

SECTION 5

SPACE PLANNING

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5.0 SPACE PLANNING

5.1 General

Workplace Allocation

The following space standards are to be used to determine the schedule of areas for workplace projects being undertaken at JCU

Where a workplace area accommodates 10 or more Full Time Equivalent (FTE), a gross space allocation of up to 14m² UFA/FTE will be provided. Where the group size is less than 10 FTE, a reduction to 10m² UFA/FTE (gross) or less may be proposed dependent on the availability of other support facilities and approval from Estate Office.

The extent of “enclosed built fit out” (partitions extending to the ceiling) will be assessed on a project-by-project basis but should be used sparingly. Limiting the extent of “enclosed built fit out” serves to optimise an open and flexible workspace. Any variation to this limit will be subject to endorsement by JCU Estate Office.

For all space allocation guidance, see JCU Space Allocation and Management Policy.

Enclosed Offices

Enclosed offices will only be provided where there is a demonstrable functional requirement. An example of a functional requirement is where the majority of a staff member’s time is spent in completely confidential work (such as staff counseling) and access to a shared meeting room is not appropriate.

Where there is a demonstrable functional need supported by a recommendation from the Executive Dean of College/Head of Division, a standard enclosed office of 9-12m² may be provided in accordance with the Enclosed Office fit out and Workstation Services Guide and subject to approval by JCU Estate Office. All space allocation is to adhere to the JCU Space Allocation and Management Policy. This policy details the approved guidelines for space allocation in accordance with entitlement for all JCU employment levels.

Storage

JCU recognises the importance of providing adequate storage for both academic and professional staff.

Where possible, staff should maximise the use of digital storage options provided by JCU. As a supplement to digital storage, new workspace projects will address the provision of adequate physical storage through a range of personal and shared design solutions. These design solutions include:

- Personal storage located at individual workstations and in enclosed offices;
- Shared, team storage/libraries located in areas adjacent to open plan work groups;
- Shared facility and resource hubs located throughout the total workspace; and
- Shared secure storage located where appropriate (this could be off campus).

Workplace Design

University staff will generally be accommodated within a flexible and open workspace comprised of a variety of individual and shared work zones. Flexible, open workplaces with a variety of activity based work zones enable the University to:

- encourage greater collaboration and exchange of knowledge between staff, students and other stakeholders,
- provide a greater level of amenity and choice to all staff in the workplace,
- support a diverse range of end user functional requirements,
- provide more flexible and efficient space that can readily respond to future change,
- reduce whole of life costs and excess material wastage.
- any shelving must be flexible or able to take A4 Folders.

For all detailed entitlement measurements, refer to JCU Space Allocation and Management Policy.

Workplace design shall aim to provide:

- open plan work spaces that encourage interaction and collaboration;
- transparency, maximise natural light and provide an appropriate level of amenity for all occupants;
- internal circulation is preferred to the perimeter or adjacent to other useable space, avoid enclosed and internalized corridors and explore strategies to activate and enliven circulation spaces;
- planning arrangements and designs that best support end user functional requirements with shared common spaces; and
- Flexible spaces that can easily accommodate future change.

Workplace design considerations:

- Plan so workstation's 90 degrees to offices so people aren't being overlooked from behind;
- Max screen height 1350 unless approved by EO;
- Straight desks (no corner workstations) with flexible mobile returns that occupant can hand themselves; and
- Select workstations early in DD phase with user group.

Teaching Space

All new and refurbished general teaching rooms must have a minimum of $2m^2/student$. This applies to all general teaching rooms at JCU including all seminar rooms and tutorial rooms. Other teaching spaces, such as lecture theatres, computer rooms and specialist studios, must be sized so that they are fit for purpose. In accordance with JCU Blended Learning Policy, teaching spaces are to be capable of supporting new pedagogy. See JCU Blended Learning Blueprint for more guidance.

All teaching rooms and student facilities must allow for access by students and staff with disabilities. This requires wheel chair access to all facilities and impacts on the space requirements. Refer also Section 35: Special requirements for Teaching Spaces.

Prior to purchasing furniture for teaching spaces, Project Managers are to engage with EO Space Planning team for guidelines on types of furniture and preferred contractors.

For all identified Common Teaching Spaces, EO managed people counters are to be included in access doorways. Provision to fit people counters to all common teaching spaces must be incorporated in DD. Space Planning Team are to be engaged to site people counters and link contractor to approved vendor for equipment.

Space Reporting Requirement

For all Projects an areas schedule must be provided at the completion of the sketch design stage. The schedule is to have GFA, UFA, UCA and a breakdown of non-usable areas. The format is to be agreed with the Spatial Systems Administrator and Architectural Drafter, Estate Office.

5.2 Floor Module

Base floor modules on 1200mm centres or multiples thereof. This module should correlate with floor, ceiling and other components (especially glazing mullions) for ease of layout. Avoid or minimise the need for relocation of services during fit-out. Column free areas are preferred. Avoid isolated columns that do not relate to a grid. Laboratories and other specialist spaces may require an alternative grid and floor module and will be subject to endorsement by JCU Estate Office.

Foyer size and width of corridors shall be sized to accommodate peak levels of use. Where fire stairs are to be used as communicating stairs, compliant door hold open devices or viewing panels are to be incorporated. Handrails shall comply with BCA and shall be galvanised and not painted in fire stairs.

5.3 Building Areas & Definitions

Building Areas for JCU projects shall be measured in accordance with principles established by the Tertiary Education Facilities Management Association (TEFMA), which are set out as follows.

- All areas are measured in square metres.

Fully Enclosed Covered Area (FECA) – is the sum of all fully enclosed covered areas at all building levels, including basements (except unexcavated portions), floored roof spaces and attics, garages, penthouses, enclosed porches and attached enclosed covered ways alongside buildings, equipment rooms, lift shafts, vertical ducts, staircases and any other fully enclosed spaces and useable areas of the building, computed by measuring from the normal inside face of external walls but ignoring any projections such as plinths, columns, piers and the like which project from the normal inside face of exterior walls.

It shall not include open courts, light wells, connecting or isolated covered ways and net open areas of upper portions of rooms, lobbies, halls, interstitial spaces and the like, which extend through the storey being computed.

Note: Atriums and light wells are only measured at the base level. Do not include the area of the non-existent floor slab at upper levels.

Unenclosed Covered Area (UCA) – is the sum of all unenclosed covered areas at all building floor levels including roofed balconies, open verandas, porches and porticos, attached open covered ways alongside the building(s), useable space under the building(s), unenclosed access galleries (including ground floor) and any other trafficable covered areas of the building which are not totally enclosed by full height walls. The UCA is computed by measuring from the inside face of any enclosing walls, balustrades or supports, but excludes connecting or isolated covered ways and eaves, overhangs, sun shading, or awnings unless they relate to clearly defined trafficable covered areas.

Gross Floor Area (GFA) - is the sum of the Fully Enclosed Covered Area (FECA) and the Unenclosed Covered Area (UCA). $GFA = FECA + UCA (m^2)$

Usable floor Area (UFA) – is the sum of the floor areas measured at floor level from the general **inside** face of the walls of all spaces related to the primary function of the building. This will normally be computed by calculating the FECA and deducting common use areas, service areas and non-habitable areas.

If an area which may be deemed as ‘common use’ or ‘service area’ e.g. entry foyer, tea room, or store room, is included in the briefed Schedule of Areas, then those areas shall be included in the calculation of UFA. Foyers to large Lecture Theatres should be treated as UFA.

In some cases, the UFA may include some external covered areas which relate to the primary function of the building but are not part of the FECA e.g. covered play area for a Child Care Centre, open roofed civil engineering hydraulics-modeling laboratory.

‘Common use area’ includes corridors which are defined by partitions, but do not include passages and secondary circulation areas associated with ‘open plan’ spaces.

‘Non-habitable area’ is the area occupied by internal columns and other internal supports, internal walls and permanent partitions, service ducts and the like.

5.4 Efficiency

Building efficiency for JCU projects is to be computed by dividing the Usable Floor Area (UFA) by the Gross Floor Area (GFA) and expressing the result as a percentage.

The efficiency required by building type shall not be less than the following;

Category	Building Efficiency (Useable Floor Area (UFA) / Gross Floor Area(GFA) x 100)
Science	65%
Humanities	70%
Libraries	80%
Arts	70%
Social Learning	70%
Administration	75%

The design shall minimise the path of travel between different parts of the building, vertically and horizontally.

Ground floor connections to tropical landscapes and learning nodes shall be integrated. Spaces between buildings should provide logical well-designed pedestrian traffic routes, and in particular attractive ‘gathering spaces’ which encourage people to meet, sit, and talk. Suitably lit covered walkways and links to adjoining buildings must be provided.

Safety in Design

Access roads and pedestrian paths are to link and integrate with the main system. Avoid conflict between pedestrian and vehicular routes.

Utilisation

The provision of teaching spaces including room sizes, learning modes, and capacities shall promote a significant improvements in overall space utilisation (refer to TEFMA space utilisation benchmarks by space type).

5.5 Area Schedule

The Principal Consultant shall provide an areas schedule on completion of final schematic design with Gross Floor Area (GFA) and Useable Floor Area (UFA) breakdown for comparing against building efficiency parameters (and for use by JCU Estate Office for planning maintenance and cleaning requirements). The Area Schedule shall be updated as design progresses including For Construction Issue.

Provide a complete room schedule including floor area, floor covering (for cleaning requirements) and space type/function.

5.6 Room Numbering

Room numbers are to be incorporated in the working drawings, door and hardware schedules in the specifications. The accepted numbering is based on zero at ground level ie 1 for level 1, and shall be a three-digit number starting at 001 for rooms.

Building identification codes are used as the prefix to room numbers. The building identification code will be notified in the Project Brief or advised by the Project Manager. At Townsville Campus, buildings are allocated a three-digit number, e.g. the Mabo Library is Building 018. At Cairns Campus, buildings are allocated identification codes consisting of an alphabetic prefix followed by a two-digit number, e.g. the Library is Building B1 and the Student Refectory is Building A25.

Room numbering must be consistent and must be allocated in sequence clockwise from the main entrance (lift, stair or doors). Should a room open from another room rather than directly from a main corridor it shall be suffixed A, B etc. Refer to the examples in Appendix 4 for two illustrations, one of a conventional design with a central corridor and the other of an unconventional design without a single central corridor.

For example, rooms with a building identification code of 045 would be numbered from 045-001 (ground floor, first room in the sequence), 045-002 etc.

Corridors, foyers, stairs, lifts and core areas must also be assigned unique identification codes which will be prefixed by "C" (corridor), "F" (foyer), "S" (stairs), "L" (lift) or "X" (mechanical, electrical, hydraulic rooms not publically accessible).V" (voids), "X" Service cupboards (eg. Fire hose reel)

For example, in Building 045, corridor 1 on the ground floor would be designated 045-C001, and the third corridor on the second floor would be 045-C203. There are examples illustrating this in Appendix 4.

The specifications provide for the supply and installation of engraved signs in approved colours for all access doors with reference to Identification and Signage in Section 5.

For maintenance purposes, JCU Estate Office staff will attach a bar-coded room number or space identification label to the top of each door frame or space (as described in Identification and Signage in Section 5). This is done on both Townsville and Cairns Campuses.

Consultants and contractors are reminded that room numbering changes that occur as a result of building renovations must be adjusted, replaced or in general made good by the renovation project.

5.7 Universal Design (Equity)

Design teams for major JCU projects must include an accredited DDA specialist with extensive experience in all aspects of access consultancy and disability management services.

The NCC accessibility requirements, and the current AS1428 series (Access for Design & Mobility), shall be incorporated in the design, **however the approach to disability access shall be best practice, and go above-and-beyond these minimum standards.**

Lifts shall be designed into all multi-level buildings and shall conform to all relevant existing and pending Codes and requirements for persons with disabilities.

A safe vehicular pick up/set down area shall be located in close proximity to the main entry and be accessible to the main entry for people with disabilities without segregation from other users.

Buildings shall include appropriate design features where manual handling tasks will be a regular component of building user activities. Fitting out the building is to be undertaken using similar planning with an emphasis on flexibility for future use.

Queensland WH&S statutes require adequate areas and air space, and an acceptable solution is to provide a minimum of 2.3 square metres of unencumbered floor space per person.

Workstations and workstation furniture shall accord with the provisions of the current AS 3590 series, 4442, 4443. Design for access and mobility shall accord with the current AS1428 series and *Disability (Access to Premises – Buildings) Standards 2010* (Cth).

Equity & Social Justice

JCU has an Equity policy and encourages others to follow suit. The Equity policy of each Consultant and Contractor may be evaluated as part of the selection criteria for awarding commissions and contracts.

JCU requires that Consultants and Contractors comply at all times with their obligations under Anti-discrimination and Sexual Harassment legislation. Consultants and Contractors must use their best endeavors to provide employment for Aboriginal and Torres Strait Islander people. The submission of a policy on this issue may be required for evaluation as part the selection criteria for awarding commissions and contracts. Where an obligation in this matter is conferred on the Consultant or Contractor through the Conditions of Tender or Agreement with JCU, the Consultant or Contractor shall ensure that their Sub-consultants or Subcontractors also comply with this obligation.

Consultants and Contractors must comply with their obligations, if any, under the *Affirmative Action (Equal Employment opportunity for Women) Act 1986*, and not enter into any agreement or contract with a sub-consultant or subcontractor who has been named by the Director of Affirmative Action as a non-compliant employer under the Act.

5.8 Allocation & Design Standards by Room Type

TEFMA RT Code	TEFMA Room Type Description	JCU Space Type Code	JCU Space Description
	Office Accommodation		

101	Office / Open Plan Faculty Staff	O-OFFL, O-OFFM, O-OFFO	Enclosed Office, Shared Office, Open Plan Office
102	Office / Open Plan Research Staff	O-OFFL, O-OFFM, O-OFFO	Enclosed Office, Shared Office, Open Plan Office
103	Office / Open Plan Honours / Post Grad Students	O-OFFL, O-OFFM, O-OFFO	Enclosed Office, Shared Office, Open Plan Office
104	Office / Open Plan Technical Laboratory or Store	O-OFFL, O-OFFM, O-OFFO	Enclosed Office, Shared Office, Open Plan Office
105	Office / Open Plan Professional Staff	O-OFFL, O-OFFM, O-OFFO	Enclosed Office, Shared Office, Open Plan Office
106	Office / Open Plan Category undefined	O-OFFL, O-OFFM, O-OFFO	Enclosed Office, Shared Office, Open Plan Office
107	Office / Class Room / Teaching Studio (i.e. Music) (informal teaching, predominantly an academic office)	O-OFFL, O-OFFM, O-OFFO	Enclosed Office, Shared Office, Open Plan Office
108	Office / Open Plan Administration	O-OFFL, O-OFFM, O-OFFO	Enclosed Office, Shared Office, Open Plan Office
	General Timetabled Teaching Space		
200	Informal learning spaces such as Courtyard areas etc - external	X-UCA	Unenclosed <u>Covered</u> Space (Refer 5.3: Covered/Uncovered space)
201	Lecture Theatre (>100) Stepped floor – raked seating. Incl area at the front of theatre.	T-CLEC	Tiered Lecture Theatre
202	Lecture room / Seminar / Tutorial / Classroom (15 < 70 seats – flat floor)	T-CLAC, T-CLAD	Classroom Common, Classroom Department
202	Case Study Theatre (70 < 100)	T-CLEC	Tiered Lecture Theatre
203	Seminar service room – General teaching area – Lecture Theatre	T-CLAC, T-CLAD	Classroom Common, Classroom Department
204	Teaching area – not defined	N/A	
	Laboratories		
300	Laboratory Student Information – Commons - Computing	T-COMG	GATCF Lab
301 404	Scientific / Medical / Engineering Laboratory – <i>Undergraduate</i> including fume hood store and prep area	T-LBUW	Undergrad Teaching Lab - Wet
303	Laboratory – Drawing Office – Architecture / Engineering / Design	T-SPEC	Specialist Teaching Space
304	Laboratory Computing Undergrad (Provides for disabled access)	T-COMG / T-COMF	GATCF Lab / Faculty Computer Room
305	Laboratory Computing Postgrad (Provides for disabled access)	T-COMG / T-COMF	GATCF Lab / Faculty Computer Room
306	Laboratory – Audio Visual Teaching Room	T-SPEC	Specialist Teaching Space
307	Laboratory – Clinical areas – Psychological & Anthropology. For training students in the examination and treatment of people or animals.	T-LBUW	Undergrad Teaching Lab - Wet

308	Laboratory – Gymnasium Human Movement Dance	T-SPEC	Specialist Teaching Space
309	Laboratory – Language & Statistics. Used for training students in a language other than their native language	N/A	
310	Music Practice Rooms – Teaching (Single use rooms)	T-SPEC	Specialist Teaching Space
311	Laboratory – Undergraduate training – non scientific	T-LBUD	Undergrad Teaching Dry
312	Laboratory Facility – research only	R-LPC1, R-LPC2, R-LPC3	Research Lab – PC1, Research Lab – PC2, Research Lab – PC3
	Studios		
313	Drawing studios, Architecture, Town Planning, Engineering	T-SPEC	Specialist Teaching Space
314	Design studios - postgraduates	T-SPEC	Specialist Teaching Space
315	Sculpture, Metal Studio, Store	T-SPEC	Specialist Teaching Space
316	Ceramics Studio, Store	T-SPEC	Specialist Teaching Space
	Ancillary Area		
400	Ancillary area with specific type not defined	N/A	
401	Ancillary Area – Laboratory service preparation	T-LBPR	Prep-Room
402	Ancillary Area – Instrument room	T-LBPR	Prep-Room
403	Workshop within a laboratory	O-WKSP	Workshop
403 404	Heavy Engines, Machine Tool and similar. Store and Prep area	T-LBPR	Prep-Room
403 404	Strength of materials, electrical machine, building Store and prep area.	T-LBPR	Prep-Room
404	Ancillary area – store and prep areas	O-STO	Storage Space
405	Ancillary area – display area, museum	L-LIBF, L-LIBU	Library Faculty, Library University
406	Ancillary area - glasshouse	N/A	
407	Ancillary area – Animal accommodation	T-SPEC	Specialist Teaching Space
408	Ancillary area – Mailroom – Goods receipt - Dispatch	O-WKRM	Workroom
409	Ancillary area – Flammable Liquid Store	O-STO	Storage Space
410	Ancillary area – Constant temp room	T-LBPR	Prep-Room
411	Ancillary area - Darkroom	T-SPEC	Specialist Teaching Space
	General Facility		
600	General facility - type not defined	N/A	
601	Committee Conference, Meeting room	O-MEET	Meeting Room

602	Service room for above meeting etc	N/A	
603	Printing, Photocopier room	O-COPY	Copy/Equipment Room
604	Common Room	N/A	
607	Dining Hall, Café, Canteen (internal)	O-LUN	Lunch Room
608	Kitchen, Service, Food Storage	O-LUN, O-PANT	Lunch Room, Pantry Space
609	Lounge / Recreation Room	N/A	
610	Indoor Sporting Facility	N/A	
611	Commercial or business facilities	C-CAFÉ, C-CON, C-SHOP, C-SUPP	Cafeteria, Consulting Rooms, Shop, Support Space / Offices
612	General facility – theatre. Used for dramatic, music and film presentations not associated with teaching	N/A	
613	Great Hall or large flat floor assembly area. Used for examinations	N/A	
614	Dressing rooms / Theatrical Gymnasium	X-CHANGE	Change Room
614	Music practice rooms – used in conjunction with theatre	N/A	
615	Medical Facility – Where medical and counselling services are available to staff and students	C-CON	Commercial Consulting Rooms
616	Careers and Employment Centre	N/A	
617	Child Minding Centres	N/A	
618	Religious Meeting Place	N/A	
	Information Service - Library		
500	Information service category – not defined	L-LIBU	Library - University
501	Reading Room	L-LIBU	Library - University
502	Private Study	T-STUD	Study Room
503	Audio Visual Room	L-LIBU	Library - University
504	Open Stack	L-LIBU	Library - University
505	Closed Stack	L-LIBU	Library - University
506	Compact Stack	L-LIBU	Library - University
507	Remote Stack	L-LIBU	Library - University
508	Library Service – Area accommodating staff in areas such as Reader Service, Reference Services, Cataloguing, Acquisitions	L-LIBU	Library - University
509	Department Library. E.g. Special Collection	L-LIBF	Library Faculty
510	Local Computer Room	T-COMG	GATCF Lab
	Student Residential Accommodation		
701	Staff	A-PRRM	Private Room
702	Head or Chief Executive	A-PRRM	Private Room
703	Caretaker, Curator	A-PRRM	Private Room
704	Accommodation - Apartment	A-PRRM	Private Room
705	Bed Study	A-PRRM	Private Room

706	Lounge	A-SHRM	Share Room
707	Dining / Kitchen	A-KITC	Residential Kitchen
708	Ablutions	A-BTRM	Residential Bathroom
709	Laundry	A-LDRY	Residential Laundry
710	Common Room	A-COMM	Common Room
711	Tutor / Warden suites (kitchen/living/study/bed/bath & toilet)	A-PRRM	Private Room
	Non Usable Area Floor Area		
800	Not specifically defined	X-CORE	Building Core
801	Circulation	X-CIRC-P, X-CIRC-S	Primary Circulation, Secondary Circulation
802	Tearoom	O-LUN	Lunch Room
803	Toilets & Restrooms	X-TOILET	Toilet
804	Change & Shower Rooms	X-CHANGE	Change Room
805	Cleaner's Room	X-CLEAN	Cleaner
806	Garage & Loading Bay	X-WKSP	Workshop Area
807	Mechanical Plant Room	X-MECH	Mechanical Room
808	Mechanical Service Riser	X-MECH	X-MECH
809	Substation	X-MECH	X-MECH
810	Switch Rooms	X-ELEC	Electrical Room
811	Electrical Riser	X-ELEC	Electrical Room
812	Communication Riser	X-ICT	Information & Comms Tech
813	Data Riser	X-ICT	Information & Comms Tech
814	Hydraulics Riser	X-CORE	Building Core
815	Fire Service Riser	X-CORE	Building Core
816	Lift Motor Room	X-MECH	Mechanical Room
817	Other Plant Room	X-MECH	Mechanical Room