health Facility Guidelines for Engineering Services*, Australian Standards and the mandatory items that were established or implied in the issuing of the 'Approval in Principle' and 'Approval to Construct'.

- Medical gases cross connection and purity tests for each outlet have been witnessed by a senior hospital medical representative (medical gases only).

35. Typical installer's certification

Typical installer's certification – template

Certification is required for each relevant service.

**Re: Anywhere Private Hospital
electrical/mechanical/medical gases/hydraulic/fire/electromedical
services**

We advise that the electrical/mechanical/hydraulic services, installation for the *Anywhere Private Hospital*, have been effectively completed.

All engineering services have been tested and found to be working as designed.

To our knowledge the electrical/mechanical/medical gases/hydraulic/fire services installation, testing and commissioning complies with the contract documents and the Health Department of WA, *Western Australia Health Facility Guidelines for Engineering Services*, Australian Standards and the mandatory items that were established or implied in the issuing of the 'Approval in Principle' and 'Approval to Construct'.

Appendix 2

Operating Room and Procedure Room Matrix

Name	Activity	Architectural	Mechanical	Electrical/ Communications	Lighting/ Pendants	Equipment	Clinical	Asepsis	Anaesthetic
Treatment	Consultation	Hands free clinical hand basin (Type A) in Room 2.7m high ceiling minimum. • 16m ²	HVAC – Class F6 Filtration or better Positive pressure relative to adjacent corridor/ surroundings Medical Gases as required – to be defined by users WAHFG/ES compliance	Body protection to AS3003 Vital/Essential supply power required to a minimum of 25%, and a maximum of 75% of socket outlets at the bed head Emergency call point	Single procedure light connected to essential/vital supply. The light to be a minimum of 20,000 lux (at 1m – aff)	Mobile trolleys Cabinetwork Removable/easy clean Treatmentcouch/ trolley/Chair	Clean Room (4A) Secure Drugs storage (4R/8)	Aseptic technique	Nil Local anaesthetic
	Examination								
Treatment	Treatments	Hands free clinical hand basin (Type A) in Room 2.7m high ceiling minimum. • 16m ²	HVAC – Class F6 Filtration or better Positive pressure relative to adjacent corridor/ surroundings Medical Gases as required – to be defined by users WAHFG/ES compliance	Body protection to AS3003 Vital/Essential supply power required to a minimum of 25%, and a maximum of 75% of socket outlets at the bed head Emergency call point	Single procedure light connected to essential/vital supply. The light to be a minimum of 20,000 lux (at 1m – aff)	Mobile trolleys Cabinetwork Removable/easy clean Treatmentcouch/ trolley/Chair	Clean Room (4A) Secure Drugs storage (4R/8)	Aseptic technique	Nil Local anaesthetic
	Suturing								
Treatment	Dressings	Hands free clinical hand basin (Type A) in Room 2.7m high ceiling minimum. • 16m ²	HVAC – Class F6 Filtration or better Positive pressure relative to adjacent corridor/ surroundings Medical Gases as required – to be defined by users WAHFG/ES compliance	Body protection to AS3003 Vital/Essential supply power required to a minimum of 25%, and a maximum of 75% of socket outlets at the bed head Emergency call point	Single procedure light connected to essential/vital supply. The light to be a minimum of 20,000 lux (at 1m – aff)	Mobile trolleys Cabinetwork Removable/easy clean Treatmentcouch/ trolley/Chair	Clean Room (4A) Secure Drugs storage (4R/8)	Aseptic technique	Nil Local anaesthetic
	Catheterisations								
Treatment	Eye wash	Hands free clinical hand basin (Type A) in Room 2.7m high ceiling minimum. • 16m ²	HVAC – Class F6 Filtration or better Positive pressure relative to adjacent corridor/ surroundings Medical Gases as required – to be defined by users WAHFG/ES compliance	Body protection to AS3003 Vital/Essential supply power required to a minimum of 25%, and a maximum of 75% of socket outlets at the bed head Emergency call point	Single procedure light connected to essential/vital supply. The light to be a minimum of 20,000 lux (at 1m – aff)	Mobile trolleys Cabinetwork Removable/easy clean Treatmentcouch/ trolley/Chair	Clean Room (4A) Secure Drugs storage (4R/8)	Aseptic technique	Nil Local anaesthetic
	Lumbar puncture								
Endoscopy Procedures	Endoscopy	Hands free Clinical handbasin (Type A) Entry 2.7-3m high ceiling Lead shielding • 20-30m ²	HVAC – HEPA filtration Positive pressure relative to adjacent corridor/ surroundings Medical Gases – preferably on anaesthetic Pendant. Include Suction, Oxygen and Medical Air. Consider Nitrous Oxide and Tool Air Temperature controllable from within room. WAHFG/ES compliance	Body protection to AS3003 Vital/Essential supply power required to a minimum of 25%, and a maximum of 75% of socket outlets at the bed head Emergency call point	Single procedure light connected to essential/vital supply. The light to be a minimum of 50,000 lux (at 1m – aff) General lighting to a minimum average of 400 lux across the room to AS1680.2.5	Anaesthetic Machine Mobile trolleys Scope storage cabinets (HEPA) – optional. Pass through recommended Endoscope machine Diathermy machine Reprocessing equipment	Aseptic Secure Drugs storage (4R/8) S/NZS 4187 GENCA Standards ACORN	Non-invasive Surgical/ diagnostic in nature (endoscopy) Surgically clean field or sterile field Semi critical. (S//NZS 4187 – device that comes into contact with mucous membrane or broken skin)	Local anaesthetic Sedation
	• colonoscopy lower								
Endoscopy Procedures	• endoscopy upper	Hands free Clinical handbasin (Type A) Entry 2.7-3m high ceiling Lead shielding • 20-30m ²	HVAC – HEPA filtration Positive pressure relative to adjacent corridor/ surroundings Medical Gases – preferably on anaesthetic Pendant. Include Suction, Oxygen and Medical Air. Consider Nitrous Oxide and Tool Air Temperature controllable from within room. WAHFG/ES compliance	Body protection to AS3003 Vital/Essential supply power required to a minimum of 25%, and a maximum of 75% of socket outlets at the bed head Emergency call point	Single procedure light connected to essential/vital supply. The light to be a minimum of 50,000 lux (at 1m – aff) General lighting to a minimum average of 400 lux across the room to AS1680.2.5	Anaesthetic Machine Mobile trolleys Scope storage cabinets (HEPA) – optional. Pass through recommended Endoscope machine Diathermy machine Reprocessing equipment	Aseptic Secure Drugs storage (4R/8) S/NZS 4187 GENCA Standards ACORN	Non-invasive Surgical/ diagnostic in nature (endoscopy) Surgically clean field or sterile field Semi critical. (S//NZS 4187 – device that comes into contact with mucous membrane or broken skin)	Local anaesthetic Sedation
	• polyp removal								

Name	Activity	Architectural	Mechanical	Electrical/Communications	Lighting/Pendants	Equipment	Clinical	Asepsis	Anaesthetic
Procedures	Dental Surgery Minor surgery Procedures under local and sedation only	Hands free Clinical handbasin (Type A) at Entry 2.7-3m high ceiling Lead shielding • 25-30m ²	HVAC – HEPA filtration Positive pressure relative to adjacent corridor/ surroundings Medical Gases – preferably on anaesthetic Pendant. Include Suction, Oxygen and Medical Air. Consider Nitrous Oxide and Tool Air Temperature controllable from within room WAHFG/ES compliance	Body protection to AS3003 Vital/Essential supply power required to a minimum of 25%, and a maximum of 75% of socket outlets at the bed head Emergency call point	Single procedure light connected to essential/vital supply. The light to be a minimum of 50,000 lux (at 1m – affl) General lighting to a minimum average of 400 lux across the room to AS1680.2.5	Operating table or chair (that can go into trendelenberg position) Anaesthetic Machine Anaesthetic trolley Mobile trolleys. Diathermy machine	Aseptic room Secure Drugs storage 4R/8). AS/NZS 4187 ACORN	Sterile field Semi critical. (S/NZS 4187 – device that comes into contact with mucous membrane or broken skin)	Local anaesthetic Sedation

Name	Activity	Architectural	Mechanical	Electrical/ Communications	Lighting/ Pendants	Equipment	Clinical	Asepsis	Anaesthetic
Operating (Small)	Minor surgical Laparoscopic procedures Dental Surgery	Barrier entry Mobile equipment 3m high ceiling (minimum) 6m minimum width Laser – safe working environment to AS/NZS 4173 Lead shielding Hands free Scrub external/adjacent entry • 30m ²	HVAC – HEPA filtration (DD) minimum 1.8 x 1.8 mm at ceiling level. 20 air changes per hour Room pressurisation to comply with WAHFG/ES L Exhaust Medical Gases – preferably on anaesthetic Pendant. Include Suction, Oxygen and Medical Air. Consider Nitrous Oxide, Tool Air and Carbon Dioxide Temperature controllable from within room WAHFG/ES compliance	Body or Cardiac protection to AS3003 Vital/Essential supply power required to a minimum of 25%, and a maximum of 75% of socket outlets installed on the medical pendants (or major services panels) Emergency call point	Single surgical light connected to UPS. The light to be a minimum of 125,000 lux (at 1m – affl) Sterile ‘clean room’ type general lighting to AS1680.2.5 ‘X-ray/Laser In Use’ illuminated sign outside each entry Room in Use lights outside each entry Minimum of one pendant EWS/Fire visual indicator/strobe	Anaesthetic Machine Anaesthetic trolleys (drugs and intubation) Mobile trolleys (various) Limited specialist equipment Diathermy Operating table Mobile x-ray/laser	Aseptic Room ACORN standards Secure Drugs storage 4R/8) AS/NZS 4187	Invasive Sterile field	General anaesthetic Sedation Regional block Local anaesthetic (optional)

Name	Activity	Architectural	Mechanical	Electrical/ Communications	Lighting/ Pendants	Equipment	Clinical	Asepsis	Anaesthetic
Operating (General)	General ENT Urology Gynaecology Ophthalmic Plastics Neurology Orthopaedic Laparoscopic Plastic/ reconstructive Maxillo/facial Dental Surgery	Barrier entry Mobile equipment 3m high ceiling (minimum) 6m minimum width Laser safe working environment to AS/NZS 4173 Lead shielding Hands free Scrub external/ adjacent entry • 36m ²	HVAC – HEPA filtration (DD) minimum 1.8 x 1.8 mm at ceiling level 20 air changes per hour Room pressurisation to comply with WAHFG/ES L Exhaust Medical Gases – preferably on anaesthetic Pendant. Include Suction, Oxygen and Medical Air. Consider Nitrous Oxide and Tool air Temperature controllable from within room WAHFG/ES compliance	Body protected to AS3003 Cardiac protected (to AS3003) where required to suit the type of procedure to be conducted Vital/Essential supply power required to a minimum of 25%, and a maximum of 75% of socket outlets installed on the medical pendants (or major services panels) Emergency call point	Single surgical light connected to UPS. The light to be a minimum of 160,000 lux (at 1m – affl) Sterile 'clean room' type general lighting to AS1680.2.5 'X-ray/Laser In Use' illuminated sign outside each entry Room in Use lights outside each entry Minimum of one pendant EWS/Fire visual indicator/strobe	Anaesthetic Machine Anaesthetic trolleys Mobile trolleys (various) Monitors Specialist equipment Diathermy Operating table Mobile x-ray/ laser	Aseptic Room ACORN standards Secure Drugs storage (4R/8) A/NZS 4187	Invasive Sterile field Critical medical device (A device which enters, or is capable of entering tissue that would be sterile under normal circumstances)	General anaesthetic Sedation Regional block Local anaesthetic (optional)

Name	Activity	Architectural	Mechanical	Electrical/ Communications	Lighting/ Pendants	Equipment	Clinical	Asepsis	Anaesthetic
Operating (Large)	Cardiac (Angio) (42)	Barrier entry	HVAC – HEPA filtration (DD) minimum 2.4 x 2.4 min at ceiling level	Cardiac protection to AS3003	Multiple surgical lights connected to UPS. The primary light to be a minimum of 160,000 lux (at 1m – affl) and the satellite to be a minimum of 125,000 lux (at 1m – affl)	Anaesthetic Machine	Aseptic Room	Invasive	General anaesthetic Sedation
	Orthopaedics/ Neuro Vascular (49)	Mobile equipment 3m high ceiling (minimum)	20 air changes per hour	LIOM protection to all UPS and essential supply outlets on medical pendants	Sterile “clean room” type general lighting to AS1680.2.5	Anaesthetic trolleys	ACORN standards	Sterile field	Regional block
	Cardiothoracic (60)	6.5m minimum width Laser safe working environment to AS/NZS 4173 Lead shielding Perfusion Room adjacent for Cardiothoracic Hands free Scrub external/ adjacent entry Hands free door activation • 42/49/60 m ²	Room pressurisation to comply with WAHFG/ES L Exhaust Medical Gases – preferably on anaesthetic Pendant. Include Suction, Oxygen and Medical Air. Consider Nitrous Oxide and Tool air Temperature controllable from within room WAHFG/ES compliance	UPS power required to a minimum of 25% of socket outlets installed on the medical pendants Vital/Essential supply power required to a minimum of 25%, and a maximum of 75% of socket outlets installed on the medical pendants Emergency call point	Room in Use lights outside each entry Minimum of two pendants EWS/Fire visual indicator/strobe	Mobile (various) Monitors Major specialist equipment Diathermy Operating table	Secure Drugs storage (4R/8) S/NZS 4187	High staffing levels	Local anaesthetic (option)

Name	Activity	Architectural	Mechanical	Electrical/ Communications	Lighting/ Pendants	Equipment	Clinical	Asepsis	Anaesthetic
Interventional	Radiological driven surgery Catheter driven Angiography/ Neuro surgery	Barrier entry Radiological equipment in-room (fixed) 3m high ceiling (minimum) Control room/ Equipment room adjacent Lead shielding Additional shielding as required (eg Magnetic) Laser safe working environment to AS/NZS 4173 Hands free Scrub external to Room Hands free door activation • 55-70m ²	HVAC – HEPA filtration (DD) minimum 2.4 x 2.4 min at ceiling level Room pressurisation to comply with WAHFG/ES L Exhaust Medical Gases – preferably on anaesthetic Pendant. Include Suction, Oxygen and Medical Air. Consider Nitrous, Tool Air and Carbon Dioxide WAHFG/ES compliance as for Operating Room/ General Surgery	Cardiac protection to AS3003 LIOM protection to all UPS and essential supply outlets on medical pendants UPS power required to a minimum of 25% of socket outlets installed on the medical pendants Vital/Essential supply power required to a minimum of 25%, and a maximum of 75% of socket outlets installed on the medical pendants Emergency call point	Multiple surgical lights connected to UPS. The primary light to be a minimum of 160,000 lux (at 1m – affl) and the satellite to be a minimum of 125,000 lux (at 1m – affl) Sterile 'clean room' type general lighting to AS1680.2.5 'X-ray/Laser In Use' illuminated outside each entry Room in Use lights outside each entry Minimum of two pendants EWS/Fire visual indicator/strobe	Anaesthetic Machine Anaesthetic trolleys Mobile (various) Monitors Major specialist equipment (including radiological) Diathermy Operating table	Aseptic Room ACORN standards Secure Drugs storage (4R/8) S/NZS 4187	Invasive Sterile field High to very high staffing levels	General anaesthetic Sedation Regional block Local anaesthetic (option)

Name	Activity	Architectural	Mechanical	Electrical/Communications	Lighting/Pendants	Equipment	Clinical	Asepsis	Anaesthetic
Hybrid	Radiological enhanced surgery 'Keyhole' surgery (minimally invasive) Image guided robotics	Barrier entry Radiological equipment in-room (fixed) 3m high ceiling (minimum) Control room/Equipment room adjacent Lead shielding Additional shielding as required (eg Magnetic) Laser safe working environment to AS/NZS 4173 Hands free Scrub external to Room Hands free door activation • 80m ²	HVAC – HEPA filtration (DD) minimum 2.4 x 2.4 min at ceiling level L Exhaust Medical Gases – preferably on anaesthetic Pendant. Include Suction, Oxygen and Medical Air. Consider Nitrous, Tool Air and Carbon Dioxide Temperature controllable from within room WAHFG/ES compliance as for Operating Room/General Surgery	Cardiac protection to AS3003 LIOM protection to all UPS and essential supply outlets on medical pendants UPS power required to a minimum of 25% of socket outlets installed on the medical pendants Vital/Essential supply power required to a minimum of 25%, and a maximum of 75% of socket outlets installed on the medical pendants Emergency call point	Multiple surgical lights connected to UPS. The primary light to be a minimum of 160,000 lux (at 1m – affl) and the satellite to be a minimum of 125,000 lux (at 1m – affl) Sterile 'clean room' type general lighting to AS1680.2.5 'X-ray/Laser In Use' illuminated sign outside each entry Room in Use lights outside each entry Minimum of two pendants EWS/Fire visual indicator/strobe	Anaesthetic Machine Anaesthetic trolleys Mobile (various) Monitors Major specialist radiological equipment, possibly in attached but separate room Diathermy Operating table	Aseptic Room ACORN standards Secure Drugs storage (4R/8) S/NZS 4187	Invasive Sterile field High to very high staffing levels	General anaesthetic Sedation Regional block Local anaesthetic (option)

Appendix 3

Legionnaires' disease

1. **Air-handling systems and associated water cooling systems contamination by legionella**

Design, installation, commissioning and maintenance including documentation and records of air-handling systems and associated water-cooling systems must comply fully with Australian Standard 3666 "Air Handling and Water Systems of Buildings – Microbial Control".

2. **Water storage and distribution systems contamination by legionella**

Water is supplied by the Water Authority of WA in a potable condition to health specifications. Every attempt should be made to preserve the quality of the supply.

Hot water should be stored and operated at a temperature not dropping below 60 °C.

A maintenance program of regular de-sludging should be implemented for any hot water storage vessel where stagnation and stratification in the lower levels of the tank may occur.

Water sampling for the culture of Legionella is not warranted for general hospital areas provided that the maintenance program is adhered to strictly.

Wards with concentrations of renal transplant, oncology and other immunocompromised patients are considered to be 'high risk' wards. The following additional advice is given for these situations:

- inspect water distribution systems monthly to locate areas of flow stagnation and to plan for their early removal
- drain sediment from calorifiers monthly – or more frequently if necessitated by water quality
- remove all shower heads and clean out accumulated sediment and scale monthly
- remove aerators from taps and check all taps for natural rubber washers acid 'O' rings and replace with synthetic products
- check all thermostatic mixing valves for natural rubber components and replace with synthetic products. Regularly clean and service these valves quarterly.
- flush through weekly all showers and taps that are not used frequently
- ensure water treatment plant, if installed, is checked regularly and operating efficiently.

If gross contamination is detected, control may be achieved by cleaning of components, attention to water temperature, and/or disinfection, and/or other engineering factors. Discussion of the circumstances is advised.

2.1 Heated spa pool

Re-circulated water spa pools are not appropriate for healthcare facilities. Fan blower type spas shall be used. Spa pools shall be maintained regularly in accordance with AS 2610.1.

2.2 Chemical water systems

Cold water storage and feed tanks associated with potable and non-potable (such as fire sprinkler) systems shall be separated (and identified) and regularly inspected for cleanliness. They shall be located in a shaded area to minimise solar heating. Flywire shall be fitted to overflow and vent pipes to protect against insects and vermin.

Appendix 4

Fire supplement

This Supplement is to be read in conjunction with the Building Code of Australia.

Section C – Fire resistance

Part C2 – Compartmentation and separation

BCA Deemed-to-Satisfy Provision C2.5

The following shall be included as part of the requirements listed in BCA Deemed-to-Satisfy Provision C2.5, for Class 9a buildings:

- The following areas are considered to be fire risk areas and are to be fire isolated with an FRL of not less than 60/60/60 from patient care areas:
 - (A) Maintenance workshop
 - (B) Medical gas storage (reticulated)
 - (C) Gas heaters installed in roof/ceiling spaces
- Suitable methods shall be implemented to minimise the spread of smoke via lift shafts (to and from fire-affected floors).

Specification Section C

The following shall be considered in Specification C1.1 for internal fire walls:

- Internal fire walls extending to an external wall shall also extend through any eaves overhang.

Section D – Access and egress

Part D1 – Provision for escape

BCA Deemed-to-Satisfy Provision D1.6

The following shall be included as part of BCA Deemed-to-Satisfy Provision D1.6:

- For patient care areas, or where egress of patients is required, the unobstructed egress width of required exits directly to open space shall be not less than 1250 mm.

Appendix 5

Consulting/examination room

The consulting/examination room is a room for private consultation and physical examination of patients with or without support/ carers present. Staff safety and security shall be considered in the room fitout, with the clinician positioned closest to the door in the consult portion of the room. Alternatively, a second exit door may be required. Depending on brief and user requirements, examination may be in a separate room; however it is more space effective and more common that the consult and examination functions are combined in one room. Acoustic privacy is essential. Natural light and view are recommended without compromising patient privacy during examination. A minimum area of 12 m² for a consult/exam room with single-sided couch access is recommended.

The following should to be allowed for:

- consultation with client at a desk – allow for carer to be present. (minimum 3 chairs)
- computer/small desktop printer for accessing, entering and updating of records, and writing and issuing of scripts
- storage space for small amounts of stationery, reference material and consumables
- patient monitoring – space for weight scale, growth charts, eye chart
- an examination couch which shall be screened to allow for a patient to undress or be examined in privacy if the door is opened by mistake. There shall be sufficient space for the patient to undress and for the clinician to move within the screened examination area – minimum 800 mm between the couch and the screening device (1000 mm preferred). The position of the examination couch will be dependent on the type of examination being performed and the handedness (left or right) of the clinician. It is preferable that examination equipment be wall mounted or on trolleys.
- clinical hand basin with dispensers and personal protective equipment (PPE) positioned close to examination couch and examination area. If the consult and examination rooms are in separate rooms, then a clinical basin is required in both rooms.
- Doors to allow wheelchair access – minimum 850 mm clear opening (920 mm door) If there are a suite of consult rooms, it is recommended that one consult room has a larger door (1200 mm) to accommodate wider/electric wheelchairs, bariatrics etc.
- Engineering services – appropriate lighting for examination, power, data, and communications including nurse call at the examination couch, emergency call and duress as per Facility Risk Management Plan. Refer to the *Western Australia Health Facility Guidelines for Engineering Services*.

Appendix 6

Treatment room

The treatment room is a controlled environment that offers patient privacy and is used for assessments, consultation, examination and treatments (non-invasive and minimally invasive). Refer also to Appendix 2 Operating Room/Procedure Room Matrix.

A minimum area of 16 m² shall be provided with clear space on a minimum of three sides of the treatment couch/bed. If space at the head of the treatment couch is required, the room should be larger.

The following should be allowed for:

- a treatment couch with a minimum 1000 mm clear circulation space on three sides of the couch. Fittings, fixtures and mobile equipment required for the procedure should be clear of the circulation space around the couch
- space to store mobile trolleys as required including dressing trolleys, instrument trolleys and any other mobile diagnostic equipment or other equipment required.
- a clinical workbench with a small amount of storage for clinical consumables (optional) and a small workstation or desk for the clinician to access, enter and update clinical records. This workstation is intended to be used for short periods of time only and is not a permanent workstation.
- clinical hand basin with dispensers and personal protective equipment.
- privacy screening either around the door or around the couch is required.
- blackout blinds and dimmable lighting are recommended for flexibility of use and may be used when performing activities such as ultrasound.
- entry doors should allow bed/trolley and equipment movement and provide a clear opening of not less than 1200 mm.
- Engineering services – Refer to the *Western Australia Health Facility Guidelines for Engineering Services* and the LARU General theatre matrix.

Treatment bay – non-acute

Treatment bay – non acute can be used for treatments such as chemotherapy, renal treatments and physiotherapy (single plinth).

The treatment bay is a screened area used for assessments, examination and treatment of patients. A treatment bay shall be sized to accommodate all furniture and equipment to function, allowing access to three sides of the treatment couch/chair and access to bedhead services. The treatment bay shall have a minimum clear floor area of 9 m². The bedhead width shall be a minimum of 2700 mm. Where fixed side screens are provided, it is recommended that the treatment bay be increased to 10 m² with a bedhead width of 3000 mm.

The following should be allowed for:

- privacy screening around the treatment bay – the required circulation/corridor width in front of the treatment bay shall be taken from the privacy screen position, not from the edge of the treatment couch
- handwashing – close access to a clinical hand basin from the treatment bay
- engineering services – such as bedhead services (communications, power, data, and medical gases) and examination lights. These shall be provided to suit the function of the treatment cubicle as stated in the Statement of Function and to comply with the *Western Australia Health Facility Guidelines for Engineering Services*.

Appendix 7

Bariatric provision

An appropriately developed bariatric patient management plan/policy (bariatric plan) shall be developed to ensure the facility is prepared to manage Occupational Health and Safety and duty-of-care issues associated with admission of bariatric patients and to provide specialist services and facilities to manage morbid obesity in a dignified manner.

If the facility decides it is not equipped to safely admit bariatric patients, there shall still be a bariatric management plan in place, highlighting exclusion policies (patient weight limit) and addressing how the facility will deal with unplanned bariatric patients and visitors.

It is recommended that provision for bariatric patients in hospital/health services be considered, taking into account obesity and morbid obesity are the leading cause of preventable disease in Australia. Consequences related specifically to excess weight and obesity include heart disease, stroke, type 2 diabetes, certain cancers, hypertension, gall bladder disease, sleep apnoea and respiratory disease.

The bariatric plan will flow from a risk management process, and an effective plan will address:

- admission protocols
- access
- the transport of bariatric patients within and outside of the facility
- building design and accommodation for bariatrics
- equipment requirements – patient safety/ expanded capacity – safe working load/limit of equipment
- manual handling issues and minimising manual handling risks to staff – OHS
- communication and staffing levels required and safe systems of work – Occupational Health and Safety
- emergency evacuation (consider placing bariatric inpatient patient rooms on ground floor if possible)
- discharge protocols and follow-up care
- patient death – protocol to follow.

Bariatric patients are accommodated in either a standalone special bariatric in-patient unit, or in a designated area of a standard in-patient unit. The number of bariatric patient beds should be determined by the clinical service plan. The preferred maximum number of patients in a standalone bariatric in-patient unit is 12. If bariatric patients are accommodated in part of a standard in-patient unit, it is recommended that they are clustered together for practical and management purposes.

Bariatric patients shall be accommodated in single-bed rooms, for patient privacy and dignity.

Bariatric inpatient bedroom/ensuite requirements:

Bedroom:

- Bedroom size – a minimum floor area of 21 m² shall be provided. The area shall be dependent on the bariatric plan and the size of the beds required to accommodate the weight of the bariatric patient. A minimum clear dimension of 1800 mm is required all around the bed to any wall or fixed obstruction such as wardrobes or basins. This enables wheelchair turning or space for equipment or hoisting. A room 5 m x 4.2 m would accommodate a standard bariatric bed 1.35 m x 2.25 m (with rails up)
- Patient bedroom door – minimum width 1500 mm clear (split 1200 + 300)
- Ceiling fixed lifting device/hoists recommended.
- Adjustable temperature control in bariatric patient bedrooms – to prevent overheating of obese patients who generally have a higher body temperature than patients in the normal weight range.

Ensuite:

- Ensuite bathrooms shall allow staff assistance on two sides of the patient at the toilet and shower areas.
- A minimum floor area of 8 m² shall be provided with a clear turning circle of 1800 mm for a bariatric wheelchair within the ensuite bathroom, clear of any fixtures.
- A bariatric assist toilet (WC) shall be provided. The pan should be floor fixed and selected to support weights of up to 450 kg. The WC should be positioned to allow staff to assist on two sides of the toilet, with a minimum clear space of 610 mm from the side of the pan to the closest wall. A clear space of 1100 mm clear in front of WC shall be provided for wheelchair and commode access.
- Toilet seats shall be heavy duty and have lateral stability, compliant with AS1371.
- Hand basins in ensuites to be wall fixed so as not to hinder and to allow wheelchair access to the basin. The basin shall withstand a minimum force of 360 kg at the front end of the basin (450 kg recommended for future-proofing) or as stated in the bariatric plan.
- All grab rails and towel rails in the ensuite shall be heavy duty to support a minimum 360 kg (450 kg recommended for futureproofing) or as stated in the bariatric plan.
- Showers – a minimum dimension of 1200 x 1800 shall be provided to allow for staff assistance.
- Hand-held showerheads are essential and the hose length should be sufficient to reach areas for washing and to be hung on the wall after use.
- Ensuite door – a minimum clear width of 1200 mm is recommended – preferably to open out.
- Ceiling hoist-lifting systems recommended.

Basic furniture, fixtures and equipment (FFE) in the bariatric patient bedroom/ensuite include:

- Special beds with adequate weight capacity in accordance with Bariatric Plan, with appropriate side rail support. Special pressure relieving mattresses should be considered to prevent pressure points which may arise with obese patients who have difficulty repositioning when lying in a bed.
- Lifting equipment (ceiling hoists preferable) to take weight as outlined in bariatric plan. It is recommended that at least one in the facility can lift max weight 450 kg – minimum 360 kg, if lifting equipment is mobile – close proximity storage bay/room for easy access.
- Positioning equipment and storage
- Mobile bariatric commodes – can double as shower chair
- Wheelchairs and walking aids that can accommodate bariatric patient
- Appropriately sized and selected room furniture such as chairs and couches.

If the bariatric plan provides a service and the facility admits bariatric patients, other areas of the facility will also need to accommodate bariatric patients. These include:

- Reception/admission and wait areas – space and furniture appropriate (bariatric chairs)
- Interview room/treatment room – depending on admission policies and protocols
- Operating room – surgical tables to have expanded capacity
- ICU/CCU – bariatric bed bay or room provision.
- Expanded capacity will also be needed for equipment such as radiology tables and diagnostic machines.

Other considerations to spaces that bariatric patients will access.

- Floor coverings shall be selected that do not increase drag when pushing trolleys, beds or wheelchairs. Floor selection should allow for excessive weight without resulting in indentations, marring and shearing of floor finish material. Floor transitions must be designed to prevent tripping hazards.
- Ramps – additional weight increases push/pull and staff injury risk– consider shorter and lesser gradients
- Scales – roll-on scales to minimise manual handling.
- Grab rails and hand rails to support additional weight of mobile bariatric patients in all areas accessed by bariatric patients including corridors and lifts.
- Gowns, linen, BP cuffs and gastric bands to fit the bariatric patient
- Door widths to all rooms bariatric patients will enter to have minimum 1050 mm clear (1120 mm leaf) to accommodate a bariatric wheelchair (990 mm wide)
- Minimum of one lift to accommodate patient on bariatric bed with attending staff. This should not be a service lift. Lift door widths min 1300 (although 1500 recommended).

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