PICKFORD & RHYDER CONSULTING PTY LTD
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23 May 2017

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Our Reference: CI-170522-MAC UNI W6A & 6B-HAz. Survey

HAZARDOUS MATERIALS SURVEY

BUILDINGS W6A & W6B
MACQUARIE UNIVERSITY

I. INTRODUCTION

As requested, I an asbestos survey was undertaken on 27 July 2016 and a follow up survey was undertaken for additional for hazardous materials on 22 May 2017 for W6A and W6B Macquarie University building areas.

The surveys were was required for the site pending alterations and refurbishment. The asbestos containing materials (ACM) survey areas was in accordance with floor area layouts for W6A-1-9 and W6B 1-3, PDF as provided in your e-mail dated 15 June 2016. The area layouts highlighted potentially unidentified ACM, which was not covered in the original detailed asbestos reports for W6A and W6B.

This report has been provided to update the current Asbestos Registers for buildings W6A and W6B with any new ACM and to determine the presence of any additional hazardous material in the form of lead paint and synthetic mineral fibre (SMF). This report is a supplementary report and should be referenced with the original survey reports which are listed as follows:

- Inspection Survey - Asbestos Containing Materials, Building W6a, Faculty Of Arts, Macquarie University, Our Reference: MAC-110221- Building W6A-Asbestos Survey-final dated 24 February 2011.

- Specification, Asbestos Pipe Insulation & Air Conditioning Ductwork Removal, Arts & Social Science, Building W6A, Macquarie University, Our Reference: MAC-090915-W6A- Removal Specification dated 23 September 2009, dated 23 September 2009.

- Inspection Survey - Asbestos Containing Materials, Building W6b, Macquarie University, Our Reference: MAC-110221- Building W6B-Asbestos Survey-final dated 24 February 2011.

Samples were collected from specific areas as highlighted in the floor plans for buildings W6A and W6B. Where flooring materials were similar in age, construction and colour, only one sample was collected for analysis.

II. SUMMARY

A. ASBESTOS

No asbestos was identified in the samples collected during the survey for Buildings W6A and W6B.

Results of the sample analysis are as follows:

- No ACM was identified in the floor samples collected.
- No ACM was identified in the internal window putty in Building W6A Level 8 Room 820.
- No new ACM was assumed or identified during the 2016 survey.
- ACM was identified in internal window putty in Building W6B.

The asbestos registers have been updated with the information gained from the 2016 inspection survey, which is the strikethrough of the 'assumed asbestos' Roof Membranes. No other ACM on the registers was surveyed during the 2016 inspection and therefore the Asbestos Registers are left dated from the original date of the surveys.

The floor plan schematics attached, list the Sample No's pertaining to the relevant highlighted areas.

B. LEAD PAINT

Lead paint was found in the Building W6A stairwell in the beige coloured paint.

C. SYNTHETIC MINERAL FIBRE

SMF was found in the following locations:-

- Pipe insulation in Building W6A Level 9 plant room
- W6B Level 3 Roof Bitumen membrane
- W6B Level 3 topping slab Bitumen membrane

III. LIMITATIONS OF THE SURVEY

It should be noted that with all asbestos inspection surveys there are limitations and shortcomings of the inspection process. The following factors are relevant in the reporting of the survey results:-

A. Fundamental to the entire basis of an inspection of this type is the fact that no matter how thorough or professionally it is conducted, *not all* asbestos might be found and recorded. In other words, the extent of any asbestos survey is bound by the limits of partially destructive methods. Hence, the presence of asbestos-containing materials can therefore be reported only within the constraints of these methods.

B. Thus, whilst one can be reasonably confident that all asbestos-containing materials that might be *routinely* encountered in the normal day-to-day activities of the buildings and vessels can be identified and assessed, no guarantees can be made that a specific building or vessel is absolutely free of asbestos, since various activities (e.g. maintenance, repair, renovation and demolition activities) may well reveal asbestos-containing materials in areas inaccessible to previous inspections.

C. The information presented in the report should only be used as *general* guidance for the purposes of recording locations of asbestos containing materials. It may be necessary to conduct destructive inspections of inaccessible areas if they are to be renovated, gutted or demolished.

IV. INSPECTION STRATEGY

The aim of the inspection survey was to determine the presence, location and condition of identifiable asbestos-containing materials (ACM).

Where ACM was suspected, a sample was collected for confirmation by asbestos identification analysis. Where ACM was suspected in flooring materials, only one sample was taken from a flooring material. Flooring materials similar in age, manufacture and colour to the sample material collected in other rooms or levels in the building were not sampled to avoid duplicity. The result for the sample collected is assumed to be representative of similar flooring throughout the building.

V. SAMPLE ANALYSIS

A. ASBESTOS IDENTIFICATION ANALYSIS

Samples of materials for asbestos identification analysis were collected during the inspection.

The samples were examined by Stereomicroscopy and Polarized Light Microscopy (with Dispersion Staining) in accordance with AS 4964-2004: - 'Method for the qualitative identification of asbestos in bulk samples'.

For building W6A, refer to attached NATA endorsed Certificates of Analysis; 88608/14-ID.
For building W6B, refer to attached NATA endorsed Certificates of Analysis; 88615/20-ID.
For Building W6A and W6B, refer to attached NATA endorsed Certificates of Analysis; 9105/07-ID.

B. LEAD PAINT

The general approach used is outlined in AS 4361.1-1995, "Guide to Lead Paint Management - Part 1: Industrial Applications", and determined the approximate content and extent of lead-containing paints, using the simple "screening" lead identification method.

Field testing of painted surfaces for the presence of lead was carried out on all painted materials in the site areas using LeadCheck® swabs.

C. SYNTHETIC MINERAL FIBRES

Visual confirmation and/or sample analysis in accordance with AS 4964-2004: - 'Method for the qualitative identification of asbestos in bulk samples' was used to determine the presence of SMF.

VI. SURVEY RESULTS

A. ASBESTOS CONTAINING MATERIALS

The results of the ACM survey can be found in the attached Certificates of Analysis and the asbestos register.

B. LEAD PAINT

Lead in paint was detected in the beige paint in Building W6B stairwell.

C. SYNTHETIC MINERAL FIBRES

SMF was found in the following locations:-

- Pipe insulation in Building W6A Level 9 plant room
- W6B Level 3 Roof Bitumen membrane
- W6B Level 3 topping slab Bitumen membrane

VII. POLYCHLORINATED BIPHENYL'S (PCB)

During the survey carried out on 22 May 2017 PCBs were not inspected for. As there are numerous light fittings within Buildings W6A and W6B the possibility exists for some fittings to contain PCB capacitors. Therefore, during the proposed works it would be advisable for licensed electricians removing light fixtures to reference the light fittings with the handbook to determine if PCB's are present. For information purposes the handbook can be accessed via the following link:-

http://www.scew.gov.au/archive/anzecc/pubs/anzecc_gl__identification_of_pcb_containing_capacitors_information_booklet_for_electricians_and_electrical_contractors_199712.pdf

Please note, in situ, PCB containing light fittings should cause no problems, however for disposal purposes it is important to determine if PCB's are present and they are disposed of appropriately due to environmental and health & safety concerns.

VIII. ADDITIONAL INFORMATION

A. REFERENCES

The following documents have been used as a reference for this Report:-

- SafeWork Australia. Code of Practice for the Management and Control of Asbestos in Workplaces, [ISBN 978-0-642-33315-5] (hereafter, Code of Practice, Management).
- SafeWork Australia. Code of Practice for the Safe Removal of Asbestos [ISBN 978-0-642-33317-9] (hereafter, Code of Practice, Removal)
- Minor Works on Asbestos-Based Electrical Mounting Boards for Domestic and Commercial Metering/Installations.

Referenced documents are available from SafeWork Australia (formerly the National Occupational Health and Safety Commission) at www.safeworkaustralia.gov.au, and from NSW Workcover Authority www.workcover.nsw.gov.au. The P&R documents are available upon request.

B. SYNTHETIC MINERAL FIBRES

Synthetic mineral fibre (SMF) insulation has replaced the use of asbestos in many applications. SMF is the predominant insulation for many types of plant and equipment, and has been used in many building applications.

While synthetic mineral fibre (SMF) insulation has been used in various locations, it does not constitute the same potential health risk as asbestos containing materials. SMF is an irritant fibre and

precautions such as respiratory protection and disposable overalls assist workers from skin and respiratory irritation during SMF handling activities.

C. NATIONAL PROHIBITION ON ASBESTOS

In December 2003 a national prohibition was enforced on the use of chrysotile asbestos in Australia. This notice has an impact where asbestos containing materials (ACM) are present.

The ban essentially means that materials that contain any kind of asbestos[1] cannot be used or re-used, and repair activities are also limited.

If ACM is left in situ, the ban does not apply as it specifically refers to new use and re-use. However, if for example an asbestos-containing panel was removed for any purpose, it cannot be re-used (either placed back in its original location or moved to a new location) and must be replaced with a non asbestos-containing alternative.

This philosophy also applies to asbestos containing doors (e.g. fire doors) which are removed from the door frame for repair. If removed from the door frame they cannot be replaced and must be disposed of as asbestos waste, however small repairs can be conducted if the door is left in situ.

Small repairs can also be conducted on asbestos-containing panels or materials when left in situ and where the material does not require removing from the structure to affect repair.

Repair work, including sealing and painting, should be conducted without any surface preparation as this type of activity may have the potential to generate airborne fibres.

D. ASBESTOS REMOVALS

In relation to the removal processes for ACM the legislative requirements, the NSW WorkCover Authority issues licenses for the removal of friable asbestos Class (ASA) and non-friable asbestos Class (ASB).

1. Friable Asbestos

A high degree of control is essential for the safe removal of friable ACM. The removal can be a high risk process, because there is often significant disturbance of ACM and thus a potential for exposure to respirable airborne asbestos fibres.

An asbestos removal contractor with a friable asbestos licence (ASA) is required to remove, repair or disturb any amount of friable asbestos. Notification to WCA is required prior to commencing work.

2. Non-Friable Asbestos

Removal of more than 10 square metres of non-friable asbestos-containing material requires:-

- Removal by a contractor with a non-friable (ASB) licence from NSW WorkCover Authority (WCA) (note it is advisable to obtain a copy of the contractors licence prior to work commencing)
- Notification to WCA is required to prior to commencing the work.

It should be noted that air monitoring is not a requirement during bonded removals; however it can be conducted in some circumstances.

[1] The intention of the ban is to implement a comprehensive approach to prevent the use of all forms of asbestos (namely chrysotile, amosite and crocidolite asbestos) within Australia.

A visual inspection must be conducted to ensure that all ACM has been removed from the site. As an example, the visual inspection can be done by site personnel who are suitably trained.

It is important that all asbestos-containing waste material is disposed of at an approved waste depot. The waste material must be double wrapped in 200 micrometre plastic prior to disposal.

It is important that waste tip dockets are kept for future reference and possible inspection by the NSW Department of Environment and Climate Change.

E. TRAINING AND INDUCTIONS

It is important that all persons who are required to work with or adjacent to ACM are aware of the relevant issues with respect to asbestos hazard and risk.

The most important point to remember is that when ACM are left undisturbed and in good condition there is no risk of inhalation of respirable asbestos fibres and therefore, no risk to human health.

Only when ACM are disturbed is there the likelihood that respirable asbestos fibres may be generated. This action initiates a potential change in the risk profile for that material. Therefore, it is important that any person who is required to work with or adjacent to ACM is aware of the relative risks and regulatory requirements applicable to the task.

These issues include:-

- Codes of Practice and NSW WorkCover Authority requirements
- National Prohibition with regard to use/reuse of ACM
- Repairs to ACM
- Removal requirements for ACM
- Minimal or no disturbance to ACM
- Labelling system used
- Asbestos Register
- Asbestos Management Plan
- Safe Work Method Statements

Report prepared by,

Gary Rhyder,
Occupational Hygienist, MAIOH
NSW WorkCover Asbestos Assessor (Lic. 000 160)

ASBESTOS REGISTER SUMMARY - MACQUARIE UNIVERSITY CAMPUS
MAY 2017 - BUILDING W6A

(For additional information regarding this summary, please refer to Pickford & Rhyder Consulting Report, Ref: MAC-110221-W6A-Asbestos Survey)

Building	Room No.	ACM Location	Description	Type	Confirmed*	Risk Rating	Condition	Action / Comments
~~W6A, Level 9~~	~~Parapet Plant Room~~	~~WHR, WHS, WWF &WWR Hot water & Heater Convection Pipes~~	~~Pipe insulation~~	~~friable~~	~~informal, amosite asbestos~~	~~Medium-in situ. High - damage exposing insulation~~	~~unstable-damaged pipes: stable-encapsulated pipes~~	**REMOVED** ~~ACTION: Short Term - Repairs are required to repair damaged insulation. Asbestos Warning labels are required. Long Term - Remove all friable insulation using AS(A)) contractor~~
~~W6A, Level 9~~	~~Parapet Plant Room~~	~~Hot Water Pumps~~	~~woven blanket~~	~~friable~~	~~informal, chrysotile asbestos~~	~~Low in situ, Medium if disturbed~~	~~stable in situ unstable if disturbed~~	**REMOVED** ~~ACTION: Remove during scheduled maintenance. Exercise appropriate removal and control procedures for asbestos.~~
W6A, Level 9	Roof -East and West Wings under Perimeter Flashing	WWF & WWR Heater Convection Pipes	pipe insulation	friable	informal, amosite asbestos	Low - in situ. Medium-High if disturbed	stable	ACTION: Asbestos Warning labels are required. No further action unless flashing requires removal
~~W6A, Level 9~~	~~Parapet Plant Room~~	~~Lid adjacent to water tank~~	~~unknown~~	~~not specified~~	~~not specified~~	~~not specified~~	~~unknown~~	**REMOVED** ~~Reported in Macquarie Uni Asbestos register 2000. Not sighted during inspection.~~
W6A, Level 9	Parapet Lift Motor Room	Asbestos in Insulator fuses	unknown	not specified	not specified	not specified	unknown	Reported in Macquarie Uni Asbestos register 2000. Not sighted during inspection-restricted access into room.
Levels 1-8	Riser No.5 (at rear of toilets adj. the lift lobbies)	WHR Domestic Hot Water Feed and Return pipes (x2)	pipe insulation	friable	informal, amosite asbestos MAC UNI 2000 Asbestos Register	Low - in situ. Medium-High if disturbed	stable	ACTION: Asbestos Warning labels are required. Pipe in Satisfactory condition, no further action unless maintenance required
Levels 1-9 Roof Level)	Riser No. 6 (PABX cupboards located at east end of corridors near stairs)	WWF& WWR Heater Convection Feed and Return pipes (2 pipes)	pipe insulation	friable	informal, amosite asbestos MAC UNI 2000 Asbestos Register	Low - in situ. Medium-High if disturbed	stable	ACTION: Asbestos Warning labels are required. Pipes in Satisfactory condition, no further action unless maintenance required
Levels 1-8	Wall Risers ~ 22 east wing & 19 west wing	WWF Vertical Riser Heater Convection pipe	pipe insulation	friable	informal, amosite asbestos MAC UNI 2000 Asbestos Register	Low - in situ. Medium-High if disturbed	stable	ACTION: Asbestos Warning labels are required. CAUTION: Should exercised during entrance into riser for maintenance/service as the condition of pipe insulation is unknown.
Levels 1-8	Electrical Distribution Cabinet	EDB A2-A8 (in the lift lobbies)	Possible zelemite mounting boards	bonded	suspected (no sample taken)	low	stable	ACTION: Nil. Treat as asbestos until confirmed, Refer to NSW **EIACC 2 Procedure for works to mounting board.

Building	Room No.	ACM Location	Description	Type	Confirmed*	Risk Rating	Condition	Action / Comments
~~Level 9,~~	~~Roof~~	~~Possible (lower) weatherproof membrane~~	~~suspected bitumen membrane~~	~~bonded~~	~~A. Lower membrane-suspected asbestos-no sample taken. B. Upper Membrane No.7, 61718/27-ID -no asbestos detected~~	~~low~~	~~unknown~~	**REMOVED** ~~ACTION: Nil. Treat as asbestos until confirmed, Refer to MAC UNI 2000 - Asbestos Register which identifies asbestos present in roof membrane. (Further comments in report)~~

ASBESTOS REGISTER SUMMARY - MACQUARIE UNIVERSITY CAMPUS
MAY 2017 - BUILDING W6B

(For additional information regarding this summary, please refer to Pickford & Rhyder Consulting Report, Ref: MAC-110221-W6B-Asbestos Survey)

Building	Room No.	ACM Location	Description	Type	Confirmed*	Risk Rating	Condition	Action / Comments
W6B, Level 1	Room 104, Electrical	Mains Control Panel (English Electric)	Arc Shields & Switchgear	bonded	suspected	Low	unknown	ACTION: Nil. Treat as asbestos until confirmed, Refer to NSW EIACC 2 Procedure for works to mounting board & MAC-070403-Asbestos Arc Chutes removal.
W6B, Level 1	Room 104, Electrical	EDB - Car Park	Electrical mounting board	bonded	suspected	Low	stable	ACTION: Nil. Treat as asbestos until confirmed, Refer to NSW EIACC 2 Procedure for works to mounting board.
W6B, Level 1	Room 104, Sub-Floor Storage	Redundant Rotary pumps	flange gaskets	bonded	No.16, 61824/29-ID	Low	stable	ACTION: Nil. Remove gaskets and dispose of as asbestos waste when pumps are removed
W6B, Service Tunnel	Mezzanine above Central Stairwell	WWF & WWR Heater Convection Pipes (x5)	pipe insulation	friable	informal, amosite asbestos MAC UNI 2000 Asbestos Register	Low - in situ. Medium-High if disturbed	stable	ACTION: Asbestos Warning labels are required. Pipes in Satisfactory condition, no further action unless maintenance required
W6B, Level 1	Rooms 183, 185 & 187	WHS Heater Convection pipe	pipe insulation	friable	informal, amosite asbestos MAC UNI 2000 Asbestos Register	Low - in situ. Medium-High if disturbed	stable	ACTION: Asbestos Warning labels are required. Pipe in Satisfactory condition, no further action unless maintenance required
W6B, Level 1	Riser 181	WWF, WWR & WHS Heater Convection pipes (x4)	pipe insulation	friable	informal, amosite asbestos MAC UNI 2000 Asbestos Register	Low - in situ. Medium-High if disturbed	stable	ACTION: Asbestos Warning labels are required. Pipes in Satisfactory condition, no further action unless maintenance required
W6B, Levels 1-3	Rooms 181, 281 & 381	WWF Vertical Riser Heater Convection pipe	pipe insulation	friable	informal, amosite asbestos MAC UNI 2000 Asbestos Register	Low - in situ. Medium-High if disturbed	stable	ACTION: Asbestos Warning labels are required. Pipe in Satisfactory condition, no further action unless maintenance required
W6B, Levels 1-3	Room 131 (possibly Rooms 232 & 336) NE Corner	Vertical Riser Heater Convection Pipe	pipe insulation	friable	informal, amosite asbestos MAC UNI 2000 Asbestos Register	Low - in situ. Medium-High if disturbed	stable	ACTION: Asbestos Warning labels were apllied in Room 131 during inspection. Pipe in Satisfactory condition, CAUTION must be exercised during cabling works to ensure the pipe remains undisturbed.

Building	Room No.	ACM Location	Description	Type	Confirmed*	Risk Rating	Condition	Action / Comments
Level 1 - Exterior	External Wal, Sub-floor space south east wall,	horizontal wall joint sealant	putty	bonded	No.1, 65707/10-ID	low	stable	ACTION: Putty material is deteriorating. Although stable consideration should be given to removal and replacement
Level 1	Electrical Distribution Cabinet	EDB No.D1, B1 & C1	Possible zelemite mounting boards	bonded	suspected (no sample taken)	low	stable	ACTION: Nil. Treat as asbestos until confirmed, Refer to NSW **EIACC 2 Procedure for works to mounting board. (no AC panel in cupboard)
Level 2	Electrical Distribution Cabinet	EDB No.D2, B2 & C2	Possible electrical mounting boards	bonded	suspected (no sample taken)	low	stable	ACTION: Nil. Treat as asbestos until confirmed, Refer to NSW **EIACC 2 Procedure for works to mounting board. (no AC panel in cupboard)
Level 3	Electrical Distribution Cabinet	EDB No.D3, B3 & C3	Possible electrical mounting boards	bonded	suspected (no sample taken)	low	stable	ACTION: Nil. Treat as asbestos until confirmed, Refer to NSW **EIACC 2 Procedure for works to mounting board. (no AC panel in cupboard)
Level 3	Room 338	Internal window sealant	putty	bonded	No 3, 91605/07-ID	Low	stable	
Level 3	Plant Room 360	Air-conditioning heater bank	Possible millboard lining inside duct	non-friable	suspected (no sample taken)	low	unknown	ACTION: Nil. Treat as asbestos until confirmed.
External	Roof	Waterproof roof covering	bitumen membrane	bonded	SMF detected	low	stable	
External	Roof	Waterproof roof covering	bitumen membrane	bonded	SMF detected	low	stable	

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24 May 2017

Mr Erik Maasepp
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Replaces Certificate 91605/07-ID dated 23 May 2017

Erik.Maasepp@capitalinsight.com.au

CERTIFICATE OF ANALYSIS – ASBESTOS IDENTIFICATION

YOUR REFERENCE/JOB No: -
TYPE OF SAMPLES: Bulk samples - as sampled by K. Grose
SITE LOCATION: Macquarie University, Buildings W6A & W6B
DATE SAMPLED: 22 May 2017 **DATE RECEIVED:** 22 May 2017
DATE ANALYSED: 23 May 2017 **OUR REFERENCE:** 91605/07-ID-a

TEST METHOD: Bulk materials examined by Stereomicroscopy and Polarized Light Microscopy (with Dispersion Staining) in accordance with AS 4964-2004: - 'Method for the qualitative identification of asbestos in bulk samples' as outlined in Laboratory Method ID/1.

Sample No	*Lab No*	*Sample Information*	*Analysis Result*	*Description*
1	91605	Building W6A, east lift, vinyl tile floor	No asbestos detected	The sample was a grey vinyl tile, of approximate weight 7 g, in which organic fibres were detected. No asbestos fibres were detected in the sample.
2	91606	Building W6A, window mastic, exterior	No asbestos detected	The sample was a grey mastic, of approximate weight <1 g. No asbestos fibres were detected in the sample.
3	91607	Building W6B, Room 338, window putty, interior	Chrysotile asbestos detected	The sample was a light brown putty, of approximate weight <1 g, in which chrysotile asbestos fibres were detected.

All sampling and site work has been undertaken by the client - the analytical procedures and results reported on this Certificate have been conducted by Pickford & Rhyder Consulting.

Sampling is not covered by the scope of accreditation.

Analysed and reported by:

K. Grose
Approved Identifier and Signatory

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Accreditation number 2515

PICKFORD & RHYDER CONSULTING PTY LTD
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3 August 2016

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CERTIFICATE OF ANALYSIS – ASBESTOS IDENTIFICATION

YOUR REFERENCE/JOB No: -
TYPE OF SAMPLES: Bulk samples - as sampled by Gary Conaty
SITE LOCATION: Macquarie University, Building W6A
DATE SAMPLED: 27 July 2016 **DATE RECEIVED:** 27 July 2016
DATE ANALYSED: 2 August 2016 **OUR REFERENCE:** 88608/14-ID

TEST METHOD: Bulk materials examined by Stereomicroscopy and Polarized Light Microscopy (with Dispersion Staining) in accordance with AS 4964-2004: - 'Method for the qualitative identification of asbestos in bulk samples' as outlined in Laboratory Method ID/1.

Sample No	*Lab No*	*Sample Information*	*Analysis Result*	*Description*
1	88608	Level 1, Room 199B Lobby, *continuous vinyl flooring, (grey)*	No asbestos detected	The sample was a grey motley vinyl flooring of approximate weight 5 g. No asbestos fibres were detected in the sample.
2	88609	Level 2, Room 208 Tea Room, *continuous vinyl flooring (green)*	No asbestos detected	The sample was a green vinyl flooring with an adhesion of approximate weight 2 g, in which organic fibres were detected. No asbestos fibres were detected in the sample.
3	88610	Level 5, Room 520 Tea Room, *continuous vinyl flooring (grey)*	No asbestos detected	The sample was a grey, motley vinyl flooring with a fibre adhesion of approximate weight 2 g, in which organic fibres were detected. No asbestos fibres were detected in the sample.

Analysed and reported by:

Gary Conaty,
Approved Identifier and Signatory

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Sample No	*Lab No*	*Sample Information*	*Analysis Result*	*Description*
4	88611	Level 7, Room 720 Tea Room, *continuous vinyl flooring (blue)*	No asbestos detected	The sample was a blue streaky vinyl flooring with an adhesion of approximate weight 3 g. No asbestos fibres were detected in the sample.
5	88612	Level 8, Room 820 Tea Room, *window putty (internal)*	No asbestos detected	The sample was a brown window putty of approximate weight <1 g. No asbestos fibres were detected in the sample.
6	88613	Level 9, Roof, East, *bituminous membrane*	No asbestos detected	The sample was a black bituminous, fibrous membrane of approximate weight 2 g, in which organic fibres were detected. No asbestos fibres were detected in the sample.
7	88614	Level 9, Topping Slab, *core drilling*	No asbestos detected	The sample was a 25 mm drilled core in 3 section consisting of a top (ardent), middle and bottom (concrete) of approximate weight 92 g. No asbestos fibres were detected in the sample.

Sampling is not covered by the scope of accreditation.

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CERTIFICATE OF ANALYSIS – ASBESTOS IDENTIFICATION

YOUR REFERENCE/JOB No: -
TYPE OF SAMPLES: Bulk samples - as sampled by Gary Conaty
SITE LOCATION: Macquarie University, Building W6B
DATE SAMPLED: 27 July 2016 **DATE RECEIVED:** 27 July 2016
DATE ANALYSED: 2 August 2016 **OUR REFERENCE:** 88615/20-ID

TEST METHOD: Bulk materials examined by Stereomicroscopy and Polarized Light Microscopy (with Dispersion Staining) in accordance with AS 4964-2004: - 'Method for the qualitative identification of asbestos in bulk samples' as outlined in Laboratory Method ID/1.

Sample No	*Lab No*	*Sample Information*	*Analysis Result*	*Description*
1	88615	Level 1, Room 143 Tea Room, *continuous vinyl flooring (beige)*	No asbestos detected	The sample was a beige vinyl flooring with a brown adhesive of approximate weight 3 g. No asbestos fibres were detected in the sample.
2	88616	Level 1, Room 136 Workshop, *vinyl tile (tan-brown)*	No asbestos detected	The sample was tan/brown vinyl tile of approximate weight 20 g. No asbestos fibres were detected in the sample.
3	88617	Level 2, Room 249 Tea Room, *continuous vinyl flooring (black)*	No asbestos detected	The sample was black vinyl flooring with a hessian adhesion of approximate weight 20 g, in which organic fibres were detected in the adhesion. No asbestos fibres were detected in the sample.

Analysed and reported by:

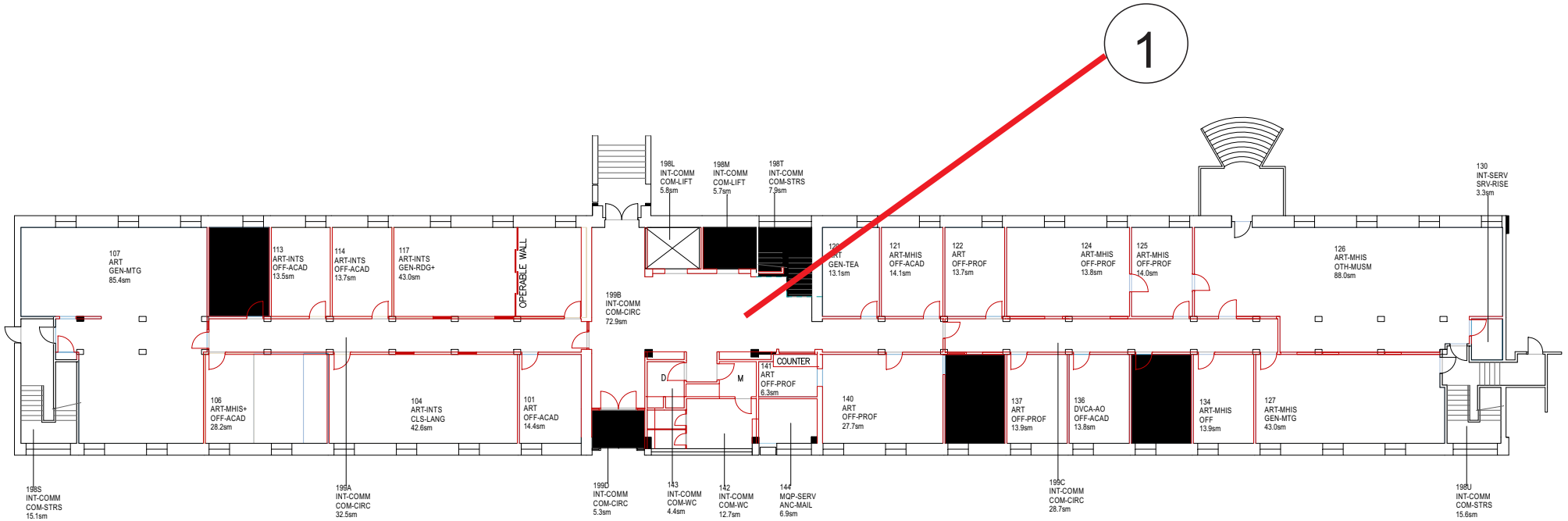
Gary Conaty,
Approved Identifier and Signatory

NATA
ACCREDITED FOR TECHNICAL COMPETENCE

Accreditation number 2515

Sample No	*Lab No*	*Sample Information*	*Analysis Result*	*Description*
4	88618	Level 2, Room 283 AV Room, *continuous vinyl flooring (grey)*	No asbestos detected	The sample was grey vinyl flooring with a hessian adhesive, in which organic fibres were detected in the adhesion. No asbestos fibres were detected in the sample.
5	88619	Level 3, Roof, *membrane*	No asbestos detected	The sample was a black fibrous bituminous membrane of approximate weight 1 g, in which synthetic mineral fibres and organic fibres were detected. No asbestos fibres were detected in the sample.
6	88620	Level 3, Topping slab, *25 mm drilled core*	No asbestos detected	The sample was a drilled core consisting of concrete, metal and a bitumen membrane of approximate weight 82 g, in which synthetic mineral fibres and organic fibres were detected in the membrane. No asbestos fibres were detected in the sample.

Sampling is not covered by the scope of accreditation.



KEY	ORG	SPCS	ORG AREA sm
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	ART-AHST	1.00	11.20
	ART-INTS	4.00	113.50
	ART-LAW	1.00	5.60
	ART-MHIS	7.00	212.50
	DVCA-AO	2.00	27.60
	INT-COMM	11.00	206.70
	INT-SERV	1.00	3.30
	MQP-SERV	1.00	6.70
TOT		37.00	789.70
W6A-1.VFM FICM			

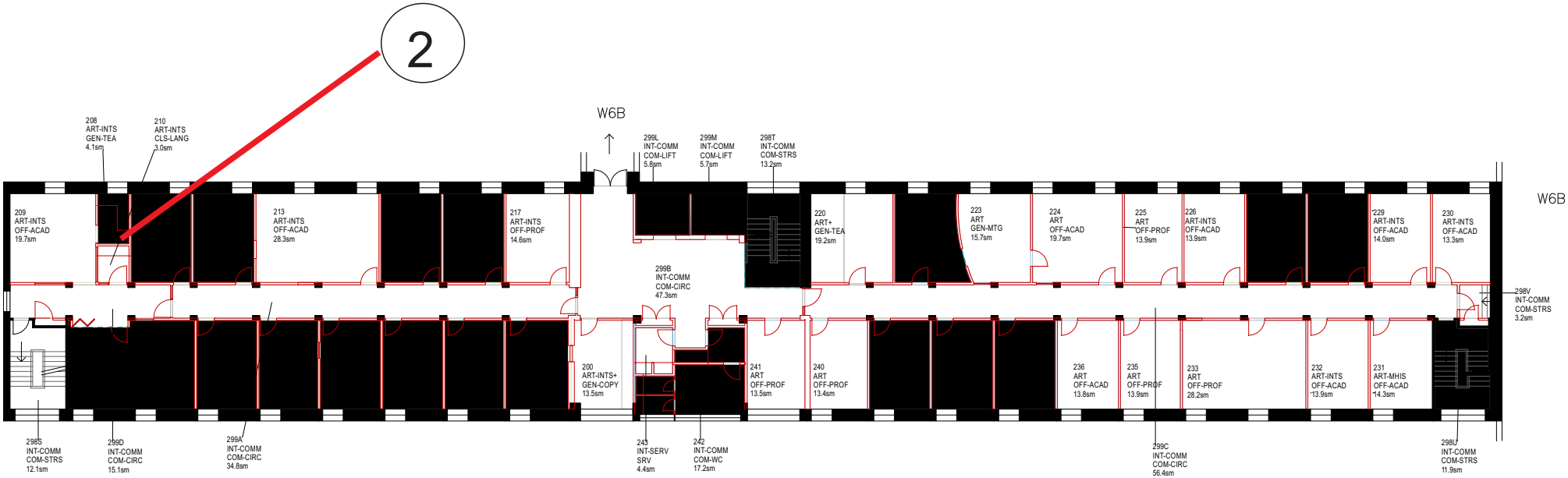
0 metres 5 10

1:300 @ A4

UPDATED:13/10/2014

W6A-1

MACQUARIE UNIVERSITY



KEY	ORG	SPCS	ORG AREA sm
	ART	13.00	190.20
	ART-INTS	24.00	337.50
	ART-MHIS	1.00	14.30
	INT-COMM	11.00	222.10
	INT-SERV	1.00	4.40
TOT		50.00	768.50
W6A-2.VFM FICM			

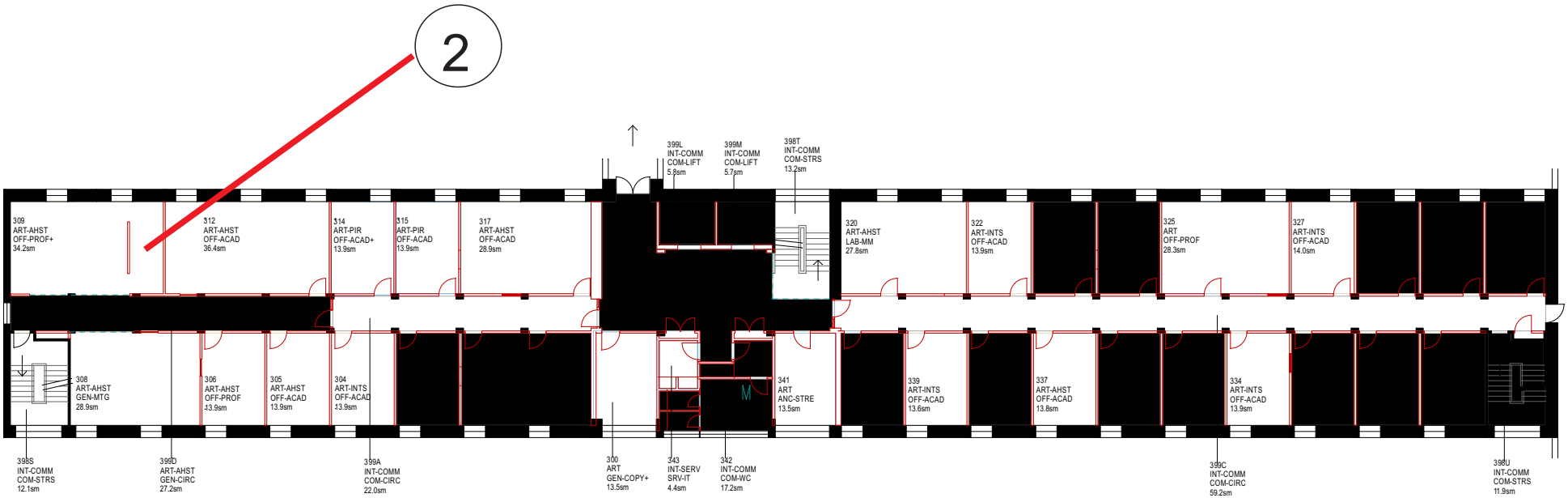
0 metres 5 10

SCALE: 1:300 @ A4

UPDATED: 13/10/2014

W6A-2

MACQUARIE UNIVERSITY



KEY	ORG	SPCS	ORG AREA sm
	ART	4.00	69.10
	ART-AHST	10.00	238.80
	ART-INTS	17.00	250.50
	ART-PIR	2.00	27.80
	INT-COMM	9.00	194.50
	INT-SERV	1.00	4.40
TOT		43.00	785.10
W6A-3.VFM FICM			

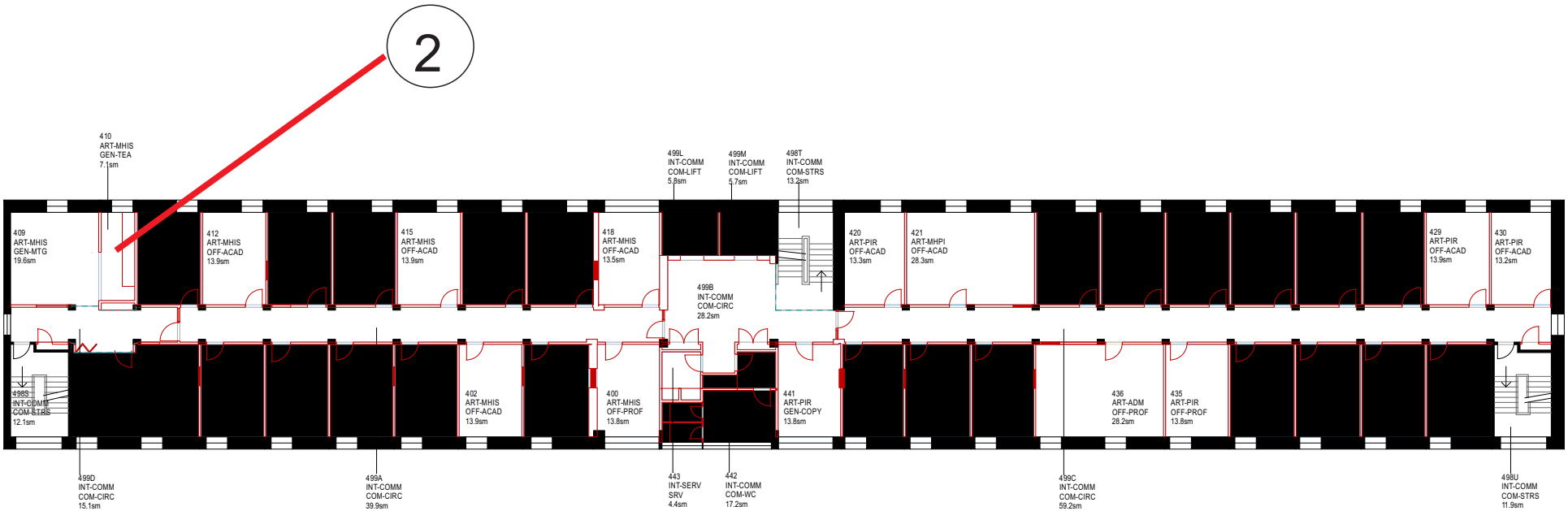
0 metres 5 10

SCALE: 1:300 @ A4

UPDATED: 12/06/2015

W6A-3

MACQUARIE UNIVERSITY



KEY	ORG	SPCS	ORG AREA sm
	ART-ADM	1.00	28.20
	ART-MHIS	18.00	262.40
	ART-MHPI	1.00	28.30
	ART-PIR	18.00	249.10
	INT-COMM	10.00	208.30
	INT-SERV	1.00	4.40
TOT		49.00	780.70

W6A-4.VFM FICM

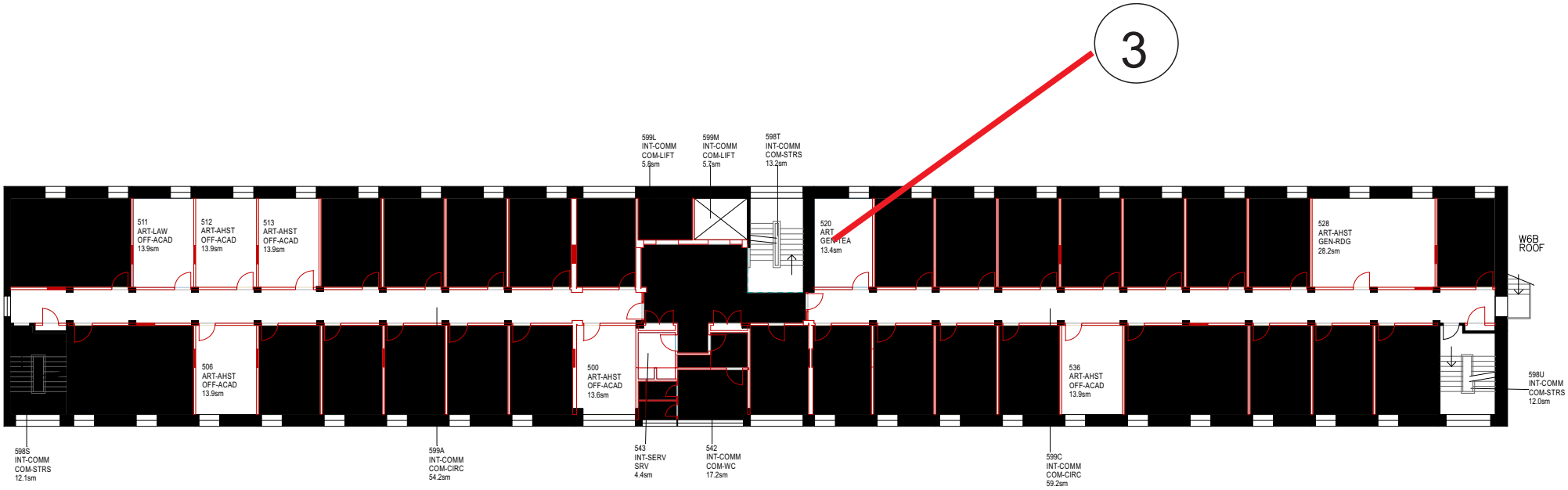
0 metres 5 10

1:300 @ A4

UPDATED: 16/10/2014

W6A-4

MACQUARIE UNIVERSITY



KEY	ORG	SPCS	ORG AREA sm
	ART	1.00	13.40
	ART-AHST	35.00	543.30
	ART-LAW	1.00	13.90
	INT-COMM	9.00	207.50
	INT-SERV	1.00	4.40
TOT		47.00	782.50
W6A-5.VFM FICM			

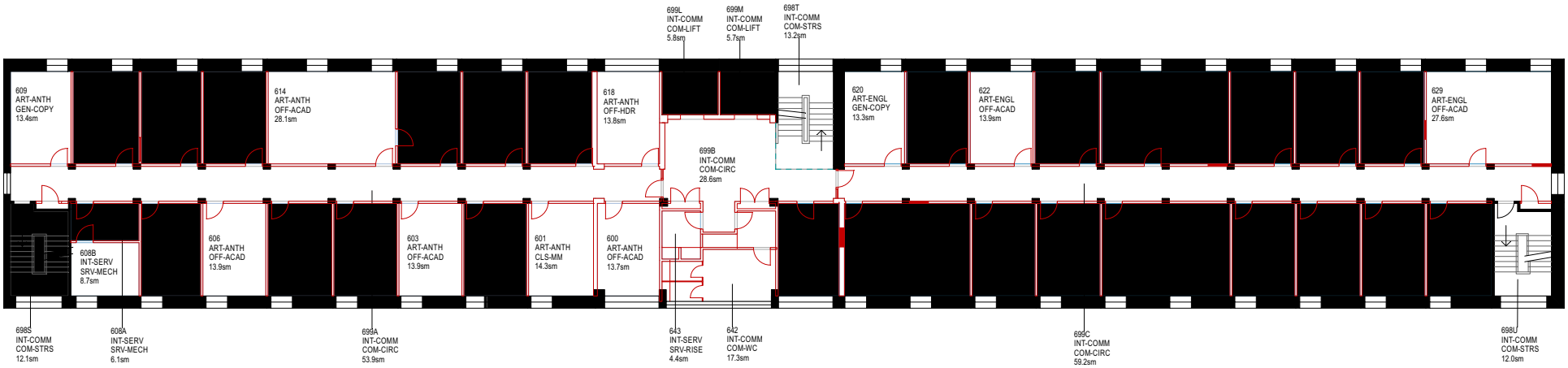
0 metres 5 10

1:300 @ A4

UPDATED: 03/10/2014

W6A-5

MACQUARIE UNIVERSITY



KEY	ORG	SPCS	ORG AREA sm
	ART-ANTH	17.00	250.00
	ART-ENGL	18.00	305.80
	INT-COMM	9.00	207.80
	INT-SERV	3.00	19.10
TOT		47.00	782.60

W6A-6.VFM FICM

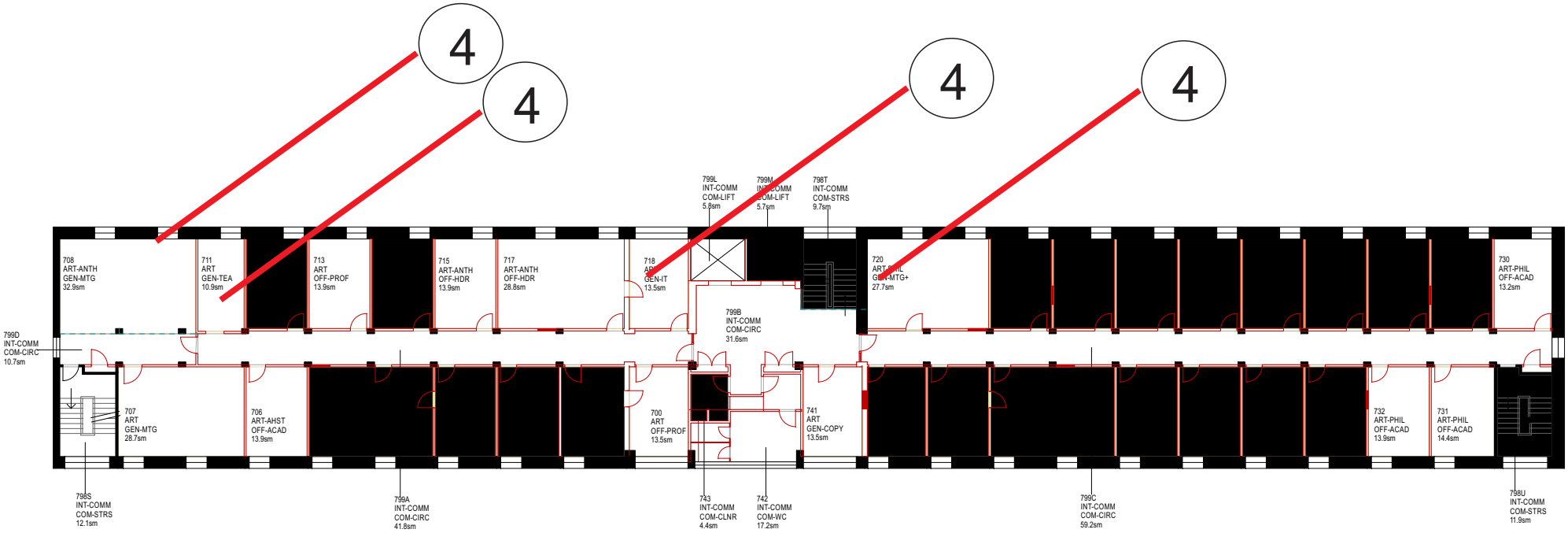
0 metres 5 10

1:300 @ A4

UPDATED: 02/10/2014

W6A-6

MACQUARIE UNIVERSITY



KEY	ORG	SPCS	ORG AREA sm
	ART	11.00	178.30
	ART-AHST	1.00	13.90
	ART-ANTH	4.00	89.50
	ART-PHIL	19.00	291.40
	INT-COMM	11.00	210.00
TOT		46.00	783.00

W6A-7.VFM FICM

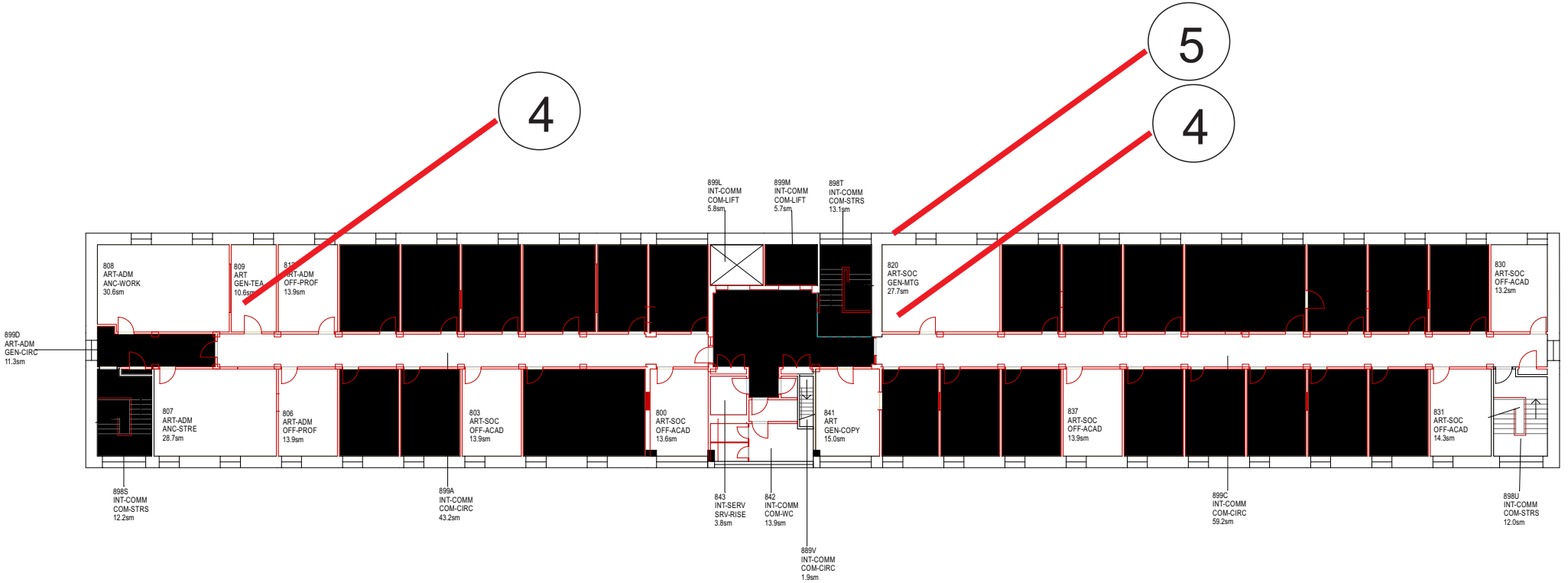
0 metres 5 10

1:300 @ A4

UPDATED: 01/10/2014

W6A-7

MACQUARIE UNIVERSITY



KEY	ORG	SPCS	ORG AREA sm
	ART	2.00	25.60
	ART-ADM	12.00	196.60
	ART-SOC	23.00	361.60
	INT-COMM	10.00	195.40
	INT-SERV	1.00	3.80
TOT		48.00	783.00

W6A-8.VFM FICM

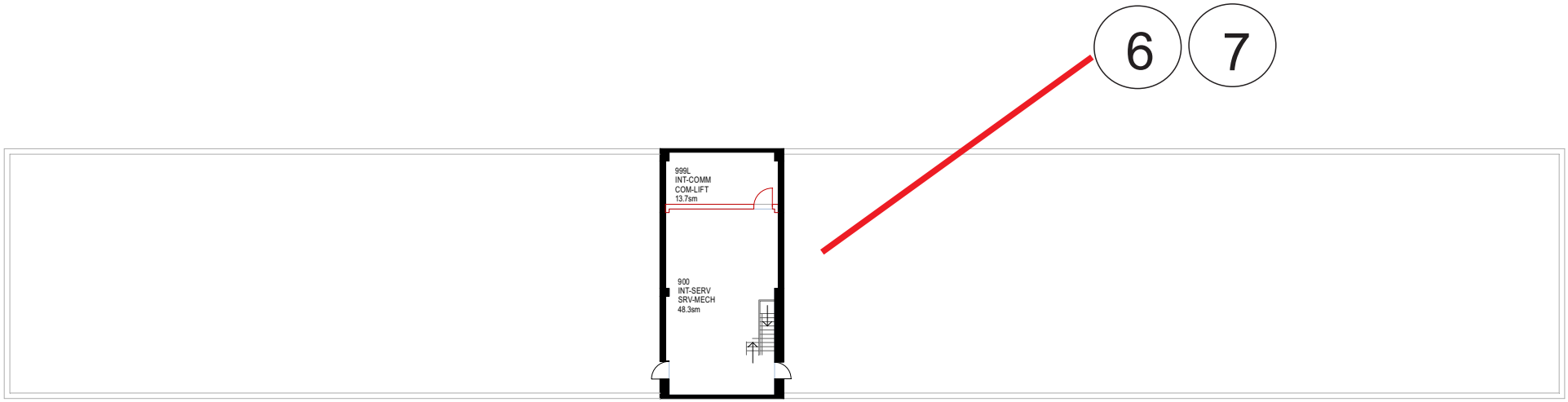
0 metres 5 10

1:300 @ A4

UPDATED: 19/09/2014

W6A-8

MACQUARIE UNIVERSITY



KEY	ORG	SPCS	ORG AREA sm
	INT-COMM	1.00	13.70
	INT-SERV	1.00	48.30
TOT		2.00	62.10
W6A-9.VFM FICM			

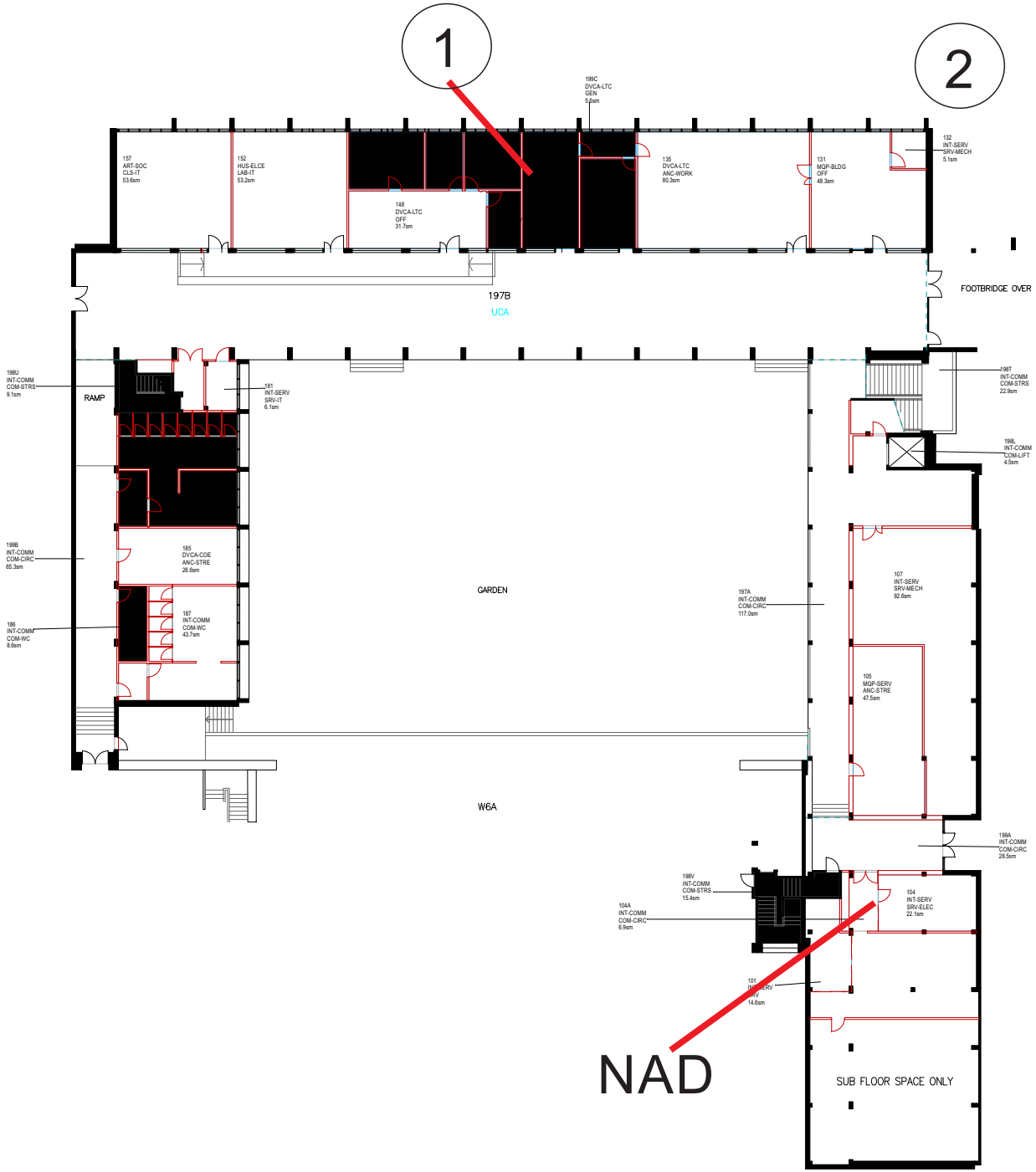
0 metres 5 10

1:300 @ A4

UPDATED: 12/08/14

W6A-9

MACQUARIE UNIVERSITY



KEY	ORG	SPCS	ORG AREA sm
	ART-SOC	1.00	53.60
	DVCA-COE	1.00	26.60
	DVCA-LTC	9.00	209.90
	HUS-ELCE	1.00	53.20
	INT-COMM	11.00	374.00
	INT-SERV	5.00	140.50
	MQP-BLDG	1.00	48.30
	MQP-SERV	1.00	47.50
	NONE	2.00	3.60
TOT		32.00	957.20

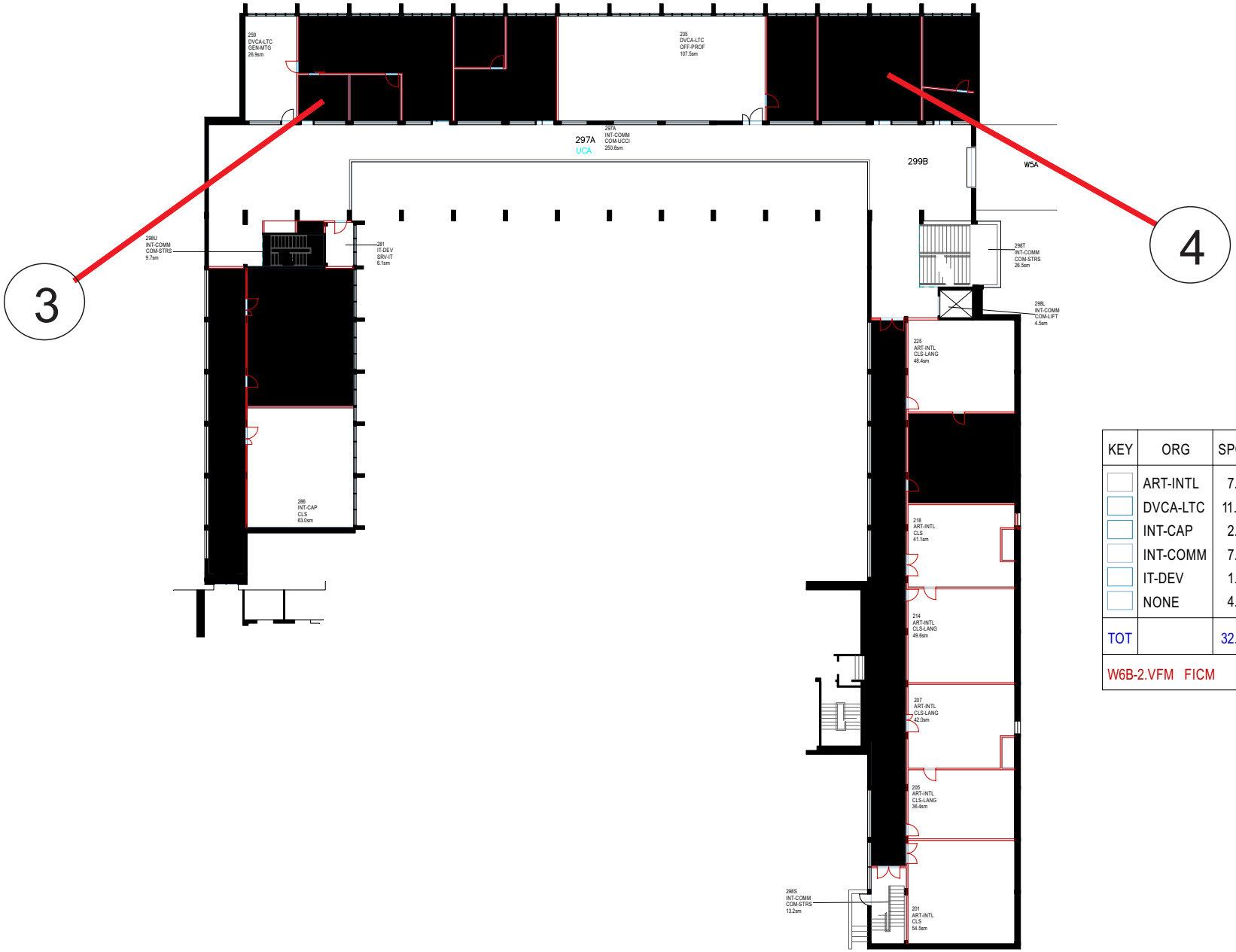
W6B-1.VFM FICM

0 metres 5 10 15

1:400 @ A4

UPDATED: 18/05/2015

W6B-1



KEY	ORG	SPCS	ORG AREA sm
	ART-INTL	7.00	319.40
	DVCA-LTC	11.00	370.80
	INT-CAP	2.00	135.80
	INT-COMM	7.00	456.70
	IT-DEV	1.00	6.10
	NONE	4.00	7.40
TOT		32.00	1,296.20

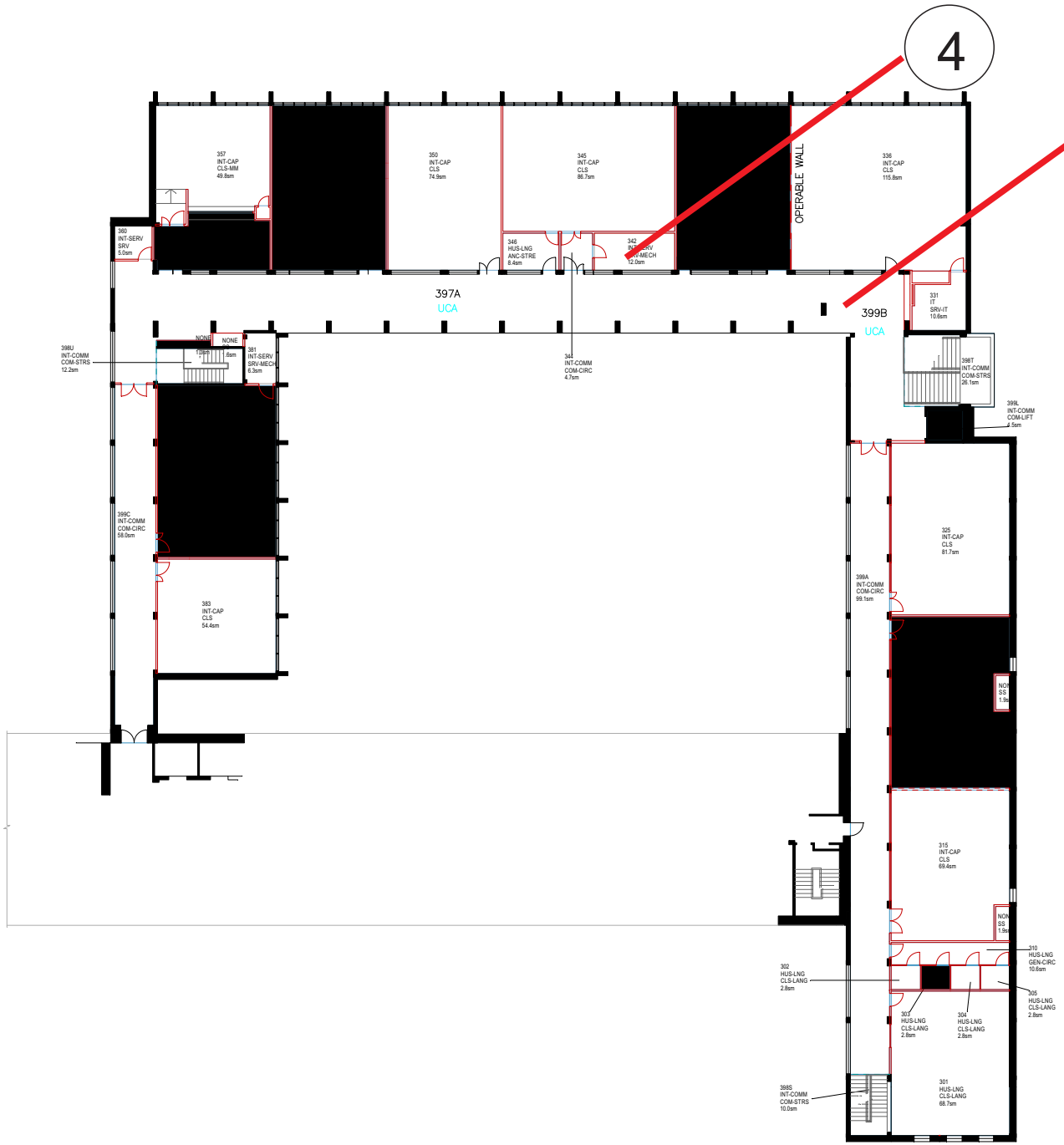
W6B-2.VFM FICM

0 metres 5 10 15

1:400 @ A4

UPDATED: 04/09/2013

W6B-2



KEY	ORG	SPCS	ORG AREA sm
	HUS-LNG	7.00	98.80
	INT-CAP	12.00	868.80
	INT-COMM	7.00	214.70
	INT-SERV	3.00	23.30
	IT	1.00	10.60
	NONE	4.00	6.80
TOT		34.00	1,223.00
W6B-3.VFM FICM			

0 metres 5 10 15

1:400 @ A4

UPDATED: 27/10/15

W6B-3