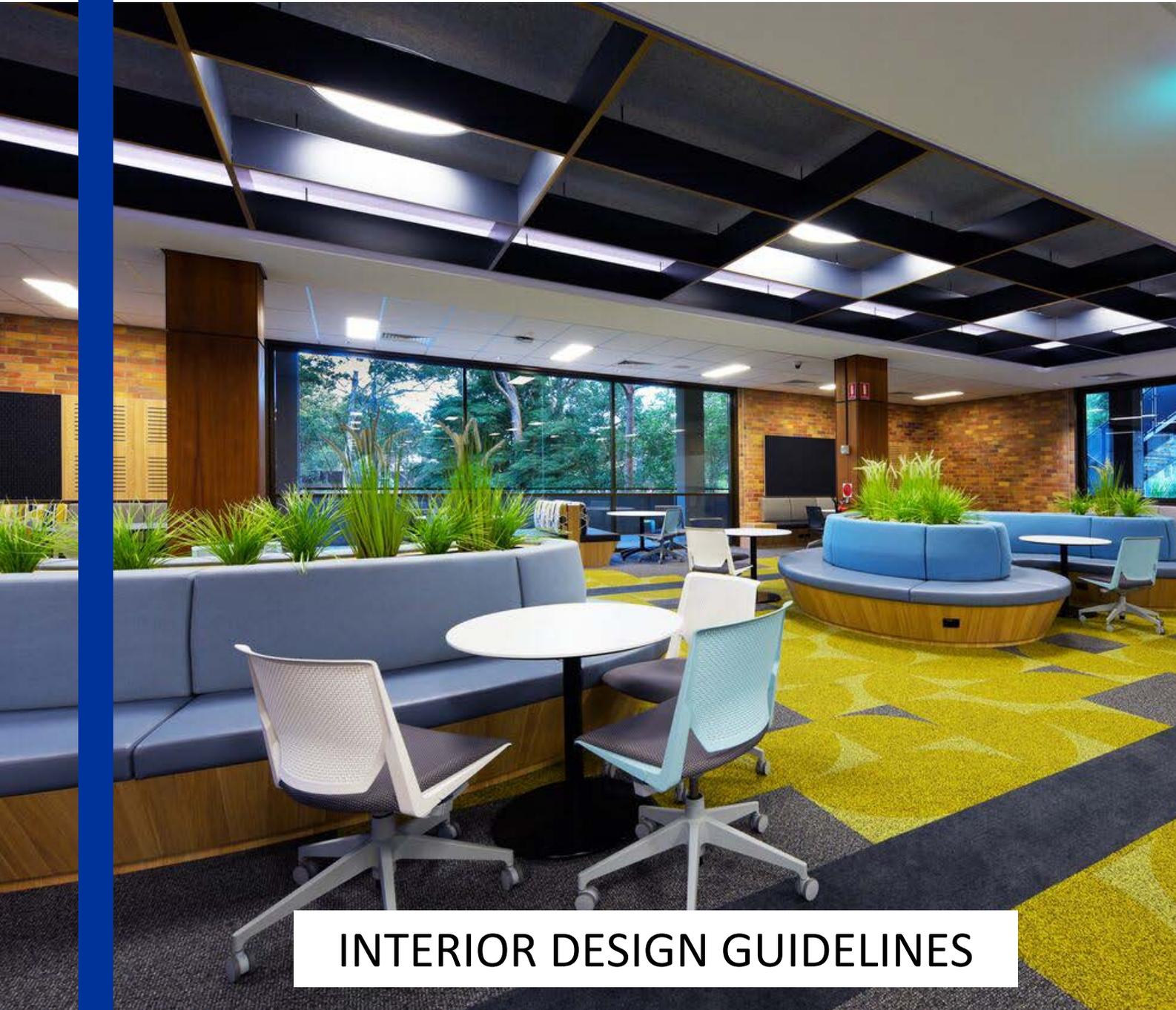




THE UNIVERSITY OF
NEWCASTLE
AUSTRALIA



INTERIOR DESIGN GUIDELINES

Version No: v1.0

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1 INTRODUCTION

These Interior Design Guidelines set out the University of Newcastle's principles, minimum requirements and standards to be applied for both refurbishment and new building projects. This manual refers to internal fitout only, it does not cover issues relating to the base building shell, except where building services directly impact the fitout.

2 WHEN TO USE THIS MANUAL

This manual is to be used by University Infrastructure and Facilities Services (IFS) staff, appointed consultants and contractors responsible for the planning, management and operation of internal fitouts for Class 5, 6, 7, 8 or 9 Buildings as per the Building Code of Australia (BCA);

- The recommendations made in this document are to apply to all internal fitouts, where relevant.
- This guideline should be referred to in the planning of new or refurbishment of existing accommodation.
- These guidelines are applicable to all space owned, operated, leased or licenced by the University.

3 OBJECTIVES

The aim of the University's Interior Design Guidelines is to facilitate a consistent approach, level of quality and accessibility, with adherence to Work Health and Safety (WH&S) requirements, across the University's estate. Individual projects should still have distinctive design solutions, within the parameters set out in this document.

- The implementation of the standards outlined in this manual should ensure the design of internal fitouts meet with the principles outlined in the University's Space Management Policy.
 - Fitout design should meet the University's Space Management Allocation Guideline and Procedure (SMAGP) including; workspace design, teaching and laboratory spaces.
- The adaptability of the fitout is also paramount, to ensure efficient planning and response to future change.
- Furniture, Finishes and Equipment (FF&E) specified should meet the required quality and WH&S provisions.
- In the event that a project seeks exception for any items that are relevant to this Guideline, approval should be sought from the Deputy Director Campus Development, IFS.

4 DESIGN PHILOSOPHY

The University is seeking to provide flexible, collaborative, comfortable and contemporary teaching, research and working environments to improve both the student and staff experience. The overall aesthetic should be light and open, with planning that supports collaboration, innovation and equity.

The design should meet with the University's values;

- Equity: Our commitment to equity and inclusiveness for access and success in higher education is fundamental to everything we do.
The University's Access Design Guidelines should be referred to, in areas with fixed furniture, allowance needs to be incorporated for wheelchairs users.
- Excellence: We pursue the exceptional and strive for innovation in our teaching, research and operations.

- Engagement: Our staff, students, alumni and communities are deeply connected to the challenges and opportunities in each of our regions and beyond.
- Sustainability: We are ethically minded and prioritise responsible management of our environment and financial resources.

The University's Environmentally Sustainable Design Guidelines should be referred to.

The underlying aims of the fitout design are;

- Design adaptability will be achieved through the implementation of a modular floor layout with the use of free standing furniture, where possible, to enable the timely and cost effective implementation of churn works. Sizing of built infrastructure, such as meeting rooms, quiet rooms and offices should be aligned, where possible, to promote future flexibility.
- General office accommodation will be an open collaborative environment, the built zones should be located adjacent to the core of the building, with the use of low height workstation screens and a minimal amount of fixed/full height partitions, promoting improved airflow and the transfer of natural light throughout the floor.
- The values of good ergonomic design will be implemented to ensure Work Health and Safety (WH&S) requirements are met.
- Equity for access and amenity will be achieved through the application of the Disability (Access to Premises – Buildings) Standards 2010 and the principles of Universal Access, to guarantee facilities which are equitable and accessible.
- Acoustic and visual privacy will be a key design objective.
- Security will be maintained at reception and foyer areas, as appropriate. If additional security is required, for the storage of specialist equipment etc., this can be achieved through the provision of secure rooms within the general workspace.
- Environmentally Sustainable Design (ESD) will be targeted, with adherence to a Green Building Council of Australia Green Star (GBCA) rating, where appropriate.
- Resource equipment, such as photocopiers and printers, should be located in dedicated utility areas. This will maintain optimum environmental conditions within the open office environment.
- Flexible meeting spaces will be provided in a range of sizes and configurations, to allow ease of access.
- Informal meeting spaces/ breakout/ kitchenette facilities will be incorporated, preferably on the external facade, to create enjoyable amenity spaces for students and staff.
- General storage will be incorporated in the utility areas wherever possible and along workspace corridors, for ease of access. Personal storage will be located adjacent to the workspace.

5 AUSTRALIAN STANDARDS THAT APPLY

All University fitouts will comply with the relevant Australian Acts and Standards including, but not limited to;

- National Construction Code (NCC)
- Work Health and Safety Act
- Disability (Access to Premises – Buildings) Standards 2010
- National Australian Built Environment Rating Scheme (NABERS)
- Environmental Protection Act
- Equal Opportunity in Public Employment Act
- Anti-Discrimination Act
- Human Rights and Equal Opportunities Act
- Fire Safety Act
- National Code of Practice for the Construction Industry Act

- Heritage Buildings Protection Act
- Tertiary Education Facilities Management Association (TEFMA) Space Planning Guidelines, Edition 3
- National Construction Code of Australia Volume 1 (Class 2 to Class 9 buildings)
- Australian Standard AS1428.1 -2009, Design for access and mobility – General requirements for access – New building work
- Australian Standard AS 1428.2-1992, Design for access and mobility – Enhanced and additional requirements – Buildings and facilities
- Australian Standards for Laboratory Construction, AS/NZS 2982 and Laboratory Safety, AS/NZS 2243 Parts 1 to 10
- Education Services for Overseas Students (ESOS) Act 2000

6 UNIVERSITY OF NEWCASTLE STANDARDS

The table below lists the standards/guidelines to be referred to when conducting any design or construction work for the University. Consultants and contractors should seek access to the standards relevant to a particular project from the nominated IFS project representative.

Please refer to the checklist located at Appendix A.

Table 1. UON Standards

#	Name	Version
1	Lock Hardware, Cylinder & Key Standards	2
2	CCTV Specification	G
3	Project Briefing Document - Engineering Services Design	2.1
4	Environmentally Sustainable Design – Project Briefing Document	2
5	Telecommunications and Data Cabling Technical Specification	Feb 2018
6	Guidelines for the Design of Vertical Transportation Services	2
7	DELETED	
8	Public Domain Manual	April 2015
9	Electronic Security Systems	2.5
10	Signage Guidelines	May 2018
11	Conservation Management Plans – Architecture Building (A) University Club (SH) Northumberland House (NH) University House (UNH) University Union (US)	Various
12	Bushfire Management Plan	2
13	Placemaking Guidelines	Not identified
14	Space Management Policy	May 2016
15	Space Management and Allocation Guideline and Procedure	May 2016
16	Landscape Management Implementation Plan, Callaghan Campus	Sept 2012
17	Internal Office Design - Waste Stations	2.1
18	Project Briefing Document - Project Handover Guideline	1.3
19	UON-ESS-101 General Electrical Specification	1.2
20	UON-ESS-102 Distribution Board Specification	1.1
21	UON-ESS-103 External Lighting Spec	1
22	UON-ESS-104 Emergency Escape Lighting and Illuminated Exit Signage	1.1
23	UON-ESS-105 Electrical Preferred equipment list	1.2

24	UON-ESS-106 Generators and Emergency Power Supplies	1.1
25	UON-ESS-111 Interior Lighting and Control	1.1
26	UON-ESS-112 Main Switchboard Specification	1.1
27	UON-ESS-100 Specification Index	1
28	Access Design Guidelines	1
29	ESD Guidelines Tool – Functional Description ESD Guideline Tool	1
30	Interactive Technologies Systems Standards and Specifications	2.0
31	Small Zoom meeting room – Standard	V1.0.4
32	Medium and Large Zoom meeting room – Standard	V1.0.5
33	CAD Drafting Standard	V1
34	Tree Management Procedure Callaghan Campus	V2.2
35	Project Briefing Document – Post-Completion Maintenance and Defects Management Procedure	1.0 Draft
36	Supply and Installation of Photo Voltaic Array	V1
37	Electric Sit-stand Workstations	V1

7 UNIVERSITY OF NEWCASTLE INTERNAL COORDINATION

Other University Business Units should be consulted, where relevant, to ensure a coordinated approach, these include but are not limited to; IT Services, Security, Operations & Maintenance.

8 SPACE MANAGEMENT ALLOCATION GUIDELINE AND PROCEDURE

8.1 INTRODUCTION

The Space Management Allocation Guideline and Procedure (SMAGP) has been developed to support the Space Management Policy.

8.2 SCOPE

The SMAGP will be applied when:

- i. Defining proposals for new space allocation
- ii. Defining proposals for refurbished space
- iii. Defining proposals for additional space
- iv. Reviewing existing space allocations
- v. Evaluating space requests.

8.3 INTENT

The intent of the SMAGP is to provide space standards and procedures to be applied in accordance with the scope of this document. The space allocations identified in the SMAGP provide guidance for planning purposes. The SMAGP provides the minimum space standards to be applied in the design and reconfiguration of facilities and seeks to provide the necessary flexibility to meet the needs of the University, staff and students.

8.4 SPACE PLANNING ALLOWANCES

8.4.1 Workspace design criteria

The following criteria are applicable to the design of workspaces:

- i. Consultation: The design of work environments will be undertaken in consultation with affected staff.
- ii. Natural light: individual workspaces should be located near the perimeter of the building where possible to promote access to natural light. Private offices should be located within a central core of a building and away from external building windows.
- iii. Multiple work modes: a suitable variety of ancillary spaces should be provided to support different modes of work and to encourage collaboration. These spaces should include quiet rooms, meeting rooms, consultation rooms and informal breakout areas. The zoning and interconnectedness of these space should be clearly identified when defining a proposal.
- iv. Confidentiality: access to office and research space by students and visitors should be managed through provision of ancillary spaces such as shared and bookable meeting spaces. Where possible these space should be positioned outside of the primary office and research space.
- v. Flexibility: workspace design should facilitate the co-location of teams, research groups and discipline groups where possible.
- vi. Adaptation and growth: workspace design should be flexible and allow for cost effective change and adaptation. The use of fixed joinery and the provision of private offices should be minimised.
- vii. Access to shared resources: access to ancillary facilities such as lunch rooms, toilets, printing and waste disposal areas should be shared between organisational units.
- viii. Access to meeting space: meeting spaces should be shared across the University and should be made bookable by any staff member. This will be necessary to ensure that small teams and units have access to appropriate ancillary spaces.
- ix. Proximity to laboratories: the workspace of academic and research staff should be located in proximity to their laboratory workspace where possible.
- x. Access to teaching spaces: access to all teaching spaces is shared. New and refurbished teaching spaces should be centrally timetabled and available for shared access via the University timetable system.
- xi. Private offices: the frontage of private offices space should include at least 50% glazing to promote access to natural light and transparency.
- xii. Security: academic and research teams should be accommodated in workspaces that are appropriately partitioned at the perimeter to provide a secure environment. Suitable ancillary space and secured printing should be provided to facilitate confidential work.
- xiii. Storage: lockable storage should be provided in under-desk drawer units and book storage areas provided based on need. Larger storage furniture should be minimised and located in shared collaborative space where possible.
- xiv. Furniture: a standard suite of furniture should be used to reduce waste and minimise the University's environmental impacts.
- xv. Environmental controls: control which allow user adjustment of temperature, ventilation and light are encouraged.
- xvi. Environmental noise: workspaces should be designed to include noise abatement measures wherever possible.
- xvii. Technology: appropriate levels of technology should be provided to support the function of each workspace.

8.4.2 Space Allocation Specifications

The following specifications are applicable to the allocation of staff accommodation:

- i. Staff and student numbers are to be based on Full-Time Equivalent (FTE) and Equivalent Full Time Student Load (EFTSL) respectively.

- ii. Casual or fractional staff below 0.8 FTE will typically be required to share a workspace and should only be provided with a dedicated individual workspace where the faculty or division can demonstrate an ongoing need.
- iii. Space planning allowances identified within Section 4 of the SMGAP may require variation by up to 25% due to physical or structural constraints of existing buildings.
- iv. An additional allowance of up to 30% should be made for the purpose of internal circulation where required.

8.4.3 Professional and Teaching staff accommodation

The following space allocations provide guidance for planning purposes:

Table 2. Professional and Teaching Staff accommodation

Occupancy type	Type of space	Allowance	Comment
Chief Operating Office or equivalent	Private office	20 m ² /FTE	
Unit Director or equivalent	Workspace or private office	12 m ² /FTE	Unit Directors will typically be located in a workspace environment however a private office will be available subject to need.
All other professional and teaching staff	Workspace	6 m ² /FTE *	Workspace desk module 1800 mm x 750 mm. See solo work zone in Diagram 1 Allowance includes dedicated solo work zone of approximately 3.15m ² , and contribution of 2.85m ² to shared collaborative zones.
* The above space allowances incorporate an additional allowance for ancillary space. As such the full space allocation will not to be assigned to each individual workspace.			

8.4.4 Academic, Research and Postgraduate accommodation

The following space allocations provide guidance for planning purposes:

Table 3. Academic, Research and Postgraduate accommodation

Occupancy type	Type of space	Allowance	Comment
Vice-Chancellor	Private office	24 m ² /FTE	
Deputy Vice-Chancellor	Private office	20 m ² /FTE	
Pro Vice-Chancellor	Private office	15 m ² /FTE	May elect to be part of the workspace environment
Head of School or equivalent	Private office	15 m ² /FTE	May elect to be part of the workspace environment

Level D - E	Private office	9 m ² /FTE	May elect to be part of the workspace environment
Level A - C	Workspace	8 m ² /FTE*	2500 mm x 2500 mm workspace module, typically containing a desk, book shelving, privacy screens & acoustic boards. See solo work zone in Diagram 2. Allowance includes dedicated solo work zone of 6.25m ² , and contribution of 1.75m ² to shared collaborative zones.
Post graduate space	Workspace	4.5 m ² /student*	Workspace desk module 1500 mm x 750 mm Allowance includes dedicated solo work zone of approximately 2.6m ² , and contribution of approximately 1.4m ² to shared collaborative zones.
* The above space allowances incorporate an additional allowance for ancillary space. As such the full space allocation is not to be assigned to each individual workspace.			

8.4.5 Ancillary space

The following specifications are applicable to ancillary space:

- i. Access to ancillary spaces is to be shared and guided by the allowances in the table below.
- ii. Small units of staff may not always be provided dedicated or allocated ancillary spaces, and access to space will need to be shared.
- iii. Reduces rates of ancillary spaces should be applied where an area is primarily comprised of private offices
- iv. Space planning allowances for ancillary office space have been incorporated within the square metre allowance for individual workstations. A separate space allowance for ancillary office space should therefore not be required.

The following space allocations provide guidance for planning purposes:

Table 4. Ancillary space

Type of space	Rate of provision	Comment
Quiet room	1 per 10 workspace	Typically 4 to 6 m ² for each room. Space provides for private telephone calls or short periods of quiet work. Typically accommodates one or two staff

Small meeting/ interview room	1 per 20 workspace	Typically 9 - 12 m ² for each room. Typically accommodates four to six staff.
Touch down desk	1 per 50 FTE	Typically 1500 mm x 750 workspace desk included in a shared office. A touchdown design is suitable roving staff.
Large meeting/ conference room	1 per 75 FTE	Typically 28 m ² for each room and can accommodate fourteen staff.
Informal work spaces, and collaborative spaces not noted above	Preferably within every work environment	Includes break out spaces and areas for informal collaboration and discussion. The spaces should be located within suitable proximity to teams to promote collaboration.

Note: Refer to Item 8 for Particular Ancillary Space Requirements.

8.4.6 Teaching spaces

Teaching space allowances noted below are high level allowances only. Teaching space is affected by pedagogy and technology and requires validation through design development.

The following space allocations provide guidance for planning purposes:

Table 5. Teaching spaces

Type of space	Allowance
Flat floor teaching spaces – traditional level of technology	2 m ² / student
Flat floor teaching spaces – collaborative learning with enhanced level of technology	3 m ² / student
Tiered floor teaching spaces – traditional level of technology, with fixed seating	1.5 m ² / student
Tiered floor teaching spaces – collaborative learning with enhanced level of technology	2.5 m ² / student
Informal learning	0.25 m ² / student
Specialised learning spaces	2 m ² / student as a nominal minimum. Space allowances are impacted by the nature of specialised learning and are subject to design development. Specialised learning areas include drawing studios, design studios, workshops and simulation labs and teaching spaces with specialised facilities that are generally targeted

	to limited disciplines.
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8.4.7 Laboratories

Laboratory allowances noted below are high level allowances only. Laboratory space allowance is highly variable by discipline and subject to design development.

The following space allocations provide guidance for planning purposes:

Table 6. Laboratories

Occupancy type	Allowance for lab space only	Comment
Research – wet lab	8.4 m ² / FTE	1800 mm long x 730 mm deep bench per staff station (excludes ancillary spaces)
Research – dry lab	7 m ² / FTE	1800 mm long x 730 mm deep bench per staff station (excludes ancillary spaces) or equivalent
Teaching – wet lab	5 m ² / student	Based on flexible student stations arranged around fixed service posts or hangers.
Teaching – dry lab	5 m ² / student	Based on flexible student stations arranged around fixed service posts or hangers.

Ancillary spaces, to support laboratories, are not included in the above allowances. The space loading of ancillary spaces for laboratories is variable by discipline and subject to design development.

9 ANCILLARY SPACE REQUIREMENTS

9.1 MEETING ROOMS

Meeting rooms should be at convenient locations throughout the floor, to ensure all staff have equitable access to meeting spaces. The location of the meeting rooms should be considered in terms of the use of these facilities by people outside of the University, as such they should be located close to main entry points.

Glazed sections and/ or door viewing panels should be incorporated in meeting, quiet and consult rooms.

9.2 QUIET ROOMS

Quiet rooms should be provided to facilitate concentrated work or private phone conversations. It is recommended that a quiet room include the following;

- 1 x desk and chair to allow work to be undertaken.
- 1 x visitors chair, where appropriate.
- 3 x double GPO's and 2 x Data Outlets.
- Phone with speaker capacity.
- Glazed partitioning should be used to optimise natural light transfer. This glazing should be treated with translucent film or decal, to provide a level of privacy.
- Base Building Air-conditioning provisions should be adequate for small meeting rooms with an occupancy level of less than 6 people.
- The acoustic rating to be targeted for these meeting rooms is sound transmission performance of 50 dB Dw and a reverberation performance of RT 0.4 to 0.7 seconds
- No booking functionality required.

9.3 SMALL MEETING/INTERVIEW ROOMS

Small meeting rooms are to accommodate a minimum of 4 people and are to be of a modular design, providing acoustic and visual privacy. The size of the small meeting rooms should be a minimum of 9m² to ensure inbuilt flexibility, in terms of the ability to repurpose these spaces as offices if required. It is recommended that a small meeting room include the following;

- 1200mm diameter meeting table with 4 meeting chairs, as a minimum, the table is to have a laminate finish. This is a guide only as the exact table size and number accommodated will vary with the size and proportion of the room.
- 600mm diameter phone table, also with a laminate finish (only if the room is not zoom enabled).
- 3 x double GPO's and 2 x Data Outlets.
- Phone with speaker capacity (only if the room is not zoom enabled).
- Whiteboard, glass magnetic.
- Glazed partitioning should be used to optimise natural light transfer. This glazing should be treated with translucent film or decal, to provide a level of privacy.
- Base Building Air-conditioning provisions should be adequate for small meeting rooms with an occupancy level of less than 6 people.
- The acoustic rating to be targeted for these meeting rooms is sound transmission performance of 50 dB Dw and a reverberation performance of RT 0.4 to 0.7 seconds
- No booking functionality required.

If the room is to be Zoom enabled, additional AV, power and acoustic provisions will be required – refer to *UON Small Zoom Meeting Room Standards*.

- *Zoom control panels should be flat mounted.*
- *No phone is required if the room is zoom enabled.*

Refer Figure 1. Indicative plan of a small meeting room on the next page.

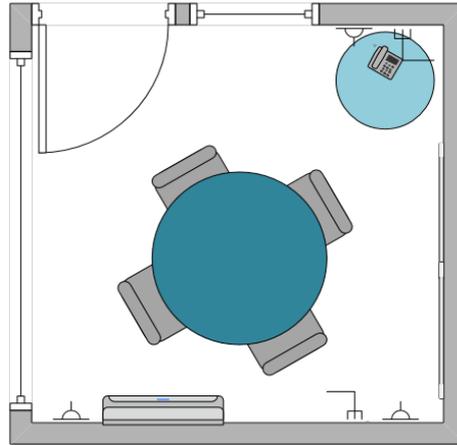


Figure 1. Indicative plan of a small meeting room.

9.4 MEDIUM MEETING ROOMS

Medium sized meeting rooms are to accommodate a maximum of 6 to 12 people and are to be of a modular design, providing acoustic and visual privacy. The size of the medium meeting rooms should be minimum of 18m², wherever possible to ensure inbuilt flexibility, in terms of the ability to repurpose these spaces if required. It is recommended that a medium meeting room include the following;

- Minimum 1500mm x 1800mm meeting table with 8 meeting chairs, the table is to have a laminate finish. This is a guide only as the exact table size and number accommodated will vary with the size and proportion of the room. Larger meeting table sizes are preferably composed of more than one meeting table, to allow flexibility in the use and configuration of the room.
- 600mm diameter phone table, also with a laminate finish (only if the room is not zoom enabled).
- 3 x double GPO's and 3 x Data Outlets.
- Phone with speaker capability (only if the room is not zoom enabled).
- Whiteboards, glass magnetic.
- Glazed partitioning should be used to optimise natural light transfer. This glazing should be treated with translucent film or decal, to provide a level of privacy.
- Supplementary air-conditioning units will be required for meeting rooms with an occupancy level of more than 6 people.
- The acoustic rating to be targeted for these meeting rooms is sound transmission performance of 50 dB Dw and a reverberation performance of RT 0.4 to 0.7 seconds
- Room booking functionality – tablet displayed outside of room door

If the room is to be Zoom enabled, additional AV, power and acoustic provisions will be required – refer to *UON Medium and Large Zoom Meeting Room Standards*.

- *Zoom control panels should be flat mounted.*
- *No phone is required if the room is zoom enabled.*

Refer Figure 2. Indicative plan of a small meeting room on the next page.

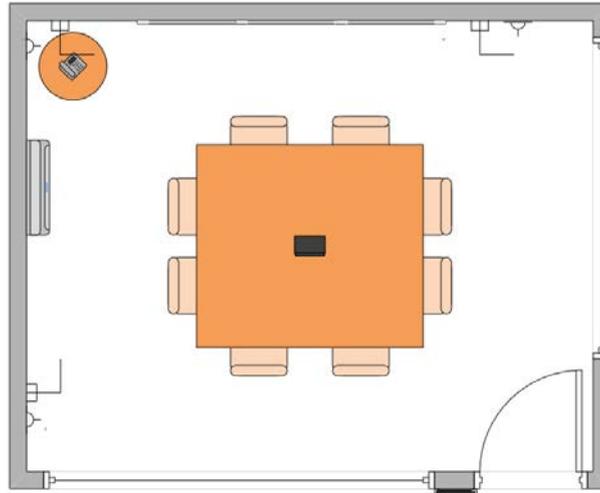


Figure 2. Indicative plan of a small meeting room.

9.5 LARGE MEETING / CONFERENCE ROOMS

Large meeting rooms are to accommodate more than 14 people, providing acoustic and visual privacy. The size of the large meeting rooms will vary depending on the specific site details, but must be a minimum of 27m², wherever possible to ensure inbuilt flexibility, in terms of the ability to repurpose these spaces if required. It is recommended that a large meeting room include the following;

- Meeting table and meeting chairs to suit the size and proportion of the room. The table is to have a laminate finish. Larger meeting table sizes are preferably composed of more than one meeting table, to allow flexibility in the use and configuration of the room.
- 600mm diameter phone table, also with a laminate finish (only if the room is not zoom enabled).
- 4 x double GPO's and 4 x Data Outlets
- Phone with speaker capability (only if the room is not zoom enabled).
- Whiteboards, glass magnetic.
- Hearing augmentation equipment, where required by Premises Standard.
- Room booking functionality – tablet displayed outside of room door and positioned at accessible height.
- Glazed partitioning should be used to optimise natural light transfer. This glazing should be treated with translucent film or decal, to provide a level of privacy.
- Optional facilities for catering setup/ service within the meeting room.
 - Kitchenette with sink, zip tap and 120L bar fridge.
 - Paper towel and soap dispensers.
 - Waste bins, incorporated within joinery.
- Supplementary Air-conditioning units will be required for meeting rooms with an occupancy level of more than 6 people.
- The acoustic rating to be targeted for these meeting rooms is sound transmission performance of 50 dB Dw and a reverberation performance of RT 0.4 to 0.7 seconds.

If the room is to be Zoom enabled, additional AV, power and acoustic provisions will be required – refer to *UON Medium and Large Zoom Meeting Room Standards*.

- *Zoom control panels should be flat mounted.*
- *No phone is required if the room is zoom enabled.*

Refer Figure 3. Indicative plan of a Boardroom on the next page.

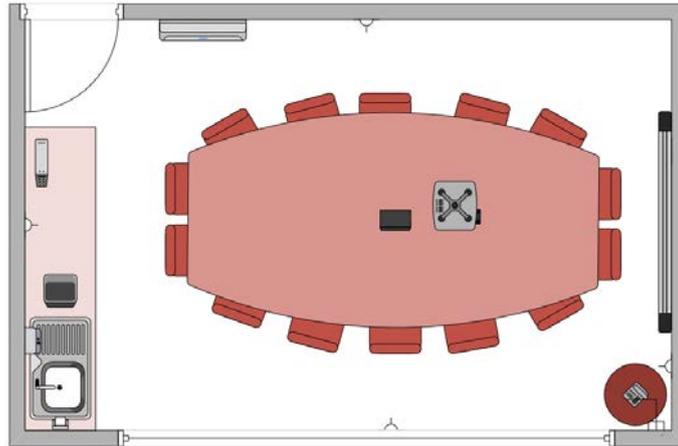


Figure 3. Indicative plan of a boardroom.

9.6 BREAKOUT AREAS / KITCHENETTE

Breakout spaces are to provide relief from the general work environment, they should be located on external or atrium glazing wherever possible. Such areas should be used for informal interactions between students and staff members, both on a social and work related level. They ought to include a variety of seating options and areas, to maximise their adaptable use. Breakout areas should include the following;

- Kitchen bench, 600mm deep, including;
 - Sink
 - Chilled/boiling water unit tap (sparkle provision is NOT to be included)
 - Refrigerator/s, to sit on vinyl flooring
 - Microwave/s, to sit at bench height or just above bench height to prevent injuries from lifting heated items at height
 - Dishwasher, to sit on vinyl flooring
 - Toaster
 - Sandwich press
 - Paper towel dispenser, as per to UON Standards
 - Hand soap dispenser, as per UON Standards
 - 2 stream waste station as a minimum; Landfill (Red) and Mixed Recycling (Yellow) 60L bins with coloured lids. *Refer to UON waste standards for more information.*

The specific details and numbers of these items will be determined during the design phase.

- The kitchen bench should comply with AS1428 and allow disability access to; sink, taps, chilled water, boiling water and power point. Flush pulls should be installed to doors and drawers to facilitate this access.
- Varied seating options including; cafe tables and chairs, lounge seating, bench seating. The details and numbers of these items will be determined during the design phase.
- If possible, outdoor seating is recommended as well as indoor.
- Delineation of spaces through the use of varied floor finishes, screening details and feature ceilings. Commercial grade slip resistant vinyl flooring should be installed adjacent to the kitchen bench. The details of these items will be determined during the design phase.
- Acoustics should be considered, in terms of suitable reverberation times for these areas.

Kitchenettes may also be provided throughout larger workspaces, they should provide tea/coffee making facilities only including; sink, chilled/boiling water unit, bar fridge, paper towel and soap dispenser, waste bin.

If the room is to have AV capabilities – equipment provision should be as follows;

- Interactive flat panel display with HDMI & wireless BYOD connectivity
- Hearing augmentation equipment, as required by premises standard
- Housing for IP TV receiver or permanent local PC

For more information regarding AV requirements – refer to UON Small, Medium and Large Zoom Meeting Room Designs

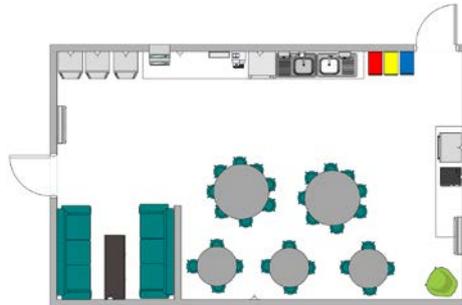


Figure 4. Indicative plan of a breakout area.

9.7 PRINT / UTILITY AREAS

Printing or utility rooms are spaces that house office equipment and general storage, their location should provide equitable access by all staff. Acoustic separation to contain noise is ideal, but not essential. The area can consist of one wall in an alcove or along a hall way. If a Green Star rating is required, these rooms will need to be fitted with a separate exhaust system. Utility rooms should include (but not limited to) the following;

- 1 x Multifunction Device (MFD)
- 3 x double GPOs & 2 x data outlets
- Confidential document disposal
- Stationary and file storage
- Collation/work bench
- Pin board
- No door requirements
- No window requirements
- Accessible to flexible work zone
- 2 stream waste station as a minimum; Landfill (Red) and Paper & Cardboard (Blue) 60L bins with coloured lids. *Refer to UON waste standards for more information.*

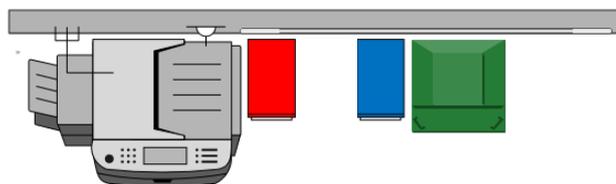


Figure 5. Indicative plan of utility room.

9.8 CARER'S ROOMS

It is recommended that a Carer's Room be provided in all office environments greater than 500m², when staff numbers exceed 400 additional rooms should be considered. In order to be considered a Breastfeeding Friendly Workplace (BFW), the carer's room should not be combined with any other space. A carer's room should achieve acoustic and visual privacy, the optimum size should be approximately 12m². A carer's room should include;

- Breast feeding/nursing chair, with wide arms, to be firm yet still comfortable.
University preferred: Featherstone Chair & Ottoman, upholstered with commercial grade fabric.



Figure 6. Featherstone chair & ottoman

- Coffee table or bench located near nursing chair.
University preferred: Dainty Side Table (matches the Featherstone Chair)



Figure 7. Dainty side table

- Lockable door (privacy bolt) with Vacant/Occupied sign.
- Microwave, to sit at bench height or just above bench height to prevent injuries from lifting heated items at height
- 120L bar fridge, or access to one nearby that is lockable, to avoid contamination of stored breast milk.
- Sink facilities with hot and cold water, soap and paper towel dispensers.
- Vinyl flooring to kitchenette area, commercial grade.
- Carpet flooring to room generally, commercial grade.
- Nappy disposal bin, with associated mechanical exhaust.
- Waste bin, general. *Refer to UON waste standards for more information.*
- Acoustic rating of D_w55 and RT of 0.4 to 0.7 seconds
- Power located near nursing chair/coffee table for the use of breast pumps.
- Change table.
- Telephone/data outlet.
- Private, windows screened from passers by
- Clearly labelled with BFW signage on door & display ABA National Helpline in the room
- Space for parking of pram, stroller or available for a small play area for siblings.

Refer Figure 8. Indicative plan of a carer's room on the next page.

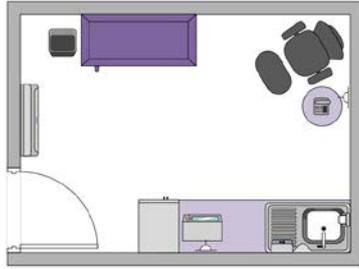


Figure 8. Indicative plan of a carer's room.

10 WASTE REQUIREMENTS

10.1 DESIGN CONSIDERATIONS

Consideration of waste station locations during design will assist in achieving the University's commitments outlined in the Environmental Sustainability Plan and reduce the visibility and design impact of waste bins.

Waste stations are to be placed in high use areas which are generally located in:

- Print Areas
- Breakout/ Kitchenettes
- Along circulation paths towards entry/exits and amenities

In premium buildings, waste stations should be either;

- Designed into joinery units rather than freestanding OR
- If free standing, the *Method Recycling & Waste Bins* should be used rather than the standard.

10.2 DESK TIDIES

A desk tidy will sit on the desk replacing the redundant and old fashioned under-desk bins. Each staff member will be responsible for their desk tidy and will empty it daily into the waste stations. The aim of the desk tidies is to increase individual responsibility for waste created, reduce plastic liners going to landfill and reduce cleaning time spent on rubbish removal. The cleaners will NOT empty the desk tidies.



Figure 9. UON approved waste bins.

Desk tidies should be supplied at part of the project scope.

10.3 WASTE STATIONS

Waste sorting stations are to be placed in high use areas which are generally located in the kitchens / breakrooms, print stations, and along the natural entrance and exit flow patterns of staff. The University has adopted the three bin system, colour coded utilising the Australian standard waste colours;

- Red – general waste
- Yellow – comingled recycling
- Blue – paper and cardboard



Figure 10. UON approved waste bins.

10.4 RECYCLING STATIONS

In addition to the three bin waste stations, recycling stations for batteries, mobile phones, and printer cartridges may be set up near print areas.

11 FURNITURE

11.1 WORKSTATIONS

The University has adopted the provision of electric sit/stand desk as a standard. *Please refer to Universities Electric sit-stand workstation specification.*

11.2 CHAIRS

11.2.1 Task Chairs

Height adjustable swivel chairs should be provided to meet the relevant Workplace Health and Safety requirements and include the following;

- Heavy duty 4 lever independent adjustment for seat height, seat tilt, back pitch and seat depth slide mechanism
- Ratchet back height adjustment
- 5 star swivel base with castors. Hard tyre castors for carpeted floors, soft tyre for hard floors.
- Gas Lift, with height adjustability range from 400 – 550mm
- No Arms
- Mesh back
- Seat upholstered in commercial grade, stain resistant, breathable fabric (wool blend preferable) in a dark colour.
- Moulded injected foam, density of foam according to AS2281
- Australasian Furnishing Research & Development Institute (AFRDI) Level 5 minimum certification
- Ability to replace seat pad, to aid with maintenance.
- Optional: availability of smaller and larger seat pans
- *Bariatric Chairs: where bariatric chairs are required, for example in teaching spaces, they should meet the requirements as per above with an increased weight rating of 250kg.*

11.2.2 Meeting/Visitors Chairs

Meeting chairs should meet the relevant Workplace Health and Safety requirements and include the following;

- Solid steel sled base frame, stackable or
- 4 or 5 Star Base with castors. Hard tyre castors for carpeted floors, soft tyre for hard floors.
- Optional upholstered or mesh back
- Upholstered seat, moulded injected foam, density of foam according to AS2281
- Stackable

- Lightweight <15kg for ease of moving
- No arms
- Seat upholstered in commercial grade, stain resistant, breathable fabric (wool blend preferable), in a dark colour.
- AFRDI Level 4 or 5 minimum certification
- Optional: rubber grommets for base when chairs are to be located on hard floors.

11.2.3 High Bar Stools

Bar Stools should meet the relevant Workplace Health and Safety requirements and include the following.

- Solid Steel Sled Base with footrest
- Back rest, optional upholstered
- Upholstered seat
- Seat upholstered in commercial grade, stain resistant, breathable fabric (wool blend preferable), in a dark colour.
- No arms
- AFRDI Level 4 or 5 minimum certification
- Note: the height of stools must be coordinated with height of the work surface to allow sufficient leg space and a seat height that coordinates with the work surface height.

11.2.4 High Workstation/ Counter (drafting) Stools

High Workstation/ Counter Stools should meet the relevant Workplace Health and Safety requirements and include the following.

- Heavy duty 4 lever independent adjustment for seat height, seat tilt, back pitch and seat depth slide mechanism
- Ratchet back height adjustment
- 5 star swivel base with castors. Hard tyre castors for carpeted floors, soft tyre (rubber) castors, with pressure castor locks (automatically activate when on) for hard floors.
- Gas Lift, with height adjustability range from 650 – 780mm
- No Arms
- Upholstered or Mesh back
- Seat upholstered in commercial grade, stain resistant, breathable fabric (wool blend preferable), in a dark colour.
- Moulded injected foam, density of foam according to AS2281
- AFRDI Level 5 minimum certification
- Optional: availability of smaller and larger seat pans
- Note: the height of stools must be coordinated with height of the work surface to allow sufficient leg space and a seat height that coordinates with the work surface height.

11.2.5 Laboratory Stools

High Workstation/ Counter Stools should meet the relevant Workplace Health and Safety requirements and include the following;

- Heavy duty 4 lever independent adjustment for seat height, seat tilt, back pitch and seat depth slide mechanism
- Ratchet back height adjustment
- 5 star swivel base with castors. Soft tyre (rubber) castors, with pressure castor locks (automatically activate when on) for vinyl/linoleum floors.
- Gas Lift, with height adjustability range from 650 – 780mm
- No Arms
- Upholstered in anti-microbial fabric, no mesh backs

- Non permeable (closed cell) commercial grade upholstery (unless non PC2 Laboratory)
- Moulded injected foam, density of foam according to AS2281
- AFRDI Level 5 minimum certification
- Optional: availability of smaller and larger seat pans
- Note: the height of stools must be coordinated with height of the work surface to allow sufficient leg space and a seat height that coordinates with the work surface height.

11.2.6 General Lounge Seating

These chairs should be commercial grade, the design and dimensions should provide the required comfort for as many users as possible. The following basic requirements should be followed:

- Seat height should be selected to minimise pressure on thighs. Recommended height range: 400mm minimum to 500mm maximum
- Seat depth should allow users to get postural benefit from the back rest without slouching. Recommended depth range of 400mm minimum to maximum 500mm
- The front edge should be well rounded to avoid local pressure
- Back rest angle should provide good back support
- The seating should be stable during normal use
- Seating options with arms should be provided for users with restricted or compromised mobility and for counselling scenarios
- Upholstered in commercial grade, stain resistant fabric, breathable fabric, wool blend preferable, seat to be a dark colour
- Moulded injected foam, density of foam according to AS2281
- Optional: removable cushions for ease of cleaning

11.2.7 Banquet/ Bench Seating

Banquet Seating should meet the relevant Workplace Health and Safety requirements for the angle back detail with commercial grade fabric and include the following;

- Seat height should be selected to minimise pressure on thighs. Recommended height range: 400mm minimum to 500mm maximum
- Seat depth should allow users to get postural benefit from the back rest without slouching. Recommended depth range of 400mm minimum to maximum 500mm
- The front edge should be well rounded to avoid local pressure
- Back rest angle should provide good back support, a 105 degree angle from the seat to the backrest is recommended
- Upholstered in commercial grade, stain resistant fabric, breathable fabric, wool blend preferable, seat to be a dark colour
- Moulded injected foam, density of foam according to AS2281

11.2.8 Tables

A variety of table sizes will be accommodated to suit particular design requirements. Generally tables should be of commercial grade and meet with the following;

- Table top material: E0MDF panel finished top and bottom with high-pressure laminate and with 2.0 mm ABS edge.
- Flip top tables to be used as a preference for flexibility, where relevant: 1500 x 750mm for modularity, with commercial grade mechanism, lockable castors and linkage capability.
- If a 4 leg base is used: legs are to be fitted with adjustable feet.
- Tables for particular functions, eg. for event spaces, may have particular requirements.

12 FINISHES

12.1 FLOOR FINISHES

12.1.1 Carpet

The University recommended standard is commercial grade (40 oz minimum) carpet tiles, specific carpet selections may vary in different sites. However, the University standard carpet selections, as per below, should be used in high traffic and common areas, such as entries, main corridors, stairs and lobbies. In general floor areas, the standard carpet selection should make up at least 60% of the floor area with feature/ highlight carpet tiles covering the remainder. The colour, construction and installation pattern (eg: monolithic, offset, random, ashlar) of the carpet should take into consideration the long term effects of traffic and general soiling.

The standard carpet selections should match the following or match existing within the relevant building;

- Ontera, 'Morse Kebel', non-stock item; Chancellery, Auchmuty Library, Services Building
- Ontera, Ultra Network Collection, 'Subiaco', 'Ascot', 'Wynard'.

For non-standard carpet sections, an additional 10% should be supplied on completion of the project for patching/repairs.

12.1.2 Vinyl/ Linoleum

Specified vinyl and/ or linoleum should be commercial grade, 2mm thick (minimum), slip resistant and pre-sealed (to reduce maintenance). Resilient floor finishes are recommended for spaces such as; breakout areas/kitchenettes, utility/storage areas, communications/data rooms and specialist facilities, where required.

Laboratories: Laboratory floors will often need a higher specification of vinyl than standard areas.

Note: Static-dissipative floor finishes should be used in communications/data rooms and other specialist facilities, such as laboratories, where required. Where performance levels for static-dissipative floors are critical to the operation of a specialist facility, the performance level will be nominated by the University in consultation with University technical staff.

12.1.3 Floor Tiles and other hard floor finishes

Floor Tiles or other hard floor finishes should be commercial grade, slip-resistant and scuff resistant, the cleanability of these surfaces should also be considered. Floor tiles or other hard floor finishes, such as terrazzo, should be considered for use in high traffic zones, such as public reception and amenities areas, for their hard wearing qualities. Epoxy grout should be used with floor tiles.

Laboratories: In high intensity wet laboratory areas, finishes such as epoxy may be required.

12.1.4 Tactiles

Tactiles should be brushed stainless steel with an 18mm fixing stud, DTAC or similar.

12.1.5 Skirting

The required skirting is to be installed to suit floor and wall finishes, generally skirting should meet the following;

- 150mm vinyl featheredge
- 150mm aluminium or metal, screw fixed

- 150mm ducted skirting, to be only used where required, ie. on solid masonry or concrete walls.

12.2 PAINT FINISHES

In terms of design standards, paint selections may vary in different sites. However, the University colour preferences for maintenance, back of house amenities or micro projects are;

- Doors: Dulux 'Juvenile' or Dulux 'Monument Grey'
- Door frames: Dulux 'Juvenile' or Dulux 'Tranquil Retreat' (see note on luminance contrast below)
- Walls: Dulux 'PMS White' is the general standards, although 'Lexicon Quarter', 'Whisper White' or 'Natural White' are also commonly used.

The luminance contrast provisions of AS1428.1 are to be complied with.

12.2.1 Gloss levels

The gloss level and paint type is to be selected to provide a finish which is robust, low maintenance and fit for purpose. Some paint colours, types and high traffic areas are susceptible to easy scuffing and in this case, protective systems such as ? are to be considered, to reduce maintenance.

Columns and wall paint to chair rail height should be high sheen gloss, as a minimum.

12.3 WALL FINISHES

12.3.1 Wall Tiles

Wall Tiles should provide an impervious surface and be dirt, stain and fire resistant. Epoxy grout should be used with wall tiles.

12.3.2 Splashback

Sink splashbacks should be an impervious surface, paint finish is not acceptable, the following finishes are acceptable;

- Tiles, with epoxy grout
- Vinyl
- Acrylic
- Glass
- Metal, with an appropriate impervious finish.

12.4 SPECIALIST BENCHTOPS

12.4.1 Laboratory Benches

Laboratory benches will require specialist finishes to meet the particular functions of the space. In terms of resilient finishes, solid surface materials, such as Corian, should be used as a minimum. The bench framing should be suitably sized and designed to support the benchtop material itself, with an additional allowance for laboratory equipment load.

13 EQUIPMENT

13.1 DOOR HARDWARE

Door Hardware consistency across design, manufacture and installation is of paramount importance to the University. The UON Lock Hardware, Cylinder and Key Standards are designed to provide guidance to architects and project managers on the Lock Hardware, Cylinder and Key issues that may need to be considered at various phases of the project.

The selection of door stops should also be consistent.

For more information regarding Door Hardware, refer to the UON Lock Hardware, Cylinder and Key Standards.

13.2 WINDOW TREATMENTS

The University preferred window treatments, where required, are roller blinds with chain adjustment, but selections may differ depending on locations where existing window treatments need to be matched.

As a standard single 'solar filter' roller blinds should be fitted, a double roller blind with additional 'block-out' layer can be fitted if additional glare control is required.

Blinds to be 'charcoal' colour as a standard, unless matching existing finishes.

13.3 ELECTRICAL CHARGING OUTLETS

Electrical charging outlets, both general purpose outlets (GPO) and universal serial bus (USB) outlets should be incorporated to support the use of mobile devices wherever possible in the following spaces;

- Teaching spaces
- Informal learning spaces, both internal and external
- Collaborative workspace breakout areas.

13.4 SIGNAGE

13.4.1 Signage Guidelines

Signage consistency across design, manufacture and installation is of paramount importance to the University.

All University signage should be designed and installed in compliance with the UON Signage Guidelines. All new signage proposals must be submitted to IFS for review.

For more information regarding Signage, refer to the UON Signage Guidelines.

14 APPENDICES

14.1 APPENDIX A: UON STANDARDS CHECKLIST



Appendix A: University of Newcastle Design Standards Checklist

Relevant	#	Name	Version	Date
	1	Lock Hardware, Cylinder & Key Standards	2	Nov 2013
	2	CCTV Specification	G	June 2016
	3	Project Briefing Document - Engineering Services Design	2.1	June 2017
	4	Environmentally Sustainable Design – Project Briefing Document	2	Nov 2018
	5	Telecommunications and Data Cabling Technical Specification	Not identified	Feb 2018
	6	Guidelines for the Design of Vertical Transportation Services	2	Aug 2014
	7	DELETED		
	8	Public Domain Manual	Not identified	April 2015
	9	Electronic Security Systems	2.5	Jan 2018
	10	Signage Guidelines	Not identified	May 2018
	11	Conservation Management Plans – Architecture Building (A) University Club (SH) Northumberland House (NH) University House (UNH) University Union (US)		Various
	12	Bushfire Management Plan	2	April 2016
	13	Placemaking Guidelines	Not identified	
	14	Space Management Policy	Not identified	May 2016
	15	Space Management and Allocation Guideline and Procedure	Not identified	May 2016
	16	Landscape Management Implementation Plan Callaghan Campus	Not identified	Sept 2012
	17	Internal Office Design - Waste Stations	2.1	Oct 2018
	18	Project Briefing Document - Project Handover Guideline	1.3	Dec 2018
	19	UON-ESS-101 General Electrical Specification	1.2	Jan 2019
	20	UON-ESS-102 Distribution Board Specification	1.1	Jan 2019
	21	UON-ESS-103 External Lighting Spec	1	Sept 2016
	22	UON-ESS-104 Emergency Escape Lighting and Illuminated Exit Signage	1.1	Jan 2019
	23	UON-ESS-105 Electrical Preferred equipment list	1.2	Jan 2019
	24	UON-ESS-106 Generators and Emergency Power Supplies	1.1	Jan 2019
	25	UON-ESS-111 Interior Lighting and Control	1.1	Jan 2019
	26	UON-ESS-112 Main Switchboard Specification	1.1	Jan 2019
	27	UON-ESS-100 Specification Index	1	Sept 2016
	28	Access Design Guidelines	1	Jan 2017
	29	ESD Guidelines Tool – Functional Description ESD Guideline Tool	1	Dec 2016
	30	Interactive Technologies Systems Standards and Specifications	2.0	Aug 2019
	31	Small Zoom meeting room – Standard	V1.0.4	Nov 2018
	32	Medium and Large Zoom meeting room – Standard	V1.0.5	Feb 2019
	33	CAD Drafting Standard	V1	Aug 2018
	34	Tree Management Procedure Callaghan Campus	V2.2	Jan 2019
	35	Project Briefing Document – Post-Completion Maintenance and Defects Management Procedure	1.0 Draft	Oct 2018
	36	Supply and Installation of Photo Voltaic Array	V1	Feb 2019
	37	Electric Sit-stand workstations	V1	Aug 2019