

### **3 BUILDING FABRIC**

#### **3.1 General Statement**

Design of building fabric and selection of materials to satisfy the following criteria:

- Fitness of purpose.
- Flexibility.
- Robustness.
- Life cycle cost.
- Fits ECU sustainability objectives.
- Thermal Performance.
- Room Data Sheets.

#### **3.2 External Fabric**

##### **3.2.1 Structure**

###### **Constructability**

Buildings with poured in-situ concrete external walls shall be designed with particular care and consideration given to the possible future effects of shrinkage and cracking which may lead to corrosion of reinforcement and eventual spalling of concrete. Any such designs will be critically examined and structural guarantees will be required.

Provide adequate control joints in all masonry walls. Joints to be thoroughly sealed to prevent water entry.

Ensure DPC are provided to cavity masonry at floors and flashings to heads/sides of openings. Ensure drainage through weepholes at all DPC flashings.

Ensure cavities and ties are clean at completion of construction.

Provide vertical flashings between columns in cavities and the external masonry leaf.

##### **3.2.2 Roofing**

- Design of roofs to satisfy essential requirement to keep out the weather, and effectively drain away stormwater. Complex roof forms which result in risk of leakage are to be avoided.
- Membrane roofing/tanking, etc not to be used without prior approval.  
Gutter design. Internal gutters or box gutters are not to be used without prior approval. Gutters must relive to the outside.

##### **3.2.3 Wall Lining**

- Limit use of materials to those which do not require periodic maintenance.
- Use of painted finishes to external elements is discouraged and is not to be used without prior approval
- Any lightweight materials which are susceptible to mechanical damage shall not be used within 3 metres of ground level
- Design for thermal buffering/ Insulation.

All wall finishes to be sealed with non sacrificial type anti graffiti coating to a height accessible from ground level (2.5m). Care to be taken in the “designing in” of the boundary of coating. External walls shall be either concrete or concrete masonry.

#### **3.2.4 External soffit lining.**

- Limit use of materials which require periodic maintenance.
- Screw fixings which embed into the material (fibre cement) being fixed to be avoided where depth of embedment cannot be reliably controlled.
- Design of support structure and fixings for soffit lining will require input from a Structural Engineer.

#### **3.2.5 External Windows & Doors**

- Design and location of windows is to provide natural lighting and outlook while at the same time not introduce glare and thermal load to the interior. Openings exposed to full sun are to be avoided particularly on the East and West elevations.
- Allow for adequate access for cleaning of windows either from elevated work platforms or permanent gangways. Where access to these gangways is from the inside, doors shall be keyed to the University service master key system.
- All external windows shall be designed in accordance with all relevant codes,
- Are to be located in common or open plan spaces and not within single offices.
- Refer Electrical Services and Security Services for the provision of automatic doors and the securing of the external perimeter

#### **3.2.6 Sunscreens and External Attachments**

- Any external attachment to a building is to be designed by a Structural Engineer.
- In general the durability of any attachment must match that of the external fabric. Any elements which require applied coating for durability must be designed to be able to be maintained.

#### **3.2.7 Access for periodic maintenance:**

- Any element of the external fabric of a building which requires periodic access for maintenance is to be provided with safe access. Elements include windows, gutters, roofs, equipment, light fittings etc. Demonstrate design strategies to achieve this end.
- The window system should be designed to ensure external face of glazing is capable of being cleaned wholly from within the building without infringing the requirements of regulatory authorities. Where this is not possible, provide approved external walkways complete with fall arrester system.
- Eyebolt systems safety hooks for cleaning windows are required where the window opening is large enough to allow a person to accidentally fall out.
- Allow a minimum 800mm wide access way free of planting to outside of windows at ground level for use by window cleaners.
- Glass must be easily removed and replaced after breakage. All window types must cater for this requirement and be designed and installed accordingly.
- All metal finishes shall be anodised aluminium for low maintenance purposes. Colour shall be approved by the University Project Manager.

### **3.3 Internal Walls, Partitions and Finishes**

#### **3.3.1 Flexibility**

Buildings shall be designed for total flexibility internally with respect to useable floor areas. Load bearing walls shall be minimised and restricted to areas such as the building exterior, core for stairwells, lift shaft and toilets. All other internal walls and partitions shall be non-load bearing and preferably fully demountable within the limits of economical design. To ensure building flexibility framed construction is preferred to load bearing masonry for buildings other than for domestic type of use.

#### **3.3.2 Materials (incl skirtings...)**

Partitions and internal walls may be of plasterboard on metal stud, concrete masonry, or equivalent as required by the application. Finish must be low maintenance and easily cleanable.

Protection of external corners, where appropriate, to be considered. Skirtings are essential to prevent damage to base of walls from cleaning equipment. Where damage from furniture is considered a high risk, use of chair rails and the like to be considered.

Long runs of unrelieved wall finishes in corridors are to be avoided to minimise the unsightliness of inevitable wear and tear.

Masonry walls to have required control joints which coincide with floor expansion joints.

### **3.4 Floor and Floor Finishes**

#### **3.4.1 Design**

Floor slabs shall be designed for the most economical construction and flexibility of use with due consideration to long term deflections and the need to provide for penetrations both initially and during the course of the building's life. The need to core holes up to 200mm diameter or to provide penetrations up to 1200mm square in selected areas at a later date should be taken into account during design.

#### **3.4.2 Floor Loads**

All buildings shall be designed for floor loadings generally in accordance with those specified by AS 1170.

Library stack areas shall be designed to suit compactus loading. Floor loads for special areas shall be determined in consultation with users.

Provision shall be made for the installation of compactus shelving in all general office areas and in other areas specifically nominated in the brief.

#### **3.4.3 Termite Control**

Anti-termite treatment shall be provided to all buildings either at the beginning or after completion of the contract. All workmanship and materials shall conform to the requirements of AS Code 2057-1981 and subsequent amendments for soil treatment for the protection of buildings against subterranean termites. All necessary safety precautions shall be taken to protect workmen and others from poisoning.

### **3.4.4 Floor Mats**

Nomad mats (minimum 1200mm deep) shall be provided internally in mat recesses at each external access to the building. Mat recesses shall be formed by brass angle set into the concrete. Mat recesses for fire-isolated areas shall be external and shall be adequately drained if exposed to weather. Where installed in carpet areas mat recesses within carpet depth may be provided.

### **3.4.5 Floor Finishes**

#### **3.4.5.1 Generally**

Floor materials shall be low maintenance and require minimum cleaning. All flooring material will be non-slip with special care being taken in material selection for wet areas.

All proposed floor finishes must be approved by the University Project Manager.

#### **3.4.5.2 Carpet**

Commercial grade carpet tiles with anti static properties are to be used where a carpet finish is briefed.

Standardisation of type, pattern and colour is advantageous for future renovation and addition.

#### **3.4.5.3 Vinyl**

Choice of vinyl floor finish to suit the particular application. In general finish to be non slip and easily cleaned. Marmoleum is an acceptable finish in administrative areas. In chemical laboratory areas finish to be chemical resistant with fully welded joints. In computer labs or areas with high density of electronic equipment finish to be antistatic.

Standardisation of type, pattern and colour is advantageous for future renovation and addition.

#### **3.4.5.4 Ceramic Tiles**

Ceramic tiles shall be used on walls and floors (non-slip) to all toilet areas/showers including air-locks and to floors in fire-rated passageways/stairs. Wall tiles shall be glazed or semi glazed of 200 x 100 module with matching grout colour. Tiles to stair treads shall be unglazed, non-slip to suit the application with tread nosing tile (of contrasting colour to other tiles) and matching grout. Appropriate expansion joints shall be provided.

Where floor tiles are used in areas susceptible to drink/fats/grease type soiling, then tiles are to be 100% non porous, non-slip and easy to clean.

#### **3.4.5.6 Concrete Finish**

Exposed concrete floor finishes shall be sealed for dust and cracking.

### **3.4.6 Floor Penetrations**

All floor penetrations shall be sealed and comply with fire stopping requirements.

Floor wastes shall be provided within all wet areas and adequate falls in the floor to these outlets are to be provided. No ponding in wet areas will be permitted.

### 3.4.7 Colour

Colour of all floor finishes shall form part of the overall colour scheme for the building and shall be selected in consultation with the University Project Manager. Those finishes that soil easily are generally to be a dark colour.

## 3.5 Ceilings and Ceiling Finishes

Choice of ceiling type and finish to suit the particular application.

In general ceilings are to have acoustic properties and provide easy access for services contained within ceiling spaces. Where accessibility is a requirement it is essential that ceiling panels can be removed and replaced without damage to the panels.

Where fire isolation or acoustic isolation is a requirement painted flush plasterboard is acceptable. Where access to ceiling voids is required when using this type of surface, proprietary manholes which do not compromise fire and or acoustic properties of the ceiling are to be used.

## 3.6 Furniture, Fixtures and Equipment

### 3.6.1 Built-in Furniture

All built-in furniture, cupboards and laboratory benches shall be supplied as part of the Contract. Details shall be determined in conjunction with the University.

Supply samples of the following with the finishes colour board:

- Ceramic wall/floor tiles
- Laminates and veneers
- Glass
- Epoxy finishes and Polyester Powder coating on steel frames
- Bench top finishes
- Carpet
- Vinyl

Special finishes which are difficult to replace or require long lead times to procure shall be avoided.

Tops to built-in shelving to finish 500mm away from light fittings in order to comply with the University's Fire Insurance requirements.

### 3.6.2 Fit out

#### 3.6.2.1 Generally

The implementation of loose furniture fit out is the responsibility of the designer. University standard furniture fit out details will be supplied to the designer as a guide. Selection and design of loose furniture is to address:

- Serviceability. Robust design
- Consistency. Ability to be relocated without looking out of place.
- Flexibility. Ability to be reconfigured.
- Meet University Occupational Health and Safety standards.

The provision of equipment, unless otherwise stated, will be by the University. Designers to establish equipment need and design in space and service requirements.

### 3.6.2.2 Standard Loose Furniture Allocations

The following is to be used as guide only. Extent to be determined during the briefing process. Changes to personnel and structure of schools are constant. Fit out proposals tailored for individuals shall be avoided.

<i>Executive</i>	Provision on request
<i>Professorial, Dean &amp; Head of Division</i>	2000mm x 2000mm Workstation Executive Office Chair with no arms Two matching Executive Visitor's Chairs Table 900mm dia. One or Two Filing Cabinets with security locks Two large Bookcases with 5 adjustable shelves One Under desk pedestal Bin
<i>Associate Professor</i>	1800mm x 1800mm Workstation  Low back swivel and tilt office chair ( no arms) Two visitor's chairs Two filing cabinets Two bookcases (SU27 & SU29) One under desk pedestal Bin
<i>Senior Lecturer, Lecturer, Tutor, Professional, Manager</i>	1800mm x 1800mm Workstation  Office chair ( no arms) Two visitor chairs One filing cabinet Two bookcases (900mm long - SU27, SU29) One under desk pedestal Bin
<i>Tutorial Assistant</i>	One 1600mm x 900mm desk with return One office chair ( no arms) One visitor chair One filing cabinet One mobile under desk pedestal Bin
<i>Clerk, Typist &amp; Technical Officer</i>	1800mm x 1800mm workstation One office chair ( no arms) One mobile under desk pedestal Bin
<i>Junior Research &amp; Part-Time Tutors</i>	1600mm x 900mm desk and chair

### 3.6.2.3 Compactus

When specified in the brief compactus's shall be supplied and installed in the contract. Minimum distance between top of compactus and light fittings to be 500mm to comply with the University's Fire Insurance requirements.

Ensure that structure is capable of supporting compactus loads and that trip hazards are eliminated.

Compactus storage systems are not to be used in public spaces.

### 3.6.2.4 Whiteboards and Pin boards

The following standards are applicable in all buildings:

#### Staff Studies

Combination of white and pinboard with pinboard section being 900mm long x 1200mm and whiteboard section being 900mm long x 1200mm high (pen rail required). Unit to be located on cross wall to which entry door opens against with whiteboard section closest to door. Provide aluminium separating section between pin/whiteboard surfaces. In general pin board surfaces are located over workstations and whiteboards to the side

Noticeboard 410mm x 275mm outside door on wall with underside located 900mm above floor.

#### Teaching Spaces & Lecture Theatres

The provision, location and design of white/glassboards, pinboards, projection screens and notice boards are fundamental teaching requirements.

Designers are to assess each room individually and put forward a proposal for approval. The issues that need to be addressed are:

- The primary teaching wall should allow the use of writing surface and projected image simultaneously.
- Teaching spaces increasingly require the breakdown of larger groups into smaller groups which result in the need for more than one teaching wall.
- Glare/reflection on the teaching wall is to be avoided.
- Minimum writing surface for rooms with a capacity between 25 and 50 is to be 1200 x 3000 and for rooms with capacity between 50 and a 100 is to be 1200 x 4000.
- Pin boards/notice boards are to be provided to contain Safety/ Evacuation Notices; Maximum Capacity Notice; Directions for Operation of Equipment.
- To provide colour into teaching spaces, colour painted glass boards should be used in place of white boards.

### 3.6.2.5 Lecture Theatre Fittings

All benches, desks, lecterns and seating shall be provided under the contract.

Designers are to put forward optional arrangements to meet briefed need for discussion and determination.

Samples of suggested fittings and furniture are to be submitted for approval.

### 3.6.2.6 Tea Preparation and Staff Rooms

Provide:

- Boiling water/ refrigerated water together with wash up facilities.
- Storage for cutlery, cups, glasses and plates.
- Location for microwave oven.
- Location for fridge. Size and number of fridges is to be determined to accommodate storage of staff lunches.
- Variety of loose furniture – tables and chairs; sofas and coffee tables.
- Notice boards.

Meeting Rooms

- Generally the provision of food and drink to meeting rooms is by outside catering establishments. Allow for bench space for setting out.
- Tea/wash-up facilities, if required, will be specified in the brief.

## 3.7 Curtains, Blinds

### 3.7.1 General

All curtains and blinds if required shall be supplied and fitted in the Building Contract. Provision shall be made in the contract for adequate battens, pelmets etc.

All fabrics utilised in Public Building designated areas are to be flame retardant quality - complying with the relevant standard.

The criteria for determining need and selection of window treatment is:

- Glare control
- Privacy
- Security

In general, windows to office areas are to be provided with blinds with manual control. The need for automatic operation of window treatments in public areas is to be considered.

Selection of blind type to take into consideration operational need and serviceability. Full glare control is required in areas where users have no option but to remain in the area during the course of a normal working day. In general areas where users have the option to move away from areas when glare becomes apparent full control may be relaxed

### 3.7.2 Samples

Provide samples sufficient to clearly demonstrate colour, texture, pattern and also compatibility with room requirements. All samples to be approved by Project Manager Buildings.

## 3.8 Projection Surfaces

Projection surfaces may be painted walls or recessed proprietary projection screens. Paint type must be appropriate to the requirement.

Projection screens, if required, are to be provided under the AV sub contract.

Designers are to establish need and ensure adequate support is allowed where motorised screens are deemed necessary, provide power and switching facility.

Ensure that natural and artificial lighting does not wash out projected images.

### 3.9 Miscellaneous

#### Coat Hooks

Provide a coat hook behind every office door.

#### Cabin Hook

To be provided as required.

### 3.10 Special Equipment

#### 3.10.1 General

In general equipment which is to be built-in is to be included in the contract. Fume cupboards; biological safety cabinets; compressors and the like fit into this category. Selection of equipment will be to stakeholder brief.

Equipment which is to be provided by users is to be identified during the briefing process and adequate space and servicing requirements provided for in the contract.

### 3.11 Door Hardware and Locks

#### 3.11.1 Locks

##### General

The University requires a consistency of type of door hardware throughout it's facilities.

##### Door Locks

Shall be Lockwood 3570 Series and keyed to the University's Grand Master Key system. Locks shall be mounted such that strike is 900mm above finished floor level. No locks are to be mounted in the bottom rails of doors. Locks in external aluminium glazed doors shall be Lockwood 591 series mounted 900mm above finished floor level.

A complete lock and hardware schedule shall be prepared by the Consultant Architect and a keying schedule will be prepared by the University Project Manager.

All external and internal fire hose/extinguisher cabinets shall be fitted with "D" handles and roller catches only.

**Lock Characteristic Table**

Location	Lock Type	Remarks
Staff Offices General Staff Areas	3574 WT	When not locked may be opened by inside or outside handles. Snib locking to inside cylinder and key lock to outside. Lever handles both sides.
Lecture Theatres Lecture Rooms Seminar/Tutorial Rooms Laboratories	3572 Z	Cylinder lock to outside. Lever handles both sides. When locked by key, outside handle inoperative but inside handle always free to open door.
Exit Doors	3572 XZ	Opening Out. Key from outside retracts latchbolt. Key on inside locks outside handle. Inside handle always free.

Services Cupboards, Plumbing Ducts	3570XT	Nightlatch with pull handle externally. Turn snib on inside opens door.
Plantrooms, Electrical Switchrooms, Lift Motor Rooms.	3572 X	Key on outside retracts latchbolt. Inside handle always free.
Stores	3572 X	Key on outside retracts latchbolt. Inside handle always free.

### 3.11.2 Keys

#### 3.11.2.1 Generally

The University maintains a key management policy which is administered by the ECU Manager Security and Traffic Services and is available on request.

Lead Consultant to develop a key schedule in conjunction with ECU Manager Security and Traffic Services, Project Manager Asset Delivery and relevant Campus Manager.

Key Schedule to:

- Follow hierarchy set out in the Asset Delivery Design Guidelines.
- Sub mastering to follow compartments identified in the Security Plan.

Note – key override is not to be provided to access points fitted with electronic access control.

Lock cylinders and keys to new works will be Abloy Protec. If works are within an area covered by the old Lockwood system, advice on system selection is to be sought from the University Project Manager.

Key scheduling will be carried out by the University. Keys from the manufacturer are to be delivered direct to the Campus Managers Office and signed off by a responsible officer of ECU. If key locking is required in the construction process, construction keying is to be utilised.

All buildings to be keyed differently and to be numerically identified.

All general teaching areas within a building to be “keyed alike”.

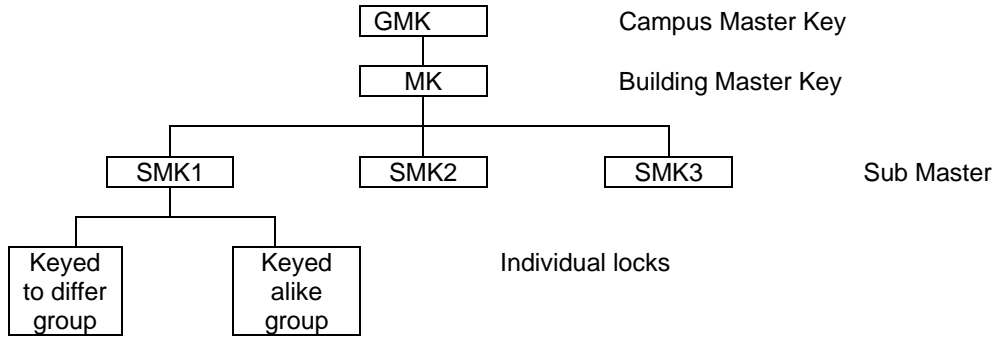
Specialist teaching areas and their stores within a building are to have all doors within responsible school “keyed alike”

All stores not linked to a specialist teaching area are to be “keyed to differ”.

All staff studies are to be “keyed to differ”.

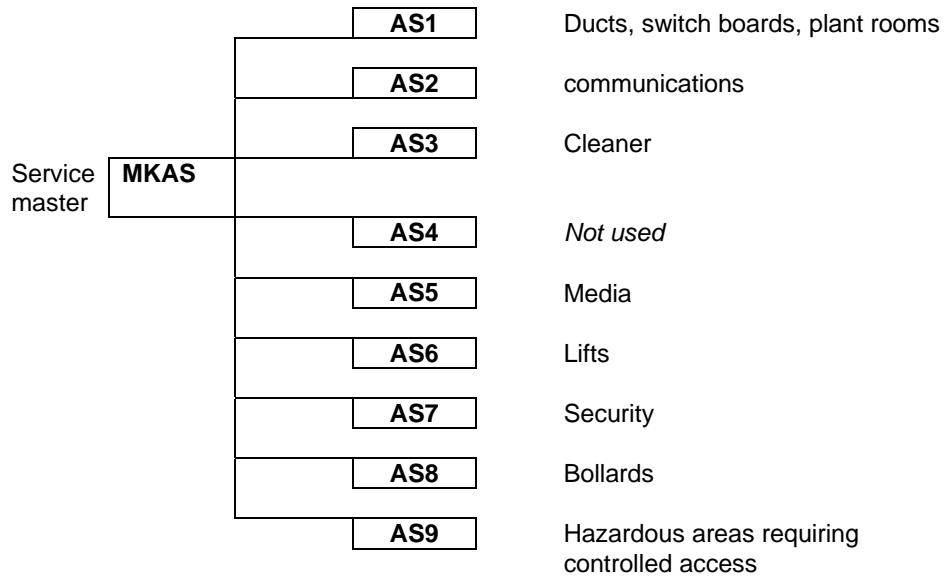
Where more than 6 keys need to be issued for a single door the use of card controlled access is to be considered.

**3.11.2.2 Building Keying System**



System should be configured so that only keys to individual locks need to be issued to building occupants

**3.11.2.3 Service Keying System (Building Fabric.)**



**3.11.2.4 Key stamping Policy**

All keys and cylinders shall be stamped to the following format.

Campus ID	Building No	Sub Master	Individual Lock	(issue)
5	21	3	12	(2)

### 3.11.3 Door Furniture

This clause is to be read in conjunction with section on Design for Persons with Disabilities

Lock furniture shall be Lockwood 1800, 2800 Series satin chrome finish or to match existing. Furniture selection is to comply with University Accessibility guidelines.

Engraved push pull plates are to be provided where required.  
2mm stainless steel kick plates are to be provided in areas of high wheelchair or trolley traffic is expected.

In confined spaces such as toilet cubicles, furniture to be selected to allow door to be removed in an emergency.

In order to provide easier control for people with disabilities all cubicle doors to toilets/showers are to be fitted with Lane M.I.B. (Mortice Indicator Bolt) with extended handle.

All doors which may, during operation, damage adjoining finishes shall be fitted with effective door stops. Fitting of door stops is not to compromise required clear opening dimension.

Acoustic door seals are to be provided where acoustic isolation is required.

Coat hooks are to be provided behind every office and toilet cubicle door.

### 3.11.4 Door Closer

Shall be provided to entrance doors, external doors, lecture theatre doors, plant rooms, toilets, air-locks and fire doors. Type shall be CAM action type approved by the University. Hold open controls are not to be used for security doors or operable leaves in air conditioned spaces unless otherwise directed. Door closers shall be provided to doors which are at the perimeter of an air conditioned zone and must be capable of complying with BCA requirements on door opening force to suit persons with disabilities.

### 3.11.5 Push/Pull Plates and Handles

Shall be provided where required.

### 3.11.6 Kick Plates

Provide a 300mm x 0.9mm satin stainless steel kick plate screw fixed to both sides of doors to toilets, cleaner's rooms, external doors, general teaching areas and laboratories.

### 3.11.7 Hold-Open Devices

Electro magnetic hold open devices shall be provided to all fire-doors in high traffic areas which shall automatically release the door, allowing closure, in the event of any fire or smoke alarm activated at the Fire Indicator Board.

### 3.11.8 Toilet Cubicle Latch Sets

In order to provide easier control for people with disabilities all cubicle doors to toilets/showers are to be fitted with Lane M.I.B. (Mortice Indicator Bolt) with extended handle.

## 3.12 Signage

### 3.12.1 Generally

Signage is divided into the following categories:

**Corporate Signage.** Being Signage which guides people from the campus boundary to a particular building front door.

**Building Signage.** Being signage which guides people from the front door of a building to a particular occupant or facility.

**Statutory Signage.** The contractor shall supply and install all Statutory signage in accordance with the requirements of the BCA.

### 3.12.2 Corporate Signage

*Section to be reviewed*

### 3.12.3 Building Signs

#### 3.12.3.1 Room Number and Room Name Signs

Room number and notation signs shall be type 35mm clear anodised aluminium sign holders using "Rowmark" range engraving stock (black lettering in smooth silver metallic surface).

Door signs to be affixed to face of doors at a height of 1500mm to the underside.

Lettering to be 16mm high Helvetica with first letter of each word to be a capital and all others being lower case.

Plate size to be 500mm long containing 150mm plate for room number and 350mm for notation.

Where two extrusions are required one above the other, they are to be the same length. Where room number is not required, notation plate is to be 500mm long.

(ie) typical sign layout

Campus Registrar	
Dr George Macrides	8.112

The Christian name letter and the first letter of the surname are to be in capitals whilst all other letters are to be lower case. Gender identification is not to be provided.

Where the occupant is a Doctor, Professor or Associate Professor, then the following may, if required, prefix the occupant's name:

(ie) Dr  
Prof.  
Assoc. Prof.

Signs for the following are also to be installed on appropriate staff study doors in association with the occupant's name.

Dean  
Assoc. Dean  
Head of School  
Directors of Divisions  
Managers of Branches

(ie) Manager Operations and System Management

J. Sully

Titles of offices or rooms are also to be installed and examples of such titles are:

Campus Registrar  
 Campus Manager  
 Student Services  
 Cashier

Herewith examples of typical standardised door signs:

Mech. Plant Room	(Service type areas)
Art Education 1	(Specialist type teaching areas)
Switchroom	(Service type area)
Switchboard	(Service type area)
Audio Visual	(Service type area)
Lecture Room	(General type teaching area)
Electrical	(Riser shaft with door)
Cleaner	
Store	
Communications	(Service type riser shaft/cupds)
Tutorial	(General type teaching area)
Fire Hose Reel Symbol	(coiled hose)
Stair	
Plumbing Duct	
Lift Motor Room	
Lecture Theatre 3	
Chemistry Laboratory	(Specialist type teaching area)
Flammable Store	(Specialist type store)

Where fire doors occur then a sign complying with the Building Code of Australia (Section D) is required to be installed. An internal access door leading to a fire isolated exit/stair is required to have sign mounted on the door facing the person seeking egress. Doors leading from a fire isolated exit requires a sign on both sides.

Signs to Lift Motor Rooms are to comply with the Lift Installation Code ("Danger Entry of Unauthorised Persons Prohibited" - in 25mm high Helvetica upper case letters).

### 3.12.3.2 Internal Room Numbering System

Room numbers will be issued by the University Accommodation Planning Manager. It is essential that numbers be determined at the beginning of contract documentation when arrangement of rooms has been fixed.

The following is a general overview only.

Room numbering system to be organised in a clockwise system moving systematically through the building ensuring that dead end pockets are avoided. Room numbering is to be in numeric rather than alpha characters.

Where rooms are accessible from a main space having a room number, then the room number is to be a sub "alpha" notation of the "accessible main space". Only one door per room is to have the room number applied.

Room numbers are to be systematically allocated down one side of corridors and returning up the other side.

The room numbering system is to incorporate the following:

- First two digits reflecting the building number
- Next digit reflecting whether it is ground floor (1), first floor (2), second floor etc.
- Last set of digits to indicate room number

Whenever a room numbering system is being implemented, the following items are required to be duly updated:

Keying Register  
Telephone Directory  
Asset Register

Room numbers are to be applied to the doors of the following spaces:

Teaching areas  
Staff studies  
Stores  
Plantrooms  
Cleaners' areas  
Amenities areas (toilets, changerooms, etc)  
Switchrooms  
Lift motor rooms  
PABX rooms  
Service ducts  
Switchboards  
Small service enclosure cupboard  
Fire Hose Reels

Room numbers are not to be placed on doors to the following:

Lift shafts  
Corridors  
Foyers  
Stairways

Room number will be assigned to the following areas (for Asset Management purposed) but no plates will be provided.

Corridors  
Foyers  
Stairways

### **3.12.3.3 Internal Directional Signs**

Internal directional signs shall be type 110mm clear anodised aluminium sign holders using "Rowmark" range engraving stock (black lettering in smooth silver metallic surface).

Lettering to be 50mm high Helvetica with first letter of each word to be a capital and all others being lower case. Edge margin shall be 30mm.

Plate size to be 500mm long.

### **3.12.3.4 Symbols**

Symbol signs shall be 200mm square clear anodised aluminium sign holders using "Rowmark" range engraving stock (black lettering in smooth silver metallic surface), or to comply with regulatory requirements or standards.

For fire type symbols utilise red instead of black lettering/figure.

Where symbols are used (such as female figure symbol) then room number is to be located under the symbol and be the width of the symbol.

Use standard symbols for signs as follows:

- Female Toilets - figure symbol
- Male Toilets - figure symbol
- People with Disabilities - standard international symbol
- Hose Reels - 200mm x 200mm - plate with coiled hose insignia mounted at right angles to wall and fire extinguisher symbol if applicable

### 3.12.3.5 Internal Signs that are Set 90° to Walls

Engraving laminate to be bonded both sides to a 3mm aluminium sheeting core.

Size of lettering and plates to be as described previously.

Colour to signs to be black lettering in smooth silver plate.

Fixing of signs is to be by utilising masonry anchors through 20mm x 20mm x 1.6mm aluminium angle (painted to match grey of engraving laminate).

Underside of sign to be set 2100mm above floor level.

### 3.12.3.6 Directory Boards

Provide externally and undercover at the main entry (location nominated by University Project Manager) a building directory board.

For legibility campus wide, directory boards shall be standardised. Provide proposal for approval proposal shall match that of adjoining existing buildings

### 3.12.3.7 Braille and Tactile Signage

Braille and tactile signage shall be used where required by the BCA.

All signs including directory boards that are within normal reach, shall be tactile signs.

## 3.13 Waste Management Plan

### Uncleared Land at ECU

An environmental assessment of the site to be cleared in line with the Work Instruction – Bushland Treatments prior to Clearing for Development. This must be done by a third party as nominated by Environmental Services. At least one annual assessment must be undertaken in Spring and will include photo evidence of flora and fauna on site. The completed assessment must be reviewed by Environment Services and Grounds Services. The assessment must include:

- Significant trees and areas of significant value to be maintained.
- Identification of nesting sites and the potential for relocating nesting sites.
- Grass trees suitable for retention and incorporation into the landscape design.
- Flora suitable for transplantation.
- AS4970-2009 must be considered in the assessment.
- Environmental risk assessment must be completed .
- Identification of fauna

The environmental assessment must be integrated into the building design process to ensure that flora to be retained is incorporated with the design of the building.

The site should be checked prior to clearing to ensure there are no protected species such as orchids or animals such as bobtails, snakes, lizards or birds living on that site.

The topsoil is rich in nutrients, organic matter, micro-organisms and could be used in post construction in garden beds and also the topsoil contains a rich supply of seeds that will germinate.

Where trees cannot be retained they should be milled and/or mulched. The mulch is to be used on ECU grounds and in the case of milling timber must be used in the building site.

The development process must be documented for historical purposes

ECU sites for clearing must be directly linked to the masterplan.

- The contractor must implement a Waste Management Plan (WMP) – this must identify the different types of waste to be produced and waste management and minimisation strategies. The WMP must take into consideration the other waste criteria;
- A 60% (by mass) of all construction and demolition waste is to be re-used or recycled (based on the green star rating tool);
- Waste produced in the construction phase must be documented and recorded to be reported quarterly to ECU for the life of the project.

#### **In-buildings-requirements**

- A dedicated storage space for recycling that facilitates the recycling of comingled recyclables and paper/cardboard waste used within the building
  - All bins to be supplied by ECU on request
  - All signage to be supplied by ECU on request – see standard signage section below.
  - Recycling bins must be located within 2-3m of the general waste bin.
  - Recycling bins must be able to handle the recyclable waste produced for the allocated catchment area for one day.
  - Comingled bins are to be located in all kitchen areas and throughout the building where required i.e. other teaching and non-teaching areas.
  - Paper/Cardboard bins to be located next to or near allocated photocopy areas and throughout the building where required i.e. other teaching and non-teaching areas.
  - All bins must be able to have a bin liner placed in them.
  - All bins must be placed in practical, visible, high use areas.
  - Number and placement of bins to be determined by design consultant.
  - Accessibility for collections needs to be considered when designing waste bin areas and the path of travel for moving bins from the storage area to the identified collection point.
- **Suggested Designs for the Different Areas**
  - For Kitchen areas:**
    - For areas of smaller volume – 50L bin as pull out draw under the kitchen bench for general waste and co-mingled waste.
    - For areas of larger volume there are two options:
      1. 50L bin as a pull out draw for general waste and 70L bin as pull out draw for recyclable waste; OR
      2. 50L bin as a pull out draw for general waste and 2 x 50L bins as separate pull out draws for recyclable waste.

**For other teaching and non-teaching areas:**

An area will need to be provided for the following:

- 120L yellow top sulo bin for comingled waste; 120L green top sulo bin for general waste and; 120L light blue sulo bin for paper waste.
- These bins are to be kept together as a station.

- **Other Bin Requirements**

An area will need to be provided for the following bins within buildings:

- Printer and toner cartridges – to be supplied by ECU on request
- Mobile phone and batteries – to be supplied by ECU on request.

**Standardised Signage**

- Both internal and external bins to have the standard signage applied where possible;
- All bins are to have the relevant signage as per below:

**General Waste Signage****Comingled Recyclables Signage****Paper Recycling Signage****External Bin Requirements**

Please see below for the required bins for the different waste types to be used for bins that are located outside of buildings:

- Comingled bins – 120L yellow top sulo bin
- General waste bins – 55L Rim Bin- Street Furniture Australia

**Outside Comingled Recycling Bin****Outside General Waste Bin**

- All external bins are to display the standard signage as above where possible.