REVISED EXTENT OF WORKS

NORTH WING

TEACHING LAB
- REDUCED AREA AS A RESULT OF REMOVING THE CENTRAL WET STATION

CLASSROOM
- LAYOUT BRIEF UPDATED TO CURTIN MEETINGS ROOM STANDARDS - REDUCE SCOPE

GENERAL
- ALL OTHER AREAS PROPOSED FOR THE NEW LABORATORY TO REMAIN AS PER THE SCHEMATIC DESIGN ISSUED ON 5TH MAY 2017

SOUTH WING

DANGEROUS GOODS STORE
- UNLOCK EXTERNAL ACCESS TO NORTH WALL & FILL IN OPENINGS TO INDEX WALLS TO CONFORM TO ULTIMATE FIRE RATING. PROPOSED CONSTRUCT (TBC)
- PROVIDE NEW MECHANICAL FIRE-RATED EXHAUST AS REQUIRED

PUMPS
- REMOVE EXTERNAL ACCESS TO NORTH WALL & FILL IN OPENING TO MATCH EXISTING EXTERNAL WALLS.

SAFETY STATION
- NEW WALL CONSTRUCTION TO PERIMETER OF STORE TO ACHIEVE 3HR FIRE RATING. PROPOSED CONSTRUCT (TBC)
- NEW CEILING AND ACCESS PANELS TO ACHIEVE 3HR FIRE RATING. PROPOSED CONSTRUCT (TBC)
- NEW MECHANICAL EXHAUST/FRESH AIR AS REQUIRED
- REPLACE EXISTING OPENING GLAZING WITH FROSTED GLASS TO ALL EXHAUST STACKS ABOVE OPENINGS.

UNISEX AMBULANT & UAT AMENITIES
- REMOVE EXISTING FLOOR FINISH - TBC.
- PAINT FINISH TO EXISTING WALLS & CEILING.
- NEW CARPET FINISH AS REQUIRED.
- INSTALL ACOUSTIC PANELS TO WALL SURFACE AS REQUIRED.
- REPLACE EXISTING OPENING GLAZING WITH FROSTED GLASS.
- NEW MECHANICAL FIRE RATED EXHAUST AS REQUIRED.
- NEW POWER & LIGHTING FIT OUT AS REQUIRED - NEW STATUTORY AND WAY FINDING SIGNAGE

MEETING ROOM
- REMOVED EXISTING FLOOR FINISH - TBC.
- NEW CARPET FINISH AS REQUIRED.
- NEW WALL CONSTRUCTION TO REDUCE AREA TO DANGEROUS GOODS STORE TO SEPARATE SAFETY STATION FOR COMPLIANCE.

LABORATORY
- NEW WALL CONSTRUCTION TO PERIMETER OF STORE TO ACHIEVE 372 m² 4HR FIRE RATING. PROPOSED CONSTRUCT (TBC)
- NEW MECHANICAL FIRE RATED EXHAUST AS REQUIRED
- REMOVE EXISTING FLOOR FINISH.
- NEW CEILING AND ACCESS PANELS AS REQUIRED. 2700MM HEIGHT
- NEW MECHANICAL EXHAUST/FRESH AIR AS REQUIRED
- REPLACE EXISTING OPENING GLAZING WITH FROSTED GLASS TO ALL WINDOW EXHAUSTS.

NEW PAVED AREA
- COMPLETE WITH FORMED UP BUND TO PERIMETER OF ROOM.
- NEW WALL CONSTRUCTION TO REDUCE AREA TO 16 m².
- NEW FLOOR TILES GRADED TOWARDS FLOOR WASTES.
- NEW PARTITIONING TO ENCLOSE AMBULANT CUBICLES.
- FULL HEIGHT WALL TILING TO EXISTING WALLS THROUGHOUT.
- NEW RAISED PAVED WALKWAY.
- NEW FIXTURES AND FITTINGS
- NEW MECHANICAL EXHAUST/FRESH AIR AS REQUIRED
- NEW POWER & LIGHTING FIT OUT AS REQUIRED
- NEW WAY FINDING SIGNAGE

DONALDSON + WARN ARCHITECTS
346 William Street, Perth
Western Australia 6000
T 08 9227 6558  F 08 9227 6559
admin@donaldsonandwarn.com.au
www.donaldsonandwarn.com.au
REVISED EXTENT OF WORKS

NORTH WING

MAIN ROOF
- SOUTH ROOF & CANOPY AREA AS RESULT OF FENSTIONS THE CENTRAL
- EXISTING ROOF
- ALLOW FOR EXTENT OF WORKS TO SERVICE DANGEROUS GOODS
- SOUTH WING
- PROVIDE CONSTRUCTION DETAILS FOR THE PROPOSED COMMS ROOM & ROOM 206
- ALLOW FOR EXTENT OF WORKS TO SERVICE DANGEROUS GOODS STORE BELOW I.E. FLOOR/WALL PENETRATIONS, DUCTS ETC. SERVICE CONSULTANTS TO CONFIRM EXTENT IF REQUIRED.
- SOUTH WING
- PROVIDE CONSTRUCTION DETAILS FOR THE PROPOSED COMMS ROOM & ROOM 206
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## Technical Room Data Sheets

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<thead>
<tr>
<th>RDS Ref</th>
<th>Room Name</th>
<th>RDS Rev</th>
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<tbody>
<tr>
<td>001</td>
<td>Teaching Laboratory: Collaborative Classroom</td>
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<tr>
<td>002</td>
<td>Teaching Laboratory: Wet PC2</td>
<td>0.1</td>
</tr>
<tr>
<td>003</td>
<td>Preparation: Wet PC2 Work Zones</td>
<td>0.1</td>
</tr>
<tr>
<td>004</td>
<td>Technical: Prep Store</td>
<td>0.1</td>
</tr>
<tr>
<td>005</td>
<td>Technical: Flammable Store</td>
<td>0.1</td>
</tr>
<tr>
<td>006</td>
<td>Constant Temp: Cold</td>
<td>0.1</td>
</tr>
<tr>
<td>007</td>
<td>Constant Temp: Warm</td>
<td>0.1</td>
</tr>
<tr>
<td>008</td>
<td>Handwash</td>
<td>0.2</td>
</tr>
<tr>
<td>009</td>
<td>Student Informal Area</td>
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<tr>
<td>010</td>
<td>Staff Area</td>
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<td>Bagstore</td>
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<td>012</td>
<td>Waste Storage</td>
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</tr>
<tr>
<td>013</td>
<td>Gas Storage</td>
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</tbody>
</table>

### Methodology

To date, Extensive Stakeholder Consultations were convened by ARINA for:

- Design Working User Group (DWUG) - 6 meetings,
- Kitchen Cabinet Meetings (KCG) - 6 meetings,

From these meetings technical requirements such as equipment, unit timetabling, and class size ratios were developed. These meetings have been minuted and functional planning diagrams, equipment lists, and draft timetable models were circulated for discussion and incorporation into the brief.

These documents have formed the basis for the Technical Rooms Data Sheets as listed on the page and detailing in the following.

Each Data sheet represents a list of similar styled rooms. The RDSs also show indicative planning diagrams and a list of preliminary equipment and fixtures, sorted by its installation code (Group 1: Supply and Install by the Contractor, Group 2: Supply by the Client and Install by the Contractor, Group 3: Supply and Install by the Client).
TEACHING LABORATORY: COLLABORATIVE CLASSROOM

Curtin University
B311 LABORATORY
B311 Pc2 Laboratory - Equipment List
FOR COMMENT
Version 0.2
1/02/20

REFERENCE AND NOTES

LEGEND:  □ Empty square indicates not applicable or none
PTD= Paper Towel Dispenser, TPD=Toilet Paper
DispenserCAir - Compressed Air, CG - Carbogen O2 -
Oxygen, N2 - Nitrogen C02 - Carbon Dioxide Nat G -
Natural Gas, RO - reverse Osmosis Pol - Polished H - Hot

MECHANICAL SERVICES
Temperature Control: 22±ºC
Contaminant Vent (Fume Cpbd (typical):

SAFETY SERVICES AND DETECTION
to code

MECHANICAL SERVICES
Temperature Control: 22±ºC
Contaminant Vent (Fume Cpbd (typical):

POWER
No Fail Plant □ EPG Power □
Power and data reticulation from floor and wall. On perimeter glazed walls, minimise brackets and other attachments for required AV/IT services.

TELEPHONE AND DATA

High AV and IT fitout to Collaborative Classroom to include display monitors and computer monitors to student table.

Nominal 1800W comms cabinet to Curtin CITS requirements.

LAB SERVICES

None

RELATIONSHIPS AND GENERAL DESCRIPTION
Convertible PC2 and PC1 Small Teaching Room adjacent to the PC2 Laboratory.

AV and IT rich teaching room.

Adjacent to PC2 lab and handwash.

Within PC2 zone

Occupants

At minimum, capacity of 36 seats in groups between 6-8P

ARCHITECTURAL

Floor □ Arch Selection □ Non Staining to chemicals and dies □ Wet Cleanable
□ Laboratory Grade □ Resistant and scrubbable □ Non Slip □ Resistant to intermittent flooding

Wall (all or low) □ Architect selection □ Scrubbable surface
□ Architect selection □ Scrubbable surface

Ceiling □ Acoustic control □ Architect selection □ Cleanable

Height □ Skirt □ Architect selection

Avoid abutment of furniture to north wall to maintain consistency of north facade for showcase. Provide student group ratio of 8P

SECURITY

VOICE / DATA:

dbl
□ dB
□ sngl
□ dB
□ trpl
□ dB

To Code

ACOUSTIC

DDA Hearing Augmentation □

Within the restrictions of Laboratory finishes detail to provide a good acoustic environment to encourage the AV module separation

WINDOWS

Require: Yes □ Internal Glazing: Desirable □ Binds

Nth Glazing to have appropriate sun shading control but external to the laboratory. Glazing to the Nth Wall to be transparent and non cluttered for showcase of laboratory to public space.

DOOR INFORMATION

Primary doors to be autosliding glass with card reader activation.

Door location □ Egress □ Glazed Swing □ Auto Glass Sliding
□ to code □ to code □ to code
□ General access □ to code
□ General access

Door type □ Auto Glass Sliding □ Glazed Swing
□ Egress □ to code

Clear width □ 1000w clear min □ 1200w clear min
□ to code □ Acoustic seals

Hardware □ Egress □ Auto Glass Sliding
□ Glazed Swing □ to code

Locking □ Egress □ Auto Glass Sliding
□ Glazed Swing □ to code

□ Hold Open □ Proximity

ENTRY DOOR HAZARD AND SPECIALIST SIGNAGE

BMS

□ 450x600h pinboard □ Wall unit to hold staff AV control devices
□ A4 paper document holder
□ Certifying Notices (if applicable)
□ Corrosive
□ Enclosed footwear □ Enclosed Footwear (Yes/No sliding panel)
□ Flammable Gas □ Flammable Liquid
□ Lab coats (Yes/No sliding panel) □ No drink
□ No Food □ Non flammable/Non Toxic Gas
□ Non flammable/Non Toxic Gas □ Room Name/Number
□ Safety Glasses (Yes/No sliding panel)

Teaching Laboratory: Collaborative Classroom
B311 Pc2 Laboratory - Equipment List
Prepared by ARINA Hayball
1/02/2017: Page 3 of 33
### Sheet 3: Room List with Equipment and Key Fixtures (PRELIMINARY)

#### Teaching Laboratory: Collaborative Classroom

<table>
<thead>
<tr>
<th>ITEM</th>
<th>TYPE</th>
<th>NUMBER</th>
<th>LOCATION</th>
<th>CONNECTED SERVICES</th>
<th>ELECTRICAL</th>
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</thead>
<tbody>
<tr>
<td></td>
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<td></td>
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<td></td>
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</tbody>
</table>

**COLLABORATIVE CLASSROOM**

**GROUP 1**

**COLLABORATIVE CLASSROOM**

<table>
<thead>
<tr>
<th>ITEM</th>
<th>TYPE</th>
<th>NUMBER</th>
<th>LOCATION</th>
<th>CONNECTED SERVICES</th>
<th>ELECTRICAL</th>
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</thead>
<tbody>
<tr>
<td>578</td>
<td>Joinery</td>
<td>Custom</td>
<td>COLLABORATIVE CLASSROOM</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Moveable Student benches with power nomes plus power for AV</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>ITEM</th>
<th>TYPE</th>
<th>NUMBER</th>
<th>LOCATION</th>
<th>CONNECTED SERVICES</th>
<th>ELECTRICAL</th>
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</thead>
<tbody>
<tr>
<td>623</td>
<td>Joinery</td>
<td>Custom</td>
<td>COLLABORATIVE CLASSROOM</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Cantilevered Side wall bench with store under (25% drawers, 25% cupboard 50% trolley space)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Blank**

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**CAir** - Compressed Air, **CG** - Carbogen, **O2** - Oxygen, **N2** - Nitrogen, **C02** - Carbon Dioxide, **Nat G** - Natural Gas, **RO** - reverse Osmosis, **Pol** - Polished, **H** - Hot water, **C** - Cold Water, **3ø** - 3 Phase

---

**Teaching Laboratory: Collaborative Classroom**

1 room(s) of this type

total UFA: 75.5 sq m

---

Teaching Laboratory: Wet PC2

B311 Pc2 Laboratory - Equipment List

Prepared by ARINA Hayball

1/02/2017: Page 4 of 33
TEACHING LABORATORY: WET PC2

RELATIONSHIPS AND GENERAL DESCRIPTION

PC2 grade teaching laboratory, convertible into PC1. Cleanable space without nooks and crannies. The spaces will be detailed as a PC2 with penetrations sealed and any abutting surfaces either easily removable or fully sealed, where cleaning is not appropriate then separate the fixtures or items by distance that is practical to clean. All built-in joinery on coved plinth. Glazing to the Nth Wall to be transparent and non cluttered for showcase of laboratory to public space, avoid permanent equipment fixings on Nth Wall.

DIRECT: Collaborative Classroom, Preparation, Handwash

Occupants
up to 96 Students

ARCHITECTURAL

Floor
Arch Selection
- Architect selection
- Laboratory Grade
- Non Slip
- Scrubbable surface

Wall (all)
Architect selection
- Architect selection
- Scrubbable surface

Height

Glass behind benches to have an obscuring frit pattern behind the bench which transitions to none just above bench height.

SECURITY

ACOUSTIC

DDA Hearing Augmentation

Within the restrictions of Laboratory finishes detail to provide a good acoustic environment to encourage the AV module separation AV Directional speakers to groups of 32.

WINOWS

Require: Yes

User openable: No

Internal Glazing: Desirable

Shading: Yes

Blinds

External Shading Controls

DOOR INFORMATION

Door location

Door type

Clear width

Hardware

Locking

Hold Open

Proximity

Primary doors to be auto sliding glass with card reader activation.

Provide 2 x exit doors to complying widths in consultation with Curtin Health and Safety

JOINERY

Perimeter benches (see equipment list)

student bench 900mm H

Wall unit to hold staff AV control devices

AV wall unit for headset and handheld mics ipad inc power and space for chargers, Controller shelf to include for Charging. Headset mic to hang and not touch surfaces.

All benches to have a small coved upturn at rear for cleaning and spill containment. Bench colour dark to allow for stain identification.

ENTRY DOOR HAZARD AND SPECIALIST SIGNAGE

BMS

Type of room

Certifying Notices (if applicable)

450x600g pinboard

Flammable Liquid

to Code

Non flammable/Non Toxic Gas

Enclosed footwear

Type of room

ACOUSTIC

DDA Hearing Augmentation

LIGHTING

Motion

Dimming

Lab Grade

TELEPHONE AND DATA

Data, WiFi

Cable Reticulation

From floor

Under bench duct

Under bench duct with bench GPO pedestals

Data and AV to equipment stations and Master Control.

LAB SERVICES

Provide natural gas outlet to each student position (1000 cts)

HAUHYDRAULIC

required

-floor: 

Cold Water

RO (type 2)

Staining Sinks

Hot Water

Safety Shower

Cold water to staining sinks

RO water in perimeter sinks

H+C water in perimeter sinks and handwash

Provide staining sinks in qty matching plans

STANDARD EQUIPMENT

(See also room list on next page for detailed equipment list.)

FIXTURES/FURNITURE

First Aid

Fixed

2L benchtop waste bin

Loose

Gown Collection Bin

Stools

Trolleys with height to match the Student benches

Student benches in group clusters of 8. Demonstrator to ratio of 16.

Instructor bench to ratio of 32. Benches 900x480 and without edge leg supports (cantilever). Fold-down section in the middle. Provide glass screens to staining sinks and infill panels for unused sinks.

Perimeter bench heights to allow trolleys to fit under

AUDIO VISUAL

Directional AV Speakers

Instructor Master Controls

Typical hearing cluster 32 person group.
### PC2 Laboratory

<table>
<thead>
<tr>
<th>Equipment ID</th>
<th>Model</th>
<th>Type</th>
<th>Location</th>
<th>Connected Services</th>
<th>Electrical</th>
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<tbody>
<tr>
<td>537</td>
<td>1800W Model</td>
<td>Fume Cupboard</td>
<td>Floor</td>
<td></td>
<td></td>
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<tr>
<td>596</td>
<td>ClydeAPAC BHA180</td>
<td>Biohazard Hoods</td>
<td>Floor</td>
<td></td>
<td></td>
</tr>
<tr>
<td>610</td>
<td>1800W Model</td>
<td>Laminar Flow Cabinet</td>
<td>Floor</td>
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</tr>
<tr>
<td>624</td>
<td>Custom</td>
<td>Student Bench</td>
<td>Floor</td>
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</tr>
</tbody>
</table>

Centre supported lab bench (no edge legs) with 900w drop down section to provide flexibility of use. 16 gaspoints on benchtop. 1 double GPO per student on pedestal. 300sq shelf on top of pedestal. 1 pedestal per four students.
<table>
<thead>
<tr>
<th>Equipment</th>
<th>Manufacturer</th>
<th>Quantity</th>
<th>Dimensions</th>
<th>Location</th>
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</thead>
<tbody>
<tr>
<td>Electrophoresis power pack</td>
<td>Fisher Biotech</td>
<td>10</td>
<td>0.23m x 0.24m x 0.10m</td>
<td>31/1/2017</td>
</tr>
<tr>
<td>Gel Tanks</td>
<td>Bio-Rad</td>
<td>10</td>
<td>Mobile</td>
<td>30/1/2017</td>
</tr>
<tr>
<td>Hot Plate</td>
<td>IEC2090.001</td>
<td>15</td>
<td>0.18m x 0.20m x 0.13m</td>
<td>30/1/2017</td>
</tr>
<tr>
<td>Kettle - Electric</td>
<td></td>
<td>4</td>
<td>Mobile</td>
<td>30/1/2017</td>
</tr>
<tr>
<td>Lamp (IKEA)</td>
<td>IKEA</td>
<td>48</td>
<td>Mobile</td>
<td>30/1/2017</td>
</tr>
<tr>
<td>Micropipettes</td>
<td>Nichipet EX Invitro, 1000ul</td>
<td>50</td>
<td>Mobile</td>
<td>30/1/2017</td>
</tr>
<tr>
<td>Micropipettes</td>
<td>Nichipet EX Invitro, 100ul</td>
<td>50</td>
<td>Mobile</td>
<td>30/1/2017</td>
</tr>
<tr>
<td>Nanodrop Scientific</td>
<td>thermofisher</td>
<td>3</td>
<td>0.20m x 0.32m x 0.34m</td>
<td>30/1/2017</td>
</tr>
<tr>
<td>Power Pack</td>
<td>Bio-Rad</td>
<td>10</td>
<td>Mobile</td>
<td>30/1/2017</td>
</tr>
<tr>
<td>Pumpette (pipette)</td>
<td>Acumax PipetteHelp</td>
<td>100</td>
<td>0.07m x 0.20m x 0.20m</td>
<td>31/1/2017</td>
</tr>
<tr>
<td>Venier Calipers - analogue</td>
<td></td>
<td>48</td>
<td>Mobile</td>
<td>30/1/2017</td>
</tr>
<tr>
<td>Venier Calipers - digital</td>
<td></td>
<td>48</td>
<td>Mobile</td>
<td>30/1/2017</td>
</tr>
<tr>
<td>Vortex Mixer</td>
<td>ZX3 Advanced Vortex Mix</td>
<td>20</td>
<td>0.16m x 0.17m x 0.10m</td>
<td>30/1/2017</td>
</tr>
</tbody>
</table>
PREPARATION: WET PC2 WORK ZONES

REF # 003
Preparation Area

B311 LABORATORY
Curtin University

FOR COMMENT
Version 0.2
1/02/20

0.1

REVISIONS

REFERENCE AND NOTES

LEGEND:
- Empty square indicates not applicable or none
- PTD=Paper Towel Dispenser, TPD=Toilet Paper
- DispenserCAir - Compressed Air, CG - Carbogen
- Oxygen, N2 - Nitrogen C02 - Carbon Dioxide
- Nat - Natural Gas, RO - reverse Osmosis Pol - Polished H - Hot

SAFETY SERVICES AND DETECTION
to code

MECHANICAL SERVICES
Temperature Control: 22±ºC
Contaminant Vent (Fume Cpbds (typical):

PC2 Lab AC Fume Cupboard. Refer to Equipment Schedule to QTY.

Safety Cabinets - Refer to Equipment Schedule

LIGHTING
Switching:
Lab Grade

POWER
Type:
Outlets: sngl dbl 3 ø 15A

No Fail Plant EPG Power

Reticulated 240v 10A power with 15A and 3 phase to suit installed equipment

TELEPHONE AND DATA
Type: Phone, WiFi, Data, Intercom
Voice / Data: sngl dbl trpl

Cable Reticulation
From floor Under bench duct under bench duct with bench GPD pedestals
Wall Wall duct (bench height) wall du

Telephony at wet workstation

Phone Line for emergency response, to Curtin Security and Health & Safety requirements.

LAB SERVICES
CAV Nat0 RO Water

Provide gases to workstation benches. one outlet per person.
Provide Compressed Air Tap - 1 outlet
Provide Nominated gas to relevant equipment identified in list.
Provide RO Water outlet, 1 Tap.

HYDRAULIC
required

Floor waste:

H+ C Safety Shower
RO (Type 2) Sink
No Safety Shower Floor wastes.
Nominal 15m max travel to safety shower.

STANDARD EQUIPMENT
(See also room list on next page for detailed equipment list.)

Drying racks over sink

FIXTURES/FURNITURE
900x600 whiteboard First Aid
Drying racks Hand towel
Soap dispenser (over HB) Split Kit (wall)

AUDIO VISUAL

Preparation: Wet PC2 Work Zones
Prepared by ARINA Hayball

B311 Pc2 Laboratory - Equipment List
1/02/2017: Page 9 of 33
Preparation Area

Sheet 3: Room List with Equipment and Key Fixtures (PRELIMINARY)  

<table>
<thead>
<tr>
<th>ITEM</th>
<th>TYPE</th>
<th>MODEL</th>
<th>LOCATION</th>
<th>CONNECTED SERVICES</th>
</tr>
</thead>
<tbody>
<tr>
<td>001</td>
<td>Fume Cupboard</td>
<td>1800W Model</td>
<td>Floor: 1.80m, 0.75m, 1.50m</td>
<td>WATER</td>
</tr>
<tr>
<td>131</td>
<td>RO Store and polishing unit</td>
<td>60L</td>
<td>Floor: 0.75m, 0.60m, 0.71m</td>
<td>C, RO</td>
</tr>
<tr>
<td>499</td>
<td>Glasswasher</td>
<td>Miele PG 8693 + UG 30-60/60-85 underbench Model, RO water to client consideration</td>
<td>Floor: 0.60m, 0.60m, 0.84m</td>
<td>C, RO</td>
</tr>
<tr>
<td>504</td>
<td>Dangerous Goods Cabinet - S4 drug</td>
<td>UB Model - 30L</td>
<td>Floor: 0.52m, 0.47m, 0.70m</td>
<td>RO, C</td>
</tr>
<tr>
<td>505</td>
<td>Dangerous Goods Cabinet - Corrosives</td>
<td>UB Model - 40L</td>
<td>Floor: 0.60m, 0.47m, 0.77m</td>
<td>RO, C</td>
</tr>
</tbody>
</table>

Prepared by ARINA Hayball

Preparation: Wet PC2 Work Zones
1/02/2017: Page 10 of 33
<table>
<thead>
<tr>
<th>Item</th>
<th>Description</th>
<th>Location</th>
<th>Dimensions</th>
<th>Capacity</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>508</td>
<td>Biohazard hoods</td>
<td>ClydeAPAC BHA120</td>
<td>1&lt;br&gt;1.51m x 0.77m x 1.50m</td>
<td>NatG</td>
<td>31/01/2017 7:05:49 PM</td>
</tr>
<tr>
<td>509</td>
<td>Biohazard Cabinet</td>
<td>ClydeAPAC BHA180</td>
<td>1&lt;br&gt;1.95m x 0.77m x 1.50m</td>
<td>Duct</td>
<td>31/01/2017 7:06:06 PM</td>
</tr>
<tr>
<td>526</td>
<td>Dangerous Goods Cabinet - Flammable</td>
<td>250L Model</td>
<td>1&lt;br&gt;1.10m x 0.47m x 1.76m</td>
<td></td>
<td>22/12/2016 10:55:41 AM</td>
</tr>
<tr>
<td>632</td>
<td>Biohazard Hoods</td>
<td>ClydeAPAC BHA180</td>
<td>1&lt;br&gt;1.95m x 0.77m x 1.50m</td>
<td>NatG</td>
<td>31/01/2017 7:14:52 PM</td>
</tr>
<tr>
<td>107</td>
<td>Ice machine</td>
<td>Hozhizaki FM-170AKE+B301SA</td>
<td>1&lt;br&gt;0.56m x 0.82m x 1.80m</td>
<td>1.00kW</td>
<td>30/01/2017 6:34:54 PM</td>
</tr>
<tr>
<td>066</td>
<td>Glass Drying Oven</td>
<td>1&lt;br&gt;0.77m x 0.40m x 1.04m</td>
<td>400$</td>
<td></td>
<td>30/01/2017 5:54:21 PM</td>
</tr>
<tr>
<td>587</td>
<td>Autoclave (Steriliser)</td>
<td>1&lt;br&gt;0.59m x 0.90m x 1.70m</td>
<td></td>
<td></td>
<td>22/12/2016 10:55:04 AM</td>
</tr>
</tbody>
</table>

**GROUP 2**

**PREPARATION AREA**

<table>
<thead>
<tr>
<th>Item</th>
<th>Description</th>
<th>Location</th>
<th>Dimensions</th>
<th>Capacity</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>165</td>
<td>Vortex mixers</td>
<td>Ratek VM1</td>
<td>2&lt;br&gt;0.13m x 0.15m x 0.15m</td>
<td></td>
<td>20/12/2016 4:12:10 PM</td>
</tr>
<tr>
<td>023</td>
<td>Hotplate</td>
<td>IEC 2090.001</td>
<td>1&lt;br&gt;0.18m x 0.20m x 0.13m</td>
<td></td>
<td>22/12/2016 10:56:55 PM</td>
</tr>
<tr>
<td>170</td>
<td>Microwave Oven</td>
<td>Panasonic</td>
<td>1&lt;br&gt;0.60m x 0.41m x 0.36m</td>
<td></td>
<td>22/12/2016 10:56:54 PM</td>
</tr>
<tr>
<td>148</td>
<td>Incubator (15-30 deg)</td>
<td>Thermoline Science (refrigerator incubator)</td>
<td>1&lt;br&gt;0.95m x 0.70m x 0.60m</td>
<td></td>
<td>20/12/2016 4:12:10 PM</td>
</tr>
<tr>
<td>309</td>
<td>Phase Contrast Microscope</td>
<td>Olympus BX41</td>
<td>1&lt;br&gt;0.30m x 0.50m x 0.45m</td>
<td></td>
<td>20/12/2016 4:12:10 PM</td>
</tr>
<tr>
<td>437</td>
<td>Vortex mixers</td>
<td>ZC3 Advanced vortex mix</td>
<td>1&lt;br&gt;0.16m x 0.17m x 0.10m</td>
<td></td>
<td>20/12/2016 4:12:10 PM</td>
</tr>
<tr>
<td>348</td>
<td>Water baths</td>
<td>Lauda AL25</td>
<td>2&lt;br&gt;0.53m x 0.34m x 0.36m</td>
<td></td>
<td>20/12/2016 4:12:10 PM</td>
</tr>
<tr>
<td>500</td>
<td>Electrophoresis power pack</td>
<td>Fisher Biotec</td>
<td>1&lt;br&gt;0.22m x 0.24m x 0.10m</td>
<td></td>
<td>20/12/2016 4:12:10 PM</td>
</tr>
<tr>
<td>501</td>
<td>Electrophoresis gel tank</td>
<td>Fisher Biotec</td>
<td>1&lt;br&gt;0.18m x 0.28m x 0.90m</td>
<td></td>
<td>20/12/2016 4:12:10 PM</td>
</tr>
<tr>
<td>502</td>
<td>Dissecting Microscope</td>
<td>Nikon C-DS</td>
<td>2&lt;br&gt;0.20m x 0.24m x 0.40m</td>
<td></td>
<td>20/12/2016 4:12:10 PM</td>
</tr>
<tr>
<td>503</td>
<td>Compound Microscope</td>
<td>Olympus CH20</td>
<td>2&lt;br&gt;0.24m x 0.32m x 0.45m</td>
<td></td>
<td>20/12/2016 4:12:10 PM</td>
</tr>
<tr>
<td>506</td>
<td>Busen burner and insulated slab</td>
<td>MET-APP</td>
<td>2&lt;br&gt;0.22m x 0.23m x 0.14m</td>
<td>NatG</td>
<td>22/12/2016 10:56:47 AM</td>
</tr>
<tr>
<td>507</td>
<td>Bunsen Burner portable model</td>
<td>Integra (Firebox ECO)</td>
<td>2&lt;br&gt;0.22m x 0.28m x 0.08m</td>
<td></td>
<td>22/12/2016 10:56:48 AM</td>
</tr>
<tr>
<td>510</td>
<td>Balances</td>
<td>Shimadzu TX3202L</td>
<td>2&lt;br&gt;0.22m x 0.28m x 0.08m</td>
<td></td>
<td>22/12/2016 10:56:48 AM</td>
</tr>
<tr>
<td>511</td>
<td>Balances</td>
<td>BEL M2544i</td>
<td>1&lt;br&gt;0.20m x 0.32m x 0.33m</td>
<td></td>
<td>30/01/2017 6:27:05 PM</td>
</tr>
<tr>
<td>512</td>
<td>Balances analytical</td>
<td>Ohaus Pioneer Series PA212C</td>
<td>1&lt;br&gt;0.20m x 0.32m x 0.29m</td>
<td></td>
<td>22/12/2016 10:56:48 AM</td>
</tr>
<tr>
<td>589</td>
<td>Centrifuge</td>
<td>Orbital 400</td>
<td>1&lt;br&gt;0.46m x 0.48m x 0.32m</td>
<td></td>
<td>30/01/2017 6:27:05 PM</td>
</tr>
<tr>
<td>572</td>
<td>PCR Machine</td>
<td>Bio-Rad</td>
<td>1&lt;br&gt;0.25m x 0.46m x 0.24m</td>
<td></td>
<td>30/01/2017 6:27:05 PM</td>
</tr>
<tr>
<td>573</td>
<td>Freezer (-20C)</td>
<td>Skope VF1500 3 Door</td>
<td>1&lt;br&gt;1.71m x 0.71m x 2.20m</td>
<td>Backup</td>
<td>30/01/2017 6:27:05 PM</td>
</tr>
<tr>
<td>584</td>
<td>Aquarium Pumps</td>
<td></td>
<td>18&lt;br&gt;Storage</td>
<td></td>
<td>30/01/2017 6:27:05 PM</td>
</tr>
<tr>
<td>585</td>
<td>Calibration Weights</td>
<td></td>
<td>2&lt;br&gt;Storage</td>
<td></td>
<td>30/01/2017 6:27:05 PM</td>
</tr>
<tr>
<td>586</td>
<td>CO2 Q Box</td>
<td>John Morris</td>
<td>10&lt;br&gt;Storage</td>
<td></td>
<td>30/01/2017 6:27:05 PM</td>
</tr>
<tr>
<td>587</td>
<td>Compound Microscope</td>
<td>Nikon Eclipse E100</td>
<td>1&lt;br&gt;0.24m x 0.24m x 0.38m</td>
<td></td>
<td>30/01/2017 6:27:05 PM</td>
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<tr>
<td>ID</td>
<td>Item Description</td>
<td>Location</td>
<td>Quantity</td>
<td>Dimensions (m)</td>
<td>Notes</td>
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<td>----------------------------------</td>
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<td>----------------</td>
<td>-------</td>
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<tr>
<td>588</td>
<td>Freezer - Laboratory Sparkfree</td>
<td>Thermoine TLUF-520, 520L</td>
<td>3</td>
<td>0.64 x 0.80 x 1.63</td>
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</tr>
<tr>
<td>589</td>
<td>Hanna Water Parameter</td>
<td>Hanna Parameter</td>
<td>32</td>
<td>0.44 x 0.32 x 0.09</td>
<td></td>
</tr>
<tr>
<td>590</td>
<td>Microcentrifuge</td>
<td>Sigma 1-14</td>
<td>1</td>
<td>0.22 x 0.25 x 0.15</td>
<td></td>
</tr>
<tr>
<td>591</td>
<td>Nanodrop Scientific</td>
<td>Thermofisher</td>
<td>1</td>
<td>0.20 x 0.32 x 0.34</td>
<td></td>
</tr>
<tr>
<td>592</td>
<td>Pipette (pipette)</td>
<td>Acmam PipetteHelp</td>
<td>2</td>
<td>0.07 x 0.20 x 0.20</td>
<td></td>
</tr>
<tr>
<td>593</td>
<td>Refractometers</td>
<td>ATC</td>
<td>32</td>
<td>0.21 x 0.08 x 0.06</td>
<td></td>
</tr>
<tr>
<td>594</td>
<td>Vernier Calipers - Analogue</td>
<td></td>
<td>1</td>
<td>Storage</td>
<td></td>
</tr>
<tr>
<td>595</td>
<td>Vernier Calipers - Digital</td>
<td></td>
<td>1</td>
<td>Storage</td>
<td></td>
</tr>
<tr>
<td>633</td>
<td>Dangerous Goods Cabinet - Corrosives</td>
<td>UB Model - 100L</td>
<td>2</td>
<td>0.80 x 0.61 x 0.77</td>
<td>Blank</td>
</tr>
</tbody>
</table>

Blank
## TECHNICAL: PREP STORE

### Currimuniversity

#### B311 LABORATORY

#### B311 Pc2 Laboratory - Equipment List

### REF # 004

#### FOR COMMENT

<table>
<thead>
<tr>
<th>Version</th>
<th>Issue</th>
<th>REV</th>
<th>Date</th>
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<td>draft</td>
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<td>0.2</td>
<td>1/02/20</td>
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### REF # 004

<table>
<thead>
<tr>
<th>TECHNICAL: PREP STORE</th>
<th>PREP STORE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Primary / example</td>
<td>Prep Store Room</td>
</tr>
<tr>
<td>room of this RDS</td>
<td>refer next page for full list</td>
</tr>
</tbody>
</table>

### RELATIONSHIPS AND GENERAL DESCRIPTION

Space used for the storage of laboratory goods, equipment and consumables.

Consumable storage capacity for a 1 week replenishment cycle.

Limited storage of waste bins internally - waste collection to external courtyard as per existing practices.

PC2 Laboratory, Preparation part of PC2 containment

### OCCUPANTS

<table>
<thead>
<tr>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ye</td>
</tr>
<tr>
<td>Yes</td>
</tr>
</tbody>
</table>

### ARCHITECTURAL

#### Floor

- Cleanable
- Laboratory Grade
- Non Slip

#### Wall (all or low)

- Scrubbable surface

#### Ceiling

- Cleanable

#### Height

- 2700 mm

#### Potential high floor loading

- Lab grade

### SECURITY

#### ACOUSTIC

- DDA Hearing Augmentation

#### WINDOWS

- Require: No
- User openable: Yes
- Internal Glazing: No
- Blinds

### DOOR INFORMATION

- Door location: N/A

### JOINERY

- Adjustable wall shelving

### ENTRY DOOR HAZARD AND SPECIALIST SIGNAGE

- Authorised Access
- Certifying Notices (if applicable)
- Flammable Liquid
- Room Name/Number
- to Code
- Type of room
- Whiteboard at end of compactus

### MECHANICAL SERVICES

#### Temperature Control:

- 22±ºC

#### Contaminant Vent

#### Fume Cpbd (typical):

### SAFETY SERVICES AND DETECTION

#### to code

- MECHANICAL SERVICES
- Temperature Control: 22±ºC
- PC2 Lab AC

#### LIGHTING

- Lab Grade
- Special spark free lighting in front of flammable store to code

#### POWER

- Type: None
- EPG Power
- No Fail Plant
- Cleaners outlets only.
- Provide wall duct at 1100AFL and allow for future calbing

#### TELEPHONE AND DATA

- Type: None
- Voice / Data: sngl, dbl, 3 a, 15A
- Cable Reticulation: From floor, Under bench duct, under bench duct with bench GPO pedestals, Wall, Wall duct (bench height), wall duct

### HYDRAULIC

- none
- Floor waste: □

### STANDARD EQUIPMENT

- See also room list on next page for detailed equipment list.

### FIXTURES/FURNITURE

- adjustable lab laminate shelving
- Compactus (manual)
- Clinical pull out tray shelving
- Trolleys

- Mixture of height adjustable shelving and proprietary clinical pull out shelving.

### AUDIO VISUAL

- BMS

- Fail

---

Technical: Prep Store

Prepared by ARINA Hayball

B311 Pc2 Laboratory - Equipment List

1/02/2017: Page 13 of 33
### Technical: Prep Store

**Sheet 2: Plans**

![Prep Store Room Plan](image)

**Sheet 3: Room List with Equipment and Key Fixtures (PRELIMINARY)**

**TECHNICAL: PREP STORE**

<table>
<thead>
<tr>
<th>ITEM</th>
<th>TYPE</th>
<th>LOCATION</th>
<th>CONNECTED SERVICES</th>
<th>ELECTRICAL</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
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<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**PREP STORE ROOM**

<table>
<thead>
<tr>
<th>Group 1</th>
<th>Equipment ID</th>
<th>Description</th>
<th>Number</th>
<th>Width</th>
<th>Depth</th>
<th>Height</th>
<th>WATER</th>
<th>Drain</th>
<th>GASES</th>
<th>MECH. EXHAUST</th>
<th>MECH. VOLTS</th>
<th>VOLTS</th>
<th>DATA</th>
</tr>
</thead>
<tbody>
<tr>
<td>582</td>
<td>109</td>
<td>SS Shelving</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>583</td>
<td></td>
<td>Compactus</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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</tr>
</tbody>
</table>

**TECHNICAL: Flammable Store**

**Prepared by ARINA Hayball**
**TECHNICAL: FLAMMABLE STORE**

| REF # 005 | Curtin University | B311 Pn2 Laboratory - Equipment List | FOR COMMENT | Version | Issue | rev | 0.1 | 1/02/2017: Page 15 of 33 |

**Primary / example room of this RDS refer next page for full list.**

**RELATIONSHIPS AND GENERAL DESCRIPTION**

Space for storage of flammable liquids and samples in cabinets
Preparation
Part of PC2 containment

**Occupants**
casual access by staff

**ARCHITECTURAL**

| Floor | Cleanable | Non Staining to chemicals and dies | Non Slip |
| Wall (all or low) | Scrubbable surface | |
| Ceiling | Cleanable | |
| Height | 2700 min | |
| Bundled space to code for dangerous goods | Lab grade |

**SECURITY**

**ACOUSTIC**

DDA Hearing Augmentation

**WINDOWS**

Require: No
User openable: No
Internal Glazing: No
Blinds

**DOOR INFORMATION**

Door location
General access
Fire rated - solid
Clear width
900
Hardware
Free access inside
Self access inside
Locking
Key

**JOINERY**

**ENTRY DOOR HAZARD AND SPECIALIST SIGNAGE**

| Authorised Access |
| Certifying Notices (if applicable) |
| Flammable Liquid |
| Room Name/Number |
| To Code |
| Type of room |
| Whiteboard at end of compactus |

**MECHANICAL SERVICES**

| Temperature Control: | 22ºC |
| Contaminant Vent |

**SAFETY SERVICES AND DETECTION**

to code
Ensure Chemical Store room complies with BCA and AS, including fire rating.

**MECHANICAL SERVICES**

Temperature Control: 22ºC
Contaminant Vent

**LIGHTING**

Lab Grade
Special for flammable space (no spark)

**POWER**

Type: None

Outlets: sngl
dbl
3 ø 1SA

No Fail Plant
EPG Power

**TELEPHONE AND DATA**

Type: None

| Voice / Data |
| snql |
| db1 |
| trpl |

**Cable Reticulation**

From floor
Under bench duct
under bench duct with bench GPO pedestals
Wall
Wall duct (bench height)

**HYDRAULIC**

None

**STANDARD EQUIPMENT**

(See also room list on next page for detailed equipment list.)

**FIXTURES/FURNITURE**

Proprietary Flamm cabinets - 4x240L

Fixed

Provide separation of cabinets to code

**AUDIO VISUAL**

**REFERENCE AND NOTES**

LEGEND: Empty square indicates not applicable or none

PTD=Paper Towel Dispenser, TPD=Toilet Paper

DispenserCaIr - Compressed Air, CG - Carbogen O2 -

Oxygen, N2 - Nitrogen C02 - Carbon Dioxide Nat G -

Natural Gas, RO - reverse Osmosis Pol - Polished H - Hot

| BMS |

**FOR COMMENT**

**REVISIONS**

LEGEND: Empty square indicates not applicable or none

| BMS |

**FOR COMMENT**

**REVISIONS**

LEGEND: Empty square indicates not applicable or none

| BMS |

**FOR COMMENT**

**REVISIONS**

LEGEND: Empty square indicates not applicable or none

| BMS |

**FOR COMMENT**

**REVISIONS**

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| BMS |

**FOR COMMENT**

**REVISIONS**

LEGEND: Empty square indicates not applicable or none

| BMS |

**FOR COMMENT**

**REVISIONS**

LEGEND: Empty square indicates not applicable or none

| BMS |
Sheet 3: Room List with Equipment and Key Fixtures (PRELIMINARY)

**TECHNICAL: FLAMMABLE STORE**

**ITEM**

**FLAMMABLE STORE**

**ITEM**

**EQUIPMENT ID**

**DANGER STORES CABINET - FLAMMABLE**

**GROUP 1**

**113**

**INCIDENTAL SERVICE**

**LOCATION**

**NUMBER**

**NUMBER**

**WIDTH**

**DEPTH**

**HEIGHT**

**CONNECTED SERVICES**

**ELECTRICAL**

**POWER TYPE**

**AMPS**

**VOLTS**

**DATA**

---

**Constant Temp: Cold**

**Prepared by ARINA Hayball**

**B311 Pcter Laboratory - Equipment List**

---

10/2/2017: Page 16 of 33
RELATIONSHIPS AND GENERAL DESCRIPTION

Constant temperature space with internal shelving. Directly accessible from the staff and student areas via auto sliding doors. PC2/PC1 Laboratory, Preparation. Within PC2 zone

Occupants
Temporary access for staff and students

ARCHITECTURAL

Floor: Arch Selection, Laboratory Grade, Non Slip, Non Staining to chemicals and dies, Resistance to intermittent flooding

Wall (all or low): Architect selection, Scrubbable surface, Internal Glazing: Blinds, Desirable

Ceiling: Acoustic control, Architect selection, Cleanable

Height: 2400

Insulated box within the space. Finished floor must be flush with Adjoining surfaces

Cool room type construction. Architectural finish suitable on the outer face.

SECURITY

DDA Hearing Augmentation

ACOUSTIC

DDA Hearing Augmentation

WINDOWS

User openable: Yes

Internal Glazing: Desirable

VIEWING PANEL

Sliding access windows to side of Cold room. Configure in two panel sets only with narrow fixed panel between sliding

DOOR INFORMATION

Door location: General access, Secure access

Door type: Auto sliding, Sliding

Clear width: 1000 clear

Hardware: Fail-safe internally, Handle Both Sides

Proximity activated vision panel, Locking: No access student, None

Primary doors to be auto sliding glass with card reader activation. Secure access to preparation room side.

JOINERY

ENTRY DOOR HAZARD AND SPECIALIST SIGNAGE

BMS

Room Name/Number

Temperature warning

Type of room

Constant Temp: Cold

Prepared by ARINA Hayball
**Sheet 2: Plans**

- **1 room(s) of this type**
- **total UFA: 9.8 sq m**

---

**Sheet 3: Room List with Equipment and Key Fixtures (PRELIMINARY)**

**CONSTANT TEMP: COLD**

<table>
<thead>
<tr>
<th>ITEM</th>
<th>MODEL</th>
<th>MOUNTING</th>
<th>WIDTH</th>
<th>DEPTH</th>
<th>HEIGHT</th>
<th>CONNECTED SERVICES</th>
<th>ELECTRICAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>111</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**COLD ROOM**

- **GROUP 1**
- **1 room(s)**
- **total UFA: 9.8 sq m**

**580**: SS Shelving
CONSTANT TEMP: WARM

RELATIONSHIPS AND GENERAL DESCRIPTION
Constant temperature space with internal shelving. Directly accessible from the staff and student areas via auto sliding doors. PC2 Laboratory, Preparation. Within PC2 zone.

Occupants
Temporary access for staff and students

ARCHITECTURAL

Floor
- Arch Selection
- Non Slip
- Lab Grade
- Scrubbable surface
- Architect selection
- Scrubbable surface
- Cleanable
- Architect selection

Wall (all or low)
- Acoustic control
- Arch Selection
- Cleanable
- Architect selection

Height
- Coved integral to floor

Ceiling

Skirt

Insulated box within the space. Finished floor must be flush with adjoining surfaces. 37ºC warm room

WINDOW

User openable:
- Yes

ACOUSTIC

DDA Hearing Augmentation:
- Yes

SECURITY

WINDOS

Require:
- No

Internal Glazing:
- Desirable

DOOR INFORMATION

Door type
- General access
- Auto sliding
- Sliding

Clear width
- 1000 clear

Hardware
- Fail-safe internally
- Handle Both Sides
- Vision panel
- Proximity activated
- No access student

Locking
- Staff access
- Staff access

Primary doors to be auto sliding glass with card reader activation.

JOINERY

ENTRY DOOR HAZARD AND SPECIALIST SIGNAGE

Room Name/Number

Temperature warning

Type of room

MECHANICAL SERVICES

Contaminant Vent
- Fume Cpbd (typical):

Temperature Control:
- Location compressors away from staff and students
- 37ºC Constant Temperature

SAFETY SERVICES AND DETECTION
to code

Mechanical Services

Power
- Location compressors away from staff and students
- 37ºC Constant Temperature

Lighting

Motion
- Sealed WP lighting
- UV non-presence lighting.

Provide a separate lighting circuit for the side access shelving

PVC

Connection to existing backup generator required. Primary system failure to be notified by SMS spider.

4x 10A power in skirting duct (1000AFL) each side

TELEPHONE AND DATA

Type:

Voice / Data:

OUTLETS

Type:

No Fail Plant

EPG Power

Connection to existing backup generator required. Primary system failure to be notified by SMS spider.

4x 10A power in skirting duct (1000AFL) each side

LAB SERVICES

None

HYDRAULIC

required

Floor waste:
- None

STANDARD EQUIPMENT

(See also room list on next page for detailed equipment list.)

FIXTURES/FURNITURE

- Shelving adjustable and cantilevered

- SS Shelving

- Max height 1800H shelving 450 centres

AUDIO VISUAL

Reference and Notes

Legend:
- Empty square indicates not applicable or none

PTD=Paper Towel Dispenser, TPD=Toilet Paper

Dispenser Air, Compressed Air - Carbogen O2 - Oxygen, N2 - Carbon Dioxide Nat G - Natural Gas, RO - reverse Osmosis Pol - Polished H - Hot

Curtin University
B311 Laboratory
B311 Pc2 Laboratory - Equipment List

FOR COMMENT

Issue

Version

Draft

1/02/20

0.2

17

0.1

REF # 007

Prepared by ARINA Hayball

1/02/2017: Page 19 of 33
### Warm Room

#### Sheet 2: Plans

**Constant Temp: Warm**

1 room(s) of this type  
total UFA: 7.1 sq m

#### Sheet 3: Room List with Equipment and Key Fixtures (PRELIMINARY)

<table>
<thead>
<tr>
<th>ITEM</th>
<th>TYPE</th>
<th>LOCATION</th>
<th>CONNECTED SERVICES</th>
<th>ELECTRICAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>112</td>
<td>WARM ROOM</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

- **WARM ROOM**
- **GROUP 1**

**Equipment ID**
- 561 SS Shelving

**Prepared by ARINA Hayball**

**Handwash**
- 1/02/2017: Page 20 of 33
HANDWASH

Primary / example room of this RDS refer next page for full list.

RELATIONSHIPS AND GENERAL DESCRIPTION
Space inside the PC2 containment for handwashing.
DIRECT: Collaborative Classroom, PC2 Laboratory, Bags Store.
Within PC2 zone
Occupants
up to 96 student to pass through within a 5-10 period

ARCHITECTURAL
Floor 
Laboratory Grade
Non Slip
Wall (all)
Bruttable surface
or low
Cleanable
2700 min
Ceiling 
Cleanable
Height
Skr (high)
Coved integral to floor

Part of the PC2 containment area
Provide 500mm of SS sink length per 9 student seats in the PC2 laboratory
Cleanable space without nooks and crannies. The spaces will be detailed as PC2 with penetrations sealed and any abutting surfaces either easiy removable or fully sealed. Where sealings is not

SECURITY

ACOUSTIC
DDA Hearing Augmentation

WINDOWS
Provide vision glazing into inform space and collaboration space

DOOR INFORMATION
Door location
General access
Door type
auto sliding
Clear width
1200w min
Hardware
hold open (electronic)
Locking
Proximity

JOINERY

ENTRY DOOR HAZARD AND SPECIALIST SIGNAGE

BMS

MECHANICAL SERVICES
Contaminant Vent
Temperature Control: Normal

LIGHTING
Lab AC
PC2 containment Mechanical Ventilation

TELEPHONE AND DATA
Allow for proximity swipe points each side of entry door from bagwash (2 per doors) for student attendance counts

POWER

LAB SERVICES

HYDRAULIC
required

FIXTURES/FURNITURE

AUDIO VISUAL
Sheet 3: Room List with Equipment and Key Fixtures (PRELIMINARY)

**Handwash**

<table>
<thead>
<tr>
<th>Equipment ID</th>
<th>ITEM</th>
<th>TYPE</th>
<th>LOCATION</th>
<th>CONNECTED SERVICES</th>
<th>ELECTRICAL</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>482</td>
<td>Wash trough and accessories</td>
<td>Hands free tapware</td>
<td>SS Handwash trough and hands free tapware</td>
<td>Blank</td>
</tr>
</tbody>
</table>
### Mechanical Services

Temperature Control: 22±ºC

Contaminant Vent: Fume Cupboard (typical: 0)

### Safety Services and Detection

**Power**
- Normal AC
- Normal
- No Fail Plant
- EPG Power

Type: Normal
- Outlets: sngl, dbl
- 3 ø, 15A

Relocate demolished services cupboard, location to Detailed Design.

### Acoustic

DDA Hearing Augmentation

### Security

Ability to restrict after hours access.

- Staff and students for private or group discussion.

### Windows

- User openable: Yes
- Internal Glazing: No

Provide retractable brownout screening to wall between PC2/PC1 Laboratory.

### Architectural

- Height (high)
- Architect selection

- Wall (all or low)
- Architect selection

Ceiling: Acoustic control, Architect selection

Provide retractable brownout screening to wall between PC2 Laboratory.

### Doors Information

- Connecting door: Sliding
- General access: Connecting door: Sliding

Ability to restrict access to B311 South. Door to 3P Group Rooms to have cardex access.

### Joinery

Double sided glass display to wall separating PC2 Laboratory.

### Entry Door Hazard and Specialist Signage

- Room Name/Number: BMS
- Temp: Yes

### Fixed Equipment/Furniture

- 3P Desks: Lounge/Sofa
- Long Tables/Setdown Tables: Fixed

Provide up to 60 learning seats of various types from hard to soft surfaces, at a rate of 1 seat per 2.5 sqm UFA.

Provide 6 x 3P rooms.

### Audio Visual

LED monitors to 3P Group Rooms.

Interactive AV fitout media wall or equivalent to Warm Room wall facing informal area.
### STAFF AREA

**B311 Laboratory - Equipment List**

#### REFERENCE AND NOTES

**LEGEND:**

- Empty square indicates not applicable or none
- PTD = Paper Towel Dispenser, TPD = Toilet Paper Dispenser
- CAir = Compressed Air, CG = Carbogen O2
- Oxygen, N2 = Nitrogen, CO2 = Carbon Dioxide, Nat G = Natural Gas, RO = Reverse Osmosis, Pol = Polished

**CONTAMINANT VENT**

- Fume Cupboard (typical):
  - Temperature Control: Normal

**SAFETY SERVICES AND DETECTION**

- Contaminant Vent
  - Fume Cupboard (typical):

**MECHANICAL SERVICES**

- Temperature Control: Normal
- Normal AC

**LIGHTING**

- Switching: Normal

**POWER**

- Type: Normal
  - No Fail Plant
  - EPG Power

**TELEPHONE AND DATA**

- Outlets: Sngl, Dbl, 3, 15A

**LAB SERVICES**

- Cable Reticulation: From floor, Under bench duct, Under bench duct with bench GPO pedestals
- Wall, Wall duct (bench height)

**HYDRAULIC**

- Required
  - Cold Water
  - Filtered Water H+C

**STAFF HYDRATION PROVISIONS**

- Zip Hydrotap or Similar

**STAFF HYDRATION PROVISIONS**

- Zip Hydrotap or Similar

**STANDARD EQUIPMENT**

- See also room list on next page for detailed equipment list.

### RELATIONSHIPS AND GENERAL DESCRIPTION

- Space separate from the PC2 zone for staff use only and for small capacity confidential staff conversations.

#### SPACE SEPARATE FROM THE PC2 ZONE FOR STAFF USE ONLY AND CONFIDENTIAL STAFF CONVERSATIONS

- Provide short term temporary seating for up to 3 staff for respite.
- Staff Informal Area

### SECURITY

- Staff access only.

### ACOUSTIC

- 0.5A Hearing Augmentation

#### ACOUSTIC

- Acoustic insulation to preserve speech privacy within rooms

### WINDOWS

- Require: Desirable

#### WINDOWS

- User operable: No
- Internal Glazing: Desirable

### DOOR INFORMATION

- Door location: Staff Access

#### DOOR INFORMATION

- Door type: Sliding
- Clear width: 870
- Hardware: Acoustic Seal
- Locking: Proximity

### JOINERY

- Bag Pigeon Holes
- MDF Bench

### ENTRY DOOR HAZARD AND SPECIALIST SIGNAGE

- BMS

### FIXTURES/FURNITURE

- SEE ROOM LIST ON NEXT PAGE FOR DETAILED EQUIPMENT LIST.
### Sheet 3: Room List with Equipment and Key Fixtures (PRELIMINARY)

#### STAFF AREA

<table>
<thead>
<tr>
<th>ITEM</th>
<th>MODEL</th>
<th>NUMBER</th>
<th>LOCATION</th>
<th>CONNECTED SERVICES</th>
<th>ELECTRICAL</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>GROUP 1</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>577</td>
<td>Hot and chilled Water</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>(Zip Hydrotap or similar)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>627</td>
<td>Sink in benchtop</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>standard kitchenette style</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>630</td>
<td>Bench and drawers/cupboards</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>600w 2 x dbl GPO</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>GROUP 2</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>628</td>
<td>Underbench fridge</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>600deep</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

#### STAFF AREA

- **CAir:** Compressed Air
- **CG:** Carbogen
- **Oxygen:** O2
- **N2:** Nitrogen O2
- **CO2:** Carbon Dioxide
- **Nat G:** Natural Gas
- **RO:** reverse Osmosis
- **Pol:** Polished
- **H:** Hot water
- **C:** Cold Water
- **3ø:** 3 Phase

**POWER TYPE**
- **AMPS**
- **VOLTS**
- **W**
- **DATA**

**DATE:** 31/1/2017

**Prepared by ARINA Hayball**
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th>GPO</th>
<th></th>
</tr>
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<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>240$</td>
<td></td>
</tr>
</tbody>
</table>

**Hot desk - furniture**

750 deep for 3 persons 2 GPO per person

Blank
### BAGSTORE

**Primary / example room of this RDS refer next page for full list.**

**RELATIONSHIPS AND GENERAL DESCRIPTION**

Space outside the PC2 containment for the setdown of student bags.

DIRECT: Informal Learning Area, Handwash

**Occupants**

**ARCHITECTURAL**

- **Floor**: Arch Selection
- **Wall (all or low)**: Architect selection
- **Ceiling**: Acoustic control
- **Height**: 2700mm

**Transition space where student must store bags or other personal effects.**

**No requirement of lab finishes at this point**

**SECURITY**

- CCTV surveillance to cover all corners of room and bag storage shelves

**ACOUSTIC**

- **DDA Hearing Augmentation**: Provide acoustic treatment to assist reduction of noise in bad store.

**WINDOWS**

- **User openable**: Yes
- **Internal Glazing**: Desirable

**JOINERY**

- **Bag storage**

**DOOR INFORMATION**

- **Door location**: Connecting door
- **Door type**: Auto sliding
- **Clear width**: 1200w min
- **Hardware**: Hold open

**Proximity card access, hold open switch in Bag room side leading to informal area, hold open switch in Teaching Laboratory side leading to Bag room.**

**ENTRY DOOR HAZARD AND SPECIALIST SIGNAGE**

**ENTRY DOOR HAZARD AND SPECIALIST SIGNAGE**

**B311 Pc2 Laboratory - Equipment List**

<table>
<thead>
<tr>
<th>REF # 011</th>
<th>Curtin University</th>
<th>B311 Laboratory</th>
<th>FOR COMMENT</th>
<th>Version</th>
<th>0.2</th>
<th>1/02/20</th>
<th>Issue</th>
<th>0.1</th>
<th>rev 17</th>
</tr>
</thead>
</table>

**REFERENCE AND NOTES**

- **LEGEND**: Empty square indicates not applicable or none
- **PTD**. Paper Towel Dispenser, **TPD**. Toilet Paper Dispenser
- **CAir**. Compressed Air, **CG**. Carbogen O2
- **N2**. Nitrogen, **CO2**. Carbon Dioxide, **Nat**. Natural Gas, **RO**. reverse Osmosis, **Pol**. Polished
- **H**. Hot

**SAFETY SERVICES AND DETECTION**

- **Contaminant Vent**: From lab
- **Fume Cpdb (typical)**

**MECHANICAL SERVICES**

- **Temperature Control**: Normal
- **Normal AC**

**POWER**

- **Outlets**: sngl, dbl, 3 ø, 15A
- **No Fail Plant**: Yes

**HYDRAULIC**

- **required**: Loose

**LAB SERVICES**

- **Floor waste**: None

**STANDARD EQUIPMENT**

- **Clean Gown Tray (96 gowns)**

**FIXTURES/FURNITURE**

**AUDIO VISUAL**

**For Comment**

- **Issue**: 1/02/2017
- **Version**: 0.1

**Prepared by ARINA Hayball**
### Sheet 3: Room List with Equipment and Key Fixtures (PRELIMINARY)

**Bagroom**

<table>
<thead>
<tr>
<th>ITEM</th>
<th>TYPE</th>
<th>LOCATION</th>
<th>CONNECTED SERVICES</th>
<th>ELECTRICAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>104</td>
<td>BAG ROOM</td>
<td>EAST 680</td>
<td>WATER</td>
<td>#</td>
</tr>
</tbody>
</table>

**Equipment ID**

- **Type (pigeon hole, lockers)**: TBA

---

**Sheet 2: Plans**

**Bagroom**

- **Bag Room**: 104
- **1 room(s) of this type**: total UFA: 12.2 sq m

---

**BAG ROOM**

- **Bag Storage**: 104
- **Type**: (pigeon hole, lockers) TBA
GAS STORAGE

115 Gas Store

RELATIONSHIPS AND GENERAL DESCRIPTION
Space external of building for the storage of gas cylinders, to replace existing alcove demolished at south of Room 158.

Provide storage of up to 4 Cylinders.

Occupants

ARCHITECTURAL
Floor □
Wall (all □ or low □)
Ceiling □
Height □
Wall: Wire mesh, metal pailing fence, or similar to Architectural aesthetic selection.

Roof: Roof cover required

SECURITY

ACOUSTIC DDA Hearing Augmentation □

WINDOWS User openable: □ Internal Glazing: □

DOOR INFORMATION
Door location
Wire mesh or metal pailing or similar to architectural aesthetic selection. Manual Sliding. Lock.

JOINERY

ENTRY DOOR HAZARD AND SPECIALIST SIGNAGE BMS

MECHANICAL SERVICES
Temperature Control:

Contaminant Vent □ Fume Cpbd (typical):

MECHANICAL SERVICES

SAFETY SERVICES AND DETECTION

POWER
No Fail Plant □ EPG Power □

TELEPHONE AND DATA
Cable Reticulation □

LAB SERVICES □

STANDARD EQUIPMENT

FIXTURES/FURNITURE

AUDIO VISUAL
### Sheet 3: Room List with Equipment and Key Fixtures (PRELIMINARY)

<table>
<thead>
<tr>
<th>ITEM</th>
<th>MODEL</th>
<th>LOCATION</th>
<th>CONNECTED SERVICES</th>
<th>ELECTRICAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>4 cylinder mounting rack</td>
<td>Group 1</td>
<td>Gas Store</td>
<td></td>
</tr>
</tbody>
</table>

**GAS STORE**

- **GAS STORE**
  - **Group 1**
    - **Equipment ID**: 622
    - **Model**: 4 cylinder mounting rack
    - **Date**: 31/1/2017
    - **Time**: 4:23:58 pm

---

**Equipment ID**: 622

**Prepared by**: ARINA Hayball

**Date**: 1/02/2017: Page 31 of 33
**RELATIONSHIPS AND GENERAL DESCRIPTION**

External wire enclosure for the accommodation of up to 10 x 240L PC2 waste bins, accessible to refuse collection contractors.

**ARCHITECTURAL**

- **Floor:** Non Slip
- **Wall (all or low):** Cleanable
- **Ceiling:** Architect selection
- **Height:**
- **Skirt:** Contain washdown within space

- **Wall:** Generally wire mesh, metal pailing or similar to architectural aesthetic selection.
- **Roof:** Required

Maximise screening from general campus areas.

Maintain sufficient access for vehicles into existing external area and minimise/eliminate via avoidance features.

- **Securities:**
  - **Security:**
  - **ACOUSTIC:** DDA Hearing Augmentation
  - **WINDOWS:**
    - **Waste:**
    - **User openable:**
    - **Internal Glazing:**
    - **Blinds:**

- **DOOR INFORMATION:**
  - **Door:**
    - **General access:**
    - **Door type:**
    - **Clear width:**
    - **Hardware:**
    - **Locking:**

- **JOINERY:**

**ENTRY DOOR HAZARD AND SPECIALIST SIGNAGE**

- **BMS:**

**WASTE STORAGE**

**Waste Storage**

Prepared by ARINA Hayball

**REFERENCE AND NOTES**

**LEGEND:**

- *Empty square indicates not applicable or none*
- *PTD=Paper Towel Dispenser, TPD=Toilet Paper Dispenser*
- *Air - Compressed Air, CG - Carbogen O2 - Oxygen, N2 - Nitrogen C02 - Carbon Dioxide Nat G - Natural Gas, RO - reverse Osmosis Pol - Polished H - Hot*

**MECHANICAL SERVICES**

**Temperature Control:**

- **Contaminant Vent:** Fume Cpbd (typical):

**LIGHTING**

- **Switching:**

**POWER**

- **Type:**
- **Outlets:**
- **waterproof powerpoint**

**TELEPHONE AND DATA**

- **Voice / Data:**

**LAB SERVICES**

- **HYDRAULIC**

**STANDARD EQUIPMENT**

- **See also room list on next page for detailed equipment list.**

**FIXTURES/FURNITURE**

**AUDIO VISUAL**

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<table>
<thead>
<tr>
<th>ITEM</th>
<th>TYPE</th>
<th>LOCATION</th>
<th>CONNECTED SERVICES</th>
<th>ELECTRICAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>621</td>
<td>BIN ENCLOSURE</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Group 1**

**Bin Enclosure**

**Waste Storage**

1 room(s) of this type

**Sheet 2: Plans**

- **Waste Storage**
- **Bin Enclosure**
- **Bin 115 Gas Cylinder Store**

**Sheet 3: Room List with Equipment and Key Fixtures (PRELIMINARY)**

- **Waste Storage**
- **Equipment ID**
  - **PRE-LABORY**
- **Model**
- **Number**
- **Mounting**
- **Width**
- **Depth**
- **Height**
- **Saturated Gases**
- **Water**
- **Draught Exhust**
- **Power**
- **Type**
- **Amps**
- **Volts**
- **W**
- **Data**

- **Bin Enclosure**
  - **Group 1**
  - **No equipment**

**Change from previous issue**

**Prepared by ARINA Hayball**

**Ref #: 012**

**Waste Storage**

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