

C. ARCHITECTURAL REQUIREMENTS – TABLE OF CONTENTS

UNSW DESIGN & CONSTRUCTION REQUIREMENTS – WEB ENTRY PAGE

SECTION A – INTRODUCTION

SECTION B – DEVELOPMENT & PLANNING

C. ARCHITECTURAL REQUIREMENTS – SCHD. OF CHANGES – REV 4.1	3
C ARCHITECTURAL REQUIREMENTS.....	4
C.1 GENERAL.....	4
C.1.1 Structural Requirements.....	4
C.1.2 Durability of Building Fabric.....	4
C.1.3 Concrete Mix. UNSW80 Specification.....	4
C.2 EXTERNAL FABRIC.....	4
C.2.1 Walls.....	4
C.2.2 Windows.....	4
C.2.3 External Doors.....	5
C.2.4 Roofs	5
C.3 INTERNAL WALLS PARTITIONS & FINISHES	6
C.3.1 Room Security.....	6
C.3.2 Partitions\	7
C.3.3 Internal Finishes	8
C.3.4 Walls.....	8
C.3.5 Floors	8
C.4 DOORS AND DOOR FURNITURE	8
C.5 SIGNAGE	9
C.5.1 Background	9
C.5.2 General.....	9

SECTION D – EXTERNAL WORKS

SECTION E.1 – HYDRAULIC SERVICES

SECTION E.2 – MECHANICAL SERVICES

SECTION E.3.1 – ELECTRICAL SERVICES

SECTION E.3.2 – LIGHTING

SECTION E.3.3 – SPECIAL SYSTEMS

SECTION E.3.4 – HIGH VOLTAGE

SECTION E.4 – COMMUNICATIONS

SECTION E.5 – LIFTS

SECTION E.6 – FUME CUPBOARDS

SECTION F – SPECIFIC AREA REQUIREMENTS

APPENDIX 1 – BUILDING AUTOMATION AND CONTROL SYSTEMS
SPECIFICATION

APPENDIX 2 – CONCRETE FOR STRUCTURES

APPENDIX 3 – UNSW CONTROL SYSTEM STANDARDS HVAC

APPENDIX 4 – DOCUMENT REQUIREMENTS

APPENDIX 5 – UNSW STANDARD PRELIMINARIES

APPENDIX 6 – SECURITY SYSTEMS

C. ARCHITECTURAL REQUIREMENTS – SCHD. OF CHANGES – REV 4.1

As a guide only, attention is drawn to changes that have been made in the following clauses since the last revision

Clause	Date
General revision	November 2003
No change	August 2004
C.4 Revised and added	February 2007

C ARCHITECTURAL REQUIREMENTS

C.1 GENERAL

C.1.1 Structural Requirements

All structural engineering design is to be in accordance the Earthquake Code.

C.1.2 Durability of Building Fabric

UNSW Kensington Campus is located approximately 3 kilometres from the coast. External building materials and structural components are to be resistant to the corrosive salt laden environment and are to be selected to ensure building durability.

C.1.3 Concrete Mix. UNSW80 Specification

See [Appendix 2](#)

C.2 EXTERNAL FABRIC

C.2.1 Walls

Walls are to be durable with material selection and detailing fit for purpose.

- a) Base and plinth sections of walls are to resist physical wear from day to day activity such as hand trolley and skateboards collisions, and impacts and scuffing from maintenance equipment such as cleaning machines and mowers. Mitre joints in terrazzo and stone cladding and painted render plinths are not acceptable.
- b) Upper section of walls are to be low maintenance and resistant to degradation by weathering. Sealants are not to be the primary weather barrier.

C.2.2 Windows

All window framing is to be of commercial quality aluminium extrusion. The choice of extrusion should be based on future availability to allow later matching of profile for modification and replacement.

Aluminium framing is to have a high quality corrosion resistant powdercoat or anodised finish. Powder coating is to be Dulux 'best quality' warranty grade polyester. Anodising is to be minimum thickness 20 microns.

Windows are to be constructed and installed to minimum Terrain Category 2.5. Windows to be designed and installed with mechanical means as the primary form of weatherproofing.

Vacuum-sealed double glazed sashes incorporating venetian blinds are not to be used.

C.2.2.1 Function

Windows sashes that can be cleaned from the inside are preferred.

Sealants must be selected to be appropriate for their application and must be colour matched to the finished surface. Sealants are not to be used as the primary waterproofing barrier.

C.2.2.2 Cleaning

Windows should be easily accessible for cleaning. Fixed sun screening is to be offset from the windows to allow window cleaning.

C.2.3 External Doors

Refer also: [DOORS & DOOR FURNITURE](#)

The number and position of external doors is to be carefully considered and limited to avoid an unnecessary number of access points. South facing doors should be adequately weather protected.

C.2.4 Roofs

Pitched roofs must be provided to all buildings as far as practicable. Minimum pitch must be not less than manufacturer's recommendations and an appropriate safety margin provided to suit prevailing conditions. Roof design should discourage pigeon nesting.

C.2.4.1 Roof Types

C.2.4.1.1 Steel Sheet Roofing.

Profiled 'zincalume' or 'colorbond' sheet steel roofing is acceptable for general use where there are a minimum number of roof penetrations. Sheet steel roofing is to be minimum 0.47 mm thickness. 'Colorbond' finish is to be XSO grade.

C.2.4.1.2 Aluminium Sheet Roofing.

Profiled aluminium sheet roofing is to be used for roofs where there are a large number of penetrations. Associated flashings for penetrations are to be of welded construction.

C.2.4.1.3 Membrane Roofing.

The use of roofing membranes is to be minimised. Membrane roofing is to be “Wolfen” PVC membrane.

C.2.4.2 Roof Flashings, Trays & Penetrations

C.2.4.2.1 Sheet metal roof accessories.

Accessories are to match roofing in both appearance and galvanic characteristics. Assemblies should not rely on sealants. Fully welded assemblies are the preferred method.

C.2.4.2.2 Roof Gutters.

Gutters are to be of fail-safe design with external overflows. Box gutters are to be avoided. All gutters must be easily accessible. Downpipes. All downpipes to be external to the building.

C.2.4.3 Roof Access

C.2.4.3.1 Roof Access Hatches

Provide roof access from a service area or room such as a plantroom by a personnel door, or by means of a sliding aluminium and stainless steel hatch. A permanent steel ladder is to be provided where access to roofs is required, preferably located in a plantroom or a separately enclosed space. A hot dipped galvanised roof ladder must also be provided at changes in roof levels.

C.2.4.3.2 Roof Walkways

Roof walkways of approved construction must be provided to access any roof mounted plant.

C.2.4.3.3 Roof Spaces

All roof spaces must have permanent, fixed, adequate access. They must be provided with catwalks and be sufficiently lit to enable the roof space to be traversed without danger 24 hours a day.

C.2.4.4 Roof Safety

See ‘Work Cover - Code of Practice’. “Safe Work on Roofs – Part 1”.

C.3 INTERNAL WALLS PARTITIONS & FINISHES

C.3.1 Room Security

Security for internal doors is to be to a level appropriate to exposure. Two broad scenarios exist, doors securing rooms/open plan spaces off corridors, and offices within these secured zones. Incorporate all measures depending on location type.

*1 – Perimeter Secure Zone - Secure Door Between Office & Corridor
With Sidelights*

- Extended throw latch.
- Heavy duty 100X50 aluminium section jamb
- Snap in jamb rebate with large fin.
- Door tolerance max. 3mm all round.
- Side lights to have mid-rail lined in line with door lock.
- Flush mounted striker.
- Obscure film to side-lights

*1a – Perimeter Secure Zone - Secure Door Between Office & Corridor
Without Sidelights*

- Extended throw latch
- Slim Line aluminium section jamb.
- Snap in jamb rebate with larger fin.
- Door tolerance max. 3mm all round.
- Flush mounted striker.

*2 –Within Secured Zone - Door Between Office & Secured Area
With Sidelights*

- Standard throw latch.
- Snap in jamb rebate with larger fin.
- Slim Line aluminium section jamb security fixed to backing column.
- Door tolerance max. 3mm all round.
- Flush mounted striker.
- Clear glazing side-lights

*2a – Within Secure Zone - Door Between Office & Secured Area
Without Sidelights*

- Standard throw latch.
- Snap in jamb rebate with large fin.
- Slim Line aluminium section jamb security fixed to backing studs.
- Door tolerance max. 3mm all round.
- Flush mounted striker.

C.3.2 Partitions

Stud / plasterboard partitioning to be used in preference to proprietary / modular systems. Partitions to be steel stud frame construction. Partition systems to be of robust construction, provide a level of security appropriate to location and be capable of accepting doors and door furniture to UNSW requirements.

C.3.3 Internal Finishes

C.3.4 Walls.

Paint finishes in high use areas such as foyers and corridors to be minimum semi-gloss acrylic.

C.3.5 Floors

Floor finishes are to be durable and appropriate to use and location. Floor finishes in high traffic areas to be dirt resistant.

Non-slip surfaces are to be provided to areas that are likely to be subjected to water. For example foyers and laboratories. See also: [Section B](#)

C.3.5.1 Carpet.

Preferred carpet. 80 wool/ 20 synthetic.

C.3.5.2 Sheet Flooring

“Tarket” sheet vinyl or “Flowtex” vinyl carpet.

C.3.5.3 Applied Floor Finishes.

Applied two pack epoxy to specialist areas.

C.4 DOORS AND DOOR FURNITURE

Typical timber door:

Storeroom Mortice Lock	Lockwood 3572X (Left or right)
Lever Furniture (Cylinder hole)	Lockwood 1801/70 SC
Lever Furniture	Lockwood 1905/70 SC

Typical aluminium door:

Storeroom Mortice Lock	Lockwood 3572X (Left or right)
Lever Furniture (Cylinder hole)	Lockwood 1801/70 SC
Lever Furniture	Lockwood 1905/70 SC

Door Closers: LCN1461 REG

C.5 SIGNAGE

C.5.1 Background

The University of New South Wales has a standardised and cohesive signage system based on overall simple rectilinear shapes using standardised typeface, colours and sizes. Signs are classified into types each with an individual specific function.

The UNSW Signage Coordination Officer has the role of directing location specific and detailed design, based on the University's signage standard (manual). The role includes briefing and liaising with the project team in the pre-construction phase of projects and the engagement and directing of the nominated signage sub-contractor during the construction phase. The signage officer is to be involved prior to the commencement of the documentation phase of any project.

Enquiries and requests should be directed to:

Ricardo Artigas
Signage Coordination Officer.
Campus Services

C.5.2 General

Aluminium is the preferred construction material for all signs. Sign message panels will be rigid, stable and not subject to distortion or corrosion. Support posts for freestanding signs will utilise purpose designed aluminium extrusion to allow the use of inter-changeable sign faces. All fixing devices are to be tamper-resistant and where possible concealed. Approved direct photo deposit methods of reproduction are preferred for symbol and text elements. Intended methods of manufacture and installation should be clearly specified.